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Udranomia spp. (Lepidoptera: Hesperiidae: Eudaminae) in Trinidad, West Indies

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ABSTRACT
Udranomia orcinus (C. Felder and R. Felder) is confirmed as a Trinidad species, and the early stages are described and illustrated from Nariva Swamp. The food plant is *Ouratea purdieana* (Ochnaceae), an uncommon endemic species in Trinidad. A second species *Udranomia eurus* (Mabille and Boullet) is recorded from Trinidad for the first time, based on specimens from the summit ridge of El Tucuche.

Key words (not in title): *Udranomia orcinus*, *Udranomia eurus*, *Ouratea purdieana*, Ochnaceae, Nariva Swamp, El Tucuche.

INTRODUCTION

Udranomia is a Neotropical genus of just four species of small skipper butterflies. Previously it was placed in the subfamily Pyrginae (Evans 1952; Cock 1984), but in the new classification of the Hesperiidae, it joins many other Neotropical species in the new subfamily Eudaminae (Warren *et al*. 2009).

Until now, there has been just one doubtful record of an *Udranomia* species from Trinidad. *Udranomia orcinus* (C. Felder and R. Felder) was known only from a single record from the island. Kaye (1940) records this capture, '♂ Manzanilla, 22.iii.1922 (Dr. F.W. Jackson)'. The whereabouts of this specimen – if it still exists – is unknown. When MJWC treated this species in his series on the Hesperiidae of Trinidad (Cock 1984), he concluded that as Jackson had recorded several unusual butterflies associated with swamps in Trinidad with the same data, then 'somewhere in the swamps of east Trinidad this species probably awaits rediscovery'. Here we report this rediscovery, together with a new record of a congeneric species, *U. eurus* (Mabille and Boullet).

Udranomia orcinus (C. Felder and R. Felder)

Figs. 1-4.

Cock (1984) presents basic information on this species in Trinidad. Moss (1949) records the food plant of *U. orcinus* as *Ouratea subscandens* (=*Gomphia subscandens*) (Ochnaceae) at Belém (=Pará), Brazil. In Costa Rica, Janzen and Hallwachs (2012) have reared this species repeatedly from *Cespedesia spathulata* (Ochnaceae) and several times from *O. lucens* and three species of *Quiina* (Quiinaceae). Ochnaceae is represented by two species of *Ouratea* and two of *Sauvagesia* in Trinidad (Williams 1929b), while Quiinaceae is represented by two species of *Quiina* (Williams 1929a).

