

## ***Calycanthus floridus* L. (Calycanthaceae) in Illinois**

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### **ABSTRACT**

A population of *Calycanthus floridus* L. was found in a mesic, wooded ravine at Pere Marquette State Park, Jersey County, Illinois. Strawberry shrub, which is native to the coastal plain of the southeastern United States, is now naturalized in Illinois. This species has the potential of becoming a major plant pest, particularly in the southern part of Illinois.

### **FINDINGS**

*Calycanthus floridus* L. (Strawberry Shrub, Carolina Allspice), a species of the coastal plain of the southeastern United States, is found in rich, moist woods from Florida to Mississippi and north to Virginia and West Virginia (Fernald, 1950). It is occasionally used as an ornamental in the eastern United States (Bailey, 1949), can be planted as far north as southern Michigan (Flint, 1983), and sometimes escapes (Fernald, 1950). This taxon was first reported from Illinois by Mohlenbrock (1975), who collected a specimen on an open, wooded slope at the Midland Hills Country Club, Jackson County, about four miles south of Carbondale just off of old U.S. 51. Cultivated specimens occur in the area, and this "wild" individual undoubtedly represents an escape (Mohlenbrock, personal communication).

In the spring of 1989 one of the authors (KDA) collected a flowering specimen of *Calycanthus floridus* at the edge of the Ravine Trail, Pere Marquette State Park, Jersey County, Illinois (SE1/4 Sec 9 T6N R13W). At this site, located about 250 m from the beginning of the trail in a steep-sided, wooded ravine, was a small colony of this species. This colony extended along the west side of the trail for about 45 m, and varied from 5 m to nearly 12 m in width. Many individuals of strawberry shrub occurred in scattered clumps, and a few of these individuals were more than 2.5 m tall. Most were smaller,

and appeared to be root sprouts from the extensive horizontal root systems of larger individuals. When the colony was examined in the fall of 1989, one fruiting specimen (Ebinger #25161, EIU) was observed, while in the fall of 1990 no fruits were found.

The overstory at this site was a poor quality, second growth forest dominated by *Fraxinus pennsylvanica* Marsh. (green ash), *Acer saccharum* Marsh. (sugar maple), *Quercus prinoides* Willd. var. *acuminata* (Michx.) Gl. (yellow chestnut oak) and *Q. rubra* L. (red oak). These mesic species are typical of closed to partially open canopied forests of the hilly areas of west-central Illinois. The estimated canopy cover above the strawberry shrub population was approximately 85%.

The extent of the woody understory in the area (less than 10 cm dbh) was determined using ten 1/1000 ha circular plots located along a line transect through the strawberry shrub population. The dominant species observed was *Calycanthus floridus*, with more than 11,300 stems/ha. Other common components included *Asimina triloba* (L.) Dunal (4,500 stems/ha), and *Lindera benzoin* (L.) Blume (1,000 stems/ha). Species that were occasionally encountered in the plots included *Acer saccharum* Marsh., *Euonymus atropurpurea* Jacq., *Hydrangea arborescens* L. and *Cornus florida* L. Most of these understory woody species were less than 3 m tall and rarely exceeded 3 cm dbh.

*Calycanthus floridus* appears to be well established at this one site in Pere Marquette State Park, but attempts to locate it at similar sites in and around the park have failed. Also, no cultivated individuals of this species were encountered anywhere in the surrounding area. It is possible that this species had been planted around the lodge or other buildings in the park, but these specimens have died out or have been removed in recent years.

Presently alien taxa make up more than 20% of the vascular flora of Illinois (Henry and Scott, 1980). Many are not problem species, rarely occurring in natural communities. A few, however, have become major plant pests (Ebinger, 1983). *Calycanthus floridus* has the potential of belonging to this latter group. It grows well in open mesic forests, and once established, probably can increase by root suckers. Furthermore, it produces flowers and sets fruits under shaded conditions, and it can tolerate the winters throughout most of Illinois (Flint, 1983).

## LITERATURE CITED

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