

Boroecia maxima (Brady & Norman, 1896)

No. of individuals recorded – 1312

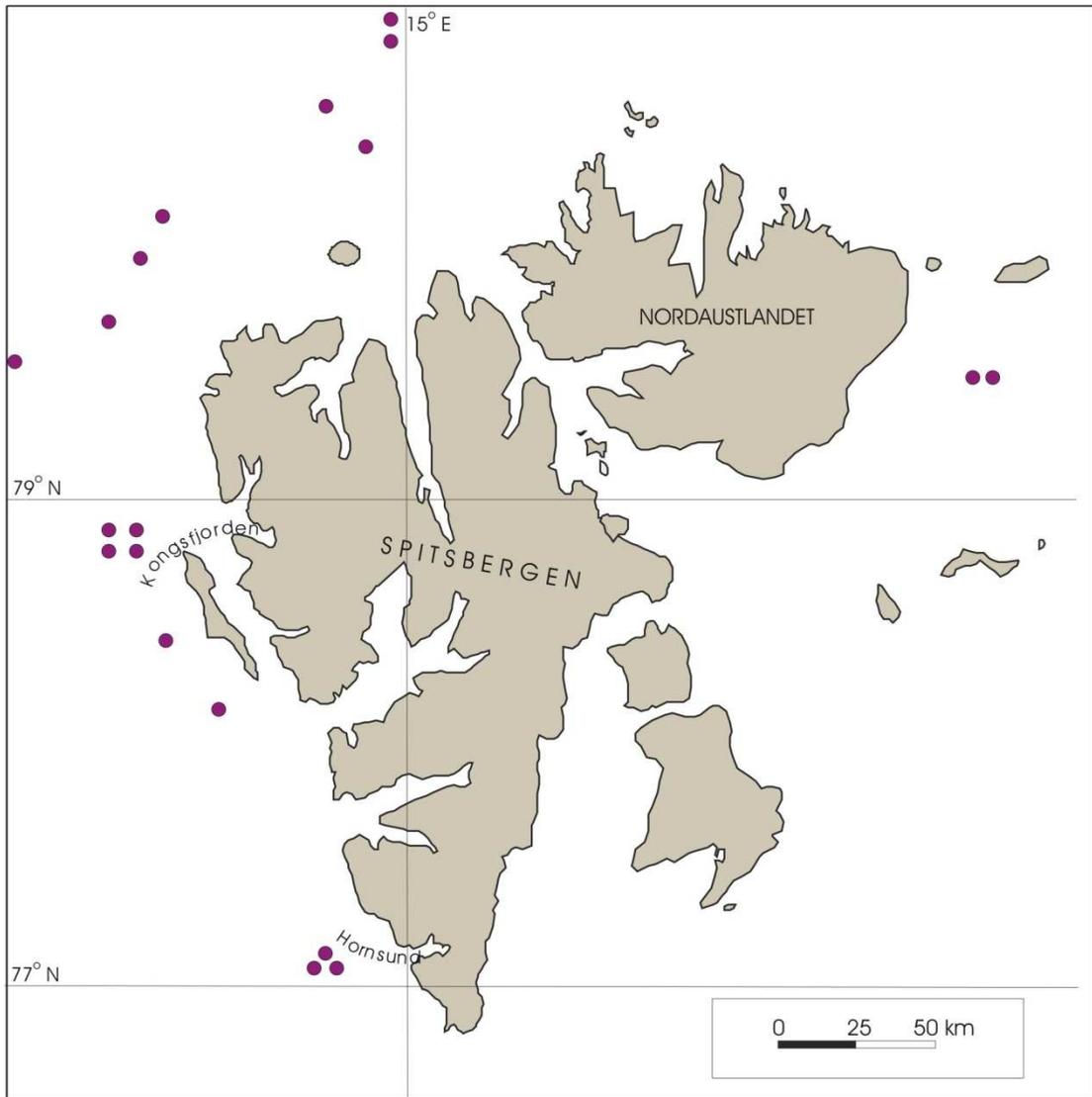
This species was originally described from the Greenland Sea (74°N) and the Faroe Channel (~60°N) (Brady & Norman, 1896). *Boroecia maxima* was the second most frequent halocyprid species (36%) and the biggest one (♀: 3.30-3.85 mm; ♂: 3.10-3.30 mm) noted in Svalbard waters.

