

Geraldine A. Allen

Professor Emerita

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**Plant Systematics
and Evolutionary Biology**

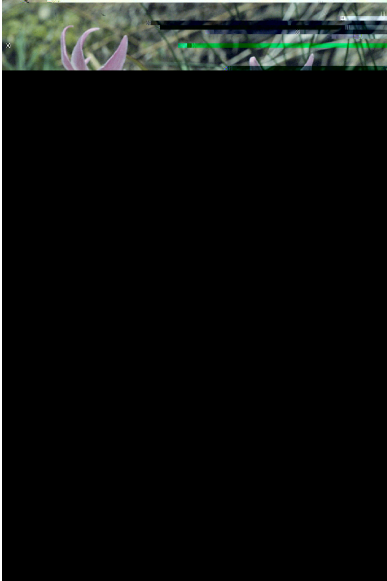
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RESEARCH PROJECTS

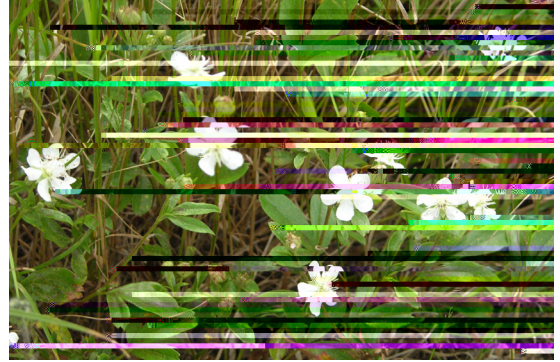
North American Asteraceae

Asters (in the broad sense) are one of my long-standing interests, and I have worked on several aster groups. I have been interested in western North American *Symphotrichum* (formerly *Aster*) since doing my PhD work on these plants. They are a textbook example of a highly variable and taxonomically challenging polyploid complex, and hybridization has played a major role in their



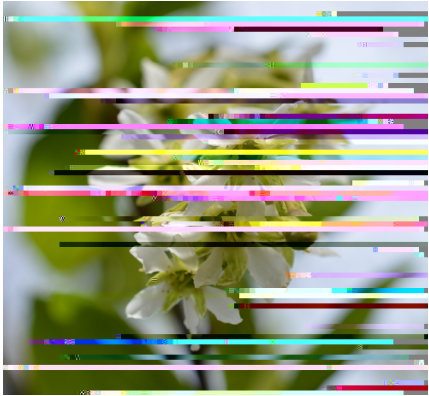
Phylogenomics of the strawberry lineage

Strawberries (*Fragaria*) belong to a small clade of about 10 genera in the family Rosaceae, which also includes *Sibbaldia*, *Alchemilla*, and several genera

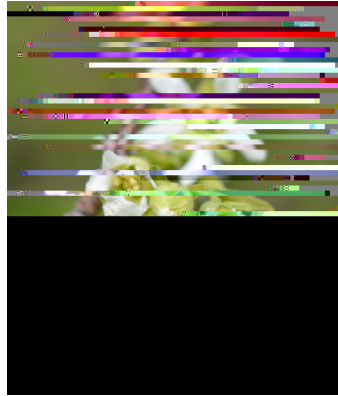


Sex ratios and gender differences in dioecious plants

Dioecious species constitute only about 6% of flowering plants, but have many interesting attributes. Sex expression can be controlled by genetic or environmental factors or both of these together. Sex ratios are often biased and males and females typically have unequal reproductive allocation. In collaboration with my spouse Joe Antos, I investigated sex ratio variation, reproductive allocation, and life history traits in the osoberry (*Oemleria cerasiformis*), a dioecious west coast shrub. We showed that differential reproduction allocation between males and females was the basis for male-biased sex ratios in this species.



Male flowers



Female flowers

Twig with old fruit stalk

Oemleria cerasiformis has genetically determined sex expression. Recently I started a new collaboration with Aa.001 Tc -0.00i. 0 Td[(t)f.84 (o)-2 (ry)4 (t)n-4 (d)-4 ()]TJ[(ma4 (t)4 (e)-1 (b)-4 (asr4 (h)-4 (.



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Allen, G.A. 9 (e1(iv(A)n)2 p)-0.7 (p)-3.261 .2 (e)-aD72 747.6 Tm((:)-4.8e)-3 (g)-0.7 4Tw 0(A)nL Mi(arc)-2 (h)3 (.)-.2 (d)2.-2.9 (

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