Phoebis argante (Apricot Sulphur Butterfly)

Order: Lepidoptera (Butterflies and Moths)
Class: Insecta (Insects)
Phylum: Arthropoda (Arthropods)

Fig. 1. Apricot sulphur butterfly, *Phoebis argante.*

[http://www.butterfliesofamerica.com/L/phoebis_argante_chincha_types.htm, downloaded 9 March 2016]

TRAITS. They are sexually dimorphic; the male upper side is bright orange in colour (Fig. 1) while the female upper side is paler, ranging from white to yellow (Fig. 2). The wingspan is approximately 53-65mm (Opler, 1998). Sulphur butterflies rarely open their wings, except in flight or when mating.

DISTRIBUTION. These butterflies are swift flying and are known to be migrants. They are found in South America from Mexico to Uruguay and in the Caribbean in countries such as Jamaica, Windward Islands, Puerto Rico, Hispaniola, Cuba, and Trinidad, and seen rarely in Texas and Kansas (Fig. 3) (Opler, 1998). Regular migration is seen across Lake Gutan in the Panama Canal heading in the southerly direction (Dingle, 2014).

HABITAT AND ACTIVITY. They are diurnal, most activities are done in the day. Habitat is diverse, they can be found in a number of different areas such as subtropical brushy areas, primary and secondary rainforest, and open forest. In Jamaica *Phoebis argante* prefers open woodlands (Stiling, 1999).

FOOD AND FEEDING. They are primary consumers since they feed on plants. Adult butterflies feed on liquids and use their proboscis which is a tube-like tongue. When feeding the proboscis uncoils to sip liquid and coils up again when finished feeding (Kentucky, 2013). These butterflies feed on nectar from flowers and minerals from mud or damp soil. Males habitually gather in large groups along with other species such as cloudless sulphur (*Phoebis sennae*), straight-line sulphur (*Rhabdodryas trite*) and Statira sulphur (*Aphrissa statira*) to feed by drinking water that contain minerals from damp sand (Fig. 4). The females mostly feed on the nectar from flowers including *Lantana* and *Impatiens*.

POPULATION ECOLOGY AND BEHAVIOUR. They are typically solitary butterflies except when males come together along with other species to puddle on damp sand as males tend to follow each other for food. In order to protect itself *Phoebis argante* camouflage with its surroundings to a point that it's almost invisible. The design on the underside of the wings can imitate various types of tree leaves and flowers (Stiling, 1999). These butterflies communicate by colours and scents. Mates are attracted to the males with pheromones (scents) and by display while the females leave behind a scent where they lay eggs (Michigan, 2007).

REPRODUCTION. Copulation in these butterflies occur by the males intercepting the females in mid-flight. No courtship takes place. The butterfly goes through four stages in its life: egg, caterpillar, pupa (Fig. 5) and adult. In Central America *Phoebis argante* lays its eggs singly on developing leaf buds of *Cassia fructicosa* and avoids mature leaves. During the rainy season the eggs are commonly laid singly on the fresh expanded leaves of the plant. In one visit the butterfly may lay up to 6 eggs on one plant. *Phoebis argante* possesses an egg to adult development of about 40 days with a larval period of 22 days (Society, 1983). Cassia plants are host plants for *Phoebis argante*, and also a source of food for its caterpillar stage. After the eggs are laid they grow into a caterpillar which eat the leaves of the plant before forming into a pupa. The caterpillar is green or yellowish-green with tiny dark green warts in the very early stage. It eventually turns to small creamy warts and a white or yellow line along each side with reddish short hairs (Opler, 1999). Other host plants include *Pentaclethra* and *Inga.*

APPLIED ECOLOGY. *Phoebis argante* is not listed on the IUCN red list. Along with other species *Phoebis argante* suffer from removal of habitat due to development by humans. They are not harmful to humans in any way.

REFERENCES

Dingle, H. 2014. *Migration: The Biology of Life on the Move.* Oxford University Press.

Kentucky, University of. 2013. *ALL ABOUT BUTTERFLIES.* April 10. http://www.uky.edu/hort/butterflies/all-about-butterflies.

Michigan, The Regents of the University of. 2007. *Pieridae.* http://www.biokids.umich.edu/critters/Pieridae/#20020904145503 .

Opler, P. A. 1998. *A Field Guide to Eastern Butterflies.* Houghton Mifflin Harcourt.

Opler, P. A. 1999. *A Field Guide to Western Butterflies.* Houghton Mifflin Harcourt.

Society, The Lepidopterists'. 1983. "EGG PLACEMENT BY phoebls (PIERIDAE) ON CASSIA (LEGUMINOSAE) "ANTICIPATES" THE TROPICAL RAINY SEASON ." *Journal of the Lepidopterists' Society* 313-317.

Stiling, P. 1999. *Butterflies of the Caribbean and Florida.* Macmillan Education Ltd.

