## Additional Notes on the Lepidopterous Fauna of San Cataldo (Southern Italy).

## Notes from a collecting trip in the spring and early summer of 1931.

## By

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In Entom. Medd. Vol. XVI 1930 p. 425—432 I published the results of my collecting at San Cataldo near Amalfi in Southern Italy in August-September 1928. These results have encouraged me to investigate the spring fauna of that region, and renewed grants from the institutions "San Cataldos Venner" and "Julius Skrikes Stiftelse" enabled me to stay for a month — from mid-May to mid-June 1931 — in San Cataldo.

For these reiterated grants I beg the said institutions to receive my best thanks.

This collecting in May—June gave a somewhat greater yield than that made in the late summer. This time I could hand over about 3200 specimens of arthropods to the Zoological Museum of the University of Copenhagen.

As regards the Lepidoptera, the number of species is greater than in 1928, and more and more species appeared towards mid-June; this time too, I had to be content to catch what could be taken with a catcher in the day-time; the sugaring did not give any results, and, peculiarly enough, illumination of a distended sheet by means of an acetylen hand-lantern in the night-time did not show any yield either. The only thing attracted by the illuminated sheet was — an *Oryctes*-beetle. I got the impression that all insect life disappeared together with the sun. Perhaps the mountain slope was too dry, perhaps the bats interfered; only the numerous fire-flies were seen moving about, sparkling, unaffected by the bats. In the list below the species are arranged in conformity to Spuler: Die Schmetterlinge Europas.

Papilio podalirius L. Only one — freshly emerged — specimen caught June 9th on a glade in the chestnut wood at a height of 800 m, most probably a precursor of the 2nd brood. I sought in vain for the caterpillar during my whole stay; possibly the species then was in the pupal instar of the 2nd brood.

Papilio machaon L. Freshly hatched specimens were rather often met with in May, rubbed and more darkish coloured specimens in June, but it was far from being as numerous as in September 1928. I took a full-grown larva on June 9th; it was distinctly differing from Danish specimens in being of a light bluish green, and missing the black spots; it pupated June 15th (the day of my departure), but it did not succeed in emerging.

Pieris brassicae L. A few rubbed specimens in May. Frequent — freshly hatched specimens — from June 7th.

Pieris rapae L. Common during my whole stay.

Pieris ergane H. G.? 7 specimens from May 23rd to June 6th. See the remarks in Entom. Medd. XVI p. 426; possibly they may be ergane ab.  $\bigcirc$  magnimaculata Rostagna (after Seitz).

Pieris napi L. Only a single specimen, a little male (ab. nana Seitz), on June 4th.

Pieris daplidice L. Did not occur up in the mountains; a few specimens down at Amalfi, on May 29th and June 11th.

Euchloë cardamines L. Rather frequent in May, last observation May 25th.

Colias hyale L. A single of June 10th.

Colias edusa F. A few rubbed specimens in May. After a shower on May 31st freshly hatched specimens appeared, thereafter rather frequent and freshly emerged specimens only. A fullgrown caterpillar caught on May 24th.

Colias edusa F.  $\bigcirc$  ab. helice Hb. 2 specimens caught May 31st and June 9th.

Gonepteryx rhamni L. One rubbed  $\circ$  June 11th.

Gonepteryx cleopatra L. Rather common, freshly hatched specimens in June.

Leptidia sinapis L. In copse wood, common in May, single specimens in June.

Leptidia sinapis L. gen. aest. diniensis B. Freshly hatched specimens June 6th, 11th and 13th.

Charaxes iasius L. This fine butterfly was observed flying mear the outskirts of the chestnut wood above San Cataldo (800 -900 m) on June 14th.

Limenitis camilla Schiff. Rubbed June 5th; the specimen was considerably bigger than the specimens taken in August 1928 of the 2nd generation.

Vanessa io L. 1 specimen June 12th.

Polygonia egea Ch. Only occurred in the valleys; 2 specimens at Majori on May 25th and 3 specimens at Atrani and Amalfi on June 11th.

Pyrameis atalanta L. Rather commen on the slope in May —June, often swarming together with the following.

Pyrameis cardui L. Rather common, freshly hatched specimens from June 8th.

Melitaea didyma O. Larva frequent along paths and in copse wood in May. Imago from June 4th.

Melitaea athalia Rott. Imagines abundant from June 11th. Larva common in copse wood May—June; some specimens hatched in Copenhagen from June 20th to 24th.

Melanargia galatea L. Appeared for the first time June 4th, and was rather common mid-June in copse wood round San Cataldo.

