

The attractively marked leaves of *Petrocosmea cryptica* 'Whirlpool'



Jon Evans

A new species of *Petrocosmea*

JULIAN SHAW discovers that a gesneriad that has been in cultivation under the wrong name for more than 10 years is a new species

A VERY ATTRACTIVE gesneriad with yellowish veined green leaves forming strikingly neat rosettes has been gaining in popularity with growers of alpine gesneriads (Drew 2003). It has even won a showbench award (Drew 2002). Usually it is labelled *Petrocosmea rosettifolia* or *Petrocosmea* G25KC00.

I have studied published accounts (Wang 1985, Wang *et al.* 1998, Li &

Wang 2005) and herbarium specimens at Edinburgh, Kew and the Natural History Museum, London, and have found it to be an undescribed species belonging to section *Anisochilus*. It originated in China and has been distributed by Chen Yi (Kaichen Nursery, China) from about 1998. It is named here as *Petrocosmea cryptica* (see description p178). The epithet *cryptica* refers to

the identity of this species being hidden during the 10 or more years it has been in cultivation.

Similar species

True *P. rosettifolia* C.Y. Wu ex H.W. Li differs from *P. cryptica* in having broadly ovate or broadly elliptic leaves, and filaments glabrous, only 1mm long. *Petrocosmea cryptica* shares some interesting characters, such ➤

DESCRIPTION OF NEW TAXON

***Petrocosmea cryptica* J.M.H. Shaw, sp. nov.**

A *P. rosettifolia* foliis ellipticis non late ovatis et filamentis puberulis 3–4mm longis nec glabris neque 1mm differt; a *P. xanthbomaculata* foliis basi cuneatis non cordatis et corolla alba non flavomaculosa.

Type: plant cultivated in alpine house at RHS Garden Wisley, UK.

P. Gibson s.n., 22 Feb 2011 (holotype WSY, barcode WSY0133310).

Rosette forming herb, eventually producing offsets. Leaves up to 160, borne on petioles to 3cm long, leaf blade 2.5–4 x 1.3–1.7cm, elliptic, upper surface sparsely pilose with multicellular, linear, c. 3mm long trichomes, arising from pustulate bases, midrib and main veins not raised on upper surface, but visible as yellow green stripes, raised on lower surface but subglabrous, leaf underside between main veins densely pubescent with linear trichomes to c. 1.5mm long; leaf base cuneate, apex acute, margin sub-entire on lower half, weakly serrulate towards apex. Inflorescences mostly 1-flowered, occasionally 2–4-flowered; peduncle 5–7cm, puberulent with linear trichomes up to 5 cells long; bracts linear, 3–4mm, puberulent; pedicels 1.6–2.8cm long, puberulent. Calyx actinomorphic, segments 5, equal, parted from base, lobes 3 x 0.8mm, outside puberulent, inner surface glabrous. Corolla white with yellow in throat, exterior sparsely pubescent, interior glabrous, tube 3mm long, upper lip 4.5–5mm, emarginate to weakly 2-lobed, lower lip to 9mm, clearly 3-lobed, lobes rounded, 1.5–2mm. Filaments 3.5–4mm, C-shaped, densely and minutely puberulent especially towards middle; anthers 2, ovoid, 3–3.5mm x 1.2mm, white, beakless; staminodes 2, c. 0.6mm long, very minutely puberulent. Pistil 8–8.5mm; ovary c. 2.5mm long, densely covered with long silvery linear trichomes; style glabrous in upper 3.5–4mm, stigma club-shaped. Capsule and seeds not observed. Flowering from autumn to winter in cultivation in alpine house, flowering can continue in to spring after a cold winter.



Philippa Gibson / RHS

The flowers of *Petrocosmea cryptica* 'Whirlpool' are white with some yellow in the throat but in other clones they may be lavender-coloured. It typically flowers in autumn to winter, often extending to spring

as the long white pubescence on the ovary and lower style, with the recently described *P. xanthbomaculata* G.Q. Gou & X. Yu Wang. However, the former differs in its elliptic, basally cuneate (instead of cordate) leaves, longer bracts of 3–4mm (not 1mm), and absence of yellow blotches in the corolla lobe sinuses.

