

TAXONOMIC HISTORY AND DISTRIBUTION OF  
*OCHLODES YUMA* (HESPERIIDÆ)

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This paper is an outgrowth of the meetings of the Western Section of the Lepidopterists' Society. It was started as an enumeration of the specimens of *Ochlodes yuma* taken on the annual field trip in 1954 to the Sand Dunes near Antioch, Contra Costa County, California. Interest in the matter has led to an extension of the original idea, which nevertheless remains a contribution from the members of the Western Section.

*Ochlodes yuma* was described by W. H. EDWARDS from an unique among the collections of the Wheeler Expeditions. It was described in 1873 from material collected in 1871 "in Arizona." EDWARDS assigned the species to *Hesperia* from which it was removed in 1921 by LINDSEY and placed in *Augiades*. This name is unavailable, and its members have been placed in *Ochlodes* Scudder (1872) with *nemorum* Boisduval (1852) as orthotype. *Pamphila scudderi* Skinner (1899) has been considered a synonym of *yuma* by most American workers. The type material hailed from the White River in Colorado. Lack of sufficient material for study leaves the status of *scudderi* uncertain. It may be, as it is now considered, an out-and-out synonym, a subspecies, or a sibling species.

Previous to 1920, material of *Ochlodes yuma* was exceedingly scarce, and most of the major papers on American Skippers have little to say about it. Since that time, a fair number of specimens has been taken, mostly in Inyo County, California. In 1932 a specimen was taken near Modesto, California. In 1939 another was found in Calaveras County, California. In the early 1950's it was located at Antioch, Contra Costa County, by PAUL HURD, JR. It may be mentioned here that the male is illustrated as the "Sand-hill Skipper" in the article called "Sand-dune Insects" in *Life Magazine*, August 8, 1955. In addition to the eleven specimens of *O. yuma* taken by members of the Lepidopterists' Society on September 5, 1954, subsequent collectors have found the species at the Antioch Sand-dunes. Since specimens have been taken there in June and September the insect must be double-brooded at that locality as it is in Inyo County.

An examination of the known Californian localities for *Ochlodes yuma* reveals these constant features: all localities are near water; in some respects each locality represents an oasis or moist spot in otherwise arid country; rank grasses usually grow at the locality. The species has never been found in truly arid spots far from water. Nothing is known about the life-history of the species, but its foodplant is expected to be a grass. The Sand-dunes area near Antioch is rapidly disappearing before the expansion of industrial sites. However, it seems likely that diligent search of the little-collected lowlands in the San Joaquin Valley will result in finding other colonies of the species.

Brigadier EVANS (1955) has stated that he considers *Ochlodes yuma* to be a form of *sylvanoides*. This seems unlikely. The first brood of *yuma* appears in late spring, June. *O. sylvanoides* appears later in the year, toward

the end of summer. The fall brood of *yuma* appears in August and flies through September. It is found with *sylvanoides*, but there is no evidence that the two intergrade. *Ochlodes yuma* has a colonial type of distribution while *sylvanoides* exhibits a blanket or matrix type. I find it difficult to believe that the two are one species. Incidentally, studies of *sylvanoides*, so far incomplete, suggest that what we now consider a single species may be a complex of siblings. I shall consider *yuma* to be a distinct species.

#### Distributional Data

ARIZONA: "Arizona," the type; also in Henry Edwards Collection, AMNH\* (RINDGE); MCZ (FORBES); USMN (FIELD). COCONINO CO.: Indian Gardens, Grand Canyon National Park, 23-24.vii.24 (leg. E. L. BELL) in AMNH (RINDGE) and also 24.vii.34 and 18.vii.38 (both leg. E. L. BELL) in collections of the Naturalists' Workshop at Grand Canyon (SCHELLBACH); Cameron, 1.viii.50 (leg. COHN, BOONE, and CAZIER) AMNH (RINDGE). PIMA CO.: Tucson, no date, USNM (FIELD). YAVAPAI CO.: Prescott, 12.vii. USNM (FIELD).

