

XIX. *The Butterflies of Aragon.* By MRS. M. DE LA B. NICHOLL. Communicated by SIR GEORGE F. HAMPSON, Bart., B.A.

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So few English collectors are acquainted with the Lepidoptera of the uplands of Aragon, that a short account of an excursion in that district, during June and July last, may be interesting.

The ancient kingdoms of Castile and Aragon are bounded by a mass of rocky mountains, in which three large rivers rise, viz., the Tagus, flowing westwards to the Atlantic, and the Jucar and the Guadalaviar, flowing eastwards and southwards to the Mediterranean. From the northern slopes of the Sierra de Albarracin the streams run northwards and join the distant Ebro. It will, therefore, be apparent that these mountains form one of the principal watersheds of Eastern Spain; they extend for about seventy miles from Cuenca on the west, to Teruel on the east. Both of these towns are about 3000 feet above the sea, and all the intervening country is considerably above that level, the mountains averaging about 5000 feet, and attaining a height of nearly 6000 feet on the higher summits. Albarracin is in the midst of these sierras, but much nearer to Teruel than to Cuenca, from which it is separated by about sixty miles of forest and mountain—a beautiful and interesting country, well wooded, thinly inhabited, with barren mountains, smiling valleys, and wide grassy hollows, all rather less known to the Englishman than Japan or Newfoundland.

There is much variety of geological formation; the higher ridges are mostly mountain limestone or lias, and the main valleys are cut through some kind of sandstone or softer rock. There is one large mass of porphyritic formation, north of Albarracin, extending about ten miles

from east to west, and six or seven from north to south, a beautiful wild country, well watered, well wooded, and well pastured. Albarracin itself is built on a precipitous lias rock, overhanging the Guadalaviar, which flows for many miles through lias gorges—which we found very good ground for insects.

Arriving at Cuenca with Mr. E. Witty, of Barcelona, on the 14th of June, we presented our introductions to Señor Don Ventura Prosper, Professor at the Cuenca University, and were most kindly received by him. He gave us much useful information, and also an introduction to Canon Zapater, of Albarracin, which afterwards proved most valuable to us, as the Canon is a well known entomologist, and the original discoverer of *Erebia zapateri* and *Satyrus priouri* and *uhagoni*. We stayed at Cuenca for a week, but were unfortunately too late for *Zegris eupheme*, which must have been just over. It is common at Cuenca in May, and is taken more or less abundantly throughout the Albarracin country. We then made an excursion of two days to Lago d'Una, a charming little lake about eighteen miles up the Jucar valley, and a good place for butterflies. We got *Thecla roboris* there, *A. hecate*, *A. ino*, and many other insects. Returning to Cuenca, we started thence on mules for Albarracin, first following the Jucar right to its source, then crossing the Upper Tagus valley, and striking the source of the Guadalaviar, we descended that river to Albarracin, where we arrived on June 30th, after four days of most enjoyable travelling. We took, on our way, *P. apollo*, just out; *Erebia evias*, in very bad order; *Lycæna arion*, scarce and in bad order; *Melanargia ines*, *M. iapygia*, and *M. lachesis*, just out, and *Cœnonympha iphioides*, flying over a wet field in the Tagus valley, in some numbers. This was described by Dr. Staudinger as a variety of *C. iphis*, W.V. (= *amyntas*, Poda, which is the older name); it differs, however, from *C. amyntas* in having the ocelli on the underside of the hindwing evenly disposed, whilst in that species the ocellus above vein 3 is displaced inwards; also there are no white blotches on the inner side of the series of ocelli; these differences seem perfectly constant, and there can be little doubt that it is a distinct species. It is also closely allied to *C. leander*, Esp., from Russia and Hungary, but differs from it in having an orange terminal line on the underside of the forewing, and in having a silvery line on

the inner side of the terminal orange line of the hind-wing instead of on the outer side.