Clones of *P. cryptica*

Several different clones of *P. cryptica* are in cultivation. The clone from which the type collection was made (G25KC00) is the most distinctive with its yellow-veined foliage and also the one most commonly encountered in cultivation. It is here named *P. cryptica* 'Whirlpool'. The description here is from living material at RHS Garden Wisley (colour references are to the RHS Colour Chart 2007): Leaves green (slightly yellower than N137D) with paler yellow-green (144A) mid and main lateral veins; upper lamina shiny and pustulate with long pilose hairs; underside greyed green (193A),



Julian Shaw

The distinctive white anther of *P. cryptica* is supported by a densely puberulent filament

softly felted. Petioles with soft, long to short patent, wavy hairs. Inflorescence with sepals green; corolla white (155C) with pale yellow-green (154D) patch in throat.

Other clones suggested on the Passion for *Petrocosmea* website (<http://petrocosmea.blogspot.com>) as belonging to *P. cryptica* include: China no. 2, Yumebutai, and a plant distributed as *P. "menglingensis"* (not to be confused with *P. menglianensis*). These clones lack the striking variegated foliage of 'Whirlpool' and



Philippa Gibson / RHS

The leaves of *Petroscosmea cryptica* 'Whirlpool' have yellow veins but the typical species is likely to have plain green leaves. Note the stiff trichomes on the upper leaf surface arising from pustulate bases

also differ in the flower colour which can be shades of lavender. As material of these has not been available for study, I hesitate to comment further on their identity.

Hybrids

Under the name *P. rosettifolia*, *P. cryptica* 'Whirlpool' has been successfully crossed with *P. sericea* to produce at least three cultivars. These include 'Keystone's Bantam' (flowers white, larger than the small dark green, bullate leaves), 'Keystone's Harvest Moon' (flowers light lavender; leaves greenish yellow) and 'Rosemary Platz' (flowers lavender pink, yellow in tube; leaves glossy green, intermediate in shape between parents).

Cultivation

Petroscosmeas are usually grown in an alpine house or frame with appropriate shading. They need a humid atmosphere and free-draining compost. In the wild they usually inhabit limestone cliff faces or grow

on limestone boulders. Hence compost with plenty of perlite and humus gives good results. Plants need to be kept on the dry side to avoid rot and should only be watered when dry. In winter many growers test the leaves and only water if they are limp.

Propagation is by seed or leaf cuttings. Seed is sometimes produced when different clones are cross-pollinated. Seedling growth can be rapid, particularly under fluorescent light, and seed sown in January can produce flowering plants by autumn. Leaf cuttings are possible in a manner similar to African violets, *Saintpaulia*. Plants with very hairy petioles root best if the leaf is

ACKNOWLEDGEMENTS

I would like to thank Barry Phillips for the description of 'Whirlpool', and Philippa Gibson and Carol Sheppard, all at RHS Wisley, for practical help. Also herbarium staff at BM, E and K, and Nesta of Jacques Amand Nursery, who asked me to identify some *Petroscosmea*.

laid on top of the medium rather than inserted. It is common for leaves to root by themselves if they fall on to humidity trays, especially when plants are grown under fluorescent lighting in a cellar or garage, as is popular with some gesneriad growers.

More information on cultivation and propagation can be found in Drew (2003).

Conclusion

There are now over 30 known species of *Petroscosmea*, with more likely to be described. One of the most horticulturally interesting recent discoveries is *P. bicolor* (Middleton & Triboun 2010) with a dark purple lower lip and white upper lip. The potential for hybridization and selection in cultivation is considerable. Could they become as popular as African violets in the future?

JULIAN SHAW is a Senior Registrar in the RHS Botany Department

REFERENCES

- Drew, R (2002) Sussex Show, October 6th. *The Alpine Gardener* 70(1): 82–85
- Drew, R (2003) Developing a collection of subalpine gesneriads. *The Alpine Gardener* 71(3): 297–307
- Li, Z-Y & Wang, Y-Z (2005) *Plants of Gesneriaceae in China*. Henan Science and Technology Publishing House, China
- Middleton, DJ & Triboun, P (2010) Two new species of *Petroscosmea*. *Thai Forest Bull., Bot.* 38: 42–47
- Wang, W (1985) The second revision of *Petroscosmea*. *Acta Bot. Yunnan.* 7(1): 49–68
- Wang, W, Pan, K-Y, Li, Z-Y, Weitzman, AL & Skog, LE (1998) *Petroscosmea*. In: Flora of China Editorial Committee (eds) *Flora of China Vol. 18*. Science Press, Beijing, & Missouri Botanical Garden Press, St Louis