

Population Irruption of the Least Weasel (*Mustela nivalis*) in East Central North Dakota

John T. Lokemoen and Kenneth F. Higgins
U.S. Bureau of Sport Fisheries and Wildlife
Jamestown, North Dakota 58401

The least weasel is distributed throughout most of Canada and the north-central United States, including all of North Dakota. Although widespread, this species is considered rare throughout its entire range (Hall, 1951; Bailey, 1926). Occasionally population irruptions of least weasel are reported. Swenk (1926) reported a population irruption of least weasels in Nebraska in 1916 and 1917 and Swanson and Fryklund (1935) observed increased numbers of least weasels in Minnesota during the period 1928 through 1930. Our purpose is to report a population irruption of least weasels which occurred in east-central North Dakota in 1969-1970.

During a foot habits study of the red fox (*Vulpes vulpes*) in Barnes, Kidder, and Stutsman Counties, remains of 6 least weasels were found in 56 fox-rearing dens excavated in 1969, 19 in 72 dens excavated in 1970, and 1 in 66 dens excavated in 1971 (Alan Sargeant, pers. comm.). Two fur buyers in Stutsman, one in Barnes, and one in Foster County reported that none to one or two least weasels were brought to each of them in most years. Together they bought less than 5 during the 1968-1969 trapping season, 21 in 1969-1970, and 2 in 1970-71. A total of 68 least weasels were accounted for during the three years; including 26 from fox dens, 28 purchased by fur dealers, and 14 obtained by the authors from trappers or as "road kills." Six were obtained between November 1, 1968 to June 30, 1969, 54 from the same period in 1969-1970 and 8 in 1970-1971. It appears that the least weasel population reached a high level in 1969 but declined during the winter of 1969-1970.

Hall (1951:174) stated that meadow voles (*Microtus pennsylvanicus*) are a major part of the least weasel diet. The weasel irruption in North Dakota apparently followed a population increase of the meadow voles; voles were numerous in 1968 and 1969, but had decreased noticeably by the spring of 1970. Vole population changes were substantiated by visual sightings and indirectly by an increase in certain breeding raptors which also prey heavily upon this mammal. Easterla (1970) reported least weasels for the first time in Missouri and related their occurrence to the high mouse population of the preceding years.

Gunderson and Beer (1953) reported that least weasels in Minnesota use high marshes and damp meadows. During this study least weasels were not as selective in their choice of habitat and were observed or collected in native prairie, wetlands, river bottoms, hay fields and farmyards.

REFERENCES CITED

- Bailey, V. 1926. *A biological survey of North Dakota*. North Am. Fauna No. 49. vi + 226 pp.
- Easterla, D. A. 1970. First records of the least weasel, *Mustela nivalis*, from Missouri and southwestern Iowa. *J. Mammal.* 51:333-340.
- Gunderson, H. L., and J. R. Beer. 1953. *The mammals of Minnesota*. Univ. Minnesota Mus. Nat. Hist. Occas. Pap. No. 6. 190 pp.
- Hall, E. R. 1951. American weasels. *Univ. Kansas Publ. Mus., Nat. Hist.* 4:1-466.
- Swanson, G., and P. O. Fryklund. 1935. The least weasel in Minnesota and its fluctuation in numbers. *Am. Midl. Nat.* 16:120-120.
- Swenk, M. H. 1926. Notes on *Mustela campestris* Jackson, and on the American forms of least weasels. *J. Mammal.* 7:313-330.