"More Especially the Elephants and Cureloms and Cumoms"

An Extensive Treatise on the Surprising and Deep Evidence Associated with this Book of Mormon Passage

Greetings! You're invited to read the four page Abstract Overview, but just skim or skip the rest due to length

Questions or comments are encouraged! Contact me at sdrencure@gmail.com

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Abstract Overview

The Book of Mormon's Ether 9:19 mentions domesticated ancient American elephants and unknown animals called cureloms and cumoms. How fascinatingly intriguing! Yet this verse has long been manna to the critic and mystifying to the converted. This treatise thoroughly transforms this problematic passage into one more tiny thread in the tremendous tapestry of testimony for this marvelous work and majestic wonder – the Lord's restoration of the original gospel and church of Jesus the Christ. Three interwoven elephantine propositions are proffered:

Ether 9:19

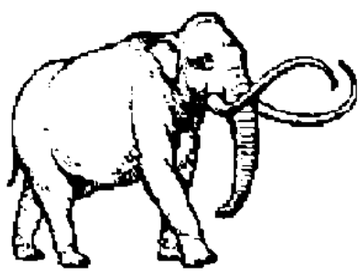
And they also had horses, and asses, and there were **elephants and cureloms and cumoms**; all of which were useful unto man, and **more especially the elephants and cureloms and cumoms**.

1. **The Columbian mammoth grouping (defined here as American mammoths *excluding* the woolly mammoth), can *decisively* and *definitively* be identified as the Book of Mormon elephant**, or as the core essence thereof in some subset and/or overlapping set. This grouping is simply a misnamed elephant. Not just an "elephant" in rather broad *Proboscidea* (elephantine taxonomic order) terms, but rather a fully bona fide one by the *strictest* of elephant definitions. This grouping is closer to the Asian elephant than the African elephant is to either; evidences of the Columbian mammoth grouping's exceptionally strict elephant qualifications include:

    a. One study compared 123 skeletal traits of various *Proboscidea*, mammoths varied from Asian elephants in only two. Another study of 138 traits showed mammoths varying from Asian elephants in none of the 138.
    b. Two computer programs put the Asian elephant closest to the mammoth within Proboscidean taxonomy.
    c. Although early DNA study results were mixed, more recent and more comprehensive DNA studies conclusively show the mammoth to be closer to the Asian elephant than the African elephant is to either.
    d. All six of the Columbian mammoth grouping's so-called species, when first named, were placed in the Asian elephant genus of *Elephas*. These six were in *Elephas* until 1945 when a transition to *Mammuthus* took root; the tenuous decision to change was based on assumptions that particularly now are very clearly in error.

    Columbian mammoths are bigger and have more spiraled tusks, but are largely similar to Asian elephants. The long history of chaos, confusion, and change in Proboscidean taxonomy would astonish most people -- in some future day I believe Columbian mammoths will be renamed as "elephants." Indeed the experts often already call these mammoths "true elephants." While this grouping is *clearly* the core essence of the Book of Mormon elephant, the *woolly* mammoth could also be a part of it. But this is doubtful, as the woolly mammoth was only from far more northerly locales, and was quite likely unknown to the stewards of the "elephant" definition in Ether.

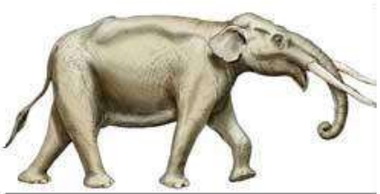
Columbian Mammoth: The Jaredite Elephant



2. Many observations *collectively together* build a surprising, even startling, and striking case that the **Book of Mormon's cureloms and cumoms – unknown animals – are *Proboscidea***. One should be spontaneously and severely skeptical to any claim of identifying *unknown* animals with potent persuasiveness; yet the arguments, from tenuous to terrific individually, in synergistic summation are astonishingly affirming of this amazing assertion.
3. **The *only* two decent *Proboscidea* candidates for the curelom and cumom, and they are both very high-confidence candidates, are the American mastodon grouping and the *Cuvieroniinae***, or the core essence thereof in subsets and/or overlapping sets. (*Cuvieroniinae* are primarily the *Cuvieronius* and *Stegomastodon* "twins", and are a subset of the gomphotheres.) The only other recent American *Proboscidea* is the woolly mammoth, but it's quite doubtful as either a curelom or cumom. All other *Proboscidea* are quite improbable as they are far more rare, are not thought to have human coexistence evidence, and are thought to be of vastly older dates (supposedly extinct over a "million years ago"). Thus the American mastodon grouping and the *Cuvieroniinae* are outstanding and high confidence identifications.

American Mastodon: A Curelom or Cumom

***Cuvieroniinae*: The Other Curelom or Cumom**



Thousands of Elephantine Remains

A 2003 paper listed 343 sites (*far* undercounted) in Mexico/Central America where these three candidates (Columbian mammoth grouping, American mastodon grouping, and *Cuvieroniinae*) have been found. Total known published *Proboscidea* skeletal finds in North America are about 6,500, of which over 95% are these three or the woolly mammoth. Judgments are that most finds were never published, particularly in Latin America; *vastly* more than 6,500 have been found.

Over 100 Elephantine Remains Show Human Coexistence

Extensive *Proboscidea* skeletal remains show human coexistence. Over 100 American continent sites have *Proboscidea* bones found modified by humans or found associated with human artifacts. Many in the latter 1800s judged the evidence conclusive, yet many more far into the 1900s judged (unsoundly) the evidence scant and inconclusive, while often alleging fraud or poor scholarship. Finally today practically all subject-educated parties accept the coexistence conclusion.

Over 100 Elephantine Depictions

Even the experts have been unaware of the magnitude of ancient American *Proboscidea* depictions; this treatise has the largest list ever compiled. An overly conservative counting approach would be to:

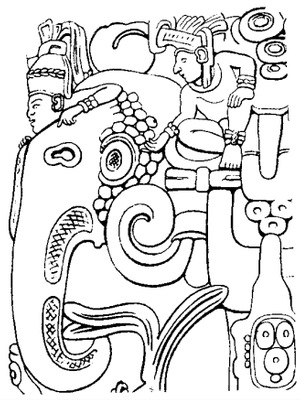
Nevada Petroglyph

- Ignore the few dozen elephantine depictions in Mesoamerican codices/glyphs as they generally show elephantine trunks/heads/headdresses, but not the more persuasive entire elephantine body.
- Ignore the thousands of elephantine trunks in ancient Mesoamerican architecture as they are elephantine in appearance but not generally considered definitively elephantine
- Ignore those identified but described subsequently as likely spurious

- Ignore another 20% of what remains to drop the most questionable or least documented
- Finally, to be *very* conservative, only count one half of the still remaining depictions

This last step – of being conservative by only counting one half of the remaining 200+ elephantine depictions – still leaves just over 100 valid ancient American *Proboscidea* pictorial depictions. Each of the three proposed *Proboscidea* candidates has large numbers of both skeletal and depiction evidences of human coexistence.

Copan Stela with People and a Saddle on a *Proboscidea*



Ten Domestication Depiction Sites

The primary *Proboscidea* domestication evidences are 15 such depictions from 10 sites. However several of these do not have multiple verification and/or picture availability. Two sets of these depictions share unusual details, thus strengthening their credibility. Appendix I has a 7,000 word review of a domestication depiction in Copan Honduras, including a meticulous debunking of its easily refuted primary alternative explanation. Though without independent verification and thus ***great*** caution is due, articles in the *Los Angeles Times* and many other publications in 1903 reported that a prominent National Museum of Mexico archaeologist had excavated an ancient mudslide-destroyed Mesoamerican city and found *Proboscidea* with silver rings on their tusks. I believe the main manifestations (not evidences) of domestication are the endless array of stone structures (some stones even weighing hundreds of tons) throughout ancient America, vast numbers of which I believe were likely built with elephantine assistance.

Seven Curelom/Cumom Clues

A careful inspection of the Book of Mormon discovers seven subtle clues that are *surprisingly* insightful into the identity of the cureloms and cumoms:

Ether 9:16-19

…insomuch that they became exceedingly rich –

17. Having all manner of fruit, and of grain, and of silks, and of fine linen, and of gold, and of silver, and of precious things;

18. And also all manner of cattle, of oxen, and cows, and of sheep, and of swine, and of goats, and also many other kinds of animals which were useful for the food of man.

19. And they also had horses, and asses, and *there were* ***elephants and cureloms and cumoms*****;** all of which were useful unto man, and ***more especially the elephants and cureloms and cumoms***.

1. The name similarity of the "kū-re´ lums" and "kū´ mums" means the two are almost certainly related to each other. Seven analyses from five languages (English, Hebrew, Egyptian, Akkadian, and Sumerian) give odds of roughly 1 in 10,000 of this being possibly due to just coincidence. (Rhyming consonant-ending words with identical consonant-bearing opening syllables.) As reviewed in the *Improvement Era*, the similar names means they were likely similar; statistically, this is practically certain. (Also, a review of Hebrew, Egyptian, Akkadian, and Sumerian finds no even mediocre candidates for parent or related words.)
2. The grouping together of similar nouns here and elsewhere in the Book of Mormon means the cureloms and cumoms are likely at least somewhat closely related to elephants.
3. These groupings also mean the cureloms and cumoms are confidently closer to elephants than to horses, cows, or any other listed animal.
4. The types of animals show that verse 18 lists food animals and that verse 19 lists work animals. This is reinforced by verse 18 ending in "… and many other kinds of animals which were useful for the food of man", and by verse 19 animals described as "which were useful unto man." Thus we can conclude cureloms/cumoms were work animals.
5. Described as more especially useful than horses, *only Proboscidea* would be substantially more useful than horses.
6. After being described as useful, they were then engraved a second time *solely* to add the "more especially" aspect of their usefulness. This afterthought second arduous engraving gives *far* more emphasis on their great usefulness than if they had just been described that way the first time. Extraordinarily useful are their notable docility, unequalled strength, *phenomenally handy* trunk, and incredible intelligence; some believe they are the smartest animal on earth.
7. After 16 nouns were prefaced with "having" or "had", the sentence is then oddly interrupted just to change the prefatory wording to "there were." All other Book of Mormon animals preceded by "there were" or "there was" were not under human control, and the several dozen wild animal references were never prefaced with "having" or "had." Domesticated *Proboscidea* come from taming wild ones, unlike other domesticated animals that come predominantly from breeding. "There were" was apparently selected to refer to both tame *and* wild *Proboscidea*. Another reason for reference to tame *and* wild may be that perhaps *Proboscidea* were somewhat hunted for food. Can you conjure even one alternative that could credibly explain this *clearly intentional, very odd* mid-sentence change?

1829 Curelom/Cumom Untranslatability

A review of the *Proboscidea* taxonomy/terminology chaos in 1829 (troubled still today) renders clear why an 1829 translation was impossible for cureloms and cumoms. The term "American mastodon" was not yet in even embryonic usage by 1829. The term "mastodon" was used by 1829, and its most common U.S. (not world) usage was then and is now to refer to the "American mastodon", but the term "mastodon" also has many other usages. For example: 1.) All five genera with "mastodon" in their name are not American mastodons; 2.) Most *Cuvieroniinae* are found in Latin America and are usually called "mastodons" ("mastodontes" in Spanish/Portuguese); and 3.) The mastodons in the Old World are not American mastodons. As to "*Cuvieroniinae*" and its alternative names, these terms were not even created by 1829. To summarize, both of these were primarily called "mastodons" in 1829; it was quite impossible to translate either of these two in 1829.

Process of Elimination of Over 100 Curelom/Cumom Alternatives

An extensive and exhaustive process of elimination yields no other American animals, alive or "recently" extinct, as attractive or appealing (or even mediocre) alternatives for the curelom or cumom:

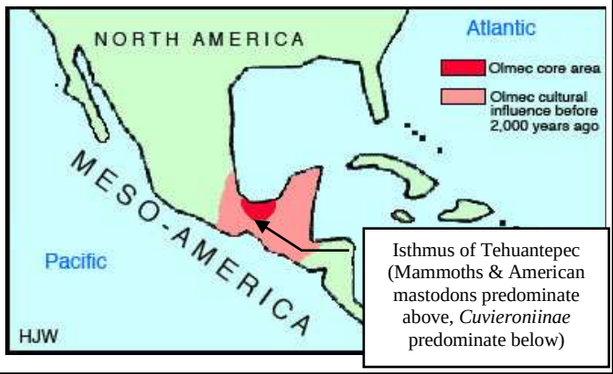
- Few alternatives would have been domesticatable for work, let alone highly domesticatable and highly intelligent
- No alternative would have been more useful than horses, let alone "more especially" useful
- No alternative would likely have been grouped with elephants except for perhaps extinct rhino/hippo animal types
- No alternative would have also had an amazing useful appendage (trunk) except for monkeys (hands)
- Most alternatives would have been translated into English as they were already sufficiently named in 1829
- No alternative has the significant depth of other evidence/rationale as identified in this treatise for *Proboscidea*

A tedious travail through over 100 different American animal types (anything larger than a breadbasket) *tremendously* increases one's confidence -- when considering *all* of the factors *very studiously and meticulously*, there really are no robust or even adequate alternatives. As a camelid (camel or llama) is the most commonly proposed curelom/cumom alternative, and is the second (*very* distant second) best alternative, Appendix V has a very adept deflation of the camelid theory.

Baffling Elephantine Distribution Plausibly Explained

A number of scientists have been mystified by the baffling distribution of mammoths and American mastodons for which the Book of Mormon has an engaging plausible explanation, if you accept both a Noachian flood and that almost all *Proboscidea* remains found are postdiluvian. Mammoths and American mastodons are infrequent below the Isthmus of Tehuantepec (Mexico's "skinny" part) and are nonexistent in South America. The Jaredites have very commonly been identified as the Olmecs, who were centered about this isthmus. Many LDS scholars also believe that subsequently Mulekites/Lehites also kept this isthmus area well populated. While this mammoth/American mastodon geographic bottleneck has puzzled many, the near-continual human population here may have kept the wild mammoth/American mastodon population essentially to the north. And as the Jaredites never lived in South America, this could explain why mammoths or American mastodons have not been found there. Conversely, this same population base may be the primary explanation as to why *Cuvieroniinae* make up most *Proboscidea* finds in far southern Mexico and in Central America and 100% of all finds in South America, but less than 5% of *Proboscidea* in the remainder of North America.

Olmecs (Jaredites) Centered at Isthmus of Tehuantepec



Over 100 Strong Evidences of Far More Recent Elephantine Existence

These three candidates are the only *Proboscidea* thought to have existed in Mesoamerica in relatively recent times. Secular conventional wisdom says these three went extinct before or by a supposed 8000 B.C., however there are endless indicators of far more recent *Proboscidea*. Many of these evidences are only speculative, suggestive, tentative, or indicative. Many are with doubts as to their authenticity, age, association, or artistic aim. But many of these evidences are impressive, persuasive, authoritative, or definitive. While of widely varying merit individually, in totality they make a sweepingly comprehensive and strongly compelling solid case for far more recent American *Proboscidea*. Conventional secular wisdom is that metal working, pottery crafting, mound building, and writing all didn't occur until many millennia after *Proboscidea* were extinct. Yet *each* of these items has 20+ instances of being contemporaneous with *Proboscidea* remains or depictions. Also, *many* other *Proboscidea* bones or depictions have been found with other types of artifacts thought relatively recent or more particularly have come from within civilizations thought relatively recent. Most of the 200+ *Proboscidea* depictions in this treatise are from Latin America, and most of the 100+ Latin American depictions are from the relatively recent advanced civilizations that ranged from Mexico down to Bolivia. Plus, some of the depictions are intricately carved in *very hard* stone – *only* possibly done with steel, another indicator of recency. In total there are well **over 100 instances of *Proboscidea* bones or depictions with evidences *very strongly* indicating *far* more recent existence than a supposed "8000 B.C."**

Additionally, though not determinative, three other types of evidence are somewhat directionally supportive of recency:

- Dozens of non-frozen *Proboscidea* have been found with many different not-yet-fully decomposed body parts; other non-frozen dozens have been found with intact vegetation in their stomachs/stomach areas and/or teeth.
- Many *Proboscidea* bones have been found barely buried, leading some to think they must be more recent. Some *Proboscidea* bones were not buried at all, with the thinking being that the bones clearly would have decomposed had they actually been left exposed to the elements for many millennia.
- Various legends, from over three dozen Indian tribes, are thought descriptive of *Proboscidea*. Some have remarkably elephantine-unique details; however they generally also describe traits not reflective of *Proboscidea*.

While conventional wisdom is that these recent Mesoamerican civilizations couldn't have known *Proboscidea*, this treatise references dozens of professors or authors who believe otherwise. However the issue is still not robustly reviewed -- this treatise has the most comprehensive presentation to date of elephantine Mesoamerican evidence. While the Mesoamerican "elephantine recency" debate between the "but-it-can't-be-elephantine-because-*Proboscidea*-were-already-extinct" crowd versus the "but-the-artwork-is-clearly-elephantine" crowd has continued for a century and a half, largely unknown has been the surprising South American story. A few prime South American examples:

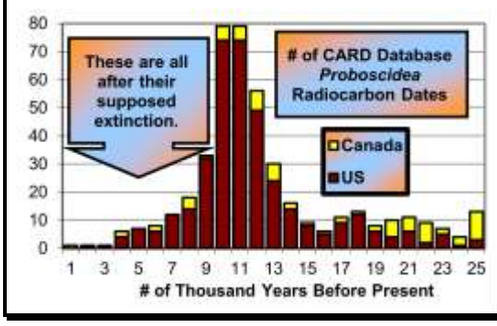
1. In 1851 a French diplomat described two Bolivian museum vases that both showed *Proboscidea* mounted with seating for people.
2. In 1884 a British scientific journal described a landslide-buried *Cuvieroniinae* found inside an ancient paved stone water channel that led to a stone structure; for 25 years books cited this as evidence of recent *Proboscidea* in Colombia.
3. A 1911 Bolivian government report described a "notable" private artifact collection largely of "thin plates of gold", primarily depicting animals, of which "standing out" were the *Proboscidea*.
4. In 1928 very prominent paleontologists excavated near Quito a *Cuvieroniinae* that had been butchered and cooked; with the find was "advanced and decorated" pottery believed to have been from between "A.D. 100 and 400."
5. In reviewing museum artifacts from Cuenca Ecuador, I saw 40+ unmistakable *Proboscidea* depictions in stone or metals/alloys of gold, silver, or copper. Many different sources state that *Proboscidea* depictions are *very* common in this area -- it appears there are likely *vastly* more than 40+ Cuenca depictions. A greater Cuenca area *Cuvieroniinae* was radiocarbon dated to 3530 B.C.

A Gold Depiction from Cuenca

While conventional wisdom says American *Proboscidea* went extinct before or by a supposed 8000 B.C., that's contradicted by 50+ American *Proboscidea* radiocarbon dates that are at least two millennia more recent. However caution is *strongly* warranted, as a *very* significant share of these 50+ dates are possibly, likely, or clearly erroneous, and the great majority are still older than the Jaredite era. On the other hand, young dates receive doubt just because they are young, and thus can get disparaged or not published. Additionally 80-90% of published *Proboscidea* finds have not been radiocarbon dated – thus *far* more would receive young dates if dated. While the 5,000 year interval prior to the supposed 8000 B.C. extinction date is the interval far most likely for an American *Proboscidea* to be dated to, the second most likely 5,000 year interval is the one *after* the supposed 8000 B.C. extinction. However bottom line, *Proboscidea* bone radiocarbon dating, while discrediting and dismantling the 8000 B.C. extinction theory, gives scant support to Jaredite era timing.

Teachings from LDS Church authorities and publications, including the Bible, indicate Adam's mortality began about 6,000 years ago. The six-millennia-since-Adamic-mortality-began has been *very clearly stated over 200 times* by either scripture (ancient and modern), prophets (Joseph Smith and most latter-day prophets), apostles, other general authorities, or church publications. (While it's taught that matter is eternal, what's not taught is when/if a given rock was transformed into its current elements or compounds, when these rocks were amassed into our earth, when our earth was placed into its solar orbit, or when [or how] the Biblical creation of plant/animal life occurred; opinions vary widely.) As radiocarbon dating gives human dates much older than 6,000 years ago, then subject-educated LDS and other similar Biblical Christians may logically conclude there is a problem with older radiocarbon dating. Though radiocarbon dating is brilliant and its physics assumptions about radioactive decay appear very robust, older dating has crucial unavoidably-germane problems with respect to ancient ^{14}C ratios, atmospheric ^{14}C disequilibrium, dubious "trust-me" older calibrations, gaping unanswered logic busts, and very substantial contrarian radiocarbon and other evidence. But whether one postulates conventional Biblical timing or conventional radiocarbon timing, there are abundant 100+ strong evidences of far more recent *Proboscidea*.

Canada/U.S. *Proboscidea* Radiocarbon Dates



Approximate Chronology

~ 4000 B.C.	Adamic Mortality Begins
~ 2344 B.C.	Noachian Flood
~ 2100-2250 B.C.	Peleg's World Division
~ 2100-2200 B.C.	Jaredite Arrival
~ 1500-1800 B.C.	Ether's Elephant Verse
~ 589 B.C.	Lehite Arrival
~ 585 B.C.	Mulekite Arrival

Just as *Proboscidea*/human coexistence evidence suffered strong skepticism for over a century, so today evidence of more recent *Proboscidea* existence is generally disparagingly disbelieved, alternatively interpreted, or elusively overlooked. Some of these evidences have received critiques ranging from valid to vapid, but most have been unnoticed by the relevant scholarly circles. It's very natural and understandable to filter out, doubt, or not scout for what is already disbelieved -- particularly when one thinks (erroneously) only a small handful of evidences potentially flout a nearly universal viewpoint.

Elephantine Summary

Prominent LDS scholars B. H. Roberts, Sidney B. Sperry, Paul R. Cheesman, and Hugh W. Nibley, plus an old *Improvement Era* article, all conceded that Book of Mormon elephants were a scientific difficulty. Elephantine (topic and quantity, lol) disparagement has been trumpeted ad nauseam from anti-LDS critics.

In "The Mastodon of the Book of Ether", an 1866 *Millennial Star* article, Apostle Orson Pratt wrote that the American mastodon was either a curelom or cumom. In an 1868 tabernacle address he said "…elephants, cureloms or mammoths and many other animals…" With two different *Proboscidea* ideas about the cureloms, perhaps the safest interpretation is that Orson Pratt had concluded that cureloms and cumoms were *Proboscidea* without making certain identifications therein.

BYU's Dr. Wade Miller also concluded that mammoths "are elephants" and that American mastodons are a "strong possibility" (one of his two best choices) for a curelom or cumom. After having reviewed this treatise, he now concurs that *Cuvieroniinae* are also an "excellent candidate" for a curelom or cumom.

In summary, the prolific plethora of *Proboscidea* points leads to captivating conclusions that, though "preposterous" in 1829, are now at long last not only plausible and probable, but are potent and persuasive to the promising point of being additional attestations to the actual authenticity and archaeological antiquity of this ancient account from Mormon and Moroni.

Four "Preposterous" 1829 Ideas Now Abundantly Evidenced

	1829			Early 21st Century		
American Elephantine Issue	Expert Opinion	Public Opinion	Evid-ence	Expert Opinion	Public Opinion	Evidence
Strictly Defined Elephants Existed?	No	No	No	Yes	No	Clear yes, bones/DNA close to Asian elephants
Proboscidea Coexisted with Man?	No	No	No	Yes	Yes	Clear yes, 100+ bone & 100+ depiction evidences
Proboscidea Lived in Jaredite Era?	No	No	No	No	No	Strong yes, 100+ evidences from recent advanced civilizations, though scant radiocarbon support
Proboscidea Domesticated?	No	No	No	No	No	Yes but not overpoweringly, only 10+ evidences

P.S.: Fascinating Side Tangents

Though not germane to this treatise's primary purpose, several fascinating side tangents are covered:

- Over 10,000 offshore *Proboscidea* bones have been recovered from the North Sea and at least 50 *Proboscidea* have been found on America's Atlantic Shelf; this treatise explains how *Proboscidea* ended up on the continental shelves.
- Surprisingly, the evidence points to *Proboscidea* having survived into the Lehite era, and the domestication evidences appear to be likely more Lehite than Jaredite.
- This research "trotted" across endless evidences of all types for the horse. While very abundant, the evidence appears to be less numerous than for the *Proboscidea*, except for domestication evidence which appears to be more common.
- The scientific community has finally tilted slightly more to the theory of *Proboscidea* extinction due to hunting instead of due to climate change; Appendix III shows that hunting is the only viable extinction possibility.
- Wouldn't it be exciting to find an "extinct" *Proboscidea* still alive? In Nepal is a small herd of giant odd-head *Proboscidea* that appear to be almost certainly *Stegodons*! The reviewers of this issue appear to all agree these beasts look like *Stegodons*, but many of these understandably timid reviewers generally think that somehow they must be isolated Asian elephants that have mutated into looking like *Stegodons*, because *Stegodons* supposedly "went extinct millions of year ago." But in nearby China the *Stegodon* was more common than Asian elephants and has many recent radiocarbon dates including one at 2150 B.C. Assuming the general consensus is accurate that they really do look like *Stegodons*, then I'm very confident that these are not "mutants", but really are *Stegodons*!

Giant Odd-Head Nepal *Stegodon*?!!

Elephantine Treatise Introduction

From its commencement, the Book of Mormon has been commonly criticized and constantly condemned, the caustic cynicism customarily coming with complete certitude, for "crazed" claims concerning American elephants:[1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] [30] [31] [32] [33] [34] [35] [36] [37] [38]

- From an anti-LDS book: "**Scientific men are unanimously agreed** that elephants never existed on this continent."[39]
- From another anti-LDS book: "…elephant is not a native of America and **never was its inhabitant**."[40]
- From *The Kingdom of the Cults*: "it is clear that… elephants **never existed** on this continent."[41]
- Sandra Tanner wrote of elephants and other items: "**None of these items were here** before the Spaniards."[42]
- From an anti-LDS website: "The Book of Mormon states that there were horses, elephants… Modern day archeologists, geologists, paleontologists and scientists have found **absolutely no evidence** that any Book of Mormon animals or items **ever existed**."[43]
- From a Christian encyclopedia: "The Smithsonian Institute and the archaeological department of Columbia University have gone on official record stating the Book of Mormon's descriptions of the civilizations in America are false from beginning to end. **There were no elephants**…"[44]
- From a 1903 magazine: "Some **ugly knots** there are that cannot be planed away. The Book of Mormon is full of **anachronisms**…" and then the article identifies elephants as one of them.[45]
- The *Economist* wrote that LDS: "…gone through **strenuous intellectual gymnastics** to prove that the elephants and other animals described in the Book of Mormon existed…"[46]
- From a Smithsonian statement criticizing the Book of Mormon: "…the mammoth and mastodon, but all these animals became **extinct around 10,000 B.C.**"[47] [48] [49]
- Several anti-LDS sources list Book of Mormon animals including elephants and then state: "**Evidence of the foregoing animals has not appeared in any form – ceramic representations, bones or skeletal remains, mural art, sculptured art or any other form**."[50] [51] [52] [53] [54] [55] [56] [57]
- From an anti-LDS Yale archaeologist referring to the Book of Mormon: "…elephants [*Proboscidea*] were wiped out in the New World around 8000 B.C. by hunters. **There were no elephants**!"[58]
- And my favorite: "There is even sheer nonsense… elephants, and cureloms and cumoms… [reflecting] **distinct degeneration, vulgarity, charlatanry, and cheapness, -- almost beyond any point yet reached by human delusion**…"[59]

Prominent Book of Mormon scholars have made similar points:[60]

- Elder B. H. Roberts, referring to both elephant domestication and elephant existence during the Jaredite era, wrote: "…it has to be admitted that it constitutes **one of our most embarrassing difficulties**."[61]
- Elders Roberts, referring to *Proboscidea*, wrote: "…their existence is accredited to very ancient times – **to ages long prior to either Nephite or Jaredite times**."[62]
- From a 1933 *Improvement Era* referring to several animals including elephants: "…passages from the Book of Mormon were **quite embarrassing** to believers in, and defenders of, this sacred volume, for, as is well known, many of the animals here named… were not found on this continent at the time of its discovery by Columbus."[63] And later in referring to elephants: "...probably our **most embarrassing difficulty and hardest to meet**."[64]
- BYU's Dr. Paul R. Cheesman wrote: "The elephant, horse, iron, wheat, and the wheel are five areas in which scientists still have **not produced sufficient evidence** for unanimous confirmation of Book of Mormon statements that they all existed."[65]
- BYU's Dr. Sydney B. Sperry wrote: "…domestic animals among ancient American peoples is the **most difficult scientific problem** faced by Book of Mormon scholars."[66]
- Dr. Sperry again: "**We frankly admit that scientific evidence** for the presence on this continent in historic times of a number of the domesticated animals mentioned in the Book of Mormon **is sadly lacking** at the present time."[67]
- BYU's Dr. Hugh W. Nibley wrote: "The mention in the Book of Mormon of certain domesticated animals not found in the New World at the time of Columbus has always been taken as **irrefutable proof of Smith's folly. Elephants head the list**."[68]

The countless criticisms are variations of four fair-minded reasonable objective allegations and one minor weak allegation:

Allegation 1: **"*Proboscidea* existed in ancient America, but elephants never did."**
   a. Today and historically, this has been the dominant view, though a minority/alternative view has been that *Proboscidea* in general (mastodons, mammoths, gomphotheres, etc.) are close enough to be considered as Jaredite elephants.

Allegation 2: **"*Proboscidea* and man never coexisted in the Americas."**
   a. When the Book of Mormon was translated, those who did not accept traditional Biblical timing were nearly universal in the opinion of no *Proboscidea*/man coexistence. For those who did accept traditional Biblical timing, the views were not as uniform, but the more dominant viewpoint was that there was no postdiluvian coexistence. Notwithstanding much evidence and acceptance by many authors later in the 1800s, coexistence didn't become robustly accepted by many of the experts until long into the 20th century. Today practically all students of the issue accept coexistence.

Allegation 3: **"American *Proboscidea* went extinct before or by "8000 B.C.", long before the Jaredite era."**
   a. This is the overwhelmingly dominant view, a minority view is that they lasted a few more thousand years; a *dramatically* smaller view is that they survived into the Jaredite era.
   b. This criticism is problematic for Christians who hold traditional Biblical views as they generally, like traditional LDS, place Adam's fall at about 4000 B.C., and Noah's flood at about 2344 B.C.

Allegation 4: **"*Proboscidea* were never domesticated by ancient Americans."**
   a. This has always been, continuing to today, a near universal opinion.

Allegation 5: **"Cureloms and cumoms are silly and Joseph Smith should be ridiculed for making them up."**
   a. Though not a highly intellectual allegation, anti-LDS have mockingly assumed Joseph made up unknown names in order to have something that couldn't be proven false.

These five allegations, as well as related issues, will be addressed. But first a few cautions and caveats from our attorneys:

- The treatise is thorough (75,000+ words, 2,800+ footnotes) -- most should just skim, and perhaps read the summaries.
- Multiple *Proboscidea* taxonomies exist -- this treatise follows the latest taxonomy from the world's premier Proboscideantologists – even though its authors, I, and most experts disagree with many aspects of it -- primarily that there are still far too many specious species/subspecies.

- Multiple *Proboscidea* terminologies exist – for example a mammoth can also be called an elephant, a *Cuvieronius* can also be called a mastodon or gomphothere. This treatise uses a uniform terminology except for quotes which are left as given [though often with explanations in brackets.] One protocol followed is that "elephantine" refers to all *Proboscidea*, while "elephant" is just a subset within *Proboscidea*.
- The evidences that will follow are subject to **six types of possible interpretative errors**:
  - **Artifact Association** – perhaps the linkage of some *Proboscidea* bones to human artifacts was due to happenchance, or to human involvement long after the *Proboscidea* death.
  - **Antiquity's Age** – perhaps a petroglyph was made only a century ago, or made pre-Noah instead of post-Jared.
  - **Artistic Aim** – perhaps a depiction's intent was not elephantine, but rather of another animal.
  - **Actual Authenticity** – perhaps a sketch was embellished, or the artifact never existed.
  - **Author's Accuracy** – an author's accurate attention to detail is a concern, more so when the source is not first hand
  - **Allegations and Accusations** – some evidences are *not* in error, but have received conspiracy allegations. Some of these allegations have valid points or valid conclusions; others are simplistic, incoherent, and/or factually fraudulent. Understandably, allegations tend to come when evidences violate beliefs. Today allegations abound on evidences that imply more recent *Proboscidea*; historically they were made on all human coexistence evidence.
- This treatise is sometimes lightened up with alliteration, puns, or one-liners; proceed with caution if your mental stability is convulsively allergic to such, lol.
- To avoid repeating the same clarifier – *the* **various *emphases*** in *the* **subsequent *quotes*** are usually added.

Without further ado, the topics are as follows:

A. Cureloms and Cumoms are *Proboscidea*

When a thoughtful friend, a leader in another faith, respectfully challenged the idea of Book of Mormon elephants, I decided to investigate further. While my friend became persuaded that American elephants had existed, he became even more enamored and impressed with my proposal that the cureloms and cumoms were some sort of *Proboscidea*. Indeed as I kept studying, I was startled at the depth of support for this unusual claim. The following umpteen sections make numerous points that individually range from tenuous to terrific, but that *collectively together in synergistic summation* build a *surprisingly* very compelling case for cureloms and cumoms ("cu-oms" for short) being some type of *Proboscidea*.

A.1 Similar Words Due to Similar Animals

It's believed that Book of Mormon names were translated into an English spelling of the original language word, such as "Nephi."[69] [70] Cureloms (kū-re´ lums) and cumoms (kū´ mums) are also widely accepted as being as originally spoken -- why would there be any other reason for this word selection?[71] [72] [73] [74] [75] (The letter "s" is an English translation of the plural word, and the pronunciation and accentuation are likely modern assumptions.)[76] [77] [78] Since both start with "cu" (kū) and end with "om" (um), it is almost certain that these two received alike names because, as reviewed in the *Improvement Era*, they were closely related to each other.[79] [80] (Why is a "kū" sound spelled "cu"? Because in English "cu" is an order of magnitude more common than "ku" for the "kū" sound.)[81] The following methods help quantify the random odds of word similarity:

1. Independent of any particular language, if we estimate that the chance for a single-consonant-sound/vowel-ending first syllable is 50%, for a consonant-ending word is 75%, and for random repetition of the same consonant sound is 8% and for the same vowel sound is 20% -- this then would mean the random odds of repeating the "cu" with the "om" are about one in 10,000 (10,400).[82] [83] [84]
2. An assessment done by downloading a long English list of animals and then analyzing via Excel formulas, found that the odds of a single-word similar name (by the above rules) for unrelated animals is about one in 38,000.[85]
3. A search for "cu-om" matches in a 250,000 word English dictionary found two matches (cubiculum and cuminum) – reflecting odds of about one in 125,000.[86]
4. No "cu-om" matches were found in a list of 12,000 Hebrew nouns, in either the singular or plural form.[87]
5. A review of a 24,000 word Egyptian dictionary found no matches to the "cu-om" words.[88] [89]
6. In reviewing two Akkadian dictionaries, one of 7,700 words and the other of about 22,000 words, tentatively five potential matches to "cu-oms" were found -- thus odds of about one in 4,400.[90] [91] [92]
7. A review of 3,800 Sumerian words found one potential "cu-om" match, thus odds of one in 3,800.[93] [94]

- Akkadian and Sumerian were reviewed as some believe the Jaredite language may have been related to ancient Mesopotamian languages from just after the Tower of Babel. (My view is tentatively more pessimistic about this likelihood; Appendix V has more detail.)

These analyses, with their weighted likelihood at about one in 10,000 (11,300 more precisely), help show that statistically the similar "cu-om" names are almost certainly due to reflecting similar animals, not due to chance.

If math is not your number, see how long it takes you to, without assistance, name two unrelated (non-dinosaur) single-word animals that rhyme, end in consonant sounds, and share a consonant-bearing opening syllable. Not something that shares root words like bullfrog and bulldog – not something that is close like chickadee and chickaree or nautilus and nauplius – but something like martin and marlin, beagle and beetle, or xenopus and xenotarosaurus. (After reviewing all of this, if you still believe the two "cu-oms" are only very likely related but not almost certainly related, then perhaps you are the target marketing audience for lotteries, lol.)

Whether linguists would think such a naming pattern likely for Hebrew, modified Hebrew, or Reformed Egyptian is likely not relevant. It is generally thought that the "cu-oms" were Jaredite names obtained via their records or via Coriantumr.[95] Given "the widely held belief that the founding members of the Jaredite civilization preserved the Adamic language", we may speculate that when the "cu-oms" were named, the language was a more pure language that may have been more logical in giving similar animals similar names.[96] [97] [98] However a very bona fide alternative is that Lehites or Mulekites simply created similar names for them – particularly if the Lehites or Mulekites encountered them before encountering Jaredite names (later it will be shown that *Proboscidea* almost certainly survived into the Lehite era). But aside from any particular linguistic trail, the similarity of the "cu-om" names statistically means that they are almost certainly similar to each other.

Two alternative theories have been floated about the rhyming of "cureloms" and "cumoms", but as they are both easily deflated, their review has been relegated to Appendix V. Additionally, a review of Hebrew, Egyptian, Akkadian, and Sumerian finds no even mediocre candidates for parent or related words.[99] [100]

A.2 Thematic Verses

Reviewing the content of each verse in Ether 9:17-19 indicates that each verse has a theme:

17: Inanimate Material Possessions
18: Animals Primarily for Food
19: Animals Primarily for Work

Thus being in the verse listing types of animals used for work, it's highly likely they were primarily work animals.[101] Also, verse 18 ends with an all-inclusive "and also many other kinds of animals which were useful for food" while verse 19 animals are described as "useful unto man", this makes it even more likely that additional animals in the next verse would be used for work, not primarily used for food.[102] These two factors together make it highly probable that cureloms and cumoms were primarily work animals. Elder B. H. Roberts and Elder George Reynolds also said the passage shows the cureloms and cumoms were work animals.[103] [104]

A.3 Groupings of Similar Nouns

Both cureloms and cumoms are in the noun group also containing elephants. The 16 other nouns listed in verses 17-19 are ordered and grouped with the most similar of the other nouns (this same pattern is also in Ether 10:23-24 and elsewhere in the Book of Mormon):

17: Inanimate Material Possessions:
+ Fruit, grain
+ Silks, fine linen
+ Gold, silver, precious things
18: Animals Primarily for Food:
+ Cattle, oxen, cows
+ Sheep, swine, goats
+ Also many other animals useful for food
19: Animals Primarily for Work:
+ Horses, asses
+ Elephants, cureloms, cumoms

Ether 9:16-19
…insomuch that they became exceedingly rich –
17. Having all manner of **fruit**, and of **grain**, and of **silks**, and of **fine linen**, and of **gold**, and of **silver**, and of **precious things**;
18. And also all manner of **cattle**, of **oxen**, and **cows**, and of **sheep**, and of **swine**, and of **goats**, and also many **other kinds of animals** which were useful for the food of man.
19. And they also had **horses**, and **asses**, and *there were* ***elephants and cureloms and cumoms***; all of which were *useful* unto man, and *more especially* the ***elephants and cureloms and cumoms***.

The level of similarity may vary, as gold is perhaps closer to silver than sheep are to goats, but all nouns are grouped by closest similarity. Thus this grouping pattern means "cu-oms" are most likely closer to elephants than to horses, cattle, or to any other listed animal. If the "cu-oms" were camelids or llamas, they would more likely be listed with horses.

A.4 Uniquely Inclusive Wording?

This section's points are very minor and very tenuous; almost all readers are best served by skipping this section.

A.4.a No Comma

The wording of these last three animals is uniquely inclusive, as all of the 16 previous objects are separated from each other by a comma -- while both times the elephant/ "cu-om" separations do not use any comma. (The same comma pattern is in Ether 10:23-24.) This no-comma increased-inclusivity may possibly be due to these three animals having relationships more close than the closeness within the noun groups of the 16 prior objects. And *Proboscidea* subgroupings would be arguably closer to each other than gold to silver, sheep to swine, etc. To list three items with "ands" but not use commas is a rare pattern in Ether and when used, the items are quite similar.[105] On the other hand, as the original Book of Mormon edition did not have commas separating these animals, if the subsequent editing was free of inspiration or insight, then this paragraph's point would be eviscerated.[106] [107] [108]

Within the 16 prior objects, the anomalous wording is the "of cattle, of oxen, and cows" – "oxen" isn't preceded by an "and", and "cows" are not preceded by an "of". Is this "and/of" variation due to happenchance, or to cattle, oxen, and cows having more internal similarity than other groupings? Of the 16 objects, cattle, oxen, and cows are the most homogeneous grouping – thus this may reinforce that more similar items are treated in a more inclusive writing style. Thus this may perhaps increase the speculative conjecture that the "cu-om's" lack of commas may suggest more inclusivity.

A.4.b All Manner Of

The objects in verses 17-18 are prefaced with "all manner of", but the elephants and "cu-oms" are not. This may be reflective of the elephants and "cu-oms" representing three "Jaredite-single-genera-equivalents" while the other terms are representing Jaredite *groups* – like of many types of fruits, many types of goats, many types of gold alloys/purities/metalworking, etc. Later in this treatise when the specific identities of these three are proposed, their likely single-genera-Jaredite-viewpoint will be evident. However "horses and asses" are also not prefaced with "all manner of" – possibly horses and asses were also thought of as singular identifications -- or possibly this wording is all due to happenchance or other reasons, which would refute this paragraph's speculation.

Object Wording/Punctuation Variations

Prefatory	Object	Separatory
Having all manner of	fruit	comma
and of	grain	comma
and of	silks	comma
and of	fine linen	comma
and of	gold	comma
and of	silver	comma
and of	precious things	semicolon
And also all manner of	cattle	comma
of	oxen	comma
and	cows	comma
and of	sheep	comma
and of	swine	comma
and of	goats	comma
and also	many other kinds of animals…	period
And they also had	horses	comma
and	asses	comma
and there were	elephants	
and	cureloms	
and	cumoms	semicolon
…more especially	elephants	
and	cureloms	
and	cumoms	period

A.4.c Inclusivity Summary

The speculations in this section are quite tenuous. Nevertheless, these tenuous observations do not diminish the far more important observations about "cu-om" naming similarity and similar-noun groups within themed verses -- *collectively* they make a highly effective argument that "cu-oms" are very likely:

1. Related closely to each other
2. Primarily or exclusively work animals
3. More closely related to elephants than to any other animal in these two verses
4. Perhaps more closely related with elephants than the closeness existing within most noun groups in these verses

A.5 Odd Intentional Interruption to Replace "Had" with "There Were"

All 16 prior objects in these three verses are prefaced by "having" or "had" – but these three animals are then curiously prefaced by a "there were." This is not from random usage of various introductory wording -- the "having" in verse 17 is followed by 14 objects or animals, while the "had" in verse 19 is followed by only two – then the sentence is unusually interrupted for the sole purpose of altering the prefatory wording from "had" to "there were." This *mid-sentence* change means it is almost certainly purpose-driven instead of happenchance.

All other Book of Mormon animals prefaced by a "there were" or a "there was" were animals not under human control.[109] And the several dozen wild animal references in the Book of Mormon were never even once prefaced with a "having" or a "had."[110] Was a possessive terminology avoided here because the passage referred to both tame *and* wild elephants and "cu-oms" – and that the wild ones had to be in the reference because tame ones came from training wild ones? Tame elephants usually come from being captured due to the following:[111] [112] [113] [114] [115] [116] [117] [118] [119] [120]

1. Wild elephants are *surprisingly* easily tamed.
2. Elephants take a decade plus to mature while consuming enormous quantities, thus taming wild ones is far more economical, timely, and easy to plan.
3. Females can now work instead of being consumed/ burdened/distracted with 22-month pregnancies and mothering which includes years of nursing.
4. It is somewhat difficult to breed domesticated elephants.
5. Elephants that grow up wild are more obedient as they are more fearful of man.

Ether 9:16-19
…insomuch that they became exceedingly rich –
Having all manner of fruit, and of grain, and of silks, and of fine linen, and of gold, and of silver, and of precious things;
And also all manner of cattle, of oxen, and cows, and of sheep, and of swine, and of goats, and also many other kinds of animals which were useful for the food of man.
And they also had horses, and asses, **and there were** elephants and cureloms and cumoms; all of which were useful unto man, and more especially the elephants and cureloms and cumoms.

Other domesticated animals also had counterparts in the wild (the Lehites found wild horses, asses, cows, oxen, goats, and other "wild animals, which were for the use of man") -- but *only* Proboscidea usage would likely have been based primarily or exclusively on captivating wild counterparts, thus requiring a "there were" phrase to refer to *both* tame *and* wild.[121] An alternative or supplemental need to also refer to wild *Proboscidea* may be because the wild *Proboscidea* were perhaps sometimes hunted for food, most likely in less populated areas on the periphery of the Jaredite civilization. Additionally, another supplemental cause for this wording may be that perhaps the Jaredites were aware of a very high quantity of wild *Proboscidea*. The intent to refer to both tame *and* wild is a potential *phenomenal* fit for a **highly-unusual clearly-intentional** mid-sentence change to a different type of wording. What alternative credibly explains this non-happenchance wording change?

A.6 Why Untranslated?

All Book of Mormon animals were translated except for cureloms and cumoms. A decent argument could be made either way as to the feasibility of translating in 1829 the mammoth. But all other American *Proboscidea* groupings could ***not*** have been translated in 1829; the following sections will explain.

A.6.a Why Untranslated – Confusing/Competing/Changing/Controversial/Chaotic Classifications

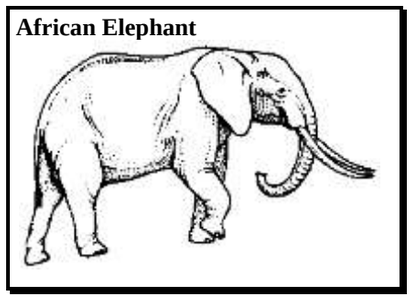
To understand why most American *Proboscidea* couldn't be translated in 1829, it helps to first understand some of the significant confusing chaos that exists in *Proboscidea* classification.[122] [123] [124] [125] [126] [127]

A.6.a.1 Why Untranslated -- Species/Subspecies

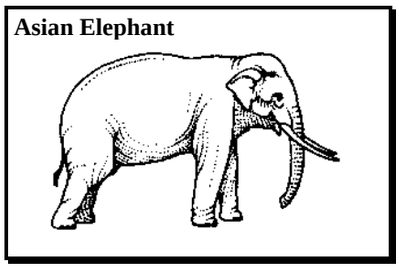
By 1939 some 552 separate *Proboscidea* species/subspecies had been proposed; more current literature generally recognizes totals from 136 to 352.[128] [129] [130] [131] [132] [133] [134] [135] Of 448 species/subspecies in an authoritative 1946 classification, only 39 (9%) had the same name in an authoritative 1996 classification (generally the differences weren't due to name changes, but rather boundary definition changes such as "mergers", even the 39 don't necessarily have known/unchanged physical criteria).[136] The authoritative "Proboscidean Bible", published in 1996, used 162 as the number of species/subspecies; this 162 was explained as follows:[137]

> "Taxa listed in this appendix and those species given in the synonymy section below are not intended to be exhaustive. The estimated total of 162 species and subspecies of Proboscideans is an average of 136-188, and does not include many of the subspecies listed in the second part of this appendix… nor does it include the 21 taxa listed below under '*Nomina dubia*' (12), '*Nomina nuda'* (1), '*Nomina oblita'* (4), and '*Nomina vana'* (4). This total also does not include the species listed under a 'group' (see notes C1, G2, and Z1 below), a possible addition of up to 11 species."[138]

The preeminent Proboscideantologists, that produced the 1996 "Proboscidean Bible", published an update in 2005 – adding 13 more species, bringing the total to 175.[139] Thus the current "most authoritative" count of 175 reflects an average of a large range and ignores several dozen other uncertain species/subspecies. These experts believe many more consolidations are needed; they basically leave many of the species in due to tradition, inertia, confusion, and lack of consensus.[140]

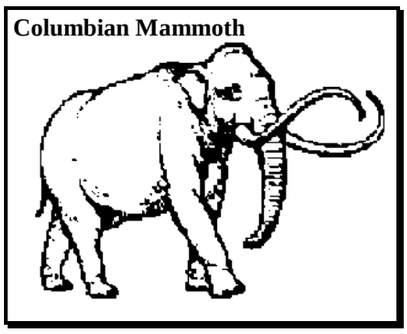


Difficulty with *extinct* species is more understandable when one realizes there are competing views even today about the correct species/subspecies for *living* elephants.[141] The two African elephant species have often been considered from one to three species, and there have been a variety of opinions on how many Asian elephant subspecies there are.[142] [143] [144] For example, a 1955 classification identified the Asian elephant as having one species with eight living and 14 total subspecies, whereas today three or four living subspecies are generally recognized.[145] [146] [147]



A.6.a.2 Why Untranslated -- Genera

Genera have more clarity than species, right? Yes, but very significant problems still exist. A leading 1936 review proposed 44 *Proboscidea* genera; only 28 carried of these carried through to the 38 proposed in the 1996 "Proboscidean Bible."[148] Of these 38, 37 carried into the 42 genera recognized in the 2005 update.[149] And some of these 42 genera are already discarded in many recent publications; even the experts that counted the 42 don't believe in some of them, but left them in due to tradition, inertia, confusion, lack of consensus, etc.[150]

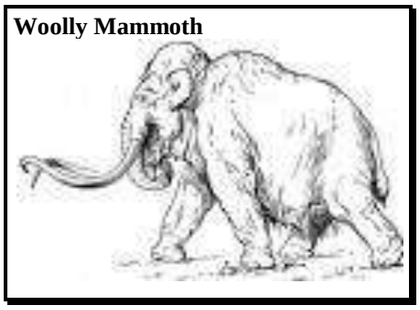


A.6.a.3 Why Untranslated -- Families

Of the eight families in the 1936 classification, three of them carried into the 10 families in the 2005 classification; the 2005 classification write-up also discusses four other possible families.[151] [152] The variety in approaches in subfamilies and superfamilies is also very significant.[153] [154] [155] There is even debate today over whether some of the Proboscidean families even belong within *Proboscidea*.[156]

A.6.b Why Untranslated – Specific Candidates

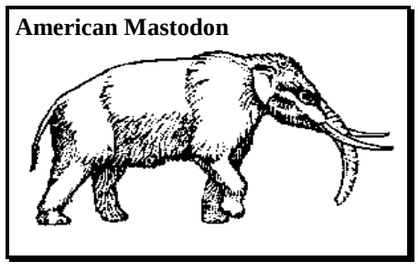
Having reviewed the significant classification confusion and chaos, the following will review the translation possibility for a few specific American *Proboscidea*.



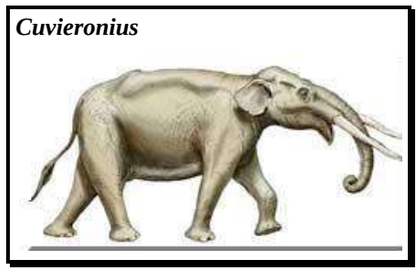
A.6.b.1 Why Untranslated -- American Mastodon

If one of the "cu-oms" was an "American mastodon", could it have been translated as such in 1829? A Google Book/News/Scholar search finds just three instances of this term by 1829 – in the first "American" is just an adjective, in the second it may be an adjective or part of the name, and in the third a *Cuvieroniinae* is being discussed.[157] [158] [159] Thus clearly a "cu-om" could not have been translated into "American mastodon" in 1829.

Could the American mastodon have been translated as "mastodon?" A Google Book/News/Scholar search finds 351 usages of "mastodon" by 1829.[160] However the term "mastodon" has many different meanings both then and now.[161] [162] [163] While its most frequent U.S. usage today is in referring to the American mastodon, it is also very often used now to refer to the American mastodon's larger family, or to many or to all gomphotheres. One example -- the *Cuvieroniinae* are usually called mastodons (primarily found in Latin American, "mastodontes" in Spanish/Portuguese). A Google search (in English or Spanish) finds large magnitudes of more hits of "mastodon" with "South America", than for any of the names within *Cuvieroniinae.* (To be covered later, American mastodons never lived in South America.) Thus an "American mastodon" "cu-om" could not have been translated into "mastodon" in 1829 or now.



Were there other terms used to describe the American mastodon? Yes, many other names were used, but they were of varying establishment and durability. Very early on the American mastodon was frequently called a mammoth.[164] Referring to 19th century American mastodon names, one museum wrote: "Common names in this country were The Great American Incognitum, The Leviathan Missourium, The Carnivorous Elephant, Ohio Incognitum, Elephas americanus, a Behemoth, The Pseudelephant, Le Grande Mastodonte, Mastodon giganteus, and many others."[165] None of these alternatives were established enough to become a translated name.



Was the American mastodon clearly named and understood at least within scientific circles by 1829? No. For today's American mastodon's scientific name, *Mammut americanum*, the species name was proposed in 1805 and took a while to catch on.[166] While the American mastodon is recognized today essentially as a single species, it had been split or named into over 20 different species by 1852.[167] A *Proboscidea* book author in 1878 said: "the number of the varieties of the mastodon have been variously given by authors, from four to thirty, owing to the differences which each thought should constitute a distinct species."[168] No scientific taxonomic name could have been something an "American mastodon" "cu-om" could have been translated into in 1829.

By reviewing the above history, it is quite clear that an American mastodon "cu-om" could *not* have been translated in 1829.

A.6.b.2 Why Untranslated -- *Cuvieroniinae*

Even today few people are familiar with the taxonomic subfamily "*Cuvieroniinae*"; this grouping, term, and its alternatives weren't created until the 1900s, far after the Book of Mormon.[169] [170] Within *Cuvieroniinae* the four genera are:[171] [172] [173] [174] [175]

- *Cuvieronius* -- named in 1923 (1923 is normally given, but the term has existed since 1814, many other past names)
- *Stegomastodon* -- named in 1912 (1912 is normally given, but the term has existed since 1888, many other past names)

- *Haplomastodon* -- named in 1950 (rare, 1950 is normally given, but the term has existed since 1920, this genus is now commonly *not* recognized, but was in the taxonomy selected for this treatise)
- *Notiomastodon* -- named in 1929 (rare, today this genus receives even less acceptance than *Haplomastodon*)

The chaotic *Cuvieroniinae* members have had over 20 different synonyms and groupings.[176] [177] As an example of the chaos, in 1936 the world's leading Proboscideantologist named as *Cuvieronius* a grouping that is today not recognized independent from the *Stegomastodon*.[178] [179] One reviewer listed 51 different historical South American Proboscidean genera/specie names that today this reviewer would call all either *Cuvieronius* or *Stegomastodon*.[180] *Cuvieroniinae* itself has had various names, either in the past or today, with either the same or somewhat different or somewhat unclear definitions. While hard to sort out, it appears the various alternative (or related?) names have included *Notorostrinae*, *Cuvieroniini*, and *Humboldtinae* - and by some listings also *Brevirostrinae*, *Notiomastodontinae*, *Notiomastodontina*, and *Notiomastodonte*; all of these names were given in the 1900s.[181] Clearly a *Cuvieroniinae* "cu-om" could not have been translated in 1829.

A.6.c Why Untranslated – Non-Skeletal Zoological Differences?

Another possibility is that the three Jaredite classifications had to do with zoological features that cannot be observed by exhuming skeletons. Other than woolly mammoths (frozen carcasses), we have rather limited confirmation as to what all of these American *Proboscidea* looked like. For example, would skeletal remains alone explain why we think of and name zebras and horses so differently? Though not very likely, it's possible the key naming factors had to do with color, hair, ears, trunks, fat shapes, behavior, skills, etc. -- but not primarily skeletal differences.

A.6.d Why Untranslated – Non-Zoology Categories?

Additionally, it's possible that these were not "clean" zoological groupings -- but rather partly, primarily, or entirely non-zoological groupings. For example the Ether 9:18 reference to cattle, oxen, and cows -- this does not cleanly reflect three separate zoological classifications in English. Rather many of us often think of these as usage-based -- meat from cattle, work from oxen, and milk from cows. Possibly these Jaredite *Proboscidea* names were primarily three usage categories – such as usage for logging, transportation, and construction.

The non-zoological possibilities are much more complex than just usage groupings. For example, the various meanings in English of the term "cattle" have been related to: sex, castration, age, whether a parent, whether horned, industry, class of people, usage, level of domestication – and has varied by which country or region, and what point in history – additionally meanings have at times been unclear and intent has varied by the user.[182] One or more of these non-zoological factors may have been at play in the Jaredite naming of *Proboscidea*.

However, with the first group member translated into a zoological term ("elephant"), this would greatly reduce the chances that the "cu-oms" are non-zoological groupings. Additionally, other than the probable exception of cattle/oxen/cows, all other Book of Mormon animal designations appear to be zoologically based. In summary, the odds are quite low that the "cu-oms" were defined by non-zoological distinctions.

A.6.e Why Untranslated – Summary

Though only the American mastodon and *Cuvieroniinae* were reviewed above, every single other ancient American *Proboscidea*, outside of the possible exception of the mammoths, clearly could **not** have been translated in 1829. Thus *Proboscidea* are an excellent match for being untranslated "cu-oms."

A.7 Useful for Work: *Proboscidea* have Unparalleled Usefulness!

