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## ***Malva weinmanniana* (Besser ex Rchb.) Conran, a new name for the pink-flowered form of *M. preissiana* Schldl. (Malvaceae)**

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### **Abstract**

The two morphotypes of the Australian endemic *Malva preissiana* Miq. (Austral Hollyhock) are here regarded as separate, distinct species with the white-flowered *M. preissiana* a coprophilic halophyte on seabird-dominated near-shore islands, or rarely mainland shores or inland salt lakes used by seabirds. *Malva weinmanniana* (Besser ex Rchb.) Conran, based on *Lavatera weinmanniana* Besser ex Rchb., is the new name applied to the more common, pink-flowered, largely mainland taxon. The names *L. weinmanniana*, *L. plebeia* var. *eremaea* J.M.Black., *L. plebeia* var. *tomentosa* Hook.f., and *M. behriana* Schldl. are lectotypified and their statuses discussed. A key to the taxa and a table of comparisons is supplied.

**Keywords:** *Malva*, *Lavatera*, Malvaceae, hybrid, nomenclature, taxonomy, southern Australia, South Australia, Western Australia, Victoria.

### **Introduction**

The two ecotypes of the Australian endemic *Malva preissiana* Miq. (Austral Hollyhock) discussed in Barker & Conran (2007) are here regarded as separate, distinct species, based on morphological and ecological differences (Moore 1994, Lewis 1999). The white-flowered *M. preissiana* is primarily found on near-shore islands of the southern coast of Australia (Rippey *et al.* 2002, Zed *et al.* 2006), or more rarely from mainland shores or inland salt lakes associated with seabirds. *Malva preissiana* has for some time been recognised as being threatened by competition from, and hybridisation with, the introduced *M. arborea* (L.) Webb & Berthel. across its range and is in need of conservation (Rippey *et al.* 2002, Rippey 2004). The pink-flowered taxon, *M. weinmanniana* (Besser ex Rchb.) Conran, does not appear to be threatened but there is the necessity to be able to distinguish between all of the taxa concerned for conservation and monitoring purposes.

The differences between these taxa are summarised in Table 1 and a comparison of the flowers is shown in Fig. 1.

### **Key to taxa in the *Malva preissiana* complex and their hybrid with *M. arborea***

1. Leaves well-spaced along stems, upper surface much less tomentose than lower ..... *Malva weinmanniana*
- 1: Leaves crowded together on stems and densely tomentose on both surfaces
2. Flowers deep cerise pink with a dark purple to black centre ..... *Malva arborea*
- 2: Flowers white to pale pink with a pale centre
3. Epicalyx lobes shorter than the calyx lobes .....  
..... *Malva preissiana*
- 3: Epicalyx lobes and calyx lobes of similar length ....  
..... *Malva arborea* × *M. preissiana*

### **The *Malva preissiana* complex**

Images of most type specimens cited are available on the following web-sites:

- herbarium.univie.ac.at/database/search.php (HAL)
- apps.kew.org/herbcat/navigator.do (K)
- www.lu.se/biological-museums/botanical-museum/databases (LD)
- www.plants.jstor.org (LD, K, TCD).

Specimens accessible through these databases are indicated with an asterisk.

