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DISCUSSIONS

Discussion on "Calcareous algae from the Ordovician succession (Thango Formation) of the Spiti Basin, Tethys Himalaya, India"

RAVI S. CHAUBEY[1*] and S.K. PRASAD
[1]Department of Geology, Panjab University, Chandigarh 160014; [*]Corresponding author: ravischaubey@hotmail.com

The online published article – "Calcareous algae from the Ordovician succession (Thango Formation) of the Spiti Basin, Tethys Himalaya, India" by Shivani Pandey and Suraj K. Parcha in Acta Palaeobotanica. 2018. DOI: 10.2478/acpa-2018-0009

We congratulate the authors for presenting new data on algae; however, its utility is greatly reduced due to short comings indicated below:

1. The inset in Fig. 1 is wrong, hence misleading.

2. Authors report fossils in 14 thin section of the carbonate rocks and attribute these to the Thango Formation. The Thango Formation is essentially an arenaceous sequence with no carbonate input, thus the stratigraphic location of algal remains becomes suspect. From Hayden (1904) to Myrow et al. (2016) all authors have unmistakably stated that the Thango/ Shian Formation is a non-fossiliferous red-sandstone/quartzitic and conglomeratic succession, deposited in fluvio-marine environment, post the Cambro-Ordovician orogenic event. The calcareous rocks conformably overlie the Thango Formation and are referred as the Takche/Pin Formation.

3. Fig. 1 indicates studied section at Shian locality, but the field photograph in Fig. 2a is of Farakah Muth in the Pin valley. Similarly, the Fig. 2b is not from the Shian locality but from one kilometer south of the Farakah Muth locality. Shian locality lies nearly 5 km south of the Farakah Muth section.

4. According to Suttner (2007) the Pin Formation (280 m) is divisible into Farakh Member (unit P/1–P/6, 0–90 m thick), Takche Member (unit P/7–P/13, 90–230 m thick) and Mikkim Member (unit P/14–P/17, 230–280 m thick). Hubmann and Suttner (2007) reported calcimicrobes and green algae from the units P7 to P11 of the Pin Formation at Farakh Muth section (see Hubmann & Suttner, plate 1 and 2, p. 189–190), Pandey and Parcha's (2018) statement that their algal remains come from 72 m below the level of Hubmann and Suttner (2007) section of Farakah Muth contradicts their claim that their samples were from the Thango Formation of Shian section. Kato et al. (1987) reported algae from 58.7 m below the base of Muth Quartzite from the 'Shaly Limestone' of the Pin Formation from the Farakah Muth section. The ambiguity of geographic and stratigraphic locations makes the report dubious and contamination in Himalayan palaeontological database.

5. In Table 1, the authors mention that Hubmann and Suttner (2007) used the term Takche Formation, whereas these authors had used the term Pin Formation.

REFERENCES

HAYDEN H.H. 1904. The Geology of Spiti with parts of Bashahr and Rupshu. Memoirs Geol. Surv. India, 36: 1–121.

HUBMANN B. & SUTTNER T. 2007. Calcimicrobes and calcareous algae of the Pin Formation (NW Himalayas, India): a contribution to the 'Ordovician Flora'. Acta Palaeontol. Sin., 46: 188–193.

KATO M., GOEL R.K. & SRIVASTAVA S.S. 1987. Ordovician Algae from Spiti, India. Jour. Fac. Sci., Hokkaido Univ., Ser. IV, 22(2): 313–323.

MYROW P.M., HUGHES N.C., MCKENZIE N.R., PELGAY P., THOMSON T.J., HADDAD E.E., FANNING C., MARK F. 2016. Cambrian–Ordovician orogenesis in Himalayan equatorial Gondwana. Geol. Soc. Ame. Bull., 128(11–12): 1679–1695.

PANDEY S. & PARCHA S.K. 2018. (in press) Calcareous algae from the Ordovician succession (Thango Formation) of the Spiti Basin, Tethys Himalaya, India. Acta Palaeobot. 58(2): 97–106, DOI: 10.2478/acpa-2018-0009.

SUTTNER T. 2007. The Upper Ordovician to Lower Silurian Pin Formation (Farka Muth, Pin Valley, north India) – a formal discussion and redefinition of its controversial type-section: Acta Palaeonto. Sin. 46, 460–465.

Reply on the "Discussion on Calcareous algae from the Ordovician succession (Thango Formation) of the Spiti Basin, Tethys Himalaya, India"

SHIVANI PANDEY and SURAJ K. PARCHA, Wadia Institute of Himalayan Geology Dehradun – 248001. Corresponding author: shivani@wihg.res.in

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The authors are thankful to Dr. Chaubey and Dr. Prasad for their comments on our new data on calcareous algae from the Pin valley. The reply to the comments are as follows:

1. The inset in Fig. 1 is not intended to be misleading; while arranging the sketch there was a slight mistake in writing. It should be Farakha Muth instead of Muth. The exact location is Farkah Muth which is opposite to the Muth Village.

2. Few thin layers of carbonaceous rocks within the upper part of Thango Formation were observed during the studies. The samples were collected from these thin layers, thin sections of these samples were prepared. From these thin sections calcareous algae along with other microfossils were observed and reported. Thus there are no grounds of suspicion. Hayden (1904) has given detailed geology of the Spiti valley. Whereas, Myrow et al. (2016) have discussed the geology of the region and have not studied the section in particular in the Pin Valley.

3. The calcareous algae reported in the present studies by the authors is from the left bank of the Pin River which is opposite to the Muth Village. Fig. 2b is the close view of the sample locality which lies between the Farakha Muth and Shian Village.

4. Hubmann and Suttner (2007) reported algae from the unit P7 to P11 of the Pin formation and assigned the age as Upper Ordovician age. The presently described algae is reported below the P7 unit of Hubmann and Suttner (2007) and from upper part of Middle Ordovician Thango Formation. Kato et al. (1987) reported algae from 58.7 m below the base of Muth Quartzite from the 'Shaly Limestone' of the Pin Formation which lies above the reported forms. Therefore, there is no ambiguity of the geographic and stratigraphic locations of the algae reported presently.

5. The authors have used the term Pin Formation of Hubmann and Suttner (2007) and not the Takche Formation as mentioned by Chaubey and Prasad in their discussion. Refer Hubmann and Suttner (2007) page no. 189.