

Northern Great Plains Network

Inventory and Monitoring Monthly Report

January 2001

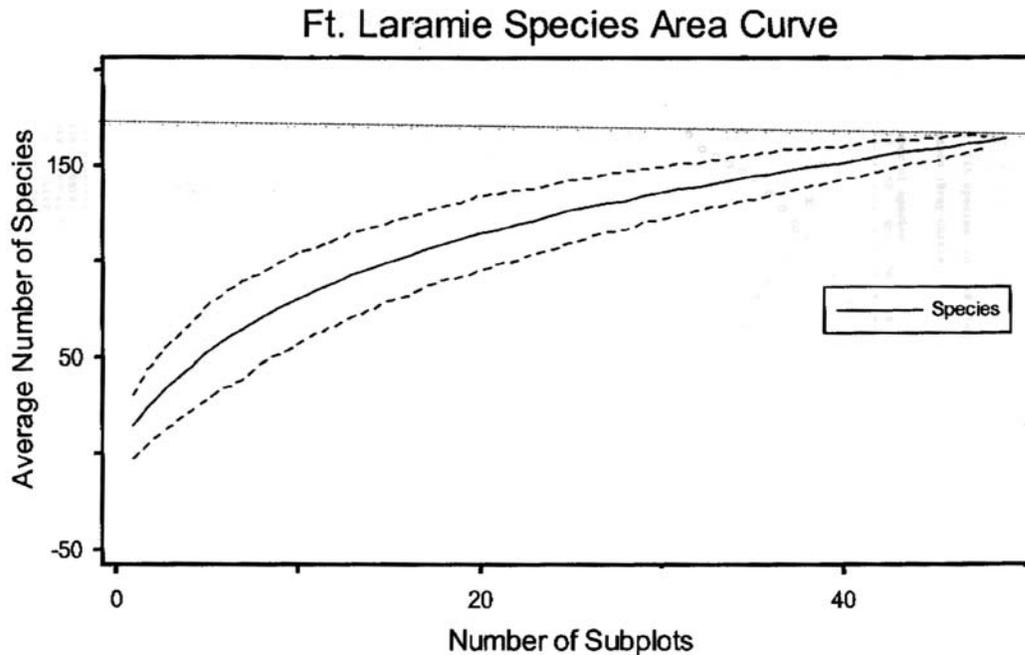
Greetings and Happy New Year to the Northern Great Plains Network. As some of you may have noticed, I have expanded the mailing list for the monthly update to include all of the Superintendents for the network parks. This hopefully will continue to expand and improve our communication within the network. January has been a month for getting into the details of our planning effort and receiving some new products.

GIS Theme Manager, version 2.01: I sent the I&M WASO office all the GIS data layers I had for Devils Tower in December, and this month I received a customized version of the Theme Manager for DETO. The Theme Manager allows you to easily pick data layers to be displayed and each attribute is clearly labeled and color-coded. It also has a pre-set layout which allows you to quickly make a map from your data layers that would be suitable for the wall, a presentation, a document etc. If you would like to learn more about the Theme Manager or download the extension go to :
<http://www.nature.nps.gov/im/apps/thmmgr/index.htm>

The I&M WASO office only took about a month to process the information from Devils Tower. Eventually we will make GIS data for all of the parks compatible with the Theme Manager, however, if you would like your park processed sooner rather than later, give me a call. I will bring the DETO version to the Natural Resources meeting in Minnesota in April to give folks a chance to try it out.

Evaluating the completeness of previous inventories: One of the tasks in preparing our full study plan for FY02-04 is to evaluate the completeness of previous inventories as objectively as possible. For the vertebrate taxa this can be done by creating a list of species expected to occur and comparing it to the list of species already documented to occur in the parks. This will also be done for plants, but since the number of plant species tends to be relatively large, estimating the total number of species can be more difficult.

Dr. Jack Butler, from Central Missouri University, is on sabbatical for a year working with the USGS Vegetation Mapping Program. Dr. Butler is working on a model using data from the vegetation map plots to estimate the total number of species in a given park. This month, Dr. Butler sent me his results for Fort Laramie NHS using a preliminary model. Based on the vegetation map data, his model predicted 235-264 total species for FOLA. The vegetation map plots captured 165 species, or 63-70% of the total species. We have an additional 14 species documented for Fort Laramie through other sources, which would bring the percentage up to 68-76%. Even with some of the limitations of the model, the data indicate that more inventory work would be needed at Ft. Laramie to document 90% of the species.



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The need for additional work is also shown in this Species-Area curve Dr. Butler created from the vegetation map plot data. For the vegetation map work, 49 “subplots” were sampled. As the graph shows, the curve does not flatten much by the 49th subplot which would indicate that the number of species recorded during the mapping process is somewhat short of the actual number of species. The dotted lines are confidence bands (plus or minus 2 standard deviations from the average estimate).

Dr. Butler plans to continue work on estimating the total number of species from the vegetation mapping data from various parks to see if he can discern any kind of pattern. From this he hopes to develop a model for using the vegetation mapping databases to accurately estimate the actual species richness for a particular area.

Coming up:

- Continue hiring process for data management technician (subject to the conditions of the hiring freeze)
- Finish lists of vertebrate species expected to occur in parks and send out to subject matter experts and park staff for review
- Work with regional staff and other network coordinators to develop a strategy for voucher searches and documentation
- Set up contracts to develop lists of plant species expected to occur in parks