

# Pelecypods

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Present knowledge of the Silurian pelecypods of Gotland is meager. Many of the reported taxa are known only from faunal lists, various taxa were described in more general faunal studies (Hisinger, 1837, 1840; Lindström 1880), and to my knowledge only two studies have been devoted entirely to pelecypods (Walmsley 1962; Soot-Ryen 1964). Although pelecypods are reasonably abundant at Vattenfallet (89 specimens), they are not well preserved, and most of the forms mentioned herein are treated within open nomenclature.

For distribution in the section see Fig. 30.

## Faunal list

Ambonychiacea: *Mytilacra* sp. a.

Pteriacea: *Actinopteria* sp. a, A. sp. b, A. spp. indet., *Pteronitella?* sp. a, Pteriacea gen. et sp. indet.

Mytilacea: Modiomorphidae? sp. indet., *Goniophora* sp. a.

Crassatellaceas: *Cypricardinia* spp.

Pholadomyacea: *Grammysia cingulata* (Hisinger).

## Discussion

The most common pelecypods in the material from the section are *Grammysia cingulata* (28 specimens), *Pteronitella?* sp.a (18) and *Actinopteria* spp. (13).

*Pteronitella* is a reasonably common genus in the Ludlovian rocks of Gotland (Walmsley 1962, 1964). The Lower Wenlockian species herein assigned to that genus has the general form of *Pteronitella* in that it lacks a prominent posterior wing, has prominent comarginal ornament, and the anterior auricle is not strongly delimited from the rest of the shell. However, the dentition of the Vattenfallet specimens is not known, furthermore they are biconvex and possibly equivalved. Thus, the Vattenfallet specimens are identified as *Pteronitella?* sp. a. *Pteronitella retroflexa* (Wahlenberg), the type species of

