

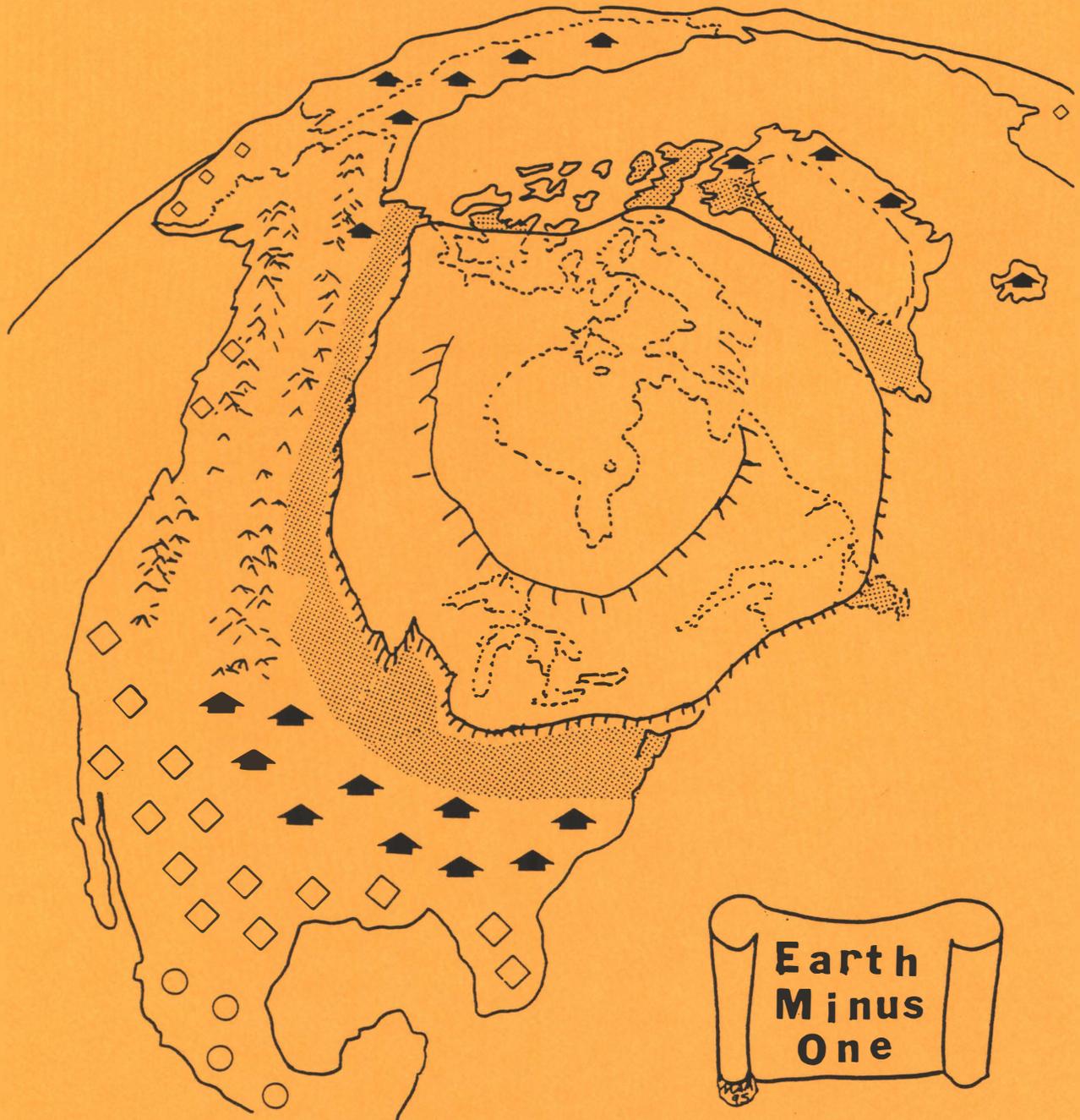
WONDERS

Seeking the Truth in a Universe of Mysteries

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WONDERS

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EDITORIAL

THE SCIENTIFIC TREE-HOUSE

Recently the *New York Times* reported on a gathering of "200 worried scientists, doctors, philosophers, educators, and thinkers" who had a three-day meeting complaining about the current "flight from reason." They feel science is under attack. Alternatives to the current scientific tunnel vision were all under attack at their meeting. Included were such topics as reincarnation and alien abduction. One worried doctor from Radcliffe College cited these very topics and warned, "They help to break down the standards of reason, and that can lead to such vicious doctrines as Aryan theories of race, and Lysenkoism." One person from the audience summed up the gathering well. He rose and said, "This is not an objective platform, and I've heard nothing but vituperation from the scientific power structure trying to reinforce its own image."

Virtually at the same time the *New Yorker* was reporting on one of the reasons science is viewed with suspicion today. Journalist Douglas Preston wrote a long piece in the 12 June issue about the career of archaeologist Frank Hibben. His famous finds at Sandia Cave and other of his reported findings have been under suspicion for a long time. From all the testimony in the article the picture looks very bad for Dr. Hibben. The truth should be determined by more than the work of one journalist. But there lies the problem. The field appears to be incapable of dealing with such charges and setting the record straight.

The view of the scientific establishment as a disciplined, self-correcting, and meticulous group of adults is sadly off the mark.

The scientific establishment resembles a tree-house filled with children pretending to be something they are not. Who is in charge depends upon who is the oldest. The tree-house becomes what ever they want it to be, a ship at sea, a rocket to Mars, or a scientific laboratory. While everything is supposed to be run by the book in an orderly fashion in fact they are making up the rules as they go along.

THE MANY PLANETS "EARTH"

by Mark A. Hall

"Albert Einstein lent his support to the hypothesis that ice accumulation in Antarctica sometimes causes the earth's crust to slip around the planet's interior, setting life on new evolutionary paths."

-- Walter Sullivan
New York Times, 2 May 1995

We are survivors on a restless planet that regularly bucks and jolts, leaving its inhabitants to scramble to adjust to new climatic regimes. Out of this stern geological pattern has come a series of lively and vigorous planets. Nature abhors a vacuum and tenacious forms of life seek out and adapt to all land and water environments. Plant and animal life are abundant and diverse on each new "Earth."

How prehistory has delivered up our planet and the ones before our era is a story still barely perceived. We have yet to sort out the magnificent jumble of rocks, fossils, and survivors to see clearly the outline of events that have nurtured us.

Walter Sullivan, science writer for the New York Times, recently made reference to the hypothesis of a shifting crust for the planet Earth. This is the geological idea that causes us to consider the past existence of distinctive "Earths." In this view of the past the present is the key to the past. The pattern of climate and vegetation in the past was like what we see today. Moderate polar regions, tundra, forests, plains, deserts, and tropical realms were all there in succession from the poles to the equator. The fundamental change among the "Earths" is that the thin outer crust of continents and ocean bottoms moves somewhat upon the next layer of our planet's interior. With the necessary accommodations in ocean currents and weather patterns the result of a crustal shift is a whole new Earth.

This hypothesis serves to answer many mysteries surrounding the so-called "ice ages." Ice ages were postulated in error because the evidence for the most recent shifts is fresh upon the landscape.

The shifting of the crust is an old idea that was revived in 1958 by James Campbell and Charles Hapgood in **Earth's Shifting Crust**. [1] Hapgood refined their views in a second edition in 1970 titled **The Path of the Pole**. [2] Further consideration caused him to abandon the idea that ice accumulation in Antarctica was the trigger for a shift. The cause, which appears to be periodic and not random, is still unknown. The proposed sequence of shifts, however, continues to hold up as the best comprehensive explanation of observable facts.

Albert Einstein wrote in a foreword to **Earth's Shifting Crust**:

I think that this rather astonishing, even fascinating, idea deserves the serious attention of anyone who concerns himself with the theory of the earth's development. [3]

In a foreword to **The Path of the Pole** a geologist, F. N. Earll, made this appeal:

The plain fact is that the logic of all previous theories of the earth's deformation is so obviously contrived, the holes so gaping, that one is inclined to suspect that danger lurks there for the unwary. Now at last in Hapgood and Campbell's theory, actually a coalition of several older and poorly enunciated ideas, we find the first outwardly reasonable explanation of the observed facts in several geological fields. Now I ask -- no, I implore -- my colleagues, those most competent to assume the task, to attack this theory with the weapons of well-documented proof. Or, failing this, let them build upon it to a better, clearer understanding of the forces that have deformed this planet we live upon. [4]

His request appears to have fallen on deaf ears. Less notice was taken of the revised work than the original. Nevertheless, the accumulation of facts about Earth's prehistory seems to be heading toward an explanation that includes the shifting of its crust.

To understand this hypothesis it is crucial to see that we are talking about sliding the thin outer shell of continents and oceans upon the much greater mass of the planet. The axis of rotation does not change. The bulk of the planet's mass remains stable and does not move. The poles do not move, despite the frequent references to the "moving of the poles" when describing this hypothesis. The North and South Poles remain at the ends of the axis of rotation. What does change is which part of the crust is present in a particular polar region. Presently the Arctic Ocean is in the area of the North Pole. Twenty thousand years ago it appears that Hudson Bay was in that region. Over a period of some thousands of years -- with possibly rapid shifts as part of the transition -- the crust shifted and is now stabilized with an ocean at the pole. The ice cap at Hudson Bay collapsed and an ice raft formed at the "new pole." This is the kind of shift that appears to have happened about every thirty thousand years going back many millennia.

Recent shifts are the most clearly evident. Hapgood found the following pole positions suggested:

I have found evidence of three different positions of the North Pole in recent time. During the last glaciation in North America the pole appears to have stood in Hudson Bay, approximately in Latitude 60° North and Longitude 83° West. It seems to have shifted its present site in the middle of the Arctic Ocean in a gradual motion that began 18,000 or 17,000 years ago and was completed by about 12,000 year ago.

The radioactive dating methods further suggest that the pole came to Hudson Bay about 50,000 years ago, having been located before that time in the Greenland Sea, approximately in Latitude 73° North and Longitude 10° East. Thirty thousand years earlier the pole may have been in the Yukon District of Canada. [5]

Figure 1 shows the three polar sites in addition to the present site. Again, the planet is not shifting or turning its aspect in the heavens. A thin layer of crust is shifting which changes the

relationships of our familiar reference points, the continents, to the North and South Poles. Subsidence and emergence of coast lines, changes in drainage patterns and lakes, and adjustments in weather and vegetation would have drastically altered the appearances of the continents after each shift. Figure 1 cannot illustrate such changes because we have only begun to sort out the appearances of previous "Earths." The present day is labeled "Earth Zero." The previous states of the planet are labeled "Earth Minus One," "...Minus Two," (Earth-1, Earth-2), and so on.

The position of the South Pole naturally changed correspondingly with each shifting of the crust. During "Earth Minus One" (50,000 to 17,000 years ago) the South Pole would have been 60° South Latitude and 97° East Longitude on today's globe. Hapgood illustrates the other South Polar positions in **Path of the Pole**. [6]

Recently revealed evidence of the periodic shedding of ice from Antarctica was debated in 1995. [7] Such events are an expected consequence of crustal shifts. Hapgood was able to cite evidence of an unglaciated Ross Sea in Antarctica during Earth-1. [8]

The Path of the Pole contains scientific citations in support of Hapgood's development of the hypothesis. Hapgood looks at the drift of the continents, the well-known failure to explain the "ice ages" proposed to describe the recent past, and the need to explain remarkable changes in climate. He finds support for the past polar positions just described.

For example, parts of the Canadian Archipelago were ice-free when North America was burdened with ice during Earth-1. Those islands were distant enough from the true pole at the time that they were not cold enough to be iced-over.

Following the publication of **Path of the Pole** in 1970 I looked in vain for reviews and critical responses to the book. I found only a small notice in **Science Digest**. I have been told that Hapgood's presentations have been better received in Europe than in America, but I have no way to gauge the truth of this.

I find what appears to be an oblique reference to the shifting crust hypothesis in Bjorn Kurten's **The Ice Age**. He cites a theory on "reshuffling parts of the earth's crust."

But the fact that continents have moved in geological time does not mean that they can careen about freely. Mountain chains on the earth's crust have extremely deep roots thrust far down into the mantle of the earth. The underside of the crust is thus much more uneven than the upper, anchoring the continents firmly to their substratum. [9]

The hypothesis considered here does not deal with moving "parts" of the crust but the whole crust, oceans, continents, and all. The hypothesis is suggesting that the roots of mountain chains are not sufficient to prohibit such a periodic movement.

