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## SYSTEMATICS OF HUMANKIND

### PALMA 2000: AN INTERNATIONAL WORKING GROUP ON SYSTEMATICS IN HUMAN PALEONTOLOGY

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On February 7-9, 2000, an International Colloquium on Human Systematics, as a preliminary event of the V Congress of the IASHP (International Association of Human Paleontology), to be held in Barcelona, Spain (2003), had place in the Balears Island University, Palma de Mallorca, Spain. The authors of these report attended the Colloquium, under the presidency of Prof. Camilo J. Cela-Conde. Alejandro Pérez-Pérez, representing the IASHP, Jordi Serrallonga, coordinator of *Hominids* (Spanish Association for the Study of Hominid Evolution), Cristian Altaba, of the *Imedea* (Mediterranean Institute of Advanced Studies), and Lucrecia Burges, member of the Department of Philosophy of the Balears Islands University and secretary of the Colloquium, also participated in the discussions.

The aim of the Palma Colloquium was that of reaching a consensus capable to put an end to the current confusion of how the human lineage should be classified. Since Goodman's (1963) disagreement with Simpson's (1945) classification of Hominoidea, the content of the Hominid taxon, as well as the category given to the human clade, changed in the course of time. Some authors (Schwartz, Tattersall, & Eldredge, 1978; Groves, 1986; McKenna & Bell, 1997) gave the category of tribe (Hominini) to humans and their direct ancestors. Others (Bailey et al., 1992;

Goodman *et al.*, 1994) placed the human clade in the category of genus, sharing the taxon of Hominina (subtribe) with chimpanzees. In a later paper, Goodman and collaborators (Goodman *et al.*, 1998) gave the category of only a subgenus (*Homo homo*) to the human clade, sharing the genus *Homo* with chimpanzees (*Homo pan*). Finally, Watson and collaborators (Watson, Estal, & Penny, 1998) placed gorillas (*Homo gorilla*) also in the *Homo* genus.

In order to reach an agreement, just principles of classification, not detailed taxonomies, were focused and discussed in Palma Colloquium. The following statements summarize the results of the discussions.

#### GENERAL CONSIDERATIONS

1. Humans have evolved from non-human ancestors and continue to evolve. Since their emergence from their ape ancestors, humans diversified into different lineages, of which only one has survived to the present day. All evidence indicates that the human species is not evolving toward increasingly diverse groups, but rather the opposite.

2. Current human beings, their ancestors not shared with any extant nonhuman species, and the collateral descendants of these ancestors, will be henceforward referred to as the human "clade".

3. Scholars engaged in studying the human clade use a variety of approaches and methods, all of which have a place in human systematics. Different methods may yield different outcomes concerning human systematics. Principles and methods originally devised for classifying living forms often encounter difficulties when applied to fossils.

4. Organisms were originally classified on the basis of morphology (including ontogeny). Molecular, biogeographical, behavioral, and ecological approaches have added significant new lines of evidence. Morphology retains a preeminent role in systematics, particularly so in the study of fossils. The time dimension is notably significant in the assessment of phylogenetic relationships.

5. Phyletics, phenetics, and cladistics, are all used in systematics. Taxonomic classification should conform, to the extent possible, to phylogenetic relationships. Since the second half of the twentieth century, cladistics has made particularly valuable contributions in the field of classification, but we note that cladistics identifies sister groups, not ancestor/descendant relationships.

6. Molecular considerations are valuable in determining relationships between lineages that have extant descendants. In the case of fossil lineages having no extant descendants, the application of molecular studies is limited at present, but advancing techniques may reduce this limitation.

## CLASSIFICATORY PRINCIPLES

7. Taxonomic practice should be consistent with the principle of monophyly. On this ground, Simpson's (1945) traditional concept of a Pongidae family should be rejected because it embraces paraphyly.

The family Hominidae has been widely used as the taxon assigned to the human clade. It is advisable to treat taxonomic rankings conservatively.

Several alternative ranks have been proposed for the human clade, such as subfamily (Homininae), tribe (Hominini), subtribe (Hominina), genus (*Homo*), or subgenus (*H. homo*). None of them has achieved a substantial degree of consensus among the world community of scholars, though the use of tribe has received increasing support.

We recommend that active steps be taken to elicit a consensus viewpoint on this subject. To this end, we propose that a Workshop or Study Group be convened to meet at the V International Congress of Human Paleontology, to be held in Barcelona, Spain, in 2003.

8. The transfer of a species taxon from one superspecific taxon to another should be avoided if it increases paraphyly in the recipient taxon. There are practical difficulties in following this principle. We recommend that the above mentioned Workshop addresses this issue.

9. No consensual means of identifying biological species in the fossil record exists at the present time.

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