Notes

A NEW BRAMBLE OF NORTHUMBRIA AND THE SCOTTISH BORDERS

Rubus newtonii Ballantyne, **sp. nov.**
Turio alte arcuatus, faciebus sulcatis obtusangulus, brunneus, pilis simplicibus stellatisque sparsis vel numerosis vestitus, glandulis sessilibus multis et interdum stipitatis raris instructus; aculei 6–18 in 5 centimetrorum longitudine, ad angulos plerumque limitati, nonnunquam geminati, turionis diametro vel breviores vel aequales vel paulo longiores, declinati vel curvati, raro patentes, e basi compressa purpurea vel flavescenti tenues, aut omnino flavescentes.

Folium foliolis 3(–4) magnitudine subaequalibus, non contiguis, aliquantum coriaceis, supra viridibus, nitentibus, magis minusve glabris, infra pallide viridibus, rare pubescentibus; foliolum terminale 4–7(–8) cm, plerumque obovatum sed variabiliter subrotundum vel ellipticum, apice (1–1·5 mm) acuminatocuspidato, basi emarginata, regulariter serratum marginibus planis, dentium principalium paucis recurvatis, petiolulo lamina 3–4plo breviore praeditum; foliola lateralia nonnunquam latere inferiore lobata, petiolulis brevibus (2–8 mm) patentibus vel ascendentibus praedita; foliolorum basalium petioluli, quando adsunt, 1–3 mm; petiolus brunneus, pilis simplicibus stellatisque numerosis vel densis brevibus vel mediocribus vestitus, glandulis sessilibus nonnullis instructus, aculeis (7–)9–11(–13) curvatis 1–3 mm armatus, folioluli terminalis petiolulo laminaeque longitudine subaequalis vel paulo longior.

Ramus florens infra foliis ternatis, supra folio uno (vel duobus) simplice, interdum satis grandi, instructus, non ad apicem foliosus; inflorescentia interdum pyramidalis vel supra subracemosa, vertice angusto plerumque rotundato, pedunculis subaequalibus suberectis vel ascendentibus, ramulis axillaribus superis magis minusve congestis, floribus 1–3 praeditis, medianis multifloris, pedunculis foliis suis brevioribus vel longitudine aequalibus, infimis longis, interdum paniculis secundariis effectis.

Rachis flexuosa, pilis simplicibus stellatisque numerosis vel densis patentibus brevibus vel mediocribus vestita, glandulis sessilibus subsessilibusque numerosis raroque stipitatis paucis instructa, aculeis satis numerosis, tenuibus, plerumque purpurascentibus, basi lata, acumine flavescenti (3–6 mm), declinatis vel curvatis, armata; pedicelli sicut rachis vestiti et armati.

Flores ad 2·5 cm diametro; sepala viridibrunnea, pallidimarginata, pilis simplicibus stellatisque densis vestita, glandulis stipitatis aciculisque sparsis instructa, apice brevi vel mediocri, interdum curvata, laxe reflexa vel patentia. Petala 8–15 × 5–9 mm, rosea, obovata vel elliptica, aliquantum sinuata, ciliata, magis minusve contigua, leniter concava; stamina stylos excedentia, filamento subroseo antheraque pilosa praedita; styli luteovirides; carpella juvenia pilis longis sparsis vestita; receptaculum hirsutum; fructus elongatus. Floret Julio et Augusto.