The following sections show why *Proboscidea* would have been simply superb candidates for being useful for work.

A.7.a Useful for Work: Called "Useful", Then Repetitively Engraved to State "More Especially" Useful

The Book of Mormon author realized the original "useful" for work description was such a *huge* understatement that he had to add a second difficult metal engravement of their names just to state the *more especial* aspect of their usefulness![183] Not just "useful", not just "more useful", not just "especially useful", not just "more especially useful", but a second arduous engraving solely for the purpose of coming back and adding "more especially" to the "useful" description. A repetitive addition is certainly a far stronger statement than if they had just been described that way the first time. *Proboscidea* would be an excellent match for an emphasized "more especially useful" for work – the following several sections will explain why.

Ether 9:19
And they also had horses, and asses, and there were **elephants and cureloms and cumoms**; all of which were useful unto man, and *more especially* the **elephants and cureloms and cumoms**.

A.7.b Useful for Work: Elephants Easily Tamed Today

Proboscidea are great candidates for work as shown by how elephants have been used for work throughout history. One estimate is that 15,000 elephants are used today for work (mostly in Myanmar) – about a quarter of all Asian elephants.[184] [185] [186] [187] Elephants are easily domesticated: "The elephant is a striking exception to the rule that wild animals captured when full grown can rarely be domesticated."[188] Some elephants have reportedly been tamed in just two days, though the norm is a few weeks.[189] Extinct *Proboscidea* would likely have had similar "extraordinary docility"; it's thought extinct *Proboscidea* would likely have behavior similar to living *Proboscidea*.[190] [191] [192]

A.7.c Useful for Work: Super Strength

Listed as useful as elephants and more useful than horses, this may suggest the "cu-oms" were very large beasts of burden.[193] With its large size, *Proboscidea* could have carried people easily loaded by its trunk, or have hauled tons of weight. Today elephants used for work will routinely drag items like logs of up to 9,000 pounds over not smooth terrain.[194] [195] The Columbian mammoths, with shoulder heights up to 13 feet or more, were larger than today's elephants and thus could have handled even larger loads.[196] American mastodons were about 8-10 feet tall, but stockier than today's elephants.[197] Elder Orson Pratt in a tabernacle address once said "…the elephant and curelom and cumom, very huge animals..."[198]

A.7.d Useful for Work: Terrific Trunk

A trunk is like a Herculean hand with ladder-like latitude, and a keen nose roamingly detached from the face.[199] [200] [201] One dissection counted 148,000 trunk muscles; these muscles can lift very heavy weights, up to 600 pounds by one account.[202] [203] [204] [205] Elephant trunk dexterity is helped by "fingers" (raised portions of the tip) – thus elephants can handle small items such a bean, single blade of grass -- even a dime![206] [207] [208] [209] They have an outstanding sense of smell – "Their chemical senses, especially olfaction, are highly developed."[210] "The elephant's nose is believed to be five times as sensitive as that of a bloodhound, a remarkable olfaction capacity."[211] Trunks are simply unbelievably and phenomenally useful!

A.7.e Useful for Work: Incredible Intelligence

Elephants are legendary for their intelligence and memory. They can remember geography not visited for many years.[212] In dry areas, elephants have reportedly dug wells up to ten feet deep, and then waited hours until water came into them.[213] [214] "[Elephant] memory is far better than that of horses given similar tests."[215] Elephants have been called by some the single most intelligent animal.[216] Being intelligent enough to respond to commands would be phenomenally useful; some elephants can reliably memorize 70-100 different verbal orders, others over 200 orders.[217] [218] [219] [220]

A.7.f Useful for Work: Further Factors

Many other factors would make *Proboscidea* phenomenally useful:

- **Tusks**: Elephants use tusks to push, dig, or tilt something for the trunk to then pick up.[221] [222]
- **Night Vision**: Elephant vision, though not very good, does allow them to be functional at night.
- **Hearing**: Their keen ears and deep voice allow communication, even over miles at pitches inaudible to human ears.[223] [224] [225] [226] Interestingly, elephants, similar to some small animals, are capable of listening to ground vibrations -- from many miles away via their feet or trunk, including warning signals from other elephants.[227]
- **Speed**: Asian elephants walk at four miles per hour but can charge at 30 miles/hour.[228]
- **Agility**: Circus tricks, such as balancing on large balls, demonstrate *amazing* elephant agility.[229] [230]
- **Environment/Food Flexibility**: "Neither captive or wild elephants show much discomfort in cold weather, indicating they have a wide comfort zone for air temperatures."[231] Elephants thrive in a wide variety of environments from desert to tropical jungle; they also live on a wide variety of vegetation making it easier to care for them.[232] [233] [234] [235] [236]
- **Stamina**: With great stamina, elephants can travel 60 plus miles in a day, with one source indicating up to twice that.[237] [238] Herds can travel hundreds of miles in treks; one studied herd travels 600 miles each way in annual treks.[239] [240] [241] Elephants can cross hot deserts without food or water for days.
- **Long Hours**: Often taking only one to four hours of sleep a night, elephants can work long hours.[242] [243] [244] [245]
- **Swimming**: With trunks held high, elephants are confident swimmers that could have been used to cross rivers or lakes; Asian elephants have reportedly been known to swim on their own to islands 30 miles away.[246] [247] [248] [249]
- **Longevity**: Their long life of 60 plus years or longer, would mean a great payoff for the time spent training.[250] [251]

A.7.g Useful for Work: Supplying Stone?

Thousands of ancient stone cities exist throughout the Americas.[252] [253] *Proboscidea* evidence (remains or depictions) has been found extensively in Mexico, somewhat in all eight Central American countries (one article listed 74 skeletal remains in Central America), and frequently in northwestern/western South America that had ancient advanced civilizations.[254] [255] [256] [257] [258] As early as 1615 the Spaniards wrote that these bones were "all over New Spain"; "all historians" from this early period wrote of giant bones found throughout Mesoamerica and northwestern South America.[259] [260]

Finding abundant mammoth bones near the great Teotihuacan pyramids (the largest has three million tons of rock), natives told the Spaniards that they must have been bones from giant people who built the pyramids.[261] [262] [263] [264] [265] [266] The "Father of Mexican Anthropology" excavated mammoths at Teotihuacan.[267] [268] "So many of these immense bones have been disinterred in the Valley of Teotihuacan that before the conquest, people named a site *near the pyramids* Acolman… [meaning] 'where there are giants.'"[269] [270] Were these *Proboscidea* bones there because these animals were used to build the city's huge structures? So many mammoths have been found in the Valley of Mexico (home of Mexico City, Teotihuacan, and many ruins) that a book has been written on them, which includes references to many other publications about mammoths in this valley.[271] One article said: "… it seems like you can not dig a hole in the basin of the Valley of Mexico without finding remains of these prehistoric animals [mammoths]."[272]

At Sacsayhuaman near Cuzco are walls of huge stones (the specks in the picture are people) thought by some to have come from a quarry 25 miles away over rough terrain; one stone reportedly weighs 360 tons.[273] [274] [275] [276] [277] *Proboscidea* have been found near Cuzco; also found nearby are six-meter wide very well-built stone roads.[278] [279] [280] [281]

Sacsayhuaman, Cuzco Peru[282]

The ruins at Tiwanaku (near Lake Titicaca) Bolivia have huge stones pulled from miles away; some of the stones are several hundreds of tons.[284] [285] Tiwanaku has two well-known stone depictions often called *Proboscidea* (many doubt whether these two are *Proboscidea*, including myself), has one other *Proboscidea* depiction, and has had *Proboscidea* skeletons found there; at least three huge stone wheels have been found at Tiwanaku.[286] [287] [288] [289] [290] [291] [292] [293] *Cuvieroniinae* have been found around Lake Titicaca.[294] Of course if *Proboscidea* were involved with building either Cuzco or Tiwanaku, these would have been Lehite in nature, not Jaredite, as the Jaredites only lived in the "land northward" per the Book of Mormon.[295]

One of the Tiwanaku Giant Stone Wheels[283]

These ancient huge stones are even more amazing when one considers how they were sometimes moved great distances over steep terrains, and how they were amazingly sculpted and then set in place such that paper can't slide in between them. *Proboscidea* could have far more easily moved stone if wheels were used. Conventional (though goofy) wisdom says ancient Americans didn't use transportation wheels. (The laws of science and economics have traditionally guided man to making wheels of wood or metal; exposed wood, iron, and steel simply decomposes/rusts and simply doesn't survive millennia.)

A Columbian mammoth's weight was about that of 100 men, could their strength have replaced 100 men? Perhaps *Proboscidea* pulled stones on wheeled vehicles over the exceptionally solid ancient stone highway network that ran throughout much of Mesoamerica. Was an exceptionally large stone dragged by 1,000 men, pulled on a wheeled vehicle by 100 men, or pulled on a wheeled vehicle over a fairly smooth/sturdy surface by just one or two *Proboscidea*? Assuming they were used to help build this vast array of stone cities, we could fully understand the remarkable emphasis on their usefulness.

A.7.h Useful for Work: Lumber Logging?

Thousands of elephants were used for logging in Thailand until a ban in 1989; they are still heavily used for logging in Myanmar and also somewhat in India.[296] [297] [298] Like some modern elephants, ancient *Proboscidea* may have been used largely for timber.[299] Not only for hauling tons at a time, but also for felling trees (they have knocked over trees three feet in

diameter), clearing fields of logs, and positioning logs in construction.[300] [301] [302] Logging was apparently a great Jaredite and Nephite industry, logging and field clearing is the probable cause of the timber scarcity in the Book of Mormon.[303]

However the timber scarcity may have been due to *Proboscidea* in a different way. Not only do *Proboscidea* eat 300 plus pounds of vegetation a day (some mammoth estimates are as high as 800 pounds) thus destroying branches/leaves on a tree, but also they kill trees by stripping the bark or knocking them over to obtain the leaves.[304] [305] Aside from a *slight* lion-family risk to baby elephants, man is their only predator today to prevent them from multiplying and overwhelming the environment; consequently elephants are culled today to protect the vegetation in several parts of Africa.[306] [307] [308] Mirroring modern reproductivity, ancient elephants, if not encumbered with premature death, would have likely multiplied over a thousand fold (much more by some estimates) in two centuries if unchecked.[309] [310] [311] If they outlived the Jaredites, eventually significant damage would likely have occurred, only tempered by the future presence of Mulekites and Lehites.

A.7.i Useful for Work: Of Tools and Beasts

Using "cu-oms" for handling stone or timber would have required tools. This may be what triggered a verse (Ether 10:26) on the subject of tools for *beasts*. Verse 26 is perhaps somewhat less likely to have been primarily referring to horses or oxen for agriculture given that verse 25 just listed tools for five types of agricultural activities, some of which may perhaps have been for using horses and oxen.

Ether 10:25-26
And they did make all manner of tools to till the earth, both to plow and to sow, to reap and to hoe, and also to thrash.
And they did make all manner of tools with which they did work their beasts.

What is a beast? Ether 6:4 refers to preparing "food for their flocks and herds, and whatsoever beast or animal or fowl."[312] Thus it appears a Jaredite "beast" may have a somewhat narrow definition. The word "beast" has some connotation of strong and large, four-footed, and sometimes perhaps wild and/or ferocious.[313] While "animal" only appears six times in the Book of Mormon, half of which are tame, "beast" appears 36 times and is almost always wild.[314] Interestingly, except for an unclear sacrificial reference (Alma 34:10) the four Book of Mormon references to tame "beasts" are all Jaredite, and each of these four could have been referring partly, largely, or entirely to *Proboscidea*.[315] [316] [317] [318]

With all of these factors put together, it appears verse 26 may have been referring largely to *Proboscidea*.

A.7.j Useful for Work: Summary

To engrave again the statement to add in "more especially" to the prior comment that the elephants and cureloms and cumoms were useful for work, indicates how particularly useful they were. Extinct *Proboscidea* would match this description extremely well with phenomenal docility, strength, trunk abilities, intelligence, and many other talents. And if *Proboscidea* were the key to the construction of endless stone and wood cities, one can understand the great emphasis on their usefulness.

A.8 Very Common Animals

As few Jaredite animals are mentioned and since the elephants and "cu-oms" were described as more especially useful, they were probably quite common, particularly given the very large size of the Jaredite nation.[319] Therefore one might expect their remains to be quite common. *Proboscidea* remains have been found in all mainland states except Rhode Island.[320] [321] There have been various North American *Proboscidea* counts/estimates:[322] [323] [324] [325] [326] [327] [328] [329]

- **Mammoths in North America (none are in South America)**
  - A prominent mammoth researcher in 1984 counted 1427 mammoth sites in North America.[330] [331]
  - This same researcher wrote later in 1984: "A recent literature search has provided more than 1,500 locations for more than 3,100 New World mammoth since Hay's series of works in the 1920's."[332]
    - This researcher indicated that the list of sites was "far from comprehensive."[333]
    - He also said: "The number of individual animals represented at a given site or locality is lacking in the majority of published reports. For this reason, the number of individuals presented in this chapter must be considered to be a minimal count."[334]
  - Then in 2003 he wrote that there are "more than 2,000 reported mammoth localities for North America."[335]
    - Compared to the 1984 data, it would appear that about 25 new mammoth sites are found a year.
    - By extrapolation, and conservatively assuming only one mammoth per new site, this would mean about 2,200 mammoth sites and 3,800 finds by 2010.
- **American Mastodons in North America (none are in South America)**
  - A 1990 counted found a "minimum estimate" of 1,473 American mastodon finds.[336] [337] [338]
  - Using similar extrapolation, 1,900 American mastodons by 2010 would seem to be a reasonable estimate.
    - This would be an increase of 20 per year, which compares well with the average of 14 per year identified between 1920 and 1990.[339]
  - As a benchmark, a 1996 summary said: "A rough minimum total estimate of remains of *Mammuthus* and *Mammut* individuals in the New World is between 1,500 and 2,000 each. This minimum estimate is based on reported specimens in publications and in some, but not all, museums and private collections."[340]
- ***Cuvieroniinae* in North America**
  - I've seen no comprehensive estimate of North American *Cuvieroniinae* (mostly *Cuvieronius* and *Stegomastodon.*)
  - "*Cuvieronius* is endemic to the New World."[341]
  - "The bunodont gomphothere Cuvieronius is endemic to the New World. It had a wide distribution, from the south of the U.S. to the south of Chile. In Mexico the record of this genus is extensive…"[342]
  - "*Cuvieronius*… was widely distributed in North, Central, and South America."[343]
  - One 2003 list counts 48 Mexican/Central American sites for the Cuvieronius; however this count misses many, for example it missed 17 sites from Costa Rica, among other known misses.[344] [345] [346] [347] [348] [349]
  - Cuvieronius are more common in southwestern states and are "relatively common in Florida."[350]
  - Stegomastodon range from South America to "as far north as Nebraska and Colorado."[351]
  - *Rhynchotherium* are very closely related to *Cuvieroniinae*; some have argued that most *Rhynchotherium* are misidentified *Cuvieroniinae*, others have argued that the differences are questionable.[352] [353] [354] [355] [356] [357] [358] [359] [360] [361]
  - The Paleobiology database listed 85 *Cuvieroniinae* and 32 *Rhynchotherium* North American sites; based on the mammoth and American mastodon we can conclude this database doesn't have most finds.[362]
  - The researcher who did the mammoth counts told me that he was unaware of any *Cuvieroniinae* counts.[363]
  - Overall, I'll reluctantly guess there are perhaps about 400 *Cuvieroniinae*/*Rhynchotherium* North American finds.
- ***Cuvieroniinae* in South America**
  - A South American map where "shaded parts represent generalized areas where gomphothere [*Cuvieroniinae* only] remains were discovered" indicates about 60% of South America has already been found to have had *Cuvieroniinae* – about 4,000,000 of its 6,900,000 square miles.[364] [365]
  - Another map, sourced to six papers, showed 158 South American sites with *Cuvieroniinae*.[366]

- The actual South American number is undoubtedly *vastly* higher – both of total "ever-published-somewhere-once-in-history" as well as of total unpublished sites.

- **Other *Proboscidea in* North America (none are in South America)**
  - Other remaining *Proboscidea* genera have not received as much attention:[367] [368]
  - The Paleobiology database has 110 *Gomphotherium*, 102 in the U.S.[369]
  - This same database for all other gomphotheres (*Amebelodon*, *Platybelodon*, *Serbelodon*, *Gnathabelodon*, and *Eubelodon*) has 42 sites, all in the U.S. or Canada.[370]
  - Overall, I'll reluctantly guess there are perhaps about 300 of these other gomphothere North American finds.

The above-referenced mammoth researcher in 2011 was not aware of any more updated mammoth or American mastodon counts, and was not aware of any counts for other types of *Proboscidea*.[371] These guestimates round to about 6,500 individual North American *Proboscidea*, partial or complete, that have been found in more accessible publications.

By definition, no one knows how many finds were not counted as published due to:

- The finders lacking interest, follow-through, or ability to notify the "Proboscidean publishing community"
- Lack of interest of Proboscideantologists to study and publish
- Being on public land while wanting to keep the bones or to keep the find confidential
- Not wanting government/public/scholarly interference in their land (bones are often found during construction)
- Having been found prior to the era of common publishing
- Only published in obscure and/or old publications that were never found by those doing the counting

One estimate is that only 1 in 4 U.S. finds have been published, another estimate is only one in ten.[372] [373] (The percentage that is unpublished or published but not found by the above-referenced "counters" is likely much higher for finds earlier in time and for Latin American finds.) Using the 1 in 4 ratio, this would lead to a very loose guestimate of about 25,000 total North American Proboscidean finds.

The great commonness of *Proboscidea* increases their chances of being "cu-oms."

A.9 *Proboscidea* Skeletal Remains Indicating Human Coexistence

This section will only show *Proboscidea* *skeletal* evidence of human coexistence, and then the subsequent section will show *ancient pictorial depictions* of *Proboscidea* that thus obviously reflects *Proboscidea*/human coexistence. As skeletal evidence of human coexistence is *finally* well accepted, this section will not be as in depth as some other sections.

A.9.a Skeletal/Spearhead Evidence

Spearhead evidence includes a large number of sites where spearheads were found lodged in *Proboscidea* bones, including one mammoth with eight in vital target areas.[374] [375] [376] [377] [378] [379] [380] [381] [382] [383] [384] Some foot-long spearheads were made of *Proboscidea* ivory.[385] An Alberta spearhead was found to have traces of blood proteins only known in elephants; four Alaskan sites were found with blood on projectile points/stone tools – where DNA and protein tests on the blood pointed to mammoths.[386] [387] Similarly an Ohio *Proboscidea* was found with worked flint that had dried blood "that tested positive for elephant antiserum."[388]

A.9.b Skeletal Bone Usage Evidence

Bone evidence includes very numerous *Proboscidea* bones that were carved, butchered, burned, or carved into something such as tools, figurines, necklaces, or weapons.[389] [390] [391] [392] [393] [394] [395] [396] [397] [398] [399] [400] [401] [402] [403] [404] [405] [406] [407] [408] [409] [410] [411] [412] One type of bone evidence is "a partly healed injury from a bone projectile tip embedded in a mastodon rib."[413] Another type of bone evidence is finding huge *Proboscidea* bones that were broken open while fresh that realistically could only have been opened via human effort.[414] One quote about bone evidence:

> "… matching marks (of a type that only human activity seems capable of producing) on conarticular surfaces of disarticulated pairs of bones, cutmarks (presumably made during meat removal) identified on the basis of scanning electron microscopy and anatomical context, burned bone heated to at least 440 degrees Celsius (too high a temperature to be explained by natural fires), distinctive patterns of gouging and breakage at some points of muscle attachment (traces of meat removal different from those left by non-human predators or scavengers), and use wear and secondary flaking on some bone fragments interpreted as tools."[415]

A.9.c Other Skeletal/Human Evidence

Interestingly, at a few California sites, *Proboscidea* bones have been found mixed in with human objects, buried quite deeply, sometimes under volcanic rock (A.D. 34?).[416] [417] [418] [419] Other human interaction evidence includes extensive numbers of *Proboscidea* found with human skeletons, charcoal, fire-cracked stones (from cooking), hearths, pottery, basketry, matting, worked flint, wood artifacts, artifacts of stone (flint, obsidian, granite, slate, and many other types of stone), meat caches (contraptions to store *Proboscidea* meat in cool water), and a very wide variety of tools and weapons.[420] [421] [422] [423] [424] [425] [426] [427] [428] [429] [430] [431] [432] [433] [434] [435] [436] [437] [438] [439] [440] [441] [442] [443] [444] [445]

A.9.d Skeletal Evidence Quantifications

In a study of 25 mammoth sites in the Basin of Mexico (Mexico City), half were associated with human presence; many other Mexico locations also reflect *Proboscidea*/human interaction.[446] [447] [448] [449] [450] [451] [452] [453] [454] [455] [456] A 1950 book identified 27 American sites where remains of *Proboscidea* and humans were found together.[457] [458] A 1984 study identified 56 mammoths with evidence of having been killed by humans.[459] A 2003 review of 107 *Proboscidea* sites in North America found 44 (41%) with human evidence (this study selected more documented sites and human interaction would tend to lead to more documentation – so 41% can't be extrapolated).[460] A 2004 study estimated that 27% of mammoth skeleton sites in North America have evidence of human killing.[461] Another review of mammoth sites radiocarbon dated under 15,000 BP found that 29% (14/48) had human interaction evidence.[462] Very many sites in South America also reflect coexistence.

Evidence of human interaction is so common that there is an entire book just on this subject.[463] In 1987 500 people attended a Baylor symposium entitled: "Mammoths, Mastodons, and Human Interaction."[464] As the evidence is so common and the premise is now so widely accepted, I left out a huge number of possible footnotes for interaction evidences. In total there are over 100 American continent sites with evidence of human coexistence with *Proboscidea* bones.

A.10 Ancient Depictions of *Proboscidea*

There are a huge number of pictorial depictions (petroglyphs, pictographs, paintings, figurines, etc.) that have been presumed to be *Proboscidea*; they range from potentially or plausibly *Proboscidea* to persuasively or positively *Proboscidea*. Relative

to the prior skeletal section, this section will be more detailed -- as people find depictions more interesting and more convincing. To repeat prior caveat, these depictions are subject to various types of assumption errors:

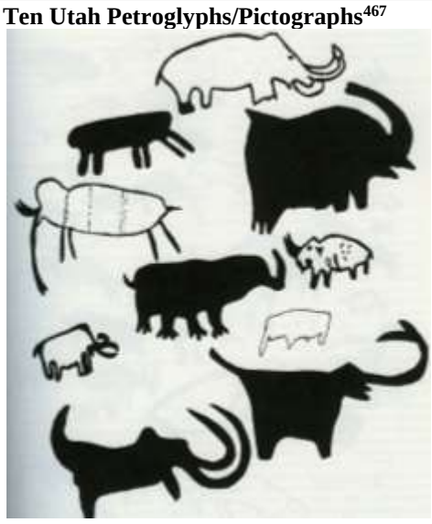
1. **Authenticity** - perhaps a sketch was embellished, or the artifact never existed.
2. **Age** - perhaps a petroglyph was made only decades ago, or made pre-Noah instead of post-Jared.
3. **Association** – what the depiction may be reportedly associated with can help us to better assess it.
4. **Artistic Aim** - perhaps a depiction's intent was not elephantine, but rather of another animal.
5. **Accuracy** – the author's accuracy is more important when the picture is not shown either in this treatise or the source (many of the footnotes include the website where you can easily see the picture). As a photo of a depiction on stone can be hard to see, often a sketch yields a more viable view.
6. **Allegation** – some evidences are *not* in error, but have received conspiracy allegations or conjured alternative theories. Today these allegations are primarily for evidences that imply far more recent *Proboscidea* existence.

Even the premier Proboscideantologists have been unaware of how many depictions exist; what follows is by far the largest list ever compiled.[465] [466] As *Proboscidea* more recent than 8000 B.C. are not generally accepted, when reviewing these depictions, **evaluate which would reflect having come from a more recent advanced civilization**. Most from the U.S. cannot be matched to any era, but **most from Latin America would appear to be from the more advanced civilizations that are far more recent than a supposed 8000 B.C.** The depictions are organized into seven different sections below.

A.10.a U.S. *Proboscidea* Depictions

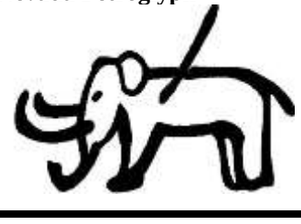
A number of the following U.S. elephantine depictions are not unequivocally necessarily elephantine. That said, the following is a quite long list of U.S. *Proboscidea* depictions:

Ten Utah Petroglyphs/Pictographs[467]



- The "Moab Mastodon" petroglyph is well-known.[468] [469] [470] [471] [472] It is one of ten Utah *Proboscidea* petroglyphs or pictographs, from seven sites, listed by America's premier mammoth expert.[473] [474] Of these Utah finds, he writes: "Some of the mammoth petroglyphs are in the same canyons that contain mammoth skeletal and fecal remains." [475]
- "I personally identified and recorded two separate Indian petroglyphs in a rock canyon east of Escalante, Utah, that are dead ringers for a mammoth and mastodon."[476]
- Another Utah *Proboscidea* petroglyph is found near the "Butler Wash – San Juan River confluence".[477] [478] [479]
- One paper asserts two petroglyphs, near Sand Island in the San Juan River near Bluff Utah, are clear mammoths; I'm far less confident.[480] [481]
- Two more Utah "possible mammoth pictographs" are located in Willow Gulch.[482] [483]
- There's an online photo of a Utah petroglyph that is called a *Proboscidea*, but the location is only given as a "very remote area of the slickrock country of the Colorado Plateau."[484]
- Near Manila Utah: "One figure, which resembles an elephant or mastodon with a raised trunk, is somewhat similar to the figures at Indian Creek and near Moab."[485]
- Two pictographs in near Birch Creek near Ferron in Emory County Utah are questionable as to whether they are *Proboscidea*, and have been deemed as recent creations.[486] [487] [488]
- At Jones Hole in Dinosaur National Monument in Utah is a rock pictograph with the follow commentary: "This clearly depicts an elephant… The features of this creature make it most closely resemble an Asian elephant rather than an African one."[489]
- Though I'm somewhat skeptical, an Idaho elephantine petroglyph is reported "on a boulder near the confluence of the Ada and Smoke Rivers."[490]
- In a cave near Blue Lake Washington is a pictograph: "…the suggested trunk and tusk, as well as the shape of the head warrant classification as an elephant."[491]
- One book reports: "Cressman [former chairman of the University of Oregon's Anthropology Department"]… believes that a mastodon is depicted in a petroglyph in southeast Oregon."[492] [493] [494]
- Oregon Public TV aired a show titled "Mastodon Petroglyphs", describing it as: "We look for proof the mighty mastodon and humans came in contact with each other in Southeastern Oregon."[495] [496] However I would characterize the depictions as weak in being necessarily *Proboscidea*.[497] [498]
- A China Lake California "possible Proboscidean petroglyph" picture was sent to many rock art specialists – eight dismissed it, but 48 responded positively, ranging from "a definite maybe to exuberance" in concluding it as elephantine.[499] [500] [501]
- Renegade Canyon in California has a "controversial petroglyph [that] may show a mammoth being speared by four hunters."[503]

Nevada Petroglyph[502]



- In a very remote far northwestern Nevada canyon a speared *Proboscidea* petroglyph was found in 1968.[504] [505] [506] [507] The local archaeologists' reaction is insightful about how coexistence evidences have often been dismissed. They conceded it was unquestionably elephantine, it was adjacent to three other petroglyphs of clear Indian antiquity, and that all four glyphs were weathered and were "covered with lichen which could take upwards of 60 years to grow." [508] In spite of all this, they assumed it was from a Gold Rush pioneer because they believed *Proboscidea* were extinct before man entered the area; fortunately some of them later came to believe it was authentic.[509] [510] [511] [512] [513]
- A 1973 book on Southeastern Nevada prehistory describes a location somewhat near Caliente: "Above cliff face figures [petroglyphs] is a single figure outlined in black latex paint or tar [to highlight the rock cutting], locally called the "elephant petroglyph."[514]
- A scientific expedition found in Arizona's Hava Supai Canyon a petroglyph that they reported to be of a *Proboscidea*.[515] [516] [517] [518] [519]
- Arizona's Painted Rocks State Park has a petroglyph called an "elephant with long tusks."[520]
- An 1846 military expedition to Arizona's Gila River recorded: "One stone bore on it what might be taken, with a little stretch of the imagination, to be a mastodon."[521] [522]
- For a purported *Proboscidea* petroglyph in Hieroglyphic Canyon in Arizona, the only source I found was quite disparaging of an elephantine interpretation.[523]

- For the "Craneman Hill mastodon" near Mayer Arizona, the only source I found was quite disparaging of an elephantine interpretation as it said the nearby petroglyphs were from the A.D. era.[524]
- One book author contacted me, showing in his book a "seal era Chinese script elephant" found in northern Arizona along with three other "old Chinese scripts."[525] I have no background whatsoever on Chinese script; the script itself does not look like an elephant, but I understand the script isn't expected to look like an elephant. Obviously most of us don't assume the Chinese likely were in northern Arizona anciently.
- An archaeologist (a former curator of archaeology and anthropology for the Maryland Academy of Sciences) found an Anasazi stone pendant near an ancient Pueblo ruin in Gallo Canyon New Mexico on which was carved "the head of a bull elephant."[526 527 528 529 530]
- A large number of geologists, professors, and others viewed an elephantine petroglyph, amidst ancient writing petroglyphs, in northeastern New Mexico and: "All of us agreed that the lines were indeed man-made, and the form was indeed that of an elephant." [531 532]
- An animal petroglyph near Suwanee New Mexico is considered elephantine by some, not so by others.[533]
- A young boy in New Mexico offered a tablet to a bank officer for one dollar -- the bank officer offered a second dollar to be shown the Anasazi site where they found a second tablet; 20 years later the officer donated the tablets to a museum.[535] These Flora Vista tablets had three elephantine pictures and were associated with Indian relics that radiocarbon dated to A.D. 1100-1200; this timing fits in with conventional wisdom about when this community existed.[536 537 538 539 540 541]

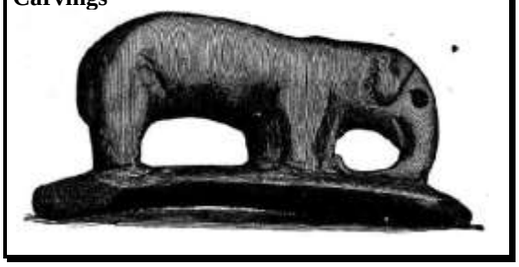
Flora Vista New Mexico *Proboscidea*[534]

- After discussing the Flora Vista depictions, one write-up, without giving any sourcing, wrote: "Another artifact, a jug dated to a-bout the same time ["1000 C.E."], was found near Shiprock Mountain [New Mexico], to the northwest of Flora Vista. An elephant figure was found etched into that one as well."[542 543]
- Found near Granby Colorado was a large "granite statuette" with an elephant "carved in high relief" with a "long curved tusk."[545 546 547 548 549 550 551 552 553]
- Pottery with a *Proboscidea* painted on it was found in the "cliff-dwellings" of Montezuma Valley Colorado.[554 555 556] The Anasazis are thought to be relatively recent.[557] (Female Asian elephants usually lack tusks.[558])

Colorado Pottery[544]

- Without directly sourcing, one website writes that "elephant drawings are found in Colorado" on rock.[559]
- Attributed to a photograph from the Utah Museum of Natural History is an "elephant petroglyph from Glen Canyon, Colorado."[560 561 562 563 564] (Should this have said the "Colorado Plateau" within Utah?)
- In an Oklahoma panhandle cave is an "elephant" amidst some ancient writings and pictures.[565 566 567]
- From Poteau Oklahoma, in an area where copper artifacts have been found, a Wake Forest professor writes of a "brass bowl… (now in Kerr Museum). Its outer-rim engraving depicts a running elephant. Later a matching bowl was found in the same general vicinity."[568]
- A Pineville Missouri cave has mastodon bones and a possible *Proboscidea* carved on bone, as reported in *Science* and *Natural History*.[569 570 571 572 573]
- An 1894 scientific article describes in Boone County Missouri a tall limestone cliff with a very obscure hard-to-see dangerous-to-access "elephant" pictograph in the midst of other pictographs and "hieroglyphics."[574] The 1894 author and an 1882 author both believe these were first seen and recorded in 1804, but the author believed the pictograph had to have been made by white men since he believed elephants didn't coexist with Indians.[575 576] (The account of the 1804 sighting just referred to animal paintings without listing any specific animal; few Caucasians had frequented this Missouri location by 1804, creation by a Caucasian is quite doubtful.)[577]
- One archaeologist wrote of "rock drawings of what experts believe to be a prehistoric mammoth" – and then reports of mammoth art at Bear Creek and Painted Rock in northeastern Iowa; however I believe none of these depictions are elephantine.[578 579]
- Two sandstone-carved *Proboscidea* pipes were found near Davenport Iowa.[582 583 584 585 586 587] (A specious conspiracy theory has been conjured for these pipes.[588 589 590]) "Other pipes similar in material and form were found here, representing mostly some beast, bird, or man."[591] In the same area of Iowa a tablet was found that with 30 animal depictions of which "there are two that seem intended for elephants."[592 593 594] All were found in mounds by different people.

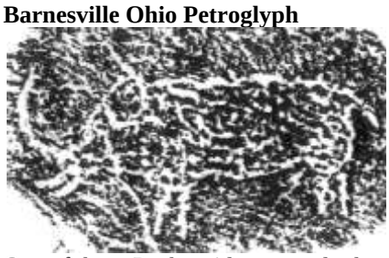
One of Two Iowa Sandstone *Proboscidea* Pipe Carvings[580 581]



- In discussing elephantine depictions, a Wake Forest professor describes these Davenport finds and then writes: "Another was unearthed 1889 at Toolesboro, Ia, and there are others kept mainly out of sight and studiously ignored. A notable specimen came from Ross Co., O. Seip Mound [Ohio]" – however I was unable to find any separate support for the 1889 or Seip claims.[595]
- In a La Crosse County Wisconsin cave is an animal drawing described by: "perhaps suggests a mastodon" or "appears to be a mastodon."[596 597 598 599]
- A weak source says a *Proboscidea* image is in Wisconsin's Tainter Cave which has many animal images.[600 601 602]
- An address on pottery artwork to the 1893 State Historical Society of Wisconsin made a passing reference, as if the audience knew the background: "It is not, however to be forgotten that bones of the mastodon – an animal now extinct – have been found carved with representations of hunting that animal…"[603] Unknown what this was referring to, perhaps local carved bones that the audience was aware of?
- A mound shaped like a *Proboscidea* in Wisconsin has received a lot of attention, and there are at least two others in Wisconsin, and another in Ohio thought by some to be Proboscidean-shaped.[604 605 606 607 608 609 610 611 612 613 614 615 616]
- From an Illinois cave on the Ohio River are animal drawings of which three "are like the elephant in all respects, except the tusk and the tail."[617 618 619 620 621 622 623 624 625 626 627 628] (Female Asian elephants usually lack tusks.)[629] "We suppose the animals resembling the elephant to have been the mammoth, and that these ancients were well acquainted with the creature, or they never could have engraved it on the rock."[630]
- Some elephantine artifacts are reported from a supposed hidden "Burrows Cave" in Illinois; from my very limited knowledge, I believe they have low likelihood of being authentic.[631 632]

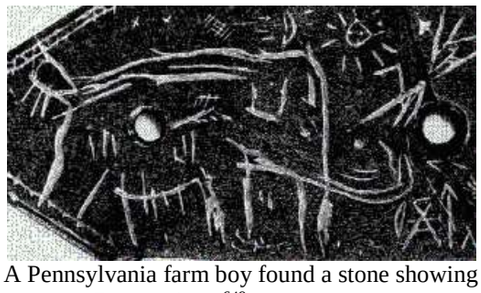
- Despite extensive publicity, the so-called Lake Michigan underwater mastodon petroglyph is likely not a *Proboscidea* in my opinion.[635]
- LDS Elder James E. Talmage and a LDS-church-hired expert both concluded that the Michigan Artifact collection, which included some elephantine depictions, was fraudulent.[636] [637] [638]
- From Fort Ancient in Ohio is a report of a "mastodon's head cut on the surface of a huge granite boulder."[639] [640] Fort Ancient is a well developed site generally thought populated roughly from 100 B.C. to 600 A.D.[641] (Some authors in the 1800s thought *Proboscidea* were likely used to help build Fort Ancient.)[642]
- One book reports "the queer fact that, in 1892, relics, called Paleolithic, were found in Ohio. These extremely ancient relics represented…" *Proboscidea* and other animals, and were found with a *Proboscidea* tusk and tooth.[643]
- One article tells of a "Hopewell-mound stone knife in the Ohio State Historical Society Museum that engraves a tropical hunter about to spear an elephant."[644]
- Three *Proboscidea* petroglyphs are near Barnesville Ohio; one of them is described as "truly looks like an elephant, it has beautiful tusks, a short tail, and the head and back of an elephant."[645] [646]
- As reported in the *American Journal of Archaeology*, at the 1899 Archaeological Institute of America Conference held at Yale, a renowned geologist gave a lecture titled "Archaeological Discoveries in Ohio" – "Of the new facts presented, the most important were…" [then listed two, the second one being] "…a beautifully sculptured mastodon on a piece of slate, showing the coexistence of man and mastodon in America."[647] [648] A renowned archaeologist showing solid evidence of coexistence at a prestigious conference, yet it is subsequently apparently ignored as it went against the prevailing opinion of the day.
- A sandstone museum piece found in a mound in 1878 near Portland Ohio has animals on it, one of which is claimed to be an "elephant"; I find the artwork not at all compellingly elephantine.[650]
- In Pennsylvania the famous "Lenape Stone" was found depicting hunting of a *Proboscidea*.[651]
- An elephant petroglyph is near Van Pennsylvania; while it has some believers, it has been judged by others to be recent, though this belief is likely simply due to its content.[654] [655]
- A New York depiction, of questionable veracity, will be reported in the domestication section.
- The Hammond Tablet from Taunton Massachusetts depicts four *Proboscidea*, but I believe it's likely fraudulent due to its similarities to the Lenape Stone.[656] [657]
- One book reports: "There is a petroglyph of a mammoth and two small people, perhaps done in Maine before 5000 BP"; the "perhaps" is presumably referring to the guestimated date."[658]
- From Delaware came a well-known "Holly Oak" shell pendant depicting a *Proboscidea*; most of the conventional wisdom is that it's fraudulent, but it has several defenders who say the incision weathering is the same as the shell surface weathering; I also think it's likely fraudulent.[659] [660] [661] [662] [663] [664]
- Found near Ludowici Georgia was "the most striking North American elephant artifact" -- the "Georgia Elephant Disk" – a ceramic artifact with clear depictions of "eight tiny elephantine figures."[665] [666] [667]
- A bone most likely from a *Proboscidea* from Vero Beach Florida has a carving of a *Proboscidea*.[669] [670] [671] [672] National Geographic said: "…the bone had passed a barrage of tests by University of Florida forensic scientists. The examinations revealed that the light etching is not recent, and that it was made a short time after the animal died."[673]
- An unpublished *Proboscidea* petroglyph in Florida was reported by the editor of *Ancient American*.[674]
- Unsourced, an 1881 *Juvenile Instructor* reported: "Some very strangely-shaped old bottles have been dug up on this continent… Some of these earthenware or pottery curiosities of the ancients are in the shape of elephants."[675]
- One book, without giving any location, reports of "…ancient American artifacts as tobacco pipes carved on bowl or stem with the image of the elephant, or mammoth."[676]

Barnesville Ohio Petroglyph



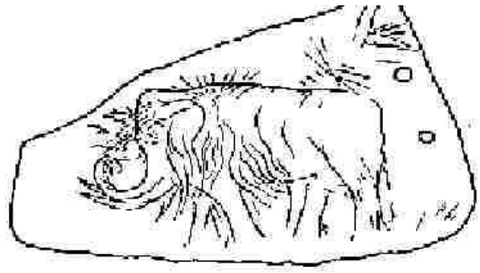
One of three *Proboscidea* petroglyphs at Barnesville Ohio.[633] [634] The crayon tracing is fuzzy, but it shows a clear *Proboscidea*.

Pennsylvania "Lenape Stone"



A Pennsylvania farm boy found a stone showing a hunted *Proboscidea*.[649]

Delaware's "Holly Oak" Pendant



This pendant was reportedly found in Delaware and is a good example of a controversial artifact.[652] [653] As it radiocarbon dates to the A.D. era, it is thought to be fraudulent. For other reasons, I also think it's likely fraudulent.

Vero Beach Florida Bone[668]

Entertainingly, but very insightful into the state of journalism and science in many quarters, notwithstanding all of the above U.S. depictions, the Smithsonian and many news outlets called the 2009 Vero Beach Florida *Proboscidea* depiction the "first" one from the U.S., or the "first authentic" U.S. depiction.[677] [678] [679] [680]

A.10.b Mexico/Central America *Proboscidea* Depictions

These Mexico/Central America depictions will be grouped into: 1.) Trunk-like building architecture décor; 2.) Codices/glyphs (ancient American books/writing); 3.) Olmec; and 4.) All other. **In your perusal, keep in mind that *most* of these Mesoamerican depictions, since they are from relatively recent advanced civilizations, would imply *Proboscidea* existence far more recent than a supposed 8000 B.C.**

A.10.b.1 Mesoamerica *Proboscidea* Depictions – Trunk-like Architecture Decor

There are thousands of depictions of what appear to be "*Proboscidea* trunks" on ancient Mesoamerica buildings. Some of these are described as more than trunks -- as reflective of entire *Proboscidea* heads.[681] [682] Some find many of these trunks definitively elephantine, others not at all; though this may be due to the widespread belief the Maya could not have known elephantine traits.[683] Many of these are considered as depictions/reflections of ancient gods – "the elephant-headed god, known among the Maya people as Chac, and among the Mexicans as Tlaloc."[684] [685] One website has compiled a few pictures of some of them, which you can peruse via the footnote.[686] As these depictions in aggregate are generally considered elephantine in appearance but not decisively or strongly elephantine, I have not spent very much time looking into them. Nevertheless a few related quotes:

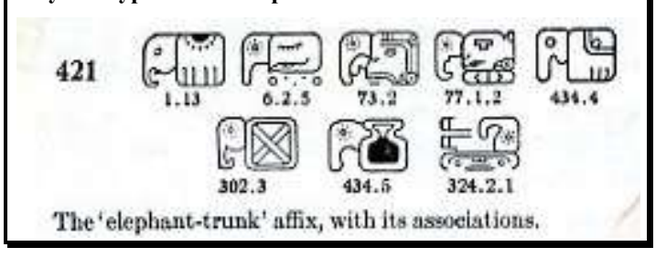
- "In the Maya sculptures, particularly on the trunks of the mastodon heads that adorn the most ancient buildings…"[687]
- "…mastodon's trunks that at a very remote period in Maya history embellished the facades of all sacred and public edifices…"[688]
- "…the ornament so common in the temple ruins of Central America – the so-called 'elephant's trunks'"[689]
- "…in Yucatan I had seen the obvious elephant trunk on the temple to Chac…"[690]
- "…the frequent occurrence of the 'elephant trunk' ornament in Yucatan."[691]
- "...no architectural feature of any of them [Central American ruins] has been the subject of more inquiry then the protuberant ornaments in the cornices, which are usually called elephants' trunks."[692]
- "…these trunklike extensions, typically found at the corners of all Puuc-style buildings (ca 800-1000 A.D.), are today recognized as a standard portrait of the Maya deity Chac."[693]
- "The dominant motif is the face of the god Kukul Can – symbolic masks with upturned snouts which some observers have called 'elephant trunks.' The same masks are seen again and again in these old ruins…"[694]
- "Artifacts featuring elephants and elephant deities were common in ancient American cultures… the profuse long-nosed deities on temple faces found in the Yucatan peninsula… Throughout the Yucatan peninsula, the facades of Mayan buildings portray the long-nosed rain god, Tlaloc…"[695]
- The "Palace of Masks" at Kabah Mexico has "250 masks of Chaac, each one with curling remnants of Chaac's "elephant-trunk-like" nose.[696]
- At Mitla (thought Zapotec but in Olmec country) exists painted pottery with: "faces often having noses exactly likely the so-called 'elephant trunk' ornament of the Yucatec ruins."[697] [698]
- Referring to Mesoamerica: "Stone carvers produced thousands of intricate, three-dimensional carvings of priests, deities, and elephants."[699]
- "The elephant trunk as an architectural ornament is common in Central America."[700]
- "…mastodon… that great pachyderm, whose head, with its trunk, forms the principal ornament of the temples and palaces built by the members of king Can's [Mayan king] family."[701]
- "…in the most ancient edifices of Mayans the mastodon's head with its trunk is the principal and most common ornament."[702]
- "The long-nosed god is a common feature of Mayan religion, even though elephants were never present in Central America."[703]
- "The mastodon's head forms a prominent feature in all the ornaments of the edifices of Yucatan."[704]
- "The appearance of the prefix resembling an elephant's trunk in all 13 divisions of the divinatory almanac on Dresden…"[705]
- "In the head of god K we recognize the ornament so common in the temple ruins of Central America -- the so-called 'elephant's trunk.' The peculiar, conventionalized face, with the projecting proboscis-shaped nose, which is applied chiefly to the corners of the temple walls, displays unquestionably the features of god K."[706]
- From a University of Oregon professor: "The trunk of the elephant is found as parts of faces on the fronts of many Mayan sculptured-stone structures in eastern Mexico, Belize, Guatemala and Honduras... The recognition of the elephant images in America has caused much consternation to archaeologists because to accept the knowledge meant that a model of an Indian elephant had reached America for sculptors to copy. Mariners had to have sailed to and from America to India during the time of the Olmec and early Maya in Mesoamerica. The elephant image (Long Nosed God) and the idea that the elephant (God) should be worshipped in order to bring rain, among other things, must have been brought from the Sub-Continent India."[707]
- From the same professor: "The Mayan rain god, Chac, or the Aztec rain God, Tloloc, is illustrated by an elephant-shaped God-Head in the east wall of what is now called, the Nunnery at Uxmal. The similar Chacs are found on the front of the Governor's Palace and elsewhere. 'At Uxmal, the image of Chac, with its curved nasal appendage – which the… European visitors took to be the trunk of elephant – is treated in a schematic way'… The defining features of these smaller sculptures are the elephantine noses. The giant faces of Tloloc/Chac with <u>their long, recurving trunks, their broad face and deep set eyes illustrate the elephant</u>. Essentially, the nose of the elephant is proposed as the indication of the image representing the 'long-nosed' rain-god, as it is labeled by the anthropologists/archaeologists. Examples of the Chac's nose curve up as if the elephant had raised its trunk to near verticality. In other examples, the trunk hangs down and then curves up as if begging for fruit. <u>Essentially, the same set of elephantine faces are found at all the major Mayan archaeological sites at Chichen Itza, Labna, Uxmal, etc. in the Yucatan or Xunantunich in Belize, and other locations</u>. The Rain-Gods of the Maya all have recurving and, potentially, water-giving trunks (as if the elephant has just filled his nose with water). It may curve up and then down or down and then up with the tip sometimes curling under at the end of the trunk… <u>I see these noses as elephant's trunks and sometimes they also have a point or coil of the elephant's tusks represented</u>. If there were any doubt about the fixation of the Maya on the Long Nosed Rain God you can see it in their temple architecture in the Yucatan area. Henri Stierlin, Mayan specialist, said that you can see it 'on the façade of the Place of Masks, or 'Codz Poop of Kabah' (Yucatan), the stylized masks of the rain god has an obsessive quality. <u>Its protruding eyes, long shaped nose and rigorous frontal symmetry cover the whole building' all indicate elephant</u>… The general public is not as firmly indoctrinated as academics are… In our experience, the random tourist identifies the facial shapes as elephantoid instead of being similar to the macaws of the academicians. I know this; <u>I asked them nothing more than, "What does this image look like?" They would invariably respond, 'Elephants'.</u>"[708]

<u>A.10.b.2 Mesoamerica *Proboscidea* Depictions – Codices/Glyphs</u>

There are many reports of Proboscidean depictions in ancient codices (books) from Mesoamerica; without doing a comprehensive review, these appear to be generally trunks or elephant heads, often as part of a headdress, and often quite likely related to these "elephant-headed gods."[709] [710] In general, opinion varies widely on how elephantine they appear; of course most reviewers are influenced by their opinion that there were no contemporary American *Proboscidea*.

- "…from the zoological standpoint the heads represented in the Codices Troano and Cortesianus recall the elephant…" and "is undoubtedly an elephant."[712] Another source listed <u>five instances</u> of mammoths in these two codices.[713]
- A Mesoamerican manuscript Mayanist compiled a list of <u>seven different types</u> of Mayan glyph characters that had "elephant-trunks" as part of the glyph.[714] [715] [716] [717] Female Asian elephants either lack tusks or have very small tusks ("tushes") often hard to see unless the mouth is open; the first glyph appears to perhaps reflect a "tush" and also reflects the most elephantin" trunk shape.[718] [719]

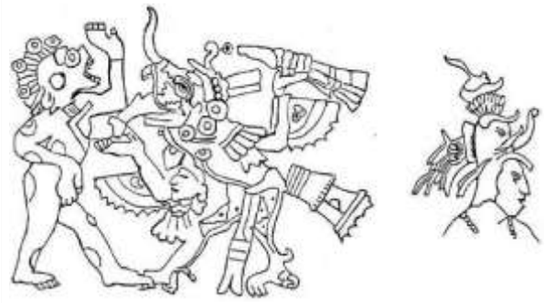
Mayan Glyphs with "Elephant-Trunks"[711]



The 'elephant-trunk' affix, with its associations.

- Per the Dresden codex, another Mayanist wrote of "the appearance of the prefix resembling the elephant's trunk in all 13 divisions of the divinatory almanac on Dresden…"[720]
- Though disputed, some authors believe the Aztec Codex Borgia has an elephantine trunk depiction; this depiction is discussed in greater detail in a subsequent section.[721] [722] [723] (I was unable to find an elephantine depiction upon viewing the Codex Borgia, but did find a sketch of it.)[724] [725]
- "This god with the elephant's trunk is frequently depicted in Mexican manuscripts and in the temple ruins in Central America as the god with a proboscis-like horn…"[726]
- "The god was most often depicted upon the ancient Maya and Aztec codices… [and] was provided with the head of the Indian elephant."[727]
- "In Mayan and Mexican codices and hieroglyphic reliefs, there are numerous representations of the elephant-headed god of rain called *Chac* by the Mayas and *Tlaloc* in Central America…"[728]
- An 1848 book "referred to the figure of a trunk resembling that of an elephant."[729]
- "What clinched the matter [question of Mayan *Proboscidea*], however, was a careful search for and reappraisal of the extant original Mayan codices… Brought to light were **several dozen quite obvious elephants, elephant symbols, and figures of man wearing elephant headdresses**."[731] [732]
- Palenque has a glyph with two more examples of the "elephant trunk prefix."[733]
- "Mayan glyphs where elephant heads appear as affixes occur at least 14 times."[734]
- "…since the time of Cuvier, Europeans in Mexico were intrigued by what appear to be representations of elephants in authentic pre-Columbian pictographs and sculptures."[735]
- "The illustrations of the Maya rain god in the codices share with the elephant not only the trunk, but the very characteristic shape of the head with the depression between the root of the trunk and the forehead."[736] [737]
- From a Smithsonian researcher: "The only reason for the refusal to admit that sculptures and images in the Maya codices are Indian elephants is due to the fact that such an admission would destroy the foundations of the doctrine of an independent evolution of American culture."[738] [739]

Palenque "*Proboscidea*" Headdresses



These are some of the "elephant headdresses" found in codices in Mesoamerica.[730]

A.10.b.3 Mesoamerica *Proboscidea* Depictions – Olmec Origins

The following several elephantine depictions have been called Olmec; likely some of the depictions in the subsequent section are also Olmec. (A number of LDS scholars believe the Olmecs were the Jaredites.)[742] [743] [744]

Olmec "Clay Elephant Toys" [740] [741]

- Regarding Mexico's Anthropology Museum: "In the Olmec room a badly corroded stone statue of a man who seemed to have an elephant trunk for a nose."[745]
- From the Anthropological Museum of the University of Veracruz in Jalapa there used to be displayed Olmec "toy elephants made of clay."[746] [747]
- "A large elephant-like stone statue" of basalt was found – "other stone statues… made of basaltic rock of evidently derived from the same source, are known at [nearby] La Venta" – a known Olmec city.[748] [749]
- One professor writes that at Mexico's National Museum of Archaeology and Anthropology there an "elephant head was sculpted on top of a human form during the age of the Olmec culture" that came from the San Luis Potosi area.[750] [751] [752]
- From the Olmec La Venta: "the bottom glyph seems to be an elephant."[753]
- "An elephant's head on a human body." Though the trunk is very elephantine, the rest of the animal doesn't have much to indicate elephantine roots, and this Monte Alban depiction might not be Olmec.[754] [755] Another Monte Alban description was: "… elephant reliefs are in fact exhibited on the walls at Monte Alban…"[756]
- "The entire façade of the building is fitted with dozens of highly stylized representations of elephants! The elephants' trunks are very easily identifiable and cannot be mistaken for anything else. Yet there were no elephants on the American continents – at least not in recent history. So how would Olmecs who carved the building know anything about elephants?"[757]

A.10.b.4 Mexico/Central America *Proboscidea* Depictions – Remaining List

There are yet many other *Proboscidea* depictions from Mexico/Central America, some of which may be Olmec in origins:

- One translation: "The elephant, or perhaps the mammoth, is a subject that appears frequently in American Indian art and architecture. Did pre-Columbian Indians just recreate them after examining his bones? In case, they seemed to know that elephants had a trunk. In Palenque, Yucatan, were ornaments in the shape of an elephant head and masks in relief representing the huge animal…"[758]
- From "Petan Mexico" is a stone "elephant carving."[759]
- One description: "…at Palenque… there is the figure of a head resembling the elephant, although the tusks are not represented" (female Asian elephants usually lack tusks).[760] [761] [762]
- An 1867 visit to Uxmal described a building with "six elephant's heads… the curled and tapering trunks and pendant ears are decidedly elephantine, and even the small piggish eyes are characteristic of pachyderms, though it ought to be mentioned that the tusks are uniformly omitted."[763] (Female Asian elephants usually lack tusks or prominent tusks.[764]) Another description: "…at Uxmal is said to be the carved image of a head of an elephant, as clearly delineated as it can have been done only by an artist who was familiar with these creatures."[765] [766]
- Per the controversial Acambaro Mexico artifact authenticity, both sides have compelling arguments if both are honest and accurate, which they both can't be; additionally if partially/largely authentic, could they be pre-Noah?[767] [768] [769] Of the 33,000+ ceramic, stone, and jade artifacts, a few have elephantine representations, and some were found with *Proboscidea* bones.[770] [771] [772] [773] [774]
- A Mexican anthropology journal lists several depictions of ancient American elephant heads – one of which I hadn't found elsewhere – an elephantine depiction found in a "Zapotec relief from Oaxaca."[775] [776] [777]
- "The late Heini-Geldern [ethnologist/archaeologist] told CK [Clyde Keeler, co-author] that there were five elephant effigies found in Mexico, but that because they had been found by amateurs, professional archaeologists would not

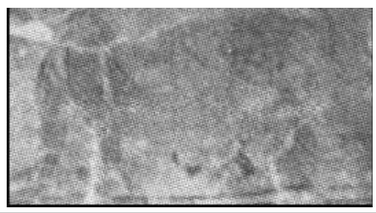
accept them. 'Fraud!' became the chief cry of the professionals."[778] [779] [780] [781] One translated quote was: "Heini-Geldern tells us… the elephant trunk appears as such in the Maya codices and also in Veracruz and Oaxaca, as carved relief and statue respectively."[782]

- At the Hueyatlaco/Valsequillo site near Puebla Mexico (an Olmec area), with extensive human-interaction evidence, countless bones have been found of the mammoth, American mastodon, *Cuvieroniinae*, and by some accounts Rhynchotherium (similar to *Cuvieroniinae*, may likely be a misidentified *Cuvieroniinae*).[785] [786] [787] [788] Paleontologists found "more than 100 partial skeletons" of *Proboscidea* with "many of the bones sharpened for tools, broken for marrow, or engraved."[789] [790] [791] A mastodon bone with animal depictions "had been engraved when the elephant bone was still fresh, still 'green'" and depicted "several types of elephants"; this bone had a stint at the Smithsonian and got attention in *Life* and *National Geographic*.[792] [793] [794] [795] [796] (Idle lunchtime workings of a Jaredite employee of a *Proboscidea* business?)

