



Predators of the Salt Marsh Harvest Mouse in the Suisun Marsh

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Background

The salt marsh harvest mouse (*Reithrodontomys raviventris*, SMHM) is a unique species, endemic to the salt and brackish marshes of the San Francisco Bay Estuary. Despite being listed as endangered since the early 1970's there is still very little data regarding the ecology of this species, including common predators. To date, the only study that addressed predators of SMHM occurred 60 years ago and reported that 8% of short eared owl (*Asio flammeus*) pellets collected in San Pablo Bay contained SMHM skulls (Johnston, 1956).

Methods



As part of a broader study on SMHM we recorded observations of predators actively hunting in study areas, in addition to taking note of sign of predators including tracks, scat, skins, and calls. These observations occurred throughout the day, and captured both diurnal and nocturnal predators.

Likely Active Predators

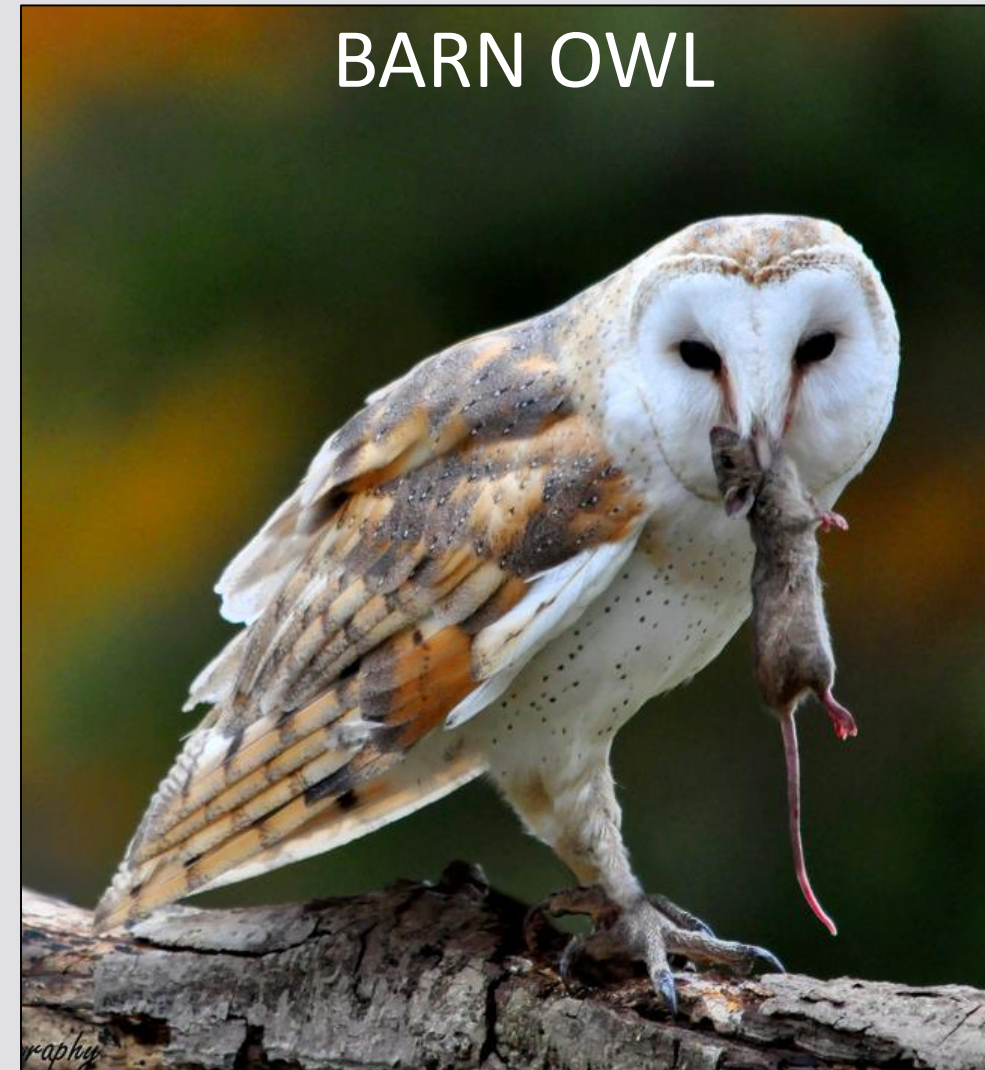
Raptors



WHITE-TAILED KITE



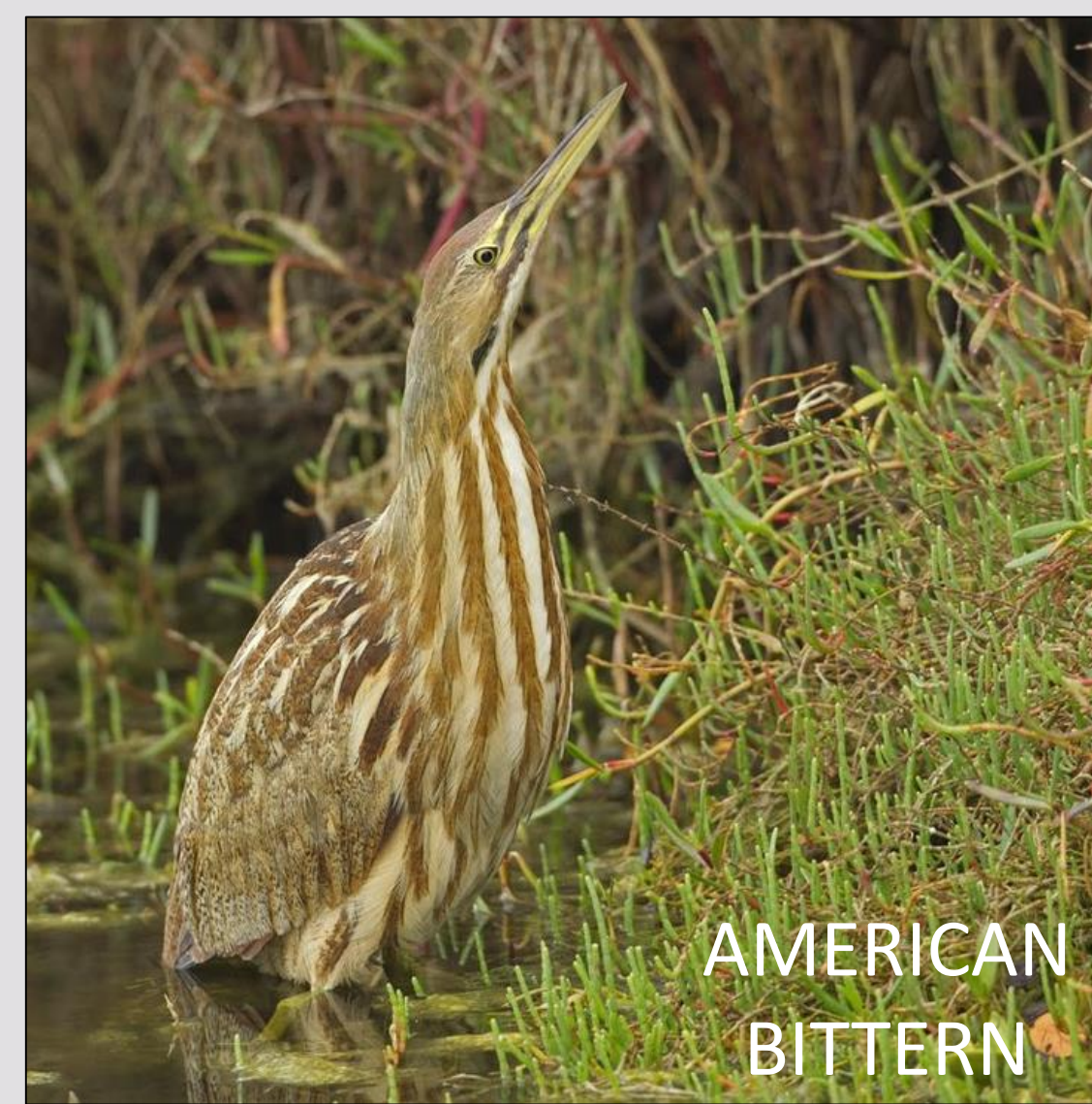
NORTHERN HARRIER



BARN OWL

These raptors are commonly seen hunting in areas with SMHM; likely their most important predators.

Wading Birds



AMERICAN BITTERN



EGRETS AND HERONS

Bitterns, egrets, and white herons are often observed hunting in areas with SMHM.

