

Purely arctic forms.

three categories. The first category may be termed purely arctic, occurring in water having a low temperature all the year round.¹ Allowing for slight variations it is safe to assert that the majority of them require a temperature considerably below what prevails in the deeper parts of the boreal region (6° to 7° C.), though a few coast and shallow-water forms are able to exist at higher temperatures for a short portion of the year; this is particularly the case with those arctic forms that come as far south as the Lofoten, Murman, and Finmark coasts. Still even within the purely arctic areas we find faunal differences that are due to temperature. Some forms are never, or very rarely, found in water having a temperature above 0° C., others appear to thrive impartially throughout the whole arctic region in whatever temperatures prevail, while others again avoid the coldest water and keep as much as possible to temperatures slightly above 0° C.

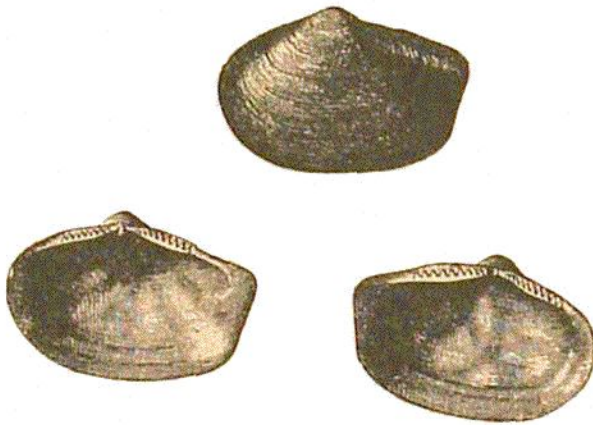


FIG. 370.
Yoldia arctica, Gray. (After Stuxberg.)

As regards horizontal distribution within the arctic region we may assume that most of the species are widespread, even if they have not yet been met with everywhere, for we are still only imperfectly acquainted with the fauna over a large portion of the arctic plateaus, especially that off East Greenland. Some species, however, will undoubtedly prove to be more or less local, judging from what we have found in the boreal region.

A few of the larger forms that characterise the arctic coasts and plateaus are given in the following list:²—

Molluscs: *Margarita cinerea*, *Onchidiopsis glacialis*, *Natica clausa*, *Amauropsis islandica* (rarely found on the Norwegian west coast), *Nepitunea despecta*, *Sipho curtus*, *S. turgidulus*, *S. krøyeri*, *S. glaber*, *Buccinum glaciale*, *B. hydrophanum*, *B. grönlandicum*, and a few other species of *Buccinum*, species of *Bela*, *Siphonodentalium vitreum*, *Nucula tenuis* var. *expansa*, *Yoldia hyperborea*, *Y. (Portlandia) arctica* (see Fig. 370) and *Y. limatula*, *Arca glacialis*, *Pecten grönlandicus*, *P. islandicus*, *Astarte (Nicania) banksi* var., *A. borealis*, and *A. crebricostata*, *Axinopsis orbiculata*, *Axinus gouldi*, *Tellina calcarea* (rarely found alive on the Norwegian west coast, though extremely abundant in the arctic region),

¹ There are a few exceptions, for instance, *Pecten islandicus*, *Ctenodiscus crispatus*, *Onchidiopsis glacialis*, which are more boreo-arctic than arctic (see p. 534).

² In this list I deal only with the molluscs, echinoderms, crustaceans, and ascidians.