Sample Depictions of Animals Including *Proboscidea* from a Freshly Carved Hueyatlaco *Proboscidea* Bone[783] [784]

- Comalcalco Mexico is an Olmec city turned Mayan that extensively used bricks, some with various depictions including of animals: "…two bricks even showed elephants"; the bricks are thought to be Mayan with Mayan hieroglyphics and though the timing isn't fully clear, they are thought to be "A.D.", not "B.C.".[797] [798] [799] [800] [801] [802] [803] Another summary wrote: "…Comalcalco also depicts a great many elephants among its hieroglyphs…"[804]
- An incomplete quote from a compilation of man/elephantine evidences via a second hand source: "In a [Mayan] tomb which dates to perhaps the fifth century A.D. were four carved in mammoth bone."[805]
- One professor writes: "Decorations of elephants were sculpted on the ends of the roof tiles in Mexico in the best of tradition have been found by Neil Steede, a Latin Americanist Archaeologist."[806] As Steede is associated with Comalcalco, this very likely is a repeat reference to the "elephant bricks."
- From "Petan Mexico" is a stone "elephant carving."[808]

Petan Mexico "Elephant Carving"[807]

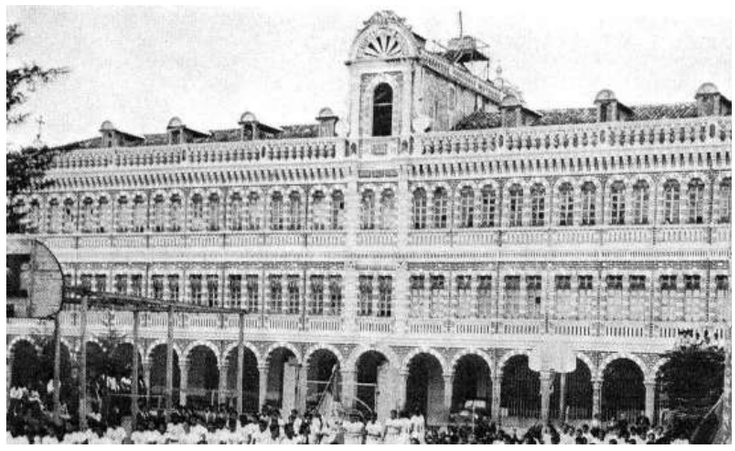


- One book listed some elephant evidences known elsewhere but then gave some I didn't recognize which were not sourced, so reader beware: "Artifacts featuring elephants in a seated position, posed as though praying, have been uncovered as stone pipes in mounds in North America, on temples in the Yucatan, Mexico and in Copan, Honduras"; it also includes a not-footnoted tiny photo of an ancient carving that apparently includes an elephant with a caption of "Elephant vessel detail Aztec Mexico."[809]
- One professor wrote: "Another small human figurine with an elephant head has been found in the Mayan World Music Museum, three or four kilometers north of Antigua, Guatemala."[810]
- Quirigua Guatemala has some stones interpreted by some (Dr. Cheesman for one) as elephantine.[811] [812]
- Dos Pilas in Guatemala has a stela of a warrior wearing an elephant mask.[813]
- A 1921 visit to a San Salvador museum noted a stone statue, the interpretation of whether it was elephantine ranged from "by no means convincing" to "no doubt" and "distinctly elephantine",[814] [815] [816] [817] [818]
- A 1957 visit to a private artifact collection near Matagalpa Nicaragua described: "bowls with alligator and elephant head handles."[819] (Crocodiles do live in Central America.)[820]
- Published in 1866 were some 1832 Waldeck sketches that showed several elephant depictions at Palenque – however later research appears legitimately to be of the opinion that Waldeck embellished these to make them look elephantine.[821] [822]
- The following Panama stone elephant reports may be redundant. *Time* reported that U.S. Vice President Dawes (1925-1929) visited Panama and "a stone elephant aroused his curiosity specially"; Dawes' dismissively said "in the museum a model of a rather doubtful elephant of which I had a picture taken."[823] [824] A description of a Panama museum piece: "One curious object that has puzzled the archaeologists is a monolith, representing in its upper part, the figure of an elephant."[825] From Cocle Panama is a description of a "figure of the stone elephant."[826] One book mentioned: "… the sculptured stone elephants of Panama… the man who made those elephants had seen one."[827]
- A museum artifact from Costa Rica is a described as "an exquisite jade 'elephant'" by some, as a bird by others.[828]
- A dozen other *Proboscidea* pictures from Mexico/Central America will be given later in the domestication section.
- Some summaries from various professors/authors:
  - "In Central America the tradition of the elephant form can be clearly seen in Mayan art, both in stone and clay, and during the last century this has caused great controversy as to its interpretation."[829]
  - A Texas A&M archaeologist wrote: "…the heads of elephants are prominent in art and sculpture from Mexico, Central America, and northern South America."[830]
  - "Pottery vessels with the unmistakable depiction of the elephant or mastodon have been recovered from archeological sites in Guatemala, Honduras, and the Yucatan."[831] (The domestication section will reference elephantine pottery from Guatemala and the Yucatan, unknown what has been found in Honduras.)
  - From a University of Oregon professor: "Elephant images are found in sculptures and in writings in Mexico, Belize, Honduras, and Guatemala."[832]
  - "…mammoths, and art-forms derivative of them, are frequent enough in Maya art... The elephant or mammoth motif has abundant illustration in the motif of Central America."[833]
  - "In some Mexican ruins carved stones were found with heads of elephants."[834]
  - "An Aztec image with an elephant's face… A perfect elephant head carved on a Palenque temple wall… the Asian elephant being depicted in Mesoamerican motifs and hieroglyphics."[835]
  - "The mastodon was evidently known to the founders of the Central American cities, and its figure is pictured on their walls."[836]
  - "…generation of explorers hacked their way into the jungles of Yucatan and Central America – and marveled at apparent signs that elephants, or people who knew them, had already been there."[837]
  - "Any keen-eyed observer could see such elephants among the reliefs at Copan and Palenque, as well as in Mayan manuscripts."[838]
  - "Elephant heads are prominent in art and sculpture throughout the ancient Americas."[839]
  - Translated: "…the mysterious elephants that appear in Mayan sculptures… were very real representations of what the Mayans had before their eyes and had even domesticated: mastodons or prehistoric American elephants, extinct for centuries, but for the Maya were very real and contemporary."[840]

A.10.c Cuenca Ecuador *Proboscidea* Depictions

Some background should first be given to Catholic Father Crespi's Cuenca Ecuador depictions. Crespi grew up in Italy, became a priest, and earned a masters in anthropology, and doctorates in natural sciences, engineering, and music.[841] He first came to Ecuador in 1923 to collect artifacts, and later in 1926 in a religious role. Crespi connected so unbelievably well with the Indians and was so beloved and respected (a monument, theater, postage stamp, street name, honorary doctorate, and beatification all honor him) that for six decades they gave him (often when he performed a baptism or marriage) or sold to him thousands of ancient artifacts -- 70,000 artifacts by one estimate, 250,000 by another estimate (*many* of the purchased items were forgeries – his policy was if they were desperate enough to make a forgery, he'd help them by buying it).[842 843 844 845 846 847 848 849 850 851 852 853 854 855 856] He received a large inheritance from his father, which he used to make more money by becoming a very successful art dealer; from his great wealth he was able to purchase many artifacts, sometimes paying as much as $10,000 a piece, a very substantial sum for his era and location.[857] Aside from purchases, his great wealth also led to artifacts indirectly, as by feeding 2,000 students daily, the earned respect led to literally many tons of artifacts being given to him.[858] Richard Wingate wrote of his photographing Crespi's collection: "… exposed over three thousand frames, and I *still* have captured only 2 percent of the collection."[859 860] "In spite of the plethora of startling material in his museum, Father Crespi regrets that he missed acquiring most of the treasure unearthed in the jungle, including most of the best articles, because he simply couldn't match prices with other bidders."[861] The museum was devastatingly burned in 1962; the common opinion was that local leftists had burned the huge stately museum to help cover their massive theft of gold artifacts that were not found in the ashes.[862 863] Crespi's museum suffered a fire again in 1974, many pieces were stolen, but a vast amount remained.[864] Crespi was adamant that thousands of artifacts clearly showed an ancient Middle Eastern influence and he was certain that the area had been settled anciently by people from the Middle East -- as mainstream archaeology hasn't been open to this view, the collection has been disparaged and even more has been ignored.[865] Though mixed in with *lots* of forgeries – countless thousands of detailed artifacts (many in metals, 3,000 gold pieces by one estimate) that have reportedly passed assay tests – largely donated or sold by countless poor Indians over six decades – does this gargantuan artifact collection sound like it could even possibly be a mammoth conspiracy?[866 867 868 869 870]

School and Museum of Father Crespi, Before the 1962 Fire[871 872]



At the LDS Church's request, BYU Professor Cheesman investigated, visiting Cuenca and having hundreds of pictures taken.[875 876] In viewing many Crespi pictures from Wingate, Cheesman, and others, I found 35 separate *Proboscidea* depictions (two of which I believe are likely fake) – and these weren't like many in Mesoamerica where one might argue over the elephantine nature – these were almost entirely unmistakable *Proboscidea*.[877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894] One of the Crespi objects was "an elephant [*Cuvieroniinae*] tusk engraved with figures and drawings."[895] Several *Cuvieroniinae* have been found in the greater Cuenca area.[896]

Two Cuenca Stone *Proboscidea*[873 874]

Another local museum, the Konanz Museum, had its collection become the original nucleus of the Museo del Banco Central del Ecuador.[897 898 899] I was only able to obtain one book that showed Konanz artifacts -- it contained nine *Proboscidea* depictions.[900 901]

Several authors have written of the many elephantine depictions from these Cuenca museums:

- Wingate wrote: "The elephant isn't now native to the Americas yet its motif appears ***throughout*** the Crespi collection."[902]
- Gabriele Baraldi frequently visited Cuenca and Crespi: "Baraldi noticed that in many plaques and gold foils were several *recurring* signs: the sun, the pyramid, the snake, and the elephant."[903 904]
- One book said: "In Crespi's collection… in the plates of gold and silver there also appear elephants…"[905]
- A translated quote: "The artifacts stored in the museums of Father Crespi and from Max Konanz [another Ecuadorian artifact collector] show us clearly that **the emblem of this culture was an elephant**, as a sign of strength. **We see it represented in all parts: in the statues, in the mortuary tablets [tombstones/burial plates?], in the crowns, in the scepters in command, in the chest ornaments, and in the ritual vases**."[906] This quote references several types of elephantine depictions that were not in the 40+ depictions that I did see.
- Another translated summary of their ancient culture, based upon a review of these museum artifacts, was: "The **elephant would be their standard bearer**, as seen in the men's crown and breastplate. He also would be the companion of the deceased, as an emblem of his kingship."[907]
- A translated review of Canari (Ecuador) archaeology listed seven towns with Prehispanic tombs that had "repeated depiction of the elephant (the symbol of strength)."[908]
- A translated quote about Crespi's museum listed its depictions of gods, the sun, the moon, and "depiction of animals (elephant and particularly the snake)" – with the elephant being one of only two animals listed, this reflects how commonly the elephant was depicted.[909]
- An article reviewing Crespi's artifacts said: "Representations of elephant-like animals often appear on different pieces made of ceramic and also on metal plates."[910]
- Another translated quote: "The ancient collection of Father Crespi, in Cuenca (Ecuador), shows tens [? - "decenas"] of plaques, supposedly of gold, recorded with figures of **elephants**, beings of different races, monsters and objects of possibly unknown technologies."[911]
- Dr. J Manson Valentine twice photographed parts of the Crespi collection; in a very short 1968 journal article about the Crespi collection he wrote much about the elephants:[912]

  - "…carries implications of tremendous importance if authenticated. So also does the depiction of elephants and other animals unknown in South America in recent times. The **elephants appear as heads constituting portions of composite, symbolic figurines, or they occupy conspicuous places in outline on tablets of stone or gold** along with various different emblems. **So far as the author is aware, no other collection in Ecuador or in Peru contains such anachronistic material**. However, a golden elephant effigy has recently been unearthed at an archaic site in southwest Colombia."[913]
  - "A tremendous amount of work remains to be accomplished before the Cuenca enigma can be solved. First an authenticity test must be run on the whole collection. So far, our results along this line reflect favourably toward Father Crespi. One of the oldest families in the town, and a very reliable source, reports: 'Most of the collection is genuinely antique and original.' **At least we know the elephants and the gold tablets are ok…"**[914]
- One person, who visited Crespi and photographed many of his pieces, commented: "Reappearing elephants do not fit at all to South America… conceded at once that the Inca knew both writings and **elephants**."[915]
- A magazine article's author, who saw Crespi's artifacts, wrote: "Most intriguing were the innumerable plates of bronze, brass and gold. Many bore strange inscriptions and hieroglyphic symbols. Others were replete with the engravings of incongruous animals – **elephants**, snakes, jaguars, wild beasts of every kind."[916]
- Referring to Father Crespi's collection, a translated quote: "…a large number of engraved metal plates, so many as to form a library, where there would be enclosed the chronological history of mankind… We also find representations of **elephants**… But in those places extinct 10,000 years ago. Suffice to say that since the time of the Incas, i.e. in 1200 A.D., the **elephants** were unknown."[917] [918]
- Though likely not referring to Cuenca museum artifacts, an Ecuadorian government scientific journal in 1958 said: "The elephant decorative motif in various palaces of the ancient Maya civilization – which undoubtedly influenced the Ecuadorian cultures… Recent discoveries in the provinces of Canar and Azuay claim to have found representations of **elephants** in archaeological objects of stone and bronze."[919] [920] (Bronze has copper; a Konanz museum artifact shows three *Proboscidea* "trimmed with copper.")[921] [922] (Azuay is Cuenca's province, Canar is an adjacent province.[923])

In 1980 with Crespi in the hospital and people believing he wouldn't survive, the government (the museum of the central bank of the government) purchased from the Salesian Order, the right to take any artifact they wanted; when they came unannounced to take it, Crespi was incensed and left the hospital, but was physically restrained by soldiers from stopping the loading.[924] Various sources tell the disposition differently, it appears the Museo del Banco Central bought over 10,000 number of pieces, other thousands went to several other institutions and organizations, and other thousands were discarded due to being considered forgeries or unimportant, unfortunately many were discarded due to the paradigm that Middle Eastern/Mediterranean influence reflected forgery; a few sources say much of it was stolen, and/or much of it was shipped to the Salesian Order in Turin Italy or to the Vatican.[925] [926] [927] [928] [929] [930] [931] [932] [933] [934] [935] One "self-promoter" made up claims about other artifacts still in caves; one shouldn't be naïve enough to allow credibility issues of one person or of the many forgeries to erroneously detract from the many thousands of legitimate artifacts. To see some of the post-fire artifacts, watch a video made by a Scottish Academy of Sciences team (which included astronaut Neil Armstrong) which, inspired by Crespi's collection, unsuccessfully searched a nearby cave for artifacts.[936] [937]

Crespi Gold *Proboscidea*[938]

In the Namangosa Valley, about 50 miles from Cuenca, "the most extraordinary and momentous find" of a *Cuvieroniinae* tooth was radiocarbon dated to 3530 B.C.: "This [the recent tooth] explained the stone artifact of a carved elephantine creature that was recovered from an ancient crevice burial in the Namangosa Valley. It also explained carved elephant-like heads on stone mortars recovered in adjacent areas."[939] "The vividness with which an elephant-like animal was rendered in the stone pieces discovered in the Namangosa stone strongly suggest that it had to be alive in Ecuador within the memory of the tribes that produced these artifacts."[940]

Conventional wisdom varies, but the differing opinions put the start of these advanced civilizations in south central Ecuador as much closer to today than to the conventional dating for *Proboscidea* extinction, and they put the even more highly advanced phases, such as metal working, of these civilizations as far more recently.[941] Cuenca is so teemingly and convincingly recently elephantine, that the cynic who elects to be skeptical can only ignore the "elephant in the room", as he cannot coherently rationalize away Cuenca's copious and concrete relatively recent elephantine evidence.[942]

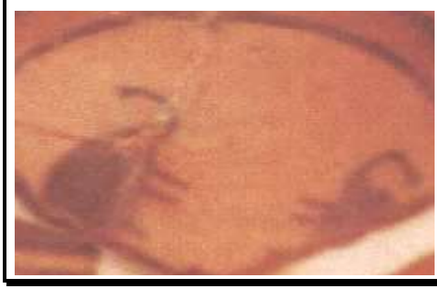
A.10.d Other South American *Proboscidea* Depictions

In addition to the Cuenca depictions, there are many other South American *Proboscidean* depictions:

- Some petroglyphs near La Victoria Venezuela have been called "surely" the "heads of elephants."[943] [944] [945] *Cuvieroniinae* skeletons have been found at La Victoria.[946]
- Similar to the Cuenca *Proboscidea* done in gold, one book reports: "In Colombia incised drawings of elephants on *golden* disks have been recovered from an airport construction site near Cali."[947]
- One book writes: "Carvings of the elephant have all been found in such locales as [then lists several elsewhere in this treatise, then lists]… Cali, Colombia."[948] (Perhaps this is the same as the prior listing?)
- A 1968 article reports: "…a golden elephant effigy has recently been unearthed at an archaic site in southwest Colombia."[949] (Same as in the above point?)
- A 1930 newspaper article discusses an artifact from a gold collection, found near Tuquerres Colombia, displayed in San Francisco's de Young Museum: "Another fine piece is a sacerdotal breast plate which includes a pair of mastodon or elephant tusks perfectly represented in gold, and about three inches long. The question immediately arises as to where the makers of this piece ever saw any elephant or mastodon, as none of these animals has been native to the Americas in recent geological epochs."[950] [951]
- Several sources discuss how in the Valley of the Statues near San Augustin Colombia are statues that depict elephants; other sources show a single depiction that is less than certainly elephantine in my opinion.[952] [953] [954] [955] [956] [957]
- One book talks about how in Colombia: "…drawings of horses, mules and elephants engraved in rocks, were confirmed by the deposits of bones scattered across the American continent."[958] (Like *Proboscidea*, remains of horses have been found throughout the Americas.)
- In Ecuador: "A more stylized form of the mastodon-like [*Cuvieroniinae*] features can be seen in the clay artifacts of later cultures recovered in other areas: a standing clay figurine from the Pisco area of the northern Mesa, and a seal stamp from Tungurahua (ca. 400 B.C.)."[959] Pictures are described as: "Pottery figure with elephant features. Pisco" and "Seal stamp with stylized elephant features. Tungurahua."[960]

- In listing elephantine depictions, one professor writes: "Decorative impressions, bas relief/etchings, on the ceramic platter in Ecuador suggest evidence… [of *Proboscidea*, however] the dating of the platter may not be sufficiently valid as pre-Columbian."[962]
- From a museum piece from Pachacamac Peru, two *Proboscidea* are painted on a terracotta plate thought to be from A.D. 500.[963] [964] [965]
- An archaeologist reports of a "bone clothespin found in Peru with an animal resembling a baby elephant."[966]
- Peru's Cumbe Mayo is famous for ancient aqueducts and plentiful petroglyphs.[967] One source reports: "Nearby caves contain petroglyphs, including some that resemble woolly mammoths."[968]
- Anything that violates conventional wisdom gets called fraudulent – I don't know whether the famous 10,000 -15,000 Ica Stones (decorated stones in Peru) are possibly authentic or entirely not (both sides have appealing arguments and at least one of the sides must have inaccuracies/falsehoods in their arguments); if they are authentic could they be pre-Noah?[969] I did find one Ica stone depicting a clear *Proboscidea*.[970]

Peru Terracotta Broken Plate with Two *Proboscidea*[961]



- Near Cuzco Peru is Marcahuasi where many people report stones of various animals including of elephants, but I believe these are neither persuasively elephantine nor manmade.[971] [972]
- From Peru: "Carved on the outside of the initiation cave was what seemed to be the face of a large elephant with two distinct tusks and a long trunk… It is very curious that the face of an elephant should be carved on the entrance to the cave, as there had never been any elephants in South America."[973]
- A pitcher found in Peru shows the "head of a mastodon" [*Cuvieroniinae*] that shows the "water god Chac in the same position they appear in Maya script."[974]
- "For example, in Peru there is a sixth century stele on which is represented an elephant… there were no elephants in Peru at that time."[975]
- Tiwanaku Bolivia was mentioned before, it has two stone carvings that often have been interpreted as elephantine heads with ears, tusks, and trunks; some see different interpretations, such as condors.[976] [977] [978] [979] [980]
- One book after discussing a ceramic puma states: "Another extraordinary specimen, discovered in Tiwanaku at over 1.8 meters of depth, symbolizes the jaws and teeth of a prehistoric elephant."[981]
- An article discussing ancient ceramic musical instruments from Tiwanaku said: "Pacheco shows one of the instruments that resembles the shape of a long elephant trunk and says most of the wind instruments are inspired by figures of animals 'noiser' in this case elephants and mammoths."[982]
- In 1911 a Bolivian government scientific publication discussed three "notable" private artifact collections, the third being from "the current Subprefect of Uyuni, Mr. Ricardo Cruz." [983] (A subprefect is a Bolivian province governor, Uyuni is a southern Bolivian province capital; Mr. Cruz was also a wealthy mine-owning businessman.[984] [985] [986]) After discussing the first two collections, the publication then reports:
  - "Finally, the private collection of the Subprefect of Uyuni represents great ethnographic value, taking into account the price actually intrinsic to it. Nearly all of that interesting collection consists of pieces, in faint thin plates of gold and precious stones, among which stand out, turquoise and malachite [copper ore sometimes used in jewelry], finding these stones cut into small balls and rollers or microscopic fragments, barely one side polished, without exception, having a single element, the hole to string the thread sustained by the neck of the deities [dignitaries?] of the time, serving by the same account as amulets on necklaces, which incidentally would not be used today. These necklaces are still found in the prehistoric cemeteries of Bolivia and Peru, next to the female mummies.

    To conclude with regard to this valuable collection, I have to refer to the famous golden plates. These pieces, very thin and malleable, coated sheets, are all made of pure metal and with exquisite art, given the known circumstances, the absence at that time, of instruments and utensils necessary for today for such work. Some of these plaques represent human figures, and others, these in greater numbers, animal figures. Of this latter group, standing out are the figures of the great antediluvian [pre-Noah's flood] pachyderms [elephants] which today can only be appreciated in museums, in fossil skeletons, of the order of mammals to which I referred, in the paleontological collection of the Museo de La Plata [huge natural sciences museum in Argentina.] These plates, real sheets, they are found, though in small number, in the museums of Lima, Santiago, and Buenos Aires, bringing the memory of others, even today found in excavations made in Colombia." [987]
    - The term "pachyderm" is referring to *Proboscidea*:
      - The word "pachyderm" is from an outdated mammalian taxonomic order that is no longer used.
      - The dictionary gives the first definition of "pachyderm" is as "any of the thick-skinned, nonruminant ungulates, as the elephant, hippopotamus, and rhinoceros."[988] The second definition given in the dictionary for "pachyderm" is "elephant." [989]
      - From my reading, when I found the term "pachyderm", it was referring to *Proboscidea*.
      - Though when inputting "paquidermo" by itself into Google Translate it gives "pachyderm", when inputting in several different complete Spanish sentences it instead gives "elephant."
      - Wikipedia gives a list of pachyderms: six *Proboscidea*, rhinos, hippos, aardvarks, tapirs, and four pig/hogs.[990]
        - Saying they can only be found today in museums as fossils would eliminate the still-alive tapirs, aardvarks, and pig/hog animals.
        - Though known from North America, I haven't found any sources claiming rhinos and hippos were in South America; however the toxodon, which is somewhat similar to a rhino/hippo, was from South America.[991]
      - The adjective "great", also translated as "large", fits *Proboscidea* better than any other possible pachyderm.
- A remarkably adept internet researcher from Kiev has posted two pictures, labeled only with "Artifacts from Bolivia", that show a rather large stone figurine of a complete *Proboscidea* body, complete with a large stocky body, large ears, distinct tusks, and a long trunk.[992]
- From Huaycama (Argentina) an axe was found that was described as having an "elephant" carved on it.[993] [994] [995] [996]
- One book lists various animals "mentioned in the literature on South American petroglyphs" – and then the list includes elephants; unknown if this references locations not mentioned above.[997]
- Though unknown what evidences are being referred to, a book reports: "In South America, a few Mayan drawings show what appear to be elephants, but the drawings of the Maya are too stylized to say with any degree of certainty."[998] The book also says evidence of more recent *Proboscidea* is: "Indian carvings in South America."[999]
- Another book also gives no details: "Among the items found in South America were… carvings of elephants only found in Asia."[1000]
- More South American depictions will be listed in the domestication section.
- One summary: "But without doubt, the mastodon or elephant form played a significant role in the spiritual and religious beliefs of both South American and Mesoamerican cultures."[1001]

A.10.e *Proboscidea* Pictorial Depiction Summary

A very conservative *Proboscidea* depiction count will be made by following these miserly assumptions:

1. Will normally assume the average is three when there are plural but unspecified quantities of depictions
2. Will not count the dozens of depictions in Mesoamerican codices or glyphs
3. Will not count the thousands of depictions referred to in the section on trunk-like architecture décor; these are elephantine in appearance but in particular are not generally considered definitively elephantine
4. Will count depictions not yet discussed, but discussed later in this treatise
5. Will not count any depictions described in this treatise as likely invalid or spurious
6. Will not count 20% of the still remaining depictions in order to drop the most questionable or least documented
7. Will reduce the still remaining count by a very pessimistic one half for possible fraud, error, recent-creation, pre-Jared creation, non-elephantine intent, unknown potential repetitive referencing, or any other invalidating reason.

This last step – of being very conservative by only counting one half of the remaining depictions – reduces the remaining 200+ depictions to still give just over 100 valid ancient American *Proboscidea* depictions. Most of these depictions are quite obscure and relatively unknown. The ones that are more known have received generally unfair dismissals through the years based on the certitude that *Proboscidea* didn't coexist with man (this false premise is finally extinct) or the certitude that they didn't coexist relatively recently (dominating premise today). (Those who have accepted the implication of more recent depiction-creation have largely assumed they were reflective of trans-oceanic contact; this also is a politically-incorrect minority view.) This "it-can't-be" mindset is reflected in a few quotes:

- From one prominent Proboscideantologist: "No undisputed Paleolithic art survives to show us an American mastodont [usage here was anything not a mammoth] in the flesh. Archaeologists tend to consider objects reportedly depicting mastodonts as either forgeries or artistic images of animals other than Proboscideans."[1002]
- From the same person: "There are no known cave paintings, portable artwork, carved figurines, or petroglyphs that clearly and unambiguously portray Clovis-era [era of extinction per conventional wisdom] images [of *Proboscidea*.][1003]
- From another prominent Proboscideantologist: "With the exception of a widely reproduced rock drawing of a putative proboscidean in Utah and perhaps one other, there is nothing in the New World to suggest a lengthy association with mammoths and other extinct species."[1004]
- From one book: "…the possibility of the representation of elephants in Mesoamerican art has been considered as highly disputable."[1005]
- "Where then do all these elephant representations originate? They originate, say the scientists, in the eye of the beholder or the hand of the hoaxer, and there are no authentic representations of elephants to be found anywhere in pre-Columbian America."[1006]
- Finally, bewailing the mindset against elephantine depictions: "The refusal to believe in elephant petroglyphs has always seemed to be somewhat futile and one is surprised that it has been allowed to drag on for so long."[1007]

For a classic example of this "premises-deny-facts" very-understandable but-still-wrong mentality, see Appendix I -- it's the most in-depth review ever on the Copan Stela B elephantine debate. These dismissals make blithe assumptions that there are just a few "fraudulent or misinterpreted outliers" to dismiss – *none* of today's American Proboscideantologists are aware of the *magnitude* of the depiction evidence -- as this treatise contains by a *huge* margin the largest list ever compiled.[1008] For example, in referring to a Florida *Proboscidea* depiction on bone, a Smithsonian anthropologist in 2011 said: "There are hundreds of depictions of proboscideans on cave walls and carved into bones in Europe, but none from America -- until now."[1009] [1010] [1011] [1012] The depiction list is simply far too long and large to be blithely dismissed as entirely 100% erroneous.

Along with the abundant human artifacts found with *Proboscidea*, these plethoric depictions represent overwhelming evidence that man did coexist with *Proboscidea*. And, as will be reviewed more later, a very significant number of these depictions directionally or strongly point to far more recent existence than what is accepted by "conventional wisdom."

A.11 *Proboscidea*/Human Coexistence Evidence at Time of Book of Mormon Translation

Coexistence evidence found in Missouri in 1838 has very often been cited as the first evidence of *Proboscidea* coexistence with American man; it received significant discussion in scientific and other circles, though for quite some time it was largely disbelieved and often mocked.[1013] [1014] [1015] [1016] [1017] [1018] [1019] [1020] [1021] [1022] [1023] [1024] [1025] [1026] [1027] [1028] Those in Joseph's era who believed in traditional Biblical timing generally believed the American *Proboscidea* were antediluvian (pre-flood) in nature; those in the same era who believed in longer than Biblical timeframes in particular believed *Proboscidea* to have predated American man.[1029] [1030] [1031] [1032] [1033] [1034] [1035] [1036] [1037] [1038] [1039] [1040] [1041] After having tediously travailed through many hundred "Google" pre-1830 publications with words of "mastodon/s" or "mammoth/s" or "mastodonte" plus other word combinations, plus having benefited from an anti-LDS critic exhaustively doing the same, I've found some pre-1830 coexistence evidences or potential evidences:

- An obscure museum list published in 1826 described a tusk from a Kentucky human burial mound (the tusk is described as five inches long and thus of a "young mastodon".)[1042] The museum list did not cite this as suggestive of coexistence; I have found no other source referring to this find, let alone labeling it as coexistence evidence.
- One anti-Mormon says Joseph Smith may have gotten the idea of recent elephants from this 1820 quote: "`I continue,' says he, `to receive, by every mail, specimens of minerals, and drawings of ancient works, accompanied by descriptions of them; specimens of something either curious or valuable relative to the natural history or antiquities of this country. The objects themselves are numerous all over this great secondary region. **It is indeed nothing but one vast cemetery of the beings of past ages. Man and his works, the mammoth, tropical animals**, the cassia tree, and other tropical plants **are all found here reposing together in the same formation**. By what catastrophe they were overwhelmed and buried here in the same strata, I know not, unless it was the general deluge.'"[1043] [1044] However the anti-Mormon selectively only gave the bolded words and said that "very likely" Joseph intended the cureloms and cumoms to be the mentioned "tropical animals." However the quote made clear the author believed these were antediluvian, whereas the Jaredite history is postdiluvian.
- An anti-Mormon says Joseph Smith may have gotten the idea of *Proboscidea*/human coexistence from an 1819 publication describing some Middletown New Jersey marl pits where both an "elephant" [mammoth] tooth and some human artifacts were found – however the article describes not a single marl pit, but a marl region and makes no claim the tooth was found with human relics. Additionally it has more focus on the many ocean creatures found in the marl – so obviously the author was not somehow implying all marl items were contemporaneous.[1045] [1046] [1047] I found no other sources citing this as evidence of coexistence.

- This same anti-Mormon did later find a quote in an 1806 book from England: "At a considerable distance back of St. Louis, in Upper Louisiana, there is a large parcel or body of both animal and human bones, mixed altogether promiscuously, over a space of ground of 300 yards, some lying, and others sticking up. Some of the largest order were presented to the Baron Carondolet, while in that country, who pronounced them to belong to an elephant."[1048] This quote's unknown source may also be behind this 1812 Philadelphia book quote: "The bones of the Mammoth, or some other enormous animal… A square of several hundred yards in extent, situated in the vicinity of a salt spring, is filled with them; and what is still more extraordinary, they are intermixed with human bones… About the year 1796, a gentlemen at St. Louis collected several sets of the teeth, some of which were but little decayed, and presented them to the Baron Carondelet at New Orleans. They were compared with those of the elephant; and it was the opinion of the Baron, that they belonged to that animal."[1049] These quotes eluded me (my 2104th endnote); they also eluded others as they were not referenced in extensive century-plus coexistence debate. These appear to have been found by Pierre Chouteau near the Osage River; these other sources didn't mention human bones.[1050] [1051] [1052] [1053]
- An 1802 publication describes a 1795 South Carolina canal dig that found *Proboscidea* bones at nine feet below the surface -- the author then adds: "It is remarkable that among these bones were found the arm bone of a man, in a state of petrifaction."[1054] [1055] [1056] [1057] This source made no comment about a possible coexistence interpretation, and I found no other sources citing this as coexistence evidence, or even mentioning the human arm bone.
- The Lewis and Clark expedition recorded having found a "painting of animals" in Missouri's Boone County in 1804 – many decades later it was determined precisely where these were and that one of the animal pictographs was of a *Proboscidea*.[1058] [1059] [1060] Thus this could not have been a pre-1829 source of coexistence evidence.
- An 1833 American book describes three elephantine depictions in an Illinois cave.[1061] I subsequently learned (my 2045th footnote) this 1833 information originally came from (due to obvious plagiarism with no citations) an 1809 book published in London by an Englishman who travelled the world and had entered this cave in 1806.[1062] [1063] Both of these references were not picked up by the scientific community, as it constantly referred to the 1838 Missouri discovery (discussed above) as being the first coexistence evidence. I found other sources referencing the 1833 source, but not the 1809 source.
- First published in French in Paris in 1810, then in English in London in 1814, one author found in the Aztec Codex Borgia a priest's mask that included what was described as an elephantine trunk; the author speculated this may have been due to Asiatic contact.[1064] [1065] [1066] [1067] [1068] This passage was also in an 1827 London publication.[1069] The same French author briefly alluded to this same elephantine trunk in another French work that was translated in English/London in 1821.[1070] I believe it is this same depiction that is referred to in an 1823 book on the history of Tennessee up until 1768: "The masque [mask] of a Mexican priest is represented in Mexico… The masque [mask] represents an elephant's trunk, similar to the head so often portrayed in Indostan. As no elephants exist in America, it is reasonable to conclude that the designment was brought from Asia."[1071] As best as I can ascertain this Codex Borgia item received exceedingly scant pre-1829 attention; and subsequent attention was not significant or generally supportive of the elephantine interpretation.[1072] [1073] I looked at good pictures of each page of the Codex Borgia, but was unsuccessful in finding which depiction was interpreted as an elephantine trunk.[1074]
- To be reviewed in a subsequent section, some believe some Indian legends reflect *Proboscidea*. Thomas Jefferson, a *Proboscidea* aficionado, had heard of legends and had told Lewis and Clark to look for possible *Proboscidea*; others had also heard of other *Proboscidea* legends before 1829. However these Indian legends of *Proboscidea*, which generally include clearly false items, were not believed by the majority then, and even less so by 1829.

Of the above possible physical coexistence evidences, my guess is that the publication most likely to have been read by Joseph Smith by 1829 and also be interpreted by him as evidence of *Proboscidea* coexistence would be the 1823 history book of Tennessee; I believe one would be hard pressed to argue that the odds of Joseph Smith having done so would even be as high as one in a million. By far the best argument for Joseph having heard of *Proboscidea* coexistence by 1829 would have been the Indian legends, as they did receive a fair amount of attention, in particular due to Thomas Jefferson's interest. Often also reviewed with these Indian legends were a couple of Indian stories from the 1700's of having found what would appear to be decomposing elephantine trunks. However in 1829 (as well as today), these legends and stories were not generally accepted as convincing evidences (legend review to follow later), and clearly the prevailing opinion, particularly "expert" opinion, in 1829 was that *Proboscidea* had either predated American man or predated postdiluvian American man. The Book of Mormon was clearly contrary to prevailing and expert 1829 opinion on human/elephantine coexistence, though it was consistent with the 1829 minority both aware of and believing of the Indian legends.

Though the first evidence of *Proboscidea*/human coexistence is usually cited as occurring in 1838, it took well over a century for the idea of coexistence to move from mostly rejected to widely accepted; though there was some early acceptance starting in 1838, there was primarily skepticism still a century plus later.[1075] [1076] [1077] For example, a Smithsonian report in 1908 said evidence of human/*Proboscidea* coexistence was "absolutely wanting in North America."[1078] Some point to finds in the 1920s and then particularly the 1950s as to when opinion started to be more materially accepting of interaction.[1079] [1080] A 1952 article wrote: "Finds of this nature have in fact been known for more than a hundred years, but the inertia of scientific opinion in the twentieth century has until very recently offered considerable resistance to the idea that man and mammoth were contemporaneous in America." Finally today coexistence is well accepted by the experts; but clearly it was overwhelmingly rejected when the Book of Mormon was translated in 1829.

A.12 Domestication Evidence

The following paragraphs have several fascinating evidences and indicators of Proboscidean domestication. The general evidentiary caveats and cautions given in the prior sections apply here as well. Several of the below evidences are of lower quality with respect to clear credibility, multiple verification, and/or picture availability; please remember the varying levels of confidence and uncertainty.

A.12.1 Silver-Ringed Tusks in a City

Some large ancient cities near Paredon Mexico were destroyed by a sudden ancient mudslide. Elephantine excavations there were reported around 1903 by Dr. Leon, a well-known National Museum of Mexico archaeologist, in the *New York Herald*, the *Los Angeles Times*, the *Milwaukee Free Press*, the *New Century Path*, the *American Antiquarian* as well in as other newspapers (was a wire report) and publications: [1081] [1082] [1083] [1084] [1085] [1086] [1087]

> "The discoveries which have been made in Mexico by Dr. Nicholas Leon, to which we have already made some reference, are receiving something of the widespread attention which they deserve. The *New York Herald* produces an interesting account by Dr. Leon:
>
> 'The discoveries made at Paradon [Paredon], in Coahuila, are the most extraordinary that have been made in Mexico, and possibly anywhere in the world. The excavations made so far show that a large city was buried not far from the present town of Paradon by an immense amount of earth, which was evidently washed down from the mountains by flood.

> Portions of buildings so far unearthed show that the city -- at least the largest of the cities that were covered by the debris of the flood, there being at least three cities destroyed -- was very extensive. The indications are that there were many massive structures in the city and that they were of a class of architecture not to be found elsewhere in Mexico. According to the estimates of the scientists under whose directions the excavations are being made, the city in question had a population of at least 50,000.
>
> The destruction wrought by the flood was complete. **Skeletons of the human inhabitants and of the animals are strewn all through the debris... Most remarkable of the minor finds made at Paradon is that of the remains of elephants. Never before in the history of Mexico has it been ascertained positively that elephants were ever in the service of the inhabitants. The remains of the elephants show plainly that the inhabitants of the buried cities made elephants work for them. Elephants were as much in evidence in the streets of the cities as horses. Upon many of the tusks that have been found were rings of silver**.'" [1088] [1089] [1090] [1091]

The evidence of domestication is twofold – *Proboscidea* having been found commonly within the city, and with silver rings around many of their tusks -- the implication being that these rings were likely used with reins similar to bits used with horses. However while several sources report this find, they all appear to use much of the same wording, thus implying there may be a single original source for this information, thus *great caution* is warranted.[1092] On the other hand, paradigm-breaking evidence is often not pursued as it is understandably deemed too suspect, and many leading publications chose to report this, and it was attributed to a prominent Mexican archaeologist.

A.12.2 On Top of Paved Stone

Somewhat similarly, near Concordia Colombia: "A **paved stone channel** was found, through which the salt water had been led to the boiling house. In this **stone channel was found the complete skeleton of a mastodon** [*Cuvieroniinae*] whose tusks measured 5 feet in length. The ivory is in good preservation, and there seems good reason to believe that the animal was killed by the landslip whilst drinking the salt water. I have seen necklaces taken out of Indian graves formed of beads made of sections of the fangs of the molars of mastodons… The perfect preservation of the bone is so remarkable that I do not believe that these could have been fossil teeth which the Indians dug up and employed. I am inclined to think that the mastodon was contemporaneous with man in recent times in this country."[1093] Several sources up to the early 1900s cited this as an example of recent *Proboscidea*.[1094] [1095] [1096] [1097] [1098] [1099] [1100] [1101] Would it have died in a civilized location because it had been domesticated? (Was this one and the Paredon *Proboscidea* killed in the A.D. 34 destruction?[1102])

A.12.3 By an Ancient Road

Similarly, "near the city of Tezcuco [near Teotihuacan Mexico], one of the ancient roads or causeways was found, and on one side, only three feet below the surface, in what may have been the ditch of the road, there lay the *entire* skeleton of a mastodon [quite likely not an American mastodon.] It bore every appearance of having been coeval [contemporary] with the period when the road was used, and he suggests that these animals may have been the beasts of burden of these ancient inhabitants."[1103] [1104] [1105] [1106] [1107] [1108] Were all of these in populated advanced-civilization areas due to being domesticated? As referenced earlier, many *Proboscidea* bones were found at "a site near the pyramids" – were *Proboscidea* used to build the pyramids in Mexico?[1109] After reviewing this "causeway mastodon", one author wrote in 1836:

> "**The number of the remains of this huge animal** [*Proboscidea*] **found on the table land of Mexico, and in the valley itself, is *astonishing*. Indeed, wherever extensive excavations have been made of late years, they have almost always been met with… I could not avoid, at the time I was in Mexico, putting many isolated facts together, and feeling inclined to believe… that the extinct race of enormous animals, whose remains would seem, in the instance I have cited, to be coeval** [coexistent] **with the undated works of man, may have been subjected to his will, and made instrumental by the application of their gigantic force, to the transport of these vast masses of sculptured and chiselled rock, which we marvel to see lying in positions so far removed from their natural site. The existence of ancient paved causeways also, not only from their solid construction over the flat and low plains of the valley, but as they may be traced running for miles over the dry table land and the mountains, appears to me to lend plausibility to the supposition; as one might inquire – to what end the labour of such works, in a country where beasts of burden were unknown**?"[1110]

Another author reviewed the above and said: "Had the ancients some means of taming these beasts into laborers for their gigantic architecture?"[1111] [1112]

A.12.4 Cuernavaca - *Proboscidea* with a Platform

Cuernavaca Mexico – Sketch of Mounted *Proboscidea*[1113]

An archaeologist wrote: "Near Quehutla in the vicinity of Cuernavaca, Mexico, Dr. H. A. Monday in 1940, unearthed a porcelain **elephant figure bearing a seated human being on the back**… At the same spot two other elephant figures were discovered. One was of carved stone, the other of pottery."[1114] [1115] [1116] "This broken figurine is clearly an elephant with a platform on its back."[1117] Another description was: "…a ceramic elephant figurine, with a headless oriental rider, extracted from the Teocalli Mound, Cuernavaca, Mexico by Dr. H. A. Monday, together with two locally made imitations in stone, also found in the burial mound."[1118]

A.12.5 Chichen Itza – Two Domesticated Depictions

Three stories down inside Chichen Itza's Temple of the Warriors, a pillar is reported with "**an elephant shown in one case with straps running down his side to pull things** and **another elephant with a basket on his back to carry passengers**, and a horse that in full color, shown as a beast of burden. [several miles away]…at the base of one of their giant temples is a life-sized elephant."[1119] Other sources have reported Chichen Itza *Proboscidea* artwork, though this may only be trunks or partial *Proboscidea* faces that some find so convincing and others find not persuasive.[1120] [1121] [1122] [1123] One summary for some of these Chichen Itza elephantine representations (which applies generally) was "which many generations of antiquarians took for heads of elephants with waving trunks" – until they became told elephants could not possibly have existed.[1124]

A.12.6 Panamanian Stone Elephantine Idol Strapped with a Load

For an elephant figure found in Panama, it was written: "…there is no reason to doubt that the makers of this carving were perfectly acquainted with the existence of elephants."[1125] To help explain the below quote from a well-known archaeologist, it should be noted that *Proboscidea* are reported as the only known non-primate mammal with forward-bending hind knees:

> "The most astonishing of the [stone] idols is one bearing a figure which is so **strikingly and obviously elephantine** that it *cannot* be explained away by any of the ordinary theories of being a conventionalized or exaggerated tapir, ant-eater, or macaw. Not only does this figure show a trunk, but in addition it has the big leaf-like ears and the **forward-**

bending knees of the hind legs peculiar to the elephants. **Moreover, it shows a load or burden strapped upon its back.** It is ***inconceivable*** that any man could have imagined a creature with the flapping ears and peculiar hind knees of an elephant, or that any human being could have conventionalized a tapir to this extent. To my mind there is no doubt that the people who built this temple and reach such heights of culture in Panama in prehistoric times had either seen elephants, **had domesticated some species of mastodon**, or were in direct and frequent communication with the Orient and had heard descriptions of elephants."[1126 1127 1128 1129 1130]

Bonampak Mexico Fresco Painting[1131]

A.12.7 Bonampak Mural

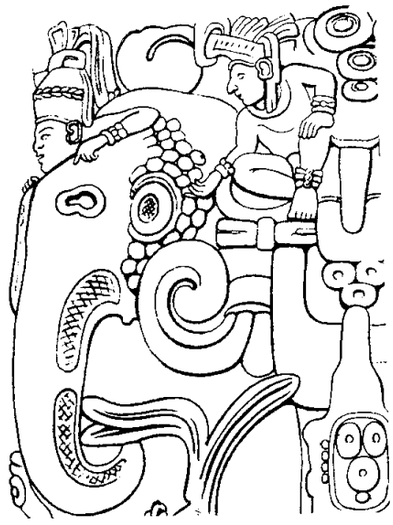
Bonampak Mexico has fascinating colorful large ancient mural paintings.[1132] One mural depicts a battle scene with a "figure of an elephant" rising up.[1133 1134] It appears to have a trunk and a small tusk; the lower "jaw" wouldn't make sense on any animal, though the fresco's animals are rather stylized. Does the painting depict a saddle/harness on its back and back of its head, thus reflecting domestication? The paintings are thought to be perhaps from A.D. 790, thus generally consistent with the Copan/Yalloch timing.[1135 1136]

A.12.8 Copan - Ground Zero in the "Elephantine War"

A Copan Honduras stela, thought to be from A.D. 731, shows two *Proboscidea* with their mahouts (elephant masters), passengers, and harnesses/saddles; one of the *Proboscidea* is shown below.[1137 1138 1139 1140 1141] (The stela's mahouts have since been broken off; some archaeologists speculated possibly due to opposition to the elephantine interpretation.)[1142 1143 1144 1145] Many archaeologists have the paradigm that recent *Proboscidea* could not have existed, and thus have called this *Proboscidea* a macaw, tortoise, anteater, tapir, squid, alligator, or bat.[1146 1147 1148 1149 1150 1151] (Rigid minds create flexible eyes.) For a century the macaw interpretation has been the dominant position parroted within "ivory towers." (Funny how the academic "ivory tower-ers" deny the animal "ivory towerers", lol.) As this stela has become the epicenter in the "American elephantine debate", a very detailed review (7,000 words) is given in Appendix I. Over 50 anatomical points are reviewed, and then subjectively weighted for a variety of factors. The pro-con score for the elephantine interpretation is 136-32 – a very strongly elephantine result, but not without unresolved issues, though these have potential explanations or may be due to artistic stylization. The pro-con score for the macaw interpretation is 18-236 – a definitive debunking of the highly unscientific macaw myth. The anatomical debunking is complimented by a review of the flaw-filled pro-macaw arguments, which further strengthens the macaw debunking; again, see Appendix I.

However to review lightly just one of the points – the elephantine eye shown herein appears a bit odd on the old sketch (this eye is now broken and gone from the stela). However the remaining elephant eyes on the stela really do look like perfectly normal eyes. And in the macaw interpretation this eye is a nostril; yet no macaw from Mexico down to Costa Rica has any visible nostril – they are all hidden in the feathers. This same "level of intellectual rigor" is common on the rest of the anti-elephantine pro-macaw argument as well.

Elephantine Copan Honduras Stela[1152]



Yalloch Guatemala Mayan Vase (front and back)[1153 1154]

A.12.9 Yalloch Guatemala Vase

A colored vase found by Dr. Gann in 1916 in Yalloch Guatemala is fascinating.[1155 1156 1157 1158 1159 1160 1161 1162] It depicts the *Proboscidea* in its correct gray color. The *Proboscidea* on its hind legs reflects training similar to elephants today. Elephants are reported as the only non-primate mammal with forward-bending hind knees – and the vase correctly shows this. However, elephants have forward-bending high front ankles – the vase shows this incorrectly. Remarkably, there are several similarities to the Copan stela:

- Both mahouts are lying down on the *Proboscidea's* head and are apparently carrying a goad.[1163 1164 1165 1166]
- Both mahouts appear to possibly be wearing distinctive very long dual-plumed headdresses.
- Both *Proboscidea* appear to be carrying a load with some sort of harness around the shoulder area.
- The vase is thought to be from 600-900 A.D., while the Copan stela is thought to be from A.D. 731.[1167 1168]

The correlations to the Copan stela strengthen the credibility of both. One summary with regards to "the elephant controversy" is that "the Yalloch vase is a **difficult** thing to be explained away by non-believers."[1169]

A.12.10 Representation of Elephants Equipped for War

A New York magazine's editor wrote an article in 1880 on "Ruined Cities of Central America" and said: "…statues at the base of the pyramid at Izamal, and the representation, on pottery, of elephants equipped for war purposes."[1170 1171] No detail is given as to whether this elephantine war pottery was found at Izamal (Yucatan city with pyramids).[1172]

A.12.11 New York Copper Domestication Depiction

As reported in *American Archaeology* and elsewhere, from Dr. Larkin in 1880: "My theory that the **prehistoric races used, to some extent, the great American elephant, or mastodon**, I believe is new and no doubt will be considered visionary by many readers and more especially by prominent archaeologists. Finding the form of an elephant engraved upon a copper relic some six inches long and four wide, in a mound on Red House Creek, in the year 1854 and represented **in harness with a sort of breast-collar with tugs reaching past the hips**, first led me to adopt that theory." [1173] [1174] [1175] [1176] [1177] [1178] [1179] [1180] (This was found in western New York; thousands of ancient copper relics have been found throughout the U.S.) He argued: "There is scarcely a nation or people so low in mental cultivation and the arts but resort to some of the lower animals to transport some of their heavy burdens or to carry them on their backs. When we consider the magnificent works built by these ancient people it looks impossible that they could have been built by no other hand than human labor."[1181] Dr. Larkin also wrote: "…in South America, a singular animal engraved upon stone and sketched by Mr. Gibbon is represented and no doubt was designed for the Mastodon, though it is devoid of tusks. Engravings of a similar character have been found in several mounds in different sections engraved upon bone."[1182] However, I believe there is some reason to at least doubt Dr. Larkin's veracity.[1183]

A.12.12 Bolivian National Museum – Palanquin Vases

Several books, from 1851 and onwards, including from some rather prominent people, tell of a French diplomat Count of Sartiges description of two Aymara vases in the National Museum in La Paz Bolivia -- each vase showed elephants painted in black that are carrying palanquins (fancy seats for carrying important people) on their back.[1184] [1185] [1186] [1187] [1188] [1189] [1190] [1191] [1192] [1193] [1194] [1195] [1196] [1197] [1198] Elephants have often been topped with fancy seats, often for important people.

A.12.13 Konanz Museum -- Ecuador

As reviewed earlier, the Konanz Museum collection became the original nucleus of the Museo del Banco Central del Ecuador.[1199] [1200] [1201] I only found one book with Konanz artifact photos – of its nine *Proboscidea* depiction photographs, one showed an artifact with a person standing on the head of a *Proboscidea*.[1202] However I am sheepish about "counting" this one as it by no means is necessarily reflective of domestication -- it may well be just artistic expression of a person on top of a *Proboscidea* – thus possibly reflecting just art and not domestication.[1203]

A.12.14 Other Domestication Depiction Possibilities

A 1956 publication wrote (translated): "In Central America, the Maya had a single work animal: the mastodon. In the Yucatan and Guatemala, archaeologists have uncovered magnificent bas-reliefs that they first thought are Asian elephants carrying bundles and riders. These elephants are actually mastodons."[1204] Perhaps the Yucatan reference is to Chichen Itza, but I'm not aware of what the Guatemalan reference would be to.

From the Namangosa Valley (about 50 miles from Cuenca) was found a "carved stone elephantine animal."[1205] It's a full standalone stone figurine of an entire elephantine body; below the tusks and trunk is some unidentifiable item. It's unclear if the item is held by the lower part of the trunk, if it's held by what may appear to be a rope around the *Proboscidea's* neck, or whether it's necessarily being held at all. A *Cuvieroniinae* tooth from this valley was radiocarbon dated to 3530 B.C.[1206]

A comment in an online science article read as follows: "When the[y] made [a] freeway in Mexico they found [a] tunnel under the city that had giant rock cart wheels used to carry huge rocks and also has huge elephant tusks there too which prove they used elephants to build Mayan and Aztec cities! Hauled rocks 20 miles from the quarries!"[1207]

One book in passing states: "…we find in South America the carving of an Indian mahout riding on the neck of an elephant", but then gives no detail or sourcing.[1208] Another book makes a similar South American claim, but also without any detail or sourcing.[1209]

As all of these in this section have less confidence, none of them will be "counted" in the depiction total.

A.12.15 Domestication Summary

These represent 15 depictions of domesticated *Proboscidea* from 10 locations. However several of these are of lower quality with respect to clear credibility, multiple verification, and/or depiction availability. The Copan stela and Guatemala vase both come from the same era and both appear to possibly reflect a dual-plumed mahout headdress -- thus they increase each other's credibility. To be reviewed in Appendix I, the Copan stela clearly shows in great detail two domesticated *Proboscidea*. If authentic, the report of multiple *Proboscidea* found with silver rings on their tusks, having died suddenly within ancient populated cities, would clearly indicate domestication. The other *Proboscidea* that died within recent advanced civilizations may also reflect domestication. In totality, these evidences are not as plethoric as for other premises, but still a double digit number of domestication evidences is much higher than the number of evidences against domestication, which of course total zero, lol.

All of these evidences were found after 1829; I can recall only one pre-1829 *possible* inference of *Proboscidea* domestication evidence – based on one tusk being more worn than the other -- not what I would consider evidence – as the comment can be interpreted two different ways, it's most likely the passage wasn't even trying to intimate domestication.[1210] Clearly today's overwhelming consensus against domestication was also the practically uniform opinion in 1829.

A later section will make a sweepingly comprehensive and strongly compelling solid case that the *Proboscidea* were clearly coexistent with at least some of the very sophisticated and fairly recent civilizations of ancient America. If one accepts this advanced-civilization coexistence contention, then the dubious and dubitable premise would be in defending the notion that no one in these brilliant civilizations ever thought of domesticating *Proboscidea*. The most awe-inspiring *Proboscidea* domestication manifestations (not evidences) are, in my opinion, the endless array of ancient American stone cities.

A.13 Remarkable Potential Explanation for Distribution Mystery

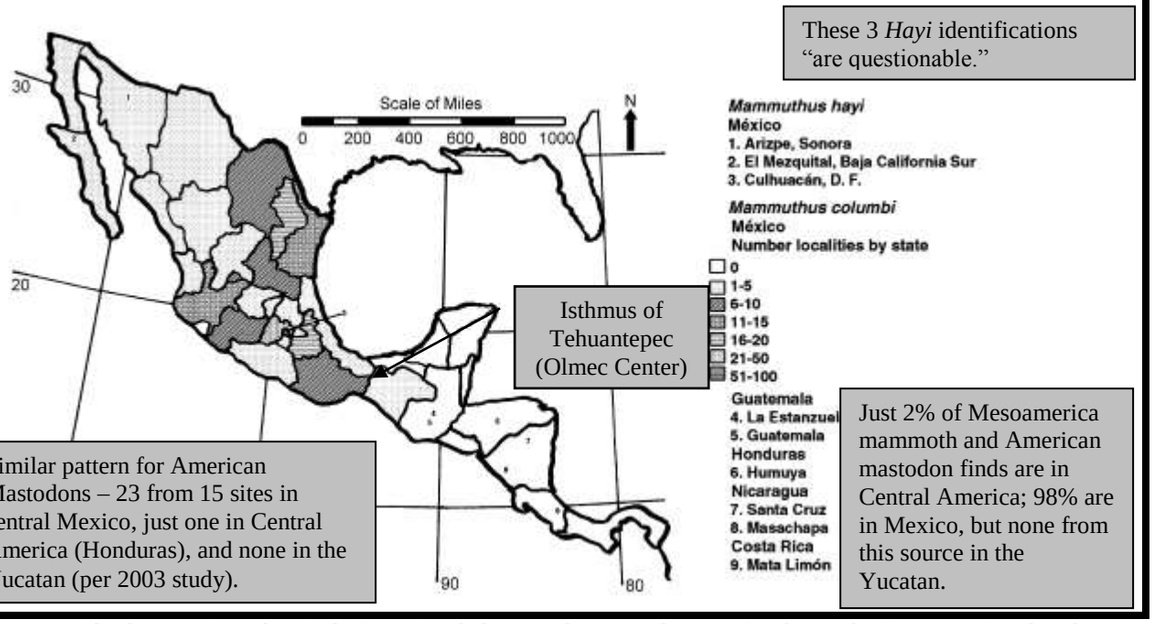
The Book of Mormon provides a *remarkable* potential explanation for the quite unusual distribution of mammoths and American mastodons, if you accept the Noachian flood and that almost all *Proboscidea* remains found are postdiluvian. Indeed, I'm not aware of any attractive alternative theory, which is why this unusual phenomenon has perplexed many.

