



**the**  
**CRAYFISH TALE**  
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## FLUCTUATING CRAYFISH POPULATIONS

“How many crayfish will I catch in my trap?” Many times in the past I have faced that question from prospective customers. “If I buy your trap, how many crayfish will it catch?” asks another.

No experienced fisherman would ever try to answer such a question. Obviously, there is no way of telling how many crayfish you'll catch or how many fish you will land. Actually, if you always knew how many you'd catch, it would soon steal the excitement of fishing.

Many years ago, as I had caught some crayfish in a Phoenix irrigation canal, I came upon a young boy kneeling down by an irrigation ditch nearby. I walked up to him and asked what he was watching. “Crayfish” answered the boy, “There are millions of crayfish in here.”

That statement obviously caught my attention, and I hunkered down and looked down in the irrigation ditch to look at the ‘millions of crayfish’ he reported. Well, I did not see a single one in the ditch at that moment and became rather disappointed and left the scene.

But that's typical of fishermen, isn't it. You just can't rely on what they report, whether it's how many they caught or how big they were. To this boy, one crayfish was plenty.

I don't have to point out to a fisherman that you don't always know where to find fish, much less if you are going to catch any. The same goes for crayfish.

Certainly many lakes and rivers in the US have crayfish in them. Some have many, some have few. Some have none at all. So, how to predict how many a trap is going to catch is foolish speculation.

During the many years I have tried to catch crayfish, I have learned that all waters with crayfish have them in different amounts. Some times you pull up traps with very few crays in them, sometimes none. Yes, I have sometimes been skunked when trying to catch crayfish. The fact that you never know how many you'll catch may be the reason you keep coming back.

Crayfish populations differ from lake to lake and river to river. Sometimes they also differ from year to year. We certainly know that our catch differs from summer to winter, so why not from year to year. One of my favorite lakes for both trout and crayfish used to be Willow Springs Lake north of Payson in Arizona. I enjoyed the mixture of catches, and came back there many years. Then one year I found that the catch was getting sparser and sparser, and if I picked up half a dozen crays in a trap, I considered myself lucky.

And what was the reason for that decline? Of course, nobody knows for sure. But some cray catchers suspect that the crayfish festival events two years in a

row at that lake had reduced the crayfish population. But if that was the reason, it will probably just take a few years for the population to come back again. But then, maybe there was another reason...

Take another one of my favorite crayfish lakes, Black Canyon Lake, also north of Payson. I was once told it harbored large crayfish, so I went there with my trot line of ten traps to investigate. True enough, I found plenty of crayfish and large ones too, so I enjoyed that situation for a couple of years. But then suddenly the population started to dwindle, and my traps in some areas of the lake came up practically empty. I checked with the forest people in charge of the lake for any possible reason, but they had no clues. The crayfish had simply dwindled to very little. Then a few years later I heard rumors that the lake had recovered. I checked it out, and, yes, there were plenty of crayfish in the lake again. And no one could tell me why.

There are probably many reasons why crayfish populations may change in lakes and rivers. In a report from Canada on the crayfish population of lakes I find that drought is a factor that sometimes causes crayfish density to go down. Interestingly, burrowing crayfish are not affected by this condition. That some rivers often are likely to show a crayfish popula-

tion reduction after severe floods, is not surprising.

We know that temperature of the water affects the activities of crayfish, to the extent that, at winter times, you are less likely to bring home any large catches. Most of us, crayfish friends, have experienced going for crayfish too early in the season, and have had the unfortunate experience of poor catches.

But another report from Canada indicates that the amount of calcium in the water seems to regulate how many crayfish survive. The lower the amount of calcium, the lower the amount of crayfish. After all, the crayfish shell contains large amounts of calcium.

Other reports point to acid rains and the pH values of lake water as the cause of population variations. In another report, the Canadian pond weed *Elodea canadensis* invaded some lakes and established dense covers over large parts of the shallow lake areas. The crayfish were gradually excluded from areas covered by *Elodea*, while the yield from other areas of the same lake remained relatively constant.

What's the moral of this story? When the crayfish are few, use the best trap possible and the best bait you can find.

**Trapper Arne**