## Ulota crispa/bruchii U. crispa var. crispa/U. crispa var. norvegica Crisped/Bruch's Pincushion

Key 281

Capsule narrowed just below mouth U. crispa Capsule narrows just below mouth U. crispa U. crispa 1 mm 2 mm 2 mm U. crispa

Identification These mosses form yellowish-green cushions 0.5-1 (-2) cm tall, with a blackishbrown lower part to each shoot. The upper leaves of U. bruchii are 2.5-4 mm long, while those of *U. crispa* are 2–3.5 mm long; however, there is considerable overlap in this and other features of the two species, and some plants cannot be confidently named without microscopical examination of the peristome.

> Leaves are spearhead-shaped, and the nerve ends in or below the tip. The leaves of U. crispa become strongly crisped when dry, whereas those of U. bruchii become moderately crisped, but again there is overlap.

Both species frequently form capsules in summer, borne on a seta about 2.5 mm long, and these persist all year round. U. crispa tends to produce capsules slightly earlier in the season than *U. bruchii*, but this is not consistent. The calyptra covering immature capsules is covered in long hairs, as in most other Ulota species. Mature capsules are brown and longitudinally furrowed. Those of U. bruchii are 2-3.2 mm long, whereas those of *U. crispa* are 1–3 mm long, but as with their leaves there is considerable overlap in size. U. bruchii tends to produce capsules with a neck that tapers more longly into the seta. A more reliable distinguishing feature is provided by mature (but not yet senescent) capsules: those of U. crispa are wide-mouthed and narrow immediately below the mouth, whereas those of *U. bruchii* taper to a narrow mouth. Again, though, even some plants with mature capsules cannot confidently be ascribed to one or other of these two species, except by microscopical examination of features of their capsules.



Similar species The leaves of U. drummondii (p. 661) curl slightly, but do not crisp when dry, its outer peristome is often almost white rather than pale brown, and its inner peristome is usually absent. U. drummondii often forms patches with creeping marginal shoots, rather than cushions, and plants may be tinged reddish. The calyptra of U. calvescens (p. 662) is usually only sparsely hairy, and its leaves are longitudinally ridged near the base. Capsules of Orthotrichum pulchellum (p. 652) are shorter and wider, and its calyptra is not hairy. Daltonia splachnoides (p. 669) has a fringed calyptra, and flattened shoots.

Habitat U. bruchii and U. crispa grow on the twigs and branches of many species of tree and shrub, such as elder (Sambucus nigra), hazel (Corylus avellana) and willows (Salix), as well as on trunks that are not heavily shaded. Rarely, these mosses grow on rocks underneath trees. These two species may occur together, but U. bruchii is commoner than U. crispa in many districts, and U. crispa has been over-recorded for U. bruchii. In general, U. crispa is more frequent in upland areas than U. bruchii.