

# Atlantic Flyway Review: Region IV

*Donald F. Clark, Coordinator*

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As per usual over the years, the only consistent factor of Region IV is its inconsistency. The size of the area with the differences in terrain make this region almost incomparable. We vary from lake plains, to upland farm country, to mountain passes. Each station seems to have its own specialties. Only one of the five northern stations has two warblers in its ten most commonly banded species. The other four have none. The three southern stations have from three to eight species of warblers in their top ten. Black-capped Chickadees were high in numbers for all five northern stations.

The weather in 1986 was not conducive to good netting for the northern stations. August and September started out dry, but it got wet and wetter as the fall progressed. Rochester and Presque Isle reported high water problems, while Farmersville Station reported 44 days of rain and four days of snow out of the 92 total days of banding. On the other hand, Allegheny Front reported its nets were closed on only one day during their period of operation.

Five stations banded more birds in 1986 than in 1985 and our stations banded more species. All in all it was about average for the region.

Only Maitland River and Farmersville Station reported exceptionally poor migration. Newark Valley and Allegheny Front felt it was well above average. However, most stations reported low numbers of thrush moving through. The numbers of warblers varies -- some up like the record Yellow Warbler catch at Presque Isle -- some down like Bay-breasted at Maitland River and Presque Isle. Several stations reported an increase in Kinglets over the past few years.

Newark Valley had a record of 65 birds of 14 species in one net at one time, all within a 20 minute period. That makes for an exciting banding day.

Any bander wishing to have his fall banding results included in the Atlantic Flyway Review is welcome to do so. Just submit your results to the appropriate coordinator.

**Table I. Region IV Summary.**

	Maitland River Ontario	Rochester New York	Beaver Meadow New York	Farmersv Station New York	Newark Valley New York	Presque Isle Penn.	Powder- mill Penn.	Allegheny Front West V.A.
Days of Operation	42	37	23	47	32	18	104	59
Number Nets Used	38	12	1-10	1-5	12	—	0-60	—
Total Net Hours	16933	1479	579	286	1296	735	15214	5358
Largest Daily Catch	—	137	17	15	132	133	300	665
Birds Banded 1986	621	1174	170	278	1191	741	7216	8778
Birds Banded 1985	587	487	201	361	983	582	7570	8506
Different Species 1986	61	56	21	21	57	69	107	81
Different Species 1985	68	39	22	36	62	58	109	80
Birds per 100 N.H. 1986	4	79	29	25	92	100	47	164
Birds per 100 N.H. 1985	3	123	36	32	84	67	61	165

**Table 2. Interesting or Most Common Species in 1986:**

Maitland River Ontario	Rochester New York	Beaver Meadow New York	Farmersville New York	Newark Valley New York	Presque Isle Pennsylvania	Powdermill Pennsylvania	Allegheny Front West Virginia
98 SC Junco	319 WT Spar	43 Cedar Wax	139 House Fin	256 Song Spar	104 Yellow Warb	603 SC Junco	1415 Tenn Warb
56 BC Chick	193 A Goldfinch	33 WT Spar	55 SC Junco	115 A Goldfin	78 Myrtle Warb	448 Cedar Wax	1063 Bl-Thr Blue
45 RW Black	95 BC Chick	25 BC Check	28 BC Check	106 House Fin	50 Swain Thrush	411 Myrtle Warb	941 Blackpoll
41 Swain Thrush	71 RC King	10 A Goldfin	8 Purple Fin	97 G Catbird	40 Song Spar	365 Cape May Warb	684 Cape May
35 Song Spar	54 Swain Thrush	9 G Catbird	7 Mourm Dove	95 C Yelthroat	36 GC Thrush	353 A Goldfinch	553 Bl-Thr Green
	46 GC King	9 A Robin		91 Cedar Wax	33 WT Spar	339 Song Spar	507 Blackburnian
	40 Hermit Thr	6 SC Junco		69 WT Spar	33 G Catbird	333 Magnolia Warb	465 Bay-breasted
	35 G Catbird	5 Song Spar		35 BC Chick	26 Magnolia Warb	306 RC King	419 Magnolia Warb
	31 Br. Creeper	4 N. Cardinal		35 Tenn Warb	21 Winter Wren	260 C Yellowthr	390 Swain Thrush
	29 Song Spar	4 Hermit Thr		29 Swamp Spar	21 GC Kinglet	254 WT Spar	302 GC Kinglet