At Albarracin we were kindly welcomed by Canon Zapater, who gave us a copy of his valuable Catalogue of the Lepidoptera of the Province of Teruel. This was of infinite use to us; it supplied us with much local information, and we found it entirely reliable in every respect. The Canon also told us that *Erebia zapateri* was not to be looked for before July 21st, at the earliest—so we had three weeks before us in which to explore the country. We first went to Bronchales, in the porphyritic mountains north of Albarracin, then eastwards to Teruel, and on our road there (in the hot gorge of the Guadalaviar) we took *Satyrus priouri* for the first time. Later on, we found this handsome butterfly very plentiful in these lias valleys, and we were lucky enough to get several specimens of the rare female variety *uhagoni*. We observed that this variety appeared to be singularly attractive to the males; in fact the crowd around *uhagoni* several times attracted our notice to her. And on one occasion she escaped, leaving three of her admirers in the net!

From Teruel we went southwards to the Sierra Camarena, and ascended the Javalembre, 6000 feet high, where we got plenty of *E. evias*, but in very bad condition. We also took a fine *P. apollo*, with orange spots. Returning to Teruel by Villeda, we took plenty of *S. fidia* and *S. actæa*, but no *S. priouri* till we got back to the lias above Teruel. *P. podalirius*, var. *feisthameli* was very common around Teruel, and we had a very good day along the Albarracin Road, getting *Lycæna admetus*, *L. telicanus*, and *Syrichthus proto* besides the *S. priouri*, which swarmed. Then we tried Bronchales and Noguera (in the porphyritic group of mountains) for *Erebia zapateri*, but in vain. We could only find an isolated specimen here and there, though we quartered the district as carefully as pointers do the turnips in September. We began to despair of it, and our time was running out, when, at last, on the 29th of July, it appeared in numbers, and we took over a hundred specimens in three days. It is the most beautiful of *Erebias*, and rather peculiar in its habits, flying slowly and lazily about the bushes of grouseberry (*Arctostaphylos uva-ursi*), which form the

undergrowth of the thin pine woods, and it is very shy of windy or cloudy weather. If by any chance it gets blown away from the grouseberry bushes, it seems completely lost and will not settle anywhere, letting the wind carry it at pleasure. It is then very hard to catch. I append a description of this little-known insect.

Expanse, 1.50 to 1.75. Upper side of all the wings dark reddish-brown, with a distinct blue gloss. F. W. with broad triangular ante-marginal band, broad at costa and tapering to a point at inner margin, containing two small white-pupilled spots near the apex. This ante-marginal band is sometimes continued half-way across the hindwings; but generally the hindwings have no yellow markings. Underside of forewings brown, much tinged with red, ante-marginal band and spots as above. Underside of hindwings rather paler brown, with faint grey ante-marginal band edging the wing rather evenly. No eye spots on hindwings.

Another scarce *Erebia* is common in the Albarracin country, viz.: *E. epistygne*, which appears in abundance on the higher pastures in April and May, directly the snow melts. The only other *Erebia* to be had is *E. evias*, which appears in May or June, and is not very plentiful. The *Satyrus* family are well represented, and we took eight species besides var. *uhagoni*. *S. priouri* is probably a *lias* insect, as we never took it on any other formation. *P. apollo* is very common on all the higher mountains, and shows much variation; some specimens have the spots white, some more or less orange, and some ♀ specimens are very dark, with three conspicuous red spots on the upper side of the forewings. *L. baetica* swarms everywhere; *L. telicanus* is not so abundant. *L. admetus* is not scarce in the Guadalaviar valley, and *L. amandus* is to be had in the porphyritic country, whilst *L. arion* is very scarce and very early, but generally distributed over the higher valleys. *Thecla roboris* is plentiful on the Cuenca side, but rare about Albarracin. *Argynnis hecate* and *A. pandora* are common everywhere. *A. chlorodippe* replaces the typical form of *A. adippe* all through Aragon. *Melitæa deione* is to be had, but not very commonly, the same remark applying to *M. trivia*. *M. aurinia*, var. *desputainii*, is common, but was nearly over. The Melanargias are well represented. *M. lachesis* swarms, so does *M. iapygia*, and its variety

