

# *Bythoceratina dania*, a new ostracode from the Maastrichtian White Chalk (Denmark)

NIELS OLUF JØRGENSEN



Jørgensen, N.O.: *Bythoceratina dania*, a new ostracode from the Maastrichtian white chalk (Denmark). *Bull. geol. Soc. Denmark*, vol. 25, pp. 135–137. Copenhagen, December, 21st 1976. <https://doi.org/10.37570/bgsd-1976-25-16>

A new ostracode species, *Bythoceratina dania*, is described from the Maastrichtian white chalk of Denmark. The new species has so far been recorded only from Upper Maastrichtian strata in the Danish Embayment.

Niels Oluf Jørgensen. Institut for historisk Geologi og Palæontologi, Øster Voldgade 10, 1350 København K, Denmark. July 20th, 1976.

The ostracode fauna from the Maastrichtian white chalk of Denmark has been discussed previously by Jørgensen (1970, 1974). The present paper deals with a new species of the genus *Bythoceratina* Hornibrook, 1952 which has stratigraphical significance for the Maastrichtian in the Danish Embayment. The occurrence of the new species is discussed in relation to the known stratigraphy of the Maastrichtian white chalk in Denmark (Troelsen 1937; Birke-lund 1957; Surlyk 1970).

## Systematic description

Family Cytheridae Baird, 1950

Genus *Bythoceratina* Hornibrook, 1952

*Bythoceratina dania* n. sp., fig. 1.

*Derivatio nominis*: After the type locality, 'Dania' cement works.

*Holotypus*: Right valve of adult. The specimen is housed in the Geological Museum, Copenhagen, with the number MGUH 13896.

*Locus typicus*: 'Dania' cement works, Assens Denmark.

*Stratum typicum*: Brachiopod zone 10 of Surlyk (1970), Upper Maastrichtian.

## Diagnosis

A *Bythoceratina* with a tapering posterior part, a strong ventrolateral spine and an ornamentation of small knobs arranged in a pattern of concentric rows, subparallel to the periphery of the valve.

tation of small knobs arranged in a pattern of concentric rows, subparallel to the periphery of the valve.

*Measurement of holotype*: Length: 0.59 mm; height: 0.30 mm.

*Material*: 76 right valves, 98 left valves and 19 fragments.

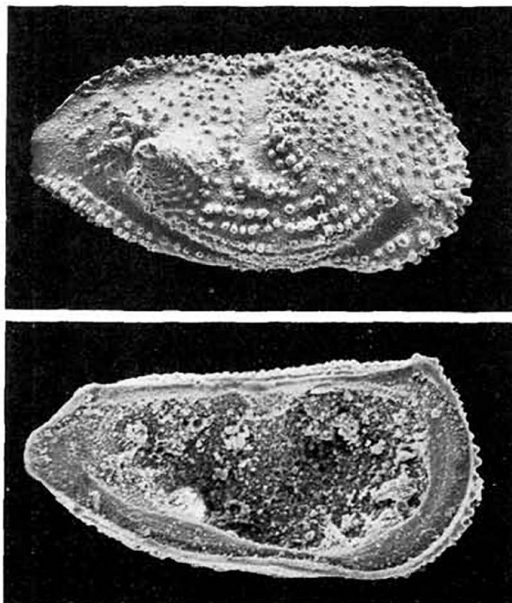


Fig. 1. Above: Holotype. Outside view of right valve of adult. (SEM)  $\times 100$ . Below: Inside view of left valve of adult. (SEM)  $\times 100$ .

**Description**

*Shape.* Carapace is subrhomboidal in lateral view with a straight dorsal margin and a distinctly tapering posterior part. Anterior margin broadly rounded, but with a dorsal anterior-marginal angle. Posterior end provided with a compressed subdorsal caudal process. A vertical sulcus divides each valve into two inflated parts. A ventrolateral hollow spine is present on the posterior half.

*Ornamentation.* Small knobs occur along the dorsal and free margins, except on the caudal process. The ventral and lateral surfaces of the valve are provided with small knobs in a regular pattern of concentric rows, subparallel to the periphery. The pattern is particularly prominent on the ventral side and the anterior lower half. An anteriomarginal denticulation is present. The only parts of the valve that are smooth are the subcentral sulcus and the subdorsal caudal process.

*Internal characters.* The inner lamella is moderately wide in the anterior part, but rather narrow elsewhere. There is a narrow anterior vestibulum.

The hinge is merodont/lophodont. The right valve is provided with two small terminal teeth connected by a straight groove. The left valve shows the complementary groove. The median bar in the left valve is somewhat swollen at both ends.

The muscle scars consist of five scars in a vertical row. Frontal scars have not been observed.

Normal pore canals are scattered and not very numerous. Marginal pore canals have not been observed.

Overlap is far from pronounced, but the length-height ratio indicates that the left valve is slightly larger than the right.

Sexual dimorphism is not apparent.

*The instars* show identical shape to the adults, but the ornamentation is not as prominent.