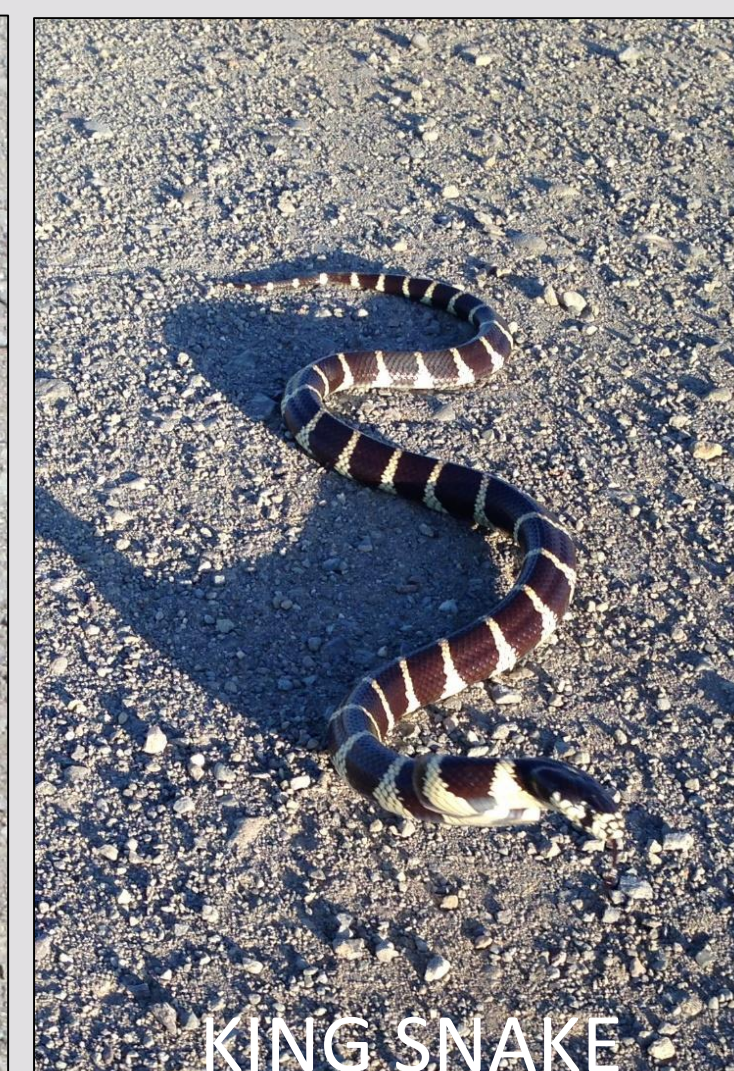
Snakes



GOPHER SNAKE



WESTERN-YELLOW-BELLIED RACER



KING SNAKE

Snakes are cryptic and rarely seen but likely are important predators.

Mammals



STRIPED SKUNK



RACCOON

These mammals are common. Raccoons frequently disturb traps.

