



BOOK OF MORMON CENTRAL
<http://bookofmormoncentral.com/>



Religious Studies Center
<https://rsc.byu.edu/>

Categories of Evidence for Old World Contacts with Ancient America

Author(s): Norman Totten

Source: *The Book of Mormon: The Keystone Scripture*

Editor(s): Paul R. Cheesman, S. Kent Brown, and Charles D. Tate, Jr.

Published: 1988

Page(s): 187-205



The Religious Studies Center is collaborating with Book of Mormon Central to preserve and extend access to scholarly research on the Book of Mormon. Items are archived by the permission of the Religious Studies Center.

<https://rsc.byu.edu/>

Categories of Evidence for Old World Contacts with Ancient America

11

Norman Totten

When Columbus refound America for Europe in 1492, he believed that the Bahamas, Haiti, and Cuba were parts of the East Indies in eastern Asia; so naturally he named the people whom he encountered on that initial voyage “Indians.” His and subsequent Spanish trips caused the church this curious problem: were native Americans humans or not? In 1512 at the Fifth Lateran Council, Pope Julius II declared that Americans had descended from Adam and Eve, and thus are humans—as well as candidates for conversion to the Christian faith.

Julius left open another issue: from which son of Noah—Shem, Ham, or Japheth—had Americans descended? This question hardly bothered merchants, soldiers, soldiers of fortune, colonists, and slaves arriving in this hemisphere, eventually by the millions. But the question of American origins remained vivid for churchmen and scholars. Rephrased in today’s terms, the question meant: had

Norman Totten is chairman of the History Department at Bentley College. This chapter is copyrighted by the author.

Americans migrated here primarily from Europe, Africa, or Asia?

It seemed obvious to most early European explorers that Americans varied widely in physical appearance, language, and life-style, and represented various amalgamations of people. East Coast tribes physically resembled European or Middle Eastern populations more than Far Eastern ones, while the reverse was usually true on the West Coast. Some American tongues had no known affinities with other languages; others could be grouped easily or with difficulty into language families. A few such as Canadian Takhelne,¹ have been grouped with Gaelic or some other Old World language family.

Pottery made its appearance in the Northeast about 1000 B.C. In its type, it was closer to then-contemporary northern European ware than to other American pottery.² The earliest pottery at Valdivia, Ecuador, arguably the first anywhere in America (c. 3100 B.C.), bore the same range of decorative patterns as Middle Jomon ware of western Japan.³

Such observations merely state facts. In no way do they denigrate the innate intelligence, creative potential or achievements of anyone. The biological bases for temperament and intelligence vary far more between individuals than between groups. In this connection, the label "racist" has been applied and continues to be misapplied by some members of academia to the more far-reaching diffusionist interpretations for which I would like to present a defense. The position of racism has very specific meanings when judging individuals by their ethnic group of origin without regard to individual worth. Some of us within the Epigraphic Society have actually risked our lives to combat racism, and some of us are part or entirely Indian. This particular charge made hypothetically in defense of isolationism is inappropriate and, at best, a misunderstanding. Any explanation of America's ancient cultural developments that does not take into account some combination of diffusion and indigenous achievements is not in keeping with the way civilizations have arisen everywhere on earth.

In referring to post-1492 European colonization of America, the poet Robert Frost noted, "The land was ours before we were the land's." The isolationism that

characterizes most current archaeological theory is not just an alternative view; it is one, in my mind, that causes misunderstanding and considerable harm to our common cultural heritage. In just one example, reported by Warren Cook, a well-intentioned but incompetent archaeology judgment has resulted in the dispersal and loss of most of the Crespi collection.⁴ Isolationism sometimes results in not reporting or even worse in hiding evidence which supports opposing views. No member of the Epigraphic Society has been allowed to view the Davenport Tablets, much less make detailed studies of them (among others, I telephoned the director's office and went to the museum in Iowa where the tablets are housed but was denied access). Collectors of ancient coins continue to be informed, incorrectly in my view, that all Greek, Roman, and Jewish coins found in American soil and on its beaches are hoaxes or modern losses.⁵ Thus evidence that academia itself may someday come to realize to be of immense value continues to be destroyed through current misunderstanding and bias.

Oral traditions in various American tribes refer to ancestors who arrived by sea. Strangers were sometimes sacrificed, as depicted in the Toltec-Maya mural fragments found at Chichen Itza more than half a century ago and never reported by Mexican archaeologists. Those murals, as von Wuthenau and others have pointed out, depicted an Old World type dragon-boat, with shields attached, and the deaths of white and black strangers. The fact is that new ideas are not easy to come by indigenously; and whether better technology is developed in isolation or by introduction, it has often been attributed to culture-bringers who are honored: Quetzalcoatl, Kukulcan, Wiracocha.

