

A NEW SPECIES OF *HESPERIA* FROM CALIFORNIA (HESPERIIDÆ)

by H. A. FREEMAN

During 1953 Dr. J. W. TILDEN sent me some specimens of *Hesperia*, and among the group were several individuals of a species which appeared new to me. After carefully comparing these specimens with all the other known *Hesperia* from North America as to superficial characteristics and genitalia, I am convinced that they represent an undescribed species, as follows.

*Hesperia tildenii* new species

MALE (Upper Side): Primaries broadly yellow fulvous, fusing into the subapical spots and into the darker marginal border. There are two indistinct yellow fulvous extradiscal spots. The stigma is rather narrow, with only a few dark scales below it. Secondaries are yellow fulvous except for a narrow dark margin. Fringes are slightly darker than the yellow fulvous overscaling.

(Under Side): Primaries completely overscaled with light yellow scales. The dark margin is very indistinct as are the subapical and extradiscal spots. Secondaries are somewhat variable with most specimens having the overscaling light chestnut brown. Some are as dark as *H. dodgei* (Bell). The band of discal spots is very variable, ranging from entirely absent to well defined and is only slightly lighter in coloration than the ground color. The basal spots are of the same color and show less variation.

Thorax above is slightly darker than the wings at their base, lighter beneath. Abdomen is of the same yellow fulvous as the wings. Palpi are light tan beneath. Legs are light brown. Antennæ are brown with the outer edge of the club black.

Expanse of males, 22 to 29 mm., average 25 mm.

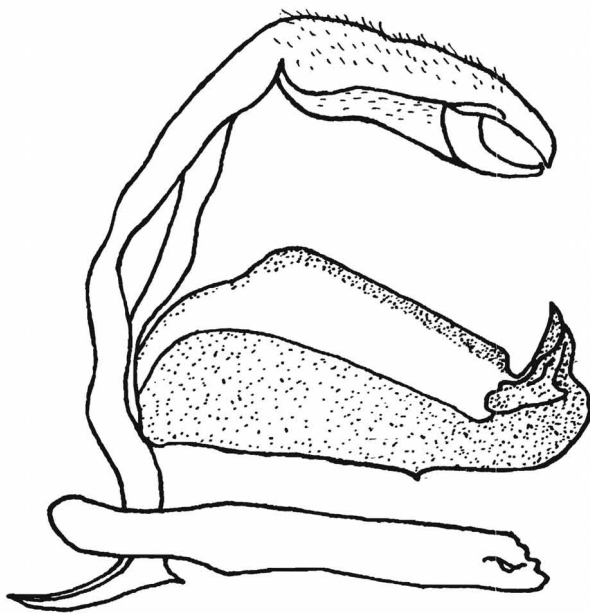
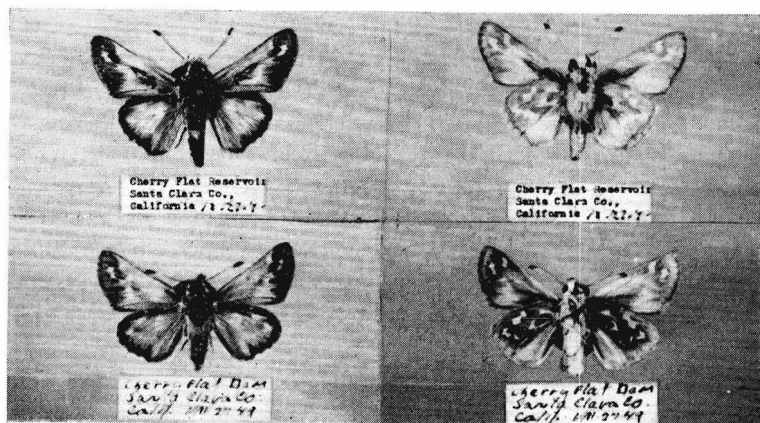
FEMALE. (Upper Side): Primaries are very similar to the males, except some have the marginal dark area extending inward a little more. The coloration and maculation are very similar to those of the males. Secondaries are variable, from immaculate with a narrow marginal border to fairly dark with the discal spots well defined. The general tendency is toward the obliteration of the discal spots by the yellow fulvous overscaling. Fringes are creamy, lighter than the overscaling over the central portion of the wings.