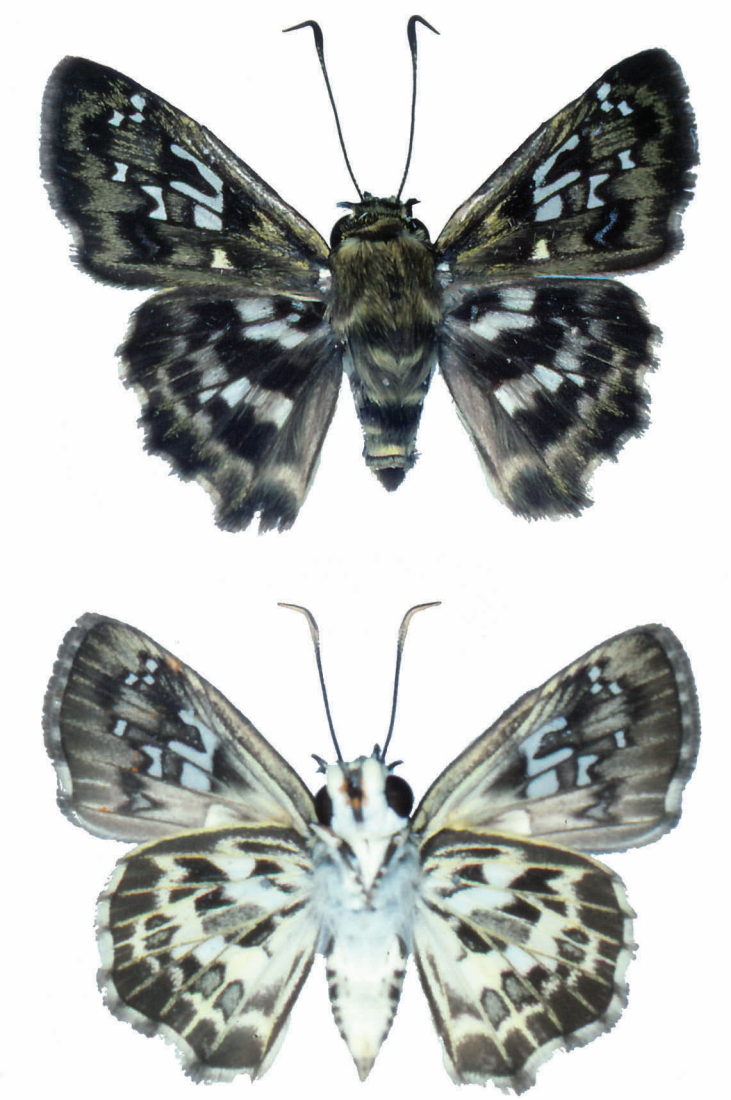

Fig. 1. *Udranomia orcinus* pinned adults. **Above**, UPS male, Bush Bush Island, August 1993; **Below**, UNS female, Parrylands, April 1993 (S. Alston-Smith).

In 1993 SAS discovered the early stages of *U. orcinus* at Bush Bush Island and Parrylands and reared out adults (Fig. 1). In May 1995, we visited Bush Bush Island together. As soon as we reached the edge of the forest from Kernahan, we found an adult of *U. orcinus* feeding at flowers of black sage, *Cordia currassavica*. Inside the forest, we collected the early stages which are documented here (MJWC ref. 95/33).

A sample of the food plant was pressed (MJWC 195) and identified by the National Herbarium as *Ouratea purdieana* (Ochnaceae), an uncommon endemic species in Trinidad, with records from the Northern Range (Williams 1929b). In Bush Bush Island, it is found beside shady paths and the serrated leaf edges, and common hesperiid damage on flush growth due to *U. orcinus,* made it quite obvious.

The eggs are small, laid mostly on the leaf under surface (12 examples) but also on the upper surface (2 examples). The stage 1 leaf shelter is a small irregular two-cut triangle from the leaf edge, folded over upwards or downwards. The stage 2 shelter is also an irregular triangle, about 20 x 10 mm, and folded over upwards or downwards; the shelter edges may be irregular due to caterpillar feeding from the edge. The stage 3 shelter is a large two-cut flap from the edge of the leaf, hinged adjacent to the midrib; one example measured 70 x 30 mm, with the bridge (hinge) 16 mm wide. To complete the shelter about eight deep notches are cut from the edge of the flap and from the edge of the leaf on which the flap rests.

The final instar caterpillar (Fig. 2) measured 18 mm, six days after moulting and about 14 days before it pupated; six days before pupation it had grown to 25 mm. Head wide, almost as wide as high, 1.41 x 1.44 mm wide x high, broadly indent at vertex; the stemmata placed around a slight bulge; light shiny brown, the epicranial suture slightly darker; smooth, but slightly rugose in two bands, the upper from apex towards adfrontals, and the lower parallel to and slightly below this. T1 concolorous. Body dull yellowish translucent green, becoming pink-brown just before pupation; spiracles light yellow-brown; all legs concolorous. The caterpillars documented by Janzen and Hallwachs (2012) are similar, but the head is red-chestnut in colour, and the posterior margin of the anal plate has a brown line. In Trinidad, the previous two instars are similar to the final instar, but the head is smooth: the head of the penultimate instar measures 2.29 x 2.39 mm wide x high, while the previous instar measures 1.41 x 1.44 mm.