**Maitland River Bird Observatory 433-0812**  
**Huron County, Ontario, Canada**  
**John B. Miles**

The station was in operation for 42 days, mainly on week-ends, with the exception of the last two weeks in August when continuous coverage was provided. This period was from 26 July to 2 November, 1986.

The station operated with up to 38 mist nets set in the same locations as in past years. Three traps, a Potter trap, a sparrow trap, and a jay trap, were also in operation. A total of 621 birds of 61 species were banded. Two House Wrens were banded as nestlings in a nest box.

In general, the fall migration was poor, especially warblers with no Blackpolls, only four Myrtles and low numbers of Tennessee and Bay-breasted Warblers.

An Olive-sided Flycatcher was the only "good" species banded but a "White-winged" Junco was perhaps the best catch of the year. There is no specimen, acceptable photograph, or accepted sight record for Ontario or Canada of which I am aware. A written description of the bird was forwarded to the National Museum of Canada, the Ontario Rare Bird Committee, and the Banding Office, along with sketches of the 3-1/2 white tail feathers. The only reply that I have had back was from the Ontario Rare Bird Committee who advised that they do not deal with races but it was an interesting report.

**Kaiser-Manitou Beach Station 431-0774**  
**Elizabeth W. Brooks**

The Kaiser-Manitou Beach Banding Station, located in the town of Greece near Braddock Bay in Monroe County, NY, began its second fall of operation on 13 August and continued until 17 November. Up to 12 mist nets were used on 37 days during the period for a total of 1479 net hours of operation. This was nearly four times the total net hours in

1985. Banding was done by Jeff Bouton, Elizabeth Brooks, Kevin Griffith and Bill Symonds with assistance from volunteers. Nets were located in hedgerows, in mixed deciduous woods, in an open weedy field, and in lanes cut through shrubs.

A total of 1174 birds were banded representing 56 species with 23 species being new for this location in the fall. There were 140 repeats but no returns. There were 79 birds banded per 100 net hours of operation. Our most active day was 27 October when 136 birds were banded. A special vote of thanks is due Danny Niven whose help enabled us to band 127 birds (125 goldfinches and 2 siskins) in one hour that day.

New species this fall were Eastern Wood Pewee, Eastern Phoebe, Red-breasted Nuthatch, Brown Creeper, Cedar Waxwing, White-eyed Vireo, Philadelphia Vireo, Blue-winged Warbler, Golden-winged Warbler, Tennessee Warbler, Nashville Warbler, Yellow Warbler, Blackburnian Warbler, Blackpoll Warbler, Ovenbird, Wilson's Warbler, Canada Warbler, Scarlet Tanager, Indigo Bunting, Field Sparrow, Red-winged Blackbird, Pine Siskin and House Sparrow.

Species missing this year were Northern Saw-whet Owl, Blue Jay, Brown Thrasher, Bay-breasted Warbler, Black-and-White Warbler and Common Redpoll.

Birds were aged, sexed, and wing chord measurement taken, and examined for fat class. A number of birds had abnormalities or injuries which were documented.

Generally, the fall was warm and wet. Net lanes that were essentially dry in August became muddy and in some loca-

tions under ten inches of water as the season progressed.

Noteworthy encounters included a late Black-throated Blue Warbler on 17 October. A record late and sixth ever regional fall record White-eyed Vireo was banded on 29 October. An immature Bald Eagle flew over the station on 7 November, exactly one year to the hour as the one in 1985. Other noteworthy sightings at the station included a Merlin on 1 October and a Whimbrel on 3 September.

Appreciation is extended to Jim Aubin, Nancy Boudrie, Carolyn Cass, Brian and Eileen Keelan, Jon Morse, Dan Niven, Martha Reinhardt, Sharon Skelly and Dave Tetlow. Special appreciation is due Bill Kaiser for his enthusiastic support and permission to band on his land.

