Floristic Quality Assessment

Floristic Quality Assessment

The Floristic Quality Assessment (FQA) is a tool to quantify the quality of remnant and restored ecosystems. It acts like a restoration triage system so management plans can be developed appropriately. It also assists with site monitoring, providing managers with a means of measuring the progress of a site against its management plan.

The FQA is determined by the mean Coefficient of Conservatism (C) for the total inventory of native plants for a site and by calculating the Floristic Quality Index (FQI). Non-native plants and naturalized plants are excluded from this listing; according to Swink & Wilhelm the existence of weeds on a site does not "signify significant degradation of an area." Degradation is delineated by the loss of plants with a high C value.

Step 1: Generate a Plant Inventory
Create a complete inventory of the plants on your site. If you have a very large natural area, this inventory can be developed by transect or quadrant sampling. Although non-native and naturalized plants are not included in the FQA, I keep a list of those so I can monitor them, manage them, and study their impact on our work.

Step 2: Ascertain the Mean Coefficient of Conservatism (C)
Each plant is assigned a number on a scale from 0 to 10. These numbers are based on the likelihood that the plant would exist in an ecosystem if it were in a non-degraded community. For example, a plant that was very common and in most locations might be assigned a 0 or a 1; a plant that was found in both quality and degraded environs would be a 5; and a plant found only in high-quality, specific sites and regions would be a 10. Coefficients are specific to a geographic area and are

only applied to native plants; non-natives and naturalized plants have no coefficient. Click [here](#) for a list of Wisconsin plants and their C value.

After each plant has been assigned its coefficient, total them and divide by the total number of species. This is the mean C.

Step 3: Calculate the Floristic Quality Index (FQI)

Multiply the mean C by the square root of the total number of native species(n): FQI = C√n

How to interpret the FQI:
High quality: The mean C is greater than 4 and the FQI is greater than 50
Medium quality: The mean C is 2-4 and the FQI is 20-50
Low quality: The mean C is 0-2 and the FQI is 0-20

I update our FQA annually. Throughout the years that we have managed these prairies, woods, and savanna areas, we find new species every year — new natives and new non-natives. For a complete plant inventory and the current FQA, click [here](#).

You can read more about the FQA methods and processes in *Plants of the Chicago Region* (1994) by Floyd Swink & Gerould Wilhelm and *The Tallgrass Restoration Handbook* (2005) by Stephen Packard and Cornelia F. Mutel.

To understand more about the FQA, read this [document](#) written specifically for Wisconsin.