

Pull-tab Luring Plain Pocketbook Mussel

Background Information:

This information is pulled from the Freshwater Mollusk Conservation Society

<https://molluskconservation.org/MUSSELS/Reproduction.html>

Mussels are nature's freshwater version of marine clams like those you can find on the beach. Technically, a freshwater mussel is a bivalved mollusk that lives in fresh water.

Mussels constantly pump water to feed and breathe. They filter out suspended particles in the water. Detritus, phytoplankton, zooplankton, diatoms, bacteria and other microorganisms are all filtered out of the water by mussels. This makes the animals exceptionally vulnerable to water pollution and degradation of the aquatic ecosystem.

Mussels are the longest lived invertebrates; some have been reported to live more than 100 years. More commonly, they live from 10 to 50 years depending on the species. Mussels have growth lines on the outside of the shell, like rings on a tree. In many cases, these growth lines represent years in the mussel's life.

Freshwater mussels have an unusual and complex mode of reproduction, which includes a brief, obligatory stage as a parasite on a fish. During the breeding season, females lay eggs and brood them inside specialized chambers in their gills called a marsupia. Males release sperm into the open water, which is then drawn into the females through their siphons. The sperm fertilizes the eggs. Inside the female mussel, fertilized eggs develop into microscopic larvae known as glochidia. Mussels need to "infect" a host fish with glochidia to complete the reproductive process. Once the glochidia are released from the female, they must attach to the gills or the fins of the right fish host and encyst to complete development.

Some mussels simply release glochidia into the water where they must haphazardly come into contact with their fish host as it swims by. Female mussels in the *Lampsilis* genus, such as the **Plain Pocketbook**, have an extension of the mantle tissue that resembles a small fish. The mussel displays this tissue outside its shell between the valves and twitches it repetitively to attract its predaceous fish host—like a fishing lure. While attempting to eat the lure, the marsupial gills of the female mussel are ruptured, and the fertilized eggs come loose and attach themselves to the fish. Other mussel species release small structures containing glochidia called conglutinates. These float freely into the water. Conglutinates look like prey items to the host fish; the host fish are infested when they attempt to eat them.

The process of encystment on the fish host occurs as the tissue of the fish grows over the glochidia. Metamorphosis takes place within days or weeks, depending on species and temperature. Glochidia transform into microscopic juveniles and drop off. If by chance they settle into suitable habitat, a new mussel bed is created.

You Will Need:

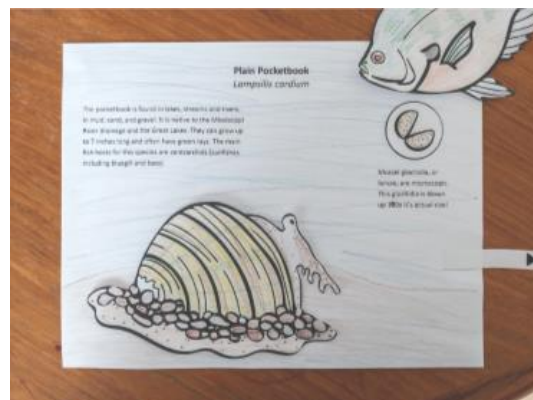
- Copies of the pattern pages, printed onto card stock, if possible. Plus one extra piece of paper.
- Scissors
- Glue or tape
- Crayons or colored pencils (optional)
- Popsicle stick or straw (optional)

Directions:

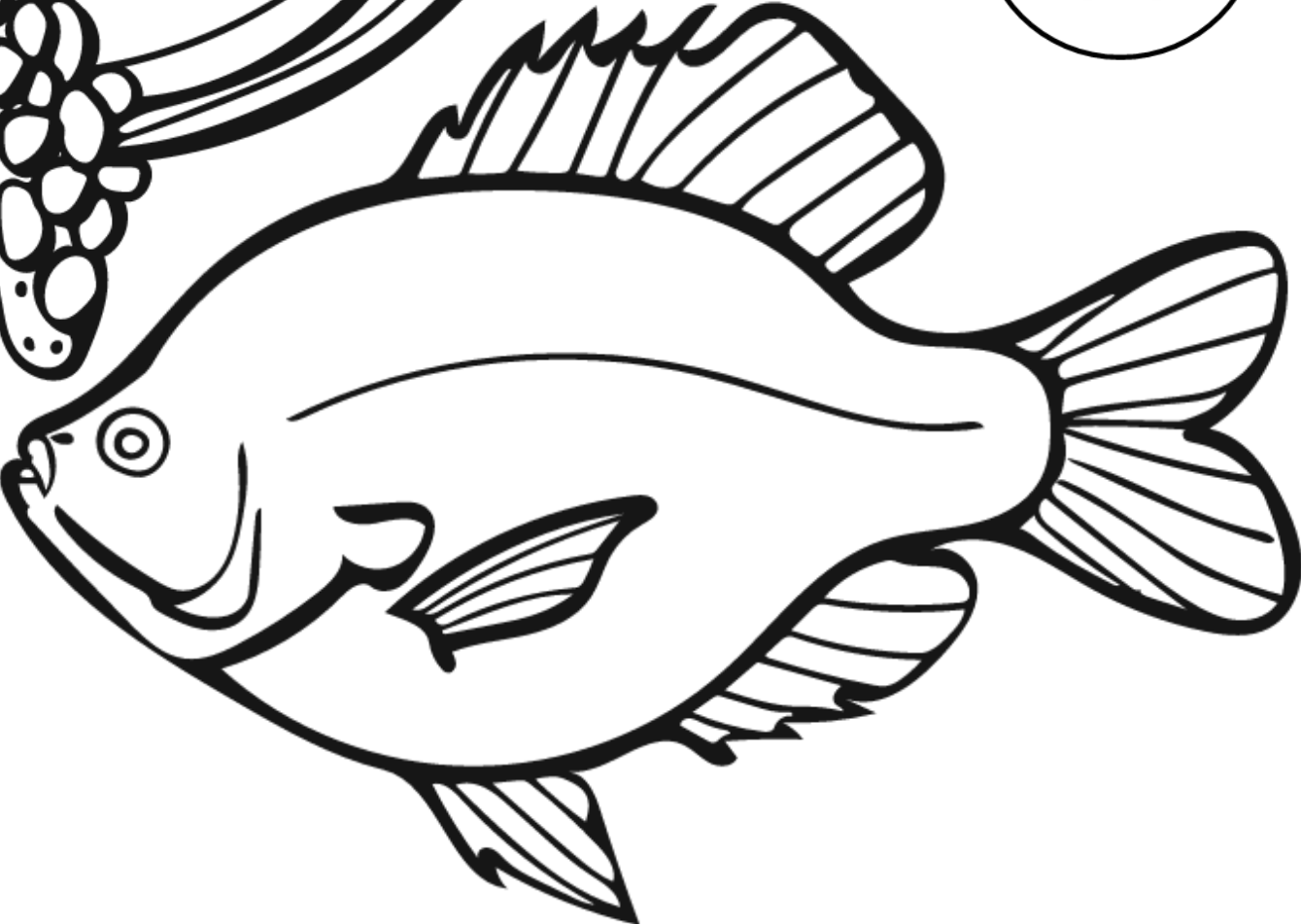
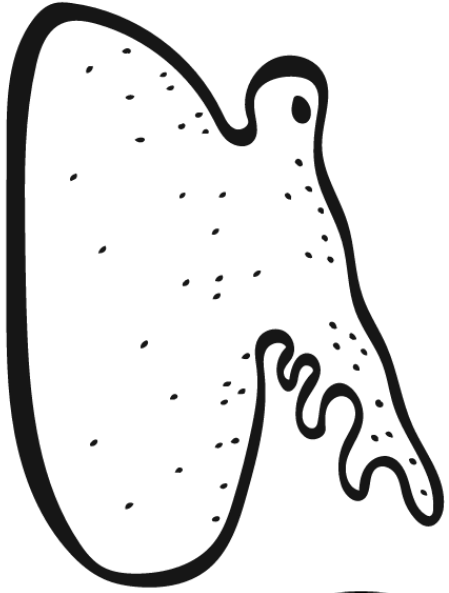
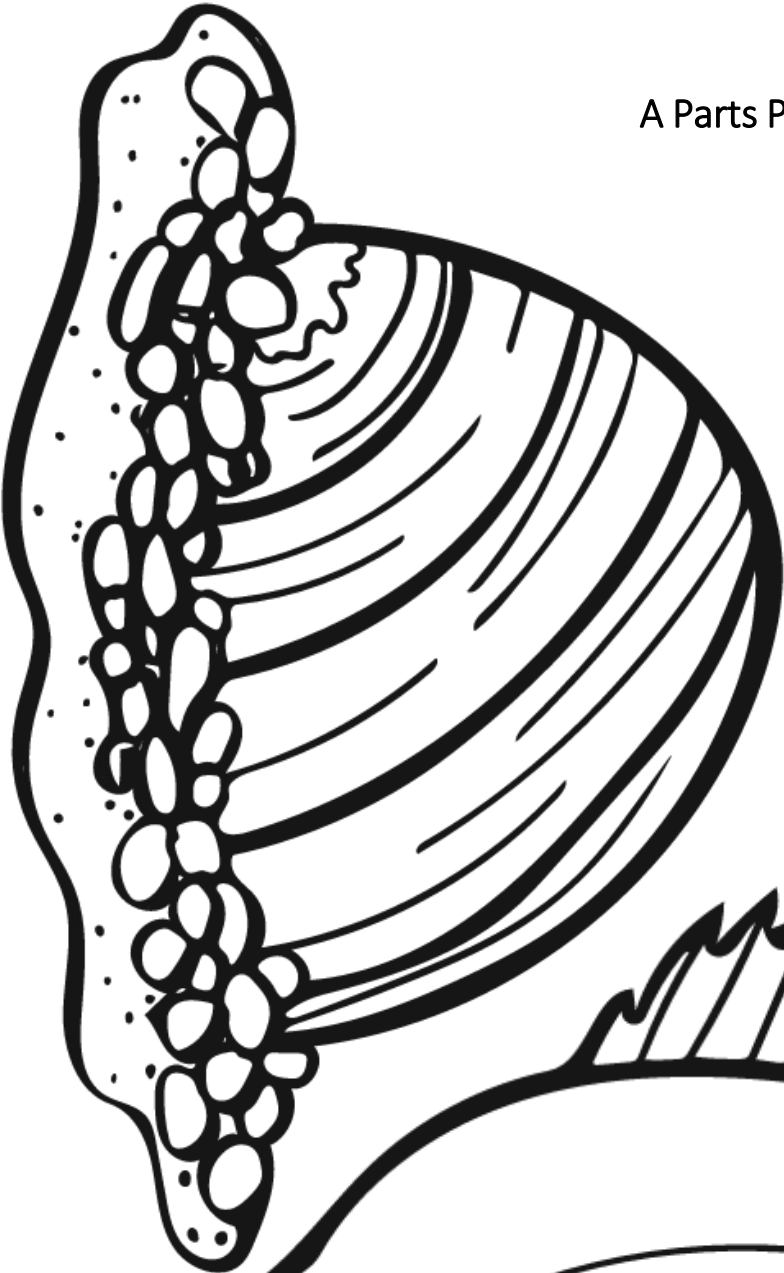
1. Color any parts that you want to color, such as the mussel shell, lure, or glochidia on the parts page (page #3). You can also color the main page (page #4) to resemble a river or lake bottom.
2. Cut out the parts from the parts page (page #3).
3. Cut out the rectangles from the main page (page #4).
4. Assemble the pull tab. Glue the lure on the opposite end of the pull tab as the arrow, see image below for lure orientation on the pull tab. Let dry.



