Gramma loreto Poey 1868
Fairy Basslet

Photo by J. Randall, Bishop Museum

Identification: Head, pelvic fins, and anterior portion of the body violet; posterior half of the body yellow. Two narrow stripes on the head. Distinctive black spot on anterior portion of the dorsal fin. Pelvic rays elongate, reaching well beyond the origin of the anal fin. Lateral line interrupted (in two parts), the anterior part high on the body and ending at the last soft ray of the dorsal fin, the posterior part midlateral on caudal peduncle. A small fish that grows to about 8 cm TL. Also called Royal Gramma. Dorsal fin XI-XIII (9-11); anal fin III (10). Pectoral fin soft rays 14-17. From Böhlke and Randall (1963), Randall (1996) and Mooi and Gill (2002).

Similar Species: Juvenile Spanish Hogfish (*Bodianus pulchellus*) lacks the dark dorsal spot and has diagonal separation of body colors. Heliotrope Basslet (*Gramma klayi*) lacks the dorsal spot and has a pink to rose-colored forebody (not violet, as seen in Fairy Basslet).

Native Range: Bahamas, Mexico (Quintana Roo), Belize, Honduras, Colombia, Venezuela, Greater Antilles (Cuba, Haiti, Dominican Republic, Jamaica, Grand Cayman), and Lesser Antilles (Böhlke and Randall 1963; Mooi and Gill 2002). Often erroneously reported from Bermuda (see Smith-Vaniz et al. 1999).

Ecology: The Fairy Basslet generally occurs in groups, often hanging upside-down under ledges. It has been recorded at depths to 65 m (Mooi and Gill 2002). The species preferentially occupies high vertical relief within the general reef areas occupied (Freeman and Alevizon 1983). Individual fish (both males and females) hover close to the substratum and defend a small area against intruders (Freeman and Alevizon 1983). Fish

generally occupy the same feeding sites for many months (Asoh 1996). Fairy Basslet groups live in a social structure consisting of dominance hierarchies arranged by size, with the largest fish at each coral head being the dominant one (Freeman and Alevizon 1983). The diet of the Fairy Basslet consists primarily of free-living planktonic crustaceans, but the species will also eat parasitic crustaceans (i.e., ectoparasites picked from the bodies of other fishes; Böhlke and Randall 1963).

In the Caribbean, the species has been used as a model to understand the effects of interactions between size classes and the effects of density dependence on juvenile recruitment and mortality (Webster and Hixon 2000; Webster 2003, 2004). These studies showed that the Fairy Basslet occupies the undersides of open reef ledges where it lives in dominance hierarchies maintained by aggression between size classes such that larger fish occupy prime plankton-feeding positions closer to the outer edge of the ledge (Webster and Hixon 2000).

Nonindigenous Occurrences: There are numerous reports of Fairy Basslet from southeastern Florida (Courtenay 1995). Starck (1968) reported the species was collected by aquarium collectors along the east coast of Florida between Fort Lauderdale and Palm Beach. Although the Fairy Basslet is widely cited as being introduced to Florida (e.g., Nelson et al. 2004), its presence there could be due to natural range expansion from nearby populations. It is also possible that both aquarium releases and range expansion have occurred.