Melanargia arge Sulz. This endemic Italian butterfly was common on the slopes round San Cataldo, even in the garden of the monastery it was observed. I saw it for the first time on May 22nd and it became more frequent day by day. After June 9th it decreased in number, and June 14th mostly rubbed specimens were found.

Satyrus statilinus Hfn. (v. allionia F.). A full-grown larva under a stone on May 26th.

Satvrus semele L. Appeared already June 12th  $(1 \ Q)$ .

Epinephele jurtina L.  $\bigcirc \bigcirc$  had appeared when I arrived on May 15th and were frequent the whole time.  $\bigcirc \bigcirc$  (ab. hispulla Hb.) from the beginning of June.

Epinephele ida Esp. Some few specimens (captured 6) on June 11th and 12th. Only  $\vec{\bigcirc}\vec{\bigcirc}$ .

Coenonympha arcania L. In the chestnut wood and on uncultivated slope. 7 specimens from June 9th to 14th.

Coenonympha pamphilus L. gen. aest. lyllus Esp. Very common the whole time. In a few specimens, especially females, the dark edge was very faint.

Pararge egeria L. Rather common in copse wood, last time June 12th, rubbed. Pararge megaera L. Common during the whole time.

Pararge maera L. Rather common during the whole time. Thecla ilicis Esp. Larvae on young oaks May 17th, hatched June 9th. Imagines, especially  $\vec{\bigcirc} \vec{\bigcirc}$ , abundant on the flowers (milfoil flowers) in copse wood from June 6th.

Callophrys rubi L. Several specimens May 27th—June 12th, as a rule rubbed.

Chrysophanus alciphron Rott. Abundant from June 7th.

Chrysophanus phlaeas L. The typical form, occasionally, but not common.

Lycaena argus L. (v. corsica Bell?). Big specimens, the black edge very broad, underside of a light bluish-grey. By comparison with material from the Zoological Museum found to be very much like *L. cleobis* Brem.  $2 \stackrel{\frown}{\bigcirc} \stackrel{\frown}{\bigcirc}$  June 10th and 14th.

Lycaena baton Brgstr. A fresh specimen May 19th. A rubbed specimen June 6th.

Lycaena astrarche Brgstr. Common during the whole time.

Lycaena eumedon Esp. 6 specimens from June 9th to 14th.

Lycaena eumedon Esp. ab. privata Stgr. 2 specimens of this rare aberration on June 14th.

Lycaena eros O. 2 ぐぐ May 22nd and 24th.

Lycaena icarus Rott. Very common. Two  $\bigcirc \bigcirc \bigcirc$  with bluish scales; proximal eye-spots absent on the underside of the forewings (as in *L. astrarche*).

Lycaena bellargus Rott. Common during the whole time.

Lycaena sebrus B. This Blue of the Alps was abundant in the mountains near San Cataldo from May 17th to June 10th.

Lycaena minima Fuessl. Very common in May; rubbed specimens in June.

Lycaena semiargus Rott. Abundant from June 4th.

Lycaena cyllarus Rott. Fresh specimens in May; rubbed specimens in the beginning of June.

Cyaniris argiolus L. A male on the 11th and a female on the 13th of June.

Adopaea actaeon Esp. 1 specimen June 12th.

Augiades sylvanus Esp. Single specimens and not common, from June 6th.

Carcharodus lavaterae Esp. Some specimens (one specimen captured) swarming on a glade in copse wood at Minuto June 6th.

Pygrus orbifer Hb. Some specimens from May 28th to-June 14th.

Pygrus sao Hb. Abundant from May 21st to June 14th.

Scelothrix carthami Hb. 4 specimens from May 27th to-June 9th.

Scelothrix alveus Hb. Abundant from May 27th to June 14th.-

Scelothrix malvae L. 5 specimens from May 26th to June 9th.

Thanaos tages L. 3 specimens at the Ravello brook May 24th and June 9th.

Macroglossa stellatarum L. Single specimens May 26th, June 11th and 13th. A half-grown larva June 10th.

Lasiocampa trifolii Esp. Half-grown larvae in May, fullgrown larvae in June.

Saturnia pyri Schiff. 2 specimens,  $\vec{O}$  and  $\vec{Q}$ , May 31st. (The species is supposed to be abundant at San Cataldo. In the beginning of May 1926 the late Docent R. H. Stamm of Copenhagen captured a freshly hatched female in the vicinity of the monastery. The animal was kept living, and in the evening a considerable number of males came flying through the open windows and doors of the monastery, attracted by the captive female).

Saturnia pavonia L. Larvae in considerable numbers, small — gregarious — on blackberries etc. in May, half-grown, singly, in June. I took with me a number of living larvae to Copenhagen, which pupated in July, but only one, a female, was hatched on February 12th 1932. A closer investigation on January 30th 1933 showed that a pupa was still alive during the 2nd hibernation; Imago emerged February 28th 1933 ( $\bigcirc$ ).

