

WISCONSIN AMERICAN MARTEN COMMITTEE MEETING

August 8, 2017

WI DNR Service Center, 107 Sutliff Avenue, Rhinelander, WI 54501

Final Meeting Notes

9:30 AM Introductions

9:40 AM Winter 2016/17 marten track surveys (Jim Woodford, WDNR)

- DNR continues marten monitoring through snow track survey and rare mammal reports
- SNOW TRACK surveys in the Chequamegon totaled 92.4 miles with 17 martens, 18.4 marten per 100 miles, 55% increase from previous year
- Snow track surveys in the Nicolet totaled 119 miles with 16 martens, 13.4 marten per 100 miles, 45% decrease from previous year
- Since 2007/08 survey efforts have been good, 3 yr averages are better indication of marten populations, weather varied
 - Chequamegon track surveys done mostly inside the marten protection area, results to be expected with habitat
 - Nicolet track surveys done mostly inside marten protection area, also throughout current UW Madison genetic study area
 - Tracks useful for distribution but not so much for population numbers or abundance estimators
- RARE MAMMAL REPORTS
- One in Douglas County, landowner photos sent in most likely not a marten, possibly young fisher
- One in Chequamegon/Park Falls area, landowner report probably not a marten either
- ACTION ITEMS (DNR):
 - Marten observation within Menominee County – need to confirm or throw out
 - Consider new state status assessment and listing update
 - Add Bayfield peninsula and Apostle Islands to distribution map, based on current inventory and live-trapping projects

10:15 AM Apostle Islands camera study update (Ken Pemble, NPS)

- Over 100 trail cams out on the islands
- 3 projects: cameras, small mammal (red backed vole, white footed, red squirrel), and marten hair snares
- Stockton island (fisher and marten)
- Oak and Basswood islands (fisher)
- Manitou, Cat, Rocky, Bear, Outer, and Otter Islands (marten)
- 1950's introduction of martens (10 total released on Stockton island), by '69 and in 80's none observed

- 2014 visitor took photos near fish camp on Manitou, early as 2010 found photo evidence of a marten on Stockton
 - New research investigation: source of animals determined using non-invasive sampling; possible sources include:
 - Stockton island reintroduction
 - Chequamegon population movements
 - Possible endemic population

10:30 AM UW-Madison marten research updates (Jon Pauli, Jen Grauer, and Matt Smith, UW-Madison)

- Jon provided brief overview of past research: PhD student, Phil, in his lab did Chequamegon marten research, moved to Isle Royale where they caught one marten recently, lab group then focused on Nicolet next, now focusing on Apostle Islands
- Jen Grauer presented on her genetic and demographic work:
- Genetic contribution from source population
 - 5 genetic clusters within WI (from MI, Ontario, MN, and 2 unknowns)
 - Colorado animals didn't contribute to current populations
 - Genetic evidence of marten movements between Chequamegon/Nicolet areas
 - Assortative mating occurring, no mixture between clusters
 - Chequamegon appears much more isolated than Nicolet population
 - 23 females within Chequamegon study area & 63 females within Nicolet study area
 - Robust design modeling based on capture, recapture, survival, recruitment, derived estimate of abundance
 - Results showed increase or at least stability in the Nicolet population
 - Nicolet: long-term viability is good with probability of extinction low due to good survival, some reproduction, and occasional immigration events.
 - Chequamegon: likely extinction without immigration (see Manlick et al. 2016)
 - Differential recovery due to differential immigration (from MT, BC, CO, MI, MN, Canada)
 - Translocations are a common tool to supplement populations (through increased survival and population boosting)
 - In general, translocations are expensive, have local opposition, have negative impacts on sources, and overwhelm local genetic diversity
 - Should consider natural immigration as alternative to continued translocation events
 - Ideas for future: increase habitat connectivity by preserving suitable, older forest habitat and creating stepping stone populations
 - Discussion brought up: possibility of genetically unknown/unidentified populations coming from fur farms, we know the Poynette stock came from British Columbia, but could other translocation events occurred?
 - Due to assortative mating - really have multiple subpopulations within the large populations; uncertain why subpopulations are not mixing

- Matt Smith, new PhD student in the Pauli lab did his BS in zoology at UW-Madison, then went on to complete his masters in Washington with a degree in wildlife ecology
 - His interests lie in genetic methods in conservation and how this affects management, his masters project was on the spotted frog using multi-scale occupancy, species interactions, and environmental DNA.
 - His Apostle Islands research project will look at colonization history, population viability, foraging ecology, and population comparisons
 - Colonization: where did they come from and when using genetic markers, genetic divergence, and modeling
 - Population viability: non-invasive hair traps on Cat, Manitou, Stockton islands checking every 7-8 days, 7-8 times per season for three field seasons
 - Foraging ecology: stable isotopes to determine dietary inputs, prey availability, how this compares to other populations in WI
 - Population comparison: Apostle Islands population work should help to inform management on mainland as well.

