



In the Grip of Sleep

Ingenious survival tactics are a way of life on the reef. **BY NED AND ANNA DELOACH WITH PAUL HUMANN**

IT ISN'T EASY being a little reef fish. Day-to-day survival depends on the clever use of defensive adaptations picked up during the long slog of evolution. The most common strategy is finding a personal hiding hole to pop into when predators approach, and on an active coral reef, predators approach often. Many species spend their entire adult lives within a tail thrust of their hideaways. In fact, the pressure to locate protective shelter is the primary reason fishes flock to the craggy structure of coral reefs. Those species that venture away from the reef to feed must depend on more sophisticated defenses such as camouflage, streamlined profiles or flat, spiny, difficult-to-bite bodies.

The Caribbean's smallest member of the filefish family, the slender filefish, *Monacanthus tuckeri*, has taken a multifaceted approach to survival. Instead of competing for a limited number of hiding holes, adults take up residence within the feathery confines of gorgonian branches. Their ability to camouflage—combining rapid changes in color, markings and skin texture—mimics the golden fronds perfectly, making it extremely difficult for predators to sort them out among the dense branches. But if a predator does

happen to detect the little fish, the presence of a stiletto-sharp fore-dorsal spine, raised in times of crisis, provides a credible backup plan.

The limber coral hosts, most frequently sea plumes, thrive on hard bottoms where generous currents supply an endless banquet of plankton. The two- to three-inch filefish, who spend their day stealing captured bits of zooplankton from the polyps' feeding tentacles, have little need to leave their safe havens. However, their innovative lifestyle creates a dilemma: How can a sleeping fish remain within the protective cloak of their wispy hosts when currents blow?

Currents don't present a problem for species who bed down inside holes or beneath the sand, but for the slender filefish, currents are a way of life that must be dealt with. So, somewhere in the distant eons, they learned to sleep with their mouths firmly clamped onto the polyps of sea plumes. The ploy works well—one night while diving in a stout current, we watched a slender filefish flap like a flag in a gale without loosening its death-defying grip.

Worth a Look

To view the slender filefish's sleeping arrangements, as well as the entertaining bedtime routines of yellowhead wrasse and rosy razorfish, in a video by Anna DeLoach, log on to Scuba Diving TV at www.scubadiving.com. Click on Photo/Video and then The DeLoaches' Encounters.

