Dormitator maculatus (Fat Sleeper)

Family: Eleotridae (Sleeper Gobies)
Order: Perciformes (Perch and Allied Fish)
Class: Actinopterygii (Ray-finned Fish)

Fig. 1. Fat sleeper, *Dormitator maculatus.*

[http://www.ncfishes.com/wp-content/uploads/2014/10/Dormitator-maculatus1.png, downloaded 6 October 2016]

TRAITS. The fat sleeper has a flat head with a fat body that reaches 15cm in length. The pelvic fins are separate, not connected by a membrane to form a sucker as in other gobies. The bases of the dorsal and anal fins are short (Bowling, 2015). Males have an average length of 5.1cm and females 4.5cm when they reach sexual maturity (Aiken et al., 2010). Mature males can grow approximately 5cm larger than females, and the second dorsal fins of males are also larger and extends further than females. Colour is olive brown, sometimes darker brown (Bowling, 2015), with yellowish vertical lines and a large blue spot directly behind the head and above the pectoral fins (Horst, 2011), and brown spots on dorsal fins and yellowish anal fin with a white margin (Fig. 1) (Bowling, 2015).

DISTRIBUTION. A native to Trinidad, located in the Silver Stream, Guapo Rivers and by expansion Moruga Betty River and St. Hilaire (Mohammed et al., 2010). Distributed in the western Atlantic coastal region (Aiken et al., 2015) from North Carolina, the Bahamas, Gulf of Mexico throughout most parts of the West Indies and south to Brazil (Debrot, 2003). A distribution map is shown in Fig. 2.

HABITAT AND ECOLOGY. The habitat of the *Dormitator maculatus* ranges from fresh to marine waters, these include coastal rivers, ponds, mangroves and ditches up to 9m in depth (Aiken et al., 2015), as seen in figure 3. They can be found on the soft mucky bottoms of these waters (Horst, 2011), in crab burrows within mangroves and areas with an abundant supply of food. They are rarely found in waters that have floating mats of vegetation (Aiken et al., 2015). Their diet mainly includes aquatic plants, sediments and invertebrates (Cheffe et al., 2010), they also feed on dead organisms (Debrot, 2003). Hence they are omnivorous or detritivorous organisms. A stiff pelvic fin allows for the ability to dive lightning-quick to get at any passing food, from a resting position (Horst, 2011).

REPRODUCTION. *Dormitator maculatus* reproduces at any time throughout the year (Aiken et al., 2015) and are able to sexually reproduce after one year when sexual maturity is attained. During the reproductive season adults have a darker colour (Cheffe et al., 2010). Eggs, which are 0.3mm in size, are laid in river mouths and lagoons with a range of 0-10ppt of salinity (compared to 35ppt for the open sea) and are attached to aquatic vegetation or benthic objects (Aiken et al., 2015). External fertilization occurs and larvae are washed downstream into the ocean where development occurs. Males display parental care by vigorously guarding the nest during spawning (Horst, 2011). The larva has a thin long body with short dorsal and anal fin bases (Fig. 4) (Victor, 2013), they have a blotchy silver colour and become darker as they grow (Horst, 2011).

BEHAVIOUR. *Dormitator maculatus* lives in groups that range from 3-34 specimens being recorded in different locations (Cheffe et al., 2010). It has also been observed that up to 24 specimens can inhabit crab burrows within mangroves swamps. During the summer and rainy seasons, large groups of individuals can be spotted in shaded areas near the shore of the lagoon (Aiken et al., 2015).

Juvenile behaviour: They can survive in marine conditions which has a salinity that ranges from 0.0 to 35.4% (Mohammed et al., 2010). Juveniles can live under that condition for a short period of time before swimming upstream to the adult habitat.

Antipredator behaviour: When the fat sleeper feels threatened they quickly bury their bodies into the soft mud and debris for protection. This is their primary point of refuge from predators, hence the reason why they spend most of their time at the bottom (Horst, 2011).

APPLIED BIOLOGY. Due to their attractiveness, the fat sleep is sometimes kept as pets or placed on display. They face no substantial threats and hence is listed as Least Concern in the IUCN Red List (Aiken et al., 2015). This is due to their wide range of distribution. The only known threats of the *Dormitator maculatus* is the loss of habitat due to human developmental activities, loss of mangrove and marshes and migration barriers of native fish (Aiken et al., 2015).

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Fig. 2. Fat sleeper geographic distribution.

[http://maps.iucnredlist.org/map.html?id=185972, downloaded 6 October 2016]

Fig. 3. Fat sleepers in their natural habitat.

[http://www.forestventure.com/speciesdetail.cshtml?id=82257, downloaded 6 October 2016]

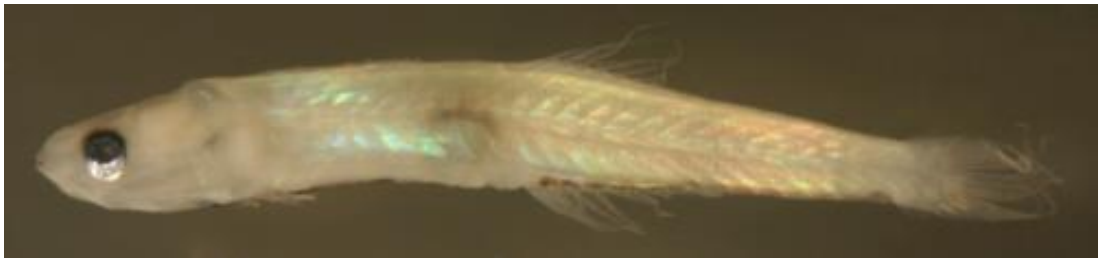

Fig. 4. Larva of fat sleeper.

[http://www.forestventure.com/speciesdetail.cshtml?id=82257, downloaded 6 October 2016]