

It had been our assumption that the groups were drinking filtration water, but this year we had a chance on 31 March to observe five groups more closely: one of about 15 individuals, one of about 20, two of about 50 and one of more than 100. All were in places protected against the wind. None of the individuals had the proboscis uncoiled, and there was no moisture present, yet the groups stayed there from the time first detected, 1015, to the time we left, 1700. From time to time individuals would fly away, and individuals would join the group. Males and females were mingled in each group, but no sexual activity was noticed.

All groups followed a certain pattern: a nucleus of about eight individuals had the heads together, so that the antennae, upraised, formed a tight fascia. Then a row of individuals formed a tight circle around this nucleus, with the antennae touching the wings of the inner group. In this way row after row were formed. Some rows did not form a complete circle, and eventually there was a line of four to five individuals breaking the regularity of the pattern, but they were encircled by the next row. All heads were pointing inward. The groups looked very much like dried moss growths.

When at the resting places the butterflies are very tame, so that specimens can be captured by hand from any place in the group, without disturbing the rest. If handled roughly the whole group will take flight, fully alert, and disperse among neighboring trees and rocks. In the surrounding woods individuals were observed while feeding on sap from wounds caused by other insects or woodpeckers high up in tree trunks.

We have not investigated yet if the individuals keep to their own groups after their occasional flights, or if they exchange locations with others; nor have we investigated if this species has acquired the behavior of forming groups just to protect themselves from the wind or predation. This behavior has not been observed in *Smyrna blomfieldia datis* Fruhstorfer, a closely related species abundant in the lowlands.

We intend to present the full results of our investigation on this phenomenon in a future article.

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BIRD PREDATION ON *PAPILIO POLYXENES* F. (PAPILIONIDAE)

Birds have been shown to exert substantial predation pressure on many butterfly species (Carpenter 1940, Entomol. Mon. Mag. 76: 224-229; Rawson & Bellinger 1953, Lepid. News 7: 27; Betts 1956, Entomol. Mon. Mag. 92: 68-71; Gibb 1958, J. Anim. Ecol. 27: 375-396). However, a shortage of field observations exist in the literature dealing with bird predation on larvae and adult butterflies.

During the summer of 1971, while carrying out field studies in Ithaca, New York, on the eastern black swallowtail (*Papilio polyxenes*), several observations on bird predation were made. On 3 June, a female butterfly was taken by a bluejay (*Cyanocitta cristata* L.) as she was ovipositing on carrot (*Daucus carota* L.). In the same area on 1 July, another bluejay was seen attacking a 5th instar larva on a carrot plant. Near Homer, New York, on 31 July, a male swallowtail was taken on the wing by a catbird (*Dumetella carolinensis* L.) just after the butterfly flew from the common burdock (*Arctium minus* (Hill) Bernh.) flower upon which it had been feeding.

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