

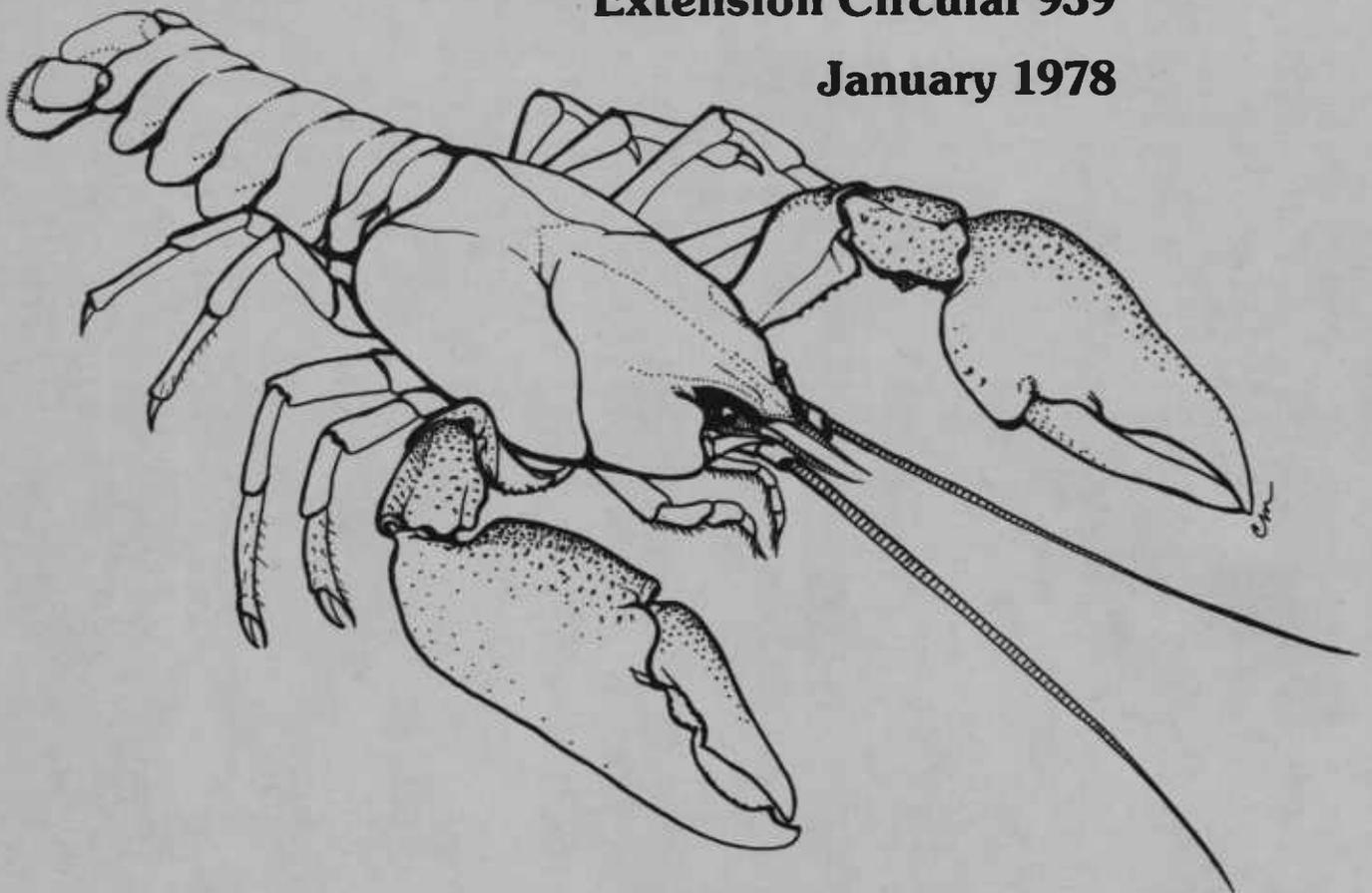
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Catching Crayfish for Fun and Profit

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Stalking a crayfish under the rocks of an Oregon stream is a recreation long enjoyed by children of all ages. It is a perfect excuse for summer wading in a cool stream. And a meal of tasty crawfish can be an excellent way to end a day of camping or hiking.

Oregon's abundant natural supply of crayfish has excited would-be entrepreneurs interested in raising or harvesting crayfish for gourmet restaurants and European importers. This speculative interest is maintained by the commercially successful pond culture of crayfish in Louisiana and other southern states.

