

## Names and diagnoses for three willow (*Salix* L.) hybrids discovered recently in Scotland

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### ABSTRACT

Binomials and diagnoses are provided for three distinctive willow (*Salix* L.) hybrids found in recent years in the Scottish Highlands: *Salix myrsinifolia* × *S. phylicifolia* × *S. repens* = **S. ×lochsiensis**; *Salix arbuscula* × *S. repens* = **S. ×lyonensis**; and *Salix caprea* × *S. myrsinifolia* × *S. phylicifolia* = **S. ×meikleana**.

### INTRODUCTION

Binomials and diagnoses are provided for three distinctive willow (*Salix* L.) hybrids which were discovered in recent years during field surveys of British montane willows, as summarised by Tennant (2001, 2004); full descriptions were provided by Tennant (2004). All three were discovered in montane habitats in the Scottish Highlands, but one of them (*S. ×meikleana*) has also been found in Mid-West Yorkshire (v.c. 64) (Tennant 2001, Wilcox 2001). They were all found growing near their parents and were all local and very scarce. *S. ×tetrapla* Walker (*S. myrsinifolia* × *S. phylicifolia*) was probably one parent of *S. ×lochsiensis* and of *S. ×meikleana*. Only two plants of *S. ×lochsiensis* were found in Glenshee; one plant of *S. ×lyonensis* was found on Meall Ghaordaidh, and two more near Creag Roro in 2002; and at least four plants of *S. ×meikleana* were found near Creag Roro.

### THREE NEW HYBRIDS

***Salix ×lochsiensis*** D. J. Tennant, **hybrida nova**

HOLOTYPUS: On stream-bank north-west of the Spittal of Glenshee, East Perthshire, v.c 89, GR NO07, 5.8.1997, D. J. Tennant no. GSB 2H/97 (BM).

Hybrida inter *Salicem myrsinifoliam* Salisb. et *S. phylicifoliam* L. et *S. repentem* L.

A *Salice myrsinifolia* et *S. phylicifolia* et *S. ×tetrapla* Walker (*S. myrsinifolia* × *S. phylicifolia*) habitu fruticis prostrati vel

decumbentis nanissimi, ramos longos graciles gemmasque minores ferentis; foliis multo minoribus, marginibus revolutis undulatisque, primo dense sericeis, postea rarius sericeis, denique abaxialiter subglabris; petiolis saepe rubellis; amentis numerosioribus, minoribus, flores prorsum spectantes ferentibus, in pedunculis brevibus lateralibus portatis; amentorum squamis angustioribus, involventibus, omnino viridibus vel nonnunquam dilute brunneis; ovariis capsulisque brevioribus distinguitur. Praeterea a *S. myrsinifolia* stipulis paucissimis vel absentibus et ovariis pubescentibus; a *S. phylicifolia* foliis serratis, dentes rubellos saepe ferentibus, abaxialiter venationem prominentem praebentibus, abaxialiter fere persistente sericeis minusque glaucis, et pedicellis longioribus et stylis brevioribus distinguitur.

A *Salice repenti* foliis magis undulatis, distinctissime serratis, dentes saepe curvatos acutos rubellos ferentibus, abaxialiter venationem prominentem praebentibus; amentorum squamis hirsutioribus, saepe anguste obovatis; stigmatibus longioribus distinguitur.

A *Salice ×schraderiana* Willd. (*S. phylicifolia* × *S. repenti*) foliis angustius obovatis (minus anguste ellipticis), obtusioribus, magis serratis, magis undulatis, dilute viridibus vel minus glaucis, abaxialiter venationem magis prominentem praebentibus; stipulis paucis nonnunquam praesentibus distinguitur.

Hybrid between *Salix myrsinifolia* Salisb., *S. phylicifolia* L. and *S. repens* L.

