

NORTHEAST REGIONAL CONSERVATION NEED GRANT QUARTERLY REPORT

Grant Number: 2007-03

Grant Title: Identifying relationships between invasive species and Species of Greatest Conservation Need in the Northeast region.

Grant Receipt:

Grant Contact Name: Glen N. Stevens

Report#- 7

Were planned goals/objectives achieved last quarter? Not all of the planned goals/objectives were achieved. We have not yet developed a website for the project. We received feedback from individuals during the regional meeting in September that indicated concerns about the completeness of our state-level lists, particularly of invasive species, but did not receive specific feedback that could be incorporated into a final report to meet objective 2, "A report listing the invasive species common to each state.."

Regional Conservation Need Addressed: 2007 Priority RCN Topic 2, "Identify Invasive Species that Impact Species of Greatest Conservation Need in the Northeast."

Progress Achieved:

Little if any progress was achieved relative to the most recent quarterly report. We have included details from that quarterly report in this document.

We have developed state-level and regional lists of both invasive species and GCN species, and reformatted those lists in a fashion that is importable into a database format. In addition, these are ready to be imported into a project-specific website, the public portions of which should be available in early November of 2009. At its earliest stages, the website will list the GCN and invasive species reported in each state, along with the report associated with Objective 2, "A report listing the invasive species common to each state."

We continue to assign broad habitat classifications for the different taxonomic groups and species. This has been identified as a key strategy for assigning ratings to GCN*invasive interactions, given the 455 individually identified current invasive species and 3371 individual GCN species (including plants, invertebrates, fish, herps, birds, and mammals) and thus the 1,533,805 potential pairwise comparisons in the region.

This said, although there are a large number of comparisons, few of the identified invasives are present across the region. More than half of the 455 identified invasives are found in only one state (Fig. 1), with a only 25 occurring in nine states or more across the region. This should reduce the complexity of regional assessments, and make it simpler to determine the key regional invasive species threats.

We also continue assigning importance values to some individual pairwise comparisons in a way that will reflect objective #5, and be used to develop reports in objectives 1, 3, and 4.

We currently have information on hand that is sufficient to meet Objective 2, "A report listing the invasive species common to each state." At present, this list contains only three species, *Rosa multiflora*, *Lythrum salicaria*, and *Polygonum cuspidatum*, or multiflora rose, purple loosestrife and Japanese knotweed, respectively.

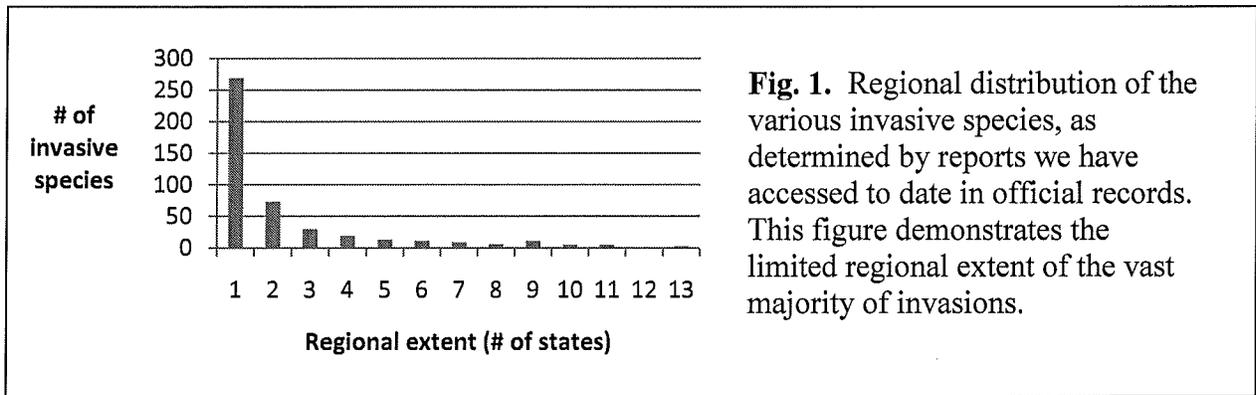


Fig. 1. Regional distribution of the various invasive species, as determined by reports we have accessed to date in official records. This figure demonstrates the limited regional extent of the vast majority of invasions.

Difficulties Encountered:

We are awaiting confirmation of invasive lists from relevant sources in the states before we submit this list, as there are species such as Eurasian watermilfoil that appear in all but one of the states, and *Phragmites australis*, water chestnut, Japanese barberry and autumn olive that are listed in all but two. We will use the reports we get from these states to verify the completeness and accuracy of the Invasive species listings list before we post this report on a project website.

In addition, the sheer number of potential pairwise comparisons will preclude individual comparisons in most cases. These comparisons will be made on the basis of logical habitat exclusions (i.e., upland invasive species are unlikely to influence marine GCN species, reducing the strength of the interaction, and vice-versa). These assumptions will be spot-checked in a limited number of cases to verify their accuracy.

We presume the strength of interaction to be greatest with those species that occupy similar habitat (e.g., both terrestrial, or both marine), that an intermediate strength of interaction will be found in species whose habitat is adjacent (terrestrial and freshwater, freshwater and marine), and greatly reduced in non-adjacent habitats. This assumption may not prove accurate in all cases, and will be modified based on characteristics of the invasives (e.g., mechanism of impact , potential for spread).

Activities Anticipated Next Quarter:

1. We will finalize the lists of GCN species and invasives, reflecting feedback from appropriate personnel in individual states within the region. This will allow us to finalize the report for Objective 2.
2. We will continue pairwise comparisons of individual GCN species and invasive species, as detailed in the proposal. This will populate the database (objective 5), that will be used to develop individual comparison reports that are the deliverables for this project (Objectives 1, 3 and 4).

Costs:

Are you within the approved budget plan? Yes
 Are you within approved budget categories? Yes, expenses and matching funds have been used to support labor for the project.

Signature 
 Date January 7, 2010