Forest Co-op Marten Cores Project

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Evaluating the importance of marten cores to trapper harvests

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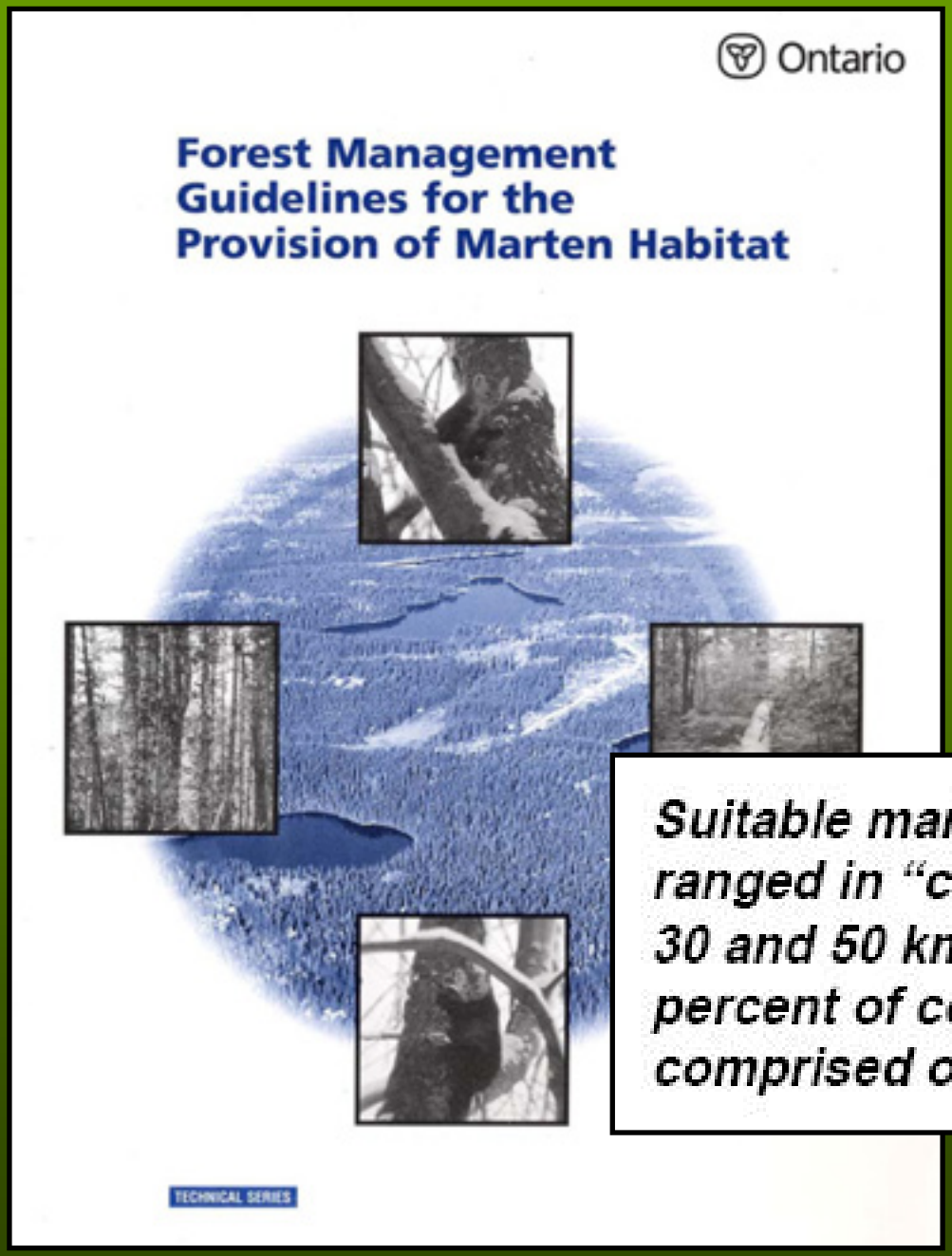


Are large cores necessary?

Suitable marten habitat should be arranged in "core habitat areas" between 30 and 50 km^2 in size. A minimum of 75 percent of core habitat areas should be comprised of suitable stands.

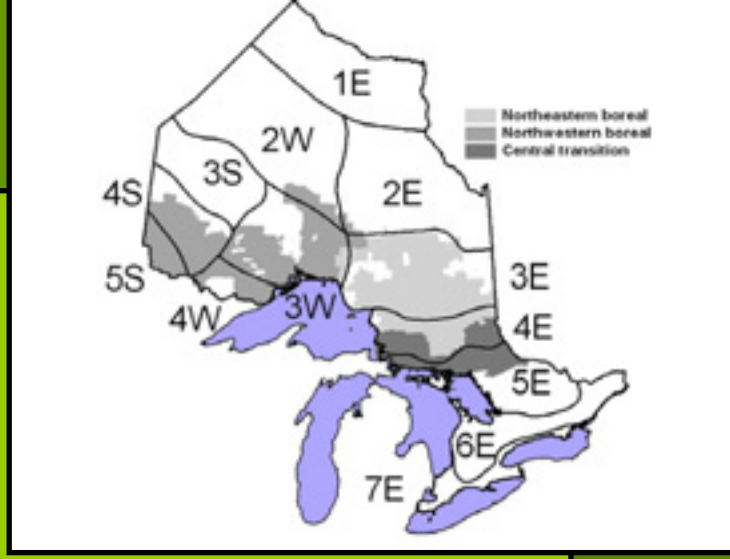
Hypothesis:

