HAWK MIGRATION: A NEW HORIZON FOR BIRDERS

by Leif J. Robinson, Wellesley

Along what paths do migrant hawks fly? Do certain species have an affinity during migration? Are some prime hawk-watching sites still awaiting discovery?

These and scores of other questions were raised during the New England Hawk Watch Conference, held April 8th at Holyoke, Massachusetts. This regional meeting of the Hawk Migration Association of North America (HMANA) attracted about 250 enthusiasts, including founders of the "new awareness" in raptor migration studies, organizers, and members of the hard-core observing fraternity.

Conferences tend to provide perspectives rather than produce bombshells; this one was no exception. For example, Tom Gagnon reminded everyone that the large and predictable hawk flights at Mt. Tom were discovered by Joseph A. Hagar only 40 years ago. And only within the past few years has the tremendous accipiter migration along the Connecticut coast or the major flight line across eastern Massachusetts been detected.

It is impossible for an individual to recount all that was said at the HMANA conference; thefore, this will be a very personal view of what seemed important. For example, George Appell recalled his studies in Maine--the northeasternmost extremity of North America from which we have systematic records of the hawks seen passing by. In recent years he has noted an annual 10-percent increase in the number of migrating hawks (excluding the Sharp-shinned, which is especially numerous coastally). Appell's data are supported by records from Hawk Mountain, Pennsylvania. He also presented graphs which illustrated the day-by-day autumnal variation in the abundance of sundry species. But perhaps his most provocative comment pertained to "pulses" observed during heavy migration--pronounced peaks every 20 minutes or so in the numbers of birds seen passing a site.

From observations while flying a glider, Donald Hopkins has found evidence that hawks, particularly Broad-wingeds, travel in streams (rather than along broad fronts) separated by perhaps a dozen miles. By following birds peeling off the top of a kettle (a congregation of hawks in an uprising thermal), he learned that the Broad-wingeds headed toward another kettle, one that was invisible from the glider at the time. Yet, as we learn, we question. How does one reconcile, for example, the fact that Hopkins estimated 2,500 hawks passing over Mt. Tom at the same time ground-based observers reported only about 450?

Speaking for Vermont birders, Alan Pistorius suggested that the migration of Broad-wingeds may occur earlier far inland than at locations closer to the coast.

For Massachusetts hawk-watchers, Paul Roberts' recapitulation of the discovery of a major migration route in the eastern part of the state was the highlight of the conference. This flight line, extending from the Merrimack River past Mt. Wachusett, was found as a result of Roberts' organizing efforts and the participation of many members of the

Brookline Bird Club. (Incidentally, along this line lies Ft. Devens, where since 1970 Michael Olmstead has had good success banding migrant hawks; he summarized his results at the conference.)

Certainly, the visual highlight of the session was Michael Root's photographs of Northern Goshawk nests in Connecticut. Altogether he has studied some 20 nesting pairs and has reached some provocative conclusions. In particular, Root has found that the Goshawk seems to be changing its habits: the traditional "accipiter of deep northern woods" now adopts even forest edges. He also found Goshawk nests in rather close proximity to those of Red-shouldered Hawks and Great Horned Owls, which suggests that these species are not in direct competition for food. (This situation also prevails in Weston, Massachusetts, where I can add Barred Owls to the roster of cohabitants.)

Joe McDonald dealt with a topic of concern to everyone interested in raptors, the status of the Red-shouldered Hawk. This buteo was widespread three or four decades ago, but is now uncommon as a breeding species in the northeast. Its decline is due, at least in part, to its competition with the Red-tailed Hawk for nesting sites, a struggle in which the maturation of second-growth forests has favored the latter species.

Today, according to McDonald, the Red-shouldered has retreated to woodland swamps with hardwood trees 40 feet tall or more. (Again confirmed in Weston, where several Red-tailed nesting sites are also active annually.) Nevertheless, in prime woodland swamps, the Red-shouldereds nest closely adjacent to one another, about a mile apart. Of the approximately 50 nests McDonald observed from 1971 to 1976, an average of 2.29 young were produced per effort, which is probably sufficient to maintain a stable population. Also of interest were his statistics concerning the number of young present in those nests: 10 nests had 0 young; 4, 1; 19, 2; 16, 3; 1, 4.

Two hawk enthusiasts from Connecticut reflected upon observations made in that state during the past several years. Neil Currie cited data from closely spaced observing sites indicating that Broad-winged Hawks migrate along seven- to eight-mile fronts. (Note apparent conflict with Hopkins.) He also pointed out that a very strong northwest wind will tend to push the birds 30 to 40 miles nearer to the coast.

Arne Rosengren reviewed the amazing hawk counts at New Haven. On September 29, 1977, for example, more than 9,000 passed that city's lookouts, with the Sharp-shinned outnumbering the Broad-winged 6 to 1 or more! Coming from the east and north, these flights approach the coast at New Haven and then vanish westward, inland, along an as yet undiscovered route. The number of hawks that cross Long Island is still unknown, though proposals to answer this question were offered at the conference. (If you want to plan ahead for next autumn's migration, some of the best hawking in New England might take place at Lighthouse Point [New Haven] from mid-September through the third week of October.)

HMANA is a going and growing concern, and as its membership continues to expand more and more records will become available for analysis. Fortunately, the U. S. Fish and Wildlife Service has offered to computerize

this data. As Mark Fuller described, a new report form that he and Chandler Robbins have proposed will facilitate this data processing. Such a form--properly filled out--is essential for use by keypunch operators who may know nothing about birds but who are responsible for putting your observations into a language that can be understood by a computer.

The Passenger Pigeon, Heath Hen, and Carolina Parakeet became extinct without widespread public action. The recent plight of the Peregrine Falcon shocked a nation. Yet, it is still unclear whether this latter-day concern reflects a greater sympathy toward nature or merely apprehension for human survival. Has the canary in the coal mine only been replaced by the falcon in the field as our ecological early warning system?

HMANA is attempting to understand how and why the "visible raptors" survive, at home and on the wing. By this effort we may benefit; for this effort the association deserves your support.

AN INNOVATIVE WAY TO TAG WOOD DUCKS

by Ronald Clayton, Winchester

Color-marking birds to study their movements is important. However, capturing and marking the birds often has adverse effects on their subsequent behavior. For example, disturbing a Wood Duck on its nest during egg laying or incubation may cause abandonment.

Now biologists at the Massachusetts Division of Fisheries and Wildlife have found a way to color-mark nesting Wood Ducks without handling them. A hook is screwed into each corner of the long predator guard on the box, and a large rubber band is stretched over the four hooks. When the Wood Duck enters the nesting box, the rubber band is dislodged and snaps around the duck's neck. A strip of brightly colored vinyl flagging attached to the rubber band makes it visible at one hundred yards or more. The vinyl flags are also numbered so that individual birds can be identified. Marking Wood Ducks in this manner does not affect their flying, feeding, preening, or egg laying.

The colors are designed for short-term use and begin to wear away after a couple of months. By the following spring, even the rubber bands may have disappeared. This new color-marking method is an important advance in learning more about Wood Ducks during the nesting season without the risk of eggs or young being abandoned.