Various writers have taken note of the idea of a shifting crust (such as Lester del Rey in **The Mysterious Earth** [1960], A.J. Wraight in **Our Dynamic World** [1966], and Francois Derrey in **Our Unknown Earth** [1964, 1967]). John White gave it a chapter in **Poleshift**. [10] He penned a follow-up in **Frontiers of Science**. [11]

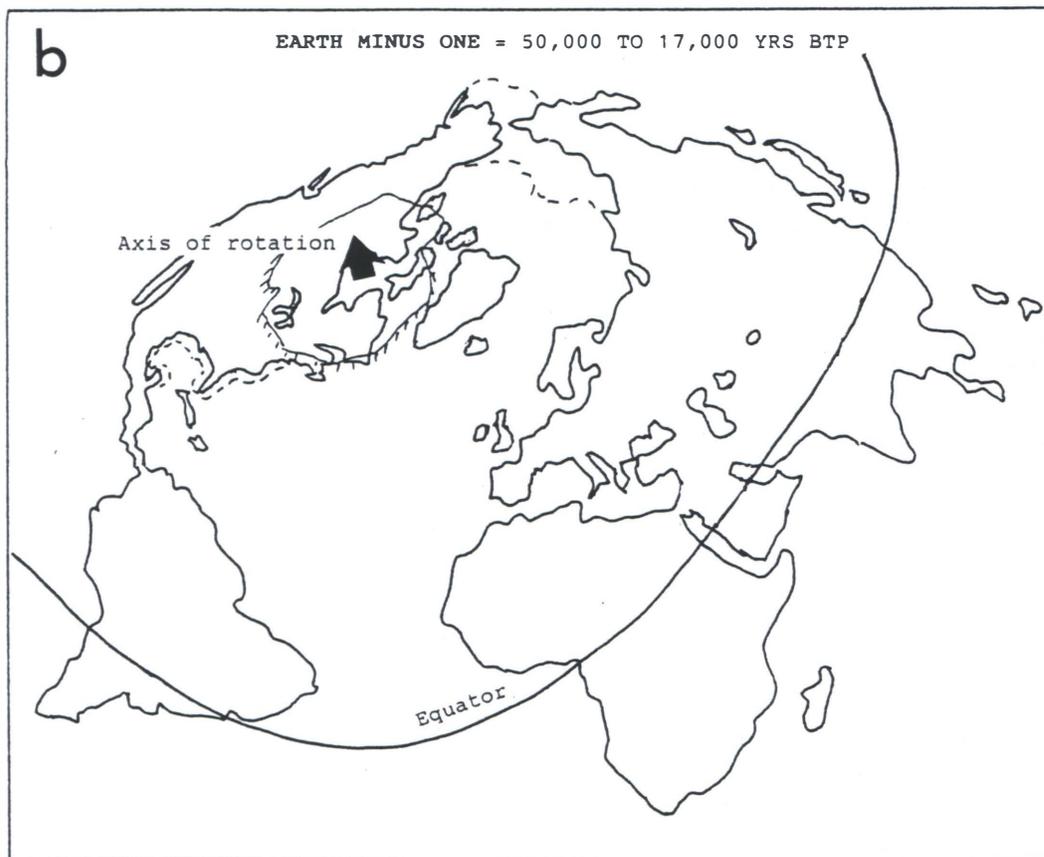
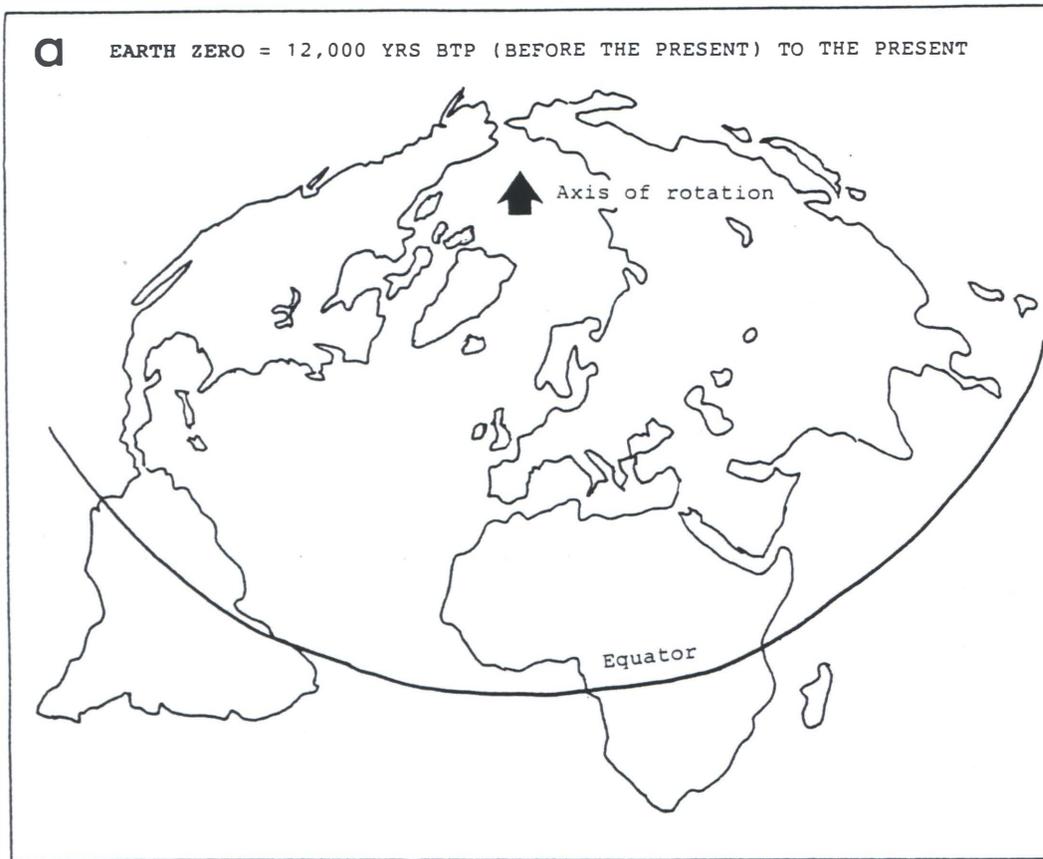
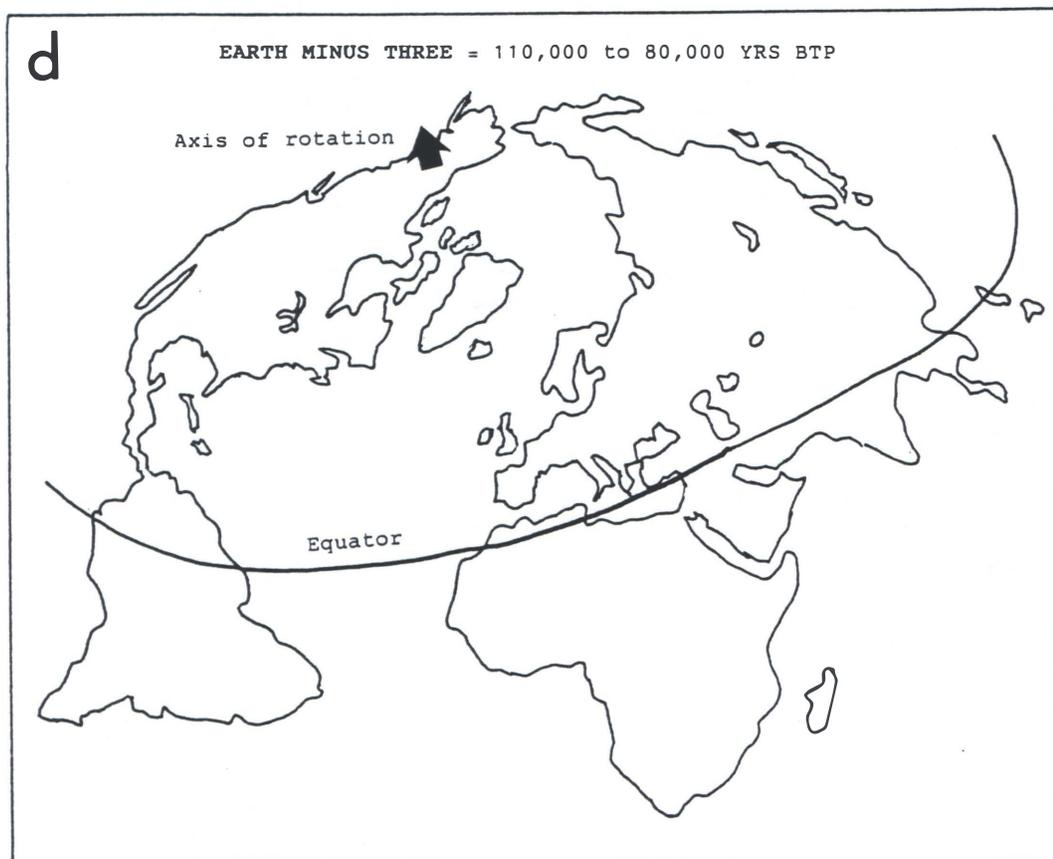
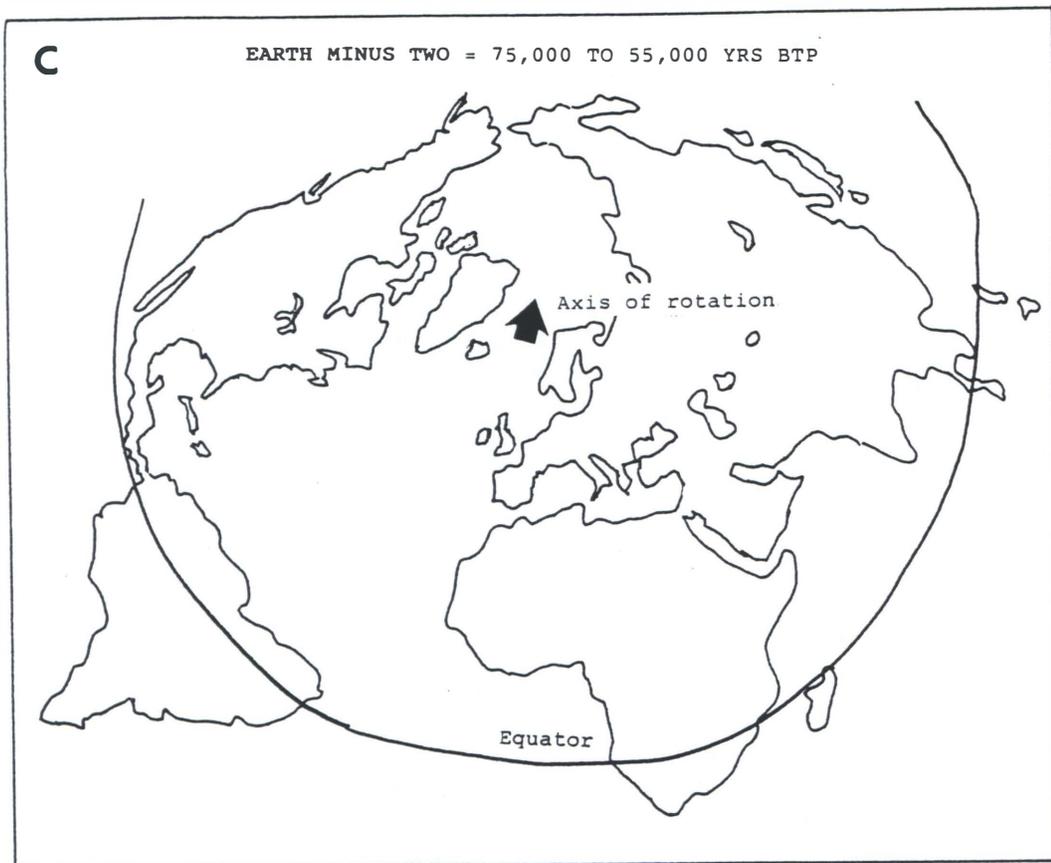


Fig. 1. The approximate relationships of today's continents as they seem to have been on three previous "Earths" (Minus One, Minus Two, and Minus Three) as well as today. Coastlines and sea levels would change markedly with each shift. The periods of transition create the opportunity for violent changes in the landscape. The greater mass of the Earth



remains stable and unchanged. The axis of rotation does not change. Only a relatively thin outer crust of continents and oceans would shift upon the rest of the globe. Different areas move into polar positions. We lack the data to show here the past true configuration of the continents. Computer simulations could be crosschecked with palaeontological findings to create better approximations of past "Earths."