Appearance

The crayfish looks like a miniature lobster (see cover). They range in size from just-hatched Stage 1 juveniles to a few rare specimens 8 to 10 (about 20 to 25 cm) inches long. Best eating size is 4 inches or longer (10 cm or more). To achieve this large size, crayfish go through several molts, where they lose their hard outer shell and form a new, larger one. For several hours after molting, their shells are soft, and they are highly susceptible to predation.

The large front claws are used to crush and tear food to reduce it to eating size; the remaining four pairs of legs are used for feeding, cleaning, and walking. The powerful tail is used to propel the crayfish backwards in a series of quick jerks. Color ranges from pale yellow to black, and depends on water conditions.

Habits and habitat

The habits and habitat requirements of crayfish influence how they are caught and their potential for being grown commercially. Crayfish abound in the slower-moving waters of larger streams and rivers in the flat agricultural valleys of western Oregon, but may be found in nearly every pond, stream, and lake in Oregon. Water temperature is critical in the life cycle of crayfish; waters warmer than 40°F (4°C) are required for reproduction and maximum growth rate. As temperatures drop below 40°F, crayfish become inactive and quit feeding and growing. But temperatures above 75°F (24°C) also result in cessation of growth and high mortality. Crayfish grow faster under dark conditions. Their greatest period of activity, including feeding, is during the night. Crayfish

require high dissolved oxygen content in water for maximum growth and survival.

Crayfish are highly cannibalistic; greatest mortality of young crayfish occurs when they are molting and easily killed and eaten by their hard-shelled brethren who are between molts.

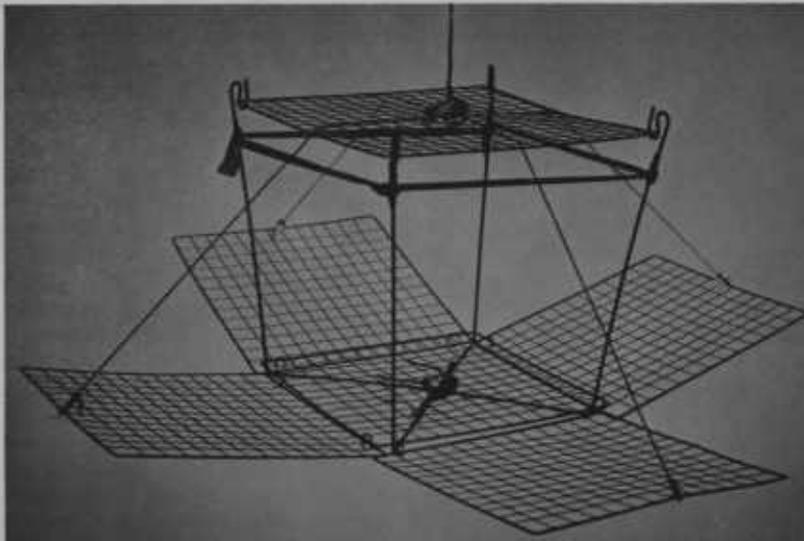
Commercial growing and trapping

Unlike their Louisiana cousins, Oregon crayfish cannot be grown economically in captivity. The greatest obstacles are cannibalism and slow growth rate. Crayfish must be grown in high density for a profitable commercial operation, but predation on molting juveniles is so high that not enough survive to marketable size to justify growing them. Rapid growth requires artificial feed, dark conditions, and warm, highly oxygenated water; costs of these requirements make growing crayfish expensive. At present, commercial growing of crayfish in Oregon is not profitable and cannot be recommended.

Crayfish can be trapped commercially, however, and there is some market for crayfish as fish bait and as food for human consumption. Before major investment in traps, persons desiring to market crayfish should assess the strength and reliability of the demand, including foreign and local markets. There is good demand in European markets for crayfish, but it is seasonal, lasting only 1 to 2 months. Few brokers and dealers specialize in crayfish. Most buyers want live crayfish, and the costs of packaging and keeping crayfish alive for overseas shipment are monumental. Shipping frozen crayfish would be an ideal solution, but there is no foreign demand for frozen crayfish. Local markets are the best outlets for crayfish, but demand appears low for crayfish in Oregon restaurants. Most local consumption of crayfish is at banquets and "crayfish festivals."

Harvest regulations

There are bag and size limits, season lengths, and licenses required to harvest crayfish, both for fun and for market (see table). Harvest regulations change occasionally, and the current information is contained in *Synopsis of Oregon Angling Regulations and Oregon Marine and Estuarine Commercial Fishing Regulations*.



