

Habitat Suitability for American Marten Reintroduction in the Northern Lower Peninsula

By: Sean Leask

Abstract

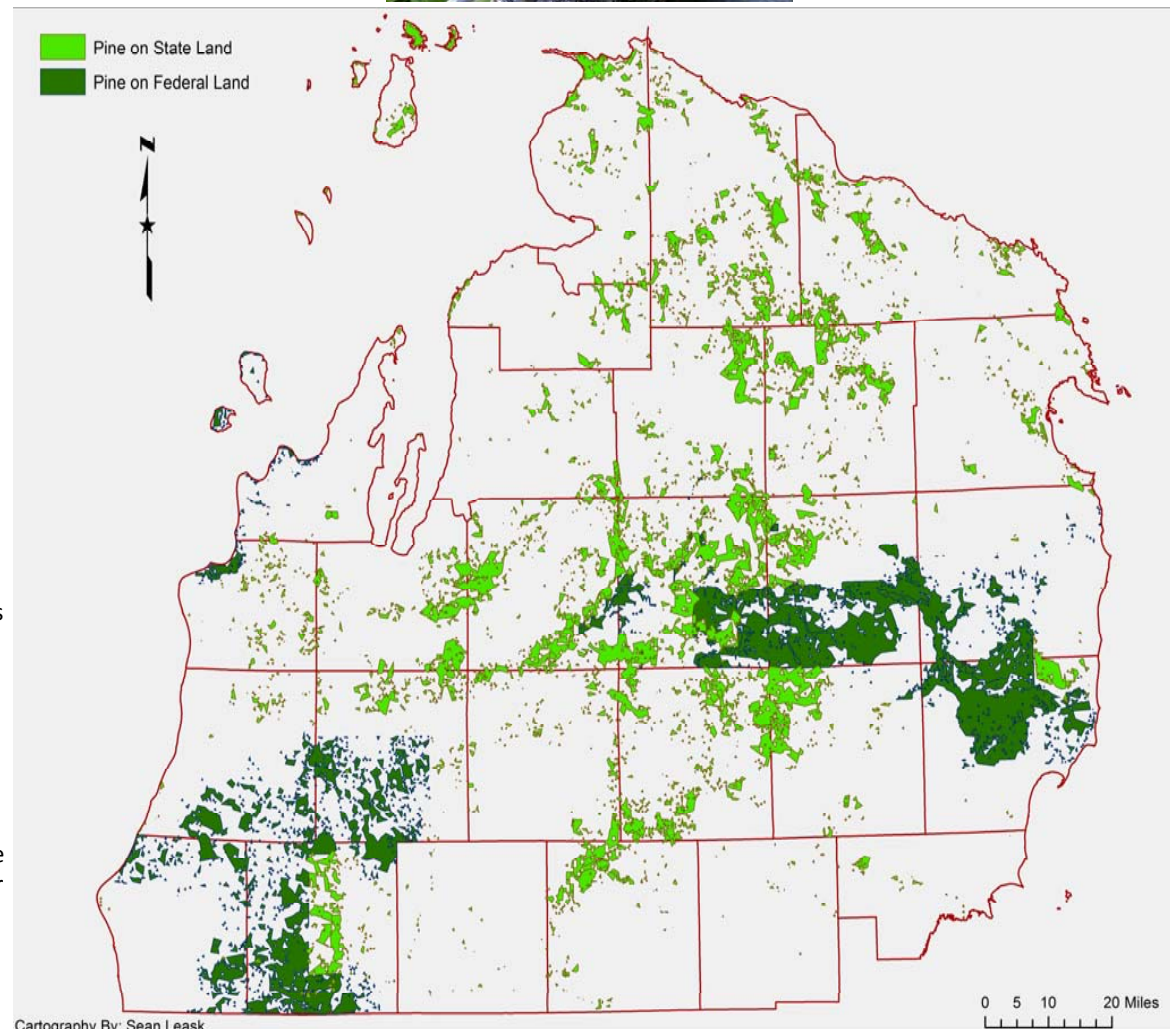
According to the Michigan DNR the American Marten was virtually gone from Michigan by the 1930s. Recovery efforts began in the 1950s and continued into the mid-1980s. The American Marten has recovered and is found throughout the Upper Peninsula. A small population was released into the Northern Lower Peninsula but failed to thrive.

Introduction

The study area for this project is the Northern Lower Peninsula of Michigan. Since an earlier reintroduction failed, this project is an attempt to find suitable habitat within state and federally owned land that would aid in a successful reintroduction of the American Marten into the Northern Lower Peninsula.

Methodology

- Download Michigan counties layer and select the counties in the Northern Lower Peninsula. Export as a new layer
- Download a forest type image and convert the image to a raster and then a shapefile and clip the layer to be included only in the NLP.
- A layer from the USGS was downloaded and clipped to the NLP. A merge was done between the pine tree layer and the federal lands layer and the total acreage of pine forest in the federal land was calculated.
- The steps used to create the federal/pine layer were used to create the state/pine layer.



Results

Most of the large tracts of pine forests are found in the Huron-Manistee National Forest. The total number of pine forest for federal land is 622,873 acres while the total for state land is 631,195 acres. While the total acreage for state land is higher, the habitat is highly fragmented. The acreage found on federal land is better connected and more concentrated.

Conclusions

If the American Marten were to be reintroduced into the Northern Lower Peninsula in significant numbers it would be best to place them in the forests located in the National Forest lands. The National Forests would provide a large tract of uninterrupted habitat to support large marten population that might expand into the surrounding state owned forests.

Sources

ArcGIS Online
MI Counties
Forest Cover Upper Midwest
MIGDL
DNR Land & Mineral
Ownership
nationalatlas.gov
Federal Lands