

# Naturalized *Forsythia suspensa* (Thunb.) Vahl (Oleaceae) in Illinois

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## ABSTRACT

*Forsythia suspensa* (Thunb.) Vahl. is reported as naturalized within the canyon of a tributary to the Vermilion River in Matthiessen State Park, LaSalle County, Illinois. This is the first reported naturalization of this species in eastern United States.

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While undertaking a study of endangered and threatened plant species at Matthiessen State Park, near Oglesby and Utica, LaSalle County, Illinois, the senior author observed two populations of *Forsythia suspensa* (Thunb.) Vahl (weeping forsythia). This species is a relatively common ornamental shrub native to China that has been planted in the northeastern United States since 1833 (Rehder 1940). According to Fernald (1950) and Gleason and Cronquist (1991) it has not become naturalized and no mention of this species has been found in the many regional and state floras examined by the authors. Swink and Wilhelm (1994) have reported *F. x intermedia* Zabel as naturalized in a sandy blowout near Oldhometown Indian Dunes State Park, Porter Co., Indiana. This medium sized shrub rarely exceeds 2 m in height, has pendulous branches with hollow internodes and solid nodes, while the opposite, irregularly serrated leaves are usually simple, but 3-lobed and trifoliate forms are also found. The flowers are golden yellow, to 2.5 cm long, while the narrowly ovoid, woody, septicidally dehiscent capsule has many winged seeds (Bailey 1949, Rehder 1940).

Generally, propagation of this species is by softwood cutting in summer, by hardwood cutting in autumn and winter, by seeds, and by branches taking root at the tips where they touch ground and send out vigorous shoots (Flint 1983). According to Dirr (1983) seeds will germinate without pre-treatment, but 1-2 months at 41° F appear to improve germination.

The two populations discovered were in a narrow, deep canyon cut through St. Peter Sandstone (Willman and Payne 1942). Subsequent searches failed to locate additional

colonies, though similar habitat occurred throughout this nearly mile long canyon. The smaller population, located about 150 m down stream from Cascade Falls, consisted of seven individuals located about 5 m up the east-facing, vertical cliff-face (Ebinger #26416A, EIU). All were connected by drooping, stoloniferous branches, and probably originated from one plant. Some of these pendulous branches nearly touched the stream bed. Associated species on the cliff-face included *Hydrangea arborescens* L., *Ribes missouriense* Nutt., *Parthenocissus quinquefolia* (L.) Planch., *Pilea pumila* (L.) Gray, *Cystopteris bulbifera* (L.) Bernh., *Aralia racemosa* L., *Aruncus dioicus* (Walt.) Fern. and *Pellaea atropurpurea* (L.) Link.

The larger population, located about 50 m upstream from the smaller population, consisted of 25 plants growing on a talus mound covered with a thin layer of soil (Ebinger #26416B, EIU). All plants were in an area 6 m by 8 m, and probably were the result of asexual reproduction from pendulous branches rooting at the tips of one original individual. Associated shrubs included *Hydrangea arborescens*, *Ptelea trifoliata* L. and *Ribes missouriense*, along with the naturalized *Ligustrum vulgare* L. and *Berberis thunbergii* DC. Few herbaceous species were found associated with the colony, and due to the dense shade, only a few individuals of these taxa were observed. These included *Aruncus dioicus*, *Aster lateriflorus* (L.) Britt., *Cryptotaenia canadensis* (L.) DC., *Laportea canadensis* (L.) Wedd., *Leersia virginica* Willd., *Pilea pumila* and *Rudbeckia laciniata* L.

No ornamental plantings of *Forsythia* spp. were found in the area. However, the area has been used as a park since the last century because of its picturesque canyons and diverse plant and animal life. The area was privately owned from the 1890's until 1942 when the heirs of the prominent LaSalle industrialist F. W. Matthiessen donated the property to the State of Illinois. Prior to 1942 the area was known as Deer Park (Matthiessen State Park Files, Illinois State Archives), and numerous ornamental trees and shrubs were planted, many of which are still present, with some having become naturalized.

