

## FISH TALK by Bill Hauser

### Fish Teeth (continued)

The mouth and teeth of a northern pike are designed to catch and hold prey. Big slippery prey. The teeth pierce, stick and grab. The mouth acts as a pincer. It is a deadly combination that helps to make the northern pike an efficient predator. This, combined with excellent camouflage and a patient ambush strategy, means that a prey will only rarely escape.

Each different species has evolved a unique shape, form or coloration that makes it adapted to a particular life form (or, in the modern vernacular..."lifestyle"), function or habitat. In fact, (are you ready for this) carp have a set of teeth that are very specially adapted for their lifestyle.

Carp teeth. There! Did that get your attention? Just to mention the C-word in a place like the Alaska Fly Fishers Newsletter, much less to suggest that carp have teeth. Anyhow; now that I have you listening I guess that I'm supposed to talk about something else... right? OK. I'll get serious.

Believe it or not, carp do have teeth. Actually, carp have molars. Recall how salmonid teeth have a multipurpose design (to catch several types of food) and northern pike teeth are designed for another function (to impale slippery prey). Similarly, the teeth in a carp are also designed for a special function - crushing. The teeth operate very much the way we use our molars... to grind food into smaller bits for better digestion. Now at first, if you've ever taken a close look at a carp, you may find this very hard to understand. In fact, you may argue that a carp has no teeth at all. This is because carp teeth are not readily apparent. In fact, they cannot be seen without dissection. The reason is that these teeth occur in the "throat" or "pharyngeal" region - not the mouth.

The truth of the matter is that carp teeth are not really true teeth, but rather special tooth-like (or molar-like) structures that have developed on the first pair of gill arches in the pharynx (or throat) of the fish. These grind upward against a bony pad on the roof of the gullet. As the carp feeds, it uses a sucking action to draw snails, small clams and other organisms into its mouth. As these food items pass through the gullet, they are crushed by these "pharyngeal teeth".

So with just a few simple comparisons of teeth and their functions, among these three fishes, we can begin to appreciate the incredible diversities among the many fishes in our world. Each subtle difference in form and color in this world of fish is to help that species with some unique function to adapt for survival as a species.

Do you have a question for FISH TALK? Contact Bill at [karelbill@gci.net](mailto:karelbill@gci.net).

Bill has published ***Fishes of the Last Frontier***, *Life Histories, Biology, Ecology, and Management of Alaska Fishes* and ***Letters from Alaska***, *The Inside to the Outside*.

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