WISCONSIN CRAYFISH IDENTIFICATION GUIDE
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Craig Roesler
Wisconsin DNR – Spooner

There are eight species of crayfish that have been found in Wisconsin in recent years. They are:

The Red Swamp crayfish has only been found in three stormwater ponds in southeastern Wisconsin in recent years where efforts have been made to eradicate it. The Prairie crayfish has only been found in far southeastern Wisconsin (Milwaukee, Waukesha, Racine, Kenosha, and Walworth Counties). This leaves only six species likely to be present in the remainder of the state. The three most commonly found species are the Virile crayfish, the Northern Clearwater crayfish, and the Rusty crayfish. These three species typically comprise more than 90% of specimens in crayfish collections.

There are historical reports of Digger crayfish (*Fallicambarus fodiens*) being found in Wisconsin. This crayfish may have recently been found in the Milwaukee area, but the recent reports have not yet been substantiated.

This guide is an attempt to allow simplified identification of Wisconsin crayfish. Technical terms have been avoided*. "Lobster dinner" terms have been used (tail, claws, shell). Color photos depicting useful identification characteristics are provided. A simplified key is included on page 3.

A crayfish species can be fairly variable in appearance. All identification characteristics will not be apparent in every specimen. Regional variations in characteristics can also occur. This guide should not be depended on when correct identification is critical. However, it is likely to allow correct identification of most specimens most of the time.

It generally requires the use of live or fresh specimens. Preserved specimens will lose their markings. Specimens also need to be fairly clean, and not coated with mineral deposits or biological films that will obscure markings. Very young specimens or freshly

molted (soft shell) specimens also may not exhibit typical markings. Hybridization of Orconectes species can occur. Hybrids can have a blend of species characteristics.

This guide will hopefully assist with efforts to monitor non-native, invasive crayfish species. It will also allow the determination of native crayfish species present and increase awareness of the variety of crayfish species we have in Wisconsin.

Photos and line drawings were contributed for this guide by Jim Klosiewski, Paul Skawinski, Jeremy Bates, Craig Roesler, and the Milwaukee Public Museum.

When crayfish species identification is critical, a good key to consult is "The Crayfishes and Shrimp of Wisconsin", H.H. Hobbs III and Joan P. Jass, Milwaukee Public Museum, 1988. It is available for purchase online. The key can be difficult to use for most people since it makes extensive use of technical terms. This reference also provides a great deal of other information, including ecological and life history descriptions for crayfish species.

Distribution maps shown in this guide were obtained from the 1988 document above. Some crayfish species are known to be more widely distributed in Wisconsin than the maps indicate.

Another useful crayfish guide is "Field Guide to Crayfishes of the Midwest", Taylor, C.A., et al. Illinois Natural History Survey Manual 15. It contains photos and descriptions of all Wisconsin species as well as numerous other species.

* One technical term, "rostrum", is used. The rostrum is the tapered "shell" section above and between the eyes.

SIMPLIFIED WISCONSIN CRAYFISH KEY

For medium to large-sized, live or fresh specimens

1. Tufts of fibers usually present adjacent to claw hinge; mottled markings present on body and legs – ***Orconectes immunis*** p.6
   (***Orconectes virilis***, 12., below, may also have a less extensive tufts of fibers)

   No tufts of fibers present adjacent to claw hinge; no mottled markings – 2

2. Curved seams on back touch in middle – 3

   Curved seams on back don't touch in middle – 4

3. Sides with numerous small bumps; claws often with red spots – ***Procambarus clarkii*** p.16

   Sides without numerous small bumps; claws without spots – ***Cambarus diogenes*** p.4
   (also see 7. Procambarus gracilis, below)

4. Dark band on top of tail – 5

   Without dark band on top of tail – 6

5. Sides with numerous small bumps; often reddish body color (sometimes tan) – ***Procambarus acutus*** p.14

   Sides without numerous small bumps; brown or grey body color; claw tips orange/red with black rings – ***Orconectes propinquus*** p.8

6. Claw tips orange/red without black bands; two to four rows of angular spots on tail – ***Orconectes virilis*** p.12

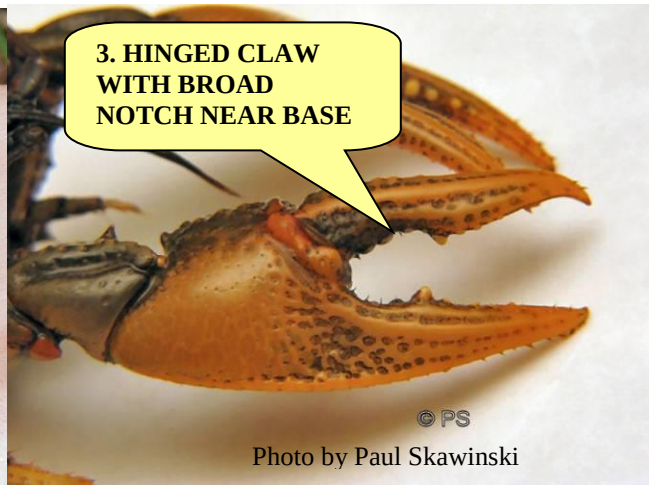
   Claw tips orange/red with black bands; rust colored bands on tail segments; usually with rust colored spots on sides – ***Orconectes rusticus*** p.10
   (also see 7. Procambarus gracilis, below)

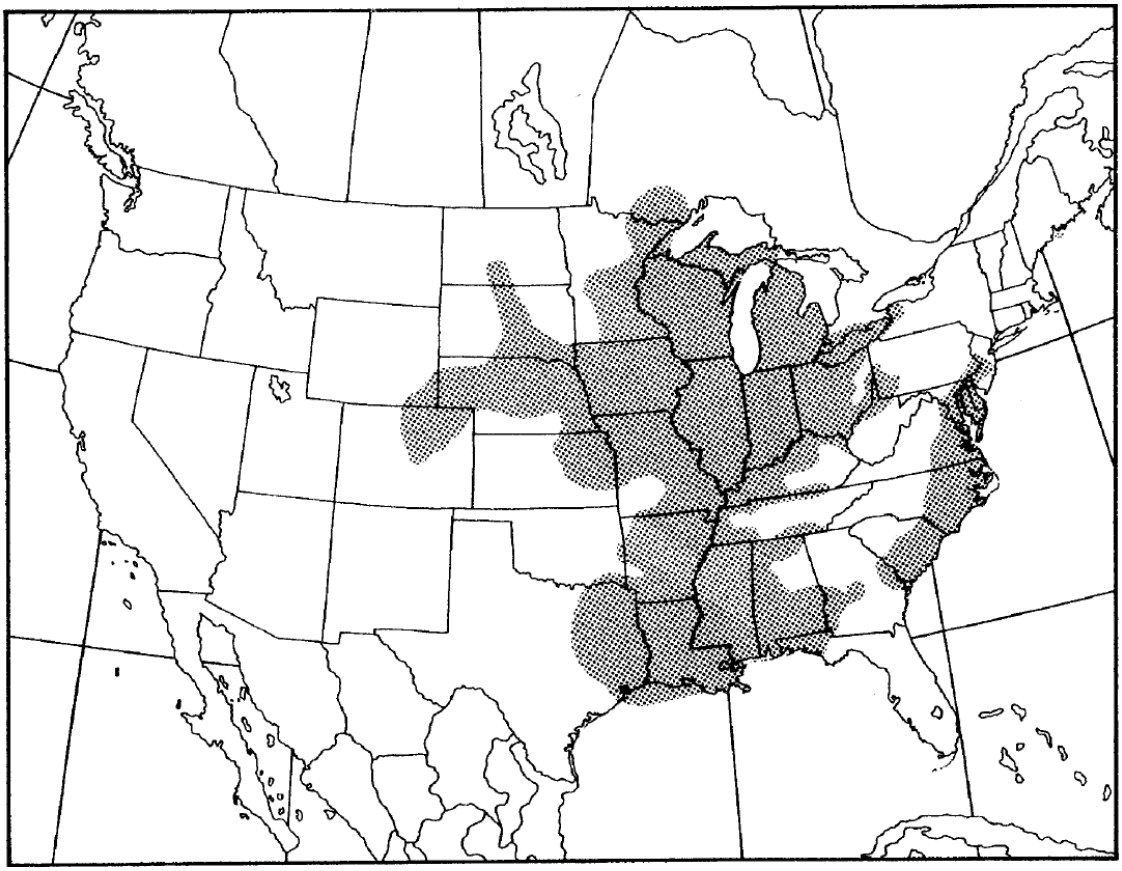
7. ***Procambarus gracilis*** p.17 – Has only been reported from far southeastern Wisconsin. Seams on back touch or nearly touch in middle; tail is shorter than remaining body length (carapace); claws wide with width of unhinged claw about half of length

DEVIL CRAYFISH (*CAMBARUS DIOGENES)*

This species is distributed statewide and is fairly common, but probably infrequently found. It spends most of its life in burrows and enters lakes and streams in spring for reproduction. It can be quite variable in appearance.

