

## SOME OBSERVATIONS ON AND DESCRIPTION OF *POLYDORUS ARISTOLOCHIAE* (PAPILIONIDAE)

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*Polydorus aristolochiae* (Fabricius) is the commonest large-tailed, black butterfly of the Indo-Pakistan region. At Tando Jam (25°26' N; 68°32' E), West Pakistan, adults were found on *Aristolochia bracteata* L., and other plants, and the following observations were made during 1962-63.

Descriptions and longevity of the adult have been recorded by previous workers (Witt, 1909; Ghosh, 1914; Anthram, 1924; Talbot, 1939; and Wynter-Blyth, 1957). More comprehensive observations on the description, longevity, and sex ratio of *P. aristolochiae* is presented below.

### DESCRIPTION OF THE ADULT

Most earlier workers have not mentioned details of the color and pattern of the hindwing spots, a description of which follows.<sup>1</sup>

Ground color black; a curving row of three to four white spots in interspaces between the veins in lower discal area, beyond cell, followed at anal angle by an irregular, elongate spot of whitish or reddish, with a black center; a submarginal row of six or seven dull to bright red, crescent-shaped spots in vein interspaces, usually dusted with some black scales. Underside with the white, lower discal spots as on upperside; the submarginal red spots larger than on upperside, varying in shape, either triangular or elongate, with or without a black dot in them.

### LONGEVITY OF ADULT

To study longevity of adults and effect of food on longevity, 45 pairs of butterflies were caged in the laboratory between March, 1963 to November, 1963. They were provided flowers of rose (*Rosea indica*), *Lantina Cameron*, and host twigs (*Aristolochia bracteata* L.) as possible sources of nutrition, in addition to cotton wool soaked in glucose solution or different chemicals. The results are given in table 1.

It was found that females lived slightly longer than the males. The food apparently had no significant effect on the longevity of the adults. The males lived from three to 12 days and the females from three to 18 days. The results obtained in the laboratory are in general agreement with those of Ghosh (1914), but the life of adult ranged to considerably longer at Tando Jam.

### SEX RATIO

One batch of 140 and another batch of 16 pupae were collected on

<sup>1</sup> An excellent description of both dry-season and wet-season forms, with colored plates, is given by Moore (1902, *Lepid. Indica*, Vol. V, p. 178; pl. 441-442)—ED.

TABLE 1. FOOD MATERIAL SUPPLIED TO MALES AND FEMALES OF  
*P. aristolochiae*.

Food Supplied	Month 1963	No. of Pairs	Longevity in Days	
			Male	Female
1. Jaggery with host twigs and Lantana flowers	March	6	3-4	0-4
2. Honey with host twigs and Lantana flowers	March	6	3-4	0-4
3. Glucose, Peptone & host twigs	Nov.	9	3-6	3-9
4. Fructose with host twigs	Nov.	12	3-12	9-16
5. Dextrose, host twigs and Lantana	Oct.	6	3-4	4-6
6. Dextrose, host twigs and Rose	Nov.	6	6-9	7-18

November 10 and December 1, 1962 respectively. The pupae were kept in two cages in the laboratory in anticipation of adult emergence. The results are summarized in Table 2.

It can be seen that 22 pupae failed to produce adults. This may be a normal mortality level or the pupae may have been injured in handling. The data show that the proportion of males was slightly higher, the ratio being slightly less than 7 : 5.

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TABLE 2. EMERGENCE OF *P. Aristolochiae* ADULTS FROM FIELD-COLLECTED PUPAE.

Month of Collection	Month of Emergence	Sex	
		Male	Female
November, 1962	February, 1963	7	4
	March	12	14
	April	23	20
	May	29	10
	June	1	2
	July	—	1
	August	1	1
	December, 1962	December, 1962	1
January, 1963		—	1
February		—	—
March		3	—
April		—	1
May		1	1
TOTAL			78

## LITERATURE CITED

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COLOR VARIANT OF *CALLOSAMIA PROMETHEA*  
(SATURNIIDAE) IN NEW YORK

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Distinct color variants exist within many species of insects and it is interesting to detect in nature examples of appearance and increase of such morphs for a particular species in a region where they have not previously been found. For eight successive years (1957-1965), I have collected cocoons of *Callosamia promethea* (Drury) from three counties in southern New York State: Ulster, Westchester, and Nassau counties. Within each of these regions, which are roughly 50 miles apart, cocoons were taken at six different localities, covering an approximate area of 150 square miles per county. Almost invariably collected on *Prunus*, yearly samples of 75 cocoons were obtained for each county giving a total of 225 per year or 1,800 cocoons sampled for the eight-year period. Adult emergence indoors was recorded yearly by county and the sex ratio consistently revealed slightly more males (53-57%) for the eight years in all three counties.

The most interesting result of this survey, and the subject of this paper, was the repeated appearance of an apparently distinct color variant of females from cocoons collected in Ulster County (the most northern of the three) during the final three years. Normal females of