1046-05-1406   **Jeremy M. Aikin*** (`jaikin@math.lsu.edu`), Mathematics Department, Louisiana State
University, Baton Rouge, LA 70803-4918, and **James Oxley** (`oxley@math.lsu.edu`),
Mathematics Department, Louisiana State University, Baton Rouge, LA 70803-4918. *Towards a*
general tree decomposition theory for matroids.

Oxley, Semple and Whittle described a tree decomposition for a 3-connected matroid M that displays, up to a natural
equivalence, all non-trivial 3-separations of M. Crossing 3-separations gave rise to fundamental structures known as
flowers. In this talk, we show that crossing separations of higher order also have a flower-like structure and we illustrate
the kinds of structures that can arise by considering certain subsets of a vector space. (Received September 15, 2008)