Most recently, as I am writing this article, the idea has been embraced by Graham Hancock in **Fingerprints of the Gods**, a somewhat overreaching look at the ancient worlds and prehistory. [12] He refers to another new work which I have not yet seen that also takes up the Hapgood hypothesis, **When the Sky Fell** by Rand and Rose Flem-Ath. [13]

Ivan T. Sanderson was a champion of Hapgood's views. One of his most interesting discussions of it appeared in the **Journal of the Interplanetary Exploration Society** for December 1961, a short-lived fortean publication edited by Hans Stefan Santesson. In "Non-Cuverian Cataclysms" Sanderson pointed to circumstances that indicated past cataclysms.

It has been observed that in caves all over the Old World in which there are datable deposits, there was a sudden collapse of their roofs due apparently to a global earthquake. Then again, vast deposits of unstratified silts up to fifty feet in depth are found over enormous areas, all apparently of identified date, indicating mass floods. (This is not to be interpreted as meaning that there was a universal flood such as Cuvier favoured, but coincident floods of enormous extent over all lowlands below a certain altitude.) Thirdly, there is the enigma of mass bone beds in which countless 'billions of animals' remains are packed -- babies, immature, adults in the prime of life, and ancient ones all together -- in such circumstances as positively to preclude their being the result of age-long slow accumulations of accidents such as drownings. [14]

Periodic cataclysms would explain drastic changes in landscape such as the raising of the Afar Triangle in eastern Africa from the bottom of the Red Sea. Such a change does not appear to be accountable on a scale of gradualism. The dissolution of a large island such as the legendary Atlantis may have come with such a cataclysm. [15] Its destruction according to Plato came at the time of the rockfalls (cited below) that are recorded in widely spaced locations.

Sanderson wrote of such evidence:

The overnight results of the 1954 Assam-Bhutan earthquake...were so astounding, that one looks at other mountains -- and I think particularly of those immediately to the south of Monterey in Mexico -- with the gravest misgivings. There is certainly nothing gradual about their denudation; in fact, denudation has hardly even got started, yet the things are thrust straight up into the air for thousands of feet with clean, new surfaces of fracture and on a monumental scale. If they had risen slowly, they would have been compensatingly denuded and eroded. Then again, basaltic lava flows that cover half a state can not have been gradually extruded; they solidify far too quickly and so would form a mountain over the vent up which they came. [16]

The issue of rockfalls already recorded and dated in cave deposits is a promising one. Sanderson gave neither examples nor a source for a previous observation on the subject. When I look at the records

readily at hand, which are naturally famous archaeological sites, there is a coincidence of rockfalls.

In Peru Richard MacNeish found rockfalls in Flea Cave and Pepper Cave dating from the same time, 12,000 years before the present. [17] These sites are in the Ayacucho Valley, between Lima and Cuzco. In the course of the transition from Earth-1 to Earth 0, i.e., the present, this area would have been transported from a position north of the equator to one south of the equator over the bulge of the body of the planet below the crust. Crossing the bulge would contribute to the violence of the transition.

The long record of the Meadowcroft site west of Pittsburgh, Pennsylvania, includes three rockfalls. One of them occurred between radiocarbon dates of 9,350 B.C. and 10,850 B.C., or about 12,000 years ago. [18]

A cave site from northern Spain has shown a "depositional hiatus" for the period of 13,000 to 16,000 years before the present. [19] That is, no artifacts were deposited for the thousands of years that served as a transitional period from one Earth regime to the next.

The nature of this transitional period is uncertain. The course of events would be tied to the physical mechanism for change, which is unknown at this time. We can only guess that forces within the planet progressively create tensions that can only be resolved by a crustal shift to restore a temporary equilibrium. Hapgood gives his view that "the evidence points to a very rapid transit of the pole from its old to its new home. It [the Hudson Bay to Arctic Ocean shift] must have completed its transition in a matter of centuries rather than millennia." [20] He suggests that the shift began slowly, picked up speed rapidly, and then slowed to put the crust in its present position.

This time of transition may have been a turbulent period throughout in matters of weather, volcanism, and instability of climate. The greatest violence may have come at the end as suggested by the rockfalls. As cave records are analyzed and dated we should be looking for synchronizations of falls with times of crustal shifts.

The return of plant and animal life to an ice-free North America is described in E. C. Pielou's **After the Ice Age**. [21]

Scientists will one day come around to acknowledging the shifting of the Earth's crust. They will do so in order to explain the mysteries in their own findings. For example, geologist Jack Wolfe reported in 1978 that the fossil plants found in south central Alaska showed tropical vegetation only 45 million years ago. [22] Wolfe was quoted as saying, "The only solution is that this part of Alaska must have received more sunlight than it presently does." He was reported to have offered two possible explanations. Either the region was situated much farther south at the time or the area received more sunlight. Standard geological theory placed Alaska at least as far north or even farther north for the period of 45 to 65 million years ago. [23]

Scientists have come close to considering crustal shifts when looking for "polar wandering" according to a 1987 article in *Science*. "Polar wander" is described as "the Earth tumbling like a rolling ball beneath the pole -- where the spin axis meets the surface." Slight polar wander has been detected currently. Major wandering

is indicated by data for the period of 100 to 200 million years ago. This is attributed to the poor quality of the data. Indications of major "polar wander" were found for 70 to 100 millions year ago. Another instance occurred 30 to 40 millions years ago. It was explained away as "plate motion reorganization." [24]

The traditional view of the "ice ages" has imagined enlarging the two polar regions at the same time sending ice to mid-latitudes. The vegetation belts were narrowed or survived as "islands" in the remaining living space. The idea of a shifting crust replaces this dire and unconfirmed vision with a different one. The worlds of the past Earths were like the present one -- modest polar regions with the usual climatic and vegetational regions. The fundamental change is the positions of land masses in relation to animal and plant life. As noted earlier, coastlines, weather patterns, and ocean currents would all differ according to the different global regimes. (See Figs. 2-4).

An old view of the equatorial forests held that they were regions of long-term stability. John Flenley found it necessary to contradict this in 1979 in **The Equatorial Forest: A Geological History**.

Twenty years ago scientists regarded the rain forest and most other vegetation of equatorial regions as essentially static, a museum piece, a survival from far into the geological past. They thought ice ages of temperate regions has left equatorial regions substantially unaffected, or had been reflected there as "pluvials." They used the supposed stability of the rain forest to bolster the theory that floristic diversity endowed stability, and the diversity itself they explained in terms of environmental stability.

The aim of this book is to show that all these ideas were wrong. The equatorial environment is now believed to have changed markedly in the past, and I shall present evidence that ice ages were times of aridity in the tropics, not pluvials. In fact the old pluvial theory must be completely abandoned. I shall show that equatorial vegetation, even perhaps the lowland rain forest has changed dramatically in the geologically recent past, and that the effects of the Pleistocene are still reverberating in this vegetation. I shall conclude that equatorial vegetation is essentially dynamic. [25]

In his conclusions he noted:

Firstly the indications that equatorial vegetation at any one place was different in the Pleistocene are now all but universal in sequences extending back more than 10,000 years....

Secondly we may consider the nature of the former vegetation. In the period c.20,000 to c.14,000 B.P. the vegetation was strikingly different from that at present. In general the mountain vegetation was of types now found at higher altitudes. The lowland vegetation was generally that of areas with a more pronounced dry season.

In the period c.14,000 to c.7000 B.P. vegetation gradually migrated to its modern locations.... [26]

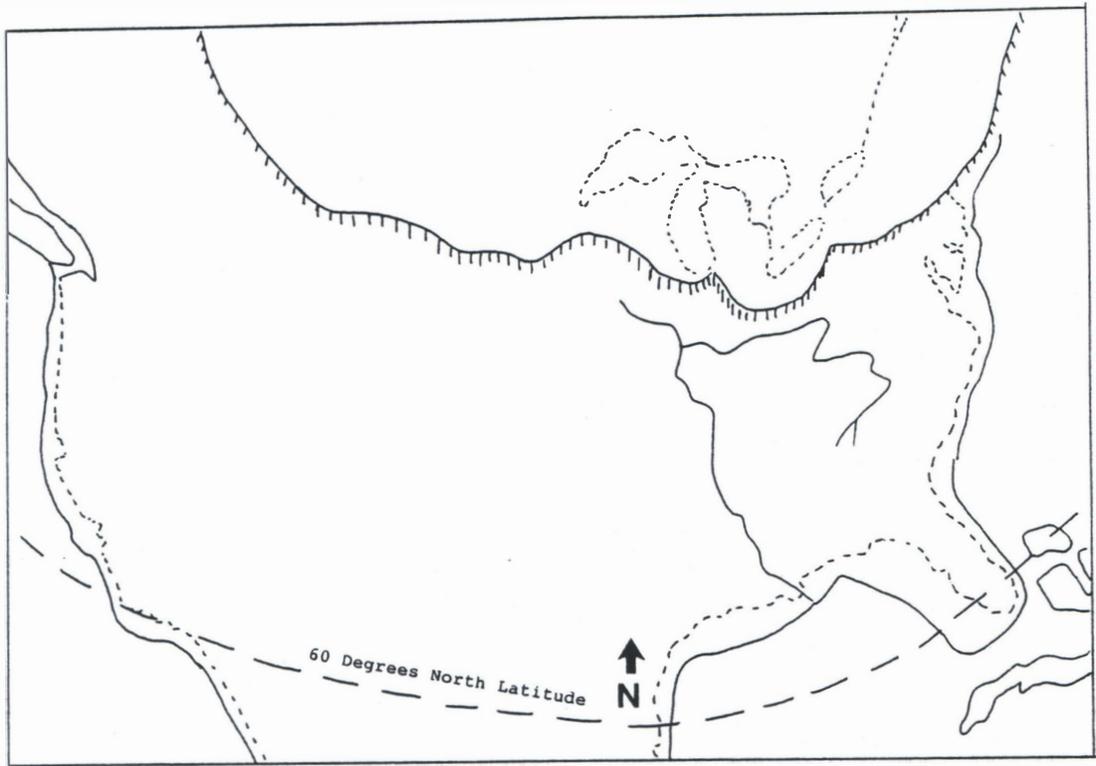


Fig. 2. During Earth-1, 50,000 to 17,000 years ago, most of today's United States of America was located north of 60 degrees north.

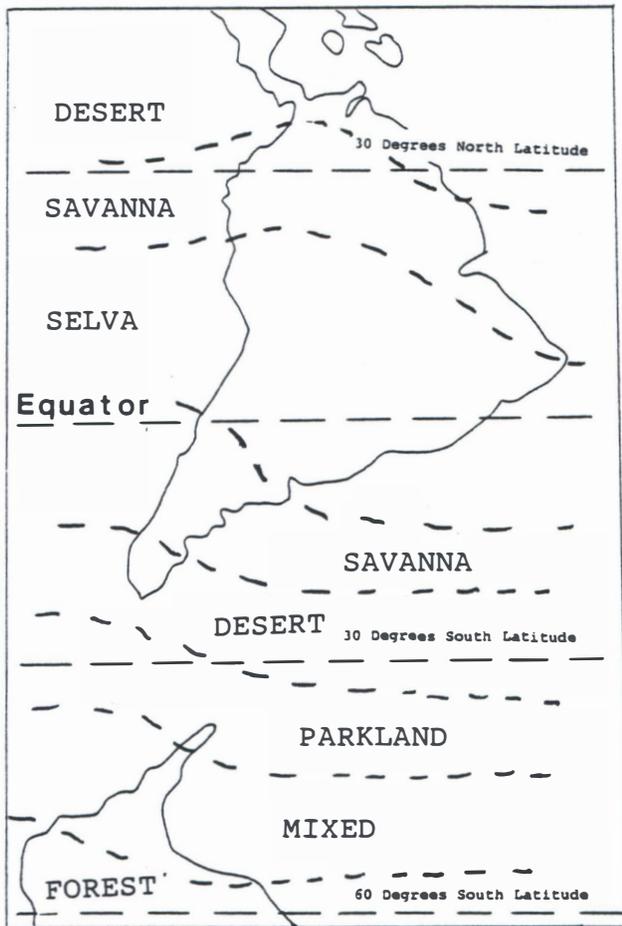


Fig. 3. During Earth-1 the regions of vegetation would have appeared more as shown here with the equator to the south of the present one.

