the surface. The scolices were attached to the lucent germinal layer of the cyst.

However, on removal of the thick fibrotic capsule, some scolices emarginated outside the lucent germinal membrane. The scolices have four suckers and one rostellum armed with a double crown of 30–32 hooks with hooklets (Figure 4). On the basis of morphological studies, the cyst was diagnosed as *C. cerebralis*.

Cerebral coenurosis is worldwide in distribution. However, information on non-cerebral coenurosis from Asia is limited. Most of the cases are reported from the Middle East only[10]. Prevalence of non-cerebral coenurosis in goats in India was recorded[6,12,13] up to 1.1–2.41%. Coenurus was reported from various body parts of goats in India, including diaphragm[4], the base of the ear and thigh muscles, and ocular coenurosis[14]. The present finding on occurrence of coenurus cyst underneath the *tensor fascialata* of the upper thigh and also under *bracheocephalicus* and *multifedous dorsi* muscle in the cervical region of a goat is the first report from North East India.

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Skeletal microfauna from the Cambrian Series 2 (Stage 4) Kunzum La Formation, Parahio valley, Spiti region (Tethyan Himalaya), India

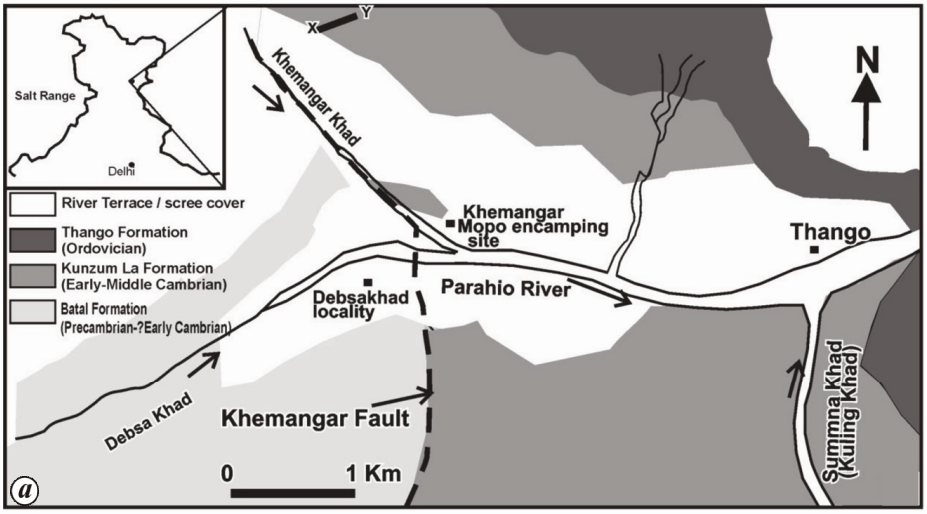
Small shelly fossils (SSFs)[1] consist of a variety of shells, sclerites and other biomineralized structures[2] that mark the advent of widespread biomineralization among animals in the Cambrian period[3]. SSFs are commonly known worldwide from the Terreneuvian Series to unnamed Series 2 of the Cambrian System[3]. The less diverse SSFs are known from the Cambrian Series-3 (refs 4, 5) to Carboniferous[6]. In the Indian Himalaya, SSFs are recorded from the Early Cambrian Tal Group[7–9] of the Lesser Himalayan Zone and in the Tethyan Himalayan Zone from the Middle Cambrian part of the Kunzum La Formation (Spiti region)[10], and Lolab Formation[11,12] (Kashmir Basin). Here we report an assemblage of mineralized skeletal microfossils from the Lower Cambrian part of the Kunzum La Formation of the Spiti region, Tethyan Himalaya.

Most of the previous palaeontological work in the Cambrian of the Spiti region pertains to the trilobites[13–20], brachiopods and hyoliths[14,21] and trace fossils[22–32]. Only one record of SSFs *Oneotodus* sp., *Sagittodontus* sp., *Problemoconites*, *Westergaardodina* sp., and *Furnishina* spp. is available from the Middle Cambrian dolomitic beds of the 'Parahio Series' at the Parahio valley section[10].

