

# On the age of the Sulcacutus Beds of Spiti, Himachal Pradesh based on Bajocian-Bathonian Brachiopods

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## Abstract

The brachiopod species *Arceythyris veziani* Contini and Rollet and *Arceythyris diptycha* (Öppel) are reported from the Sulcacutus Beds exposed near Kibber, Spiti. The find of these brachiopods suggests that the Sulcacutus Beds may start from Upper Bajocian, thus suggesting the age of the bed from Upper Bajocian to Callovian.

## Introduction

The present note records the find of one species each of the brachiopods genus *Arceythyris* from two different stratigraphic levels within the Sulcacutus Beds exposed near Kibber (32°20' : 78°04') in the Spiti valley. The stratigraphic succession exposed near Kibber along with location of brachiopods recorded in the present note is as follows :

Spiti Shales succession - Upper Oxfordian to Lower Tithonian

### Unconformity

- |            |  |                                     |
|------------|--|-------------------------------------|
| Horizon 3. | Dark grey and black ferruginous oolitic limestone yielding <i>Belemnites sulcacutus</i> , <i>Macrocephalites</i> , <i>Reineckites</i> , <i>Dolikephalites</i> , -4 m | - Callovian                         |
| Horizon 2. | Grey and black limestone yielding <i>Arceythyris diptycha</i> (Oppel) and indeterminate bivalves-10 m  | - Upper Bathonian                   |
| Horizon 1. | Dark grey biomicritic limestone and shales yielding <i>Arceythyris veziani</i>   | - Upper Bajocian<br>Lower Bathonian |

### -Unconformity

Kioto limestone succession - Upper Norian to liassic

As shown in the above Table, the lowermost horizon (Horizon 1) within the Sulcacutus Beds lying unconformably above the upper units of the Kioto Limestone succession has yielded rich assemblage of *Arceythyris veziani* Contini and Rollet. This species has been recorded from north Jura mountain and is considered to range in age from Upper Bajocian to Lower Bathonian (Contini and Rollet, 1970).

The Horizon 2 lying above Horizon 1 has yielded representatives of *Arceythyris diptycha* (Oppel) which has been recorded from different parts of Europe and considered to be restricted to Upper Bathonian (Rollet, 1964a, b).

The uppermost horizon (Horizon 3) of the Sulcacutus Beds has yielded *Belemnites sulcacutus*, *Macrocephalites triangularis*, *Dolikephalites fluxuorsus*, *Reineckites waageni*, etc. of Callovian age.

The Sulcacutus Beds of Spiti and their equivalents in other parts of Himalaya have generally been assigned a Callovian age on the basis of ammonoids and belemnoids which are found in the uppermost horizon of the succession (Gupta,

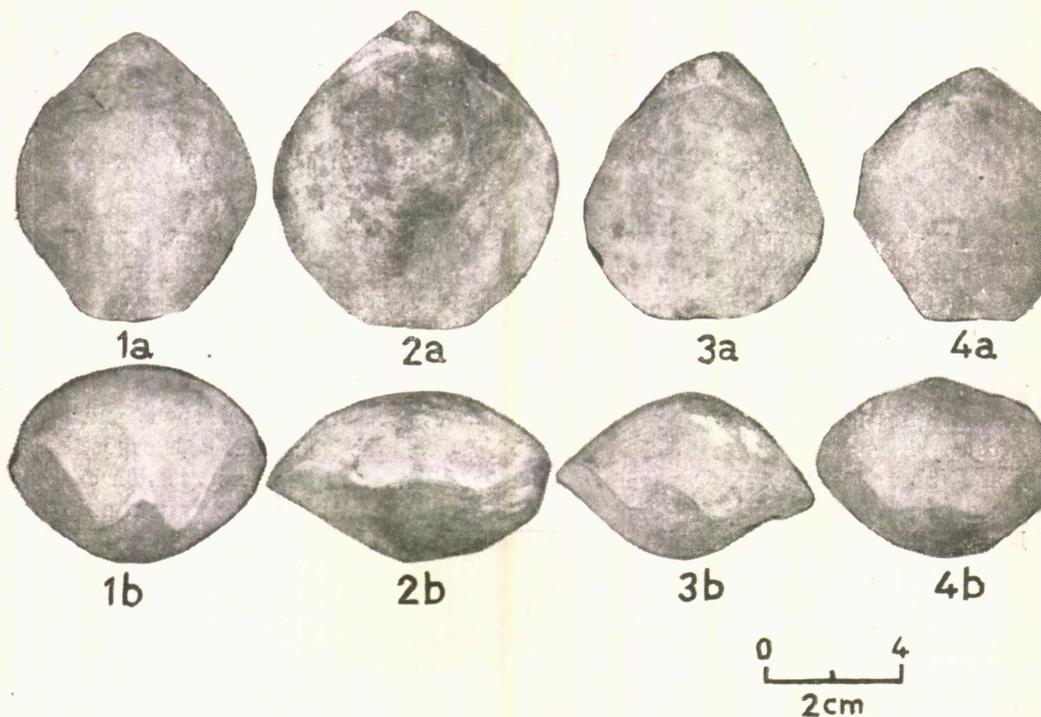


Figure 1-2. *Arceythyris veziani* Contini and Rollet  $\times 2$ .

Figure 3-4. *Arceythyris diptycha* (Öppel)  $\times 2$

1975). The find of *Arceythyris veziani* Contini and Rollet and *Arceythyris diptycha* (Öppel) from the lowermost two horizons suggests that this succession actually ranges in age from Upper Bajocian to Callovian. The occurrence of doubtful *Arceythyris* had earlier been recorded from the basal units of the Laptal Formation in the Pangoo section of the Chharap valley of Himachal Pradesh and has also been considered Bathonian to Callovian age (Gupta and Michalik, 1982).

#### References

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