American Badger

(*Taxidea taxus*)

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Legal Status
Federal: None
State: Species of Special Concern.

Global and State Conservation Status: G5S4: Global rank, G5 = Secure: Common; widespread and abundant; State Rank, S4 = Apparently Secure: Uncommon but not rare; some cause for long-term concern due to declines or other factors.

Recovery Plan: None

Species Description and Life History

American badgers are heavy bodied, short-legged, grayish mammals that have a white medial stripe from nose over the top of the head and down the back. Badgers have a black nose, white cheeks, and black spot in front of each ear. Their feet are black with extremely long front claws. The belly and the short tail are yellowish (Burt and Grossenheider 1980).

This non-migratory species is nocturnal and diurnal and active year-round (Ahlborn 2005). Adults are primarily nocturnal (Sargeant and Warner 1972, Lindzey 1978) whereas juveniles appear to be active during the day (Messick and Hornocker 1981). Badgers may become torpid for variable periods of time in the winter (Long 1973), probably at high elevations and latitudes. In Wyoming, male badgers were found to double their daily activity during the breeding season (Minta 1993). When not actively foraging, badgers retreat to a sleeping den. Badgers typically occupy a different sleeping den every night, either digging a new burrow or using one that has been dug previously. In Idaho, 85% of burrows used were previously-dug (Lindzey 1978). However, in California badgers were found to use previously dug dens only 43% of the time (Quinn *unpublished data*).

They have large home ranges that vary according to geography, season (Ahlborn 2005), and distribution of food sources (USFS 2008). Male home ranges are typically larger than female ranges and much larger during the summer breeding season (Messick and Hornocker 1981, Minta 1993). Generally, the home range of the badger is 395 to 2,100 acres (137-850 ha) (Sargeant and Warner 1972, Lindzey 1978, Messick and Hornocker 1981). However, larger home ranges in California have recently been documented in California. In a 2005 study, mean home range across all seasons for females (n=5) was estimated at 1.94 km^2 (480 acres) while mean home range across all seasons for males

(n=4) was estimated at 11.23 km^2 (2,775 acres) (Quinn 2008). Badgers are generally solitary aside from temporary family groups, transient mating bonds, and overlapping home ranges (Davis 1942, Messick and Hornocker 1981, Minta 1993). In Idaho, population densities have ranged from two to six badgers per km^2 (e.g., Messick and Hornocker 1981). Population densities in California appear to be much lower. Badger density in the Fort Ord Public Lands was estimated to be at minimum 1 badger per 4 km^2 or 988 acres (Quinn et al. 2006).

Badgers mate in summer and early fall (Ahlborn 2005). However, badgers may not breed every year. Messick and Hornocker (1981) report that an average of 57% of females produce a litter in a given year. The average litter size is two or three with young being born in March and April (Long 1973). Female badgers raise the young. Young disperse approximately three to four months following birth (Minta 1993). Natal dens are dug in dry, sandy soil in areas with sparse overstory cover (Zeiner *et al.* 1990). Some females may breed in their first year; males do not reach sexual maturity until their second year (Ahlborn 2005). Badgers have been reported to live 11 to 15 years (Flower 1931, Jackson 1961, Long 1973, Messick and Hornocker 1981).

Habitat Requirements and Ecology

American badgers are found in a variety of open, arid habitats, but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub (Stephenson and Calcarone 1999). They are usually absent from mature chaparral (Quinn 1990). Principle habitat requirements for the species include sufficient prey base, friable soils, and relatively open, uncultivated ground (Williams 1986). They are primarily found in areas of low to moderate slope (Stephenson and Calcarone 1999). The elevational range of the badger extends from below sea level to over 3,600 meters (12,000 ft) (Lindzey 1982).

American badgers are carnivorous and feed on fossorial rodents including ground squirrels (*Spermophilus* ssp.), cottontail rabbits (*Sylvilagus* spp.), jackrabbits (*Lepus* spp.), small rodents (*Peromyscus*, *Microtus*, *Mus*, *Reithrodontomys*, *Dipodomys*), and pocket gophers (*Thomomys* spp.) (Ahlborn 2005). Badger will also eat reptiles, insects, earthworms, eggs, birds, and carrion (Ahlborn 2005). In Wyoming, badger density was correlated with ground squirrel density (Minta 1993). Their stout bodies, powerful forelimbs, and long curved claws allow badgers to capture prey by digging them out from their burrows (Messick and Hornocker 1981). They will cache their prey in dens (Snead and Hendrickson 1942); however, caching has not been universally observed (e.g., Messick and Hornocker 1981). Diet shifts seasonally and yearly in response to availability of prey.

Predators of the American badger include coyotes and golden eagles (Long 1973). However, the species is a ferocious fighter and has very few predators (Long 1973).

Species Distribution and Population Trends

Distribution

American badger occurs as far north as Alberta, Canada, and as far south as central Mexico (Hall 1981). The taxon's distribution throughout the United States is expanding; it currently extends east from the Pacific coast to Texas, Oklahoma, Missouri, Illinois, Indiana, and Ohio (Long 1972, Williams 1986). In California, the American badger is an uncommon, permanent resident throughout most of the state, with the exception of the North Coast area (Grinnell *et al.* 1937).

The distribution of the badger in Yolo County is not well documented. There are several areas of potentially suitable habitat in the Yolo Bypass, Dunnigan Hills, Capay Valley, and the lower slopes of the Capay Hills and Blue Ridge Mountains. However, the only documented observations are near Davis, Woodland, and south of Clarksburg. The badger is also listed as a species likely to occur at the Yolo Bypass Wildlife Area. Historic observations include four records from Highway 16, near Rumsey (see Grinnell 1937 and Sacramento State Museum specimen 1971).

Population Trends

American badgers have experienced large population declines in many areas of southern California and has been steadily decreasing throughout the state over the last century (Williams 1986). The amount of suitable habitat available has decreased as a result of extensive urban and agricultural developments in the valley and foothill habitat adjacent to the four National Forests (USFS 2008). Badgers are likely to have experienced similar declines in Yolo County as a result of habitat loss, and increased road kills due to increase traffic volume (note that two of the three records near Davis occur on County Road 31 and are likely to have been collected as road kill).

Threats to the Species and Other Conservation Issues

The American badger is threatened by habitat conversion to urban and agricultural uses, farming operations, shooting and trapping, poisoning, and reduction of prey base as a result of rodent control activities (Williams 1986). Predator control with the usage of indiscriminate trapping and poisons have caused extensive loss (Ahlborn 2005). Vehicular accidents (road kill) are also a major cause of badger mortality (USFS 2008).

Contributors to this species account:

Mark Roll, TAIC

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