

## UNTHINKING *HOMO HABILIS*

CHRIS C. HUMMER\*

Received 10 July 1978

"... no evolutionary scheme should be hinged on evidence with this degree of uncertainty."<sup>1</sup>

*The taxon Homo habilis has recently re-entered the evolutionary scenario of human origin. It has, unfortunately, been also entered into the scenario of some creationists. The evidence is poor, fragmentary, uncertain and fraught with controversy. Evolutionists assign the material to Homo because they think it evolved into Homo, not because of what the creature looked like. Creationists should not accept such a taxonomic assignment without first analyzing the evidence and the taxonomic philosophies of evolution. In reality, the small-brained, primitive creature looks like an australopithecine.*

### Habilis History

In 1964 L. S. B. Leakey announced that recently discovered hominid fossils from Olduvai Gorge in East Africa were being assigned to a new species: *Homo habilis*. The declaration implied that the material did not match known hominid species and did not fall into the known range of variation of previously discovered species. The australopithecines, formerly thought to be human ancestors, were dismissed as evolutionary dead ends. The Leakey criteria for the new species were: increased brain size, "advanced" dental features, some "advanced" features found in the fragmentary postcranial remains, and inferred cultural activity involving the use of stone tools.

Backers of *Australopithecus* for the fossil ancestor of man gave little ground. The Leakey opinion gained only a small following, and by 1972 the majority opinion that *Australopithecus africanus* was the "missing link" prevailed. In that year Time-Life Books published their volume with the title *The Missing Link*.<sup>2</sup> *Australopithecus africanus* was enthroned. But the volume was soon out of date. Skull KNM-ER 1470 had been found that same year. The Leakey name was once more the center of controversy, and the stage was set for the revival of *Homo habilis*, though it would be a few years in coming. The bigger brained 1470 was soon looked upon as being the human ancestor. *Australopithecus africanus* lost his throne.

Struck with what he considered the uniqueness of KNM-ER 1470 Richard Leakey, in those first few years following the discovery, did not advocate a taxonomic connection between the skull and his father's *Homo habilis*. Newsweek summed up the situation in 1974 as follows:

This find (1470) also consigned the small-brained but later *Homo habilis* . . . to another evolutionary backwater. Leakey reasoned that skull No. 1470 must represent the lineal ancestor of *Homo erectus*, and hence present-day man. The next deduction was that the tool using *Homo habilis* from Olduvai Gorge must now be placed in the ranks of a type of *Australopithecus* which became extinct after many years of coexistence with man's true ancestor.<sup>3</sup>

But the claims and taxonomy have changed again. KNM-ER 1470 is now called *Homo habilis* and is

grouped with many of the fossils which earlier received that designation. Leakey says, "... I do believe that *Homo habilis*, as represented by the type specimen from Olduvai, OH 7, is the same as the more complete and slightly earlier material, such as KNM-ER 1470. On this basis, *Homo habilis* has priority."<sup>4</sup> Additional finds by Mary Leakey at Laetolil, Tanzania, and Donald Carl Johanson at Hadar, Ethiopia, have been included in the list. The uniqueness of 1470 has been subsumed. *Habilis* has been rehabilitated.

### A Valid Taxon?

Evolutionists, however, are far from presenting a united front on the matter of whether *Homo habilis* is a valid taxon, and if it is, just what fossils ought to be placed within it. Wolpoff and Brace said it well: "The problems involved in the *Homo habilis* concept are nowhere better outlined than in the difficulties in deciding what specimens to include in it."<sup>5</sup> Richard Leakey admits "there is an inherent problem in hominid taxonomy caused by the present lack of any precise diagnosis for fossil forms."<sup>6</sup> Elwyn Simons highlighted another problem when he spoke of "the common tendency to feature each new hominid fossil as taxonomically distinct and by so doing overemphasize the uniqueness of the discovery."<sup>7</sup>

Absolutely critical to an understanding of the thinking of Richard Leakey, Donald Carl Johanson and others when they place certain fossils in *Homo habilis* (or "primitive" *Homo*, etc.) is a knowledge of the theoretical taxonomic concepts of anagenesis and cladogenesis.