Stem high arching, bluntly angled with furrowed sides, brown with sparse to numerous simple and tufted hairs and many sessile glands and sometimes an occasional stalked gland; *prickles* 6–18 per 5 cm, mostly confined to the angles, sometimes in pairs, from shorter than to more than equalling the stem diameter, slanting to curved, seldom patent, slender from a compressed purplish to yellowish base or yellowish throughout. *Leaf* with 3(–4) leaflets of approximately equal size, not contiguous, somewhat coriaceous, shining green above and more or less glabrous, pale green and thinly pubescent beneath; *terminal leaflet* 4–7(–8) cm, mostly obovate but varying from almost round to elliptic, with an acuminate-cuspidate apex (1–1·5 cm) and weakly cordate base, regularly serrate with flat margins, a few main teeth recurved, the petiolule one quarter to one third as long as the lamina; lateral leaflets not infrequently lobed on the lower side with short patent to ascending petiolules 2–8 mm; petiolules of basal leaflets, when present, 1–3 mm; petiole brown, with numerous to dense short to medium simple and tufted hairs, some sessile glands and (7–)9–11 (–13) curved prickles 1–3 mm, about equalling or slightly longer than the petiolule and lamina of the terminal leaflet. *Flowering branch* with ternate leaves below and 1(–2) simple sometimes quite large leaves above, not leafy to the apex; *inflorescence* sometimes pyramidal or sub-racemose above with a narrow usually rounded top with subequal peduncles which are suberect or ascending, the upper more or less congested and 1–3 flowered, the middle many-flowered with

peduncles shorter or as long as their leaves, the lowest long and sometimes developed as secondary panicles. *Rachis* flexuous, with numerous to dense patent, short to medium, simple and tufted hairs, numerous sessile and sub-sessile glands, and occasionally a few stalked glands and fairly numerous usually purplish broad-based slender prickles with yellowish points 3–6 mm, most declining or curved; pedicels clothed and armed like the rachis. *Flowers* to 2·5 cm in diameter; sepals greenish-brown, pale-bordered with dense simple and tufted hairs and occasional stalked glands and acicles, with a short to medium point, sometimes curved, loosely reflexed to patent. Petals 8–15 × 5–9 mm, rose-pink, obovate to elliptic, somewhat sinuate, ciliate, more or less contiguous, slightly concave; stamens exceeding styles, filaments pinkish, anthers pilose; styles yellowish-green; young carpels with occasional long hairs; receptacle hairy; fruit thimble-shaped. Flowering in July and August.
HOLOTYPUS: roadside bank Craster, v.c. 68, NU207198, 5 September 1996, *A. Newton* (**E**). Isotype in **BM**.

This member of ser. *Sylvatici* (P. J. Mueller) Focke is named in honour of Alan Newton, whose work over the past half-century has done so much to advance the study of *Rubus* L. in Britain and Ireland. He has been familiar with this species himself ever since encountering it in 1971 in the far north-east corner of England, where its distinctiveness owing to its having the primocane leaves almost invariably ternate led him to give it the working name of "R. trifolius". Although by no means the sole British *Rubus* exhibiting this character, it is the only predominantly eglandular one with this character that has a sufficiently wide distribution for it to be likely to be encountered. At the same time, care needs to be taken in the field to avoid confusing it with a not infrequent companion, *R. drejeri* Jensen ex Lange, which also often has ternate primocane leaves as well as pink petals and hairy anthers, but always with at least a few stalked glands on the stem and usually many on the rachis.

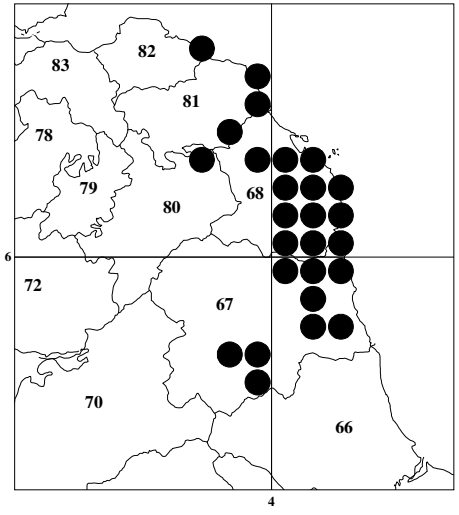
Specimens exist in herbaria as far back as 1855 (near Stannington, D. Oliver, **CGE**, v.c. 67), but there is persuasive evidence that this was the "*R. leucostachys*" mentioned by Johnston (1853), the description of which tallies with *R. newtonii* in important details. These rule out equation with Johnston's "*R. mucronatus*", the other possible candidate. Johnston's specimen was collected at Twizell House, Warenford, south-west of Lucker, v.c. 68, the residence of his fellow naturalist and High Sheriff of the county, P. J. Selby, and *R. newtonii* occurs thereabouts in quantity today.