**Beaver Meadow Audubon Center 424-0782  
North Java, New York**

Sporadic banding in the fall as Beaver Meadow Audubon Center volunteers could find time, resulted in a low number of birds netted. New birds numbered 170, with 31 repeats during 23 days of operation from August 1 to November 15, 1986. Three of those days, totaling 49 net hours, resulted in no birds netted at all.

In general, nets were run between 7 a.m. and noon on those days of banding with some days extended to mid afternoon. Participants were: Nancy Bompczak, Jane Cole, Taddy Dann, Tom Harper, Dave Junkin, John Mitton, Carl Pedersen, Jane Schmieder, Ree Thayer, Emily Vaughan, Rich Wells and Mike Zebehazy.

Warbler time was not covered well enough to make a conclusion, but absent was our annual small migration of Gray-cheeked and Swainson's Thrushes. The high count for Cedar Waxwings seems to emphasize a build up correlating with a good crop of Autumn Olive fruit, which abounds in the net area.

**Farmersville Station, New York 422-0782  
Donald F. Clark**

The fall of 1986 migration was a complete fiasco at Farmersville Station. This 18th year of record keeping showed the poorest number of species ever captured. Although not the smallest number of individuals caught over the years, most of the birds banded were not necessarily migrants. The 139 House Finches and 28 Black-capped Chickadees could well be birds that nested or fledged in this area. All but four species caught from 15 August to 15 November nest in this area and are possible local birds. The true migrants consisted

of only 14 birds.

One to five nets were used for a total of 286 net hours. Twenty-five birds/100 net hours were captured in 47 days of operation. There were 11 returns and 189 repeats. During the 92 days from 15 August to 15 November, we had 44 days of rain with 10 1/2 inches falling plus four days of snow with 8 1/2 inches. It was wet, wet, and wetter.

Only two warblers were caught, two flycatchers and one thrush other than robins. The poorest record ever. Of interest, fall banded birds recovered during the year:

- #970-61378 - House Finch banded on 08-31-83 was recovered 06-12-85 at Rushford, NY.
- #871-19014 - Evening Grosbeak banded on 10-31-85 was recovered on 02-15-86 at Alfred, NY.
- #1420-42812 - Black-capped Chickadee banded on 12-12-76 and recaptured 10-05-86 at Farmersville Station. This bird is at least 10 years old.
- #1660-74212 - Myrtle Warbler banded on 05-09-85 was recovered on 10-(43)-85 at Durham, NC.
- #2020-03392 - House Finch banded on 08-27-85 was recovered 05-01-86 at Cuba, NY.

**Presque Isle State Park 420-0800  
Ronald F. Leberman**

Birdbanders Jean and Jim Stull, Mary Leberman, Thelma Patton, and Ronald Leberman extended our banding efforts at Presque Isle State Park once more to arrive at our 25th season for the Atlantic Flyway Review.

For the fall of 1986, 741 new birds were banded of 69 species in 734 net hours for an average of 101 birds per 100 net hours. There were 52 repeats and eight returns. As in the past, wing measurements and fat counts were made on 95% of all birds handled.

The banding location behind the administration building and lily pond area that had been in continuous use for the last 24 years was not usable due to the extremely high water levels, forcing the Stulls to look for other suitable banding locations. After trying the cement walk area and one other location, they set up in the Lake Erie side, north of the Nature Center, and had good results. Again, nets were used on one day at Gull Point, adding a number of species to the list of birds banded. Mrs. Patton and the Lebermans again banded along the bay shore north of the old baseball field and south of Niagara boat ramp. The water level was also much higher than normal there, but operations were not hindered.

August was warm and pleasant and produced a record number of Yellow Warblers; September started out warm and dry but ended wet and rainy; October was cool, wet and windy.