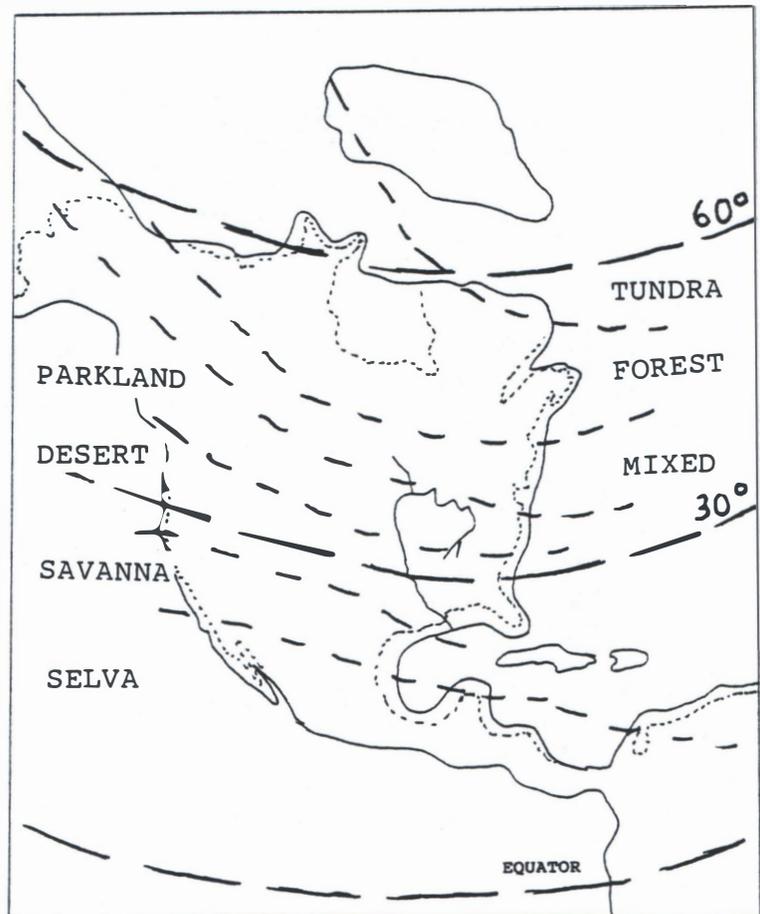


Fig. 4. During Earth-2, some 75,000 to 55,000 years ago, North America might have looked something like this during what is known as the "Sangamon Interglacial."

I would explain the changes in the equatorial vegetation as being caused by the **shifting** of the area's plant and animal life to suit the new latitudes of the continents. As crudely illustrated in Figures 2 through 4 the shift of the crust would cause the suitable land spaces for equatorial forests ("selva") to move. Some overlap of old and new would occur. Other areas would adjust to different vegetation. The bands of vegetation shown in these figures are intended to be suggestive of the kind of changes during differing Earths and not at all to be reliable projections of what occurred. What is needed are computer-simulations for past Earths that would then be checked against reliably-dated sites of prehistoric flora and fauna. Such simulations would take into account local conditions of altitude as well as latitude because they will determine vegetation also.

The time-scale suggested by Hapgood (see Fig. 5) tends to shorten the Pleistocene. This is a trend that has been going on for a long time as we have been replacing the geological guesswork of the last century with more sophisticated dating methods. This trend can be seen in a figure in Kenneth MacGowan's **Early Man in the New World** where the span of the Pleistocene ranges from 1 million to 250,000 years. [27] The synchronization of ice advances in North America and Europe are done away with in this conception as discussed extensively by Hapgood. The explanation calling for "ice ages" came about because the most recent crustal shifts have naturally left us the clearest evidence of changes in the landscape of the planet. But there were no ages of dramatic enlargement of the polar regions. That kind of catastrophe is not needed to explain the past.

As illustrated in Fig. 3, during Earth Minus One the land mass of Antarctica may have extended to the north sufficiently to have been habitable. Sea level changes and other forces are likely to have obliterated much of mankind's past sites of habitation. So we might not find the evidence of people even if they once lived there. If we did find such traces, they are likely to have been people living like those dwelling in southern Chile some 13,000 to 12,500 years ago. Their settlement has been described by Tom Dillehay in **Scientific American**. [28] The people are not likely, in my view, to turn out to be "the substantial remains of a lost civilization" proposed by Graham Hancock. [29]

The effects and influences of periodic crustal shifts are many. They place repeated demands on plant and animal life to accommodate or die as the global regime is re-structured at a rapid pace (geologically-speaking) of every thirty thousand years. Periodic mass extinctions are either caused or aided by conditions during crustal shifts. Change is unavoidable. New evolutionary paths are set in motion.

Writing in **Natural Mysteries** in 1989 (& 1991) I pointed to these forces as accounting for the many but little-known cryptozoological mysteries of our planet. The "changes" here are crustal shifts.

I suggest that, when unobstructed by mankind, nature maintains a great diversity of species as part of the pattern of rapid changes and new regimes. This diversity includes many still uncatalogued animals surviving in many parts of the globe.... ..the presence of unusual animals is the rule in

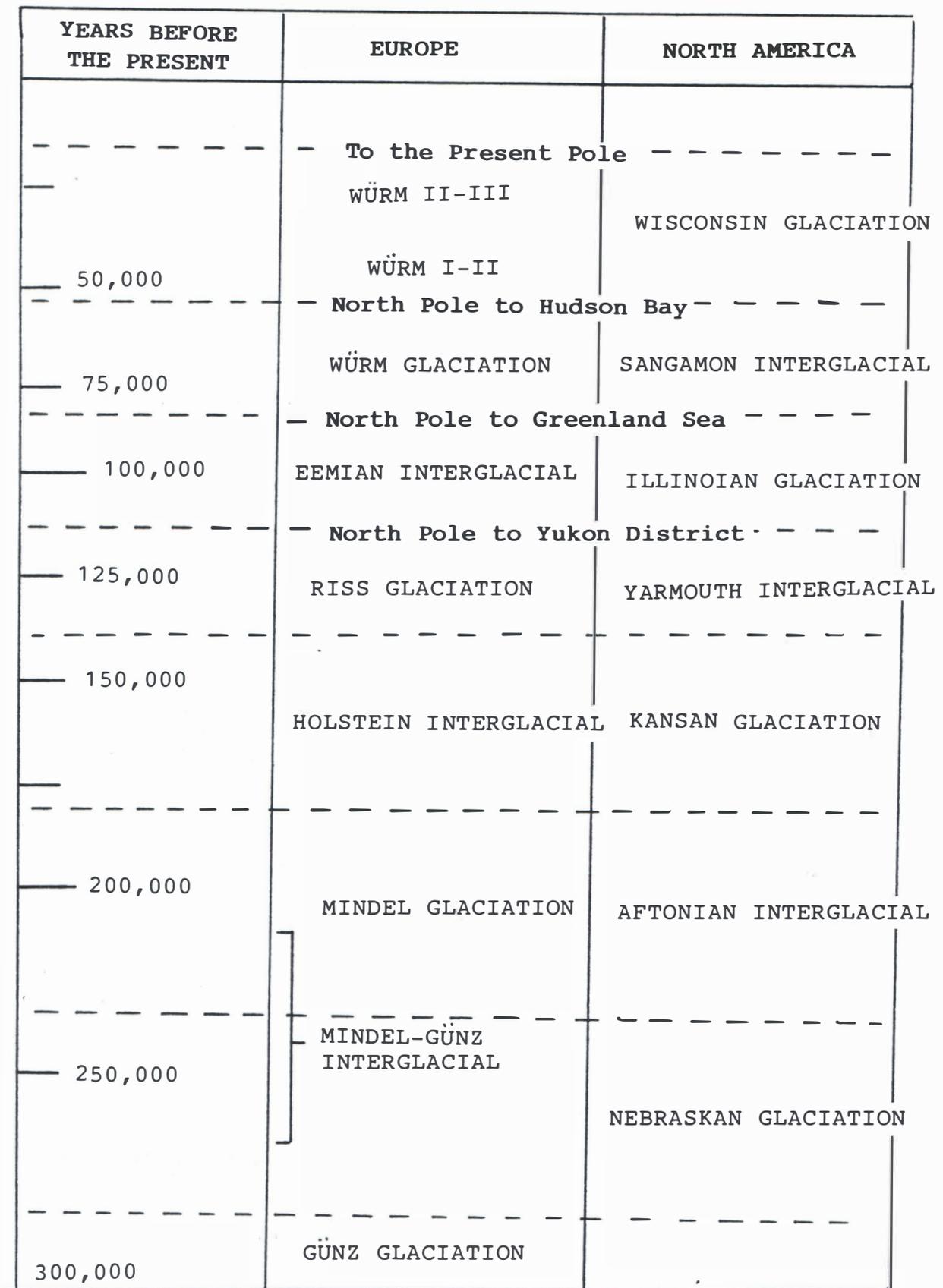


Fig. 5. Climatic change as determined by movements of a shifting crust. The period of 100,000 years to the present is based upon Hapgood's reconstruction in *The Path of the Pole*, pp. 94-95. The periods beyond 100,000 years may need to be compressed even further on the timescale.

nature, not the exception, on a world-wide basis.

Present in all parts of the globe are tenacious life forms, survivors of the past changes and potential survivors for future change. Perhaps small in numbers today, but under the stressful demands of future changes they might flourish. Or they might fail utterly to survive future change as well. These many hold-outs, I think, account for the abundance of unusual animals to be found in nature all over the world. [30]

Viewing the environments of past Earths will tell us much about how animals moved from one continent to another. Strained and erroneous conclusions have come about by viewing data with the assumption that the continents have been fixed as we see them today. This has special importance to the topics of the Yeti, Bigfoot, True Giants, and other like-primates that inhabit many of the same parts of the globe. [31] These are highly mobile and adaptable species that have moved almost as easily as mankind. The environments of past Earths have made this possible.

Better knowledge of past global regimes will aid us in seeking past traces of humankind and fossils of animals. We can see that the temperate region of the Earth Minus One, for example, was to the south of where we find it today. Most of the today's United States of America was above 60 degrees north latitude at the time. (Fig. 2)

Our interpretations of archaeological finds will be greatly aided by correctly viewing the recent past geologically. Why do we find the earliest-known evidence of farming in New Guinea forty thousand years ago? [32] Did a large island known in ancient Egypt as Atlantis once rest in the ocean off Spain? [33] These questions are considered elsewhere in this issue of **Wonders** in light of the Hapgood hypothesis.

To further our knowledge of the geological past we should pursue hypothetical reconstructions of the past Earths through computer simulations. The results can be crosschecked with independent findings of dated plant and animal life around the globe. Each regime will be a complicated picture of differing oceans, oceanic effects, changes in coastlines, and even some changes in altitudes of mountain ranges are possible. We can also look for supporting evidence in simultaneous rockfalls in cave sites. The three sites given here (Flea Cave, Pepper Cave, and the Meadowcroft Rockshelter) would be joined by others if the hypothesis is valid. This hypothesis should be discussed, criticized, and tested. Such efforts seem not to have happened so far.

I still remember the moment I read these words over twenty years ago in an archaeological text.

Late Pleistocene glacial chronology in South America is believed to parallel that of both Europe and the United States; that is, the major events -- the glacial advances and retreats -- are thought to have been essentially synchronous on all three continents. [34]

Eagerly I looked to the chapter footnotes to find the basis for this statement. Here is what I found:

A working assumption of most authorities on the subject. [35]

This is the very assumption we must throw over the side if we are to progress with learning about our past. It is the nature of authorities that they will feel we are trying to throw them over the side as well.