Author: Daveanna Wiltshire

Posted online: 2016

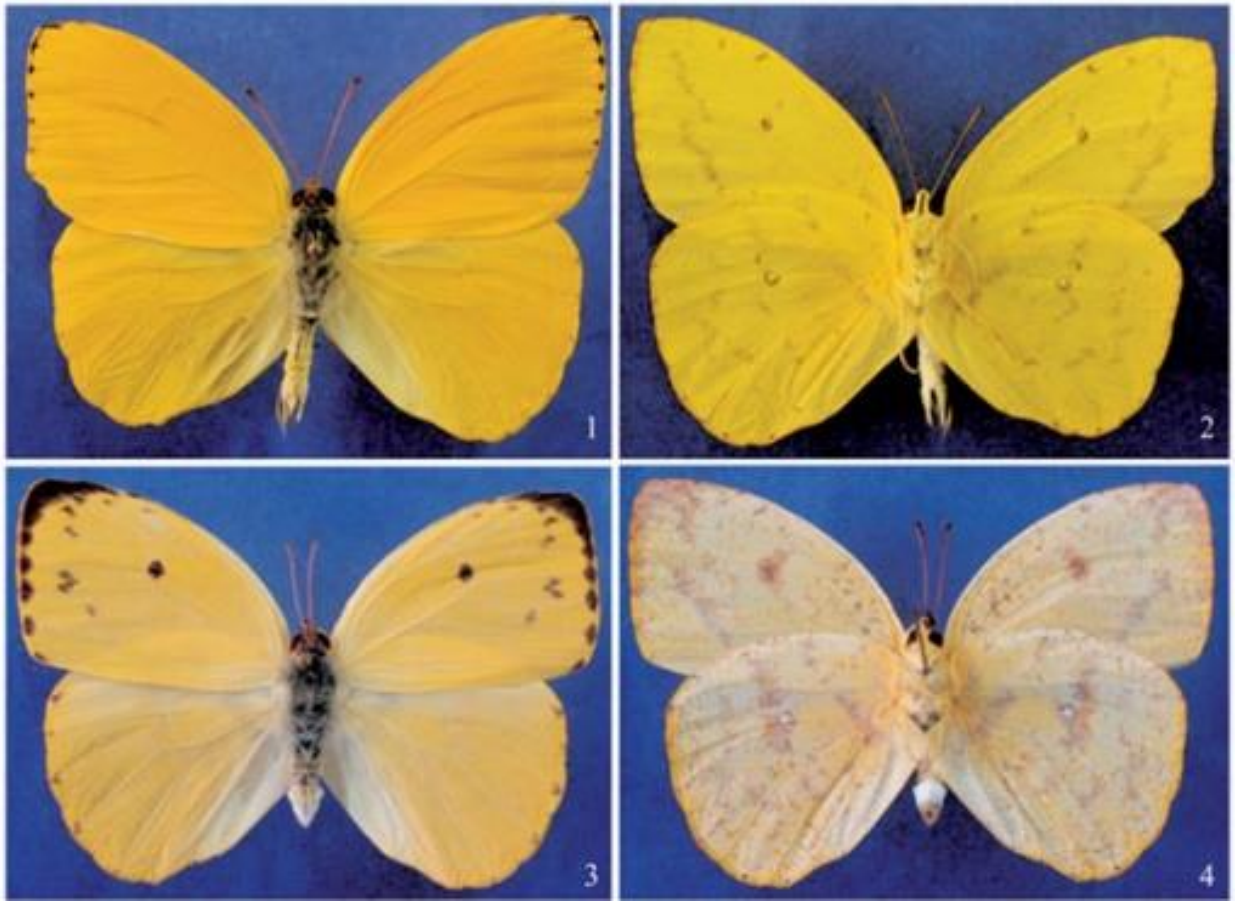

Fig. 2. *Phoebis argante* dorsal and ventral surfaces in male (1-2) and female (3-4).

[http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0085-56262011000300022, downloaded 9 March 2016]

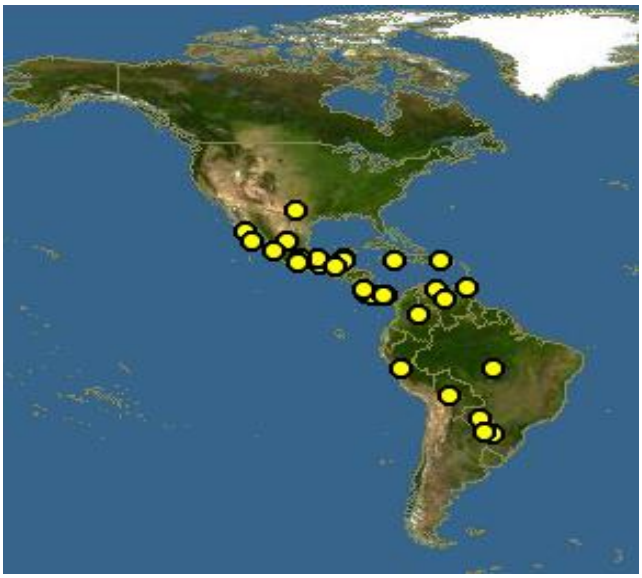

Fig. 3. Geographic distribution of *Phoebis argante*.

[http://www.discoverlife.org/mp/20q?guide=Butterflies_San_Luis, downloaded 9 March 2016]

Fig. 4. *Phoebis argante* feeding on damp sand.

[http://www.learnaboutbutterflies.com/Amazon%20-%20Phoebis%20argante.htm, downloaded 9 March 2016]

Fig. 5. Caterpillar and pupa stage of the butterfly.

[http://caterpillars.myspecies.info/taxonomy/term/2038/media, downloaded 9 March 2016]