

A NEW PARVICURSORINE ALVAREZSAUROID SPECIMEN IVPP V20341 (DINOSAURIA: THEROPODA) FROM THE UPPER CRETACEOUS GOBI BASIN: A SPECIMEN OF *LINHENYKUS* OR AN EIGHTH GENUS?

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Upper Cretaceous rocks from the Gobi Basin of China and Mongolia have yielded alvarezsauroid theropod dinosaurs with impressive specialized body plans, including the uniquely monodactyl parvicursorine alvarezsauroid *Linhenykus monodactylus*. The latter taxon is the only parvicursorine species from the Upper Cretaceous Chinese Gobi Basin and belongs to the Wulansuhai Formation of Bayan Mandahu, Inner Mongolia. We compare a new fragmentary disarticulated parvicursorine specimen IVPP V20341 from the same formation and locality with *Linhenykus* and find that they have different origination points for their anterior caudal transverse processes: in IVPP V20341, this is the anterodorsal corner of the centra whilst in *Linhenykus* it is the posterior end of the prezygapophyses. There are also a number of tentative differences observed, but these require further information from future finds to confirm - particularly with regards to anatomical variation along the parvicursorine spine as many of these differences relate to vertebral elements that have similar, but not identical, vertebral numbers. IVPP V20341 lacks any of the known autapomorphies of other Asian parvicursorines, but this is partly because many relevant elements are missing from the specimen. IVPP V20341 is seemingly unique amongst alvarezsauroids because of the presence of cervical procoely and its relatively larger semi-circular neural canals. However, these features can be plausibly explained as anatomical variations of the parvicursorine cervical series because similar degrees of variation are actually observed in the dorsal and caudal series of these animals. Thus, erring on the side of caution IVPP V20341 is not identified as a new taxon, although future discoveries, particularly of vertebral elements, may warrant a taxonomic revision. As a parvicursorine specimen without any autapomorphies, IVPP V20341 does not contradict the hypothesis that the Bayan Mandahu fauna is unique compared to other localities within the Upper Cretaceous Gobi Basin. Thus, despite the description of this specimen there are still seven parvicursorine species in the latter basin (*Linhenykus*, *Albinykus*, *Ceratomykus*, *Kol*, *Mononykus*, *Parvicursor*, and *Shuvuuia*). This study represents an extreme example of making anatomical comparisons when precise vertebral position data - vertebral number along the spine - is lacking. It is hoped that this example can serve as a valuable case study for vertebrate palaeontologists conducting work on similarly-preserved material, particularly younger students.