photograph © Steve Leonard

Hamamelis ovalis

In 2005 Steve Leonard discovered a new species of *Hamamelis* which is known as Leonard's witch hazel. CHRIS LANE describes it and reports on its propagation.

Introduction

Imagine how my curiosity was piqued when in 2005 I received an email from a Mr Steve Leonard from Mississippi, USA saying that he had discovered a witch hazel in the wild which he could not find mentioned in my then recently published book on the genus. (Lane, C., 2005).

Initially his description of the flowering time, size and variable colouration of the flowers, yellow through to red, suggested *Hamamelis vernalis* Sarg. The location of *H. vernalis* however was some 600 km to the north-west in the Ozark Plateau region, mainly in Arkansas and adjacent parts of Missouri and Oklahoma.

Further email communications with Steve Leonard followed and images that he sent me, showed the plants growing in a habitat quite different to that in which *H. vernalis* flourishes. It had a suckering habit similar to *H. vernalis*, in some instances more pronounced, most likely an adaption to the periodic burning which takes place in the woods where it is found.

The foliage is quite different from *H. vernalis*, the leaves being ovate, 12–24 cm long by 5–17 cm wide with a dense stellate tomentum on the

Opposite, *Hamamelis ovalis* growing in its natural habitat in southern Mississippi.
Right, *Hamamelis ovalis* suckering prolifically on the forest floor in Perry County, Mississippi.

undersurface of the leaf. The leaf size and presence of hairs make it quite distinct from *Hamamelis virginiana* L. which can also be found growing in Mississippi. *Hamamelis virginiana* in the deep southern part of its range (*Hamamelis virginiana* L. var. *henryae* as described in my book, (not however recognised by the *Flora of North America*) flowers in November to December, later and with smaller flowers than *H. virginiana* L. var. *virginiana*, which grows over the rest of its range in the USA. From this information it was obvious that the population of plants discovered by Leonard did not conform to either *H. vernalis* or *H. virginiana*.