1. **CURVED SEAMS ON BACK ARE JOINED IN CENTER.**
2. **TAIL (ABDOMEN) IS MORE FLATTENED THAN IN OTHER SPECIES.**
3. **HINGED CLAW HAS BROAD NOTCH NEAR ITS BASE. (THREE OTHER SPECIES HAVE A SIMILAR NOTCH.)**



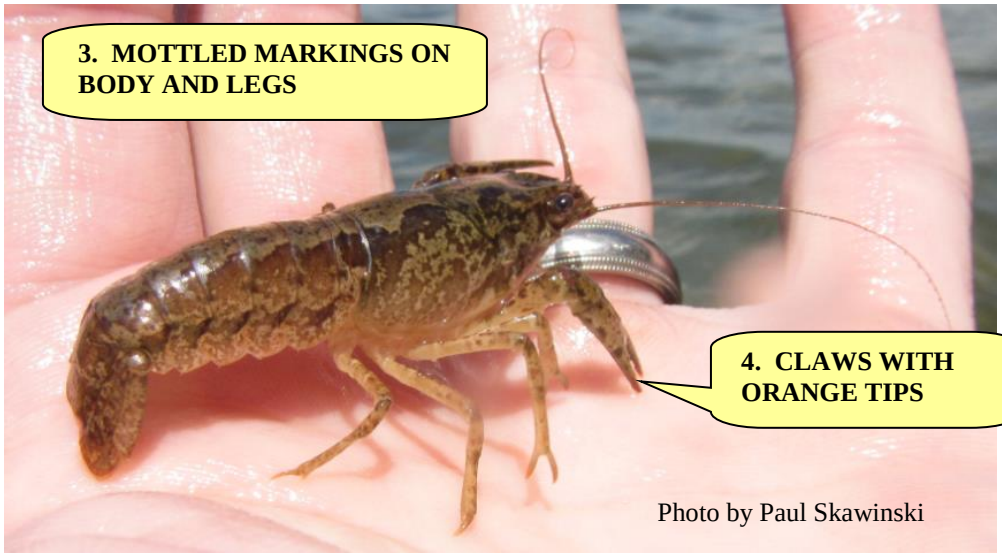


Map 1. Geographic distribution of *Cambarus diogenes*.

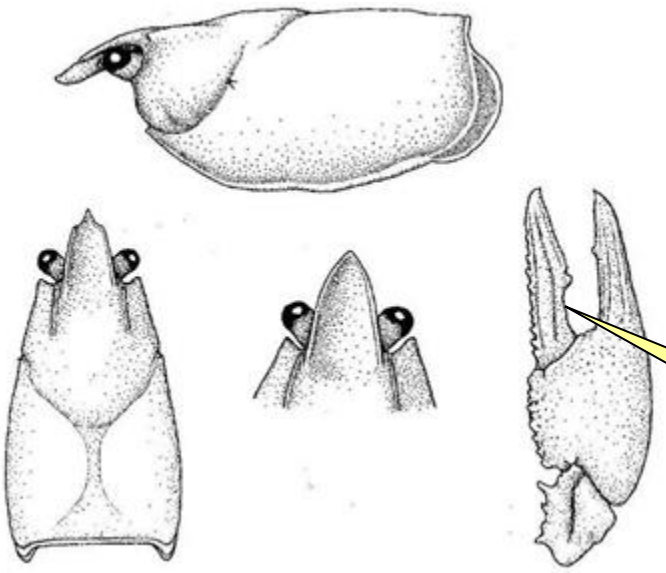
CALICO CRAYFISH *(ORCONECTES IMMUNIS)*

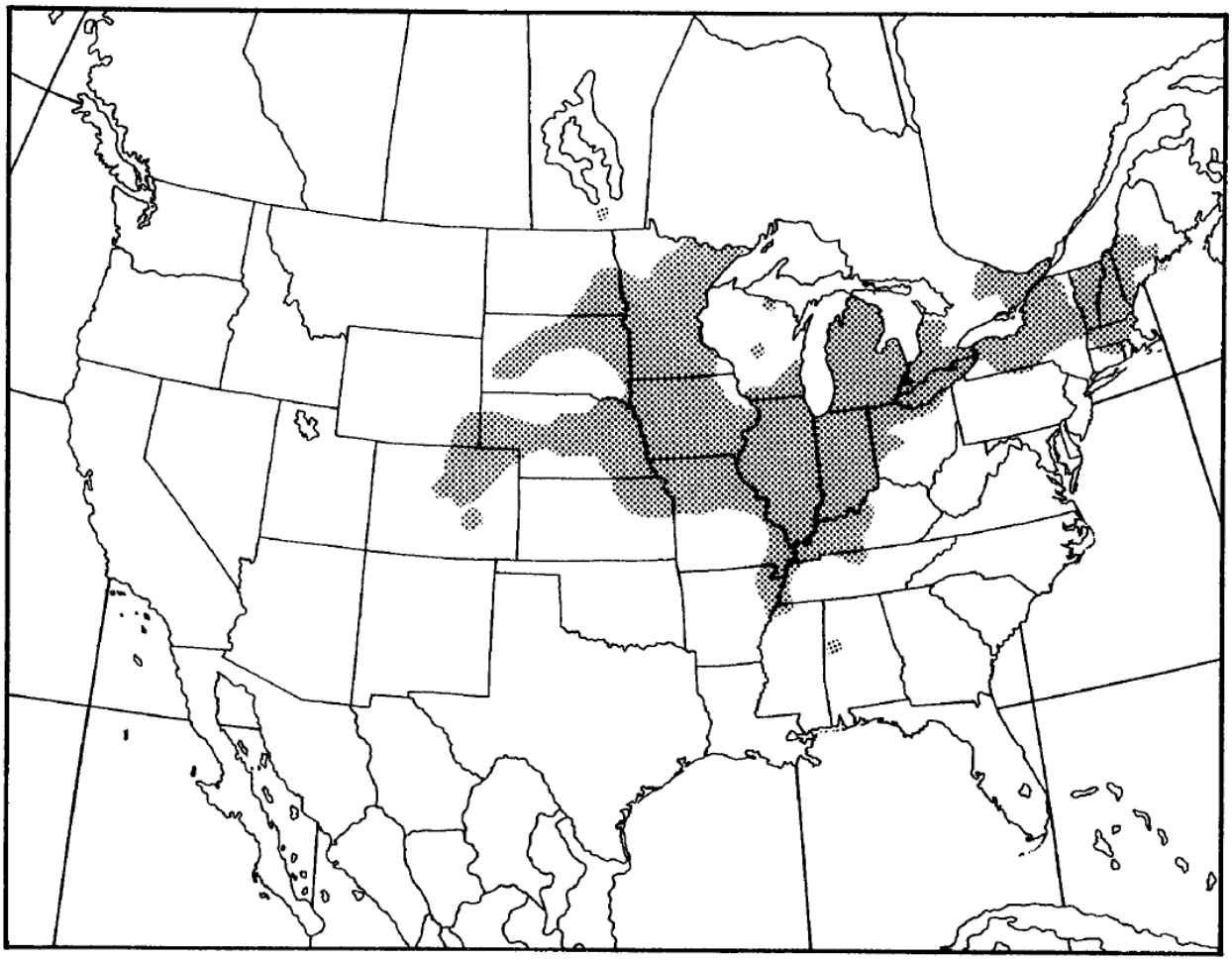
This species is distributed across much of the state but is uncommon. It is typically found in soft bottom areas, usually with aquatic plants present.

