

# NOTES ON LIFE HISTORIES OF *PYRRHOCHALCIA IPHIS* AND *PARDALEODES TIBULLUS* (LEPIDOPTERA: HESPERIIDAE)

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**ABSTRACT.**— The immature stages of two skippers, *Pyrrhocalcia iphis* (Drury) and *Pardaleodes tibullus* (Fabricius) from Ghana, West Africa, are illustrated. Their respective host plants, *Psychotria calva* (Rubiaceae) and *Pennisetum* sp. (Poaceae), are reported. The aposematism of the larval coloration in *P. iphis* is supported by the toxicity of its known host plant species.

**KEY WORDS:** Africa, Anacardiaceae, Ethiopian, Ghana, Gramineae, hostplant, larvae, Poaceae, Rubiaceae.

On our August 1996 visit to Kakum National Park of Ghana, several larvae of *Pardaleodes tibullus* (Fabricius) were collected from the wide-leafed forest grass, *Pennisetum* sp. (Poaceae). The larva rolls the side of the leaf into a tube in which it spends the day and apparently comes out to feed at night. The larvae have little pigmentation, so that some areas of the body are translucent (Fig. 1C). The subdorsal areas are coated with a wax-type substance, which creates white longitudinal stripes. The head is black. Larvae pupate in the same fold of the leaf in which they reside during the larval stage. Translucent at first, the pupa later secretes a white layer of wax. It is covered with numerous thin setae and has a long proboscis case, which extends to the tip of the abdomen and is unattached through its outer half. The adult hatches in two weeks.

During a one-day stay in a dry forest reserve at Kissi, near Cape Coast, we observed a number of larvae of the Giant African Skipper, *Pyrrhocalcia iphis* (Drury). The adults of this largest African skipper were also flying in abundance in the area. Larvae were observed feeding both in groups and solitarily. Based on our observations in the field, the gregarious behavior of the larvae extends into the penultimate instar. At this stage, larvae exhibit a social behavior: for example, the three larvae shown in Fig. 1B are moving backwards synchronously, while clearing off the epidermal layer of the plant's stem. This communal feeding behavior is probably beneficial to larvae, helping them to bite through the tough bark of the stem as well to create stronger appeal to potential predators. In the final instar, all of the observed larvae were solitary and positioned themselves on the upper surface of the leaves, fully displaying their colorful black and white bodies and bright red heads (Fig. 1A-B). The assumption that the bright coloration of *P. iphis*'s larvae is aposematic is supported by the nature of its host plant, which was identified as *Psychotria calva* I-en. of the toxic family Rubiaceae. The *Anacardia* hostplant previously reported for this species (Ackery *et al.*, 1995) belongs to the family Anacardiaceae, which is also toxic.

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Fig. 1: (A) The head of the last instar larva of the Giant African Skipper, *Pyrrhocalcia iphis* (Drury); (B) The penultimate instar larvae of *P. iphis* clearing off the epidermal layer from the stem of *Psychotria calva* I-en. (Rubiaceae); (C) Last instar larva of *Pardaleodes tibullus* (Fabricius). (© 1997 Andrei Sourakov)