A.13.a Mammoths and American Mastodons Only in North America

While roughly 5,700 mammoths or American mastodons have been found all over North America and more are being found monthly, experts agree that none have ever been found in South America (a mammoth molar fragment was reported from Cayenne in 1863, though it's been widely rejected as "uncertain and suspect" and has been speculated to have been brought to Cayenne; also a 1916 book reports that a *columbi* was "said to have been found in Colombia", but this is quite doubtful).[1211] [1212] [1213] [1214] [1215] [1216] [1217] [1218] [1219] [1220] [1221] [1222] [1223] [1224] [1225] [1226] [1227] [1228] [1229] (In 2010 a tooth, found in the 1990s in Brazil, was identified as being from an "elephant" [mammoth] and was dated to 43,000 B.C.; it was heralded as the first

elephant [mammoth] evidence south of Costa Rica.[1230] [1231] My guess is that it was likely either pre-Noah, was transported there, or is in error.) One reads of "mastodons", "mastodonts", "gomphotheres", or "elephants" in South America, but these are just terminology usage variations – experts agree that *Cuvieroniinae* are South America's sole *Proboscidea*.[1232] [1233] (A

Distribution of 265 Mammoth Sites in Mexico and 6 in Central America from a 2003 Study[1249]



few recent articles have reviewed a single Peruvian skeleton and proposed a new *Amahuacatherium peruvium*, but the world's leading experts have rejected it as being just part of *Cuvieroniinae*.[1234] [1235]) Many have been perplexed by this geographic distribution, in particular because by reviewing Panamanian terrain they've concluded the mammoths and American mastodons clearly could have and logically should have reached South America:[1236] [1237] [1238]

- "There appears to be ***no biological explanation*** why *Mammuthus* [mammoth] and *Mammut* [mastodon], which might have been expected to cross the Panamanian land bridge, did not reach South America."[1239] [1240]
- "***Strangely***, *Mammut americanum* did not migrate into South America."[1241]
- "…it appears that ***the only obstacle*** to mammoth dispersal within the New World was the forested tropical lowland region of the Nicaraguan Basin and the Panamanian Isthmus."[1242]
- "…***for some reason***, evidently climatic and vegetative, the route has been closed…"[1243]
- "A *number* of widely distributed mammalian genera, including *Mammuthus* and *Mammut* , which might be expected to have crossed the Panamanian land bridge, did not reach South America. ***This phenomenon is considered highly significant*** in the light of the multitude of species from both continents which made the crossing."[1244]
- "However, the absence of mammoths south of central Costa Rica ***is significant, indicating a barrier to their dispersal to the south*** - likely the tropical jungles of Panama and northern South America (the called 'Darién plug'), which did not provide the vegetation necessary to the diet of mammoth."[1245]
- "Although Mammut is confidently interpreted as a forest-living proboscidean that browsed on sylvan vegetation, it ***apparently did not disperse southward*** to South America, possibly because of a dietary specialization on a particular type of vegetation."[1246] (It's hard to think of any mammal with less "dietary specialization" and more ability to move than *Proboscidea*.)
- "…the Miocene ***Panamanian seaway apparently was a barrier*** to Proboscidean dispersal."[1247]

This secular conventional wisdom is made even more difficult because it believes much of this migration occurred during one of many so-called Ice Ages where they believe the ocean levels were several hundred feet lower – thus creating a much wider path for migration.[1248]

A.13.b Many Mexico/Central America Skeletal Finds, But Just 2% in Yucatan/Central America

Many mammoths and American mastodons have been found in Mexico. A 2003 review identified 265 locations in Mexico where Columbian mammoths had been found (and many sites have multiple mammoths).[1250] [1251] This count missed some published finds and obviously missed subsequent published finds, but I believe the primary miss would have been a far higher number found over many centuries that were never published. Starting in the 1500s, Cortez and other early Spaniards had extensive interaction with *Proboscidea* bones: "A score of other early Spanish chroniclers reported discoveries of 'the bones of immense men' [*Proboscidea*] *whenever* people plowed fields, dug wells or tombs, or mined for minerals in New Spain".[1252] [1253] [1254] [1255] [1256] "Remains of Columbian mammoth are the most widespread Quaternary fossils in the northern part of Mesoamerica."[1257]

However, very few have been found below the Isthmus of Tehuantepec area (Mexico's skinny part) – this 2003 study reports that just 6 mammoths and one American Mastodon have been found in Central America, and none of either in the Yucatan.[1258] (Costa Rica is the most southern location usually quoted for the mammoth, Honduras for the American mastodon.)[1259] [1260] [1261] [1262] However no study can be complete and I found several more southern *Proboscidea*:

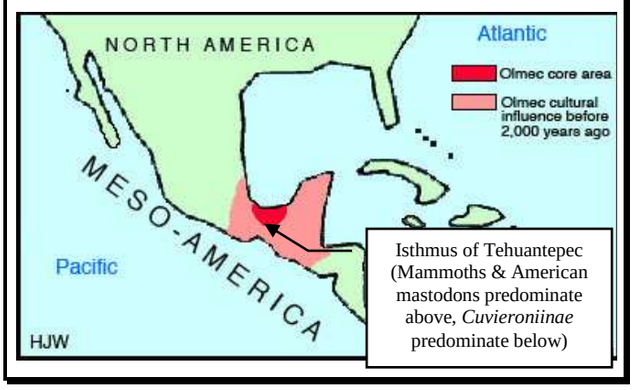
- The mammoth has also been found in El Salvador.[1263]
- Mammoths and "mastodons" (*Cuvieroniinae*?) have been found in the Yucatan – in the Loltun caves in association with human evidence.[1264] [1265] [1266] [1267]
- A few "mastodons" (though most likely meaning *Cuvieroniinae*) have been found in Guatemala (some with human evidence).[1268] [1269] [1270] [1271] [1272] [1273]
- Likely different than the ones listed in the 2003 study, some other mammoths have been found in Guatemala.[1274]
- A 2010 article identified eight Central American mammoth locations.[1275]

Nevertheless, the mammoths and American mastodons are of a much lower frequency below the area of the Isthmus of Tehuantepec. Perhaps much of the lower southern frequency may be that discoveries are more likely to be both made and reported in the drier, more-;populated, and more-advanced areas of central and northern Mexico. Still the discovery pattern is quite unintuitive and unexplainable -- until you read the next section.

A.13.c Olmec (Jaredite) Correlation

LDS who have studied the Olmecs have often concluded they must be the Jaredites (a sound conclusion in my opinion); the Olmec center was in southern Mexico at the Isthmus of Tehuantepec.[1277] [1278] [1279] [1280] The Jaredites arrived shortly after the tower of Babel (about 2200/2100 B.C.) and never lived in South America -- apparently by both divine and human intent -- while many millions lived in North America.[1281] [1282] [1283] [1284] [1285] [1286] [1287] [1288]

Olmec (Jaredite) Main Areas[1276]



Did ***wild*** mammoths and American mastodons only live north of the Olmec (Jaredite) center and not be able to migrate south due to the heavy settlement in this area? Overlapping the end of the Jaredites, the Mulekites are generally believed to have lived in Mesoamerica, and then the Nephites later united with these Mulekites, generally believed in this same Mesoamerica area. Archaeology and history tells us this region continued to be highly populated after the Nephite/Mulekite era ended. Thus perhaps continuous extensive civilizations in this area blocked mammoths and American mastodons from migrating to South America. And perhaps the far lower frequency of mammoths and American mastodons in Central America and the Yucatan are because only (or mostly only) *domesticated* ones lived in Central America and the Yucatan, with the densely and continuously populated Isthmus of Tehuantepec (Mexico's "skinny" part) serving as a block to wild mammoths and American mastodons.[1289] [1290] Additionally, domesticated *Proboscidea* that die in populated areas are more likely to have had their bones more effectively disposed of, reducing future archaeological finds.

If you assume Biblical timing, with the Isthmus of Tehuantepec being continually populated, and with the Jaredites never entering South America, the history recorded in the Book of Mormon provides a *phenomenal* potential explanation for the *very* unusual distribution of mammoths and American mastodons being infrequent below this isthmus and being nonexistent in South America. Indeed, what else would be a credible alternative causation theory?

Ether 10:21
And they did preserve the land southward for a wilderness, to get game. And the whole face of the land northward was covered with inhabitants.

As an aside, another conclusion can be reached as well. Though very few LDS believe the Jaredites resided in South America, the complete lack of any mammoths or American mastodons there would further reinforce the idea that the Jaredites were solely in North America.

A.13.d Bottleneck Other Direction Also

This same bottleneck appears to have perhaps worked in reverse for *Cuvieroniinae*. With fewer sources giving robust quantifications for *Cuvieroniinae*, they total less than 5% of *Proboscidea* found from Canada through most of Mexico, but represent the great majority of all *Proboscidea* found in far southern Mexico through Central America, and represent 100% of all *Proboscidea* in Panama and South America.[1291] [1292] (See subsequent section for most distribution detail.) Thus perhaps the human population bottleneck around the Isthmus of Tehuantepec delayed and mitigated materially the eventual wild northern *Cuvieroniinae* presence.

A.13.e Geographical Bottleneck Summary

The conventional secular wisdom, that these highly-flexible-diet highly-mobile highly-durable *Proboscidea* had millions of years to roam the Americas with no material predator, is flatly contradicted by their geographical locations as millions of years would have caused far greater distribution. However a Book of Mormon timeframe with a constant Book of Mormon population (during *Proboscidea's* existence) near the Isthmus of Tehuantepec provides a very plausible potential explanation.

A.14 Indian Legends

Numerous Indian legends of beasts with elephantine traits have convinced some that they are of authentic elephantine origins and that they are reflective of relatively recent *Proboscidea* existence.[1293] [1294] [1295] [1296] Thomas Jefferson (America's first prominent *Proboscidea* aficionado) and others said that the Indians believed *Proboscidea* still lived "in the northern and western parts of America"; Jefferson (and a few others) also believed they might still be alive, telling Lewis and Clark to look for them.[1297] [1298] However while many legends identify animals with *Proboscidea* characteristics, these legends generally add other-animal and/or non-reality characteristics to these same animals, thus weakening their persuasiveness. On the other hand, trunk-like descriptions in particular are impressive. Indian tribes sometimes reported to have *Proboscidea*-like traditions (of varying elephantine-clarity, quality, and documented establishment; without usually seeing original sources I list with even more trepidation) include (with some overlap):[1299] [1300] [1301] [1302] [1303] [1304] [1305] [1306] [1307] [1308] [1309] [1310]

- Abenaki, Alabama, Algonquin, Atakapa, Chicksaw, Chippewa, Chitimacha, Choctaw, Cuna, Dakota
- Delaware, "various Dhegiha tribes" ("Dhegiha" includes Omaha, Ponca, Osage, Kansa, and Quapaw languages)
- "Eastern Cree", Eskimo, Huron, Inuit, Iroquois, Kaska, Koasati, Micmac, Naskapi, Ohio, Omaha, Oneida
- Ojibwa, Osage, Passamaquoddy, Pawnee, "Peace River Indians", Penobscot, Ponca, Shawnee
- Shuar (Ecuador/Peru), Stickeen, Tuscaroras, Winnebago, Wyandots
- Unnamed tribes in Kentucky, Louisiana, Ohio, the Yukon Valley, and tribes "throughout northwestern Canada."

Some stories of "giant elk", thought by at least one source as likely *Proboscidea*, are reportedly found within the Apache, Beaver, Kaska, Kutenai, Navaho, Paiute, and Pend d'Oreille tribes.[1311] The better *Proboscidea* legend connections follow:

- Some Indian descriptions were: "very large, had a big head, large ears and teeth, and a long nose with which he hit people", "great animals with long teeth", "so strong was it that it was able to crush trees that stood in its path", "such huge dimensions as to thresh down the forest in his march", "it would root up trees with a long nose", "a monster which could strike a man with its long nose", and "were once abundant, feeding on the boughs of the lime tree; they did not lie down at night".[1312] [1313] [1314] (Elephants often sleep/doze standing up, though also often may sleep lying down, though this is more common with younger elephants.)[1315]
- One tradition summary: "giant stiff-legged beasts which would never lie down, had a big head and large leaf-like ears, round footprints, forward bending knees, and had a fifth appendage coming out of its head."[1316] (Proboscidea front-limb ankles are quite high and are forward-bending, thus sometimes *Proboscidea* are stated to have four forward-bending knees, though this is not technically correct for the front legs. Remarkably, they are reported as the only non-primate mammal with forward-bending hind knees.)

- Some phrases were "intended as a beast of burden", "its skin being so strong and hard that the sharpest spears and arrows could scarcely penetrate it", and "by their weight, sank in the mire, and were drowned" (stuck in mud is a common form of *Proboscidea* death).[1317] [1318]
- One long-time Indian agent said: "Particular persons in every [Indian] nation were selected as the repositories of their histories and traditions: that these persons had others who were younger selected for this purpose continually and repeatedly instructed in those things that were handed down from generation to generation; and that there was a tradition among the Indians of the existence of a mastodon."[1319] [1320]
- One Chippewa story from about 1800 told of a man becoming an animal: "His body became heavy and massy, his legs thick and long… A long-snout grew from his head, and two great shining teeth out of his mouth. His skin remained as it was, naked, and only a tuft of hair grew from his tail."[1321] [1322]
- One 1744 description was "…beside whom others seem like ants. He has, they say, legs so high that eight feet of snow do not embarrass him, his skin is proof against all sorts of weapons, and he has a sort of arm which comes out of his shoulder, and which he uses as we do."[1323] [1324] [1325] [1326] [1327] Per this tradition it was written: "It is hard to imagine that anything but the actual sight of a live elephant can have given rise to this tradition."[1328]
- A story from several Algonquin tribes includes the phrases "huge monster", "trampled" (people), "large, round tracks deep in the snow", "monster would hit him with his long nose", and "ears for your bed" (only *Proboscidea* have large round tracks or gargantuan ears).[1329] [1330]
- This quote is intriguing as: 1.) The author apparently made no connection to *Proboscidea*; 2.) It has several *Proboscidea* ties; 3.) The trunk description seems unlikely unless fact-based; 4.) It's early – from 1667/8; and 5.) Its only primary problem relates to the meaning/implication of each usage of "moose." A Frenchman said Indians told of hunting a "great Moose": "All the largest Moose are only dwarfs compared with this one; he has legs so long that, however deep the snow may be, he is never inconvenienced by it while the others are almost buried in it, and on that account they are easily caught. He has a skin that is arrow-proof and bullet-proof, and he seems invulnerable. They add that he carries a fifth leg which grows out from his shoulders and which he uses like a hand in preparing his bed. He never goes alone, and does not appear without being escorted by a great number of other Moose; and, in fact, our hunters said they killed fifteen of the latter while chasing it."[1331] [1332] (Though not commonly found in Quebec, *Proboscidea* have been found there.[1333] Except for adult males, elephants travel in herds.)
- A respected ethnologist wrote in 1917 of a Kaska (from northern British Columbia) tradition of: "A very large kind of animal which roamed the country a long time ago. It corresponded somewhat to white men's pictures of elephants. It was of huge size, in build like an elephant, had tusks, and was *hairy*. These animals were seen not so very long ago, it is said, generally singly; but none have been seen now for several generations. Indians come across their bones occasionally. The narrator said that he and some others, a few years ago, came on a shoulder-blade... as wide as a table (about three feet)."[1334] [1335]
- "There are native legends… of the great Elk or Buffalo which besides its enormous horns, had an arm protruding from its shoulder with a hand at the extremity (a proboscis) [trunk]".[1336]
- "…colossal Elk, another name for the Mastodon… with designations of existing species, the Indians describe extinct animals with a precision which in the state of their information nothing but traditionary recollection of their real structure could have furnished."[1337]
- One article reports: "In 1848, Professor John Russell published a Miami oral tradition which cites the existence of the Illinois Confederacy 'many moons before white man arrived, when the mastodon was living on the plains.'"[1338]
- An 1827 "Tuscarora chief" wrote of an ancient monster "which they called Oyahguaharh, supposed to be some great mammoth who was furious against men, and destroyed the lives of many Indian hunters, but who was at length killed."[1339]
- "The Ohio Indians have a tradition handed down from their fathers respecting these mammoths…"[1340]
- Thomas Jefferson wrote of someone's account from the mid-1700s: "…that mammoths' bones abounded there; and that the natives described to him the animal to which they belonged as still existing in the northern parts of their country, from which description he judged it to be an elephant."[1341] [1342] [1343]
- "Also, the Chickasaw Indians encountered a race of people known as Cannibals who feasted on the bodies of their enemies, and who were also large. They used the mastodon as their burden bearers and as their domestic work animals."[1344]
- I'm highly cynical, but there are a few 1800s newspaper articles saying some Alaskan natives had seen live *Proboscidea*, apparently convincing Alaska's governor and newspaper among others.[1345] [1346] [1347] [1348] (There are other reports of people having seen live American *Proboscidea*, but as I've been very skeptical, I've left these out.)
- "The Cunas [Panamanian Indians] say that they have always known about the elephant."[1349]
- The Shuar (primarily Ecuador, also Peru) have a tradition about a battle where the Shuar (also called Jivaro) used a "large number of elephants", where the enemy was "crushed by the elephants."[1350] [1351] [1352] [1353] Another translated description was: "…Shuar traditions on the use of elephants in tribal wars… The Shuar have no name for the elephants, but describe it as such. When the Shuar saw elephants in a Tarzan film, they all said they were the same as in their story."[1354]
- "The Indians of Louisiana named one of the streams Carrion-crow Creek, because in the time of their fathers a huge animal had died near this creek, and great numbers of crows flocked to the carcass, a mastodon skeleton was found near the spot indicated by the Indians."[1355]
- Someone who frequented for years the Amazon side of the Andes cites the following as evidence of *Proboscidea*: "Even today, around the campfire, jungle-dwelling Indians recount ancient legends of a huge creature with a serpent-like nose and wings for ears that once walked the land. According to their tales, it was so big and heavy that it tramped everything in its path, thereby helping the people to forge new trails through the dense forest."[1356]

However the above descriptions are commonly mixed in with traits not reflective of *Proboscidea* and one can always wonder about the accuracy and objectivity of both ends of the communication; this section was included for thoroughness and indicativeness, not for highly-convincing case-closing persuasiveness. Nevertheless their extensiveness, and in several cases great elephantine-clarity, particularly with respect to the trunk, does directionally increase the likelihood of both common and somewhat-recent *Proboscidea*, and has convinced a number of people who have studied these legends.[1357] [1358]

A.15 Process of Elimination

This section will first review alternative "cu-om" possibilities previously proposed by others, then more broadly review all possible American animals.

A.15.a Previously Proposed Alternative Curelom/Cumom Candidates

At times some have speculated that "cu-oms" might be oxen, bison, tapirs, camels (or relatives like the llama or alpaca), giant sloths, or bears; monkeys or dogs are also candidates for work.[1359] [1360] [1361] [1362] [1363] [1364] But none of these would be thought more useful than horses and as useful as elephants, or more similar to elephants than other animals in these verses. And why

wouldn't they be translated as an ox, bison, tapir, camel, llama, bear, sloth, monkey, or dog? All of these could have been translated in 1829. A brief review of these:

- Oxen are already listed in the prior verse, a redundant listing redundant listing would be rather odd.
- Bison are a food animal, not a work animal more useful than a horse; could they be tamed and be as useful as oxen?
- In comparison to the look and agility of tapirs, pigs are beautiful ballerinas, lol. While some tapirs have been tamed (not domesticated), I'm not aware of tapirs doing work and I doubt John Wayne would trade his horse in for one.
- How would a camelid (camel, llama, or relative) be considered as useful as a horse, let alone as useful as an elephant? Perhaps a camelid's only direct material advantage over a horse would be the ability to go longer without water – this may not have been needed and thus perhaps camelids were not domesticated in ancient America due to the availability of horses. Also, a camelid would be grouped with a horse, not an elephant; this is a devastating blow to the camelid idea. Even less likely than the larger extinct camelids would be the smaller still alive camelids – the South American llama, alpaca, guanaco, and vicuna. See Appendix V for a much more exhaustive camelid review.
- For sloths – has anyone seen a sloth trained to work, let alone expeditiously? (An average sloth ground speed is reported at nine inches per minute.[1365]) Besides, if a Jaredite wanted to give chores to a giant sloth, why not just ask his teenage son? The answer is perhaps that giant sloths from the wild take less time to train, are more reliable, are cleaner, eat less, talk back less, sleep less, and move much more quickly.
- Although the largest American monkeys (woolly spider, some are pets) are 25 pounds, fossils show some recent types to be nearly twice that size.[1366] I'm aware of monkeys for amazing tricks, but haven't found examples of them being used routinely for work; even as pets they sometimes bite or cause trouble.
- Dogs are excellent helps and extremely docile, but would not be comparable to elephants in taxonomy or usefulness.

Very importantly, all of these animals do not have the very significant other supporting rationale, listed in prior sections, of *Proboscidea*. The related table shows how the alternatives proposed for "cu-oms" are immensely inferior to *Proboscidea*.

A.15.b Review of Most Commonly Radiocarbon Dated Animals

To give some directional indication as to how common various animals were, the numbers of entries in the FAUNMAP and CARD databases are shown below as "Faunmap#/CARD#". The results are:[1367] [1368]

- *Proboscidea* (470/569) (470 in Faunmap/569 in CARD)
- Horses (450/305) (and yes a few of these date during the Nephite/Jaredite timeframes)
- Giant sloths (150/66, excluding *teenagesoni*)
- Camels (150/57)
- Peccaries (140/34)
- Oxen (120/28)
- Llamas (70/5)
- Bears (60/35)
- Tapirs (60/15)
- Everything else in smaller numbers

Both databases are far from complete summaries of finds, as about 6,500 North American *Proboscidea* finds have been published while the databases only shows tests on 470/569 *Proboscidea*. However with *Proboscidea* being the most common animal that has been radiocarbon dated, this is one more directional support that no alternative to *Proboscidea* is as likely to be a "cu-om." More convincingly, a review (see the table) of how well these possibilities match to the various issues raised in this treatise leaves *Proboscidea* as the only attractive candidate.

Comparison of Various Curelom/Cumom Candidates

		Various Curelom/Cumom Candidates -- Match Rating								
		Quite subjective -- some estimates have little to no support								
Match Trait	Factor Weighting	*Proboscidea*	Giant Sloths	Camels	Peccaries	Oxen	Llamas	Bears	Tapirs	Bison
More similar to elephants than others	20	10	3	1	0	0	1	3	0	0
Fits "inclusively unique" wording	5	10	0	0	0	0	0	0	0	0
Can explain "there were" wording	5	10	4	4	1	3	4	2	1	2
Can explain similar words	5	10	8	5	8	8	8	8	5	5
Can explain why not translated	5	10	4	1	5	1	3	1	5	2
Avoids redundant listing in prior verse	15	10	10	10	10	0	10	10	10	10
Level of possible domestication	20	10	2	3	1	4	3	2	1	2
Can explain extraordinary usefulness	20	10	1	2	0	2	2	0	0	1
Evidence of interaction with man	10	10	3	3	0	0	0	0	0	0
Evidence of domestication	20	7	0	0	0	0	0	0	0	0
Pictorial evidence in Mesoamerica	10	10	0	0	0	0	0	0	0	0
Common animals	5	8	4	3	3	3	2	2	2	2
Common existence in Mesoamerica	10	7	4	4	2	2	3	4	10	4
Indian legends	2	2	0	0	0	0	0	1	0	1
In general recent carbon dating	10	4	4	2	10	2	10	10	10	10
	Score:	1444	480	425	375	235	485	457	435	407
Thousands of Google Hits:										
Genera with "Mexico"		230	24	1.8	1.1	0.4	0.5	6	9	n/a
Genera with "Mesoamerica"		851	110	130	17	5	33	244	1,510	n/a

A.15.c All American Animal Alternatives Assessment

By one count, "Ice Age" large mammal genera extinctions totaled 34 in North America and 46 (overlapping) in South America (various counts/criteria exist).[1369] [1370] (For clarity I believe that under light the "Ice Age" notion quickly melts away into an all-wet idea, and that it has been about 6,000 years since Adam's mortality began.) The list of all medium to large animals, either alive or generally thought to be relatively recently extinct, is full of improbable "cu-om" candidates. Excluding *Proboscidea*, the American continent list of medium or large-sized animal types (that generally include many species and higher-level taxonomic groups) either are, or are somewhat related to, the following:[1371] [1372] [1373] [1374] [1375] [1376] [1377]

- Rhinoceros, hippopotamus, toxodon, mixotoxodon (last two are somewhat rhino-like)
- Camel, llama, alpaca, guanaco, vicuna, macrauchenia (somewhat humpless camel-like)

- Horse, zebra, donkey, mule, ass, mountain goat, goat, sheep
- Antelope, gazelle, deer, pronghorn, pudu, elk, moose, bison, caribou, cattle, ox, musk ox
- Peccary, capybara, tapir, sloth, giant sloth (only surviving species is *teenagesoni*), marsupial, monkey
- Anteater, porcupine, armadillo, glyptodon (armadillo-like giant), tortoise, turtle
- Beaver, giant beaver, opossum, marmot, prairie dog, woodchuck, raccoon, ringtail, coati, kinkajou, olingo, skunk, mink, ermine, fisher, weasel, ferret, tayra, marten, grison, paca, rabbit, pika, squirrel, chinchilla, viscacha, pacarana, agouti, acouchi, cavy, paca, tuco-tuco, degu, rat, coypu, hocicudo
- Badger, wolverine, hyena, dog, fox, coyote, wolf, bear
- Sabre-tooth, scimitar, lion, Siberian tiger, jaguar, cougar, jaguarundi, bobcat, cheetah, ocelot, lynx, oncilla, margay, other "leopard" cats, domestic cats
- Otter, seal, elephant seal, walrus, sea lion, manatee, crocodile, alligator, caiman
- Anaconda, boa, bushmaster, viper, rattlesnake
- Vulture, eagle, condor, rhea, heron, egret, stork, swan, flamingo, turkey, goose, teratorn, bat

Proboscidea are a dramatically more appealing "cu-om" candidate than any of the above 100+ animal types.

A.15.e Process of Elimination Summary

Several of the above animals could be or would be untranslatable in 1829, however:

- None are closer to elephants than other Ether 9 animals except for perhaps the rhino/hippo type of animals
- None are more useful than horses, let alone more especially useful than horses
- Except for monkeys, none have an appendage nearly as useful as a trunk
- None have nearly as compelling and extensive additional rationale as the *Proboscidea*

The process of comparison and elimination makes one of the ***most convincing and alternative-closing arguments*** for *Proboscidea* being the "cu-oms."

A.16 Radiocarbon Dating

This section will review both radiocarbon dating and church teachings on timing; the next section will review a large variety of indicators of more recent *Proboscidea*.

A.16.a Radiocarbon Dating of American *Proboscidea*

Conventional wisdom says American *Proboscidea* became extinct before or by about a supposed "8000 B.C.", near the end of the last purported "Ice Age."[1378] [1379] The chart below reflects *Proboscidea* radiocarbon dates from the CARD database; some caveats are due:[1380]

- A few outliers on either end were excluded if they weren't of bone (thus the bulk of the timeframe does have a few tests of vegetation from adjacent to or inside the *Proboscidea*).
- Some handling and treatment methods produce errors; in general more recent tests tend to be more reliable.[1381]
- The data reflects tests -- multiple tests might be from a single *Proboscidea*.
- One third of Canadian dates are from one site which had older dates; the Yukon gave one half of the Canadian dates.
- The database does not have all known U.S./Canada *Proboscidea* dates, but still the 550+ dates give a large sample.

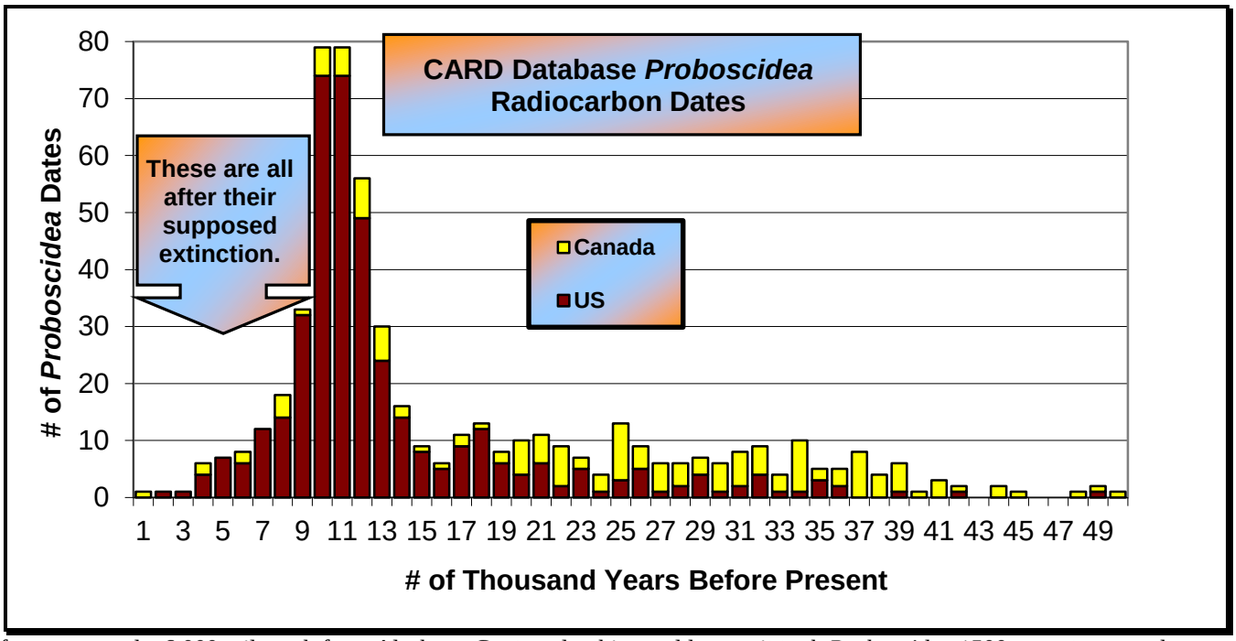
Does the data contradict conventional wisdom? Definitely yes, a few points to be made.

First, if one believes the "scientific conventional wisdom" that North American *Proboscidea* have existed for "15-16 million years" or longer, then why does the first 99.7% (up until "50,000 years ago") of that timeframe have 0.00% of these 550+ finds?[1382] [1383] [1384] [1385] [1386] (Note, while radiocarbon testing can't measure infinitesimal ^{14}C and thus can't differentiate between the 150,000 or 15,000,000 years ago – the samples all had detectable ^{14}C ratios putting them all within a theoretical 50,000 years.) If you assumed these supposed eras had roughly equal populations which had equal chances of being found (both assumptions have logic weaknesses, particularly the latter), the odds of this occurring are one in 1.6×10^{1361}. Older remains are not as likely to be found and when found are perhaps less likely to be dated -- thus the real odds are *far* smaller – but are still *extremely gargantuan – impossibly so* – thus the basic point remains. (If math isn't your number, write out 1.6×10^{1361}, then cross off as many zeros as you want for likeliness of being found and dated – you'll get the point by then.) Clearly some aspect of conventional wisdom has an inescapably-relevant gaping gargantuan mammoth (lol) assumption bust. One prominent *Proboscidea* expert said: "Proboscidean bone assemblages from geologic time intervals earlier and later than the major extinction period probably have not been sampled or described in the literature."[1387]

Second, if a purported "Ice Age" had purported ice of "3,000 to 5,000 or more" feet thick down into much of the United States, then why are so many *Proboscidea* found during the purported dates and locations of this purported mile-thick ice? For example, many of the Canadian *Proboscidea* radiocarbon dates in particular are from an era and from locations that were supposedly under many thousands of feet of ice.[1388] If thousands of feet of ice covered the land for thousands of miles, there would have been no vegetation to have sustained *Proboscidea*, yet *Proboscidea* are found these areas for the same time period of these supposed thick ice. A glaring mammoth (lol) inconsistency that is ignored within today's conventional wisdom. If one tries to argue that the Ice Age must then have ended earlier, then how does one explain 50 offshore *Proboscidea* found on the Atlantic Shelf that date to the same late general timeframe as most onshore *Proboscidea*? Put differently, how can *Proboscidea* have lived in northern North America on top of a mile of ice? The answer is clear – they couldn't have. (Section D has more detail and a light touch on the real explanation.)

Third, the conventional secular wisdom about the timing of American *Proboscidea* dispersion is unable to withstand mathematical scrutiny. (Not radiocarbon related, but included here as it's another point against conventional timing wisdom.) The thinking is that *Proboscidea* arrived in North America about 15-16 million years ago, then arrived in Central America about seven million years ago, and then arrived in South America about 2.5 million years ago (only *Cuvieroniinae* are in South America.)[1389] Thus conventional secular wisdom says it took eight to nine million years for *Proboscidea* to go from North America to the jungles of Guatemala, and that there was no man around during that timeframe to thwart their movement. Could *Proboscidea* actually have been that sluggishly slow to disperse? We know that *Proboscidea*:

1. Can eat just about anything – they thrive on practically any vegetation (See Appendix IV.)
2. Have no meaningful predator except for man.
3. Travel great distances.
4. Multiply reliably over time.



If you assumed a 6,000 mile path from Alaska to Guatemala, this would mean it took *Proboscidea* 1500 years to expand a single mile, a year to expand just 40 inches. That's implausibly and impossibly slow. The conventional wisdom about *Proboscidea* dispersion just doesn't survive under mathematical scrutiny.

Fourth, while the 5,000 year interval an American *Proboscidea* is most likely to be dated to is the 5,000 years before the supposed "8000" B.C., why is the second most likely interval the 5,000 years *after* this "8000 B.C. extinction?" Indeed, why are 6% of all U.S. *Proboscidea* dates more than *two millennia* younger than a supposed 8000 B.C.?[1390] A ***great many of these young dates are due to sample-treatment or processing errors***, but others are imputed as potential errors only because they are "too young"; I lack both the expertise and individual sample familiarity to judge. But *all* of these 50 dates can't be dismissed; thus what can be dismissed is an 8000 B.C. extinction theory. More recent North American dates (many not part of the 550+, and **repetitively to emphasize, *many* are possibly, likely, or clearly in error**) follow:

- 6050 B.C. in California (dwarf, Channel Islands, skepticism exists over the test's validity)[1391]
- 6000 B.C. in New Mexico (Tom Pound)[1392]
- 5980 B.C. in Arizona (Lehner, other mammoth dates include 5072 and 5255 B.C., but all 3 of these young dates are "questioned"; other test dates much older are generally accepted for this site)[1393 1394]
- 5930 B.C. in Colorado (Dutton, Yuma County)[1395]
- 5806 B.C. in Arizona (Whitewater Draw, second site sample at 6250 B.C.)[1396]
- 5720 B.C. in British Columbia (Hudson Hope)[1397 1398 1399]
- 5620 B.C. in Illinois (Urbana, second site sample at 6460 B.C., third parties "suggest" contamination)[1400]
- 5350 B.C. in Oklahoma (Domebo, an erroneous date. This mammoth had many radiocarbon tests using various sample preparation methods to compare the methodologies – and gives an *excellent* lesson in caution about dates; some test methods gave it other erroneous young dates such as 100 B.C., 2860 B.C., 2960 B.C., and 3002 B.C. – whereas most dates were about 8500 B.C.)[1401 1402]
- 5250 B.C. in Colorado (Lindenmeier Site, Dent, other site dates are much older, "contamination… is suspected", "doubtful or unacceptable date")[1403 1404]
- 5200 B.C. in Michigan (Seneca in Lenawee County, second sample at 5950 B.C., both dates are questioned)[1405 1406]
- 5150 B.C. in Texas (Plainview, "date has been questioned")[1407]
- 5140 B.C. in Utah (Huntington Reservoir, other samples are 5640 and 5700 B.C. , dates are questioned)[1408 1409 1410]
- 5120 B.C. in Michigan (Eaton Rapids, second sample dating to 5870 B.C.)[1411 1412 1413]
- 5010 B.C. in Ontario[1414]
- 4580 B.C. in Tennessee of "plants remains within the cusps of a mastodon tooth associated with 10 tool fragments"[1415]
- 4490 B.C. in Ontario (Muirkirk, "anomalously young")[1416 1417]
- 4420 B.C. in New Mexico (Blackwater Draw, "date is inconsistent with… other radiocarbon data… contamination by younger organic material is evident")[1418 1419]
- 4180 B.C. in Montana (Manhattan Mammoth in Gallatin County)[1420 1421]
- 4150 B.C. in Michigan (Washtenaw, same tusk second test at 4350 B.C.)[1422 1423 1424 1425 1426 1427]
- 4050 B.C. in New Mexico (second same site sample at 6000 B.C.)[1428]
- 4025 B.C. in Utah (Sandy, other same site samples at 5330 and 6945 B.C.)[1429]
- 4000 B.C. in Michigan (Russell Farm)[1430 1431 1432 1433]
- 3750 B.C. in Alaska (on the remote Pribilof Islands, second Pribilof mammoth at 5958 B.C.)[1434 1435]
- 3350 B.C. in Indiana (Cromwell, Noble County, "date has been questioned")[1436 1437 1438 1439]
- 3270 B.C. in New Jersey (Bergen, second same site sample at 4390 B.C., possible contamination cited)[1440]
- 3260 B.C. in Arizona (Escapule, erroneous, other radiocarbon dates for this mammoth were 2660 B.C. and 6550 B.C.; these young dates appear to be erroneous due to testing problems)[1441]
- 2940 B.C. in Texas (Friesenhahn Cave, hundreds of mammoth molars here, most date much older)[1442]
- 2350 B.C. in Idaho (Tolo Lake near Grangeville, eight mammoths here; associated sediment at 3200 B.C.)[1443 1444]
- 2340 B.C. in Ontario (Rostock, "anomalously young")[1445 1446]
- 2130 B.C. in Alberta ("probably contaminated by shellac")[1447]
- 1650 B.C. on Wrangel Island (Siberian island 300 miles from Alaska, included for general interest; over 100 of the 130 mammoth carbon dates were from 1650 to 6950 B.C.)[1448 1449]
- 1450 B.C. in Michigan (Cascade Township, its ^{13}C fraction is lower than most *Proboscidea* bones, casting doubt on the sample, though occasionally modern elephants have also had low fractions.)[1450 1451 1452]
- 1360 B.C. near Coleman Michigan of conifer cones dated because they had been thought to be likely contemporary with a mammoth skeleton that dated to about 22,000 B.C.[1453 1454]
- 690 B.C. near Mexico City ("The mammoth remains were found in direct association with stone implements such as atlatl points or knives of flint. Comment: seems impossibly late." "Date much too young.")[1455 1456 1457]

- 570 B.C. in Alaska (Sullivan Creek -- believe this was a date on wood thought associated with a mammoth – "Wood, muck, etc. should be reliable dates; association with extinct fauna questionable."[1458]
- 90 B.C. in Florida ("Date has been questioned"; "Charcoal… associated with extinct Seminole Field mammals… these materials lie in unconsolidated strata which uncomformably overlie the Pamlico Terrace and therefore are much younger geologically. Nevertheless the date seems anomalously low in view of the extinct fauna" [which include mastodon and mammoth]).[1459] [1460] [1461] [1462] Another summary was: "…mammoth bones found in Florida mixed with other extinct animals and human artifacts were found to be 2000 years old based on radio carbon dating."[1463] (One book discusses how some originally accepted this date, but then later rejected it because it is "too young".)[1464]
- 50 B.C. in the South "a mammoth skeleton in the Mississippi River Valley was once dated at about 2000 years"[1465]
- A.D. 1010 in Manitoba ("does not reflect the real age of the sample but is a measure of sample contamination through exchange")[1466] [1467]

The 690 B.C. date is particularly interesting since it was recent, near Mexico City, and was associated with human artifacts. It's been estimated that upwards of 90% of the published North American sites have not been radiocarbon dated, thus if all remains had received radiocarbon dates, there would be a far larger number of young dates.[1468]

Many less South American dates have been published, and I spent much less time looking for them:

- 7150 B.C. in Chile[1469] [1470]
- 4110 B.C. in Colombia (El Totuma in Tocaima).[1471] [1472] [1473] Some comments: "…bones of Mastodon [*Cuvieroniinae*] and *Megatherium* were found associated with stone artifacts of the El Abra type, brings to the conclusion that man and megafauna still cohabited in the area between 6,000 and 5000 years before present. A stone statue of the early San Agustin Culture (perhaps of the ninth century before Christ), shows a face or mask that seems to represent an elephant…"[1474] [1475] From the computer translator: "Perhaps at the beginning of the culture of San Agustin, close to 3000 BP (1000 BC), there were still mastodons survived…")[1476] Another comment given in relationship to this find: "…another example [of recent *Proboscidea*] could be the mastodon [*Cuvieroniinae*] Toro (Cauca Valley), who despite not been dated by radiocarbon, seems to belong to the early Holocene as indicated by the presence of projectile points made of bone which were found associated with its bones."[1477]
- 3530 B.C. in Ecuador (a tooth from Namangosa Valley: "the most extraordinary and momentous find… near one of the stone-built platforms… This explained the stone artifact of a carved elephantine creature that was recovered from an ancient crevice burial in the Namangosa Valley. It also explained carved elephant-like heads on stone mortars recovered in adjacent areas."[1478]
- A.D. 400 is commonly reported, including in some encyclopedias, for the *Cuvieronius*.[1479] [1480] [1481] But I haven't been able to find any direct *Proboscidea* bone radiocarbon date behind it; my best guess is that the "400" +9came from a cooked *Cuvieroniinae* found in Ecuador with "pottery dating from A.D. 200 to 400" – dating surmised from pottery design either Mayan-influenced or from Mayan areas. One secondary source indicated a subsequent radiocarbon dating of the charcoal used to cook this *Cuvieroniinae* gave an A.D. 100 date.[1482] [1483] [1484] [1485] Bottom line, this date is widely quoted but I can't find any robust source for it.

Repetitively to emphasize, many of the above dates are wrong due to errors; however others have no testing/sample errors but are suspected of errors due to their young dates.[1486] Also, while testing problems can give dates too young, the opposite can also happen – testing methods can also give dates that are far too old as well.[1487] Additionally, young date results can get understandably discarded due to not believing in them: "…theorists will not accept when found, nor publish when found, dates of mammoth bones that are younger than 10,000 years."[1488] How many have been ignored due to this paradigm?

A.17 Church Teachings on Historical Timing

This section will first review LDS Church teachings about when Adam's mortality began, and then given that timeframe, when the Jaredite elephant passage likely occurred.

A.17.a Adamic Mortality Beginning - Timing

Teachings from the Bible and the LDS Church indicate Adam's mortality began about 4000 B.C.[1489] [1490] [1491] [1492] [1493] [1494] I'm not aware of LDS teachings that indicate the believed level of precision -- whether the 4000 B.C. number is thought accurate within a score of years or even within a century. The basis of LDS acceptance of Adamic mortality beginning at roughly 4000 B.C. is of four inter-related types:

1. **Direct Scriptural Basis**
   There are a few scriptural passages that directly discuss the seven 1000-year periods of human mortality for our earth, and some of these passages identify some of the recognizable events that would then point to human mortality beginning somewhere in the 4000 B.C. vicinity. In the Book of Revelations, John speaks of a "sealed book" with seven "seals", and when these seals are opened he sees the events within, such as the Christian martyrs of the fifth seal and the latter-day signs of the times of the sixth seal.[1495] Doctrine and Covenants 77 explains parts of the Book of Revelation; it clarifies that the seven seals each represent 1000 years of human mortality (six past and one future).[1496] [1497] [1498] [1499] [1500] [1501] Section 88 of the Doctrine and Covenants also discusses the seven 1000 year periods of our human mortality.[1502] These are the passages that, without Biblical interval compilation, most directly point to 4000 B.C. for Adam's mortality starting.
2. **Time Interval Compilation Basis**
   By compiling intervals given in the "Masoretic" text bibles (King James and most Bibles), complimented somewhat by selective usage of other ancient records, we can calculate Adamic mortality as having begun in the general neighborhood of 4000 B.C. The year 4004 B.C. has been the single most common estimate used in the Christian world; of 29 Masoretic Christian chronologies, 19 are within 50 years of 4000 B.C., and 25 are within a century; Jewish chronologies have tended to support 4000 B.C., usually somewhat younger, or up to about a couple of centuries younger.[1503] [1504] [1505] [1506] [1507] [1508] [1509] [1510] [1511] (The commonly used 4004 B.C. is from Archbishop Ussher; the LDS Bible Dictionary states: "The dates found at the top of many printed English Bibles are due to Archbishop Ussher. Some of them have been found to be incorrect.")[1512] [1513] Surprisingly, the disputed issues in the Masoretic text total a few centuries, they are not insignificant. The five major issues in the Masoretic text are as follows:
   a. The interval from Adam's mortality beginning to the Noachian flood is given as 1656 years.[1514] Since there is so little data from this era, and as the quoted lifespans are as long as 969 years, naturally some people have doubts. Fortunately for LDS, the Pearl of Great Price also gives the same lengths for these respective intervals that total 1656; thus LDS can have confidence in this pre-Noachian interval of 1656 years.[1515]

b. Another issue is how to interpret the Bible in determining whether Abraham's father Terah was age 70 or age 135 at Abraham's birth.[1516] Without going into detail, LDS have unique reasons to be very confident in the traditional Jewish assumption of age 70.[1517]
c. Surprisingly, the length of the Israelite stay in Egypt is a major issue. The primary four schools of thought are that the stay was either 210, 215, 400, or 430 years. As for myself, I find the traditional Jewish assumption of 210 years as having the most persuasive argument.
d. Estimates are often made for the time interval between the Exodus and the start of construction of Solomon's temple – the estimates vary from over six centuries to less than three centuries for this interval. Most of the uncertainty is within the period between Joshua and the first king, Saul; this narrower interval is often called the Period of Judges. There are contradictions within the Bible for this timeframe. Plus some intervals are unclear, or are thought to be rounded estimates, or may be overlapping with other intervals, or are widely accepted as not quite right due to other ancient records. My opinion favors one of the longer interval estimates, as reflected by the Bible and also favored by traditional Jewish understanding. Almost all chronologists say the Period of the Judges is the most difficult to judge (excuse the pun); those that support the shorter timeframes do so through primarily non-Biblical arguments.
e. Once we enter the era of Israelite and Jewish kings, there is much less uncertainty. The LDS Bible Dictionary, written in the 1970s, gives a Masoretic text date of 975 B.C. for Solomon's death, but then gives 953 B.C. as an estimate derived from monument inscriptions.[1518] Other interpretations of the Masoretic text put Solomon's death at 961 B.C.[1519] Today there appears to be fairly large consensus that 931 B.C. can be accepted as a highly reliable date for Solomon's death; this is a variation from the Masoretic text of 30 to 44 years.[1520] The more recent the period of the Old Testament kings, the more that ancient records offer extra insight, and the differences between both various texts and various opinions get smaller and smaller. There is a widespread consensus that the 10 tribes of Israel were taken in 722 B.C., and that Jerusalem was captured in 586 B.C.

The Pearl of Great Price pre-flood comparison can thus increase our confidence in other Masoretic time intervals, as opposed to some varying time intervals in the Septuagint or Samaritan text. Thus it's logical to have much more confidence in the Masoretic post-flood intervals as well. However the Pearl of Great Price does show that two Masoretic time intervals are wrong (neither impact correct chronological calculation since Adam).[1521] [1522] The two biggest issues are the length of the Egyptian stay and the length of the Period of Judges. Generally those that believe in a longer Exodus then believe in a shorter Period of Judges, and vice versa. So generally the estimated variations from 4000 B.C. are actually smaller than their variations on Egypt and the Period of Judges.

3. **<u>Widespread Historical Acceptance Basis</u>**
Though better described as supplemental support to as opposed to causal factor of LDS belief, another basis for belief in a 4000 B.C. is the widespread historical acceptance throughout the Jewish and Christian ages of this approximate timeframe. Some of this undoubtedly came from the known scriptures and historical records that we have today. But other support undoubtedly came from ancient history, records, books, traditions, and revelations that we have no record of today.
4. **<u>LDS Teaching Basis</u>**
A fourth inter-related type of basis for LDS acceptance of an approximate 4000 B.C. timeframe for Adamic mortality beginning, is teaching from LDS leaders and LDS Church publications. LDS teachings are quite *clear, consistent, copious, certain, and categorical* that this is about when man's mortality began. I found *over 200 statements from church publications or general authorities* clearly supporting this approximately six-millennia-from-Adamic-mortality-timing – statements from latter-day prophets (Joseph Smith and *most* of the latter-day prophets), apostles, other general authorities, scripture, or other church publications.[1523] [1524] [1525] [1526] [1527]

The primary Judeo-Christian exception to this approximate 4000 B.C. timing is the Septuagint Bible which often adds exactly one century to many intervals; these longer intervals thus put the beginning of Adamic mortality at roughly 5400 - 5500 B.C.[1528] [1529] [1530] [1531] [1532] [1533] The Samaritan Bible is also significantly different. But as mentioned before, LDS have modern revelation that supports the pre-Noachian Masoretic intervals. In summary, Masoretic Bibles support mortality beginning about six millennia ago, this is accepted by most traditional Bible-ingrained Christians, and LDS have clear abundant teaching from church leaders and church publications that this correct.

<u>A.17.b Adamic Mortality Beginning - Clarification</u>

Acceptance of a six-millennia-ago-Adamic-mortality-start is often associated with other beliefs that are not held by LDS, and thus it may be prudent to elucidate some related LDS teachings here, though they are tangential to this thesis. In many Christian circles, acceptance of a six-millennia-ago-Adamic-mortality-start is also synonymous with the acceptance of the same timing for the beginning of this earth and the rocks/materials of this earth, and for many also the beginning of the known universe (planets, stars, galaxies, etc.). It should be pointed out however this is not the case with LDS teachings. LDS believe that matter is eternal and is simply reorganized or changed, but not created *ex nihilo* (created from literally nothing).[1534] [1535] [1536] [1537] [1538] [1539] [1540] [1541] [1542] [1543] Also, LDS believe that there has always been a universe with countless numbers of planets, stars, galaxies, etc. Thus LDS believe the Lord simply created our earth as one more to-be-lived-upon planet, and organized it out of pre-existing matter; LDS do not believe in *ex nihilo* creation or that the universe was created when this earth was organized. What's *not* taught in LDS circles is when/if a given rock was transformed into its current elements, isotopes, or compounds, when these rocks were amassed into our earth, whether our earth's current-form organization started from a *single* pre-existing planet or not, when exactly our earth was placed into its rotation and solar orbit, or when the scriptural creation of plant or animal life began; opinions vary widely on timing and methods.[1544] [1545] [1546] [1547] While LDS accept the six "days" of the Lord's earth organization and plant/animal life creation, it's taught that these six "days" are periods of length dramatically longer than an earth day.[1548] [1549]

<u>A.17.c 4000 B.C. Beginning vs. Radiocarbon Dating</u>

As radiocarbon dating gives dates much older than 4000 B.C. for man, then generally converted subject-educated LDS and Biblical Christians would conclude this older radiocarbon dating is wrong.[1550] [1551] Sometimes some of the converted can tend to think any Bible-contradictory theory has the same "scientific intellectual rigor" as "poof a randomly-created intelligent soul now magically possesses a randomly-created body that abracadabra can eat/digest/move/create-DNA/breed and then hocus-pocus will randomly evolve ever-increasingly astoundingly sophisticated biology."[1552] In striking contrast to evolution, radiocarbon dating is quite fact-based, scientific, logical, intelligent, and far above goofy deluded absurdity. Though radiocarbon dating is amazingly brilliant and its various laws-of-physics assumptions about radioactive decay appear very robust, older dating has crucial unavoidably-germane quandaries with respect to ancient ^{14}C ratios, atmospheric ^{14}C disequilibrium, dubious "trust-me" older calibrations, gaping gargantuan unanswered logic busts, and very substantial unanswered contrarian evidence of both radiocarbon and other types. But whether one's paradigm accepts conventional Biblical timing or conventional radiocarbon timing, endless indicators will shortly be given, many of a very difficult nature to try to dismiss, of much more recent *Proboscidea*.

<u>A.17.d Jaredite Elephant Timing</u>

So when did the Jaredite passage about elephants occur? The Jaredites crossed the ocean just after the Tower of Babel, this would have to have occurred after Peleg's continental division; Peleg lived from 101 to 340 years after the flood.[1553] [1554] [1555] In a 1968 conference report, Alvin R. Dyer of the First Presidency put Peleg's world division at "about the year 2200 B.C.", saying it was "just prior" to the Tower of Babel.[1556] The Tower of Babel has been most often estimated by LDS leaders and authors to be at about 2200 B.C.; my guess is that any variation was perhaps a bit more likely just after than just before 2200 B.C.[1557] [1558] [1559] [1560] [1561] [1562] [1563] [1564] [1565] [1566] [1567] [1568] [1569] [1570] [1571] [1572] [1573] [1574] [1575] [1576] [1577] [1578] [1579] [1580] [1581]

When did the Jaredite civilization end? As we know Coriantumr lived with the Mulekites for 9 months, and the Mulekites arrived about 585 B.C., this means the Jaredites lasted at least until 585 B.C. Apparently the Mulekites only found Coriantumr alive; its generally assumed this 9 month period was more likely fairly soon after 585 B.C. as opposed to long after. Another timing indicator is that during Coriantor's life, prophets foretold that a new people would be brought to the Americas unless the Jaredites repented; thus this prophecy would have been at least before 589 B.C. when the Lehites arrived. As Coriantor was the father of Ether, and it was Ether who along with Coriantumr are the last recorded Jaredites, this would mean the Jaredites perhaps ended most likely by 500 B.C., perhaps 450 B.C. at the most. The most frequent assumption is that the end of the Jaredite civilization was likely not long after 585 B.C., likely well before 500 B.C., though some have put forth arguments for believing it may have been two to four centuries after Mulekite arrival.

If the Jaredite story begins at about 2200 B.C., and ends likely not too long after 585 B.C., we can then estimate the time of the elephant passage based on the generations listed in the Book of Ether. The Book of Ether lists 30 generations, inclusive of Jared and Ether.[1582] (Of the 30 generations identified, 27 are listed as the "son" of and three are listed as the "descendant" of; elsewhere two of these three descendants are clarified as the son, and elsewhere two other usages of "descendant" also mean son, thus exactly 30 generations is the most likely case.)[1583] In the Old Testament, for centuries after the Noachian flood, the lifespans were far longer than they are today, for instance with Nahor living to be 148.[1584] A similar pattern would appear likely in Jaredite existence, as evidenced by Emer's son Coriantum living to be 142, and as evidenced by having many children, such as Orihah having 31 children.[1585] The elephants are mentioned in the 62nd year of the reign of King Emer.[1586] Considering that King Emer was the sixth generation out of the 30 generations, and considering that the earlier lifespans were likely quite longer, this could put the elephant passage at perhaps about 1700 B.C., though this estimate very easily could be off by more than a century.[1587]

A.18 Endless Indicators of Relatively Recent *Proboscidea*

There are endless indicators that individually either potentially, persuasively, or positively point to far more recent American *Proboscidea* existence. It's important to note that these evidences are subject to generally the same types of potential errors that were enumerated in the earlier sections, thus please carefully consider the cautions and caveats. Many entire categories of the below evidence are only directional or tentative in pointing to more recent existence. However many are very telling. Together in totality the following evidences make a sweepingly comprehensive and strongly compelling solid case for *Proboscidea* being far more recent than the conventional wisdom of a supposed 8000 B.C. extinction:

1. **Recent Advanced Civilizations**: Huge numbers of the elephantine depictions listed in earlier sections were from within advanced ancient American civilizations that would thus reflect far more recent existence than 8000 B.C. To itemize them here would be repetitive of course. This evidence is very strong and very numerous; one would need to review the non-U.S. depictions to get the full impact of their extensiveness and strength. These alone have way more than enough strong evidences to easily and safely conclude that *Proboscidea* were relatively recent and concurrent with at least some of the advanced civilizations that stretch from Mexico down to Bolivia. The following sections are simply "piling on."
2. **Mounds**: Greatly discussed in the 19th century are the countless thousands of Pre-Columbian manmade mounds all over the U.S. – which by today's conventional wisdom are generally dated from 3000 B.C. to A.D. 1600 – many millennia after the *Proboscidea* extinction that supposedly occurred by "8000 B.C."[1588] [1589] A key softness with this section's evidence, however, is that clear human usage of *Proboscidea* bones buried in mounds does not prove that they were necessarily contemporaneously alive. Thus remember this caveat with the following:
    - 2.1. At New Madrid Missouri a mastodon tooth was reported as contemporary with a human buried in a mound.[1590] [1591] [1592]
    - 2.2. The previously mentioned Iowa elephantine pipes/tablets came from mounds.[1593] [1594] "The pipes in question are typical Middle Woodland-Hopewell platform pipes. I should estimate they date about 1 A.D., give or take a few hundred years… The specimens closely resemble other platform pipes found in mounds of this culture having a carved animal forming the bowl of the pipe."[1595]
    - 2.3. In Crawford County Wisconsin "pieces of a mammoth tusk" were found in a "burial mound."[1596] [1597]
    - 2.4. As mentioned before, one mound shaped like a *Proboscidea* in Wisconsin has received a lot of attention (it's 135' x 70' x 5'), but there are at least two others in Wisconsin and another in Ohio thought by some to be Proboscidean-shaped.[1598] [1599] [1600] [1601] [1602] [1603] [1604] [1605]
    - 2.5. Near Kennard Indiana in a mound was found "a saucer-shaped vessel of ivory, about six inches in diameter, containing 84 ivory beads, that must have been made from the tusks of a mastodon."[1606]
    - 2.6. At Angel Mounds near Evansville Indiana one of the human graves contained a mastodon tooth.[1607] [1608]
    - 2.7. "In one mound in the Buckeye State [Ohio], remains of a mastodon were found, killed by the Moundbuilders' flints."[1609]
    - 2.8. As referred to before, there is a report of a "Hopewell-mound stone knife in the Ohio State Historical Society Museum that engraves a tropical hunter about to spear an elephant."[1610]
    - 2.9. South of Chillicothe Ohio, in a mound was found: "Around the neck of the skeleton was found a triple row of beads, composed of several hundred marine shells, also the tusks of some animal."[1611] [1612]
    - 2.10. To be reviewed in more detail later, the mounds at Mound City Ohio have "mammoth or mastodon bones" and "engraved discs of mastodon tusks."[1613] [1614] [1615] [1616] [1617]
    - 2.11. Summarizing investigations into Ohio mounds: "Within these monuments [mounds] have been found implements and ornaments of silver, copper, lead, stone, ivory, and pottery…"[1618]
    - 2.12. One book wrote: "The mounds built by paleo-Indians in Ohio also contain pieces of fossilized ivory tusks collected more than two thousand years ago."[1619]
    - 2.13. Per the famous West Virginia Grave Creek Mound: "One of the skeletons was surrounded by six hundred and fifty ivory pieces… In another mound, were found upwards of seventeen hundred ivory pieces."[1620] Whether these 650 or 1700 beads were ivory is disputed; from another book: "The skeleton, the male, was surrounded by 650 'ivory' beads. Dr. James W. Clemens asserted that the beads were genuine ivory and not bone, 'inasmuch as he had himself wrought much in ivory, he could not be mistaken in the material.' Clemens was of the opinion that they were cut from the tusks of mastodons."[1621]
    - 2.14. The previously mentioned depiction of a domesticated *Proboscidea* was from a mound in western New York; the author said they were other *Proboscidea* depictions from other mounds.[1622] However I believe there are reasons to doubt the veracity of these claims.

