

HAWK TRUST NEWS

The last six months have been busy ones for the Hawk Trust. The aviaries and birds are, hopefully, soon to be moved from Hungerford to a new site in Shropshire on the border between England and Wales where there is scope for further expansion. With eight species of raptor regularly nesting near the new headquarters, some in good numbers, there will be excellent opportunities for carrying out combined field and laboratory studies.

On November 4, 1978, the Trust held a conference on the "Behavioural Ecology of Birds of Prey" at the meeting rooms of the Zoological Society of London. Papers included "A Study of Polygyny in Hen Harriers in Orkney" by Mr. N. Picozzi, "Patterns of Predation by Peregrines Breeding in Northern Scotland" by Mr. D. Weir, "Territory Usage by Tawny Owls" by Dr. A. R. Hardy, "The Role of Vultures as Scavengers" by Dr. D. Houston, and "The Hunting Strategies of Raptors" by Dr. N. Fox. There were also several short communications on more general aspects. It was an interesting and enjoyable day and drew raptor enthusiasts from far and wide together under one roof to discuss recent advances. Details of the proceedings of the conference, which will be published in 1979, can be obtained from the Hawk Trust, P.O. Box I, Hungerford, Berkshire RG17 0QE.

Research during the last year has concentrated mainly on the bioenergetics of the Kestrel and on the growth and development of this and other species, but other studies have been undertaken including a bacteriological and haematological survey. This year the Trust successfully bred Kestrels (*Falco tinnunculus*), Buzzards (*Buteo buteo*), Snowy Owls (*Nyctea scandiaca*), and Tawny Owls (*Strix aluco*) in connection with research projects.

James S. Kirkwood

ABSTRACTS OF THESES AND DISSERTATIONS

NOCTURNAL, PREROOSTING AND POSTROOSTING BEHAVIOR OF BREEDING ADULT AND YOUNG OF THE YEAR BALD EAGLES (*HALIAEETUS LEUCOCEPHALUS ALASCANUS*) ON THE CHIPPEWA NATIONAL FOREST, MINNESOTA.

Nocturnal roosting behavior of nesting Bald Eagles and associated young of the year was studied during the 1974-1976 nesting seasons within the 6,475 km² Chippewa National Forest in Minnesota. Direct observations of 14 patagial color tagged young, 2 radio tagged young, and adults from 8 nesting efforts were made at and away from nest trees during nocturnal, twilight, and diurnal time periods. Roosting behavior of eagles closely coincided with nocturnal time periods defined by the nautical twilight standard (sun 12° below horizon). Eagles were inactive (as recorded via Noctron IV night vision scope) during these roosting periods. Multiple regression analysis determined that length

of twilight, cloud cover, and presence of a full moon were significant factors ($P < 0.01$) influencing the timing of eagle roosting relative to sunrise and sunset. These factors, all affecting relative light intensity, accounted for 72% and 68% of the variability in the timing of first morning activity and last evening activity, respectively. Higher ambient light conditions relative to sunrise or sunset (as indicated by long twilight period, lack of cloud cover, or presence of a full moon) resulted in later initiation of roosting in the evening and earlier termination of roosting at dawn. Temperature, nest site, and age of the eagle (adult or young) did not significantly ($P < 0.05$) affect the timing of roosting behavior. Observations indicated that a single adult roosted at the nest tree until nestlings were approximately 7 weeks old, at which time adult nest-tree roosting behavior terminated at all nests. From incubation to the fledging of young, adult roost locations away from the nest tree were primarily at repeatedly used supercanopy trees within 400 m of the nest. Fledgling eagles, including siblings, differed considerably regarding use of the nest tree for roosting. Nest trees continued to be important roosting locations for some fledglings through the first few weeks after their first flight. With progress of the nesting cycle, adults and fledglings roosted at increasingly greater distances from the nest tree. However, 4 weeks after their first flight, some fledgling roost locations still ranged to within 12 m of the nest tree. Adults roosted to 1,866 m and fledglings as far as 3,057 m from the nest tree prior to dispersal of the young from the forest. After fledgling, siblings showed a slight tendency to roost together (29 of 115 observations), this behavior occurring primarily in recently fledged young. Adults rarely were observed roosting with fledged young (2 of 102 observations). Characteristics of 44 identified roost trees were variable regarding species, height, distance to water, and community type. However, most roosts occurred on habitat edges (55%) and had considerable foliage (89%). Based on observed relative use of identified roosts in this study, identification and protection of actual and potential important roosts within other eagle nesting territories appear practical within only a 400-m zone around nest trees.

Pramstaller, Michael E. 1977. Nocturnal, prerooting and postrooting behavior of breeding adult and young of the year Bald Eagles (*Haliaeetus leucocephalus alascanus*) on the Chippewa National Forest, Minnesota. M.S. thesis, University of Minnesota, St. Paul. 97 pp.

Present address: Michael E. Pramstaller
Raptor Information Center
National Wildlife Federation
1412 16th Street, N.W.
Washington, D.C. 20036

BOOK REVIEWS

A symposium on African predatory birds. 1977. South African Ornithological Society. 108 p. Paper covers. Price (unstated). Obtainable through Northern Transvaal Ornithological Society, P.O. Box 4158, Pretoria 0001, South Africa.

This collection of papers was presented at the 1977 Symposium on African Pre-