

Eueides isabella (Isabella's Longwing)

Order: Lepidoptera (Butterflies and Moths)

Class: Insecta (Insects)

Phylum: Arthropoda (Arthropods)



Fig. 1. Isabella's longwing, *Eueides isabella*.

[University of the West Indies Zoology Museum, original photo, 28 September 2016]

TRAITS. Isabella's longwing, also known as Isabella's heliconian, is a large species of butterfly with a wingspan ranging from 6.5-9cm. The forewings are longer than the hindwings with rounded edges (Fig. 1). The underside forewings are black with yellow sections while the upper sides are orange with black stripes. The hindwings are orange with double black stripes and black edges spotted with white (Butterflies and Moths of North America, 2016). Eggs are typically 1 x 0.9 mm and a cream colour while caterpillars have orange and yellow lines and white stripes over a black body; they are covered with black and white spikes (Fig. 2). Pupae (chrysalis stage) are a light green-white colour with short spikes on the upper side (DeVries, 1997) (Fig. 3).

DISTRIBUTION. Isabella's longwing is distributed mostly in Central America to Brazil and can be found along the Greater Antilles (Tree of Life Web Project, 2009) (Fig. 4). In Trinidad they have been collected in Irois, La Laja, Rio Claro and Las Lomas, among other places (UWI Zoology Museum, collection records).

HABITAT AND ECOLOGY. Isabella's longwing can be found up to 1,500 m above sea level on hilltops in forests (Brown, 1981), or on the edges of woodlands in the subtropics and in bushy

fields and scrub (Butterflies and Moths of North America, 2016). Caterpillars feed on the host plant of the Passifloraceae family of flowering plants (Brown, 1981). Adults drink nectar from flowering plants (Fig. 5), usually white flowers (Encyclopaedia of Life, 2016). Adults roost (rest) solitarily at night on the undersides of leaves while the larvae spend much of their time eating.

REPRODUCTION. Females may mate multiple times and males patrol for them while they lay their eggs. They are not pupal maters (Ron's Critter of the Day, 2013) meaning that the males do not seek out female pupae before or right after emergence to mate, a behaviour seen in *Heliconius* species, a genus of the same subfamily, Heliconiinae (Sourakov, 2008). Eggs are normally laid singly with rare occasions of clusters of 2-3. They are laid under leaves of the host plant (Passifloraceae) thus providing food for the larvae after they have hatched (Brown, 1981).

BEHAVIOUR. From April to December adults migrate into south Texas, though not a resident of North America, and there are flights into Mexico several times all year round (Encyclopaedia of Life, 2016). Isabella's longwing has a relatively long life span (Ron's Critter of the Day, 2013). To help evade predators, Isabella's longwing has shown a form of Batesian mimicry, defined as the similarity of a palatable profitable prey to an unpalatable or unprofitable species (Srygley, 2004). Palatable butterflies like Isabella's longwing mimic the behaviour of distasteful butterflies, which are usually more discernible by their bright colours and their flight pattern, often flying at slower speeds (Srygley, 2004).

APPLIED BIOLOGY. The caterpillar of Isabella's longwing was found to be a minor pest of passion fruit plants in Venezuela, a primary producer of passion fruit in the world (Dominguez-Gil and McPheron, 1992).

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Fig. 2. Isabella's longwing caterpillar.

[<https://myrockytop.smugmug.com/keyword/eueides%20isabella/>, downloaded 1 October 2016]



Fig. 3. Isabella's longwing pupa.

[http://butterfliesofamerica.com/imagehtmls/Nymphalidae/Eueides_isabella_eva_pupa_NICARAGUA_30-XI-2003_GARWOOD_i.htm, downloaded 1 October 2016]

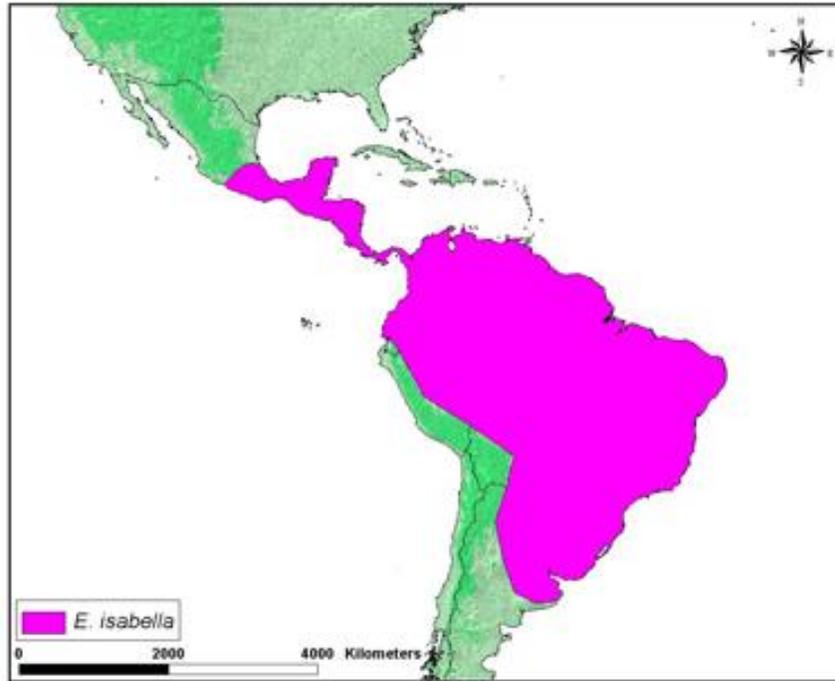


Fig. 4. Geographical distribution of Isabella's longwing.

[http://tolweb.org/tree/ToLimages/e_isabella1.jpg, downloaded 1 October 2016]



Fig. 5. Adult *Eueides isabella* feeding on a flower.

[<https://www.flickr.com/photos/lastingimages/10617578984/in/photostream/>, downloaded 1 October 2016]

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