With the advent of the Internet, if you have a mailing address and a credit card, you can purchase anything from an anole to a serval. The species available with the click of a computer mouse are astounding, and new, “fad” species appear to be popping up every day. While the easy availability of “designer” exotic species on the Internet brings business to exotic animal practitioners, it also brings a wealth of misinformation about the care and husbandry of these pets.

As a private practitioner with a limited library on exotic pets readily available in my clinic, I often wish I had a text or two to glance at that would provide me with some quick, basic facts on some of the species in which I am not as well-versed. In talking with my colleagues, I know I am not alone in this desire. To try to meet this need (and as a follow-up to Volume 8.6), contributors to Exotic DVM Magazine have compiled information about several less commonly seen exotic species kept as pets. While this information is not meant to be comprehensive, nor is it intended to promote these species as pets, it provides practitioners with an easy-to-read list of important facts. With these pages, exotic animal veterinarians will at least have some reference material at their fingertips the next time an anole or serval walks in their clinic door.

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Richardson’s ground squirrel* (Spermophilus richardsonii)

*Also known as gopher, prairie gopher, yellow gopher, flicker tail or picket pin. There are at least 39 species of Spermophilus ground squirrels.

Kristin Sinclair, DVM

ORIGIN
Northern United States and southern Canada

FREE-RANGING HABITAT
The Richardson’s ground squirrel is found in burrows in open grasslands, overgrazed pastures and cultivated areas.

SUITABILITY AS PETS
At this writing, no information exists on captive breeding programs; commercially available babies are from wild-caught pregnant females. These animals can be affectionate if handled gently and frequently from a young age, and the prospective owner must commit a large amount of time to this. Ultimately, they are not a domesticated animal. Lack of the ability to hibernate in captivity may pose a health problem. They can be destructive chewers; prospective owners need to squirrel-proof the cage and home. The Richardson’s ground squirrel is reported to be litter-trainable. Lifespan averages 4 years in the wild and captivity.

ADULT SIZE
- Males (prehibernation weight): 500-600 g
- Females (prehibernation weight): 400-450 g
- These animals are considerably lighter upon emergence from hibernation.

PHYSICAL CHARACTERISTICS
These squirrels are stout-bodied with a short tail and resemble a small prairie dog. The hair coat is short and dense, ranging in color from cinnamon to pink buff on the dorsum. The underside is lighter in color, and the dorsal tail is black. Dental formula: I 1/1 C 0/0 P 2/1 M 3/3 = 22. The incisors are open-rooted.

BEHAVIOR
Free-ranging individuals hibernate for most of the year and are active from early spring to mid-to-late summer for mating and feeding. Hibernation consists of approximately 90% torpor for lengthening periods as the weather gets colder, interspersed with a few hours of warming and brief activity within hibernaculum (hibernation burrow). Free-ranging female Richardson’s ground squirrels maintain amicable interactions with female relatives (mother, daughters, sisters, sometimes aunts and female cousins, grandmother). However, they are aggressive to non-familial females and all males aside from during their brief estrus period. Males live singly and exhibit inter-male aggression during the breeding season. Vocalizations include chirps, whistles (warning calls) and growls (upset, warning noise).

Estrus lasts only a few hours. Females carry one litter a year and cannot have a second if the first is lost. Gestation averages 23 days. The altricial offspring are born hairless with closed eyes, fused digits and no teeth. Litter size is typically 6-8 offspring. The babies emerge from the maternal burrows at 1 month of age and are immediately able to eat solid foods. They are weaned shortly afterwards. Sexual maturity is attained at 11 months of age, when the young emerge from their first hibernation cycle.

CAPTIVE HOUSING
A solid-bottomed wire cage suitable for a rabbit or a guinea pig would be the minimum size requirement (3 x 2 x 1.5 feet [0.9 x 0.6 x 0.5 m]). Substrate deep enough to allow burrowing and nesting should be provided; recycled paper and hay can be used. Some authors recommend the use of a 3-story ferret cage to mimic their natural burrow system. They are not good climbers so the 3-story enclosure should be arranged so they cannot fall far from ramps or tubings. Ideally, they should be housed at least in pairs (sisters or females), but if housed alone, they will need regular interaction with their owner.

ENVIRONMENTAL TEMPERATURE / HUMIDITY
Ambient household temperature is acceptable, but heat extremes should be avoided (over 80°F [27°C]).

ENVIRONMENTAL ENRICHMENT
- Hide boxes, polyvinyl chloride (PVC) pipes buried in the substrate and chew toys are options for environmental enrichment.
- Some like to have a “lookout” perch, but they are not good climbers and may fall.
A Richardson's ground squirrel exhibiting territorial behavior.

**DIET**

- In the wild, the Richardson's ground squirrel is primarily herbivorous/granivorous, consuming native grasses and seeds. Those living in cultivated areas tend to eat more crop foods (e.g., wheat, oats). They will occasionally eat a few insects.
- Recommended foods in captivity are similar to those recommended for a prairie dog: timothy hay, commercial herbivore pelleted diet or hay cubes (e.g., Oxbow Prairie Delight, Brisky Prairie Dog Diet) and fresh, leafy vegetables.

**RESTRAINT**

- These creatures cannot be scruffed easily (nothing to grab).
- They can be carried and held as you would a rabbit, supporting the chest in one hand and the rump with other.
- If the animal is fractious, a towel or pair of heavy gloves can be helpful.

**ANESTHESIA**

- Fasting is not required, because they do not vomit.
- There are no reported dosages for this species, but one can extrapolate from other rodents (other squirrels, prairie dogs).
- Inhalation anesthesia can be used for induction and maintenance.
- Ketamine (40 mg/kg) with acepromazine (0.4 mg/kg IM) has been used successfully in prairie dogs.
- Analgesics include butorphanol (2 mg/kg SC), buprenorphine (0.02 mg/kg SC) and meloxicam (0.2 mg/kg SC or PO).

**MOST COMMON DISORDERS**

- Ectoparasites: fleas, ticks
- Endoparasites
- Improper diet: inadequate hay intake
- It is so far unreported if the inability to properly hibernate in captivity poses any health risks.

**VACCINES**

- None required

**ZOONOTIC POTENTIAL**

- Vector-borne disease, such as *Bartonella* sp.
- Colorado tick fever

**SPECIAL CONSIDERATIONS AND CAUTIONS**

- Ownership may require a permit, depending on local and state laws.
- Castration may be feasible through an intra-abdominal approach. The testicles are active for only 8 weeks after emergence from hibernation, after which they regress intra-abdominally.

**REFERENCES AND FURTHER READING**

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