

## AFRICAN JAMBOREE

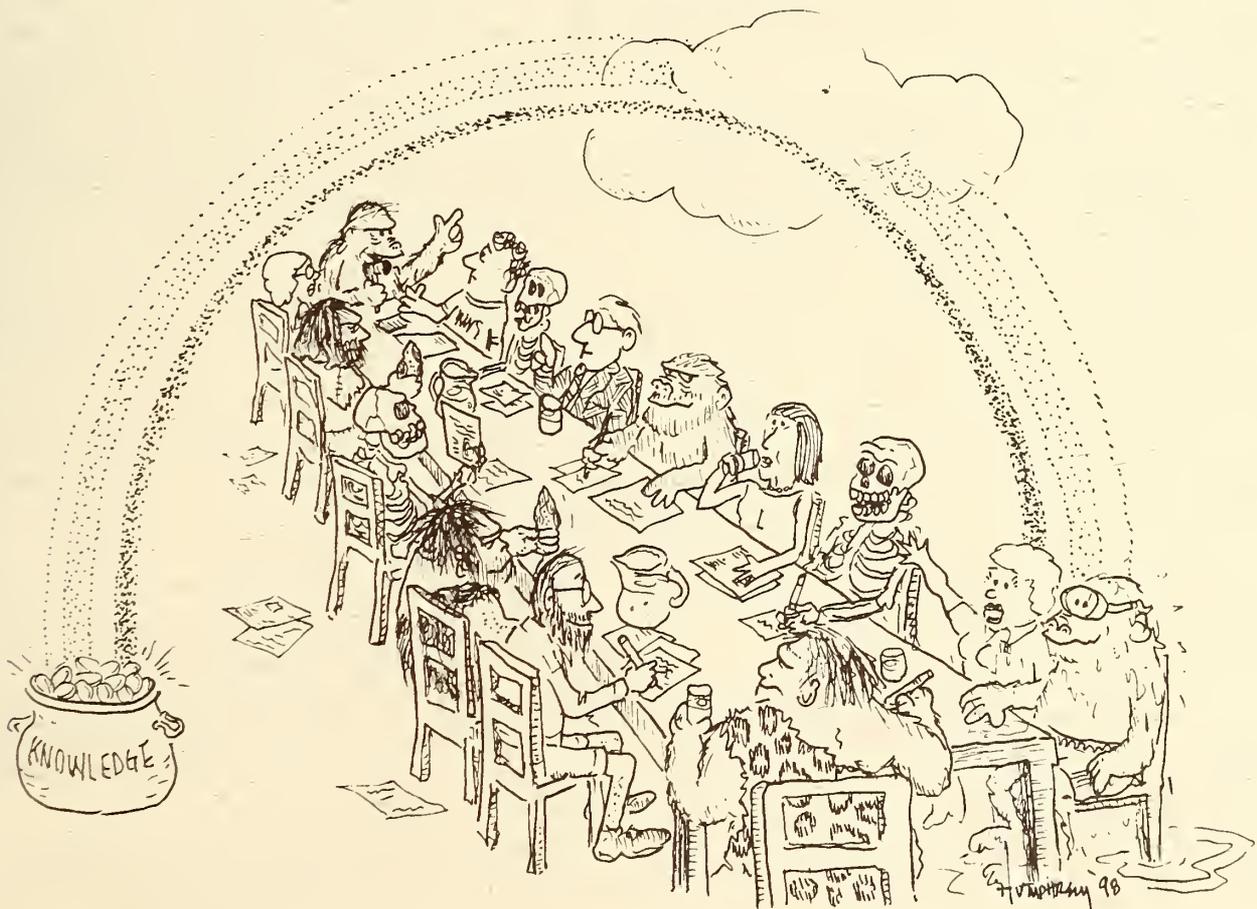
by Bernard Wood



It was the largest scientific gathering ever held in South Africa—the Dual Congress of the International Association for the Study of Human Paleontology and the International Association of Human Biologists—bringing over a thousand scientists from more than 75 countries to meet in Johannesburg the last days of June and the first few days of July. The Dual Congress was a marvelous way to celebrate the contributions Africa has given humanity. Without Africa, after all, there would have been no human evolution as we know it nor any human biology. The venue also reminded us that civilization means much more than cultural complexity. It means a proper respect for human dignity and a real understanding of the benefits and responsibilities of our unusual evolutionary history. We saw both of these in evidence in the “rainbow” coalition that is the new South Africa.

Human biology (the study of the patterns of variation in human physiology and morphology) and human evolution (the study of human evolutionary history) should be intellectual bedfellows, and a few scientists have international reputations in both fields. The doyen of this distinguished group, Phillip Tobias, predictably reminded the participants of the important role Africa has played in human prehistory, a role which Tobias had a major part in establishing. He also informed us that a very recent study implied that Africa also played a crucial role in the origin of mammals.

Tobias, emeritus professor of anatomy at the University of Witwatersrand in Johannesburg, is the president of both organizations, and he used his dual presidency to propose a joint meeting in the “new” South Africa. Organizing such a meeting is a tough assignment in any context, but to do this in a country



facing economic and social “growing pains” was a special challenge, but one to which the nation and its scientists rose. From the words of the Minister who spoke at the opening ceremony to the inevitably more emotional speeches at the closing banquet, it was clear that South African politicians had achieved a perspective on the apartheid years that made them into statesmen and stateswomen. It was a perspective that had a perceptible maturity and moral strength, and it made many of us from so-called “more developed” countries yearn for men and women of equivalent stature to be our political leaders.

