

COMMENT

Bolaspidella from the Cambrian of Kashmir and its stratigraphic significance

(A comment on the paper by S. K. Shah and C. S. Sudan, published in the Journal of the Geological Society of India, Vol. 23, No. 5, pp. 236-245, 1982).

The find of '*Bolaspidella*' from Kashmir is of great significance, and is contrary to the accepted view that it is not found in the Asia-Pacific biological province of Cambrian but is restricted to the province in which north America falls. I sought the comments of Prof. R. A. Robison, Department of Geology, University of Kansas, Kansas, U.S.A., who is a member of IGCP Project 29 Working Group. He writes 'in my opinion, the specimens that Shah and Sudan have described from Kashmir resemble *Bolaspidella* in a general way, but they differ in several important details. The anterior cephalic border is more tumid, the glabella is relatively larger, the occipital rings are more robust, and the weak lateral glabellar furrows are probably different. I would not assign the specimen from Kashmir to *Bolaspidella*.'

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AUTHOR'S REPLY

The 'accepted view' that *Bolaspidella* is restricted to North America is based on the absence of any report (before the present one) from the so called Pacific and Australo-Asian provinces. This need not be accepted dogmatically as several supposedly restricted Cambrian trilobite taxa are now known to occur outside their provincial domains. In many cases the provincialism is valid only up to the specific level. This appears to be the case with *Bolaspidella*.

Regarding the comments of Professor Robison, it is noteworthy that all the characters which, according to him, distinguish the American species of *Bolaspidella* from those of Kashmir are of a relative nature. These include, the 'more tumid' anterior cephalic border, 'relatively larger' glabella, 'more robust' occipital rings etc. The threshold limits of these dimensional characters do not figure as diagnostic distinctions of this genus, as elaborated by Robison himself (Robison, 1964, 1971). Some of these are more apparent than real because of the larger size of the Kashmir species. For example, the glabellar length with relation to total cranial length compares favourably with many American species where a gradational relationship is noticeable. The relative dimensional differences, if any, can be considered to be of specific significance only, since the generic characters are all corresponding. Accordingly, the Kashmir taxa have been designated as new species which would differ from the American species in detail, as mentioned by Professor Robison. If Professor Robison would not like the Kashmir species to be included in the genus *Bolaspidella*, he will have to redefine the genus *sensu stricto* fixing the limits of the dimensional parameters so as to exclude Kashmir forms from it. It would be, however, only a subjective exercise and whether it is desirable, in order to sustain a theory of provincialism, I am not sure.

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References

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- (1971) Additional Middle Cambrian trilobites from the Wheeler Shale of Utah. *Jour. Paleont.*, v. 45, no. 5, pls. 89-91, pp. 796-804.