

# Territorial habits of the Yellow-Tailed and the White-Tailed Damselfish

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July 2008

## **General:**

The damselfish is a common marine fish that can be found throughout many of the tropical reefs in oceans worldwide and can also be found in temperate waters. They belong to the family Pomacentridae along with anemonefishes. There are over 69 known species of damselfish. Damselfish are characteristically territorial and tend to be found alone or in very small groups (Minster).

Their territorial nature is not an uncommon trait and can be found in many varieties of reef fish. The area they claim is usually a patch of coral which they use to perform a multitude of functions. To help the damselfish evade predators, the coral offers a refuge to the small damselfish that large predators cannot reach. In addition, the coral accumulates algae that the damselfish use as their primary food source although they also feed on small crustaceans and plankton. Finally, the coral gives the male damselfish a nesting site in which it can defend the eggs against predators (Robertson, *et al.*, 1998).

The gonochoristic damselfish usually reaches sexual maturity around 2-3 years of age. The breeding cycle of damselfish begins with the male establishing and clearing a territory. He will then attract females by imploring a number of different methods including color change and varying swimming patterns. The female will deposit her eggs which will stick adhesively to the territory; the male will then fertilize the eggs. The male then fearlessly guards the eggs for the next several days until they hatch (Marine Fish Breeding).

## **Galapagos Varieties:**

Located throughout the coral reefs around the Galapagos islands are two types of damselfish: the white-tail damselfish (*Stegastes leucurus beebei*) and the yellow-tail damselfish (*Stegastes arcifrons*). These damselfish are not endemic to the Galapagos and can be found in other offshore islands (McCosker, 1998).

The white-tail damselfish derived its common name from the white stripe that appears at the base of its tail, however in certain adults this stripe may fade. Their color ranges between grey and black. They are also noted for having brilliant orange "eyebrows" and a yellow stripe on their pectoral fins. The yellow-tailed damselfish is named for the dazzling color of its tail. Their lips also have the same yellow color and their eyes are noted for their vivid blue shading; the remainder of the body is a dark purple or black (Minster). There is no difference in appearance between the males and females of these species.

### **Further Study:**

Although the damselfish have been used in a number of studies most notably describing their relationship with coral reefs, these two particular species have largely been ignored by the scientific community. There were few scholarly articles available in regards to the uniqueness of these two species. As a result there was little information about special adaptations or the specific life cycles of the white-tail and the yellow-tail damselfish.

### **Yellow-tail Damselfish:**

Kingdom: Animalia Phylum: Chordata Class: Actinopterygii Order: Perciformes  
Family: Pomacentridae Genus: *Stegastes* Species: *arcifrons*

### **White-tail Damselfish:**

Kingdom: Animalia Phylum: Chordata Class: Actinopterygii Order: Perciformes  
Family: Pomacentridae Genus: *Stegastes* Species: *leucurus beebei*



Minster, Crit. Juvenile white-tail damselfish. <http://www.vivatravelguides.com/south-america/ecuador/the-galapagos-islands/galapagos-overview/galapagos-wildlife-guide/marine-life-galapagos/fish-in-the-galapagos/white-tail-damselfish/>

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