The Cambrian succession is well exposed in the Parahio valley of the Spiti Himalaya, Himachal Pradesh, India (Figure 1 *a* and *b*). The Cambrian of the Spiti Himalaya is grouped under the Haimanta Group, which is divided into Batal and Kunzum La formations[33,34]. The Batal Formation mainly consists of phyllite, quartzite and intervening shale, and contains acritarch *Pulvinomorpha*, *Sphaerochitinozoa* and *Anguloplanina* suggestive of latest Precambrian age[35]. The 2700 m thick Kunzum La Formation[35] comprises of shale, sandstone, quartzite, dolomite and limestone, and is rich in trilobite and trace fossils of Early–Middle Cambrian age. Based on the incoming carbonate material in upper part, the Kunzum La Formation was subdivided into two members[35]. The lower 2210 m of the Kunzum La Formation, which is devoid of carbonate, was grouped under the Debsakhad Member[35] which yielded abundant trace fossils. The upper 590 m of trilobite-bearing part belonged to the Parahio Member[35], which is equivalent to the Parahio Series[36]; it contains carbonate rocks. However, recent work suggests that the carbonate beds also occur within the Debsa Khad Member[37], making the subdivision redundant. More recently, the term 'Parahio Formation'[37] is suggested for the Parahio Series which originally signified a biostratigraphic unit, and used for the entire Kunzum La Formation, which has been contested[38,39] and retention of the term 'Kunzum La Formation' was suggested (Figure 1 *c*).

The present studied section of the Cambrian Kunzum La Formation in the

Spiti region (Figure 1 *a*) is located along the left bank of the Khemangar khad at Kaltarbo locality, which lies 1.8 km NW of the classical Parahio valley section in the Spiti region. Along this section, the Kunzum La Formation is more than 1600 m thick and is in faulted contact with the underlying Batal Formation. The basal faulted contact of the Kunzum La Formation is concealed under the debris (X, Figure 1 *b*), while the Thango Formation (Ordovician) overlies it along an angular unconformity, exposed on the steep ridge at a higher level. The Kunzum La Formation mainly comprises of sandstone, siltstone, quartzite, silty shale, shale and carbonate. The present study was confined to 719 m of the Kunzum La Formation at the Kaltarbo locality (Figure 2). The dominant lithologies include sandstone, siltstone, shale and silty shale. Fossiliferous thin carbonate beds (30–41 cm) are present at three stratigraphic levels. The lowermost carbonate bed includes *Haydenaspis parvatya* level at 162.3 m from the base of the measured section. The basal Middle Cambrian *Oryctocephalus indicus* level (Cambrian Series 3, Stage 5) is at an interval of 345.7 m from the base of the section. The second thin limestone bed, which yielded skeletal microfauna, occurs 163.7 m below the *O. indicus*-bearing beds of the Cambrian Series 3, Stage 5, and 19.7 m above the *H. parvatya* level of the Cambrian Series 2, Stage 4. About 500 g of limestone sample from the level 182 m from the base of the section was etched with 15% formic acid for one month. Sieving procedure was followed using 150 to 200 mesh size. Scanning electron microscope studies were undertaken at CAS, Department of Geology, Panjab University (PU), Chandigarh. The present microfaunal assemblage contains several taxa which are globally known from the Cambrian system. Owing to poor preservation,



Age	Stoliczka (1865)	Greisbach (1891)	Hayden (1904)	Pascoe (1959)	Srikantia *et al.* (1979) and Srikantia (1981)	Kumar *et al.* (1984)		Singh *et al.* (1991)	Myrow *et al.* (2006)	Bhargava (2008)
Cambrian	"Babhes Series"	"Haimanta Series"	"Cambrian System"	Parahio series	Kunzum La Formation	Kunzum La Fm.	Parahio Member	Parahio Formation	Parahio Formation	Kunzum La Formation
				Upper Haimanta series			Debsa Khad Member	Kunzum La Formation		
					Batal Formation	Batal Formation		Batal Formation	Batal Formation	Batal Formation

c

Figure 1. ***a***, Geological map showing the Cambrian rocks in the Parahio valley, Spiti Himalaya and small shelly fossils (SSF) bearing Kaltarbo section (*X*–*Y*). ***b***, Field photograph of the studied section. *X*–*Y* indicates the measured section from base (*X*) to top (*Y*). ***c***, Generalized classification scheme of the Cambrian of the Spiti Himalaya.

