

SOME OBSERVATIONS ON THE LEPIDOPTERA OF  
BROMELIADS

CARLOS R. BEUTELSPACHER

Instituto de Biología, Apdo. Postal 70-233, México 20, D.F. Mexico

The bromeliads are mostly tropical plants, with leaves generally arranged in rosettes which permit the accumulation of water and detritus; these form a microhabitat suitable for many organisms, principally insects, whose different interrelations constitute special ecosystems of great biological interest (Picado, 1913; Smith, 1938).

Compared to other groups of insects inhabiting these plants, Lepidoptera are scarce. Thus, in his masterly work "Les Bromeliacees epiphytes considerees comme milieu biologique," Picado (1913) reports only two species: *Valentinia bromelia* Walsing. (Blastobasidae) from Córdoba, Veracruz, México, and *Acrolophus pallidus* Möschler (Acrolophidae) from Costa Rica. He reports the larvae as living among the leaves of *Aechmea* and other large bromeliads. Biezanko (1961) reports four moths from bromeliads in Rio Grande do Sul, Brazil: *Castnia acraeoides* Gray, *C. boisduvali* Walker, *C. garbei* Forttlerle and *C. satrapes catharina* Preiss, collected in *Tillandsia aëranthos* (Loisel) L. B. Smith, *Bromelia antiacantha* Bertol and *Ananas comosus* (L.) Merr.

In Mexico I have collected the following species in bromeliads—arrangement according to Hoffmann's Catalogue (1940):

*Melinaea imitata* Bates (Danaiidae). A chrysalis was found in a leaf of *Aechmea bracteata* (Swartz) Griseb (Fig. 1.), at the Tropical Biological Station "Los Tuxtlas," near Sontecomapan, Veracruz. This species we consider only occasional, since larvae have not been found feeding on this plant, although all known Ithomiidae feed on Solanaceae as larvae.

*Napaea eucharilla picina* Stichel (Riodinidae) (Figs. 7-8). Caterpillars were found eating the leaves of *Aechmea bracteata* (Swartz) Griseb, and *Aechmea nudicaulis* var. *nudicaulis* L. B. Smith, collected at the "Los Tuxtlas" Station.

*Caria domitianus ino* Godm. & Salv. (Riodinidae). Larvae eating the leaves of *Tillandsia caput-medusae* E. Morren, collected at San Francisco Acuitlapán, Guerrero; they hatched on 14 June 1971.

*Thecla basalides* Geyer (Lycaenidae) (Figs. 2-4). The caterpillars are a serious pest of pineapple (*Ananas comosus* (L.) Merr.), causing great losses of this crop; they enter the inflorescence and cause an abnormal development, besides facilitating the entry of bacteria and fungi which cause rotting. I have also found these larvae eating the fruits of another



Fig. 1. *Aechmea bracteata* (Swartz) Griseb, a giant bromeliad from Veracruz.

bromeliad, *Aechmea bracteata* (Swartz) Griseb (Fig. 1), in southern Veracruz.