cleanthæ is to be had. *M. ines* we only took near Cuenca—never on the Teruel side of the watershed. Of the genus *Syrichthus*, *S. proto* is common in the valleys, *S. carthami* in the mountains, and a very well-marked variety of *S. alveus*, probably var. *cirsii*, is taken in plenty about Noguera. It occurred to us that the country had been far more thoroughly worked around Cuenca and Albarracin, and in the Noguera and Bronchales group of mountains, than around Tragacete, the Muela de San Juan, and Lago d'Una. Professor Max Korb spent much time at Bronchales during the summer of 1896, searching for the larva of the rare *Saturnia isabella*, and he has probably taken everything worthy of notice in those forests. He has also hunted the country around Cuenca pretty thoroughly, and the whole Albarracin district has been constantly worked by Canon Zapater for many years past. But from Tragacete, a large prosperous village within an hour's walk of the source of the Jucar, and within reach of the Tagus valley, there is a great extent of mountain and forest country, many boggy uplands and hot gorges, which deserve to be explored. Travelling is easy on mules, the people are remarkably honest, civil, and hospitable, and the climate delightful.

There are excellent inns at Cuenca, Albarracin, and Teruel; no guide books are of much use; and no good maps are to be had. The mountain inns are no worse than they are in other countries, and the food decidedly better than in out of the way parts of Italy or Ireland.

I append a list of the species of Rhopalocera to be had in the district—partly derived from Canon Zapater's Catalogue, those recorded for the first time being marked * :—

Papilio sinon, Poda (*podalirius*, L.); also var. *feisthameli*, Dup. (common); *P. machaon*, L.

Thais rumina, L., scarce—we only took one.

Parnassius apollo, L., common—and pretty varieties to be had.

Aporia crataegi, L., common.

Pieris brassicæ, L., common; *P. rapæ*, L.; *P. napi*, L.; *P. daphidice*, L.

Anthocharis belemia, Esp., very rare; *A. belia*, Cram.,

rare; and var. *ausonia*, Hübn., not uncommon; *A. cardamines*, L.; and *A. euphenoides*, Staud., common.

Zegris eupheme, Esp., tolerably plentiful in some years, always common about Cuenca.

Leucophasia sinapis, L., not very common.

Colias hyale, L.; *C. edusa*, Fabr., and var. *helice*, Hübn., very common.

Rhodocera rhamni, L.; *R. cleopatra*, L.—very common.

Thecla spini, Schiff., and *T. ilicis*, Esp., common; *T. roboris*, Esp., not so common; *T. rubi*, L., very plentiful.

Thestor ballus, Fabr., common at Cuenca.

Polyommatus alciphron, Rott., var. *gordius*, Sulz., and *P. phlæas*, L., very common; var. *eleus*, Fabr., also common.

Lycæna boetica, L., in swarms; *L. telicanus*, Lang, rarer; *L. argus*, L., and var. *hypochiona*, Ramb., common; *L. zephyrus*, Friv., rare (we caught none, being too late for it); *L. orion*, Pall., rare; *L. baton*, Bergst., rather common; *L. lysimon*, Hübn., very rare; *L. astrarche*, Bergst., and vars. *æstiva* and *montana*, common; *L. icarus*, Rott., common; *L. escheri*, Hübn., *L. bellargus*, Rott., *L. corydon*, Poda, *L. argiolus*, L., *L. sebrus*, Boisd., all common; *L. corydon*, Poda, var. *albicans*, Herr.-Schäff., var. *syngrapha*, Boisd., and var. *hispana*, Herr.-Schäff., rare; *L. hylas*, Esp., and var. *nivescens*, Kef., not very common; *L. admetus*, Esp., not very common; *L. damon*, Schiff., rare; *L. minima*, Fuessly, rare; *L. semiargus*, Rott., not common; *L. cyllarus*, Rott., rare; *L. melanops*, Boisd., very rare; *L. arion*, L., very rare; *L. amandus*, Schneid., local, probably recorded in Zapater's list as *L. iolas*, Ochs.

Limenitis camilla, Schiff., common.

Vanessa C.-album, L., not rare; *V. polychloros*, L., common; *V. urticæ*, L., *V. atalanta*, L., and *V. cardui*, L., very common; *V. io*, L., scarce; **V. egea*, Cram., very rare.

