

Short Communications

FIRST RECORD OF THE EASTERN ATLANTIC SQUIRRELFISH *SARGOCENTRON HASTATUM* (HOLOCENTRIDAE) FROM THE WESTERN ATLANTIC OCEAN.— Each summer a ReefNet team conducts a trip to a different Caribbean destination to survey marine life using film and video to document their sightings. In 2003 the team surveyed St. Vincent Island, and in 2004, San Andres, Colombia. At both of these sites the team observed and photographed a squirrelfish that they never had seen before. The results of this most recent trip to San Andres were made available on the web (<http://www.reefnet.ca>) and sent to the third author by e-mail. Upon viewing the photographs of this squirrelfish, the third author recognized it as *Sargocentron hastatum*, a distinctive species previously known only from the eastern Atlantic, where it has been recorded from Portugal southward to Angola, including the Cape Verde Islands.

At St. Vincent the squirrelfish was first seen at a location called the Bat Cave, a cavern with a swim-through, located on the west side of the island north of Kingstown. The fish was observed at 9.1 meters (Figs. 1–3). At a second site about 90 meters south of the first location, two more specimens were observed swimming upside-down along the ceiling of a smaller cave.

During dives along the southwest coast of San Andres, the team encountered cracks, caves, and caverns in the shallow water near shore, where craggy limestone drops steeply into the water. In two instances they sighted and attempted to photograph *S. hastatum*, and were successful in one case (Fig. 4). These fish also were at a depth of about 9.1 meters. All observed individuals were well back in a cave. The photographed fish was in the northeast corner of the cave that was about 9.1 meters wide, 1.2 meters high, and 6.1 meters deep. It was seen hiding from the dive lights among a few large rocks, was extremely shy, and would only reveal itself after a few minutes if the lights were turned off.

Sargocentron hastatum (Cuvier 1829), is easily recognized by the distinct, alternating, red and white lines on the entire side of the body, a dorsal fin with distinct white spots on the basal half of the membranes, a very long third anal-fin spine reaching, when folded back, to the caudal-fin base, and a very long spine on the opercle (Greenfield 1981, in prep.). In earlier literature this species was referred to as *Adioryx hastatus*.

The broad, deep-water region between the West African coast and the western tropical Atlantic is known as the Mid-Atlantic Barrier (Briggs 1974, 1995). Briggs (1974) calculated that for fishes, this barrier was 91 percent efficient in preventing transatlantic movement, and that the predominant migratory movement across this barrier is from west to east. He goes on to say that “The westward colonization traffic appears to be restricted to certain dominant species that originated in the Indo-West Pacific and then gained access to the Atlantic by rounding the Cape of Good Hope. So far, there are no indications that species originating in the eastern Atlantic, and belonging to genera typical of that area, have been successful in becoming established on the western side.” Four holocentrid species are known from the eastern Atlantic Ocean, *Corniger spinosus*, *Holocentrus adscensionis*, *Myripristis jacobus*, and *Sargocentron hastatum*. All of these species, except *S. hastatum*, are well known from the western Atlantic Ocean, and are thought to have crossed from there to the eastern Atlantic Ocean. *Sargocentron hastatum*, thus, is an exception. Although the genus *Sargocentron* has its greatest diversity in the Indo-Pacific Ocean (Randall 1998), *S. hastatum* is a species restricted to the eastern Atlantic and does not occur south of Angola.

Luiz-Júnior et al. (2004) reported on the occurrence of four eastern Atlantic fishes that have migrated from east to west, *Acanthurus monroviae*, *Aulostomus strigosus*, *Epinephelus margina-*

tus, and *Parablennius pilicornis*, or 3.7% of the 106 reef-associated amphi-Atlantic fishes. The addition of *S. hastatum* raises this number to five, or 4.7%.

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FIGURES 1–3. *Sargocentron hastatum*, St. Vincent. Photo by Les Wilk.

FIGURE 4. *Sargocentron hastatum*, San Andres. Photo by Keri Wilk.

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