APPENDIX J: FLORISTIC QUALITY INDEX

I.   Floristic Quality Indices (after Taft et al., 1997)

        1.   For the reference species list, assign an index based on the affinity to "natural areas". Individual species assignment range from 0-10 with "10" being considered the highest fidelity to natural areas. This index is termed the coefficient of conservatism (C). General categories for species assignments consist of the following:

X   0-1: Taxa that are adapted to severe disturbance, particularly anthropogenic. Disturbance occurs so frequently that often only brief periods are available for growth and reproduction. Generally considered ruderal species/opportunistic invaders.

X   2-3: Taxa within this category are associated with more stable, though degraded habitat. Generally considered ruderal-competitive species, found in a variety of habitats.

X   4-6: Taxa that have a high consistency of occurrence within a given community type and will include many dominant or matrix species for several habitats. Species will persist under moderate disturbance.

X   7-8: Taxa associated mostly with natural areas but can persist where the habitat has been somewhat degraded. Increases in the intensity or frequency of disturbance may result in reduction in population size, or; taxa may be subject to local extirpation.

X   9-10: Taxa exhibiting a high degree of fidelity to a narrow range of synecological parameters. Species within this category are restricted to relatively intact natural areas.

Assignment of the "C" value should be based upon field experience of principal investigators (A-Team), consultation with local or regional plant ecologist/ taxonomists, description of habitat preferences in floristic manuals or published synecological or autecological studies. Values to be assigned should be considered in the context of the defined reference domain (geographic distribution) and range of variability (disturbance gradient) within the HGM subclass of interest.

        2.   Calculation of the Floristic Quality Index

X   Determine the mean coefficient of conservatism ($\overline{C}$) by summarizing all coefficients in the inventory unit (reference site or sample within the reference site) and dividing by the number of taxa (N), or $\overline{C} = \sum C/N$.

X   Multiply the mean coefficient of conservatism ($\overline{C}$) by the square root of the total number of taxa. The floristic quality index is then indicated by:

FQI = $\overline{C} (\sqrt{N})$

Selected Bibliography

Taft, J.B., G.S. Wilhelm, D.M. Ladd, and L.A. Masters. 1997. Floristic quality assessment in   Illinois; a method for assessing vegetation integrity. Erigenia 15:3-95.