

LORQUIN'S LOCALITIES "SONORA" AND "UTAH"

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For some time Mr. Harry Clench and I have been puzzled by the type localities "UTAH (Lorquin)" and "SONORA (Lorquin)" given by the Felders for certain North American butterflies. I have come to the conclusion that Lorquin's "UTAH" has nothing to do with the present State of Utah and that his "SONORA" has equally little to do with the present Mexican state of Sonora. Currently this has become acute to me in trying to extend the work of Opler and Powell (1962) on *Apodemia mormo* beyond the area they studied. This is part of the problem to try to understand W. H. Edwards's descriptions of Riodinidae and Lycaenidae in preparation for selection of types for the names he proposed in those families.

The Felders mention or describe thirteen North America butterflies in the *Reise Novara* volume devoted to Rhopalocera (Felder & Felder, 1864-67). Two of these have little to do with the question. One is *Papilio telemonides*, a form of *marcellus* Cramer that was described from a specimen in the Royal Museum in Vienna and had been in the collection of Abbé Mazzolo. The other is the female of *Speyeria diana* Cramer that had been sent to them by Tryon Reakirt. It came from Kanawha, [West] Virginia, and doubtless had been given to Reakirt by W. H. Edwards. Edwards' (1864) description of the female appeared about a year before that of the Felders.

All of the other North American specimens named by the Felders were sent to them by Lorquin who also supplied them with many Philippine and East Indian specimens. The Lorquin North American butterflies can be arranged in three groups: those from "California," those from "Utah" and those from "Sonora."

CALIFORNIA

Papilio albanus—a mountain form of *eurymedon* Lucas.

Lycaena zelmira—an alpine to subalpine species (= *shasta* Edw.)

Lycaena podarce—an alpine subspecies of *aquilo*.

Melitaea leanira—a lowland species west of the Sierra.

Chionobas nevadensis—a subalpine mountain species.

UTAH

Pieris menapia—a widespread pine forest species.

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Apodemia mormo—a widespread species.

Lycaena zelmira—an alpine species (= *shasta* Edwards)

SONORA

Anthocharis cethura—a desert, or chaparral, lowland species.

Apodemia sonorensis—a chaparral species (= *virgulti* Behr).

Lycaena sonorensis—a lowland rock-loving species.

Lycaena sagittigera—a coastal species in southern California, in mountains elsewhere (= *piasus* Bdv.).

We know too little about the activities of Lorquin. There is an account in Essig (1931: 694–697) that synthesizes this. The Essig account, drawn from various sources, contains several statements that are self-refuting, especially those that refer to the termination of Lorquin's stay in California. Grinnell's account (1904) was based upon information given Grinnell by Lorquin's son. From it we see that Lorquin's collecting in California is divisible into two periods: 1850–1856 and 1861–1862. Boisduval's first paper upon the results of Lorquin's work was published in 1852, the second in 1855 and the final paper in 1869. In addition to these Boisduval published excerpts from a letter of Lorquin from California in 1856. What Boisduval knew about the man and his collecting, he summarized in the preface of the 1869 paper. This account is the one upon which I put most reliance. It is based upon many years of close association between the two men and the letters from Lorquin written in the field. Nowhere in any of the accounts do I find direct mention of Lorquin in Utah. In Boisduval's account is an interesting statement that suggests the meaning of "Sonora" when associated with butterflies that Lorquin captured. Boisduval wrote (1869: 6) ". . . il alla visiter les montagnes du nord, penetra fort avant dans l'est et se dirigea plus tard chez les Apaches, jusqu'a Los Angeles en Sonora." Thus it appears that Lorquin used the old Spanish name Sonora for southern California (and Baja California?).

California fell to the United States in settlement of the Mexican War in 1848. I have maps of the region published immediately thereafter showing the entire newly acquired land under the name "New, or Northern California." This new acquisition, "New California," extended south from the 42nd parallel. Its eastern boundary was approximately at 107° 30' west longitude, well within the present state of Colorado, south to "Uncompahgre Mountains" where, when the stated meridian intersected the Rio Grande, it followed the west bank of the river. In two years time, a new pair of territories, Utah and New Mexico, were made from the region left over after the present boundaries of the State of California were established. Thus Lorquin's "Utah" very likely was the eastern slope of the Sierra Nevada and included no territory as far east as the present State of Utah. Attempts to establish Salt Lake City,

Utah, as the type locality for *Pieris menapia* Felder and Felder, and *Apodemia mormo* of the same authors, cannot be supported upon historical evidence. It was not until 1861 that the original Utah territory, with its ill-defined western boundary in the mountains of California, was divided into Nevada Territory and Utah Territory. In treating boundaries in this period of the development of the West it must be remembered that they were nebulous until the surveys of the 1860's and 1870's carried out the descriptions of the territories established by law years earlier. It is amusing to note that during the very early 1850's Kansas and California shared a common boundary, on paper, in western Colorado.

