

A NEW SUBSPECIES OF *MICROTIA DYMAS* (NYMPHALIDÆ) FROM SOUTHERN CALIFORNIA

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Microtia dymas (Edw.) is a new combination of generic and specific names. The generic name *Microtia* is used as a name of full generic standing and not as a subgenus of *Melitæa* Fabr. FORBES (1945) removed several species from the genus *Phyciodes* Hübner and suggested that they might properly be placed in the genus *Melitæa*, subgenus *Microtia*. This placement is quite plausible if the Melitæini are divided into three types by the male genital structures — *Euphydryas*, *Melitæa*, and *Phyciodes*. If the female genital structures are taken into consideration this placement of *Microtia* is no longer tenable, and the species of the genus *Microtia* become a problem, which, I believe, is best solved by maintaining *Microtia* as a name of full generic standing for the following reasons.

1. The male genital armature of the type species, *M. elva* Bates, is that of the members of the genus *Chlosyne*, not *Melitæa*.

2. This common type of male genital armature does not sink *Chlosyne* Butler, 1870 (type species *Papilio janius* Drury, 1782) as synonym of *Microtia* Bates, 1864 (type species *Microtia elva* Bates, 1864), because the female genital plate of *elva* is simple, more like that of *Euphydryas* Scudder. The female genital plate of *janius* is very complicated in a fashion all its own.

3. The body form of *M. elva* is frail, the abdomen elongate and protruding past the outer margin of the secondaries, and the wings elongate. *M. dymas* shares these characters with *elva*, and together with *anomalous* G. & S. and *coracara* Schs. forms a small genus of very distinct but related species.

The California specimens of *Microtia dymas* have for many years passed as *M. dymas chara* Edw. This practice probably began with WRIGHT (1905). On plate XX WRIGHT figures two specimens (figs. 195, 195b) taken in the Colorado desert of California as *chara* Edw. WRIGHT's two figures are excellent examples of this insect. Years later J. A. COMSTOCK (1927) also figured specimens from Palm Springs, California, as *chara*. Since then the California insect has passed as *chara* in the minds of most western lepidopterists. The recent list by MARTIN and TRUXAL (1955) follows COMSTOCK's and WRIGHT's leads and then applies the name *dymas dymas* Edw. to the distinctive southeastern Arizona population. This is logical if the name *dymas chara* is applied to the California insect, for the two are not identical.

Microtia dymas (Edwards, 1877: p. 190) was described from specimens collected near San Antonio, Texas. *M. dymas chara* (Edwards, 1883: p. 209) was described from specimens taken by MORRISON in southern Arizona. Thus the distinctive southern California population can not be called *chara*, nor can the southern Arizona population be called *dymas*.

I have before me series of *M. dymas dymas* from: Junction, Kimble Co., Texas; the lower Rio Grande Valley, Hidalgo Co., Texas; and several localities in western Texas and southern New Mexico. The western Texas and southern New Mexico specimens are not perfectly typical *dymas dymas*, but fall with *dymas dymas* according to EDWARDS' differentiation of true *dymas* from *chara*. Their status awaits the securing of longer series for study. I also have before me series gathered during eight years of collecting in Arizona. The Arizona series come from near Yuma, Yuma Co., in the southwest corner, to Cochise Co. in the southeast corner, and from as far north as the Verde Valley in Yavapai Co. There is also before me a series from northern Sonora, Mexico, and from Navojoa in southern Sonora. Of course there is variation between the specimens from Yuma, Arizona, (3.50 inch average annual rainfall) and those from the humid mountains of Sonora, but they all resemble *M. dymas chara* more than Texan *M. dymas dymas* or the distinctive California insect.

HALL (1928) noted some seasonal variation in series of *chara* from southern Arizona. For some time I suspected the California insect to be the spring form of Arizona *chara*, for all the specimens examined were taken in the early spring, and all the Arizona specimens were late summer and fall captures. After some searching I collected for comparison spring specimens of Arizona *chara* and found the spring generations from Arizona and California to resemble each other, but they can still be separated with ease. C. M. DAMMERS collected a short series of fall specimens of the California insect, which I also found to be separable when compared to the fall generation of the Arizona insect. This difference in the principal season of flight is an important biological character. The Arizona population does not readily respond even to heavy winter and spring rains, for repeated searching in the Yuma area at the very clumps of *Beleperona californica* where colonies had flourished the previous fall failed to turn up a single spring specimen, while just across the Imperial Valley the California insect was at its peak flight. All the Arizona spring specimens seem to come from the mountain canyons of the central and eastern areas. Unfortunately, few California collectors take time to look for the insect in the fall, and the information on fall flights is scanty. A description of the southern California insect follows.

Microtia dymas imperialis Bauer, new subspecies

HOLOTYPE male: upper surface of the primary: same general pattern as *dymas chara*. Marked by black-brown transverse lines which divide the wing into marginal, submarginal, postdiscal, and discal series of orange-brown bands, which are lightly broken into separate spots by fine dark brown scaling along veins. Basal area variously broken into spots by dark black-brown lines. The two spots of the discal series nearest the costa are paler. Under surface of the primary: same pattern as upper surface except submarginal series of spots is white, and the dark markings are less prominent.