Left to themselves scientists will at some distant date come around to a shifting crust. Then they will note that it explains the clues that have been around for a long time, such as Genevieve Woillard's findings reported in 1979. In northeastern France there occurred an abrupt end to a Pleistocene interglacial. A transition from hardwood trees of a temperate zone to trees of a sub-Arctic zone (pine, spruce, and birch) took less than 20 years. [36]

The hypothesis of a shifting crust as presented by Charles Hapgood is appealing because it can explain the recent geological past and the complex results of those events. The idea merits detailed considerations which have so far not been given. Our many Earths have a dynamic prehistory but a comprehensible one if we begin asking the right questions. [37]

NOTES

1. Charles Hutchins Hapgood and James H. Campbell, *EARTH'S SHIFTING CRUST: A KEY TO SOME BASIC PROBLEMS OF EARTH SCIENCE* (NY: Pantheon, 1958).
2. Charles H. Hapgood, *THE PATH OF THE POLE* (Philadelphia: Chilton, 1970). A revised edition of *EARTH'S SHIFTING CRUST*.
3. *Ibid*, xv.
4. *Ibid*, ix.
5. *Ibid*, xvii.
6. *Ibid*, 107.
7. Walter Sullivan, "New Theory on Ice Sheet Catastrophe is the Dirtiest One Yet," *New York TIMES*, 2 May 1995, p. B9.
8. Hapgood, *THE PATH OF THE POLE*, 106-7.
9. Bjorn Kurten, *THE ICE AGE* (NY: Putnam's, 1972), 35. Originally published as *ISTIDEN* (Stockholm, 1969).
10. John White, *POLESHIFT: PREDICTIONS AND PROPHECIES OF THE ULTIMATE DISASTER* (Garden City, NY: Doubleday, 1980), 88-109.
11. John White, "Cataclysm on the Horizon: The Pole Shift Controversy," *FRONTIERS OF SCIENCE*, July-August 1982, pp. 37-39.
12. Graham Hancock, *FINGERPRINTS OF THE GODS* (NY: Crown, 1995).
13. Cited in Hancock as published in 1995 by "Stoddart, Canada."
14. Ivan T. Sanderson, "Non-Cuverian Cataclysms," *JOURNAL OF THE INTERPLANETARY EXPLORATION SOCIETY*, 1(3): 2-7 (December 1961).
15. Mark A. Hall, "The Atlantis of Solon and Plato," *WONDERS* 4(2): 47-54 (June 1995).
16. Sanderson, "Cataclysms," 7.
17. Richard S. MacNeish, "Early Man in the Andes," *SCIENTIFIC AMERICAN* 224(4): 36-46 (April 1971).
18. J.M. Adovasio and R.C. Carlisle, "An Indian Hunters' Camp for 20,000 Years," *SCIENTIFIC AMERICAN* 250(5): 130-136 (May 1984).

19. Lawrence Straus, Geoffrey Clark, Jesus Altuna, and Jesus Ortea, "Ice Age Subsistence in Northern Spain," *SCIENTIFIC AMERICAN* 242(6): 142-152.
20. Hapgood, *THE PATH OF THE POLE*, 144.
21. E.C. Pielou, *AFTER THE ICE AGE: THE RETURN OF LIFE TO GLACIATED NORTH AMERICA* (Chicago: University of Chicago Press, 1991).
22. Jack A. Wolfe, "Paleogene Floras from the Gulf of Alaska Region," *U.S. Geological Survey Professional Papers P997*, 1977 (1978).
23. United Press International, 11 May 1978.
24. Richard A. Kerr, "Tracking the Wandering Poles of Ancient Earth," *SCIENCE* 236: 147-48 (10 April 1987). Also discussed in D.M. Jurdy and R. Van Der Voo, "True Polar Wander Since the Early Cretaceous," *SCIENCE* 188: 1193-96 (28 March 1975).
25. John R. Flenley, *THE EQUATORIAL RAIN FOREST: A GEOLOGICAL HISTORY* (London: Butterworths, 1979), 1.
26. *Ibid.*, 127.
27. Kenneth MacGowan, *EARLY MAN IN THE NEW WORLD* (NY: Macmillan, 1950), 47; Kenneth Macgown and Joseph A. Hester Jr., *EARLY MAN IN THE NEW WORLD* rev ed (Garden City, NY: Doubleday, 1962), 55.
28. Tom D. Dillehay, "A Late Ice-Age Settlement in Southern Chile," *SCIENTIFIC AMERICAN* 251(4): 106-117 (October 1984).
29. Hancock, *FINGERPRINTS OF THE GODS*, 469-70.
30. Mark A. Hall, *NATURAL MYSTERIES* (Minneapolis: MAHP, 1989), 21-22 and in the second edition (1991) p. 23.
31. Mark A. Hall, *THE YETI, BIGFOOT & TRUE GIANTS* (Minneapolis: MAHP, 1994).
32. Mark A. Hall, "Farming Forty Thousand Years Ago," *WONDERS* 4(2): 55-59 (June 1995).
33. Hall, "Atlantis."
34. Gordon R. Willey, *AN INTRODUCTION TO AMERICAN ARCHAEOLOGY - VOLUME TWO - SOUTH AMERICA* (Englewood Cliffs, NJ: Prentice-Hall, 1971), 33.
35. *Ibid*, 70.
36. Genevieve Woillard, "Abrupt End of the Last Interglacial s.s. in North-east France," *NATURE* 281: 558-62 (18 October 1979).
37. Following the completion of this article I have seen the text of an aboriginal legend from Western Australia. It was collected by Oscar and Ernestine Little and communicated to *Flying Saucer Review* (40[2]: 19, Summer 1995) by anthropologist Hannah Wondy Wolfe. It describes a sudden and massive change of the planet's landscape. Parts of it read:

One day the earth began to tremble and shake. This great shaking continued all day and night. When it stopped and morning came the terrified people saw that all the land had changed.

It seemed as if the earth had turned round. The hills had moved. Where there used to be hills now there were plains and where there used to be plains there were now hills. Great rocks had risen along the coast.

...The strangest thing was that after the great shaking it seemed as if the earth had turned and the Sun was rising in a different place. Just as the hills had moved, so now the Sun that used to come up in the north and set in the south was rising in the east and setting in the west.

THE ATLANTIS OF SOLON AND PLATO

by Mark A. Hall

Two great mysteries lie at the western end of the Mediterranean Sea. The first is Tartessus, an ancient and lost trading center. Its location on Spain's Atlantic coastline remains uncertain. The second mystery is Atlantis. The lost island was said in antiquity to have disappeared nine thousand years earlier. History recorded in ancient Egypt placed the island just west of Spain.

Tartessus was a trading center established around 1150 B.C. As Ivar Lissner points out in *The Silent Past*, Tartessus was founded by seafarers from Asia Minor. They were of an Etruscan-Tyrrhenian culture that flourished in western Italy. [1] The city they established was the Tarshish of the Bible. (See Fig. 1.) Their trade was with the Mediterranean peoples and peoples living to the north as far as Ireland, Scotland, and possibly Norway. Nearby to the south of Tartessus was the city of Gadir (now Cadiz), which was founded by the Phoenicians as a trading center in 1100 B.C. In 500 B.C. the Carthaginians destroyed Tartessus. Finds of stashed jewelry and grave goods have suggested some of the wealth and culture of the city, but its location has not been determined. (See Fig. 2).

Adolph Schulten came to the conclusion that Tartessus and Atlantis were one and the same. Others have also made this suggestion. However, Solon, the Greek poet and politician who carried the story of Atlantis from Egypt to Athens, is thought to have heard the story in 570 B.C. [2] So the city of Tartessus was either still in existence or only just beginning to disappear beneath the soil of Spain at the time. If Tartessus had a long history of thousands of years as the Greek geographer Strabo wrote, then it may have had some link with a much earlier Atlantis. If Tartessus is ever found and if its history is reconstructed, we would then know something of that link. These are three enormous "if's."

We should not confuse our antiquity of some 2,000-2,500 years ago with the prehistory of 11,500 years ago when we must reckon the approximate demise of Atlantis. Many supporters and some critics of a real Atlantis have done so through the years. We do not profit by looking at high civilizations of our antiquity (Egyptians, Mayans, etc.) and trying to identify Atlantean influences. To find a true Atlantis we must look at the world of 12,000 years ago and at the words that Solon took to Greece and Plato repeated.

The western end of the Mediterranean Sea has not seen the extensive archaeological scrutiny that has been given to the eastern end of that sea. Yet it is an area suited to the rise of superior cultural development because it too is a crossroads. There two continents meet, Europe and Africa. As we will see, in the light of modern knowledge there are other reasons to credit the logic in the description and fate of Atlantis: a rich mountainous island succumbs to a geological upheaval at the time the planet is experiencing one of its periodic global changes.

That ancient Egypt would have obscure historical knowledge should be no surprise. The famous library at Alexandria was a repository of knowledge that was lost to posterity through fires and warfare.

Around 570 B.C. Solon was visiting Egypt. A priest at Sais chided Solon for his lack of knowledge of his own history. At the same time he complimented Solon by telling him his ancestors had defeated the menacing Atlantean empire that once threatened the whole of the Eastern Mediterranean. Some have tried to make an issue of the age of the city of Athens as disqualifying this part of the history. The fact is that we don't know the history of Athens beyond 1900 B.C. which is when the Greeks occupied Attica. All that we can say is that the city dates at least from Neolithic times. In any case, the priest was referring to the people who occupied that part of the world nine thousand years earlier, and he chose to call them Athenians.

This episode in Egypt was preserved by Plato in *Timaeus* and in *Critias*. [3] A reading of the relevant passages in both works is recommended. The story is recalled by Critias who first brings up the subject addressing Socartes. Solon had told the story to Critias' grandfather, also named Critias. According to the younger Critias:

...I should be surprised if any detail of this story I heard so long ago has escaped me. I listened to it then with a child's intense delight, and the old man was glad to answer my innumerable questions, so that the details have been indelibly branded on my memory. [4]

History begins with Atlantis. We should welcome this chain of preservation which gives us a glimpse into the past. With some effort we can one day find a way to confirm this earliest historical account of humankind.

Since Plato's accounts, regard for the validity of the history of Atlantis has waxed and waned. Some have declared it to be the first science fiction. Others have taken it as true.

We are told that the Greek historian Herodotus never mentions Atlantis as if this argued against its truth. All we can say is that none of the works of Herodotus that survive mention it. We don't know if he heard of it or what his opinion of it was.

Many writers have embroidered the story to write their own personal vision of Atlantis. Its location and place in time have been changed to match other and more recent historical sites. Thera [5], Crete [6], Denmark [7], and Tartessus among others have been made out to be Atlantis. Let us begin with the Atlantis of Solon's account and see how it matches the geography, the geology, and the course of Earthly events as we know them today.

We must remark upon the context in which the story was presented and how it coincides with modern evidence of Earth's past. The hypothesis of a periodic shifting of the Earth's crust has been presented elsewhere. [8] Solon's adviser told him:

...there is at long intervals a variation in the course of the heavenly bodies and a consequent widespread destruction by fire of things on earth. On such occasions those who live in the mountains or high and dry places suffer more than those living by rivers or by the sea.... When on the other hand the gods purge the earth with a deluge, the herdsmen and shepherds in

TAR'SHISH, or THAR'SHISH, *subdued*, I., a son of Javan, Gen. 10:4; 1 Chr. 1:7; perhaps the founder of Tartessus.

II. Gr.-grandson of Benjamin, 1 Chr. 7:10.

III. A prince of Ahasuerus, Esth. 1:14. As a Persian name it is akin to Teresh and Tirshatha, *strict*, Neh. 8:9; Esth. 2:21; 6:2.

IV. Psa. 48:7, probably Tartessus, an ancient city between 2 mouths of the Guadalquivir, in the south of Spain and the adjacent region. It was a Phœnician colony, and was the most celebrated emporium in the West at which the Hebrews and the Phœnicians traded. That Tarshish was situated in the west is evident from Gen. 10:4, where it is joined with Elisha, Kittim, and Dodanim; see also Psa. 72:10. According to Ezek. 38:13, it was an important place of trade; according to Jer. 10:9, it exported silver, and according to Ezek. 27:11, 12, 25, silver, iron, tin, and lead to the Tyrian markets. They embarked for this place from Joppa, Jonah 1:3; 4:2. In Isa. 23:1, 6, 10 it is evidently represented as an important Phœnician colony. It is named among other distant states in Isa.

66:19, and in Psa. 72:10 with "the isles of the sea." A mine recently reopened near Huelva in Spain has long borne the name of Tharsis, and many traces of Phœnician occupation in that vicinity are found. All these notices agree with Tartessus. In Exod. 28:20; 39:13; Song 5:14; Ezek. 1:16; 10:9; 28:13; Dan. 10:6, the "beryl" or topaz is tarshish in Hebrew.

V. In some of these passages, however, Tarshish may be used as a general expression, applicable to all the distant shores of Europe; and thus the custom may have arisen of designating as "ships of Tarshish" any large merchant ships bound on long voyages in any direction. The English term Indiaman is very similarly used. Whether the ships fitted out by Solomon at Ezion-geber on the Red Sea sailed around Africa to Tarshish in Spain, or gave the name of Tarshish to some place in India or Ethiopia, as the discoverers of America called it and its inhabitants India and Indians, cannot now be determined, 1 Kin. 10:22; 22:48, 49; 2 Chr. 9:21; 20:36; Isa. 23:1, 14; 60:9.

Fig. 1. The entry on Tarshish, or Tartessus, from Dictionary of the Holy Bible (NY: American Tract Society, 1886), 615.

