# American Marten Winter Track Surveys in Northern Wisconsin 2014-2015

By Jim Woodford and Carly Lapin

**Summary.** The annual track surveys for American martens (*Martes americana*) were completed in winter 2014-15. Methods followed those originally described by Kohn and Eckstein (1987). Tracking conditions were average during this winter, which for the most part led to good results and near-completion of all survey routes in both population core areas.

Winter track surveyors observed 12 marten and 1 fisher (*Pekania pennanti*) tracks along 79 miles surveyed in the Chequamegon Forest area. Surveyors observed 7 marten and 3 fisher tracks along 110 miles surveyed in the Nicolet Forest area (Figure 1). Compared to track rates in 2013-14, marten track rates decreased 53% in the Nicolet and increased 130% in the Chequamegon area. In addition to the changes in marten track rates, there was a very large drop in the number of fisher tracks observed. This decline in fisher sign was also reflected in the lack of fisher trapping success in these areas and may be attributable to low fisher recruitment this year. This low recruitment may have been caused by the duration and depth of the snow pack observed in winter (2013-14). The 3-year moving averages for marten track rates continued to decline this year, but not as sharply as expected (Figure 2).

Tracking summaries for:

| Chequamegon Area | Nicolet Area |
|---|---|
| - 12 martens (15.2 detections/100 miles) | - 7 martens (6.4 detections/100 miles) |
| - 1 fisher (1.3 detections/100 miles) | - 3 fishers (2.7 detections/100 miles) |
| - 1:12 (fisher:marten ratio) | - 1:2.3 (fisher:marten ratio) |

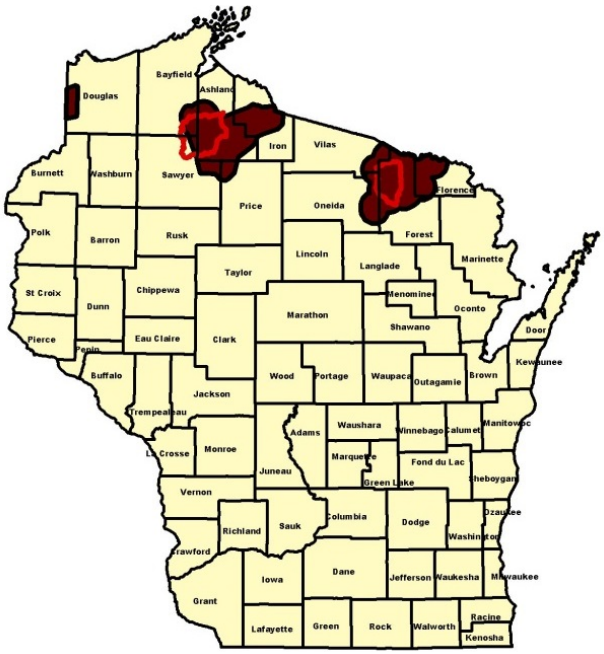


**Figure 1.** *American marten range (dark brown) and Marten Protection Areas (MPAs; red outline) in Wisconsin, 2014-15.*

