

Recent emigrations of northern shrikes.—The northern shrike, *Lanius excubitor*, is one of the northern predators which depends upon mice and hence fluctuates greatly in abundance due to the cyclic changes in food supply. The shrikes emigrate from Canada in large numbers and have appeared in northern United States about every four years (Davis, Auk, 54: 43-49, 1937).

The present paper discusses the abundance of shrikes from 1930 to 1948, thus bringing the reports up to date. As in the previous paper, the Christmas censuses from Bird-Lore (now Audubon Magazine) were used for an area bounded by: Quebec, Ontario, Minnesota, Iowa, Missouri, Illinois, Indiana, Ohio, and Maryland. The work was conducted under a grant from the International Health Division of the Rockefeller Foundation.

Figure 1 shows the number of shrikes and crows seen per census, with the years from 1930 to 1935 redrawn from the previous paper. The crows are used as a reference to indicate the changes in abundance of a non-cyclic species.

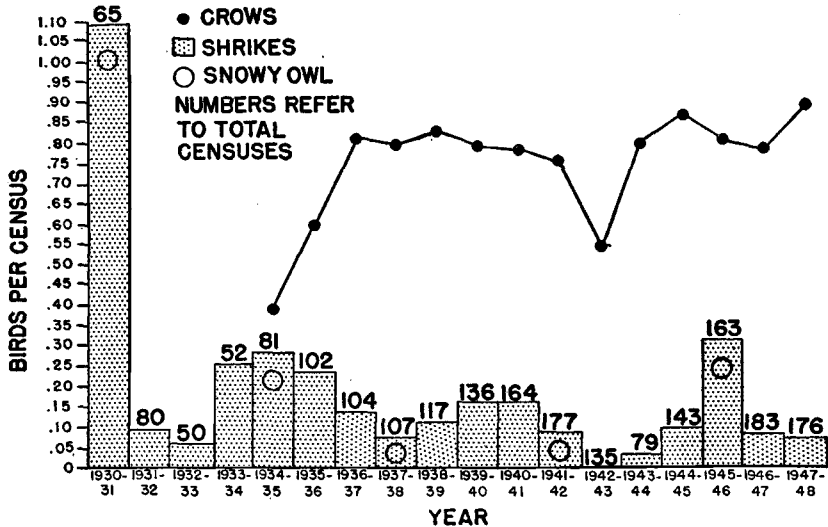


FIGURE 1.—Numbers of shrikes and crows seen in Christmas censuses. O indicates an invasion of snowy owls into New England.

It is at once apparent that the shrikes change in abundance, but that recently the changes have occurred at intervals of four, five and six years. Furthermore, only two of these peaks coincide with the invasions of snowy owls, *Nyctea scandiaca*, (Gross, Auk, 64: 584-601, 1947). Note that few shrikes were seen in 1937-38 when there was a minor invasion of owls and that a number of shrikes invaded northern United States from 1939 to 1941, before the invasion of owls in 1941-42. An analysis of the geographical distribution of shrikes in the northern states suffers from lack of sufficient numbers but suggests that in 1939-40 and 1941-42 the birds invaded New England, while in 1940-41 the shrikes were relatively more common in the north central states.

To conclude, these dates indicate that emigrations of northern shrikes have recently occurred at intervals of five or six years and are not synchronous with invasions of snowy owls.—DAVID E. DAVIS, Department of Parasitology, Johns Hopkins University, Baltimore, Maryland.