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A Note on the Biology of *Pirascuca sagaris* *sagaris* (Cramer) (Lepidoptera: Riodinidae) in Trinidad, West Indies

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NATURE NOTES

A Note on the Biology of *Pirascuca sagaris sagaris* (Cramer) (Lepidoptera: Riodinidae) in Trinidad, West Indies

Riodinidae is a family of small, often brightly coloured butterflies of diverse feeding habits and a wide range of food plants, including at least 75 families of plants (DeVries 1997, Beccaloni *et al.* 2008). The family occurs throughout the world, but only in the Neotropical Region has it evolved a spectacular diversity of more than 1300 species (Callaghan and Lamas 2004), of which more than 100 are found in Trinidad (Barcant 1970). The orange-banded jet, *Pirascuca sagaris sagaris* (Cramer) is a widespread and occasional riodinid in the forests of Trinidad, particularly “along shady clearings, valleys and tracks of the Northern Range” (Barcant 1970, as *Phaenochitonias sagaris*). It is sexually dimorphic, the male as shown in Fig. 1 and the female with a transverse orange bar on each forewing (Hall and Wilmott 1996, Figs 2a-d).



Fig. 1. Male orange-banded jet, *Pirascuca sagaris sagaris* (Cramer), Morne Bleu, Trinidad, 16.i.988 (M.J.W. Cock); wingspan 28 mm.

Callaghan (1989) describes oviposition and young caterpillars of ssp. *satnius* on a species of Melastomataceae in south-east Brazil. Oviposition was into a leaf roll made by an unidentified Lepidoptera, and the young caterpillars lived gregariously in a group of five in the leaf roll, but died in the third instar. Although Beccaloni *et al.* (2008) include an unpublished record on “*Miconia* sp.?” from Brazil, there are no other reports on the biology and food

plants of this species, so the following notes from Trinidad are worth being placed on record.

I found caterpillars on *Miconia ciliata* (Rich.) DC. (Melastomataceae) on Morne Catherine, north-west Trinidad, in January, 1980. One mature caterpillar was collected 28 January, and emerged as an adult male on 15 February. A second caterpillar was collected on 13 February, but was parasitized (no details recorded, but there may be a specimen or specimens in the CABI collection, Curepe, Trinidad and Tobago). Two more caterpillars were found on the same food plant in the same area 31 March, 1982 from which males were reared. These two specimens are in the collection of CABI, but the original male from 1980 has not been located (it may have been released).

The caterpillars lived in individual leaf shelters made by folding the leaf over onto the adaxial surface. Within this shelter, the caterpillar fed on the adaxial surface, leaving just the transparent abaxial epidermis. Although ants are often found in a mutualistic association with riodinid caterpillars (DeVries 1997), no ants were noted in attendance on this occasion. The caterpillar and pupa are similar to those of other *Pirascuca* spp. illustrated by Janzen and Hallwachs (2010).

Caterpillar. Head orange, smooth, with short pale hairs. A transparent semi-circular plate on dorsum of first thoracic segment, straight edge on anterior margin, smooth with a few pale setae. Body flattened, with lateral lobes on each segment; hair tufts on each lobe projected below horizontal to the leaf surface; also vertical tufts of dorsal hairs; hairs on T1-T2 orange, remainder white. Dorsal line transparent – the heart action visible; segments T2-A8 with subdorsal yellow line, then dull green line, then a dorso-lateral yellow line, then a broader, green lateral stripe. Spiracles pale, inconspicuous; legs and prolegs concolorous.

Pupation was in a shelter between the food plant leaf and the rearing container, the pupa placed upside down on the dorsal surface of the shelter. Pupa 9 mm long, by 3.3 mm at widest from mesothorax to abdominal segment 3; abdomen slightly flattened dorso-ventrally, with slightly projecting and chitinised lateral flange; ground colour orange; slightly darker dorsal line on abdomen. Long pale erect hairs up to 2 mm long as follows: in a stripe along dorsum of thorax; around lateral and anterior margin of prothorax; a tuft anterior to base of forewing; smaller tuft just dorsal to wing sheath on metathorax. Similar pale

orange-brown hairs as follows: in two subdorsal lines along length of abdomen; tufts just dorsal to wing case on abdominal segments 1-3; dorsolateral tuft and tuft along and just dorsal to lateral flange on remaining abdominal segments. The wing cases, antennae, eyes and ventral surface of head and body flattened against substrate and smooth. Spiracle T1 pale brown as a narrow vertical line anterior to wing base; abdominal spiracles pale, that on abdominal segment 2 anterior to hair tuft, those on segments 4 to 7 below dorsolateral hair tuft. Three days before eclosion, the black and orange wing markings were clearly visible.

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REFERENCES

- Barcant, M.** 1970. Butterflies of Trinidad and Tobago. London: Collins. 314 p.
- Beccaloni, G. W., Vilorio, Á. L., Hall, S. K. and Robinson, G. S.** 2008. Catalogue of the hostplants of the Neotropical butterflies. Catálogo de las plantas huésped de las mariposas neotropicales. *Monografías Tercer Milenio*, 8: 536 p.
- Callaghan, C. J.** 1989. Notes on the biology of three riordinine species: *Nymphidium lisimon attenuatum*, *Phaenochitoniasagaris satnius*, *Metacharis ptolomaeus* (Lycaenidae: Riordininae). *Journal of Research on the Lepidoptera*, 27: 109-114.
- Callaghan, C. J. and Lamas, G.** 2004. 99. Riordinidae. p. 141-170. In **G. Lamas**, ed. Checklist: Part 4A Hesperioidea – Papilionoidea. Atlas of Neotropical Lepidoptera. Gainesville, Florida: Scientific Publishers.
- DeVries, P. J.** 1997. The Butterflies of Costa Rica and their Natural History. Volume II: Riordinidae. Princeton, New Jersey: Princeton University Press. 288 p.
- Hall, J. P. W. and Willmott, K. R.** 1996. Systematics of the riordinid tribe Symmachiini, with the description of a new genus, and five new species from Ecuador, Venezuela and Brazil (Lepidoptera: Riordinidae). *Lambillionea*, 96: 637-660.
- Janzen, D. H. and Hallwachs, W.** 2009. Dynamic database for an inventory of the macrocaterpillar fauna, and its food plants and parasitoids, of Area de Conservacion Guanacaste (ACG), northwestern Costa Rica. <http://www.janzen.sas.upenn.edu.org> (Last accessed 24 Mar. 2010).
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