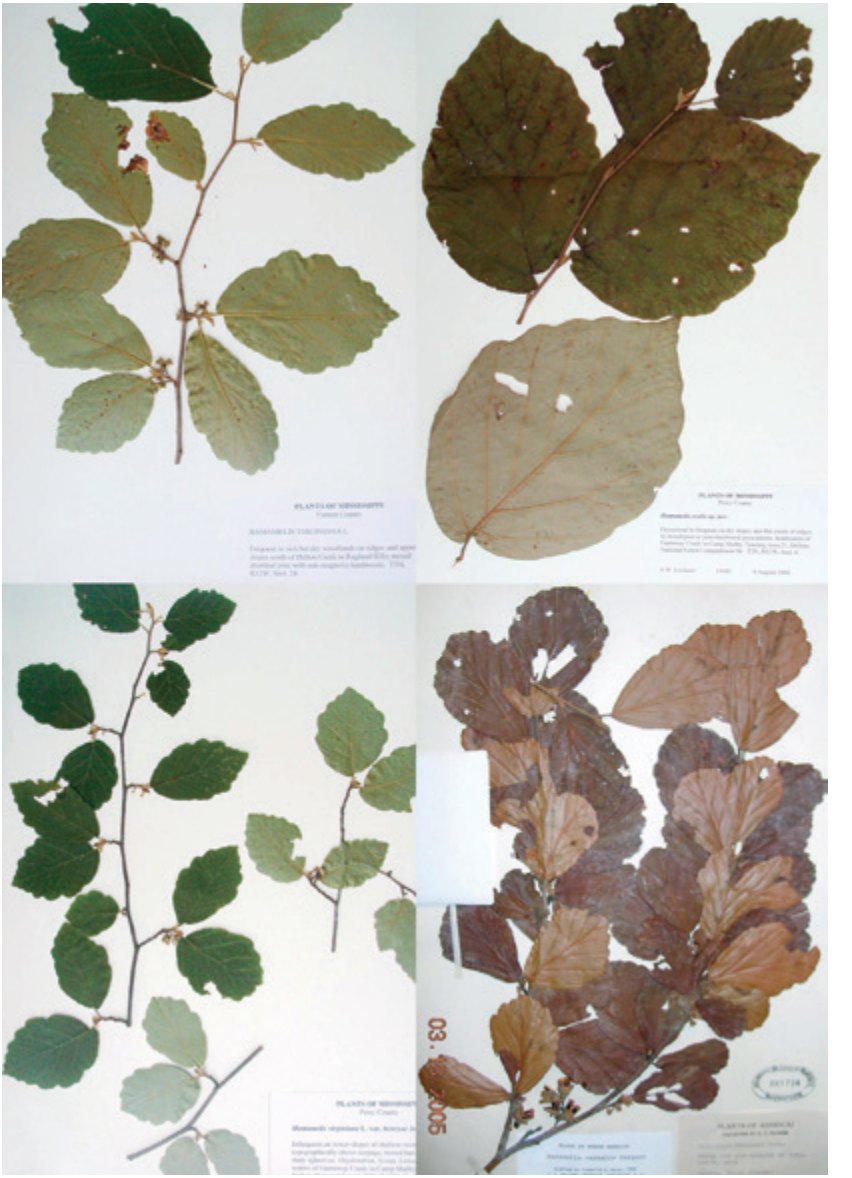
Description

In 2006 Steve Leonard published his discovery in SIDA 22(2), 849-856.

A new species of Witch Hazel (Hamamelis, Hamamelidaceae) apparently endemic to Southern Mississippi.

Hamamelis ovalis S.W. Leonard, sp. nov Type USA, Mississippi, Perry County, shallow ravine in mixed pine-hardwoods near headquarters of Garraway Creek, Camp Shelby Training Area T-17, Compartment 96, DeSoto National Forest, T2N, R11W, Sec. 6, NE1/4. 7 July 2004 S.W. Leonard 11073 (HOLOTYPE MO, ISOTYPES FSU, NCU, NY).

Rhizomatous shrubs to 5 m tall, the twigs pubescent, large leaves to 24 by 17 cm, heavily pubescent on the undersurface. Sepals glossy, scarlet above, petals 7–14 mm to 0.5–1 mm wide, various shades of red, some yellow tipped.



Herbaria specimens of North Amercian witch hazel: *top left* is *Hamamelis virginiana*, found wild in Forrest County, Mississippi, frequently in rich but dry woodlands; *below left, H. virginiana* var. *henryae* from Perry County, Mississippi, where it grows on the lower slopes of shallow ravines; *top right H. ovalis*, also from Perry County, grow on dry slopes and flat crests of ridges in mixed woodland, and below right is *H. vernalis* from Taney County, Missouri where it is found growing on rocky beds and margins of small creeks.

photographs © Steve Leonard (habitat) and Tim Bratzman (close-ups)

The flowers of *Hamamelis ovalis* showing the range in colour from maroon, scarlet, rose or red with yellow tips to the petals.

In July 2004, whilst Leonard was surveying for proposed vehicle manoeuver's in Camp Shelby Training Site in DeSoto Forest, Southern Mississippi, he came across an unusual colony of witch hazels. They had a rhizomatous and suckering habit, large leaves which were quite pubescent. Further observation during the winter of 2004/2005 showed flowering time to peak in early to mid-January and flower colour to vary from maroon, scarlet, rose or red with yellow tips to the petals.

In the type locality the plants occur in shallow flat-bottomed ravines and adjacent slopes on loamy soils which drain into the headwater tributary of Garraway Creek.

Hamamelis ovalis S.W. Leonard occurs with a rich assemblage of other woody plants, growing beneath a canopy of pine and mixed deciduous hardwoods. The main species of canopy trees are *Pinus taeda, Pinus palustris,*

Carya tomentosa, Nyssa sylvatica, Quercus falcata, Magnolia macrophylla, Cornus florida, Sassafras albidum, Ilex vomitoria, Ilex opaca and *Liquidambar styraciflua*. Associated understory shrubs and vines include *Vaccinium arboreum, Vaccinium elliotii, Morella cerifera, Callicarpa americana, Tridens flavus* var. *chapmanii, Chasmanthium sessiliflorum, Sorghastrum elliottii, Smilax purida, Mitchella repens, Berchemia scandens* and *Vitis rotundifolia.*

***Hamamelis macrophylla* Pursh**.
In Leonard's article, he raises the possibility of *Hamamelis ovalis* being what Pursh originally described as *H. macrophylla*. Unfortunately there is little published information from Pursh on this and from what information there is, he did not observe the flowers. Pursh described the leaves as large (compared to *H. virginiana*), punctuated on the undersurface with rough tubercles. This does not square with the foliage of *H. ovalis* which is densely stellate pubescent. *Hamamelis macrophylla* was collected by John Lyon (1765-1814) in Georgia (more than 400 km from Mississippi) and western North Carolina (more than 1,000 km from Mississippi). It is unlikely that these are the same plant.

