

Developments in *Mabonia*

JULIAN SHAW discusses some new and not-so-new mahonias, clarifies their identities and provides names for them

TWO YEARS AGO, plantsman Roy Lancaster discussed Chinese *Mabonia* that had been introduced to cultivation in the past two decades (Lancaster 2009). It has been my privilege to assist him and others with further studies of cultivated *Mabonia*. This article presents the results of that research and, as a result, several new taxa are described and cultivar names validated.

Mabonia gracilipes hybrids

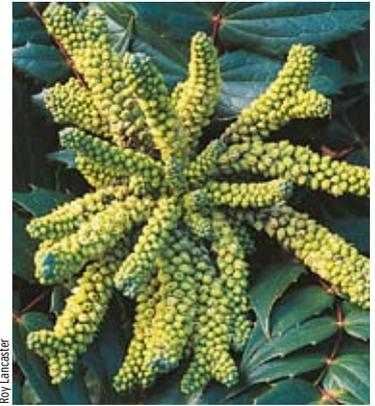
Mabonia gracilipes has contributed to two hybrids, both of which are formally named here. Horticulturally it is a distinctive species due to the white waxy underside of the leaflets. Examination under magnification reveals numerous, close-set, papillate, wax trichomes which can be easily rubbed away by hand. This waxiness is transmitted to the hybrids to varying degrees. *Mabonia x savilliana* is a name in current horticultural use (Cubey 2010, Hinkley 2009) but lacking validation, and the other hybrid discussed here, *M. x emeiensis*, is known from the wild in China and also cultivation.

A graceful variant of *Mabonia oiwakensis* subsp. *lomariifolia* collected from Yunnan is named var. *tenuifoliola*

Roy Lancaster



Roy Lancaster



Roy Lancaster

A new species (left and above) with bold leaflets on a red rachis and stout flower racemes. It was first collected in 1995 and is named *Mahonia ogisu*

Mahonia x savilliana (see description p46) has occurred spontaneously in several locations in cultivation, and is also known from the wild. It was first noted in 1986 at The Savill Garden, Surrey, after which the hybrid is named. Although variable, *M. x savilliana* can be identified by a combination of features inherited from both parents. From *M. gracilipes* it inherits the red outer sepals, the sometimes waxy white bloom on the leaflet undersides, and lateral branches often present towards the base of the inflorescences. From *M. eurybracteata* (syn. *M. confusa*) it inherits the larger number of smaller, narrower, more toothed leaflets, upright to spreading inflorescences, and densely packed flowers. Because it is so variable, each of the four cultivars presently known are described separately here (p46), based on mature specimens at The Savill Garden.

These four cultivars of *M. x savilliana* were selected at The Savill Garden from a batch of seedlings in the care of the then propagator, Martin Gardner.

Both the parent plants were collections by Roy Lancaster from Mount Omei, Sichuan, China. Many of the seedlings were given away but the four most distinct were grown on and named 'Commissioner', 'Factor', 'Ranger' and 'Verderer'.

A further hybrid of *M. gracilipes*, this time with *M. nitens*, was discovered by plant explorer Mikinori Ogisu in Sichuan, China. It is named here as *M. x emeiensis* (see description p46). The description is based on the type collection, an individual that is closer to *M. nitens*. However, Mikinori Ogisu (pers. comm. 2010) reported finding hybrid swarms of this taxon in several localities in south Sichuan, including Mount Omei, in which seedlings display wide variation particularly in leaf shape and the degree of white waxy coating on the underside. He has many more seedlings in cultivation in Japan and has been distributing gardenworthy plants to colleagues in Europe and North America.

Other collections of this hybrid in cultivation include Ogisu 94058, of

intermediate appearance with glaucous leaf undersides, and Ogisu 94059 with a green leaf underside. Ogisu observed three species of *Mahonia* at the type locality. *Mahonia nitens* grew in slightly wet bamboo (*Phyllostachys*) forest, *M. gracilipes* favoured rocky sites along a stream, and a third species yet to be described could be found as an isolated population on nearby slightly dryer slopes.

