

A contribution to the knowledge of the Papilionidae of Rhodes Island

(Lepidoptera: Papilionidae)

by

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Introduction

In the present work the authors report considerations about distribution, ecology, and systematics of the Papilionidae of Rhodes Island, based on direct observations during a spring field-trip (10.–17.IV.1994) and on works of many authors (FRUHSTORFER, REBEL, TURATI, SEYER, WEISS, KOÇAK, OLIVIER).

Following investigations done on Kriti Papilionidae, the first author visited all the known sites adding some new biotopes; the first intent was searching for the food plants, the preimaginal instars, the places of flight with the feeding plants of adults. The first author, with the cooperation of three colleagues, travelled the island for more than 880 km, visiting almost all localities cited by OLIVIER and trying to look for new biotopes in the southern part of Rhodes; the climatic situation was in syntony with the annual trend although a disturbance in the first days of April has delayed the emergence of populations of *All. cerisy* at higher altitudes in the center of the island, while those at sea level have already vanished; in the intermediate area the flight period was at its peak; generally the butterflies were scarce, only *All. cerisy* and *Maniola telmessia* were found in some numbers. We didn't find any *Archon apollinus* despite the search along the whole of Rhodes; we presume that the flight period had already ended for quite a time because, at least, some worn specimens should have been found; if *apollinus* is present on Rhodes island, it is surely very local and rare.

Allancastria cerisy martini FRUHSTORFER

A localized species, only abundant in a few biotopes, widespread from sea level up to 800 m (fide WEISS); it seems absent from the southern tip of Rhodes.

Systematics

From the examination of the specimens collected (74 ♂♂, 7 ♀♀) and those in collections of the authors and of Prof. ROSE, the populations of Rhodes are similar to the nomotypical ones from Western Turkey (Izmir, Samos Island, Antalya etc.) but have some constant different characters: The colour of the submarginal spots in the hindwings both on upper and underside is yellow in 46 ♂♂, yellow ochre in 2 ♂♂, red in 16 ♂♂ (10 specimens were rejected for their poor condition) with a percentage of about 74% for yellow and 26% for red; in the females, 6 were yellow and only one red, the balance of yellow/red form seems more constant in the males (concording with other authors, e.g. WEISS, OLIVIER) while in the females the yellow form seems more predominant.

We checked the presence/absence of black subdiscal spots in space Cu₂/A₂ of the forewing: in the males (93 specimens) of Rhodes we found, for 95%, the absence of this spot (in this

character *martini* is more similar to *cypriae*); in the specimens from Samos, West Turkey, Antalya (48 specimens) all bear this spot or black dots; in the females from Rhodes, as rightly said by OLIVIER, the size is usually smaller than in the males, unlike other populations, besides the black discal spots in hindwings are, on the average, smaller than those borne by all females from other localities.

Biology

The only foodplant used was *Aristolochia guichardii*, even if *Arist. parvifolia* was sympatric. The first author, near Embonas, observed a female while ovipositioning; it inspected many plants of *Ar. guichardii* but not some very near plants of *Ar. parvifolia*, after a short flight it turned back and put a few eggs under the leaves of a small and young plant sheltered by dry walls and blackberry bushes; during the trip the first emerged larvae were forced to accept *Ar. parvifolia* but they refused it; the same, at home, refused *Ar. rotunda* and *Ar. pallida*, it seems that *martini* could be monophagous; the caterpillars' habitus (colour plate III, fig. 9) bear a distinct yellow pattern unlike that of Samos populations (colour plate III, fig. 10); for these considerations we retain *martini* a good ssp; further investigations will prove, or not, the soundness of our opinion.

Localities of collecting and remarks

Archangelos: 14.IV., 1 ♂ observed near the road between olive trees.

Malonas: 11.IV., 2 ♂♂ seen near wheat fields, 1 ♂, worn, taken.

Masari: 11.IV., 5 ♂♂ taken, 3 seen near olive grove.

Salakos: 11.IV., 3 km before, near cultivated fields with vineyards, 10 ♂♂ taken, many worn; others seen 5.2 km after, in abandoned fields; 1 ♀ taken, 2 ♂♂ seen feeding on *Muscari*.

Lindos: 12.IV., just at the foot of the Akropolis in degraded garrigue, one red ♀ seen feeding on *Nalva*, some ♂♂ seen feeding on *Scabiosa*, 12 ♂♂, some still fresh, taken, 2 yellow little worn ♀♀ taken while feeding on *Scabiosa*.

Lindos: 14.IV., 3 fresh ♂♂ taken together with some just emerged *Maniola telmessia*.

Lindos: 16.IV., no adults seen, only fresh ♂♂ and two ♀♀ of *M. telmessia* taken.

Kalavarda: 13.IV., 1 ♂ seen near the shore.

Embonas: 13.IV., 500m before the village, cultivated terraced fields with olive trees, vineyards, between the plants many *Muscari comosum* was present; just at the base of dry walls many tufts of *Aristolochia guichardii*, together with *Aristolochia parvifolia*; two ochreous-yellow females observed while ovipositing on the smaller and younger leaves of *A. guichardii*, many fresh males seen flying through the terraces, resting on the ground feeding on *Muscari*.

Embonas: 16.IV., some worn males together with just emerged ones.