Lymantria dispar L. Small larvae numerous in May on various trees and bushes (oak, thorn etc.) full-grown in June. A series af 33 and 93 hatched from July 9th to July 15th in Copenhagen.

(Mamestra brassicae L. 1 specimen in Rome May 14th).

Mamestra serena F. 1 full-grown larva captured June 13th.

Miselia oxyacanthae L. Full-grown larvae on thorn on the high plateau at Porta di Canale, 1200 m altitude, on May 20th.

Dryobota protea Bkh. 3 full-grown larvae on young oaks May 17th.

Aporophyla nigra Hw. One larva captured in June.

Bryophila muralis Forst. In rainy weather I captured 4 larvae on a lichen-grown wall on May 18th.

Oporima croceago F. A full-grown larva in May. The larva enclosed itself in the cocoon in June, but did not pupate till September (in Copenhagen). Imago emerged October 25th.

Cucullia blattariae Esp. Larvae abundant on brown-wort on uncultivated mountain slopes from the beginning of June. As I could not procure the host plant in Copenhagen, I only took a few living specimens with me, which were about to pupate on June 15th. 2 Imagines were hatched March 6th and 13th 1932.

Toxocampa sp. A half-grown larva captured June 8th has not been determined as yet.

Heliothis dipsacea L. Imagines on flowers May 15th and 16th and June 4th.

Heliothis peltigera Schiff. Captured one specimen swarming in the sun June 7th.

Acontia luctuosa Esp. 4 specimens on Monte di Pontone, swarming on flowers May 23rd.

Prothymia viridaria Cl. Seen on the wing on uncultivated mountain slopes. Captured 2 specimens June 5th and 9th.

Plusia gamma L. Only singly; captured 5 specimens from May 23rd to June 8th.

Euclidia mi Cl. One specimen June 10th.

Euclidia glyphica L. 5 specimens June 4th to 14th.

Hypena obsitalis Hb. Common during the whole time, but not as numerous as in August-September 1928.

Aplasta ononaria Fuessl. 2 specimens on Monte di Pontone June 4th.

Pseudoterpna coronillaria Hb. On June 9th I startled a female on the mountain slope. From larva captured in May a male emerged on June 15th.

Euchloris smaragdaria F. 6 specimens from May 28th to June 10th.

Eucrostes indigenata Vill. 3 specimens June 7th and 8th. Acidalia virgularia Hb. ab. australis Z. Common during the whole time.

Acidalia herbariata F. One specimen June 15th.

Acidalia felicata Hb. Common during the whole time.

Acidalia degeneraria Hb. 3 specimens May 23rd to June 8th. Acidalia luridata Z. 1 specimen June 5th.

Acidalia strigillaria Hb. May 18th and 30th, June 3rd.

Acidalia imitaria Hb. In the garden of San Cataldo, during the whole time.

Acidalia ornata Sc. May 23rd, June 5th and 6th.

Rhodostrophia calabraria Z. From May 23rd, and particularly in June, very common on uncultivated mountain slopes.

Anaitis plagiata L. One specimen in the garden of San Cataldo, another specimen in the near vicinity of Santa Catarina on June 4th.

Larentia fluctuata L. A single specimen May 27th.

Larentia galiata Hb. Some specimens at the lamp-posts on the Scala-road in day-time on May 15th, 17th and 23rd.

Larentia flavofasciata Thnbg. 1 specimen May 30th. Larentia bilineata L. Common during the whole time. Tephroclystia oblongata Thnbg. 1 specimen May 28th. Abraxas adustata Sch. 1 specimen May 26th. Deilinea pusaria L. 4 specimens from May 30th to June 14th.

Ennomos erosaria Hb. Of this species which otherwise has its flying-season in the after-summer, from end July till September, I caught a female on oak June 10th.

Boarmia gemmaria Brahm. I caught a larva (on oak?) on May 17th, imago, a female, emerged June 10th. I also captured a male May 21st and a female June 5th.

Gnophos respersaria Hb. 1 specimen June 6th.

Gnophos mucidaria Hb. 2 specimens May 28th and June 4th. Thamnonoma sparsaria Hb. According to Seitz a rare species which has only been met with in North- and Mid-Italy. At San Cataldo in South-Italy it flew, when startled, among young oaks in a locality, where e. g. *Thecla ilicis* Esp. was found. I caught 2 specimens, a female May 17th and a male May 19th.

Phasiane clathrata L. Singly in the outskirts of the chestnut wood. Captured May 28th and June 7th.

Scodiona conspersaria F. A male on May 27th and a female June 12th.