2.15. From near Vine Valley "from New York mounds" was "a copper chisel blade, a segment of a mastodon ivory dagger… [and] fragments of a large cord-marked pottery jar."[1623] [1624]

2.16. From Dr. Mitchill (of Pearl of Great Price fame) while listing museum artifacts: "Tusk of a young mastodon, from Kentucky, five inches long and compact; found at Neville, in a tumulus [burial mound] with human bones, as the donor, Dr. Meigs certified."[1625] [1626]

2.17. Not very persuasive given the doubt over which animal: "…a letter from Dr. Charles S. Edwards of Kentucky, contains the description of a piece of pottery in the shape of an elephant's (possibly a bear's) foot, which was taken out of a mound near Nashville."[1627]

2.18. From mounds near Franklin Tennessee: "…two beautiful pieces of ivory carved with a precision seldom seen among Indians, they are made from the tusk of the mastodon."[1628]

2.19. A prominent mound archaeologist, who dug up countless mounds in Mississippi and nearby states, dug up a "tusk of a Mastodon, six feet long, elaborately carved with a serpent and human figures…"[1629]

2.20. This same archaeologist in discussing ancient coins made of bone wrote: "This 'money' is also made from the tusks and ribs of the mastodon… [then lists three other animal bones as well, followed by the next quote which is not necessarily also referring to the mastodon] we found them around the necks of the occupants of the mounds, punctured and strung, and also in terra-cotta vases and cups."[1630]

2.21. Vero Florida has a mound with *Proboscidea* and pottery; some believe it indicates more recent existence.[1631]

2.22. An LDS member in 1857 dug open a Los Angeles area mound, finding a mastodon.[1632] [1633]

2.23. Some summaries from those who have studied this issue:[1634]

2.23.1. "The indications are that the mastodon was known to the earlier Moundbuilders…"[1635]

2.23.2. "That the mastodon was contemporary with the mound-builders is now an undisputed fact."[1636]

2.23.3. "There is nothing improbable in the supposition that the mammoth was known to the Mound-Builders."[1637]

2.23.4. "It is a fact admitted by all familiar with pre-historic discoveries that the bones of the Mastodon and those of the Mound Builders are found in the same localities, and in about the same state of preservation."[1638]

2.23.5. Others have also decided Moundbuilders were contemporaneous with *Proboscidea*.[1639] [1640] [1641] [1642] [1643]

3. **Copper**: Ancient Americans worked copper for thousands of years. Conventional opinions vary as to whether it started in 3000, 4000, or 5000 B.C. – any of these dates would all be long after *Proboscidea* were supposedly extinct.[1644] [1645] [1646] [1647] [1648] Yet there is evidence of the two being contemporaneous:

3.1. The previously mentioned Poteau Oklahoma brass (copper alloy) bowl depicts a running elephant.[1649]

3.2. One of the Iowa elephantine pipes was found with a copper axe; many copper relics were nearby.[1650]

3.3. Near Beardstown Illinois was found a *Proboscidea* with "a broken point of a copper spear."[1651]

3.4. As an example of undue exuberance, while several sources tell of a copper knife being contemporary with a mastodon in Illinois – it appears the contemporary conclusion was reached only because they were found in the same larger area at the same depth in a formation -- hardly conclusive in my mind.[1652] [1653] [1654]

3.5. "…stone tools left behind by these first miners [Lake Superior area copper miners] have been found, some of them associated with bones of the extinct mastodon."[1655]

3.6. "An American elephant, a mastodon, was killed by the miners and found with their remains, indicating that copper mining was carried on when the mastodon lived in America."[1656]

3.7. From an ancient cemetery near Madisonville Ohio was found "a perforated copper hammer and a piece of a mastodon's tooth."[1657]

3.8. To be reviewed in more detail subsequently, copper has been found at the mounds at Mound City Ohio which had "mammoth or mastodon bones" and "finely crafted pottery vessels."[1658] [1659] [1660] [1661]

3.9. The aforementioned New York domesticated *Proboscidea* depiction was in copper (though I have doubts.)[1662]

3.10. As noted before, from near Vine Valley "from New York mounds" was "a copper chisel blade, a segment of a mastodon ivory dagger… [and] fragments of a large cord-marked pottery jar."[1663] [1664]

3.11. A Konanz museum (Ecuador) artifact that is "trimmed with copper" depicts three *Proboscidea*.[1665]

3.12. As reported before, an Ecuadorian government scientific journal in 1958 reported: "Recent discoveries in the provinces of Canar and Azuay claim to have found representations of elephants in archaeological objects of stone and bronze."[1666] (Bronze is an alloy primarily of copper.)[1667]

3.13. Many of the *Proboscidea* evidences come from civilizations that used copper. For instance, Tiwanaku was mentioned earlier as having *Proboscidea* depictions, and Tiwanaku is well-known for having used copper (and also gold and silver.)[1668] [1669] [1670] [1671] [1672] However to list all *Proboscidea* evidences associated with more advanced civilizations that used copper would be a bit redundant and tedious.

4. **Gold/Silver**: Current conventional thinking appears to be that ancient American gold *hammering* started at 1200 B.C., and ancient American gold *casting* started at A.D. 500.[1673] From a quick look, it appears that conventional wisdom might place ancient American silver working beginning at around 500 B.C. or later.[1674] There are several associations of *Proboscidea* with gold or silver:

4.1. Of the previously reviewed Cuenca Proboscidea depictions, nine of them were in gold.[1675] [1676] [1677] [1678] [1679] [1680]

4.1.1. One source wrote of the Cuenca collection: "Elephants appear on gold and silver plaques."[1681] [1682] [1683]

4.2. A tumbaga (gold/copper) artifact from the Ecuadorian Konanz museum shows two *Proboscidea*.[1686]

4.3. As reported above: "In Colombia incised drawings of elephants on *golden* disks have been recovered from an airport construction site near Cali."[1687]

4.3.1. Likely the same, as previously mentioned: "…a golden elephant effigy has recently been unearthed at an archaic site in southwest Colombia."[1688]

Cuenca Peru *Proboscidea* in Gold[1684] [1685]

4.4. Discussed previously was the Bolivian government review of a private artifact collection – it said that much of the collection was of thin gold plates, and that its artwork more commonly depicted animals than people, and that "standing out" among the animals were elephants – thus this would make it appear than *many* elephants were depicted in gold in Bolivia.[1689]

4.5. As mentioned before, there is the unverified report of a huge mudslide that had killed several *Proboscidea* within a city – some of the tusks reportedly had silver rings around them.[1690]

5. **Pottery/Ceramics**: There are various opinions on when pottery is thought to have started somewhere in the Americas -- some say starting at 3000 or 4000 or 5000 or as early as 5500 B.C.; 2000 B.C. is often the approximate date given for Mesoamerica, 3000 B.C. for the U.S., and 3300 B.C. for South America.[1691] [1692] [1693] [1694] [1695] These various pottery dates are different by several millennia as to when *Proboscidea* are thought to have gone extinct, yet the two have often been found together:[1696]

5.1. A *Proboscidea* was found at Avery Island (Petit Anse) Louisiana in association with pottery.[1697] [1698] [1699]

5.2. Near Kimmswick Missouri was found "many mastodon bones mixed with pottery" – the pottery being called "later Holocene."[1700] [1701] [1702]

5.3. The La Crosse Wisconsin cave with a mastodon picture also had "elaborately wrought pottery."[1703]

5.4. Near Madisonville Ohio a mastodon tooth was found in the same manmade pits that contained "large sherds of pottery-ware" (and flint, stone, and bone tools).[1704] [1705]

5.5. This has everything: well-studied, famous, mammoths, mastodons, mounds, pottery, copper, fine workmanship, and recent. In Mound City Ohio: "One mound within the complex contained a quantity of fossil mammoth or mastodon bones, and another contained finely crafted pottery vessels decorated with images of ducks and eagles; others contained various ornaments of copper…"[1706] [1707] [1708] [1709] [1710] Also found here were "engraved discs of mastodon tusks."[1711] These mounds are generally thought to have dated from 200 B.C. to A.D. 500.[1712]

5.6. As referred to before, a Cincinnati mound had pottery, brass, and a mother/child *ivory* carving.[1713]

5.7. One summary: "In many mounds in the Ohio Valley, there have been found deposits of the bones of the mastodon in association with flint arrow-heads and fragments of pottery."[1714]

5.8. As mentioned before, from near Vine Valley "from New York mounds" was "a copper chisel blade, a segment of a mastodon ivory dagger… [and] fragments of a large cord-marked pottery jar"[1715]

5.9. An Attica New York mastodon was found above charcoal and at a foot higher level than some pottery, leaving the reviewer to conclude "the mastodon may have survived up to comparatively recent times."[1716] [1717] [1718]

5.10. "Actually, there have been other finds that suggest very late survival of the elephant family in the Americas. Pottery and elephant remains were found associated in Virginia."[1719]

5.11. Pottery was found with a mastodon in Charleston South Carolina.[1720] [1721] [1722] [1723] [1724]

5.12. At Clute Texas a mammoth was found with "two pieces of pottery", plus a nearby "wooden bowl" that radiocarbon dated to 2255 B.C.; naturally the date leads some to believe the bowl arrived later.[1725] [1726] [1727] Apparently the mammoth was not radiocarbon dated.

5.13. From an 1881 *Juvenile Instructor*: "Some very strangely-shaped old bottles have been dug up on this continent… Some of these earthenware or pottery curiosities of the ancients are in the shape of elephants."[1728]

5.14. In Mexico City mammoths were found with "remarkable round pottery objects."[1729]

5.15. "There were high hopes for a few days that another 'old man of Mexico' had been unearthed, along with a mastodon tusk, this time in the Oaxaca region… When the skeleton was found, it seemed to be in a geological level that would make very old, but later there were found in the same deposits pottery of the Mixtecan sort and also jade which would date it in the relatively recent prehistoric era."[1730]

5.16. A summary of a Mexican scientific journal article reads: "Careful weighing of the geological and archaeological evidences for and against the great antiquity of a skeleton apparently associated with both elephant and pottery concludes that the skeleton is contemporaneous with the pottery and that the latter is possibly of the Tula-Mazapa (late) horizon."[1731]

5.17. One article tells of many *Proboscidea* found at Tequixquiac Mexico associated with human artifacts, including clay pipe and other ceramic artifacts.[1732]

5.18. As referenced above in the discussion of "A.D. 400" for the *Cuvieronius*, in 1928 a prominent paleontologist in Ecuador found a cooked/eaten *Proboscidea* with obsidian implements, carved bones, and "advanced and decorated" pottery apparently dating from "the centuries II, III and IV of the Christian era; charcoal used to cook the Proboscidea was dated to A.D. 100."[1733] [1734] [1735] [1736] [1737] [1738] [1739] [1740] [1741] [1742] Another summary was: "The fragments of pottery around the skeleton, which were the most important factor in determining its age, bore clear traces of the old Mayan culture and were 1,600 – 1,800 years old."[1743] [1744]

5.18.1. One book summarized this as: "Such ceramic evidence would make the mastodon a contemporary of at least the formative phases of Andean civilization, and could update its survival by six to eight thousand years."[1745]

5.18.2. Though this find could not have been more well documented, and was documented by multiple individuals of the highest prominence, groupthink led to much negative reaction as it: "… was rewarded with years of hoots and catcalls… it was unthinkable that advanced pottery ware could be found associated with it [*Cuvieroniinae*]. Uhle was accused of having faked the find. He was so stunned…"[1746]

5.18.3. "The paper [of this find] is a classic, for its assignment to oblivion because of its conflict with the accepted ideas of the time…"[1747]

5.18.4. However some paid attention -- this skeleton "provided convincing proof to him [a Princeton geologist and paleontologist] that the animal had been killed by the Indians not earlier than the fourth century."[1748]

5.19. From the Pampas of Argentina, terracotta (a ceramic) has been found with *Cuvieroniinae*.[1749]

5.20. The following *Proboscidea*-depiction pottery/ceramic/clay objects were all previously mentioned:

5.20.1. The pottery from Montezuma Valley Colorado. [1750] [1751] [1752]

5.20.2. The jug from Shiprock Mountain New Mexico. [1753] [1754]

5.20.3. The ceramic artifact from Georgia with eight *Proboscidea* on it.[1755] [1756] [1757]

5.20.4. The *Proboscidea* associated with pottery in Vero Florida.[1758] [1759]

5.20.5. The two Quehutla Mexico *Proboscidea* depictions - one of porcelain, the other of pottery. [1760] [1761] [1762]

5.20.6. The Olmec toy elephants were of clay. [1763] [1764]

5.20.7. The Mesoamerican "representation, on pottery, of elephants equipped for war purposes."[1765] [1766]

5.20.8. The Yalloch [Guatemala] *Proboscidea* were on a ceramic vase. [1767] [1768] [1769] [1770]

5.20.9. The Pisco Ecuador elephantine figurine was of clay.[1771]

5.20.10. The terracotta plate showing two *Proboscidea* from Peru.[1772] [1773] [1774]

6. **<u>Writing</u>**: It's not clear whether there is a standard conventional wisdom about ancient America's first writing; it appears that perhaps the current thinking may be 1000 B.C. for Mesoamerica, and nearly 3000 B.C. for South America.[1775] [1776] [1777] Yet writing has often been associated with *Proboscidea*:

6.1. The three Flora Vista New Mexico depictions were on tablets with writing.[1778] [1779] [1780] [1781]

6.2. The elephantine petroglyph from northeastern New Mexico was associated with ancient writing.[1782]

6.3. The elephantine stone pendant from Gallo Canyon New Mexico had writing on it.[1783] [1784] [1785] [1786]

6.4. The "elephant drawings [that] are found in Colorado" on rock are associated with writing.[1787]

6.5. The Oklahoma panhandle cave elephant is amidst ancient writing.[1788] [1789] [1790]

6.6. The Boone County Missouri *Proboscidea* pictograph was associated with "hieroglyphics."[1791]

6.7. The Iowa Davenport tablet *Proboscidea* were associated with writing.[1792] [1793]

6.8. The La Crosse Wisconsin cave with a mastodon also had "hieroglyphic characters."[1794]

6.9. The three Illinois cave elephantine depictions were associated with "many interesting hieroglyphics."[1795]

6.10. Obviously the various depictions within the ancient American codices/glyphs were associated with writing.

6.11. The Comalcalco Mexico bricks, which showed some *Proboscidea*, are well known for their extensive "hieroglyphics."[1796] [1797]

6.12. The Yalloch Guatemala vase with two elephantine depictions also had "hieroglyphics" on it.[1798]

6.13. At least nine of the Cuenca elephantine depictions were associated with writing.

6.14. The Tiwanaku *Proboscidea* depictions are on a huge stone that also has unknown "hieroglyphics."[1799] [1800]

7. **<u>Other Recent Artifacts</u>**: *Proboscidea* remains or depictions have often been found with many other artifacts that have reflected much more recent existence. Some of the below items are of a quite recent and/or definitive nature:

7.1. Per Pennsylvania's Lenape Stone that depicts a *Proboscidea*: "The type of gorget the Lenape Stone resembles is known to have been popular no earlier than 1000 B.C.E. – thousands of years after the mammoth was extinct. Additionally, three other artifacts found later on the Hansell farm bore engravings very similar to those on the Lenape Stone… These artifacts were able to be dated and were found to be from a time period not contemporary with the mammoth."[1801]

7.2. A Kentucky mastodon at Blue Lick Springs was reported as found above a "stone pavement. The stones forming this pavement had been quarried. Their upper surfaces had been cut and dressed, while their lower sides were in the rough."[1802] [1803] [1804] [1805] Quarried smooth stone pavement is thought to have occurred *long* after *Proboscidea* extinction.

7.3. The previously reviewed *Proboscidea* killed in mudslides ("many" in Paredon, the "complete" one in Colombia on *paved stone*, and the "entire" one near Tezcuco next to a Mesoamerica road) all reflect coexistence with recent advanced civilizations, thus pointing to recent existence.

7.4. As to be reviewed in Appendix I, several Copan stone carvings (more than Stela B) reflecting *Proboscidea* are thought to be from about the 8th century A.D.

7.5. In Colombia, a Quimbaya cemetery tomb had *Cuvieroniinae* bone and maize; the Quimbaya culture is sometimes thought to have gone from A.D. 300 to 1300.[1806] Association with both maize and the Quimbaya culture would likely point to more recent existence.[1807] [1808]

7.6. Some artifacts are of *Proboscidea* ivory. Fresh ivory is more capable of quality carving than old dried-out ivory.[1809] Thus if carved ivory is found with more recent artifacts or in areas thought to be more recent, they may reflect the *Proboscidea* was of the same more recent era.

7.6.1. One professor in an Anasazi area "found in the homes of ancient people fossil remains of the mastodon and saber-tooth tiger; also utensils made out of **live, not fossil** ivory."[1810] [1811]

7.6.2. "…an implement made of mammoth ivory, which was found in Florida's Aucilla River…"[1812]

7.6.3. Chicago's Field Museum has a "Hopewell Culture" figurine made from the "ivory of a mammoth" which "has the same kneeling posture and general appearance as the clay Hopewell figurines"; it's thought to date from 300 B.C. to A.D. 500.[1813]

7.6.4. In Mexico was found an "ivory needle"; another source recorded "hearing" of a piece of ivory.[1814] [1815]

7.6.5. In Mexico was found a "small carving of a human foot… carved from the molar tooth of a mammoth, and is doubly startling, as the art of carving implies quite an advanced culture."[1816] [1817]

7.6.6. In Oaxaca a *Proboscidea* bone was found to have been "well-sculpted" into a "musical instrument"; the author thought the work was from the Zapotec culture.[1818]

7.6.7. One translated book, after referring to various American elephantine depictions, adds: "In the ruins of Palenque, is also drawn the elephant's head and between the ruins themselves were collected large fragments of carved ivory."[1819]

7.6.8. In Toro Colombia a tool was found made from *Cuvieroniinae* ivory.[1820]

7.6.9. At Tagua-Tagua Chile was found a "piece of mastodon [*Cuvieroniinae*] ivory with etched geometric designs."[1821]

7.6.10. A fascinating 1914 *Los Angeles Times* article tells of how in Guerrero Mexico (Olmec then Mayan area), professors from America and the National Museum of Mexico excavated a huge city destroyed by a mudslide (ton-sized boulders on second floors of buildings, A.D. 34?).[1822] [1823] One large buried building had a room in the center that had been protected. The room was a wealthy woman's "boudoir" – described by "the walls had been plastered with a white lime cement, dressed to a perfect smoothness… The walls were highly decorated, but with one exception all the decorations were figures of flowers and of women and young girls." The fancy room had bowls, lamps, and a wall mirror (mirrors existed in ancient America). "Directly beneath the mirror was a slab of stone, upheld on two other perpendicular slabs, forming milady's [fashionable woman] toilet table. The supper [upper?] slab was of green diorite, that beautiful stone that is often called 'New World jade,' polished to a degree of smoothness seldom seen even in modern stone work. On this table lay a necklace of shell ornaments, from which the deerskin thong had long rotted away: three beaten copper hair ornaments; a gold head of a woman, evidently a neck or breast ornament, a bone comb, and, most valuable find of all, the piece of **ivory."** The ivory necklace ornament was carved with symbols and with smooth holes on both ends, and **"analysis in the laboratory of the National Museum of Mexico showed it to be *elephant* ivory**."

7.6.11. A 1937 publication: "Except for the Cocle region [Panama], ivory is not known again until we reach the coastal regions of Peru."[1824] (Both of these areas are known for more advanced/recent civilizations.)

7.7. One book reports: "Archaeologists at the paleo-Indian Hiscock Site in western New York (occupied around A.D. 100) have found numerous mastodon fossils and tusks along with tools made from mastodon bone."[1825]

7.8. On a different note, with respect to a Mayan dialect, one author wrote: "…the Mam dialect of Mayan language has a word for "elephant", and, believe me, they had few words for things they did not see around them."[1826]

8. **Steely Interpretation**: Indirect but very strong (if you understand the science) evidence of association with more recent artifacts would be that some of these elephantine depictions are intricately carved on *very* hard stone or are associated with civilizations that carved on very hard stone.[1827] For instance, the Gallo Canyon pendant was "very hard" stone, the Granby statuette was of granite, the carvings at Copan were intricately done on hard stone, etc. The conventional wisdom is that these were engraved by stone tools. But stone tools fracture. And you simply can't explain intricate cutting of high-end-hardness stone without having used tools that were harder. And similarly, one author argues that only steel could have been used as a strong enough crowbar to lift/tilt stones of hundreds of tons.[1828] And how does one create stone tools of the higher/highest-end-hardness stone? The *only* way to create decent tools of the strongest substance is to *shape* materials that are mildly to entirely fluid – fluidity caused by heat – metallurgy is the *only* solution. A review of the possible metals and their properties and the possible metalworking processes yields a *single* attractive ancient American answer – steel. Corrosion is why we don't find ancient steel tools, not ancient nonexistence. And conventional wisdom puts any metallurgy of comparable sophistication far more recently than the supposed 8000 B.C. *Proboscidea* extinction. In summary, some of the *Proboscidea* depictions are associated with civilizations which had very intricate and highly sophisticated cutting and sculpturing of very hard stone that had to have used steel, and any steel would be thought to have been of more recent usage and not consistent with traditional timing of *Proboscidea*. The typical reader likely won't have sufficient scientific background to pass confident judgment on this issue, nevertheless this point is quite telling. However any robust iron-clad treatment of this topic would need to be in a separate treatise. But just one point here, the ancient iron mine high on a Peruvian cliff-face, where 3700 tons of iron ore were anciently extracted, was not dug just because the Lehites liked to look at the color of iron.[1829]

9. **Indian Legends**: The frequency (over three dozen tribes) and in some cases great *Proboscidea*-clarity (trunks in particular) of elephantine Indian legends increases the likelihood of more recent existence. However as the legends generally had other animal and/or non-reality characteristics, it is hard to feel overly confident about them.

10. **Shallowly-Buried *Proboscidea***: *Proboscidea* being found not buried all that deeply have led a number to believe in their relatively recent existence:[1830] [1831] [1832]

10.1. "…often covered by only a few inches of soil or peat, and in such a state of preservation as to make it difficult to believe that they are more than a few centuries old."[1833] [1834] [1835]
10.2. "…found so superficially buried in [Ontario]… that they appear to be quite recent."[1836]
10.3. One professor reviewed 51 Michigan finds and wrote: "…remains were from a few inches to six feet below the surface… The shallow depths at which they are buried in bogs still actively accumulating peat point to a surprisingly recent date."[1837]
10.4. "The remains of these animals [*Proboscidea*] (in America) occur in the most superficial deposits…"[1838]
10.5. "I have myself observed the bones of the mastodon and elephant imbedded in peat at depths so shallow that I could readily believe the animals to have occupied the country during its possession by the Indian."[1839] [1840]
10.6. "When we find the bones of any animal in a swamp of this nature, much closer to the roots of the sod than to the solid earth below, it is evident that the time of their inhumation will not embrace many centuries."[1841]
10.7. "The ancient lakelets of Michigan enclose numerous remains of the mastodon and mammoth, but they are sometimes so near the surface that one could believe them to have been buried with 500 years."[1842]
10.8. From an 1881 Smithsonian report: "Mastodon bones have been exhumed from peat beds in this country at a depth which, so far as is proved by the rate of deposition, implies that the animal may have been alive within five hundred years."[1843]
10.9. "Prof. Hall says: 'Of the very recent existence of this animal [*Proboscidea*] there seems to be no doubt. The marl beds and muck swamps, where these remains occur, are the most recent of all superficial accumulations."[1844]
10.10. "Mastodons have been unearthed all over a very wide area of the northeastern part of the United States and mostly in the top layers of bogs."[1845]
10.11. "… at least one American geologist thought that the recency of the deposits that contained elephant remains was such that a survival into A.D. 1000 would not be at all unexpectable."[1846]
10.12. "In North America, the mastodon and mammoth occur in strata much more recent in date than in Europe or Asia, and very well preserved."[1847]
10.13. "The Mastodon… has several times during the past eight or ten years been discovered in such circumstances as to throw great doubt on the vast length of time during which it has been supposed, from earlier evidence, to be extinct."[1848]
10.14. "It was not long after the colonization of the New World commenced before travelers began to comment upon the huge bones found in the New World. They seemed strewn in greater profusion, to be, in short, more suggestive of recency."[1849]
10.15. "But we have authority for believing that the mastodon was one of the last animals that has become extinct."[1850]
10.16. "But the bones of the elephant and mastodon are found near the surface, sometimes in marshes that are alternately wet and dry, in a much better state of preservation than some of the human bones at the bottom of burial mounds where the conditions for their preservation are much more favorable. Placing such bones side by side and bearing in mind the places from which they were exhumed, one can not resist the conclusion that the human remains are quite as old as those of these extinct animals."[1851]
10.17. In Guadalajara Mexico an archaeologist in 1938 met a man "whose hobby it was to dig up the bones of elephants and men from the dried-up bottom of a neighboring lagoon. The bones were all found a few inches below the surface, and the excavator believed them to be contemporary."[1852]
10.18. In Oaxaca Mexico a "mastodon" (most likely *Cuvieroniinae*) was found by a farmer – "scientist were required to dig no more than 50 centimeters" (10 inches).[1853]

11. ***Proboscidea* <u>On the Surface</u>**: Similarly, elephantine bones ***<u>lying on the surface</u>*** would be quite strong support for recent existence for two primary reasons: 1.) the closer to the surface, particularly on the surface, would obviously mean the likelier the more recent of an existence; 2.) more importantly, being buried can actually mitigate the decomposition process – surface exposure leads to more sure decomposition where bones would not be expected to last for eons. Arguments have been made that bones will simply entirely decompose away if left on the surface for many centuries, yet there are many reports of *Proboscidea* bones on the surface of the ground:[1854]
11.1. "It seems irrational to suppose that these surface bones could have been preserved intact through untold ages, hence the theory is untenable that the mammoth and mastodon bones from Big Bones Springs [Kentucky] were only of prehistoric creatures" – this author then writes that his father-in-law saw an on-surface mammoth shoulder blade in the early 1800s that entirely disintegrated with only 50 more years of exposure.[1855] [1856]
11.2. Thomas Jefferson wrote: "It is well known that on the Ohio, and in many parts of America further North, tusks, grinders, and skeletons of unparalleled magnitude, are found in great numbers, some lying on the surface of the earth, and some a little below it."[1857] [1858] [1859] [1860]
11.3. "Bones, teeth, even entire skeletons of mastodons or mammoths are frequently found in situations where it would seem impossible they could retain their form and solidity for a great length of time."[1861]
11.4. "…the American mastodon are nearly always found in the peat formations, or in some formation contemporary thereof with – often, indeed, on the surface of the ground."[1862]
11.5. "Mastodon bones are extremely fragile on exposure to air, so that they require expert handling to be correctly exhumed and preserved."[1863] (Thus surface bones would not be expected to last thousands of years.)
11.6. "The body of an animal that dies on high ground is seldom preserved because predators and scavengers scatter the bones. Such exposed bone usually becomes decayed or badly weathered before it can be carried downslope to a lake or stream to be preserved in the sediments deposited there."[1864] (Thus surface bones would not be expected to last thousands of years.)
11.7. A similar comment about large animals from supposedly long-ago in the American tropics: "…whose bones are, nevertheless, accepted as belonging to an extinct species; now could they have resisted disintegration during four or five thousand years, considering both of these to have lain exposed to, or at least within the influence of a tropical sun, and the periodical rains? Yet they occur often on the surface…"[1865]
11.8. An archaeologist wrote of finds in Ecuador: "…several instances of the discovery of elephant [*Cuvieroniinae*]… usually they were found on the surface." Relatedly, in discussing one particular find: "It is therefore evident that the erosion of the material and deposition of the mastodon [*Cuvieroniinae*] bones must have taken place some time after the Pleistocene terrace deposits had been laid down."[1866]

12. <u>**Not Fully Decomposed Body Parts and Consumed Vegetation**</u>: <u>**Dozens**</u> of non-frozen American *Proboscidea* have been found with a great variety of eaten but <u>**not-yet-decomposed vegetation**</u> (of types that grow currently in the same locations -- which is inconsistent with some of the Ice-Age *Proboscidea* theories) inside their stomachs or where their stomachs had been and/or in their teeth; even more <u>**dozens**</u> of other non-frozen American *Proboscidea* have been found with <u>**various body parts**</u> still remaining and described by the following terms (somewhat overlapping): <u>**intestines, gut, stomach, live stomach bacteria, marrow-filled bones, spinal vessels, adipocere, fatty tissue, skin, "skin on the bones", flesh, hide, "hide with its hair", hair, muscle tissue, sinew, soft tissue, tendons, meat, trunk (caution, only two 18th century reports, from Indians), foot, toes, toenails, dried blood, blood stains, veins, steroids, dung, and faecal material**</u>.[1867] [1868] [1869] [1870] [1871] [1872] [1873] [1874] [1875] [1876] [1877] [1878] [1879] [1880] [1881] [1882] [1883] [1884] [1885] [1886] [1887] [1888] [1889] [1890] [1891] [1892] [1893] [1894] [1895] [1896] [1897] [1898] [1899] [1900] [1901] [1902] [1903] [1904] [1905] [1906] [1907] [1908] [1909] [1910] [1911] [1912] [1913] [1914] [1915] [1916] [1917] [1918] [1919] [1920] [1921] [1922] [1923] [1924] [1925]

12.1. One famous Chilean non-frozen location deserves attention: "The site has also yielded 38 small pieces of *animal hide and muscle tissue*, some still preserved on bones of *Cuvieronius*. Pieces of hide also were recovered from hearth areas, living floors, and wooden structural remains. Some pieces were still attached to wooden poles, possible suggesting the presence of *hide-draped* huts. Pathological and other analyses of these pieces suggest that they are also of a *Proboscidean*."[1926] [1927] This site also had chunks of *Proboscidea* meat preserved in a peat bog.[1928] [1929] [1930] [1931]

12.2. In 1946 it was written: "…for over a hundred years the mastodon's hide and hair have been regarded by textbook writers as irrefutable proof of its recent existence."[1932]

12.3. "The immense volume of bits of flesh, skin, and bone (and even stomach contents) of these animals [American mastodons] that have been found, in proportion to the comparatively minute number of bogs investigated, is utterly perplexing."[1933]

12.4. "We quote from p. 385, Geological Report for 1880. Professor Collett says: 'Of the thirty individual specimens of the remains of the mastodon found in this state [Indiana], in almost every case a very considerable part of the skeleton of each animal proved to be in a greater or less condition of decay.'"[1934]

12.5. "Father of Paleontology" Cuvier gave reasons why American *Proboscidea* may have been recent:[1935]

12.5.1. Shawnee Indians had found a *Proboscidea* skull in 1762 which had a not-yet-fully-decomposed "long nose above the mouth" – a claim difficult to fabricate without knowledge of a *Proboscidea* trunk.[1936] [1937] [1938] [1939] [1940] [1941] One description was: "Thus in 1762 the Shawany Indians found some three miles from the Ohio the skeletons of five mastodons, and reported that **one of the heads had a long nosed attached to it, below which was the mouth**. Mr. Barton argues with reason that **the trunk was actually preserved**."[1942] Another description, written in 1805, was "some 'Shawanese' Indians who had brought to Pittsburgh an elephant tooth and a fragment of tusk of which they were attempting to dispose. Describing similar remains, the Indians mentioned **a head with a long nose and a mouth on the underside**."[1943]

12.5.2. Similarly, naturalist Kalm said Illinois Indians in about 1750 found a *Proboscidea* with a **mostly decomposed trunk**.[1944] [1945] [1946] [1947] [1948] [1949]

12.5.3. Though wondering whether it might truthfully have been from an Old World elephant, Cuvier inspected a mummified partial *Proboscidea* foot reported to have been found by Indians.[1950] [1951] [1952] Believe it was the same foot also described elsewhere as: "Part of a foot of a mastodon, with five nails attached, was found in a cave, with a tooth, by a savage west of the Missouri: it was very fresh, and perfectly resembling that of an elephant: it was obtained of a Mexican, who had purchased it of a native."[1953] (Asian elephants have five toes on their front feet, with toenails.)[1954]

12.5.4. Cuvier said: "…that its [mammoth] remains are in a better state of preservation than any other fossil bones; and there are some curious facts which may give rise to the conjecture, that its extinction may be more recent than has been supposed."[1955]

13. **Buried Frozen *Proboscidea***: To only be lightly touched upon here, stupefyingly vast numbers of *Proboscidea* have been found buried, often quite deeply and suddenly and with warm-weather vegetation, and frozen in Siberia and Alaska.[1956] [1957] [1958] [1959] [1960] This amazing phenomenon can be explained from a Noah's flood and Peleg's continental split viewpoint, but not from a "conventional wisdom" view of geologic history. (Most of the frozen *Proboscidea* found in Siberia and Alaska could be explained from the conventional wisdom of geologic history, but many cannot.)

13.1. As an aside, the single land mass splitting into today's continents during Peleg's time (often thought to be between 2250 and 2100 B.C.) has been taught at least 80 times by either scripture (ancient and modern), modern prophets (at least five of them), many apostles, other general authorities, or by church publications.[1961] [1962] [1963] [1964] [1965] [1966] [1967] [1968] [1969] [1970] [1971] [1972]

14. **Similar Evidence for Similar-Period Animals**: There are several other animals thought to have gone extinct in the same timeframe as the *Proboscidea*. They too have many types of evidences of living in much more recent periods. One example is a giant ground sloth found associated with pottery in South Carolina.[1973] [1974] More recent evidence associated with these other animals is another point indicating the conventional radiocarbon dating wisdom is in error.

15. **DNA Diversity**: To give a quote from a DNA study:

15.1. "The low nucleotide diversity of mammoth [woolly] mitochondrial sequence ($\pi \sim 0.003$) is an **order of magnitude lower** than that reported for the overall populations of *L. africana* ($\pi \sim 0.02$) and *E. maximus* ($\pi \sim 0.017$), **but similar to the values reported for select populations** of *L. africana* ($\pi \sim 0.00084$–0.027) and *E. maximus* ($\pi \sim 0.0024$–0.0055). These data suggest that unlike the Asian and African elephants, the mammoth population has not had a complex population structure and has had a relatively low genetic diversity in mitochondrial lineages, at least in the area **spanning thousands of kilometers** in north-eastern Siberia."[1975]

15.1.1. If both woolly mammoths and elephants had lived for a roughly comparable long period of time, then we might expect a similar level of mtDNA diversity due to comparable mutation – yet woolly mammoths across huge distances have significantly less diverse mtDNA than of elephants, and as comparably-diverse as that of isolated populations of elephants. If this particular mammoth lineage (Siberian) had only lived for a far shorter period of time than elephants, then this could explain the lower levels of mtDNA diversity. A much shorter woolly mammoth species-duration after Noah's ark, relative to living elephants, could explain this. While this doesn't utilize American *Proboscidea* DNA, the point is that the phenomenon is plausibly explainable from a Noah-ark timetable, while it's an unexplainable anomaly for conventional wisdom timing.

16. **Some Similar Opinion**: Before radiocarbon's influence there were some who reviewed many of the above evidences and reached similar "recent *Proboscidea*" conclusions.[1976] [1977] [1978] [1979] For example, a Notre Dame professor who was a *Proboscidea* expert wrote: "The opinion of many writers, including myself, is that mastodons have only recently become extinct in North America and that they have lived into historic times."[1980] [1981] A 1951 college anthropology textbook said: "…it has been suggested that the mastodon became extinct less than 1,000 years ago."[1982] And others, in the radiocarbon age, believe the evidence points to more recent survival: "…evidence of elephants is found in the Americas, that is depictions of extinct elephants. These forms had been extinct at least 8,000 years as well. Yet, they are represented by ancient Mexican artisans… What is apparent is that these animals lived into historical times and early civilized man had observed them and sculptured and drew them accurately."[1983]

As reviewed, there are numerous types of evidences that individually either potentially, persuasively, or positively point to far more recent American *Proboscidea* existence, particularly the many *Proboscidea* depictions from within fairly recent civilizations. In totality they make a sweepingly comprehensive and strongly compelling solid case for *Proboscidea* being far more recent than the conventional wisdom of a supposed "8000 B.C." extinction. In contrast, a detailed study of old radiocarbon dating greatly reduces confidence in its assumptions.

A.19 Summary of Cureloms and Cumoms Being *Proboscidea*

The following is a long summary of the rationale for cureloms and cumoms being some sort of *Proboscidea*:

1. There are many reasons to believe the "cu-oms" are similar to both elephants and to each other, and to believe that all three were used for work:
   a. The naming similarity of "cureloms" and "cumoms" makes a very strong case statistically that the "cu-oms" are similar to each other, as the odds of a random repetition of both a consonant-bearing opening syllable and a consonant-bearing rhyming end are roughly one in 10,000. Also, a review of Hebrew, Egyptian, Akkadian, and Sumerian finds no even mediocre candidates for parent or related words.
   b. Verse 19's known animals are used for work, thus increasing the chances that "cu-oms" were used for work; *Proboscidea* are *outstanding* work animals.
   c. Verses 17 and 18 each have a unique noun theme, thus further increasing the likelihood that all of verse 19 follows a unique noun theme -- of work.
   d. Verse 18 ends with "and also many other kinds of animals which were useful for the food of man" – making it even more likely that all verse 19 animals were *not* primarily food animals.
   e. The pattern of grouping similar nouns, in these and other Book of Mormon passages, makes it likely the "cu-oms" are closer to elephants than to horses, cattle, sheep, or any other listed animal.
   f. It's the combination of several preceding points together that makes the strongest case for "cu-oms" being:
      i. Related closely to each other
      ii. Primarily or exclusively work animals
      iii. More closely related to elephants than to horses, cattle, or to any other animal in these two verses
      iv. Perhaps more closely related with elephants than the closeness within most noun groups in these verses.

Ether 9:16-19
…insomuch that they became exceedingly rich –
17. Having all manner of **fruit**, and of **grain**, and of **silks**, and of **fine linen**, and of **gold**, and of **silver**, and of **precious things**;
18. And also all manner of **cattle**, of **oxen**, and **cows**, and of **sheep**, and of **swine**, and of **goats**, and also many **other kinds of animals** which were useful for the food of man.
19. And they also had **horses**, and **asses**, and ***there were elephants and cureloms and cumoms***; all of which were *useful* unto man, and ***more especially the elephants and cureloms and cumoms***.

2. Domestication from wild herds is a remarkably impressive potential explanation for a highly unusual non-happenchance mid-sentence interruption from "having" to the unpossessive "there were" wording for referring to both tame *and* wild.
   a. This interpretation is further reinforced due to elsewhere in the Book of Mormon where "there were" or "there was" always referred to animals not under human control, and also that all of the many dozen wild animals were never prefaced with a "having" or "had."
   b. No other domesticated animal relies primarily on capturing wild animals instead of breeding.
   c. What alternative explanation exists for this clearly non-happenchance change in wording?
3. Given their oblique obscurity, confusing classification, and inconsistent identification in 1829, American *Proboscidea* subsets (except arguably for mammoths) could not have been translated in 1829.
4. *Proboscidea* are extraordinarily useful, matching the passage's great emphasis on high usefulness:
   a. A second repetitive engraving just to state the "more especially" aspect of their usefulness is an even greater emphasis than if it had just been written that way in the first place.
   b. *Proboscidea* capabilities are *phenomenal* with respect to docility, strength, handyman trunks, intelligence, agility, diet versatility, stamina, and longevity – they meet the description of being as useful as elephants and more so than horses.
5. Four Book of Mormon passages refer to domesticated Jaredite "beasts", *Proboscidea* would match well in all four.
6. ***Very convincingly***, an exhaustive review of *every* single known mid-to-large-sized type of American animal (over 100 types, many more at the genera and/or species level), living or relatively recently extinct, leaves *Proboscidea* as the ***only*** strong contender; all other candidates are *dramatically* lower-quality possibilities. In particular, per the specific candidates proposed by various LDS members – none are close at all in having the same level of strong credible arguments. For example, one issue is that most viable alternatives would have been translated in 1829.
7. There is overwhelming evidence of *Proboscidea* interaction with ancient man:
   a. There are over 100 sites with some sort of evidence of human interaction with *Proboscidea* skeletal remains. There is *far* more evidence than reported or footnoted in this treatise.
   b. Even by very pessimistically dismissing half of the 200+ *Proboscidea* depictions, this still leaves over 100 valid American *Proboscidea* depictions.
      i. Several of these are Olmec (Jaredite), and many others could be Olmec.
8. Evidences exist of ancient *Proboscidea* domestication:
   a. There are 15 reported depictions of *Proboscidea* domestication from 10 different sites
      i. However many of these are of lower quality with respect to clear credibility, multiple verification, and/or picture availability.
      ii. All but one are from areas of highly advanced ancient American civilizations.
      iii. The domestication credibility is strengthened by two sets of depictions from separate sites, both thought to be of the same general era, sharing unusual similarities.
   b. A report of silver rings on tusks of *Proboscidea* killed by a sudden mudslide in a populated city are a remarkable evidence of domestication – both the plentiful existence in the city and the silver rings denoting apparent use of reins; however this report is not independently verified.
   c. With a *Proboscidea* skeleton on top of ancient paved stone and another next to an ancient stone highway, these may also suggest domestication.
9. As "cu-oms" were "more especially useful" they were likely common. About 6,500 North American *Proboscidea* remains have been found in the literature. Judgments are that the vast majority of finds are not part of the 6,500.
   a. Similarly, *Proboscidea* are the most radiocarbon-tested animal, which helps show their commonness.
10. With knowing Jaredites (Olmecs) lived in the land northward and never lived in South America (and then were succeeded by Mulekites/Lehites in Mesoamerica), this may explain why no mammoth or American mastodon has ever been found in South America, even though about 5,700 have been found in North America.
    a. Scientists find this "strange", "highly significant", and having "no biological explanation."
    b. What is a credible alternative explanation?
11. With understanding the Olmec (Jaredite) center to be in the general area of the Isthmus of Tehuantepec, this may likely explain why mammoths and American Mastodons remains are very common north of this isthmus (domesticated and wild), but are quite limited south of the isthmus area (predominantly or exclusively domesticated, whose bones may also have more likely been more thoroughly disposed of.)
    a. While scientists have been perplexed as to how Panama could have blocked mammoths and American mastodons from entering South America, it is even more perplexing why the much larger Isthmus of Tehuantepec would serve as a quite effective filter -- unless of course it's the Book of Mormon explanation.
    b. Conversely, this population bottleneck may largely explain why *Cuvieroniinae* follow the opposite pattern – common below this point and much scarcer above it.

12. With over three dozen Indian tribes thought to have legends descriptive of *Proboscidea*, and with some of their descriptions remarkably uniquely-elephantine (especially descriptions of trunks and their usage), this increases the likelihood that *Proboscidea* were both common and relatively recent. However while these legends have been quite persuasive to some, these elephantine descriptions are generally mixed in with non-elephantine descriptions.
13. There are many evidences that *Proboscidea* are far more recent than what conventional wisdom says:
    a. There are 50 *Proboscidea* radiocarbon dates that are 2,000 or more years younger than the supposed 8,000 B.C. extinction. However *many* of these dates range from possibly to highly likely erroneous. On the other hand, many are accused of error just because they violate "conventional wisdom." It's generally hard to make tentative let alone confident or definitive judgment on them. Very few are more recent than the approximate 1700 B.C. of the Ether passage. However there are inescapably-relevant large problems in the logic of older-radiocarbon-dating and their problematic calibrations, as well as very significant contrarian evidence.
    b. Conventional wisdom is that metal working, pottery crafting, mound building, and writing all didn't occur until many millennia after *Proboscidea* extinction -- yet each of these four items has 20+ instances of appearing to be contemporaneous with *Proboscidea*. Also, *Proboscidea* or *Proboscidea* depictions have been found with other types of artifacts thought relatively recent, as indicated by their styling, believed era of use, or radiocarbon dating. In total there are over 100 instances of *Proboscidea* bones or depictions associated with artifacts thought far more recent than a supposed "8000 B.C."
    c. In addition to the specific-artifact-associated depictions referenced above, there are several dozen other depictions of *Proboscidea* from within relatively recent civilizations (Anasazi, Mound-Builders, Mayan, Olmec, and lastly identity-unclear-to-me but advanced civilizations within Mexico, Mesoamerica, and northern and western South America).
    d. At three sites there are remains of *Proboscidea* that died in/by relatively recent civilization stone edifices.
    e. As discussed, the various legends, from over three dozen Indian tribes, thought descriptive of *Proboscidea*, if of true elephantine origins, would point to more recent *Proboscidea*.
    f. Many *Proboscidea* bones have been found barely buried, leading some to think they must be more recent. Many other *Proboscidea* bones were not buried at all, with the thinking being that the bones clearly would have decomposed had they actually been left exposed to the elements for many millennia.
    g. Dozens of non-frozen American *Proboscidea* partly-decomposed body parts have been found that have been described as: intestines, gut, stomach, life stomach bacteria, marrow-filled bones, spinal vessels, adipocere, skin, "skin on the bones", flesh, hide, "hide with its hair", hair, muscle tissue, sinew, soft tissue, meat, dried blood, steroids, dung, and faecal material. And if some old Indian reports are correct, two partially decomposed trunks and one mummified foot have also been found.
    h. Dozens of non-frozen *Proboscidea* have been found with intact vegetation in their stomachs/stomach areas and/or teeth.
    i. Other animals also "conventionally thought" to have gone extinct at the same "8000 B.C." as the American *Proboscidea* also have the same types of evidences (as listed above) indicating they are also much more recent, thus further strengthening the more-recent *Proboscidea* argument.

In summary, there are plethoric points, that individually range from tenuous to persuasive, but which collectively construct an astonishingly convincing and amazingly compelling case that the cureloms and cumoms were *Proboscidea*.

B. Identifying the Elephant, Curelom, and Cumom within *Proboscidea*

Having proposed "cu-oms" as some type of *Proboscidea*, more specific "cu-om" identification is warranted. But first the Jaredite elephant should be identified. However the following Jaredite elephant section in particular errs on the side of daunting detail – the typical reader is likely better served by skim reading.

B.1 Identifying the Jaredite Elephant

This section articulates a decisive and definitive identification of the Jaredite elephant.

B.1.a Columbian Mammoths are "True" Elephants, in the Elephant Subfamily *Elephantinae*

For many years a dominant classification for American mammoths counted 16 species.[1984] [1985] While there are a variety of American mammoth classifications, for the one used in this treatise, there are seven American mammoth species, one of which is the woolly mammoth.[1986] Their names and dates when first named are:[1987] [1988]

- *primigenius* (woolly mammoth), 1803 (20 other names by 1845)
- *hayi*, 1815 (rare, thought to be very old, pre-flood in reality?)
- *meridionalis*, 1825 (rare, thought to be very old, pre-flood in reality?)
- *columbi*, 1857 (first name given in America)
- *imperator*, 1858
- *jeffersonii*, 1922
- *exilis*, 1928 (California Channel Island pygmy mammoths, see Section D to learn more)

Many (including myself) consider *columbi*, *jeffersonii*, *imperator*, plus possibly *exilis* (dwarfs), and even perhaps *hayi* and *meridionalis* all better treated if considered as a single species.[1989] [1990] [1991] [1992] [1993] [1994] [1995] [1996] [1997] [1998] [1999] For example, a premier North American mammoth expert recommends consolidating the species – *meridionalis* (drop *hayi*) for the old ones, *exilis* for the dwarfs, and *columbi* [drop *imperator* and *jeffersonii*] for the remaining non-woolly American mammoths.[2000] [2001] Calling these six species the "Columbian mammoth grouping", they have larger sizes and more spiraled tusks than Asian elephants.[2002] [2003] [2004] [2005] While woolly mammoths have abundant shaggy hair, the Columbian mammoth grouping's skin is thought to have had the same look, thickness, structure, and thin hair as the skin of modern elephants.[2006] [2007] [2008] [2009] [2010] This grouping is in the same subfamily, *elephantidae*, as the living elephants.[2011] Radioimmunoassays (antigen protein identification tests) provide more evidence that Columbian mammoths are bona fide elephants: "Radioimmunoassays were able to identify *Elephas*, *Mammuthus* (woolly), and *Loxodonta* as being closely related" -- and they showed the American mastodon to be more distant.[2012] [2013] DNA studies also show mammoths and modern elephants to be closely related, with the American mastodon more distant.[2014]

The following quotes reflect how the experts recognize the mammoth as an authentic narrowly defined elephant:

- "Elephant: A member of the family *elephantidae*. ***Technically, it includes the mammoth***, *although informally it is often restricted to the two living species*."[2015]
- "Mammoth: An extinct *elephant* of the genus *Mammuthus*."[2016]
- "…the **three 'classic' elephant genera**, *Loxodonta*, *Mammuthus*, and *Elephas*."[2017]
- "…**the three elephant genera**, *Loxodonta*, *Elephas*, and *Mammuthus*…"[2018]

- Mammoths and elephants are called the "true elephants."[2019]
- "…mammoths were nevertheless morphologically and taxonomically **true elephants**."[2020]
- "The **true elephants**, including the two living species and the mammoths…"[2021]
- "The bones of the **true elephant** are found in tolerable abundance throughout North America" – referring to mammoths while excluding mastodons, this quote came from the "Father of Paleontology", Cuvier.[2022] Cuvier entitled one of his chapters: "The Fossil Elephant, Called Mammoth by the Russians."[2023]
- "…the loxodonts [African] and the **remaining elephants** (*Primelephas* [obscure extinct Old World elephant], *Mammuthus, Elephas*…)"[2024]
- "North American Mammoths: The elephants of North America…"[2025]
- "…the true elephants – the family Elephantidae." [2026] (which includes mammoths)
- "Unlike mastodons, which were *not* elephants, mammoths… were large, specialized elephants."[2027]
- "Both mammoths or **true elephants** and their cousins the mastodons…"[2028]
- From 1803: "Of these *fossil bones* none have attracted more attention than those belonging to the unknown animal denominated the *Mammoth*, found in several parts of the world, and especially in North America. A controversy for a long time existed, whether this animal were a species of *elephant* or not; and both the affirmative and negative sides of the question were confidently maintained by eminent zoologists. It is probable the dispute is now near being terminated, as, in the estimation of good judges, proof little short of demonstrative has appeared, confirming the opinion of those who assign this far-famed animal to the genus *Elephas.*"[2029]

Conversely, sometimes the woolly mammoth has been called the "true mammoth", a usage excluding the Columbian mammoth grouping; a 1921 quote from the premier Proboscideantologist of his era was "in recent years [the woolly mammoth] has usually been referred to [as] the true mammoth."[2030] [2031] [2032] [2033] [2034] [2035] [2036] To summarize, the experts clearly consider the Columbian mammoth grouping as a fully bona-fide narrowly-defined true elephant.

B.1.b The Columbian Mammoth and Asian Elephant are Similar, the African Elephant More Distant

A conclusive evidence of the Columbian mammoth grouping's strict elephant authenticity is that it is much closer to the Asian elephant than either of them is to the African elephant.