1. **TUFTS OF FIBERS ADJACENT TO CLAW HINGE; MOST FIBERS ATTACHED TO UNDERSIDE OF UNHINGED CLAW (FIBERS MAY NOT ALWAYS BE PRESENT).**
2. **NOTCH NEAR BASE OF HINGED CLAW.**
3. **MOTTLED MARKINGS ON BODY AND LEGS; VARIABLE PATTERNS.**
4. **CLAWS WITH ORANGE/RED TIPS.**



Line drawings from The Crayfishes and Shrimp of Wisconsin, Hobbs and Jass, Milwaukee Public Museum, 1988



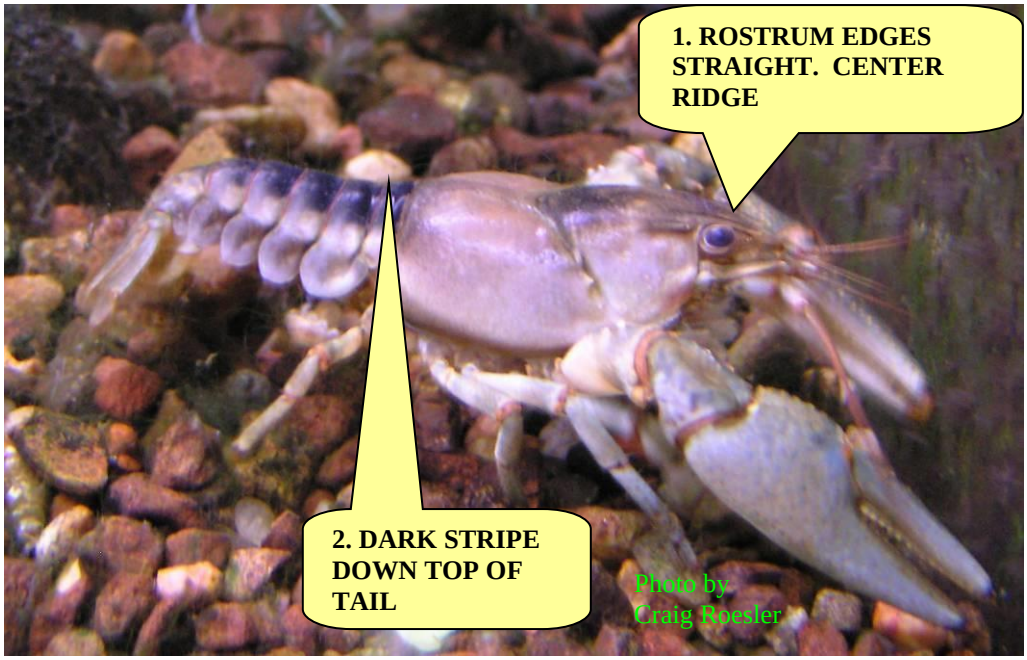


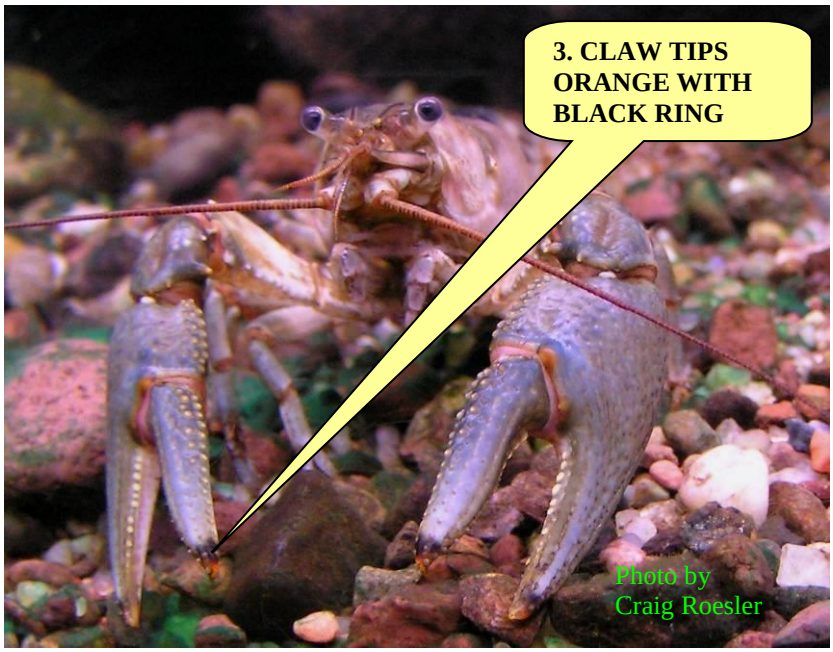
Map 2. Geographic distribution of *Orconectes immunis.*

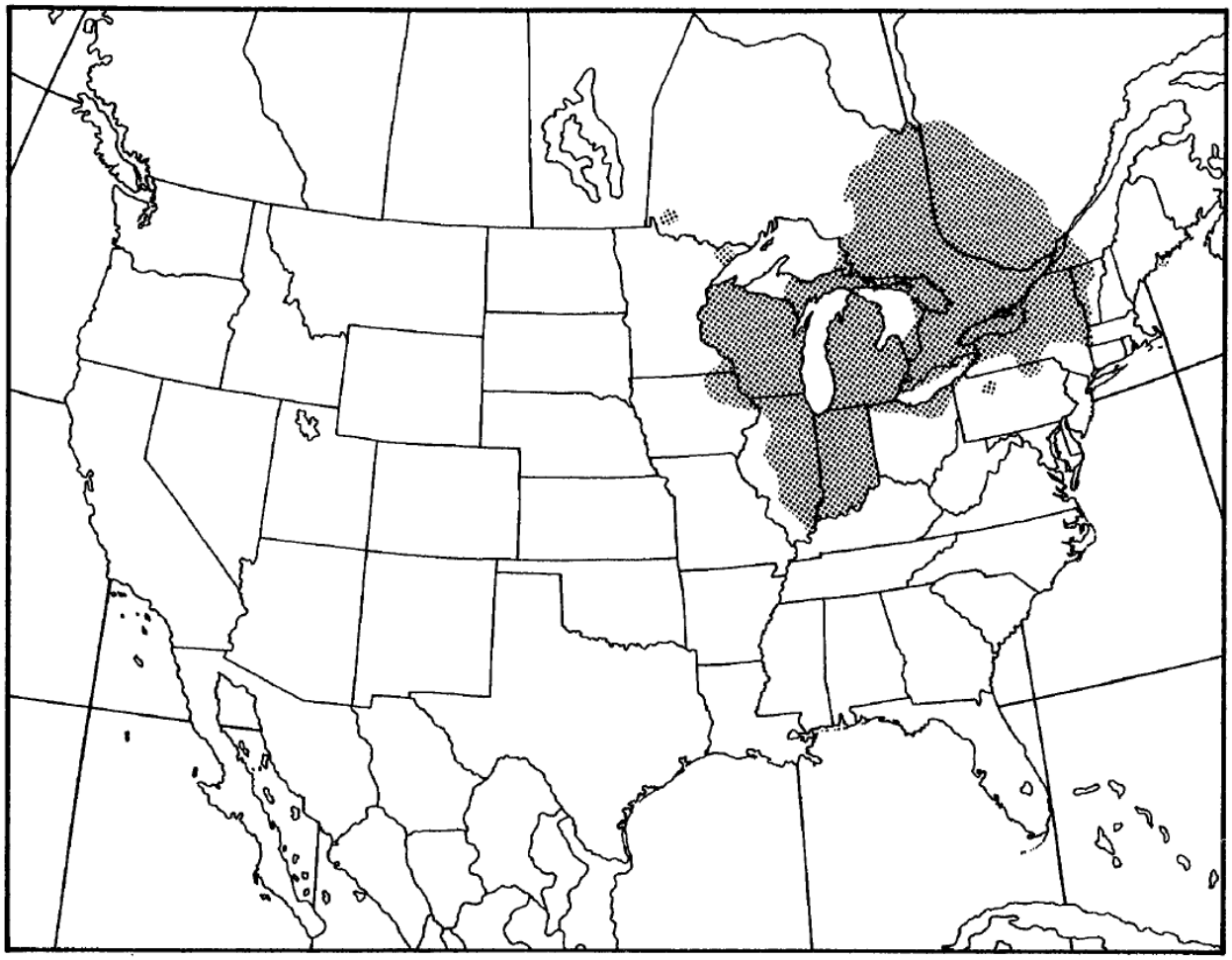
NORTHERN CLEARWATER CRAYFISH
(ORCONECTES PROPINQUUS)

This species is distributed statewide and is very common. It is usually found on gravel or rocky bottoms. It can be grey (pictured) or brown. Grey specimens are more commonly found in very clear waters.

