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Middle Eocene ungulate mammals from Myanmar: A review with description of new specimens

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We review an ungulate mammalian fauna of the Eocene Pondaung Formation, central Myanmar, and herein describe new dental specimens. The taxa newly recognized in the Pondaung Formation are two indeterminate bunodont artiodactyls, two small 'eomoropid' perissodactyls (*Eomoropus* sp. cf. *E. minimus* and an indeterminate 'eomoropid'), and a new deperetellid perissodactyl genus, *Bahinolophus*, which is established for *Deperetella birmanica* from the Pondaung Formation. The Pondaung ungulate fauna consists of 29 species (14 families and 18 genera): one species of an indeterminate small ungulate, 12 species (six genera in six families) of artiodactyls, and 16 species (11 genera in seven families) of perissodactyls. Although both Pondaung artiodactyls and perissodactyls are abundant and taxonomically diverse, the former are less diversified in generic numbers than the latter, but are nearly equal to the latter in abundance. Anthracotheriid artiodactyls and brontotheriid and amynodontid perissodactyls are the most abundant elements in the fauna. The estimated paleoecologies of the included taxa, the geologic and geographic evidence, and cenogram analysis suggest that the paleoenvironment of the Pondaung fauna was forested/woodland vegetation with humid/subhumid moisture and large rivers, which were located not far from the eastern Tethyan Sea. The age of the Pondaung fauna is independently correlated with the latest middle Eocene only on the basis of the stratigraphic, microfossil, and radiometric evidence, yielding a result consistent with mammalian faunal correlations. On the other hand, the Pondaung fauna includes many artiodactyl taxa compared to other middle Eocene faunas of East Asia and shows relatively high endemism at the generic level, implying that the Pondaung fauna is not formally included in the Eocene Asian Land Mammal 'Ages' system.

Key words: Ungulata, Bahinolophus, cenogram, Eocene, Pondaung Formation, Myanmar.

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