

Patuxent Wildlife Research Center

Effects of Invasive Plants on Pollination of Native Plant Species



- **The Challenge:** Relationships between pollinating insects, such as bees, beetles and flies, and native plant species, are crucial to plant reproduction and therefore to ecosystem function. However, many pollination mutualisms are at risk from decline in populations of insect pollinator species, and from changing floras resulting from the spread of invasive plants. Other possible concerns are that invasive plants might attract natural pollinators away from native species, or might modify relationships of native plants and their pollinators in other unforeseen ways.



- **The Science:** Effects of invasive plant species on pollination of native plants was studied at Acadia National Park. Flower visitors were recorded to native species when living alone, and compared to visitation when invasive plant species that flower at the same time were present nearby. Native-invasive pairs included lowbush blueberry (native) with Japanese barberry (invasive), wild raisin (native) with glossy buckthorn (invasive), and meadowsweet (native) with purple loosestrife (invasive).



- **The Future:** The presence of invasive plants influenced insect visitation to native plants in some cases. For example, visitation to blueberry sometimes declined in the presence of barberry, and the mix of species visiting wild raisin changed when glossy buckthorn was present. Nevertheless, in no case did fruit set or seed set of native plants decline in the presence of invasives. Therefore, the presence of these invasive species is apparently not, at present, interfering with reproduction in these native plant species at Acadia National Park.