Fieldwork by the writer since 1984, particularly in 2000, has established that the species is present in at least 21 hectads in South and North Northumberland, v.cc. 67 and 68, mainly to the east of the NU/NZ dividing grid line, from the neighbourhood of Fenwick south to Stannington. It is at its most plentiful in NU02, 12 and 22 in v.c. 68. It grows chiefly in or fronting the hedges of minor roads, especially those with a broad verge, on the margin of former moorland, often associated with honeysuckle, *Lonicera periclymenum* L., with populations of up to 50 × 3–4 m in extent in places. The bramble is scarce in and south of the Tyne corridor, but a good stand in the vicinity of Slaley Hall, v.c. 67, suggests that the distribution may extend southwards into Co. Durham, v.c. 66, as well. To the north, entering Scotland, *R. newtonii* is scattered throughout Berwickshire, v.c. 81, edges into East Lothian, v.c. 82 in the vicinity of Oldhamstocks and on the coast, and follows the River Tweed into Roxburghshire, v.c. 80, south-east of Kelso in the Softlaw area. The species thus occurs in at least five vice-counties and in almost certainly more than the 26 recorded hectads, thereby amply qualifying for taxonomic recognition.

REPRESENTATIVE EXSICCATAE:
v.c. 67, S. Northumberland: Near Stannington, c. NZ2080, August 1855, D. Oliver, (**CGE**). Langley Lead Mines, NY86, September 1865, J. G. Baker (**CGE**). Acklington Station (W. of), NU2101, 25 July 2000, GHB (**GHB**). Stobswood, W. of Widdrington Station, NZ2394, 25 July 2000, GHB (**GHB**).

v.c. 68, N. Northumberland: [Long]Framlington, NU1301, 1865, J. G. Baker (**BM**). Skinlaws Toll, NT95, October 1877, A. Brotherston (**CGE**). Alnwick-Eglingham, NU11, 4 September 1897, F. A. Rogers (**BM**). Fowberry, NU0228, August 1971, A. Newton (**AN**). Ford, NT9538, August 1971, A. Newton (**AN**). Chillingham, NU0525, August 1971, A. Newton (**AN**). Rothbury, NU0501, 7 July 2000, GHB (**GHB**). Yeavering, NT9030, 24 August 2000, GHB (**GHB**).

v.c. 80, Roxburghshire: Softlaw East Mains Plantation, S.E. of Kelso, NT756311, 19 July 2001, GHB (**GHB**).



Distribution of *Rubus newtonii* by 10-km squares

v.c. 81, Berwickshire: Aytonwood House area, NT9161, 22 September 1984 and 15 July 2000, GHB (**GHB**).

v.c. 82, East Lothian: N. of Oldhamstocks, NT7372, 11 August 1986 and 15 July 2000, GHB (**GHB**).

ACKNOWLEDGMENTS

The author wishes to pay tribute to both Mr Alan Newton and Dr D. E. Allen for much help, advice and encouragement in the preparation of this paper. The Latin description was originally prepared by Mr W. Hay and amended by P. H. Oswald, to whom grateful thanks are also due.

REFERENCE

JOHNSTON, G. (1853). *The Botany of the Eastern Borders*. Van Voorst, London.

