

## HAWK WATCHING: STILL AN UNDEFINED WONDER

by Leif J. Robinson, Wellesley

Organized hawk watching is still young; as a popular activity, it is even younger. Our contemporary love affair with diurnal raptors began in Pennsylvania as recently as 1934, with the establishment of the sanctuary known as Hawk Mountain. In New England, the first blushes of observational activity centered on Mt. Tom, largely due to the efforts, also in the 1930's, of J. A. Hager.

This April the New England Hawk Watch, founded by Donald Hopkins and Gerald Mersereau, celebrated its 10th anniversary by sponsoring a day-long conference at Holyoke. About 300 raptor enthusiasts attended, crossing the spectrum from banders and rehabilitationists, to leaders of organized hawk-watching activities, to those who were just curious or whose interest had recently been sparked.

I wish some profound wisdom could be reported, such as the answer to why and how hawks migrate. There were no such papers. Instead, one heard many fragments of understanding that seem isolated today but which may find codification at some future time. This is not to say that certain facets of hawk-watching have not coalesced--they have; rather, the penetrating questions concerning raptor migration may still have to be asked. Let's check some highlights from that meeting.

Regional reports brought us up to date concerning activities in various states. Seth Kellogg (western Massachusetts) noted that even a valley location can provide good hawk watching, if the view is free of obstructions. Paul Roberts (eastern Massachusetts) stressed the history and importance of Wachusett Mountain as a premier lookout; he also suggested that autumn watches be continued into early November for a better census of Red-tails, Rough-legs, and eagles. Echoing growing sentiment among veteran observers, Roberts also suggested that hawk watchers broaden the kinds of data they record, such as timings to the minute, associations between different species, the number of birds in a kettle, and so on.

Neil Currie reflected on the importance and enigma of Lighthouse Point, near New Haven, Connecticut, as a major congregation area for accipiters from mid-September to mid-October. Many places along the north shore of Long Island Sound seem very attractive as hawk-watching sites, and as Currie pointed out, West Rock (also near New Haven) was visited by a thousand Red-tails in 1980.

In Vermont, 15 to 20 percent of the raptors seen are accipiters, reported Nancy Martin, with Sharp-shinned to Cooper's ratios running 10-20:1--perhaps a bit higher than the national average. A potentially important area, the Taconic Range, has no observers.

Not far from the resort town of Ogunquit, Maine, stands Mount Agamenticus, a conspicuous massif visible from Plum Island on a clear day. Rena Cote noted that this well-manned site in 1979 experienced two days with 2,000+ birds; overall, 68 percent arrive on northwest winds. Southern Maine, southeastern New Hampshire, and northeastern Massachusetts seem to be potentially prime territory that is merely awaiting proper sampling. Manpower is the problem; perhaps this autumn some Commonwealth hawk-watcher will take advantage of off-season rates and prove the point.

Attending the conference from Cape May, New Jersey, Peter Dunne tackled the perennial problem of Sharp-shinned and Cooper's identification. Here are some new wrinkles to think about this autumn.

One in ten Sharp-shins has a slightly rounded tail, and one in a hundred has a severely rounded tail. Immature Sharp-shins exhibit a brown belly; Cooper's appears white. Sharp-shins appear in two's and three's; Cooper's fly solo.

The inspirational highlight of the morning session involved Edwina Czajkowski's slide-filled account of hawk watching as part of the 4th-grade science curriculum in New Hampshire's Union School District. From "flight training" (silhouette identification) to data interpretation, the children are exposed to real scientific problems and explore them using information they themselves have gathered.

Seven schools have participated in this program, with daily watches (typically 8:30 a.m. to 4:30 p.m.) beginning on the second day of the autumn term and extending to the end of the main migratory season. In Czajkowski's words, the children experience "the greatest show above the earth."

To prove the success of this experiment in interdisciplinary education, a score of students traveled to the conference to entertain us with song, impress us with their knowledge and skill, and perk us with their enthusiasm. Creative teaching at its very best!