This trap, like modified crab rings, works well for frequent, short settings, so is excellent for afternoon outings with children. In shallow water often the crayfish can be observed as they approach and crawl onto the trap. Bait and sometimes a weight are secured to the inside bottom of the trap.



Funnel-end traps are effective for longer settings. It takes the crayfish longer to seek the openings and enter the trap, but once in they generally stay in. These traps can be disassembled and nested for easy transporting. A string of funnel traps left overnight can produce a good catch.

Regulations for Crayfish Fishing

	Catch for fun	Catch for market	
		For bait	For food
Bag limit	.....144/day	None	None
Size limit	.....None	Greater than 3.5 inches	Greater than 3.5 inches
Season	.....Open year round	April 1- October 31	April 1- October 31
License	.....None	Commercial bait fishing (\$25.00)	Commercial fishing* (\$40.00)
Equipment	.....Any means except firearms, explosives, or chemicals	Crayfish rings or traps only	Crayfish rings or traps only

* To sell crayfish you have caught to other than wholesale fish dealers (i.e. to the public) requires a wholesale fish dealer license (\$100.00) in addition.

Catching crayfish

Crayfish overwinter in bottom or bank mud, emerging as the water warms. The opening of trout season roughly corresponds to the time crayfish will be moving in Oregon streams. Crayfish may be caught in abundance in smaller lowland streams as early as May, but not until June in larger cold-water areas. Crayfish activity begins during the late afternoon, and this is usually the best time to pursue them or check on numbers (unless traps are used).

For real summer sport, pick a relatively small, clear stream with a good crayfish population, and go after them with your hands or trout-landing nets. If crayfish are not showing, it may be necessary to tip over the rocks under which they hide. Placing fresh fish (salmon heads or backbones are dandy) or meat baits along the bottom of the stream will entice crayfish out of hiding, and cause them to concentrate around the baited area. To handle crayfish safely, grasp the body just behind the claws. For the first-timers, a pair of heavy gloves will help ward off pinches.

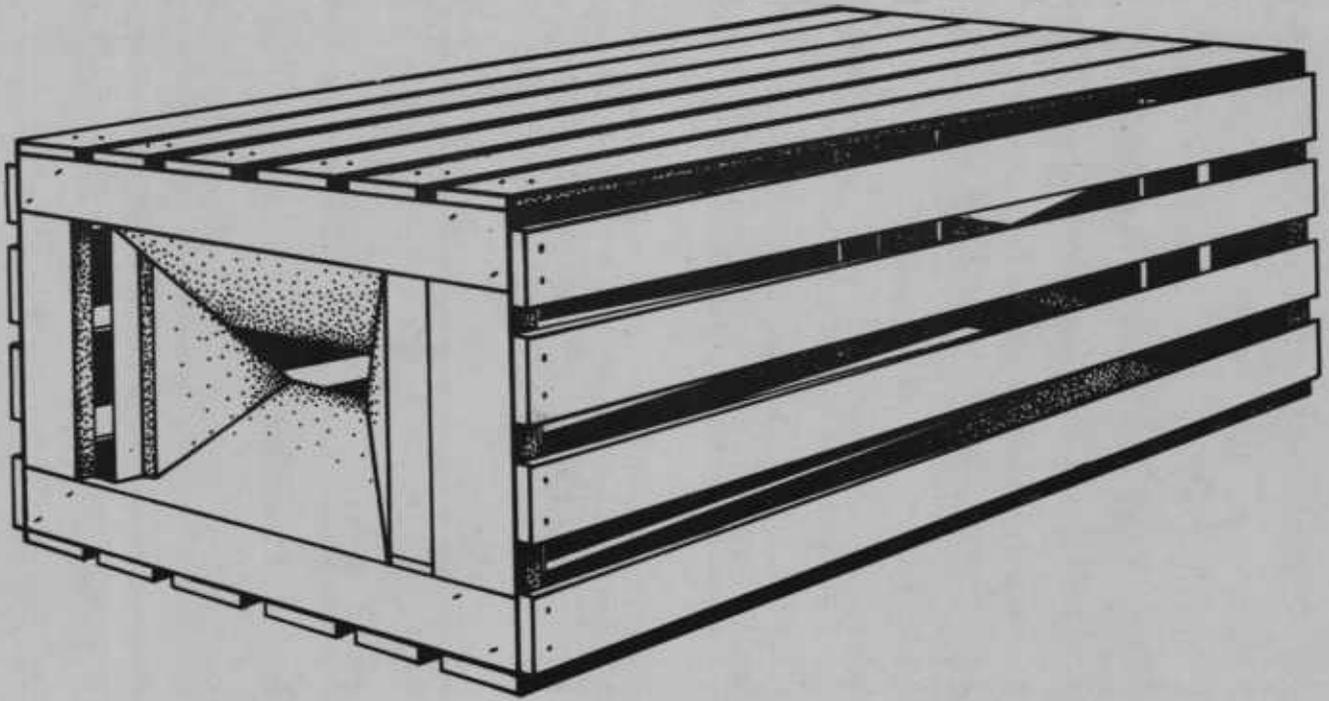
If you do get pinched, you can pry the claw open, break it off, or lower the crayfish to the ground or stream bottom, where usually it will release its grip and crawl away.