G. H. BALLANTYNE
Branksome, 193 Nicol Street, Kirkcaldy, Fife, KY1 1PF

A NEW NAME IN THE BRITISH FLORA: *PERSICARIA* × *FENNICA* (REIERSEN) STACE

In July 1981 Dr and Mrs John Dony collected a puzzling large, leafy, branched knotweed growing on a grassy bank near a road at New Mill, near Holmfirth, c. 5 miles south of Huddersfield, West Yorkshire (v.c. 63). Specimens were sent to Ann Conolly, who similarly had not seen the likes of it previously. Her investigations showed clearly that it belonged to a group of species that includes *Persicaria alpina* (All.) H. Gross, *P. weyrichii* (F. Schmidt ex Maxim.) Ronse Decr., *P. mollis* (D. Don) H. Gross and *P. campanulata* (Hook. f.) Ronse Decr., and which is often segregated into the genus *Aconogonon* (Meisn.) Rchb. (Conolly 1983). The plant is mentioned in Stace (1997) at the end of the entry for *P. alpina,* but is not covered in Wilmore (2000) and no other wild localities are known in the British Isles. Similar plants are, however, much commoner in Scandinavia as garden escapes: 15 localities in Denmark; 12 in Norway; 2 in Sweden; and over 100 in Finland (Reiersen 2000).

Reiersen (in Jonsell 1999) concluded that the Scandinavian plants are probably garden hybrids between *P. alpina* and *P. weyrichii*, two species which have very different distributions overall but which are possibly sympatric in parts of eastern Asia. Reiersen (2000) reported that the Danish plants differ from the Finnish and Norwegian plants in having well-developed anthers with apparently good pollen, longer and narrower perianth-tubes, and more hairy leaves and upper parts of stems. Plants from Yorkshire and some garden material from Cambridge and Kent were sent in 1990 to Reiersen, who confirmed that they belong to the same taxon as the Scandinavian plants. He claimed that the Yorkshire plant resembles the Finnish/Norwegian plants and the garden material resembles the Danish ones. However, in contradiction to this, the Cambridge cultivated material appears to have fertile pollen but the Kentish garden material has sterile pollen (Reiersen's own annotations on the specimens), and the Yorkshire plant does set some good seed (A. P. Conolly, pers. comm., 2001).

The evidence for splitting *Aconogonon* (and *Bistorta* (L.) Adans. among others) from *Persicaria* is rather equivocal. On a practical level the distinction between *Aconogonon* and *Persicaria* is obscured because one other 'large, leafy, branched species', *P. wallichii* Greuter & Burdet (*Polygonum polystachyum* Wall. ex Meisn.), morphologically resembles an *Aconogonon* but is in its technical details (style length, stigma and pollen form, seed shape) a *Persicaria* (Hong 1993). This species does not occur in Scandinavia, but using Reiersen's generic key it would wrongly key out to *Aconogonon.* For this purely practical reason I prefer not to split off *Aconogonon*, at least until generic and sectional limits are better understood in this group, so the hybrid plant needs recombining under *Persicaria*:

Persicaria* × *fennica (Reiersen) Stace, **comb. nov.**
Basionym: *Aconogonon* × *fennicum* Reiersen, *Nordic J. Bot.* **19**: 386 (1999).

ACKNOWLEDGMENT

I am grateful to Ann Conolly for advice on several points.

REFERENCES

CONOLLY, A. P. (1983). What is this *Polygonum? Watsonia* **14**: 450.
HONG, S.-P. (1993). Reconsideration of the generic status of *Rubrivena* (Polygonaceae, Persicarieae). *Plant Systematics and Evolution* **186**: 95-122.
JONSELL, B. (1999). Additional nomenclatural notes to *Flora Nordica* (Lycopodiaceae to Polygonaceae). *Nordic Journal of Botany* **19**: 385-387.
REIERSEN, J. (2000). *Aconogonon* (Meisn.) Rchb., in JONSELL, B., ed. *Flora Nordica* **1**: 236–240. Bergius Foundation, Stockholm.
STACE, C. A. (1997). *New Flora of the British Isles,* ed. 2. Cambridge University Press, Cambridge.
WILMORE, G. T. (2000). *Alien Plants of Yorkshire.* Yorkshire Naturalists' Union, York.

