

Western yellow bat, *Lasiurus xanthinus*

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Description: *Lasiurus xanthinus* is a medium-sized bat with a short rostrum and short, rounded ears. The proximal one-third to one-half of its uropatagium has its dorsal surface densely furred. It can be distinguished from other California bats by the combination of yellow coloration, size, and short ears. It could be confused with *L. blossevillii*, but is larger (forearm = 45-50 mm versus 35-45 mm) and has more yellow fur. In coloration it is most similar to *Antrozous pallidus* (which has large ears) and *Pipistrellus hesperus* (which is much smaller and has a black mask).

Taxonomic Remarks: *L. xanthinus* (Family Vespertilionidae) was first described as *Dasypterus ega xanthinus* from a locality in Baja California (Thomas 1897), and recognized as belonging in the genus *Lasiurus* by Hall and Jones (1961). Recent genetic work argues strongly that the species formerly considered to be *Lasiurus ega* should be treated as two species: the southern yellow bat, *Lasiurus ega*, and the western yellow bat, *Lasiurus xanthinus* (Baker et al. 1988, Morales and Bickham 1995). Only *L. xanthinus* occurs in California.

Distribution: *L. xanthinus* has a primarily Mexican and Central American distribution, with a range that extends only into the southern portions of California, Arizona, New Mexico and possibly southwestern Texas (Hall 1981, Schmidly 1991, Dixon 1997). Yellow bats are found in a variety of habitats throughout their range, from dry tropical forest to semi-tropical wet forests (Kurta and Lehr 1995).

The first record for California was from Palm Springs in 1945 (Constantine 1946). It has since been found in a number of localities (P. Brown pers. comm., D. Constantine pers. comm., K. Miner pers. comm., D. Simons pers. comm.) and could be expected in appropriate habitat south and east of the San Bernardino Mountains.

Life History: Life history characteristics for *L. ega*, including *L. ega xanthinus* (here treated as *L. xanthinus*) are summarized by Kurta and Lehr (1995). This species is thought to be non-colonial, although aggregations of up to 15 have been found in the same roost site. Individuals usually roost in trees, hanging from the underside of a leaf. They are commonly found in the southwestern U.S. roosting in the skirt of dead fronds in both native and non-native palm trees. At least some individuals or populations may be migratory, although some individuals appear to be present year-round, even in the northernmost portion of the range. Yellow bats probably do not hibernate; activity has been observed year-round in both the southern and northern portions of the range. Yellow bats are insectivorous. Very limited diet data from Mexico suggest the primary prey is beetles, but almost no information is available from the southwestern United States. K. Miner (pers. comm.) reports juvenile yellow bats taking ichneumonids (Hymenoptera) based on finding insect parts embedded in tail membranes of two juveniles. Capture sites are often associated with water features (e.g., stock tanks, ponds, streams, and rivers) in open grassy areas and scrub, as well as canyon and riparian situations. Captures are also reported over swimming pools, lawns in residential areas, and orchards. In northern areas, seasonal segregation between the sexes during parturition may occur, as males are scarce from April through June. In the U.S., pregnant females are known from late April through June, with lactation occurring during June and July. The number of embryos carried by pregnant females ranges from one to four, with no apparent geographic trend. Reported predators include barn owls, domestic dogs and domestic cats.

Habitat: Yellow bats are associated with dry, thorny vegetation on the Mexican Plateau, and are found in desert regions of the southwestern United States, where they show a particular association

with palms. They are known to occur in a number of palm oases, but are also believed to be expanding their range with the increased usage of ornamental palms in landscaping. *L. xanthinus* occurs up to approximately 2,000 m in the mountains in Arizona. In California, this foliage-roosting species appears to roost exclusively in the skirts of palm trees, and to be limited in its distribution by the availability of palm habitat.

