

LETTERS

AMERICAN KESTRELS (*Falco sparverius*) ADOPT AND FLEDGE EUROPEAN STARLINGS (*Sturnus vulgaris*)

*Frederick Hamerstrom often lamented about how the current state of science does not allow an investigator to deviate from his/her pre-planned protocol. His view was that unusual and interesting "side events" often were overlooked because time and money did not allow for such "unnecessary" investigations. In memory of Hammy, we present an unplanned study of a truly unusual event: the adoption of and eventual fledging of a brood of European Starling (*Sturnus vulgaris*) chicks by a pair of American Kestrels (*Falco sparverius*).*

In 1968 we placed 50 kestrel nest boxes on our 20243 ha study area in central Wisconsin (F. Hamerstrom et al. 1973, *J. Wildl. Manage.* 37:400-403). An average of over 50 boxes has been maintained through 1990. In 1988 we started an intensive study and checked the boxes weekly during the breeding season. We caught and identified or banded any adults, and took notes.

In April 1988 we caught a pair of kestrels in the Rosen box. This pair initially had six eggs, but by 20 May only four eggs remained. On 24 May we found four young about 2-3 d old in the box. Four days later (28 May) the young had disappeared. There were scratches on the side of the box, which suggested predation by a mammal.

On 28 May the West Brandt box, 1.1 km from the Rosen box, contained six young European Starlings. Of these, four appeared to be dead, one dying, and one "still cheeping." By 0730 H we had caught the Rosen male kestrel on a *bal-chatri* near the West Brandt box and the Rosen female inside the box.

From the field notes: "May 28. Watch box [West Brandt] 0845-1045 H. Starlings fly to box about every 15 minutes with food [earthworms] in bill, but do not enter. If a starling flew in while the kestrels were out of the box, both male and female kestrel chased the starlings away.

June 3, 0550 H. Same banded female caught on five starling young. Female missing crown feathers. Left eye swollen and glassy. Perhaps wounds on head are from starling gapes?

June 3, 1545-1800 H. See male and female kestrel hanging in nest hole. Young starlings open gapes and crowd to hole. Kestrels appear to be placing small prey in starling gapes, but we couldn't see any prey. Male flew to perch near box with small, green, thin snake. Female perches next to male and then takes snake into box. Female kestrel stays in box about 10 min. Female catches mouse, brings it into box and stays ± 15 min. Can see waving gapes while female kestrel is in the box, but not female feeding them. At 1800 H, check box. No signs of snake or mouse there! Female overhead circling.

June 4, 0600-0900 H. Set blind 38 m and second observer ± 61 m from box. Female enters box with mouse but leaves after ± 1 min with mouse. ± 20 min later, female enters box with mouse—tears small pieces of mouse and places them in gapes of young starlings who lunge forward and place entire gape around female kestrel's head! Female kestrel feeds starling 2 more mice. Female [kestrel] mobbed by both adult starlings. One [starling] perches and hops toward box, female kestrel chases it.

June 5, 0600-1100 H. Female kestrel feeds starlings 4 mice—again starling gapes envelope female kestrel's head. Adult starling perches on top of and near hole of box. Kestrels not near. Starling leaves. Starling young call to adult starling, but more [vigorously] to approaching kestrels!"

[Note: every time the robins nesting nearby saw a kestrel coming back to the nest, usually with prey, they gave loud alarm calls—calls that the young starlings soon recognized as a "dinner bell." They responded by sticking their heads out of the nest box and waving their big, yellow gapes.]

"June 6, 0640-0820 H. ± 0745 female kestrel lands near box with a partially skinned mouse—some fur on its back legs. She flushes three times before entering the box [perhaps to avoid further injury to her eye]. Finally she goes into the box and feeds the young for 18 minutes."

We saw two of the young starlings fledge; one flew 14 paces on its first flight. By 9 June the box was empty.

We have recorded the following on video: a female kestrel bringing food to the box and hanging on the entrance; the eager response of the starlings to approaching kestrels and their unusual indifference to adult starlings even when these entered the box; the female kestrel tearing slender, green snakes and voles, and placing the morsels in the starlings' mouths; and one starling fledging over the female kestrel's back.

We are deeply indebted to Hammy for his insatiable curiosity, and his interest in science. Ruth L. Hine and Jennifer A. Leak assisted in field observations.—**Michael F. Tlusty, Department of Biology, Syracuse University, Syracuse, NY 13244 and Frances Hamerstrom, College of Natural Resources, University of Wisconsin-Stevens Point, Stevens Point, WI 54481.**