Two new species were added to the overall list this year with the Killdeer banded by the Stulls and the two Green-backed Herons banded in August by the Lebermans. Five species of shorebirds were netted at the point on 31 August. The number of Downy Woodpeckers were much higher than normal with ten banded. There were 16 flycatchers netted, four of them were Yellow-bellied. Sparrow numbers were better than the past few years. Forty Song Sparrows were netted but only six Juncos. A late Scarlet Tanager was banded 5 October. Vireos were at least average or above. Two immature male Prothonotary Warblers were netted in August, perhaps from the broods raised at Presque Isle. Only one Orange-crowned was banded and only six Bay-breasted Warblers. This was below normal. The 104 Yellow Warblers banded set a new station high for that species. Good numbers of Yellow-rumped Warblers were taken. Kinglet numbers have improved recently but are still far below the 1960 and 1970 totals and averages. Swainson's Thrushes were about average this year but Gray-cheeked Thrushes were well above average with 36 banded.

Returns captured include two Gray Catbirds, both four months; one Warbling Vireo, three years, three Song Sparrows of three years, and one of one year, three months; and one Northern Oriole of four months.

**Newark Valley, NY**  
**Judith A. Bell**

**421-0761**

For the fourth consecutive year, fall migration banding was conducted at this semi-rural station. A total of 1,191 birds of 57 species were banded and processed. The station was in operation on 32 days, beginning on 19 August and ending on 24 October, from dawn until 10 a.m. each day. Twelve nets were used for 1,296 net hours, resulting in 92 birds/100 net hours. There were 25 returns and 263 recaptures of previously banded birds. Peak activity came on 4, 18, and 30 September, and 7, 9, 12, and 23 October. The largest daily catch was 132 birds on 18 September.

Five new species were banded bringing the station total to 76 species for the fall migration. The most interesting of these new species was a Belted Kingfisher. The daily catch of 132 birds on 18 September was an all-time high for this station and included an astounding 65 birds of 14 species in one net at one time. These birds all entered the net in a twenty minute

time span, an exceptionally high number for an inland location.

While sparrow numbers were down slightly this year, species composition in general was average. Although *Catharus* thrush numbers are normally low, this year they were non-existent. Gray Catbirds showed an increase of 100% over the average of the previous three years. Interestingly, only two of the 97 catbirds banded were AHY. It would appear to have been a good nesting season for them. In addition to the 1,191 birds, two white-tailed deer were also netted this year, resulting in the destruction of one net.

**Powdermill Nature Reserve**

**400-0791**

**Rector, PA**

**Robert S. Mulvihill**

**Robert C. Leberman**

Our banding program was in operation for 104 days during the season. More than 100 birds were banded on 25 days; more than 200 on three of these. Peak dates were 14 September (211 birds), 21 September (192), 24 September (204), 26 September (178), 15 October (192) and 29 October (300). The catch on the latter date included 95 Cedar Waxwings, 41 Dark-eyed Juncos, 48 Yellow-rumped Warblers, and 23 Song Sparrows, among 23 species.

Table 1 lists our fall 1986 banding totals for selected species and the mean fall banding totals for these species ( $\pm$  standard deviation) for the previous ten years (1976-1985). Only three species were caught in record high numbers this fall: Blue-winged Warbler, Cape May Warbler and Blue-gray Gnatcatcher. Another five species made their best showing in the past ten years: Ruby-throated Hummingbird, Nashville Warbler, Blackpoll Warbler, Kentucky Warbler, and Golden-crowned Kinglet. Four species were caught in their worst numbers in the past ten years: Blackburnian Warbler, Canada Warbler, Swainson's Thrush, and Wood Thrush.

A recent comment by DeSante (Ornithological Newsletter No. 56: 3) that many passerines along the northwest coast had suffered a "drastic and unprecedented reproductive failure...in 1986..." prompted us to analyze age ratios for selected species and to ask the question whether or not variation in our total capture of these species in the fall can be interpreted as reflecting the relative success of their most recent breeding season.