Mahonia nitens and *M. gracilipes* both bloom together from mid September to early October and are probably pollinated by *Bombus* species (bumblebees). Some populations of *M. x emeiensis* occurred with both parents, such as on Mount Omei at around 1,370m where introgressive hybridization is likely. But other hybrid populations occurred some distance from either parent, possibly due to seed dispersal by birds. Other species associated with *M. x emeiensis* include *Aucuba himalaica*, *Cotoneaster* species, *Litsea populifolia*, *Quercus oxyodon*, *Viburnum cinnamomifolium* and *V. erubescens*. ➤



Mahonia x savilliana (above left) inherits its red flower colour from *M. gracilipedi* and some of the hybrids also show a pale underside to the leaflets. The leaves of the two parents (*M. eurybracteata*, left, and *M. gracilipedi*, right) are shown with the hybrid in the centre (right top, upperside, and right above, lowerside)

DESCRIPTIONS OF NEW TAXA

***Mahonia x savilliana* J.M.H. Shaw, hybr. nov.**

Hybrida hortensis e *Mahonia gracilipedi* (Oliver) Fedde et *Mahonia eurybracteata* Fedde exorta. Foliolorum numero inter parentes media, ad illud alabastris rubris et foliis subtus glaucis-subglaucis, ad hoc racemis erectis, floribus confertis et foliolis angustioribus accedens. Type: fruiting specimen, The Savill Garden, Surrey, *M. Flanagan s.n.*, 2009 (holotype WSY, barcode WSY0133278).

For an English description, see the individual accounts under the four cultivars below.

Mahonia x savilliana 'Commissioner' Leaves 34–45 x 9.5–11cm, with 5–6 pairs of leaflets, underside light green and slightly glaucous; median leaflets ovate-lanceolate, 7.5–10 x 2–4.5cm; lowermost pair 7–8.5 x 2–3cm, not noticeably separated from others by longer rachis; terminal leaflet 9–11 x 3–4cm; leaflet margins not as spiny as other cultivars, some almost spineless; stipular spines usually present, 5–8mm. Racemes to 24cm, a few with small basal branches. Nomenclatural standard WSY, barcode WSY0133280.

Mahonia x savilliana 'Factor' Leaves 32–42 x 7–10cm, with 4–6 pairs of leaflets, underside white glaucous; median leaflets ovate-lanceolate, 9–12 x 3–4.2cm; lowermost pair slightly smaller 8.5 x 2.5–

3.8cm; terminal leaflet lanceolate, 12–14 x 4cm; stipular spines present, 5–10mm. Racemes to 30cm, unbranched. Nomenclatural standard WSY, barcode WSY01332790.

Mahonia x savilliana 'Ranger' Leaves 36–43 x 15–24cm with 5–6 pairs of leaflets, underside pale green, not glaucous; leaflets 11–16 x 2.5–3.5cm; lowermost pair smaller, ovate, 6–8 x c.2–3 cm; terminal leaflet lanceolate, 12–16 x 3–4 cm; stipular spines absent or reduced. Racemes to 19cm, a few with branches near base. Nomenclatural standard WSY, barcode WSY0133282.

Mahonia x savilliana 'Verderer' Leaves 32–36 x 6.5–8.5cm, with 4–5 pairs of leaflets, undersides pale green; median leaflets lanceolate-ovate to lanceolate, 9–12 x 2.8–3.5cm; lowermost pair more ovate, 4–10 x 2–3cm; stipular spines sometimes present, 5–6mm. Racemes to 20cm, a few branched near the base. Nomenclatural standard WSY, barcode WSY0133281.

***Mahonia x emeiensis* J.M.H. Shaw, hybr. nov.**

Hybrida e *Mahonia gracilipedi* (Oliver) Fedde et *Mahonia nitenti* C. K. Schneider exorta. Foliolis 13–17 inter parentes media, ad illud alabastris rubris, ad hoc floribus confertis et apice foliolorum acuminato longiusculo accedens. Type:

