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A contribution to the knowledge of the Papilionidae of Kriti Island

(Lepidoptera, Papilionidae)

by

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Introduction

The authors report the distribution, ecology, and systematics of the Papilionidae of the island of Kriti; based on direct observations during a spring field trip (10.–18.IV.1993) and on the works of many authors (ROSE, BRETHERTON, ROUGEOUT, TRONICEK, REBEL, WEISS, LEESTMANS, OLIVIER).

The first intent was to record the various biotopes together with the foodplants, preimaginal instars, and feeding plants of the adults. The first author, with the cooperation of his wife DONATELLA and his daughter ELISABETTA, travelled for more than 2500 km along the whole of Kriti visiting the three main mountain chains, Lefka Ori, Idi Ori, and Dikti Orif and the northern and southern coast; during their stay the season followed the normal trend; at low altitudes many plants (*Siliquastrum*, *Geranium*, *Mesembryanthemum* etc.) were in blossom, while at middle to high altitudes the season was delayed; despite a dry winter with little precipitation, snow was still present at the highest peaks; the diurnal temperature was, on the average, 21 °C on 10.IV.93 passing to 37 °C on 15.IV.93; a strong wind was usually present causing some difficulties in the observation and capture of the butterflies.

Zerynthia polyxena idaensis EISNER

This subspecies has been described from specimens coming from Ida Mts., it has never been recorded again by many lepidopterists who visited the island in the last years; it is possibly a misunderstanding of the original locality or a wrong label of the specimens, we retain this species in the fauna of Kriti with great doubts. Despite searching in probable biotopes of *polyxena* on the slopes of Ida Mt. no specimens were found.

Allancastris cretica REBEL (*cerisy cretica*)

A localized species, widespread all over the island from sea level to middle mountain range (ROSE, TRONICEK); during the field trip it was present only in the lower situated biotopes. This is a thermophilous, heliophilous and sometimes anemophilous species.

Systematics

From the examination of the collected specimens (58 ♂♂, 11 ♀♀) and of those stored in the collections of the authors, of Prof. ROSE, Mainz and Dr. EITSCHBERGER, Marktleuthen, *All. cretica* seems to be a species, or subspecies, with a quite constant habitus; only slight variations are present in the subdiscal rows of blue and red spots, in some specimens almost disappearing; the tail, one of the peculiar characters, is—more or less—always very short,

only one specimen of the total visioned bore a longer tail (f. *shulzi* Брык) approaching the nominotypical *cerisy*.

Biology

Despite a thorough search all along Kriti, no eggs or larvae were found; the only *Aristolochia* recorded was similar to *Ar. parvifolia* (near Preveli), surprisingly no *Ar. cretica* plants were found in all visited biotopes!

Localities of collecting and remarks

Apostoli (Kasteli, Nomos Irakliou), 11.IV.93: many specimens captured and observed along a secondary road, near a partially dried small river; most of them were worn, they flew together with *Gon. cleopatra*, sometimes very high when a strong wind was blowing; a very strange three-winged female patrolled the track at ground level, probably searching for the foodplant; no *Aristolochia* was found and the specimen seemed not to suffer any difficulties during the flight.

Potamies (Kasteli, Nomos Irakliou), 11.IV.93: two specimens collected and some others observed flying high on the rocks close to the road together with *Gon. cleopatra*.

Kroustas (Kritsa, Nomos Lasithiou), 12.IV.93: a single specimen captured and two seen on a ravine at the road side.

Agios Ioannis (Kalò Chorio, Nomos Lasithiou), 12.IV.93: a typical maccia biotope; along a rough road surrounded by *Arbutus*, *Myrtus communis*, *Pistacia lentiscus* etc., many specimens were flying inside and outside the bush, all males didn't stop patrolling, none was seen feeding on flowers, on the contrary, a single female was observed feeding on a small flowered plant (not stated).

Istro (Nomos Lasithiou), 12.IV.93: just at the beach, three specimens observed flying at middle height using the strong wind that was blowing, they visited the low bush near between the road and the beach, without resting or feeding on flowers.

Gournia (Nomos Lasithiou), 12.IV.93: a single specimen captured while flying in the direction of a strong wind, on the dry bed of a stream.

Mirsini (Ornò Oros, Sitia), 12.IV.93: a single specimen observed along the road.

Kalami (West of Ierapetra), 13.IV.93: some very fresh specimens captured (8 ♂♂), all were flying along a rocky wall just at the road side; some others were observed flying above the bush at the top of the rocky wall, none was seen resting or feeding on flowers, a single very worn *Nym. polychloros* (probably overwintering) was captured in the same biotope.

Pefkos (west of Ierapetra), 13.IV.93: two specimens observed flying high above the maccia.

Ano Vianos (west of Pefkos), 13.IV.93: a single wandering specimen observed.

Vrises (Nomos Chanion), 14.IV.93: a single male seen wandering along the road.

