

wet and its carapace dry." In such microhabitats the turtle forages along the shallow waterways and vole runs, and, at times of perceived danger, when becoming too warm, or at night, buries itself in the soft bottom or within the sedge tussocks. It is a confirmed basker (all age groups and sexes, although females may bask slightly more than males). Its microhabitat probably plays a major role in lowering the rate of incidence of both algal and leech attachment. Its extremely shallow water microhabitat is warmer than the cooler, deeper waters nearby, and may not be as conducive for leeches. Also, the turtle's carapace is exposed to the sun more often, even if not basking, than those of more aquatic turtles; and is thus drier and warmer (pers. obs.). Algae cells on the carapace and leeches attached to the soft parts have a greater chance of being killed by ultraviolet rays, overheating, or drying out. When not foraging or basking, the turtle is usually found under the surface of the soft bottom or within vole or Muskrat (*Ondatra zibethicus*) burrows, if available, and is then in reduced light or possibly total darkness which does not favor algae growth.

Algal and leech associations should be included in current or future ecological studies of Bog Turtles to confirm or refute the above assumptions and the apparent low incidence of colonizations.

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GOPHERUS AGASSIZII (Desert Tortoise) and CROTALUS RUBER (Red Diamond Rattlesnake). BURROW CO-OCCUPANCY.

I observed an adult Desert Tortoise and an adult Red Diamond Rattlesnake (sexes unknown) (Fig. 1) in a shallow tortoise burrow on 6 January 1997 at a wind energy generation facility near Palm Springs, Riverside Co., California, USA (33.9599°N, 116.6613°W). The site is located in the southeastern foothills of the San Bernardino Mountains just west of the Whitewater River. The air temperature was about 5°C at the time the photograph was taken. The burrow was located about 50 m from a row of wind energy turbines, not an unlikely location for tortoises in this population (Lovich and Daniels 2000. *Chelon. Cons. Biol.* 3:714–721). Both species are common at the site and Red Diamond Rattlesnakes have been seen at Desert Tortoise burrows during the summer as well. The time of year when the photograph was taken was well within the cool weather dormancy period for both Desert Tortoises (Ernst and Lovich 2009. *Turtles of the United States*

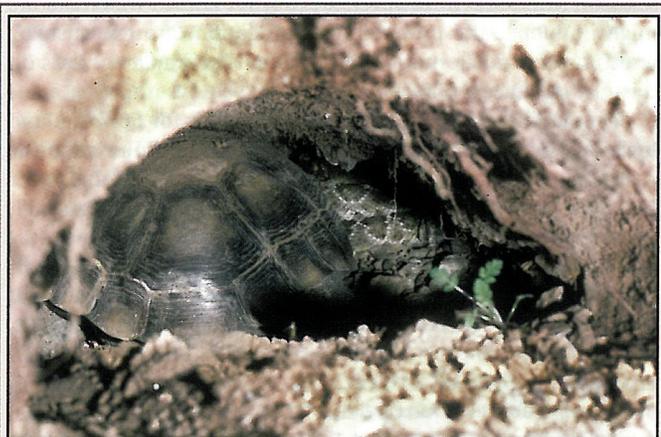


FIG. 1. *Gopherus agassizii* and *Crotalus ruber* hibernating in a shallow Desert Tortoise burrow together near Palm Springs, California, USA.

and Canada, 2nd ed. Johns Hopkins University Press, Baltimore, Maryland) and Red Diamond Rattlesnakes (Ernst 1992. *Venomous Reptiles of North America*. Smithsonian Institution Press, Washington, D.C.). In California the Red Diamond Rattlesnake is more commonly associated with coastal sage scrub and chaparral plant communities and the Desert Tortoise is emblematic of the desert, three very different but proximate ecosystems. Areas where the ranges of these animals overlap are comparatively small when considering their composite distributions but the transition area at the study site contains representatives of plant species from all three ecosystems. Although Desert Tortoise burrows can be occupied by many species of animals including other species of *Crotalus* (Ernst and Lovich, *op. cit.*) this is the first documented case of burrow co-occupancy for these two reptiles.

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GOPHERUS POLYPHEMUS (Gopher Tortoise). BURROW ASSOCIATE.

Gopherus polyphemus excavate and inhabit burrows in xeric, sandy habitats of the southeastern United States (Auffenberg and Franz 1982. *In* Bury [ed.], *North American Tortoises: Ecology and Conservation*, pp. 95–126. USDI Fish and Wildlife Service, Wildl. Res. Rep. 12). Because of the cool, moist microenvironment provided by tortoise burrows, a number of animals use them as refugia with 60 vertebrate and 302 invertebrate species documented utilizing burrows (Jackson and Milstrey. 1989. *In* et al. [eds.], *Proceedings: Gopher Tortoise Relocation Symposium*, pp. 86–98. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida). Although the Six-lined Racerunner (*Aspidozelis sexlineata*) has been observed using tortoise burrows for refuge, it has never been reported to nest in tortoise burrows or the burrow aprons, the mound of excavated sand deposited outside the burrow entrance. Here we present six instances of *A. sexlineata* nesting in the aprons of burrows of *G. polyphemus* at the Aiken Gopher Tortoise Heritage Preserve, Aiken Co., South Carolina, USA.

In the course of searching for and excavating *G. polyphemus* nests on 25 August and 1 September 2010, we unearthed six *A. sexlineata* nests at six separate burrows. All nests were buried shallowly on burrow aprons. Four of the nests consisted of neonates emerging from or recently emerged from eggs, while two nests contained clutches of two and three eggs each. We brought the clutch of two eggs to the laboratory where it subsequently hatched on 3 September (eight days later). Tortoise burrows have long been acknowledged as important microhabitats within open-canopied, sandy habitats for species seeking thermal refugia, moist hides, or foraging areas (Milstrey 1986. *In* Jackson and Bryant [eds.], *The Gopher Tortoise and its Community*, pp. 4–25. *Proceedings 5th Annual Meeting Gopher Tortoise Council*, Florida State Museum). Female Gopher Tortoises are also known to nest in the aprons of their burrows; however, these observations of *A. sexlineatus* highlight the potential for the aprons of Gopher Tortoise burrows to serve as important oviposition sites for other herpetofaunal species.

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