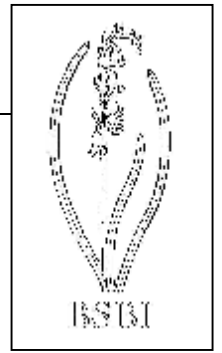


Plant Crib



UPLAND / MOUNTAIN SPECIES WITH SMALL LINEAR OR LINEAR-SUBULATE LEAVES

The following ten plants are dealt with here: *Silene acaulis* (L.) Jacq., *Minuartia rubella* (Wahlenb.) Hiern, *M. sedoides* (L.) Hiern (*Cherleria sedoides* L.), *M. verna* (L.) Hiern, *Sagina nivalis* (Lindblad) Fr. (*S. intermedia* Fenzl), *S. nodosa* (L.) Fenzl, *S. × normaniana* Lagerh., *S. procumbens* L., *S. saginoides* (L.) H. Karst. and *S. subulata* (Sw.) C. Presl.

Four plants are not included here: *Sagina boydii* – now known to be a genetically compact form of *S. procumbens* (Rich et al. 2005); *S. maritima* - mountain records of this annual have still to be confirmed; *Minuartia recurva* - known only from SW Ireland; *M. stricta* - known only from Teesdale.

When in flower most of these plants are readily separated, with confusion only likely to occur between *Minuartia rubella* and *Sagina nivalis*, between *Minuartia verna* and *Sagina nodosa* (see also below), and between *Sagina procumbens*, *S. × normaniana* and *S. saginoides*. When not in flower, small plants of *Silene acaulis* and *Minuartia sedoides* can look superficially similar to mature plants of some other species - for instance, *M. sedoides* sometimes puts out long stringy shoots which look like *Sagina*, but the recurved teeth on the leaves are distinctive. Young plants of *Minuartia* and *Sagina* cannot be identified with confidence.

The illustrations in Keble-Martin of most *Sagina* species are useful, but that for *S. saginoides* is misleading and those of *S. nivalis* and *Minuartia rubella* completely wrong. The illustrations in Ross-Craig are generally good, but note that the petals of *S. saginoides* should be notched; the petals of *S. nivalis* should be much narrower; the habit drawings of *S. nivalis* and *M. rubella* are representative of younger plants only.

The keys in Stace's *New Flora* is useful for mature plants, but cannot be used for young, non-flowering plants when even the genus may be uncertain.

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|---|--|---------------------------|
| 1 | Leaf margins with narrow hyaline teeth, especially at base (use lens) | 2 |
| 1 | Leaf margins entire | 3 |
| 2 | Leaf apex purple, acute and mucronate | <i>Silene acaulis</i> |
| 2 | Leaf apex green, blunt | <i>Minuartia sedoides</i> |
| 3 | Leaves strongly 3-veined (easily seen with lens when dead or dried); sepals acute, ± glandular-hairy | 4 |
| 3 | Leaves 1-veined (best seen when dead or dried); sepals blunt, glabrous or ± glandular-hairy | 5 |
| 4 | (See note 1 below) Plant forming compact tufts 2-6(-9) cm across, petals 2/3 as long as sepals; open calcareous ground high on a few Scottish mountains, very rare | <i>Minuartia rubella</i> |
| 4 | Plants forming loose cushion, up to at least 12 cm across; petals equalling or just exceeding sepals; open base-rich ground, local | <i>Minuartia verna</i> |

Plant Crib

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- 5 Leaves diminishing in length upwards from 10-15 mm to 1-2 mm, with lateral leaf clusters in the axils of the upper leaves giving a 'knotted' appearance, leaves glabrous or \pm glandular-hairy at base; sepals glabrous or glandular-hairy; petals twice as long as sepals *Sagina nodosa*
- 5 Not as above 6
- 6 (See note 2 below) Leaves \pm hairy; pedicels and sepals conspicuously glandular-hairy; petals ovate, not notched, equalling or slightly shorter than sepals *Sagina subulata*
- 6 Plants glabrous (See note 3 below) 7
- 7 Plant a neat, dense tuft 2-5(-9) cm across, 1-2 cm high; flowers on short stalks, inconspicuous and rarely fully open, parts in 5s; sepals with violet edges; petals not notched, length 3 \times width, equalling or slightly shorter than sepals; open calcareous ground high on a few mountains in central Scotland, very rare but probably under-recorded *Sagina nivalis*
- 7 Not as above 8
- 8 (See note 4 below) Petals absent or small, length 3 \times width; sepals green, at $\pm 90^\circ$ to flower axis; parts in 4s, occasionally 5s; plant extensive, rooting readily at nodes; common and widespread *Sagina procumbens*
- 8 Petals conspicuous, round; sepals usually with purple coloration, at $\pm 45^\circ$ to flower axis 9
- 9 Plant usually a single rosette (though rooted ramets may be present), in \pm open ground; parts in 5s, very rarely 4s; sepals \pm purplish; petals notched; capsule length 1.5-2 \times sepal length (capsules well-developed); flowers July (-August); local *Sagina saginoides*
- 9 Plant usually extensive, rooting at nodes, growing in \pm open ground or short herb-rich swards; stamens (3-)6-10, other parts in 4s and / or 5s; sepals usually purple-edged; petals sometimes with shallow notch; capsule length 1.2-1.5 \times sepal length (with many capsules undeveloped); flowers August (-September); local.
Sagina \times *normaniana* (probable hybrid between *S. procumbens* and *S. saginoides*)

Notes

1. Plants not known to grow together, though this may occur on hills near Ben Lawers. Small, non-flowering plants of these two species cannot be separated safely.
2. Populations of *Sagina subulata* occur which are glabrous (e.g. on the island of Colonsay) but such populations have not been recorded from upland or mountain locations in Britain (they have been recorded to 2100 feet in Ireland; C. D. Preston pers. comm. 1998). Glabrous plants of *S. subulata* can resemble superficially small plants of *S. saginoides* (see Stace's *New Flora*, both key and text).
3. Vegetative plants (except seedlings) of *Sagina nivalis* can, with experience, be identified by their neat appearance and combination of bright green and orange-brown colours.
4. Non-flowering plants of *Sagina procumbens*, *S. \times normaniana* and *S. saginoides* cannot be identified with confidence.

Reference Rich, T. C. G., Mardon, D., Curtis, I., Heyward, S. J., Heywood, V., McKean, D. R., Hall, T., Harris, S., O'Rourke, A., Cowan, R. S. & Fay, M. F. (2005). Is the enigma a variation? *Sagina boydii* F. B. White (Caryophyllaceae), Boyd's pearlwort. *Botanical Journal of the Linnean Society* **147**: 203-211.

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