Anagenesis is grade classification. Animals are placed together in the same category because they look alike. In this evolutionary theory it is believed that there is change in time without diversification. Cladogenesis places animals in the group that they are believed to have evolved into. This theory says new forms are derived from splitting and branching of the ancestral form. Classification by clade "stresses the importance of a group at the beginning of a new lineage by incorporating the group in the taxon of the new lineage."<sup>8</sup> For the evolutionist there are drawbacks to both theories if they are followed to their logical conclusions. Grade classification ultimately means that one generation will be in one taxon, the next in another. Clade classification means that part of a single population will be in one taxon, while another part of the same population will be in the next taxon.

\*Mr. Chris C. Hummer, B.D., M.A., teaches Anthropology and Prehistoric Archaeology at Plymouth-Whitemarsh Senior High School, Plymouth Meeting, Pennsylvania. His address is 1121 Rose Lane, Berwyn, Pennsylvania 19312.

The Leakeys, Johanson and others are using clade classification when they assign their "advanced" hominids to *Homo*. Their classification is according to what they believe the form evolved into. It is not according to what the specimen looked like. They are saying, in effect, that since brain sizes for some *habilis* specimens appear to be a little larger than the "standard" australopithecine size there is, therefore, evidence of an evolving line. Though *habilis* does not yet look really human, it is on its way to becoming man and therefore deserves to be called *Homo*.

### Cranial Considerations

One of the major reasons for placing *Homo habilis* in *Homo* is brain expansion beyond the presumed australopithecine level.<sup>9</sup> It remains a bit of a mystery, however, how one can know what constitutes brain expansion beyond the australopithecine level. Who is to say what the australopithecine level really is? The situation is quite complicated by the nearly continuous series of endocranial volumes: 506, 510, 530, 590, 650, 687, 775 cm<sup>3</sup>.<sup>10</sup> Body size, though difficult to measure in such a meager sample, seems to be larger for those specimens assigned to *Homo habilis*. But even this, McHenry says, "does not solve the problem of dividing the brain size continuum into taxonomic groups . . ." <sup>11</sup> Cranial capacities for *Homo habilis* as listed by McHenry follow:<sup>12</sup>

OH 7	687 cc (cc = cubic centimeters)
OH 13	650 cc
OH 16	excluded because too fragmentary
OH 24	590 cc
ER 1470	775 cc

He divides the cranial series thus: 506 cc to 530 cc are *Australopithecus*; 650 cc to 775 cc are *Homo*. Richard Leakey suggests a cranial capacity of 750 cc for defining early species of *Homo*.<sup>13</sup>

The volume listed for KNM-ER 1470 seems well accepted, but there are severe problems with the other capacities listed here. Pilbeam and Gould list the cranial capacities for both OH 7 and OH 16 at 700 cc or more!<sup>14</sup> The conservative estimates of Holloway<sup>15</sup> and McHenry are to be preferred, or even reduced, especially in light of the condition of the fossils. Wolpoff and Brace remarked that:

The parietals (of OH 7) were found crushed flat, and both the curvature of the bones and their fit on the sagittal suture were reconstructed. The cranial capacity is, and has been, anybody's guess, but the close correspondence of the parietal arc dimensions with those of other specimens of known capacity suggest a value significantly in excess of 500 cm<sup>3</sup> is unlikely. The hand is very small . . . Specimen OH 16, unfortunately fragmented by a herd of cattle, has been reconstructed three times, and in all cases there is no continuous bone surface in any direction. The present reconstruction is known to be inaccurate . . . Neither the actual shape nor the size of this cranium can as yet be determined, and at present, there is no possibility of determining the cranial capacity.<sup>16</sup>