If a species had poor nesting success we would expect (1) fewer individuals to be present in the fall, resulting in fewer total captures, and (2) a lower percentage of those captured

to be immature (HY) birds. The reverse would be true for species that enjoyed above-average nesting success. For fall banding data to be predictive under this model, total capture and percentage HY should be positively correlated. If, on the other hand, the age composition of the fall sample of a species remains fairly constant, regardless of variation in the total number of that species caught from one year to the next, or if the age composition varies but is not significantly correlated with total capture, then factors other than nesting success must contribute substantially to annual variation in fall species totals (e.g., banding effort, weather, and adult mortality prior to the breeding season).

We analyzed eight species - three were caught in above-average numbers (i.e., 1986 total more than two standard deviations above the mean), and five were caught in below-average numbers (i.e., 1986 total more than one standard deviation below the mean). Results of this analysis are provided in Table 2.

Only three correlations were significantly different from zero. The positive correlation for Cape May and Canada Warblers indicates that at Powdermill %HY decreases as the seasonal total decreases in these species. The Wood Thrush shows an unexpected and possibly spurious negative correlation, such that %HY increases as the seasonal total decreases. In the other species, no significant relationship exists between total fall captures and %HY of the capture sample. For all eight species, %HY of the fall 1986 sample is not significantly different from the mean %HY.

In general, our banding data do not appear to be very useful in evaluating the recent nesting success of species captured at Powdermill during the fall migration. This is not unexpected when we consider that very good or very poor nesting success may be localized, while samples of fall migrants may be comprised of individuals of wide geographic origin. That we found a positive correlation between %HY and fall capture total for Cape May and Canada Warblers may indicate that individuals in our fall samples of these species typically arise from a comparatively restricted geographic area.

Prerequisite to any suggestion that annual variation in a species' fall capture total is related to that species' recent nesting success, should be the knowledge of a significant correlation between age composition (%HY) and the total number of individuals in the capture sample. For many species this relationship may not exist, and information about nesting success must stem from comprehensive, long-term field studies.

We extend our thanks to those who contributed to the success of our banding season: Linda and Larry Barth, Nancy Kirsch, Don and Judy Koch, Marilyn Niedermeier (Research Assistant, Section of Birds, the Carnegie Museum of Natural History), Dr. Kenneth C. Parkes (Curator, Section of Birds), Barb and Ted Rich, and Dr. D. Scott Wood (Assistant Curator, Section of Birds and director of the Powdermill banding program). We also thank Dr. Wood for many helpful suggestions concerning this report.

**Table 1. 1986 Fall banding totals at Powdermill Nature Reserve for selected species, compared with the mean fall banding totals for those species ( $\pm$  S.D.) for the years 1976-1985.**

Hummingbird, Ruby-throated*	169 (78.1 $\pm$ 17.1)
Wood-Pewee, Eastern	38 (35.9 $\pm$ 15.9)
Flycatcher, Yellow-bellied	93 (83.1 $\pm$ 21.4)
Acadian	21 (17.3 $\pm$ 5.7)
"Traill's"	22 (17.4 $\pm$ 9.4)
Least	82 (88.2 $\pm$ 19.3)
Phoebe, Eastern	64 (44.5 $\pm$ 13.1)
Kinglet, Golden-crowned*	57 (27.8 $\pm$ 14.0)
Ruby-crowned	306 (181.7 $\pm$ 86.6)
Gnatcatcher, Blue-gray*	16 (5.8 $\pm$ 2.9)
Veery	7 (12.1 $\pm$ 5.3)
Thrush, Gray-cheeked	35 (63.0 $\pm$ 35.8)
Swainson's	86 (385.2 $\pm$ 173.0)
Hermit	49 (49.4 $\pm$ 23.6)
Wood	13 (38.0 $\pm$ 16.8)
Vireo, White-eyed	13 (9.9 $\pm$ 4.6)
Solitary	17 (26.2 $\pm$ 14.3)
Philadelphia	15 (30.5 $\pm$ 19.6)
Red-eyed	148 (128.2 $\pm$ 25.8)
Warbler, Blue-winged*	12 (4.1 $\pm$ 2.3)
Golden-winged	2 (2.5 $\pm$ 2.3)
Tennessee	217 (215.7 $\pm$ 74.4)
Nashville	80 (49.1 $\pm$ 18.7)
Chestnut-sided	36 (35.4 $\pm$ 11.2)
Magnolia	333 (256.3 $\pm$ 69.5)
Cape May*	365 (134.0 $\pm$ 89.8)
Black-throated Blue	22 (21.1 $\pm$ 12.2)
Yellow-rumped	411 (361.7 $\pm$ 273.6)
Black-throated Green	76 (54.7 $\pm$ 26.1)
Blackburnian	3 (12.7 $\pm$ 5.8)
Prairie	5 (5.3 $\pm$ 2.4)
Palm	11 (21.7 $\pm$ 7.1)
Bay-breasted	43 (59.3 $\pm$ 30.4)
Blackpoll*	60 (29.6 $\pm$ 11.6)
Black-and-white	7 (16.0 $\pm$ 7.5)
Redstart, American	133 (112.1 $\pm$ 43.1)
Ovenbird	54 (76.2 $\pm$ 26.8)
Waterthrush, Northern	25 (39.0 $\pm$ 15.3)
Warbler, Kentucky*	11 (5.7 $\pm$ 2.6)
Connecticut	23 (17.1 $\pm$ 7.5)
Mourning	12 (16.3 $\pm$ 6.9)

