

Utilizing Foray Records to Document Fungal Diversity Across North America

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Background

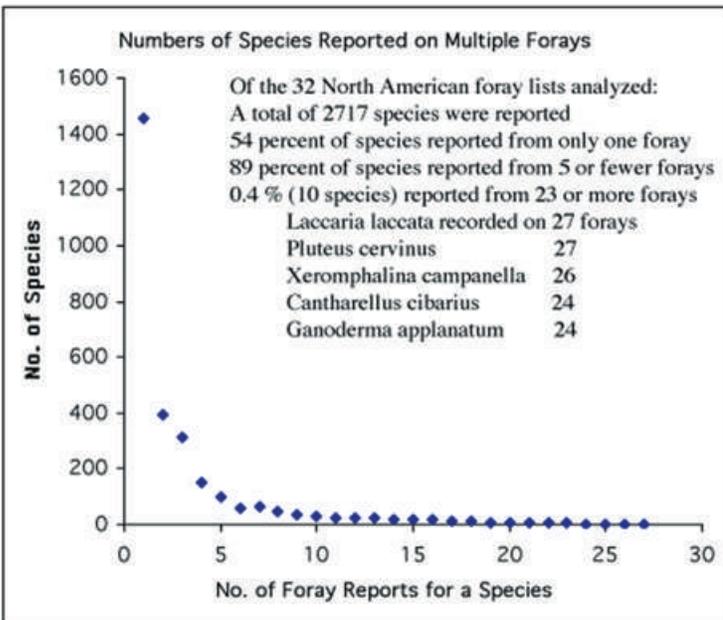
The diversity and distribution of macrofungi intrigue both amateur mushroom hunters and professional mycologists. For over 30 years the North American Mycological Association (NAMA) has sponsored forays that have recorded species occurrence across the continent.

Past foray species lists provide an interesting resource to examine macrofungal diversity and distribution however this data is not verified by voucher specimens. This prevents verification of identifications and accurate interpretation of species that have undergone taxonomic changes.

Analysis of existing records

Species lists from 31 of the past 38 NAMA forays were assembled and combined into a database, some names updated, and more than 300 synonyms combined, yielding a total of 2712 species with an average of 260 names reported per foray. Foray lists ranged from 103 species (Michigan 1961) to 541 species (North Carolina 1994). Twenty percent of the total species were found on both western and eastern forays. Several localities have had repeat forays and provide a larger data set for a site.

There have been five forays at Priest Lake, Idaho; 231 to 364 species were recorded per foray giving a total of 820 taxa for this area. Only 5% of these species were reported for all five years while 58% were only recorded once. Jaccard's coefficient of similarity ranged from 0.22 to 0.31 between pairs of Idaho forays. This low overlap between forays is due in part to yearly variation, timing of the foray, and collecting and identification biases of the participants.



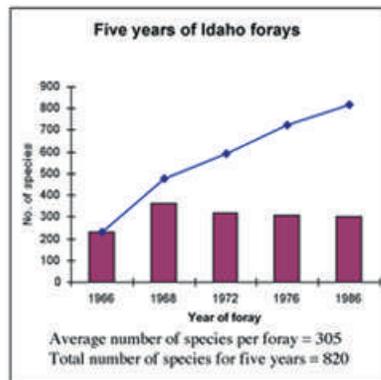
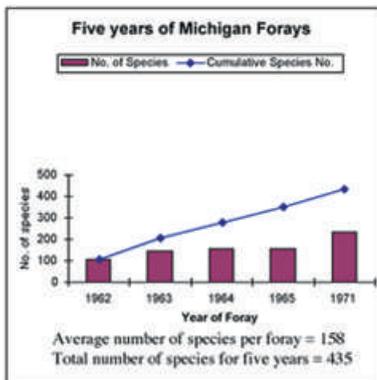
There was a 15% overlap in species between the Michigan and Idaho sites; similarly the overlap between widely separated California and New Hampshire Forays was 13%. Surprisingly the overlap between Michigan (5 forays, 435 spp.) and Minnesota (3 forays, 546 spp.) was only 30% even though they are in the same Great Lakes floristic region.

New initiative

Beginning with the 1997 Colorado and 1998 California NAMA forays the species are now being documented by vouchers (483 specimens). The collection data, photographs, and dried specimens are housed at The Field Museum, Department of Botany Herbarium (F). For the 1999 Missouri foray a voucher database program has been designed to provide rapid and consistent data entry.



Comparison of Species Numbers for Two Foray Locations



With time these vouchered records will provide data on the distribution of macrofungi in North America and serve as a resource for further studies enabling more rigorous analysis of macrofungal biodiversity. The database of specimen information and photographs will be viewable on The Field Museum website (www.fieldmuseum.org).

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