



Eclipta Prostrata Whole Plant – BP 2016

Photographs and micrographs are provided for information. To be used in conjunction with the published British Pharmacopoeia monograph.

Identification A

Stems cylindrical, four sided or flattened, 2 to 5 mm in diameter, greyish, with appressed, whitish hairs pointing towards the tip, longitudinally striated, occasionally branching and nodes distinct. Leaves dark green, sessile or subsessile, opposite, lanceolate, 2 to 8.5 cm long and 1 to 2.5 cm wide with an entire or slightly dentate margin and appressed trichomes on both surfaces. Flowerheads 2 to 6 mm in diameter, greenish-brown, solitary or in pairs on unequal axillary peduncles, up to 8 involucre bracts, ovate, with appressed hairs; ray florets spreading, no longer than the bracts, not toothed; disc florets with 4-toothed corolla, pappus usually absent or reduced to minute teeth; 5 stamens, filaments epipetalous and anthers united into a tube; pistil bicarpellary, ovary inferior, unilocular with one basal ovule. Fruits 2 to 3 mm long, pappi persistent and coroniform; unfertilised achenes pale yellow, flattened and smooth; fertilised achenes pale to dark brown, 3 to 4 angled, tuberculate and bulbous. Root, if present, cylindrical, greyish, main root up to about 7 mm in diameter, with secondary branching.



fig. 1 Fragments of stem



fig. 2 Fragment of stem showing rooting at a node



fig. 3 Leaf fragments



fig. 4 Flowerheads and peduncles



fig. 5 Fragment of lower stem and root



fig. 6 Fragments of stem, leaves and flowers

Identification B

Reduce to a powder (355). The powder is greenish brown. Examine under a microscope using choral hydrate solution. The main diagnostic characters include numerous free, whole or broken, large covering trichomes, with warty or spiny walls, up to 700 μm long, uniseriate, usually tricellular, with a broad basal cell, a long median cell and a short, pointed sub-triangular apical cell; less frequently, smaller, unicellular, pointed covering trichomes from the midrib and stem. Fragments of leaf show sinuous walled epidermal cells, underlying palisade, anomocytic stomata, cuticular striations and covering trichomes on both surfaces. Stem fragments with unicellular and multicellular trichomes, epidermis of elongated cells, or in mature stem, poorly developed rectangular cork cells; secondary cortex of parenchyma with numerous air-spaces, pericyclic fibres thick-walled, lignified, simple pitted; secretory canals may be visible; xylem vessels usually simple pitted or spirally thickened, xylem parenchyma lignified and pitted. Fragments of root, if present, show poorly developed cork, consisting of 3-5 rows of thin-walled elongated cells, a secondary cortex of parenchyma, with scattered stone cells and fibres either singly or in groups, xylem vessels and tracheids, and fibres with peg-like projections. Pollen grains with spiny exine and 3 pores.

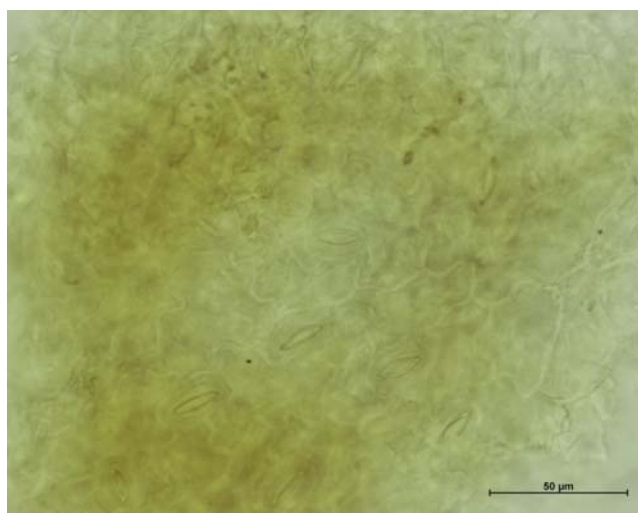


fig. 7 Fragment of epidermis (500x)



fig.8 Palisade cells in surface view (200x)

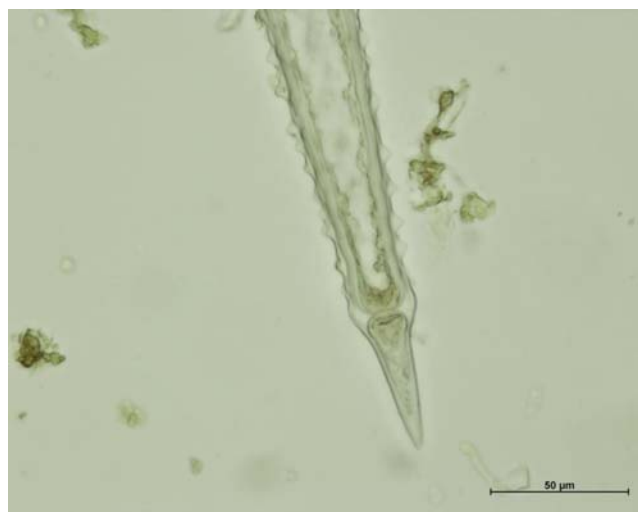


fig. 9 Warty trichome with apical tip (500x)



fig. 10 Basal cell of trichome with attached epidermal cells (500x)