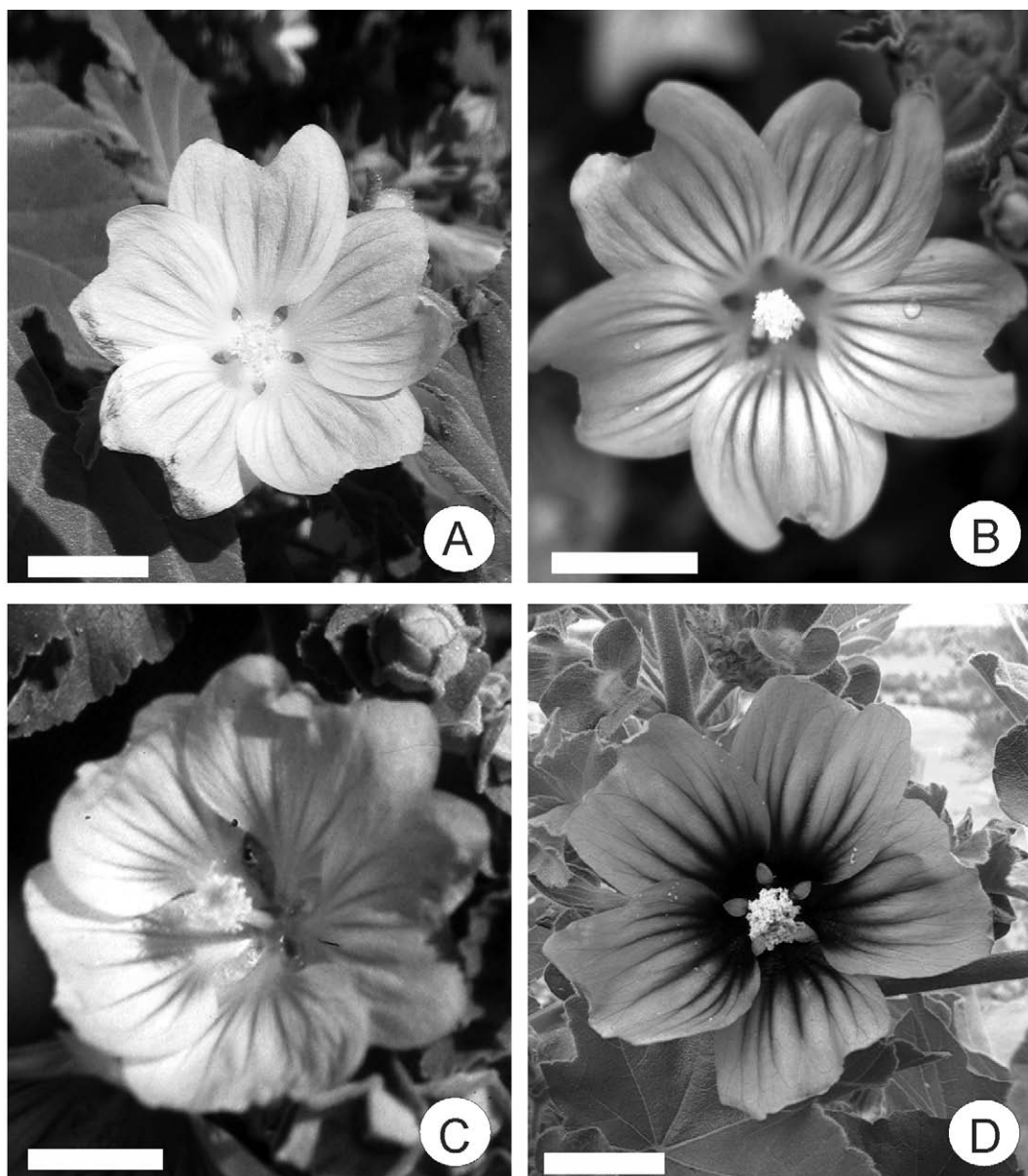


Fig. 1. Flowers of the two native *Malva* species, *M. arborea* and the natural hybrid. **A** *M. preissiana* (Conran 857, ADU); **B** *M. weinmanniana* (Conran 2038, ADU); **C** *M. arborea* × *M. preissiana* (Rippey 169, PERTH); **D** *M. arborea* (Conran 1527, ADU). Scale bars 10 mm. See front cover of journal for colour reproductions of these photographs.

### 1. *Malva preissiana* Miq.

Miq. in Lehm., Pl. Preiss. 1(2): 238 (1845). — **Type citation:** “L. Preiss 1893, 14 Nov. 1839, Crescit in insula Penguin-Island” [S of Cape Peron, Rockingham, WA, fide Marchant (1990)]. **Syntypes:** LD 1065806!\*; TCD 0010674!\*, labelled “No. 654”; MEL 1528422! (ex Herb. Steetz); MEL 2282397!

*Lavatera plebeia* Sims var. *tomentosa* Hook.f., J. Bot. (Hooker): 412 (1840). — **Type citation:** “Near Woolnorth. Mr Gunn (n. 655), (also in New Holland, Cunningham).” **Lectotype (here designated):** R. Gunn 655/18 [3]7, 24 Nov. 1836, Van Diemens Land, near Woolnorth (K000659311!\*, p.p., ex Herb. Hook.; Fig. 2). **Possible syntype or isosyntype:** A. Cunningham 87, [Jan 7] 1818, King George Sound (K000659315!\*, p.p. *L. australis* Schrad. ex Colla, Hortus Ripul. 1: 134 (1824), nom. nud.