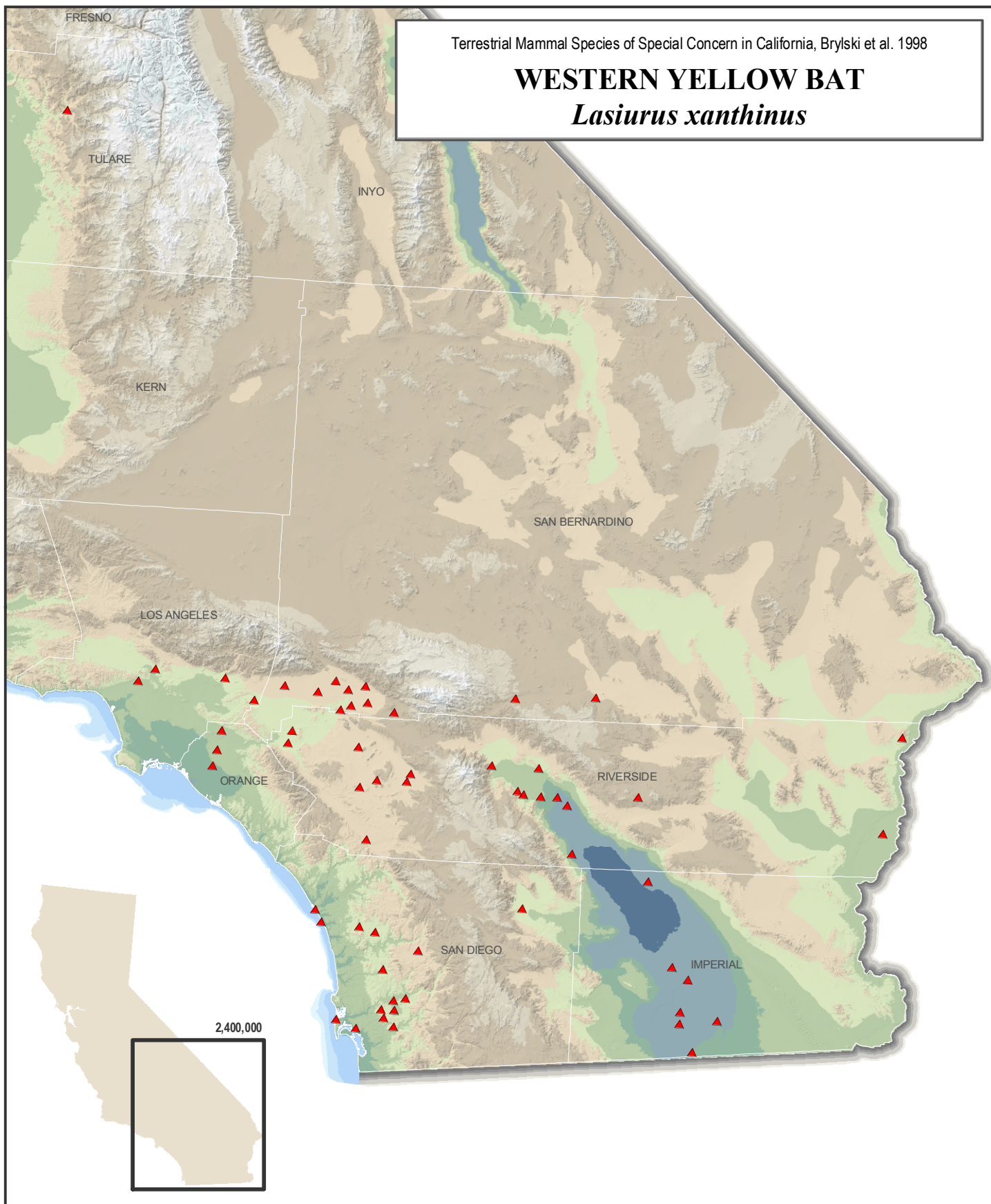
Status: Class II. This species is being placed on the Special Concern list due to its limited distribution and apparently restrictive habitat requirements. Although there is evidence that the species is expanding its range in response to the availability of ornamental palms (D. Constantine pers. comm.), and most of the significant palm oases in southern California are on public land (e.g., Joshua Tree National Monument and Anza Borrego State Park), this species is at risk from certain management practices regarding palms -- the cosmetic removal of dead fronds in suburban settings, and the burning of fronds by vandals (Mirowsky 1997). Additionally, burning of fronds was used as a management practice at Joshua Tree National Monument in the 1970s and early 1980s. The use of pesticides in date-palm and other orchards may also constitute a threat to both roosting bats and the insects upon which they forage. Domestic cats, whether pets or feral, may be a significant source of predation, as they are for many lizards, songbirds, and rodents.

Management Recommendations: More survey work is needed in southern California, focusing on palm habitat, to delineate more clearly the distribution and habitat needs of this species. Information is also needed regarding daily activity patterns, dietary requirements, and seasonal movement patterns.

Terrestrial Mammal Species of Special Concern in California, Brylski et al. 1998

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▲ Constantine 1998