ELGARIA PANAMINTINA (Panamint Alligator Lizard). REPRODUCTION. The biology of *Elgaria panamintina* is summarized in Banta et al. (1996, Calif. Acad. Am. Rep. 629:1–4). Information on clutch sizes or the timing of the events in the testicular cycle are unknown. Here we report the first clutch size and time of sperm formation (spermiogenesis) for this species.

Specimens were examined from the California Academy of Sciences (CAS), San Francisco, Natural History Museum of Los Angeles County (LACM), Los Angeles, Museum of Vertebrate Zoology (MVZ), University of California, Berkeley and Department of Biology, San Diego State University (SDSU), San Diego. All specimens were collected in Inyo County, California in the interval 1959–1985. Six males (mean SVL = 99 mm; ±9 SD, range: 90–114 mm) and two females (SVL = 105 mm ± 6 SD, range: 100–109 mm) were examined. In males, the left testis was removed and embedded in paraffin. Histological sections were cut at 5 mm, mounted on glass slides and stained with Harris’ hematoxylin followed by eosin counterstain.

One male collected in May (CAS 89230, 93 mm SVL) was undergoing sperm formation (spermiogenesis); Lumina of the testes were shriveled and filled with sperm. Two males collected in June (MVZ 77108, 97 mm SVL; CAS 89675, 92 mm SVL) had regressed testes containing spermatogonia. One male collected in July (MVZ 227164, 90 mm SVL) had a regressed testis. A second male (MVZ 227765, 106 mm SVL) had a testis in recrudescence (i.e., renewal of germinal epithelium for next period of spermiogenesis); spermatogonia and primary spermatocytes were present. One male collected in July (MVZ 227764, 90 mm SVL) had a regressed testis, and a second male (MVZ 227765, 106 mm SVL) had a testis in recrudescence. The presence of a male collected in May undergoing spermiogenesis suggests that *E. panamintina* breeds during spring. This agrees with two other North American alligator lizards that also produce sperm at this time: *Elgaria multicaudata* (Goldberg 1972, Herpetologica 28:267–273) and *E. coerulea* (Vitt 1977, Herpetologica 33:176–183). A report of captive breeding in May exists for *E. panamintina* (Rowe and Leviton 1961, Herpetologica 17:204–206). Beehler and King (1979, The Audubon Society Field Guide to North American Reptiles & Amphibians. Alfred A. Knopf, New York. 743 pp.) reported spring mating for this species.

Histological examination revealed the ovarian follicles from the female collected in May (CAS 88135, 109 mm SVL) described in Banta (1963, Occas. Pap. California Acad. Sci. 36:1–12) as “developing eggs” had not started yolk deposition. One female collected in September (MVZ 150329, 100 mm SVL) contained 4 ovudidial eggs and is the first clutch size reported for *E. panamintina*.

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On 22 June 2000 at ca. 08:00 h, I observed 3 different *E. septentrionalis* nests each with an associated female and each under a different cover object in an open, grassy field on the south edge of Bridgewa ter (41°14’N, 94°08’W), Adair County. One nest was under a piece of cement, one was under a flat rock, and one was under a piece of tin. I had placed all cover objects at each location in previous years. Soil in the area was silt loam or silty clay loam. Each female skink was in a short, horizontal burrow (6–10 cm long, 3–6 cm diam opening) with eggs that were poorly visible because they were far back in each burrow. Nest locations were flagged and the cover objects replaced. I returned to the area at ca. 1000 h the same day to observe each nest once again. Close examination revealed that each female had placed her eggs (clutch sizes = 4, 9, 11) into a shallower depression (ca. 2 cm deep) located outside and adjacent to each burrow opening. Each clutch was in the open depression and clearly visible when the cover object was removed during the 1000 h visit. Nests were located in sparsely vegetated areas, which provided better insulation than in adjacent areas. Through apparent repositioning of the eggs to the edge of each burrow and directly under a cover object, the females may have been making the environment of each clutch thermally more favorable for development. Two of these nests I observed hatched by 18 July (<30 days), over 10 days faster than those reported by Breckendridge (1943, Amer. Midl. Nat. 29:591–606). Based on brooding observations of *E. septentrionalis* in the lab, Somma and Fawcett (1989, Zool. J. Linn. Soc. 95:245–256) reported an incubation interval of <27 days.

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**GAMBELIA SILA** (Blunt-nosed Leopard Lizard). PREDATION. Gambelia silica is a fairly large member of the depueprar lizard fauna of California’s San Joaquin Valley (Montanucci 1968, Herpetol. 24:326–322). This lizard, state and federally listed as endangered, remains over about 15% of its historical range (Germann and Williams 1992. Trans. West. Wild. Soc. 28:38–47). Understanding population dynamics, including potential predators, is essential to its recovery. Several predators of *G. silica* are known. These include two snakes, the San Joaquin cooweship (*Masticophis flagellum radii*ckii) and goopher snak (*Pituophis cafinerfix*), and five birds, the prairie falcon (*Falco mexicanus*),
American kestrel (Falco sparverius), loggerhead shrike (Lanus ludovicianus), burrowing owl (Athene cunicularia), and roadrunner (Geococcyx californianus) (Montanucci 1965, Herpetol. 21: 270-283; Tollstenop 1979. Ph.D. dissertation, University of California, Berkeley: 46 pp., Germano and Carter 1995, Herpetol. Rev. 26: 100). Here, we add two new species to the predator set on G. silica.