1. **ROSTRUM EDGES STRAIGHT WITH RAISED RIDGE IN CENTER. RIDGE USUALLY DIFFICULT TO SEE, BUT CAN BE FELT WITH A FINE-POINTED OBJECT. RIDGE SHAPE / LOCATION VARIABLE.**
2. **DARK STRIPE DOWN TOP OF TAIL (ABDOMEN).**
3. **CLAW TIPS ORANGE WITH BLACK RING. RING SOMETIMES PARTIAL OR FAINT.**





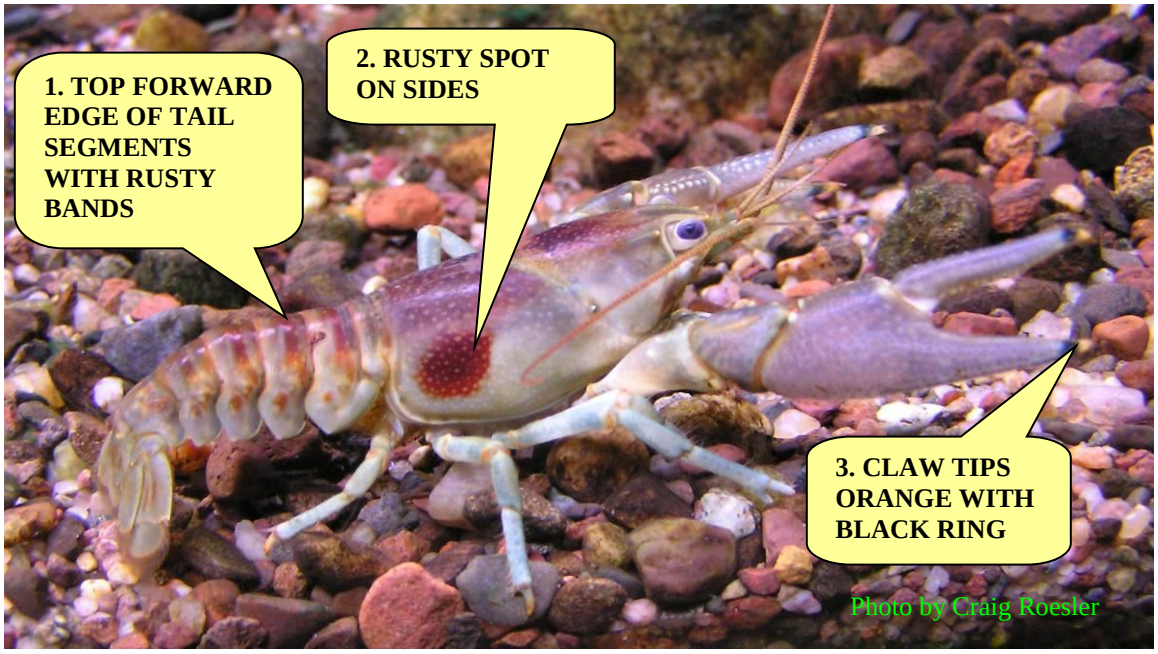


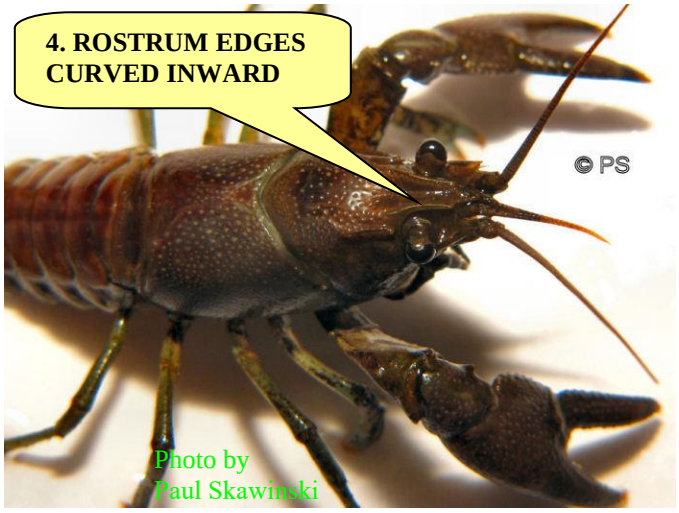
Map 3. Geographic distribution of *Orconectes proinquus*

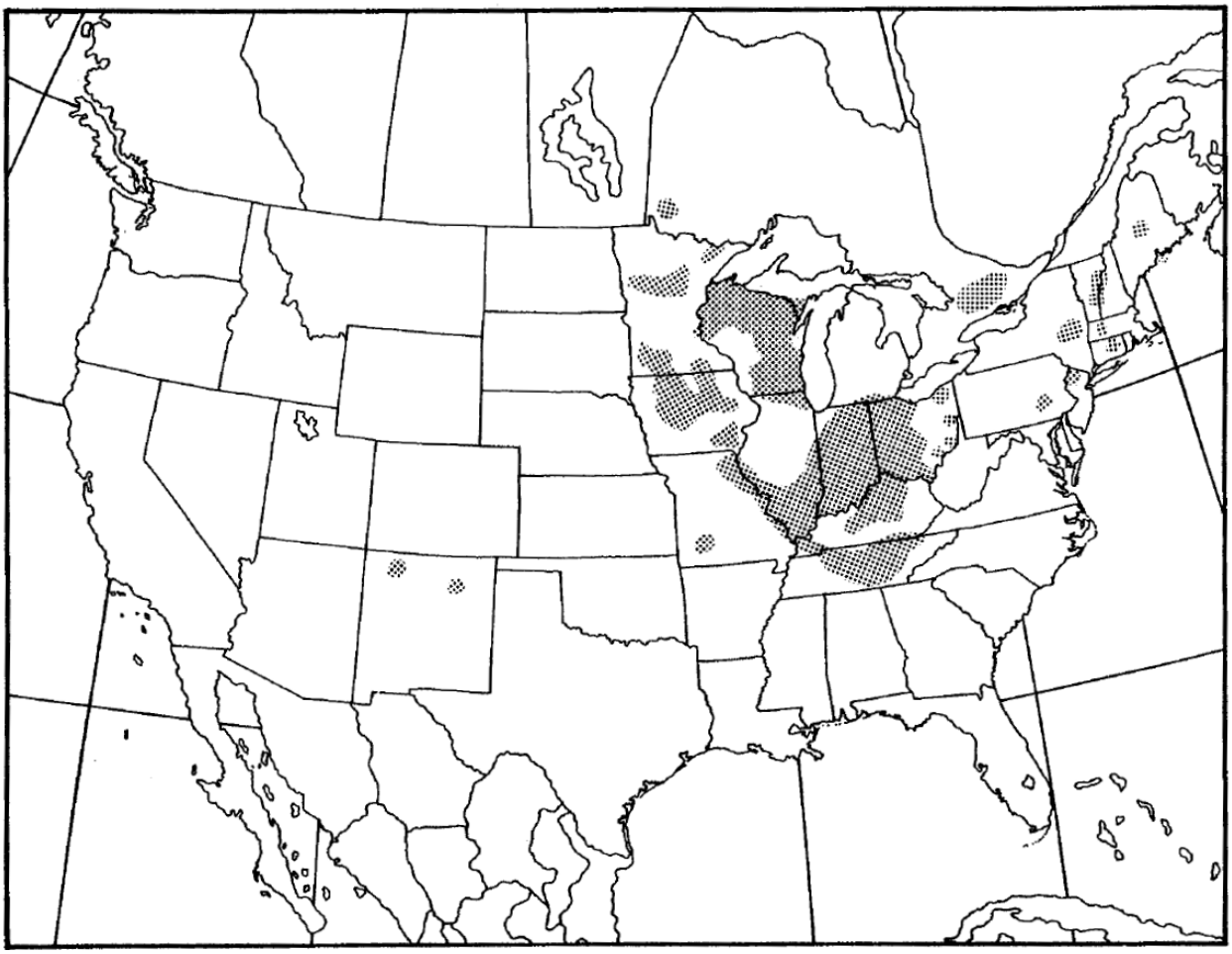
RUSTY CRAYFISH (*ORCONECTES RUSTICUS*)

