Cercariae (in Snail Host)

Cercariae
Species: varies
Genus: varies
Family: Heterophyidae
Order: Lumbriculida
Class: Olphisthorchiida
Phylum: Platyhelminthes
Kingdom: Animalia

Snail Host
Species: *californica*
Genus: *Cerithidea*
Family: Potamididae
Order: Lumbriculida
Class: Caenogastropoda
Phylum: Mollusca
Kingdom: Animalia

Conditions for Customer Ownership (per USDA Permits)

We hold permits allowing us to transport these organisms. To access permit conditions, click here.

purchase living specimens without having a disposition strategy in place.

There are currently no USDA permits required for this organism. In order to protect our environment, never release a live laboratory organism into the wild.

Primary Hazard Considerations

- Wear gloves when handling the snails and conducting experiments with the cercariae.

Availability

- Cercariae, in snail host, are wild-collected from the mud flats of the West Coast during low tide, and therefore do not have a guaranteed ship date. Please call ahead with as much advance notice as possible to ensure that we can collect your order on time.

How Will Animals Arrive and Immediate Requirements

- Your cercariae, in snail host, will arrive in a waxed paperboard container with wet paper towels. You will also receive a separate jar of saltwater.
- Keep the paper towel damp by periodically moistening it with a little of the saltwater. Store the container of snails in a cool place (65° F).
- We over-pack each order of cercariae. It is normal to have some deceased snail host in the container. You will receive at least the quantity of live snail host stated on the container.

Extracting Cercariae From Host

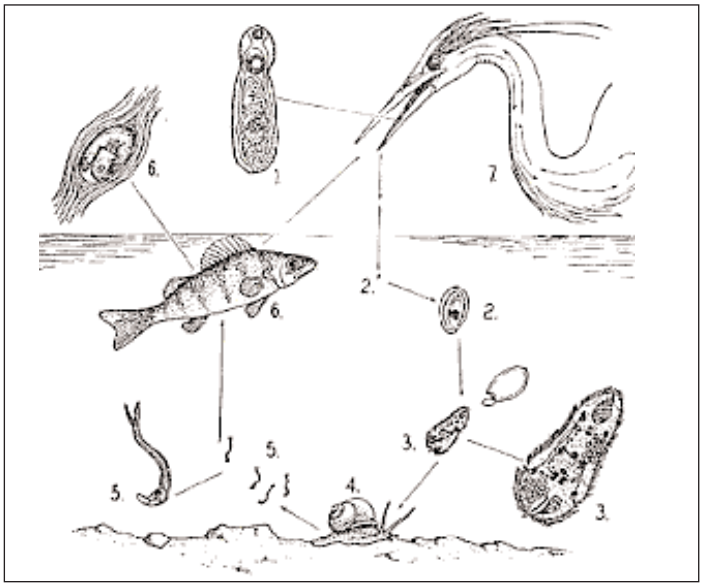
- Rinse snails in cool tap water for a few seconds to remove debris. Pour 100 mL of the seawater provided into a container and place 10 snails into it. Place the container with the snails near a bright light. Within 30 minutes, the cercariae will be visible, swimming in the water or moving along the bottom of the container. Repeat for the remaining snails.
- Cercariae behavior and morphology may be observed with a stereomicroscope using 15-30x magnification, or can be examined as a wet mount under a compound microscope.

Information

- Method of reproduction: Asexual and sexual.
- Sexual reproduction takes place in the vertebrate host. In genera that infect birds, adult worms occur in tissues and veins of the host's gastrointestinal tract, where they produce eggs that are shed into water with host feces.

Life Cycle

- Sexual reproduction occurs in definitive shorebird hosts, which defecate parasite embryos into the marsh.
- Free-living miracidia (larvae) hatch and infect California horn snail, Cerithidea californica, causing castration of the snail.
- Asexual reproduction ensues, producing tens to thousands of cercariae per snail per day. The cercariae are produced in the area previously filled by the snail gonad, and the larvae then crawl within the snail hindgut to emerge from tissues in the rectum.
- Once released into the environment, cercariae encyst on second intermediate hosts, such as benthic snails (including C. californica), crabs, and fishes.
- Ingestion of these intermediate hosts by birds completes the parasite life cycle.



Wild Habitat

- The snail host can be found in intertidal mud flats in quiet bays and estuaries.
- Free-swimming cercariae are subject to predation by fish and other predators, especially killifish.

Special Notes

- Differentiation of trematode genus or species is exceptionally difficult. The identification of trematode species using the larval stage of cercariae up to now remains difficult and unreliable. As a rule, identification should be decided only after regarding the complete life cycle including all stages.
- In southern California intertidal marshes, there are more than 18 digenetic trematode species.

Disposition

- We do not recommend releasing any laboratory animal into the wild.
- At the end of study, put all snails and cercariae into a container or bag and freeze for 48 hours.
- A deceased specimen should be disposed of as soon as possible. Consult your school's recommended procedures for disposal. In general, dead organisms should be handled as little as possible or with gloves, and wrapped in an opaque plastic bag that is sealed (tied tightly) before being placed in a general garbage container away from students.

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