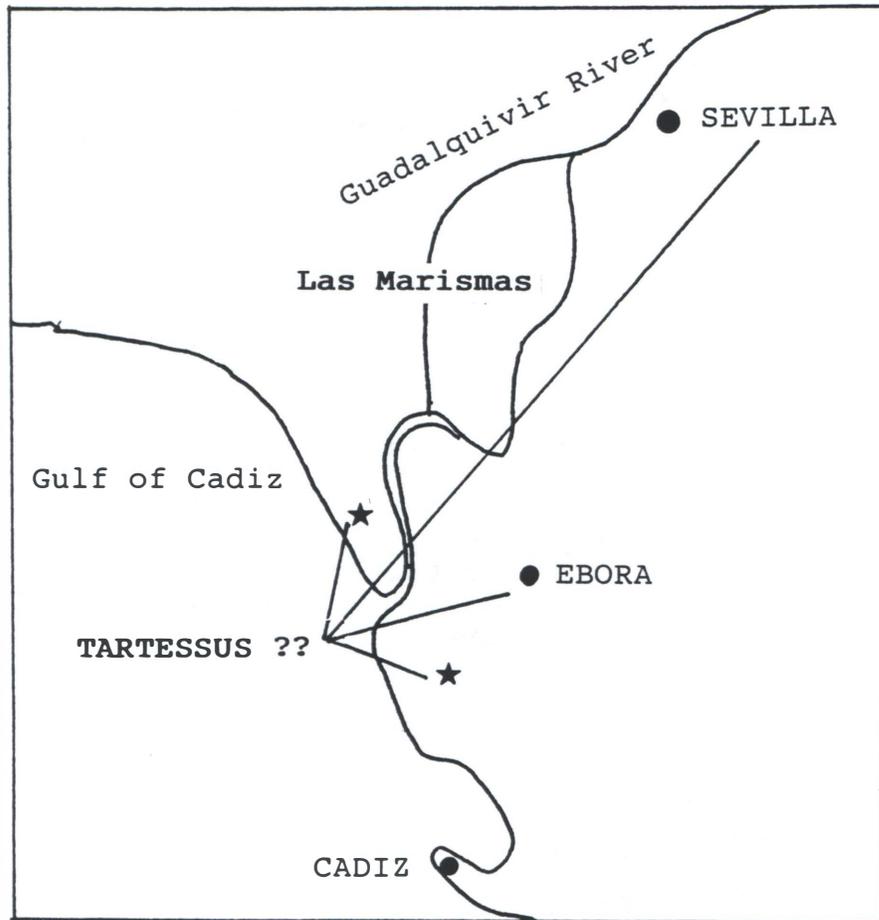


Fig. 2. Various speculations on the locations of Tartessus, a trading center of the ancient world that existed from 1150 to 500 B.C.

the mountains escape; but those living in the cities in your part of the world are swept into the sea by the rivers.... [9]

The heavenly bodies may appear to change at times of a crustal shift, but it is the perspective of the observer that is changing. Such an observation is given in an Australian legend about "The Great Shaking." [10] The Sun appears to rise and set differently after the event, but, again, it is the land on the globe that has changed. The Egyptians had the same hypothesis of periodic calamities that we have come around to in the twentieth century. Their view was based upon records of humankind that are now lost to us save for this spectacular story of a lost Atlantis.

Atlantis was an island to the west of the Strait of Gibraltar, Solon was told. That part of the island furthest east was "facing the district now called Gadir" on the mainland. It was an "island larger than Libya and Asia combined; from it travellers could reach the other islands, and from them the whole opposite continent which surrounds what can truly be called the ocean." The Egyptians knew this much of the New World.

The size of Atlantis is the one and only part of its description that cannot be reconciled with what we know today. As noted by H.S. Bellamy, in antiquity "Libya" referred to North Africa and "Asia" meant Egypt, the Levant, and Asia Minor. [11] As has been proposed by others, it may be that the might of the empire of Atlantis was what was being compared here. The empire was stronger than all of Libya and Asia combined. It had conquered the lands around the western end of the Mediterranean and sought to conquer more until defeated by the Athenians.

To the west of the Pillars of Heracles we find an underwater plateau, seamounts, and the Madeiran archipelago. [Fig. 3] If we were to replace rock upon this base we would get an island as shown in Fig. 4, a mountainous island rising sheer from the sea. The original mountains would have been an extension of the Sierra Morena of Spain. These Spanish mountains are rich in copper, silver, etc.

This island would have been about 1000 kilometers long and measure about 500 kilometers at its widest. In size it would be slightly smaller than the modern Kingdom of Morocco. This Atlantis would be a large island but not a continent. Prior to the last crustal shift it would have been situated east to west just as described to Solon. He was given other features of the island which are included in Fig.5.

Nine thousand years before Solon a war of conquest was begun by Atlantis. They were defeated, led by the Athenians. Solon was told:

At a later time there were earthquakes and floods of extraordinary violence, and in a single dreadful day and night all your fighting men were swallowed up by the earth, and the island of Atlantis was similarly swallowed up by the sea and vanished. [12]

In other words this calamity was widespread, visiting not only the Atlanteans but also the Athenians.

Solon was told there was an impassable sea left where Atlantis once stood. Navigation was "hindered by mud just below the surface."

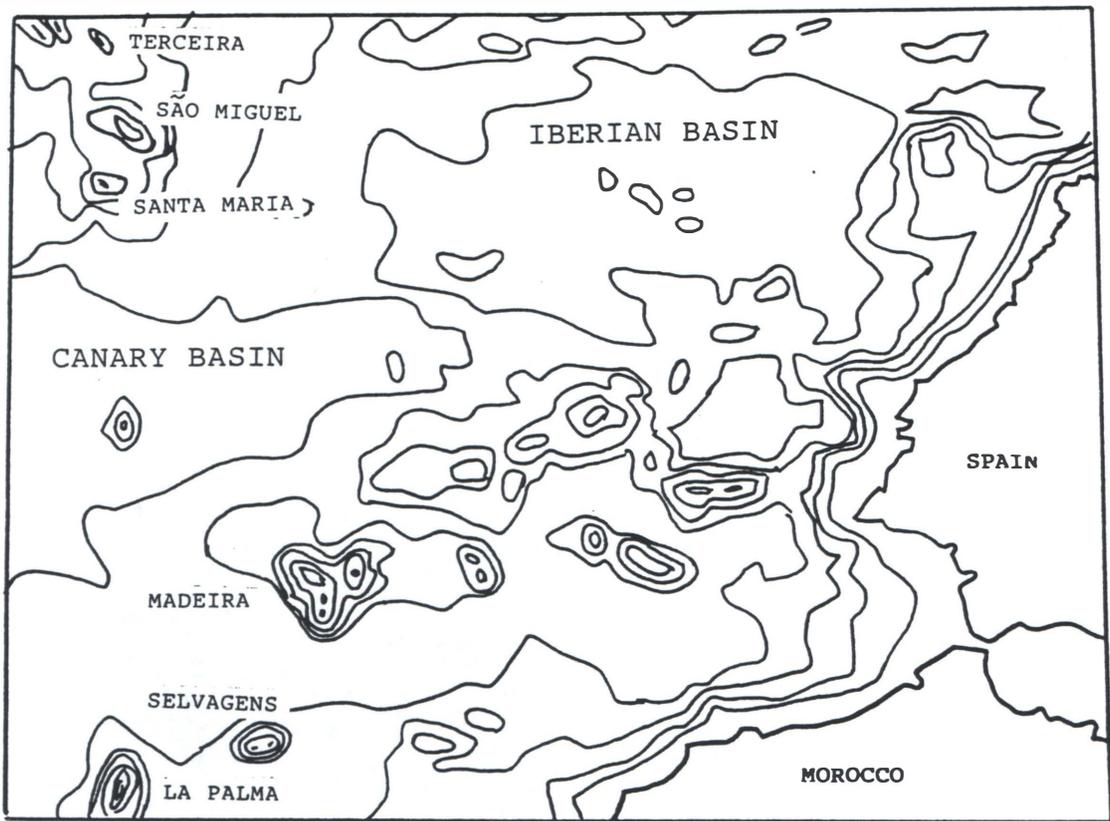


Fig. 3. The Atlantic Ocean and its bottom east of Spain. Based on "Africa Fisica" No. 107-108 in *Atlante Internationale*, Italian Touring Club (Milano, 1968).

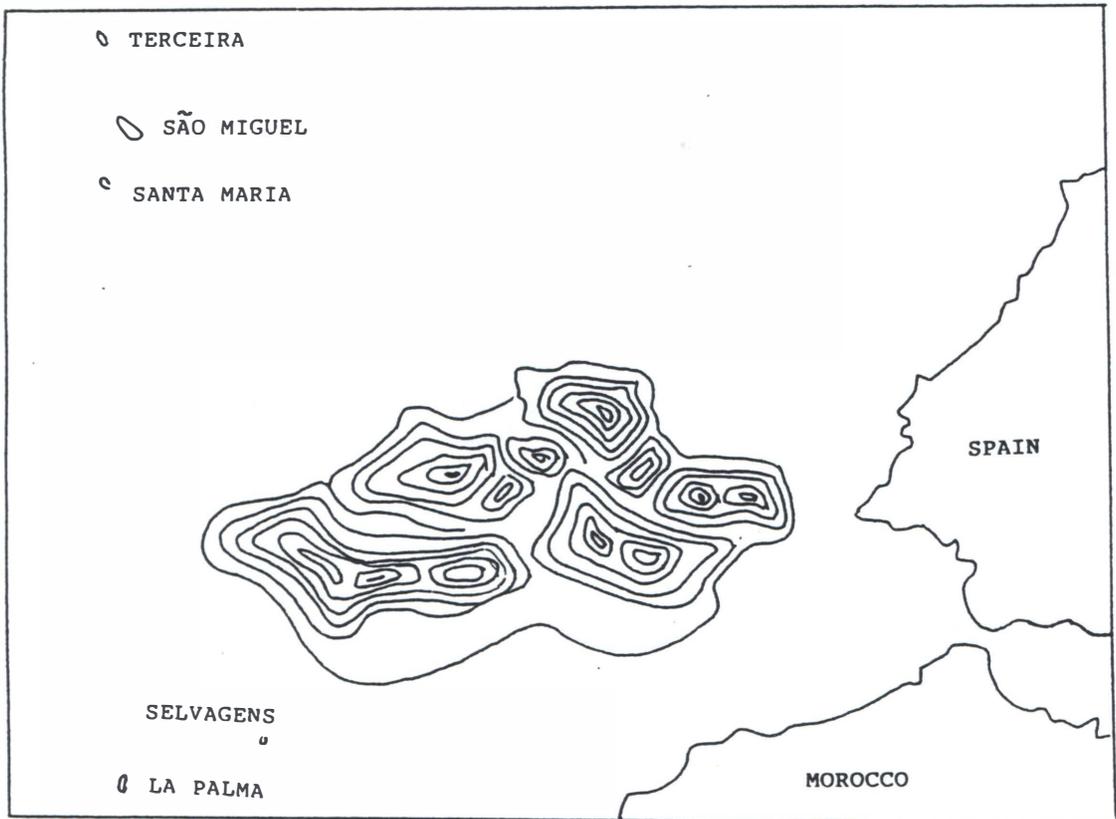


Fig. 4. An island resting on the underwater plateaus and seamounts off the coast of Spain would look like the one reconstructed here. It extends 1000 kilometers by 500 kilometers, the size of Morocco.

