

A Record of Hawks and Owls Trapped at the Oklahoma State Game Farm

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Pole-trapping of hawks and owls on the State Game Farm became a necessity following a change in methods of holding pheasant brood-stock through the winter months. Originally, pheasants were held in covered pens of relatively small dimensions. In the late fall of 1954, a 23-acre open-top pen was constructed for retaining brood-stock through the winter. This was done to provide stronger and better-plumaged birds for the breeding season. The operation happened to be initiated during a drouth cycle and sufficient cover could not be produced in the field to provide adequate protection from avian predators.

The pheasants were brailled on one wing with a leather thong which inhibited flight and made them comparatively easy prey from the air. Terrestrial predators were discouraged from preying on the birds by cyclone fencing augmented by an outrigger electric wire.

It soon became evident that it would be necessary to protect the pheasants from birds of prey, or sufficient brood-stock would not be available for egg production the following summer. Poles were, therefore, erected around the periphery and through the center of the field, with No. 1 steel traps set on top of each. The results were immediately satisfactory. No catch record was kept during the first year, since it was not foreseen that more than one-half dozen hawks and owls would be trapped; but on one occasion in early fall 5 Great Horned Owls were caught in one night. As nearly as the employees could remember, the trapping results for 1954 amounted to about 30 soaring hawks (Redtails and Swainson's), most of which were released unharmed, and approximately 30 Great Horned Owls which were eliminated. It became apparent, and later was definitely ascertained, that the Great Horned Owls were causing most of the trouble. These birds seemed to have killed pheasants mainly for the sport of killing, since several pheasants would be found in a small area with the neck picked bare and sometimes a portion of the breast eaten, which is typical of Great Horned Owl predation. On many occasions soaring hawks moved in before the pheasant carcasses had been found to feed upon what the owls had left, and as a result, they too were trapped in substantial numbers. On no occasion were Redtails or Swainson's actually seen to catch live birds. The trapping record shown herein is not considered to be complete, nor is it considered to be fully accurate since the employees who removed birds of prey from the traps were not familiar with the different species. The later trapping records of 1957 and 1958, however, are thought to be almost 100% accurate as to dates of trapping and identification. Future data will be more accurately recorded.

During the four-year trapping operation several factors influencing the catching of hawks and owls became apparent, the most interesting being the association of avian predators with penned pheasants in the absence of natural food such as field rats and mice. During the first three years of trapping, when relatively large numbers of hawks and owls were trapped, the drouth cycle was at a peak in Oklahoma and apparently might have contributed to a low population of rodents as well as to our large catch of avian predators. Trapping in 1957 and 1958, which was carried on in exactly the same way as in earlier years, showed a great decrease of all hawks and owls, which was attributed to the abundance

of natural foods such as cotton rats and other rodents as well as rabbits during this period. Another factor which may have reduced the take of hawks and owls was vegetative cover planned for the open-field rearing pens. During the first years of the project, the field was divided into equal parts and planted to field corn and winter wheat. This resulted in insufficient protective cover being produced due to the drouth. During the latter years of the trapping operation, much better protection was provided by the use of sugar drip cane which grew tall and provided camouflage for the birds.

It should be pointed out that during the 1957-1958 period many Great Horned Owls were present and could be heard nightly along the North Canadian River bottom which borders the field. Certainly there was no shortage of hawks and owls on the area. Great numbers of Swainson's hawks passed over the farm during October. Redtailed hawks were seen regularly throughout the winter and neighboring grasslands swarmed with Marsh Hawks throughout the winter of 1957 and 1958. (Refer to chart for comparison).

Records of hawks and owls trapped on the area at the Game Farm have been shown (Table I). During the last three years of operation, all hawks and owls were banded unless severely injured; those were eliminated. Barn owls have inhabited the Game Farm for many years, using the buildings which were favorable nesting sites. Two broods of 6 each were raised at the same site by the same parents. The Marsh Hawks were caught and banded on the nest just 2 miles east and 1 mile north of the Game Farm while the Mississippi Kites were young birds banded at the nesting site on the farm. It should be pointed out that the birds not receiving severe injury in trapping have been banded and released several miles east of the Game Farm. Two Great Horned Owls and one Redtailed Hawk returned during the following year. The birds seem to be taken as they move through the country, since only three were recaptured shortly after release.

The Prairie Falcons which were caught were believed to have occurred in the area because of the large expanses of grasslands on the Fort Reno and Concho Indian Reservations near the farm. On one instance a falcon was observed in the act of harassing pheasants. Numerous swoops were made towards the birds on the ground, but none were ever touched. One cock pheasant seemed to bluff the falcon away by flopping at him just before contact was made. The hens escaped by crouching low to the ground. Since falcons take their prey in the air it was thought that the hawk may have been attempting to flush the birds from the ground.

TABLE I. Records of Hawks and Owls Trapped

DATE	HAWKS	OWLS	RETURNED	HAWKS AND OWLS BANDED AT NEST
1955	3 Cooper's 17 Soaring 10 Red Tail 1 Falcon 4 Harlan —			
	35	36 Great Horned		
1956 Jan.	1 Soaring	3 Great Horned		

TABLE I (Continued)

Feb.	1 Falcon 1 Red Tail	2 Great Horned	
April		1 Barn	
June	2 Soaring		
Sept.	8 Soaring 2 Cooper's	5 Great Horned	
Oct.	8 Soaring 1 Falcon 1 Red Tail 1 Cooper's	10 Great Horned	
Nov.	2 Red Tail 1 Harlan 1 Cooper's	12 Great Horned	
Dec.	3 Soaring	4 Great Horned	
	—	—	
	33	37	
1957			
Jan.	3 Red Tail	3 Great Horned	
Feb.	4 Red Tail	4 Great Horned	
March	3 Red Tail	6 Great Horned	
			*1 Great Horned Owl 3/14/57
			*1 Red Tail 2/18/57
April	1 Cooper's	3 Great Horned	
	—	—	
	11	16	
1958			
Feb.		1 Great Horned	
			*1 Great Horned 3/58
April	1 Red Tail 1 Swainson's		
June			7 Barn Owls 5 Marsh Hawks 2 Mississippi Kites
July			
Sept.	2 Cooper's		
Oct.	1 Cooper's	1 Barred 1 Barn	
Nov.	4 Red Tail 1 Cooper's	1 Great Horned 1 Barred	
	—	—	
	10	5	6 Barn Owls

* Banded birds which returned to Game Farm and were trapped again.