Percoma strigillaria Hb. From May 27th common on the slopes.

Chloëphora bicolorana Fuessl. A full-grown larva on oak May 17th.

Syntomis phegea L. Larvae abundant on different low plants or crawling on the ground along mountain paths. A number of Imagines hatched in Copenhagen from June 26th to July 4th.

Dysauxes punctata F. One specimen June 6th.

Spilosoma menthastri Esp. 3 specimens at the lamp-posts in the day-time May 15th to 29th.

Arctia villica L. One larva in May, Imago emerged June 11th. On and from May 23rd I now and then startled Imagines on slopes and in the chestnut wood. I captured 3 specimens.

Coscinia cribrum L. Larvae abundant in May. Imagines from May 29th. I captured 4 specimens all of the var. candida Cyr.

Lithosia caniola Hb. The larva on a wall covered with lichens on May 18th in rainy weather (together with larvae of *Bryophila muralis* Forst.). Imagines, 3 specimens, from May 25th. Anthrocera filipendulae L. One specimen June 7th. I caught some Anthrocera-larvae May 28th and 30th and June 9th. By a comparison with Danish material they seemed to be *filipendulae* larvae.

Anthrocera transalpina Esp. The first time May 28th. From the beginning of June rather common in and near woods.

Anthrocera transalpina Esp. var. sorrentina Stgr. A Danish lady, Miss A. Jøker, brought me one specimen from Sorrento on May 30th.

Anthrocera transalpina Esp. var. calabrica Calb. One specimen which I caught June 11th in the Minuto wood below San Cataldo presumably belongs to this species. The animal is very dark, the hind wings mainly black and the forewings with 5 smallspots only. Ressembles A. stoechadis Bkh.

Anthrocera oxytropis Boisd. The most common of the *Anthrocera* species. It was on the wing from May 17th, was abundant May 28th, but decreased perceptibly in numbers from June 8th. On June 13th mostly rubbed specimens were found.

Rhagades turatii Bartel. From May 26th more and more common, but not numerous. According to Spuler the larva is unknown. On June 1st I caught a *Rhagades* larva, the appearance of which does not agree with the *Rhagades* larvae described by Spuler. It may be the larva of *turatii*.

Rhagades cognata H. S.? (The pectinate antennae of the male with very long rami) May 24th and June 10th.

Pachytelia unicolor Hfn. A number of cases on the walls etc. along the mountain paths towards the end of May. 2 males emerged June 3rd and June 10th.

Fumea crassiorella Brd. Numerous cases. Some females hatched June 3rd, 10th and 22nd.

Fumea casta Pall. A single case May 19th.

Aphomia sociella L. At light May 29th.

Crambus craterellus Sc. Common from May 30th.

Homoeosoma sinuellum T. May 23rd, 28th and 30th.

Ancylosis cinnamomella Dup. June 3rd.

Pempelia ornatella Schiff. Singly in June.

Zophodia convolutella Hb. 2 specimens May 27th.

Aglossa pinguinalis L. June 12th and 15th.

Stenia punctalis Schiff. Common from May 28th in the darkbrown form. 2 further specimens of *Stenia* caught June 9th and 10th are possibly a lighter form of *Stenia punctalis*.

Psammotis hyalinalis Hb. 1 specimen June 6th. Hellula undalis F. 1 specimen June 14th. Nomophila noctuella Schiff. Common from May 23rd, but not numerous.

Phlyctaenodes palealis Schiff. 1 specimen in June.

Pionea crocealis Hb. 1 specimen May 30th.

Pionea ferrugalis Hb. Common June 3rd and 4th.

Pionea forficalis L. Common in the garden of San Cataldo during the whole time.

Pionea numeralis Hb. Likewise common in the garden of the monastery.

Pyrausta flavalis Schiff. 2 specimens June 14th on glades in the chestnut wood.

Pyrausta nubilalis Hb. 1 specimen June 7th.

Pyrausta cespitalis Schiff. Very common during the whole time everywhere on the slopes.

**Pyrausta porphyralis** Schiff. 1 specimen on the wing in bright sunshine on a slope covered with shrub June 11th.

Pyrausta purpuralis L. 1 specimen May 28th.

Pyrausta aurata Sc. June 4th and 10th.

Pyrausta funebris Strøm. Swarming in bright sunshine. Caught June 6th and 11th and observed June 14th.

Dyspessa ulula Bkh. A single female taken on the wing in the sunshine in the Minuto wood May 30th.

Zeuzera pyrina L. 1  $\bigcirc$  from Sorrento May 30th (Miss Jøker).

Trochilium vespiforme L.  $\mathcal{S}$  and  $\mathcal{Q}$  in copula June 12th.