

A GYNANDROMORPH OF *PAPILIO POLYXENES* (PAPILIONIDAE)

Cultures of *Papilio polyxenes asterius* Stoll are maintained in our laboratory for use in ecological studies. In October 1975, a bilateral gynandromorph of this species appeared in the second generation of a laboratory culture derived from populations around Brooktondale, Tompkins County, New York. This was the first such specimen observed.

Although the external genitalia are male, only the right half of the specimen is male in appearance (Fig. 1). The yellow spots of the inner row of the right forewing

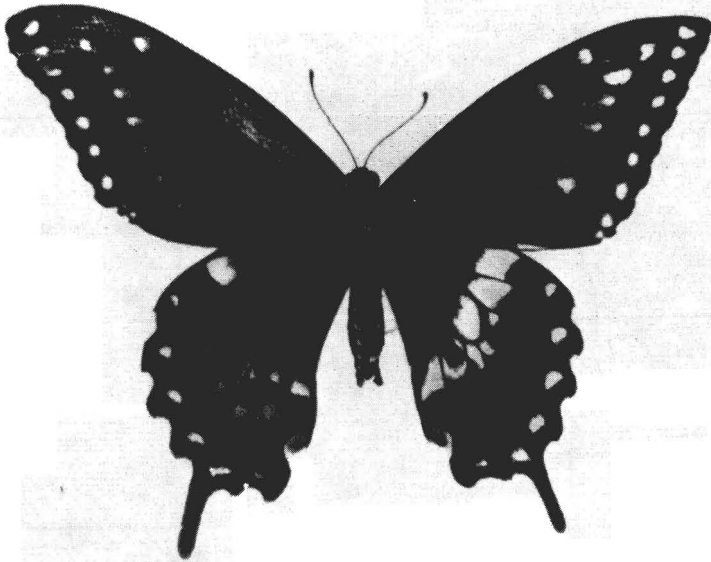


Fig. 1. Lab-reared gynandromorph of *Papilio polyxenes*, dorsal view.

are greatly reduced and/or appear as "ghosts" composed of scales intermediate in color between black and yellow. The inner band of the hind wing resembles a normal male except for the last yellow spot ( $Cu_1$  cell) which is half obliterated by black scales. The hazy blue spots of the hind wing are irregular and appear in cells  $Cu_1$ ,  $Cu_2$ ,  $M_2$ , and  $M_3$ . The left half of the specimen perfectly resembles a female. The left forewing is 43 mm in length, the right is 41 mm.

Instances of gynandromorphism among the swallowtails are rare. Schmid (1973, Can. Entomol. 105: 1549-1551) describes natural gynandromorphs of *Ornithoptera victoriae* Gray and *O. priamus* L. Skinner (1919, Entomol. News 30: 247) and Cockayne (1935, Trans. Roy. Entomol. Soc. Lond. 83: 509-522) refer to *Papilio glaucus* L. gynandromorphs. Hybrid crosses between *P. polyxenes* and other swallowtails in the *machaon* group have in some cases yielded gynandromorphic individuals (Clark and Sheppard, 1953, Suppl. Entomol. Rec. 65: 1-12; Ae 1964, Bull. Jap. Entomol. Acad. 1: 1-10). Edwards (1868-1872, The Butterflies of North America; Philadelphia:

Am. Entomol. Soc.) presents a figure of an apparently gynandromorphic *P. polyxenes*, but offers no data on the specimen.

It is not known what caused the butterfly described here to be a gynandromorph. Gardiner (1972, J. Res. Lep. 11: 129-140) notes that the incidence of gynandromorphism in *Pieris brassicae* L. cultures is associated with outbreaks of virus and suggests that viral disease may cause such genetic abnormalities. Viral disease is commonly present at low levels in our cultures of *P. polyxenes* and may account for the appearance of this unusual individual.

The specimen is located in Lot 1062 of the Entomological Collections at Cornell University. I wish to acknowledge the support of N.S.F. Grant DEB 76-20114 (to Paul P. Feeny) which covered costs of publication.

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#### ELECTROSTRYMON ANGELIA ANGELIA (LYCAENIDAE): THE OLDEST FLORIDA RECORD?

The butterflies, Sphingidae and Castniidae from the Strecker collection were transferred from the Field Museum of Natural History to this institution in 1976 on semi-permanent loan in order that they might be more readily utilized by students of these groups. Since that time workers here and elsewhere have made greater use of the Strecker and Reakirt material contained in Strecker's collection.

That collection is, however, an aggravating one by modern standards: there are few labels on individual specimens; rather, the series are labelled with data that in theory apply to all members under the label. This is certainly not the case in all instances. Fortunately, Strecker prepared catalogs to the Papilionidae, Pieridae and Lycaenidae before his death, and in these families the data for individual specimens are recorded.

A second problem involves Strecker's apparently too-eager interpretation of what specimen was what, and from where. Some of the putative Reakirt types in the collection may not be those, and we suspect that Strecker was easy prey for dealers who peddled material mislabelled by locality. The situation with the Strecker collection is by no means as bad as that with some other older collections, notably the Ehrmann collection presently housed at Carnegie Museum of Natural History.

Nevertheless, the Strecker collection contains some magnificent material—material that is not duplicated in other North American collections. Further, the Strecker collection, with its associated letters, is an historical document. The Lycaenidae, because that family was one for which the catalog was completed, are especially interesting. In working through the hairstreaks in the Strecker collection, specimens of *Electrostrymon angelia* (Hewitson) were found under the label "*Thecla hugon* Godart", a synonym of *Electrostrymon endymion* (Fabricius). Two of these specimens were placed in the collection after Strecker had compiled the catalog and are individually labelled "Haiti" and "Port au Prince, Haiti"; both of these butterflies are specimens of the Hispaniolan subspecies *boyeri* (W. P. Comstock and Huntington). The other specimen is labelled characteristically with an "a", referring to an entry in the catalog. This specimen is here figured (Fig. 1) and is referable to the Cuban *E. a. angelia*. The catalog states that the specimen was from "Florida" and that