Alikampos (Nomos Chanion), 14.IV.93: some males captured in a mixed biotope (maccia and oliveyard).

Askyfou (Nomos Chanion), 14.IV.93: a montane biotope at about 1000m of altitude; a high plateau similar to Lassithi with low vegetation at the beginning of the season; a very strong wind was blowing, only the first two emerged males of *cretica* were flying on the rocks close to the road, no other species of butterflies were on the wing; a male was run over by a car, it rested on the ground for a few minutes and soon afterwards took a gust and flew away.

Skaloti (Nomos Rethimnis, southern coast), 14.IV.93: a single specimen observed in an oliveyard.

Lefkogia (Nomos Rethimnis), 14.IV.93: two specimens captured and two observed in an oliveyard.

Preveli (Nomos Rethimnis), 14.IV.93: an isolated biotope just near the sea shore; a good density population, many of the captured and observed specimens were worn; males patrolled the maccia and the palm trees, sometimes going on the waves and resting on the sand feeding on *Silene colorata*; females less active resting on the ground near the maccia or feeding on *Lupsia galactides*, *Cirsium maritimum*, and *Anthemis maritima*; during the hot hours females were less active. I found them only on flowers, after 5 p.m. they started to patrol at ground level, probably searching for the foodplant, if disturbed they took the wind and flew away for hundreds of meters. Males were on the wing till 5.30 p.m. No *Aristolochia cretica* plants were found, only a few plants of *Aristolochia parvifolia* were observed without eggs or larvae.

Fournes (Alikianos, Nomos Chanion), 15.IV.93: a female captured in a shady zone between olive trees at 9.15 a.m.; another female and a male observed flying between the olive trees.

Laki (Nomos Chanion), 15.IV.93: near the little village, some males and females observed between the oliveyard flying the strong wind above the trees together with *lph. podalirius*; a male of this species, very worn, without tails, was confused with *cretica* having a similar way of flying; the next visit to the Lefka Orislopes didn't yield any records of *cretica* or other species of butterflies.

Between Gazi and Tilisos (Iraklion), 16.IV.93: two specimens observed flying at the side of the road, above some small spiny bushes and *Asphodelus fistulosus* together with a just emerged male of *Pseud. vicrama*.

Between Tilisos and Gonies (Iraklion), 16.IV.93: many specimens seen and captured near the road together with *Gon. cleopatra*.

Anogia (Oros Idi), 16.IV.93: a just emerged male captured, no others seen nor other species of butterflies observed, the season was at its beginning.

Gonies (Lasithi), 17.IV.93: some males captured and observed near an oliveyard, a female was observed feeding on *Oxalis pes-caprae* in the shade of the trees, no *Aristolochia* was found.

Papilio machaon giganteus ELLER (*gigantea* VERITY)

The population of Kriti has been described by SEYER as ssp. *ruettimanni*; after having examined some paratypes in the collection of the first author and long series from Yugoslavia, Greece, and West Turkey, we consider this population belonging to ssp. *giganteus* according to the statement of TRONICEK and OLIVIER. Despite a thorough search of both adults and caterpillars, only a few records have been reported, it seems scarcer than *lph. podalirius*, to the contrary of what was stated by REBEL.

Localities of collecting and remarks

Apostoli (Kasteli, Nomos Irakliou), 11.IV.93: a single specimen flying high above the trees.

Pigi (Kasteli, Nomos Irakliou), 11.IV.93: a single specimen seen in an orchard, maybe a female inspecting some plants of fennel and carrot.

Istro (Nomos Lasithiou), 12.IV.93: a single wandering male observed near the shore together with *cretica* and *podalirius*.

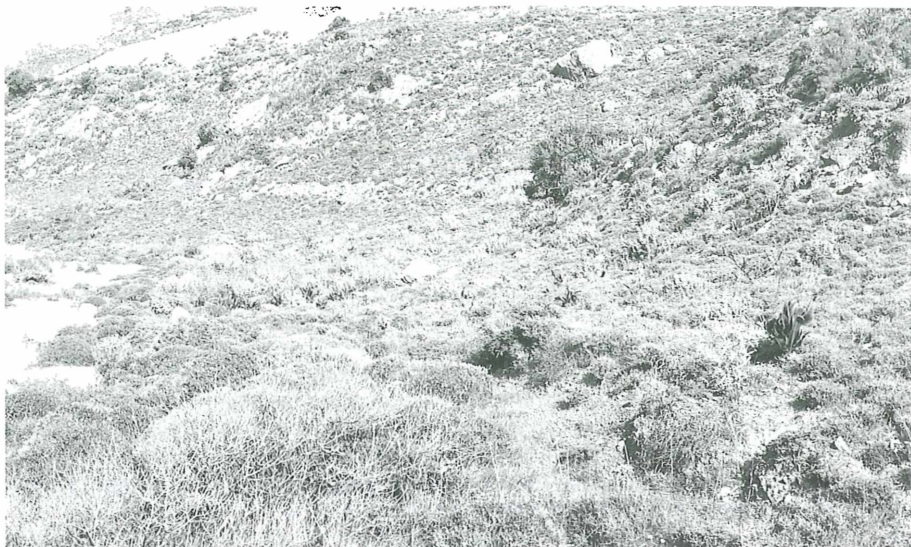


Fig. 1: Biotope of *Allancastris cretica* near Preveli.