5. Glue the main page onto the extra piece of cardstock by gluing around the edges. Make sure you do not glue the track for the pull tab. Let dry.
6. Glue the circle showing the glochidia onto the circle on the main page.
7. Glue the fish onto the popsicle stick or the straw. Let dry.
8. Feed the pull tab through the larger opening of the track until the arrow is visible in the small opening at the edge of the page.
9. Place the shell over the lure and pull the lure out with the pull tab. Your lure should emerge from the shell, not the gravel. Adjust your shell as needed. Glue your shell along the gravel on the bottom, make sure you do not glue the main body of the shell otherwise your lure will not work. Let dry.
10. When all parts are dry, gently pull your pull tab to see the lure emerge then have your fish 'swim' up to it!



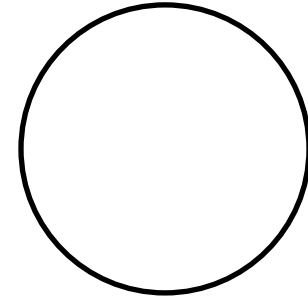
A Parts Page



Plain Pocketbook

Lampsilis cardium

The pocketbook is found in lakes, streams and rivers, in mud, sand, and gravel. It is native to the Mississippi River drainage and the Great Lakes. They can grow up to 7 inches long and often have green rays. The main fish hosts for this species are centrarchids (sunfishes including bluegill and bass).



Mussel glochidia, or larvae, are microscopic. This glochidia is blown up 150x it's actual size!

Cut out

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