

## *Cenchritis muricatus* (Beaded Periwinkle)

Superfamily: Littorinoidea (Winkles)

Class: Gastropoda (Snails and Slugs)

Phylum: Mollusca (Molluscs)



**Fig. 1.** Beaded periwinkle, *Cenchritis muricatus*.

[[https://c2.staticflickr.com/4/3908/14239642767\\_ecc94d9f5f\\_b.jpg](https://c2.staticflickr.com/4/3908/14239642767_ecc94d9f5f_b.jpg), downloaded 6 April 2015]

**TRAITS.** The beaded periwinkle *Cenchritis muricatus*, previously known as *Tectarius muricatus*, is a sea snail species that belongs to the family Littorinidae (GBIF.org, 2011). They have a single shell that is asymmetrically coiled around an anterior-posterior axis; the shell at the apex (tip) of the spire is the oldest, with additional whorls added as the snail grows (De Victor and Crowe, 2010). The shell is a cream colour, with pale pink at the top, and has six to seven whorls with its distinctive bumps or beads which identify this species (Fig. 1). The size of the shell is usually about 10-12mm in the adult stage (Wikipedia, 2014).

**DISTRIBUTION.** It resides mainly in the Caribbean Sea, the Gulf of Mexico and the Lesser Antilles (Fig. 2), including Trinidad and Tobago (Wikipedia, 2014).

**HABITAT AND ACTIVITY.** The numbers of *C. muricatus* were examined in the Bahamas during July-August 1995 and June 1999 (Emson et al., 2002), just after a hurricane had swept over this country in 1995. *C. muricatus* were found from lowest tide mark, but the highest densities were found above the high tide mark. They were inactive during daylight hours and on nights with little or no rain or humidity, especially for those that were not close to the water's edge (Fig. 3). Most individuals of the high shore population were active on nights of high humidity or heavy rainfall, moving up to 4m overnight. During the course of this rainfall, it was observed that there was extensive pairing and copulation taking place. The population density changed drastically after the hurricane had passed through, declining from about 20/m<sup>2</sup> to 2.8/m<sup>2</sup> (Emson et al., 2002). In the majority of Caribbean rocky shores, the beaded periwinkle has a near-terrestrial existence (Bates, 2005; Judge et al., 2011).

**POPULATION ECOLOGY.** The herbivorous gastropods are the most frequent of all marine animals at high rocky shore levels worldwide. *C. muricatus* were found to have the highest density in the Caribbean and the Bahamas, due to their high desiccation tolerance and survival ability (Judge et al., 2011). This is partly due to the production of heat shock proteins. They also have the highest mobility rate in a vertical direction (up to 3cm/minute) among the rocky-habitat gastropods in the Caribbean (Diaz-Ferguson and Harvey, 2011). Throughout their population there were significant differences in *C. muricatus* density, average length, and biomass between exposed and protected islands (Piovia-Scott, 2009).

**APPLIED ECOLOGY.** Proteins from this periwinkle may inhibit the growth of bacteria (Lopez-Abarrategui et al., 2012).

## REFERENCES

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Posted online: 2015



**Fig. 2.** Geographical distribution of the beaded periwinkle.

[[http://cdn.gbif.org/v1/map/density/tile.png?key=2301143&resolution=1&x=5&y=7&z=4&type=TAXON&palette=yellow\\_s reds](http://cdn.gbif.org/v1/map/density/tile.png?key=2301143&resolution=1&x=5&y=7&z=4&type=TAXON&palette=yellow_s reds), downloaded 6 April 2015]



**Fig. 3.** Group of beaded periwinkles inactive during the day.

[[http://upload.wikimedia.org/wikipedia/commons/2/27/Cenchritis\\_muricatus\\_\(beaded\\_periwinkle\\_snails\)\\_Bahamas.jpg](http://upload.wikimedia.org/wikipedia/commons/2/27/Cenchritis_muricatus_(beaded_periwinkle_snails)_Bahamas.jpg), downloaded 6 April 2015]