This species is distributed statewide and is very common. It is found on a wide variety of bottom types. It is not native to Wisconsin but has spread widely and causes serious ecological damage.

1. **TOP FORWARD EDGE OF TAIL (ABDOMINAL) SEGMENTS WITH RUSTY BANDS.**
2. **RUSTY SPOTS ON SIDES. SOMETIMES VERY SMALL OR FAINT. OCCASIONALLY ABSENT.**
3. **CLAW TIPS ORANGE WITH BLACK RING. RING SOMETIMES ONLY PARTIAL OR FAINT.**
4. **ROSTRUM EDGES CURVED INWARD. SOMETIMES VERY SLIGHTLY. OCCASIONALLY STRAIGHT.**





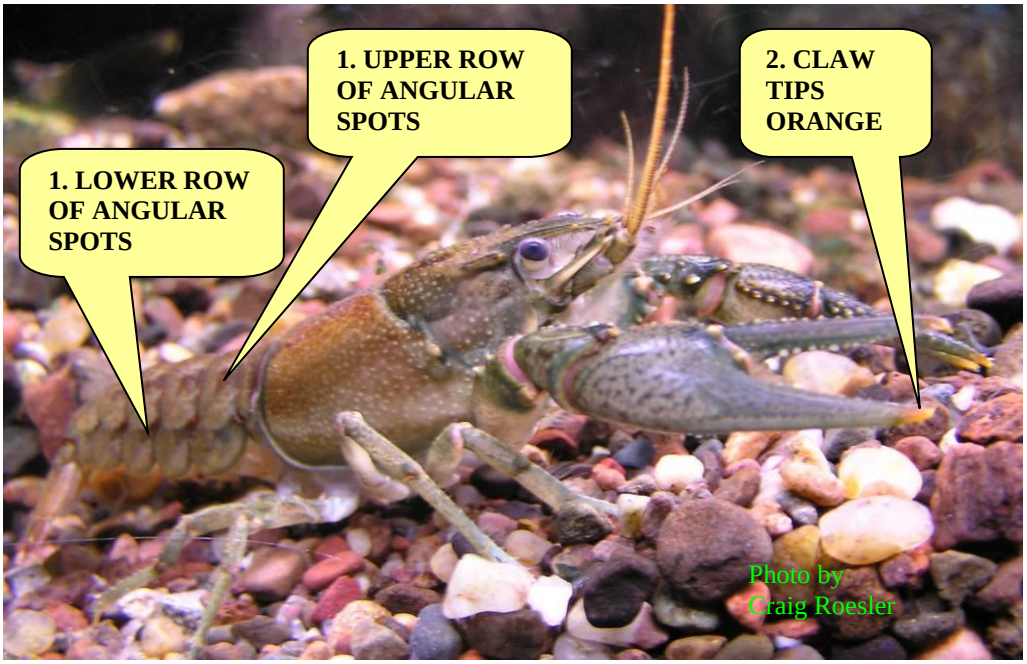


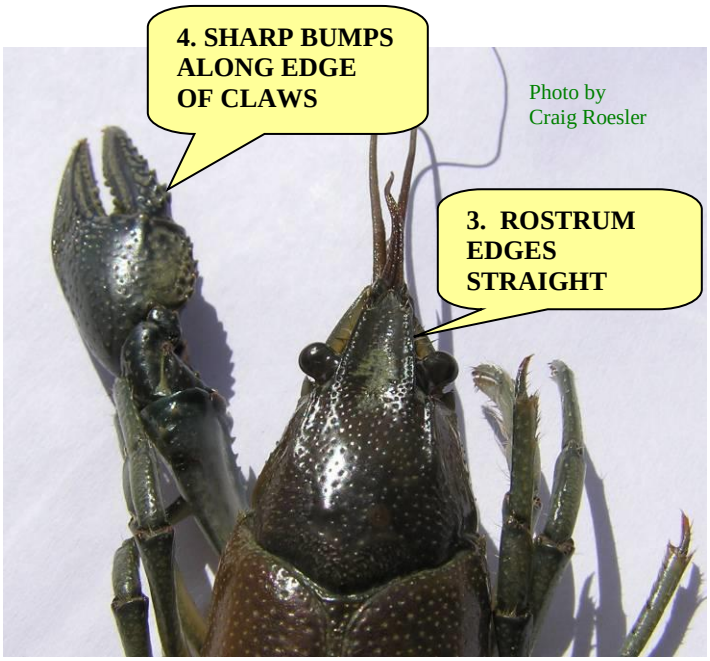
Map 4. Geographic distribution of *Orconectes rusticus*.

