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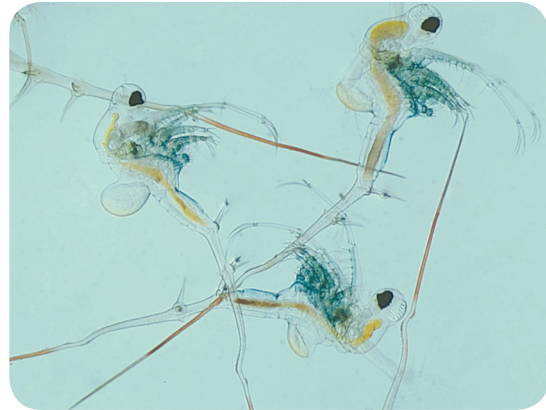
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# Reproductive Strategies

## Animal Profile:

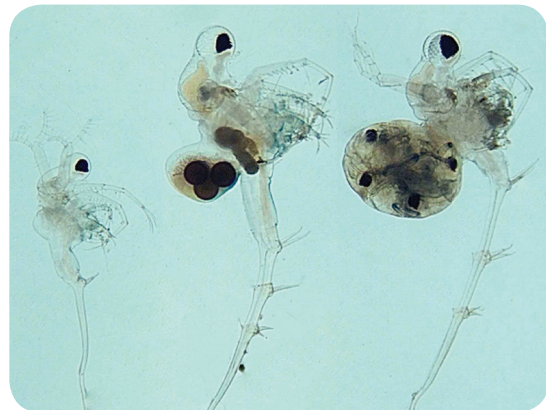
### **SPINY WATER FLEA** (*Bythotrephes longimanus*)

There's a tiny, transparent crustacean that swims jerkily around in the Great Lakes. It spikes fish in their mouths with its long tail and gobbles up other microscopic aquatic animals (zooplankton). It's called the spiny water flea, but it's more related to crabs and lobsters than to any insects. Though many different kinds of water fleas are common in ponds and streams, the spiny water flea is not a welcome visitor. It's an invader from European waters and it competes with local fish and water fleas for food. It's protected from predators by its nasty barbed tail, which makes up 70% of its 2 cm long body.



Pieter Johnson, University of Colorado at Boulder

Spiny water fleas are a threat to ecosystems because of their power to rapidly reproduce. Like all water fleas, this one alternates between asexual and sexual phases. Most of the time, a female produces eggs without fertilization. She releases about 10 eggs into the brood chamber on her back, where they develop into young clones within several days. During summer, females can produce clones of themselves every 2 weeks.



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*Different reproductive forms of spiny water fleas. Male (left), female with asexual eggs (center), and female with sexual eggs (right).*

When food becomes scarce or temperatures change, some females produce spiny little males. These males mate with other females that have produced special eggs used for fertilization, called "resting eggs." They're called this because after these eggs are fertilized, they leave the mom and remain dormant before hatching. Many water flea resting eggs can survive drying or being eaten by fish.

Spiny water fleas seem to have a lot on their side, and they're in the Great Lakes to stay. Still, biologists are working hard to keep them from spreading into too many more lakes in the future.