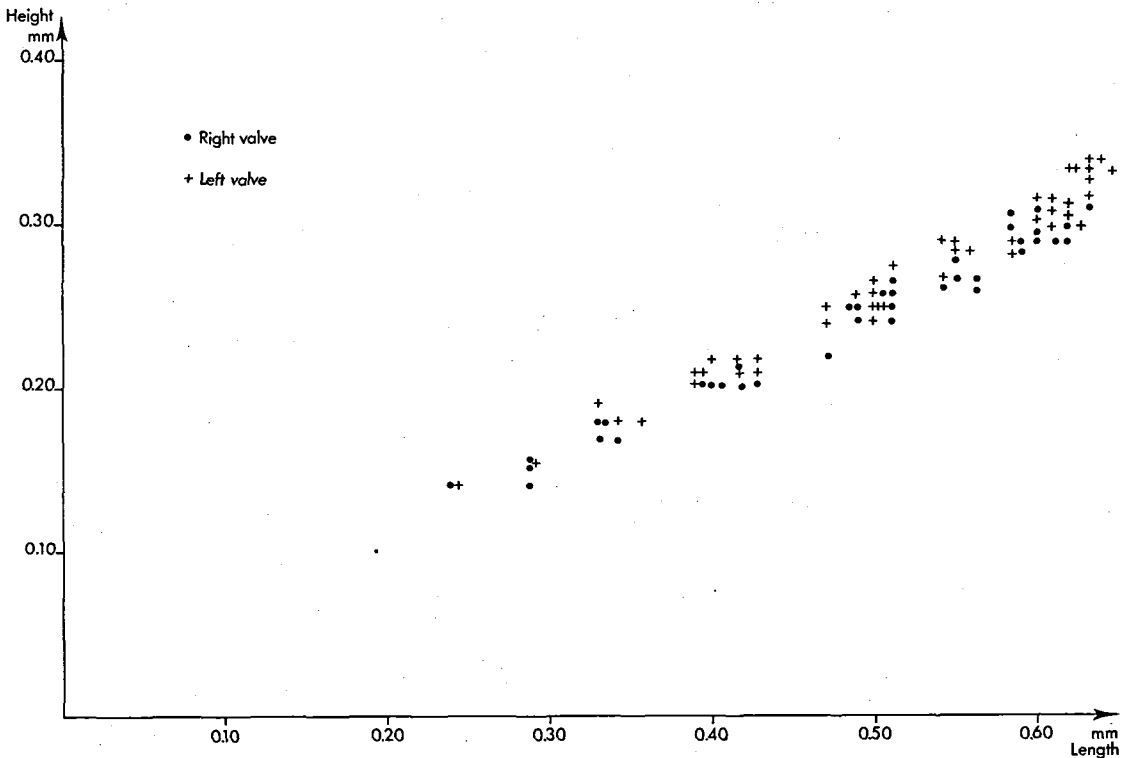


Fig. 2. Length-height diagram for *Bythoceratina dania* n. sp. The specimens originate from the type locality 'Dania' cement works, Assens, Jylland.

### Affinities

*B. dania* belongs to the formgroup of *B. umbo-nata* (Williamson 1848), but is easily distinguishable with the tapering posterior end and the characteristic ornamentation. Shape and general ornamentation resemble those of *B. bugensis* (Szczechura 1964), but *B. dania* is considerably smaller and is provided with small knobs on both the ventral part as well as the lateral part of the valve.

### Occurrence and stratigraphic distribution

*B. dania* is in general only found in restricted number of individuals per sample. However, the species occurs relatively constantly in samples from the Danish localities of Dania, Voxlev, Erslev, Bjerre, Kjølbygaard, Nye Kløv, Vive and Spentrup (all in Jylland) and has a more sporadic occurrence at Stevns Klint and Karlstrup (Sjælland). It also occurs sporadically in the Danish Geological Survey core TUBA 13 (Copenhagen) and at Limhamn (Scania, Sweden).

At the localities mentioned, the species occurs in the Upper Maastrichtian, i. e. brachiopod zones 9–10 of Surlyk (1970). *B. dania* has not yet been recorded outside Denmark (except Limhamn).

It is worthwhile to note that the main occurrence of *B. dania* is within the central part of the Danish Embayment, i. e. the localities in Jylland. Since the exact correlation of the localities involved has not yet been established it is uncertain whether the distribution of the new species has a stratigraphic or palaeogeographical significance.

Acknowledgement. The author is indebted to H. Egelund for preparing the diagram and to R. G. Bromley who kindly improved the English text.

### Dansk sammendrag

En ny ostracod art, *Bythoceratina dania*, beskrives fra det danske skrivekridt (Maastrichtian). Den nye art er af stratigrafisk betydning, idet den kun er tilstede i brachiopod zonerne 9–10 (Surlyk, 1970), som omfatter det yngste Øvre Maastrichtian. *B. dania* er hyppigst forekommende på jyske lokaliteter, mens kun et beskedent antal er fundet i kridtet på Sjælland og i

Limhamn (Skåne, Sverige). Om denne fordeling er stratigrafisk eller geografisk betinget er ikke klarlagt, da der endnu ikke foreligger en nøjagtig korrelation mellem lokaliteterne i det yngste Maastrichtian.

### References

- Birkelund, T. 1957: Upper Cretaceous belemnites from Denmark. *Biol. Skr. dan. Vid. Selsk.* 9 (1), 1–71.
- Jørgensen, N. O. 1970: Ostracoderne i det danske skrivekridt, deres stratigrafiske og palæoøkologiske betydning. *Unpublished thesis, Copenhagen University, Denmark.*
- Jørgensen, N. O. 1974: A new ostracode species from Maastrichtian white chalk of Denmark. *Bull. geol. Soc. Denmark* 23, 102–108.
- Surlyk, F. 1970: Die Stratigraphie des Maastricht von Dänemark und Norddeutschland auf Grund von Brachiopoden. *Newsl. Stratigr.* 1 (2), 7–17.
- Szczechura, J. 1964: *Monoceratina* Roth (Ostracoda) from the Upper Cretaceous and Lower Paleocene of north and central Poland. *Acta Paleontol. Polon.* 9, 357–406.
- Troelsen, J. 1937: Om den stratigrafiske inddeling af skrivekridtet i Danmark. *Meddr dansk geol. Foren.* 9, 260–263.