

trunks and larger limbs. The larval mines of *Trachykele* commonly extend into the main roots of the trees well below the surface of the ground, and also extend as much as two feet into limbs, but pupation and emergence seem always to occur in and from the trunk. Adults have been beaten from the foliage of the Sargent cypress on Cypress Ridge in the summer. Larvae and adults were chopped from Sargent cypress near Camp Meeker in early February, and pupae were found in pygmy cypress near Mendocino on July 24th.

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## NOTES ON THE GENUS *METROBATES* IN CALIFORNIA WITH DESCRIPTION OF A NEW SUBSPECIES

(Hemiptera: Gerridae)

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The species of *Metrobates* are typical inhabitants of swift-flowing rivers and streams and have long been known from the eastern and southern United States and from Central and South America. The genus was first recorded from California in 1948 (Usinger, La Rivers, Chandler and Wirth, *Biology of Aquatic and Littoral Insects*, Univ. of Calif. Syllabus SS, p. 175) on the basis of a series of specimens collected in Putah Creek beneath the railroad bridge near Davis, Yolo County, October 24, 1942. These specimens were identified as *Metrobates trux* Bueno by H. B. Hungerford and L. D. Anderson, although it was noted that the dark markings of the upper surface were much more extensive than in the typical form described from Colorado and subsequently recorded from Texas, Kansas and Arizona as well as from Oregon and Idaho. Drake and Harris (Ann. Carnegie Museum, 21: 87, 1932) stated that Texas specimens differ from the Oregon and Idaho specimens "in having the basal portion of the second antennal segment yellowish brown."

Since 1942 the dark form of *Metrobates trux* has been found on several occasions in northern and central California by H. P. Chandler. Most of these specimens are apterous, as was the original series from Putah Creek, but recently Mr. Chandler found a high percentage of macropterous forms in a stream at Oroville, Butte County, July 27, 1951.

All specimens from northern California have the second antennal segment uniformly dark and, in the apterous forms, the pale area of the pronotum reduced to a median spot which is narrowed posteriorly, the mesonotum with the median stripe reduced to an elongate spot which tapers anteriorly, the pale spots in the longitudinal black fasciae much reduced, and the sublateral pale stripes greatly reduced and sinuate. The dark markings are also more extensive on the metanotum and abdominal tergites.

The typical pale form was taken by me in the Colorado River at Yuma, Nov. 3, 1951, and by Mr. J. D. Lattin and me in the Colorado River near Parker Dam in March, 1952.

Variation in *Metrobates* has been studied in Florida by Hussey and Herring (Florida Ent., 32: 166–170, 1949) where it was found that *hesperius* populations formed three subspecies and *anomalus* populations two subspecies. The Florida subspecies differed in pilosity of antennae and legs as well as in color, whereas no differences in pilosity have been discovered in California specimens. Nevertheless, California specimens are easily separated into a southern and a northern form. For the dark form from northern California I propose the subspecies name ***Metrobates trux infuscatus*** Usinger, new subspecies, with the holotype, male, allotype, female, (Calif. Acad. Sci., Ent.) and designated paratypes from the apterous series collected in PUTAH CREEK near DAVIS, CALIFORNIA, October 24, 1942, R. L. Usinger.

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#### BOOK NOTICE

GENERA INSECTORUM—The following two parts on Coleoptera have been published during the first half of 1953. The plates in both are in black and white, printed by a photographic process; the publishers state that lithography in color has become too expensive.

*Fascicule 192.* Carabidæ Subfamily Carabinæ. By G. Vacher de Lapouge. Plates 2 to 10, to accompany the Marquis Lapouge's monograph of the Carabinæ. These are plates of the adult beetles; plate 1 (larvae) was published in the first (1929) of the previous four parts.

*Fascicule 210.* Endomychidæ. By H. F. Strohecker. Pp. 1–140, 64 text figs. (many compound), 5 pls. There is a key to subfamilies, and keys to genera within the various subfamilies, for the world fauna. Genotypes are cited; the few described fossils are catalogued. Two new genera and one new species are described, and five new generic names proposed.—H.B.L.



Usinger, Robert L. 1953. "Notes on the genus *Metrobates* in California with description of a new subspecies (Hemiptera: Gerridae)." *The Pan-Pacific entomologist* 29, 178–179.

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