A short while later the female parent flew to the nest and forced the nestling out by prodding it with her beak. The nestling tumbled to the ground, whereupon the female coaxed it (by calling and more prodding) to walk to the same bush, 11 m distant, where the two missing siblings sat. The whole process, from the time the young bird was nudged from the nest until the female left it under the new bush, took 11 min, 37 s. During this period the male perched close by, apparently on guard.

We then replaced simultaneously the other 3 nestlings in the nest. The female soon returned and pushed each nestling, in turn, out of the nest and ushered them sequentially to the second bush. This transfer process took 47 min, 13 s. Only after her 6 nestlings were together did she return to her look-out post. We observed the process of nestling transfer in one other nest where 5 nestlings were moved 13 m. It proceeded as described above.

Nestlings from three other nests were found soon after we assumed transfers had taken place. One nest was raided by a colubrid snake (*Spalerosophis diadema*) that consumed a 9-day-old nestling. Nestlings disappeared from another nest the day after we saw a Eurasian Kestrel (*Falco tinnunculus*) perched on the bush where the nest was situated. Fledglings from two more nests, which we had considered abandoned, were seen flying about their parents' territories (Table 1).

In 13 disturbed nests we documented 5 nestling transfers, and in 2 more cases we suspect that transfer took place. One possible advantage to moving nestlings once the nest has been discovered by a potential predator is that it gives the young a better chance of survival. Therefore, transfer of young is likely to be successful only if it occurs when the young no longer require brooding in a well-insulated nest. We suspect that our disturbance caused a higher than normal number of nestling transfers, but the fact that the phenomenon occurred in 7 of 13 nests observed suggests that it has adaptive value.

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Polygyny in the Northern Shrike (*Lanius excubitor*) in Israel

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Polygyny is the practice of a male having two or more mates, either simultaneously (harem polygyny) or sequentially (successive polygyny) (Lack 1968). Polygyny has been reported in only one species of true shrike (family Laniinae), the Loggerhead (*Lanius ludovicianus*; Verner and Willson 1969 and references therein), despite extensive studies of breeding behavior in several other species (e.g. Bent 1965, Huhtala et al. 1977, Bassin 1982, Kridelbaugh 1983, Dittami and Knauer 1986, Zack 1986).

In the course of a study of Northern Shrikes (*Lanius excubitor*) at Sede Boqer in the Negev Desert, Israel, we observed two cases of harem polygyny. During the breeding season of 1987 (January–June) 7 pairs of shrikes were observed closely and all individuals were color-banded. Territory boundaries were marked by coordination on a topographical survey map, and areas were measured by planimetry (Table 1).

In Case 1 a pair (male: green band, female: red band) of Northern Shrikes completed building its first nest by 16 January. Five eggs were laid between 26 and 30 January. Incubation by the female began with the laying of the third egg, and 4 nestlings hatched on 11–12 February; two nestlings fledged. On 8 February we observed that a female (blue band), in a territory adjacent to that of the red-banded female, finished

TABLE 1. Sizes of adjacent breeding territories and distances between nests of female Northern Shrikes. Each pair of territories was within that of their polygynous mate. Colors refer to leg bands.

Male	Female	Territory size (ha)	Distance between nests (m)
Green	Red	760	630
	Blue	712	
White	Yellow	788	600
	Black	712	

building her nest. She laid 5 eggs between 17 and 25 February and began incubating after the third egg was laid. We observed that the green-banded male fed the blue-banded female while simultaneously providing food to the red-banded female, which she fed to her nestlings. The nest of the blue-banded female was subsequently destroyed by a storm, and we saw the green-banded male chasing her over the next 3 days until she disappeared.

The green-banded male and the red-banded female prepared a second nest, which was ready by 25 February, and laying commenced on 26 February. This clutch comprised 6 eggs laid at 24-h intervals, and again incubation by the female began with the laying of the third egg.

Case 2 involved a white color-banded male and two females, one with a yellow and the other a black leg band. Initially the white-banded male paired with the yellow-banded female, and their nest was ready on 5 February. She laid eggs from 7 to 12 February. The nestlings hatched on 26 February, and on the same day the nest of the black-banded female in the neighboring territory was completed. The black-banded female laid eggs from 8 March and started incubating from 10 March, after laying the third egg. At this stage we observed the white-banded male feeding the black-banded female on her nest and bringing food to the yellow-banded female, who fed her nestlings. All nestlings in both nests fledged.

In neither case were the females seen to confront each other along their territorial boundaries. Females alone incubated eggs and brooded young. Neither polygynous male was seen feeding young directly; they both brought food to their mates, who did the feeding. During 109 h of observation of monogamous pairs, however, we saw 17 instances of males feeding young directly.

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