C. A. STACE
Department of Biology, University of Leicester, Leicester LE1 7RH

THE RE-APPEARANCE OF *LOBELIA URENS* L. FROM SOIL SEED BANK AT A SITE IN SOUTH DEVON

Lobelia urens L. (Heath Lobelia) is a rare plant recorded from 19 British localities before 1970, all but one in the southern coastal counties of England. From 1987 onwards it could only be found on six of these sites with population levels fluctuating dramatically depending on management (Dinsdale 1999). It has been known from Andrew's Wood (Stanton Moor) in South Devon, now a Devon Wildlife Trust Reserve, since 1889 (Martin & Fraser 1939) whilst the unimproved fields to its south and east remained its main stronghold until the 1950s (Archibold 1971).

On 8 July 1995, C. J. Smith and I visited Andrew's Wood and we noticed some "purple patches" amongst the vegetation in a field, then in set-aside, adjacent to the wood on its south eastern edge.

TABLE 1. SPECIES ASSOCIATED WITH *LOBELIA URENS* IN A SET-ASIDE FIELD ADJACENT TO ANDREW'S WOOD, SOUTH DEVON IN JULY 1995

Agrostis capillaris	*Agrostis stolonifera**	*Anagallis tenella**
*Centaurium erythraea**	*Cerastium fontanum*	*Cirsium arvense*
Cirsium palustris	*Crepis capillaris*	*Galium uliginosum*
*Holcus lanatus**	*Hypericum tetrapterum**	*Hypochaeris radicata**
*Juncus effusus**	*Lolium perenne*	*Lotus pedunculatus**
*Lysimachia nemorum**	*Potentilla erecta**	*Pulicaria dysenterica**
*Ranunculus acris**	*Ranunculus flammula**	*Ranunculus repens**
Senecio aquatilis	*Sonchus asper*	*Taraxacum officinale**
Trifolium dubium	*Trifolium pratensis*	*Trifolium repens**
Veronica serpyllifolia		

Species associated with *L. urens* at its traditional sites are marked with an asterisk.

These patches proved to be *L. urens*. There were thousands of plants forming drifts here and there across the field. *Holcus lanatus*, *Agrostis stolonifera* and *A. capillaris* dominated the vegetation of the field. Other than some large patches of *Lotus pedunculatus*, *Lobelia urens* was by far the commonest forb present. All species recorded are shown in Table 1.

It seems unlikely that the plants in the field arose recently by way of seed rain from the large population now growing in clearings in Andrew's Wood. This population, which has varied between 2000 and 13,000 plants annually between 1975 and 2000 (G. Waterhouse, pers. comm. 2000), is isolated from the field by a considerable barrier of woodland. Dispersal is said to be limited to a "short distance" (Brightmore 1968).

It is more likely that the population in the field re-established from soil seed bank. This view is supported by evidence from another South Devon site, Yarner Wood, where plants of *L. urens* re-appeared following disturbance after a period of 40 years (Dinsdale *et al.* 1997). Additionally, many of the species established in the set-aside field, marked with an asterisk in Table 1, are known associates of *L. urens* where it grows typically in M25 and W23 communities (Dinsdale *et al.* 1997; Dinsdale 1999) of the National Vegetation Classification (Rodwell 1991). It is, perhaps, less clear why *L. urens* was able to persist in the seed bank, germinate and establish in such large numbers when associated species of forbs were so uncommon. Indeed, with the exception of *Centaurea erythraea* and *Pulicaria dysenterica*, all these species can have long term persistent soil seed banks (Thompson *et al.* 1997) as can many of the absent associates. The most likely explanation is that, in its characteristic habitats, *L. urens* relies on disturbance to regenerate. In Brittany for instance, Brightmore (1968), quoting C. D. Pigott, suggests that a ruderal response is normal. The small seed size and the large numbers of seeds produced, perhaps 15000 by a mature plant (Brightmore 1968), is more typical of the seed bank of an arable weed (Harper 1977) than a permanent grassland species. Perhaps, after nearly 40 years of agricultural improvement, the soil seed banks of the permanent semi-natural grassland species have simply become exhausted through decay and senescence. Alternatively, the conditions for seed germination and seedling establishment of these species may have been less than optimal.