Open-top rings, similar to crab rings, can be used to catch crayfish. Let the baited ring lie flat on the bottom of the stream, and pull it up at intervals, frequency depending on numbers of crayfish coming to the baits. Rings 15 to 20 inches (37 to 50 cm) in diameter with half-inch (1 cm) mesh will work well.

Another trap is patterned after the New England crab trap. It is a cube of ½-inch (1-cm) mesh grids, with rigid corner posts. The four walls are hinged along the bottom edge so they fold down when the baited trap lies on the bottom and close when the retrieval cord is pulled. These traps are lowered from bridges and pulled up when crayfish crawl onto the trap bottom where the bait is. Sort catches immediately, and return under-size crayfish to the stream.

Traps may be more productive and practical for muddy streams or deep water. Nesting-type commercial minnow traps can be used if funnel openings are enlarged to about 2½ inches (7.2 cm) in diameter to allow entry of the larger crayfish. Another variety of commercial trap consists of a hardware cloth cylinder with funnel openings at each end, and a door in the middle to facilitate baiting and removal of crayfish. A trap 7 inches in diameter by 30 inches in length (7½ x 75 cm) is handy to carry and effective in use. Larger traps, often used for commercial harvest, can be made of wooden slats (see illustration). An advantage to this type of trap is that the width between slats permits crayfish smaller than 3½ inches (8½ cm) to escape, while retaining the larger ones.

Usually you'll find traps available at sporting goods outlets. In operation, crawfish crawl into the small entryways at either end of funnel-type traps, fall in and cannot get out. Any fresh meat or fish bait is an effective lure. For overnight or long trap setting times, you can enclose the bait in a mesh of hardware cloth or plastic to prevent the crayfish from eating all the bait, thus removing the attractant in the trap.



Several types of traps can be purchased and most can be made at home, for either hobby or commercial use. Large traps such as this could be made to disassemble for easier transport, but are likely to be heavy, especially when loaded with a good catch. They are best suited for commercial or regular use at a fixed site.

Cleaning and cooking crayfish

The first step in preparing crayfish is to place them in very hot water as a blanch. This kills the crayfish and usually turns them a beautiful red color. After about 1 minute, drain off the hot water, and refill the container with cold water to stop the cooking process and allow handling.

Next, remove the intestinal tract from the tail by twisting the middle flipper at the end of the tail and pulling. Before cooking, lightly crack the claws, and cut the tail with scissors along the top from end to end. Some prefer to twist off and cook only the tails and claws. Then boil further to complete the cooking. Boil for at least 5 minutes.

There are almost as many recipes for cooking crayfish as there are cooks. Here are some recipes we've tested:

SPICED CRAYFISH

Cook whole or break off claws and tail as desired.

5 dozen crayfish ½ cup (120 ml) pickling spices
1 cup (240 ml) salt ½ cup (120 ml) wine vinegar

Put spices in a bag or tie in cheesecloth. Add water to cover and bring to boil. Add crayfish. Bring to boil again and time for 5 minutes. Do not overcook. Take crayfish out and spray or dunk in cold water for 2 minutes (this

is important to stop the cooking process and prevent meat from sticking to shell). Chill before serving.

SIMMERED CRAYFISH

Cook only the claws and tails in shell. Simmer cleaned crayfish in water (just enough to cover), butter or margarine, and salt and pepper for 5 minutes. Best eaten hot.

DEEP FAT FRIED TAILS

Cut cleaned tails end to end (on top) with scissors. Press on the bottom of the shell and the tail meat will pop out in one piece. Mix batter by starting with white of 2 eggs, beaten until fluffy. Fold in ½ cup beer or carbonated water. Add enough flour to thicken (probably just a couple of tablespoons). Bring deep fat to 400°F (200°C). Dip tails in batter and drop into fryer and cook till brown. (Try same treatment for onion rings or fish filets with any leftover batter.) Serve with favorite sauce—such as mixtures of catsup and horseradish—well laced with Tabasco.

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