The upper Eocene Youganwo Formation in Maoming Province, Guangdong Province, China, produced abundant remains of turtles and crocodiles, but mammalian remains are rare. The previously found mammals from Youganwo Formation include a nimravid carnivore and an amynodontid perissodactyl. Here we report on a new brontotheriid perissodactyl from the Youganwo Formation. *Maobrontops paganus* gen. et sp. nov. is described based on a maxillary fragment with P4 and M1–2 (SYSU-M-4). *Maobrontops paganus* gen. et sp. nov. is characterized by the combination of a simple P4 without a hypocone with derived molars having large molar fossae and large anterolingual cingular cusp. A parsimony implied weighting character analysis places *Maobrontops* gen. nov. in the clade Embolotheriita as a sister taxon to the terminal subclade containing *Nasamplus*, *Protembolotherium*, and *Embolotherium*. *Maobrontops paganus* gen. et sp. nov. is one of the largest Asian brontotheres. The brontotheriiid fauna of South China is endemic and includes at least three valid taxa: *Dianotitan* from Brontotheriita and *Pygmaetitan* and *Maobrontops* gen. nov. from Embolotheriita.

**Key words:** Mammalia, Perissodactyla, Brontotheriidae, Eocene, China.