Moni Artamiti: 13.IV., on degraded fields with olive trees, many worn males and females seen feeding between the grasses on a blue flowered plant (*Anchosa italica*) together with *Iph. podalirius*; some small plants of *Ar. guichardii* sheltered by dry walls.

Kallithea: 14.IV., 1 ♂ seen near the beach, one wandering yellow female taken near the pine-wood before the beach.

Istrios: 14.IV., near the village, degraded fields with tall grasses and rare *Asphodelus*, some worn males seen, 5 fresh taken, some resting on the stalk of grass; some small plants of *Ar. guichardii* without eggs or larvae.

Vatio: 14.IV., in a clearing between cultivated fields with olive trees, 2 ♂♂ seen flying near *Asphodelus aestivus*.

olakkia: 14.IV., one little worn male taken and another seen near corn fields.
indou: 15.IV., one male seen near the road Moni.
ios: 15.IV., 1 ♂ seen near the shore.

ology

mesophilous, heliophilous species, adapted to cultivated fields, degraded maccia, gar-
je; males usually feed rarely. We saw both males and females only on *Muscari comosum*
ar olive, vineyards; only one time females on *Malva* and *Scabiosa* in degraded garrigues
d on *Anchosa italica* in degraded fields with small olive trees.

pilio machaon giganteus ELLER (*gigantea* VERITY)

the contrary to the statement of SEYER, the type locality of this ssp. is known (Dalmatia)
d doesn't represent a high altitude ssp. with only a single brood (it is a mystery from what
deduced this); under this name we can comprise all populations from Dalmatia, Greece,
; Aegean Islands, and the West Coast of Turkey. We completely agree with OLIVIER con-
ering ssp. *ruettimanni* SEYER a synonym of *giganteus* (or *syriacus*) after having seen many
ecimens (comprising paratypes) from Kriti and Rhodes in collections of the authors and of
; Museum "La Specola", Florence. *Syriacus* was described as an infrasubspecific form by
RITY, together with *cypria*, and it had been used in trinomial combination by ELLER (p. 61,
; Rassen von *Papilio machaon*) but both are synonyms of *giganteus* (*gigantea*) ELLER
60, l.c.), a perfectly valid name.

calities of collecting and remarks

eologos: 13.IV., one fresh female seen and taken near a small channel with reed thicket.
hania: 14.IV., 1 ♀ observed near the road flying at ground level, inspecting all fennel plants;
;vpositioned three eggs on the smaller and younger plants in a shady side; another six
vae of the second instar were seen, two of them bore a melanic habitus (colour plate III,
. 8).
idos: 16.IV., one wandering specimen seen.

ology

uncommon species during our field trip, probably the first generation was already at the
d as in *I. podalirius*; not recorded at middle to high altitudes.

iclides podalirius LINNAEUS

e names *creta*, *ornata*, *zancleus* are considered only as seasonal forms; the name *inter-*
ta VERITY, 1911 designates also the populations of the Middle East (Akbes, Syria), not only
nger as stated by OLIVIER; all populations from Greece, the Aegean Islands, and West
rkey can be comprised under a sole ssp. that could be the nominotypical one as stated by
IVIER (syn. *smyrnensis* EIMER); after having checked long series from Italy, Yugoslavia,
eece, and Turkey in the reference collections of the authors, of the Museum "La Specola",
vance, and of Dr. H. F. EISENHAGEN, Marktlothen, only slight and differences occur

constant have been appreciated; the Middle East populations, linked to more xeric biotopes, bear a clear habitus also in the first generation and could be referred to ssp. *virgatus* BUTLER, 1865 (syn. *interjecta* VERITY) as correctly stated by LARSEN.

Localities and remarks

Lindos: 12.IV., 1 ♂, 1 ♀ observed floating near the Akropolis, another male near the shore.

Fanes: 13.IV., one wandering male seen near a fruit tree in an orchard near the beach.

Kastellos: 13.IV., one specimen seen.

Kritinia: 13.IV., one specimen seen flying high.

Moni Artamiti: 13.IV., 4 ♂♂, 2 ♀♀ observed while feeding on a blue flowered plant in a cultivated field with olive trees, together with *cerisy*.

Siana: 13.IV., one wandering male seen.

Mesanagros: 14.IV., one wandering specimen seen together with *G. cleopatra fioni*.

Kolymbia: 16.IV., one wandering male seen.

Ecology

Only a few worn specimens observed, this could be due to the already advanced season of the first generation; more common than *machaon*, many times near gardens, orchards etc., at low altitude, depending on the habitude of the females to lay eggs on fruit trees like *Amygdalus*, *Prunus* etc.; sometimes adults seen feeding on *Scabiosa* and *Muscari*.

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Explanation of colour plate III (p. 199):

Fig. 1: *cerisy*-biotope near Lindos.

Fig. 2: *cerisy* while feeding near Moni Artamiti.

Fig. 3: *Arist. guichardii*.

Fig. 4: *Ar. parvifolia*.

Fig. 5: *cerisy*-♀, near Embonas.

Fig. 6: *cerisy*-♂, yellow form, near Embonas.

Fig. 7: *cerisy*-♂, red form, near Embonas.

Fig. 8: *machaon* caterpillar, melanic habitus.

Fig. 9: *cerisy* caterpillar, near Embonas.

Fig. 10: *cerisy* caterpillar, near Pythagorion, Samos Island.

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