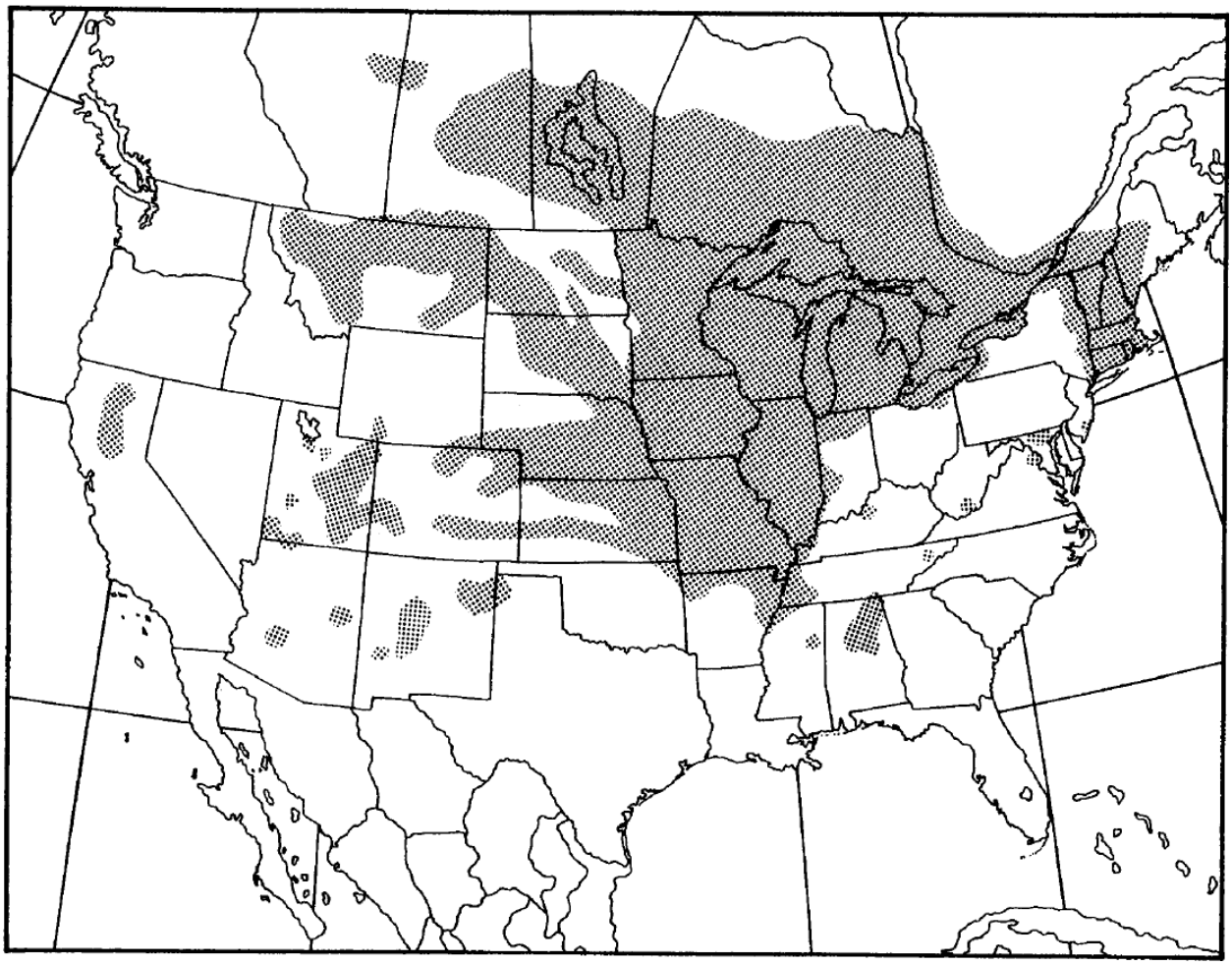
VIRILE CRAYFISH *(ORCONECTES VIRILIS)*

This species is distributed statewide and is very common. It is found on a wide variety of bottom types.

1. **TAIL (ABDOMEN) WITH FOUR ROWS OF ANGULAR SPOTS, AN UPPER AND LOWER ROW ON EACH SIDE. UPPER OR LOWER ROW SOMETIMES FAINT.**
2. **CLAW TIPS ORANGE WITH NO DISTINCTIVE BLACK RING. ORANGE TIPS SOMETIMES VERY SMALL.**
3. **ROSTRUM EDGES USUALLY STRAIGHT. NO CENTRAL ROSTRUM RIDGE.**
4. **LARGE SHARP BUMPS ALONG INSIDE EDGE OF CLAWS**





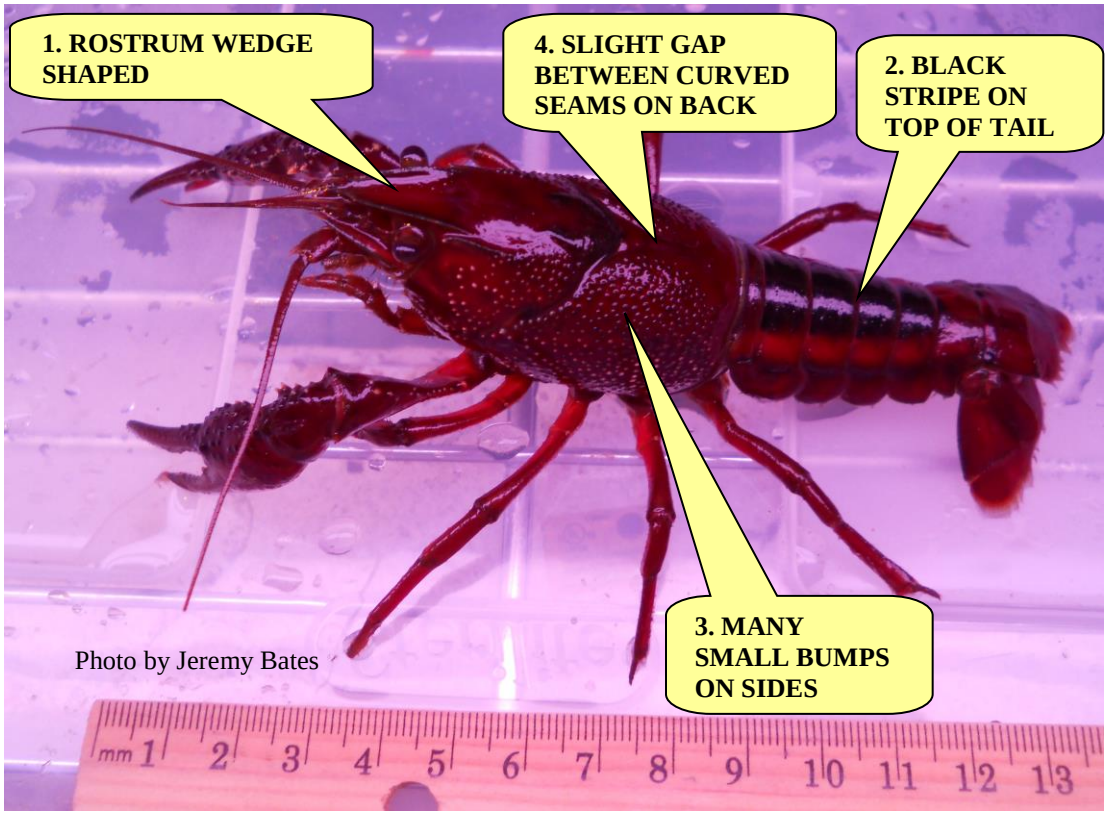


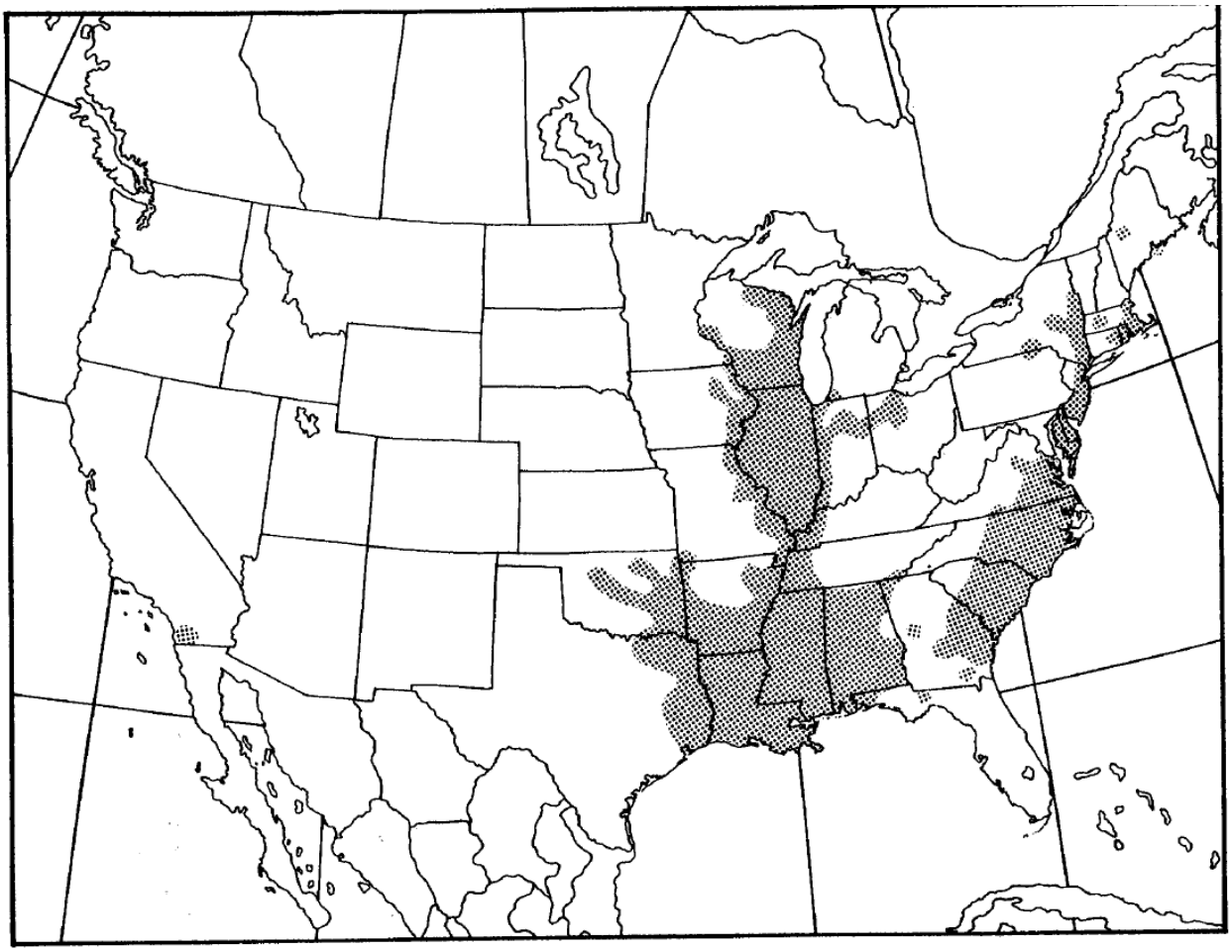
Map 5. Geographic distribution of *Orconectes virilis*.

