

September, the lowest number for that month in 26 years. Only 67% of the August birds were HY and 60% of the September birds were HY (both months were 79% HY last year). The severe drought continued into September and was finally alleviated in October when over six inches of rain fell.

The Gray Catbird, always one of the most common birds at this station, was greatly affected by the poor nesting season. Only 26 were banded (compared with a 26-year average of 50), and of those, 69% were HY (90% HY in 1994).

The number and diversity of warblers banded was also way off. Only 51 warblers of 13 species were

banded, comprising 15% of the total catch, as compared with 185 warblers of 20 species last year, when they were 37% of all birds captured.

More than half of all birds banded were caught after 1 October. The two species of kinglet dominated, together taking up 30% of the season total. More Ruby-crowned Kinglets (84) were caught than ever before; the next highest season total was 57 in 1976. Thirty-five Golden-crowned Kinglets were netted, the second highest ever for that species, topped only by 43 banded in 1989.

The station's trend toward decreasing diversity continued, with just five species making up over half of the total number of birds banded.

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## CAPE MAY RAPTOR BANDING PROJECT 1995 YEARLY REPORT

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1995 was the 29th consecutive autumn season of operation for the Cape May Raptor Banding Project (CMRBP) at Cape May Point, New Jersey (385-0745). During the 1995 autumn migration season, we captured a total of 4,327 raptors of 16 species. This total includes 3,658 hawks of 12 species (Table 1) and a record breaking 669 owls of four species. For an in-depth discussion of the remarkable results of our 1995 owl project, see the article by Katy Duffy in this issue. The hawk total was the highest in five years but was slightly below the project average since 1980. These capture totals resulted from the operation of up to four hawk banding stations between 4 September and 30 November for a total of 2,183 station-hours on 259 station-days of capture effort. Since 1967 we have captured a grand total of 92,821 hawks of 16 species. Capture techniques have been previously described by Clark (1970. *EBBA News* 33:181-189; 1981. *J. Wildl. Manage.* 45:1043-1044). Highlights this autumn included new season records for Red-tailed Hawk (443) and Cooper's Hawk (909). The project's first adult Bald Eagle was captured on 6 September, and the first adult Swainson's Hawk was captured on 8 November.

This season's total of 127 Northern Harriers was slightly better than our average of 123 per year since 1979. Harriers were captured in low numbers from mid-September through late

November. For the first time in several years we had no double digit harrier capture days. Adult capture rates were higher than usual with quite a few adult females banded later in the season. Our Sharp-shinned Hawk capture total of 1,426 was the highest season total since 1990. However, after accounting for increased capture effort, this autumn's capture rate per hour was identical to that of 1994. The total was also more than 1,000 less than our project average since 1976. Figure 1 shows the number of Sharp-shinned Hawks captured per hour of station operation since 1979 for the period 21 September to 7 November, when 92% of yearly sharp-shin captures occur. The decline in sharp-shin capture rates during this 17-year time period has been both dramatic and highly significant. This season's total of 909 Cooper's Hawks was significantly higher than the previous project record of 654 in 1993 and continued a ten-year increase in capture rates. During the first half of October, which is the peak time for *Accipiter* migration at Cape May Point, on 10 of 15 days we caught more Cooper's Hawks than Sharp-shinned Hawks. On 29 September we set a new daily record of 75 Cooper's Hawks (compared to only 26 Sharp-shinned Hawks the same day). Most of the 12 Northern Goshawks were captured in mid to late November. An adult male captured on 19 November was the first adult goshawk captured by the CMRBP since 1991. The 443 Red-tailed Hawks was a new project