B.1.b.1 Skeletally, the Mammoth and Asian Elephant Are Similar, the African Elephant More Distant

Several studies indicate that the Asian elephant is closer skeletally to the mammoth than to the African elephant. While many of these studies used the woolly mammoth, the woolly mammoth is quite similar to the Columbian mammoth skeletally: "No clear differences in postcranial morphology distinguish the two species [woolly and Columbian]; enamel thickness is considered partially diagnostic, but individual teeth and even parts of a given tooth have variable enamel thickness."[2037] [2038] [2039] [2040] Another quote: "The profile of *M. primigenius*, the woolly mammoth, would have been somewhat similar to that of modern Asian elephants, except that the mammoth would have had a higher shoulder "hump" formed by long vertebral spines and a covering mass of long thick hair."[2041] When an American mammoth is found, sometimes its location has helped in pointing to whether it is thought to have been a woolly mammoth or otherwise.[2042] [2043] A summary of several relevant skeletal studies will follow:

Skeletal Study 1

One study reviewed entire skeletons of the African elephant, Asian elephant, and the woolly mammoth.[2044] (Remember woolly and Columbian mammoths are practically identical skeletally.) Of the approximately 330 bones in each, most bone types had identical counts. Excluding caudal vertebrae where the mammoth count was incomplete, the African elephant had four more bones than the Asian elephant, which had three more than the mammoth. However a note of caution should be added, as there can be varying bone counts on specimens within the same genera.[2045]

Skeletal Study 2

One review compared craniums and concluded that *Elephas* (Asian) craniums "contrast sharply with *Loxodonta*. Although less distinct from *Mammuthus*, *Elephas* lacks the spirally twisted tusks…"[2046] After citing other small differences, the review then concludes: "In other respects the crania of *Elephas* and *Mammuthus* are more nearly similar to each other than they are to *Loxodonta*."[2047] "The skull and teeth of *Mammuthus*… are morphologically close to those of *Elephas*."[2048]

Skeletal Study 3

Another study looked at neck bones from 17 *Proboscidean* genera.[2049] It concluded the mammoth was closer to the Asian elephant than the African elephant.[2050]

Skeletal Study 4

One big study documented 34 skeletal traits of 132 head specimens of 18 types of *Proboscidea* from 77 locations.[2051] It then sorted these 18 types based on similarities; a cladistic computer program sorted and developed relations between the different animals.[2052] At one end of the sort was the Asian elephant, next to it was the mammoth – the only difference was that the Asian elephant had "narrow" premaxillary tusk sheaths, while the mammoths' sheaths were "flaring."[2053] Next in the sort of 18 types was the two species of African elephants – both had variations relative to the Asian elephants in six of the 34 traits. These authors recommended creating taxonomy that put the mammoth and Asian elephant in a different taxonomic classification than the African elephant.[2054] [2055] They also called the mammoth and Asian elephant "sister taxa."[2056]

Skeletal Study 5

A thorough study compared 123 traits across various *Proboscidea*.[2057] African elephants differed from Asian elephants in six of the 123 traits; mammoths differed from Asian elephants in only two: 1.) mammoths having more curved tusks; 2.) minor variation in some of the molars.[2058]

Detailed Study Relationship Results

Study	Traits Analyzed	Differences: Asian to African	Differences: Asian to Mammoth
#4	34	6	1
#5	123	6	2
#6	138	5	0

Skeletal Study 6

A very sophisticated study documented 138 characteristics of 22 different types of *Proboscidea*.[2059] A computer analysis showed that the closest relative of an Asian elephant is a mammoth; the next closest is an African elephant.[2060] Of the 138 traits, African elephants differed from Asian elephants in five categories, while mammoths didn't differ in any of the 138 from Asian elephants.[2061]

Skeletal Wrap-up of the Mammoth and Asian Elephant Being Close

To summarize, the skeletons of the Asian elephant and Columbian mammoth grouping are practically identical to each other, and are much closer to each other than either is to the African elephant skeleton. This is widely recognized by the experts:

- "Asian elephants are more closely related to North American mammoths than they are to African elephants."[2062]
- "The mammoth is more nearly allied to the Indian elephant than to any other species."[2063]
- "*Elephas* and *Mammuthus* are believed to share a more common recent ancestor than either has with *Loxodonta*."[2064]
- "…mammoths and the living Asian elephants were more closely related to each other than either of them is to the living African elephants."[2065]
- "The bones of the [mammoth] skeleton generally more resemble those of the Indian Elephant than of any other known species."[2066]
- "The traditional phylogeny, based on tooth and skull similarities, places the mammoth closer to the Asian than to the African elephant."[2067]
- "… the living Asian elephant is more closely related to mammoths than to the living African elephant."[2068]
- "*Mammuthus* and *Elephas* have been thought to be more closely related to each other than either of them to *Loxodonta*. Some workers have included *Mammuthus* within the genus *Elephas*."[2069]
- "*Mammuthus* is aligned with *Elephas*, the Asian elephant, and more distantly, with the African genus *Loxodonta*."[2070]
- "There are no clear differences yet reported in molar morphology distinguishing *Elephas* from *Mammuthus*."[2071]
- "Interestingly, the Asian elephant is more closely related to the extinct mammoth than to the African elephant."[2072]
- From the Smithsonian in regards to Columbian mammoth teeth: "In fact, they greatly resemble those of the modern Indian elephant."[2073]
- "…once you have the genome of a mammoth, you could compare it with the genome of its closest relative, the Asian elephant."[2074]
- "This elephant [referring to the mammoth], although the word 'mammoth' has become an expression for hugeness, was little if any larger, on the average, to the modern Asiatic elephant, to which it was nearly related."[2075]
- "Geneticists have sketched out the woolly mammoth's family tree using ancient DNA found preserved in Siberia. The extinct beasts are more closely related to Asian elephants than to African elephants…"[2076]
- "…[the mammoth's] nearest surviving relative, E. indicus, [Indian subspecies of the Asian elephant] has retained the slightly more generalized characters of the Mammoth's contemporaries of more southern climes, E. columbi of America, and E. armeniacus of the Old World, <u>if, indeed, it can be specifically distinguished from them</u>."[2077]
- "The German zoologist, Dr. W. Soergel, finds that <u>the form of the skull and tusks</u> of the American *Elephas imperator* [now binned to *Mammuthus* instead of *Elephas*] <u>correspond fully with the Old World species</u>…"[2078]
- One professor, (arguably the world's foremost *Proboscidea* specialist, who authored over 200 articles and books on *Proboscidea*), stated that mammoths "are more closely related" to Asian elephants than African elephants.[2079]
- This professor calls them a "sister-group relationship", and in his traditional taxonomy had listed *Mammuthus* as a "plesion" (a highly-related taxonomic distinction) instead of full genus separate from *Elephas*; more recently he and several of the world's foremost *Proboscidea* experts lumped the two together into a "supertribe *Elephantina*"; others have drawn similar conclusions, also sometimes using the term "supergenus *Elephadon*" to group the Asian elephant and mammoth together.[2080] [2081] [2082] [2083] [2084] [2085] [2086] [2087] [2088]
- He also points out in 1991 the International Commission of Zoological Nomenclature decided to retain *Mammuthus*; even evaluating retention further reflects upon how it's hardly different than the Asian elephant.[2089]

<u>B.1.b.2 DNA-wise, the Mammoth and Asian Elephant are Similar, the African Elephant More Distant</u>

While this section reviews woolly mammoth DNA, remember the prior review of how the woolly mammoth is extremely similar skeletally to the Columbian mammoth grouping.[2090] [2091] [2092]

Various DNA studies have led to varying conclusions as to whether the woolly mammoth was closer to the Asian or African elephant; some of this is perhaps due to variations within Asian elephants, African elephants, and mammoths.[2093] However overall, the preponderance, the more recent, and the more complex studies point to the woolly mammoth being more closely related to the Asian elephant than the African elephant, though this is only a growing and very dominant opinion but perhaps not yet a fully universal opinion.[2094] [2095] [2096] [2097] [2098] [2099] [2100] Some DNA study quotes:

- "The mammoth was most closely related to the Asian rather than African elephant… we have **finally resolved** the phylogeny of the mammoth which has been controversial for the last 10 years [2005]."[2101]
- "…we show [using mtDNA] that mammoths are more closely related to Asian than to African elephants."[2102]
- "Two recent studies reported complete mtDNA genomes from the woolly mammoth *(Mammuthus primigenius)* that provided **strong evidence** that mammoths were more closely related to Asian elephants than to African elephants."[2103]
- "The study **definitively established** that mammoth and Asia elephant mitochondrial DNA lineages are more closely related than either is to African elephants."[2104]
- "…we obtained higher support values for a sister group relationship of mammoth and Asian elephant than previous [DNA] studies." "…**confirms** mammoth and Asian elephants as sister taxa…"[2105]
- "*M. primigenius* [woolly mammoth] was determined to be a sister species to *E. maximus* [an Asian elephant], i.e., the woolly mammoth shared a common ancestor with the Asian elephant more recently than with the African elephant. A maximum likelihood (ML) ratio test comparing all three possible topologies of the Elephantinae species corroborates this conclusion ($p < 0.01$). We also reconstructed the phylogeny of these species by using only individual protein and rRNA genes (tRNA genes are too short and contain too few substitutions). The majority, but not all, of trees reconstructed with the sequence of individual genes supported the topology recovered using the complete genome."[2106]
- "Recently, the complete 16,000 bp sequence of the mitochondrial genome showed the mammoth to be more closely related to the Asian than the African elephant…"[2107]
- "Based on mitochondrial DNA studies, mammoths are more closely related to Asian elephants than either are related to African elephants."[2108]
- "Finally in 2006, using new technology, three research groups independently published the complete mitochondrial DNA of the woolly mammoth – more than 16,000 bases long… The resulting sequence at last appears to answer the long-standing question: the mammoth is more closely related to the Asian elephant…"[2109]
- "Using our complete mtDNA mastodon sequence, we were able to employ gene-by-gene phylogenetic analyses **<u>to explain why several earlier studies found a sister group relationship between African elephants and mammoths</u>**. The reconstructed phylogeny of the Elephantidae varied widely when we used each of the 13 protein coding genes and the two *rRNAs* individually. We recovered the mammoth–Asian elephant topology for the majority of the genes, but with lower support values (44%–90% for bootstraps and 0.42–1.00 for posterior probabilities). Other genes supported different tree topologies, sometimes with high bootstrap values or Bayesian posterior probabilities (up to 90% or 1.00). In fact, when considering NJ trees alone, the majority (eight of 15) of the single-gene analyses in fact supported an incorrect topology. Some single-gene analyses resulted in different, yet well supported topologies when hyrax and dugong were used as the outgroup instead of mastodon. **<u>These results indicate</u>**

that studies based on a single gene can be misleading, and long sequences may often be necessary to obtain correct phylogenies."[2110]

Does the last quote solve the riddle as to why a few earlier DNA studies had indicated the mammoth was closer to the African elephant, when very clearly it wasn't?

To summarize, the preponderance of DNA analysis is quite conclusive in showing the mammoth to be much closer to the Asian elephant than to the African elephant.

B.1.b.3 Genera Placement History: The Counter Argument Completely Disintegrates

Understanding the history of genera treatment of the American mammoths gives another very powerful argument for their being similar to Asian elephants. Today the six Columbian mammoth species are binned to the *Mammuthus* genus which was first named in a sales catalog in England in 1828.[2111] [2112] However the six Columbian mammoth grouping species were all in *Elephas* when first created; the transitional move to *Mammuthus* began in 1945 and took decades to complete.[2113] [2114] [2115] [2116] [2117] [2118] [2119] [2120] [2121] [2122] [2123] [2124] [2125] [2126] [2127] [2128] (A contemporary competing classification had the woolly mammoth going to "*Mammonteus*" and the other American mammoths going to "*Paraelephas*", but usage of these terms died out.)[2129] A Google search of pre-1945 books for each of the six species with the preface "*Elephas*" yielded 2,106 hits; prefaced with "*Mammuthus*" yielded *only* nine hits before 1945. Making the same comparison in Google Book in subsequent timeframes gave the following breakdown for the percentages of species association with *Mammuthus* instead of *Elephas*:[2130]

- 0.4% *Mammuthus* pre-1945 (9 hits with "*Mammuthus*" and 2,106 hits with "*Elephas*" for these six species)
- 16% *Mammuthus* for the remainder of the 1940s
- 27% in the 1950s
- 43% in the 1960s
- 67% in the 1970s
- 80% in the 1980s
- 90% in the 1990s

Who proposed and made this 1945 move of the woolly mammoth and Columbian mammoth grouping species from *Elephas* to *Mammuthus*? It was George Gaylord Simpson, a preeminent paleontologist who was the Curator of the Department of Geology and Paleontology at the American Museum of Natural History in New York City.[2131] He made this change as part of his publication on mammal classification which became widely adopted.[2132] But *Proboscidea* classification is hard enough for Proboscideantologists, even today. A museum curator familiar with many thousands of mammalian species in 1945 is just not going to be the world's most qualified expert of the 448 Proboscidean species/subspecies in vogue in the 1940s.[2133] So what was his rationale for moving the mammoths from *Elephas* to *Mammuthus*? In his own words:

> "Among the elephantines, it is difficult to find a suitable middle ground between the old custom of referring all elephantines to *Elephas* and the excessive splitting into from seven to 12 genera. Osborn has well shown the heterogeneity of the forms lumped as mammoths. Some like *antiquus* are near the African elephant; some, like *hysudricus*, near the Asiatic elephant; and others, like the Siberian and the various American mammoths, are not particularly allied to either one. I have accepted Osborn's views as to affinities, adapting their taxonomic expression to the more usual conception of the scope of a genus. The *Loxodonta*-like forms are here included in *Loxodonta*, and the *Elephas*-like in *Elephas*. The others may be polyphyletic, but probably are more nearly allied to one another than either living genus (a probability expressed by Osborn by placing all in a separate subfamily) **and, therefore, are all placed in one extinct genus, the earliest available name for which appears to be *Mammuthus***."[2134]

The following reflects how his credentials were lacking, his logic was atrocious, his facts were wrong, and his conclusion was daft:

- He was a mammalian generalist and museum curator, not a Proboscideantologist; he simply lacked the expertise.
- He admitted this issue was "difficult" and he described his confidence as "probably."
- Part of his rationale that mammoths are different is based on his claim that: "Some [mammoths] like *antiquus*, are near the African elephant." So many errors in one statement. First, *antiquus* is not near the African elephant. (The species *antiquus* traditionally has been in the subgenus *Palaeoloxodon* with the Asian elephant genus. Recently the world's foremost experts decided to elevate this subgenus to an independent genus; see later discussion.) Second, *antiquus* hasn't been considered a mammoth, it's been considered an Asian elephant; it has nothing to do with the mammoth discussion. Third, "Some like *antiquus* are near the African elephant" would mean there are multiple "mammoths" near the African elephant – but none is the correct number.
- Similarly the comment of "some, like the *Hysudricus*, near the Asiatic elephant" is in error. First, *hysudricus* has been and is now considered an Asian elephant, not a mammoth. Second, all mammoths are similar to Asian elephants, not just "some."
- Also similarly, the comment of "and others, like the Siberian [woolly] and the various American mammoths, are not particularly allied to either one" is also completely wrong. Both the woolly and all of the American mammoths are considered highly similar to Asian elephants, and in comparison, quite distant from African elephants.
- In truth he put mammoths as a separate genus because he deferred to Osborn who, unlike others, put the mammoths in a separate genus. Yet the author went to great lengths to disparage Osborn's approach to taxonomy, calling it "profoundly and irreconcilably different" and "quite a different way from any other in the animal kingdom."[2135]

In summary, a 1940's museum curator just can't be an expert in thousands of mammal species. He just copied the mammoth genus idea from the most famous Proboscideantologist of his era. It is quite clear that this mammoth genus creation was an error. The change gradually got accepted not due to merit, but because its larger mammalian classification had become the "new mammalian taxonomic bible" for which acceptance grew and grew over the decades.[2136]

B.1.b.4 Summary of the Mammoth and Asian Elephant are Similar, the African Elephant More Distant

The North American *Proboscidea* art depictions, though often not of mammoths, generally reflect the smaller ear indicative of Asian elephants instead of the very large African elephant ears, as well as sometimes reflect other traits more reflective of the Asian elephant; frozen woolly mammoth ears that have been found were also small.[2137] [2138] [2139] [2140] More than one person has made this same conclusion – that ancient American depictions generally compare well with Asian elephants.[2141] [2142]

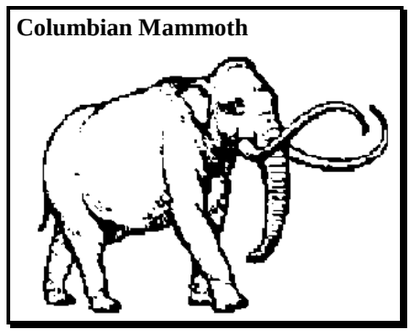
When reviewing the skeletal evidence, DNA analysis, the genera placement history, it becomes compellingly clear that the Columbian mammoth grouping and the Asian elephant are much closer to each other than either is to the African elephant. Indeed, the first century's binning for the Columbian mammoth grouping as species within the Asian elephant genus was

more fitting. This relationship analysis helps to clearly establish the Columbian mammoth grouping as a legitimate elephant even by exceedingly strict and narrow definitions.

B.1.c Further Support of the Columbian Mammoth's Authenticity as a Narrow Elephant

Below are three further arguments that the Columbian mammoth is an authentic narrowly-defined elephant.

B.1.c.1 African Elephant Species Comparison



In the study that compared 34 traits of *Proboscidea* heads and found that mammoths differed from Asian elephants in only one trait -- the two different African elephant species (African Bush and African Forest) varied from each other in four traits.[2143] Thus the Columbian mammoth grouping's narrow elephant authenticity is further reflected by the mammoth being closer to the Asian elephant than the two African elephant species are to each other.[2144 2145]

B.1.c.2 Bardia *Proboscidea* Comparison

The Columbian mammoth grouping is closer to the Asian elephant than the *Proboscidea* behemoths, alive today in Bardia Nepal, are to the Asian elephant. These Bardia *Proboscidea* have received scant attention. The *interesting* details are in a subsequent section. The related point here is that it's more accurate to call as an elephant the Columbian mammoth than the Bardia *Proboscidea*, even though the Bardia *Proboscidea* are largely called narrowly-defined elephants.

B.1.c.3 *Palaeoloxodon* Elephant Comparison

The Palaeoloxodon elephant (1924) has historically been considered a subgenus of the Asian elephant. The world's foremost Proboscideantologists have relatively recently elevated to it a separate genus; the *Elephantina* subtribe includes the Asian elephant and mammoth but excludes the *Palaeoloxodon*.[2146 2147] (This change is recent, plus there are many differing taxonomies, thus this change is not reflected in most literature. However these changes came from the world's foremost experts and this treatise follows whatever the-y use.) Hence the Columbian mammoth grouping is closer to the Asian elephant than something that used to be considered an Asian elephant itself – this is one more evidence of the narrow elephant authenticity of the Columbian mammoth grouping.

B.1.d The Columbian Mammoth Grouping is the Jaredite Elephant

For the Columbian mammoth grouping, the term "mammoth", instead of being a thoughtful meaningful taxonomic distinction, is just a mistake. **The "Columbian mammoth grouping" is a definitive core essence identification of the Jaredite elephant.** Core essence in the sense that the "Jaredite elephant" could possibly also have:

- Included woolly mammoths, though as previously discussed, not likely.
- Excluded *exilis* – these Catalina Island dwarfs would most likely have been included in any Jaredite elephant definition had they been known, but were most likely unknown to any Jaredite elephant definition determiner.
- Excluded *hayi* and *meridionalis*, the two older species. If these species are truly valid, perhaps they were just pre-Noah generic Asian elephants. However either way, if they were known to the Jaredites, they would likely have been labeled an elephant by any Jaredite elephant definition determiner.

B.1.d.1 Explains Why Listed First

This identification could also explain why the elephants were listed prior to the "cu-oms." It appears that the 19 nouns in seven noun groups in Ether 9:17-18 are listed by descending value within the groups. Gold before silver, horses before asses, silks before fine linen, fruit (likely a broad definition) before grain, sheep before goats, and cattle before cows ("cattle" usually means meat and are ten times more common in the U.S. than "cows" which often means milk). Since the Columbian mammoths were larger than the American mastodons or *Cuvieroniinae*, we would expect these to perhaps have been more highly valued and thus listed first. (Relatedly, Columbian mammoths being larger than Asian elephants might be due to centuries of Jaredite breeding, though it's perhaps more likely they didn't generally breed them but instead domesticated wild ones.) Similarly, as the Columbian mammoth grouping makes up three quarters of the Mexican *Proboscidean* fossils, it was likely the most common Jaredite *Proboscidea*, and this great abundance may also have been a contributing reason to why they were listed first.

B.1.d.2 Matches Old World Historical Distribution

This also fits in well with the believed historical distribution of the living elephant specie. Asian elephants anciently were in at least Syria, Iraq, Iran, and by one description "in a continuous belt from Syria eastwards to the Pacific", while African elephants are thought to have been limited only to Africa.[2148 2149 2150 2151 2152 2153 2154 2155] The Tower of Babel is generally thought to have been in Iraq, or at least in the Middle East.[2156 2157] Thus when the Jaredites left the Tower of Babel, one would surmise that if they brought elephants, they would have been Asian. And perhaps the Jaredites had both the idea and resource because Asian elephants were used to help build the Tower of Babel? Elephants are thought to have been domesticated since about 2000 B.C. or earlier – the general timeframe of the Tower of Babel.[2158 2159 2160 2161 2162] One book reports: "The Sumerians, who helped initiate the building of the Great Tower in the Old World, also kept big elephants around to help with the very heavy work."[2163 2164] President Joseph Fielding Smith thought the Jaredites may have brought the elephant to the Americas; Elder Orson Pratt and Elder George Reynolds (general authority/First Presidency secretary) thought they also may have brought the cureloms and cumoms as well.[2165 2166 2167]

B.1.d.3 Jaredite Elephant Summary

I believe that in some future day the Columbian mammoths will be street-named as "elephants." Critics claim the elephant issue is a strong argument *against* the Book of Mormon, completely unaware that Columbian mammoth grouping species are practically identical to Asian elephants and thus are a strong argument *for* the Book of Mormon. With the Jaredite elephants long ridiculed, evidence of both elephants and their domestication is just one more tiny (mammoth?) thread in the tremendous tapestry of telling testimony for the Lord's divine latter-day marvelous work and majestic wonder.

B.2 American Mastodon – One of Two Outstanding Curelom/Cumom Candidates

Having previously established "cu-oms" as *Proboscidea*, this section will make the first specific *Proboscidea* identification.

An excellent candidate for a curelom or cumom is the American mastodon (called *Mammut americanum*, or sometimes called *Mammut americanus* or *Mastodon americanus*) grouping, or the core essence thereof. (Realize the term "mastodon" gets used differently – it's often just the American mastodon, but sometimes as broad as almost any *Proboscidea* not closely related to an existing elephant.) In creating the term "American mastodon grouping", I added the closely related *borsoni* and *matthewi* species. Both are thought to be very old and rare, and though I haven't been able to find a robust description of their distinguishing/differentiating characteristics, I doubt whether the Jaredites, if they encountered them, would have named

them separately. And even more fundamentally, I doubt whether they should even be independent species. Somewhat similarly, some think the *Zygolophodon* should not be a genus, but rather just part of *Mammut*; *Zygolophodon* is also very old and rare.[2168] Some classifications have *Mammut* and *Zygolophodon* mapping to the same parent *Mammutinae* (a grouping not specified in the classification selected for this treatise.)[2169]

American Mastodon

Compared to mammoths, American mastodons have: shorter and stockier builds; flatter and differently-shaped skulls; longer jaws; more horizontal tusks; pointed teeth; enameled tusks; shorter legs; and a short coat of reddish/brownish (general thinking) hair.[2170] [2171] [2172] The world's foremost *Proboscidea* expert said they are "as different from a mammoth or an elephant as a 'dog is from a cat.'"[2173] As reviewed before, roughly 1,900 American mastodons have been published by 2010. A 2001 listing shows 23 occurrences in Mexico (subsequent Mexican mastodons have been found).[2174] [2175] [2176] [2177] Yet none have been found in South America and hardly any in Central America, a pattern potentially explained by the geography of the Jaredite and subsequent nations as reviewed previously. (Interesting, a mastodon tooth was found in the Bahamas.)[2178] It is also one of the few genera believed to have survived until recent times. Evidence of interaction with man has been found repeatedly, including somewhat in Mexico.[2179] [2180] [2181] [2182] [2183] [2184] [2185] [2186] "In North America, this conjunction of man's remains with those of the mastodon is very widely spread."[2187]

Apostle Orson Pratt, in the church's *The Latter-day Saints' Millennial Star* in 1866, wrote an article called "The Mastodon in the Book of Ether" where he identified a particular American mastodon find as a curelom or cumom.[2188] [2189] (Such a relevant quote yet it eluded me -- a reader found it; it became my 2059th footnote.)

As mentioned before, the American mastodon had been split or named into over 20 different species by 1852 – and the term "American mastodon" was not yet in use in 1829 – it could not have been translated in the Book of Mormon in 1829.[2190] The American mastodon is a ***compellingly outstanding candidate*** for being a curelom or cumom.

B.3 *Cuvieroniinae* – The Other Terrific Curelom/Cumom Candidate

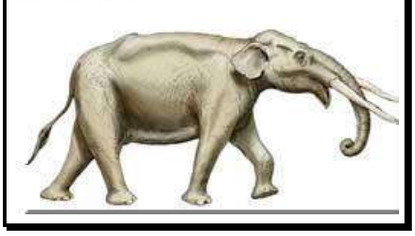
The other outstanding "cu-om" candidate is the *Cuvieroniinae* subfamily, or the core essence thereof, in some subset and/or overlapping set. It is the third of four *Proboscidea* groupings with recent radiocarbon dates and believed to have survived in North America until recent times (the fourth being the woolly mammoth).[2191] [2192] [2193] *Cuvieroniinae* have very commonly been found with human interaction, as reflected in the 40+ footnotes to this sentence; one quote: "The archaeological record from South America shows that gomphotheres [here referring to *Cuvieroniinae* only] were common in Paleo-Indian sites."[2194] [2195] [2196] [2197] [2198] [2199] [2200] [2201] [2202] [2203] [2204] [2205] [2206] [2207] [2208] [2209] [2210] [2211] [2212] [2213] [2214] [2215] [2216] [2217] [2218] [2219] [2220] [2221] [2222] [2223] [2224] [2225] [2226] [2227] [2228] [2229] [2230] [2231] [2232] [2233] [2234] [2235]

Distribution of 48 *Cuvieronius* (lead genus within *Cuvieroniinae*) Sites in Mexico/Central America[2236]

By this treatise's taxonomy, *Cuvieroniinae* has four closely related genera:[2237]

1. *Cuvieronius* – quite common, has been found in South America (very common), Central America (19 occurrences in the 2003 study, every country except for perhaps Belize), Mexico (29 occurrences in the 2003 study), and the southern U.S (sporadic, many in Florida.)[2238] [2239]
2. *Stegomastodon* – fairly common; found in South America, Central America, Mexico, and the southern U.S.[2240] [2241]
3. *Haplomastodon* -- has been found in South America, and there is some opinion that it has also been found in Mexico.[2242] [2243] [2244] (Today generally not thought to be a valid independent species.)
4. *Notiomastodon* -- only found in South America. (Today generally not thought to be a valid independent species.)

Cuvieronius



These four genera are quite related to each other. A very common view today is that *Haplomastodon* and particularly *Notiomastodon* should *not* be recognized as unique, a view I believe is quite merited (they were kept to keep the treatise on a single authoritative well-done well-recognized taxonomy classification – though even its authors doubted the validity of these two).[2245] [2246] [2247] [2248] [2249] [2250] [2251] [2252] [2253] [2254] [2255] [2256] [2257] One review called all of these as having "few and slight differences."[2258] In a study of 123 traits, *Notiomastodon* was identical to *Cuvieronius*, and *Haplomastodon*'s only difference was that it had less enamel around the upper tusks.[2259] *Stegomastodon's* only differences in the 123 categories

were straighter tusks with missing enamel, and more cement on molar crowns.[2260] Other studies say that *Haplomastodon* cannot be differentiated from *Stegomastodon*.[2261] All reviews indicate that all four of these are very similar to each other, or that they should be consolidated into less than four genera.

A 2003 study counted 48 sites in Mexico or Central America where Cuvieronius have been found.[2262] However this is far short of the real total discovered. For example I found source listing another 17 locations in Costa Rica, missed by this 2003 study, that were either clearly or probably *Cuvieroniinae*; there are other finds as well.[2263] [2264] [2265] [2266]

B.3.a *Rhynchotherium* Possibility

A very strong possibility is that this *Cuvieroniinae* "cu-om" also includes *Rhynchotherium*, or similarly, that *Rhynchotherium* should not be recognized as a valid independent creature. One study identified *Rhynchotherium* as having five differences from *Cuvieronius* out of 123 traits.[2267] One count listed 13 *Rhynchotherium* sites between northern Mexico and Honduras, with most in Central Mexico.[2268] Another source identified 15 *Rhynchotherium* sites in Mexico and Central America.[2269] Some *Rhynchotherium* comments:

- A summary said: "…it has been commonly proposed that *Cuvieronius* is closely related to, or directly descended from, *Rhynchotherium*."[2270]
- Some have labeled the *Rhynchotherium* as a "sister" to *Cuvieronius* and put *Rhynchotherium* and *Cuvieroniinae* into a single unnamed taxonomy "node." [2271]
- Another description called *Rhynchotherium* a "closely related genus" to *Cuvieronius*.[2272]
- *"Cuvieronius* is generally considered closely related to or derived from the Pliocene gomphothere *Rhynchotherium*…"[2273]
- "*Rhynchotherium* locations are generally limited to the same as *Cuvieronius* in North America."[2274] [2275]
- Another summary wrote that differentiations between the two genera are "questionable"; and that "even complete skulls may be difficult to identify at this point, since, as Miller (1990) points out, many of the characters used to define *Rhynchotherium*, are quite variable."[2276]
- An article said that any *Rhynchotherium* identifications in Central American are misidentified *Cuvieroniinae*.[2277]
- "The North American *Rhynchotherium* may belong to the same complex" – referring to *Cuvieroniinae*.[2278]

Aside from the issues of how unique *Rhynchotherium* is or how many *Rhynchotherium* finds are misidentified *Cuvieroniinae*, I believe it very likely that the Jaredite definition stewards may well have included it in their term for *Cuvieroniinae* if the *Rhynchotherium* were postdiluvian.

B.3.b *Eubelodon* Possibility

Relatedly, some have called the *Cuvieronius* "related to and probably derived from *Eubelodon*"; *Eubelodon* are also possibly of the "cu-om" that contains the *Cuvieroniinae*, though the *Eubelodon* is thought to have gone extinct long ago.[2279]

B.3.c *Cuvieroniinae* Truly Unique

Most people are not familiar with *Cuvieroniinae*, and the question might be asked if they could be part of the Columbian mammoth or American mastodon groupings. One description of them is: "Compared to the simple molars of the mastodonts [American mastodons in this usage], gomphothere [which includes *Cuvieroniinae*] molars are complex, with additional rounded cusps and accessory conules that wear to a complicated trefoil pattern. Tusks were usually present in both jaws. Gomphotheres usually had a longer body and head and shorter limbs than the true elephants [mammoths]."[2280] In the study that compared 138 traits, *Cuvieroniinae* differed with mammoths on 28 traits and with American mastodons on 12 traits and are in between the two in overall similarity.[2281] The *Cuvieroniinae* are truly unique.

B.3.d *Cuvieroniinae* Summary

As reviewed in Section A.6.b.2, *Cuvieroniinae* could not have been translated in 1829. In summation, they are a ***compellingly outstanding candidate*** for being a curelom or cumom. And since they are closer to elephants than the American mastodons are, have more strong recency evidence, and are far more numerous than American mastodons in Mesoamerica, they are more likely the animal listed right after the elephant – the "curelom" instead of the "cumom."

B.4 Woolly Mammoth Possibility?

The fourth and final American *Proboscidea* grouping thought to have survived until recent times is the woolly mammoth. While having been commonly found in Canada, Alaska, and even found in the northern lower 48, they are not found further south. (The rare identifications claimed in Mexico have almost universally been deemed mistakes.)[2282] [2283] On the other hand, as they are so identical skeletally, they have been confused with Columbian mammoths and perhaps their southern presence has been missed.[2284] But the opposite direction is thought more likely – some of the mammoths called woolly, when studied in detail, were changed to be Columbian mammoths.[2285] [2286] [2287] [2288] Regardless, perhaps some tame woolly elephants were brought into Jaredite areas and thus are one of the "cu-oms." Though another possibility is that they were just considered part of the Jaredite elephant. However I think it quite likely the Jaredite elephant term was created without knowledge of the woolly mammoth, and most likely that the Ether passage did not refer to woolly mammoths. In summary, it is rather doubtful that the woolly mammoth is either a curelom or cumom.

B.5 Remaining American *Proboscidea* Candidates: All Highly Unlikely

There are nine remaining American *Proboscidea* genera candidates: *Eubelodon, Rhynchotherium* (as discussed these two may be part of the *Cuvieroniinae* "cu-om"), *Zygolophodon* (as discussed this may be part of the American mastodon grouping "cu-om"), *Amebelodon, Gnathabelodon, Gomphotherium, Platybelodon, Serbelodon*, plus some accept the *Tetralophodon* as having been in North America.[2289] [2290] [2291] [2292] [2293] All of these are only rarely found (as reviewed before, they total less than 5% of all American *Proboscidea*), and the latest survival date (generally believed by the literature) is 1.8 million years ago (are these all pre-flood?).[2294] [2295] [2296] [2297] [2298] [2299] (The term "gomphothere" is commonly used for these nine genera plus for the *Cuvieroniinae*, but "gomphothere" has no single meaning – for example the taxonomy used in this treatise excludes *Zygolophodon* and *Tetralophodon* as gomphotheres.[2300] [2301]) While human interaction has been repeatedly found for other *Proboscidea*, for these nine genera I'm only aware of a single site (*Rhynchotherium*) with human interaction reported – and this particular interpretation is widely rejected.[2302] [2303] [2304] These nine genera are mentioned not due to their likelihood, but rather that by showing that the entire remaining list of all American *Proboscidea* are highly unlikely "cu-om anchor" candidates, the case becomes much stronger for the proposed *Proboscidea* candidates as being the "cu-oms."

B.6 Non-Skeletal or Non-Zoological Possibilities

As previously reviewed, the "cu-om" classifications could be based on non-skeletal zoological features or on non-zoological criteria such as work classifications. But as previously reviewed, these are quite low likelihood possibilities.

B.7 *Proboscidea* Identification Summary

The Columbian mammoth grouping is a *definitive* identification of the Jaredite elephant, or as the core essence thereof in some subset or overlapping set. The two very outstanding curelom/cumom candidates are the American mastodon grouping and the *Cuvieroniinae*, or core essence thereof in subsets or overlapping subsets. These three are three of the four *Proboscidea* groupings thought to be of relatively recent extinction in North America. (The fourth -- woolly mammoths -- are generally thought to only have been in more northerly locales.) These three identifications have been commonly found in the U.S. down to the Olmec (Jaredite) regions, and all three have also been found in Central America.[2305] Human interaction has been repeatedly found for all three.

The open issue in this overall proposition is the radiocarbon dating; the very few dates younger than 1700 B.C. (approximate Ether passage timeframe) could either be errors or get thought of as such due to non-Biblical expectations. While adherents of Bible/LDS timing recognize something must be wrong with old radiocarbon dates, others would find this a key problem. However both types of "timing-paradigm-viewpoints" would accept the logic behind most of the plethoric other timing indicators reviewed previously – there are over 100 strong indicators of Proboscidea from within the relatively recent advanced civilizations from Mexico down to Bolivia. And fundamentally, when one reviews the issues with older radiocarbon dating, one realizes there are significant assumption problems and significant contrarian evidence.

American *Proboscidea* – Other Info[2308] [2309] [2310]

Proboscidea	Approximate Conv. Wisdom Extinction	Google Scholar Hits With: America	Mexico	Meso-america	Human Interaction Known?	R-carbon Dates Known?	Ether 9 Ties?
Amer. Mastodon	10,000 BP	1480	380	149	Y	Y	Cu-om#1
Zygolophodon	5.3 to 1.8M BP	102	15	5	N	N	Maybe part of #1?
Gomphotherium	5.3 to 1.8M BP	365	98	13	N	N	Very doubtful
Amebelodon	By 1.8M BP	89	25	0	N	N	Very doubtful
Platybelodon	5.3 to 1.8M BP	132	22	2	N	N	Very doubtful
Serbelodon	By 5.3M BP	23	6	0	N	N	Very doubtful
Gnathabelodon	By 5.3M BP	7	3	0	N	N	Very doubtful
Eubelodon	By 5.3M BP	17	4	0	N	N	Maybe part of #2?
Rhynchotherium	By 1.8M BP	76	49	5	N	N	Maybe part of #2?
Cuvieroniinae	10,000 BP	608	289	68	Y	Y	Cu-om#2
Other Mammoths	10,000 BP	1770	469	95	Y	Y	Jaredite Elephant
Woolly Mammoth	10,000 BP				Y	Y	Doubtful

American Continent *Proboscidea* Genera per Taxonomy Selected for this Treatise[2306] [2307]

Family	Grouping	Subfamily	Genus	Species	Common Name/s
Mammutidae			***Mammut***		**American Mastodon**
Mammutidae			***Zygolophodon***		
Gomphotheriidae	***Node N.1***		***Gomphotherium***		
Gomphotheriidae	***Node N.1***	***Amebelodontinae***	***Amebelodon***		**A Shovel-Tusker Gomph.**
Gomphotheriidae	***Node N.1***	***Amebelodontinae***	***Platybelodon***		**A Shovel-Tusker Gomph.**
Gomphotheriidae	***Node N.1***	***Amebelodontinae***	***Serbelodon***		**A Shovel-Tusker Gomph.**
Gomphotheriidae			***Gnathabelodon***		**Spoon-Billed Mastodon**
Gomphotheriidae	***Node N.7***		***Eubelodon***		
Gomphotheriidae	***Node N.7***		***Rhynchotherium***		
Gomphotheriidae	***Node N.7***	***Cuvieroniinae***	***Cuvieronius***		**Cuvieronius**
Gomphotheriidae	***Node N.7***	***Cuvieroniinae***	***Stegomastodon***		**Stegomastodon**
Gomphotheriidae	***Node N.7***	***Cuvieroniinae***	***Haplomastodon***		**Haplomastodon**
Gomphotheriidae	***Node N.7***	***Cuvieroniinae***	***Notiomastodon***		**Notiomastodon**
Elephantidae		***Elephantinae***	***Mammuthus***	***Columbi/others***	**Columbian Mammoth, etc.**
Elephantidae		***Elephantinae***	***Mammuthus***	***Primigenius***	**Woolly Mammoth**

C. Elephantine Summary

If you've made it this far, congratulations! It's finally time for a closing summary. The original Book of Mormon elephantine issues, long understandably given as arguments against the Book of Mormon, instead are a tiny thread in the tremendous tapestry of telling testimony favoring the Book of Mormon:

Allegation 1: "*Proboscidea* existed in ancient America, but elephants never did."

a. This has been a continually common condemnation of the Book of Mormon. Even prominent Book of Mormon scholars have conceded this issue was a huge difficulty. Yet of the approximately 175 *Proboscidea* supposed species/subspecies, none are closer to the Asian elephant than the Columbian mammoth grouping species. The evidence is incontrovertible that elephants, by even the strictest of definitions, did exist in ancient America. Imposters tend to avoid prognostications universally thought wrong; authentic records tend to make dubious declarations that may later be vindicated. Another allegedly anachronistic absurdity now finally actually authenticated.

b. However an alternative theory would be that the passage's "elephants" are just a loose term for *Proboscidea* in general. As Joseph Smith may well have heard of *Proboscidea* finds, under this theory, elephant existence would not be indicative of the text's authenticity. However this has not been the main argument of many anti-LDS who have repeatedly insisted that American elephants never existed. And of course anti-LDS would incessantly criticize an LDS apologetic who claimed that a divine translation would use a sloppy/loose term of "elephant" to refer to all *Proboscidea*.

Allegation 2: "*Proboscidea* and man never coexisted in the Americas."

a. Coexistence review has almost always pointed to a Missouri 1838 find as the first American physical evidence. I did find some obscure pre-1829 physical coexistence evidences, and more will eventually surface, but all of these, except somewhat for the Codex Borgia, eluded the century plus of extensive coexistence debate. The Indian legends and stories are by far the best argument for Joseph Smith having been convinced of coexistence. However these legends were not generally believed, particularly by 1829; the Book of Mormon was clearly contrary to the overwhelmingly prevailing opinion of 1829. However with 100+ bone coexistence evidences, and another 100+ depiction coexistence evidences,

coexistence is now universally accepted. Imposters tend to avoid prognostications universally thought wrong; authentic records tend to make dubious declarations that may later be vindicated. Another allegedly anachronistic absurdity now finally actually authenticated.

Allegation 3: "American *Proboscidea* went extinct before or by "8000 B.C.", long before the Jaredite era."

a. This "8000 B.C." extinction date is the dominant opinion today. In Joseph's era the scientific wisdom generally placed it much earlier, though there were several authors who pointed to more recent timeframes; for 1829 Christians who believed Biblical timing, they usually thought of *Proboscidea* as antediluvian (pre-flood). While radiocarbon dating discredits an 8000 B.C. extinction, it also gives scant support to Jaredite timing. But radiocarbon theory has giant issues with initial ^{14}C ratio assumptions and with very significant contrarian evidence. Conversely there are over 100 evidences, many of a very "stubborn nature", that indicate far more recent timing than "8000 B.C." Most tellingly, many dozens of these evidences are from civilizations generally thought to be at least as recent as the approximate 1700 B.C. of the Ether passage. Imposters tend to avoid prognostications universally thought wrong; authentic records tend to make dubious declarations that may later receive very expansive evidentiary support, even if the detailed supportive argument has scarcely been heard yet. Although the comprehensive argument has hardly been made elsewhere and thus a robust appraisal, let alone acknowledgement or acceptance, are admittedly absent, nevertheless -- another allegedly anachronistic absurdity now finally arguably actually authenticated.

Allegation 4: "*Proboscidea* were never domesticated by ancient Americans."

a. Lacking the overwhelming triple-digit number of evidences for human interaction, the evidences for *Proboscidea* domestication are barely in the double digits. And some of these are questionable, and several of them should be much more substantiated. But still, several evidences, some of which are very challenging to logically refute, are much more impressive than the evidences against domestication, which total zero. Imposters tend to avoid prognostications universally thought wrong, authentic records tend to make dubious declarations that may later receive meaningful and multiple evidentiary support. While the only thorough argument for domestication is made herein, and thus the argument is essentially unknown, nevertheless -- another allegedly anachronistic absurdity now finally with substantial support.

Allegation 5: "Cureloms and cumoms are silly and Joseph Smith should be mocked for making them up."

a. Though never an intellectually sophisticated allegation, skeptics have assumed Joseph purposefully made up unprovable animals to avoid bring proved wrong, and thus have mocked him with an air so scornfully sneering that one might rather meet a "bear robbed of her whelps", lol.[2311] Yet a deep dive into detail yields two truly outstanding Proboscidean candidates, without robust alternatives. Imposters do not tend to later receive meaningful support on unusual and vague prognostications. Though with almost no attention, an unusual claim now finally with a highly credible and persuasive explanation.

The above allegations were generally considered "scientific facts" that "proved" Joseph Smith was silly for alleging such absurdities. But rigorous review thoroughly transforms these puzzling Proboscidean perplexities into one more tiny thread in the tremendous tapestry of telling testimony for the Lord's divine latter-day restoration.

D. Extra Interesting Elephantine Insights

There are several other interesting elephantine insights in this section.

D.1 Offshore *Proboscidea*

A 1967 article listed over 40 sites where fishermen had found *Proboscidea* teeth on the Atlantic continental shelf, from North Carolina to Massachusetts; a later 1977 article quantified it as "about 50 such" and logically estimated that "many, many more" were never reported.[2312] [2313] [2314] [2315] [2316] [2317] While an average find was in 100 feet of water 50 miles from shore, some were up to 300 feet deep or 200 miles from shore. The average radiocarbon age for these was about 9000 B.C.[2318] (Interestingly, one found off of Virginia reportedly had a projectile point buried in it, indicating hunting.[2319]) Offshore *Proboscidea* have also been found near Florida, California, Japan, Siberia, and in the Gulf of Mexico, Georges Bank, and the English Channel.[2320] [2321] [2322] [2323] [2324] However the North Sea has long been the most famously prolific source.[2325] [2326] The National Museum of Natural History (Naturalis) in Leiden, Netherlands, had 7,500 North Sea specimens of mammoths as of 2003.[2327] The fisherman from the British village of Happisburg dredged up over 2,000 *Proboscidea* molars from 1820 to 1833.[2328] [2329] One summary said North Sea mammoth "molars are counted by the thousands."[2330] The fishing, underwater exploration, and public literature are probably not as developed and disseminated for South America – but at least one apparent *Cuvieroniinae* has been found off of Argentina.[2331]

An interesting find in Florida was: "in a cave under a 100-foot-deep lake they found mixed together mastodon bones and teeth, bone spearheads -- and charcoal."[2332] An even more fascinating find – at the bottom of a 200 foot pit nearly a mile inside an underwater Yucatan cave are bones from a "mastodon" and a human.[2333] [2334] Another underwater Yucatan location also has both *Proboscidea* and human remains.[2335] [2336] Were all of these submerged in A.D. 34?

D.2 *Proboscidea* Ancient American Arrival

As mentioned before, LDS President Joseph Fielding Smith thought the Jaredites may have brought the elephant to the Americas, and Elder Orson Pratt and Elder George Reynolds (general authority/First Presidency secretary) thought they also may have brought the cureloms and cumoms as well.[2337] [2338] [2339] Ether 6:4 describes Jaredites bringing "their flocks and herds, and whatsoever beast or animal or fowl" – might a "beast", separate from flocks or herds, be a *Proboscidea*? Ether 2:2 reads: "they did also prepare a vessel, in which they did carry with them the fish of the waters." This vessel may have been large not only because game fish are large, but also because extra size may have been needed to support survival of fish over many miles and years, assuming they made it to the Americas.[2340] [2341] A vessel of water three feet in each direction would be almost a ton – thus were *Proboscidea* used to pull a heavy vessel?

However whether or not Jaredites brought *Proboscidea*, they likely were already here. To migrate from Noah's ark on to the Americas before Peleg's continental split, *Proboscidea* would have had to migrate during Peleg's lifetime which was from 101 to 340 years after the flood by Biblical timing.[2342] (As mentioned before, Peleg's continental split has been taught by scripture, prophets, general authorities, or by church publications at least 80 times.)[2343] [2344] [2345] [2346] [2347] [2348] [2349] [2350] [2351] [2352] [2353] [2354] [2355] [2356] Interesting, the *Evening and Morning Star*, a church publication, in an 1834 article on faith, three times mentions the great faith of Peleg, once saying: "…of the faith of Peleg, by which the world was divided..."[2357] It compares Peleg's faith in dividing the world to Noah's faith in building the ark. Peleg dividing the world by faith can explain why his name is always associated with the earth dividing; the theory that he just lived during its division doesn't explain the association. Peleg did become a father at age 30, so he was apparently mature at a young age, but when did the world division occur?[2358] In a 1968 conference talk, Alvin R. Dyer of the First Presidency said: "…in the days of Peleg, or about the year 2200 B.C., just prior to the confusion of the languages, the single continent of land that had continued from creation was divided to

produce the hemispheres as we now know them."[2359] If at 2200 B.C., this would have put the continental division at about 150 years after the Noachian flood. (As a speculative aside, could a dramatic earth division have been a key impetus in the decision to build the Tower of Babel?) Given elephants' great ability to travel, covering this distance prior to Peleg's continental divide would have been easily doable. Given that both mammoth and American mastodon frequently are found on the Atlantic continental shelf close to America one would logically surmise this would be supportive of their migration before Peleg's split. As ocean-floor *Proboscidea* finds are quite common, especially in the North Sea, this means these finds could only be post-Noah and pre-Peleg's-divide if the divide occurred late enough for *Proboscidea* to greatly multiply. As *Proboscidea* are not generally significantly impacted by animal predators or by deadly diseases, they can multiply tremendously. By using one modern elephant reproductivity rate, two *Proboscidea* would have numbered in the many thousands after one and a half centuries, and in the several millions after two and a half centuries. Thus most likely very significant numbers existed when Peleg's divide occurred. Importantly, since on-land finds appear to be reflective of a post-Noah genus distribution, it would appear that the underwater finds were post-Noah and pre-Peleg, and thus indicative of migration on their own to the Americas.

D.3 Lehite Era *Proboscidea*?

From a Harvard professor: "'The elephant that supports the earth upon the waters and causes it to quake,' so reads the Libyan inscription on this votive tablet found at Cuenca, Ecuador . . . the letters read: A-B-Y… Aby is the ancient Libyan word for the African elephant… The unknown Libyan language is in fact almost the same as the Ancient Egyptian language." [2364] [2365] [2366] [2367] [2368] [2369] [2370] [2371] Since Nephites engraved in reformed Egyptian and since the Jaredites never lived in South America, this would point to Lehite/Proboscidea coexistence in South America.[2372] There are at least three other stones from Cuenca that look practically identical to this one – a sun, followed by a *Proboscidea*, followed by identical letters.[2373] [2374] [2375] (Interestingly, the professor references many other Libyan/Egyptian language evidences in ancient America, and then says their origin was "voyagers who crossed the Atlantic *some time before about 500 B.C.*")[2376]

Cuenca Ecuador Elephant[2360] [2361] [2362] [2363]

Cuvieroniinae have been commonly found in every South American country except perhaps Suriname and French Guiana.[2377] [2378] [2379] [2380] Possibly their introduction to South America is explained in Ether 9:28-34 – "their flocks began to flee before the poisonous serpents, towards the land southward, which was called by the Nephites Zarahemla. And it came to pass that there were many of them which did perish by the way; nevertheless, there were some which fled into the land southward."[2381] Or they entered South America from Panama at a different time, or more likely entered prior to Peleg's continental split, as supported by earlier-discussed *Cuvieroniinae* tooth found off the coast of Argentina. *Cuvieroniinae* had extensive interaction with man in South America, and as LDS frequently believe only Lehites occupied South America, this would indicate existence during the Lehite era. Did the Lehites domesticate them? Some of the domestication evidences previously given were from South America, plus the advanced stone cities of South America may directionally support that they may have. Additionally, several of the North American domestication evidences may likely have been Lehite in nature.

D.4 Extinction

It's rather difficult and rare for large cats to kill a young elephant, particularly given how adult elephants protect babies.[2382] Perhaps baby American *Proboscidea* had a larger risk with larger extinct American animals -- saber-tooth, American lions, or large bears? But *Proboscidea* extinction due to animal predators, even when reviewing all of the extinct animals, appears extremely unlikely and to my knowledge has never been proposed.

For years the dominant *Proboscidea* extinction theory was due to a supposed global warming at the end of a supposed "Ice Age"; for a review of these naive theories see Appendix IV. Expert opinion of recent years has moved to where extinction by hunting is likely more accepted than climate change, but perhaps the most popular notion now is that *both* hunting *and* "global warming" caused the extinction (politically-correct compromise.)[2383] (To be reviewed later, global warming extinction theories still have significant acceptance; to some the theories might appear as "cloud-level" plausible, until you see the details.) *Proboscidea* are remarkably durable – hunting is the only credible complete bi-continental extinction theory.

The Jaredites might have killed off many of their domesticated *Proboscidea* during the famine referenced in Ether 9:28-34. Similarly, perhaps many died during the final Jaredite wars – either in battle or as easy food -- possibly collected in the four-year gathering mentioned in Ether 15:10-15 and possibly their battle remains were found as referenced in Mosiah 8:8. But none of these Jaredite events can explain a complete extinction from Alaska to Argentina, as most do not believe the Jaredites were in South America or reached every corner of North America from Nome to Nova Scotia.

I believe the *Proboscidea* extinction could only have been after the Lamanites had entirely covered both continents. The Lamanites are the only good possibility for killing the *Cuvieroniinae* in the more southern and eastern corners of South America, as the Jaredites never entered South America and most don't believe the Nephites ever reached these far corners. As referenced before, *Proboscidea* hunting has been repeatedly shown in South America: "elephants [*Cuvieroniinae*] were hunted widely in South America."[2384] [2385] "The archaeological record from South America shows that gomphotheres [in this usage meaning *Cuvieroniinae* exclusively] were common in Paleo-Indian sites. Gomphotheres appear to have been a human food resource in central and southern Chile, Colombia, and Venezuela."[2386] Similarly, most of us would probably not believe that Jaredites or Nephites made it into the far northern portions of North America enough to have exterminated the woolly mammoths. Diverse Lamanite tribes are the least likely to have purposefully preserved the elephants and the most likely to have hunted them – and would have had many more centuries to bring about a complete "bi-continental" extinction. (There's an argument that the Eskimos are not Lamanite but rather from Siberia; either way, the Eskimos are the best story for the woolly mammoth extinction.) What else could be so easily hunted and provide tons of meat?[2387]

D.5 Utah

In Price Utah is a display of a Columbian mammoth found in 1988 at an elevation of 8,990 feet at the Huntington Reservoir (not the more well-known Huntington Lake North.)[2388] Its bones were radiocarbon dated from 7500 to 9500 B.C. and it "may be associated with a late Paleoindian occupation at the site."[2389] Two miles away, two American mastodons were found at 9,780 feet, the highest elevation for any American mastodon.[2390] They had some radiocarbon dates of 5140, 5640, and 5700 B.C., though these "young" dates have been questioned.[2391] They were found with an adjacent spearhead fragment, suggesting perhaps man was contemporaneous.[2392]

University of Utah's Museum of Natural History displays a Columbian mammoth found in Utah.[2393] Sandy has three mammoth radiocarbon dates of 4025, 5330, and 6945 B.C.[2394] Without being a comprehensive list, *Proboscidea* remains have also been found at or near the following northern Utah locales: Bear Lake, Clarkston, Ogden, Payson, Provo, Salt Lake, Spanish Fork, and Springville.[2395 2396 2397]

As previously reviewed, the "Moab Mastodon" is the most famous of about 20 different elephantine petroglyphs/pictographs in Utah.[2398] Near Kanab is a site where evidence shows humans killed a mammoth.[2399] One source identified 13 locations in southeastern Utah with mammoth remains; a cave near Capital Reef National Park has 300 cubic meters of mammoth (excuse the pun) dung – called the largest ancient dung pile in North America.[2400 2401 2402]

D.6 The Horse

In researching the elephant, I trotted across a very large number of evidences for the Book of Mormon horse. Similarities to elephantine evidence would include: skeletal evidence of coexistence with man, pictorial depiction evidence, domestication evidence, a few recent radiocarbon dates, and other types of evidence that would indicate more recent existence. In general, I would prognosticate that the evidence of the horse is perhaps not as common as that of the *Proboscidea*, except for domestication where probably more evidence exists. This topic is ripe for someone to mount up and gallop ahead with it. There are several good LDS write-ups about the horse; I would suggest that perhaps the most value-added might be by someone who is willing to be a true workhorse – someone willing to do a *very extensive* review. If someone is interested in a long trek, contact me, I'd be willing to help you saddle up.

D.7 Pygmy *Proboscidea*

Pygmy *Proboscidea* remains have been found on a couple dozen islands throughout the world.[2403 2404 2405] Over 140 sites with pygmies (*Mammuthus exilis*) have been found on the California Channel Islands; their adult height is as short as five feet but otherwise they are basically similar to Columbian mammoths.[2406 2407 2408] In Sicily, some adult withers heights (back's highest point) have been *less* than three feet.[2409 2410 2411] A "somewhat-parallel" are the living pygmy elephants of Borneo, a subspecies of the Asian elephant.[2412] While the scientific cause is unknown, *Proboscidea* (and some other animals) have somehow grown to smaller sizes when living in a restricted environment.[2413 2414]

Bardia Nepal *Stegodon*?! ![2415]

D.8 Oops! The "Extinct" Stegodon is Alive Today!

Asia's *Stegodon* (a *huge* odd-forehead really-high-domed different-ear sloping-posterior *Proboscidea*) was thought to have been an ancestor of the elephants and to have gone extinct over a million years ago.[2416 2417 2418] Then "oops", radiocarbon dating indicated extinction occurred at the end of the supposed "Ice Ages."[2419 2420] Then "oops" again, many more recent radiocarbon dates came from China, including one dated as recently as 2150 B.C.[2421 2422 2423 2424] Finally "oops" once again – a handful of *Proboscidea* have been found in Nepal's Bardia Park that very strongly appear to be stegodons! (Unusual naming in that the common name is identical to the italicized and capitalized taxonomic genus name; "stegodont" is an alternative common name.) These are huge – *far* bigger than the largest ever-recorded living Asian elephant (but are the normal size for a stegodon); they also have giant domes, indented and unusual foreheads and nasal bridges, different ears, much more sloping posteriors, a thick tail, and giant footprints.[2425 2426 2427 2428 2429 2430 2431]

Bardia Nepal – Stegodon?!![2432]

Bardia Nepal – Stegodon?!![2433]

This find in the 1990s is still quite obscure. Generally the conventional wisdom says the various stegodon features "must" just be due to Asian-elephant mutants because stegodons surviving "millions of years" would be "far-fetched", but some do accept them as stegodons.[2434 2435] One write-up said: "His unusual shape may have been due to isolation or perhaps a connection with a prehistoric elephant named a *Stegodon*."[2436] One summary said: "The presence of two large arches in the front and a distinctive nasal bridge… such anatomical attributes are not present in Asian elephants, but in… the *Stegodon*, missing for a million years."[2437] To some extent the Bardia *Proboscidea* have been caught up in a bit of "religious arguing" – some Christians callings them mammoths (erroneous) and using them as an example of how atheist scientists are often wrong (correct), and some atheists calling them Asian elephants (erroneous) in defensive posturing. I am not an expert on stegodon attributes – but the various parties appear to largely agree that these Bardia animals have stegodon features and do look like stegodons. The debate is over whether they are genuine stegodons or whether they are an "inbred mutant" Asian elephant isolated population that transformed itself into looking like stegodons. The former choice is based on logic; the latter choice is based on the combination of groupthink, a mistaken belief stegodons went extinct over a million years ago, and an exceedingly egregious lack of skill in estimating the statistical probability of the two alternatives. DNA studies have indicated that their DNA is distinct from Asian elephants and "were different than any living elephant" and "certainly in a class of their own."[2438 2439 2440] Further strengthening this concept -- that these Bardia stegodons are stegodons -- is that stegodon finds "significantly outnumber" Asian elephant finds in southern China, and that many of these Chinese stegodons have relatively recent radiocarbon dates.[2441] (Since several sources stated these Bardia animals can't be stegodons because stegodons "went extinct over a million years ago", I put into the "Stegodon" Wikipedia article that a

Bardia Nepal – Stegodon?!!

review of 130 Chinese *Proboscidea* papers found stegodons to be far more common than Asian elephants in southern China, and that they had tons of recent radiocarbon dates – my Wikipedia insertion is now starting to get quoted on the internet.) Plus stegodon skeletons have also been found in Nepal, India, Pakistan, Myanmar, Thailand, among several other Asian countries.[2442] [2443] [2444] [2445] [2446] [2447] If what is apparently largely agreed to is actually true – that these Bardia *Proboscidea* are just like stegodons – if this really is the case -- then I am certain that these really are stegodons and not some accidental look-alike "mutant" descended from Asian elephants.

One blogger thinks the Bardia *Proboscidea* look like the *Elephas hysudricus*, an extinct elephant of somewhat unclear status and independent validity.[2448] (It's not clear to me that this blogger has a deep understanding of the *hysudricus*.) However could it be that *hysudricus* is just a mistakenly created categorization of what is in reality the more-established stegodon identity? (As reviewed before, *most* species created within *Proboscidea* were mistakes – they really were just already established species.) Also the *hysudricus* is thought to have been extinct for *far* longer than the stegodon, and has not had nearly as many reported finds as the stegodon.[2449] I don't have enough background on the *hysudricus* to know if should be a valid species, or whether it should just be thought of as another misnamed *Stegodon*. However, either way, the Bardia *Proboscidea* are quite distinct from living Asian elephants, and demonstrate survival of something once thought extinct. And it would actually be far more unusual if something far less common and thought extinct for over a "million years" was found still alive instead of something that was far more common and is now known to be very recent.

In summary, it's fascinating that the stegodon, once thought long ago extinct, is now apparently found alive.[2450] [2451] However, the fascination in large part is driven by terminology. "Stegodon" sounds like the famous dinosaur "Stegosaurus"; "stegodon" gives a ring of tantalizing vibrant prehistoric mystique. If the stegodon had instead been named as another elephant species, much of the allure would disappear, as well as much of the reticence to recognize what it actually is. The stegodon resides within a sister family to *Elephantidae* per the taxonomy used in this treatise -- others have placed it within *Elephantidae*, which would be even closer to the living elephants.[2452] [2453] [2454] [2455] All that said, it's just amazing to know that the unique thought-extinct *Stegodon* is still alive!