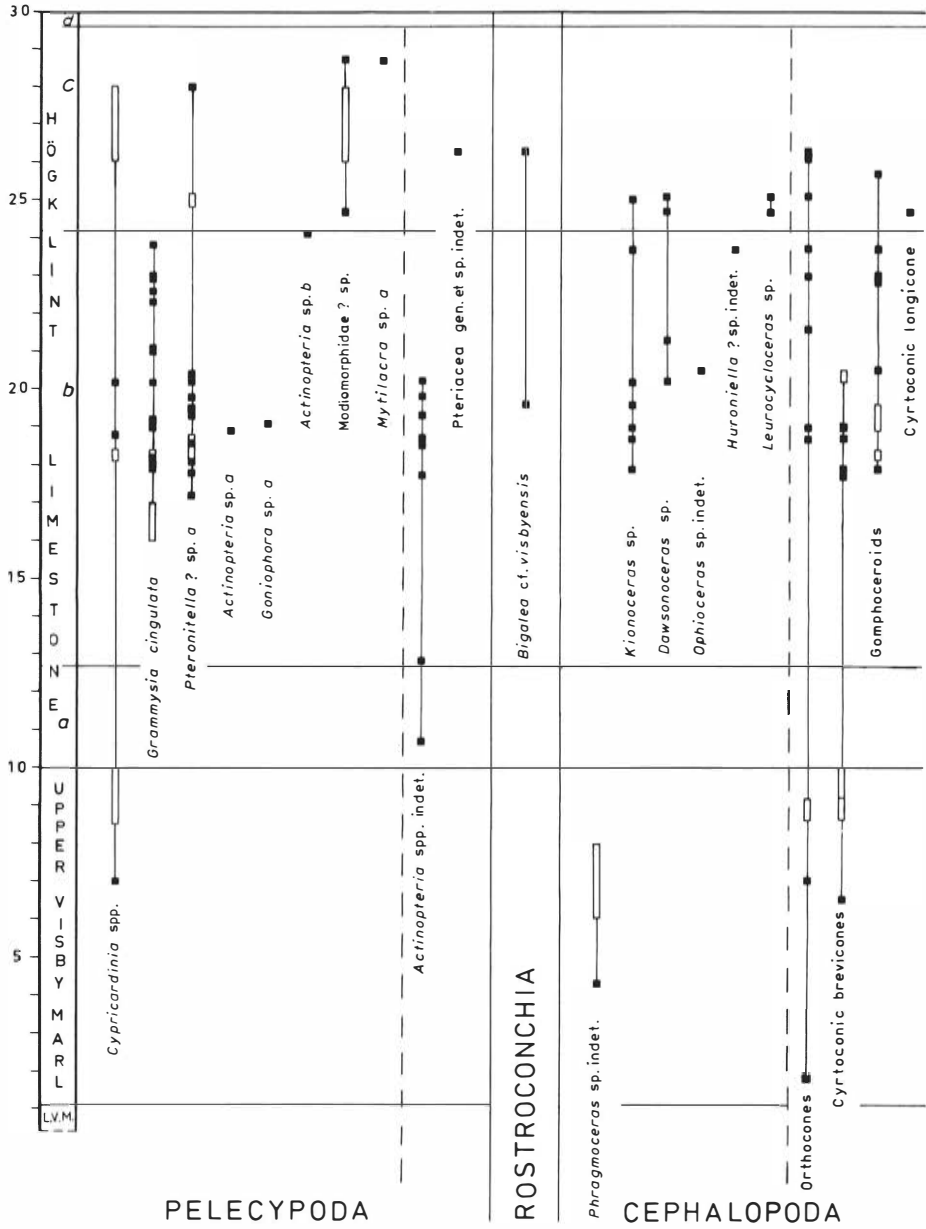


Fig. 30.

*Pteronitella*, has very prominent dentition and is markedly inequivalved (Walmsley 1962, 1964).

With the possible exception of *Grammysia cingulata*, all the pelecypods known from Vattenfallet were byssally attached to the substrate (for discussions of various byssally attached Paleozoic pelecypods see Pojeta 1962, 1966; Bambach 1971; Stanley 1972; Runnegar 1974), and all known forms were suspension feeders. There are two modes of life among byssate pelecypods, partial burial in the substrate (endobyssate or semi-infaunal) and attachment to the surface of the substrate (epibyssate or epifaunal).

Bambach (1971) has presented evidence that *Grammysia obliqua* (McCoy) from the Upper Silurian rocks of Nova Scotia, was an endobyssate filter feeder. His documentation for this mode of life for that species includes the presence of a byssal gape and the finding of specimens of *G. obliqua* in life position. Runnegar (1974:914) has suggested the same mode of life for Devonian species of *Grammysia*; he noted that in Devonian forms, the anterior adductor muscle scar is very small, which is a common feature in byssally attached pelecypods.

None of the known specimens of *G. cingulata* from Vattenfallet preserve the muscle scars or show evidence of a byssal gape, although some of them suggest the presence of a posterodorsal gape in the species. Various pelecypods that have a prominent byssus do not have an obvious byssal gape (Pojeta 1962, 1966); however, such forms usually show a byssal sinus in lateral view. Neither *G. cingulata* nor *G. obliqua* show a byssal sinus. *Grammysia cingulata* may have been endobyssate like younger species of *Grammysia*, or it may have been a sluggish shallow burrower. The latter mode of life was suggested as possible for the genus *Cuneamya* (Runnegar 1974:914), the likely ancestor of *Grammysia*.

*Mytilarca* has a highly reduced anterior end and lacks an anterior lobe (Pojeta 1966); it was probably epibyssate (Stanley 1972). All other pelecypods from Vattenfallet are in Stanley's (1972) endobyssate category, although their inclusion there needs to be documented by the finding of specimens in life position.

## REFERENCES

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## Rostroconchs

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The rostroconchs from Gotland were included in a general revision of rostroconch molluscs by Pojeta & Runnegar (1976). In the material from Vattenfallet rostroconchs are represented only by six specimens of which three (26.28–26.37 m and from the “*Pterygotus*” Beds) are unidentifiable and one (*Hippocardia* sp.) lacks any information about the level. Two specimens have been identified as *Bigalea* cf. *visbyensis* Pojeta and Runnegar and entered into the log (Fig. 30). The rostroconchs from the section were probably infaunal deposit feeders (Pojeta & Runnegar 1976).

## REFERENCE

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