Although diffusion from the Old World to the New World prior to 1492 occurred infrequently within long stretches of local time, its impact was often far out of proportion to its quantity because of the nature of human *conservatism* versus *creativity* (which occurs most frequently when ideas are in tension and conflict). One must understand why and how creation occurs in order to develop balanced accounts that incorporate both local developments and outside influences. The burden for fairness and accuracy lies not simply with those who challenge

prevailing theory, but also with those who hold older, more established views.

In modern times, oceans have been navigated in various directions by hundreds of rigs with one- and two-man crews carrying only a few supplies such as paddles, sails, caulking, and something for catching fish and pressing out their juices. The Atlantic, for example, has been crossed intentionally during this century in kayaks, dugouts, inflatable rafts, reed-bundled boats⁶ (Carter called the Ra II, in admiration, a "floating haystack"), and a stitched animal skin curragh.⁸ Once steered into a prevailing wind and current, only an accident will prevent craft, large or small, from eventually landing on a far-distant shore.

Charles Wolcott Brooks, who served as Japanese consul in San Francisco during the mid-nineteenth century, spent many hours researching the history of Japanese fishing boats ("junks") that had beached on American shores prior to 1850. He was able to document about a hundred such landings—accidental voyages to be sure—and found that in most cases crew members had survived the trip. The Japanese sailors seldom returned home, but rather blended into local Indian populations from Alaska to South America, adding some new words to local languages.⁹

Although a vessel's size has little to do with its seaworthiness, size does affect the movement of large numbers of peoples and goods. Among Barry Fell's important findings through the decipherment of ancient scripts are his identifications and translations that indicate the existence of pottery compass bowls in Liria, Spain, and in New Mexico, both long before Columbus, about a thousand years earlier than any form of compass was previously known to be in use in Europe.¹⁰ Our knowledge of ancient navigation skills, exploits, and supportive techniques and technology is still so limited that, if the early navigators could read our reconstructions, in many cases they would probably have a good laugh—maybe not at Paul Chapman's work,¹¹ but at that of most of us.

Ptolemy IV (221-204 B.C.) had built in Alexandria, Egypt, a twin-hulled catamaran designed to carry marines; it was propelled by four thousand rowers—quite a ship!¹² In 56 B.C. Julius Caesar recorded details of his battle with a

fleet of the Celtic Veneti tribe, off the Atlantic coast of modern France. Caesar wrote that the 220 Celtic ships were considerably larger than his own and more seaworthy.¹³ They were built of heavy oak beams with large iron fittings and employed supple leather sails and iron anchor chains. All in all, the Celtic fleet was much better constructed than Roman ships to withstand the violent Atlantic storms.

It is also worth noting that, in size, Roman merchant ships of the first century A.D. averaged 340 tons unladen. This compares to about 106 tons for Columbus' flagship and 180 tons for the Pilgrims' *Mayflower*. In A.D. 64, when the historian Flavius Josephus sailed across the often stormy Mediterranean Sea to Rome, he was just one of six hundred passengers in the ship—certainly a respectable size even by mid-twentieth-century standards. Grain freighters built to sail only with prevailing winds from Egypt to Rome reached the enormity of 1200 tons unladen, about twelve times the size of the ship that Columbus sailed.¹⁴

Looking westward from America across the Pacific to China, let us next consider another bit of pre-Columbian navigation. Zheng He departed China in A.D. 1430 commanding a fleet of sixty vessels manned by a crew of 27,000 men. His flagship measured 140 meters long (one-and-a-half times the length of a modern football field) and could sail against or with the wind.¹⁵ Such massiveness was not reached again in the known history of navigation until we began to build aircraft carriers in this century. Following visits to Arabia and East Africa, Zheng He returned to China. On one trip his cargo included a live giraffe for the imperial zoo that was recorded in an extant contemporary painting.

Certain cultural parallels between ancient China and Peru suggest Chinese influence in the Cupisnique-Chavin, Moche, Nazca, and Chimu cultures that existed along Peru's coastal desert from about 500 B.C. to A.D. 1400. Numerous nineteenth- and twentieth-century scholars have observed linguistic, epigraphic, artistic, religious-cosmological, and technological parallels suggestive of such influence.¹⁶

Unfortunately, many once-great ancient libraries have been either deliberately or accidentally destroyed and their records lost—including those at Alexandria, Carthage, Merv,

and cities of the Maya. Moreover, as is well known, cartographic information and knowledge of voyages were often well-guarded state secrets in the ancient world, for reasons of military and economic advantage and for the advantage of potential sites for refuge and colonization. What made possible the irregular voyages to and from America on ancient seas? Not compasses, nor ship dimensions and types, for experienced seamen devised many ways to make such crossings. To be sure, there were accidental drift crossings caused by storms—broken rudders and masts, or ships blown far off course. But there was also the daring skill of the navigators, an unending search for wealth in trade, curiosity, and the often desperate desire of passengers to improve their lives.

