RUSTY CRAYFISH

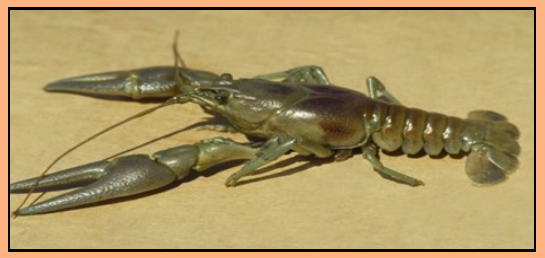
(*Orconectes rusticus*)

INTRODUCED INVADER!

The Rusty Crayfish is an **invasive** species found throughout New York, but yet to be found on Fort Drum. They were introduced from the Ohio River basin, where they are considered native. In recent years they have spread throughout the Midwest and northeast. Rusty Crayfish reproduce quickly and can rapidly take over an ecosystem. The Rusty Crayfish often disturbs aquatic vegetation and reduces populations of game fish.

Rusty Crayfish can be identified by their bronze color and rust color spots on their shell; they also have black bands at the tips of their claws (Figure 4).

They are generally transplanted to new watersheds by anglers, who use them as bait. To avoid this, anglers should never transfer bait between bodies of water. Once introduced to a watershed, they can be difficult to control. Rusty Crayfish reproduce much faster than native crayfish and are generally not eaten by game fish because they have ridged shells and are very aggressive.



If you see any Rusty Crayfish on Fort Drum, please report your sightings to the Fort Drum Fish and Wildlife Management Program.

LEGAL STATUS OF CRAYFISH

Per New York State regulations: harvesting, taking, or possessing crayfish is legal (with possession of a fishing license) in accordance with the NYSDEC baitfish regulations.

CRAYFISH NATURAL HISTORY

Crayfish, crawdads, mudbugs, yabbies or spoondogs—whatever you want to call them, crayfish are one of the most interesting groups of freshwater invertebrates (animals without backbones) in the world.

There are over 500 species of crayfish in the world and 330 species in North America, but only 9 species in New York State. Although most crayfish are between 3-8" in length , the largest crayfish (in fact, the largest freshwater invertebrate) is the Tasmanian crayfish which can grow upwards of 3 feet long and can weigh over 11 pounds!

Crayfish and other members of the subphylum Crustacea (including crabs, lobsters, shrimp, and amphipods) have blue blood. This is due to the hemocyanin in their blood, a copper based compound which is blue when oxygenated. (Human blood contains iron which turns red when oxygenated.)

Crayfish are omnivores, meaning they eat both plants and animals. You'll often find them munching on aquatic plants, snails, insects and fish.

Crayfish mating seasons differ greatly among species, but reproduction usually occurs in late summer or early fall with females producing around 100 eggs.

Male and female crayfish can be differentiated by the presence or absence of a pair of swimmerets; which are located on the underside of the crayfish. Males have these swimmerets (Figure 5), while females do not (Figure 6).

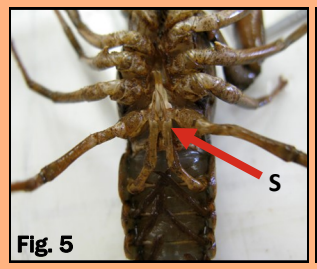


Figure 5. Male Crayfish
S = swimmerets

Figure 6. Female Crayfish

All photos are from Fort Drum Natural Resources Branch or used with permission from Keith Crandall, Cody R. Hough and Casey D. Swecker.

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CALICO CRAYFISH

(*Orconectes immunis*)

Calico crayfish are named after their calico-patterned tails.

They can also be identified by a distinct notch in their claws and a large tooth half way up their claw (Figure 3). Since the calico crayfish is one of the smaller crayfish, they build burrows up to a meter deep as shelter from swift currents and predators.

Calico Crayfish are found in slow moving streams or wetlands with muddy and sandy substrate. They can also tolerate bodies of water with very low concentrations of oxygen and moderately high levels of organic pollution.

ALLEGHANY CRAYFISH

(*Orconectes obscurus*)

Alleghany crayfish are found in a variety of habitats including lakes, rivers and streams. They can tolerate streams with moderate flows, allowing them to colonize areas that other crayfish can't.

Alleghany Crayfish are highly mobile and usually lack a permanent home. They hide under rocks and other debris to avoid predators.

ROBUST CRAYFISH

(*Cambarus robustus*)

The robust crayfish gets its name from its large size; they are the biggest crayfish found on Fort Drum. It is also one of the most acid tolerant crayfish species. These crayfish reproduce in early summer with their young hatching in late summer.

Found in streams and rivers with rocky substrate, they can withstand areas of high flows due to their size. This gives them a dispersal advantage over other crayfish.

NORTHERN CLEARWATER CRAYFISH

(*Orconectes propinquus*)

The Northern Clearwater Crayfish is easily identified by the presence of a medial carina and marginal spine (See Figure 1). A medial carina is a raised bump in the middle of a crayfishes rostrum (the platform between it's eyes), while the marginal spine is a spine on the perimeter of the rostrum. They prefer larger bodies of water with rocky shores, but can be found in a variety of habitats including streams and wetlands.

Northern Clearwater crayfish are sensitive to water pollution and can be a good indicator of stream health. Like most crayfish, they are omnivores, feeding on both plants and animals.

CRAYFISH I.D.

1 a. Rostrum bordered by two distinct marginal spines (Fig. 1)..... 2

1 b. Rostrum without obvious marginal spines (Fig. 2)..... 4

2a. Medial carina present on rostrum (Fig. 1) .... *Orconectes propinquus*

2b. Medial carina absent 3

3a. Claws with black bands at tip (Fig 4)..... ..... *Orconectes rusticus*

3b. Claws without black bands at tip .... *O. obscurus*

4a. Claw with large tooth at midpoint (Fig. 3) .... *Orconectes immunis*

4b. Claw without large tooth at midpoint (Fig. 4)..... ..... *Cambarus robustus*

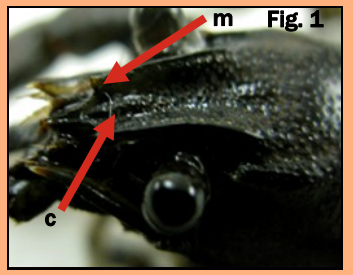

Figure 1. Rostrum of *O. propinquus*:
m = marginal spine
c = carina

Figure 2. Rostrum of *C. robustus*

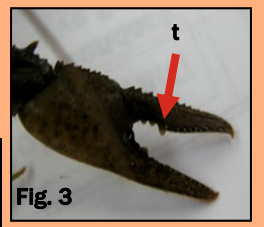

Figure 3. Claw of *O. immunis*
t = tooth

Figure 4. Claw of *O. rusticus*