

The Passerine Decline

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As a long time bander of some 35 years experience, I have become very concerned about the staggering decline of some species of passerine birds, particularly the warblers. To demonstrate this decline I have chosen the Tennessee Warbler, which a few years ago appeared to be the most abundant migrant in this part of the country. These are birds which nest primarily in the north central boreal forest regions of Canada and migrate through this area in August to winter quarters in Central or South America. It is the opinion of this writer that the population drop in Tennessee Warblers since 1971 has been not less than 85-90% (Jones, 1984).

My permanent banding section is located on the edge of a north/south oriented ravine through which flows White Mud Creek. At this point the ravine and creek enter the North Saskatchewan River of north central Alberta which flows in a northeasterly direction, eventually emptying into Hudson's Bay.

It is important to point out that over the period of 1978-85 there has been little or no change in the banding station surroundings. All nets have been placed in the same location each year and detailed records kept of the number of birds caught in each net. Each year I have used 14 or 15 one and one-half inch mesh mist nets along with a 'water drip' Cohasset warbler trap.

Although I have kept detailed banding records since 1971 the years 1978-85 were used as the banding hours recorded were more consistent with the migration of the warblers. The month of August is the main migration period for most of the warblers passing through this area of Canada.

Table 1 gives the complete picture of the declines while Figures 1 and 2 show the recorded declines, (1) of all passerines caught over the 1978-85 period and (2) the specific decline of Tennessee Warblers over the same period.

For many years it has been the opinion of this observer, that the billions of gallons of chemical insecticides, herbicides, etc. scattered through the world, including our

continent, would eventually have drastic effects on ecological systems. The effect of DDT has been well documented on many species, and we must remember that many of the chemicals used today are many times more powerful than DDT, Dieldrin being a good example.

Having personally visited Costa Rica, I am also of the opinion that the vast and continuing destruction of the tropical rain forests throughout Central and South America must be having some detrimental effects on the swarms of passerines which pass through or winter in those areas.

My third major concern and opinion is that the millions upon millions of wild/domestic house cats in North America are also a factor. According to recently published figures there are over 80 million domestic cats on North America, many of which are allowed outside at intervals during the day or night. If *one cat only* takes just one bird a year, we have lost over 80 million birds. Passerines are those birds most likely to suffer, particularly ground feeders.

In addition to the above, the Tennessee Warbler's breeding populations could have been affected to some extent by the hundreds of forest fires burning throughout Northern Alberta over the past few summers.

It would be interesting to know if other banders in various parts of North America have experienced similar declines.

Acknowledgements

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Literature Cited

Jones, Edgar T., Concerned note from Edgar T. Jones, Alberta Naturalist, Volume 14, Number 4, December 1984.

Table 1. Banding Records During August

YEAR	TOTAL NET HOURS	TOTAL BIRDS	CATCH RATE P/100 NET HOURS	TENNESSEE WARBLERS	TENNESSEE WARBLERS P/100 NET HOURS
1978	2,353	1,979	84	1,060	45.0
1979	4,876	1,601	33	890	18.3
1980	3,556	1,820	51	635	17.9
1981	2,385	596	25	182	7.6
1982	3,845	702	18	190	4.9
1983	4,212	637	15	168	4.0
1984	1,912	214	11	32	1.7
1985	4,800	427	09	33	.68

Figure 1. The downward trend calculated on #/100 net hours.