WHITE RIVER CRAYFISH *(PROCAMBARUS ACUTUS)*

This species is distributed statewide but is uncommon. It is found on a wide variety of bottom types.

1. **ROSTRUM WEDGE-SHAPED, WITH ONLY VERY SMALL INDENTATIONS NEAR TIP. INDENTATIONS ARE LESS THAN 1/6TH ROSTRUM WIDTH.**
2. **BLACK STRIPE ON TOP OF TAIL (ABDOMEN).**
3. **SIDES HAVE NUMEROUS SMALL BUMPS.**
4. **SLIGHT GAP BETWEEN CURVED SEAMS ON BACK.**
5. **HINGED CLAW WEAKLY NOTCHED NEAR BASE; SOMETIMES NOT NOTICEABLE.**



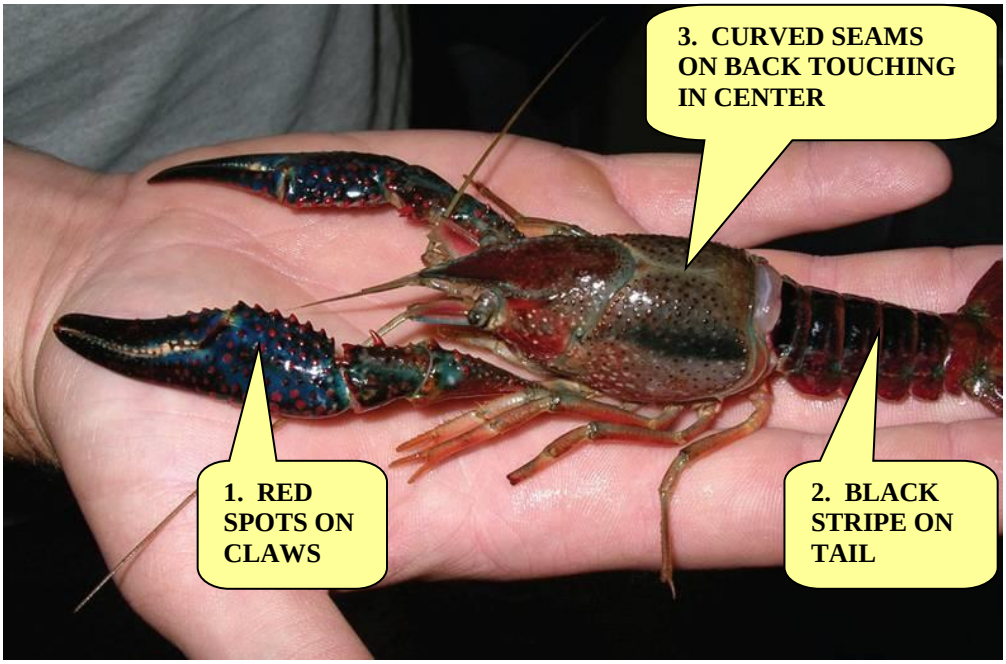


Map 6. Geographic distribution of *Procambarus acutus*.

RED SWAMP CRAYFISH
(PROCAMBARUS CLARKII)

This crayfish has only been found in 2 stormwater ponds in southeast Wisconsin.

1. **RED SPOTS ON CLAWS OFTEN PRESENT.**
2. **BLACK STRIPE ON TAIL (ABDOMEN), BUT SOMEWHAT INDISTINCT.**
3. **CURVED SEAMS ON BACK TOUCHING IN CENTER.**
4. **ROSTRUM WEDGE-SHAPED, WITH VERY SMALL INDENTATIONS NEAR TIP. INDENTATIONS ARE LESS THAN 1/6TH ROSTRUM WIDTH.**
5. **SIDES HAVE NUMEROUS SMALL BUMPS.**
6. **SIDES HAVE NUMEROUS SMALL BUMPS.**



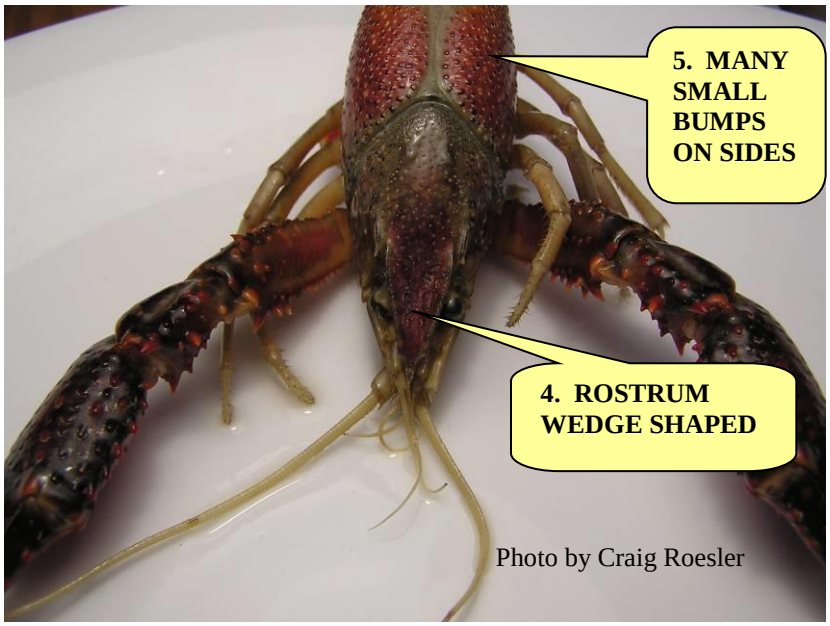
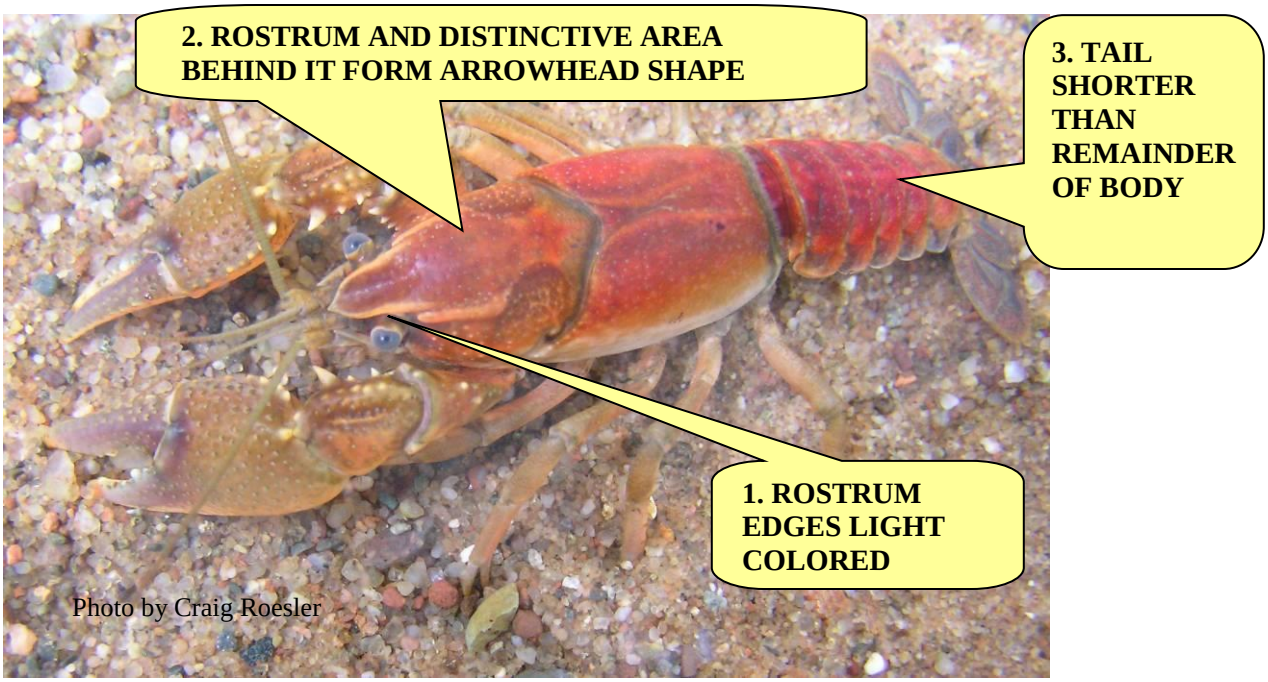