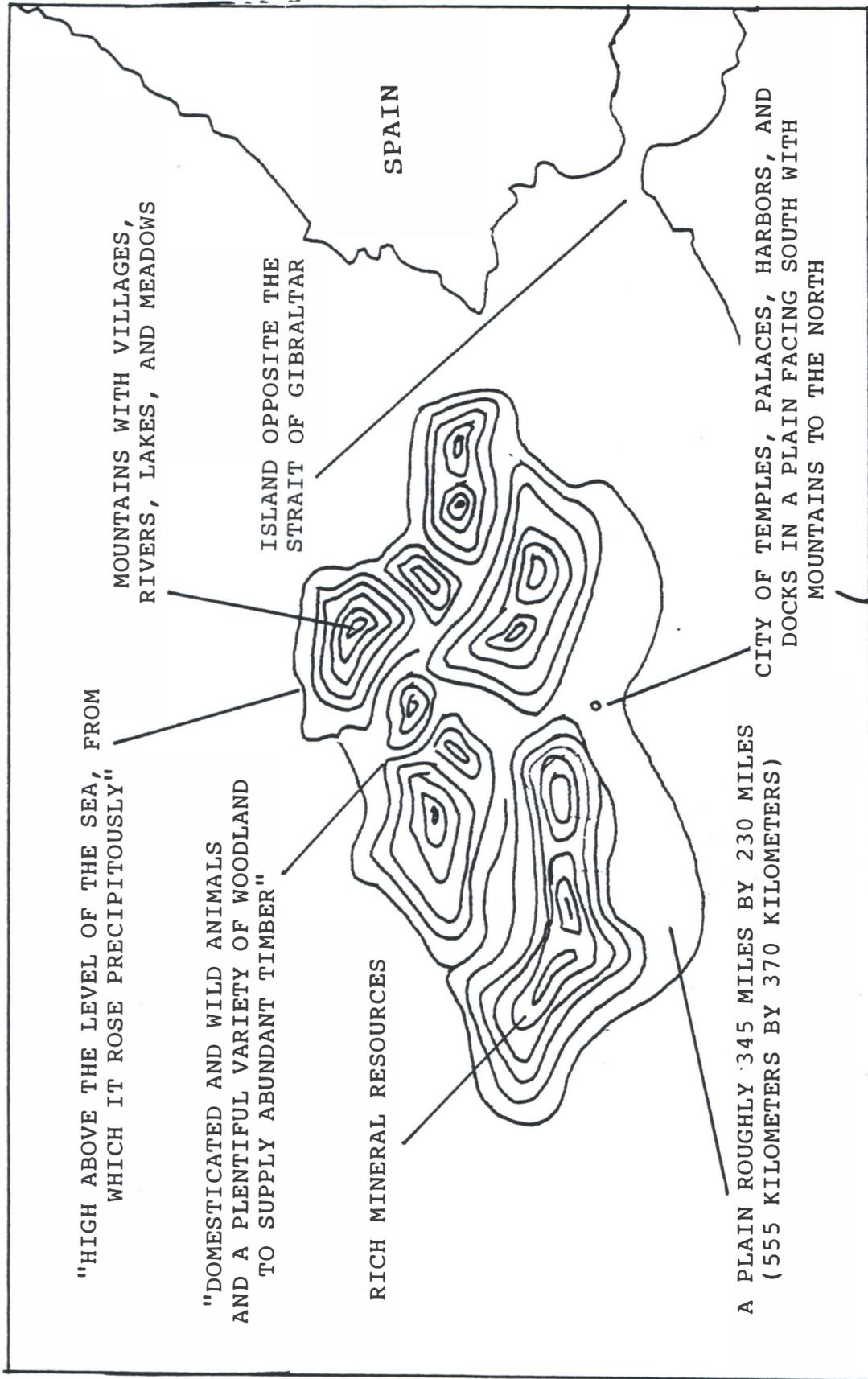


Fig. 5. The Atlantis of Solon and Plato. The island would have been about 1000 kilometers long by 500 wide (620 miles by 310). Prior to the last crustal shift such an island would have been situated east to west as shown here. The southern plain should extend south about twice as much as shown to agree with Plato's dimensions.

Atlantis did not sink. The popular image of columned buildings resting on the ocean floor waiting to be discovered is not logical. The island was taken apart by the violence of its destruction. It essentially dissolved beneath the civilization of Atlantis. Whatever was left of the artifacts of its age would be buried beneath the mud and then silted over for the intervening 12,000 years. The ocean currents would have worn away at the subsurface base of the island for the same period. For a period of time the passage out of the Mediterranean may have truly been impassable due to the debris of the former island.

The priest in Egypt gives us an estimate of the timing of the destruction by placing the Atlantean declaration of war nine thousand years prior to his time. [13] "At a later time," but apparently not long after, the floods and earthquakes came "in a single dreadful day and night." The timing then is roughly post-11,500 years before our time.

According to the hypothesis of a shifting crust the last change of this kind occurred from 17,000 to 12,000 years ago. [14] Rockfalls at Flea Cave and Pepper Cave in South America and Meadowcroft Rockshelter in North America have been dated to the same time 12,000 years ago. [15] The timing is so close that they may be markers of the same world-wide violence that saw the end of Atlantis.

With its mineral-rich mountains and position as a cultural crossroads between two continents, Atlantis may be said to have been geographically blessed. But if it was geographically blessed, it might also be said to have been geologically cursed. It was positioned on the edge of the Eurasian Plate next to the African Plate. This location on the edge of two plates that make up the parts of the Earth's crust may account for the extraordinary fate of the island. When the crust shifted it was torn apart by the stresses between the two plates. There is still volcanic activity in the region today with 9 active volcanoes in the Azores and volcanic vents in the Canaries.

Only the island of Madeira and some associated islets may be the smallest remnant of the island left to us. After the violent changes and the passage of time it seems unlikely that any meaningful trace of past glory would be found there. The artifacts described in Plato's account have been violently buried beneath the sea. They would require some not-yet-dreamed-of technology to be recovered.

In the days of the glory of the Atlantean empire they would have had some effect on peoples distant from the island. There we might find traces. Some such sites will likely have been destroyed by the same violence that removed Atlantis. Nevertheless, there ought to be some consistent and widespread cultural traces in the period of 12,000 years ago and more.

People have looked to the Canary Islands and elsewhere for survivors of the Atlantean catastrophe. Some threads of Atlantean civilization may have survived over the several thousands of years into what we call our historical times. Until such historical items are connected to finds dating to 12,000 years ago there is no use speculating on them.

One seldom mentioned artifact said to support the history of Atlantis is mentioned by H.S. Bellamy in **The Atlantis Myth**. The assertion is not based, please note, on Plato's accounts.

Bellamy writes:

Historical references to the loss of Atlantis are said to have been inscribed on a series of columns in Egypt which were supposed to have existed a generation after Plato, when the philosopher Crantor saw them and found, according to Proclus, that their texts tallied with Plato's story. [16]

The finding of such artifacts in Egypt today would certainly be a sensation and would fuel an increased interest in the lost island. They would not settle the matter, however. Those who deny the possibility of Atlantis would insist it was still only a story, no matter where it was written.

Many have written on this subject. Here I have written one more view of the place of Atlantis in our past. Other views can be read with some profit, in both old books and new. Read them, keep in mind what is written here, and make your own judgments as the pursuit of Atlantis unfolds before us.

NOTES

1. Ivar Lissner, THE SILENT PAST: MYSTERIOUS AND FORGOTTEN CULTURES OF THE WORLD (NY: Putnams, 1962). Tartessus and Atlantis, pp. 156-181.
2. H.S. Bellamy, THE ATLANTIS MYTH (London: Faber and Faber, 1948), 140.
3. Plato, TIMAEUS AND CRITIAS, translated by Desmond Lee (London: Penguin Books, 1977).
4. Ibid, 39.
5. J.V. Luce, LOST ATLANTIS (London: Thames and Hudson, 1969).
6. Donald Mackenzie, CRETE AND PE-HELLENIC MYTHS AND LEGENDS (1995 reprint, London: Studio Editions), 97-114.
7. Jurgen Spanuth, ATLANTIS OF THE NORTH (London: Sidgwick and Jackson, 1979).
8. Mark A. Hall, "The Many Planets 'Earth'," WONDERS 4(2): 33-46 (June 1995).
9. Plato, TIMAEUS AND CRITIAS, 35.
10. Hannah Wondy Wolfe, "The Great Shaking," FLYING SAUCER REVIEW 40(2): 19 (Summer 1995). Reprinted from NYOONGAR YORGAS REMEMBER: EARLY DAYS OF MOORE RIVER SETTLEMENT (Green River Books, Yinnar, Victoria, Australia).
11. Bellamy, ATLANTIS MYTH, 146.
12. Plato, TIMAEUS AND CRITIAS, 38.
13. Ibid, 131.
14. Hall, "Many Planets."
15. Ibid, 39.
16. Bellamy, ATLANTIS MYTH, 52.

FARMING FORTY THOUSAND YEARS AGO

by Mark A. Hall

The textbook presentations on early agriculture point to East Asia, China, and the Middle East for traces 10 to 12 thousand years old. Finds in New Guinea are going to require some revisions to be made.

The earliest indications of agriculture date from Earth Minus One, that period of Earth's past before the last shift of the Earth's entire crust was completed some 12 thousand years ago. [1] Farming tools dated to 40 thousand years ago have been found on the Huon Peninsula in New Guinea. This site is part of a pattern of episodic development for humans and their primate near-relatives since the emerging of *Homo sapiens* some 100,000 years ago.

Humankind reached its present state of physical and mental development roughly 100 millennia ago. In the past three thousand years we can see that we have changed our circumstances greatly and developed what we call the "modern world." What held back our ancestors for so long? They had the same brains, the same dexterity that we have had to employ. Yet we look back at the prehistoric past and find long periods of incremental change.

We find periods of noteworthy progress that appear to be without issue. One of these is the "waisted ax" culture reported from New Guinea. [2] Another example is the recent evidence of woven cloth dating from 27,000 years ago. Clay fragments from the Pavlov Hills in the southeastern Czech Republic contain impressions of textiles or basketry. When reporting on this Brenda Fowler, writing in the *New York Times*, noted:

One mystery is what became of the apparently advanced technologies of these Central European hunters and gatherers after 23,000 years ago, when, as the weather gradually turned colder, the archaeological record of their presence in the Pavlov Hills ceased. [3]

Two of the primary influences that have shaped the emergence of *Homo sapiens* have been the species' competition with other primates and the dominant forces of geological change on Earth.

The primates referred to here are not mild-mannered gorillas, chimps, and gibbons you will find in your textbooks. They were and are highly developed primates with skills approaching our own. They are the True Giants, the Shorter-hominids, the Taller-hominids, and others known by such names as the Bigfoot and the Yeti that have all been reduced to living lives of concealment to maintain a perilous existence today. [4] The flourishing of these primates produced many competing experiments. One subspecies has grown to intimidate almost all the others -- *Homo sapiens*. While different in outward appearances, inside we each represent the crafty and adaptable product of a competition for space and resources on one planet.

It will take a long time to reconstruct the record of this competition because we now take our position for granted and can even pretend, as many do, that the primate competitors do not even exist.

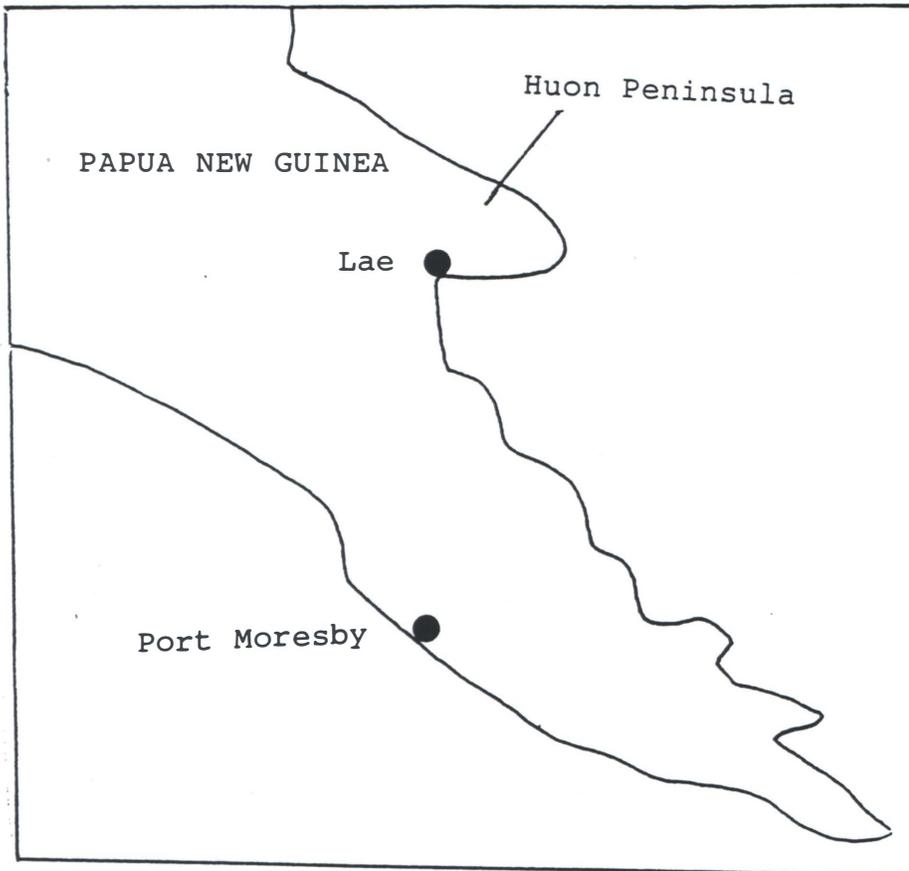


Fig. 1. Artifacts of a "waisted ax" culture have been found on the Huon Peninsula in Papua New Guinea. They date back 40,000 years.

