Ecology is sometimes the source of interesting graph-theoretical problems. Starting from properties of ecosystems, in particular normal, healthy competition between species, Joel Cohen introduced the idea of a competition graph corresponding to a food web. There have been hundreds of papers on this topic since then, and applications ranging from coding to scheduling. Recently, one long-standing conjecture about competition graphs, the Opsut Conjecture, was settled. However, several other important conjectures remain and this talk will explore them. (Received September 07, 2013)