identification of the Spiti material is possible only up to generic level. Detailed systematic description of the fossils will be submitted elsewhere. The recovered fauna shows abundance of Chancelloriid sclerites of *Archiasterella* (2–5) and *Chancelloria* sp. (1, 6–9, 13–19), hyolitheminthes tubes ?*Torellella* sp. (24–35), hylothid ?*Cupitheca* sp. (10), indeterminate hylothid forms (11, 12), and ?*Halkieria* sp. (20–24) (Figure 3). All of the specimens are phosphatic in composition. Five specimens assigned to *Archiasterella* are preserved as phosphatized sclerites or phosphatic steinkerns. Spiti materials (2, 3–5) (Figure 3), particularly one specimen (2) (Figure 3), exhibit four lateral rays with one median recurved ray. The incomplete preservation of the Spiti sclerite rays prevents a definite assignment to any species of *Archiasterella*. Chancelloriid was first described from the Burgess Shale as sponges[40] and later from earliest Cambrian to early Late Cambrian rocks as Coeloscleritiphora[41–43]. These occur as composite and star-shaped, slightly irregular, straight, cylindrical shape or single-rayed sclerites. The *Chancelloria* sp. mostly occurs as isolated rays and internal moulds (1, 6–9, 13–19) (Figure 3) and a sclerite with 5–7 recurved, radiating lateral asymmetrically arranged rays. Compositionally, they are phosphatic in nature. Chancelloriid sclerites are known worldwide from Cambrian of China[44,45], Australia[42,46], north Greenland[47], Jordan[48], Siberia[49], Turkey[50], Spain[51,52] and Quebec[53]. *Cupitheca* is a cylindrical conch with surface sculptures. Due to poor preservation of specimen, the sculpture on the surface (10) (Figure 3) is not clear. Specimen with preserved apertural end of conch shows septate termination and is bounded by smooth, collar-like incised groove (10) (Figure 3) which is characteristic of *Cupitheca*. The species is known from the Cambrian of Australia[54], Newfoundland[55] and Antarctica[56]. The hyolitheminthes tubes of calcium phosphate from the Spiti region are small, abraded fragments (23–35) (Figure 3) and resemble ?*Torellella* Holm, 1893. Hyolitheminthes tubes are most common and widely dispersed SSFs in the Cambrian deposits and known from the Cambrian of Australia[57,58]. In the Lesser Himalaya, the SSFs are known from three levels, i.e. *Anabarites–Tiksitheca–Circotheca* assemblage (at the base of the Tal Group), *Dimida–Allonia* assemblage (lower part of the Arenaceous Member) and *Pelagiella–Auriculatespira* assemblage (at the top of the Arenaceous Member and lower part of the Calcareous Member). Age diagnostic *Pellagiella lorenzi* is known from