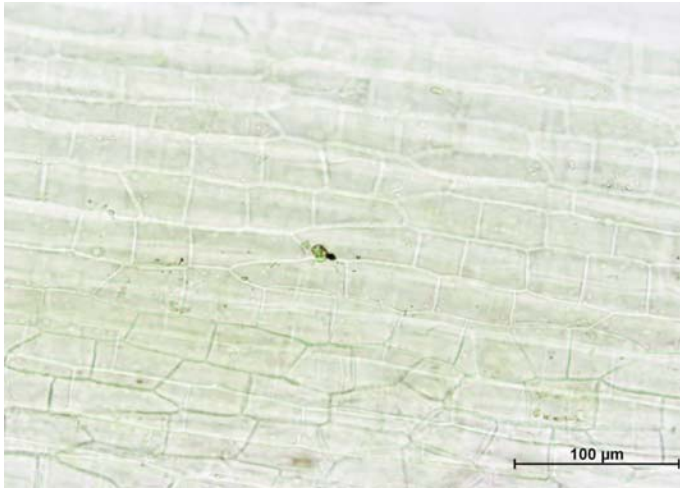


fig. 11 Elongated epidermal cells (200x)

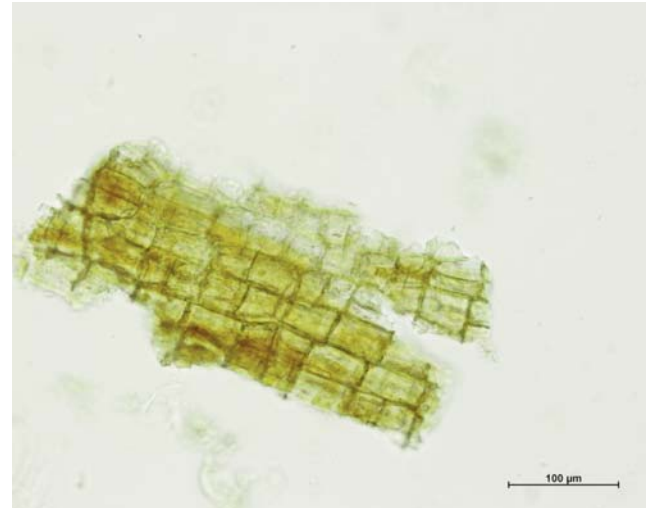


fig. 12 Cork cells (200x)

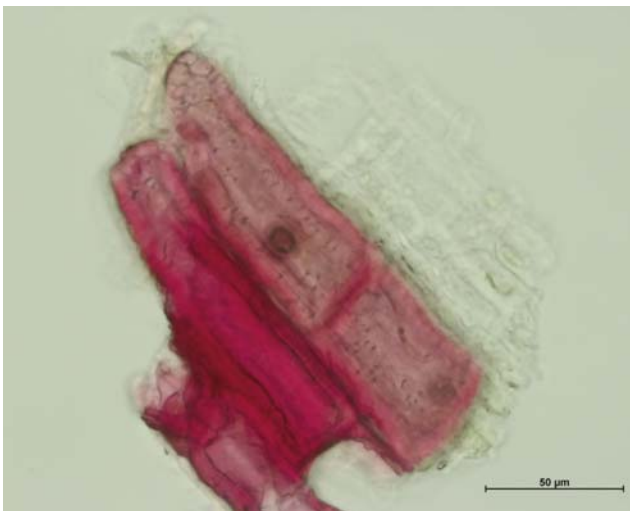


fig. 13 Lignified pitted parenchyma stained with phloroglucinol (500x)



fig. 14 Lignified cell from root stained with phloroglucinol (500x)



fig. 15 Pitted and spiral vessels of the stem stained with phloroglucinol (500x)



fig. 16 Vessels from the root stained with phloroglucinol (500x)

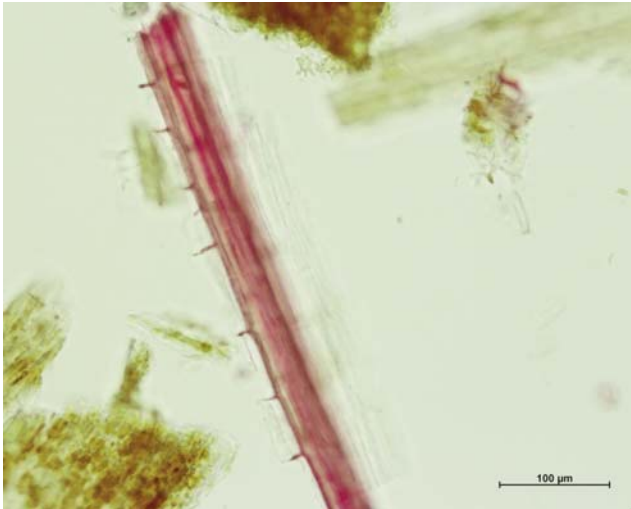


fig. 17 Pericyclic fibres stained with phloroglucinol (200x)

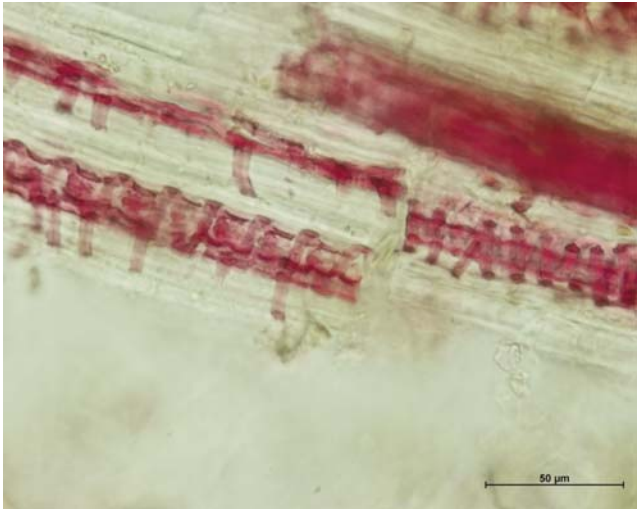


fig. 18 Spirally thickened vessels stained with phloroglucinol (500x)



fig. 19 Pollen grain with spiny exine (500x)