

SPECIES SPOTLIGHT: FAIRY SHRIMP



Intro

Along the trail the soil looks dry. Overhead, a thunderstorm rolls in drowning the arid land. After several hours enough rain falls to create a small pool, a vernal pool. Beneath the water's surface the magic begins; A small egg senses this flood of water and begins to open, revealing a species known as the fairy shrimp. Named for their magical appearance in small pools after months or years of dryness, the fairy shrimp holds an important role in the vernal pools of the Albany Pine Bush.

Identify

Fairy shrimp are small crustaceans related to sea monkeys or brine shrimp (cultivated for entertainment and pet foods). At 1.5 - 4 cm long, this upside-down swimmer glides through the water with its 10 pairs of feathery, swimming legs. Pine Bush vernal pools could contain as many as three species of fairy shrimp, based on the number known to occur in the glaciated northeast: The Vernal Fairy Shrimp (*Eubbranchipus vernalis*), The Smooth-lipped Fairy Shrimp (*Eubbranchipus intricatus*) and The Neglected Fairy Shrimp (*Eubbranchipus negletus*).

Life Cycle

The eggs or cysts lay dormant on the vernal pool's floor for several months or years. When flooding occurs and water temperatures are under 72 °F, the cyst will open. Young fairy shrimp look almost exactly like the adults, only smaller. After 3 to 24 weeks, the young fairy shrimp reach maturity and mate. The female deposits her eggs into the water, where they fall to the floor waiting for the right conditions to hatch.



Importance

Fairy Shrimp play an important role in the food chain. As omnivores, they eat many small foods from algae to microorganisms. They have been documented scraping rocks to loosen algae. In turn, they are preyed upon by beetles and waterfowl.

fairy shrimp also serve as a sign of a vernal pool's presence and health. Unable to withstand pollution, fairy shrimp are highly sensitive to oxygen depletion, salt, high alkalinities and warm temperatures. In the Albany Pine Bush Preserve they are one of the few animal species that is entirely dependant on vernal pools for their survival. If we monitor and suddenly don't find them, that may be an alarm signaling that something has gone wrong, like altered hydrology.

Conclusion

These uniquely named creatures are an important species in the Albany Pine Bush Preserve. Serving as predator, prey and indicator species, the fairy shrimp graces us with their miraculous appearance once a year, communicating the health of our most precious vernal pools.

Information courtesy of the book Vernal pools: natural history and conservation by Elizabeth A. Colburn published by The McDonald & Woodward Publishing Company. 2004

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