12:45 PM Marten and fisher research updates (Jonathan Gilbert, GLIFWC)

- GPS receivers (G10's) from ATS had ~50% failure rate
- Habitat/vegetation surveys included plots in Chequamegon, some of which were post-harvest (field techs Jason and Lisa collected data), hemlock/cedar pockets in the hardwood stands are where martens are found and are the focus of this data collection
- Jason and Lisa provided an update on observations from the surveys; overall they found more trees, higher basal area, higher number of snags/tipups/logs, higher rate of decay in downed-wood, spaces under roots/spongy (perched tree locations). Just starting to look at how to quantify the field data
- Patterns of use for collared animals was broken down into designated "activity centers"
 - Success rate of collar communication with satellites in question, could provide false information about these activity center locations
- Also completing small mammal surveys to determine marten diet
 - Trap small mammals to determine community makeup using Sherman traps and innovative "cylinder traps" during winter months
 - 8 (4 in hemlock, 4 in northern hardwood) plastic cylinders with holes cut into them, a lid, and camera inside the top allowed researchers to "capture" critters in the winter months
- Research at Purdue University: continued research on the SEARCH model to track movement/dispersal, and using empirical dispersal data to verify computer simulations
 - Predicting marten movement from Chequamegon through Iron County into Michigan
 - Modeling suggests that the biggest impact on marten movements could be immediately east of the proposed mine location
 - Localized small effects, overall not a big effect

- Asymmetrical landscape, martens can move West to East much better than East to West (this likely impacts the extinction probability rates for the Cheq. population)
- Effects of structural vs. functional connectivity (mortality vs. no mortality and distance relationships) is current focus

1:15 PM 2018 *Martes* working group symposium (Jonathan Gilbert, GLIFWC)

- Proposed dates July 30th-August 3rd, 2018 in Ashland, WI
- Looking for financial, in-kind, and volunteer support for this conference

1:30 PM Iron County marten project updates (Zach Wilson, Iron Co. Land Conservation)

- Project changed from live-trapping and collaring to less invasive methods
- Forestry and stand examination continues
- Island lake area includes continued evaluation of streams, and other resources
 - 20 marten documented in Iron co. during project, located in hotspots across study area
 - Past year marten observation numbers way down from previous years
- In northernmost hotspot martens located in hemlock/cedar stands
- Did “pilot” small mammal survey last fall: found more marten prey in cedars than hemlock stands
- Resting site structure (ground hole 31%, trees 69%)
 - Cedar, yellow birch, hemlock most common for resting trees
- Ratio of 1 marten to every 3.5 fishers by track surveys
- ~190.4 ft² basal area and high density of hemlocks in resting areas
- Threats: forest fragmentation, hard edges, corridors, changing environmental conditions (snow)

2:00 PM Marten protection areas (MPA) rule updates

- Proposal to add most Apostle Islands as a 3rd MPA approved and forwarded on by advisory furbearer committee
- New area includes all Apostle Islands except Madeline and Long Islands
- Administrative rule change will take ~18 months to complete
- Furbearer advisory committee also recommends adding weasel boxes (with marten limiting hole sizes) and foot-hold trapping (with appropriate pan tension devices) that will not catch, injure, or kill martens be added as trapping techniques within all MPAs. This will follow the same administrative rule change process as above.

2:15 PM Further discussion and comments

- Discussion of current location of range lines of martens and need to update the distribution (will require occurrence data from all researchers to do) – committee agrees
- Discussion of matching known marten distribution with the MPAs boundaries – not much support for this idea by the committee.

- Might consider adjusting the MPA boundaries to match known distribution if the acreages within each MPA remain unchanged. This could account for movement of martens over time and reduce frustration and confusion of trapping regulations among trappers, law enforcement, and the public at large.