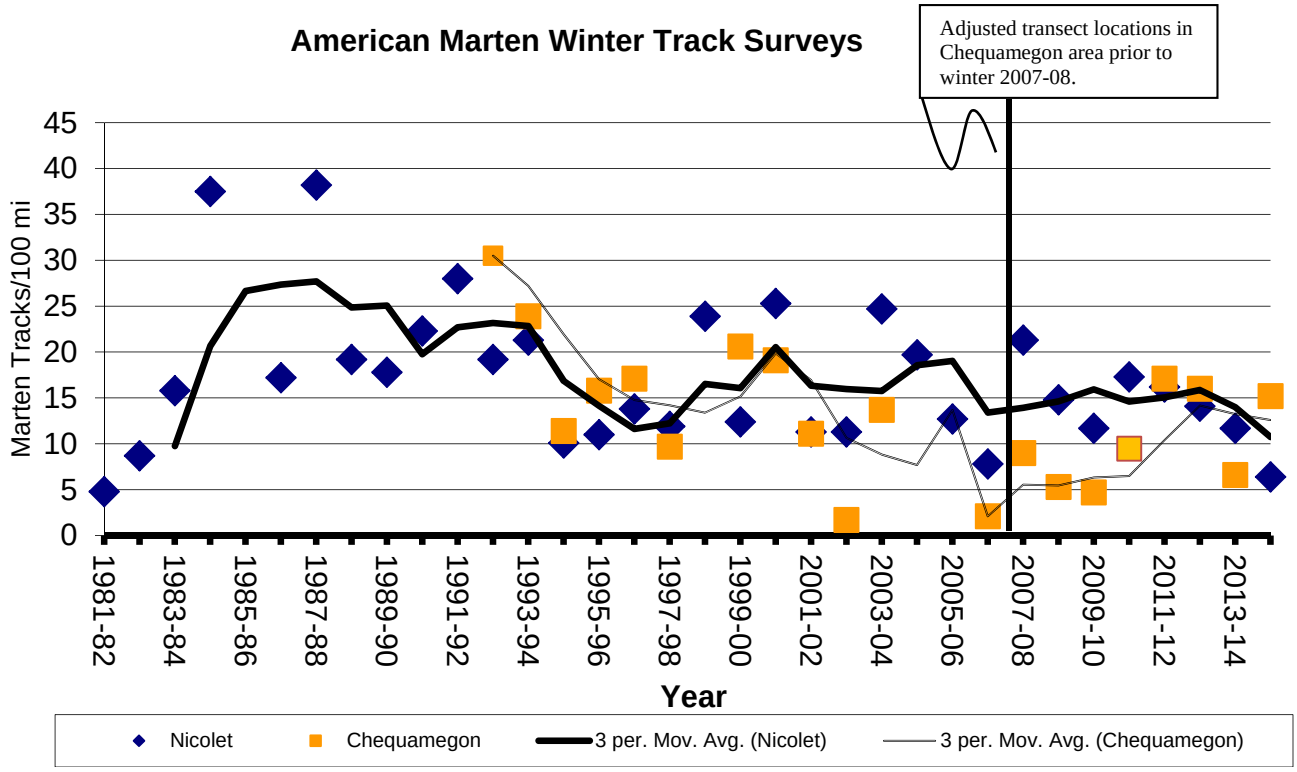


**Figure 2.** *Marten track counts from 1981-2015 within and adjacent to the Nicolet and Chequamegon MPAs in northern Wisconsin.*

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

**New Project**

Inferences that are able to be drawn from carnivore snow track counts are highly variable and somewhat limited due to animal densities and tracking conditions. In addition, American marten populations can fluctuate greatly from year to year due to prey abundance and 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 should be disseminated soon, and plans to continue this work in the Nicolet area have begun.

**Acknowledgements**

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**Literature Cited**

Kohn, B.E., and R.G. Eckstein. 1987. Status of marten in Wisconsin, 1985. Wisconsin Department of Natural Resources, Madison, WI.

