

SCIENTIFIC NOTE

NEW COLLECTION RECORD FOR *URANOTAENIA ANHYDOR* IN SOUTHERN CALIFORNIA

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ABSTRACT. Larvae of *Uranotaenia anhydor* Dyar were collected from decaying vegetation within a constructed treatment wetland in western Riverside County, CA. This find extends the range of this species into the inland valleys south of the San Bernardino Mountains of southern California.

KEY WORDS *Uranotaenia*, mosquito, southern California, constructed treatment wetlands

Mosquitoes (Diptera: Culicidae) are among the most well-studied and widely collected group of medically important arthropods. *Uranotaenia anhydor* Dyar is a rare North American species never recorded previously from Riverside County, CA. This mosquito is known to feed on amphibians in the laboratory (Chapman 1964) and may be autogenous in the field (Belkin and McDonald 1956). This species is not known to feed on humans or birds and is not considered to be a vector of disease-causing pathogens.

This species was 1st described from a single larva collected at Sweetwater Junction near San Diego, CA (Dyar 1906). Since that description, *Ur. anhydor* has been collected in three other California counties: 5 times in San Diego County (Seaman 1945, Chapman 1964), 1 time in Inyo County (Loomis et al. 1956), and a sizable population was observed in San Bernardino County (Belkin and McDonald 1956). Outside of California, this species has been collected in at least 3 different locations: Mexico, Nevada, and Arizona (Brookman and Reeves 1953, Belkin and McDonald 1956).

On September 5, 2002, we collected 2 specimens of *Ur. anhydor* from a constructed treatment wetland, the Prado Wetlands, in western Riverside County, CA. Specimens were collected with a 350-ml mosquito dipper from a wetland mesocosm (80 × 12 m). Based on the measurements given by Belkin and McDonald (1956), 1 larva appeared to be a 3rd instar (head length: 0.587 mm; head width: 0.561 mm) and the other a 4th instar (head length: 0.765 mm; head width: 0.765 mm). These specimens were collected approximately 140 km from the nearest collection site in San Diego County, CA (Chapman 1964) and approximately 227 km from the large population observed by Belkin and McDonald (1956). This is the 1st collection record for *Ur. anhydor* in Riverside County and the 1st record from a constructed treatment wetland.

The Prado Wetlands is a riparian area of the

Santa Ana River that has, in recent years, become a treatment wetland intended for the purpose of nitrate reduction (Mills et al. 1998). The collection site was densely vegetated by cattails (*Typha* spp.) and bulrushes (*Schoenoplectus californicus* (Meyer) Soják). Vegetation in several areas had fallen or become matted and decaying. This is consistent with the findings of other authors who found *Ur. anhydor* in freshwater with dense emergent aquatic vegetation and matted senescent vegetation (Dyar 1906, 1916; Seaman 1945; Belkin and McDonald 1956). Water temperature of the wetland at the time of collection was 23.4°C and pH was 7.28. The wetland mesocosm was also being treated with ammonium sulfate fertilizer (21% N–0% P–0% K (24%S)) at 5 mg/liter for a study on the effects of ammonium nitrogen addition on mosquitoes and other invertebrates in constructed treatment wetlands (Sanford 2003). Specimens of *Ur. anhydor* obtained in the Prado Wetland were collected in conjunction with large numbers of *Culex tarsalis* Coquillett and *Cx. erythrothorax* Dyar, which is consistent with the findings of previous authors (Dyar 1916, Seaman 1945, Belkin and McDonald 1956).

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