Predation Events



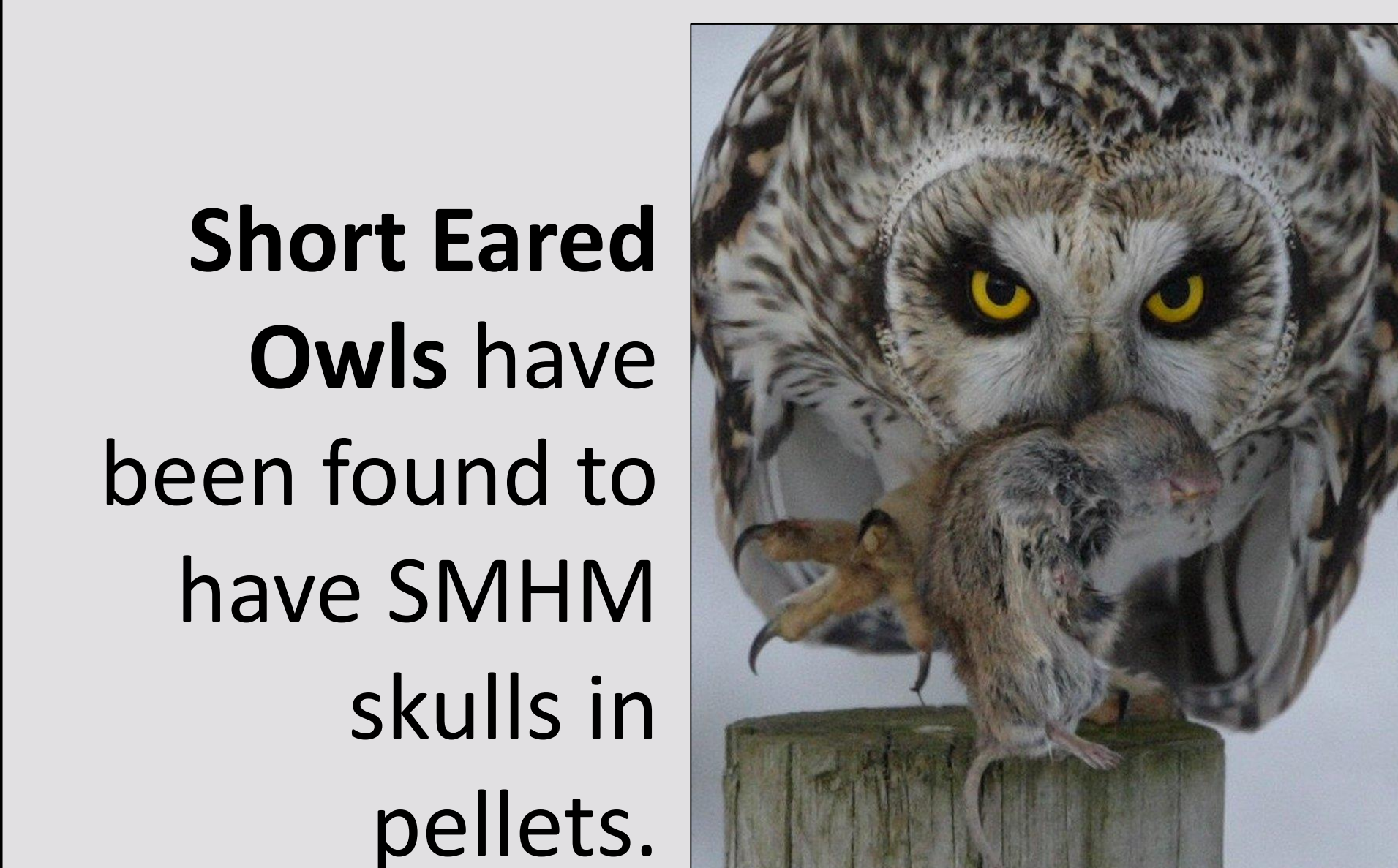
White-tailed Kite eating a collared mouse.



Yellow-bellied Racer found with collared mouse in gut.



A Northern Harrier was observed taking a collared mouse.



Short Eared Owls have been found to have SMHM skulls in pellets.

