Nicholsina usta (Emerald Parrotfish)

Family: Scaridae (Parrotfish)
Order: Perciformes (Perch and Allied Fish)
Class: Actinopterygii (Ray-finned Fish)

Fig. 1. Emerald parrotfish, *Nicholsina usta*.

[http://biogeodb.stri.si.edu/caribbean/en/thefishes/species/3912, downloaded 18 October 2016]

TRAITS. *Nicholsina usta* is commonly known as the emerald parrotfish as these fish are usually vibrantly coloured (Fig. 1). The main morphological difference (dimorphism) between the sexes is the males are usually more vibrant in colour (Westneat, 2003). They grow up to 30cm maximum length. A greenish colour is mottled (irregularly spotted) along the tail and body with a bit of yellow underneath its mouth. Some irregular red stripes are found about the body. Diagonal red and blue stripes run along its cheeks and diagonal blue bars run from the top of the eyes to the centre of the mouth. Blue spots are located immediately behind the eyes. The iris of the eyes are bright red (STRI, 2016). The snout is elongated and robust, and the teeth are not fused into a beak as with other species of parrotfish, but are single with flat pointed tips in 2-7 rows. No canines are present but they have a large crushing molar called the pharyngeal mill (STRI, 2016). The juveniles are a dull reddish-brown colour (Molina-Urena, 2009).

DISTRIBUTION. Native to the USA, Brazil, the Gulf of Mexico, West Indies and the eastern Atlantic Ocean (Fig. 2) (Westneat, 2003). They are native to Trinidad and Tobago. Due to global warming, there is invasive migration to the north to more temperate climates (Flynn, 2015).

HABITAT AND ECOLOGY. They are demersal, that is, they live and eat near the sea floor (INaturalist.org, 2016). Their main habitat is seagrass beds in shallow waters with a maximum depth of 80cm (Westneat, 2003). They can also be found in deeper waters up to 75m and in areas where algae are present such as coral reefs, mangroves and rocky reef areas (Bertoncini, 2012). They are active during the day (diurnal), and abundant in most tropical waters. Their life spans up to 7 years (National Geographic, 2016). They are omnivores as their diet consists of seagrass and small invertebrates (Westneat, 2013). They find food by browsing about their surrounding (Streelman, 2002).

REPRODUCTION. The females mate with only one male at a time (monandry) (Streelman, 2002). Eggs are laid by this species, and the larvae hatch after 25 hours. Juveniles are usually dark reddish-brown in colour which helps hide them from predators (Molina-Urena, 2009). They undergo changes in colour when they begin to mature, and are full grown within 2-4 years. The mating season is not static but depends on external factors such population or environmental conditions. They feed in groups during the day to help ward off predators as well as territorial males (Fig. 3).

APPLIED BIOLOGY. Emerald parrotfish can be a source of food and their scales can be used for decoration. They can help in reef conservation as they eat algae that can stifle corals. They are listed by the IUCN as being of Least Concern as they are not endangered (Bertoncini, 2012). They can however become an issue if they over populate an area as they can over-eat seagrass beds and algae which could upset the ecosystem (Flynn, 2015).

REFERENCES

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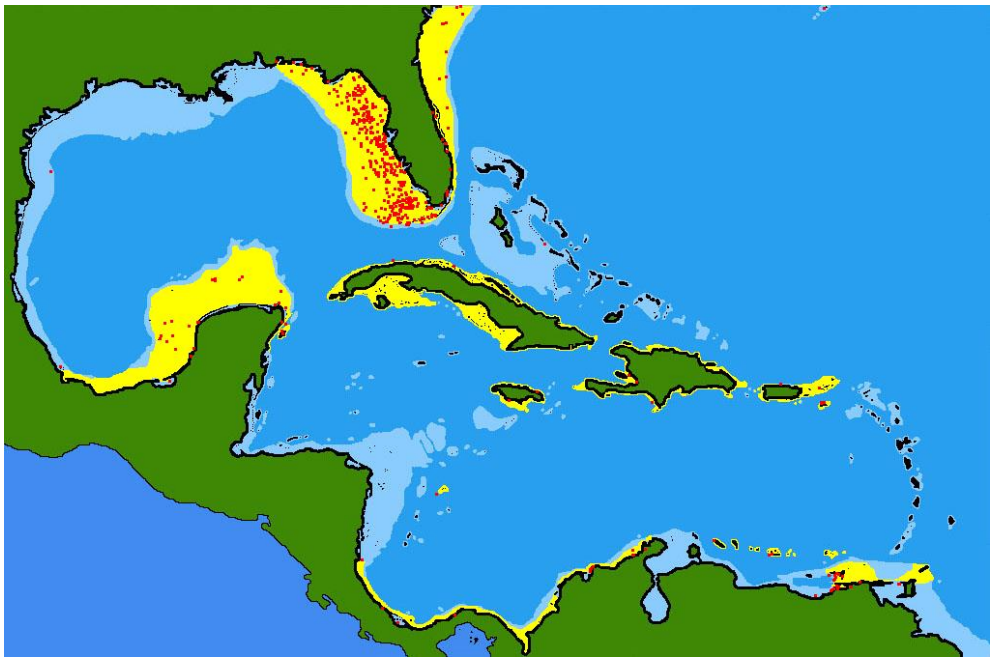

Fig. 2. Emerald parrotfish geographic distribution.

[http://biogeodb.stri.si.edu/caribbean/en/thefishes/species/3912, downloaded 20 October 2016]

Fig. 3. A group of emerald parrotfish.

[http://www.fishbase.se/Photos/PicturesSummary.php?ID=1151&what=species downloaded 22 October 2016]