The pupa (Fig. 3) is relatively broad for its length, the anterior part of the abdomen appears swollen, the eyes are bulbous, and the frons protuberant; proboscis does not project beyond wing cases; ground colour light brown with a very light powdering of white waxy powder; abdomen and dorsal part of thorax with faint rows

Fig. 3. Pupa of *Udranomia orcinus*, collected as penultimate instar caterpillar on *Ouratea purdieana*, Bush Bush Island, 2 May, 1995; pupated c. 31 May; photographed 16 June; adult 21 June; ref. 95/33C.

Fig. 2. Final instar caterpillar of *Udranomia orcinus*, collected as penultimate instar caterpillar, 2 May, 1995 on *Ouratea purdieana*, Bush Bush Island; moulted to final instar 11 May; photographed 17 May; pupated c. 31 May; ref. 95/33C.

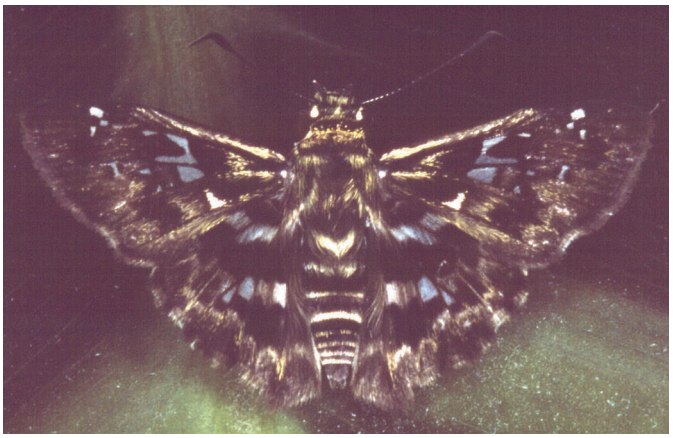

Fig. 4. Newly emerged adult male *Udranomia orcinus*, collected as penultimate instar caterpillar, 2 May, 1995 on *Ouratea purdieana*, Bush Bush Island; adult emerged and photographed 21 June; ref. 95/33C.

of dark spots, giving a smudged appearance; wing cases yellow-brown; T1 spiracle a black arc, convex side to posterior; the dorsal suture between the two T1 spiracles narrowly dark; the remaining spiracles small and dark, those of A1-A2 surrounded by a small area clear of dark spots.

Since then, SAS has found widely scattered plants of *O. purdieana* around Trinidad, usually with the distinctive shelters of *U. orcinus.* Revisiting Bush Bush Island in October 2011, MJWC readily spotted the familiar food plant, this time with empty shelters. We conclude that this is a widespread but easily overlooked species, always closely associated with its uncommon food plant.

***Udranomia eurus* (Mabille and Boullet)**

Fig. 5.

This rare species was described from Venezuela and has also been recorded from Amazonas, Brazil (Evans 1952), Colombia (Warren *et al*. 2012) and Costa Rica (Janzen and Hallwachs 2012). It has not previously been recorded from Trinidad, so we place on record the only captures we are aware of, three males taken by SAS on the summit ridge of El Tucuche, March 1983 and March 1989 (2) (Fig. 5).

Janzen and Hallwachs (2012) include just one rearing of this species from Costa Rica in their database: from *Cespedesia spathulata* (Ochnaceae). The caterpillar is quite similar to that of *U. orcinus* shown here, but the head is bright red-chestnut, and the body is green with yellow speckles. The food plant in Trinidad is likely to also be an Ochnaceae, perhaps, *O. purdieana*, which is known from El Tucuche (Williams 1929b).

Fig. 5. Pinned adult male *Udranomia eurus*, collected on summit ridge of El Tucuche, March 1989, SAS. **Above,** upperside; **Below,** underside.

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