[*Lavatera plebeia* auct. non Sims: Benth., Fl. Austral. 1: 185 (1863), p.p; F.Muell., Pl. Indigenous Colony Victoria 1: 166 (1860), p.p.; J.M.Black, Fl. S. Austral. 3: 373 (1926), p.p; J.M.Black, Fl. S. Austral. ed. 2, 3: 554 (1952), p.p.; W.R.Barker in Jessop & Toelken, Fl. S. Austral. 2: 833 (1986), p.p.]

[*Lavatera australis* auct. non Schrad. ex Colla: J.M. Black Fl. S. Austral. 3: 373 (1926).]

[*Lavatera plebeia* Sims var. *eremaea* auct. non J.M.Black: J.M.Black, Fl. S. Austral. 3: 373 (1926), p.p. (only as to T.G.B. Osborn s.n., Jan 1922, Franklin Islands, AD 96303018!).]

[*Malva behriana* auct. non Schldl.: W.R.Barker et al., Census S. Austral. Vasc. Pl. ed. 5 (= J. Adelaide Bot. Gard. Suppl. 1), 93 (2005), p.p.]

[?*Lavatera hispida* auct. non. Desf.: Benth., Fl. Austral. 1: 186 (1863) (see below)]

**Table 1.** Comparison of *Malva preissiana*, *M. weinmanniana*, *M. arborea* and the hybrid *Malva arborea* × *M. preissiana*.

Character	<i>Malva preissiana</i>	<i>Malva weinmanniana</i>	<i>Malva arborea</i> × <i>Malva preissiana</i>	<i>Malva arborea</i>
Habit	Usually sympodial and multi-stemmed at the base	± Monopodial, branches mostly arising along a main central stem	± Monopodial	± Monopodial
Stems	Densely tomentose	Densely tomentose	Densely tomentose	Sparsely hairy to subglabrous
Leaf arrangement	Clustered apically, internodes short	Widely spaced along stems, internodes long	Clustered apically, internodes short	Clustered apically, internodes short
Leaf indumentum	More or less equally densely tomentose on both surfaces	Less tomentose above; moderately to densely tomentose below	Tomentose on both surfaces	Tomentose on both surfaces
Leaf upper surface colour	Dark grey-green	Greyish yellow-green	Dark grey-green	Dark green
Pedicels	Usually shorter than the petals	Usually longer than the petals	Equalling calyx	Exceeding calyx
Epicalyx (bracteoles)	Not exceeding calyx	Not exceeding calyx	Equalling calyx	Exceeding calyx
Calyx in fruit	Enclosing mericarps	Enclosing	Enclosing	Not enclosing
Petal shape	Obovate	Obovate	Broadly reniform	Truncate-obovate
Petal apex	Deeply notched	Deeply notched	Shallowly notched	Truncate
Petal colour	White; unmarked to faintly mauve-striped	Pale pink; pink-striped	Pink; deeper pink-striped	Cerise; maroon-striped
Petal base and claw colour	Pale greenish	Pale yellowish	Pink	Deep blackish-maroon
Mericarps	11–12	11–12	10–11	6–7
Habitat	Coastal and offshore islands	Generally inland	Coastal and offshore islands	Coastal and offshore islands
Soil/nutrient preference	Coprophilic	Disturbed soil, not coprophilic	Coprophilic	Coprophilic, nutrient-rich, or disturbed soils

**Typification of *Malva preissiana* Miq.**

Preiss's collection of *Malva preissiana* in the Lund herbarium is available for viewing on the web as is another duplicate in the herbarium of Trinity College Dublin. However the authors have yet to see the Preiss collection from Miquel's own herbarium in Utrecht and so lectotypification of the name has not been undertaken. Other species named by Miquel in *Plantae Preissiana* have almost invariably been lectotypified by a specimen from Utrecht; e.g. see citations for a number of *Casuarina* L. and *Leptomeria* R.Br. species in the Australian Plant Name Index (APNI 2011–2012).

