

Hamadryas februa (Grey Cracker Butterfly)

Order: Lepidoptera (Butterflies and Moths)

Class: Insecta (Insects)

Phylum: Arthropoda (Arthropods)



Fig. 1. Grey cracker butterfly, *Hamadryas februa*.

[<http://www.flickr.com/photos/39139121@N00/2687188281/>, downloaded 20 March 2015]

TRAITS. The wingspan of this species is approximately 70-86mm (The Belize Travel Blog, 2012). They characteristically have a mottled grey, brown and white (along with variations in depth of these colours) pattern (calico pattern) on the dorsal surface (Fig. 1). This pattern serves to be rather effective in camouflaging the butterfly especially when on the bark of trees (Fig. 2). Accompanying the presence of some black crescent-like patterns on the hind wings eyespots, there are some orange scales. The underneath of the the hind wings is white in colour and the subliminal eyespots have distinct brown rings (ocelli) surrounding black crescents (kidney-shaped marks) in the white centre. Stimulation of nerve endings in response to sound is facilitated by tiny hollow holes in the wings covered by membranes that vibrate, which act as ears (Pinto, 2010). The territorial male butterflies possess a pair of twanging spiny rods or prongs at the tip of their abdomen. When these rods come into contact with the anal claspers of the male

(valvae), a cracking sound is produced as they take off (Young, 1978). The butterflies use their ears to detect the crackling sound made by the territorial males.

DISTRIBUTION. *Hamadryas februa* hails from the Neotropic Eco Zone of South America is mainly found most commonly in Central and South American regions; however there have also been a few sightings in southern USA (Fig. 5). The geographical range includes Mexico, Colombia, and the Caribbean to Brazil. This is a common and widespread species found from the south of Texas to Paraguay and Uruguay (Pinto, 2010).

HABITAT AND ACTIVITY. The habitat of this butterfly is essentially subtropical rain forests and its edges which range from deciduous forests and degraded rainforests. These include orchards and also lightly vegetated clearings. The altitudes they occupy range between sea level to 1200m (Pinto, 2010). *Hamadryas februa* are usually observed basking on the trunks of trees sometimes on the surface of rocks and tree foliage. They may also assume positions on the forest floor with light vegetation and slight clearings (Pinto, 2010). When on the tree trunks, they position themselves with their head facing downwards with wings flattened against the bark as they await sightings their potential mates for prolonged periods of time. Their settling points on these trees may be around 10m up. However, usually they are also seen lower down on the trunks at about 2-3m but this may vary depending on the occurrence of any disturbance. Once disturbed they may either take up a new position on the same tree or they may migrate to another tree altogether. Once the nature of the disturbance is no longer present, such as human intrusion, the butterfly may re-descend to their original settling position in short flights downwards until the destination is reached. These butterflies have displayed the ability to be active at any time of the day from sunrise to sunset hence they are diurnal (Pinto, 2010). They have many flights all year round in the tropical regions, however in southern Texas only from August to September.

FOOD AND FEEDING. The larvae (caterpillars) of *Hamadryas februa* feed on *Dalechampia* (vines) and *Tragia* (herbs) of the family Euphorbiaceae. The adults feed on fermenting liquid and have a diet comprising of sap (via leguminous trees), animal dung and rotting fruits. Therefore they may be considered to be herbivorous (Butterflies of Amazonia, 2012).

POPULATION ECOLOGY. This species is generally solitary and occurs at high abundance in their favourable tropical habitats. The crackling sound facilitates the formation of social communities when the other butterflies hear the sound. This hearing ability is believed to be accounted for by the Vogels organ that is located at the base of the forewing sub-costal and cubital veins (Young, 1978).

REPRODUCTION. *Hamadryas februa* undergoes metamorphosis and their eggs are only laid on host plants that are members of the family Euphorbiaceae (Fig. 4). The eggs are laid singly and are white in colour (Bamona.com, 2015).

BEHAVIOUR. The butterflies engage in a joint spiralling flight, a pattern which is believed to be associated with defence, courtship and territoriality for reproductive purposes. Other researchers have also suggested that this joint flight mechanism is essentially a method of identification in male pursuit. Mainly males partake in the perching on trees, and hold their wing on the surface. The *H. februa* align themselves parallel to gravity when attempting to perch on a strongly inclined tree trunk. Any variation in this behaviour is due to environmental conditions. On a more temperate/sunny day, the wings are placed into the veliform position or held in an

elevated position for a brief amount of time. Additionally, on a windy day, the wings may flap to a very miniscule degree. The male *H. februa* display reactions to the movements of other organisms in their frontal perch view. For members of the same species the reaction is usually a forward flight to a closer perch point and then a return flight to initial perch position. For intruders of different species the response may be to evacuate the entire tree altogether. In *H. februa*, courtship is silent and sound is usually observed in male to male interactions especially when the male engage in spiral flight (Young, 1978).

APPLIED ECOLOGY. There is no known critical endangerment to the *Hamadryas februa* species to date and they are observed in abundance in the Neotropic zones that they inhabit (Young, 1978).

REFERENCES

- Bamona.com. 2014. "Butterflies and Moths of North America | Collecting and Sharing Data about Lepidoptera." Butterflies and Moths of North America | Collecting and Sharing Data about Lepidoptera. <http://www.butterfliesandmoths.org/species/Hamadryas-februa>. Downloaded 29 March, 2015
- Butterflies of Amazonia. 2012. "Hamadryas februa." Butterflies of Amazonia.. <http://www.learnaboutbutterflies.com/Amazon - Hamadryas februa.htm>. Downloaded 29 March, 2015.
- Pinto, J. 2010. "JLinaresP: Februa Cracker." <http://jlinaresp.blogspot.com/2010/12/februa-cracker-hamadryas-februa-hubner.html>. Downloaded 20 March, 2015
- The Belize Travel Blog. 2012."Belize's "Crackling" Butterfly." <http://belize-travel-blog.chaacreek.com/2012/01/belize-gray-cracker-butterfly/>. Downloaded 21 March , 2015.
- Young, A. 1978. "On the Biology of Hamadryas Februa (Lepidoptera: Nymphalidae) in Guanacaste, Costa Rica." . <http://onlinelibrary.wiley.com/doi/10.1111/j.1439-0418.1974.tb01897.x/abstract>. Downloaded 29 March, 2015.

Author: Chequana Gilkes

Posted online: 2015



Fig. 2. *Hamadryas februa* calico pattern camouflaging effect against bark of tree.

[<http://www.learnaboutbutterflies.com/Amazon%20-%20Hamadryas%20februa.html>, downloaded 20 March 2015]



Fig. 3. *Hamadryas februa* in pupal stage.

[https://images.search.yahoo.com/images/view:_ylt=AwrB8pTaqxhV008AWLKJzbfF:_ylu, downloaded 21 March 2015]



Fig. 4. *Hamadryas februa* egg on host plant (Euphorbiaceae family).

[<http://bugguide.net/node/view/851718>, downloaded 20 March 2015]



Fig. 5. Geographical distribution of *Hamadryas februa*.

[<http://en.butterflycorner.net/Hamadryas-februa.462.0.html>, downloaded 29 March 2015]

For educational use only - copyright of images remains with original source