Upper surface of secondary: pattern is as in *chara*. The margin is black-brown. Submarginal series of seven spots is heavily outlined by dark scaling. Postmedian band divided into seven quadrate spots by black scaling along veins. Median series divided only faintly by dark scaling along veins. The remainder of the wing to base

is variously broken into orange-brown spots by black-brown lines. Under surface of the secondary is margined by black, followed by submarginal series of seven shining white spots outlined in black. Postmedian area contains two bands, the seven spots of the outer band are large, orange-brown in color and outlined in black; the inner band is shining white narrower and does not reach the costa. The median band is wide, extends from costa to inner margin and white in color. The submedian area has one orange-brown spot on costa, two orange-brown spots in the cell separated by a white spot; the outer of these two partially out of cell, and one orange-brown spot between cell and inner margin, but adjacent to cell, and all outlined in black. A postbasal white band, which does not reach inner margin, is followed by basal orange-brown band from costa to inner margin. The extreme base of costa is white.

Fringes: white; black at the ends of the veins of the forewing, but only faintly pencilled with black at the ends of veins of secondaries.

Palpus dark brownish-black above; ventrally white-tinged, with fulvous toward tip. Antenna black-ringed with white at the end of each segment; the club is black. Head black with scant orange-brown and gray-black hairs above; scaled with white and rufous below.

Thorax black with scant orange-brown and gray-black hairs and scaling above; beneath scaled with white and rufous. Legs fulvous and white.

Abdomen dorsally brownish-black mottled with rufous in male; ventrally white with two rows of black dashes.

ALLOTYPE female same general appearance as male except all dark markings, particularly on upper surface of wings, greatly reduced or obsolete. Abdomen orange-brown dorsally, mottled with dark brown.

The holotype and allotype are deposited in the Los Angeles County Museum, Los Angeles, California.

HOLOTYPE male: Palm Springs, Riverside Co., California, April 6, 1920, leg. J. A. COMSTOCK.

ALLOTYPE female: same data as HOLOTYPE.

PARATYPES as follows, all from California: 9♂♂ and 2♀♀ same data as HOLOTYPE and ALLOTYPE; 2♂♂ Palm Springs, Riverside Co., April 5, 1920, leg. J. A. COMSTOCK; 6♂♂ Chino Canyon, Riverside Co., April 1, 1922, leg. J. A. COMSTOCK; 1♂ ditto, April 6, 1920, leg. J. A. COMSTOCK; 2♂♂ and 1♀ Palm Springs, Riverside Co., Oct. 24, 1929, leg. C. M. DAMMERS; 1♂ and 4♀♀ ditto, Sept. 20, 1931, leg. C. M. DAMMERS; 2♂♂ ditto, Sept. 19, 1931, leg. C. M. DAMMERS; 1♀ ditto, Oct. 8, 1929, leg. C. M. DAMMERS; 2♀♀ ditto, Nov. 3, 1929, leg. C. M. DAMMERS; 1♀ ditto, Sept. 20, 1931, leg. C. M. DAMMERS; 1♀ ditto, May 30, 1938, leg. O. POOL; 3♀♀ Borrego Palm Canyon, San Diego Co., April 19, 1941, leg. DON WASEM. All the above are in the Los Angeles County Museum. Additional paratypes are: 11♂♂ Mountain Springs, Imperial Co., April 3, 1949, leg. D. L. BAUER; 2♂♂ Palm Springs, Riverside Co., March 17, 1936; 1♂ ditto, April 1, 1935; 1♂ ditto, April 20, 1944, leg. DON WASEM; 2♂♂ ditto, March 23, 1932; 1♀ ditto, April 8, 1928; 2♂♂ ditto, March 23, 1932; 1♂ Borrego Palm Canyon, San Diego Co., April 19, 1941, leg. DON WASEM.

Imperialis and *chara* can be separated from all specimens of *dymas* from Texas and New Mexico, including the non-typical specimens from western Texas, by the color of the fringes on the secondaries of the male. EDWARDS' description of *dymas* reads "fringes of secondaries fuscous only"; his description of *chara* reads "fringes . . . of secondaries with a few black hairs only at the tips of the nervules", the greater part being white.

Imperialis can be distinguished from *chara* most consistently by the reduction of the dark scaling in the marginal areas of all wings and particularly in the apical area of the primaries. On the under surface all the white areas are considerably more extensive and tend to be pure shining white; as a consequence the orange-brown areas are reduced.

Typical *imperialis* is figured by WRIGHT (1905) on plate XX: figs.195, 195b; and by COMSTOCK (1927) on plate 37: figs.14, 15, 16. Typical *chara* is figured by HOLLAND (1931) on plate XVII: figs. 3, 4; he also figures a typical *dymas* female on plate XVI: fig.18.

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