Core-sized patches of suitable habitat are necessary to sustain marten populations

Prediction:

Marten harvest on traplines is best predicted by the amount of suitable habitat in core-sized patches

Methods



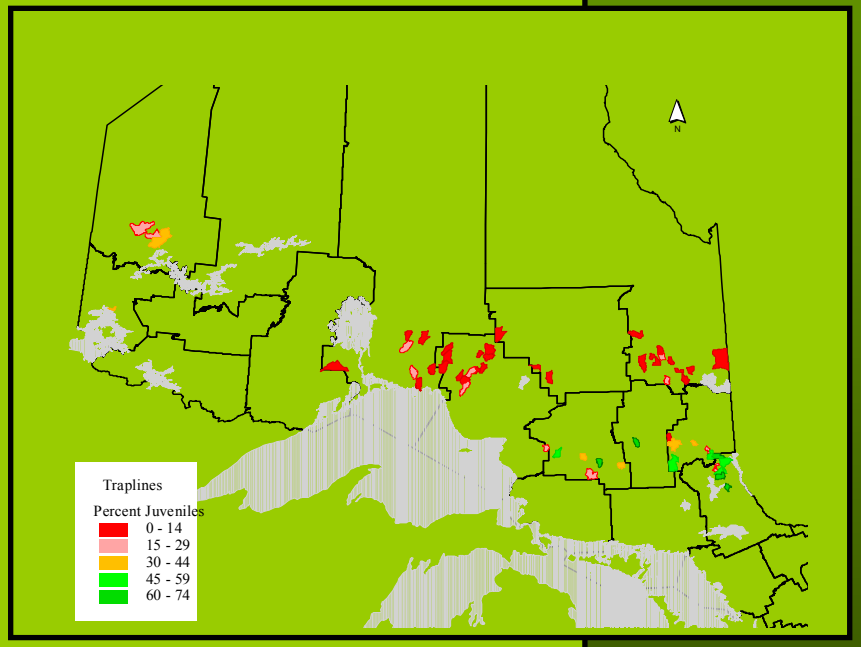
Phase 1

- ~ 500 traplines from boreal east, boreal west, & transition forests
- marten harvest records (control annual variation)
- index of trapper effort (% beaver quota)
- index of access (km of roads/km^2 trapline)
- climate variables (Jan temp, precipitation)
- suitable habitat (trapline & FMU) from FRI (OWHAM/OMA)
- patches: small (< 500 ha), medium, large (3000+ ha)
- harvest = f(effort, access, climate, habitat supply)

Methods

Phase 2

- subset of (60) traplines
- trapping season 2004-05
- effort data (# trap nights)
- sex & age of each capture
- harvest of adults vs juveniles



= f(effort, access, climate, habitat supply)

Disclaimer

The following results are preliminary, and conclusions presented in this document only provide potential explanations for these results.

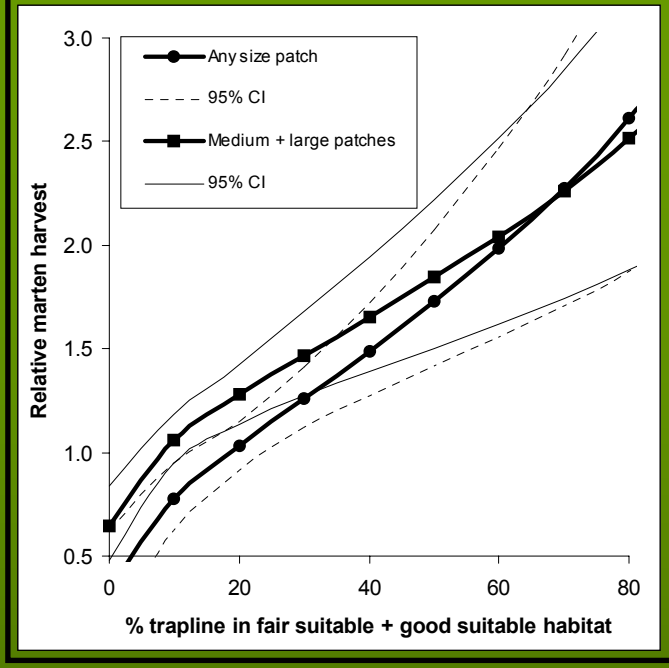
Results: Phase 1

Harvest related to:

- effort
- access
- climate (BE & CT only)
- supply of suitable habitat

*Best models only explain 25% of variation

Results: Phase 1



Best predictors of harvest:

- **FS+GS/S+GS/U+P**
- **Total supply of suitable (BE, CT)**
- **Suitable in M+L patches (BE, BW)**
- **FMU supply of M+L patches in BW & CT**

*** 1ha in med patch = 1 ha in lrg patch**

Preliminary Results: Phase 2

- Harvest NOT related to habitat in large patches (>3000ha)
- Harvest related to suitable habitat in small patches (<500ha; negative)
- Total suitable habitat – related to:
  - martens/100TN; % adults (+)
  - Juveniles/100TN (-)

Preliminary Results: Phase 2

Best predictors of harvest:

- **GS (OWHAM)**

OWHAM seems to have a stronger relationship

- **distribution of samples?**
- **Spatial considerations during core “building”**

Some Potential "Conclusions"

No support for hypothesis that core-sized patches are necessary

Some indication that the total suitable habitat is important

Some Potential Conclusions – Trapper Harvest Data

Can be used but with caveats:

- not always related to habitat
- Sample size is important (large)
- Annual variation
- Raw harvest data not always best