Enquiries regarding the history of this field suggest (G. Waterhouse, pers. comm., 2000) it remained unimproved as late as 1960 when it was said to be overgrown with gorse and rushes and virtually impassable. The neighbouring field to the south was known as Lobelia Close and was said to be blue with *L. urens* in the 1930s. At some time during the 1960s the fields were under-drained with clay tiles, ploughed and reseeded to agriculturally improved grassland. Grazing with cattle continued throughout the 1970s, 1980s and early 1990s.

When C. J. Smith and I visited the field in 1995 the field was set-aside and had, presumably, been ploughed and cropped at least once. We visited the site again in 1999 when there was a crop of flax, but no sign of any *L. urens*. However, in 2000, two large patches comprising an estimated 2000 plants of *L. urens* re-appeared in a wide fallow margin on the edge of a flax crop (G. Waterhouse, pers. comm., 2000).

The importance of disturbance and the presence of a persistent seed bank for the maintenance of populations of this species has already been stressed by both Archibold (1971) and Dinsdale *et al*. (1997). This evidence supports that view and also indicates the possibility of the reclamation of

such sites even after many years of agricultural improvement. The seed bank is less likely to have become impoverished where a site becomes overgrown or where it is managed as permanent grassland, whereas continuous arable cropping is likely to exhaust the seed bank more rapidly. Investigation of the soil seed bank of former sites by taking a few soil cores and allowing any seeds to germinate would be a relatively simple procedure to confirm its presence prior to attempting large-scale intervention.

Devon Wildlife Trust made an unsuccessful bid to purchase these fields when they came up for sale again during 2000. On 4 August 2001 the field was visited during a B.S.B.I. meeting. The field was set-aside again and *L. urens* was locally abundant (R. Barrett, pers. comm., 2001). All the traditionally associated species recorded in 1995 were also present together with another 15 known associates. It is now hoped that the field will be managed within a Country Stewardship Agreement.

REFERENCES

ARCHIBOLD, J. F. (1971). *Lobelia urens* on Andrew's Wood Reserve. *Quarterly Journal Devon Wildlife Trust* **December 1971**: 169–173

BRIGHTMORE, D. (1968). Biological Flora of the British Isles: No. 112, *Lobelia urens* L. *Journal of Ecology* **56**: 613–620.

DINSDALE, J., DALE, P. & KENT, M. (1997). The biogeography and historical ecology of *Lobelia urens* L. (The heath lobelia) in southern England. *Journal of Biogeography* **24**: 153–175.

DINSDALE, J. (1999). *Lobelia urens* L., in M. J.WIGGINTON ed. *British Red Data Books, 1 Vascular Plants.* 3rd ed. Joint Nature Conservation Committee, Peterborough.

HARPER, J. L. (1977). *The Population Biology of Plants*. Academic Press, London.

MARTIN, W. K. & FRASER, G. T. (1939). *Flora of Devon*. T. Buncle & Co., Arbroath.

RODWELL, J. S *et al.* eds. (1991 *et seq.*). *British Plant Communities*. Cambridge University Press, Cambridge.

THOMPSON, K., BAKKER, J. P. & BEKKER, R. M. (1997). *The soil seed banks of North West Europe: methodology, density and longevity.* Cambridge University Press, Cambridge.

R. E. N. SMITH

Institute of Grassland and Environmental Research, North Wyke, Okehampton, Devon, EX20 2SP