CALIFORNIA: CALAVERAS CO.: Sand Flats, 28.v.39, (leg. T. W. DAVIES). CONTRA COSTA CO.: Sand Dunes, nr. Antioch, 5-22.ix.54 (leg. DAVIES, LANGSTON, MACNEILL, POWELL, PATTERSON, TILDEN, THORNE) in collections of collectors, also, 19.vi.55 (leg. SAMUELSON) in Samuelson collection. INYO CO.: Darwin Falls, 19.vi.50 (leg. NICOLAY and MARTIN) in Nicolay collection, also, 19.vi.51 (leg. HULBIRT) in Hulbirt collection, also, 17.vi.52 (leg. TILDEN) in Tilden collection, Brown collection, USMN (FIELD), also, 28.ix.30 (leg. HARDIN) in LACM; Deep Springs, 16.vii.53 in J. W. McSwain collection; Haiwee, 11.vi.21 in LACM; Olancho, 6-21.vi.37 (leg. MARTIN) in LACM and USNM (FIELD), also, 10-20.vi.25 in AMNH (RINDGE), also, 28.vi.50 (leg. TILDEN) in Tilden collection; Owens Lake, 20.vi.37 in Henne collection. MONO CO.: Farrington Camp, no date (leg. F. W. FRIDAY) in LACM; Mammoth Camp, 1.viii.27 and no date (leg. F. W. FRIDAY) in LACM. STANISLAUS CO.: Modesto, 7.ix.32 (leg. DOLMAN) in Tilden collection.

COLORADO: RIO BLANCO CO.: White River, 24.vii and 13. viii, cotypes of *scudderi* in AMNH (RINDGE), also 24.vii - 13.viii, cotypes of *scudderi* in Scudder collection, MCZ (FORBES); 24.vii - 13.viii, cotypes of *scudderi* in Academy of Natural Sciences, Philadelphia.

\*ANMH = American Museum of Natural History, New York, N.Y. LACM = Los Angeles County Museum, Los Angeles, Calif. MCZ = Museum of Comparative Zoology, Cambridge, Mass. USNM = United States National Museum, Washington, D.C. Note: According to CLENCH there are no specimens in the collections of the Carnegie Museum.

#### References

- Bell, Ernest L., 1938. The Hesperioidea. *Bull. Cheyenne Mt. Museum* 1, pt.1: p.24.  
 Comstock, John A., 1927. *Butterflies of California*: p.222, pl.61: figs.16, 17, 18.  
 Edwards, W. H., 1873. Descriptions of diurnal Lepidoptera found within the United States. *Trans. Amer. Ent. Soc.* 4: p.346.  
 Evans, W. H., 1955. *A Catalogue of the American Hesperiidæ*, Pt.IV: pp.342-343.  
 Holland, W. J., 1930. *The butterfly book*. Rev. ed.: p.379, pl.LIII: figs.1, 2.  
 Lindsey, Arthur W., 1921. The Hesperioidea of America north of Mexico. *Univ. Iowa Studies Nat. Hist.* 9 (4): p.77.  
 Lindsey, A. W., E. L. Bell, & R. C. Williams, Jr., 1931. The Hesperioidea of North America. *Denison Univ. Bull. Journ. Sci. Labs.* 26: p.96.  
 Skinner, Henry, 1899. in *Ent. News* 10: p.111.  
 , 1900. in *Ent. News* 11: pl.II: figs.9, 10.  
 Skinner, Henry, & R. C. Williams, Jr., 1924. On the male genitalia of the Hesperiidæ of North America. *Trans. Amer. Ent. Soc.* 50: pp.145-146.  
 Scudder, Samuel Hubbard, 1872. Systematic revision of American butterflies. *Rept. Peabody Acad. Sci.* 1871: p.78.