From my studies, the evidence for ancient, occasional, transoceanic contacts between America and the Old World, including Asia, Polynesia, Africa, and Europe, can be summarized in the following categories:

1. *Languages.* Some languages spoken in pre-Columbian America were as mutually unintelligible as modern Chinese and English. Other languages were related to one another in their structures and vocabularies. During the past decade, Barry Fell has attempted to show that some American and Old World languages were related to each other, especially in cases in which the quantities of shared vocabulary and structure are too great to have been independently invented, or to have developed independently in isolation following a postulated original diffusion thousands of years ago.¹⁷
2. *Epigraphy.* Some Old World scripts have been discovered in America and published prior to being recorded during modern times in the Old World itself, making forgery improbable. For instance, prior to Fell's decipherment of Basque inscriptions found in Pennsylvania, no one knew how to read similar examples preserved in museums in Spain and Portugal. Fell's achievement was confirmed and republished by the world's foremost authority on the etymology of the Basque language (Euskera),

the late Imanol Agire.¹⁸ In addition, during thirty-seven years of exploration in Oklahoma and surrounding states, Gloria Farley has been able to record more than a hundred inscriptions on stone which appear in a variety of Old World scripts.¹⁹

3. *Place Names.* The linguistic roots and meanings of place names have sometimes survived millennia of changing inhabitants and their languages. While this has been pointed out by many scholars, perhaps the most provocative investigation is John Philip Cohane's *The Key*, which shows the phenomenon to be worldwide, including the Americas.²⁰ Cohane's studies indicate an ancient diffusion of word roots and meanings throughout large parts of the Old and New Worlds.
4. *Visual Symbols.* A variety of symbols has been employed, sometimes erratically, with common meanings throughout much of the ancient world, including America. Some symbols of the phosphene type—that is, caused to appear without light and induced by either pressure on the eyeballs, a blow to the head, drugs, or electricity—may be in our genetic makeup or irresistibly suggested by their universal appearance in nature, such as circles, concentrics, spirals. But what about symbols as complicated and specific as classical labyrinths? Labyrinths have not appeared universally in time or space, nor are they phosphene-elicited or found naturally. Yet they were used in areas of both ancient Europe and pre-Columbian America.²¹
5. *Artistic Styles.* Styles lacking universal application but traceable in geographical regions through certain parts of the Old and the New World may also suggest migration. Andreas Lommel focused on the "X-ray Style" in art and came to such conclusions.²² Chinese characteristics, including what appear to be written script characters, have been found in Peru's ancient Nazca and Chimu cultures.²³ Further, some Moche pottery from Peru's

north coast depicts physical features, tattooing, and clothing typical of certain North African Berbers, and a few depict Negroid facial features. One Tiwanaku (Tiahuanaco) pot contains an inscription referring to North Africa in the early period of the common era.²⁴ Ivan Van Sertima's *They Came Before Columbus* discusses possible African presence in ancient America, based partly on artistic styles and features.²⁵

6. *Technologies*. Serious questions arise concerning unusual, difficult techniques, as in smelting, soldering, and gold working, which involve steps not easy to discover and not universally employed. For instance, how can their developmental stages be discerned and where do they appear to have been fully developed? Paul Tolstoy detailed 121 traits in manufacturing bark cloth and bark paper in Southeast Asia and Mesoamerica and concluded that the technology must have diffused from the Celebes to America.²⁶
7. *Religious Rituals*. Numerous authors have been struck by significant similarities between particular American and Old World ceremonies. Some similarities in ritual, belief, iconography, and rank symbols express universal human psychological factors. But when considered with other categories here enumerated, these comparisons may also support contact rather than isolated parallelism. For example, Joseph Mahan has provocatively traced seeming connections with Asia in the earth-sky symbolism of America's Yuchis.²⁷
8. *Belief Systems*. Ancient mythologies shared generally an underlying basis in a common astronomy and cosmology. It is perhaps of importance that art historians and mythologists have tended to understand this better than archaeologists. Different in conception but interesting in their conclusions are de Santillana and von Dechend's *Hamlet's Mill* and Joseph Campbell's *The Way of Animal Powers*.²⁸ Although not concerned with bridging

hemispheres, Marija Gimbutas provides a rare bridging between archaeology and mythology.²⁹