Holloway reports the capacity of OH 13 as 650 cc.<sup>17</sup>

Though it has been called the paratype of the taxon *Homo habilis*, and placed by McHenry in his *habilis* list, Gould and Pilbeam did not use it in their study. Richard Leakey even suggests that it "might be classified as gracile *Australopithecus*."<sup>18</sup>

Olduvai hominid 24 (OH 24) is attributed by some to *Homo habilis* as the most complete cranium,<sup>19</sup> yet there are several problems with its morphology and status. Holloway says that its estimated cranial capacity of 590 cc is "possibly overestimated."<sup>20</sup> McHenry calls it an australopithecine.<sup>21</sup> Leakey says that it, like OH 13, might be gracile *Australopithecus*.<sup>22</sup>

I have discussed the morphology of KNM-ER 1470 more fully elsewhere.<sup>23</sup> To that I will add here some pertinent observations by Wolpoff and Brace:<sup>24</sup> 1) The face of 1470 is extremely large, second only to that of *Australopithecus boisei* ("Zinjanthropus" or OH 5). 2) The skull displays the anterior masseteric attachment known for all australopithecines. 3) The posterior dentition is very large and is therefore reminiscent of *Australopithecus*. They further suggest that "perhaps ER 1470 and 1590 are simply large australopithecine specimens."<sup>25</sup> Other than the cranial capacity of 775 cc (which very well may be indicative of the upper range of australopithecine encephalization) there is little about skull 1470 that is not australopithecine. With Alan Walker I would agree that we ought to classify specimens according to what they look like, not according to what they supposedly evolved into.

### Jaws and Other Bones

There are morphological considerations other than cranial capacity that deserve at least a brief mention. *Homo habilis* is considered by some to be intermediate in tooth proportions between *Australopithecus africanus* and *Homo erectus*.<sup>26</sup> We have seen that Skull 1470 does not necessarily fit this conception, however. Elwyn Simons raises a serious question about the type specimen mandible, OH 7:

Nor do we know whether the type mandible of so-called 'Homo habilis' is really advanced or not. The relatively large canines and narrow premolars of this type jaw associate the find with *Ramapithecus* and *Dryopithecus*.<sup>27</sup>

In addition the fossil jaws discovered by Mary Leakey at Laetolil, Tanzania, a few years ago present a problem. Mary Leakey has placed the Laetolil jaws in early *Homo* along with the other fossils discussed in this paper. However, the Laetolil jaws are reported as being morphologically similar to the hominid remains from Sterkfontein in South Africa. The Sterkfontein hominids are gracile australopithecines. A writer in *Nature* remarks that "the acknowledgement of such morphological affinities does not strengthen the final attribution of the Laetolil hominids to the genus *Homo*."<sup>28</sup> The writer goes on to say that attribution to genus *Homo* should not rest solely on the presence of certain dental features. All hominids share a basic, underlying morphological pattern which is particularly evident in the jaws and teeth . . . The taxonomic position of the Laetolil hominids (and ER 1470) must . . . be considered uncertain.<sup>29</sup>

A caution by Richard Leakey on this theme deserves repeating: "It is extremely difficult to identify mandibular fragments with any exactness . . ." <sup>30</sup>

Postcranial bones for *Homo habilis* are not numerous. Where they do exist they are controversial.

A study by Day and Wood (1968) of the talus (astragalus) of *Homo habilis* by a multivariate statistical technique indicates that it was very different both from the modern human and from the gorilla and chimpanzee pattern. Its nearest counterpart is the talus of *Australopithecus* from Kromdraai in South Africa. This and other evidence (unrelated to bipedalism as such) point to the possibility of *Homo habilis* being an advanced australopithecine rather than an early *Homo*.<sup>31</sup>