The second influence has been the most awesome force that human beings will ever have to face. It is more dangerous than any wild beast that our ancestors had to defeat. It is stronger than any storm or modern earthquake. It is the periodic need for the outer crust of the very Earth beneath us to adjust itself on a global scale.

The likely progress of humankind has been fits and starts halted by the periodic world-wide catastrophes brought on by a shifting crust. The prime example of such a halt would be the vigorous civilization remembered in antiquity as Atlantis. Prior to 12,000 years ago it was a growing power in the Mediterranean region. A convulsion of the planet removed its base of power and left it only a memory which has been labeled a myth. [5]

The effects of frequent crustal shifts (possibly as often as every thirty thousand years) has been to set back an continuous progress for humankind.

In June of 1985 a find of stone ax heads was announced in New Guinea. (Fig. 1) They put back the earliest known agriculture by another 30 thousand years. The United Press International reported:

Associate Professor Les Groube, a New Zealander working in the Department of Archeology at the University of Papua, New Guinea, said the ax heads were found recently on the northern New Guinea coast, near the city of Lae.

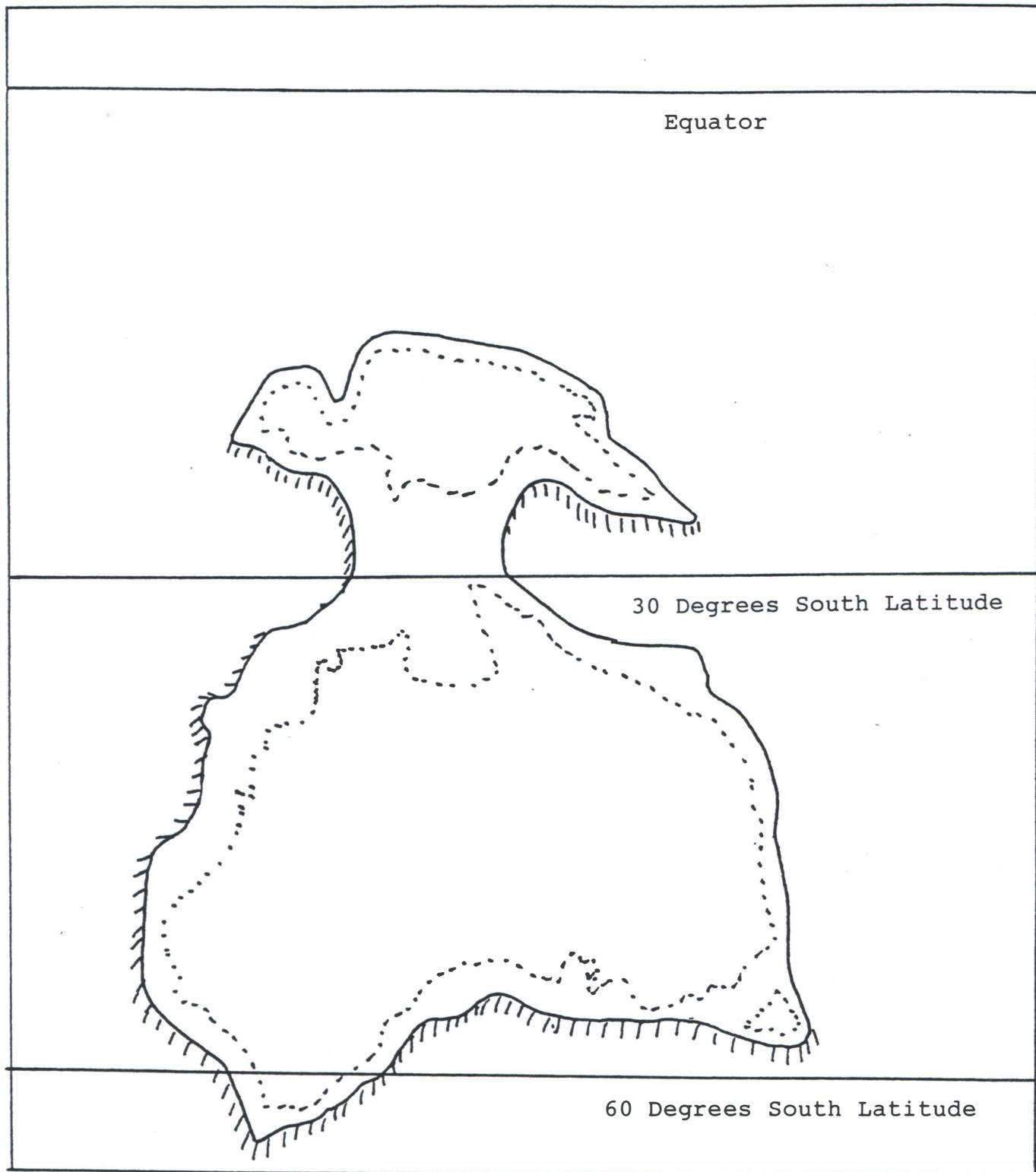


Fig. 2. Australia and New Guinea were once connected when sea levels were lower. The region would have been further from the equator during Earth-1, i.e., 50,000 to 17,000 years ago.

Tests by the Australian National University in Canberra indicated the tools were used at least 38,000 years ago. The axes -- known technically as banded axes from the grooving caused by the cane binding -- are too heavy to have been used as hunting tools, Groube said.

"They are of a kind which archeologists have found modern primitive people using elsewhere for plowing and gardening," he said. "The sheer size and weight of these axes has raised a host of problems which only further intensive research will solve."

* * *

The axes have been found on upraised coral coastlines north of the major Papua New Guinea city of Lae and near the World War II allied naval and air base of Finschhafen. Archaeologists have been using photographs of the coastline taken by the U.S. Air Force in 1942, as the coastline is normally shrouded in tropical mist.

The coral cliffs are one of the few locations in the world that have survived above the ocean surface. This is because the cliffs are being forced up by two major plates of the Earth's crust that pushes up the coastline to rise at around 13 feet every 1,000 years. [6]

Another UPI report in August of 1985 mentioned other early evidence of workings in New Guinea:

At Kosipe in the Central Highlands, the sediments around stone tools have been dated to 26,000 years ago, as has evidence of human intervention in swamp drainage.

"That man had penetrated the interior of New Guinea up to 2,000 meters (6,000 feet) above present sea levels as early as this is clear evidence of the great antiquity of settlement in New Guinea," Groube said. [7]

Groube and his co-authors later pointed out in *Nature* that similar "waisted axes" had been found in Australia and were thought to date from the Pleistocene.

Recent studies of Australian rock painting have suggested that Australia may have been inhabited some 60,000 years ago. [8] In those times Australia and New Guinea were connected by dry land. Prior to the last shift of the Earth's crust they would have been located as shown in Figure 2.

There is a legend preserved from western Australia that sounds exactly like a description of the sudden shifting of the Earth's crust, just as proposed by Charles Hapgood in *The Path of the Pole*. [9] This is the same kind of catastrophe that would have brought an end to the vanished civilization of Atlantis.

The story has been told among the Nyoongars. This tribe is found in the area of the Mogumber and Moore River north of Perth. Anthropologist Hannah Wondy Wolfe has brought attention to it. [10]

The story tells of a day thousands of years ago. Reminiscent of the "single dreadful day and night" of the account of Atlantis

the story of "The Great Shaking" tells of a trembling Earth when a "great shaking continued all day and night." The next morning the world looked different. The landscape had been altered with hills, plains, and great rocks having moved. Destructive winds blew dust and smoke and people perished. After a while conditions improved. Then people noticed for the first time that the Sun appeared to be changed. According to the legend:

Just as the hills had moved, so now the Sun that used to come up in the north and set in the south was rising in the east and setting in the west.

The effect upon the people was considerable. They divided into bands and scattered, even developing different languages. So the legend relates the cultural effect on humans of this awesome event.

The Sun did not move, of course. The continent had moved with the shifting of the crust. When I looked at the change projected for the crust some 12 thousand years ago I did not find the change of perspective for sunrise/sunset told of in the legend. When I looked at the change projected for 50,000 years ago I found that the Sun both before and after would have appeared just as described by the Australian aborigines.

There is no smooth continuum for the progress of human beings. Our ancestors struggled with perils and set-backs that we are only beginning to appreciate. They competed openly with other advanced primates and prevailed. A few among those competitors may have found some advantages in the turbulence of our geological past, but that is another story to be taken up elsewhere. The success of human beings was to prevail in numbers and to wield great influence over the appearance and quality of our environment. But some day our posterity may be reminded of nature's upper hand and nature's power to undo all our puny works. As expressed in the final words of the Australian legend: "Nothing was ever the same after the Great Shaking."

NOTES

1. Mark A. Hall, "The Many Planets 'Earth'," WONDERS 4(2): 33-46 (June 1995).
2. "A 40,000 year-old Human Occupation Site at Huon Peninsula, Papua New Guinea," Les Groube, John Chappell, John Muke, and David Price, NATURE 342: 453-55 (4 December 1986); B. Bower, "Early Culture Found in New Guinea," SCIENCE NEWS 130: 374 (13 December 1986).
3. Brenda Fowler, "Find Suggests Weaving Preceded Settled Life," NEW YORK TIMES, 9 May 1995.
4. Mark A. Hall, THE YETI, BIGFOOT & TRUE GIANTS (Minneapolis: MAHP, 1994); M. A. Hall, "The Gardar Skull and the Taller-hominid," WONDERS 4(1): 3-10 (March 1995).
5. M.A. Hall, "The Atlantis of Solon and Plato," WONDERS 4(2):47-54.
6. UPI, 19 June 1985.
7. UPI, 13 August 1985.
8. Virginia Morell, "The Earliest Art Becomes Older -- And More Common," SCIENCE 267: 1908-9 (31 March 1995).
9. C.H. Hapgood, THE PATH OF THE POLE (Philadelphia: Chilton, 1970).
10. FLYING SAUCER REVIEW 40(2): 19 (Summer 1995).

MORE ABOUT...

THE ONZA.....Loren Coleman has sent me a copy of Neil B. Carmony's *Onza! The Hunt for the Legendary Cat* (Silver City, New Mexico 88062, High-Lonesome Books, 1995, 203 + iv pp., index, illustrated). It might have been properly titled "The Onza and the Onza Hunters." You will read a lot about the people who have pursued the mystery cat of western Mexico. The book is up-to-date and tells us what little is understood about the Onza. Carmony presents the best answer to "What is the Onza?" It is a local characterization of the female mountain lion. His epilogue, however, fails to recognize the black cats reported in the Southwest as a survival of *Panthera atrox*.

MYSTERY CATS IN EUROPE.....Thanks to Wolfgang M. Schmidt we learn via Agence France-Presse on 25 May 1995 that Denmark has been visited by a mysterious lion. The story says: "For the last week, a cat resembling a lion has been scaring the citizens of the Danish island of Fyn. It is still unclear what kind of animal it could be. No zoo in Denmark is missing a big cat. The 70-80 cm [28-33 in] cat was first spotted by pedestrians in a field near Odense last week. The witnesses' reports, originally not believed by the police, have been confirmed since by other witnesses. The animal has been seen in various locations on the eastern side of the island. A hunt by police was unsuccessful." A loose pet will be the easy wiper to explain away another big cat. However, when *Panthera atrox* still prowls North America and the authorities remain clueless, Europe might look to the Pleistocene cats -- that were once numerous -- as still hanging about.

CHARLES M. SKINNER.....The folklore endeavors and a bibliography of Charles Montgomery Skinner (1852-1907) appear in "Another Look at Charles M. Skinner" by John Bealle, *Western Folklore* 53(2): 99123 (April 1994).

DEAN CONANT WORCESTER.....Dean Worcester (1866-1924) pursued the reported apes on the island of Palawan in the Philippines. His role as a colonial administrator in the islands is discussed in *The Islands: America's Imperial Adventure in the Philippines* by Emily Hahn (NY: Coward, McCann & Geoghegan, 1981).

NOAH'S ARK.....The best book written on the remarkably popular subject of Noah's Ark may be one you've not heard of. It is "an original Festival paperback" published in 1978 by Abingdon, Nashville, TN. It sold for \$1.95 at the time. The title is *Where is Noah's Ark: Mystery on Mt. Ararat*. The author is Lloyd R. Bailey, an associate professor of the Old Testament at Duke Divinity School. To find answers we must first ask the right questions. He does so in these 128 pages.