TWO NEW MIDDLE ORDOVICIAN OSTRACODS FROM OSLO

BY

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in co-operation with
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With 1 plate.

Abstract. Description by Henningsmoen of a new Beyrichiacean ostracod genus, *Ullia*, and description by Dons of its two known species, *U. ulli* sp. n. and *U. holtedahli* sp. n. from 4 a α-β and 4 b α respectively.

During geological field investigation in a small area 6 km NW of the centre of Oslo, I became aware of two different ostracods in sediments of Middle Ordovician age. As one of them seems to be characteristic for Ogygiocaris [Ogygia] Shale (4 a α) and Ampyx Limestone (4 a β), and the other is found in Lower Chasmops Shale (4 b α) only, they may prove to be useful guide fossils during further stratigraphical work in the Oslo Region.

The material consists of internal and external moulds. When studying the latter, artificial casts were made by means of a plastic material produced for dental work. The material posseses advantages as compared with plastilina, having a much higher fusing point.

The study and description of the fossils have been carried out in co-operation with cand. real. G. Henningsmoen, Paleontologisk Museum, Oslo, who regards the two ostracods as belonging to a new genus, described by him as follows:

Genus *Ullia* HENNINGSMOEN gen. n.

Genotype: — *Ullia ulli* DONS sp. n.

Name: — The name *Ullia* is derived from Ullr, the deity of skiing in the old norse mythology, as is also the case of the placename Ullern.

Diagnosis: — Beyrichiacean ostracods with one long sulcus and two more or less U-shaped ridges, the one inside the other, and the

inner one bordering the sides and ventral end of the sulcus. Velum (frill) is present, but probably no ventral pouch.

Discussion: — The characteristic two pairs of U-shaped ridges of the two species described below by J. A. Dons, recall at the first glance the four lobes of *Tetradella* and allied,[1] especially in *Ullia ulli* sp. n. In *Ullia*, however, the inner pair of ridges does not coalesce ventrally with the outer pair. The ridges of *Ullia* may be compared with the ridges or ribs of *Steusloffia* ULRICH & BASSLER 1908. In both genera they superimpose the rather effaced lobes, only one sulcus being well developed. The small node-like lobe in front of the sulcus in both these genera probably corresponds to the second lobe of the tetradellids. A ridge traverses longitudinally and obscures this node in *Ullia*, just as a rib traverses this node in *Steusloffia*. A less well-defined diagonally elongate node behind the ventral end of the sulcus probably corresponds to the third lobe in tetradellids. In some species, such as in *Tallinnella grewingki* (BOCK), the ridges or ribs follow the underlying lobation. In other forms, *e. g. Steusloffia*, the lobation is effaced, and the ribs develop their own pattern, independent of the lobation. The ribs probably are of no higher taxonomic importance. Still, certain features indicate a relationship between *Ullia* gen. nov. and *Steusloffia*, such as the rather similar lobation, and the development of the velum, showing, as it seems, no dimorphism. But there are other features in *Ullia* which rather remind of co-called "unisulcate *Ctenobolbina* species", such as the long sulcus.

Ullia ulli DONS sp. n.

(Pl. I, figs. 1—4.)

Holotype: — Paleontol. Museum, Oslo, no. 65827, in shale of 4 a α-β from Abbediengkollen E of Ullern Church, Oslo.

Name: — This species is named after Ullr, as the genus.

Diagnosis: — An *Ullia* species with the two U-shaped ridges well developed.

[1] The European species now referred to *Tetradella* should be removed into other genera, as the genotype of *Tetradella* and some other American species belong to a specialized branch, characterized *i. a.* by the development of ventral pits in some specimens (dimorphism). Several of the European species may be included in *Tallinnella* ÖPIK 1937, comprising quadrilobate beyrichiaceans with a well developed velum, and a dimorphism characterized by a convexity of the velum in some forms, not, however, leading to the formation of a saussage-like ventral pouch as found in primitiids [= eurychilids].

Dimensions: — Holotype (fig. 1): 2.85 mm × 1.44 mm.