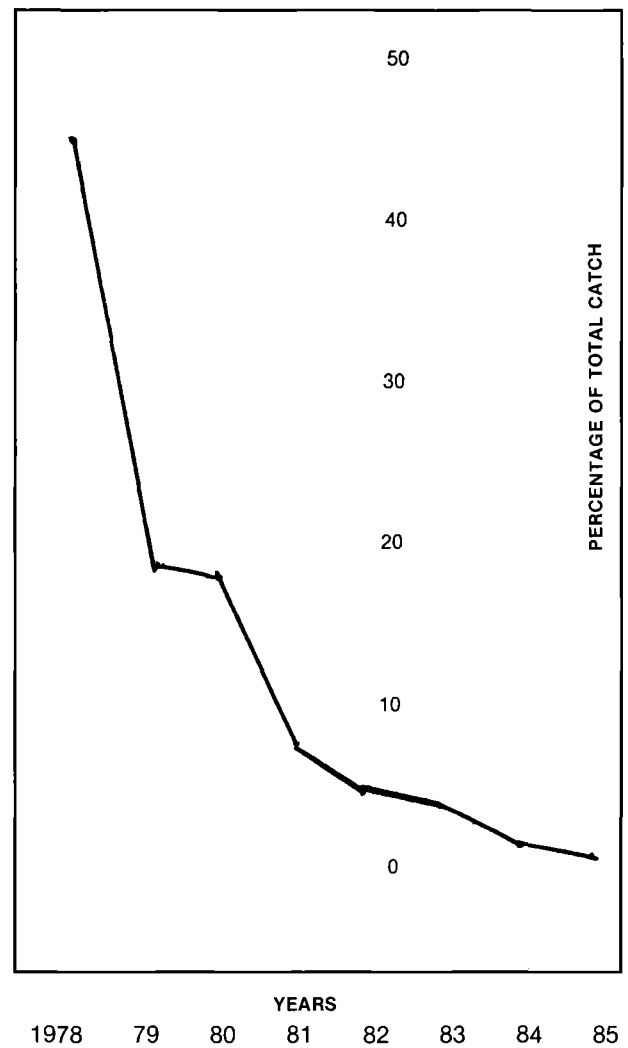
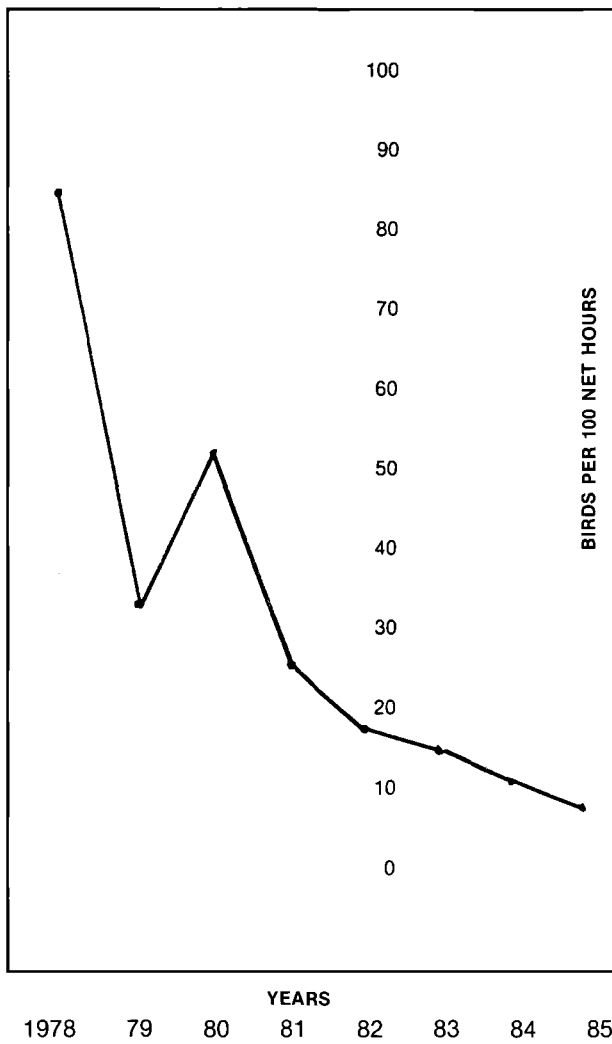
Birds caught during August.

1978	-	1,979
1979	-	1,601
1980	-	1,820
1981	-	596
1982	-	702
1983	-	637
1984	-	214
1985	-	427

Tennessee Warbler
Figure 2. Banding catch rate during August 1978-1985.

Net hours

1978	-	2,353
1979	-	4,876
1980	-	3,556
1981	-	2,385
1982	-	3,845
1983	-	4,212
1984	-	1,912
1985	-	4,800



(Western)