

How Plants Mate

Join us for our next OSU Extension Secret Arboretum workshop on Thursday, May 23, titled “How Plants Mate”. The program will be from 10:00 am to 4:00 pm, including an “excellent” lunch, though my now OSU Horticulture graduated student Sean Camilleri would say: “I’ll be the judge of that” – gotta love it. We will have an extensive Flower ID lineup, a Fruit and Flower walk, and microscopic views of flower structure using the new Secret Welcome and Education Center technology for viewing microscopic views on screen. Plus plentiful presentations and pontifications.

OSU Extension’s Dr. Ann Chanon, who’s done academic papers on buckeye hybridization, Secret Arboretum curator Jason Veil with academic degrees including plant collections curation, and Jim Chatfield will be the teachers and learners along with all of you present. Registration will be available by Monday at go.osu.edu/Chatfield and will be \$40. Let’s go to the non-Jeopardicized questions: Answers to be explored on May 23 – and a few herein.

What is the difference between dioecious and monoecious plants? What plants are which and why does it matter for practical horticulture? Is having male and female plants in the same planting enough for successful fertilization to occur? How do apple flowers differ from filbert flowers, both of which have male and female flowers on the same plant? What is considered a perfect flower? A complete flower? What are the four floral envelopes and what are they called? (The calyx made up of sepals, the corolla made up of petals, the androecium made up of stamens, the gynoecium made up of the pistils – stigma, style and ovaries).

What are some examples of modified leaves for plants? What did Goethe call a flower? Do potatoes have flowers and fruits?)Yes, but we do not eat them!) What is a ripened ovary? What is double fertilization? Why are tomatoes defined as fruits by botanists? Why are tomatoes defined as vegetables by others? What is the fleshy, juicy, delicious, part of a strawberry? What are the small, brown, grain-like structures on the outside of this fleshy part? What’s up with cashews, bananas?

What is anemophily and entomophily, and what implications does this have for insecticide use? What about zoophily and hydrophily? What is a nectar thief? (Takes nectar without facilitation pollination). Is a nectar thief necessarily counterproductive to pollination and fertilization? What is a pollen tube? What do the botanists call the alternation of generations for a moss – a fern – a flowering plant? What are Darwin and others talking about with contrivances such as pseudo aggression and pseudo copulation of orchids?

What is an Angiosperm? A Gymnosperm? A spermatophyte (Seed plants, comprising of Angiosperms and Gymnosperms). What is the pteridophytes and bryophytes? Do pines have flowers? Do ginkgos have fruits? What does the term polygamodioecious mean? There’s a show-stopper, or is it a show starter

What regulates the various sizes of Golden Delicious apple trees: (dwarf, semi-dwarf, standard)? Can lilacs be grafted to privets? (They can, and importantly they are in the same family – the Oleaceae, or olive family). To wiegelas? Why one and not the other? What is a plant family? Are privets and lilacs in the same family? Which plant family has genera with six stamens, two pairs of tall stamens across from each other and two shorter, single stamens across from each other? (It is the Brassicaceae – the mustard family, once called the Cruciferae.) Why the change of the family name?

What causes a mast year? Why do some crabapples sometimes have unusually small leaves and unusually high numbers of fruits in the same year? (It has to do with resource allocation for plants: reproduction is energy-costly). Is it easy to cross species of buckeyes? To cross bottlebrush buckeye with red buckeye? To create a pink bottlebrush buckeye? What is the relationship of horsechestnuts to buckeyes? Is a horsechestnut related to chestnuts? Why are most woody ornamental plants asexually propagated? – or are they?

And again the question that has always nagged at you – what does the term polygamodieocious mean? Well, maybe it matters not to you. But how about this – what plants attract hummingbirds and why? That's more practical. This and a thousand more questions will be discussed in our class of "How Plants Mate".

Note: Paul Snyder will not be teaching this time around, as he and wife Jacoby will be tending the new product of their own holy mate-rimony, their new baby girl.

Up next in this particular series: on July 2 - Plant Families III (Paul will be there for that one), then Plant Parts Exposed in the Fall. Up next overall in the OSU Extension Secrest series is Annuals and Perennials with Pam Bennett and Matt Shultzman on June 27.