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# Observations on the Biology of Afrotropical Hesperiidae (Lepidoptera). Part 5. Hesperiinae *incertae sedis*: Dicotyledon Feeders

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**Abstract**

Partial life histories of 24 Hesperiinae *incertae sedis* that feed on Dicotyledons are described and illustrated. The genera dealt with are: *Acada*, *Acleros*, *Andronymus*, *Fresna*, *Gorgyra*, *Melphinyet*, *Meza*, *Paronymus*, *Parosmodes*, *Platylesches*, and *Teniorhinus*. The food plants of *Gorgyra* (mainly Connaraceae), *Melphinyet* (Euphorbiaceae) and *Platylesches* (Chrysobalanaceae) stand out as clearly distinct from those of the other six genera, which share one or two food plant families with each other. Thus four genera include Fabaceae in their food plants, two include Sapindaceae, two include Combretaceae, and *Andronymus* includes all three. Ova are only reported for five genera, but they do point to some significant differences: *Gorgyra*, *Parosmodes* and *Platylesches* are different from each other, and different from *Acleros* and *Andronymus*. The features of the caterpillars do not indicate clear patterns. The pupal shelters point to *Parosmodes* and *Melphinyet* showing some affinity and certainly differ from all others. *Acleros* and *Andronymus* have similar pupal shelters, and in common with *Meza* (dicotyledon-feeding species) and *Fresna,* the pupal chamber is not closed and the pupa rests on the leaf upper surface. The pupae of *Gorgyra* differ from all others. The pupae of *Acleros* and *Andronymus* have their colouring in common, probably reflecting their very similar pupal shelters. Similarly the pupae and shelters of *Meza* (dicotyledon-feeding species) and *Fresna* seem analogous. The other pupae, hidden in their shelters are less differentiated, although the completely wax-free shelter of *Acada* is superficially different. We conclude that the likeliest scenario is that in the Afrotropical Region members of the Hesperiinae *incertae sedis* have made the switch from monocotyledons to dicotyledons several times, and then radiated.

**Key words:** *Acada*, *Acleros*, *Andronymus*, *Fresna*, *Gorgyra*, *Melphinyet*, *Meza*, *Paronymus*, *Parosmodes*, *Platylesches*, *Teniorhinus*, food plant, life history, leaf shelter, parasitoid

## INTRODUCTION

This is the fifth in a series of papers on the biology of Afrotropical Hesperiidae, based on the first author's observations primarily in Kenya, and the second author's observations primarily in Tanzania. Earlier parts covered Coeliadinae (Cock 2010), Pyrginae: Tagiadini (Cock & Congdon 2011a) and Celaenorrhinini (Cock & Congdon 2011b), and Hesperiinae: Aeromachini and Baorini (Cock & Congdon 2012). The remaining genera of Hesperiinae are currently *incertae sedis* and not placed in tribes (Warren *et al*. 2009).

It seems likely that characters of the early stages will be useful in clarifying the classification of many Hesperiinae genera *incertae sedis*, and we hope our observations will provide relevant and useful information for the revision of African Hesperiidae currently being undertaken by T.B. Larsen (see e.g. Larsen & Congdon 2012).

A detailed introduction is provided in Cock (2010) and supplemented in Cock & Congdon (2011a), so no further introduction is provided here. In this paper, unacknowledged information is the work of the first author (MJWC) who undertook the bulk of the writing, while the second author (TCEC) provided additional material which is attributed, in particular the important documentation of *Platylesches* spp. life histories. Although, the title of the series refers to observations principally from Kenya, we have dropped this for this part, as only three of the many species reared were from Kenya. We have included photographs of living adult skippers when available, but in many cases there are good photographs available on the internet (e.g. SABCA 2012 for South African species); we have not referred to these, unless directly relevant to the points we make, and more particularly if pictures of the early stages are available.

Material referred to as TCEC in this paper reflects the outputs of the Butterfly/Host Plant Research Programme which has run in Tanzania and neighbouring countries for over 20 years under the auspices of the Tanzania Commission for Science and Technology (COSTECH). The key researchers have been T.C.E. Congdon, I. Bampton (deceased May 2010) and S.C. Collins. TCEC did all of his rearing in collaboration with the late Ivan Bampton, and it is not possible to separate the efforts of these co-workers. However, TCEC did all the photography and writing up of what they reared together. Hence, reference to TCEC collections in this paper should automatically be considered to include Bampton. Both Congdon and Bampton have been Research Associates of the African Butterfly Research Institute (ABRI) since its inception in 1996, and all material collected and reared under the COSTECH programme has been incorporated in the ABRI collection in Nairobi.