

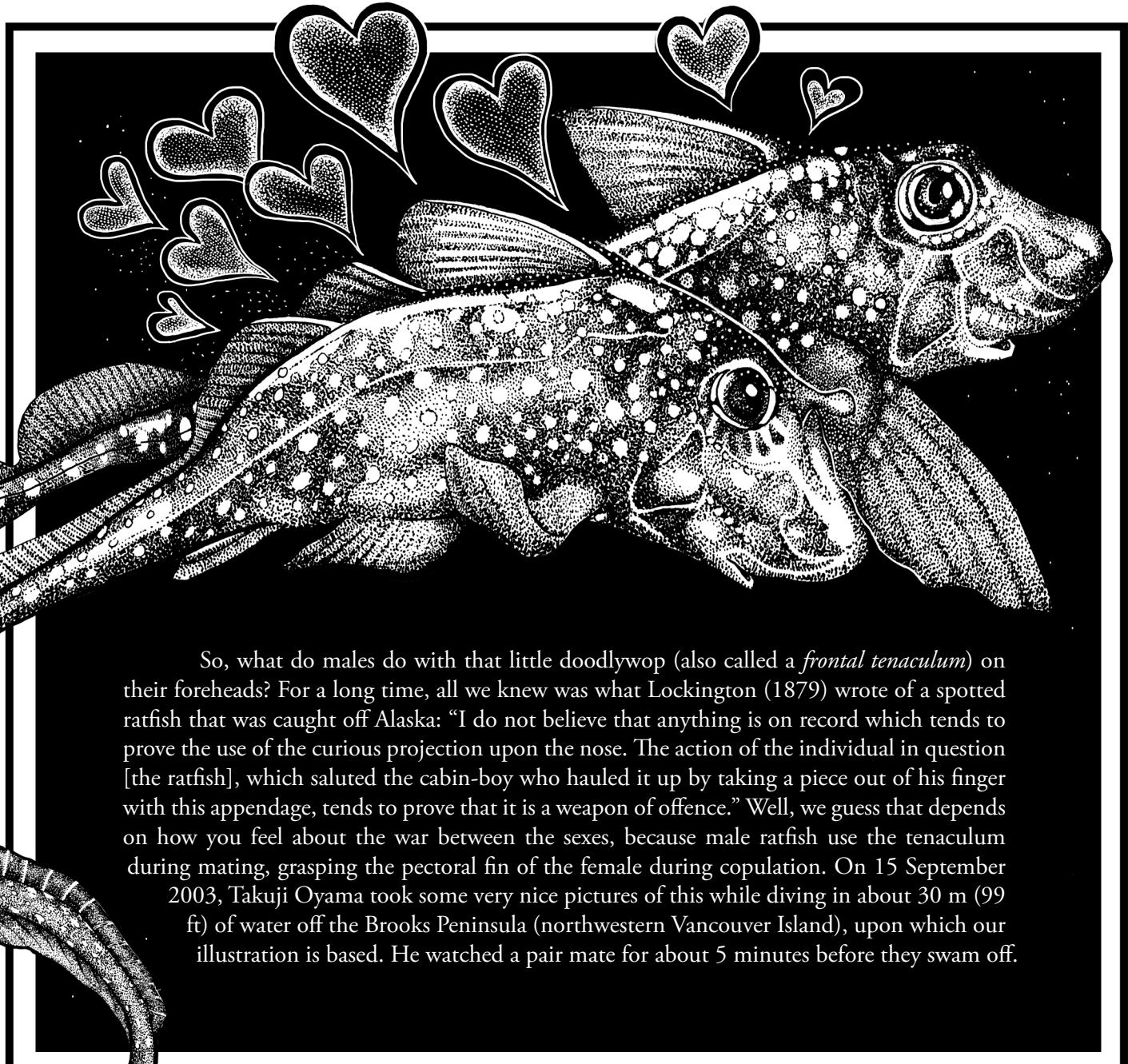
THE HOLOCEPHALI - RATFISHES

First, we note at the onset that the members of the subclass Holocephali go by a variety of names depending on family, geographic location and, we suppose, the mood someone was in when they fixed an appellation on some poor benighted fish. These names include plownose chimaeras, longnose chimaeras, ghost sharks, spookfish, and rabbitfish. We don't much like these names and, in fact, "chimaera" is just completely *Ancien-Régime*-let-them-eat-cake as far as we are concerned. No, we shall stick with "ratfish," thank you very much, a name that, we have found after consuming about half a liter of caipirinha, sounds rather like "raffish."

Second, we also note that at least some ratfish species bear an uncomfortable resemblance to John Tenniel's illustration of the Mad Hatter from *Alice's Adventures in Wonderland*. We freely admit that all of Tenniel's illustrations in that book give us at least a mildly uncomfortable frisson.

There are three families of ratfishes, Callorhinchidae, Rhinochimaeridae, and Chimaeridae, comprising at least 50 species (with most species in the Chimaeridae). All are found in marine waters, and there seems to be at least one species in deeper waters, just about everywhere. This group appears to have come on the scene in the late Devonian, at least 360 million years ago. They are usually placed in the same class as other cartilaginous fishes, and have many of the attributes of sharks, skates, and rays, including skin pores that detect electric fields, internal fertilization, and males with claspers.

While little is known about many species, it is safe to say that all species feed on the bottom, crunching stuff (often, but not always, hard-shelled invertebrates) with their plate-like teeth. At least some species have a large, and quite sharp, venomous dorsal spine. Bruce Halstead, who did this kind of thing, reported that when he intentionally scratched himself with a spotted ratfish (*Hydrolagus colliei*) spine "In about five minutes there was a mild, dull ache in the area about the scratch which lasted for about ten minutes. The eruption disappeared completely in about 30 minutes" (Halstead and Bunker 1952).



So, what do males do with that little doodlywop (also called a *frontal tenaculum*) on their foreheads? For a long time, all we knew was what Lockington (1879) wrote of a spotted ratfish that was caught off Alaska: "I do not believe that anything is on record which tends to prove the use of the curious projection upon the nose. The action of the individual in question [the ratfish], which saluted the cabin-boy who hauled it up by taking a piece out of his finger with this appendage, tends to prove that it is a weapon of offence." Well, we guess that depends on how you feel about the war between the sexes, because male ratfish use the tenaculum during mating, grasping the pectoral fin of the female during copulation. On 15 September 2003, Takuji Oyama took some very nice pictures of this while diving in about 30 m (99 ft) of water off the Brooks Peninsula (northwestern Vancouver Island), upon which our illustration is based. He watched a pair mate for about 5 minutes before they swam off.

Humans have not had much success figuring out what to do with chimaerids. Ironically (and the Universe runs on irony, as you well know) populations of some species are quite depressed because they are taken as bycatch and discarded, dead, at sea. With the "can do" attitude that has led to so many profound failures, M. D. Bensussen (1976) focused his thesis project on trying to prepare spotted ratfish meat in such a way as to make it palatable. He failed, but it was a glorious defeat.

We have a suggestion - why don't you all just leave this sweet fish alone?