9. *Native American Traditions*. Most tribes once had traditions about both their own origins and peoples who appeared in their midst. At times the traditions were couched in mythology and sometimes they consisted of straight oral history. While occasionally such records have been maintained to the present, they were generally recorded by sixteenth- to eighteenth-century explorers and scholars, or even in the late nineteenth- and early twentieth-century volumes of the American Bureau of Ethnology of the Smithsonian Institution. Examples are numerous. I used an early Spanish account of Inca oral traditions about writing in the pre-Inca Andes to shed some light on this curious problem.³⁰
10. *Old World Sagas and Histories Referring to Travel to America*. Apparent trips to America have been recorded in Viking sagas such as *Hauksbok* and *Eyrbyggja* (c. A.D. 1250), by the Greek historians Plutarch and Diodorus Siculus, in several Chinese documents, and in medieval European accounts of voyages by Ireland's Saint Brendan, the Welsh Prince Madoc, and the Scotsman Henry Sinclair. Artifacts have been found in America that accord with each of these accounts. Barry Fell also deciphered an engraving *in situ* on a large cliff face at Figuig, Morocco, that told of a fifth-century Moroccan emigration.³¹
11. *Explorer and Colonial Accounts of Americans When First Encountered*. Christopher Columbus wrote on the sixth day of his first arrival in America, referring to his crew: "They found a man who had in his nose a piece of gold, which might have been half the size of a castellano, on which they saw letters. I was angry with them because they had not bargained for it and given whatever might be asked in order that it might be examined and seen what money it was, and they replied to

me that they had not dared to bargain for it.”³² One well-known historian mistranslated this passage to make Columbus’s note accord with the modern bias that the hundreds of ancient coins found in America, even those deeply embedded in the soil, are modern losses or hoaxes.³³

12. *Comparative Anatomy.* Balboa and other early explorers in America referred to scattered groups of white Indians and black Indians and to traditions of pygmies, in fact, peoples of just about every type. Mexico’s art historian Alexander von Wuthenau offers explicit photographic documentation, in the pottery and carvings of Mesoamerican and South American pre-Columbian artists, of all the races and virtually every known physical type.³⁴ While old charts of group gene frequencies in blood types are now known to be virtually useless when employed without caution about selectivity and changes through the influences of diseases, studies of earwax and other body chemistries are promising.
13. *Animal Dispersions.* George Carter has shown that ancient American chickens are the domesticated descendants of a Southeast Asian pheasant.³⁵ In both Asia and America, where pre-Columbian tradition has been maintained, chickens have been kept primarily for their feathers and to be used as sacrifices. The Greeks were the first to begin to raise them for eating and for their eggs. Significantly, Asian fowl types and names have been maintained in South America, and Japanese names are used among the Tarahumara of western Mexico. Another curiosity suggesting migration is that hairless dogs were eaten and castrated in both Mexico and China. The *alqo*,³⁶ an almost extinct, nearly hairless dog, is still raised on boiled sweet potatoes in coastal Peru.
14. *Plant Dispersions.* Let us ask several specific questions that will make the point about diffusion

of cultures. How and when did the Old World bottle gourd (*Lagenaria siceraria*), used for containers, become America's first domesticated plant without known wild ancestors in America?³⁷ Did coconut palms and plantains arrive in America without human assistance? Did American peanuts make it to China by 2000 B.C. by some means other than human craft? Under what circumstances did strains of cotton grown in Mexico (hybrid 26-chromosome *Gossypium hirsutum*) and Peru (hybrid 26-chromosome *Gossypium barbadense*) each develop from 13-chromosome wild cottons in Polynesia and America?³⁸ How is it that American pineapples are depicted in a Pompei fresco buried since A.D. 79.³⁹ Maize, an American plant, is reported to have been growing in West Africa and Asia (Assam, Philippines) when the first Europeans arrived.⁴⁰ Also, as Professor Carter has long pointed out, one does not independently invent sweet potatoes and chickens.⁴¹

15. *Disease and Immunology.* Questions of parasite transmittal, contagion, immunity, and even the presence of certain diseases in the Old and the New World need further study and should cast some light on the issue of human contacts. At present, we would not be able to detect through archaeology the known effects of devastating plagues without historical records about them. When have plagues occurred for which we lack historical records? What were they? Why did they occur? How long and under what circumstances does general resistance to disease last in a population? Two human hookworm species that supposedly could not survive a slow land migration through Arctic regions are found in certain American Indians and in China and Japan; one of them is not present in Polynesia.⁴² How are we to explain this?
16. *Comparisons of Old and New World Artifacts.* When Old and New World artifacts are virtually identical, are complex in their nature, and have

been chosen from workable alternatives but not universally so, then diffusion is suggested and the burden of counterproof logically lies with those who would insist upon independent invention. South American and Solomon Island panpipes almost identical in tone, pitch, and shape are a case in point. Pachisi, a board game of India, and Aztec patolli are another such case.⁴³ The list could go on, including flat and cylinder stamps, trumpets, flutes, and so forth.