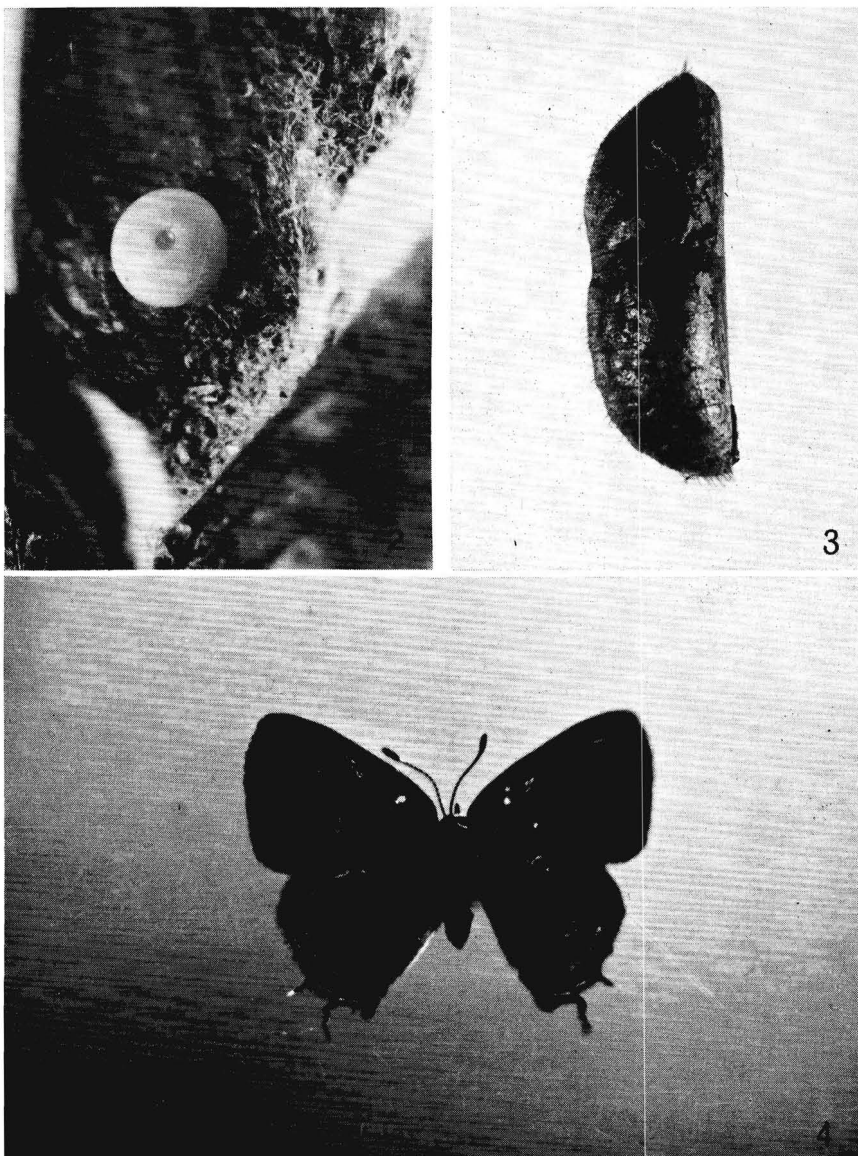
*Thecla hesperitis* Btlr. & Dr. (Lycaenidae). I found larvae eating the leaves of *Tillandsia caput-medusae* E. Morren, which I collected at Acahuizotla, Guerrero; they hatched on 20 June 1970.

*Automeris janus metzli* (Sallé) (Saturnidae). A cocoon was found in an *Aechmea bracteata* var. *pacifica* Beutelsp. at El Rincón, Guerrero. It hatched on 18 August 1971; but this, as well as the next species, is considered a casual occurrence.

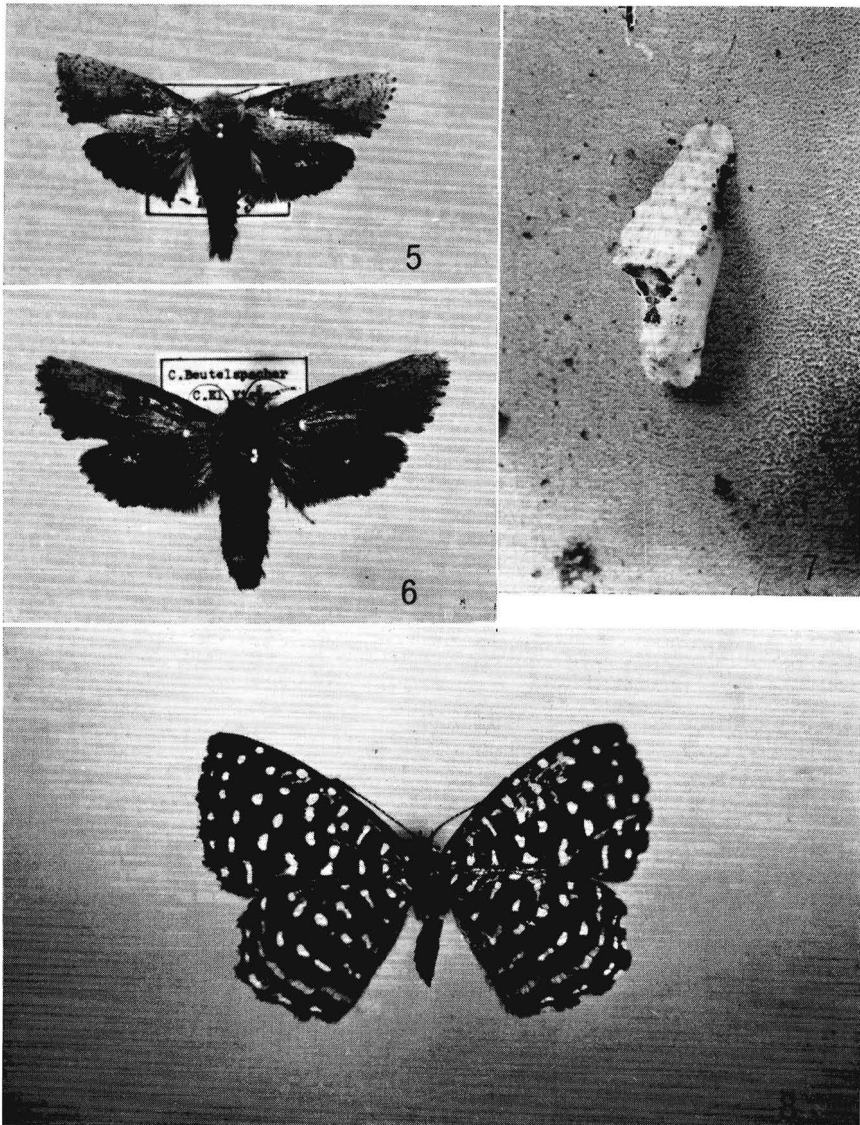
*Urania fulgens* Walk. (Uranidae). A cocoon was found among the leaves of *Aechmea bracteata* (Swartz) Griseb, at the "Los Tuxtlas" Biological Station.

