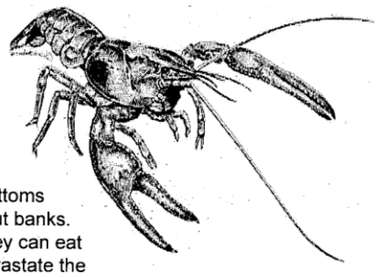
Rusty Crayfish (Orconectes rusticus)

General Description



Rusty crayfish are large and aggressive invertebrate crustaceans. Crustaceans have an exoskeleton - a skeleton outside their bodies. They are opportunistic feeders and will feed on aquatic plants, small invertebrates, small fish, fish eggs, and decaying matter on the bottom of lakes. Their preferred habitat consists of lake, pond or stream bottoms that offer protective cover like rocks, logs, or undercut banks. Once introduced into an acceptable environment, they can eat just about anything, will become prolific, and can devastate the natural balance of the entire lake ecosystem (*Wisconsin Natural Resources Magazine*, June 2001).

Lifecycle & Mechanism of Spread

The mating seasons for mature RC are in early spring, late summer or early fall. Rusty crayfish reproduce sexually, via the mixing of egg and sperm. A male transfers sperm to a female which she stores until her eggs are ripened and ready to be fertilized. The female then releases the stored sperm and fertilization of the eggs occurs. "When water temperatures are suitable, females can potentially lay anywhere between 80-575 eggs" (*Rusty Crayfish: a nasty invader.* Minnesota Sea Grant, publication X34, rev. August 2002). Fertilized eggs will hatch within three to six weeks, and the young crayfish remain close to the mature female for several weeks thereafter. Because females store sperm for later release, it is feasible for just one mature female to begin a whole new infestation if she is transferred to a new location.

The primary mode of spread for rusty crayfish is thought to be anglers using them for bait and inadvertently releasing live crayfish into the environment. The best way to reduce the spread of this animal invader is to educate anglers and bait dealers about the negative impacts that rusty crayfish can cause. They threaten the lake ecosystem as a whole and have the potential to cause declines in fish populations.

Wisconsin fishing regulations prohibit the use of live crayfish for bait. (Administrative Code NR 19.27(4)(a)1.a.)

Wisconsin fishing regulations prohibit the use of live crayfish for bait (NR 19.27(4) (a)1.a.). Unused live bait should never be released into a water body; always dispose of bait in the trash.

Potential Impacts to Ecosystem

Rusty crayfish can cause a variety of negative impacts to an aquatic ecosystem. They are physically aggressive by nature, and can completely displace native crayfish populations by winning the competition for food resources and protective habitat. They have a voracious appetite and a high metabolism. Because of this, they feed continuously, mature and reproduce quickly, and can deplete available food resources quickly and completely. The preferred food choice for a rusty crayfish is aquatic plant material or fish eggs. A modest population of rusty crayfish can severely reduce aquatic vegetation, thus depriving native fish and their prey of vital "hideaway habitat" and food resources needed for survival. Once a decline in the natural aquatic ecosystem has begun, the balance of the entire food chain falters. In short, a rusty crayfish invasion may prove detrimental to the entire aquatic ecosystem of an infested lake.

Identification Tips

Rusty crayfish have a few visible characteristics that distinguish them from native crayfish. Typically, at maturity the adults are larger than native crayfish, and can range in length from 4 to 7 inches (including the robust claws). The claws are typically larger than other species of crayfish and the very tips are black in color. As the name implies, rusty crayfish may exhibit "rust" colored spots on either side of their *carapace* (part of the exoskeleton) as though someone with paint on their fingers picked them up and the spots were left there to dry. These characteristics are easy to observe, but positive identification should always be left to the experts. Contact your local WDNR or County Land Conservation office for assistance.