



CRAYFISH MOULTING

One of the least known and understood features of a crayfish is their molting. (Some spell it moulting.) In a few words, molting is when the crayfish, or any other crustacean for that matter, sheds its old shell and puts on a new one.

And why would a crayfish want to do that? To understand why, we must realize that crustaceans have what we call an exoskeleton, an outer shell contrary to what we humans have, an endoskeleton, an inner skeleton that expands as we grow older and larger. As the crayfish grows too large for its shell, it must shed this hard layer of its exoskeleton, and it does it in a rather mystical and dramatic way.

When a crayfish is very young, it molts often. As young members of most species, the young crayfish grows fast with proper nutrients, and not surprisingly, it molts several times a year during its early life. The older a crayfish gets, the less often it has to molt. An old crayfish may not even have to molt each year. Unfortunately, this often means it takes on a muddy or 'dirty' look after a winter's hibernation which doesn't clear up until it molts the next time.

Before a crayfish can molt it has to go through some strange processes. It has to absorb the calcium in the existing hard shell and save it for the new shell. This absorbed calcium is put in an 'organ' called the gastrolith and is usually referred to as crayfish stones. This absorption makes the outer old shell softer, and after many acrobatic maneuvers, the crayfish manages to crawl out of the old shell. The absorbed old shell calcium in the crayfish stones can sometimes be found in the front of the crayfish head and are sometimes even referred to as crayfish eyes.

Way back in medical history we find recipes that sometimes include the use of these crayfish stones. They have even been used as decorations in silver ornaments.

But the most important use of these stones is for the crayfish to utilize the stored amounts of calcium for the new shell that is being developed under the old one.

After the crayfish have completed a molting, he is defenseless. His whole body is soft and smooth, just like a soft shell blue crab, that many consider a delicacy. So without its protection in the form of the hard shell, the crayfish hides from the predators in his environment and waits for the calcium in the crayfish stones to be re-absorbed back into the new shell. And within a few days, the soft shell becomes hard and protective as the old shell was. Except

that the new shell now is larger and clean and nice showing no trace of the mud encrustment from the previous hibernation.

Molting is a hazardous period for a crustacean. Not only does it fall victim to other, cannibalistic, crustaceans, but it often loses some limbs during the process of shedding the old shell. The mortality rate is rather high and the loss of a claw is not uncommon. Even the color of the crayfish may change and there are cases where a blue crayfish after molting shows up with a different color.

I recall well that many of the crayfish we caught in traps from Wheatfields Lake in Arizona during the month of June were 'mossy' and dirty looking. A sure sign that they had not yet gone through their yearly molting. Often, in addition to being 'mossy', the inside of the crayfish was skimpy as far as meat and crayfish butter under the shell is concerned. They had apparently not eaten enough food after hibernation to start the molting process.

Crayfish catchers often keep their catch for some time in fish cages in the lake letting the water circulate through the cage while keeping the crays alive. This procedure also lets the crayfish purge themselves, making the catch more pleasing to the palate. But sometimes, when emptying the cages for processing, there are several little crayfish stones lying in the bottom of the cage. That is the sad remnant of those crayfish who had molted while in captivity but who were also eaten by the still hard shelled cousins. A case of crustaceous cannibalism.

ARIZONA CRAWFISH BOIL

The Cajun habit of getting together in the spring for a crawfish boil, is not just a Louisiana tradition. Trapper Arne was lucky enough to be invited to such a Cajun affair up in the Pine mountains recently, and together with numerous other crayfish aficionados he enjoyed the air freighted crawfish, cooked with spices, corn, potatoes, hot dogs and mushrooms. Popular culinary traditions have a habit of spreading around.

Trapper Arne