Fisher Population Analyses
2019
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Abstract

Harvest size, sex and age structure data were utilized in population models to estimate the size of the fisher population in the northern third of Wisconsin (Figure 1). Population models produced estimates that totaled approximately 5,176 fishers in fall 2019 in the northern 1/3 of the state (Northern Zone).

Methods

Trappers in all zones were required to register their fishers at a DNR station. In 2018, trappers were also required to surrender the lower jaw of animals they caught. Date of harvest and harvest zone were recorded for each skull. A section of the lower jaw including the canine and fourth premolar was extracted from each skull. These samples were sent to Matson’s Laboratory, Milltown, MT for processing and aging by counting annuli in the cementum of the fourth premolar.

Results

Jaws were obtained from fishers harvested during the 2018 season, however ages from these skulls have not been determined at this time. Since 1985, ages have been obtained from harvested fishers (Figure 2). Age distributions have been similar between sexes. Harvest age structure has been fairly stable over time. On average, juveniles have comprised approximately 50% of the fishers harvested, yearlings 25%, and adults 25%.

Discussion

Fisher management zones were consolidated into two zones for 2018. A northern zone encompasses much of what was Zone A, Zone B, Zone C, and Zone D. A southern zone encompasses the remainder of the state. Distribution of harvest under the new zone structure will be examined closely moving forward. A population model has been developed for the northern zone. This model generates population estimates from harvest data and facilitates predictions of population responses to different quota levels. This model suggest that a harvest rate of approximately 5-7% yields a stable population. Currently, a similar model does not exist for the southern zone.
Figure 1. Wisconsin Fisher Management Zones 2018-2019.
Figure 2. Ages of distribution of harvested fishers in Wisconsin, 1985-2017.

Figure 3. Wisconsin Northern Zone fisher population estimates 1984-2019.