

Field Identification of Caterpillars and Adults of Bark Butterflies *Opsiphanes* spp. (Lepidoptera, Nymphalidae) in Trinidad, W.I.

Two species of *Opsiphanes* (Lepidoptera, Nymphalidae, Satyrinae, Brassolini) are found in Trinidad: *Opsiphanes cassina merianae* Stichel and *O. cassiae cassiae* (Linnaeus) (Kaye 1921, Barcant 1970, Bristow 1991, Cock 2014). Both subspecies are also known from eastern Venezuela and the Guianas (Bristow 1991), but neither is known from Tobago (Cock 2017). Kaye (1921) refers to *O. cassina merianae* by its local name 'bark' butterfly and mentions that *O. cassiae cassiae* is scarcer. Barcant (1970) introduces the name 'rare bark' for *O. cassiae cassiae*, which he considered distinctly rare. Adults are readily attracted to fallen fruit, and are active by day and at dusk. The caterpillars of *O. cassiae* feed on leaves of *Heliconias* spp. (Heliconiaceae) and bananas (*Musa* spp., Musaceae), whereas those of *O. cassina* feed on various palms (Arecaceae) (Bristow 1991). Guppy (1904) illustrated the caterpillar of *O. cassiae cassiae* from Trinidad, but that of *O. cassina merianae* has not been documented from Trinidad, although both species have been reared by local collectors (J.O. Boos pers. comm.;

F.C. Urich pers. comm.).

The adults are easily distinguished based on characters of the dorsal surface; in particular, the pale band on the dorsal forewing is split into two at the costa in *O. cassina*, but is single in *O. cassiae* (Barcant 1970, Bristow 1981) (Figs. 1-2). Because the dorsal markings make these species so easy to distinguish, characters of the confusingly similar ventral surfaces of the two species (Figs. 1-2) have not normally been considered. However, living adults always rest with their wings folded above their heads, so that the dorsal surface is not visible (Figs. 3-4). Accordingly, identification of adults in the field and of photographs of living adults requires characters of the ventral surface.

The purpose of this note is to show how adults of these two species can be separated based on a simple character of the ventral surface, provide preliminary documentation of the caterpillar and food plants of *O. cassina merianae* in Trinidad, and indicate how the caterpillars may be identified.

Having examined a series of pinned specimens of the



Fig. 1. *Opsiphanes cassina merianae*, male left, female right, dorsal view above, ventral view below. Male: Brigand Hill summit, at dusk, 28 March 2013; female, Curepe, fruit trap, 25 September 1980.



Fig. 2. *Opsiphanes cassiae cassiae*, male left, female right, dorsal view above, ventral view below. Male: St. Benedict's, fruit trap, 17 May 1982; female, as male 13 May 1982.

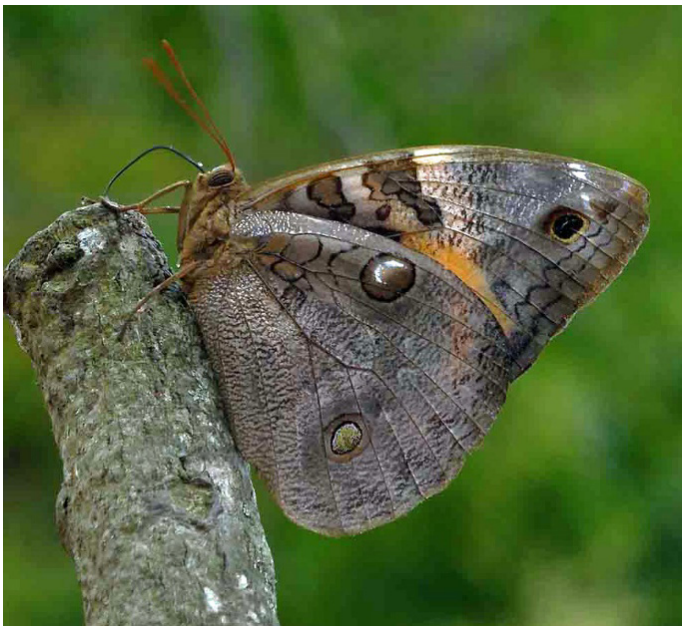


Fig. 3. *Opsiphanes cassina merianae*, female. South Oropouche, Mondesir, 2 May 2018, Tarran P. Maharaj.