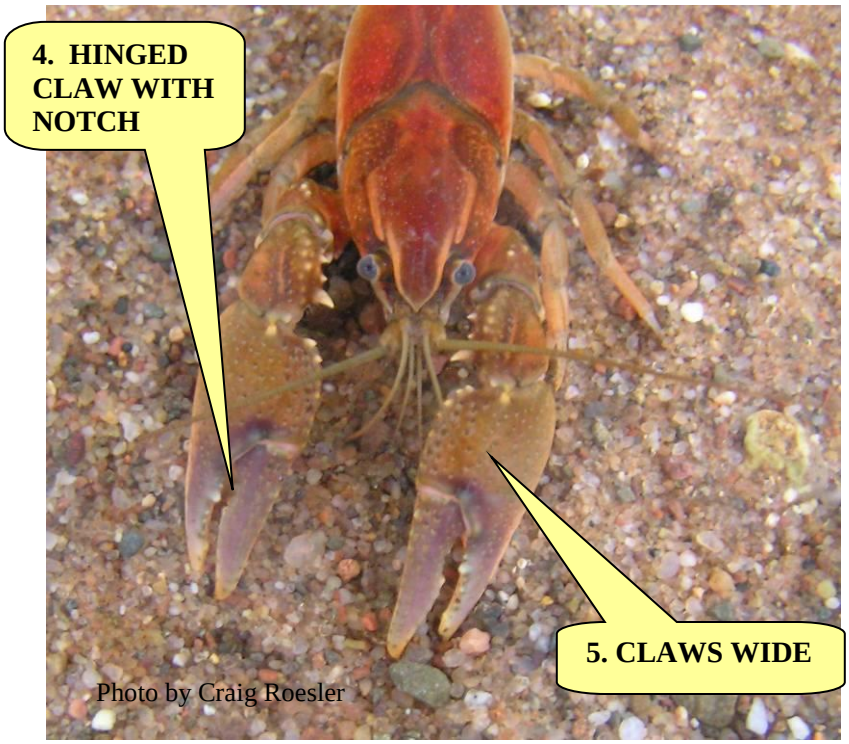
Photo by Craig Roesler

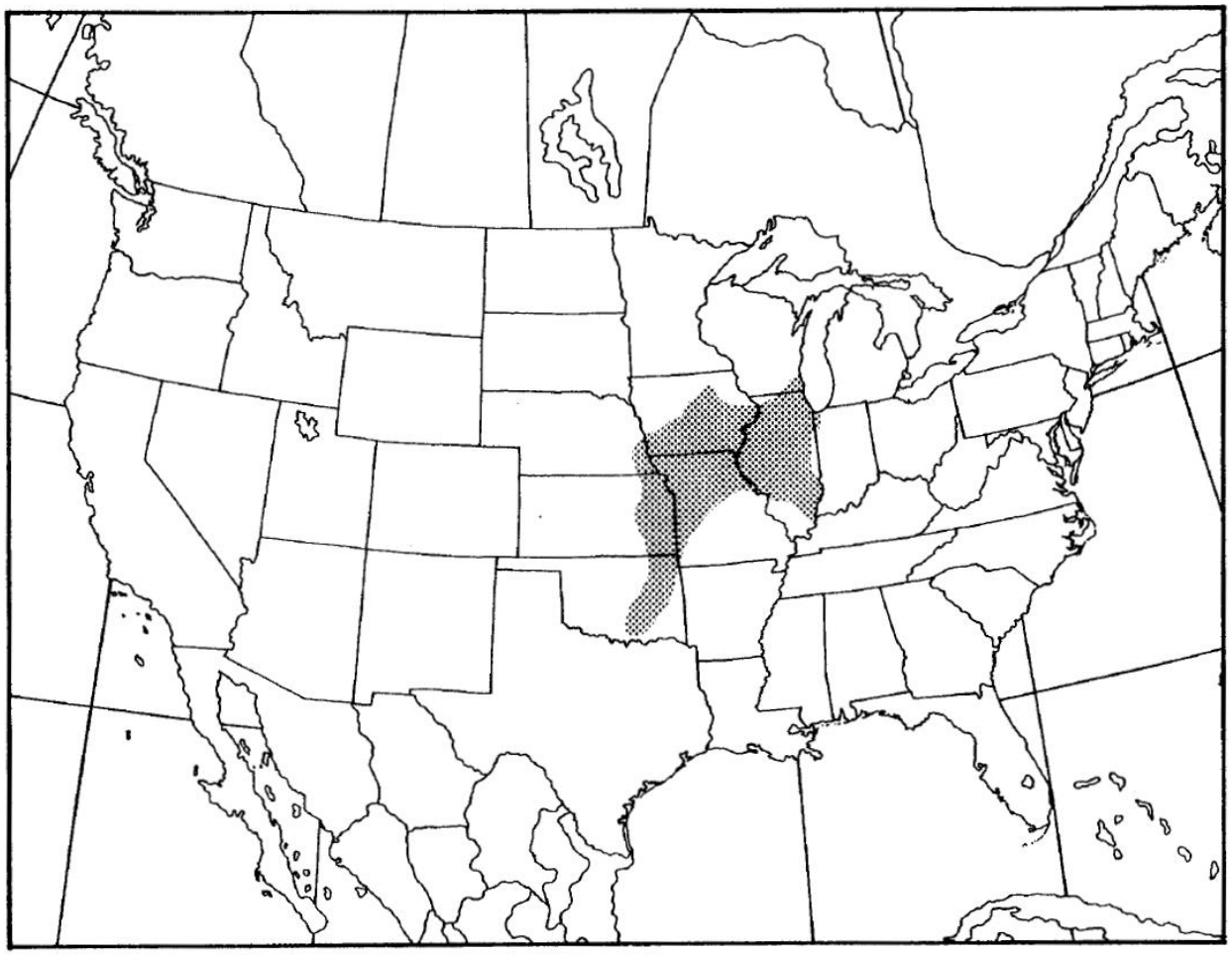
PRAIRIE CRAYFISH *(PROCAMBARUS GRACILIS)*

This species has only been found in a few Counties in far southeastern Wisconsin. This is a burrowing species that enters lakes and ponds for reproduction.

1. ROSTRUM EDGES LIGHT COLORED
2. ROSTRUM AND DISTINCTIVE AREA BEHIND IT FORM ARROWHEAD SHAPE
3. TAIL (ABDOMEN) SHORTER THAN REMAINDER OF BODY
4. CLAWS WIDE; WIDTH OF UNHINGED CLAW ABOUT HALF OF LENGTH
5. HINGED CLAW WITH NOTCH NEAR BASE







Map 7. Geographic distribution of *Procambarus gracilis.*