fruiting specimen cultivated in Hampshire, UK, *Lancaster s.n.*, 8 Nov 2010, grown from seed (*Ogisu 94057*) collected 1994 from a plant growing on wooded slopes at 1,370m on Zhaobaoping, Zhangcun, Hongya, Sichuan, China (holotype WSY, barcode WSY0133284). Stem green developing longitudinal brown slits with age, bearing leaves in terminal whorls; internodes 2–8cm except immediately beneath inflorescence, where 1–3 mm. Leaves 27–45 x 10–14cm, the outermost in each annual whorl longest, with the innermost 1 or 2 leaves below inflorescence reduced to 4.5 x 4cm, consisting of only 4–5 small leaflets; rachis light green, 1–2.5mm diameter, nodes swollen with prominent lateral ridge on lower surface; rachis internodes 3.9–4.5cm, progressively decreasing towards apex of leaf, lowest rachis internode widened and slightly winged towards base particularly below spines; petiolule of terminal leaflet 15–30mm. Leaflets (4–) 6–8 pairs* (plus a terminal leaflet), (5–) 7–12 x (1.5–) 3.3–4.8cm, variable in shape along each leaf, elongate-ovate to obovate or lanceolate-elliptic, basal half (or more) cuneate with entire margins, teeth spinose, 2–3(–4) along upper side, (1–) 3–4 along lower side, apex prominently acuminate extending 2.5–3 cm beyond uppermost pair of marginal teeth; only the terminal leaflet petiolulate; lowest pair of



Mahonia x emeiensis (above left) was first discovered in China but is also in cultivation; it is a hybrid between *M. gracilipes* and *M. nitens*. The leaves of the two parents (*M. nitens*, left, and *M. gracilipes*, right) are shown with the hybrid in the centre (right top, upperside, and right above, lowerside)

leaflets 2cm or less, similar in shape to upper ones, close to petiole base, often subtended by a solitary pair of stipular spines, 1–1.2cm long; upper surface of leaflets waxy, lustrous, dark green, veins slightly impressed towards base; lower surface light green, veins slightly raised. Inflorescence of 10–12 ascending racemes or racemose panicles, each 8–18cm long, panicles with a few basal branches 3–4cm long bearing 2–6 flowers. Inflorescence bracts ovate, c.0.5 x 1.5cm, apex acute, soon turning black. Floral bracts persistent, light green, thin, oblong, c.1 x 2mm, apex rounded to acute. Flowers yellow often with red outer sepals; pedicels 4–5mm, exceeding subtending bract. Berries globose, glaucous turquoise when immature, ripening to purple-black with waxy bloom, style persistent.

* in a description of *Ogisu 94057*, Lancaster (2009) inadvertently omitted the word 'pairs'.

***Mahonia ogisui* Lancaster & J.M.H. Shaw, sp. nov.**

Habitu *Mahoniae eurybracteatae* Fedde et affinis similis et nullo dubio his speciebus proxima, praecipue differt foliis basi cordatis-truncatis, margine e basi serrato, et foliis stipularum brevioribus foliis medianis. Type: flowering specimen cultivated in Hampshire (*Ogisu 95002*), Mar 2010,

plant collected 23 Jan 1995 at 1,520m at Yongfu, Muchuan, south Sichuan, China (holotype WSY, barcode WSY0133283). Resembling *M. eurybracteata* but distinguished by leaflets which are not cuneate with entire margins basally, but basally cordate to truncate with teeth present along both margins and the lowermost pair of leaflets much smaller and oblong-orbicular.

Shrub to 1.1m, attaining 2m in the wild. Leaves 40–45 x 17–20cm; rachis red; rachis internodes 2.9–4.6cm, uppermost rachis internode (bearing terminal leaflet) 1.9–2.2cm. Leaflets 8–10 pairs, overlapping or with narrow spaces between, asymmetrically lanceolate, apex acuminate-aristate, 7.5–12 x 3–4.1cm, upper and lower margins spinose with 4–7 teeth on each side – usually 1 or 2 more along the longer lower margin than the slightly shorter upper margin, veins sunken on upper surface, prominent below; terminal leaflet symmetrically lanceolate, 11.5–12 x 3.5–4cm; leaflets of lowermost pair ovate, 4.5–5 x 2.5–3cm, margins deeply spinose with 2 teeth each side of terminal spine. Inflorescence of 10–19 compact racemes, 10–15cm long, some bifurcating apically. Pedicels c.2mm. Floral bracts green, lanceolate-ovate, c.7 x 3–4mm, apex acute. Sepals yellow, outer lanceolate-ovate, 1 x 2mm, median ovate-lanceolate, 3.5 x 1.2mm,

apex acute, inner 4 x 1mm. Petals with a pair of basal glands, oblong, 3–4.15mm, apex deeply emarginate with rounded lobes. Stamens 2.5mm, anther connectives equalling or slightly extending beyond thecae, rounded. Ovary 2mm, stigma capitate.