17. *Old World Artifacts Found in America.* I have four coins of the Roman emperor Hadrian (A.D. 117-138) acquired from workers who found them several feet below the ground's surface in Los Llanos, Dominican Republic, while excavating a building foundation. Hundreds of Old World coins have been and continue to be found in America, few reported, some modern losses or frauds, but many recovered under circumstances that indicate their presence in America before 1492 (as Columbus himself was the first to report, see above item no. 11). This is also true of Old World pottery, tools, and figurines, ranging in date from the Neolithic period to A.D. 1500.⁴⁴
18. *American Materials in the Old World.* This category of potential evidence exists at present only minimally, for who is looking? A breakthrough may eventually occur with the analysis of the sources of raw materials, such as copper in bronze, and gold, when significant testing of Old World museum collections becomes possible. New findings of deep sea wrecks may be important. The archaic "lunate knife" may have been dispersed to Europe and to the Eskimos (as the ulu form) after its initial development in the Northeast.⁴⁵
19. *Ancient Maps, Math, Astronomy.* Of course, the great libraries of Alexandria, Carthage, and Iberia, of Central and Southeast Asia, of the Mayas and Aztecs, were destroyed. But the spherical shape of the earth, its approximate diameter, and systems of

latitude and longitude were once known and used to some extent from Europe to China, before being lost and later rediscovered.⁴⁶ The Piri Reis map raises the possibility of the existence of ancient cartography.⁴⁷

20. *Cultures at Times of Basic Changes*. This point constitutes a focusing of all categories. The archaeological record (as with the broader fossil record of species) indicates that isolated communities tend to be conservative and retentive. My unpublished study of the 5,000-year sequence of pottery lamps in the Holy Land was my own initial data bank for demonstrating this principle. Others who have studied long artifactual sequences have agreed independently with its validity. Even fossil languages and pronunciations tend to be preserved in isolated pockets after disappearance in mainline areas (e.g., Jukta in Surinam, Gullah in South Carolina, Elizabethan English on islands off Virginia and the Carolinas). Significant changes and creative developments are stimulated by environmental alterations and cultural interactions. Reasons for change require explanation; they do not just happen.

It is a social scientist's dream to have a whole geographical hemisphere where peoples developed for thousands of years in virtual isolation from the rest of the world. This hypothetical laboratory simply did not exist in America. The illusions of the hypothesis itself have been challenged by the evidence of many fields: epigraphy, art history, bibliographic archives, archaeology, comparative mythology and symbolism. The shame is that the response formulated thus far to these challenges has generally been less than scientific. Some have turned the isolationist hypothesis into an article of faith, a dogma defended through neglect of counter-evidence or with scorn, derision, and mischaracterization.⁴⁸

When a scientific approach comes to prevail, the issue will not be between diffusion and isolation, nor will it be decided by the continued use of a model so restrictive as to exclude and misinterpret relevant data. The issue,

rather, will be, What took place, when, and how much change resulted from which kinds of diffusion and indigenous creation? Regrettably, that day has not yet dawned; American archaeology remains committed to an isolationist model destructive of certain anomalous facts. The case for diffusion will continue to be made in a focused, lopsided way until the case itself is incorporated into a prevailing theory.

In the meantime, it might be helpful to define “Indians” as any peoples who lived in America or whose ancestors lived in America before 1492. That definition is broad enough to include immigrants before 1492 from any part of the world at any time, arriving by foot or by boat. And who are “Americans”? Simply those who are now here, no matter when they or their ancestors arrived. The injustices of the past—including the dispossession of native Americans from their lands and values, the importation of African slaves, and the combined genocides and oppressions that earlier institutions caused—can never be rectified, but they can be resolved.

The American petroglyphs, fading messages left by people here long ago, bring again to mind Frost’s perception: “The land was ours before we were the land’s.” Perhaps it is the Choctaw part in me reaching out. If so, then who were the distant ancestors of the Choctaw? And why could they not get along better with those Greek-like Muskogees? Native Americans have long known what it means to be observed and misunderstood, then catalogued, by academics mostly concerned with advancing the cause of their own careers and reputations. Why not treat native Americans and their ancestors as something other than specimens? If and when that challenge is taken up seriously within academic halls, it will have to be acknowledged that the Indian peoples of America have never espoused the concept of isolationism, neither in their lives nor in their oral histories.

Frost spoke also to the English, Irish, and Scottish parts in me: “The land was ours before we were the land’s.” In the natural beauty of America’s canyons, plains, forests, mountains, and rivers, the disinherited once viewed these features as sacred: the land keeps reaching out to claim us

for its own. It is my hope that this discussion will help to reestablish some of the intrinsic unity between past and present upon which good futures are constructed.

