smaller than Palaearctic examples, whose forewings are usually stated to range from 6.5 to 7.5 mm long. The male genitalia (Fig. 2) are indistinguishable from those of an example in the National Museum of Natural History collected in Kent, U.K.

Apparently, the Michigan specimen was captured flying or at a light, so its larval host plant is unknown. In Europe the larva feeds within tied leaves of *Lonicera* and *Symphoricarpos*, genera of the Caprifoliaceae or honeysuckle family (Swatschek, B., 1958, Die Larvalsystematik der Wickler, Berlin, 269 pp.).

Whether the specimen represents a population now extant or extinct, introduced or endemic, is thus far undetermined. There has been no confirmation in two decades, and, although far from traditional ports of entry, the collection area is near Great Lakes routes of international shipping through the St. Lawrence Seaway.

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## MELIPOTES INDOMITA (WALKER) IN HAWAII

In this Journal, vol. 33(2):136, was a note concerning this species in Hawaii, which very easily could be understood as if it were a first report of it in the Islands. This, however, is not so. *Melipotes indomita* was reported for the first time on 8 June 1969 on a building wall in Manoa and then repeatedly at Hickam Air Force Base and Honolulu Airport. By 7 August the moth had been found already on Molokai and, shortly before that date on Kauai, and in September also on Maui. Now the moth is one of the most common noctuids in the Islands, which is understandable because of the abundance of the foodplant, the monkeypod tree (*Samanea saman* (Jacq.)). A very thorough description and the life cycle of the moth was published by Oda & Mau (1972, Proc. Hawaiian Entomol. Soc. 21(3):435–441).

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## TMOLUS AZIA (LYCAENIDAE) AND ANTEOS CHLORINDE (PIERIDAE) IN THE DOMINICAN REPUBLIC

*Tmolus azia* (Hewitson) has recently been collected in Jamaica, the first record of its occurrence in the Caribbean (Vyhmeister, G., 1980, J. Lepid. Soc. 34(1):60). On 22 June 1981 at least three members of the Lepidopterists' Society Dominican Republic expedition collected single specimens of this butterfly in the "desert" region of Santiago Province, approximately 10 km NW of the city of Santiago and several hundred meters from the north bank of the Rio Yaque del Norte. This collection date followed approximately 40 days of rain, and the local vegetation was lush and dense. The collectors were Andrew F. Beck, S. S. Nicolay and Charles Zeiger; S. S. Nicolay identified the specimens. Mr. Nicolay returned to this site on 28 June 1981 and collected three

additional specimens, suggesting strongly that this insect is established at this locale and is not merely a visitor.

In addition, I collected a single, fresh male *Anteos chlorinde* (Godart) in Jarabacoa, La Vega Province, in the afternoon of 24 June 1981. It was captured on *Hibiscus* blossoms along a roadside in the vicinity of the Hotel Pinar Dorado. Riley (1975, A Field Guide to the Butterflies of the West Indies, Demeter Press) indicates that this butterfly is not recorded from Hispaniola.

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## HAND-PAIRING OF BATTUS PHILENOR (PAPILIONIDAE)

Hand-pairing is a useful technique in the laboratory rearing of butterflies (Clarke & Sheppard, 1956, Lepid. News 10:47–53) and has been applied in several families, most extensively in the Papilionidae. I have successfully used it for most eastern North American swallowtails but had been unable to hand-pair *Battus philenor* (L.) Recent observations of mating of caged *B. philenor* revealed the probable reason for my failure and suggested how I might be able to hand-pair the species, which has now been accomplished.

B. philenor males and females were released within a day of eclosion in a large outdoor flight cage (7.6 m  $\times$  4.6 m  $\times$  4.6 m high). Within a few minutes the following behavioral sequence was observed for two pairs: A motionless female sitting upright on a honeysuckle stem about 3 m from the ground was approached by a male, which quickly landed upside down on the stem beneath the female and in a few seconds had curved his abdomen up and locked *in copula*. He immediately hung free with folded wings in the usual way. Two aspects of this sequence were unexpected: There was no fluttering of wings by either individual; and the male approached from below with his body initially parallel to that of the female in a frontal position.

The usual technique in hand-pairing is to bring the tips of the abdomens together at about 180°, squeeze the male to open his claspers and join the two. If this technique is tried with *B. philenor*, both individuals curve the tips of their abdomens under, and the two cannot be joined. The observations in the flight cage suggested that the curvature facilitates copulation in the natural position. I, therefore, brought together a male and female in the frontal position, pressed the male's abdomen to open his claspers, and the two immediately joined. Several pairs were so mated and dissection revealed a spermatophore in each female. *B. philenor* seems to remain *in copula* somewhat longer than most other swallowtails, but, as in other species (Clarke & Sheppard, 1956, op. cit.), about 20 minutes is sufficient for the passage of a spermatophore.

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