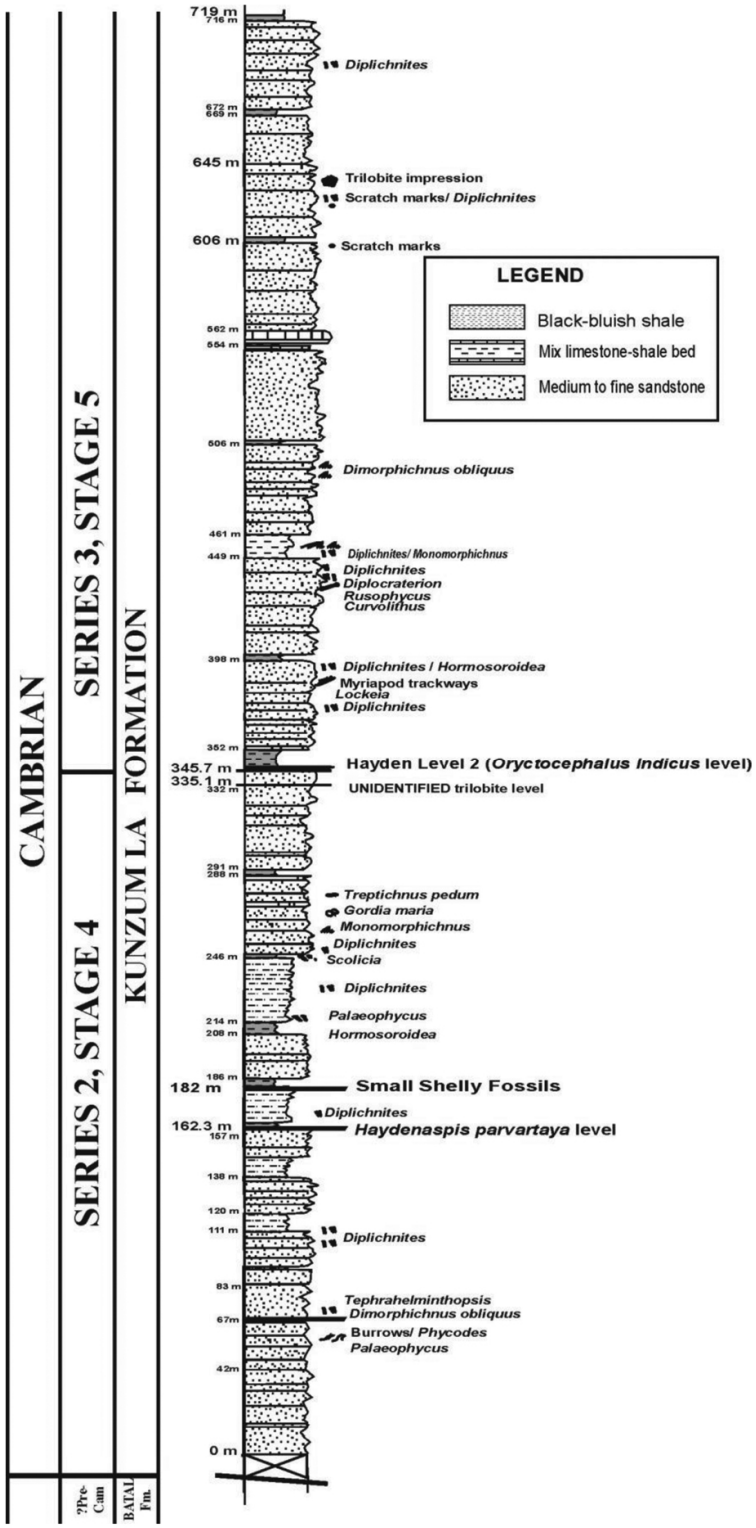


Figure 2. Stratigraphic column of the Kunzum La Formation at Kaltarbo locality, Parahio valley, Spiti Himalaya, including occurrences of *Haydenaspis parvatya* and *Oryctocephalus indicus* levels and SSFs level.