Distinguished from *S. myrsinifolia*, *S. phylicifolia* and *S. ×tetrapla* Walker (*S. myrsinifolia* × *S. phylicifolia*) by being a prostrate or decumbent, very dwarf shrub with long, slender branches and smaller buds; by its leaves much smaller with revolute, undulate margins, initially densely sericeous, later more thinly sericeous, eventually subglabrous abaxially; by its petioles often reddish; by its catkins more numerous, smaller, with forward-directed

flowers, and on short, lateral peduncles; by its catkin-scales narrower, involvent and wholly green or sometimes pale brown; and by its ovaries and capsules shorter. It is further distinguished from *S. myrsinifolia* by its stipules very few or absent and by its ovaries pubescent and from *S. phylicifolia* by its leaves serrate, often with reddish teeth, with prominent raised venation abaxially, almost persistently sericeous and less glaucous abaxially, by its pedicels longer, and by its styles shorter.

Distinguished from *S. repens* by its more undulate leaves very distinctly serrate, with often curved, acute, reddish teeth and with prominent raised venation abaxially; by its catkin-scales more hairy and often narrowly obovate; and by its stigmas longer.

Distinguished from *S. ×schraderiana* Willd. (*S. phylicifolia* × *S. repens*) by its leaves more narrowly obovate (less narrowly elliptic), more obtuse, more serrate, more undulate, and pale green or less glaucous with more prominent venation abaxially; and a few stipules sometimes present.

***Salix* × *lyonensis*** D. J. Tennant, **hybrida nova**

HOLOTYPUS: On rock-ledge, Meall Ghaordaidh in Glen Lyon, Mid Perthshire, v.c. 88, GR NN54, 1.9.1994, D. J. Tennant no. MG 2C/94 (BM).

Hybrida inter *Salicem arbusculam* L. et *S. repentem* L.

A *Salice arbuscula* foliis minoribus, hebetioribus, abaxialiter minus glaucis, margines magis revolutos praebentibus, dentes pauciores minores ferentibus, adaxialiter persistentius appresso-pubescentibus, abaxialiter persistente vel dense sericeis; amentis squamas longiores ferentibus distinguitur.

A *Salice repenti* foliis distincte serratis vel glanduloso-serratis, in sicco non nigrescentibus; amentis magis compactis, breviter pedunculatis, cum foliis primum visis, flores patentes (non prorsum spectantes) squamasque latiores, ad apicem brunneas, densius pubescentes, ferentibus; ovariis densius pubescentibus, pedicello brevioribus, capsulam minorem parientibus, distinguitur.

A *Salice* × *pseudoglauca* Andersson (*S. arbuscula* × *S. lapponum* L.) foliis minoribus, saturatius viridibus, nitidioribus, distinctius serratis, margines magis revolutos

praebentibus, adaxialiter glabrioribus, abaxialiter pilos non nisi breves sericeos (non tomentosos) ferentibus; amentis minoribus, ovaria capsulasque minores ferentibus, distinguitur.

Hybrid between *Salix arbuscula* L. and *S. repens* L.

Distinguished from *S. arbuscula* by its leaves smaller, duller, less glaucous abaxially, with more revolute margins, with fewer smaller teeth, more persistently appressed-pubescent abaxially, persistently sericeous to densely so abaxially; and by its catkins with longer catkin-scales.

Distinguished from *S. repens* by its leaves distinctly serrate or glandular-serrate, not blackening when dried; by its catkins more compact, shortly pedunculate, appearing with the leaves, with patent (not forward-directed) flowers, with wider, brown-tipped, more densely pubescent catkin-scales; and by its ovaries more densely pubescent, with a shorter pedicel and producing a smaller capsule.

Distinguished from *S. ×pseudoglauca* Andersson (*S. arbuscula* × *S. lapponum*) by its leaves smaller, deeper green, glossier, more distinctly serrate, with more revolute margins, more glabrous adaxially, with only short sericeous (not tomentose) hairs abaxially; and by its catkins smaller, with smaller ovaries and capsules.

***Salix* × *meikleana*** D. J. Tennant, **hybrida nova**

HOLOTYPUS: On stream-bank, Allt a' Chobhair, Creag Roro, Glen Lyon, Mid Perthshire, v.c. 88, 7.7.2000, D. J. Tennant no. CR 9/00 (E).