**Table 1. (cont'd.)**

Yellowthroat, Common	260 (257.9 ± 65.8)
Warbler, Hooded	105 (67.2 ± 26.9)
Wilson's	31 (27.0 ± 8.5)
Canada	18 (42.2 ± 15.1)
Grosbeak, Rose-breasted	65 (79.3 ± 28.8)
Bunting, Indigo	77 (80.1 ± 25.7)

Sparrow, Field	116 (122.9 ± 24.6)
Fox	71 (38.6 ± 27.8)
Song	339 (315.5 ± 103.9)
Lincoln's	41 (56.1 ± 16.5)
Swamp	164 (147.6 ± 63.7)
White-throated	254 (463.9 ± 153.4)
Junco, Dark-eyed	603 (442.2 ± 206.8)

\* 1986 total is two or more standard deviations above or below the mean.

**Table 2. Statistics on the age composition of selected species of fall migrants at Powdermill Nature Reserve, 1964-1986.**

Species	%HY	Mean %HY	Range*	Spearman's rank correlation between %HY and total fall captures, all years	
	1986	(± S.D.)*		rs =	p <
+ Ruby-throated Hummingbird	87	72.7 (±14.2)	31-89	rs = 0.01	n.s.
- Swainson's Thrush	81	84.4 (±5.9)	75-93	rs = 0.07	n.s.
- Wood Thrush	100	91.9 (±8.1)	82-100	rs = -0.39	p<0.05
+ Cape May Warbler	90	85.7 (±9.4)	56-96	rs = 0.64	p<0.01
- Bay-breasted Warbler	88	89.5 (±12.9)	87-98	rs = 0.30	n.s.
+ Blackpoll Warbler	78	79.6 (±8.3)	73-93	rs = 0.13	n.s.
- Canada Warbler	67	75.9 (±11.7)	52-95	rs = 0.45	p<0.05
- White-throated Sparrow	48	62.5 (±9.8)	50-92	rs = -0.22	n.s.

\* Taken from a sample of 17 to 22 years, up to 1986, depending on the species.

+ 1986 total above average.

- 1986 total below average.

### Allegheny Front Migration Observatory 390-0791 Grant County, W. Va. George A. Hall

The twenty-ninth year of bird banding at the Allegheny Front Migration Observatory was another good one. The station was in continuous operation from August 15 to October 12. Bad weather closed the station on only one day so some banding was done on 59 days. The season was unusually mild and fairly dry. There were no days with below-freezing temperatures.

A total of 8,778 birds (third highest total) of 81 species and one hybrid was banded in a station effort of 5,358 net hours (2nd highest), giving a capture ratio of 164 birds per 100 net hours (third highest). The high count was augmented by the higher-than-normal August captures and the highest ever October captures. September bandings were not as high as in some years.

