

## Note on *Ceratopyge forficula* (SARS).

By

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In the cliff between Borgholm and Köping (Köpings klint) in Öland there rests on stinkstone with *Agnostus pisiiformis* (L.) a thin pinching-out bed of alum shale which according to WESTERGÅRD (1922, p. 36) contains *Dictyonema flabelliforme norvegica* (KJERULF). Upon this bed follows a series of strata formed by glauconitic shale interstratified with clayey layers. In the westernmost part of the cliff the thickness of the glauconitic series of strata reaches 1,75 m. Towards the east it decreases gradually while at the same time the thickness of the overlying limestone increases.

The fossils met with in the glauconite-bearing series of strata belong to the *Ceratopyge* fauna. Most common are phosphate shelled brachiopods and a few species of *Eoorthis*. Infrequently, but, as it seems, enriched on certain bedding surfaces occur *Clonograptus* (*Staurograptus?*) *heres* WGD and other graptolites not closely determined. Much rarer are trilobites. Thus only one single specimen has been discovered in the large material which was last summer made accessible for investigation, thanks to the circumstance that the series of strata has been broken through at a few places 250 m S. of the cliff border within the western part of Köpings klint. The finding in question, a specimen of *Ceratopyge forficula* (SARS), was made by Professor ASSAR HADDING on a visit to Öland in October 1938, and might be worthy of a mention as it contributes to our knowledge of one of the most important index fossils of the Lower Ordovician.

The specimen now discovered shows the cephalon as well as the pygidium in primary position in relation to the thorax. Previously the thorax has never been observed but as detached segments on account of which the number of thoracic segments has not been known, though, at times, the species occurs rather frequently. As a matter of course the fossil is strongly flattened. In fact it only consists of a very thin flaking-off calcareous film which slightly differs from the surrounding rock (clay shale).

The cephalon essentially agrees with the descriptions and figures of *Ceratopyge forficula* delivered by BRÖGGER and by MOBERG & SEGERBERG. The dorsal furrows of the glabella, however, seem to run a little more parallel than is usually the case. On the free cheeks, both lying *in situ*, one observes between the palpebral lobe and the outer margin a well-marked pointed impression.

The thorax consists of six segments which can be stated with accuracy, even if this region in other respects is not very well preserved. Thus only the basal portions remain of the pleurae.

Nor is the pygidium complete. No segmentation can be traced either on the axis or on the lateral lobes. In consequence the origin of the pygidial spines can not be fixed with certainty. The only spine visible on the figures is placed so far backwards that it could be suspected to belong to the posterior of the two pleural segments which are to be found in *Ceratopyge*. After preparing forth the other spine, too, it became evident, however, that the two spines are not placed symmetrically, this spine, to judge from its position, apparently belonging to the first segment. One of the two spines, then, must be supposed to have been put out of its primary place. In *Ceratopyge* the pygidial spines are stated to originate from the first pleural rib. It is to be noticed that in well-preserved specimens they appear to have coalesced of processes from both ribs, yet principally from the first one. As a matter of fact the value from a systematical point of view of the position of the pygidial spines, foremost concerning the group *Hysteroleninae*, has been put to question by TROEDSSON, who in a paper recently published (1937) has undertaken a systematical classification of genera belonging to the family *Ceratopygidae*.

With regard to the shape of the glabella and, possibly, the

position of the pygidial spines the present specimen might seem to bear a certain affinity to the Asiatic genus *Diceratopyge* (Upper Cambrian) established by TROEDSSON. Other considerations and the fact that the European *Ceratopyge forficula* is subject to a rather considerable variation, however, make it beyond doubt that we have here to deal with a form belonging to the last-mentioned species.

*Ceratopyge forficula* has previously been mentioned from the glauconitic shale between Borgholm and Köping by WESTERGÅRD (l. c., p. 36).

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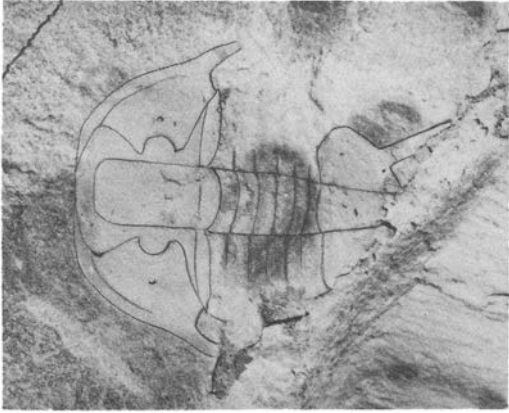
**Explanation of Plate.**

- Fig. 1. *Ceratopyge forficula* (SARS). Köpings klint, Öland. No retouche.  
— × 2.
- Fig. 2. The same specimen with contours delineated. — × 2.
- Fig. 3. Impression of the same specimen, showing the number of thoracic segments. — × 2.

PLATE I.



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