Stratigraphy of the Jajarkot nappe: finding the rocks of the Tethys province

Sunil Lamsal*, Kabi Raj Paudyal

Central Department of Geology, Tribhuvan University, Kirtipur, Kathmandu, Nepal
** geosunil91@gmail.com*

There are several thrust sheets in the Lesser Himalayan region of Nepal. The Jajarkot nappe is one of them. It is located immediately west of the Kahun Klippe and east of the Karnali Nappe. There is no unified stratigraphy established for this thrust sheet. In the present research, an attempt was made to establish the stratigraphy of the Jajarkot nappe to fulfill the research gap. Previously described by Fuchs & Frank (1970) and Sharma (1980), the Jajarkot nappe in western Nepal have two distinctive crystalline lithological units: the Chaurjhari Formation and Thabang Formation. The previous unit consists of garnet-grade schist, and quartzites, with intrusions of basic rocks and granites, while the later unit consists of grey to brown crystalline limestones with biotite-quartz-schists. An unconformity is observed above the Thabang Formation. The younger geological unit above the unconformity is mapped as the Jaljala Formation, which is composed of fine-grained calcareous sandstone and calcareous siltstone with minor proportions of limestones and grey-green slates. At present work, a preliminary geological study was carried out to work on the stratigraphy of the Jajarkot nappe in the Jaljala areas at 1:25,000 scales. Fossils of crinoids are found in the rock unit of the Jaljala Formation. These fossils are considered the index fossils of the Silurian. In this case, the Jaljala Formation would be equivalent to the rocks of the Tethyan affinity, and further study is under progress. The concept that the thrust sheets are moved from north to south in the Himalayas will be evidenced by these findings. An attempt is made to correlate the presently found fossils with the crinoids of the Phulchauki Group of the Kathmandu nappe and with the root zone of the Tethys succession.

References

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