**LITERATURE CITED**

- Bailey, L. H. 1949. Manual of cultivated plants most commonly grown in the continental United States and Canada. The Macmillan Company, New York. 1116 pages.
- Dirr, M. A. 1983. Manual of woody landscape plants: Their identification, ornamental characteristics, culture, propagation and uses. Stipes Publishing Company, Champaign, Illinois. 826 pages.
- Fernald, M. L. 1950. Gray's manual of Botany. 8th ed. American Book Company, New York. lxiv+1632 pages.
- Flint, H. L. 1983. Landscape plants for eastern North America exclusive of Florida and the immediate Gulf Coast. John Wiley & Sons, New York. ix+677 pages.
- Gleason, H. A. and A. Cronquist. 1991. Manual of vascular plants of northeastern United States and adjacent Canada. The New York Botanical Garden, Bronx, New York. lxxv+910 pages.
- Rehder, A. 1940. Manual of cultivated trees and shrubs hardy in North America exclusive of the subtropical and warmer temperate regions. The Macmillan Company, New York. xxx+996 pages.
- Swink, F. and G. Wilhelm. 1994. Plants of the Chicago region. 4th ed. The Morton Arboretum, Lisle, Illinois. xiv+921 pages.
- Willman, H. B. and J. N. Payne. 1942. Geology and mineral resources of the Marseilles, Ottawa, and Streater Quadrangles. Illinois State Geological Survey Bulletin No. 66. Urbana, Illinois. 388 pages.

Antiinflammatory effect of *Forsythia suspensa* Vahl. and its active principle. *Biol Pharm Bull.* 2000;23(3):365-367.10726898.Â Analysis of constituents of essential oil from the *Forsythia suspensa* (Thunb.) Vahl. *Natural Product Res Dev.* 1994;6:14. In this study, we sampled *Forsythia suspensa* (Thunb.) Vahl (Oleaceae), a deciduous shrub widespread at 300â€²2,200 m above sea level in the warm temperate zone in China. The flowering period of *F. suspensa* is from March to June, and the fruiting period is from July to September. This species prefers light and tolerates a certain degree of shade; additionally, it prefers warm and humid climate and can tolerate cold and drought but not waterlogging ( Niu et al., 2003 ).Â Molecular data and ecological niche modeling reveal population dynamics of widespread shrub *Forsythia suspensa* (Oleaceae) in China's warm-temperate zone in response to climate change during the Pleistocene. *BMC Evol. Biol.* *Forsythia suspensa* - (Thunb.)Vahl. Common Name. Lian Qiao, Weeping forsythia. Family. Oleaceae. USDA hardiness. 5-8.Â *Forsythia suspensa* is a deciduous Shrub growing to 5 m (16ft) by 5 m (16ft) at a medium rate. It is hardy to zone (UK) 5 and is not frost tender. It is in flower from March to April. The species is hermaphrodite (has both male and female organs) and is pollinated by Insects. The plant is not self-fertile. Suitable for: light (sandy), medium (loamy) and heavy (clay) soils, prefers well-drained soil and can grow in heavy clay soil. Suitable pH: acid, neutral and basic (alkaline) soils and can grow in very alkaline soils. It can grow in full shade (deep woodland) semi-shade (light woodland) or no *Forsythia* fruit (*Forsythia suspensa* Vahl (Oleaceae)) is a common component of Kampo medicines for treating the common cold, influenza, and allergies. The main polyphenolic compounds in the leaves of *F. suspensa* are pinoresinol 1<sup>2</sup>-d-glucoside, phillyrin and forsythiaside, and their levels are higher in the leaves of the plant than in the fruit.Â BibTeX EndNote RIS Cite This Paper. Abstract. *Forsythia* fruit (*Forsythia suspensa* Vahl (Oleaceae)) is a common component of Kampo medicines for treating the common cold, influenza, and allergies. The main polyphenolic compounds in the leaves of *F. suspensa* are pinoresinol 1<sup>2</sup>-d-glucoside, phillyrin and forsythiaside, and their levels are higher in the leaves of the plant than in the fruit.