Subsequently it was erroneously considered by Müller (1906) and Skogsberg (1920) to be synonymous with *B. borealis* despite its much larger size and the lack of shoulder vaults. Because of that *B. maxima* was constantly overlooked in subsequent studies, making comparative analyses of *Boroecia* species difficult. For example, Richter (1994) in his comprehensive and detailed study of halocyprids from the Greenland Sea gives size data that implies the majority (but not all) of his specimens were *B. maxima*, but he identified them all as *B. borealis*. Recent sampling in the Canadian Deep to the north of the Bering Strait (Kosobokova & Hopcroft 2009) as well as in whole Central Arctic (Bashmanov & Chavtur 2009) have shown *B. maxima* to be by far most dominant halocyprid species. This high arctic species has been described as dominating in halocyprid populations off Svalbard (Poulsen 1977). Russian data show that it is the most abundant of the two or three halocyprid species that are caught beneath the pack ice of the Arctic where it has been recorded as far north as 86°N. It is abundant in the cold deep water of the Norwegian Sea, hence one of its original records in the outflow water in the Faeroe Channel. In the Iceland Basin it is rare at bathypelagic depths, where possibly it is an indicator of Norwegian Sea outflow water.

This study showed that vertically *B. maxima* concentrated in the deep-layer of Svalbard waters, which is in agreement with some previous results (Cleve 1900; Stephensen 1913 & 1936; Grainger 1965, Richter 1994 whose data were reported for *B. borealis*), but contrary to Bashmanov and Chavtur's (2008) observations which are saying that its highest concentration occurred near surface (between 25 m and 100 m) in the Central Arctic, but deeper (500-750 m) near Svalbard.

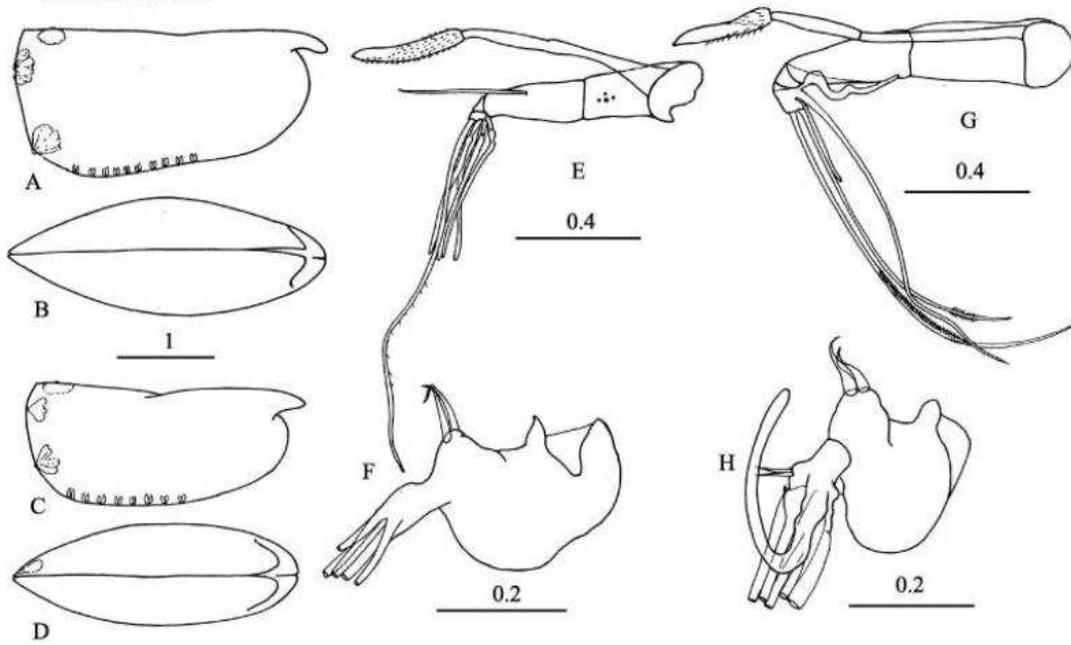
Table with sizes ranges [mm] of all developmental stages of *B. maxima* from Svalbard waters from the adult (Ad) female and male to the youngest A-6 stage:

Developmental stage	Sizes ranges	
	min	max
Ad female	3.30	3.85
Ad male	3.10	3.30
A-1	2.27	2.64
A-2	1.58	1.85
A-3	1.00	1,29
A-4	0.68	0.79
A-5	0.52	0.61
A-6	0.39	0.46



Boroecia maxima distribution

Boroecia maxima

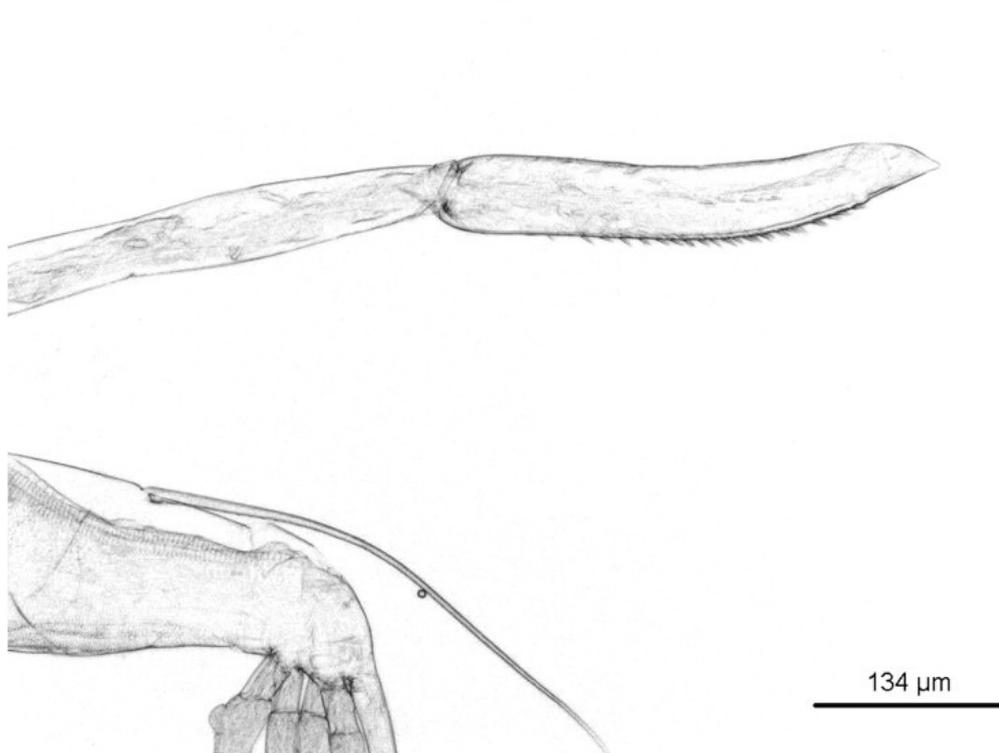


Sketches of the carapace shapes of adult females (A, B) and males (C, D); the first antennae and frontal organs and the endopodite of the left second antennae of females (E, F) and of males (G and H).

Carapace shape of *Boroecia maxima* female:



Frontal organ of *Boroecia maxima* female:



Carapace shape of *Boroecia maxima* male:



Frontal organ of *Boroecia maxima* male:

