Charles Darwin was fascinated by the origins of morphological variation, a key question that researchers are still addressing today. Specifically, the suddenness of the appearance of flowering plants and their rapid rise to dominance in the fossil record Darwin declared a “perplexing phenomenon...to those who believe in extremely gradual evolution”, and an “abominable mystery”. Since then, new fossils have emerged and molecular genetics has provided data on gene sequences and homeotic genes responsible for floral organ development, elucidating how the evolution of flowers could appear to occur so rapidly. However, many mysteries still remain unsolved, especially with regards to why floral form changes so often in the angiosperm phylogeny. Dispersal abilities of plants also captured Darwin’s attention.

Jocelyn Hall examines the basis of morphological diversity in two systems: (1) flowers of capers and their relatives and (2) fruits in relatives of canola (Brassiceae). Capers and relatives display high variation in floral form, and comprise a model system for the study of floral evolution. The Brassiceae not only includes familiar crops such as canola and broccoli, but also pernicious, widely-dispersed weeds. They comprise a model system for the study of fruit traits, which affect dispersal ability.

– All Welcome –

Darwin Lecture Series info: homepages.ucalgary.ca/~jefox/Darwin.htm