***M. oiwakensis* Hayata subsp. *lomariifolia* (Takeda) J.M.H. Shaw comb. et stat. nov.**

Basionym: *Mahonia lomariifolia* Takeda in *Notes Roy. Bot. Gard. Edinburgh* 6: 231–232 (Jan 1917).

***M. oiwakensis* Hayata subsp. *lomariifolia* (Takeda) J.M.H. Shaw var. *tenuifoliola* J.M.H. Shaw, var. nov.**

Differt a var. *lomariifolia* foliis angustis. Type: Flowering specimen cultivated in Hampshire, UK, *Lancaster s.n.*, Nov 2010, grown from seed (*Cox 6509*) collected May 1994 from a plant growing at 2,750m on the Salween-Mekong divide, west of Lungdre, NW Yunnan, China (holotype WSY, barcode WSY0133285). Leaves 30–38 x 7–8cm, with 11–16 pairs of leaflets becoming narrower towards apex; median leaflets 2.4–4.5 x 0.8–1.7cm, margin with 3–5 teeth on each side, usually more on upper margin than lower, terminal leaflet with 6–10mm petiole.

A *Mabonia gracilipes* cultivar

One cultivar associated with *Mabonia gracilipes* is 'Spring Blush', although it is currently listed as a cultivar of *M. x savilliana*. This cultivar was selected at Bluebell Nursery, Derbyshire, from seedlings raised from fruit of *M. gracilipes* collected from The Savill Garden. It is propagated clonally from a single plant at Bluebell Nursery and is grown for the shrimp pink colour of the emerging foliage in spring. It was discussed and illustrated by Lancaster (2009) who regarded it as an unnamed selection of *M. x savilliana*.

Robert Vernon, proprietor of Bluebell Nursery, told me the origin of 'Spring Blush'. In the early 1990s the late John Bond (1932–2001), Keeper of The Savill Garden, displayed a range of *Mabonia* from the Garden as cut stems at an RHS London Flower Show. At the time *M. gracilipes* was a new introduction and the fruiting shoot attracted much attention. Robert asked John if he might have a few seeds after the show. 'No, they must go back to The Savill Garden' was the stern reply. At the end of the show Robert watched aghast as the entire display was thrown into a skip! Needless to say, Robert dived into the skip and retrieved the fruit. A few years later John Bond visited Bluebell Nursery and recognized the resultant plants. 'No words were exchanged' related Robert, 'but I knew from the look he gave me that he realized the origin of the plants'. At this point John told him that he thought the seedlings were of hybrid origin and declared them to be *M. x savilliana*, under which name it is currently listed. However, seeds from *M. gracilipes* at The Savill Garden produce both hybrids and pure *M. gracilipes*. I have examined 'Spring Blush', which bears flowers with dark red outer tepals and white central ones, typical of

M. gracilipes. I consider it to be a cultivar of *M. gracilipes*, and the unusual leaf colouration is possibly due to a virus.

A new species

A further *Mabonia* in cultivation appears to represent an undescribed species and is here named *M. ogisui* (see description p47). Mikinori Ogisu pointed out this plant to Roy Lancaster on a field trip in June 1993. The plants were discovered at Yongfu in Muchuan county, south Sichuan. In 1995, from the same location, Ogisu collected three seedlings (Ogisu 95001, 95002 and 95003). The plant of Ogisu 95002, collected at 1,520m, gave rise to the type specimen and Ogisu 95001 and Ogisu 95003 were collected at 1,450m and 1,520m respectively.

In the wild, *Mabonia ogisui* can reach 2m in height and grows on steep slopes and stream gullies in woodland. It is found in association with *Cardiocrinum giganteum*, *Cinnamomum wilsonii*, *Cornus kousa* var. *chinensis*, *Corylopsis platypetala*, *Enkianthus serrulatus*, *Epimedium acuminatum*, *Euptelea pleiosperma*, *Helwingia chinensis*, *Hydrangea aspera*, *Iris confusa*, *Litsea populifolia*, *Metapanax davidii*, *Polygonatum cirrhifolium*, *Reineckea carnea*, *Sanicula lamelligera*, *Stachyurus salicifolius* and *Viburnum cinnamomifolium*.

