

Population Ecology of Marten



Milestones in 2007/08

- ◆ Workshop in SSM, May 16-17, 2007
- ◆ Presentation to Provincial Forest Technical Committee September 2007
- ◆ Final report to Forest Co-op, NSERC, CFS, and MNR submitted February 2008
 - Summary of findings at Ear Falls (2001-2005) and Kapuskasing (2003-2007)
- ◆ Advice to landscape guide: conifer content and preferred habitat
- ◆ Advice to Tembec: use of horse logged areas as cores and percentage of mature forest

Study Conclusions

- ◆ Simulation results suggest marten populations are sustainable in landscapes dominated by regenerating forests that range from 40-60 years of age
 - Sustainable is defined as: marten numbers do not fall below 10% once every 50 years
- ◆ Minimum forest age will vary between NW and NE.

- ◆ Higher risk of local population collapse in young landscapes due to chance events and fur harvesting
 - Low risk with trapping mortality <15%
 - Increased risk with trapping mortality 15-25%
 - High risk with fur trapping mortality >25%


- ◆ Differences in marten population dynamics between young and mature forest landscapes reflects differences in:
 - Coarse woody debris
 - Predation efficiency of marten on voles
 - Body condition of marten
 - Juvenile survival during dispersal
 - Dispersal distance
 - Genetic structure of marten populations

Core Areas?

- ◆ To minimize risk of local population collapse to $<10\%$:
 - Areas subjected to high trapping pressure ($>15\%$) should have core areas of mature forest >60 years in a matrix of regenerating forest
 - Total amount of mature forest should be $>30\%$
- ◆ Size of core areas will be estimated with further simulation modelling

Monograph/Book

December 2008

- ◆ 12 chapters organized around these themes
 - ◆ Introduction (context from EA and guidelines)
 - ◆ Forest structure, disturbance dynamics
 - ◆ Small mammals (habitat selection, dynamics)
 - ◆ Community composition of birds and amphibians
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- A decorative graphic at the bottom right of the slide, consisting of a silhouette of a mountain range in a teal color, matching the background.

- ◆ Marten movements, predation rates, home range, habitat use, dispersal, population dynamics and viability
- ◆ History and policy of furbearer management
- ◆ Trapper effort and habitat selection
- ◆ Are marten a useful indicator or umbrella for other species?

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- ◆ CFS/NSERC Forestry Partnership Program
- ◆ Forest Ecosystem Science Co-operative
- ◆ Sustainable Forestry Management Network (National Centers of Excellence Program of NSERC)
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- ◆ NSERC Grant Program

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- ◆ Canadian Forest Service (technical support)
- ◆ Natural Resources Canada Internship Program
- ◆ Forest Research Partnership