Two fossil femora (KNM-ER 1472 and KNM-ER 1481c), discovered in the Koobi Fora formation of East Rudolf (now Turkana), are often placed in the same taxon as Skull 1470. The proximal end of the bones is said to have a modern human appearance. Yet multiple discriminant analysis reveals some differences. McHenry reports

The two fossils from East Rudolf approach more closely the modern human form, although they share certain unique features with the other early hominids, such as the long femoral neck, and several other more subtle characteristics.<sup>32</sup>

### The Species Question

Our discussion thus far has been on the generic question, "Was *habilis* *Homo*?" I want to now briefly turn to the question of species: "Was *habilis* *habilis*?" The specific name means "handy man" and was given to the fossil by the late L. S. B. Leakey out of his conviction that the creature was the tool maker of Olduvai Gorge, Bed I. Such a hypothesis has not stood up well. Its fatal weakness was demonstrated immediately. In 1959 the tool maker of Olduvai was thought to be *Zinjanthropus*, the superrobust australopithecine. When Leakey changed his mind one year later with the finding of *Homo habilis* he was in effect admitting that the archaeological evidence is equivocal. It could be read several ways. And that is still the case. There is no positive proof that *Homo habilis* made and used stone tools. Marvin Harris points out that "paleontological and archaeological data do not prove definitely that the earliest hominids used tools."<sup>33</sup> Richard Leakey virtually admits the same thing: ". . . Who made the tools? Again, if we are honest, we have to admit that we shall never really know."<sup>34</sup>

### Summary and Conclusion

The picture we get of *Homo habilis* is this. The cranial capacity of the type specimen (OH 7) is 687 cc; it is 700 cc; it is not much more than 500 cc. The paratype specimen (OH 13) is *Homo*; it is *Australopithecus*. OH 24 is *Homo*; it is *Australopithecus*; it has a cranial capacity of 590 cc; its cranial capacity is overestimated. KNM-ER 1470 is *Homo*; it looks like an australopithecine; it is *Australopithecus*. OH 16 has a cranial capacity of 700 cc; the cranial capacity cannot be determined; the cranium has been reconstructed three

times; the present reconstruction is inaccurate. The teeth of *Homo habilis* are intermediate between *Australopithecus* and *Homo erectus*; the teeth are advanced; they are not advanced; they are like *Ramapithecus* and *Dryopithecus*. The mode of locomotion of *habilis* was like that of man; it was like that of *Australopithecus*; it was neither—it was unique. *Homo habilis* was a tool maker; he was not a tool maker; we can never know.

I am not missing the mark by much in saying that the foregoing is a very confused picture. I believe that creationists are being seriously misled if they use the designation "Homo" for the so-called "habilis" fossils in order to advocate an early sudden appearance of man. Though the young-earth creationist model would predict the appearance of man in the fossil record as early as other primate fossils, I do not believe the *habilis* fossils fulfill that prediction. If one does accept *habilis* as *Homo* he must contend with, in addition to all the problems listed above, the Leakey admission that (a) major differences do exist between *habilis* and *Homo erectus* (retrogressed, but true man), and (b) that "intermediate forms are unknown" between the two.<sup>35</sup> Creationists should not be taken in by a scheme that assigns a fossil to *Homo* status on the basis of what it is thought to have evolved into, rather than on the basis of what it looks like. Small-brained *Homo habilis* is far too primitive a creature to be called a man. "Homo habilis" is the creature of philosophy. The taxon should be "sunk" as Wolpoff and Brace suggest.<sup>36</sup>