It seems to me that appropriate type localities for *menapia* and *mormo* must be selected from the eastern flanks of the Californian or Nevadan mountains somewhere west of the general region of Reno and Carson City, Nevada, to be in keeping with what we know of Lorquin's travels and political geography of the early 1850's. This may or may not have an effect upon the nomenclature of *menapia*. It probably will alter some concepts associated with the name *mormo*. Boisduval's *Polyommatus zeroe* (= *Lycaena mariposa* Reakirt) also was described from this area, "haute montagnes de frontieres de l'Utah. . . ."

Both Boisduval and the Felders described butterflies collected by Lorquin in "Sonora." Those named by the Felders all are found within the present limits of California and their true type localities must lie somewhere from Los Angeles southward into extreme northern Baja California. The material described from "Sonora" by Boisduval is this: *Melitaea callina*: related to *elada* Hewitson.

Melitaea pola: this is close to *hoffmanni* Behr, if not the same.

Melitaea sonorae: this is *gabbii* Behr.

Ctenucha robinsonii: a synonym of *Lerina incarnata* Walker.

Phoegoptera cinnamomea: a synonym of *Aemilia roseata* Walker.

Of these, only *callina* is not yet known from southern California and northern Baja California. I know of no specimens of the *elada*-complex from the Pacific drainage area of Mexico. At first this seems to be strong evidence that Lorquin collected in that part of Mexico now called Sonora. However, Boisduval does not say that Lorquin collected the types of *callina*. In fact, only for *robinsonii* is the collector named and in that case it was Lorquin. Boisduval was in touch with collectors in Mexico and may well have received the types of *callina* from one of them.

Thus it appears that, excepting *callina*, both the Felders's and Boisduval's "Sonora" specimens may very well be considered southern Californian.

LITERATURE CITED

- BOISDUVAL, J. A., 1852. Lépidoptères de la Californie An. Soc. Ent. France, (ser. 2), 10: 275-324.
1855. Lépidoptères de la Californie An. Soc. Ent. France, (ser. 3), 3: 31-32.
1856. Extrait d'une lettre de M. Lorquin sur la faune de la Californie, et d'une lettre de Mr. Bar sur les chenilles du groupe des Erycinides. An. Soc. Ent. France, (ser. 3), 4: 98-101.
1869. Lépidoptères de la Californie An. Soc. Ent. Belgique, 12: 1-94.
- EDWARDS, W. H., 1864. Description of the female of *Argynnis diana*. Proc. Ent. Soc. Philadelphia, 3: 431-434.
- ESSIG, O. E., 1931. A History of Entomology. The Macmillan Co., New York.
- FELDER, C., and R. FELDER, 1864-67. Reise der Oesterreichischen Fregatte Novara um die Erde . . . Zoologischer Theil zweiter Band, zweiter abtheilung: Lepidoptera von Dr. Cajetan und Rudolf Felder. Rhopalocera. 2 volumes, Wien.
- GRINNELL, F., JR. 1904. An early collector in California. Ent. News, 15: 202-204.
- OPLER, P. and J. A. POWELL, 1962. Taxonomic and distributional studies on the western components of the *Apodemia mormo* complex (Riodinidae). Jour. Lepid. Soc., 15(3): 145-171 ["1961"]
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RECENT LITERATURE

THE GENERIC NAMES OF THE BUTTERFLIES AND THEIR TYPE-SPECIES (LEPIDOPTERA: RHOPALOCERA.), by Francis Hemming. Bulletin of the British Museum (Natural History). Entomology, Supplement 9; 509 pp.; 1 August 1967. This volume treats all genera proposed from 1758 to 31 December 1963. The names are arranged alphabetically, and I estimate that about 3300 names are treated. The original description for each is cited, as is the type designation. When needed there is a brief discussion of the nomenclatorial problems involved with the name. Citations are given to any International Code of Zoological Nomenclature actions which have been taken on a name. Caution is needed in one respect: the lapse in time between the completion of the manuscript, a few days before Francis Hemming died in February, 1964, and the date of publication in 1967, requires search in those cases where Hemming proposes type species. The current volume is of course an invaluable reference book for anyone in the field of taxonomy of butterflies.—F. MARTIN BROWN, *Fountain Valley School, Colorado Springs, Colo.*