*Ammalo megapyrrha* Walk. and *Ecpantheria* sp. (Arctiidae) found among leaves of the same *Aechmea bracteata* in San Luís Potosí and in southern Veracruz.

*Acrolophus vigia* Beutelsp. (Acrolophidae) (Figs. 5-6). This species was described from larvae cultivated in the laboratory and reared to obtain adults (Beutelspacher, 1969). The larvae were found in *Aechmea*



Figs. 2-4. *Thecla basalides* Geyer (Lycaenidae). 2, egg on fruits of *Aechmea bracteata* (Swartz) Griseb; 3, pupa, lateral; 4, female.



Figs. 5-6. *Acrolophus vigia* Beutelsp. (Acrolophidae). 5, male; 6, female.  
 Figs. 7-8. *Napaea eucharilla picina* Stikel (Riodinidae). 7, pupa; 8, male.

*bracteata* (Swartz) Griseb, in Veracruz and Yucatán, as well as in *Aechmea mexicana* Baker and *Vriesia gladioliflora* (Weindl.) Ant. in the "Los Tuxtlas" region, Veracruz, and in *Vriesia chiapensis* Matuda, from Bochil, Chiapas. The caterpillars feed on bromeliad leaves, and are semi-aquatic in their habits. The adults emerged in February.

I would like to express my thanks to Dr. Allan R. Phillips for English translation of this work.

#### LITERATURE CITED

- BEUTELSPACHER, B. C. 1969. Una especie nueva de *Acrolophus* Poey, 1832, de Bromeliáceas. (Lepidoptera, Acrolophidae). An. Inst. Biol. Univ. Nal. Autón. México, Ser. Zool. 40 (1): 43-48.
- BIEZANKO, C. M. 1961. Contribucao ao conhecimento da fisiografia do Rio Grande do Sul. XIV. Castniidae, Zygaenidae, Dalceridae, Eucleidae, Megalophygidae, Cossidae et Hepialidae da Zona Missioneira do Rio Grande do Sul. Arq. Entomol. Ser. B. Escola de Agronomia "Eliseu Maciel."
- HOFFMANN, C. C. 1940. Catálogo Sistemático y Zoogeográfico de los Lepidópteros Mexicanos. 1ª parte, Papilionoidea. An. Inst. Biol. Univ. Nal. Autón. México 11 (2): 639-739.
- PICADO, C. 1913. Les Bromeliacées epiphytes, considérées comme milieu biologique. Bull. Sci. Fr. Belg. 47: 215-360, Pl. 6-34.
- SMITH, L. B. 1938. North American Flora (Xyridales) Bromeliaceae. N. Y. Bot. Garden 19 (2): 61-228.

---

### THE EFFECT OF CAUTERIZING THE MNPPM OF THE PUPA OF THE MONARCH BUTTERFLY (*DANAUS P. PLEXIPPUS*) (DANAIDAE)

F. A. URQUHART

Scarborough College and the Department of Zoology, University of Toronto,  
Toronto, Canada

The pupa of the monarch butterfly possesses well-defined surface pigmented areas (color plate, e) which, owing to the configuration of the lamellae of the cuticle plus the presence of a yellow epidermal pigment, imparts to them the appearance of golden spots and hence they have been referred to as "gold spots" in the literature. Since "gold spots" is not descriptive of these structures the terminology *prismatic pigmented maculae* (PPM) has been suggested (Urquhart & Tang, 1970).

Since the PPMs are constant in number and position and further since it was suspected that they may perform specific functions, terms have been applied to each pair, the designation of such terms referring to morphological structures of the developing imago (Urquhart, 1960).