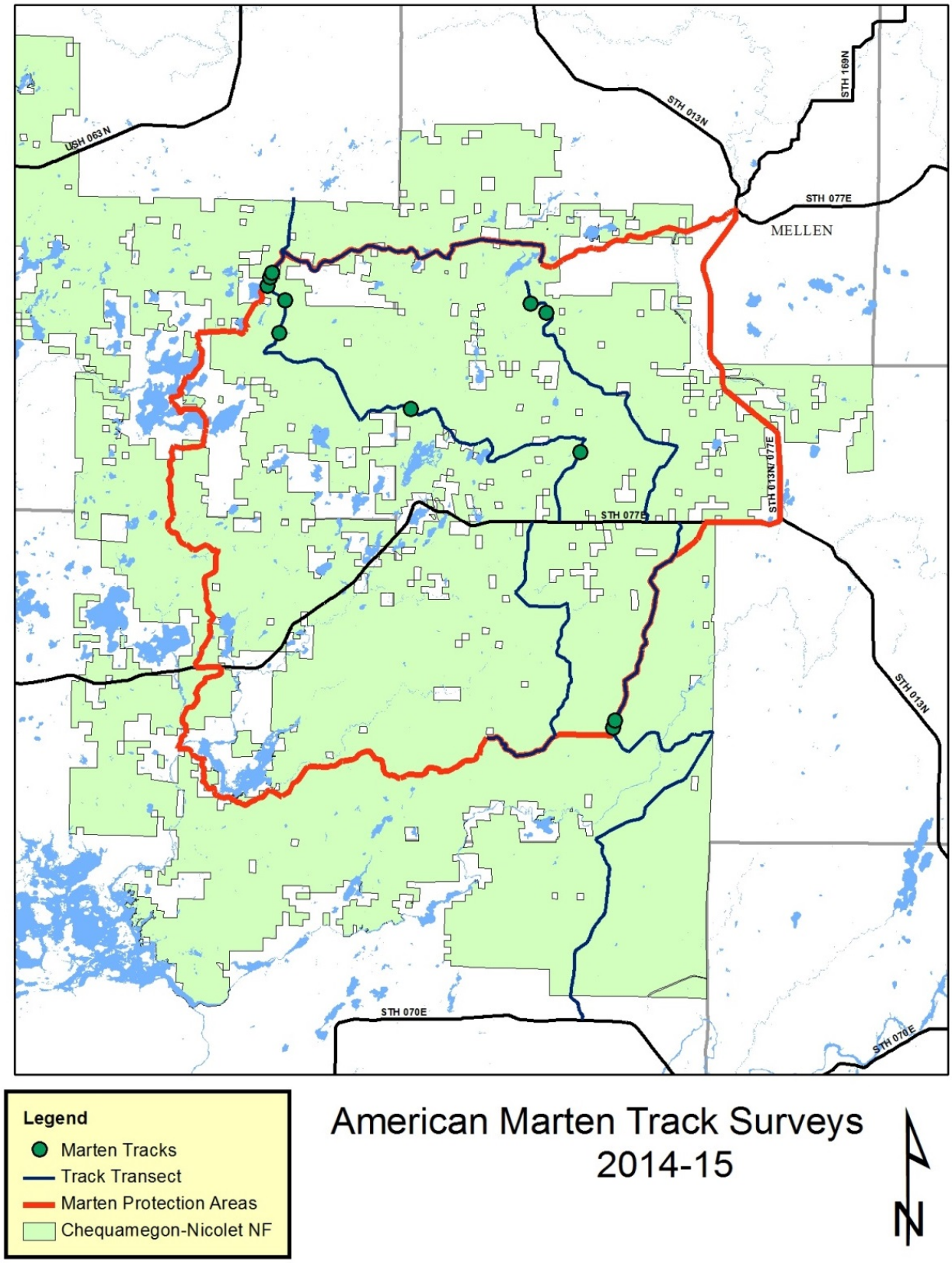


**Figure 3.** *Locations of American marten tracks observed during winter 2014-15 within and adjacent to the Chequamegon Marten Protection Area.*

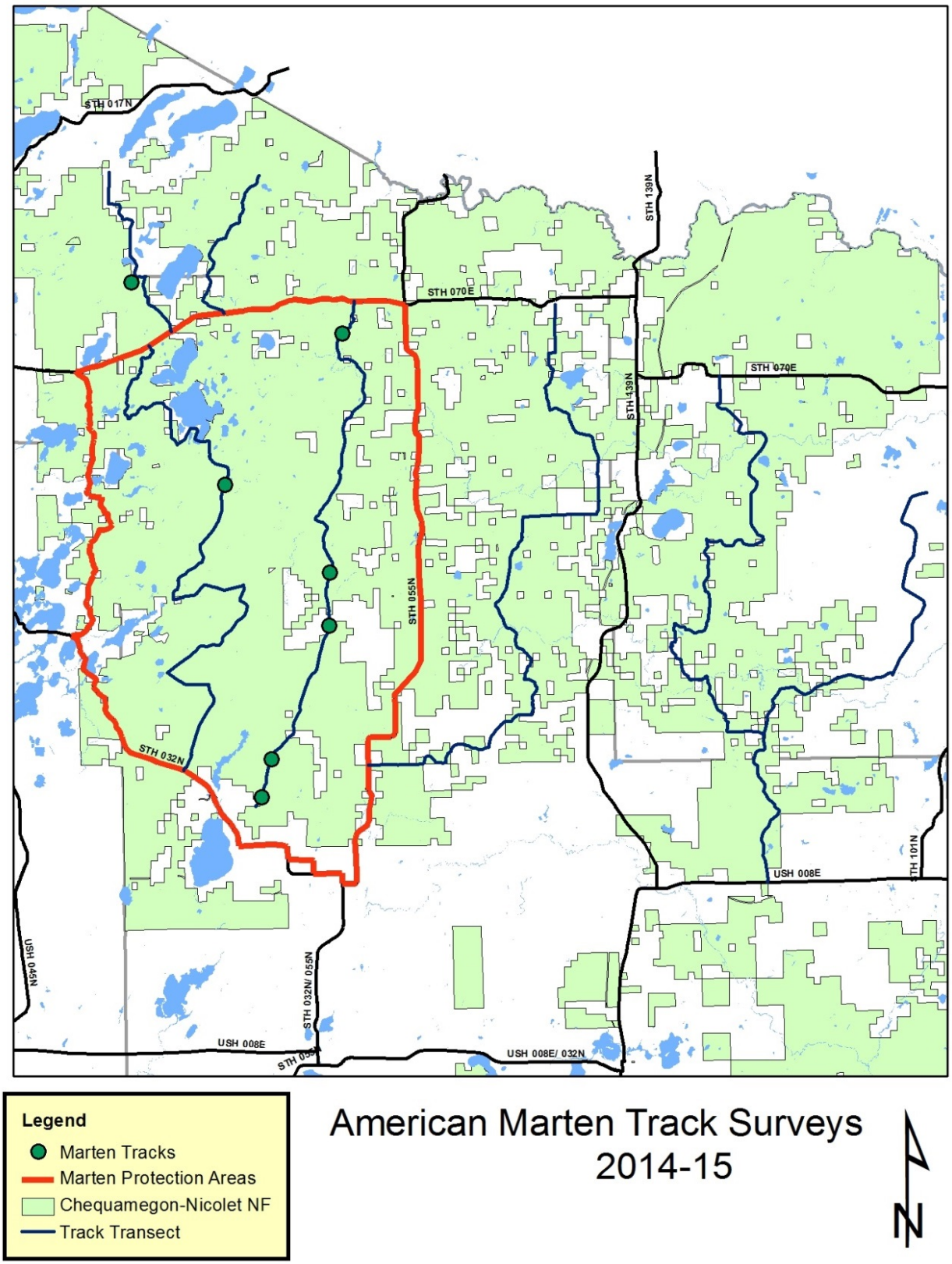


**Figure 4.** *Locations of American marten tracks observed during winter 2014-15 within and adjacent to the Nicolet Marten Protection Area.*