

## Jurassic Ammonites from the Orville Coast, Antarctic Peninsula

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With 4 Figures

### 1. Introduction

This paper contains a brief description of ammonite fragments, found in the Latady Formation in the southern part of the Antarctic Peninsula.

The present paper is based on the rock samples and field data obtained by the first named author when he joined the geological party of the 28th Soviet Antarctic Expedition (SAE). This party studied and mapped parts of the Orville Coast region, especially the southern Latady Mts., Skaife Mts. and parts of the outcrops east of Wilkins Mts. ( $64^{\circ} 30' - 66^{\circ} W$ ;  $74^{\circ} 45' - 75^{\circ} 35' S$ ).

### 2. Ammonite Fragments of the Latady Formation

The ammonite fragments were found in shales of the possibly Upper Jurassic Latady Formation exposed at small nunataks north-east of the Matthews Glacier (see Fig. 1). The ammonite fragments have been identified by J. WORMBS.

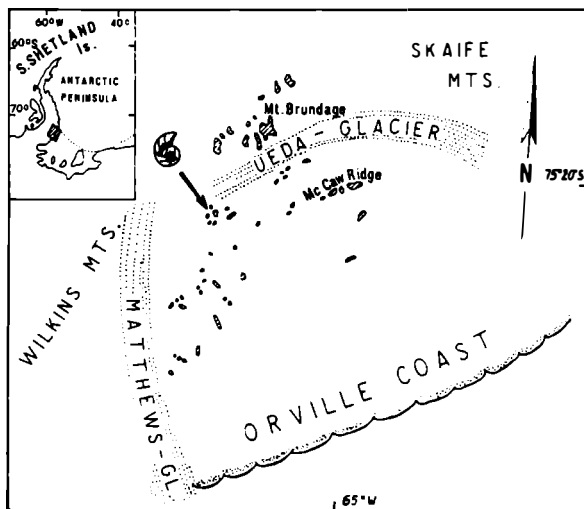


Fig. 1. Schematic map of the eastern part of Orville Coast, showing the ammonite locality in the Matthews Glacier area

Genus *Kepplerites* sp. indet.

An internal mould fragment from a weakly compressed involute ammonite about 10 cm in diameter (see Fig. 2). It has a smooth whorl with a slightly rounded venter. The falcoid ribs on the ventral half are smooth.

According to the general morphology, a Middle Jurassic age of Lower to Middle Callovian is suggested.



Fig. 2. *Kepplerites* sp. indet. (fragment); scale 2 : 1

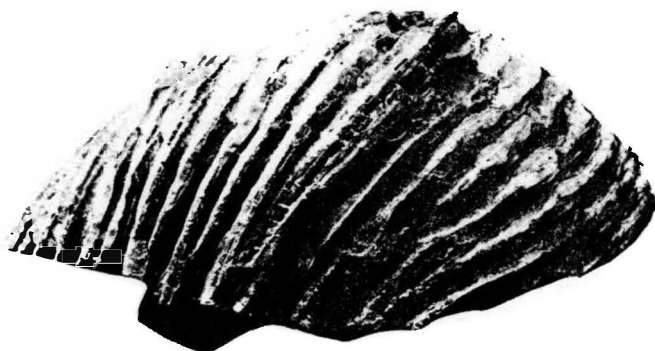


Fig. 3. *Macrocephalites* sp. indet. (fragment); scale 1.5 : 1

Genus *Macrocephalites* sp. indet.

Two internal mould fragments from strongly compressed involute ammonites, approximately 12 cm in diameter (see Figs. 3 and 4). The external whorls have a rounded venter. The 2–3 angular, equal distanced external ribs cross flex the rounded venter. The bifurcation points are visible on the inside half of the flank.

Judging from the general signs a Middle Jurassic age, Lower Callovian, is possible.



Fig. 4. *Macrocephalites* sp. indet. (fragment); scale 1 : 1

### 3. Discussion

Considering their strong deformation the ammonite fragments from the Orville Coast can be dated Lower to Middle Callovian age.

Other ages of ammonite faunas, given by ROWLEY & WILLIAMS (1982) and THOMSON (1983), suggested, that some parts of the Latady Formation are of "Upper Jurassic" age.

It is possible that the western parts of the Orville Coast region are separated from each other by faults. So, the rocks outcropping in the eastern part of the Orville Coast, especially in the areas around the nunataks east of the Wilkins Mts. may be older than the rocks which crop out in the region west of the Matthews Glacier.

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### Summary

During the austral summer 1982/83 the geological party of the 28. Soviet Antarctic Expedition worked in eastern Orville Coast area on the Jurassic Latady Formation. North-east from Matthews Glacier some ammonite fragments were found in shales. The ammonites *Keplerites* sp. indet. and *Macrocephalites* sp. indet. suggest a middle Jurassic age (Lower and Middle Callovian) of this part of Latady Formation.

### Zusammenfassung

Die geologische Gruppe der 28. Sowjetischen Antarktis-Expedition arbeitete während des australen Sommers 1982/83 im Gebiet der östlichen Orville-Küste in jurassischen Sedimenten der Latady-Formation. Nordöstlich des Matthews-Gletschers wurden in Tonschiefern Ammonitenfragmente gefunden. Die Gattungen *Keplerites* sp. indet. und *Macrocephalites* sp. indet. weisen auf ein mitteljurassisches Alter (unteres bis mittleres Callov) der Sedimente hin.

### Резюме

Во время антарктического летнего полугодия 1982/83 геологическая группа 280й Советской Антарктической Экспедиции работала в районе восточной части берега Орвилла в юрских отложениях формации Латади. На нунатаках северо-восточнее ледника Метюса нашли в глинистых сланцах фрагменты аммонитов. Возраст аммонитов (*Keplerites* sp. indet. и *Macrocephalites* sp. indet.) соответствует Средней Юре (Нижний и Средний Келловейской Ярус).

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