A calcifuge moss of sporadic and often ephemeral occurrence, normally found scattered on humus-rich sandy soil, typically on banks and by paths on heathy ground and moorland edges, and in open woodland. More rarely it occurs on rotten wood (typically pine) or litter, especially in coniferous woodland, and exceptionally on the old nests of wood ants. It has been found with or close to *Buxbaumia viridis* in these habitats in Scotland, although very rarely (Taylor, 2010). Other recorded habitats include old walls and an old railway cutting. In the latter half of the 20th century there were many finds on oil-shale and colliery waste in Scotland, where it favoured north- and east-facing slopes of somewhat stabilised shale debris or raw humus (Steven & Long, 1989). It has persisted at some of these sites for more than 30 years. Common associates include *Cephaloziella* spp., *Gymnocollea inflata*, *Lophozia ventricosa*, *Dicranella heteromalla*, *Dicranum scoparium*, *Pohlia nutans*, *Polytrichum* spp. and crustose lichens. Altitudinal range: 40–345 m.

Many of the records, particularly in England, are very old and it has apparently declined from the loss of suitable habitat, although doubtless many occurrences were temporary. It has also declined on shale spoil because of vegetational succession and landscaping.

Dioicus; the frequency of capsules is uncertain, but *B. aphylla* is recorded only when they are present. They are mature from spring to autumn but long persistent. No specialised method of vegetative dispersal is known. Growth is dependent on the persistent protonemal mat. Uggla (1958) regarded it as a colonist of burnt sites, present only at a certain successional stage.

Circumpolar boreal-montane. Widespread in Fennoscandia including the Arctic, though decreasing to the north (not in Iceland and Svalbard) and with altitude; less frequent south to the Pyrenees, Alps, Carpathians and the Balkan mountains. Caucasus, N and E Asia, Japan. N America (south to California and North Carolina). Disjunct in New Zealand and Tasmanía.

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