Taxonomic Experts Database

A proposal by USGS Nonindigenous Aquatic Species Program, Gainesville, FL

Introduction

Numerous groups within the invasive species community have indicated a need for a taxonomic expertise database that could be consulted when a species new to an area cannot be identified.

Rather than having every group invent their own version and have the different versions not be compatible or overlap and waste money funding the same project multiple times, we propose to develop a centralize database than can be used by everyone in the community. Different groups can be provided filtered views if they like for their web sites.

The USGS Nonindigenous Aquatic Species Program would develop the database structure – with input from all interested groups, and would do the necessary programming to create data input forms, query forms for both the public and a secured set, and the query results.

It would be up to the interested groups to populate the database with the experts. This can either be done by allowing experts to come and sign up on their own or by using a secured site to only allow a handful of people to enter expert's data for them. Which route this will take will depend on feedback from users).

The Database Design

Below is a list of fields proposed for the database. These are open to discussion with interested users. This proposal is targeted at only developing the taxonomic identification portion of the database and is focused on aquatic species. However, this format will allow several other areas of expertise to be included as well. The ISAC/ANSTF Pathways and Prevention group has indicated an interest in using it for pathways experts. It can also be used for many other areas of expertise such as ecology, control techniques, ballast water, risk assessments, etc.

Taxonomic Experts Database

Expert's Name:
Agency:
Address:
Phone:
E-mail:

Area of Expertise[1]: Taxonomic Identification
Ecology
Control

[1] This proposal is to develop only the Taxonomic Identification part. This same database can be expanded to cover these additional topics.

Pathways
Distribution
Ballast water
Risk Assessment

Taxonomic Group: Vertebrates
- Amphibians
- Reptiles
- Fishes
- Mammals

Invertebrates
- Annelids
- Coelenterates
- Crustaceans
- Mollusks
- Tunicates
- Ectoprocts
- Entoprocts
- Sponges

Plants
- Algae
- Aquatic-Vascular

Diseases and Parasites

Specific Group: (i.e., crabs, snails, Genus "Abc", **marine** fish, sharks, frogs, larvae, species X, Asian shrimp, etc.)

Level Contact: 1-first line (willing to weed out easy stuff)
2-expert (when first line person can't identify it)

Geographic Area:
List US states
Canada
Africa
Australia
Asia
Europe
Caribbean
Central America
South America
Oceania

How it Would Work

Since many people have indicated great reluctance at having taxonomic expert's contact information displayed to the general public for fear of swamping them with common species, we propose a filtered system. One possibility is that the experts could sign up as a level 1 or a level 2. Level 1 is the state biologist (ideally) or a regional panel chair as the initial contact person. That person (chair/biologist) tries to identify it first in order to weed out all the common species without bothering a taxonomist. If they can't identify it, then they would contact the appropriate taxonomist by searching a password secured section of the database that would allow them to see the level 2 expert and his/her contact information. Level 2 is the trained taxonomist who would be consulted for more difficult species. Level 1 people would be revealed to the public; level 2 people would not. By having the state biologist as the initial contact, the state managers would be sure to be appraised first of anything new to their state.

Another concern that has been mentioned is the need to maintain current contact information. This can be handled by performing an automatic e-mailing once a year to enrolled experts to confirm or change their information.

Future Integration

The database would also be designed so that it could be integrated with other similar databases using NISbase (http://NISbase.org). These databases include the United States Geological Survey, National Biological Information Infrastructure's (USGS/NBII) Taxonomic Expertise Research Directory (TRED), Ecological Society of America's (ESA's) expert database, and the Smithsonian Environmental Research Center's (SERC's) Aquatic Invasions Research Directory (AIRD). Although these are mentioned as other relevant databases, none of these contain the set of experts we are looking for.

On-line Queries

There would be two types of queries: one available to the public that only returns level 1 experts, and one available to the level 1 experts (or other authorized individuals) that returns level 2 experts. This second query would be password protected and would have more query options. (see below)

Public Query Form

Taxonomic Experts for Aquatic Invasives –

Taxonomic Group of species: [▼] (pull-down list)

State where found: [▼]

Results of Query (General Public)

Contact for "Mollusks" in "Alabama"

Joe Johnson – Alabama State Biologist
555 State Street
Montgomery, AL 77898
765-876-9876
jjohnson@al.st.gov

Sue Green (signed up as level 1)
Alabama Museum
Nowhere, AL 76543
909-898-7787
(Specialty: snails)

Password Protected Query Form
With this query, more fields are available to query on. For example, you can go directly to an expert for contact information if you already know who you are looking for. Or you could search for an expert on Caribbean crabs.

Taxonomic Experts for Aquatic Invasives –

Taxonomic Group of species: (pull-down list)

State where found:

Geographic Area of Expertise:

Expert's Name:

Results of Password Protected Query (done by Level 1 person)

Contact for "Mollusks" in "Alabama"

Homer Simpson
Florida State Museum
123 Apple Grove
Tallahassee, FL 12345
123-456-7894
Homer.simpson@fsu.edu

Jed Jones
Mussels R Us
22 Bivalve St.
Musseltown, AL 23454
654-876-9382
jed@mrus.com
(Specialty: marine mussels)

Anne Hanks
AL DNR
678 Front Street
Dauphin Island, AL 56543
134-765-8765
Anne_hanks@aldnr.gov
(Specialty: snails of the genus *Pomacea*)