
AGE AND SEX STRUCTURE AND FECUNDITY OF MONTANA PINE MARTEN^{TWS}

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Age and sex structure of Montana's pine marten (*Martes americana*) were determined from 2521 trapper collected skulls for the winter trapping seasons 1987 through 1993. Age was determined from radiographs and cementum annuli. Fecundity and pregnancy rates were determined by examining 383 reproductive tracts from female martens. Corpora lutea were counted in hand sectioned and histologically prepared ovary pairs. The average number of corpora lutea found in ovaries of pregnant females was 2.62 (N=225, SD=0.79). The mean number of corpora lutea found in martens from northwestern Montana (3.1) was significantly different than the mean for southwestern Montana (2.5) (F=6.97, P<0.05). Placental scars were not detected in reproductive tracts cleared in winter green oil or fixed in 10% formalin but not cleared. Pregnancy rates for female martens aged 1.5 and greater

than 2.5 years were 85.5% and 95.5%, respectively. The number of males per female in annual harvests ranged from 1.01 to 1.49. The percent juveniles in the annual harvest statewide varied from 33.2-63.7 percent. Juveniles per mother (>2.5) ranged from 2.55-8.71 during the 5 winters. The number of juveniles per adult female (>1.5) ranged from 1.14-4.18. The mean age of martens harvested was 1.57 (N=2358, SD=1.71). A significant decline in the number of juveniles in the harvest occurred throughout Montana in 1992-93. The proportion of males in the harvest has declined from 1989-1993. Age distributions from annual harvests in northwestern and southwestern Montana were similar. Possible causes for variations in data between years and geographic regions of Montana are discussed. The relevance of trends in the observed data to pine marten populations are discussed.