**Placement of Bentham's *Lavatera hispida* Desf.**

Bentham (1863) included *Lavatera hispida* Desf. (now generally considered to be *L. olbia* L. within *Lavatera* s.str., see Molero Briones & Montserrat Martí 2007) in his account of Malvaceae in *Flora Australiensis*, describing it as:

a hirsute species with nearly sessile flowers forming a long terminal raceme or interrupted spike, and with broad hirsute involucre, a native of the Mediterranean region, appears to be naturalized in some islands of Bass's Straits (*F. Mueller*).

From Bentham's description, the specimens might belong to *M. preissiana*, or possibly represent naturalised material of *Malva arborea* (L.) Webb & Berthel, both of which are characteristically tomentose. However, at this stage no Mueller specimens from the Bass Strait Islands have been located in MEL and a search of Bentham's herbarium at Kew is required. Until specimens are located, the identity of this material and the application of the name remain unknown.

**Typification of *Lavatera plebeia* var. *tomentosa* Hook.f.**

In describing var. *tomentosa*, Hooker (1840) states:

This seems to be the species alluded to under *L. plebeja*, in the *Bot. Mag.* as having been collected on the south coast of New Holland. The var. β [= *tomentosa*] differs from the described state of *L. plebeja*, in having the upper side of the leaf equally tomentose as the underside.

A sheet in Hooker's herbarium in K (K000659311 ex Herb. Hook.), reproduced here in Fig. 2, has a typical Gunn label with the number 655/18[3]7. It has been annotated as "L. plebeia Sims β" and also bears the collecting locality Woolnorth for the 24<sup>th</sup> November 1836. The label is clearly in agreement with the protologue. An additional locality on the label, Trefoil



Fig. 2. Lectotype (bottom left and top right branches) of *Lavatera plebeia* var. *tomentosa* (K 000659311). Available at [apps.kew.org/herbcat/getImage.do?imageBarcode=K000659310](https://apps.kew.org/herbcat/getImage.do?imageBarcode=K000659310) and used with the permission of the Trustees of the Royal Botanic Gardens, Kew.

Island, may or may not relate to the same date but it does suggest that there are two collections present. At the time of collection Gunn was the Police Magistrate at Circular Head in NW Tasmania and he made numerous trips to Woolnorth by the Van Diemen's Land schooner (Buchanan 1990); presumably one of these trips may have been extended further north to Trefoil Island off the NW coast of Tasmania.

Three of the specimens on the sheet have been identified with this label by a pencil line – the two on the bottom left and the one on the right hand side. At an earlier stage the label was presumably attached to one or all of these specimens. All of the specimens comply with Hooker's statement about the hairiness of the leaf, and there is a note by G. Krebs (Herbarium, University of Leipzig), dated 28<sup>th</sup> May 1985, that they represent type material.

The Cunningham specimen mounted on the same sheet as the lectotype (K 000659310!\*, Fig. 2) is from Peel's Range (now Cocoparra Range), New South Wales and is labelled as *Lavatera australis*. It is *M. weinmanniana* (see below). Even though it is a Cunningham collection in Hooker's own herbarium, it bears a different name and is not in agreement with the protologue with respect to the hair covering on the leaves and so is presumed not to be the Cunningham specimen alluded to by Hooker in the protologue.

A sheet from Bentham's herbarium also has a Cunningham specimen (*A. Cunningham* 87; K 000659313\*), collected in 1818 and mounted with a Horticultural Society of London specimen dated 6.9.[18]29 (K 000659315\*). The Horticultural Society specimen is *M. weinmanniana*, while the Cunningham collection is *M. preissiana*. The latter possibly represents the Cunningham material alluded to in the protologue and therefore may be syntype or isosyntype material of Hooker's var. *tomentosa*.

#### Note

A specimen (*Andrews* 254; K 000659318\*) in Bentham's herbarium, collected in the vicinity of Lake Eyre in Nov. 1875, also appears to be *M. preissiana*. Although far outside the normal coastal and offshore island range of this taxon, Lake Eyre is a major seabird rookery at times of inundation and the saline, guano-enriched rookery soils there could easily provide a suitable habitat for seeds carried by coastal seabirds migrating to these new, ephemeral breeding grounds.