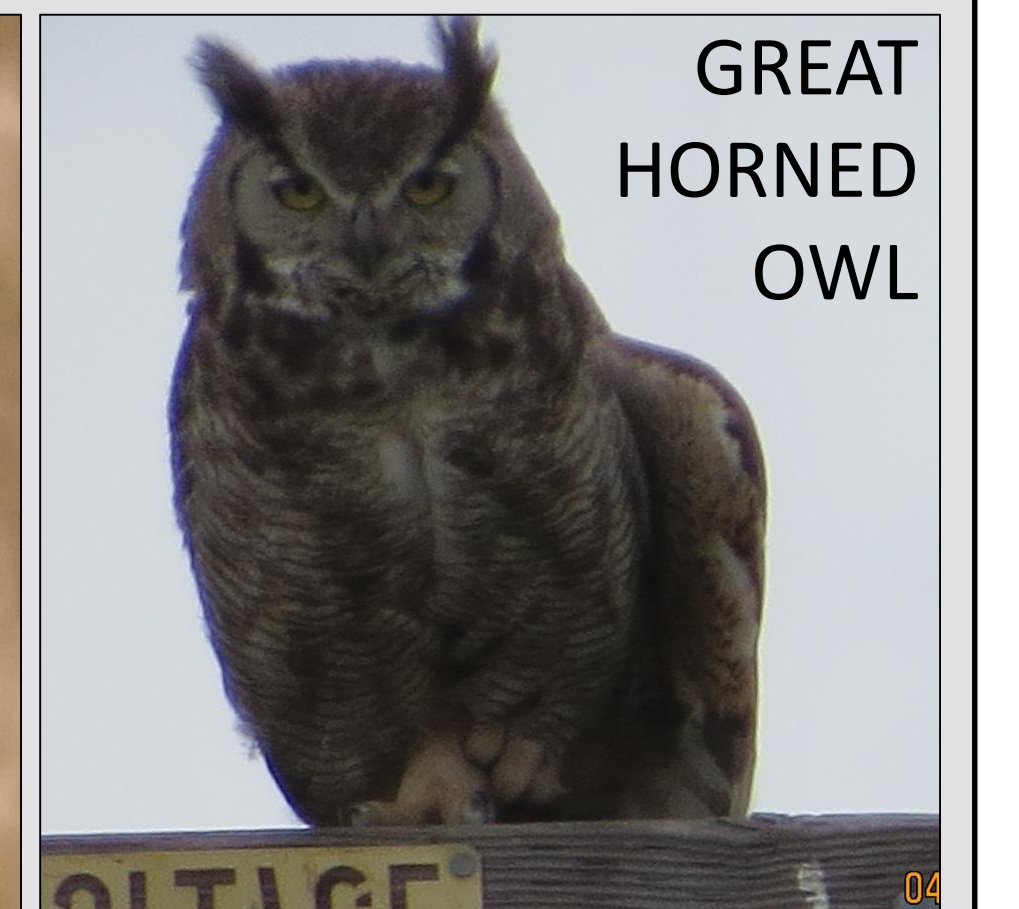
Occasional and Opportunistic

Raptors

These raptors are observed intermittently and are likely occasional predators.



RED SHOULDER HAWK



GREAT HORNED OWL

Wading Birds

These wading birds are seen intermittently; likely hunt SMHM occasionally and opportunistically. ↓