Hybrida inter *Salicem capream* L. et *S. myrsinifoliam* Salisb. et *S. phylicifoliam* L.

A *Salice caprea* foliis adaxialiter vividius nitidiusque saturatiusque viridibus, abaxialiter plerumque glabris; ovariis brevioribus, pro ratione latioribus, stylum distinctum et stigmata vix longiora ferentibus, distinguitur.

A *Salice myrsinifolia* fruticis plerumque excelsioris habitu; foliis latioribus, magis coriaceis, adaxialiter vividius nitidiusque plerumque saturatius viridibus, minus pubescentibus, in sicco non nigrescentibus; ovariis uniformiter pubescentibus, stigmata vix longiora ferentibus, distinguitur.

A *Salice phylicifolia* ramunculis lentius glabrescentibus; foliis magis serratis (quorum

maxima ad apicem basinque latius rotundata sunt), apicem versus et adaxialiter in costa persistente sed tenuiter pubescentibus, abaxialiter venationem magis prominentem praebentibus; stipulis plerumque bene effectis; pedicellis longioribus ubi capsulae effectae sunt; stylis paulo brevioribus distinguitur.

A *Salice*  $\times$  *latifolia* Forbes (*S. caprea*  $\times$  *S. myrsinifolia*) foliis maximis plerumque latoribus, ad apicem obtusioribus, magis coriaceis, adaxialiter vividius nitidiusque saturatiusque viridibus, abaxialiter plerumque glabris, in sicco non nigrescentibus, distinguitur.

Ab hybrida *Salice caprea*  $\times$  *S. phylicifolia* foliis apicem versus et adaxialiter in costa persistentius sed tenuiter pubescentibus, abaxialiter plerumque glabris; stipulis saepe majoribus distinguitur.

A *Salice*  $\times$  *tetrapla* Walker (*S. myrsinifolia*  $\times$  *S. phylicifolia*) praecipue gemmis majoribus, luteolis; foliis maximis pro ratione latoribus, ad apicem basinque latius rotundatis, in sicco non partim nigrescentibus; stipulis saepe magis effectis distinguitur.

Hybrid between *Salix caprea* L., *S. myrsinifolia* Salisb. and *S. phylicifolia* L.

Distinguished from *S. caprea* by its leaves brighter, glossier, deeper green adaxially and usually glabrous abaxially; and by its ovaries shorter and relatively broader, with a distinct style and marginally longer stigmas.

Distinguished from *S. myrsinifolia* by being a usually taller bush; by its leaves wider, more coriaceous and brighter, glossier, usually deeper green adaxially, less pubescent, and not blackening when dried; and by its ovaries uniformly pubescent with marginally longer stigmas.

Distinguished from *S. phylicifolia* by its twigs more slowly becoming glabrous; by its leaves more serrate and persistently but thinly pubescent near the apex and on the midrib adaxially, with more prominent venation abaxially, the largest leaves more broadly rounded at the apex and base; by its stipules usually well developed; by its pedicels longer when capsules have developed; and by its styles slightly shorter.

Distinguished from *S.  $\times$  latifolia* Forbes (*S. caprea*  $\times$  *S. myrsinifolia*) by its largest leaves usually broader, more obtuse at the apex, more coriaceous, brighter, glossier, deeper green adaxially, usually glabrous abaxially, and not blackening when dried.

Distinguished from *S. caprea*  $\times$  *S. phylicifolia* by its leaves more persistently but thinly pubescent near the apex and on the midrib adaxially and usually glabrous abaxially; and by its often larger stipules.

Distinguished from *S.  $\times$  tetrapla* Walker (*S. myrsinifolia*  $\times$  *S. phylicifolia*) mainly by its buds larger and yellowish; by its largest leaves relatively broader, more broadly rounded at the apex and base, and not blackening in parts when dried; and by its stipules often more developed.

This hybrid is named after Robert Desmond Meikle in recognition of his long service and considerable contribution to the study of British willows.

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