Aquifoliales are an order of plants that include five families and 20 genera, the largest of which is the familiar holly genus (*Ilex*). The current circumscription of Aquifoliales is based on fairly recent molecular data and has drawn together a diverse group of plants that had not been studied in the context of their true relationships. As a result, morphological support for family delimitations was limited, especially for Cardiopteridaceae and Stemonuraceae, which contain most of the generic diversity in the order. My talk focuses on reproductive morphology and anatomy of pollen and fruits in the order, and their implications for understanding evolutionary relationships in Aquifoliales. Few ordinal-level studies of pollen have been conducted, but Aquifoliales appear to have unusual levels of variation, and pollen irregularities hint at genomic complexity in multiple genera. Fruit morphology and anatomy are equally unusual, with exterior appendages, cell inclusions, and parthenocarpy found in multiple genera. In addition, recent developmental studies in one genus have found two innovations among angiosperms, in a new type of embryo sac and seed coat formation.

**Friday, January 23, 2015**

3:00 – 4:00 PM  
Science 2, room 109

For further information:  [www.csufresno.edu/biology](http://www.csufresno.edu/biology). If you need a disability-related accommodation or wheelchair access, please contact Lindasue Garner at the Department of Biology at 278-2001 or e-mail lgarner@csufresno.edu (at least one week prior to event).