

American Marten Winter Track Surveys in Northern Wisconsin 2015-2016

By Jim Woodford

Summary. The annual track surveys for American martens (*Martes americana*) were completed from December 2015 through February 2016. Methods followed those originally described by Kohn and Eckstein (1987). Unfortunately there were very few days with good snow tracking conditions this winter, which prevented us from completing all survey routes in both population core areas.

Winter track surveyors observed 6 marten and 7 fisher (*Pekania pennanti*) tracks along 47.8 miles surveyed in the Chequamegon Forest area. Surveyors observed 10 marten and 9 fisher tracks along 33.6 miles surveyed in the Nicolet Forest area (Figure 1). Compared to track rates in 2014-15, marten track rates increased by a factor of 4.6 in the Nicolet and decreased by 16% in the Chequamegon area. Fisher track rates increased by a factor of 10 within both survey areas. At least some of the increase in marten track rates observed in the Nicolet occurred because we were unable to survey the eastern routes that historically had the lowest track counts. The 3-year moving averages for marten track rates rebounded in the Nicolet area but remained static to slightly decreasing in the Chequamegon area (Figure 2).

Tracking summaries for:

Chequamegon Area

- 6 martens (12.7 detections/100 miles)
- 7 fishers (14.8 detections/100 miles)
- 1:0.86 (fisher:marten ratio)

Nicolet Area

- 10 martens (29.8 detections/100 miles)
- 9 fishers (26.8 detections/100 miles)
- 1:1.1 (fisher:marten ratio)

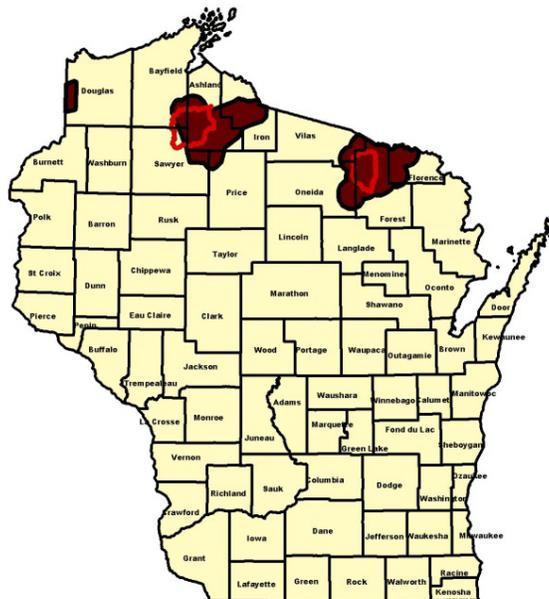


Figure 1. American marten range (dark brown) and Marten Protection Areas (MPAs; red outline) in Wisconsin, 2015-16.