(Under Side): Primaries are similar to those of the male, except that the subapical and extradiscal spots are better defined. Secondaries have the ground color variable, from ochreous to dark chestnut brown; most specimens are chestnut. The discal band of spots is variable, ranging from a single spot near the apex to a well defined band of spots. The coloration of the discal band is from ochreous to creamy, being only slightly lighter than the ground color. Basal spots are of the same color.

Thorax above is slighter darker than the wings at their base, lighter beneath. Abdomen is of the same yellow fulvous as the wings. The palpi, legs, and antennæ are also like those in the males.

Expanse of females, 23 to 22 mm., average 26 mm.

Type material: HOLOTYPE male, Cherry Flat Reservoir, Santa Clara County, California (J. W. TILDEN), 27 August 1949; ALLOTYPE female, Cherry Flat Dam, same area, collector, and date as holotype; 36 male and 32 female PARATYPES from the following locations: Cherry Flat Reser-



Top row: *H. tildenii* HOLOTYPE ♂, Cherry Flat Reservoir, Santa Clara Co., Calif., Aug. 27, 1949 (J. W. TILDEN).

Middle row: *H. tildenii* ALLOTYPE ♀, Cherry Flat Dam, Santa Clara Co., Calif., Aug. 27, 1949 (J. W. TILDEN).

Bottom: Male genitalia of *H. tildenii*. Cherry Flat Reservoir, Santa Clara Co., Calif., Sept. 27, 1949. Slide No. H100.

voir, one male, 27 September 1949, 10 males and two females, 27 August 1949; Cherry Flat Dam, eight females, 27 August 1949; Arroyo Bayo, 17 males and eight females, 8-17 September 1953; Mount Hamilton, one male, 30 May 1949, one male, 6 August 1949, four males and 10 females, 17 September 1953; Alum Rock Park, one male, 20 August 1950, and two females, 7 September 1951; Isabel Creek, Mount Hamilton, one female, 17 July 1952; Saritoga, one female, 7 September 1943 (T. B. BLEVINS), all in Santa Clara County; Mocho Canyon, Alamida County, one male, 30 August 1949.

Holotype and allotype are in the American Museum of Natural History. Paratypes will be deposited in the following collections: 10 pairs, J. W. TILDEN; two pairs, STALLINGS and TURNER, Caldwell, Kansas, two pairs, Los Angeles County Museum; two pairs, Yale University; one pair, Chicago Museum of Natural History; and remaining paratypes are in the collection of the author.

This previously undescribed species is named for Dr. J. W. TILDEN who collected most of the specimens in the type series.

On the upper side this species slightly resembles small specimens of *Hesperia lindseyi* (Holland) because of its washed out appearance due to the indistinct maculation and somewhat darker outer margin; however, on the lower side there is no resemblance between the two, especially on the secondaries, where *H. lindseyi* has a well defined and rather broad type of maculation on a light ground color, while the maculation of *H. tildeni* is reduced and the ground color is dark. The females show some similarities to *Hesperia dodgei* (Bell) on the lower side of the secondaries, as both have the chestnut brown ground color; however, the coloration is darker in *H. dodgei*. On the under side of the secondaries the general maculation in both sexes also somewhat resembles that of *dodgei*, in that both species have the same generally reduced maculation and the spots are in the same areas. On the upper side of the males some of the specimens slightly resemble *H. harpalus* Edwards; however, they lack the brassy sheen which is present in that species. *Hesperia tildeni* may be distinguished from all other North American species of the genus by the following combination of characters: (1) size—this is the smallest species in the genus; (2) the generally washed out appearance on the upper side, with a rather dark marginal border; (3) the generally dark ground color on the under side of the secondaries; (4) the reduced maculation, which varies with some specimens.

The male genitalia of *tildeni* are different from those of any of the known *Hesperia*. The uncus is somewhat similar to that structure in *dodgei*; however the claspers are different in three respects: (1) there is a deep excavation on the dorsal side just posterior to the proximal and distal teeth; (2) the teeth are close together and one-fourth longer than those of *dodgei*; and (3) the base of the distal tooth is unevenly curved on the posterior side, while in *dodgei* it is evenly curved abruptly downward.