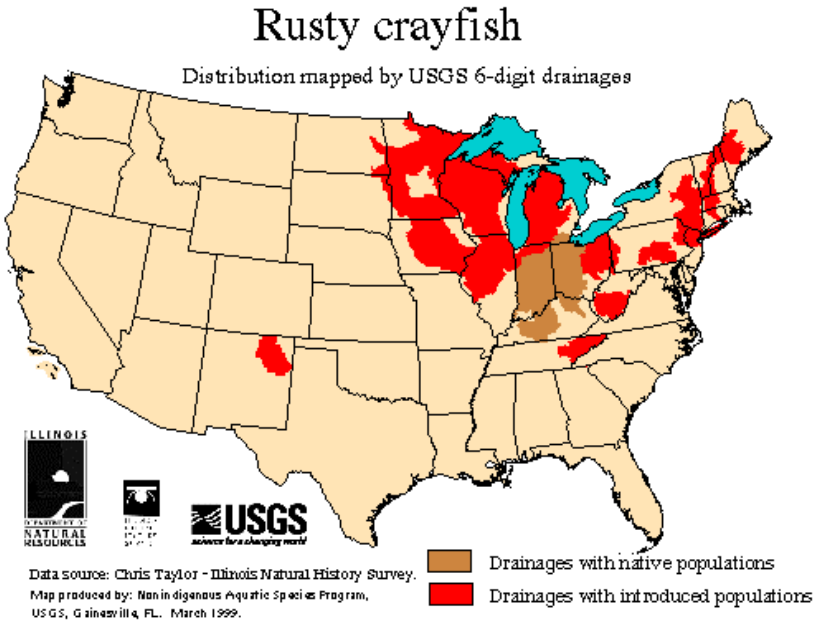
RUSTY CRAYFISH

COMMON NAME: Rusty Crayfish
This species may be referred to as rusty crawfish, rusty crawdads, or rusties.

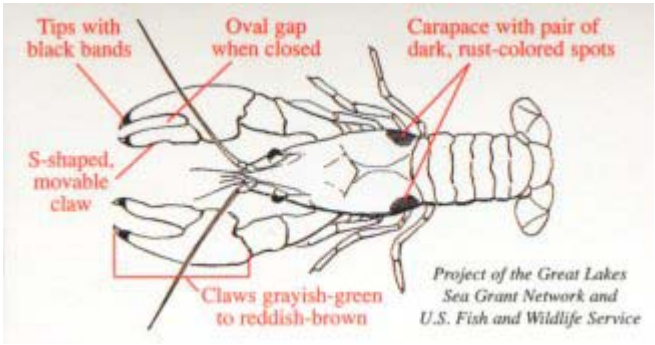
SCIENTIFIC NAME: *Orconectes rusticus*
The rusty crayfish is in the family Cambaridae, the crayfish family.

DISTRIBUTION: Rusty crayfish are native to the Ohio River Basin in Ohio, Kentucky, Tennessee, Indiana and Illinois. Currently the rusty crayfish has expanded its range to include Michigan, Missouri, Iowa, Minnesota, New Mexico, New York, New Jersey, Pennsylvania, Wisconsin, and most of the New England States as well as Ontario, Canada.

Indiana: The rusty crayfish is native to the Ohio River Basin of Indiana which covers the majority of the state. Its distribution has expanded, and the species now has now invaded the northern tier of the state.



DESCRIPTION: Its brown body and large claws identify the rusty crayfish. Its claws are grayish-green to reddish-brown with dark black bands on the tips. Also there are two rusty patches on either side of the crayfish's body. However, these patches may be less pronounced on crayfish from different areas. The claws, when closed, have an oval gap in the middle. The moveable claw is smooth and S-shaped. Males tend to be larger than females.



LIFE CYCLE BIOLOGY: The rusty crayfish can be found in lakes, ponds, rivers and streams with areas that have debris for cover. Since they do not burrow if the water level gets to low, they need permanent bodies of water to survive.

Rusty crayfish can mate in late summer, early fall, or early spring. The male's sperm is stored in the female until the eggs are ready to be fertilized. Eggs and stored sperm are released at the same time and external fertilization takes place. The fertilized eggs then attach to the bottom of the females tail section. Eggs hatch in three to six weeks. A female can lay anywhere from 80 to 575 eggs. Once hatched, the young will continue to cling to the female's tail section for further protection until they are large enough to be on their own. When the young become about 1 3/8 inches long they have reached maturity. The maximum total length is about four inches. Once maturity has been reached growth slows down considerably. A life span of three to four years is typical for a rusty crayfish.

Rusty crayfish are opportunistic feeders, meaning that they will eat just about anything that is available. They will feed on aquatic vegetation, worms, snails, leeches, clams, insects, other crustaceans, detritus, fish eggs and small fish. The rusty crayfish has a high metabolic rate and can eat twice as much food as similar sized native crayfish. Fish like smallmouth bass and rock bass do prey upon the rusty crayfish but when threatened the crawfish will assume a defensive position with claws up, which lessens the chance it will be eaten.

PATHWAYS/HISTORY: Anglers and the bait industry are the two most likely pathways for introduction into the non-native areas of the United States. Rusty crayfish are also sold to schools by biological supply stores for classroom projects. Unfortunately, many of the rusties probably get released into non-native areas.

DISPERSAL/SPREAD: It is likely that the majority of rusty crayfish introductions outside of the native range are by anglers using them as bait. Bait retailers may be enhancing their spread by offering them for sale in areas where they are not native. Rusty crayfish are able to survive in many different environments, so once they are introduced it is easy for them to proliferate. It only takes one introduced female who has

sperm stored to start a new population. Once introduced into an area, rusty crayfish can spread via connected waters.

RISKS/IMPACTS: The rusty crayfish is an aggressive species and its behaviors can reduce our native crayfish populations. They will force native crayfish from the best hiding places and thus increases the predatory pressure on the natives. Since the rusty crayfish will assume a defensive position when threatened by predators, they are not eaten as much as other crayfish that flee when attacked. Competition for food is another way that the rusty crayfish will displace other crayfish species. Rusty crayfish voraciously eat aquatic vegetation. This species has the ability to reduce the abundance and diversity of the plants in the water. These under water plants serve many important roles like, habitat, food, nesting substrate, and erosion control. Some have thought that the rusty crayfish's feeding on fish eggs could lead to lower fish populations. More studies need to be done to find out just what impacts the crayfish have on fish populations. People are often afraid to swim in areas that are heavily infested with rusty crayfish due to the fear of getting pinched.

MANAGEMENT/PREVENTION: There are chemicals that will selectively kill crayfish, however none are specifically registered and labeled for crayfish control. Of the chemicals known to kill crayfish, none selectively eliminate only rusties which would put other crayfish at risk. Due to the large size of rusty crayfish, manual harvest for human consumption is a good use of the species, but this will only reduce the adult population. Once the rusty crayfish is introduced it is almost impossible for them to be eradicated. The best method of control would be to prevent the further spread of the species. Here are some things you can do to prevent spreading rusty crayfish into areas outside of their native range:

- Learn to identify rusty crayfish and know their native range.
- Do not use rusty crayfish in areas other than the Ohio River drainage.
- Some states have regulations on the use of crayfish as bait. Investigate state regulations before using crayfish.
- Unused crayfish bait should be dumped into the trash; never release into the water or on land.
- Outside of their native range, bait dealers should be on the lookout for rusty crayfish and not offer them for sale.

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