One new species, the Common Grackle, was added to the station list which now stands at 115 forms with a grand total of 115,158 birds banded. Five birds banded in 1985, one banded in 1984 (Dark-eyed Junco) and one banded in 1983 (Common Yellowthroat) were captured again this year. A Cape May Warbler banded in September 1983 was recovered in the Dominican Republic in April 1986. This station

does not band hummingbirds, but this year 181 were caught and liberated and an additional 302 were seen flying over.

The season started in an unusual manner with some higher-than-normal counts in mid-August, but with the usual late August peak when 522 birds were banded on the 26th. This was followed by the normal lull in early September. The September pattern varied from the usual one in that while three major flights, spaced about a week apart, did occur, each of them lasted only about one or two days. The largest number of bandings was on September 26 with 665, followed by September 20 with 600. Three other days produced over 500 and two days had between 400 and 500 bandings. The first two of these flights followed classical weather conditions with pronounced cold fronts moving through the area, but the two biggest flights did not result from that sort of weather pattern. On the 26th, a cold front had moved across Canada a day earlier but warm, mild weather prevailed in West Virginia.

The most numerous species this year was, once again, the Tennessee Warbler with 1,415 bandings. The Black-throated Blue Warbler was second with 1,063, and the Blackpoll was third with 941. The fantastic flight of Blackburnian Warblers in 1985 was not repeated although the number of captures was still high. The Cape May Warbler was down somewhat and the Swainson's Thrush continues to be low. Of the

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species captured in large enough numbers to analyze, 27 were caught in average numbers (within one standard deviation of the mean), 19 were caught in above-average numbers, and only one (a Swainson's Thrush) was caught in below-average numbers. Twelve species were caught in record high numbers and two tied the highest yearly count. The record breakers included both kinglet species and some sparrows, thus reflecting the increased October coverage.

During the season a total of 1,656 people signed the visitor's book. The visitors came from 17 states, District of Columbia, Scotland, Venezuela, and Sri Lanka. Several elementary and high school classes as well as some college classes visited the station.

The banders who participated this year were Walter Fye, Maxine Kiff, Epe Olliver, Connie Skipper, Jo Lane Stern, Judy Ward, Leon Wilson, and Charles Ziegenfus along with co-leaders Ralph Bell and George Hall. LeJay Graffious was again responsible for the shelter. The net lanes were again in the charge of Genevieve and John Findley. Throughout the season Kathleen and Mike Finnegan and Harriett and Mel Hooker provided assistance. The McCullough and the Minear families were present on most weekends.

The following people aided in tending nets, carrying collecting cages, keeping records and in many other ways: Lynn Barnhart, Rodney Bartgis, Virginia Byers, Carolyn Conrad, Dorothy Conrad, Helen Conrad, Robert Dean, Ruth Ann Dean, Kathy DeVaul, Mark Eye, Naomi Eye, Osbra Eye, Brian Findley, Bryce Findley, Hal Findley, Ken Findley, Janet Fletcher, Annabelle Fye, Barb Graff, JoAnn Graham, Phil Graham, Florence Griffin, Mike Griffith, Andrew Hall, Ken Hesselton, Sue Hesselton, Linda Hollenberg, Diana Holsinger, June Huy, Jim Huy, Karen Huy, Mike Huy, Gene Hutton, Virginia Johnson, John Jones, Janice Musser, Ben Myers, Harry Osborne, Louise Osborne, Ruth Patterson, Ivarean Pierce, Charlotte Pryor, Esther Reichelderfer, Beth Ritter, Randy Ritter, Carl Rowe, Ruth Rowe, Carolyn Ruddle, Miles Runner, Noodie Runner, Joe Schreiber, Julie Simpson, Juanita Slusher, Bill Smith, Virginia Stanley, Roy Ward, Bill Wentzel, Brad Wentzel, Martin Wiley, John Willetts, Dolores Wilson, Robert Wilson and Elsie Ziegenfus.

We also thank the personnel of the Manongahela National Forest; Supervisor Jim Page, District Ranger Jerry Bremer, and the others at the Potamac District Ranger Station for their cooperation and support of this project. Thanks also to Walt Lesser of the D.N.R. for use of the Laneville Cabin for housing and for storage of our shelter.