D.9 Similar Conclusion, With a Surprising Twist

Someone contacted me who had written a seven part series on this Ether elephant passage.[2456] After this treatise, it's the most comprehensive (though flaw-filled) treatment I've ever seen of this passage. Besides Orson Pratt's opinion and two RLDS sources, this is the only other person, that I can recall, who proposed that both cureloms and cumoms are *Proboscidea*.[2457] [2458] The author gives many of the same points of this treatise, particularly that there are no other animals that could meet the criteria. Now here's the surprising twist – the author is an anti-Mormon! His musing is that Joseph Smith intended for cureloms and cumoms to be *Proboscidea*, but was "hedging his bets" by giving them unknown names should contra evidence arise, but that otherwise the plan was to later "point to the curelom or curelom, claiming…" them to be *Proboscidea*, and then because nothing else could fit for the "cu-oms", that this would convince people of the Book of Mormon.[2459] [2460]

D.10 Fascinating Quote if True, But Most Likely Spurious

A Joseph Smith quote about cureloms would be great, right? Unfortunately, the odds are that the following quote is a 21st century fabrication. An "LDS" student put this quote anonymously on a blog, and then angrily refused several people who asked for the source. To spare the reader the crude details, the dishonest and vulgar student gave every clue imaginable that would indicate this quote does not exist.[2461] [2462] Nevertheless, with this caveat that the quote is most likely fabricated:

> "While visiting the Mexican Mission, Apostle Erastus Snow toured the National Museum. In perusing its collection of giant bones and animal specimens, Snow 'related what was shown in vision to the Prophet Joseph Smith concerning the large animals the ancients on this continent had. Besides the elephant they had two others that were larger named the Curran [sic] and the Cumman [sic] of which the Book of Mormon speaks. They were herbiferous [sic] and domestic, and one of them was large enough and was used to carry a whole family on its back during their travels. It also furnished sufficient milk to support them. It would lie down, get up, or travel at the bidding of its owner being trained when young to do so.'"[2463]

Again, the evidence very strongly points to this quote being a 21st century fabrication, nevertheless a few observations:

- One question would be whether "that were larger" refers to larger than elephants, or refers to both elephants and "cu-oms" being larger than most animals – I think the introduction makes the latter more likely. Plus there is no known ancient American non-dinosaur animal that would be larger than the elephant. The "cu-oms" are nearly as large as the Jaredite elephants, practically all other American animals are not.
- *Proboscidea* do provide milk and nurse their young for years (often until the next birth) and would likely continue for as long as they are milked; people have milked domesticated elephants.[2464] [2465] [2466]
- Carrying people, being milked, obeying commands, being called "domestic" – this would all point to a highly domesticatable animal. Camels, horses, monkeys, and particularly dogs would be quite domesticatable – but elephants are the most domesticatable.
- "It would lie down" "at the bidding of its owner" – likely for mounting purposes. We generally only think of camels or elephants lying down to be mounted.
- To "carry a whole family on its back" – this would imply a huge size, perhaps a somewhat flat back, and a highly domesticatable animal. Thus:
  - Carrying a "whole family" would likely eliminate the horse/camel/cow types of animals.
  - In studying other giant animals -- rhino-like or hippo-like animals, giant sloths, glyptodons (giant armadillos), giant beavers, and giant bears – you end up easily ruling these out for a variety of reasons.
- The elephants and "cu-oms" being mentioned together might be because they were similar.

A fascinating quote, but to repeat for emphasis, objectivity would lead to believing the quote most likely was fabricated.

D.11 Coincidental Trivia

Per the prior dialogue of "cu-om" naming similarity, coincidentally one "cu-om" scientific name (*Mammut americanum*) rhymes with the "cu-oms" and the other (*Cuvieroniinae*) shares the same opening syllable. Perhaps the elephant in its original language was the "culum" (similar to columbi), lol. The first Asian elephant born in the Americas was fittingly named "Columbia."[2467]

D.12 Want to Help?

If you have something to contribute, please contact me at sdrencure@gmail.com. Some areas of particular interest:

- Domestication -- Anyone know of more evidences, or have more background on the listed evidences?

- Pictures -- There were 40+ *Proboscidea* found in just a few Cuenca pictures; anyone have access to Wingate's or Cheesman's Cuenca photo collections? Or know of other ancient American *Proboscidea* depictions? (I realize there are many Mesoamerican elephantine headdresses/rain-gods/glyphs/trunks, etc. – I'm not looking for these unless they are rather clearly elephantine.)
- Radiocarbon Dating -- New *Proboscidea* finds are very common; only let me know if they radiocarbon date less than a supposed "6000 B.C."
- Dating Other Than Radiocarbon -- If you find non-radiocarbon evidences of more recent existence, similar to the ones listed previously, please contact me.

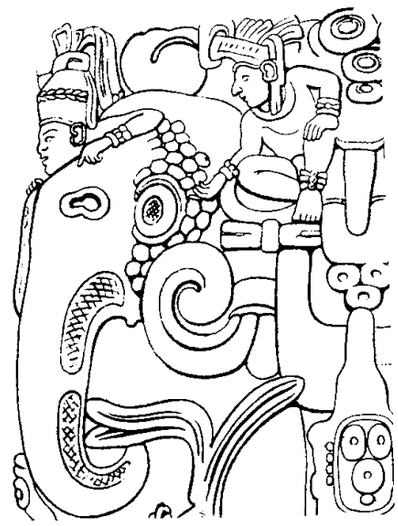
Thank you! ***Appendices start on the next page***.

Appendix I – Copan: "Ground Zero Epicenter" in the Recent Proboscidea Debate

Most authors have only been aware of a very small number of evidences of recent American *Proboscidea*. With the belief that these must somehow be mistaken, these few evidences have been heavily criticized. For a century the most intense debate has been over two elephantine depictions on Stela B at Copan Honduras: "… the subject of more controversy than any other Mayan artifact."[2469] The critics have said the elephantine Copan carvings must either be macaws, tortoises, anteaters, tapirs, squid, alligators, whales, or bats.[2470] [2471] [2472] [2473] [2474] [2475] [2476]

Photo of Post-Damage Elephantine Stela B at Copan Honduras Stela B[2468]

Sketch of Left Side of Pre-Damage Elephantine Stela B at Copan Honduras



The dominant opinion for over a century is that these depictions are "unquestionably" macaws.[2477] As Copan is the "ground zero epicenter" in the recent American elephantine debate, and partly to show the startling scarcity of intellectual rigor that sometimes goes into the groupthink of so-called-scholarly certitudes, a very detailed review of the Copan elephants-vs.-macaws argument will follow. The two carvings are both on corners, thus they are on three stela faces; however this review will focus primarily on the left side of the front stela face. The following review is based both upon photos and sketches included herein, and also upon others not shown here.[2478] [2479] This is by far the most comprehensive review ever done, with the possible exception of a review by a German scientist who asserted that these depictions are most definitively elephantine.[2480] [2481]

Copan Honduras Stela B – *Proboscidea* or Macaws?

Military Macaw

1. **Blue Macaws and Red-Faced Professors:**
   - 1.1. The professors who are known for having first promulgated these as macaws said the Copan stela represents Blue Macaws -- however all species called "Blue Macaws" are only in South America.[2482] [2483] [2484] [2485] [2486] [2487] [2488]
   - 1.2. Well perhaps the professors meant macaws that are blue or primarily blue -- however no blue or primarily blue macaws exist anywhere from Costa Rica through Mexico.[2489] [2490] [2491] [2492] [2493]
   - 1.3. But some of these professors said "Blue Macaw" but then gave the name of "*Ara militaris*" which is the Military Macaw (green with hardly any blue), so perhaps that's what they really meant -- however most (not all) lists indicate the Military Macaw is *not* from Honduras.[2494] [2495] [2496] [2497]
     - 1.3.1. For example, a Honduran bird expert, who lives in Copan and has seen 650 of the 727 Honduran birds and identified 17 new birds, said that the Military Macaw has not been known to be from Honduras.[2498] [2499]
     - 1.3.2. From a "Google Book" check – the only people of this era saying *Ara militaris* was a blue macaw was this same group of professors or other Mayanists who quoted them.[2500] [2501]
   - 1.4. Well perhaps the professors gave the Latin name for the Military Macaw, but actually meant its closely related twin "Great Green Macaw" which is in Honduras -- however the Great Green Macaw only goes as far north as far eastern Honduras while Copan is in far western Honduras.[2502] [2503]
   - 1.5. Some have said these elephantine sculptures are of the *Anodorhynchus* macaw – but the various species of these are only limited to small areas within South America that are thousands of miles from Central America.[2504] [2505]
   - 1.6. Let's now help these professors, and *fittingly* for what color their faces should be by now, any Copan macaw sculpture would most likely have been of a Scarlet Macaw:
     - 1.6.1. It's the only macaw known from the greater Copan region.[2506] [2507]
     - 1.6.2. It's been common within and native to most of Mesoamerica.[2508] [2509]
     - 1.6.3. It's a *spectacular* bird, *far* prettier than the other two macaw possibilities, thus far more likely to have been sculptured.
     - 1.6.4. There are no other possibilities -- all countries from Costa Rica through Mexico have only had some mix of these three macaws – Military, Great Green, and/or Scarlet.[2510] [2511] [2512] [2513] [2514]

Great Green Macaw

2. **Mahout (elephant masters):**
   - 2.7. While the stela has several scenes, the mahout is clearly integrated with the *Proboscidea* in the same scene.
   - 2.8. Elephants carry mahouts, like the stela. Macaws would bite a mahout trying to mount it.
   - 2.9. The stela mahout, often like a mahout today, has what has been interpreted by some as a goad (stick on front of the trunk).[2515] [2516] [2517] [2518] (The above sketch shows the mahout's right hand holding the goad – a faint pre-damage photo from another angle appears to show the entire right arm of the mahout.) The goad for a macaw would be a toothpick – anyone managed birds with toothpicks?
     - 2.9.1. A photo of this *Proboscidea's* right side appears to perhaps show a half hook coming out of the goad; elephant goads today usually have a hook, but a fuller hook.[2519] [2520] [2521]
   - 2.10. The Yalloch *Proboscidea* vase also has mahouts with hats also with dual plumes and also possibly a goad, and is of the same general era.[2522] [2523] [2524] [2525] [2526] [2527] [2528] I know of no same-era same-region vase showing somewhat-similar-hat mahouts riding macaws and waving toothpicks.
   - 2.11. The mahout is the correct size in relation to the *Proboscidea*. A mahout would kill a macaw if he sat on it.

Scarlet Macaw

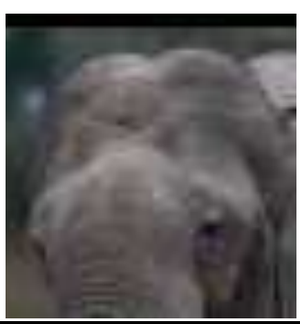
3. **Passenger, Harness, Saddle, and Cargo:**
   - 3.12. While the stela has several scenes, the passenger does appear integrated with the *Proboscidea* in the same scene.
   - 3.13. Passengers sit on elephants like in the stela; passengers don't sit on macaws.
   - 3.14. The passenger is sitting off center, to the side of the animal. *Proboscidea* have wide enough and flat enough backs to support this, macaws do not. The passenger's one leg and foot are in a position that would help his stability on a somewhat sloping surface.
   - 3.15. The passenger is sitting front-to-back flat -- a *Proboscidea's* front-to-posterior back is rather flat; however a macaw's back slopes steeply.
   - 3.16. The passenger is the correct size in relation to the *Proboscidea*; macaws are too small to carry passengers.
   - 3.17. As shown in the stela, elephants carry saddles, harnesses, and cargo; macaws do not. Though not definitive, the saddle appears to perhaps have a possible cinch cord plus a possible hanging/draping part of the saddle.
   - 3.18. The harness and saddle appear rather fancy (for example the large scroll adornment) -- elephants have often transported important people with fancy platforms; macaws never have.

Larger Pre-Most-Damage Sketch – Shows Main Side of Both Elephantine Depictions[2529]

4. ***Proboscidea* Trunk (or Lower Part of Macaw's Upper Beak):**
   - 4.19. An elephant has a continuous no-sudden-dramatic-contour-change surface (in its front profile, viewed from the side) from head down into the trunk, the stela does as well. However macaws have an abrupt contour change from feathered-head into beak. All Mesoamerican macaws have an even more abrupt contour change than many macaws.
   - 4.20. The most common position for a trunk is to have most of it hanging straight down, the stela shows the same. But macaw beaks are continuously curved without a long straight section, unlike the stela.
   - 4.21. Elephants frequently curl the tip of their trunk both inward and upward, as shown in the stela. Macaw beaks curl inward, but never upward, unlike the stela's depiction.
   - 4.22. The very lowest part of the trunk has a very high rate of curvature, modern elephants frequently hold the bottom of their trunk with this much curvature. The curvature of the bottom of macaw beaks is far less.
   - 4.23. Like the stela, elephant trunks do not end in a narrow pointed tip. Unlike the stela, macaw beaks do end in a narrow pointed tip.
   - 4.24. Moving down along an elephant's trunk, the rate at which the trunk gets thinner is similar to what's shown in the stela. However macaw beaks start out very fat relative to the head, and then thin dramatically, both of which are unlike the stela.
   - 4.25. There are two crosshatched oval patterned areas on the trunk. Though doubtful, are they perhaps trying to show trunk wrinkles? (Trunks are more wrinkled than the rest of an elephant.) Could they instead be showing cloth attached to the inside of trunks for protection when picking up items with rough surfaces such as logs? Another question, as they are deeper/inset from the rest of the trunk, were they just stone prepared to hold a different material, such as a precious metal, that has long since disappeared. Or were they to hold a projecting-outwards material, such as a tusk from the top pattern, and a load from the bottom pattern? Bottom line, these patterned areas are mysterious and don't appear elephantine. However these two patterned areas are an even more poor fit for macaws:
     - 4.25.1. Macaw beaks are flat/smooth, much more so than trunks.
     - 4.25.2. Macaw beaks wouldn't be wearing any cloth or something else here.
     - 4.25.3. Are the patterns meant to reflect a different macaw color? Most macaw beaks are unicolor, but Scarlet Macaws are black on the lower beak, adjacent part of upper beak, and often the upper beak's tip and inner edges – thus are these patterned areas reflecting black? But if so, why nothing similar on the much larger black beak areas? And the Scarlet Macaw moves to white when going outward – while the patterned areas are oval while being entirely surrounded with non-patterned area. Reviewing hundreds of beaks of all kinds of macaws provided no good macaw matches to the stela's patterned areas.

Asian Elephant Head

Asian Elephant Forehead and Domes



   - 4.26. The trunk is on a corner of the stela – angled photos show the trunk to continue smoothly rounding around the edge – the trunk size and rounding match well with what would be expected for a *Proboscidea*.[2530] However a macaw beak would be much narrower and would culminate in a "ridge peak" – very much different than what the stela shows. Put differently, trunks are horizontally round like the stela, while macaw beaks are not.
   - 4.27. The bottom of the trunk (not seen in these graphics) is also rounded – again matching well for a real trunk, but not matching for a macaw beak, particularly for the end of a macaw beak.
   - 4.28. The inside of the trunk (not seen in these graphics) is flat – while a trunk should be round and a macaw beak should be hollow.
     - 4.28.1. The elephantine interpretation would be that the artisan wasn't concerned about the inside, and wouldn't be able to carve the far inside portion if rounded.
     - 4.28.2. The macaw interpretation would be that the artisan wasn't concerned about the inside enough to hollow it out like a beak.
   - 4.29. One observation is the trunk is well positioned to take hold of the plant right underneath it; of course macaws can't eat with the tip of their beak.
   - 4.30. Both trunks have a person (these parts of the stela are now damaged) sitting underneath that is in correct size proportion relative to the above *Proboscidea*.[2531] It does appear that *perhaps* both people may be reaching out and petting the trunk, though I think it more likely that it is something different. Petting a trunk is common for modern elephants, whereas macaws are known for biting if you're not careful.

5. **Upper Head Profile**
   - 5.31. The curved line above the mahout arm represents the dome top of an Asian elephant head (not the mahout's back) because:
     - 5.31.1. The curvature, size, and location match well for a *Proboscidea*; it would match less well for a mahout.

5.31.2. There is no line break between the top profile line and the rest of the *Proboscidea* head, while otherwise there would be a line where the mahout and *Proboscidea* meet.

5.31.3. One note in looking at various elephant photos – depending on the angle of the photo and how the elephant is holding its head, this dome look will range from quite apparent to not visible.

5.32. While the dome head look of the stela matches well with an Asian elephant, the curvature profile does not match well for Mesoamerican macaw heads or macaws in general.

5.33. The profile in the forehead/trunk area near the eye of an Asian elephant is quite vertically straight, like that of the stela. Yet the high upper beak of a macaw is constantly significantly curving, unlike the stela

5.34. Macaws always have dramatically different colors in their head; even if the head feathers are unicolor, the feathers will vary from the beak color. However the stela (apart from the ear) has nothing else on the head that would depict a unique color – similar to what you'd expect for a *Proboscidea*.

5.35. The macaw interpretation means that much of the stela's head reflects the lower and upper jaws being closed against each other -- in photos of macaws you can see clearly a gap/meeting/line where the jaws join; yet no such thing is shown in the stela.

Asian Elephant Head

6. Lower Elephantine Head/Jaw (or Lower Macaw Beak):

6.36. The stela has a small nub on all four faces -- this could either be meant to reflect the lower jaw profile protrusion of a *Proboscidea*, or reflect a "tush" – a very small tusk which is often not very seeable unless the mouth is open – a tush is quite common on female Asian elephants.[2532] The macaw has no explanation for the small stela nub.

6.37. Apart from the nub, an elephant has a horizontally flat lower head surface, like the stela. The bottom of a macaw's head is made up of an upwardly sloping lower beak, unlike the stela.

6.38. On the stela, if you drew a line from the bottom point of the "outer beak" up to the center of the "macaw eye", the "inner beak" would intersect at 63% of the way up this line. Yet for a scarlet macaw it would end at 22% of the way up – it's as if the stela had no lower beak.

6.38.1. The same comparison is harder to make on an Asian elephant as you would have to judge the same amount of trunk curl plus it can be hard to see exactly where the ear hole is; but it's clearly approximately correctly proportionate and the one I measured came in at 67% vs. the 63% of the stela.

Stela B – Far Right Eye[2533]

7. Elephantine Eye (or Macaw Nostril):

7.39. Parts of the stela are considered either elephantine eyes or macaw nostrils; both arguments will be evaluated.

7.39.1. Our analysis has focused on the elephantine side with the most detail – the left face of the left *Proboscidea*. This face has an unusual pseudo-pear shape "eye/nostril"; it is no longer on the stela due to damage, thus pre-damage photos and sketches were reviewed. However the best pre-damage picture doesn't show a pear shape.[2534] The right eye of the right *Proboscidea* was damaged earlier, and thus there are likely no photos of it. But the two eyes on the sides of the stela are still intact, and both are oval without any pseudo-pear shape.

7.39.2. All three "eyes/nostrils" have rings about them; thus each has a larger oval around the smaller oval. The contour depth of the center oval appears to vary by eye; this may be due largely to lighting.

Pre-Damage Eye/Ear[2535]

7.40. The macaw nostril argument has breathtaking holes:

7.40.1. Scarlet Macaw skulls don't have pseudo-pear shaped nostrils. In looking at many macaw nostrils from all types of macaws, this shape wasn't found on any of them.

7.40.2. The center oval has a second oval ring around it. In viewing countless macaw nostrils, none had a ring around it or anything similar to it.

7.40.3. Many macaws do have nostrils visible on their beak. However all three Mesoamerican macaws do not have visible nostrils – their nostrils are hidden just within the feathers.[2536] Thus if the stela were of a Mesoamerican macaw, there would be no nostril. This is not just a tiny hole in the macaw argument; it suffocatingly takes the last breath out of the macaw argument.

7.40.4. From looking at skulls, the Scarlet Macaw nostril has slightly more height than width, yet the stela figure has more width. In looking at many nostril pictures of other macaws, the same was true.

7.40.5. Vertically, the stela's "macaw nostril" is lower than where a nostril on a Scarlet Macaw skull is.

7.40.6. Horizontally, the stela's "macaw nostril" is too far inset from the front from than where a Scarlet Macaw nostril would be.

7.40.7. The eye with the best close-up photo is the eye on the viewer's far right. For this eye one can see how the center of the inside/small oval actually gradually raises/curves up. Why would the center of a nostril hole look like a convex eye?

7.40.8. In some pictures (not all, and not in the close-ups) the center appears to be deep (shadows), this would match a nostril well.

Asian Elephant Eye (head was somewhat tilted)[2537]

7.41. The elephantine eye argument is visibly more credible:

7.41.1. Per the pseudo-pear shaped "eye socket", to my surprise, one can see some Asian elephant eyes having a little bit of a somewhat similar shape; however overall a pseudo-pear shape detracts from the elephantine argument.

7.41.1.1. However recall that the stela's two remaining eyes are simple ovals without any hint of a pseudo-pear shape.

7.41.1.2. Plus the best photo of the eye in question does not show a pear shape at all – thus I believe the eye most likely didn't reflect a pear shape.[2538]

7.41.2. The sketch has a ring around the eye. After looking at endless Asian elephant eyes, one can very often see a ring of darker color as well as an area of more wrinkles and contours.

7.41.3. An Asian elephant has more width than height in the eye socket area, matching the stela in this respect.

7.41.4. The stela eye's horizontal position within the head matches reasonably well to that of Asian elephants. (You have to see true profile photos to see this, angled photos will appear differently.)

7.41.5. The eye's vertical position within the head can be measured against both the top directly above the eye, and the top of the dome. In both instances the eye's position is quite normal for an elephant. (This is another where various angles can give different apparently different conclusions, but a true profile of a level head will support this.)

7.41.6. The eye with the best close-up photo is the eye on the viewer's far right. For this eye one can see how the center of the inside/small oval (the eye itself) actually gradually raises/curves up. This is likely as what would one would expect – a representation of the convex nature of an eye. Some of the other eye photos appear to represent the same, but it's difficult to tell given the distance.

8. *Proboscidea* Ear (or Macaw Eye):

8.42. Note – for the ear, the stela sketch varies somewhat from the photos, so look at the photos.

8.43. Particularly given the ring that encompasses the generally circular inner shape, the center of the ear looks much more like an eye than the center of an elephantine ear.

8.43.1. Though I find this very doubtful, one author believes the ring to be a manmade earring (reportedly used on elephants in Cambodia); the passenger's hand does oddly reach out to the ring -- is this a second mahout using the ring to control the *Proboscidea*?[2540]

Stela B, Left *Proboscidea*, Animal's Right Face[2539]

8.43.2. Looking at many Asian elephant ears, only a very few give even light support to something that might look like a natural ring around an ear hole. If this is an ear of a *Cuvieroniinae* or American mastodon, then we don't have guides as to what they would have looked like, but a ring would not be considered likely for these either.

8.43.3. For a macaw, the ring quite likely could represent the rest of the eye that is outside the pupil. The ring/pupil size ratio is overly large compared to most macaw eyes (looked at very many), but would be reasonable for a dilated pupil (dark outside).

8.43.4. However instead the ring might be the white area around the Mesoamerican eyes. Unlike the Scarlet Macaw shown above, many have less solidly white areas except for a ring around the eye – thus this ring would support the macaw theory. While this white ring exists on the other Mesoamerican macaws as well, the feature is not pronounced and one might more likely expect no artistic depiction of it.

8.43.5. In summary, the ring may be the best anti-elephantine argument.

8.44. Asian elephant ear hole areas vary a lot in appearance – I found several pictures that show an ear hole area of somewhat thick hair in an angled narrow imperfect oval – not an auspicious match for the less-angled less-narrow stela oval, but arguably in the range of artistic reasonability.

8.44.1. Macaw eyeballs are round, not angled-oval as in the stela. If the macaw's eyelid starts to close, the remaining eye can appear oval, but not at the same angle of oval as in the stela.

Pre-Damage Stela B Photo

8.45. Both macaw eyes and Asian elephant ear holes have some variation on how high in the head they are. Overall the stela's ear hole is somewhat low for an Asian elephant, but is even lower compared to where a macaw eye would be.

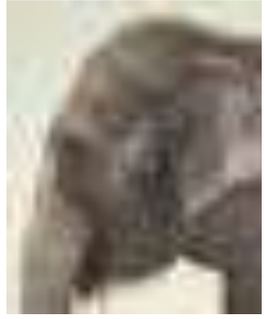
8.46. For the *Proboscidea* interpretation, the rumpled circle pattern in the stela would likely be the artist's way of denoting an ear that is also somewhat wrinkled or rumpled, and for differentiating the ear from the body itself. (While some elephants will have dotted pigmentation, these dots are smaller than what are on the stela.)

8.46.1. The two green-colored macaws and sometimes Scarlet Macaws will have colored patterned areas around their eyes. However these patterns are in dark lines, not the pseudo-circles of the stela.

8.46.2. Perhaps the lumps are reflective of skin rumples within the larger un-feathered area around the eye. The Scarlet Macaw in particular has these skin rumples. However the stela depictions appear too circular and too large. Nevertheless, while the pattern does not match clearly either an elephant or a macaw, arguably they match a Scarlet Macaw better than an elephant ear.

8.47. The boundary locations of the rumpled area match very well to an Asian elephant ear, and just do not match at all to the unfeathered skin area of Scarlet Macaws, other Mesoamerican macaws, or macaws in general.

Asian Elephant Profile



8.47.1. The front of the rumpled area follows a vertical line adjacent to the ear hole – this is the same in Asian elephants. But macaws have this unfeathered area extending for far in front of their eyes.

8.47.2. The back *point* (not contour) of the rumpled area matches reasonably well for both Asian elephants and Mesoamerican macaws.

8.47.3. The top of the rumpled area matches well for Asian elephants, but Mesoamerican macaws have this area end just above their eye.

8.47.4. Asian elephant ears vary -- the bottom of this patterned area matches very well for some elephant ears, but is somewhat low for other elephant ears. The bottom tip is harder to compare for a macaw unfeathered skin area, as for the Mesoamerican macaws the bottom follows the highly sloping line of where you run into the lower beak.

8.48. The shape of the stela's rumpled area is the shape of an Asian elephant ear. But the shape of the unfeathered skin area of the various Mesoamerican macaws is best described as an imbalanced upside-down triangle hanging from the macaw eye. The stela's rumpled area just doesn't match at all for a macaw, but does match well for an Asian elephant.

8.49. Though not viewable on the 2-D sketch, on photos taken more from in front of the *Proboscidea*, you can easily see how the 3-D surface of the *Proboscidea* ear has a clean contour break from the skin just in front of the ear and has then continues to come out farther, just like you might expect from a *Proboscidea* if the ear were sticking out a bit; then the stela abruptly recedes just behind the ear, as you would expect for a *Proboscidea* (see photos herein and online.)[2541] [2542] If this area represented the rumpled skin area around a macaw eye, it would have a slight contour break at the front, but no continual increase outwards and in particular after the rumpled area instead of receding it would go farther out as it travelled into the area of heavy feathering; this is another inescapable "fatal

flaw" for the macaw interpretation. This can also be seen on the second *Proboscidea* carved on the second corner of the stela.[2543]

9. <u>Arguments Made by Some for the Macaw Interpretation</u>

Surely the macaw flock isn't just chirping away by parroting a light-as-a-feather birdbrain groupthink idea, right? So let's hop and fly through <u>their arguments</u>…

9.50. The primary argument of the early and prominent anti-elephant professors is called "<u>artistic license</u>" (in some "less intellectual circles" this is known as duplicity) – some of these macaw-leader professors created sketches with no people and no manmade items, and then changed several of the details away from elephantine characteristics.[2544] [2545] [2546] [2547]

9.51. One macaw argument given was that the "ornamental crosshatchings" on the lower part of the upper beak are to denote a different color of the beak.[2548] However these beak locations do not match the color differentiations of any Mesoamerican macaw.

9.52. A similar macaw argument was the "subcircular marks" around the supposed macaw eye – I too initially found these directionally indicative of varied markings on macaws – until I looked at hundreds of macaws – the area's shape and relative locations do not tie to any Mesoamerican macaws.[2549]

9.53. One professor closes his arguments against the Copan elephantine interpretation with the unpersuasive but highly revealing final sentence of: "In dealing with the hydra-headed fallacy of Old World origins for New World civilizations it is necessary to cut off each head in turn with a searing sword."[2552]

9.53.1. "Cut off each head" – is he referring to his deletion of people in his "doctored" Copan sketch?[2553]

9.53.2. This same professor wrote that he "does not care to dignify by refutation the numerous empty theories of ethnic connections between Central America and the Old World" – to which another professor retorted: "This is the attitude of the mind not of the scientific investigator, but of the medieval theologian appealing to the emotions in defence of some dogma which is indefensible by reason."[2554]

Right Corner

Proboscidea[2550] [2551]

9.54. The initial group of professors making the above arguments also repeatedly implied the Copan stela is the only so-called evidence in favor of man/*Proboscidea* interaction – as they then went on to make erroneous assertions about the Davenport elephants and the Wisconsin elephant mound (whether either of these depictions are truly valid is not relevant, the point here is that they made erroneous assertions about them); of course their argument shows how these professors were understandably unaware of the *huge* amount of human/*Proboscidea* evidence already published by their timeframe.[2555] [2556]

9.55. These professors argued that a carving on the back of the stela "is unmistakably a macaw", and that these back/front carvings look the same, and that therefore the front carvings are macaws.[2557] This argument is *breathtaking*, as the sketch on the back isn't even necessarily an animal, let alone even close to a macaw. The sketch has huge differences with the front of the stela – plus the sketch is actually *unmistakably not* a macaw.

9.55.1. Also, true to form, these professors gave a sketch of the back biased towards their conclusion when compared to other sketches of the same carving.[2558] [2559] [2560] [2561]

9.55.2. In amazingly circular and twisted logic, these professors claim one evidence that both of these non-macaws are macaws are because they both have a nearby scroll figure.[2562] [2563] (The large scroll on the main sketch is a fancy adornment of the saddle.)

1889 Pre-Damage Stela B Photo

9.56. One professor apparently recognizes the trunk is too long to be a macaw beak, so in jaw-dropping logic, he claims: "the lower bill and tongue are lacking, but the omission of the lower jaw is very frequent in Maya drawings of animal heads."[2564] Without going through each anatomical reason – the stela does *not* reflect that and if it did, it would produce a whole new mouthful of anatomical problems. And leaving aside headdresses which these are not, Maya animals clearly do *not* "very frequently" leave out the lower jaw.

9.57. The professors give a sketch of a "macaw" carving elsewhere in Copan – it really does look like a clear bird head.[2565]

9.57.1. Several other Copan carvings are called or sometimes called macaws; they can be grouped as follows:

9.57.1.1. A number of Copan carvings really do look like birds. For the birdlike carvings that I saw, they appear to be in the parrot family, and there are several factors that I believe make the Amazon parrot the best parrot candidate and the macaw the worst parrot candidate; perhaps they are Mealy Amazons.[2566] [2567] [2568] [2569] [2570] [2571] [2572] [2573] [2574] While one can argue how well these carvings represent a Mealy Amazon, unquestionable a Mealy Amazon is a dramatically better candidate than any Mesoamerican macaw. (A Mealy Amazon is very common and is quite large, up to 16 inches.)

9.57.1.2. There are other carvings called macaws that are quite indeterminate as to what they represent – the viewer has to be trained and told to see the potential bird in them.[2575] [2576] [2577]

9.57.1.2.1. Some of these indeterminate carvings appear to possibly have a trunk shape; but between picture quality, rock erosion, and limited elephantine content, I wouldn't place much confidence in their potential elephantine interpretation.[2578] [2579] [2580]

9.57.2. <u>But the professors' logic -- that birds elsewhere somehow mean that a completely different-looking non-bird is somehow a bird – is for the birds, lol. For example, there are other Copan carvings that have been called elephantine – would that then prove that Copan bird carvings are then somehow elephantine</u>?[2581]

9.58. "Furthermore, they have large round eyes surrounded by feathers. Feathered elephants, as you know, are extremely rare…"[2582] However feathers are not circular, and macaws are covered by big feathers almost everywhere *except around the eyes* – and yet the stela shows the opposite – the round markings are around the so-called macaw eye.

9.59. Some claim glyphs on the back of the stela can be translated to read as "macaws." I haven't yet had any success in finding a publication that presents the evidence for this conclusion; some of the "authoritative" sources quoted

that I've chased are only parroting the assumption, not presenting evidence for it.[2583] Perhaps someone can find for me an original work that can articulate specific reasoning for this conclusion.

9.59.1. Of course if such writing does exist and actually does give a word for a macaw, it would then have to accomplish the seemingly impossible task of explaining how that means that a clear-non-macaw on the other side of the stela is actually a macaw. By the same "logic", the stela's people on the other side must somehow also be macaws as well.

9.60. In one of these professor's publications, the first objection raised was that the elephant supposedly is not a native of Central America.[2584] While this is obviously wrong, it's understandable how if one believes it, then one will believe the Copan stela is not elephantine; its related sister is the core objection today – the belief that *Proboscidea* didn't coexist with the advanced civilizations of Mesoamerica.

9.60.1. As mentioned before, other professors have thought these Copan *Proboscidea* were tapirs, tortoises, anteaters, squid, alligators, whales, or bats – all rather simplistically naive – and all in reality only based on the assumption that *Proboscidea* couldn't be the answer.

10. Arguments Made by Some for the Elephantine Interpretation

Several pro-*Proboscidea* anatomical arguments have been made, but since these are made above, this section will largely stick to summaries from those who do see the sculpture to be elephantine:

10.61. "The debate over Stela B, which has raged for over a century… 'Why do educated people see a macaw where the ordinary person sees an elephant?' The question, it seems, will not go away. After an hour spent examining… I had to confess to be one of those ordinary folk who see elephants in Stela B."[2585]

10.62. "...no doubt as to the identity of the animal depicted by the ancient American sculptor. It is not only an elephant, but an Indian elephant."[2586]

10.63. "…during the 19th Century [pre-damage] Stela B was commonly referred to as the Elephant-stela."[2587]

10.64. One book's subtitle is: "Why do scholars see macaws when normal people see elephants" – and then answers the question by saying that seeing elephants would contradict the scholars' assumptions.[2588] [2589]

10.65. "When you see the photo taken in the 1890s then there is much less doubt [of elephants]. Harry Persaud, Curator, Library Collections, The British Museum, Department of Africa, Oceania and the Americas, kindly scanned and sent me the photos and plates that were available in their collection."[2590]

10.66. Another summary was: "A properly trained early 20th century anthropologist could see anything, except an elephant, but that was because he *knew*, having been taught, that the American Indian didn't know the elephant and hence couldn't portray elephants. This is indeed the kind of faith that moves mountains – or that removes elephants."[2591]

10.67. One summary: "…a group of experts in Maya archaeology firmly united in opposing the contention… of an elephant, but unable to agree whether it was an extinct mammoth, a macaw, a tortoise, a tapir or a squid!"[2592]

10.68. Some scientists have either identified it as an Asian elephant, others as a Columbian mammoth.[2593] [2594] [2595]

10.69. At least three other Copan stela have been thought elephantine by some, one is described as having an "elephant headdress with curled tusks and large ears" and thought to be from A.D. 756 – a very similar date; another is described as "looks very much like an elephant, though some scholars believe it is a macaw" and is described as from the "8th-century."[2596] [2597] [2598] This last stela, though quite worn, shares very significant elephantine similarities to "Stela B."[2599] Of it, a book asks: "How could the stonecutters have known about ancient elephants, such as the mammoth and the mastodon, which disappeared from the New World some 9,000 years earlier?"[2600]

10.69.1. One professor wrote: "Giant curves of the elephant trunks are found at the front of Temple 21 of the Copan Ruins, just above the ball court."[2601]

10.69.2. This same professor writes of Copan's Stela M that had an elephantine trunk broken off, but "the thief left the two giant elephant ears in place along with the two tusks that were carved as a curl beside the stump of the trunk on the elephant face."[2602] This is likely the same stela as one referenced above.

10.69.3. The same professor again: "Several of these original marker-stone sculptures are inside the Copan City Museum, now, in the town of Santa Rosa de Copan. The statues in the museum have to be analyzed very carefully for some of them are sculptures made with the idea of the elephant."[2603]

10.70. "Professor Stempell [German zoologist] remarked… no zoologist can have any doubt that it was the artist's intention to represent an elephant."[2604] (This same professor says some of the codices clearly show unquestionable elephantine features.)[2605]

10.71. "…archaeologists who are unable even to see elephants in the Central American depictions of trunks. They see an extinct species of bird. Birds with trunks, that's not bad! These gentlemen should buy themselves spectacles!"[2606]

10.72. "The images themselves, though, are so evidently elephantine that the question remains unanswered: what do they mean?"[2607]

10.73. "…very famous stela of Copan in Honduras, where an animal appears that undoubtedly represents an elephant."[2608]

10.74. "Americanists for the last fifty years have been constantly vexed by those elephants. For there is no elephant in America. So the beasts have been disposed of as macaws, as alligators, as tapirs… Nevertheless, they are unmistakably Indian elephants, surmounted by mahouts, complete with turbans and goads."[2609]

10.75. "The faces on the sculptures having the giant trunks have generally been interpreted as macaw bills, but this explanation has been an unsatisfying compromise by archaeologists and zoologists. This giant parrot's bill does not regularly fit all the shapes of elephant trunks shown in the Mayan sculptures; the lower bill of the macaw is never present. It's a bit like drawing a mustache on an old picture to convince yourself that it's really your uncle."[2610]

10.76. "Since traditional archaeology does not accept this interpretation of cultural contact between Asia and the Americas, it was decided that these sculptures could not be elephant heads, but had to be something else. Generally they are said to be stylized representations of the head of the macaw, with the beak curved backward in an exaggerated way. Why miniature turbaned men should be leaning on the heads of the stylized heads of these bizarre macaws has never been explained."[2611]

10.77. Before the damage that broke off the mahouts, plaster casts of Stela B had been made -- a Berkeley anthropologist studied these plaster casts at the British Museum and believed they showed mahouts.[2612]

10.78. One professor wrote: "… had carved the picture of a quite unmistakable Indian elephant, ridden by equally characteristic turbaned mahout… The Monroe doctrinaires, knowing that America has no indigenous elephant, stoutly maintain that the elephant is no elephant; he must either be a tortoise, or a tapir, or, in the last resource, a 'stylized' blue macaw!"[2613] [2614]

10.79. Referring to the abundant Mesoamerican elephantine architecture, as quoted before, one professor wrote: "The general public is not as firmly indoctrinated as academics are… In our experience, the random tourist identifies the facial shapes as elephantoid instead of being similar to the macaws of the academicians. I know this; I asked them nothing more than, 'What does this image look like?' They would invariably respond, 'Elephants'."[2615]

10.80. "Despite its nearly wholesale adoption by archaeologists, Spinden's case for macaws remains strained and awkward. Spinden never showed elephants to be macaws… Spinden's point is almost meaningless."[2616]

10.81. Referring to the Copan and other elephantine depictions, one professor wrote: "Precolumbian depictions of elephants in both North and South America exist in some abundance and new ones continue to be reported, but this widely scattered herd wanders invisibly past most archaeologists, banished by fiat to nonexistence."[2617]

10.82. "A sculptor carved upon the Copan monument what no one would hesitate – if we had not read to the contrary – to call an Indian elephant ridden by an undoubted turbaned *mahout*."[2618]

10.83. "These arguments have been based essentially on considerations of 'sensibility' (the absence of elephants at that time from Central America), and have completely ignored the feasibility of cultural influences or the possibility that the legend about extinct animals could have been preserved."[2619]

10.84. Translated: "The greatest proof that there are elephants in Mesoamerica is represented on a stela in the Great Plaza of Copan… It becomes very difficult, says the author, and I say the same, to believe that these trunks are macaw beaks… In a survey among ordinary people, exposes Jaime Errazuriz, surely almost all would see above the heads of two elephants with their drivers with a turban, but strangely, most archaeological knowledge is distorted interpretation, doubt entering the prejudices of the isolationists, who believe that it was not possible to find someone who knew pre-Columbian America represents the image of an elephant, because it would acknowledge that there was direct contact between the two continents. So they have preferred to see parrots and even tortoises rather than admit that possibility."[2620]

10.85. "The two top and dominant figures on each edge of one stele are most perfectly and naturalistically represented heads of elephants… To summarize the arguments, we may say that because elephants in ancient Central America did not then, and still do not fit into the prescribed scheme of history, but because these carving were undeniably authentic everything possible and impossible was immediately put forward to 'explain them away.' They were not elephants at all, said some of the learned, but the enlarged heads of the giant parrot like bird of that country known as the macaw; or representations of turtles, or of a 'bat-god' wearing a symbolic headdress, or such forth. All these things are well known from Mayan carvings, but each is invariably quite distinct, for the Mayas were very accurate in their animal representations. Anything seemed acceptable as long as it was not an elephant."[2621]

Going through the above 50+ anatomical points and subjectively weighing the various points for their importance, clarity, persuasiveness, and alternative-availability, I tabulated a highly subjective 136-32 for-against rating for the elephantine interpretation – a very strong *Proboscidea* interpretation, though not without meaningful issues, though perhaps entirely explainable due to stylization. Doing the same for the macaw yielded a result of 18-236 – a most definitive "ain't-no-macaw-no-way" interpretation. It is simply not even possibly a macaw.

Reading through large numbers of online books and other write-ups of this Copan stela yielded three common opinions: about one third being professors insisting they were proven macaws, about one third saying they look elephantine but have been determined to be macaws, and about one third expressing surprise some people can see macaws when normal people see elephants. But as indicated by the many above points, a thorough scientific analysis makes a mammothly attractive elephantine argument, and reveals the macaw case to be a parroted groupthink idea.

Appendix II – *Proboscidea* Taxonomy

Some additional detail about the taxonomic classification used in this treatise:

- Before reviewing any taxonomy, the decision was made to use whatever was recognized by the world's premier Proboscideantologists – thus their taxonomy is what this treatise uses.
- The starting basis of the taxonomic classification used in this treatise came from the "*Proboscidea* Bible" published in 1996: *The Proboscidea: Evolution and Palaeoecology of Elephants and Their Relatives*.[2622]
  - The key player in this classification was the world's premier *Proboscidea* professor.[2623]
  - This taxonomy is arguably the most rigorous skeletally – it's based on a computer analysis of 123 traits across 36 types of *Proboscidea*.[2624]
  - This "*Proboscidea* Bible" did not delve into most species issues and thus was labeled "not final" for the species; comprehensive and skeptical analysis would combine more genera and substantially more species. See earlier dialogue and Appendix IV for more background.
- Subsequent to this 1996 classification, these world premier Proboscideantologists published a 2004 update.[2625] Thus this treatise uses the 1996 classification with the 2004 update. This update added a few species/subspecies, bringing the total to 175; some changes were made to the elephant/mammoth treatment as well.
  - However these same individuals believe there are still too many species/subspecies and that someday a rigorous review/consensus-generation should be done.

Any of the below groupings found in the Americas are indicated with "NA" and/or "SA." The date first named is given in parenthesis (though the animal defined by the name quite likely was later changed or clarified). Also given is whether conventional wisdom thinks the species survived until recent times ("8000" B.C.); no comment or "very old" means conventional wisdom thinks the grouping disappeared at least 1.8 million years ago (pre-flood in reality?) All *Proboscidea* outside the *Elephantimorpha* "subsuborder" did not occur in the Americas and are all thought to be long-ago extinct -- thus only a breakdown of *Elephantimorpha* is given below.

Taxonomy (usually without species/subspecies) of *Elephantimorpha*, a "subsuborder" within *Elephantiformes*, a suborder within the *Proboscidea* order:

- ❖ *Mammutida* "supersuperfamily" (1997)
  - ➢ *Mammutoidea* superfamily (1922)
    - ▪ *Mammutidae* family (1922)
      - *Eozygodontinae* subfamily (1997)
        - ▪ *Eozygodon* genus (1983)
      - *Mammutinae* subfamily (1922)
        - ▪ *Zygolophodon* genus - NA (1877, rare obscure, very old)
        - ▪ *Mammut* genus (1799)
          - **"American Mastodon Grouping" (term/group unique to this treatise; a curelom or cumom)**
            - ♦ ***Americanum* species – NA (1805, "American mastodon", extinct recently)**
            - ♦ ***Borsoni* species – NA (1834, rare, obscure, very old, legitimate?)**
            - ♦ ***Matthewi* species – NA (1921, rare, obscure, very old, legitimate?)**
          - Other rare miscellaneous uncertain old species not from the Americas
- ❖*Elephantida* "supersuperfamily" (1997)
  - ➢ *Gomphotherioidea* superfamily (1922)
    - ▪ *Gomphotheriidae* family (1922, "trilophodont gomphotheres")
      - ▪ *Gnathabelodon* genus (1935, uncertain family placement)

- *Choerolophodontinae* subfamily (1976)
  - *Afrochoerodon* genus (2001)
  - *Choerolophodon* genus (1917)
- *Gomphotheriinae* subfamily (1922)
  - *Gomphotherium* genus – NA, very old (1837)
- *Amebelodontinae* subfamily (1927)
  - *Archaeobelodon* genus (1984)
  - *Serbelodon* genus – NA, very old (1933)
  - *Protanancus* genus (1945)
  - *Amebelodon* genus – NA, very old (1927)
  - *Platybelodon* genus – NA, very old (1928)
- "*Incertae sedis*" subfamily (meaning uncertain/undefined taxonomic placement)
  - *Sinomastodon* genus (1986)
  - *Eubelodon* genus – NA, very old (1914)
- *Rhynchotheriinae* subfamily (1922)
  - *Rhynchotherium* – NA, very old (1868)
- ***Cuvieroniinae* subfamily (1929) (a curelom or cumom)**
  - ***Cuvieronius* genus – NA/SA, recent (1923 generally quoted, but term around since 1814)**
  - ***Stegomastodon* genus – NA/SA, recent (1912, but term around since 1888)**
  - ***Haplomastodon* genus – SA, NA?, rare, recent (1950, but term created 1920, dubious genus)**
  - ***Notiomastodon* genus – SA, rare, recent (1929, dubious genus)**

➢ *Elephantoidea* superfamily (1821)
- "*Incertae sedis*" family (meaning uncertain/undefined taxonomic placement, "tetralophodont gomphotheres")
  - *Tetralophodon* genus (1857)
  - *Morrillia* genus (1924)
  - *Anancus* genus (1855)
  - *Paratetralophodon* genus (1983)
- *Stegodontidae* family (1918)
  - *Stegolophodon* genus (1917)
  - *Stegodon* genus (1857)
- *Elephantidae* family (1821)
  - *Stegotetrabelodontinae* subfamily (1969)
    - *Stegotetrabelodon* genus (1941)
    - *Stegodibelodon* genus (1972)
  - *Elephantinae* subfamily (1821)
    - *Primelephas* genus (1970)
    - ♦ *Loxodontini* tribe (1918)
      - *Loxodonta* genus (1827, African Elephant)
        - *Africana* species (1797, African Bush Elephant, living)
        - *Cyclotis* species (1900, African Forest Elephant, living, some call this a subspecies of *Africana*)
        - Other misc. extinct species
    - ♦ *Elephantini* tribe (1821)
      - *Palaeoloxodon* genus (1924)
      - ➢ *Elephantina* subtribe
        - *Elephas* genus (1758)
          - *Maximus* species (1758, Asian Elephant)
            - ♦ *Indicus* subspecies (1798, Indian Elephant, living)
            - ♦ *Maximus* subspecies (1758, Sri Lankan Elephant, living)
            - ♦ *Sumatranus* subspecies (1847, Sumatran Elephant, living)
            - ♦ *Borneensis* subspecies (1950 , Borneo Pygmy Elephant, living)
            - ♦ Other misc. extinct species
        - *Mammuthus* genus (1828)
          - **"Columbian Mammoth Grouping" (term/group unique to this treatise; the Jaredite elephant)**
            - ♦ ***Columbi* species – NA, recent (1857)**
            - ♦ ***Imperator* species – NA, recent (1858, by some a subspecies to or part of *Columbi*)**
            - ♦ ***Jeffersonii* species – NA, recent (1922, by some a subspecies to or part of *Columbi*)**
            - ♦ ***Exilis* species – NA, recent, dwarfs (1928, by some a subspecies to *Columbi*)**
            - ♦ ***Meridionalis* – NA & elsewhere but not SA, rare, very old (1825)**
            - ♦ ***Hayi* – NA, rare, very old (1915, by some a part of *Meridionalis*)**
          - *Primigenius* species – NA, elsewhere but not SA, recent (1803, "Woolly Mammoth")
          - Other miscellaneous extinct very old species not in NA or SA

Appendix III – Classification Caution, Numerous Nomenclatures, & Taxing Taxonomy

This treatise earlier reviewed much of the *Proboscidea* classification confusion. This appendix gives additional insight into the magnitude of the perplexing problem.

For centuries *Proboscidea* bones found in America, Europe, and Siberia were frequently assumed to be from giant people or giant moles.[2626] A leading opinion is that the term "mammoth" came from Russian or Estonian words for a mole coming out of the ground; other common opinions are that it came from "behemoth" in the Bible, or from an Arabic term for behemoth or elephant.[2627] [2628] [2629] [2630] [2631] The "mammoth" term was possibly introduced in Europe in 1618, becoming well established throughout Europe in the 1700s and particularly 1800s as the Siberian ivory trade grew.[2632] [2633] In 1796 "Father of Paleontology" Cuvier proposed that some skeletons represented a more unique type of *Proboscidea;* in 1805 he proposed the name of "mastodon" (based on tooth variation.)[2634] [2635] In 1821 it was formally proposed that *Proboscidea* be split into two – later known as *Elephantidae* (primarily mammoths and living elephants) and *Mastodontidae* ("mastodons" or "mastodonts" – all others, though these terms have various meanings).[2636] A naming foundation was laid, but particularly in the pre-modern-communication era, the taxonomy, especially at the species level, had over-creation, multiple interpretations on what categories meant, competing structures, and basically chaos. And while confusion reigns within the mammoths, the rest of the *Proboscidea* order is generally far more chaotic.

The depth of the problem is well surmised by many of the expert's quotes:

- "Mammoth taxonomy has been… and still is… confused and confusing."[2637]
- "The classification and phylogeny of *Proboscideans* is a never ending academic game."[2638]
- "A comparative survey of South American Proboscidean assemblages is not yet possible."[2639]
- "Proboscidean systematics has been characterized by over-splitting."[2640]
- "The confusion remains unresolved."[2641]
- "The species level systematics of the Gomphotheres is in desperate need of revision."[2642]
- "The species-level taxonomy of many Proboscidean groups is sorely in need of revision."[2643]
- "Proboscidean phylogeny is difficult to analyze due to a lack of information for some taxa."[2644]
- "The systematics of gomphotheres has long been considered difficult…"[2645]
- "The taxonomy of *Mammuthus* species in North America has been an area of considerable debate and revision."[2646]
- "Currently, the systematics of North American mammoth species is in a state of uncertainty, and researchers hold varying views on the validity of mammoth species names."[2647]
- "The historical tendency of Proboscidean taxonomists to be splitters to an extreme degree in naming genera and species also extended to subspecies."[2648]
- "Much work needs to be done on the taxonomy and relationships of this widespread and diverse family [gomphotheres] of Proboscideans."[2649]
- From the premier American mammoth expert: "'Historically classification of mammoths in the New World has been, and unfortunately remains confused.' (Agenbroad, 1984). That confusion is still prevalent in 2003!"[2650] [2651]
- "Neogene Proboscidean genera and species that do not fit easily into Stegodontidae, Elephantidae, or any other contemporaneous taxon are usually placed in a group called 'gomphotheres'."[2652]
- "There has been much confusion over the use of the term *gomphothere*… gomphotheres have been a 'wastebasket' of the Proboscideans into which taxa of uncertain position or affinities have been dumped."[2653]
- "…gomphotheres, the taxonomy of which has been under investigation for many years. There are more disagreements about content of *Gomphotheriidae* than about the content of any other Proboscidean group."[2654]
- "As with the taxonomy and phylogeny of other animal or plant taxa, there are usually as many interpretations as biologists, and the *Proboscidea* have been no exception."[2655]
- "Numerous generic and specific names have been applied to them and diagnoses of specific taxa have usually been inadequate. Even those names in most common use today have not been sufficiently defined nor have they been stable in their usage."[2656]
- "The problem of classification of these mastodonts had become extremely complex not only because those and many other paleontologists had recklessly based names of supposedly new genera and species on inadequate specimens… but also because local variation was not considered."[2657]
- "Phylogenetic reconstruction of the *Proboscidea* is almost purely a paleontological game… This game is made difficult, even hazardous, because of the lacunar nature of the fossil record, the usual overemphasis on dental characters in past literature, the relatively few global studies, and few cladistic analyses."[2658]
- "Much of the confusion arises because the systematics of North American mammoths is itself highly problematic. Not only have different authorities recognized different numbers of species, but divisions and synonymies between taxa vary from author to author even when the same specific epithets are accepted. An additional source of problems is that our appreciation for intraspecific variability in even the modern species of elephants is still rudimentary, but with enhanced understanding, the number of fossil species of elephants recognized as valid is likely to decline."[2659]
- "The systematics of the family Elephantidae [elephants/mammoths], as noted by Aguirre (1969), is quite confused. Over the years, several systems have been developed for the group. Osborn (1942) noted ten genera and fifty-nine species. More recently, systems have been proposed by Maglio (1973), Kurtén and Anderson (1980), Madden (1981), Graham (1986), and Agenbroad (1984, 1994)."[2660]

A primary key to erroneous over splitting may be captured in the following quote:

> "The very basis for delimiting species of elephantids may be due for reconsideration. An appreciation of intrapopulational and intraspecific variability is of central importance in the recognition of species differences, and yet systematic accounts and alpha taxonomies of the fossils have incorporated little in the way of information about variability in the two extant species of elephantids. Species-level taxonomy in the Elephantidae is based upon metrical characteristics of the molars, yet by comparison with the teeth of other mammals, elephant teeth develop in an extremely dynamic context. In elephantids, tooth formation continues in the posterior part of the jaw at the same time that other teeth… endure the forces of mastication, while the toothrow as a whole undergoes eruption and progression. The morphological consequences of such mechanical forces on developing teeth may be deformation, and deformation of varying degrees may not only account for the relatively high frequencies of certain types of dental anomalies in elephants, but also enhance more subtle forms of intraspecific variation. Within populations and across the full geographical ranges of species, variability in dental dimensions has been documented to be higher in modern *Elephas maximus* and *Loxodonta africana* than in other mammals. The variability observed in the modern forms thus may raise questions about the validity of some of the nominal species of fossils recognized… A reevaluation of elephant taxonomy that takes account of heightened phenotypic plasticity in this group will yield a sounder basis."[2661]

As referenced earlier, the magnitude of the chaos helps indicate why the American mastodon and *Cuvieroniinae* could not have been translated in 1829, and why even today most are not aware that there were elephants in ancient America.