Why do scientists attend a continual round of meetings, each packed full of formal presentations? Small workshop meetings are designed to bring together scientists in a particular specialty, to help individuals present new research findings or plan new directions or avenues for their research. But large conferences are not designed to accomplish anything quite so tangible as developing new research direction. Such large meetings are different; they are much more like “jamborees,” meetings of enthusiasts who come together to share mutual interests. But we never call them jamborees. Perhaps it would be more difficult to raise the airfare to go to a “jamboree” than to the more lofty sounding “Joint Congress.”

To use a nautical metaphor, people do not attend conferences to plot a new course for their research; they go to check their present bearings, to make sure that the assumptions they made when they plotted their present course of research are still valid. Such meetings are also a fine opportunity for younger researchers to make the personal connections that are so valuable in science so that when you need data or tips about a better method, you can call up someone you have met face to face. At this most recent Congress, there was little science presented, but I took a young post-doctoral researcher with me and in the few short months since the Dual Congress he has begun two new collaborative projects resulting directly from contacts made at the meeting, probably over a beer late in the evening.

The conference had its amusing moments. A TV company was making a program about Elaine Morgan, author of the “aquatic ape” hypothesis. The hypothesis maintains that this is a scenario that would explain a range of alleged human peculiarities, from the distribution of body fat to the direction of hair on our backs. She argues that support for her hypothesis ranges from the absence of

any evidence for human origins between five and eight million years, to the association of the earliest hominids after 5 mya (million years ago) with lake shore locations. The difficulty with the hypothesis is that it is one of a number of superficially attractive explanations of the events of human evolution that, for the present at least, are not testable and do not deserve to be labeled a “hypothesis.” Other arguments are more plausible: there is little fossil or geological evidence of any kind for the period between 5 and 8 mya in Africa, and stable lake shores are more likely than many other environments to accumulate bones over time, whether from predation or from natural deaths.

The TV program’s thesis was that science is a cosy male clique that has systematically and ruthlessly given the “cold shoulder” to Ms. Morgan and her hypothesis, primarily because she is a woman, and, secondarily, because she is outside conventional academia. Those who have met Elaine Morgan will know that she is a tiny doughty sparrow of a lady whose advanced years have not dimmed her, or her supporters’ abilities to literally pin you against the wall so that she, or they, can make their point. Any refutation to Morgan comes less from an “anti-Morgan” conspiracy than simply from a strategy for survival! At the meeting, the session that Elaine Morgan was to speak at was quite ruthlessly stage-managed with “planted” questioners whose interventions would ensure that the conspiracy thesis would be supported by the session itself.

What was the Congress like for me, a British born and trained paleoanthropologist, formerly Dean of the Medical School at the University of Liverpool, and currently holding a joint appointment at George Washington University and the Smithsonian Institution. Like many of those attending, I presented a 20-minute talk and was the coauthor on another talk and poster. I also organized one of the 18 half-day colloquia, titled “The Diversity of Early *Homo*.” I was asked to do this because one of my research interests focuses on the early stages in the evolution of our own genus, *Homo*. Some of the papers in the colloquium, mine included, reiterated material that is soon to be published, but two of the contributions were original and thought-provoking. Not a bad ratio of “pain to gain.”

I had not expected a theme to emerge from the colloquium, but it did. The point of my contribution

was that since the very first fossil species was attributed to our own genus *Homo neanderthalensis* in 1864, we have been redefining *Homo* to make it more and more inclusive. In my paper I tried to make the case that as it is presently defined, *Homo* makes little sense as a genus. In technical terms, it is not a "clade" as it is not currently limited to the descendants of one common ancestor but includes species from several related lineages. Nor is it a "grade," for it includes species that show a variety of adaptations, rather than species that have common diets, habitats, or locomotor patterns. For example, *Homo habilis* still maintained a considerable ability to use its arms, hands, and feet for scrambling around in trees. I argued that to ensure that *Homo* is both a clade and a grade two of the most ancient species presently assigned to it, *Homo habilis* and *Homo rudolfensis* (see *AnthroNotes*, spring 1996) need to be excluded. As a result, *Homo ergaster*, also known as "early African *Homo erectus*," would be the most primitive and oldest (ca. 2.0 myr) member of *Homo*. If the label *Homo* is restricted to committed bipeds with high quality diets and an ability to disperse over large areas, then the emergence of our genus was as recent as 2 mya. This would mean that as the first stone tools occur prior to this date, they were made by a creature that was still, in terms of adaptations, an australopithecine.

What was intriguing was that two other talks in the colloquium, by Leslie Aiello and Susan Anton, set out the details of research on hominid adaptations and on dispersal patterns, respectively, that was consistent with my hypothesis. On the basis of body shape (large gut, not waist) and size (small), Aiello argued that the australopithecines shared a lower "quality" (high bulk,

low energy per gram) diet with *Homo habilis* and some apes, while *Homo ergaster*, with a taller, leaner silhouette, had made a transition to higher dietary quality. Anton used information on body mass, home range and diets in primates to suggest that *H. ergaster*, with its larger body size and quite different diet, would have been the first member of our lineage with the ability to travel and spread over large areas without much diversification into different forms. This major transition point in human evolution resulted in the first hominid dispersals out of Africa by as early as ca. 1.8 mya.

As with most meetings, my ability to sustain a fresh mind for each session fell off alarmingly as the days went by and 'people fatigue' set in. The most interesting conversation of my five days was on the bus-ride back to the airport!

Conferences rarely follow any predictable pattern, and some of one's most productive research liaisons may be over dinner. At least the venue for this Congress, Sun City, gave us little other than gambling as alternatives to the sessions. Never believe anyone who attends a conference in Paris and then claims he or she went to every session! Scientists are human too.

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SHAKING THE FAMILY TREE