From his studies at Cape May last autumn, Paul Kerlinger reported that diurnal raptors are inhibited by strong winds from crossing Chesapeake Bay. His study of flight dynamics also revealed that the higher a migrating hawk is, the faster it flies in making the crossing. Finally, the presence of lateral winds seems to influence the bird's decision whether or not to cross.

The 10-year breeding success of Red-shouldered Hawks in Berkshire County was reviewed by Joseph MacDonald. Sadly, though in tune with contemporary experience, he stated that 1980 saw the least success of any year and culminated a three-year



downward trend. Successful nests raised fewer than two young, down from  $2\frac{1}{2}$  in 1975.

MacDonald pointed out that beaver ponds are an important habitat factor. He also cautioned that his conclusions may be biased, for the originally discovered nesting sites were surveyed throughout the decade. Thus, natural or man-made alterations to once propitious habitat may have caused pairs to move to other locations and thus be lost from later censuses. In short, his results may not be indicative of Berkshire County as a whole.

The bastion of Bald Eagles remaining in the Northeast lies in Maine, and Francis Gramlich reviewed efforts to aid their breeding success since about 1955, when it was noticed that young were not being produced at occupied sites. In the 1960's there was an average of one egg per nest; now there are one to three. Despite this improvement, DDE still remains something of a problem, and the current normal production of 0.7 fledgling per nest is insufficient to maintain a stable population. Thus, the indigenous clutches are augmented with eggs from Minnesota and Wisconsin; foster young are introduced into active nests as well.

But the western Maine population of Bald Eagles is gone, with the remaining stronghold being at Cob's Cook Bay in the east. This is a sedentary population; adults can be seen all year at the nesting sites but the young scatter. In all, 133 territories, historical and recent, have been incorporated into a management plan.

The most celebrated of all breeding raptor programs involves the Peregrine Falcon--1981 was also the 10th anniversary for the Cornell University Peregrine recovery project. Jack

Barclay said that it currently has 23 egg-laying females and that 269 birds have been released since 1975. At historic (inland) sites, Great Horned Owls present the greatest threat to young birds. Thus, coastal releases have been favored, and New Jersey has had the best success for introducing juveniles into the wild.

Here is some actuarial data: Peregrines suffer 65 percent mortality during their first year; adult mortality is 20 percent per annum. Thus, some threescore birds from the Cornell project should exist today in the wild. Though this seems like a small number, it represents a huge step in establishing a viable population of this falcon in the Northeast.

At times, all hawk watchers must fantasize soaring among the birds--being thrust skyward aboard heated columns of air and then charging the ground along gravity's slide. Glider pilots can mimic the hawks' experience, and one of the most active members of that fraternity to participate in the New England experience is William Welch. For years he has followed the Broadwing flight as it crosses southwestern New England, and at the conference he recalled (with movies) some of the birds' flight performance, statistics, and migratory habits. For example, the Broadwing averages about 40 miles per hour in a glide with a sink of about  $2\frac{1}{4}^{\circ}$ . Year after year, the Broadwings follow the same track, even to cutting a particular dogleg!

Fittingly, James Baird reflected on the past and thought about the future of raptors and the people who watch them. He stressed conservation--not only in North America but especially in South America, where so many of our breeders winter. Is hard science--the formal and controlled gathering of information, coupled with its processing and the derivation of conclusions therefrom--compatible with hobbyists and their (presumed) interests? Baird was not sure.

He did suggest two diverse areas where real help is needed: the compilation of bibliographical information about various species, and the assessment of the total numbers of raptors that annually cross the isthmus of Panama--the vast bulk of hawks that inhabit North America during the warm season.

Sobering thoughts, those of Baird, and interesting suggestions, too!

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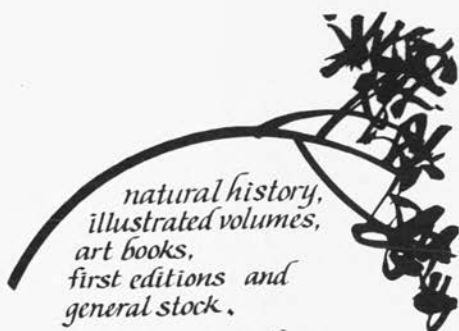
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