

REPORT:

**RAPTOR PAPERS PRESENTED AT THE 1972 MEETING OF
THE AMERICAN ORNITHOLOGISTS' UNION**

Six papers dealing specifically with raptors were presented at the Ninetieth Stated Meeting of the American Ornithologists' Union, Grand Forks, North Dakota, 14-18 August 1972. The abstracts of those papers follow. The Editors of *Raptor Research* wish to thank the authors of the papers for the permission to print their abstracts. Each author should be contacted before information presented here is quoted.

Paper 29. Development of prey-recognition and killing behavior in hand-reared Sparrow Hawks. Helmut C. Mueller, Department of Zoology, University of North Carolina, Chapel Hill, North Carolina.

Nine hand-reared *Falco sparverius* were tested with a variety of models ranging from a ball of tissue-paper to a live mouse. Six birds showed no response to models or dead mice. The three birds that responded to models did so irregularly and in a manner interpreted to be play behavior. All nine birds attacked live mice, five of these within ten seconds of the presentation of the first live mouse. First attacks on live mice were well oriented and performed with considerable expertise. The only improvement seen was that birds learned to release mice that were grasped poorly before being bitten by the mouse. Essentially no improvement in the capture of mice was seen after no more than six encounters in any of the birds. The results suggest that the recognition of mice as prey and the attack and killing behaviors are largely innate.

Paper 47. Desert wintering Bald Eagles in Utah. Joseph B. Platt, Department of Zoology, Brigham Young University, Provo, Utah 84601.

The Bald Eagle (*Haliaeetus leucocephalus*) is found along river drainages and lakes throughout the United States during the winter. Their food habits, as determined from the literature, reflect this close association with aquatic systems.

About one hundred Bald Eagles winter in the desert valleys of west central Utah. There is no extensive open water in the wintering ground and, therefore, they have a strikingly different food base than other Bald Eagles. The diet of these desert wintering Bald Eagles approximates that of the Golden Eagle (*Aquila chrysaetos*). Blacktail Jackrabbits (*Lepus californicus*) are a staple food. Their food habits in relation to their winter habitat were discussed. A high percentage of the pellets or castings analyzed contained lead shot.

Paper 48. Application of radio-telemetric techniques to studies of strigiform and falconiform birds. Thomas C. Dunstan*, Steve D. Sample, and M. Kent Froberg, Department of Biological Sciences, Western Illinois University, Macomb, Illinois 61455.

Radio-telemetric techniques were used to study various aspects of the life histories of 17 species of birds of prey.

Methods of attaching transmitters to subjects were: (1) double body loop harnesses for both breast and back packages, (2) sutured rump package, (3) tail feather package, and (4) leg jess package.

Territories and home ranges of both breeding and wintering raptors as well as interspecific spatial and temporal relationships, and post-fledging activities of juvenile birds were determined.

Nest sites were located by (1) tracking captured radio-tagged prey, and (2) by locating nests in winter from an airplane and marking the locations with transmitters.

Paper 49. A Great Horned Owl banding program in Saskatchewan. C. Stuart Houston, 863 University Drive, Saskatoon, Saskatchewan.

Since 1946, over 1,950 flightless young Great Horned Owls have been banded by the speaker in Saskatchewan. This has only been possible as a result of wide publicity, first through a personal nature program on the local television station and, subsequently, through the nature column in the largest western Canada farm newspaper.

This study depended on public cooperation in reporting nests (as far as 323 road miles from Saskatoon) and in the cooperation of successive young banding assistants. Some of the latter have gone on to careers in biology and four have graduated to full banding permits of their own. Increased public interest in raptors and an appreciation of their value has resulted in a number of Saskatchewan communities.

Food contents in nests have been recorded and recently have been correlated with pellet analysis by Hugh C. Smith. There is suggestive evidence of a cause-and-effect relationship between changing food availability and brood size.

One hundred and forty-eight banding recoveries have demonstrated an unexpected southeasterly movement of some of these supposed year-round residents (as far away as Iowa and Nebraska), confirming Swenk's 1937 conclusions based on plumage studies.

Paper 50. Population and behavioral studies of the Saw-whet Owl in Arizona. R. Roy Johnson* and Steven W. Carothers, Prescott College Ecological Survey, Prescott, Arizona.

The habits and distribution of the Saw-whet Owl (*Aegolius acadica*) have previously been poorly known in Arizona, as well as throughout the Southwest. The records, as reviewed in *The Birds of Arizona* (Phillips, Marshall and Monson) are scattered both geographically and chronologically, with nesting data practically nonexistent. Records for adjacent areas in New Mexico, Colorado, Utah, Nevada and southern California are equally scarce.

In the winter of 1968-69 we rediscovered this species in central Arizona. A study of population densities and distribution, both elevationally and geographically, as well as breeding behavior was extended throughout the state during the 1969-70 winter. Although the literature commonly reports this owl as "tame", we do not find this in Arizona. During the winter of 1969-70 population densities were commonly 15-20 pairs per square mile (usually 16 pairs in good habitat), and as great as 40 pairs per square mile in the pine-oak woodland of the Sierra Ancha. Although vocalization is common throughout winter (rare in summer), study is often extremely difficult and collection sometimes impossible. Food in mid-winter consists partially of moths. Densities remained high through the winter of 1970-71 and crashed in 1971-72.

Paper 70. Effect of man on the nesting of raptors in shortgrass prairie. Richard R. Olendorff, Department of Ornithology, American Museum of Natural History, New York, NY 10024.

The extent to which man has played a role in the distribution of nesting birds of prey on the Pawnee National Grassland in northeastern Colorado is remarkable. The homesteaders of the late 1800's and early 1900's planted trees near their houses. These trees, now long abandoned by the homesteaders, are used by birds of prey as nest sites. The early settlers also made use of windmills and the overflow provided water for trees. Elaborate but unsuccessful attempts at irrigation and water management were made decades ago and cottonwood trees got started along ditches and small water impoundments in usually dry stream beds.

These trees have had their greatest effect on birds of prey now nesting in pure grassland areas where trees did not exist before white men came to northeastern Colorado. About 68 percent of the Ferruginous Hawks nesting in pure grasslands nest in situations man has created in the last 100 years. Similarly, 98 percent of the Swainson's Hawks nest in trees man purposely or inadvertently planted in pure grassland areas. Considering all grassland habitats (grasslands, bluffs, creek bottoms, and cultivated land), 41 percent of the Ferruginous Hawks, 40 percent of the Swainson's Hawks and nine percent of the Golden Eagles now nest in situations created by man. None of the Prairie Falcons or Red-tailed Hawks do so in the area under study.

Quantitative analyses of differential utilization of the shortgrass prairie by nesting birds of prey and use of different supporting structures by the raptors were presented. The success (fledglings per nest) in each habitat, type of structure, and type of man-created situation was given.