Description: — The shell is so symmetrically built that one might almost be in doubt regarding its orientation. The direction of the sulcus is approximately normal to the hinge, though it bends somewhat forward ventrally. The inner U-shaped ridge is the higher one. The ridges are of about the same thickness. The velum (frill) has a striking resemblance to the ridges. Granulation of the shell is not observed, and neither is any kind of dimorphism.

This species also occurs in some undescribed material, collected by L. Størmer in layers of 4a α-β at Kullerud, 3 km NE of Norderhov Church, Ringerike. *Steusloffia costata* LINNARSSON is sometimes found together with *Ullia ulli* sp. n.

Ullia holtedahli DONS sp. n.

(Pl. I, figs. 5—8.)

Holotype: — Paleontol. Museum, Oslo, nr. 65828, in shale of 4b α from Øvre Ullern Terrasse, N of Ullern Church, Oslo.

Name: — The name *holtedahli* is chosen, as I wish to express my gratitude to my tutor, Professor O. Holtedahl, who has taken the greatest interest in my studies.

Diagnosis: — An *Ullia* species with the posterior branch of the outer U-shaped ridge disappearing posteriorly after a short distance.

Dimensions: — Holotype (fig. 5): Length 2.25 mm, height 1.35 mm. No. 65828 (fig. 7): Height 1.85 mm.

Description: — This species resembles the ostracod just described, but is less regularly built. The sulcus does not run so far down ventrally and is more oblique. The velum is more ridge-like. The inner U-shaped ridge widens a little ventrally on both sides of the sulcus, most on the posterior side. The greater part of the posterior branch of the outer U-shaped ridge is not developed. Dimorphism or granulation of the shell has not been observed.

This ostracod is found together with *Chasmops conicophthalma*, the guide fossil of the Lower Chasmops Shale (4b α) and Limestone (4b β).

Internal moulds.

(Pl. I, fig. 9.)

There are several internal moulds together with and probably belonging to the two species of *Ullia*. These moulds are without ridges, but the sulcus and nodes are seen. The internal moulds from 4 a α-β and 4 b α resemble oneanother greatly, as well as moulds of a great number of other ostracod species. Internal moulds are thus no good as guide fossils.

Brøgger (1887) mentions the find of a *Beyrichia* sp. (near *costata* LINRS.) in 4 a α at Elnestangen S of Volden in Asker. It has not been possible to trace this specimen in the museum, but *Steusloffia costata* (LINNARSSON) does occur in these layers in a nearby locality.

Grorud (1940) lists a *Beyrichia* sp. from the middle of the Ampyx Limestone (4 a β) at Frogner, Oslo. In his collection at the museum from this locality there is an internal mould of an ostracod, that may well be *Ullia holtedahli* sp.n.

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REFERENCES

Brøgger, W. C. 1887. Øerne ved Kristianiafjorden. — Nyt Mag. for Naturvid. *31*, Kristiania.

Grorud, H.-F. 1940. Et profil gjennom Ogygiaskifer og Ampyxkalk på Tørtberg, Frogner ved Oslo. — Norsk geol. tidsskr. *20*, Oslo.

Plate I.

All specimens belong to Paleontologisk Museum, Oslo. The reproduced photographs were taken by Miss B. Mauritz, and are not retouched. The specimens are whitened.