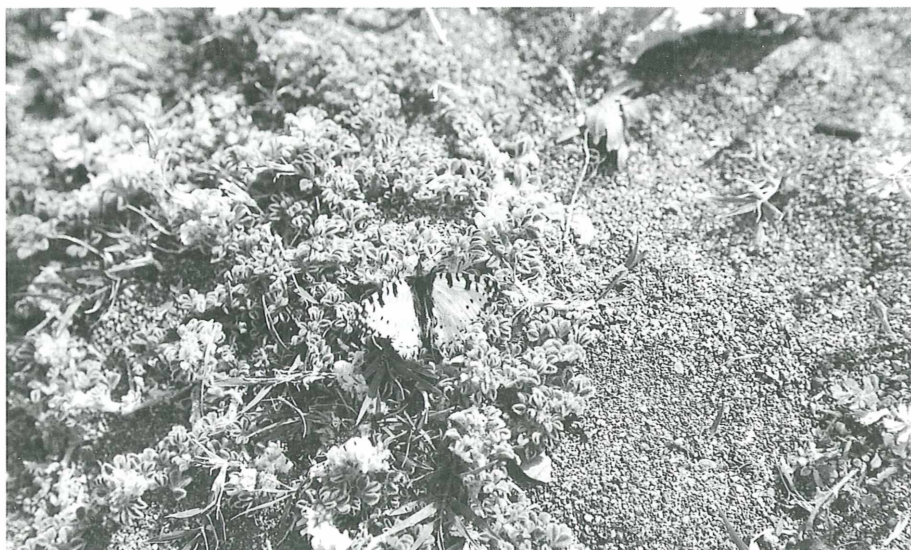


Fig. 2: *Allancastris cretica* resting on the shore near Preveli.



Fig. 3: *Lupsia galactides*, a feeding plant for adults of *All.ancastriacretica*.



Fig. 4: *Anchosa italica*, a feeding plant for adults of *Papilio machaon* and *Iphiclides podalirius*.

Skinias (Nomos Irakliou, southern coast), 13.IV.93: a female observed while feeding on a blue flowered plant (*Anchosa italica*) near the road.

Iraklion, 16.IV.93: a female observed while floating near the Archeological Museum at 10.30 a. m.

Iraklion, 17.IV.93: a specimen seen flying fast near the port.

Iphiclides podalirius LINNAEUS

The population of Kriti has been indicated with different names, i. e. *creta*, *smyrnensis*, *ornata*, *zancleus*; after having examined many specimens from south Italy, Continental Greece, Rhodes Island, Egina Island, Kriti Island, and West Turkey, it seems to us that *podalirius* of Kriti could belong to the nominotypical subspecies.

It is a widespead species, sometimes abundant, above all at low altitude; it is more frequent near orchards, gardens etc. where females usually lay eggs on cultivated fruit trees (*Amygdalus*, *Prunus*, *Pyrus* etc.); most of the specimens were worn, pointing out the early flight period of *podalirius*, at least in 1993; it seems that 3 generations are present.

Localities of collecting and remarks

Dikteon Antron (Lasithi plateau), 11.IV.93: a single specimen observed flying near a tree at the entrance of the cave.

Kritsa (Nomos Lasithiou), 12.IV.93: a male seen near an oliveyard feeding on *Asphodelus fistulosus*.

Istro (Nomos Lasithiou), 12.IV.93: two specimens observed flying near the shore.

Potami (Ierapetra, south coast), 13.IV.93: a single specimen wandering along the road.

Kalami (west of Ierapetra), 13.IV.93: a fresh male captured while flying together with *All. cretica*.

Phaistos (south coast, Kalivianis), 13.IV.93: a male captured and another three observed flying near the Minoan Palace.

Chora Sfakion (south coast, Nomos Chanion), 14.IV.93: a male seen wandering near the port.

Preveli (Nomos Rethimnis), 14.IV.93: a male captured while feeding on a blue flowered plant (*Anchosa italica*).

Alikianos (Nomos Chanion), 15.IV.93: a single wandering male observed.

Laki (Nomos Chanion), 15.IV.93: a male captured and another two seen flying near to an oliveyard.

Tilisos (Nomos Irakliou), 16.IV.93: a male and a female observed while feeding on a blue flowered plant (*Anchosa italica*) (as in the locality of Preveli).

Gonies (Nomos Lasithiou), 17.IV.93: two females observed while floating near to some trees of *Amygdalus*; one female layed two eggs on two different leaves, the other inspected many leaves, then flew away returning after some minutes to lay a single egg.

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