ABSTRACT VOLUME

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NEW POSTCRANIAL MATERIALS OF *ACERORHINUS YUANMOUENSIS*, AND THE PHYLOGENY OF ACERATHERIINAE

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Compared to other groups of Rhinocerotidae, Aceratheriinae are less specialized in having a hornless or small horned skull. However, the taxonomy of Aceratheriinae is confused, and the group is not monophyletic. A recently discovered partial skeleton of *Acerorhinus yuanmouensis* provided an opportunity to re-evaluate the phylogenetic relationships of Aceratheriinae. Our phylogenetic analysis includes all genera currently regarded as aceratheres *sensu lato* (i.e., *Mesaceratherium*, *Protaceratherium* and *Diaceratherium*). The characters used in the present analysis include many that have been previously evaluated together with 105 new ones, resulting in a data matrix of 387 characters scored for 50 rhinocerotid species and one extant tapir as out-group. Coding has been revised for several characters, both in the light of recent observations and also in order to eliminate unwarranted assumptions. The analysis recovers Teleoceratini as sister group of Aceratheriini forming a monophyletic group within Rhinocerotidae. In contrast to previous analyses and traditional taxonomy, North American aceratheriines do not form a clade, and *Mesaceratherium gaimersheimense* is placed within Teleoceratini. Another salient result is the placement of *Turkanatherium acutirostratus*as a stem rhinocerotid, falling outside Aceratheriinae. The relationships of the genera within Aceratheriinae are complex, and some remain debatable: *Alicornops simorrense* appears as sister group of *Aceratherium incisivum*, instead of *Alicornops laogouensis*, and *Aphelops mutilus* has a variable position with respect to other late Neogene aceratheriines.