

Title:

Kiwi Invader New Zealand Mud Snails Endanger Yellowstone National Park

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583

Summary:

Learn all about the pernicious New Zealand Mud Snail, scourge of Yellowstone, at Vacation Nation USA.

Keywords:

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Article Body:

What, you may well ask, do 13 foot-tall New Zealand birds that have been extinct for 500 years and modern Wyoming trout species have in common? And what, you may also ask, since you're in the asking mood, do snails have to do with any of it? Well, the answer is "quite a lot, really". It's a bit complicated, but bear with me.

In something like the year 1500 C. E. the Polynesian ancestors of the Maori peoples arrived in what is known today as New Zealand. They were a brand new species to the islands, with no previous place in the ecosystem. As a result the local prey species, most notably the enormous native birds called Moa, had no natural defenses against them. Moa were not only flightless, they were completely wingless. Their only natural predator on the island was a 30-pound eagle (also later hunted to extinction by the proto-Maori), so the weren't that fast on their feet, since there's not much point in running from an 80-MPH flying killing machine. Their only defense against ground-based predation was their great size, which humans have traditionally not given much of a damn about (island peoples can hunt whales in wooden canoes; over-grown chickens are hardly scary to them). The end result is that all of New Zealand's giant flightless birds are currently on display at several fine natural history museums around the world.

But what's that to do with snails?

Enter *Potamopyrgus antipodarum*, the New Zealand Mud Snail. These tiny, aquatic, freshwater mollusks are migrating out of New Zealand, not into it, but their

impact on an ecosystem they had no previous place in could have similar repercussions for native species. Carried by us world-trotting humans, these critters made their North American debut in the 1980's in the Snake River, and have been drifting west ever since. They are now present in Wyoming's Yellowstone National Park.

How do these diminutive invaders hop from river to river, lake to lake, establishing an almost unshakeable presence as they go? Humans again, I'm afraid. The New Zealand Mud Snail is prone to hitchhiking on boats and fishing gear. So a careless or messy angler on an extended fishing trip can spread the little devils far and wide.

Mud Snails are quite hardy enough to make the trip as well. They're so small (6mm long, maximum, and sometimes as small as a grain of rice), and they so much resemble tiny flecks of mud, that they often go undetected. They can survive out of water for several days, and can live in many kinds of freshwater environments. They're even resilient enough to handle low temperatures (anything above freezing) and can pass unharmed through the digestive tract of most fish. Moreover, they reproduce asexually, and are "livebreeders", meaning they produce a number of perfectly formed little clones, so even one can spawn a colony.

New Zealand Mud Snail densities of more than ½ million snails per square yard have been found in Yellowstone Park. With no natural predators to keep it in check there's every possibility native snail species will be out-competed into extinction and native plant species overwhelmed. Such an unbalancing presence can decimate other species, such as trout, something that gives the Colorado Fish and Wildlife Department and dedicated Wyoming fishing enthusiasts reason for pause.

Efforts are being made to curb the New Zealand Mud Snail invasion. Let's hope the trout have more luck than the Moa.