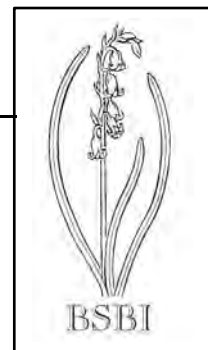


# Plant Crib

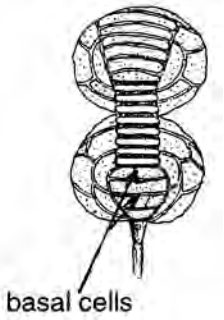

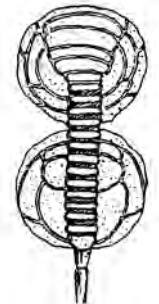


## POLYPODIUM

Three species of *Polypodium* occur throughout the British Isles. Two (*P. interjectum* and *P. vulgare*) are widespread and frequently hybridise to form *P. × mantoniae* Rothm.; it is the most frequent hybrid and often once established, forms large clones. The third species (*P. cambricum*) shows a South Atlantic/Mediterranean distribution preferring limestone rocks in areas where the January mean temperatures are above 2°C. It also hybridises with the other two when growing close by, forming with *P. interjectum*, *P. × shivasiae* Rothm. and with *P. vulgare*, *P. × font-queri* Rothm. The leaf-shape of the hybrids is intermediate between the parents and indurated cell numbers often vary to cover the whole range seen in the parents. Hybrid spores in *Polypodium* are colourless contrasting with the yellow-gold colour of viable spores and frequently sporangia do not dehisce.

	<i>Polypodium cambricum</i> L.	<i>P. interjectum</i> Shivas	<i>P. vulgare</i> L.
Leaves	5-50 cm long, yellow-green, new leaves produced autumn/winter; turning yellow and dying down in late spring or early summer	15-60 cm long, mid-green, new leaves produced late summer and autumn; wintergreen	5-25 cm long, mid-green, new leaves produced early summer; wintergreen
Leaf-blade	Broadly ovate-deltoid often with a long, narrow apical segment, pinnatisect	Narrowly ovate to oval, pinnatisect	Narrowly lanceolate to linear (but juvenile leaves triangular), pinnatisect to an obvious herringbone pattern
Leaf segments	Up to 7 cm long, usually serrated and with acute apices, lowest pair inflexed	c. 5 cm long, usually slightly serrate, tips tapering or bluntly rounded, lowest pairs somewhat inflexed	c. 2-4 cm long, entire or barely serrate, tips rounded, lowest pairs not inflexed
Rhizome scales	Narrowly triangular with a long wispy apex	Narrowly triangular with long, but not wispy, apex	Narrowly triangular with acute, but not long and twisted

# Plant Crib

Sori	Oval, on upper 1/3 of leaf, paraphyses present	Initially oval, on upper 1/3 - 2/3 of leaf, paraphyses lacking	Round, on upper 1/4 - 3/4 leaf, paraphyses lacking
Sporangium	Annulus dark brown; indurated cells (4-) 5-10, 21-26 × 81-100 μm; basal cells 3-4 	Annulus pale brown; indurated cells (4-) 7-9 (-13), 28-35 μm × 76-86 μm; basal cells 2-3 	Annulus red-brown; indurated cells (7-) 10-14 (-17), 22 -28 × 60-80 μm; basal cell 1 
Spores maturing	In early spring	Summer to autumn	In summer

## Notes

1. The best time to use this diagnostic character is early in the sporangia ripening sequence (which varies between species) and when the sporangia are yellow. With a ×10 lens the contrasting colour can be easily seen. The number of indurated cells and basal cells are best seen under a binocular at ×40 or above.
2. Illustrations of sporangia del. R. H. Roberts, with permission of C. A. Stace and Cambridge University Press.

Authors A.C.Jermy & J.M.Camus (*Field Guide*, 1991.)