two species, one character of the ventral surface stands out as providing an unambiguous diagnostic feature. The eye spot at the middle of the hindwing costa is always smoothly rounded in *O. cassina merianae* (Figs. 1, 3), whereas it is at least slightly flattened, even a little concave on the outer margin in *O. cassiae cassiae* (Figs. 2, 4). This feature appears to apply across all subspecies on the mainland judging from the illustrations of Bristow (1991), but as there are also other species of *Opsiphanes* on the mainland, this character cannot be used there in isolation. In Trinidad, with just the two species of *Opsiphanes*, it can be used with confidence.

In October 1981, I reared *O. cassina merianae* from caterpillars (Fig. 5) found on two palms on UWI campus: areca palm *Chrysalidocarpus lutescens* and Manila palm *Adonidia merrillii* (my reference numbers 81/11A and B respectively). As both of these are introduced ornamental palms, it can be anticipated that one or more indigenous palms are also used as food plants, as documented by Bristow (1991) for other subspecies of *O. cassina*. The caterpillar of *O. cassiae cassiae* has recently been



Fig. 4. *Opsiphanes cassiae cassiae*, female. South Oropouche, Mondesir, 5 December 2019, Tarran P. Maharaj.



Fig. 5. Caterpillar of *Opsiphanes cassina merianae*, St. Augustine, on ornamental palm, October 1981, 65mm.



Fig. 6. Caterpillar of *Opsiphanes cassiae cassiae*, Inniss Field, on *Heliconias* sp., 2 August 2019, R. Deo. <https://www.inaturalist.org/observations/30270859> with permission.

photographed by Rainer Deo (Fig. 6). The caterpillars of both species have twin caudal spikes, longitudinally striped green bodies and pale grey-brown heads with distinctive backwardly-projecting, black-tipped, orange-brown horns on the heads (Figs. 5-6). *Opsiphanes cassiae cassiae* has three conspicuous pairs of such horns, the subdorsal and dorsolateral pairs being long, but the lateral pair short (Fig. 6), whereas *O. cassina merianae* only has the subdorsal horns long with a black tip (Fig. 5). In addition, *O. cassina merianae* has a double orange line down the centre of the



Fig. 7. Pupa of *Opsiphanes cassina merianae*, St. Augustine, collected as caterpillar on ornamental palm, October 1981, 26mm.

face (Fig. 5), whereas *O. cassiae cassiae* has a double white line, with a black line outside this (Fig. 6). Distinguishing features of the young larvae are not known at this time, although the relative size of the horns may be evident early on. Similarly, I have not been able to compare the pupae of the two species, but illustrate that of *O. cassina merianae* here (Fig. 7)

I thank Tarran P. Maharaj and Rainer Deo for allowing me to use their images.

REFERENCES

- Barcant, M.** 1970. Butterflies of Trinidad and Tobago. London: Collins. 314 p.
- Bristow, C.R.** 1991. A revision of the brassoline genus *Opsiphanes* (Lepidoptera: Rhopalocera). *Zoological Journal of the Linnean Society*, 101: 203-293.
- Cock, M.J.W.** 2014. An updated and annotated checklist of the larger butterflies (Papilionoidea) of Trinidad, West Indies: Papilionidae, Pieridae and Nymphalidae. *Insecta Mundi*, 0353: 41 p.
- Cock, M.J.W.** 2017. The butterflies (Papilionoidea) of Tobago, West Indies, West Indies: An updated and annotated checklist. *Insecta Mundi*, 0539: 38 p.
- Guppy, J.** 1904. Appendix. Notes on the habits and early stages of some Trinidad butterflies. p. 225-228, pl. 17-18. In: **Kaye, W.J.** A catalogue of the Lepidoptera Rhopalocera of Trinidad. *Transactions of the Entomological Society of London*, 1904(2): 159-228, pl. 17-18.
- Kaye, W.J.** 1921. A catalogue of the Trinidad Lepidoptera Rhopalocera (butterflies). *Memoirs of the Department of Agriculture, Trinidad and Tobago*, 2: 163 p.

Matthew J.W. Cock

m.cock@cabi.org / mjwcock@btinternet.com