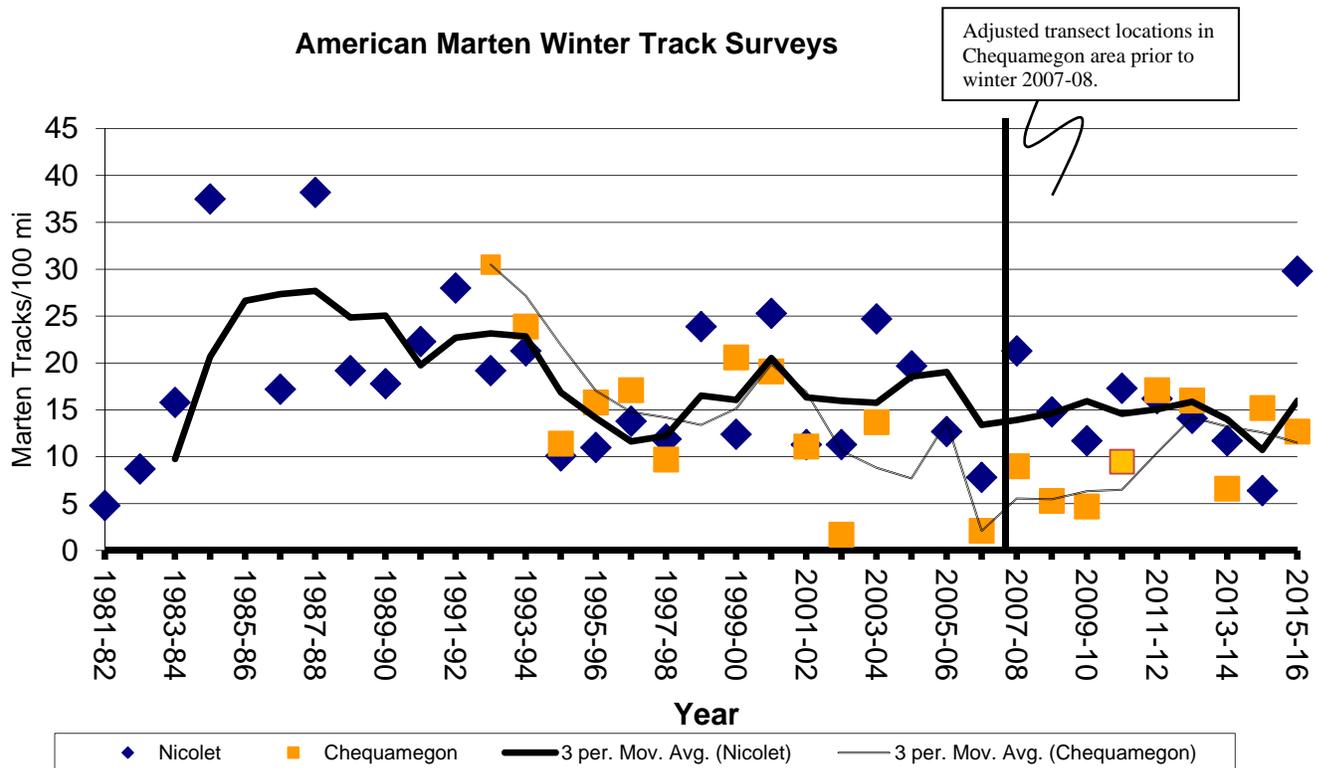


Figure 2. Marten track counts from 1981-2016 within and adjacent to the Nicolet and Chequamegon MPAs in northern Wisconsin.

Specific locations of American marten tracks observed are provided in Figures 3 and 4 for the Chequamegon and Nicolet survey areas, respectively.

Research Projects

Inferences that are able to be drawn from carnivore snow track counts are highly variable and somewhat limited due to animal densities, behaviors, and tracking conditions. In addition, American marten populations can fluctuate greatly from year to year due to prey abundance or other environmental conditions. Researchers from Wisconsin DNR and UW-Madison have continued to investigate ways to improve our ability to make inferences from winter track counts using newer methods like occupancy modeling. Results from this work in the Chequamegon area have been submitted for journal publication and should be disseminated soon.