Melitæa aurinia, Rott., the typical form replaced by var. *desfontainii*, Godt; *M. phœbe*, Knoch., *M. didyma*, Ochs., and *M. parthenie*, Borkh., very common; *M. trivia*, Schiff., and *M. deione*, Hübn., not very common; *M. athalia*, Rott., very rare.

Argynnis lathonia, L., *A. adippe*, L., var. *chlorodippe*, Herr.-Schäff. (which replaces the type), *A. aglaia*, L., *A*

pandora, Schiff., all common; *A. hecale*, Esp., *A. ino*, Esp., and *A. paphia*, L., all tolerably common.

Melanargia lachesis, Hübn., *M. iapygia*, Cyr., and var. *cleante*, Boisd., *M. ines*, Hoffsgg., all common; **M. galathea*, L., very rare.

Erebia evias, Godt., and *E. epistygne*, Hübn., tolerably common; *E. zapateri*, Oberth., common in the Sierra Albarracin only.

Satyrus alcyone, Schiff., *S. circe*, Fabr., *S. briseis*, L., *S. priouri*, Pierr., *S. semele*, L., *S. statilius*, Hufn., *S. fidia*, L., and *S. actæa*, Esp., all common; *S. arethusa*, S. V., and *S. priouri*, var. *uhagoni*, Oberth., rare.

Pararge meone, Esp., and *P. megæra*, L., common; *P. egeria*, L., rather rare; *P. mæra*, L.

Epinephele lycaon, Rott., *E. tithonus*, L., *E. pasiphæ*, Esp., very common; *E. ianira*, L., and *E. ida*, Esp., not so common; *E. ianira*, var. *hispulla*, Hübn., not common.

Cænonympha arcania, L., and *C. dorus*, Esp., common; *C. iphioides*, Staud., *C. pamphilus*, L., and var. *lyllus*, Esp., rather scarce.

Spilothyrsus lavateræ, Esp., common; *S. althææ*, Hübn., and var. *bæticus*, Ramb., and *S. alceæ*, Esp., rather rare.

Syrichthus carthami, Hübn., *S. alveus*, Hübn., var. *fritillum*, Hübn., and var. *cirsii*, Mey., *S. malvæ*, L., and *S. sao*, Hübn., common; *S. proto*, Esp., not so common.

Nisoniades tages, L., not uncommon; var. *cervantes*, Grasl., rare.

Hesperia lineola, Ochs., common; *H. comma*, L., not very common.

I cannot end this paper without some notice of *Saturnia isabellæ*, Graells, which is found chiefly in the pine forests of the Albarracin. The caterpillar feeds on the upper branches of the highest pine trees, from which it very seldom descends. It is hatched at the end of June and is full fed about the end of July; the beautiful green moth emerges in September. I am told that it is not easily taken, and the caterpillar is reckoned a great prize on account of the height at which it feeds. It is not very easy to rear, but the British Museum possesses some beautiful specimens, bred at the Zoological Gardens.

I imagine that the moth might be taken without difficulty at night in September, which appears never to have been attempted. It is not rare at Noguera and Bronchales. I believe Prof. Korb obtained over 200 caterpillars last year, but did not meet with much success in rearing them. Another very rare insect, peculiar to the Albarracin, is *Bombyx* (or *Albarracina*) *korbi*, Staud., discovered by Prof. Korb in 1881, very rare at Albarracin and unknown elsewhere in Europe. Canon Zapater's list of moths is long and interesting; but these do not come within the scope of this paper.

XX. *New or little-known Sphegidae from Egypt—a Correction.* By the Rev. F. D. MORICE, M.A., F.E.S.

IN my paper, published in these Transactions (1897, pp. 310–316), I unfortunately described one of the new species under the name of *Tachysphex* (?) *integer* (p. 308). This name is not available, having been applied by Kohl to another species (Ann. Hofm. Wien, vii., p. 216, 1892). I propose therefore to call my insect, instead, *Tachysphex* (?) *holognathus*—this name referring (as my former name was intended to do) to the entire mandibles, which form so striking a characteristic of the insect in contrast with the notched mandibles of other species belonging to the same genus.



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