Plants of *H. macrophylla* collected by myself from cultivated specimens (England, one clone and the USA, two clones, have turned out to be the smaller leaved form of *H. virginiana* which grows along the East Gulf Coastal Plain and what I have described in my book as *H. virginiana* var. *henryae*. (Lane 2005).

The Alabama connection
In 2009 Mr Wayne Webb discovered a colony of *Hamamelis ovalis* in Pine Woods in Clarke County, Alabama, 120 km east, north-east from the Mississippi colony. Since then colonies have been discovered further east in Alabama in Monroe, Butler, Crenshaw and Covingham Counties. Although first discovered in Mississippi, it now seems that Alabama is the main centre of distribution. Possibly with further botanical forays the species will be found in other areas between Mississipi and Alabama. Recent botanical exploration by Ron Miller, Rich Lewandowski and Wayne Webb have turned up populations in northern Florida, eastern Georgia and eastern Texas. They are often, although not always, found growing in fairly dry sites on the higher parts of slopes with *H. virginiana* further down the slopes in moister ground. Miller postulates that there is the possibility that *H. ovalis* is more closely related to the Mexican populations of *Hamamelis*. (Miller pers. comm.). Certainly *H. virginiana* var. *mexicana* (Standl.) C. Lane stat. Nov. has stellate tomentum like *H. ovalis*, so maybe in the future its status will be revised.

***Hamamelis ovalis* S.W. Leonard in cultivation**
How this species will behave in cultivation, whether in Europe or the USA, is yet to be determined. Initially graftwood was obtained from both the Mississippi site and the Clarke County site in Alabama. The first was by Steve

Leonard in 2006 and three clones were collected SWL-2006-1, SWL-2006-2 and SWL-2006-3. In January of 2009 my good friend Tim Brotzman collected scions from nine different plants in the same locality, namely TCB-2009-1 to TCB-2009-9. Subsequently in 2011 Tim Brotzman collected scions from seven different plants from the Clarke County, Alabama population, namely TCB-2011-10 to TCB-2011-16. I should add that the collection of this material, was carried out under the auspices of the USDA Forest Service, with the aim of getting this new species into cultivation so as to reduce the chances of unauthorised collection of plants from the wild. Fortunately the Camp Shelby site is in an Army training area which will definitely help protect it there.

The plant material was shared between Tim Brotzman and myself and although I managed to graft all accessions successfully, I did lose some subsequently. It may prove not be an easy plant when grafted onto *H. virginiana,* (the usual rootstock used by nurserymen for grafting witch hazels, notably of the cultivars of the hybrid *H.* × *intermedia*). I have noticed with cultivars of *H. vernalis* grafted onto *H. virginiana* and reaching some age that branches are apt to break away from the graft union. My plants are still young and have not been tested in the ground as yet but should certainly prove to be hardy in Western Europe.

In Lake County, Ohio, during the winter of 2015, temperatures in February went down to -25° F (-32 °C) on several occasions. Massive injury was suffered and in many cases death of mature plants to the majority of the *Hamamelis* that were being grown, with the exception of any plants with *Hamamelis vernalis* or *H. virginiana* blood lines where no damage occurred. Surprisingly about 20 seedlings (open pollinated) of *H. ovalis*, some 3–4 ft tall survived unscathed. Perhaps they may be hybrids but it was difficult to believe they held up so well. (Brotzman pers. comm.).

With the rather small flowers it is unlikely to become a plant for the keen gardener but rather the plant collector, pretty much as *H. vernalis* and *H. virginiana* are here in Europe. It's importance in the USA could be large in creating a new race of hybrids resistant to leaf blight (*Phyllostichta hamamelidis),* which makes the cultivation of many *H.* × *intermedia* cultivars in the eastern and southern states of the USA extremely problematical.

Who would have thought a new species of *Hamamelis* would be discovered in the USA in recent times, it just goes to show, plants are out there waiting to be discovered.

Acknowledgements
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References
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