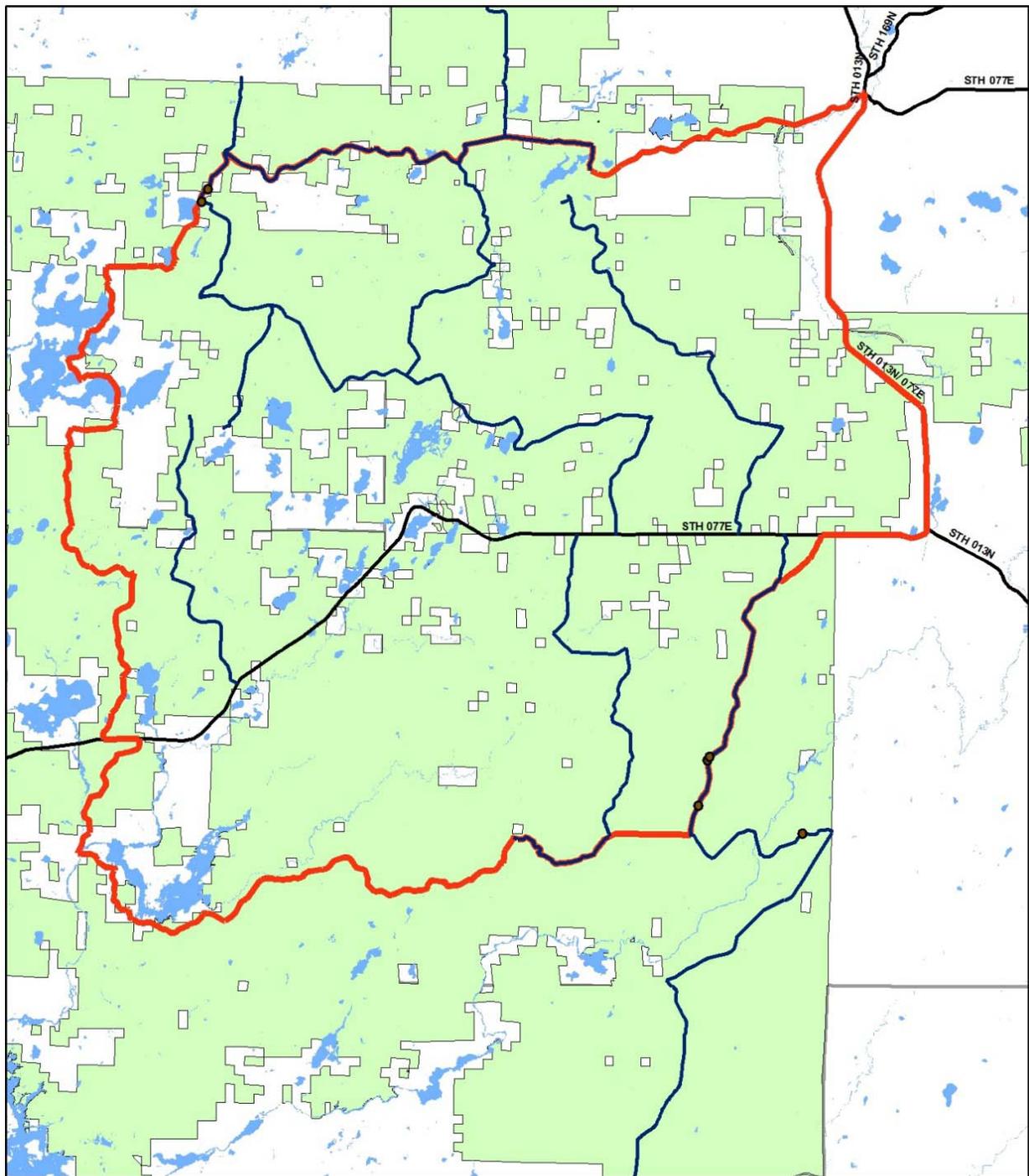
Evaluating success of the most recent marten augmentation has been a high priority for the resource organizations that completed the work. Short term monitoring and survival of released animals looked promising (Woodford et al. 2013), but more recent work (Manlick et al. 2016) reported only a minimal genetic boost to the population. Results from these studies and others taking place in Wisconsin will provide a sound foundation for a future statewide population viability assessment for this state-endangered species.