Notes

1. Barry Fell, *Saga America* (New York: Times Books, 1980), p. 299.
2. Alice B. Kehoe, "A Hypothesis on the Origin of Northeastern American Pottery," *Southwest Journal of Anthropology* 18 (1962): 20-29; cf. her "Small Boats Upon the North Atlantic," in *Man Across the Sea*, ed. C. Riley et al. (Austin: University of Texas Press, 1971), pp. 287-88.
3. Betty Jane Meggers, Clifford Evans, and Emilio Estrada, *Early Formative Period of Coastal Ecuador* (Washington: Smithsonian Institution, 1965); see especially pp. 158-72.
4. Warren Cook, "The Crespi Collection of Cuenca, Ecuador," *Epigraphic Society Occasional Publications* (hereafter *ESOP*) 11, no. 272 (1983), pp. 216-30.
5. For this view on coins, see Jeremiah F. Epstein, "Pre-Columbian Old World Coins in America: An Examination of the Evidence," *Current Anthropology* 21, no. 1 (Feb. 1980), pp. 1-19.
6. Robert A. Kennedy, "A Transatlantic Stimulus Hypothesis for Mesoamerica and the Caribbean, circa 3500-2000 B.C." in *Man Across the Sea*, pp. 266-74; cf. Alice B. Kehoe, "Small Boats Upon the North Atlantic," in *Man Across the Sea*, pp. 275-92; also Clinton R. Edwards, "Commentary: Section II," in *Man Across the Sea*, pp. 293-305.
7. See George Carter, "Before Columbus," in this volume.
8. Timothy Severin, *The Brendan Voyage* (New York: Avon, 1979) and "The Voyage of the 'Brendan'," *National Geographic*, 152 December 1977, pp. 770-97.
9. Hubert Howe Bancroft, *The Native Races of the Pacific States of North America*, in *Bancroft's Works* in 39 vols, vol. 5 (San Francisco: Bancroft & Co., 1883), p. 52: "There have been a great many instances of Japanese junks drifting upon the American coast, many of them after having floated helplessly about for many months. Mr. Brooks gives forty-one particular instances of such wrecks, beginning in 1782, twenty-eight of which date since 1850. Only twelve of the whole number were deserted. . . . The author of the paper assures me that he has records of over one hundred such disasters." Bancroft referenced the *San Francisco Evening Bulletin* of March 2, 1875. Schuyler Camman, emeritus University of Pennsylvania art historian and authority on Asian mythology and symbols, supplied me with the following additional reference: Charles W. Brooks,

"Reports of Japanese Vessels Wrecked in the North Pacific," *Proceedings of the California Academy of Science* 6 (1875):50-66; see especially p. 62. Alex Patterson of the Epigraphic Society pursued the matter for me a bit further and discovered an 1876 reprint of the academy's proceedings with another paper Brooks read before it March 15, 1875, entitled "Early Maritime Intercourse of Ancient Western Nations Before the Christian Era."

10. Barry Fell, "Ancient Iberian Magnetic Compass Dials from Liria, Spain," *ESOP* 3, no. 57 (1976); "Additional Lirian Compass Dial Inscriptions from Spain and New Mexico," *ESOP* 7, no. 142 (1979).

11. Paul Chapman, *The Man Who Led Columbus to America* (Atlanta, Ga.: Judson Press, 1973) and *The Norse Discovery of America* (Atlanta, Ga.: One Candle Press, 1981). The latter is an up-to-date discussion of Viking sagas and other sources relating to the Viking discovery of America.

12. Vernard Foley and Werner Soedel, "Ancient Oared Warships," *Scientific American*, April 1981, pp. 148-63, especially 160-61.

13. Julius Caesar, *Commentaries* 3:13-16.

14. Discussed comparatively by Wake Forest University historian Cyclone Covey in *Calalus* (New York: Vantage Press, 1975), pp. 1-3. For more basic references see Lionel Casson's *The Ancient Mariners* (New York: Macmillan, 1959) and *The Ships and Seamanship in the Ancient Mariners' World* (Princeton, N.J.: Princeton University Press, 1971). Also Willard Bascom's *Deep Water, Ancient Ships* (New York: Doubleday, 1976).

15. The exhibition catalog *China: 7000 Years of Discovery* (Toronto, 1982), pp. 8-9, discusses Zheng He's seven voyages into the western oceans 1405-1433, and shows a photograph of a model of his flagship and a map of his routes. The exhibition itself, which I visited twice in the summer of 1985 at Boston's Museum of Science, was outstanding. Unfortunately, but characteristic of a line of modern thinking about ancient navigation, the catalog text ends its discussion of Zheng He's achievements with this unwarranted assumption (demonstrably erroneous for numerous ancient voyages): "None of these triumphs of navigation would have been possible without the compass which had been invented in China."

16. See George Carter's good summary, "Chinese Contacts with America," *Anthropological Journal of Canada* 14, no. 1 (1976), pp. 10-24; Joseph Needham, *Science and Civilization in China*, vol. 4 (Cambridge, Mass.: Cambridge University Press, 1971, Part III, esp. pp. 540-43; R. A. Jairazbhoy, *Ancient Egyptians and Chinese in America* (Totowa, N.J.: Rowman and Littlefield, 1974); Paul Shao, *Asiatic Influences in Pre-Columbian American Art* (Ames, Ia.: Iowa State University Press, 1976); and recently deceased Henriette Merz's more speculative *Pale Ink: Two Ancient Records of Chinese Exploration in America* (Chicago: Swallow Press, 1953; revised 1972).

