

GENERAL NOTES

Hybridization between Mourning and MacGillivray's Warblers.—From 6 June to 31 July 1963 I surveyed the distribution of the Mourning Warbler, *Oporornis philadelphia*, and MacGillivray's Warbler, *O. tolmiei*, in the foothill region of southwestern Alberta. The objective of this survey was to determine if a zone of contact or overlap of these two species occurs in this region, and, if so, whether or not hybridization occurs. Bent (U. S. Natl. Mus., Bull. 203, 1953, pp. 531-540) states that in Alberta the breeding range of the Mourning Warbler probably extends west to Grande Prairie, Glenevis, Camrose, and Nevis, while that of the MacGillivray's Warbler probably reaches east to Lesser Slave Lake and Edmonton (Figure 1), suggesting that range contact or overlap occurs in this region. My survey was confined to an area from the latitude of Edmonton on the north to the Sheep River south of Calgary on the south, and from a line through Stettler and Drumheller on the east to the Jasper-Banff Parks region on the west. Within these boundaries I drove roads passing through forest, brushland, or riparian forest and checked suitable habitat for the presence of singing males.

The distinctive plumage characteristics of the Mourning Warbler are its gray hood and absence of darkened lores or white eyelid markings. The male has an apron of black on the upper breast. MacGillivray's Warbler has a gray hood without a black apron in the male, prominent white upper and lower eyelid markings, and, in the male, heavily blackened lores (Griscom and Sprunt, *The warblers of America*, New York, Devin-Adair, 1957). I collected 31 specimens at 7 localities and examined their major plumage characteristics to determine if variation suggestive of hybridization occurs. Because of the small number of specimens obtained, I felt that a detailed analysis was not justified at this time. I examined the specimens with particular respect to the characteristics of eyelid markings, black apron, and lores. Populations were considered "pure" if no specimens showed a mixture of characteristics of the two species.

Apparently pure populations of Mourning Warblers range west of Edmonton as far as a point on the McLeod River about 4 miles east of Edson, Alberta, and south of Edmonton as far as a point on the Red Deer River 9 miles east of Red Deer, Alberta. I found pure populations of MacGillivray's Warblers at the University of Alberta Biological Station on the Sheep River, southwest of Calgary, and at the Tolman Ferry on the Red Deer River east of Trochu, Alberta (Figure 1).

Mixed populations or populations containing apparent hybrids were present at three locations. On the Bow River near the town of Kananaskis, one male and one female MacGillivray's Warbler and one female Mourning Warbler were collected at a single mist-netting locality. At a point on the Upper Saskatchewan 6 miles west of Rocky Mountain House, and at a point on the Clearwater River 17 miles west of Caroline, Alberta, the populations contained both pure Mourning Warblers and apparent hybrids. I collected a total of 5 males, 4 of which showed hybrid characteristics, at the Upper Saskatchewan locality, and 2 males, one of which showed hybrid characteristics, at the Clearwater River locality.

The presumptive hybrid obtained on the Clearwater River showed eyelid spots and black lores typical of a MacGillivray's Warbler and a black apron characteristic of a Mourning Warbler. The four specimens from the Upper Saskatchewan differed in characteristics. Two were similar to Mourning Warblers except for slight to moderate development of eyelid spots. One was similar to a Mourning Warbler except for slight development of eyelid spots and presence of very black lores. The last was similar to a Mourning Warbler except for slight development of eyelid



Figure 1. Southern Alberta, showing localities mentioned in report. Numbered localities are those at which individuals of both species (1) or presumptive hybrids (2, 3) were obtained.

spots and the absence of a black breast patch. These specimens have been placed in the vertebrate collection at California State University, San Diego.

Hybridization between these species has not heretofore been reported (Cockrum, *Wilson Bull.*, 64: 140, 1952). John and J. M. Macoun (*Catalogue of Canadian birds*, Ottawa, Government Printing Bureau, 1909) report the taking of a possible hybrid at the Great Falls of the Saskatchewan River. This specimen is not described, and as this location is much farther east in the province of Saskatchewan, it is unlikely that it could have come from a nearby population in which hybridization was occurring.

The distribution pattern suggests that in southern Alberta the ranges of the two species do not overlap in the true sense, but rather contact each other occasionally, with some hybridization probably occurring between species at these contact points.

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