On 5 June 2002 at 07:40 h, during a radio-telemetry study on the Loken area of Kern County, California (119°37′W, 35°22′W), we located the signal of a radio-collared G. silica coming from a northern Pacific rattlesnake (Crotalus viridis oreganus) that was buried up under a dead saltbush (Atriplex sp.). For the previous 5 days, we had located the signal in a burrow next to a wash ca. 3 m from where the rattlesnake was found. The area had burned in 1997, which killed native saltbush plants, and it was one of 4 treatment replicates in a grazing study. Because of grazing and below-average rainfall in the previous winter, the land was largely devoid of herbaceous plants. We had tracked the G. silica, a small (100-mm SVL, 28.6 g) female, for 18 days. The rattlesnake, a small adult female (470 mm SVL and 74.6 g including the mass of the partially digested lizard and radio-telemetry package [2.2 g], was euthanized by freezing. When the snake was opened, only the hind legs and tail of the lizard were recognizable (Fig. 1), which we think indicates that the lizard had been eaten several days prior to our finding it inside the rattlesnake.

On 23 May 2002, we captured an adult male G. silica (116 mm SVL, 53.6 g) in another part of the Loken area. This area had not burned, was covered sparsely by living saltbush, and was at the base of hilly terrain. We had taken 12 GPS locations until 18 June 2002, when the transmitter signal was determined to be coming from a distant location. We drove towards the signal (3.2 km straight-line distance) until we reached the base of a high-voltage powerline tower. The signal appeared to be coming from the nest of a pair of red-tailed hawks (Buteo jamaicensis), located ca. 30 m above the ground. We lost the signal 3 days later and were not able to recover the transmitter; we presume that one of the red-tailed hawks was responsible for the predation event. Although the northern Pacific rattlesnake and red-tailed hawk have been suspected as predators of G. silica (Tolstrop, op. cit.), these reports remain unconfirmed, or suggesting, respectively, their preying on this lizard.

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HOMONOTUS UNDERWOODII (Underwood’s Gecko). BODY TEMPERATURE. Homonota underwoodii is an insectivorous oviparous gecko that inhabits the dry hot landscape of the Montana Physiographic Province (Cabrera and Willink 1980, Biogeography of the Americas, Linn. O.E.A. Washington D.C. 109 pp.) in Provincia de San Juan, Argentina. Like most American gekkons, few data address its biology. Werner et al. (1996, Caud. Herp. 10: 62-67), who made observations on body temperatures on a small number of lizards (N = 7), provided the only published data on this species’ biology. Here, I augment the few data on field body temperatures as part of a larger study on this species’ ecology.

Field work was carried out in a dry swamp with a mosaic of flagstone patches and patches of sand in La Laja, Departamento Alburques, Provincia de San Juan, Argentina (31°15′S, 68°41′W). Data were collected every 10 days from August 2000 to August 2001 by revisiting bushes and low flagstones across the site study at random. Each individual was captured by hand. The clausal temperature (TC), temperature of the substrate (TS) and temperature of the air (TA) were measured with a rapid reading Mitler-Weber thermometer to the nearest 0.1°C. For each capture, we took TS on the substrate at the exact point of observation, and TA 1 cm above the substrate. For both TS and TA, we distinguished whether the temperature was taken in the sun, shade or partial shade (on shrubby margins).

Of 56 captured animals, 96% were on low flagstones and 4% were in bushes among shrubs in an arid heavily altered by human activities and erosion. Most body temperatures was 26.5°C (N = 56). An ANOVA addressing gender differences in TC was not significant (F2, 54 = 1.61, P = 0.20). An ANCOVA (TS as the covariate) revealed no intersexual differences in TC (F2, 52 = 2.30, P = 0.10). Clausal temperature and TA were not correlated (r = 0.07, N = 56, P = 0.65), but the strong correlation between TC and TS was unexpected (r = 0.51, N = 56, P < 0.01). The data suggest that thermoregulation is enabled through conduction with the substrate and seems independent of air temperature. In contrast, Werner et al. (op. cit.), working with H. underwoodii on the Tulecua Reservation SE of Mendoza (Argentina), obtained a significant correlation between TC and TA. These differences may be a function of the small number of lizards Werner et al. (op. cit.) had. Body temperatures and the contrasts between TC and TS were similar in both studies. Lizards in the Tulecua study thermoregulated under a function of (live) dung piles during the day in a manner similar to what we observed in this population where low flagstones were consistently used.

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FIG. 1. Radiograph of the remains of a blot-nosed lizard (Gambelia silica) and its radio transmitter inside a northern Pacific rattlesnake (Crotalus viridis oreganus).