### References

- <sup>1</sup>Wolpoff, Milford H., and C. Loring Brace, 1975. Allometry and early hominids. *Science* 189 (4196): 61-63.
- <sup>2</sup>Edey, Maitland A., 1972. The missing link. Time-Life Books, New York. See especially the scenario, pp. 16 & 17.
- <sup>3</sup>1974. The Leakeys' telltale skulls, *Newsweek*. 15 July, p. 75.
- <sup>4</sup>Leakey, Richard E., 1976. Hominids in Africa. *American Scientist* 64 (2): 174-178. See especially p. 177.
- <sup>5</sup>Wolpoff and Brace, *op. cit.*
- <sup>6</sup>Leakey, *op. cit.*, p. 175.
- <sup>7</sup>Simons, Elwyn, 1968. Assessment of a fossil hominid. (book review). *Science* 160 (3828): 672-675.
- <sup>8</sup>Walker, Alan (in) Coppens, Yves, F. Clark Howell, Glynn Ll. Isaac, and Richard E. F. Leakey (eds.), 1976. Remains attributable to *Australopithecus* in the East Rudolf succession. Earliest man and environments in the Lake Rudolf Basin. University of Chicago Press. p. 485.
- <sup>9</sup>Pilbeam, David and Stephen Jay Gould, 1974. Size and scaling in human evolution. *Science* 186 (4167): 892-901. See especially p. 896.
- <sup>10</sup>McHenry, Henry M., 1975. Fossils and the mosaic nature of human evolution. *Science* 190 (4213): 425-431. See especially p. 429.
- <sup>11</sup>*Ibid.*, p. 430.
- <sup>12</sup>*Ibid.*
- <sup>13</sup>Leakey, *op. cit.*, p. 177.
- <sup>14</sup>Pilbeam and Gould, *op. cit.*, 895.
- <sup>15</sup>Holloway, Ralph L., in Katz, Solomon H. (ed.), 1975. The casts of fossil hominid brains. Biological anthropology. W. H. Freeman and Company, San Francisco, p. 74.
- <sup>16</sup>Wolpoff and Brace, *op. cit.*
- <sup>17</sup>Holloway, *op. cit.*
- <sup>18</sup>Leakey, *op. cit.*, p. 176.
- <sup>19</sup>Wolpoff and Brace, *op. cit.*
- <sup>20</sup>Holloway, *op. cit.*
- <sup>21</sup>McHenry, *op. cit.*, p. 430.
- <sup>22</sup>Leakey, *op. cit.*
- <sup>23</sup>Hummer, Chris C., 1977. A plea for caution about skull 1470. *Creation Research Society Quarterly* 14 (3): 168-172.

(Continued on page 204)

And Tempus caused macromolecules to form in the primal oceans; and the macromolecules began to reproduce themselves and develop a cellular structure.

And the sea brought forth protozoans and algae, and spore yielding organisms after their kind; and energy from the sun which ruled the day, was effectively used by some of the organisms; and Tempus was satisfied with the outcome. And the time that elapsed was the third age.

And Tempus caused other special forms of life to appear, the sponge, the jellyfish, the shellfish and later the starfish followed by the sunfish.

Swimming fish then appeared so that the sea had life but the land was barren. So Tempus caused seaweeds to evolve into mosses and ferns and spore yielding plants in their manner; great forest swamps also sprung up.

And Tempus caused great sharks to evolve and many creatures that move within the sea.

Then reptiles appeared on the earth, and some were great and dreadful, and Tempus was satisfied with the outcome.

And the time that elapsed was the fourth age.

And Tempus caused more life to evolve abundantly upon the earth, creatures that crawl upon the earth and fowls that fly above the earth in the open sky.

And Tempus caused pines to appear and cone-bearing trees and winged fowl that might shelter in the trees; and Tempus was satisfied with the outcome.

And among all the forms of moving life that appeared, the stronger strains destroyed the weaker strains so that only the fittest survived to multiply in the earth.

And the time that elapsed was the fifth age.

And Tempus caused many other living creatures to evolve on the earth, creeping things and cattle and beasts of the field; but the stronger strains destroyed the weaker strains so that only the fittest survived.

Those that survived were best able to adapt to their changing surroundings, and Tempus was satisfied with the outcome.

And Tempus caused the struggle to continue until a man evolved, with differences from the other forms of life. He had greater intelligence and thus acquired dominion over the fish of the sea and over the fowls of the air and over all the earth, and over every creeping thing that creepeth upon the earth.