## 2. *Malva weinmanniana* (Besser ex Rchb.) Conran, *comb. nov.*

*Lavatera weinmanniana* Besser ex Rchb., Iconogr. Bot. Exot. 1: t. 60 (1824), plate with analysis (Art. 42.3); p. 45 (1825), description; pp. xiv, 68 (1827), notes & addendum. — **Type citation (from the 1825 description):** "in Nova Hollandia, teste cl. Besser l.c. floret in hortis sub dio ad a Julio ad auctumnum". **Lectotype (here designated):** Reichenbach's plate t. 60! (Fig. 3).

*Lavatera plebeia* Sims, Bot. Mag. 48: pl. 2269 (1821), nom. illeg., non *M. plebeja* Stev., Bull. Soc. Imp. Naturalistes

Moscou xxix. (1856) I. 325. Benth., Fl. Austral. 1: 185 (1863), p.p.; F. Muell., Pl. Indigenous Colony Victoria 1: 166 (1860), p.p.; J.M. Black, Fl. S. Austral. 3: 373 (1926), p.p.; J.M. Black, Fl. S. Austral. ed. 2, 3: 554 (1952), p.p.; W.R. Barker, Fl. S. Austral. 2: 833 (1986), p.p. — *Althaea plebeia* (Sims) Schult. ex Steud., Nomencl. Bot. ed. 2, 1: 210 (1840). — *M. australiana* M.F. Ray, Novon 8: 291 (1998). — **Type:** Sim's plate 2269! (see discussion in Ray 1998, p. 292. The implication is that this might be considered to be the holotype, but this designation is not used).

*Lavatera australis* A. Cunn. ex Hook. f., J. Bot. (Hooker) 2: 412 (1840), nom. nud. (based on a Cunningham collection from Peel's Range, now Cocoparra Range, New South Wales, and labelled as *Lavatera australis*; see K 000659310\* and lectotypification of *L. plebeia* var. *tomentosa*, above).

*Malva behriana* Schltl., Linnaea 20: 633 (1847). — *Lavatera behriana* (Schltl.) Schltl., Linnaea 24: 699 (1852). — **Type citation:** "In Thale des Murray-Flusses. Juli." [Behr]. **Lectotype (here designated):** *H.H. Behr* s.n., July [1845], In Thale des Murray-Flusses (HAL 0098406!\*). **Possible syntype or isosyntype:** *F. Mueller* s.n., Australia (K 000659320\*).

*Lavatera plebeia* Sims var. *eremaea* J.M. Black, Fl. S. Austral. 3: 373 (1926), p.p. — **Type citation:** "Ardrossan, Y.P.; Caroon, E.P. Ooldea; Franklin Islands; along the Great Bight". **Lectotype (here designated):** *T. Richards* s.n., Nov. 1879, Euria (AD 96303017! p.p.). **Syntypes:** *O. Tepper* s.n., 1879, Ardrossan (AD 96303017! p.p.); MEL 1528294 n.v.); *R. Tate* s.n., 8 Feb. 1879, Gully Bunda Cliffs E from Wilson Bluff (AD 96303017! p.p.) — all from J.M. Black's herbarium at AD and annotated as var. *eremaea*. **Possible syntype:** *Anon. s.n.*, in Herb. J.M. Black, 24 Sep. 1920, Ooldea (AD 97612120B!), not annotated as var. *eremaea* by Black. **[Excluded syntype:** *T.G.B. Osborn* s.n., Jan 1922, Franklin Islands (AD 96303018!) — see *M. preissiana*.]

## The identity and validity of *Lavatera weinmanniana* Besser ex Rchb.

As with previous workers we had thought that this name was illegitimate until the proof stage of this paper, when it was discovered that the protologue of *L. weinmanniana* was merely the illustration (Reichenbach 1824) and not the associated description (printed a year later, in 1825), which included earlier names in synonymy. While the description no longer forms part of the protologue it is needed to check against earlier publications using this same name and also to provide an identification of the taxon concerned and ensure that it is associated with the correct Australian species.

In describing *Lavatera weinmanniana*, Reichenbach attributed the name to von Besser and referred to von Besser's (1823a) *Cat. Hort. Cremen.*, presumably a list of plants growing in the gardens administered by von Besser at Kremenets in western Ukraine. We have not been able to find a copy of this publication, but since it seems to be a list of names and since other names listed in this same publication, such as *Melilotus pallidus* Besser and *Rumex reticulatus* Besser, have been legitimised in later publications, we have treated von Besser's name as a nomen nudum. It may be that the publication referred to was von Besser's (1823b) seed list of the same year

for the same gardens and here the name was certainly a nomen nudum.

