

Junonia genoveva (Mangrove Buckeye or Donkey Eye)

Order: Lepidoptera (Butterflies and Moths)

Class: Insecta (Insects)

Phylum: Arthropoda (Arthropods)



Fig. 1. Mangrove buckeye, *Junonia genoveva*.

[<https://ourorca.wordpress.com/2014/03/18/mangrove-buckeye>, downloaded 6 November 2016]

TRAITS. The mangrove buckeye is also known as donkey eye in Trinidad (Butterflies of Trinidad, 2010) due to its distinctive features of prominent ocelli or eyespots. These eyespots resemble the eyes of owls, and are used to alarm predators such as small birds. The wings are reddish brown in colour with an orange band across the wings (Fig. 1). The females are generally larger than males and have more rounded front wings. Generally their wingspan ranges from 3.5-5.7 cm. The antennae of both male and female are similar, a pale cream to white colour, with a solid black or dark brown club tip (Turner and Parnell, 1985).

DISTRIBUTION. The distribution of this species is from extreme southern Florida, the Atlantic coast of Mexico, and the Caribbean.

HABITAT AND ECOLOGY. It is an inhabitant of open areas, along roadsides and park trails, forest edges and black mangroves *Avicennia germinans* (Fig. 2) and could be found year round (Turner and Parnell, 1985). The adults feed on nectar, and are mainly found around black

mangroves, the diet of their larvae. They live in small colonies around 10-20 adults and is most abundant during the dry season (Turner and Parnell, 1985). They are diurnal in activity. Males usually feed on lower grounds than females but at night they rest in sheltered forested areas.

REPRODUCTION. All butterflies undergo complete metamorphosis. They go through four stages before becoming an adult. Eggs are laid by the female *Junonia genoveva* singly on buds, also sometimes the eggs are laid on the upper side of the leaf. The eggs of these butterflies are flattened at base and green which assists with blending into the colour of the leaves (Fig. 3). This is probably used as a protection mechanism to obscure from predators. These butterflies lay eggs on a host plant, which provides nourishment for the soon to be caterpillar (larva). This is the second stage. The diet of caterpillars are very specific, therefore the adult butterflies only lay on host plants. The host plant of the mangrove buckeye butterfly is the black mangrove. The developing caterpillar feeds on the leaves of these trees. The caterpillar is mainly black with cream and blue or purple markings, with many branching spines (Fig. 4). The larva feeds continuously and alone, for about 21 days. The pupa stage (chrysalis) is immobile as the caterpillar curls and transforms into a cocoon (Fig. 5). The colour varies from grey-brown to light brown with pink, white and green markings (Turner and Parnell, 1985). This stage lasts about 7-10 days. Eventually the final stage of the cycle, the pupa forms into an adult butterfly (Fig. 1). They have fully developed wings and they are sexually mature to allow the cycle to begin again.

BEHAVIOUR. Males and females of *Junonia genoveva* are usually seen flying together along roadsides or open fields, males tend to fly on lower grounds than females (Turner and Parnell, 1985). When a mangrove buckeye is disturbed, they can react by flying very swiftly in a straight path away from danger. The enormous spots on their wings that resemble eyes makes it look much larger when their wings are spread, scaring off and surprising potential predators.

APPLIED BIOLOGY. It is not listed on the IUCN Red List and is not an endangered species.

REFERENCES

- Butterflies of Trinidad (2010). Home and Garden, <http://www.ttnaturelink.com/quick-guides/butterflies-trinidad-gardens-scrubland>.
- North American Butterfly Association (2016). <http://www.naba.org/qanda.html>.
- Turner T.W and Parnell J.R (1985). The Identification of Two Species of *Junonia* Hubner (Lepidoptera: Nymphalidae): *J. evarete* and *J. genoveva* in Jamaica **24(2)**: 142-153

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Fig. 2. The host plant (black mangrove) of the mangrove buckeye.

[https://en.wikipedia.org/wiki/Avicennia_germinans#/media/File:Avicennia-germinans.jpg downloaded 6 November 2016]



Fig. 3. Egg of mangrove buckeye.

[<http://www.butterfly-fun-facts.com/butterfly-species/butterflies-a-e/buckeye-junonia-coenia/cbeggs6/>, downloaded 6 November 2016]



Fig. 4. Larva of mangrove buckeye.

[<http://www.butterfliesofcuba.com/junonia-genoveva---tropical-buckeye.html>, downloaded 6 November 2016]



Fig. 5. Pupa of mangrove buckeye.

[<http://www.butterfliesofcuba.com/junonia-genoveva---tropical-buckeye.html>, downloaded 6 November 2016]

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