

Snails and Limpets (*Gastropoda*)

Snails and limpets do not have widely used common names.

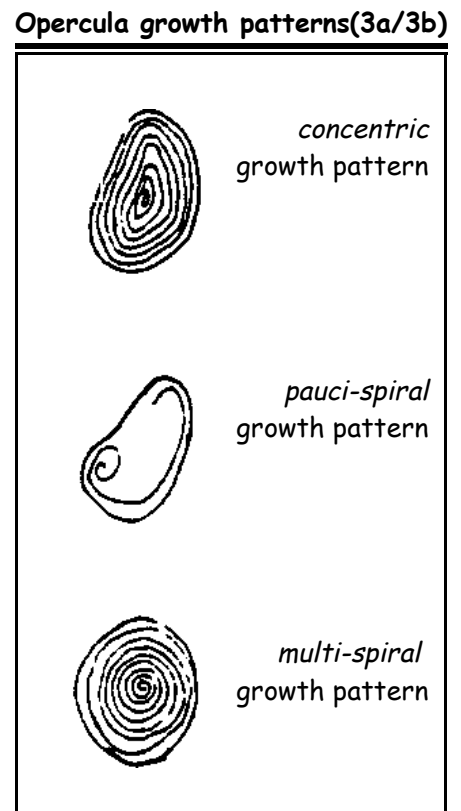
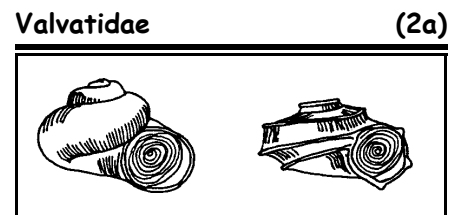
- 1
 - a. Animal with an operculum (disk that seals the shell opening like a door, it may be well inside shell or missing) 2
 - b. No operculum present 6

- 2
 - a. Shell as wide or wider than high, spire sunken or slightly raised with each whorl; operculum round and multi-spiral, round mouthed snails; shell < 8mm **Valvatidae**

This family is represented by a single genus (Valvata) containing several species in Maryland. They are egg laying hermaphrodites (with both male and female organs on each individual). [X/1/1/R]

- 2
 - b. Shell higher than wide; shell small to large; spire depressed to elongate, operculum varied (multi-spiral, pauci-spiral or concentric); size varies 3

- 3
 - a. Operculum with a multi-spiral or pauci-spiral; whorls flattened or inflated, shell small to large 4
 - b. Operculum concentric, whorls inflated; adult shell > 8mm 5



- a. Adult shell usually < 5 mm (up to 7 mm); whorls inflated; operculum usually smaller than outer shell opening, can be withdrawn into shell; color is usually drab and unicolored; shell has few whorls
..... **Hydrobiidae**

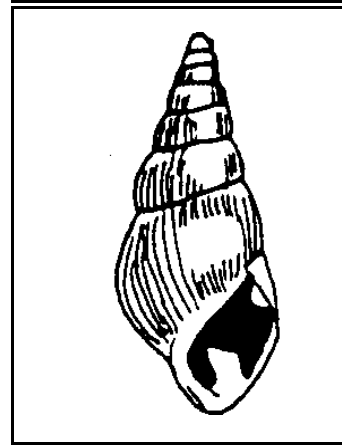
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The Hydrobiids are represented by marine and brackish as well as freshwater types. The shell form is relatively similar among genera.
[H/2/8/C]

- b. Adult shell usually >10 mm, whorls flattened
..... **Pleuroceridae**

The shells of these animals are very solid and the opening may have a furrow in front.
[X/2/3/C]

Pleuroceridae (4b)



- a. Adult shells 8-15 mm; operculum calcareous (bone-like), as big as outer opening, cannot be withdrawn into shell
..... **Bithyniidae**

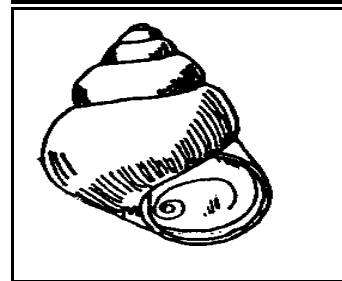
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The genus Bithynia is the sole representative of this family in Maryland. It was until recently considered to be in the Hydrobiidae family.
[X/1/1/R]

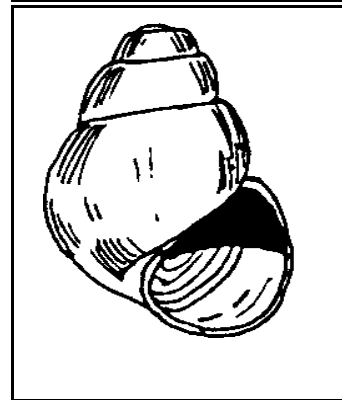
- b. Adult shells > 20 mm; operculum corneous (like horn or cartilage)
..... **Viviparidae**

Viviparids are common in lakes and rivers throughout eastern North America. [M/2/2/C]

Bithyniidae (5a)



Viviparidae (5b)



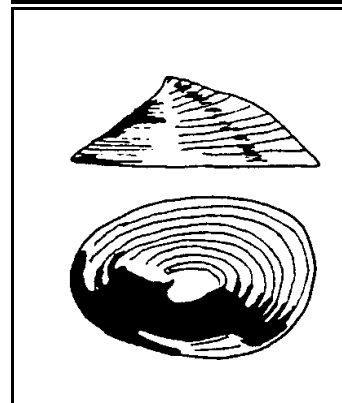
- a. Shell shaped like a wide cone and uncoiled. Limpet snails (cap shaped)
..... **Ancylidae**

6

The simple shape of the shell makes this family easy to identify. [H/1/1/C]

- b. Shell coiled
..... 7

Ancylidae (6a)



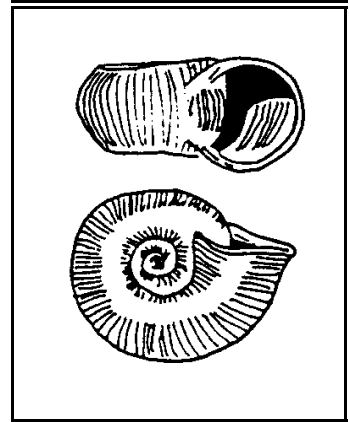
- a. Shell disk shaped and/or with a sunken spire
 **Planorbidae**

7

This family is closely related to the Ancyliidae, though they are not similar in appearance. They range in size from 1 to 30 mm and have hemoglobin as a respiratory pigment, which sometimes gives the tissue a red color.
 [H/5/7/C]

- b. Spire not sunken
 8

Planorbidae (7a)



- a. Animal and shell dextral (opening on right with spire pointing up)
 **Lymnaeidae**

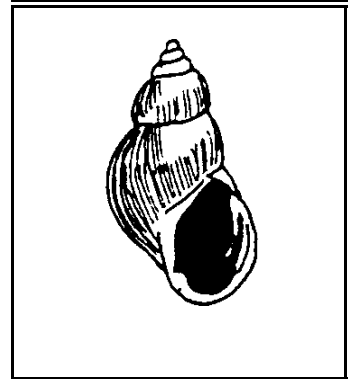
8

Lymnaeids have broad triangular tentacles and lay long tubular egg masses. [H/5/7/C]

- b. Animal and shell sinistral (opening on left)
 **Physidae**

The tentacles and foot of animals in this family are slender with fingerlike extensions from the mantle (the body wall beneath the shell).

Lymnaeidae (8a)



Physidae (8b)