Reichenbach's name might still have been a later homonym because earlier in the same year de Candolle published *Lavatera weinmanniana* Trev. ex DC. However further investigation revealed that de Candolle (1824) had merely listed *L. weinmanniana* as a queried synonym of *L. sylvestris* Brot. (= *Malva linnaei* M.F.Ray); the author "Trev." who provided the original name is assumed to be L.C. Treviranus, Professor of Botany at the University of Bonn; no publication by him using this name has been traced.

Based on the protologue illustration and the later published description, especially the reference to pink flowers and widely-spaced sub-glabrous leaves, the species is clearly associated with the pink-flowered mainland taxon, and the name has been adopted here.

#### **Publication and typification of *L. weinmanniana* Besser ex Rchb.**

The publication of *L. weinmanniana* by Reichenbach was a protracted affair and our interpretation and acceptance of this name is reliant on the publication dates given in *TL-2* (Stafleu & Cowan 1983) being correct.

Reichenbach's illustration of *Lavatera weinmanniana* (Fig. 3) was published as plate 60 in 1824, the year before the publication of the detailed description of the species on p. 45. It has always been assumed that the publications were at the same time and so the citation of earlier names in the synonymy accompanying the description and notes on *L. weinmanniana* led to it being deemed an illegitimate name. However if it is just the illustration that forms the protologue, and this meets all of the criteria for valid publication, then the name has to be considered valid. Since the illustration includes a flowering branch with leaves as well as dissections of the various parts of the plant, viz. external and internal views of the calyx, the young fruit, the columella with a single carpel attached and a dorsal view of the carpel, it meets the requirements of the botanical code (Art. 42.3 & 42.4; McNeill et al. 2006), for an illustration with analysis, even though the caption was published with the later description, and the description is needed in order to determine some of the finer detail.

Subsequent mentions of *L. weinmanniana* in the same work include p. xiv of a section titled 'Erstes hundert' (The first one hundred, viz. of plates), which is in German and includes some horticultural notes as well as the comment that the plant is also called *L. australis* and *L. plebeja*, and that the name *L. sylvestris* was applied erroneously; this was published in 1827. In the same year a further section entitled 'Addenda et emendanda ad Centuram primam' included the statement on p. 68 that *L. weinmanniana* was the same as *L. plebeia*, but not *L. sylvestris*:

*L. weinmanniana* convenit omnino *L. plebeia* Sims Bot. Mag. 2269, cui pariter adscribiter patria Nova Hollandiae, est minime *L. sylvestris*

Since the illustration is the basis for the name, it has here been designated as the lectotype. According to Stafleu & Cowan (1976–1988), the plates were hand-coloured copper engravings, this particular one by Reichenbach himself, although others were by Humm. There is no colour associated with the copy of the illustration reproduced here from the volume held by the library of the National Herbarium of Victoria (Fig. 3) and nor is there any colour associated with the copy of this publication available on the web.

Whether there are any extant specimens in what remains of Reichenbach's herbarium in W has not been established, but the name was clearly used in horticultural circles for some time before its publication and so there may well be some specimens with this name in European herbaria.

#### **Etymology**

Johannes Anton Weinmann (1782–1858), whose name presumably provides the epithet for this species, was a German born Russian botanist and gardener who worked in Dorpat (Tartu) in Estonia from 1804–1813 and then for Empress Maria Feodorowna (1759–1828), "Mother of Czars" (Grant 1905), at her palace in Pavlovsk, St Petersburg, Russia. The association of his name with the species in horticultural circles predated the protologue as indicated above, but there is no indication of why his name was used and what connection he had with Australian plants. This was however the peak of interest in Europe in plants from Australia and there was considerable exchange between the various gardens.

W.S.J.G von Besser (1784–1842), who is credited with naming the species after Weinmann, was an Austrian-Polish botanist at Kremenets, western Ukraine (then Russia), while Ludwig Reichenbach (1793–1879) was a German botanist and artist, and director of the Dresden botanical garden (Stafleu & Cowan 1976–1988).

