

Diceratocephalid trilobites from the uppermost Changhia and Kushan formations (Guzhangian, Miaolingian, Cambrian) in North China Platform

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Examination of type material of the type species of *Wongia*, *W. triangulata* and new material from the uppermost Changhia Formation and Kushan Formation, in Shandong and Liaoning, necessitates transfer of the genus from Avoninidae to Diceratocephalidae. Many species, formerly assigned to *Cyclolorenzella* or *Jiulongshania*, are re-assigned to *Wongia*. Because *Agraulos acalle* the type species of *Jiulongshania* is assigned to *Wongia*, *Jiulongshania* is synonymized with *Wongia*. *Jiulongshania* was previously assigned to Inouyiidae but as a synonym of *Wongia* belongs to the Diceratocephalidae. *Cyclolorenzella* is also revised based on new material. *Cyclolorenzella* is distinguished from *Wongia* in having a relatively larger, subquadrate cranidium, with a shorter frontal area, longer occipital spine, and a transverse semi-elliptical pygidium, without a narrow pygidial border, but with a weak posteromedian embayment. Three new species: *Wongia nanzhaocunensis* Yuan, *Wongia laevigate* Yuan, and *Torifera intermedia* Yuan, Ren & Gao are erected. Ranges of the constituent species of *Wongia*, *Cyclolorenzella*, and *Torifera* between the *Damesella paronai*–*Ajacicrepida ajax* Zone of the uppermost Changhia Formation to the *Diceratocephalus armatus* Zone of the uppermost Kushan Formation are detailed. This study facilitates the subdivision of pre-established fossil zones and the establishment of biozones based on the First Appearance Datum (FAD) of species, enabling the determination of the sequence of genera and species appearances in the stratigraphic record. It also contributes to the global correlation of the base of the Guzhangian and Paibian Stage in North China Platform.

Key words: Trilobita, Diceratocephalidae, *Wongia*, *Cyclolorenzella*, *Torifera*, Guzhangian, Miaolingian, Cambrian, North China Platform.

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