Appendix IV: *Proboscidea* Extinction via Warming Weather: a Lesson in Groupthink

One definition of groupthink is: "A type of thought exhibited by group members who try to minimize conflict and reach consensus without critically testing, analyzing, and evaluating ideas. During groupthink, members of the group avoid promoting viewpoints outside the comfort zone of consensus thinking. A variety of motives for this may exist such as a desire to avoid being seen as foolish, or a desire to avoid embarrassing or angering other members of the group."[2662] Also groupthink frequently assumes the conventional wisdom must have been rigorously vetted, and thus somehow it must be right. Groupthink is also often ascribed to the fear of being mocked and scoffed at.[2663]

The topic of groupthink is a good introduction to the traditional theory of how American *Proboscidea* went extinct – that a supposedly warming world at the end of the last supposed "Ice Age" killed all the *Proboscidea* from Alaska to Argentina. This was not a singular goofy notion, but rather a wide variety of extremely different theories but all falling under the politically-correct umbrella of "climate change." Even assuming there was an "Ice Age" that occurred just as asserted, the theories are still quite incoherent in supposedly explaining how a warming world would cause a ***complete bi-continental extinction*** by a supposed "8000 B.C." Several of these humorous "explanations" on what caused complete bi-continental Proboscidea extinction are given below (actual quotes are used to avoid any appearance of unfair paraphrasing):

- "…a more complex change in the distribution of precipitation and thermal energy within and between years. The physical conditions responsible for the co-occurrence of taxa in given communities were reshuffled rather than being displaced smoothly along latitudinal gradients… this is postulated to have produced a coevolutionary disequilibrium."[2664] *(Vague incoherent jumbled psychobabble kills students, not Proboscidea.)*
- "… a change from a relatively complex mosaic of habitats, during full glacial times, to a more homogeneous, latitudinally zoned pattern… might have left some large mammals without a sufficiently diverse resource base."[2665] *(Vague incoherent jumbled psychobabble kills students, not Proboscidea.)*
- "…led to a shorter growing season… this depressed both the quantity and the quality of food…"[2666] *(Warming lengthens growing seasons; perhaps checking with an agricultural department might have helped.)*
- "… an open, spruce parkland with abundant ponds and marshy areas, became progressively restricted… resulted in small *Proboscidean* populations, more subject to stochastic effects and less able to repopulate…"[2667] *(More warmth instead increases vegetation and also evaporation which leads to more precipitation… ah the vague "stochastic effects" somehow conclusively proves lower birthrates…)*
- "…increased seasonality in precipitation could have led to higher incidence of drought stress. In parts of south-western North America, late Pleistocene climates induced major changes in alluvial systems that imply reduced availability of surface water."[2668] *(So increased Arizona aridity killed Minnesota mastodons…)*
- "In addition to the increased number of years it might have taken for calves to mature and for females to come into oestrus again, any increased severity or unpredictability of winter storms… could have put calves and/or pregnant females at additional risk."[2669] *(So increased warmth somehow slows maturity and reproductivity, but somehow increases winter storms which somehow kill even equatorial Proboscidea…)*
- "But then the milder climate backfired on the big mammals. It paved the way for trees, which eventually outshaded and outcompeted the low-lying plants… The upstart forests transferred the landscape's nutrients to the treetops, out of the reach of large mammals. Elks and bison, it seems, adapted better to the new landscape than mammoths…"[2670] *(Bison apparently climbed trees while taller Proboscidea didn't think of using trunks to eat leaves…)*
- "…extinctions are merely a response to a high rate of species origination in the early Pleistocene because origination and extinction are in dynamic equilibrium constrained by environmental diversity."[2671] *(Vague incoherent jumbled psychobabble kills students, not Proboscidea.)*
- "…streams in the glacial floodplains experienced net degradation and incision of their channels, and the water tables lowered, causing low order streams to become sporadic and transient and springs to dry up or significantly reduce discharge."[2672] *(Ah, from the Great Lakes to the Amazon, these durable travelling nomads died of thirst…)*
- "Temperatures became less homogenous, as winters became colder and summers became hotter. Essentially, seasonality increased. In addition, rainfall became more variable…"[2673] *(So warmer weather makes winter colder?)*
- "Woolly mammoths were wiped out by trees… The iconic beasts… could not cope when the planet got warmer and forests began sprouting up. The change in climate destroyed large areas of frozen grassland on which vast herds thrived and they were starved out."[2674] *(So frozen grassland feeds vast herds while warm forests killed every single last woolly mammoth, even though vast amounts of frozen grassland remain today in Siberia and Alaska and even though Proboscidea thrive far better by eating trees...)*
- "…inverse relationship between body size and population size plays a powerful role in increasing the risk of extinction faced by larger animals."[2675] *(But the issue is how more warmth would supposedly kill all Proboscidea…)*
- "…reproductive rates decreased during the increasing seasonality of the late Pleistocene because time was lost synchronizing reproductive cycles to the changing environmental cycles. The 'lost' time should have been used to produce offspring, but was instead wasted waiting for favorable breeding cues."[2676] *(Yes they spent years coordinating their Franklin planners with their weathermen; instead they should have been raising babies...)*
- "…abrupt increase in air temperature during Late Glacial summers would have resulted in reproductive dysfunction among Pleistocene fauna. Hyperthermia would have caused blood flow to the uterus to be reduced, leading to embryo death, dwarfing, or skeletal abnormalities." [2677] *(Warming weather turned Alaskan mammoths into dwarfs while African elephants flourished…)*
- "…direct effects of climate change such as… floral changes that reduce the nutritive value of food available for herbivores, changes in the scale of heterogeneities in floral communities…"[2678] *(Quick, tell Californian farmers to move to the Sierra Nevadas – as apparently only cold-grown food has the nutrition to avoid extinction!)*
- "Not only could the herbivores have found it difficult to obtain the correct mix of nutrients, they also could have been unable to cope with new combinations of plant chemical defenses encountered in the altered habitats. These changes were more likely to affect larger, nonruminant mammals such as the Proboscideans."[2679] *(Ah, tough to argue with such a "clear articulate cause-and-effect explanation" such as "plant chemical defenses"…)*
- "…the most rational explanation for the extinction of the megafauna at the end of the Pleistocene is the gradual alteration of climate from one that was more temperate to the more severe climate of today."[2680] *(Ah, the supposed mile thick of 'Ice Age' ice on much of the northern United States was "temperate" enough for Proboscidea, but today's California climate, for example, was too severe for Proboscidea survival…)*
- "To what should we attribute this mass extinction… we are impelled to conclude that flood waves of unprecedented proportions issuing from the continental ice sheets were a principal cause."[2681] *(Ah yes, a melting glacier in Michigan drowned the Proboscidea high in the desert mountains of Mexico and Peru…)*
- "…the impact of a large meteor or comet… [or] a gamma ray burst from the supernova, followed by increased cosmic ray irradiation of the atmosphere for many thousands of years and culminating with the shell of supernova ejecta impacting the earth…"[2682] [2683] *(Perhaps green Martians took the survivors away in flying saucers...)*
- "…the megafauna [large animals] may have fallen victim to racial senility – a rather abstract concept based on the idea that species living for a long time under optimal conditions, where the laws of natural selection are relaxed, produce inferior strains that would make them susceptible to sudden changes in their environment."[2684] *(The dominant professors may have fallen victim to college groupthink – a rather realistic concept based on the idea that colleagues writing for a long time under groupthink conditions, where the laws of natural scrutiny are relaxed, produce inferior ideas that would make their ideas susceptible to sudden changes in the quality of analytical thinking in their environment… lol)*

The contradictory incoherencies listed above find acceptance because they fall within the politically-correct groupthink of "climate change." <u>In contrast, the below quotes bring good insight into the global-warming extinction theory</u>:

- "[Elephants] have an *extremely* broad habitat tolerance, from *near deserts to savannas to woodlands to tropical forests*… [and] survive well on a *wide* variety of food."[2685]
- "… modern elephants, which live in diverse habitats, are opportunists, and therefore are capable of living on any dietary mixture."[2686]
- "…elephants can withstand extreme environmental conditions without losing much energy. The ability to tolerate changes in habitat has been an extremely important feature."[2687]

- "Elephants are extremely adaptable to a variety of African environments from semidesert to gallery forest…"[2688]
- "…the Proboscideans occupied almost every continental habitat type, including swamps, tundra, boreal forests, deserts, savannas, tropical forests, river basins, and high mountains."[2689]
- "McPhee scoffs at arguments that they died out because they were adapted to steppe vegetation. 'These animals, like elephantids in general, could eat anything.' He has no doubt that with their kind of dental pattern, which he says is virtually indistinguishable from that of Indian elephants, they could have browsed, grazed, and if necessary, eaten the bark of trees. 'They're built like tanks and are able to eat practically anything.'"[2690]
- "And, in fact, if you sum all the known generic extinctions of large mammals in North America previous ['three million years'] to 12,000 years ago, it's less than the number that disappeared 10 to 12,000 years ago… Climate can't be involved. The climate has been changing so drastically, for such a long period of time -- measured by proxy data -- that it seems impossible that, by the end of a million-year period of swings from cold to warm, and back again, we could run into just one more that would make all the difference in the world."[2691]
- "One problem with the climatic theory of extinction is that the mammoths and other large mammals died out only at the end of the last Ice Age. There have been at least 22 major climatic cycles in the Pleistocene, and thousands of minor ones, but these did not result in such severe levels of extinction. We know that mammoths survived previous interglacial periods of warm climate; why then could they not survive into the present interglacial? This is a powerful objection to the climatic theory…"[2692]
- One Proboscideantologist wrote: "Despite accumulating evidence that humans caused the megafaunal extinctions, some members of the climate-change school are in deep denial… Although details of the process are rarely available, climatic change is often the answer to the question of what accounts for all the numerous extinctions…"[2693]
- "Scientists have been arguing for a very long time about what (or who) is to blame for the deaths. The theories tend to be unicausal; some are nearly apocalyptic and others are information-poor. They are vigorously debated by intense and steadfast opponents with well developed mannerisms – the spinning of one side of a case while caricaturing the other side, the rhetorical fudging of facts, the drumming out of a skewed point of through repetition and eloquence and bombast. Proponents of one tangling theory turn prickly when faced with criticism."[2694]
- One prominent Proboscidean professor put it well: "Anti-overkill theories (climate change) may be driven as much by ideology as by unbiased scientific reasoning because they seem to change frequently, but they repeatedly fail to sway public opinion."[2695]

One study of 550 Siberian radiocarbon dates on mammoths showed that all of the more recent dates (many, as recent as about 1700 B.C.) came from Wrangel Island (87 miles north of Siberia), where mainland Siberia only had older dates, from 7820 B.C. or beyond.[2696] Being unknown and being protected from Siberian hunters by 87 miles of Arctic Ocean is what kept these mammoths alive, not its stellar climate; Wrangel is strong evidence against extinction by climate change.

Actually believing global warming could somehow explain extinction of every last incredibly resilient *Proboscidea* (and many other animals) in every corner of the Americas from Alaska to Argentina -- in desert, tundra, plains, forests, swamps, mountains, and tropics – and either be explained by false facts and false logic, which if true wouldn't come close to explaining extinction anyway – or be "explained" by goofy gobbledygook -- is powerful evidence of how "scientific" groupthink can trump basic analytical thought. These "experts" believe *Proboscidea* have supposedly existed for 50-60 million years in the Old World, have supposedly existed in the Americas for 15-16 million years, have supposedly survived "many many Ice Age" cycles, yet were wiped out *entirely* in the Americas by an Ice Age *ending*, even though abundant evidence points to more recent survival![2697] [2698] [2699] [2700] It's called goofy groupthink! Fortunately hunting has gone from an initially professorial sneered-at extinction theory to become more accepted than a warming climate theory, though both causes has become the most popular view, primarily due to political compromise/diplomacy.

Appendix V: Book Proposal of a Camelid as a Curelom or Cumom

Science and the Book of Mormon is a thoughtful and well-written book that addresses Jaredite elephants, cureloms, and cumoms among many other items.[2701] The book is subtitled "Cureloms, Cumoms, Horses, & More", and over a quarter of the book is on elephants, cureloms, and cumoms.[2702] The book concurs with this treatise about Columbian mammoths being the Jaredite elephant and also concurs with the American mastodon being a curelom or cumom.[2703] The book also concurs with identifying the *Cuvieronius* as a potential curelom/cumom candidate, but differs by selecting the best other curelom or cumom candidate to be a camelid (camel, llama, or relative), a very understandable candidate.[2704] Thus a review of this book is in order. However this appendix is added not only to respond to the book, but more broadly to address the camelid theory, as a camelid is the next best (distant next best in my opinion) curelom/cumom candidate and has often been proposed as such. (After having reviewed this appendix, this author has now said *Cuvieroniinae* are an "excellent candidate" for a curelom or cumom.) Four primary points will be made with respect to this book's proposal of a camelid as a curelom or cumom:

1. If one accepts the common LDS scholar idea that the Jaredites were primarily based in Mesoamerica at the time of the Ether elephant passage, then if only one curelom/cumom were a *Proboscidea*, clearly the *Cuvieroniinae* should be nominated, not the American mastodon.
2. As noted in the *Improvement Era*, due to their naming similarity (consonant-ending rhyming with the same consonant-bearing opening syllable), cureloms and cumoms statistically are almost certainly named similarly because they are similar to each other. Based on seven estimates from five different languages (English, Hebrew, Egyptian, Akkadian, and Sumerian), the statistical odds of this naming similarity being due to just randomness are roughly 1 in 10,000 (11,300 more precisely). Thus perhaps both are camelids or both are *Proboscidea*, but it is exceedingly improbable that one is a camelid and the other a *Proboscidea*. It's basically certain that cureloms and cumoms are related to each other.
3. Though articulated outside of the book, the author mentioned that Hugh W. Nibley said "curelom" was similar to a Hebrew word for a rolling motion which thus might imply a camel.[2705] However a careful examination of this issue will very easily and confidently dissuade the reader of this notion's plausibility.
4. An exhaustive review of several different factors gives *many* reasons, some directional and some *very* strong, as to why *Proboscidea* are a far better curelom/cumom candidate than camelids, and some of these very strongly disqualify the camelids.

The remainder of this appendix will be sections addressing these four issues, interspersed with a few additional subtopics.

V.a If Only One *Proboscidea*: American Mastodon or *Cuvieroniinae*?

This book identifies both the American mastodon and *Cuvieronius* (lead genus within *Cuvieroniinae*) as potential curelom or cumom candidates, and then selects only the American mastodon and gives the following rationale:[2706]

- The American mastodon "is much more abundant [than the *Cuvieronius*], whose fossils have been found associated with man at numerous localities throughout North and Central America."[2707]

- "There is much more evidence for *Mammut* [American mastodon] in North and Central America than for *Cuvieronius*." [2708]
- Compared to the American mastodon, the *Cuvieronius* is "less well known." [2709]
- "The American mastodon is one of the best-known Pleistocene mammals, and its remains have been found throughout the country." [2710]
- "Fossils of the American mastodon are known from Alaska to Honduras, with many being discovered in Mesoamerica." [2711]
- "There have been some reports of Cuvieronius being associated with man, but they are not numerous." [2712]

- There is "very little information concerning when this animal [*Cuvieronius*] became extinct." [2713]

V.a.1 Skeletal Abundance Comparison in Jaredite Area of 1700 B.C.

Living in America where the American mastodon is so abundant, I too quickly made an association between the American mastodon and the cureloms/cumoms. However, as reviewed earlier, a number of LDS scholars believe the Jaredites were likely the Olmecs who were centered in southern Mexico and northern Central America, particularly during the time of Ether's elephant passage. And in these areas, the *Cuvieroniinae* are far more common than the American mastodon:

- The Paleobiology Database, which is very large but far short of most finds, has American mastodons outnumbering *Cuvieroniinae/Rhynchotherium* by 364 to 86 in the U.S. and Canada, but being outnumbered by 2 to 31 in Mexico/Central America.[2714] (See earlier review about the similarity of the *Rhynchotherium* to the *Cuvieroniinae*.)
- A 2010 paper listed "well documented proboscidean localities in Central America" – the American mastodon was outnumbered by the *Cuvieronius* by 2 to 28.[2715]
- A 2003 count (which also misses many) has Mexico/Central America American mastodon sites being outnumbered by 16 to 61 for the *Cuvieronius* /*Rhynchotherium* (48/13; it didn't count the remaining *Cuvieroniinae*.)[2716]
- And of the many different finds in Mexico and Central America that I found from various sources that weren't identified in the 2003 count, the *Cuvieroniinae* were very significantly more frequent than the American mastodon.
- "The bunodont gomphothere Cuvieronius is endemic to the New World. It had a wide distribution, from the south of the U.S. to the south of Chile. In Mexico the record of this genus is extensive…"[2717]

Though *Cuvieroniinae* outnumber American mastodons in Mexico and Central America by about four to one, the clarity of this can be highly illusive as the most frequent "common term" for the *Cuvieroniinae* is "mastodon". While in English they are sometimes called "mastodons", most of the literature on them is in Spanish, and in Spanish and Portuguese (Brazil) they are usually called a mastodon -- "mastodonte". Thus often people read of a *Cuvieroniinae* called a "mastodon" or "mastodonte" and understandably but mistakenly think it is an American mastodon. Additionally, English speakers naturally tend to read English articles, which tend to focus on finds in the U.S. where American mastodons predominate; most Americans don't read Spanish articles which are mostly about *Cuvieroniinae*.

To summarize, *Cuvieroniinae* clearly greatly outnumber American mastodons in Mexico and Mesoamerica by roughly four to one. And if you look at just Southern Mexico and Central America, this multiple becomes even more pronounced.

V.a.2 Human Coexistence Comparison

In Mexico there are many *Proboscidea* skeletons that have been found with human coexistence evidence, however the great majority of these are either mammoths or are indeterminate *Proboscidea*. Human coexistence evidence found with *Proboscidea* skeletons is not frequent for either determined *Cuvieroniinae* or American mastodons in Mexico and Central America. While in the U.S. American mastodon skeletons have a far higher number of coexistence evidences than do *Cuvieroniinae*, conversely in South America the very numerous human coexistence evidences with *Proboscidea* skeletons are exclusively with *Cuvieroniinae* as *Cuvieroniinae* are South America's sole *Proboscidea*. (Section B.3 gives 40+ footnotes of human coexistence evidence with *Cuvieroniinae* skeletons; these are overwhelmingly from South America, some of the footnotes are for coexistence evidence from the state of Sonora in Mexico. Some "mastodons" [most likely *Cuvieroniinae*] have been found with human bones in underwater Yucatan caves. An 1836 report of a "mastodon" next to an ancient road near Tezcuco Mexico is most likely a *Cuvieroniinae*.[2718] Many of the 40+ footnotes are redundant to the same sites.) Relatedly, the many South American elephantine depictions (75-100+, depending on how accepting or dismissive you are in counting them) must all be *Cuvieroniinae*. When Mesoamerican *Proboscidea* depictions have been tentatively identified as to which type of *Proboscidea*, they have most frequently been proposed as Asian elephants or Columbian mammoths; thus I don't know that the Mesoamerican depictions can contribute much clarity to the question of American mastodons or *Cuvieroniinae*. However in Central American countries, since *Cuvieroniinae* are the big majority of all *Proboscidea* finds, and roughly 20 times more common than American mastodon finds, one might surmise the Central American depictions are most likely of *Cuvieroniinae*. For example, *Cuvieroniinae* are the only *Proboscidea* that have been found in Panama, thus the Panamanian elephantine depictions are most likely of *Cuvieroniinae*.

In summary, American mastodons have more coexistence evidence than *Cuvieroniinae* in the U.S., but in Mesoamerica/Central America there is more coexistence evidence for the *Cuvieroniinae*, and in South America the highly abundant coexistence evidence is exclusively *Cuvieroniinae*. The 1700 B.C. Jaredites are thought to have been Mesoamerica centered. The coexistence evidence in totality favors the *Cuvieroniinae* more than the American mastodon.

V.a.3 Radiocarbon Dating Comparison

There are tremendously fewer radiocarbon dates for *Proboscidea* below the United States, and even less for those below Mexico, thus it's harder to conclude much about *Cuvieroniinae* extinction due to radiocarbon dating. Two South American *Cuvieroniinae* radiocarbon dates were 4110 and 3530 B.C. American mastodons have some less-disputed comparable dates, as well as a few more-disputed more recent dates. Recent American mastodon dates from Michigan are 5200, 5120, 4150, 4000, and 1450 B.C.; dates from Utah are at 5140 and 4025 B.C. (Footnotes on all of these were given earlier). But vastly more American mastodons have been radiocarbon dated than *Cuvieroniinae*, as the approximately 1,900 American mastodon finds in the U.S. or Canada are far more likely to be dated. In summary, from radiocarbon dating, one would not argue that the evidence directionally supports that American mastodons outlasted *Cuvieroniinae* in Mesoamerica; rather I would argue which more likely survived longer is indeterminate based on radiocarbon dating.

V.a.4 Other Timing Factors Comparison

As reviewed before, there are endless indicators (while many are weak and/or only directional, many are very strong) of *Proboscidea* being far more recent than supposed by conventional secular wisdom. Most of these *Proboscidea* evidences are from within the relatively advanced civilizations that are rather recent. For instance, Colombia, Ecuador, and Bolivia each have multiple *Cuvieroniinae* depictions in metals/alloys of gold, silver, or copper. Mexico, Guatemala, Ecuador, Peru, and Bolivia each have multiple *Cuvieroniinae* ceramic depictions. (However any highlighting here does injustice to the vigor of the evidence – one needs to read much of the earlier treatise to appreciate the depth.) Often when there are advanced-civilization depictions or other indicators of recent *Proboscidea*, one does not know which type of *Proboscidea* they are

reflecting. But since *Cuvieroniinae* greatly outnumber American mastodons in Mexico and Central America, and are the sole *Proboscidea* in South America, there are far more strong recent indicators for *Cuvieroniinae* than for American mastodons. To be clear, this is not a statement that we should conclude that *Cuvieroniinae* outlasted American mastodons, this is just stating that *Cuvieroniinae* have a vastly higher number of strong recent indicators.

V.a.5 Summary of If Only One *Proboscidea*: American Mastodon or *Cuvieroniinae*?

With the key assumption that the Jaredites at the time of this Ether elephant passage were likely centered in southern Mexico and northern Central America, then the evidence -- whether it be frequency of occurrence, amount of human coexistence evidence, or indicators of more recent existence -- the evidence makes clear that if one had to select only one *Proboscidea* as a "cu-om", that selection would logically be the *Cuvieroniinae* instead of the American mastodon. The *only* factor than I can think of that would directionally favor the American mastodon would be that they are much more common in the United States, primarily in the eastern half of the United States. But this is not where the Jaredites of approximately 1700 B.C. are generally thought to have been centered. If one had to choose only one of them as being a curelom or cumom, clearly *Cuvieroniinae* are a better choice than the American mastodon.

V.b Cureloms and Cumoms: Related to Each Other or Completely Different?

Could one of these "cu-oms" be a camelid and the other a *Proboscidea*? Just a single factor makes this basically certainly not possible. For convenience, the treatise's first point is repeated below (without the footnotes). Then afterwards additional analysis is added -- a review of two alternative theories that were proposed years ago. The treatise's first point repeated:

> It's believed that Book of Mormon names were translated into an English spelling of the original language word, such as "Nephi." Cureloms (kū-re´ lums) and cumoms (kū´ mums) are also widely accepted as being as originally spoken -- why would there be any other reason for this word selection? (The letter "s" is an English translation of the plural word, and the pronunciation and accentuation are likely modern assumptions.) Since both start with "cu" (kū) and end with "om" (um), it is almost certain that these two received alike names because, as reviewed in the *Improvement Era*, they were closely related to each other. (Why is a "kū" sound spelled "cu" instead of as "ku"? Because in English "cu" is an order of magnitude more common spelling than "ku" for the "kū" sound.) The following methods help quantify the random odds of word similarity:
>
> 1. Independent of any particular language, if we estimate that the chance for a single-consonant-sound/vowel-ending first syllable is 50%, for a consonant-ending word is 75%, and for random repetition of the same consonant sound is 8% and for the same vowel sound is 20% -- this then would mean the random odds of repeating the "cu" with the "om" are about one in 10,000 (10,400).
> 2. An assessment done by downloading a long English list of animals and then analyzing via Excel formulas, found that the odds of a single-word similar name (by the above rules) for unrelated animals is about one in 38,000.
> 3. A search for "cu-om" matches in a 250,000 word English dictionary found two matches (cubiculum and cuminum) – reflecting odds of about one in 125,000.
> 4. No "cu-om" matches were found in a list of 12,000 Hebrew nouns, in either the singular or plural form.
> 5. A review of a 24,000 word Egyptian dictionary found no matches to the "cu-om" words.
> 6. In reviewing two Akkadian dictionaries, one of 7,700 words and the other of about 22,000 words, tentatively five potential matches to "cu-oms" were found -- thus odds of about one in 4,400.
> 7. A review of 3,800 Sumerian words found one potential "cu-om" match, thus odds of one in 3,800.
>   - Akkadian and Sumerian were reviewed as some believe the Jaredite language may have been related to ancient Mesopotamian languages from just after the Tower of Babel.
>
> These analyses, with their weighted likelihood at about one in 10,000 (11,300 more precisely), help show that statistically the similar "cu-om" names are almost certainly due to reflecting similar animals, not due to chance.
>
> If math is not your number, see how long it takes you to, without assistance, name two unrelated (non-dinosaur) single-word animals that rhyme, end in consonant sounds, and share a consonant-bearing opening syllable. Not something that shares root words like bullfrog and bulldog – not something that is close like chickadee and chickaree or nautilus and nauplius – but something like martin and marlin, beagle and beetle, or xenopus and xenotarosaurus. (After reviewing all of this, if you still believe the two "cu-oms" are only very likely related but not almost certainly related, then perhaps you are the target marketing audience for lotteries, lol.)
>
> Whether linguists would think such a naming pattern likely for Hebrew, modified Hebrew, or Reformed Egyptian is likely not relevant. It is generally thought that the "cu-oms" were Jaredite names obtained via their records or via Coriantumr. Given "the widely held belief that the founding members of the Jaredite civilization preserved the Adamic language", we may speculate that when the "cu-oms" were named, the language was a more pure language that may have been more logical in giving similar animals similar names. However a very bona fide alternative is that Lehites or Mulekites simply created similar names for them – particularly if the Lehites or Mulekites encountered them before encountering Jaredite names (later the point will be made that *Proboscidea* almost certainly survived into the Lehite era). But aside from any particular linguistic trail, the similarity of the "cu-om" names statistically means that they are almost certainly similar to each other.

Analysis of this curelom and cumom word similarity shows that the "cu-oms" may both be *Proboscidea*, or both be camelids, but practically certainly are not a combination of the two. There are two alternative theories about why the "cu-oms" rhyme; the following two sections will easily and completely take the air out of these two alternative theories.

V.b.1 Alternative Weak Theory #1: Pluralization Causes Similar Word Endings for Cureloms and Cumoms?

Warning, as this section is long and simply deflates a theory that is not very robust, the typical reader should skip it. Though not part of the book under review in this appendix, by deflating the theory that follows on why the cureloms and cumoms share similar word endings, this deflating leaves intact the idea that cureloms and cumoms really are related to each other.

Two sources have articulated an alternative theory that the "om" ending is the plural form of the animal words of "curel" and "cum."[2719] [2720] In Hebrew, nouns are almost always pluralized by adding either "ot" (feminine) or "im" (masculine, pronounced as "eym" per one source) to the word.[2721] [2722] [2723] For example, one source indicates "elephant" in Hebrew is pronounced "feyl" and "elephants" is pronounced as "feyleym" (pronounced the same as "feylim").[2724] Under this theory, the two words only share the same opening consonant and vowel, and the odds of random duplication drop to about 1 in 60 with the prior assumptions. Thus their "animal similarity likelihood" drops from "practically certainly" to only "very likely." While 1 in 60 odds are still rather high (unless you're a lottery aficionado, lol), there are abundant robust reasons to discard this alternative theory:

- An “um” or “om” is still very different from an “im” or “eym”; something as fundamental as a highly common word pluralization is far less likely to change over time within a civilization. The Nephites and Jaredites always had writing, thus making such an all-encompassing change even less likely. For example, do we really think the English pluralization of “s” might eventually change to “t”, for example? (Persont believing wordt will change their plural lettert are simpletont, lol.)
- While we don’t know, the more common theory is that “cureloms” and “cumoms” were from the Jaredite vocabulary – and we have no robust basis for knowing how Jaredites pluralized words. With the common belief that the Jaredites spoke the Adamic language, some guess that Hebrew may be similar to it, but this is speculation and we just don’t have much basis from which to conjecture; scriptures and church leader comments actually lead us in the opposite direction.[2725] [2726]
- Ether 2:3 discusses the Jaredites: “And they did also carry with them deseret, which, by interpretation, is a honeybee; and thus they did carry with them swarms of bees…”[2727] Elder B.H. Roberts and others have interpreted, logically in my opinion, that “deseret” was Jaredite for honeybees – the relevant point being that this Jaredite animal name, which appears to be a plural word, didn’t end in “om.”[2728] [2729] [2730] [2731] [2732]
- Jaredites with names ending in “om” were Corom, Esrom, Hearthom, and Jacom – some 7% of all Jaredite names; plus one “place” was called Ablom.[2733] [2734] Naming children would logically avoid using the same letters that mean word pluralization. Thus these names greatly reduce the already small likelihood of “om” meaning a plural word.
  - For example, from the 1990 Census, 267,919,119 Americans share the 5,502 most common American names.[2735] The only names to end in “s” after a non-s consonant are Brooks, Glayds, Numbers, Williams, and Hans. Excluding Hans which is German, only one name in 1375, only one person in 5,710, has a plural appearing name. Thus this analysis helps show that people are normally not given plural names.
  - Similarly, the Lehite/Mulekite “om” names were Abinadom, Ezrom, Jarom, Nahom, Shiblom, Shilom, Shimnilom, Sidom, and Zeezrom.[2736] Thus if one believes the “curelom” and “cumom” came from the Lehites or Mulekites, these “om” personal names greatly reduce the already small chances that “om” meant pluralization.
- There are 37 Lehite/Mulekite names ending in “m”; every vowel is common in preceding the “m” except for “i” – the only “i” is for “Shim”, where due to the single syllable with no other vowel the “im” is clearly not a pluralization.[2737] If “i” before “m” were not to mean pluralization, and if the usage of “i” were to occur for 20% of the vowels, then the odds of going through 36 “m” words without the “i” usage would be about one in 3,100. These statistics reinforce that “im” is how words were pluralized, and that therefore these animals, if Hebrewish, were not pluralized with an “om.”
  - As an aside, the uneducated Joseph Smith, at age 23, must have been quite a “Hebrew scholar” to have successfully “orchestrated” this Hebrew pluralization consistency among so many other Hebraisms, lol.[2738]
- This alternative theory has another giant weakness – it implies the translation was wrong. In English the singular words are “curelom” and “cumom”, yet this theory says the singular words should actually be “curel” and “cum”, and thus correct plural translations should have been “curels” and “cums”, or instead perhaps “curelom” and “cumom.” As witnesses said that Joseph would always spell the names, the idea that Joseph got them wrong is a very weak idea.[2739]
  - One source argued that Joseph Smith’s scribe simply mistakenly added “s” to the words.[2740] But sloppiness and lack of review are not associated with the translation; scribes and witnesses to the translation said that in addition to Joseph Smith spelling unknown words (primarily names), that he also had each sentence repeated back to him for verification.[2741] Thus the idea is quite weak that a scribe simply went rogue and was not corrected.
  - This same source said that while “om” is not a Hebrew plural, the Hebrew “o” vowel sound is similar to the vowel sound in “on” in Arabic, where the “on” is the Arabic perfect tense plural – thus this source was using this to try to argue that “om” was a pluralization.[2742] I do not know if this is accurate Arabic, but I do know this “connection” is a silly over-reaching speculative stretch.
  - This same source made the good point that in English the words “cherubims” and “seraphims” are used – where an “s” is added to a word that is already pluralized in Hebrew.[2743] While most bibles have followed the Tyndale (1525) precedent of “cherubims”, several bibles have used the more correct “cherubs.”[2744] Two online dictionaries state “cherubim” is the correct pluralization of a religious “cherub”, and that “cherubs” is the correct pluralization of “cherub” when referring to children or child-like qualities; neither dictionary mentions “cherubims.”[2745] [2746] Wikipedia is more accurate in saying that the “plural can be written as cherubim, cherubims, or cherubs.”[2747] For “seraph”, these two dictionaries and Wikipedia refer to “seraphs” and “seraphim” as the plural words and ignore “seraphims.”[2748] [2749] [2750]
    - Aside from the issue of a couple of words having no consensus on how to pluralize in English due to erroneous precedents from many centuries ago, I would argue that more conventional translation would consider double pluralization a mistake. And I would argue that the Book of Mormon would be divinely translated, and thus this would be one more point against the idea of “om” in curelom and cumom being a pluralization.

In summary the theory that “om” is a pluralization and that cureloms and cumoms were mistakenly double pluralized has two fatal flaws: overwhelming evidence and logic against it, and no evidence or logic of even a mediocre nature, in support of it.

V.b.2 Alternative Weak Theory #2: Mimation Explains the “M” Ending?

Warning – as this section is long and simply deflates a theory that is not very robust, the typical reader should likely skip it. This theory is not articulated in the book under review; the deflating of this alternative theory further leaves intact that cureloms and cumoms really are related to each other.

Another theory that has been expounded is that the Jaredite language used “mimation” – the practice of many words ending in “m” – a pattern thought common in Near Eastern Semitic languages of the 2000 B.C. era; thus it’s been proposed that curelom and cumom end in “m” due to mimation.[2751] [2752] [2753] [2754] [2755] [2756] [2757] [2758] Both the Bible and Book of Mormon state that the Lord created multiple languages at the time of the Tower of Babel.[2759] [2760] [2761] If the Jaredite language is related to a post-tower Near Eastern Semitic language, this would mean obviously that either: 1.) the Jaredites shared one of the post-Tower-region languages; 2.) or that the Jaredite language was somewhat related to a post-Tower-region language, akin to how Spanish and Portuguese are similar. Largely based on a few scriptures and church leader comments, I think the first alternative is unlikely.[2762] [2763] [2764] [2765] [2766] [2767] But while I believe the second alternative has the better likelihood, I’m not confident that it has a weighty argument for being correct either; nevertheless, the following will assume that one of these alternatives are plausible and thus will review the possibility of Jaredite mimation.

Akkadian is the “earliest attested Semitic language” that was spoken in ancient Mesopotamia (Akkadian was used in era after the Tower of Babel, which is thought to have been in Mesopotamia) and Akkadian used mimation.[2768] [2769] [2770] Some sources would tentatively appear to indicate mimation was the *rule* for many types of Akkadian words.[2771] [2772] [2773] [2774] On the other hand, it has been said that mimation “had not yet been developed” for the “older stages” of Akkadian.[2775] [2776]

Other than the “cu-oms”, there are 62 Jaredite words, and 15% of them end in “m.”[2777] If we assume 15% of Jaredite animal words end in “m”, then the 10,000 to 1 odds would then change to about 5,300 to 1. Even if we assumed all Jaredite animals end in “m”, the odds would still be about 800 to 1. Thus the odds would still be overwhelming that “curelom” and “cumom”

are similar not due to random chance. But as reviewed before, the only other Jaredite animal name we have is "deseret" [honeybee] which doesn't end in "m"; hence obviously the Jaredite rule isn't that animals end in "m."[2778]

But if one thinks the Jaredite language might be similar to Akkadian, then other comparisons should be made as well. The Jaredite words end in non-m consonants 81% of the time, but Akkadian words end in non-m consonants 7% of the time.[2779] And while both languages have many "m" endings, overall the "m" speaks against similarity – as they are only 15% of other Jaredite words but represent the majority of Akkadian words as well as the majority of some other ancient Semitic languages; hence this observation would argue against Jaredite mimation.[2780] [2781] [2782] [2783] [2784] Narrowing the Akkadian words to just personal names, a review of about 1700 Akkadian personal names finds about 4% of them ending in "lum", with another 3% ending in "m".[2785] Yet no Jaredite names end in "lum", while 15% end in "m" – thus Jaredite/Akkadian names don't indicate commonality with "m" ending patterns (4% vs. 0%, 3% vs. 15%).[2786] [2787] Similarly, a review of 1,000 Sumerian names indicated 4% ended in "m" against 15% for Jaredite names.[2788] [2789] Additionally, a cursory comparison of Jaredite vs. Akkadian and Sumerian names only identified various pattern differences, not pattern similarities.[2790] [2791] [2792] Everything points away from Jaredite language similarity with Akkadian or Sumerian – this further weakens the already quite weak Jaredite mimation theory. And even if the mimation theory were true, the odds against "cureloms" and "cumoms" being similar words due to chance are still so high as to leave the animal similarity conclusion intact.

V.b.3 Summary: Statistics Show These Two Animals are Related

In summary, the pluralization and mimation theories are easily, comprehensively, and thoroughly deflated. (And even if they weren't, the then-smaller odds are still *very* high against "cureloms" and "cumoms" being similar without cause.) Thus the odds of random similarity really are still roughly one in 10,000 -- the cureloms and cumoms are almost certainly closely related to each other. (Plus as mentioned before, their listing together would point to their being similar to each other.) Either the cureloms and cumoms *really* are both camelids or neither are camelids; both really are *Proboscidea* or neither are *Proboscidea*.

V.c "Curelom" in Hebrew Leads to Camel?

Though not in the book itself, the book's author mentioned that Hugh W. Nibley once said that "curelom" is close to the Hebrew word for a "rolling motion", thereby being potentially "indicative" of a camelid.[2793] I believe Nibley's source for this idea likely was a book of Sjodahl and Reynolds writings that said:[2794]

> "*Cureloms*... There is a Hebrew verb, "garal", meaning to roll forth, or, roll off (a burden, for instance). The Semitic or Jaredite ancestor of that word may have been, "karal," having the same meaning. Curel or Kurel can have been formed from karal, to denote an animal with a characteristically rolling motion, such as the camel has. The sounds represented by g and k are interchangeable, or the letters are. The motion of the camel, the "ship of the desert," is peculiar. When walking, he lifts both feet simultaneously, first on one side and then the other, causing a rolling motion unpleasant to those not accustomed to it. The "om" in curel-om we consider a plural termination, as "im" in the Hebrew. Curel-om would, according to this conjecture, mean camels. The South American llama belongs to the camel family. The curel-om of the Jaredites may have been relatives of those proud-looking and useful creatures if not their ancestors."
>
> *"Cumoms*. If we eliminate the American plural "s" and understand the "om" to be equivalent to the Hebrew plural "im," the word in the singular would be "cum." But the Hebrew "kum" means to rise up, to stand up. It may be for either friendly or unfriendly purposes. The bear shows that characteristic. He rises up on his hind legs to fight an enemy, and also, at least in zoological gardens, to beg visitors for tidbits. Being a hibernating animal, he goes to sleep in the fall and rises in the spring as from the dead. Bears may possibly be the cum-om of the Book of Ether, because of these peculiarities. Their skins would certainly be "more especially" useful in areas where the summers are hot but the winters cold."

The following will present compelling arguments against "cureloms" being a Hebrew derivation for camels:

1. Despite a significant search, I could find no other source saying "garal" was Hebrew for "rolling"; I did find many sources saying that "galal" (gaw-lal) was Hebrew for "rolling."[2795] [2796] [2797] [2798] I found one LDS source saying "garal" was Hebrew for "to be rough", the line directly below it was for "galal" – I believe Sjodahl or Reynolds simply misread/transposed the lines in reviewing this source.[2799] As "galal" is a verb, the above proposition would mean a verb was used to make a noun, and then became pluralized by adding "im" to give the word "ga lal im" – and then that over time "ga lal im" transformed into "kū-re´ lum" (cu re lom). A rather far-fetched speculation, nevertheless to present the arguments against this premise:
    a. "Ga lal im" has seven vowel or consonant sounds – but only one of them carries into the same syllable in "kū-re´ lum." In contrast, there are seven times more matching vowel or consonant sounds (within the same syllable) between the two phrases of "Latter-day Saints" and "Little Gay Satans." Need more be said?
2. To assume that the noun "camel" is named after a verb for "rolling" is quite a speculation -- "rolling" is not on the shortlist of words associated with "camel."[2800]
3. If Hebrew is the assumption, why wouldn't the Hebrew word for camels ("gamal", plural word of "gamalim") actually be used for camels?[2801] [2802] And why wouldn't it be put in the Book of Mormon as "camels"?
    a. The Nephites brought the Brass Plates; the Old Testament books thought to be contained in the Brass Plates use the word "camel" or "camels" 51 times.[2803] [2804]
4. If the curelom were a camel and the cumom an American mastodon, then verse 19 would have selected an odd order of elephantine, camelid, and then elephantine – wouldn't the two elephantines have instead been lumped together? Verses 17-19 lump similar items together, as well as elsewhere in the Book of Mormon.
5. Hugh W. Nibley doesn't appear to have been too fixated on the "rolling" camel theory – he once wrote that the cureloms and cumoms "were simply breeds of those 'many other kinds of animals which were useful for the food of man'" and he discussed breeding at length, without any discussion of "rolling."[2805] Camel meat and milk are not kosher and thus were not used for food within Judaism. Nibley doesn't appear to have a single curelom/cumom theory that he was particularly sold on.[2806] [2807] I would imagine his reference to "rolling" was simply at the brainstorm speculative level obtained from the referenced book, and not a serious studied proposal.
6. Book of Mormon scholar John A. Tvedtnes said: "Unfortunately, the languages of Mesopotamia, where the Jaredites originated, are not helpful in identifying the *cureloms* and *cumoms*."[2808]
    a. Another book, after a long discussion of possible Hebrew root words that might relate to curelom or cumom, also found nothing promising.[2809]
    b. Whether it be Hebrew, Egyptian, Akkadian, or Sumerian, I found no even mediocre candidates for being a parent or related word from which "curelom" or "cumom" may have come.

The notion that the Book of Mormon people named a camelid not as a camel but after a verb for "rolling", and then that this word "ga lal im" transformed over time into "kū-re´ lum", is simply too extremely unlikely to be taken seriously. Bottom line, no sound word analysis has identified any relationship between "curelom" and an ancient Semitic word for camels.

V.d American Camelids vs. *Proboscidea*

This book, *Science and the Book of Mormon*, is just one of many several sources that has thought that one or both of the "cu-oms" might be camelids.[2810 2811 2812 2813 2814 2815 2816 2817 2818] Though this book proposes just one camelid as a "cu-om", since as reviewed earlier, practically certainly both are camelids or neither are camelids, this section will contrast the much more robust likelihood of two camelids versus two *Proboscidea* as curelom/cumom candidates. But first the full list of American camelids should be reviewed.

V.d.1 American Camelid Types

The following are the American camelids (camels, llamas, or close relatives), listed in cladistic skeletal relationship order (except for the first); the more key ones have been underlined:[2819]

- *Macrauchenia* – Large long-necked llama/camel, relatively recently extinct, South America.[2820]
- *Aepycamelus* – Giraffe-like camel, long-ago-extinct, North America.[2821 2822]
- *Tanymykter* – Long-ago extinct, very rare, North America.[2823 2824]
- *Protolabis* - Camel, long-ago extinct, somewhat common, North America.[2825 2826]
- *Michenia* – Similar to *Protolabis*, long-ago extinct, North America.[2827 2828]
- *Procamelus* – Somewhat smaller than today's llama, long-ago extinct, North America.[2829 2830]
- *Pliauchenia* – Rare, questioned status, long-ago extinct, North America.[2831 2832]
- *Hemiauchenia* – A llama, relatively recently extinct, common, North America, also in South America.[2833 2834 2835]
- *Blancocamelus* – Like a large *Hemiauchenia*, long-ago extinct, very rare, North America.[2836 2837 2838]
- *Palaeolama* – "Stout-legged llama", relatively recently extinct, both North and South America.[2839 2840 2841]
- Llama - Domesticated, have been used as pack animals, alive today, South America.[2842 2843]
- Guanaco - Not domesticated, shoulder height of four feet, alive today, South America.[2844 2845]
- Vicuna - Not domesticated, shoulder height of three feet, alive today, South America.[2846 2847]
- Alpaca - Domesticated, are not used as pack animals, alive today, South America.[2848 2849]
- *Alforjas* – Long-ago extinct, not common, North America.[2850 2851]
- *Megatylopus* – Long-ago extinct, North America.[2852 2853]
- *Camelops* – Large camel, relatively recently extinct, common, North America.[2854 2855 2856 2857]
- *Titanotylopus* - Extremely rare, relatively-recently extinct, questionable existence, North America.[2858 2859]
- *Megacamelus* – Huge camel, extremely rare, long-ago extinct, North America.[2860 2861]
- *Gigantocamelus* – Giant camel, long-ago-extinct, North America.[2862 2863]
- *Camelus* – Genus of Old World camels alive today, theorized to perhaps have been in the Americas.[2864]

The book discusses two camelids specifically -- *Camelops* and *Hemiauchenia* and discusses them as the best camelid candidates for the curelom/cumom.[2865] Of the 14 types of camelids found in North America, these two are the most common – they represent about half of all U.S. finds, and about 60% of all Mexico/Central America finds.[2866] Of the 14 extinct North American camelids, these two are two of the four thought recently extinct as most are thought to have been extinct for far longer, and these two represent about 90% of all finds of recently extinct camelids.[2867] Both of these two are fairly large, and are therefore more possibly capable of meaningful work.[2868 2869 2870] Thus the book is very sound in identifying these two as the best camelid candidates for being cureloms or cumoms (the book only selects one as a curelom or cumom, the *Camelops*).

American Camelids in the Paleobiology Database

	Paleobiology Database Occurrences					
	US & Canada	Mexico & Central America	South America	Total	Thought Recent?	
Macrauchenia			29	29	Y	
Aepycamelus	77			77		
Tanymykter	5			5		
Protolabis	65	3		68		
Michenia	38			38		
Procamelus	80	4		84		
Pliachenia	7			7		
Hemiauchenia	218	10	5	233	Y	
Blancocamelus	5			5		
Palaeolama	25	2	16	43	Y	
Llama	No	No	Yes, alive		Y	
Guanaco	No	No	Yes, alive		Y	
Vicuna	No	No	Yes, alive		Y	
Alpaca	No	No	Yes, alive		Y	
Alforjas	18	1		19		
Megatyylopus	65	5		70		
Camelops	181	12		193	Y	
Titanotylopus	14			14	Y	
Megacamelus	4			4		
	802	37	50	889		

V.d.2 Arguments FOR Two Camelids as Cureloms/Cumoms

Again, as statistically the curelom and cumom are practically certainly related to each other, the argument for both the curelom and cumom being camelids is immensely sounder than for just one of them. Thus this review will proceed on that basis. This section will give the arguments that support the *Camelops* (almost always called a camel, though arguably somewhat closer to a large llama) and *Hemiauchenia* (large llama) as being cureloms and cumoms:[2871 2872]

- Camels today are used as pack animals, draft animals, and for riding; llamas are used as pack animals.[2873 2874]
- The *Hemiauchenia* and particularly the *Camelops* (6-7 foot shoulders) were quite large.[2875 2876 2877 2878]
- Camels can go extraordinarily long without water.[2879]

- There is evidence that these two camelids coexisted with people.[2880] [2881] [2882]
  - One source, though primarily for the purpose of casting aspersion on their credibility, said there are 21 North American sites (mostly in the U.S.) where claims exist of human predation or utilization of *Camelops*.[2883]
  - The book shows a Utah petroglyph "that could be" a camelid.[2884]
  - A book on the Great Basin wrote: "There are even some symbols that suggest a camel…"[2885]
  - One article was titled: "A Possible Pleistocene Camelid Petroglyph from the Mojave Desert".[2886]
- The Paleobiology database shows these were common in North America – 193 *Camelops* and 228 *Hemiauchenia*.[2887]
  - This database shows 12 *Camelops* in northern or central Mexico, and 9 *Hemiauchenia* in northern or central Mexico, plus one *Hemiauchenia* in El Salvador.[2888] [2889]
    - Of these 22, three are on the border of the Olmec areas as shown on the Olmec map given earlier.
- Both of these camelids are relatively recently extinct.[2890] [2891] [2892]
  - The CARD radiocarbon database showed 17 relatively recent *Camelops* dates (most from a Nevada site); a Wyoming *Camelops* was as recent as 9240 B.C.[2893]
  - The CARD database showed 40 other recently-dated materials obtained from sites from where *Camelops* were found; there were four of these for the *Hemiauchenia*.[2894]
  - This book gives dates as recent as 5450 B.C. plus "possibly to 3,000 years ago" and "~3,800 years ago."[2895]

V.d.3 Arguments AGAINST Two Camelids as Cureloms/Cumoms

To open with a caveat -- not having researched camelids nearly as thoroughly as *Proboscidea*, the below comparisons are in several cases somewhat skewed because more camelid research would find more camelid evidence. As the below is generally a summary of prior treatise content, the footnotes and full background will not be reiterated. Some of the below points are directional or indicative in nature; others are very strong and very determinate in identifying the *Proboscidea* as a superior candidate to camelids. In summary, the factors together in total clearly indicate that two *Proboscidea* are, in my opinion, dramatically and drastically far better curelom/cumom candidates than two camelids are:

1. The Book of Mormon's writing style, in these Ether verses and verses elsewhere, groups similar items together. If camelids were listed in Ether 9:19, they would be grouped with horses and asses and not with elephants, as camelids are much more similar to horses than to elephants. In contrast, if the cureloms and cumoms are *Proboscidea*, they are correctly grouped with elephants. This is a huge blow to the camelid theory.
2. After describing the cureloms and cumoms as useful, they are engraved again just to state how "more especially" useful they are relative to the horses and asses – going to the effort to engrave them again just to add the "more especially" aspect of their usefulness emphasizes how incredibly useful they were.
   a. However camelids are not even as useful as horses, let alone more useful, let alone an emphasized more especially useful. It appears the camel's main advantage is being able to go longer without water, another advantage is less likely to get spooked; depending on the camelid/horse relative sizes, perhaps a camelid can carry more.[2896] But in general from my knowledge and reading, it appears most people believe the horse is the much more useful animal.[2897] A horse is faster, more agile, more domesticatable, better temperamentally, and easier to sit on.[2898] There are many reasons why non-desert civilizations throughout the world and throughout history have repeatedly selected the horse over the camel. (I don't remember movies with John Wayne riding a camel, lol.) Thus if camels aren't as useful as horses, they obviously aren't more especially useful than horses. This point is another huge blow to the camelid theory.
   b. However *Proboscidea* are not only more useful than horses, they are *dramatically* more useful than horses. *Proboscidea* usefulness advantages over camelids are: far stronger, more intelligent, better temperaments, more domesticatable, and the *gargantuan* difference of an unbelievably useful trunk. Plus the curelom/cumom level of usefulness is lumped in with elephants, American mastodon and *Cuvieroniinae* usefulness would be thought similar to that of elephants. This point is a big blow to the camelid theory.
3. As reviewed before, it was plainly impossible to have translated the *Proboscidea* candidates in 1829. While camels clearly could have been translated in 1829, it's not readily as clear about llamas:
   a. A Google Book Search found 4,020 English books, from 1829 or earlier, with "llama", so clearly llama was by no means some wildly obscure animal in English in 1829.[2899] I'd presume there's a significant probability that Joseph Smith had heard of them by 1829, but one can only conjecture.
   b. However, more importantly, I believe a "llama" would have been translated into "llama" whether or not Joseph was aware of them. There are many English words in the Book of Mormon that an age 23 Joseph, with three years of education, may likely have not known or not have been familiar enough to use, and yet they appear in the Book of Mormon. Some examples are (of words that aren't also in Isaiah): appellation, canker, clave, cumber, faggots, flaxen, garb, garners (noun), glutting, hireling, learthern, molder, preparator, privation, ringlets, and sallying.[2900] Thus even if Joseph was not aware of the "llama", one might surmise a "llama" would still be translated as "llama."
      i. Obviously Joseph Smith divinely translated names that he wasn't familiar with. Additionally, with only three years of education, it was perhaps likely that he received divine assistance on a few additional words that were more mainstream but with which he was not the most familiar with.
   c. However, even if one accepts the above premises, a different argument for non-translation would be that the particular camelid might not be a "clean" camel or llama. For instance, the *Camelops* is almost always called a camel, but at times it is argued that it is closer to the llama than the camel. Thus an argument could be made that a translation wasn't done because neither "camel" nor "llama" would be a clean translation for the *Camelops*.
   d. In summary, *Proboscidea* clearly couldn't have been translated in 1829. In contrast, camelids probably would have been translated in 1829, however there is a very plausible but weaker argument for the camelids not being translatable. This is a significant but not fatal blow to the camelid theory.
4. The two *Proboscidea* "cu-om" candidates appear to be more common – about 2,300 have been found in North America versus about 400 for the two camelid candidates. However this is significantly misleading as the 2,300 count is a much more rigorous count than the 400. Though a more rigorous count would likely find far more camelids, *Proboscidea* still appear to likely have been much more commonly found.
   a. These two *Proboscidea* "cu-om" candidates number 77 in one count (materially undercounted) in Mexico and Central America, while the two camelids number 22 (I'm confident also materially undercounted.)[2901] [2902] [2903]
5. There are far more human interaction evidences for *Proboscidea* skeletal remains than for camelid skeletal remains, though many of these evidences are for mammoths:
   a. Many more *Proboscidea* skeletons have been found with human interaction evidence. The *Proboscidea* count is over 100, whereas I found one estimate of 21 for the *Camelops*, though it came from a source that cited these 21 to disparage and doubt their validity; of course many of the Proboscidean sites used to also receive skepticism as.
6. There are far more depiction evidences for *Proboscidea* than for camelids.
   a. After eliminating entire categories of *Proboscidea* depictions, and then arbitrarily reducing the remainder by one half to account for any types of errors, there are still over 100 ancient American *Proboscidea* depictions. In

contrast, though with little research, the only North American camelid depictions are few in number and somewhat tentative in their animal identification.

i. While the *Proboscidea* depictions are throughout the advanced ancient American civilizations, I'm not aware of any camelid depictions from ancient Mesoamerica; however this is likely due to my little investigation.

7. While *Proboscidea* have 10 sites with domestication depictions plus some other evidences of domestication, I've only been told of one camelid domestication evidence from North America.[2904] Camelid domestication evidences in South America appear to be of still alive South American camelids – llamas, alpacas, etc.; however if domestication evidences exist for extinct camelids in South America, this still would not be that relevant as the Jaredites were in North America.[2905] [2906]
8. There are over 50 *Proboscidea* radiocarbon dates more recent than 6000 B.C.; the book lists two *Camelops* from 5400 B.C. and then describes two more dates (radiocarbon?) as "possibly to 3,000 years ago" and "~3,800 years ago." (There are many more recent dates in South America for other camelids – there are still four camelids alive today in South America.)
   a. This treatise gave an endless list of other indicators of relatively recent *Proboscidea*. Some of the same exists for camelids, but the extinct camelid evidence doesn't match the depth and breadth of the *Proboscidea* evidence.
9. The highly unusual mid-sentence interruption to change the prefatory wording to "there were" has a remarkably good-fit potential explanation with *Proboscidea*. (See Section A.5.) However domestic camelids are raised, not caught; thus this purposeful unusual wording change would remain an unexplained mystery with camelids.
10. The prior review of many *Proboscidea* corpses that have been found that were not fully decomposed – this is a directional and but minor support for recent *Proboscidea*; I'm not aware of whether anything similar has been found for *Camelops* or *Hemiauchenia*.
11. The Indian legend evidence of *Proboscidea* is very hard to assess – as it would seem hard to believe any legend evidence would exist. On the other hand, *Proboscidea* are big and distinct enough to make a lasting impression, and reportedly there are over three dozen Indian tribes with such legends. However while some of these legends have remarkably elephantine-unique traits (trunks in particular), they also generally include non-elephantine characteristics, reducing one's confidence in them. I'm not aware of any Indian legends for camelids.
12. The author questioned just a little bit whether American *Proboscidea*, other than Columbian mammoths, could be domesticated, as he was aware of African elephant beings tamed but not aware of any that had been domesticated. However I did find a number of examples of domesticated African elephants; it appears fair however to conclude they are not as highly and easily domesticatable as Asian elephants though.[2907] [2908] [2909] [2910] [2911]

To date I haven't been able to think of a single meaningful factor that would lean in favor of camelids instead of *Proboscidea* for being curelom/cumom candidates. Some factors favoring the *Proboscidea* are directional, such as the number of skeletons found. Others are devastating to the camelid idea, such as that camelids would be grouped with horses instead of elephants, that camelids aren't more useful than horses, and that they aren't phenomenally useful like elephants and other *Proboscidea*. In totality, these factors make *Proboscidea* clearly the far better curelom/cumom candidate than camelids. The adjacent table may be the best at concisely summarizing the comparison.

***Proboscidea* vs. *Camelops*/*Hemiauchenia* as Curelom/Cumom Candidates**

		Curelom/Cumom Candidacy Impact	
	Issue	*Proboscidea*	Camelids
1.	*Proboscidea* would be grouped with elephants, but camelids would be grouped with horses	8	-10
2.	Camelids are not quite as useful as horses, *Proboscidea* are more useful than horses	5	-10
3.	Only *Proboscidea* are "more especially" useful: strength, intelligence, and an amazing trunk	8	-6
4.	Proboscidea couldn't have been translated, camelids most likely could have been	5	-7
5.	Both camelids and *Proboscidea* are used today as work animals	6	6
6.	About 2300 of the two *Proboscidea* candidates have been found, 400 of the two camelids	6	5
7.	About 100 of the two *Proboscidea* in Mexico/Mesoamerica, about 25 of the two camelids	6	5
8.	100+ coexistence evidences with *Proboscidea* skeletons, 21 for *Camelops*/*Hemiauchenia*	7	5
9.	100+ pictorial depictions of *Proboscidea*, <5 for *Camelops*/*Hemiauchenia*	8	2
10.	Tons of pictorial depictions of *Proboscidea* in Mesoamerica; any for the two camelids?	8	0
11.	10+ *Proboscidea* domestication evidences, one for *Camelops*/*Hemiauchenia*	8	2
12.	50+ relatively recent radiocarbon dates for *Proboscidea*, a few for *Camelops*/*Hemiauchenia*	2	1
13.	100+ strong recent indicators of *Proboscidea,* guess some exist for *Camelops*/*Hemiauchenia*	8	1
14.	The unusual change to "there were" wording can be plausibly explained by *Proboscidea*	3	-2
15.	Many *Proboscidea* corpses found not fully decomposed; I'm not aware of any for the two camelids	1	0
16.	*Proboscidea* in legends of three dozen Indian tribes; I'm not aware of any for the two camelids	1	0

Appendix V Summary

In summary, while the book, *Science and the Book of Mormon*, concurs with this treatise about the Columbian mammoths being the Jaredite elephant and concurs with the American mastodon being either a curelom or cumom, there are plethoric and compelling reasons to accept the other best curelom/cumom candidate as a *Cuvieroniinae* instead of as a camelid:

1. If only one "cu-om" could be a *Proboscidea*, the evidence strongly indicates that the far better candidate would be the *Cuvieroniinae* instead of the American mastodon.
2. The similarity of the "curelom" and "cumom" terms means the two animals are almost certainly related; the relationship being due to chance has the odds of roughly one in 10,000. Thus perhaps both are camelids or perhaps both are *Proboscidea*, but practically certainly one is not a camelid while the other is a *Proboscidea*.
3. The argument that "cureloms" may come from a Hebrew word for "rolling" plainly doesn't withstand scrutiny; analysis indicates the idea is so far-fetched that it shouldn't even be considered a possibility.
4. Many different factors strongly point to *Proboscidea*. While none of the points give an edge to camelids, some of the points make enormous statements against the camelids; *Proboscidea* are a far stronger candidate.

From having reviewed this treatise, the book's author has now called the *Cuvieroniinae* an "excellent candidate" for being a curelom or cumom.[2912] A thorough review of the next most viable curelom/cumom candidate, the camelids, greatly increases the confidence that the cureloms and cumoms *really* are *Proboscidea*.

The **footnotes** can be found at www.cureloms.com/Cureloms.Footnotes.pdf