#### **Lectotypification of *Malva behriana* Schldl.**

Although there are no original labels by Behr on the specimen in HAL it bears the same information as is given in the protologue and is clearly the specimen used by Schlechtendal, then editor of *Linnaea* and resident in Halle, in describing *M. behriana*. It is therefore the obvious choice for lectotype of this name. A specimen at K in Herb. Bentham (K 000659320\*) received from Mueller and previously in Sonder's herbarium has also been annotated with this name and may represent syntype or isosyntype material, although it was annotated on the 16<sup>th</sup> May 1985 by G. Krebs: "In my opinion not once [sic] of the 3 exemplars is a Holo-, Iso- or Syn typus." While the leaves appear similar to those of the lectotype and flowers are present on both collections, the material in K does seem to be at a somewhat later stage since, unlike the lectotype, there appear to be young fruits present.



Fig. 3. Reichenbach's (1824) illustration and lectotype of *Lavatera weinmanniana*. Reproduced with permission from the State Botanical Collection, Royal Botanic Gardens Melbourne.



### Placement of *Lavatera plebeia* Sims

Ray (1998) designated Sim's (1821) plate as the type, and the depiction of widely spaced leaves and pink flowers with a yellowish centre supports its placement here. Furthermore, the accompanying description implies that the upper leaf surface is less hairy than the lower and also indicates that the original specimen was from an inland expedition beyond the recently crossed Blue Mountains. This evidence was also no doubt utilised by previous workers in establishing a typical variety in relation to var. *eremaea* J.M.Black and var. *tomentosa* Hook.f. (e.g. Black 1926, Barker 1986), or by its exclusion from the taxon representing the tomentose form (Hooker 1840).

Of interest is the further comment that this species was different from Robert Brown's collection of a "nearly related, but distinct species" from the south coast, presumably a reference to Brown's collections from Seal Island in King Georges Sound, Western Australia, and from Mt Brown in South Australia. Both of these specimens are entered in the Brown database (Chapman et al. 2001) as *L. plebeia* and need to be re-examined so that they can be correctly named.

### Lectotypification of *Lavatera plebeia* var. *eremaea* J.M. Black.

The Richards collection from Euria in the Penong area of South Australia was chosen as lectotype since it is most representative of the taxon and has been annotated with the varietal name by J.M. Black. It consists of the two specimens on the left hand side of the sheet, both of them with flowers and fruits. It is mounted on the same sheet as two of the syntypes: Tate's collection from Gully Bunda Cliffs on the Bight near the Western Australian border, consisting of two small branches with flowers and fruits, and Tepper's collection from Ardrossan on Yorke Peninsula, which consists of four small branches. Both of these syntypes have also been annotated by J.M. Black as var. *eremaea*. The Tepper collection is somewhat atypical for *M. weinmanniana* being particularly hirsute and with very small leaves. Nevertheless, it still falls within the range of variation seen in this species, resembling the occasional salt-stressed plants seen from Bass Strait and offshore islands in Western Australia.

The other possible syntype in the Black herbarium, collected from Ooldea, has not been annotated as var. *eremaea* by Black and consists merely of a long piece of stem with a single leaf.

Osborn's collection from Franklin Islands near Cowell is an excluded syntype since it represents typical *M. preissiana*; it has been annotated as var. *eremaea* by Black. A specimen from Caroon on Eyre Peninsula has not been found in AD at this time.

### 3. *Malva arborea* × *M. preissiana*

Occasional sterile hybrids between these two species have been recorded in Western Australia (Rippey 2004). It has been known for some time that the introduced *M.*

*arborea* is replacing the native *M. preissiana* on offshore islands in South Australia, Victoria and Western Australia (Rippey 2004) and so there is a clear need to be able to distinguish between the hybrid and the two parents for those involved in monitoring such changes.

The hybrid can be distinguished easily from both *M. preissiana* and *M. weinmanniana* by having the epicalyx (bracteoles) and calyx lobes of similar length, whereas the epicalyx lobes of the native taxa are shorter than those of the calyx (Table 1). The hybrid also tends to have broader, less apically notched petals with only very faint striping and a darker pink claw, whereas both native species have prominently notched petals and pale greenish-yellow claws (Fig. 1). While the hybrid and *M. weinmanniana* both share pink flowers, the former is much more tomentose overall than *M. weinmanniana*, has an upper leaf surface which is less hairy than the lower and usually bears c. 12 mericarps per fruit.

### Acknowledgements

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