

## FUN WITH SPRING WARBLERS

By Dr. C. Brooke Wörth

Having spent much of my time overseas since the advent of Japanese mist nets, and not yet having had an opportunity to participate in any of the Operation Recovery programs, I found myself until recently in the position of having handled only 23 North American Wood Warblers during my entire bird-banding career of 39 years. These birds were thinly distributed among nine species. Apart from four nestling MacGillivray's Warblers banded in Montana in 1928, I had been able to get my fingers on only the odd Yellowthroat or other skulking species that from time to time entered a grain-baited ground trap out of curiosity or perhaps even blindly for no other reason than that the trap got in its way.

Somewhat over a year ago I bought a farm at Eldora in Cape May county in New Jersey, choosing this one principally because it was largely wooded and looked like a good place to enjoy ornithology and entomology. The woods are mixed, with a preponderance of oaks, though sweet gum, red maple, persimmon, holly, Atlantic white cedar and yellow pine are also abundant and conspicuous. During the spring of 1966 I had time for only a few walks in the woods, and I was disappointed by the apparent scarcity of warblers. Therefore I decided to supplement bird-watching with bird-netting this year, to see how much the record could be improved. (My problem now is that I have no notion of other banders' results, and therefore do not know whether the following findings are good, bad or ordinary!)

I set up six ten-meter, four-shelf nets with small (30mm.) meshes for retaining warblers as advocated by Heimerdinger and Leberman in Bird Banding, Vol. 37, October, 1966, pp. 280-285. These were distributed inside the forest, two close to the edge and the other four well within the wooded zone, that is, out of sight of adjacent open areas. However, the nets were close enough together that the two most widely separated ones were only a few minutes' walking distance apart. The whole round could be made from the farmhouse in a quarter of an hour if nothing was in the nets. Therefore I decided to keep the nets spread both day and night for as many hours as possible during the warbler migration and to visit them at least hourly as long as there was enough light to see. To say that I ran myself ragged for over a month is an understatement. Nevertheless, there were some periods during which I closed the nets.

The total numbers of warblers caught on 29 days when nets were operating are shown in Table 1. From these data one can calculate that warblers were taken at the rate of about  $3\frac{1}{2}$  birds per day, though that figure diminishes to  $2\frac{1}{2}$  if the big days of May 15 and 16 are removed from the total. That, I can aver, represents hard work. To fortify such a conviction, I refine the above calculations by converting the data to birds per net-days and net-hours. Figuring on six nets and a 15-hour day at that time of year, my  $3\frac{1}{2}$  warblers are reduced to 0.58 bird per net-day or only 0.04 per net-hour.



Table 3. Schedule of Original captures and Repeating Warblers at Eldora, N. J.

Species	Sex	May 1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	June 2	4	6	8	10	12	14	16	18	Position in Order of Arrival
Ovenbird	?	* (4)					R (5)		R (2)																R (3)	#1 of 12	
Ovenbird	?		* (6)																					R (1)		#2 of 12	
Ovenbird	?						* (2)			R (2)											R (2)					#4 of 12	
Ovenbird	?						* (2)																			#5 of 12	
Ovenbird	?									* (2)	R (6)															#12 of 12	
Blk-&-wht.	M		* (2)							R (1)																#5 of 22	
Blk-&-wht.	F						* (3)																			#10 of 22	
Yellowthr.	M						* (3)			R (1)	R (6)															#4 of 12	
Yellowthr.	M									* (3)																#5 of 12	
Yellowthr.	M																									#11 of 12	
Pine W.	F		* (5)	R (4)																						#1 of 2	
Canada W.	M																									#4 of 12	

\*: Original Capture R: Repeat ( ): Net Number

Table 3 shows the performance of warblers that were re-caught in the nets. With the exception of one Canada Warbler, all individuals belonged to species that breed in Cape May County. It is revealing to note that the repeaters which were still present in June, and which consequently may have remained in my woods to breed, were not necessarily the last birds of their species to arrive. Indeed the first two Ovenbirds to be caught were among those which remained, while another Ovenbird and one Yellowthroat first appeared at about the middle of their species' contingent. Of course it may be that birds netted early had simply "homed" to territories occupied in former years and now the sites of my nets, while birds netted later had come north equally early to adjacent territories but only subsequently strayed into nets that were somewhat off their home grounds.

One can check the various possibilities by matching net numbers and distances between nets with the timing of original captures and subsequent repeats. Figures in parentheses in Table 3 indicate net numbers. These were not spaced evenly (as I have already said) or even in numerical sequence, but it is evident that the birds moved about considerably. Whether net-shyness can develop after a single experience is an open question, but some of the data would support that idea. The first Ovenbird, for example, was caught four times, each time in a different net.

The greatest distance between any two nets (No. 3 and No. 6) was 740 feet. One Yellowthroat hit both those nets, while the second Ovenbird travelled 700 feet between No. 1 and No. 6 nets. Other birds covered shorter distances.

An unexpected finding of this excursion into pleasure was the abundance of Canada Warblers. Twelve birds out of 105 are 11.4% of the total. That would be a nice showing for Canada Warblers anywhere. However, when I read in *Bird Studies at Old Cape May* that Witmer Stone had recorded the species only three times in this area during the spring migration, in 1892, 1917 and 1927, I saluted these birds for making modern history.

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