Mabonia lomariifolia* and *M. oiwakensis

Mabonia lomariifolia was described by H Takeda in January 1917 from collections made by plant collector George Forrest in Yunnan. Forrest observed that it might also occur in Taiwan. Evidently he was unaware that a few months earlier, in 1916, a similar species, *M. oiwakensis*, had been described by B Hayata from Taiwanese material. Ying *et al.* (in press) provide a much-needed overhaul of *Mabonia* in eastern

Asia and regard the two as one species. Consequently, if the two are regarded as conspecific the name *M. oiwakensis* has priority.

However, those who are familiar with the range of these two taxa in cultivation may find this difficult to accept. The lectotype specimen of *M. lomariifolia* (Forrest 9244 from Yunnan) at the herbarium of Royal Botanic Garden Edinburgh (E), has leaves with strong spines and long acuminate apices. While this is slightly different from the original cultivated introduction still maintained at the garden of Hidcote, Gloucestershire, it is unlike plants found in Taiwan. Plants at Crùg Farm Plants nursery, Gwynedd, from Taiwan display longer leaves with much narrower leaflets, like the lectotype of *M. oiwakensis* at the University of Tokyo herbarium (TI). Bledlyn Wynn-Jones (pers. comm. 2009) of Crùg Farm Plants reports that in several years field work on Taiwan he has only either encountered *M. oiwakensis* or the plant generally called *M. japonica* (which has also been regarded as a distinct Taiwanese endemic, *M. tikushiensis*). He has also reported observing



Leaves of *Mabonia oiwakensis* subsp. *lomariifolia* (left) and *M. oiwakensis* subsp. *oiwakensis* (right)



Bleddyn Wynn-Jones

Mahonia klossii in central Vietnam; it has been introduced to cultivation recently but may not be hardy

M. oiwakensis with leaves exceeding 1m in length and correspondingly longer leaflets; nothing like this is reported from the mainland. The collection made by plant collector Ernest Wilson (Wilson 9695) from Mount Arisan, Taiwan, has been determined as *M. oiwakensis*. However, careful study reveals that it consists of several collections grouped under the same number made over several months, consisting of a mixture of spring- and autumn-flowering individuals,



Roy Lancaster

Mahonia oiwakensis subsp. *lomariifolia* var. *tenuifoliola* showing red new foliage

with very variable foliage. It appears to represent a hybrid swarm between *M. oiwakensis* and *M. japonica* (*M. tikusbiensis*). Other collections including Wilson 9816 (the type of *M. discolorifolia*), Wilson 11059 and Price 960 that have been determined as *M. morrisonensis* also appear to belong to this hybrid. The presence on Taiwan of individuals resembling mainland *M. lomariifolia* is probably due to this hybridization. Based on this model, on the mainland *M. oiwakensis* will have hybridized with several other taxa, over the course of its former range to

produce the variable *M. lomariifolia*. Elucidation of this will require further study. In the meantime it is here proposed to recognize *M. lomariifolia* as distinct at sub-specific rank. I therefore provide the new combination *M. oiwakensis* subsp. *lomariifolia* (see p47).

Lancaster (2009) reports on a distinctive collection of *M. oiwakensis* subsp. *lomariifolia* from NW Yunnan made by Peter Cox of Glendoick Gardens, Perthshire. It has unusually narrow leaflets. It is here described as a new variety, *M. oiwakensis* subsp. *lomariifolia* var. *tenuifoliola* (see description p47)

Mahonia klossii

This little-known species is apparently endemic to central Vietnam and is known from several collections, including the type at the Natural History Museum, London. Bleddyn Wynn-Jones has collected material (BSWJ 9784) and grows it in a frost-free polytunnel where it flowered for the first time in late 2010. Further research may show that *M. annamica* Gagnep. is an earlier name for this plant.

Conclusion

I hope this article goes some way towards clarifying the identities of *Mahonia* in cultivation. I also hope it will encourage gardeners to try them.

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ACKNOWLEDGEMENTS

I would like to thank the following who have generously shared their knowledge and plants: Allen Coombes, Mark Flanagan, John Hunnex, David Jewell, Glyn Jones, Roy Lancaster, Mikinori Ogisu, Richard Sanford, Adele Smith, Robert Vernon and Bleddyn Wynn-Jones. I would also like to thank the staff at these herbaria: BM, E, K and WSY.

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