So Tempus evolved man in a special image, in both male and female forms they evolved.

And Tempus caused them to be fruitful and multiply and increase in the earth and to take charge of it, having dominion over the fowl of the air and over every living thing that moveth upon the earth.

And Tempus caused them to take of every herb bearing seed upon the face of the earth and of every tree bearing fruit and of anything else they chose for their food.

And the animals also ate of the plants, but some ate other animals smaller and weaker than themselves and some ate one another.

And Tempus was satisfied with everything that had evolved, and the time that elapsed was the sixth age.

Thus the major evolution of the earth was finished, and all the life within it.

### Comments

Any valid comparisons between the theories of evolution and creation must be made on the basis of similarly structured presentations. The above account indicates that the theory of evolution appears to be no less mythical than that of creation, when presented in similar style to the biblical account of creation. When

evolution theory is commonly presented with the questionable assumptions in the background, it appears to have a sound scientific structure, and the role of faith in time, to bridge the unproven gaps, is not readily obvious.

Many of the weaknesses in the evolution theory have been well documented by Morris in his book, *The Troubled Waters of Evolution*,<sup>2</sup> by Gish in *Evolution, The Fossils Say No!*,<sup>3</sup> and in the works of other creation scientists. It has also been pointed out by these authors how these weaknesses are resolved by a creation-based theory. The major objection to the creation concept is that it requires a belief in a supernatural power at the beginning, to bring the earth and life into existence, whereas in evolution, the current laws are supposed to operate "ad infinitum". A careful examination of the theory of evolution, however, indicates that effects like mutations, which are limited in scope, are extrapolated beyond their observed scope, to make the theory tenable. Such extrapolation gets into the realm of the supernatural; but faith in time is required to naturalize the supernatural. So the supernatural does exist in the theory of evolution as well, although in a more subtle form. There is really no sound basis for labelling creation as a religion while evolution is a science.

At the same time, it must be acknowledged that evolution appears to many to have a better scientific structure than creation. This is easily explained by the total expenditure both in terms of financial support and in intellectual expertise, invested in this field. Since the theory of creation has as firm a basis for further scientific investigation, there can be no justifiable reason for the denial of similar financial support for creation-oriented research. It is our conviction that such research will establish the scientific superiority of the creation theory.

### References

<sup>1</sup>The Holy Bible, Gen. 1:1-Gen. 2:1.

<sup>2</sup>Morris, Henry M., 1974. *The troubled waters of evolution*. Creation-Life Publishers, San Diego, California.

<sup>3</sup>Gish, Duane T., 1973. *Evolution the fossils say no!* Creation-Life Publishers, San Diego, California.

## Unthinking Homo Habilis

(Continued from page 214)

<sup>24</sup>Wolpoff and Brace, *op. cit.*

<sup>25</sup>*Ibid.*

<sup>26</sup>Pilbeam and Gould, *op. cit.*, p. 893.

<sup>27</sup>Simons, *op. cit.*, p. 675.

<sup>28</sup>1976. Rethinking human evolution. *Nature* 264 (5586): 507-508.

<sup>29</sup>*Ibid.*

<sup>30</sup>Leakey, *op. cit.*, p. 174.

<sup>31</sup>Napier, John, in Katz, Solomon H. (ed.), *op. cit.*, p. 23.

<sup>32</sup>McHenry, *op. cit.*, p. 428.

<sup>33</sup>Harris, Marvin, 1975. *Culture, people, nature*. Thomas Y. Crowell Co., Inc., New York, p. 54.

<sup>34</sup>Leakey, Richard E. and Roger Lewin, 1977. *Origins*. E. P. Dutton, New York, p. 96.

<sup>35</sup>Leakey, *op. cit.*, p. 177.

<sup>36</sup>Wolpoff and Brace, *op. cit.*, p. 63.