17. Barry Fell, *America B.C.* (New York: Quadrangle/New York

Times Books, 1977); *Saga America* (New York: New York Times Books, 1980) see, for example, pp. 398-406; *Bronze Age America* (Boston: Little, Brown, 1982); see, for instance, pp. 85-66, 288-89.

18. Imanol Agire, "The Origin of Writing and Language," *ESOP* 9, no. 211 (1981), particularly p. 47.

19. See, for example, Gloria Farley, "Inscriptions from Mid-America," *ESOP* 3, no. 69 (1976), pp. 1-10.

20. John Philip Cohane, *The Key* (New York: Crown, 1969).

21. Clyde Keeler, "Tree of Life and Labyrinth," *ESOP* 5, no. 107 (1977); Norman Totten, "The Eye of God and the Agricultural Grid," *ESOP* 4, no. 86 (1977). Classic labyrinths, dating 1500 B.C. to A.D. 1500, have been preserved in stone, clay, and metal in Greece, Italy, North Africa, England, Ireland, Scandinavia, France, Arizona, and Peru—but were apparently never used in most places on earth.

22. Andreas Lommel, *Prehistoric and Primitive Man* (London and New York: Paul Hamlyn/McGraw Hill, 1966); see, for example, pp. 5-7, 30-32, 71.

23. See Carter's "Chinese Contacts" referred to in note 16, in which article he illustrates several characters.

24. My article dealing with some of this material, provisionally titled "King Juba Remembered," is to appear in the forthcoming volume 16 of *The Epigraphic Society Occasional Publications*.

25. Ivan Van Sertima, *They Came Before Columbus* (New York: Random House, 1976), pp. xiii, 188-89, 249-50.

26. Paul Tolstoy, "Cultural Parallels Between Southeast Asia and Mesoamerica in the Manufacture of Bark Cloth," *Transactions of the New York Academy of Science* 25, ser. 2 (1963), pp. 646-62.

27. Joseph B. Mahan, *The Secret* (Columbus, Ga.: published by the author, 1983).

28. Giorgio de Santillana and Hertha von Dechend, *Hamlet's Mill* (Boston: Godine, 1940, 1969; 1971 reprint); Joseph Campbell, *The Way of Animal Powers* (New York: A. van der Marck; San Francisco: Harper and Row, 1983).

29. Marija Gimbutas, *The Goddesses and Gods of Old Europe* (Berkeley: University of California Press, 1982), previously published by Berkeley as *The Gods and Goddesses of Old Europe 7000-3500 B.C.* (1974).

30. Norman Totten, "Documentary Evidence for Writing in the Pre-Inca Andes," *ESOP* 13 (1985): 63-66.

31. Barry Fell, "A Fifth Century Moroccan Emigration to North America," *ESOP* 3, no. 46 (1976). I began but have never completed a commentary on Greek sources for ancient voyages to America and artifacts that appear to corroborate them. Plutarch's account, for example, can be found in Greek and Latin texts as chapter 26 of *Plutarchi*

Chaeronesis Scripta Moralia, vol. 2 (Paris, 1841), pp. 1151-53. Most medieval accounts of voyages exist in a variety of manuscript versions summarized in part by Frederick J. Pohl, *Atlantic Crossings Before Columbus* (New York: W. W. Norton, 1961).

32. Christopher Columbus, *Journal*, Hakluyt Society Extra Series, no. 38 (London: Hakluyt Society, 1960), p. 36.

33. No metal coinage is known to have been made in America prior to the May 11, 1535, decree of Doña Juana de Castilla, la Loca ("the mad"), authorizing the minting of silver and copper coins in Mexico. The Spanish silver "real" was a medieval version of the gros denier (grosso, groschen, groat), the principal coin of Europe after its introduction in 1266. Small change was provided by the copper quarto (four maravedies, tariffed at 34 maravedies to one real). Quartos were minted in Mexico City 1536-42, when copper coins were discontinued until 1814, as the Aztecs considered them worthless. A second mint at Santo Domingo, Dominican Republic, had a much longer history of copper coinage beginning in 1544. Miguel Muñoz, "The Mexico Mint," *The Numismatist*, May 1985, pp. 882-92; Miguel Gómez, *Monedas Dominicanas* (Santo Domingo, 1979).

34. Alexander von Wuthenau, *Unexpected Faces in Ancient America* (New York: Crown, 1975); see, for example, pp. 131, 156, 162, 186, 196-97, 209-14.