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Literature Cited

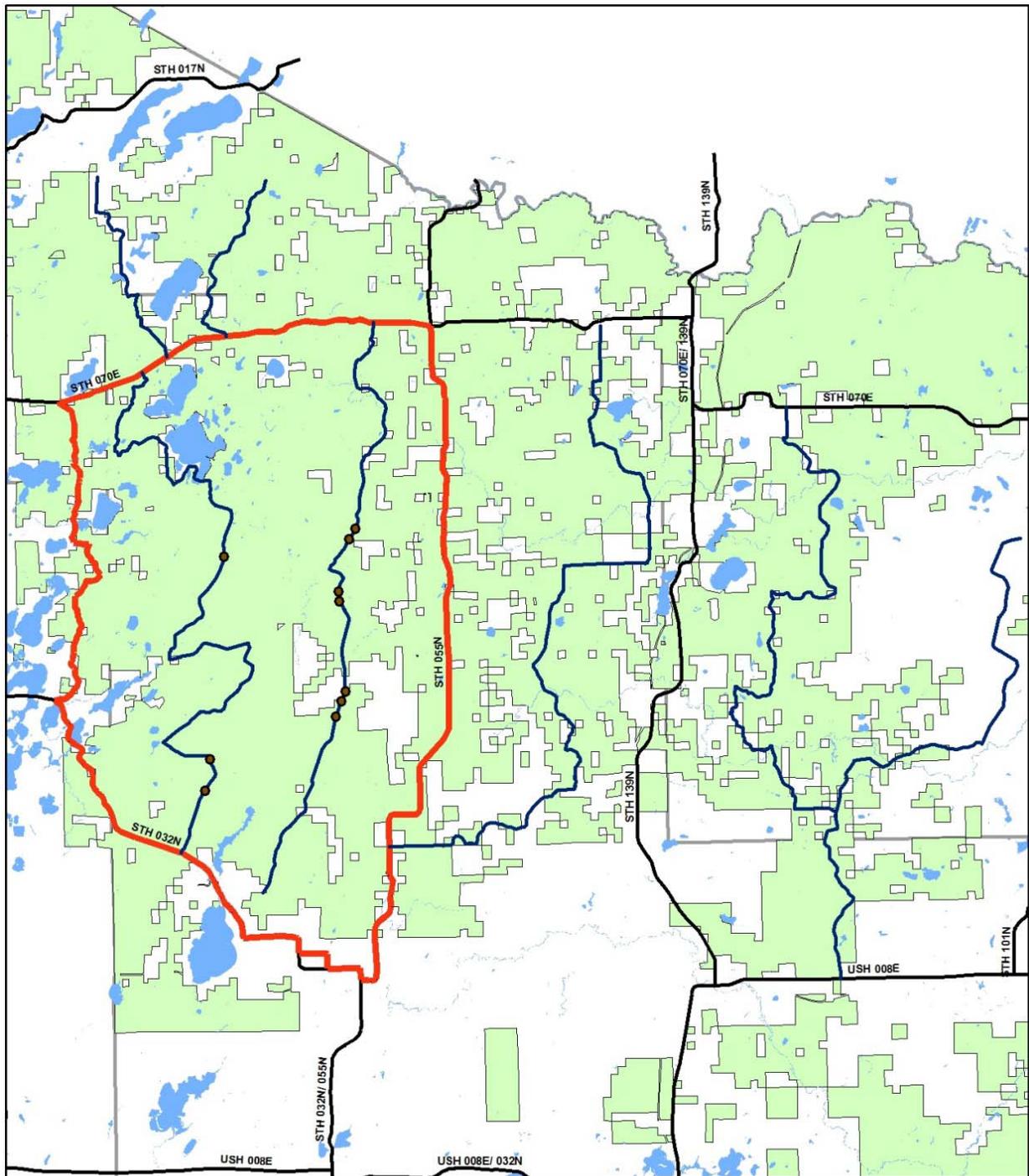
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American Marten Track Surveys 2015-16



Figure 3. Locations of American marten tracks observed during winter 2015-16 within and adjacent to the Chequamegon Marten Protection Area.



American Marten Track Surveys 2015-16



Figure 4. Locations of American marten tracks observed during winter 2015-16 within and adjacent to the Nicolet Marten Protection Area.