A note on the stratigraphic position of the Chandragiri Limestone, Nepal

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The present note defines the stratigraphic position of the Chandragiri Limestone exposed in the Chandragiri-Chisapani section lying south of Kathmandu on the basis of fresh collection of cystoids from the limestone exposed at the milestone 500 metres from the Chandragiri Pass on the Chandragiri-Kathmandu road. Chandragiri Limestone constitutes one of the few fossiliferous horizons exposed in the Godavari-Phulchauki and Chandragiri-Chisapani areas and constitutes one of the most important sections exposed in the Lesser Himalayan Zone of Nepal.

The earliest record of the occurrence of doubtful fossils in the Chandragiri Limestone was made by Medlicott (1875). Auden (1935) identified cystoids and orthids from the collections made earlier by Bowman and assigned Ordovician to Silurian age to this limestone. Hagen (1959) supported Auden's stratigraphic conclusions on the basis of some Ordovician and Silurian trilobites which he found in these rocks. Stocklin et al., (1977) described thecal plates of cystoid Caryocrinites from the limestone exposed 400 metres from Chandragiri Pass. Most of the previous workers have correlated the Chandragiri Limestone with the Phulchauki Limestone exposed in the Godavari valley.

The author made fresh collection of cystoids from the locality which lies at a distance of 100 meters from the locality from where Stocklin et al., (1977) described thecal plates of cystoid Caryocrinites. The fossils were collected from two stratigraphic levels. The upper horizon has yielded Codiacystis bohemicus, Lagynocystis pyramidalis, Dendrocystites aff. sedgwicki and Himalayicalix prokopi suggesting Middle Ordovician age for the upper units of the Chandragiri Limestone. The lower fossiliferous horizon lies 20 metres below the upper level and has yielded Elliptocinctus barrandei which is known to occur in the upper part of the Middle Cambrian succession in Europe. The fauna from the two levels is clearly suggestive of the fact that the Chandragiri Limestone may range in age from Middle Cambrian to Middle Ordovician. These stratigraphic conclusions are in contrast to the suggestions made by earlier workers that the Phulchauki Limestone and the Chandragiri Limestone are homotaxial. The age of the Phulchauki Limestone has earlier been defined as lower Upper Devonian by Gupta (1975).

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References


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