35. George Carter, "Pre-Columbian Chickens in America," in *Man Across the Sea*, pp. 178-218.

36. I observed and photographed this rare breed at a place near Lima on two different trips to Peru. In an effort to prevent its extinction, the family has been divided now to two locations. Many pots from the Colima culture of western Mexico depict a pot-bellied, nearly hairless dog raised for food. In the Nahuatl language of the Aztecs it was called *techichi* ("stone dog") because of its appearance.

37. Thomas W. Whitaker, "Endemism and Pre-Columbian Migration of the Bottle Gourd, *Lagenaria siceraria*," in *Man Across the Sea*, pp. 320-27. Indigenous to tropical Africa, the bottle gourd was found with beans in Spirit Cave, Thailand, perhaps 6000 B.C. Its presence in America is attested for certain at Huaca Prieta, Peru, by 3000 B.C., but possibly earlier in Mesoamerica.

38. J. B. Hutchinson, B. A. Silow, and S. G. Stephens, *The Evolution of Gossypium* (Oxford: Oxford University Press, 1947).

39. Domenico Casella, "La frutta nelle printure Pompeiana" *Pompeiane: Racolta di studi per il secondo centeraria degli scavii di Pompei*, (Napoli: Graetaur Marchiaroli, 1950), pp. 355-86.

40. C. R. Stonor and Edgar Anderson, "Maize Among the Hill Peoples of Assam," *Annals of the Missouri Botannical Garden* 36 no. 3 (1949): 355-405; W. R. Stanton and Frank Willett, "Archaeological Evidence for Changes in Maize Type in West Africa: an Experiment in Technique," paper 150, 63 (1963): 117-23. M. D. W. Jeffreys, "Pre-Columbian Maize in Southern Africa," *Nature* 215 (1967): 695-97.

41. George F. Carter, "Movement of People and Ideas Across the Pacific," in *Plants and the Migrations of Pacific Peoples*, ed. Jacques Barrau (Honolulu: Bishop Museum Press, 1963), pp. 7-22.

42. S. T. Darling, "Observations on the Geographical and Ethnological Distribution of Hookworms," *Parasitology* 12 (1920): 217-33.

43. Edward Burnett Tylor pointed out the patolli-pachisi correspondence in "On the Game of Patolli in Ancient Mexico and Its Probable Asiatic Origin," *Journal of the Anthropological Institute of Great Britain and Ireland* 8 (1878):116-31 (now the *Journal of the Royal Anthropological Institute of Great Britain and Ireland*; and again in "On American Lot-Games as Evidence of Asiatic Intercourse Before the Time of Columbus," *Internationales Archiv für Ethnographie*, Suppl. zu Bd. IX (Leiden: E. J. Brill, 1896), pp. 55-67 and plate 5.

44. I have not yet formally reported the Dominican coin find, but they are from North African mints and in too poor condition to be considered collectors' pieces. Of the many sources reporting Old World artifacts found in America, the most accessible would probably be Barry Fell's books *America B.C.*, *Saga America*, and *Bronze Age America* (see note 17).

45. I have listed this category because of its potential importance; in part, it can become meaningful as appropriate technologies are developed. In her article dealing primarily with European origins for the earliest pottery in the U.S. Northeast, Alice B. Kehoe noted in conclusion: "Conversely, the earlier use of ground slate knives in America implies a trans-oceanic origin for the slate implements appearing in Europe." See "Small Boats Upon the North Atlantic," in *Man Across the Sea*, p. 292. Perhaps a detailed, comparative study has since been published, but I am unaware of one. I have several ground slate tools of the early part of the Late Archaic period, about 3000-2000 B.C., from New England: a "Red Paint" culture spearpoint from Maine, a Laurentian-Brewerton tradition gouge from New Hampshire, and three ulus of the same phase from Connecticut. A flint spearpoint, ritually "killed" (broken at burial) from Danbury, Connecticut, dating perhaps 6500 B.C. (Early Archaic), is as fine as any I have ever seen anywhere on earth, indicating to me an extraordinary level of artistry from some culture in that area, as yet archaeologically unexplained. Much work remains to be done in comparing Old and New World artifacts and their chronologies.

46. Original documentation for this statement would be quite extensive, but perhaps more important are the reasons for discovery, loss, and rediscovery-plus. The most provocative essay I have read on this, focused on astronomy, was Arthur Koestler's *The Sleepwalkers* (New York: Macmillan, 1959).

47. Charles Hapgood, *Maps of the Ancient Sea Kings*, rev. ed. (New York: Dutton, 1979).

48. My defense of Barry Fell's research in North American epigraphy against abusive, incorrect, emotional critics (such as Daniel, Cole, Davies, and McKusick) is a point by point documented refutation: "Epigraphic Research in America: Reply to Archeologists' Denunciations," *ESOP* 9 (1981): 71-115.