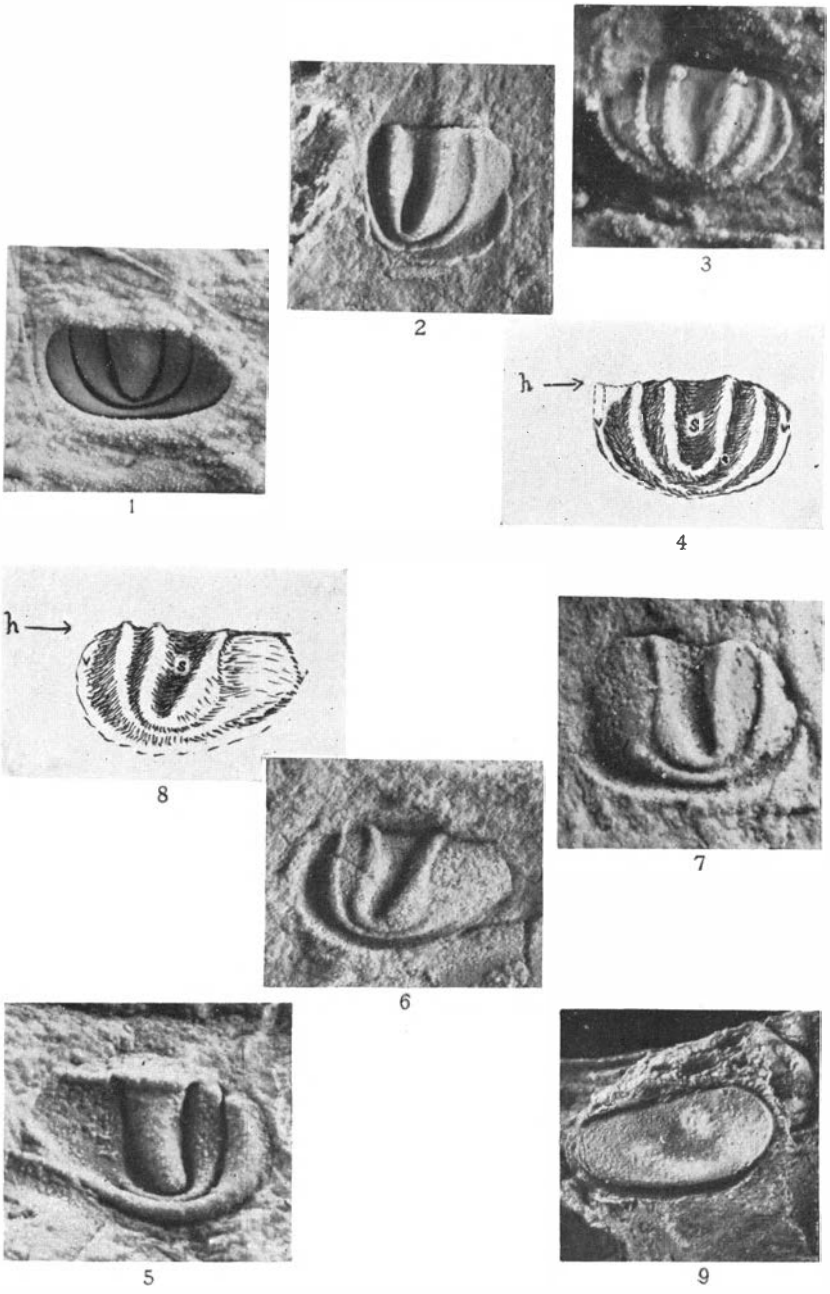
h = hinge.
s = sulcus.
v = velum (frill).

Figs. 1—4. *Ullia utli* sp. n.
Abbediengkollen, E of Ullern Church. 4 a α-β.
fig. 1. The holotype, no. 65827, a right valve. External mould. 10 ×.
fig. 2. No. 65829, a left valve. Artificial cast from an external mould. 10 ×.
fig. 3. Artificial cast from the external mould in fig. 1. 10 ×.
fig. 4. Sketch of fig. 3.

Figs. 5—8. *Ullia holtedahli* sp. n.
Øvre Ullern Terrasse, N of Ullern Church. 4 b α.
fig. 5. The holotype, no. 65825, a left valve. External mould. 10 ×.
fig. 6. Artificial cast from the external mould in fig. 5. 10 ×.
fig. 7. No. 65828, a right valve. Artificial cast from an external mould. 12 ×.
fig. 8. Sketch of fig. 6.

Fig. 9. Internal mould.
No. 65823. From Husebybakken, E of Ullern Church. 4 b α. 12 ×.

Pl. I.



Dons and Henningsmoen: Two New Ordovician Ostracods from Oslo.