



Spider Induced Egg Mortality in a Skink Population

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SPIDER INDUCED EGG MORTALITY IN A SKINK POPULATION.—The wolf spider *Geolycosa godeffroyi* (Koch) inhabits burrows and those constructed by the adults are from 10 to 18 cm deep. During the course of a study on the spiders about 1750 burrows were excavated or examined in a clearing along the transition line between dry sclerophyll forest (*Eucalyptus rossii*—*E. mannifera* community) and savannah woodland (*E. mellidora*—*E. bridgesiana* community) in the Australian Capital Territory. Skink eggs were recovered from four burrows or found apparently ejected from 15 burrows in the tailings produced by the spiders' digging activities. The spiders would eject skink eggs placed by hand in their burrows. Unhatched

TABLE 1. THE NUMBERS AND STATE OF SKINK EGGS ASSOCIATED WITH WOLF SPIDER BURROWS (NUMBERS IN PARENTHESES INDICATE THE NUMBER OF BURROWS*).

		Date
Viable eggs in burrows	9 (4)	Nov.–Feb.
Eggs ejected from burrows (total)	34 (15)	
Desiccated eggs	10 (5)	Dec.–Feb.
Viable	9 (4)	Jan.–March
Hatched	15 (6)	Feb.–June

* 18% of about 1750 spider burrows excavated were occupied by adult or subadult (penultimate instar) spiders; these burrows were large enough for the skinks to enter. About 2% of these burrows were occupied by the lycosid *Schizocosa leuckartii* (Thorell) which is similar in habits to *G. godeffroyi* which occupied the remainder of the burrows. While *G. godeffroyi* will occupy burrows that it did not construct, these burrows are modified so that they are identifiable as lycosid burrows; only such burrows were excavated.

eggs from the burrows were viable but those recovered from the tailings were often desiccated (Table 1) and the remainder would be expected to die as they were exposed to direct sunlight. The hatchlings from the viable eggs were the skink *Leiolopisma delicata*.

While the burrows provided a more equitable thermal and humidity environment (range 5–27 C and 97–100% R.H. at 10 cm) for the skink eggs than was found at the surface (range 3–48 C and 60–100% R.H.), the spider behavior potentially led to a 44% mortality of those eggs deposited in spider burrows. If the skinks commonly oviposit in burrows the spiders would have a considerable impact on skink mortality. As the clearing had been established for 17 years it is unlikely that this oviposition behavior of the skinks is a direct result of environmental perturbation, and it could be expected wherever the two species occur together.

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ALLIGATOR PREDATION ON CANADA GOOSE NESTS.—Canada geese (*Branta canadensis*) were released on the Rockefeller Wildlife Refuge in southwestern Louisiana in 1960 and at different intervals thereafter through 1968 in an effort to establish a resident breeding population (Chabreck and Dupuie, 1972). The geese were held in pastures near the refuge headquarters which were kept dry by pumping. The pastures totaled about 120 ha in size and contained a network of canals and borrow pits with a combined length of about 6.2 km. The canals were from 5 to 10 m wide and 1 to 2 m deep.

From 1961 through 1972, 692 Canada goose nests were located in the pastures and checked periodically to determine the hatching rate. The nests contained 3,046 eggs and averaged 4.4 eggs each.

Alligators (*Alligator mississippiensis*) were very abundant on the refuge and attempts were made to exclude or remove them from the pastures so that they would not molest the geese, particularly the young, swimming in the canals. A few alligators entered the area in spite of attempts to exclude them by fencing; consequently, all young geese found were moved to a dry pasture in an effort to reduce predation.