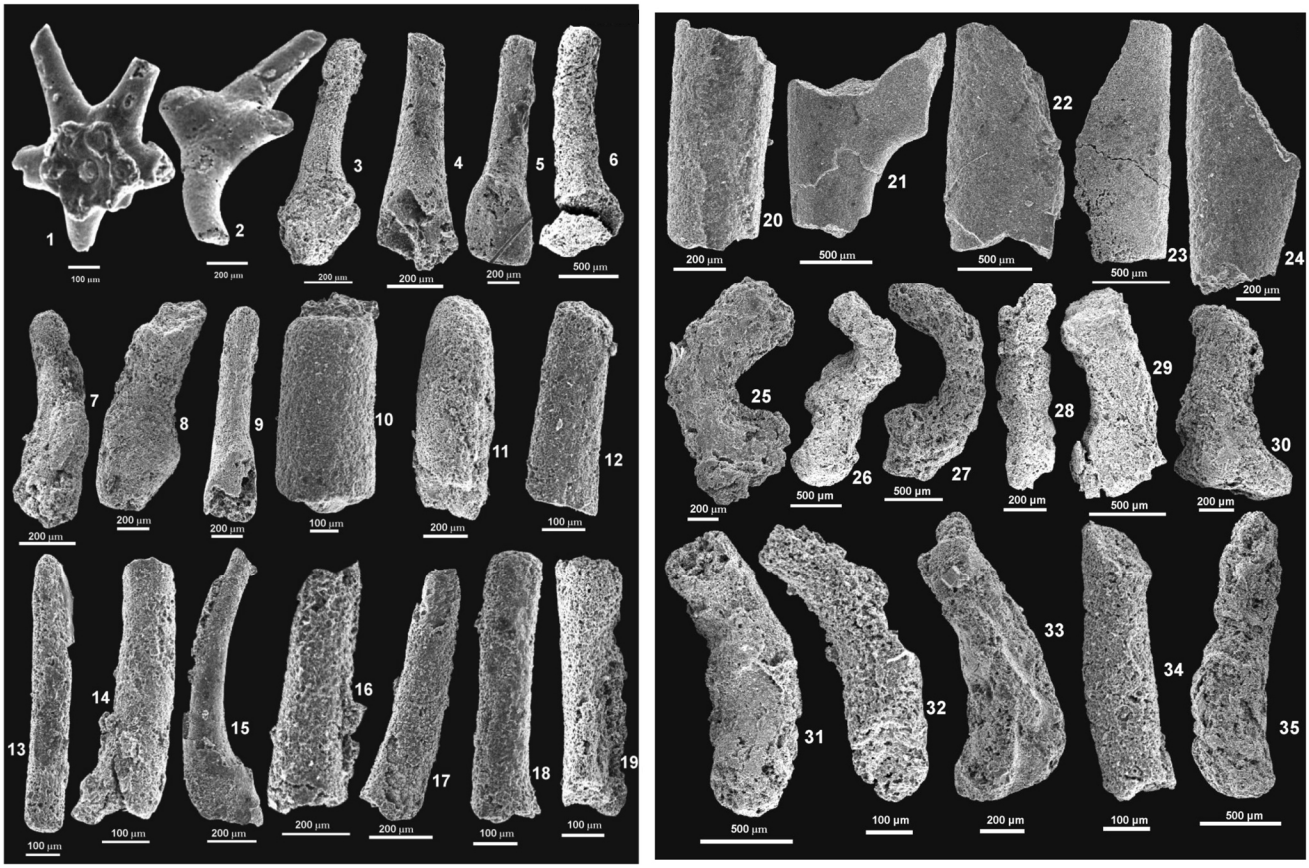


Figure 3. Scanning electron photomicrographs of skeletonized microfossils from the Cambrian Series 2, Stage 4 of the Kunzum La Formation, Spiti Himalaya. 1–9, 13–19, Single-rayed or disarticulated sclerites of Chancelloriids (Walcott, 1920); 1–5, *Archiasterella* sp.; 6–9, 13–19, *Chancelloria* sp.; 10–12, *Hyoliths*; 10, ?*Cupitheca* sp.; 11–12, Indeterminate *hyoliths*; 20–24, *Helkieria* sp.; 25–35, Indeterminate hyolitheminthes tubes.

the Calcareous Member of the Tal Group. More recently, the two upper levels were grouped under SSFs 2 level[59], which in turn is overlain by the trilobite *Drepanuroides* Zone[59] representing the late Early Cambrian age (Cambrian Series 2, Stage 4). In the Spiti region (Tethyan Himalaya), the *Drepanuroides* Zone is not yet identified, but two trilobite levels, i.e. *H. parvatya* and *Yuehisienszella* levels of Cambrian Series 2, undefined Stage 4 are known. Since the present record of SSFs from the Parahio valley of the Spiti region occurs above the *H. parvatya* level of Cambrian Series 2, Stage 4, and 163.7 m below the *O. indicus* level (Cambrian Series 3, Stage 5), is correlative with the SSFs 2 level[59] of the Lesser Himalaya. The previously described SSFs from the Parahio Member of the Kunzum La Formation as *Oneotodus* resembles the Chancelloriid sclerites (1–9, 13–19) (Figure 3) and probably belongs to *Chancelloria* sp. The specimen described as *Allonia erromenosa* from the Arenaceous Member of 'Tal Formation' (Cambrian) of the Garhwal syncline also resembles the *Chancellora* sp. sclerites.

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Litchi fruit contains methylene cyclopropyl-glycine

Earlier we had reported on annual seasonal outbreaks of hypoglycaemic encephalopathy in children in Muzaffarpur district, Bihar[1,2]. Until our studies in 2013 (ref. 1), this disease was misclassified by all others as acute viral encephalitis first and later as acute encephalitis syndrome, since no viral agent could be detected after years of search[3–6]. Media had been calling it a mystery disease, as no definitive clinical diagnosis consistent with International Classification of Diseases had been made, in spite of investigations dating back from 1995 onwards by many investigators – local, national and international.

Hypoglycaemic encephalopathy occurs sporadically in children predisposed by inborn errors of metabolism, triggered mostly by long hours of no food intake[7]. In children not genetically so predisposed, an extrinsic toxin is necessary to cause the disease. The one well-known extrinsic toxin causing hypoglycaemic