

An Illustrated ID Guide to the Crayfishes found in Nebraska

Native and Non-native

There are five crayfishes native to Nebraska. These are:

Orconectes immunis (papershell crayfish)

Orconectes virilis (northern crayfish)

Orconectes neglectus neglectus (ringed crayfish)

Cambarus diogenes (Devil crayfish)

Procambarus gracilis (prairie crayfish)

Three additional non-native crayfishes have also been found here:

Orconectes rusticus (rusty crayfish) [bait tanks and established in two ponds in Omaha]

Procambarus clarkii (red swamp crayfish) [bait tanks]

Procambarus acutus (White River crayfish) [bait tanks]

I will attempt here to provide a photographic guide to field identification, one species per page. Now, by the book, crayfish ID can depend on a variety of characteristics, the most important being the shape of the first pleopod of a mature male. Did I just lose you??? OK. Some basic life history of our crayfishes. Male crayfish change twice a year from a non-breeding immature form to a breeding mature form. This is identified by the shape of the first pleopod. The first pleopod is what the crayfish uses to transfer sperm packets from the male to the female. See photos below. The first pleopod is usually tucked up between the legs. I use something pointy to pry it out. (Note: if the pleopod isn't there, it's a female)



First pleopod tucked up between legs



Mature (Form I) pleopod



Immature (Form II) pleopod

***Orconectes virilis*, Northern crayfish (Native):** Body green-brown to brown. Chela dark olive green on top, large and strong. Rostrum with ridges on sides and rather sharp tip. Pleopod with two long terminal projections that gently bend down and diverge from each other.



***Orconectes immunis*, Papershell crayfish (Native):** Overall a brownish-green with mottled markings. Fingers of chela are long and thin, often with a lavender tint on bottom. Rostrum tapering to a blunt point with a deep dish in center. Pleopod has two short projections that bend sharply down.



***Orconectes neglectus neglectus*, Ringed crayfish (Native):** Brown with a faint “saddle” marking around rear edge of carapace. Side view shows distinctive horizontal line with pale band just above. Rostrum has a raised ridge in center of groove. Fingers of chela usually have black bands with an orange tip. Pleopods have two terminal elements that are straight and parallel.



***Cambarus diogenes diogenes*, Devil crayfish (Native):** Burrowing species. Usually a dark brown or reddish-brown. A light stripe may be visible down center of tail (easier to see in young ones). Underside often has a rosy hue. Rostrum short, blunt and curves down over eyes. Chela shorter, smooth, broad and powerful. Pleopod terminates in a short, club shape with a sharp curve.



***Procambarus gracilis*, Prairie crayfish (Native):** Seldom leaves it's burrow. Coloration can vary as seen below . Rostrum short, blunt and turned down over eyes, often with light colored edges. Fingers shorter than other native crayfish (about half total length of chela) with short, straight moveable finger. Pleopod ends in a cluster of short projections.



***Orconectes rusticus*, Rusty crayfish (Not native):** Many characteristics in common with our native species. The one distinctive feature are the “rusty” spots on the side of the carapace. The rostrum looks a lot like that of the Northern crayfish (sometimes there is a ridge in center like the Ringed crayfish). The chela’s fingers have black bands and an orange tip like the Ringed crayfish. The pleopods have two terminal projections that are straight and parallel like the Ringed crayfish. But, put them together, you have a Rusty crayfish.



***Procambarus clarkii*, Red Swamp crayfish (Not native)** : These are a bright red color and the carapace is covered in small dark bumps. The rostrum is wide at the base, tapering to a point with a deep dish in the center (similar to Papershell crayfish but wider at the base). The chela is long and slender with very long skinny fingers and is dark red with many bright red tubercles. The pleopod is bluntly rounded on the tip with one small, hard to see, projection.



***Procambarus acutus*, White River crayfish (Not native):** [I have some preserved specimens that were collected from a bait shop in North Platte some years ago. Preserved crayfish always lose their color so the photos below do not show any coloration] Their coloration is similar to that of the Red Swamp crayfish. The rostrum (similar to the Red Swamp crayfish and the native Papershell crayfish) is wide at the base and tapers to a blunt point with a deep dish in the center. The chela is almost identical to that of the Red Swamp crayfish being very long with skinny curved fingers. The pleopod has a cluster of short terminal points. Note: the easiest way to distinguish this from the Red Swamp crayfish is to look at the aureola (see arrow in photo below). If the curved lines touch, it's a Red Swamp crayfish. If there is a gap, it's a White River crayfish.