record. The previous record of 377 had stood since 1980. Red-tail capture totals were about average for the months of September and October. Despite a lack of strong cold fronts, red-tails were captured in moderate yet consistent numbers throughout the month of November, and the monthly total of 351 was higher than all season totals except 1980. The 14 Red-shouldered Hawks and 7 Broad-winged Hawks banded by the CMRBP were about average for the project. The CMRBP's first adult Swainson's Hawk, a light morph, was captured on 8 November. The bird was in full adult body plumage and had two generations of adult flight feathers, thus it was aged after-third-year. The only eagle banded this autumn was a fully adult Bald Eagle captured on 6 September. The eagle weighed 2,800 grams and was the lowest weight eagle we have ever captured. The 66 Peregrine Falcons captured this autumn was exactly double the 1994 total and the 12% adult capture rate was double our average of 6% adult. For the second year in a row we captured no previously banded peregrines. Our total of 302 Merlins captured this autumn was well above our average of 255 per year since 1976 but short of our record 401 in 1985. As in most previous seasons, more than three quarters of our Merlin captures occurred during the month of September. The total of 350 American Kestrels was the highest since 1988. Kestrel captures were relatively evenly split between September and October.

All four CMRBP hawk banding stations increased captures in 1995 over their respective 1994 station totals. However, this is misleading. All four banding stations also increased the number of station-days of capture effort during the 1995 season. Therefore, the increased station totals may have been due as much to increased capture effort as to increased numbers of hawks passing during 1995. Based on the number of hawks captured per hour, only one station continued to show a significant increase in capture rate between 1994 and 1995. Two other stations showed little increase over their 1994 capture rate, and the capture rate at one station actually declined slightly between 1994 and 1995. This example illustrates the need to account for capture effort when evaluating yearly changes in banding totals.

During the 1995 autumn migration season, the CMRBP captured 14 foreign retrap hawks, a large increase over most recent seasons. One of these, a Sharp-shinned Hawk, was a return to Cape May Point originally banded as an HY in 1993. An HY female sharp-shin was originally captured by Len Soucy in a mist net in the rafters of a northern New Jersey middle school gymnasium. The bird probably chased a House Sparrow through several large open doors at one end of the building and was trapped inside for almost a week. We captured the bird at Cape May Point five days after Len released it in Millington, NJ. Another HY female sharp-shin was banded earlier in the fall on Long Island. Of the five Cooper's Hawk foreign retraps one was banded in Connecticut this season and one, an HY female (#1705-19188), was banded by Reese Lukei at Wise Point, VA, approximately six weeks earlier. The three remaining Cooper's Hawk foreign retraps were banded in Virginia in previous seasons. A Red-tailed Hawk, Merlin, and American Kestrel were also banded north of Cape May this autumn.

The CMRBP wishes to thank the Cape May Bird Observatory (Peter Dunne and Kathy Iozzo) of the New Jersey Audubon Society for providing administrative and financial support for this project. The Cape May Point State Park (Dean Cramer) provided equipment storage facilities during the off season, and Portable Communications Inc. (Ken Grossweiler) provided radio communications during the 1995 autumn migration season. We also thank landowners Bill Maher, Dave Rutherford, the Nature Conservancy (Liz Johnson), and the New Jersey Department of Fish, Game and Wildlife (Eric Stiles) for allowing us to continue operating banding stations on their properties.

Every autumn the CMRBP is indebted to the generosity of time, labor, and financial support of the banders and helpers who participate in this project. The 1995 CMRBP banders were: Olin Allen and Becky Boutz from VA; Doug Barrett, OR; Gene Biglin, VA; Doug Brown, Portugal/UK; Bill Clark, VA; Peter and Claudia Thompson Deahl, VA; Katy Duffy and Pat Matheny, WY; Paul Engman, VA; Steve Felch, VA; Mary and John Forness, NY; Wendy Gibble, WA; Al Hinde, MA;

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Table 1. Hawks captured by the CMRBP by species and month in 1995.

Species	September	October	November	Total
Northern Harrier	19	78	30	127
Sharp-shinned Hawk	442	802	182	1426
Cooper's Hawk	223	574	112	909*
Northern Goshawk	1	2	9	12
Red-tailed Hawk	21	71	351	443*
Red-shouldered Hawk	0	1	13	14
Broad-winged Hawk	2	4	1	7
Swainson's Hawk	0	0	1	1
Bald Eagle	1	0	0	1
Peregrine Falcon	5	59	2	66
Merlin	231	67	4	302
American Kestrel	190	148	12	350
Total	1135	1806	717	3658

\* = New Season Record

### SHARP-SHINNED HAWK CAPTURE RATES 21 SEPTEMBER - 7 NOVEMBER

