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STATUS OF GAMBEL'S SPARROW IN MICHIGAN

BY JOSSELYN VAN TYNE

One of the most interesting by-products of the bird-banding which has been carried on with ever increasing vigor in Michigan during the last ten years has been the great increase in our knowledge of the status of several of our rarer sparrows. Perhaps the most striking case is that of the Gambel's Sparrow (*Zonotrichia gambeli*) formerly unknown in the State and now found to be of regular occurrence. The credit for the discovery of the occurrence of this species in Michigan must go to a bird-bander, M. J. Magee. For, although his "specimen" was the fourth to be taken in the State, he was the first to differentiate it from the White-crowned Sparrow. When Magee wrote to the University of Michigan Museum in 1925 about his discovery, I examined the series of *Zonotrichia leucophrys* in the Museum collection and discovered the two Berrien County Gambel's Sparrows listed beyond. Gregory's specimen from Marquette County also passed as a White-crowned Sparrow until A. J. Van Rossem, happening to look through the Gregory collection, detected its true identity.

The known records of the Gambel's Sparrow in Michigan may be summarized as follows:

1918—May 6. Berrien County, Birchwood Beach. N. A. Wood, collector. No. 52252 Univ. of Mich. Museum of Zoology. Adult female.

1918—May 13. Berrien County, Birchwood Beach. N. A. Wood, collector. No. 52250 Univ. of Mich. Museum of Zoology. Adult male.

1924—October 12. Marquette County, Huron Mountain Club. S. S. Gregory, Jr., collector. No. 397 Collection of Stephen S. Gregory, Jr. Immature male. (*Auk*, 46, p. 244).

1925—May 21. Chippewa County, Sault Ste. Marie. Trapped and banded by M. J. Magee. (WILSON BULLETIN, 38, 1926, p. 163). Identified by sketch sent to U. S. Biological Survey and to University of Michigan Museum of Zoology.

1927—May 5. Ingham County, East Lansing. Trapped and banded by J. W. Stack. Identified by Stack and Dr. K. Christofferson. Photograph sent to U. S. Biological Survey and University of Michigan Museum of Zoology.

1927—September 27. Chippewa County, Sault Ste. Marie. One trapped and banded by Magee. "A young bird; repeated the next day."—M. J. M.

1927—October 10. Chippewa County, Sault Ste. Marie. Two young birds trapped and banded by Magee.

1928—May 7. Chippewa County, Sault Ste. Marie. One adult trapped and banded by Magee.

1928—May 16. Chippewa County, Sault Ste. Marie. One adult male trapped and collected by Magee and sent to the U. S. Biological Survey. Now skin No. 61937 University of Michigan Museum of Zoology.

1928—May 18. Chippewa County, Sault Ste. Marie. One adult trapped and banded by Magee.

1929—May 12. Ingham County, Lansing. One trapped and banded by Fred E. Ludwig.

It is apparent therefore that the Gambel's Sparrow occurs in Michigan with some regularity. Since it is found in company with the more common White-crowned Sparrow and presumably comes as readily to banders' traps, the catch of the two species over a series of years should give some indication of the actual abundance of the Gambel's Sparrow. Mr. M. J. Magee has kindly furnished me with the following table of numbers banded by him at Sault Ste. Marie.

	Zonotrichia leucophrys	*Zonotrichia gambeli*
1925	16	1
1926	23	0
1927	15	3
1928	20	3
1929	20	0
	94	7

These figures indicate a Gambel's Sparrow population at the Sault of over seven per cent of the numbers of White-crowned Sparrows. In Berrien County in May, 1918, two of the three "White-crowned Sparrows" collected by N. A. Wood were *gambeli*. On the other hand sixteen skins from Washtenaw, Huron, and Tuscola Counties in southeastern Michigan in the University of Michigan Museum of Zoology are all *leucophrys* as were 220 trapped and banded by the Wing brothers at Jackson since 1925.

Now that it is known that the Gambel's Sparrow is to be expected in Michigan it will be interesting to see whether that knowledge will greatly increase the number of occurrences reported during the next few years.

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THE SEQUENCE OF THE MOLT

BY LYNDS JONES

Dr. Witmer Stone's paper entitled "The Molting of Birds, with Special Reference to the Plumages of the Smaller Land Birds of Eastern North America", published in the January issue of the *Proceedings of the Academy of Natural Sciences of Philadelphia* (1896, pages 108-167), is largely based upon museum specimens. It contains no detailed description of the sequence of molt in any species, and as the title implies, is primarily concerned with the sequence of plumages rather than with the molt proper.

Dr. Jonathan Dwight's paper entitled "The Sequence of Plumages and Moult of the Passerine Birds of New York", published in the *Annals of New York Academy of Sciences* (Vol. 13, 1900, pages 73-360), gives a generalized account of the sequence of the molt, but also is primarily concerned with the sequence of plumages.

It is my purpose, in this paper, to give in detail the sequence of the molt in the adult Bobolink as a typical representative of the Passerine birds in particular, and as a point of departure for making comparisons of the molt in other groups. The material that I have had to work on includes Gray Ruffed Grouse, Killdeer, Mourning Dove, Kingbird, Crested Flycatcher, Bobolink, Cowbird, Meadowlark, Bronzed Grackle, Vesper Sparrow, Song Sparrow, Towhee, Bank Swallow, and Catbird, all specimens in the flesh. In the cases of the Bobolink, Cowbird, and Bronzed Grackle many specimens representing all stages of the molt have been handled, and with the Cowbird and