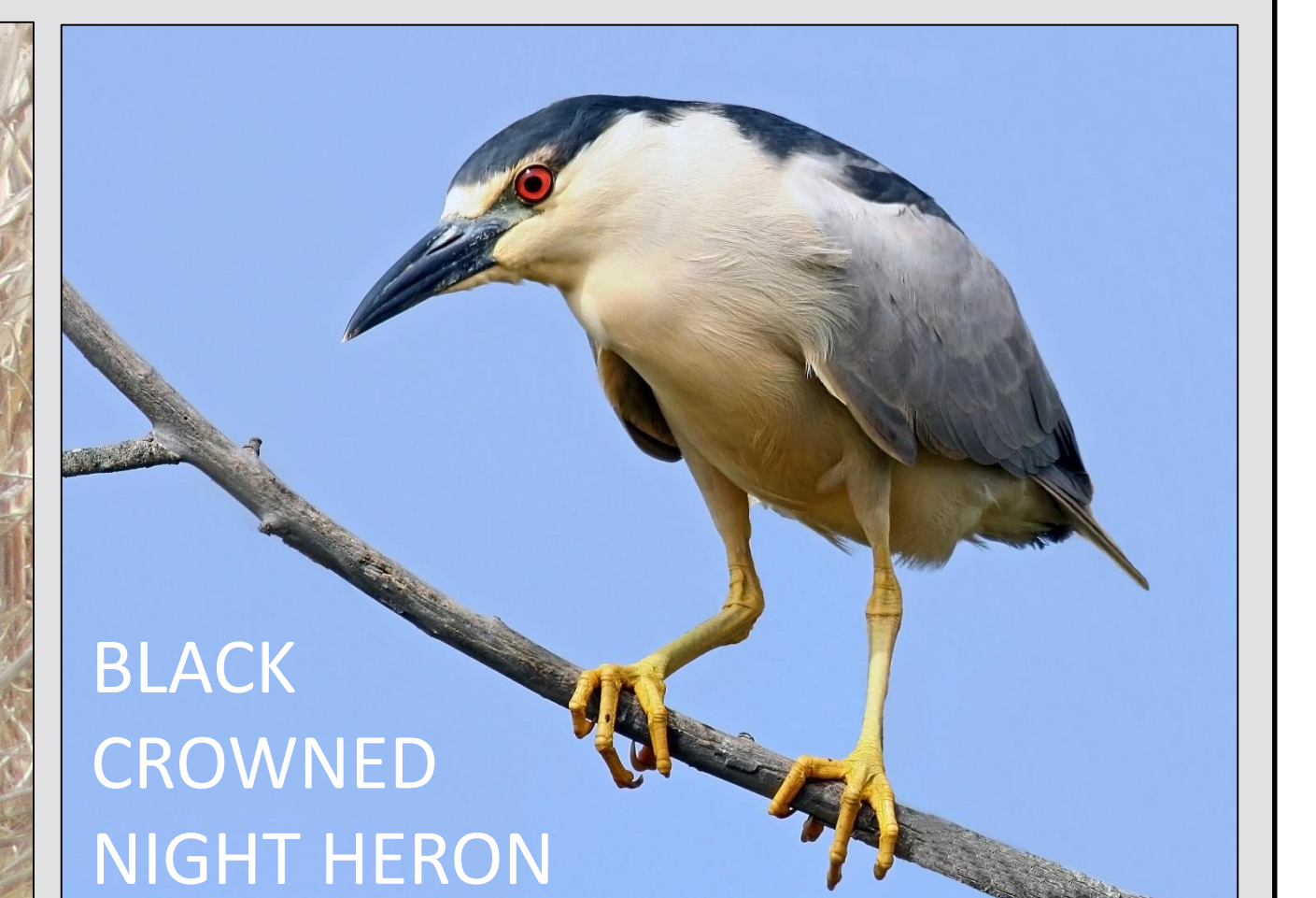
SHORT EARED OWL



RED TAIL HAWK



GREAT BLUE HERON



BLACK CROWNED NIGHT HERON

Mammals



FERAL CAT



FERAL PIG

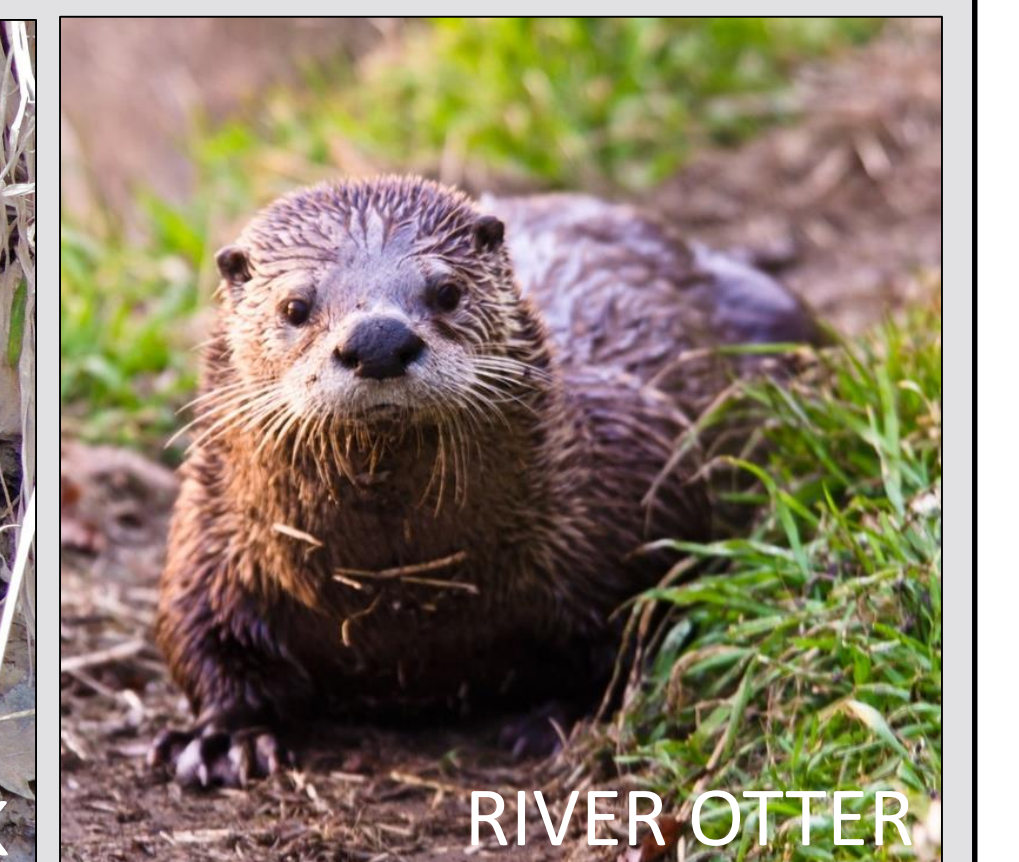
Pigs and these meso-carnivores are common but infrequently observed; likely predate opportunistically.



COYOTE



MINK



RIVER OTTER