Mitchella repens L.

Partridge Berry Leaf

Folium Mitchellae

Rubiaceae

Partridge berry leaf is an indigenous North American botanical historically used by Native Americans, particularly in the northeastern United States. Among various tribes, it was used for a wide array of conditions ranging from diarrhea to urinary pains. Its most notable use in more modern times is as a uterine tonic and to facilitate childbirth.

A. Leaf

Surface view: Upper epidermal cells are more or less polygonal or slightly wavy with very conspicuous beaded cell wall thickenings; stomata are absent; cells of the lower epidermis are similar, except that they are smaller and have more sinuous anticlinal walls; paracytic stomata are restricted to the lower surface; subsidiary cells are narrow and of different sizes; guard cells are ~20–25 µm long. The lower epidermis detaches very easily from the leaf, leaving the mesophyll visible to surface view in some preparations; in surface view, the mesophyll cells have wavy anticlinal walls and nearly spherical intercellular spaces; very small calcium oxalate needles (2–5 µm) occur singly, and idioblasts containing 70–150 µm long bundles of acicular raphides are conspicuous.

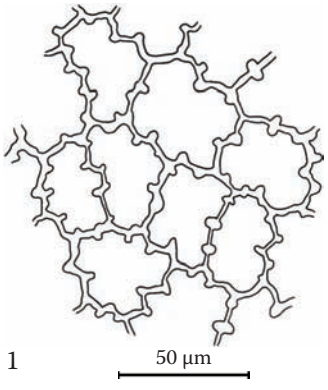
Transverse section: Bifacial; the palisade cells are very short and arranged in one or two layers; the cells of the upper layer are elongated and the ones of the interior layer are nearly quadratic; cells of the spongy mesophyll are spherical in the center of the leaf, becoming gradually ovoid toward the lower epidermis; calcium oxalate needles and bundles of acicular raphides are present.

B. Stem

Surface view: Fragments of the stem may be found in the crude drug. The epidermis has a thick cuticle and occasional unicellular or uniseriate covering trichomes.

Transverse section: Cortex is relatively thick, with frequent idioblasts containing acicular raphide bundles; endodermis is visible; xylem vessels up to 10 µm diameter; pith consists of large cells, some with reticulate thickenings.

Powder: Fragments of the leaves having wavy or sinuous epidermal cells with beaded wall thickenings and paracytic stomata or not; fragments lacking the lower epidermis and showing the typical spherical intercellular spaces of the spongy mesophyll and idioblasts containing acicular raphide bundles; parenchyma from the stem with idioblasts containing acicular raphides.



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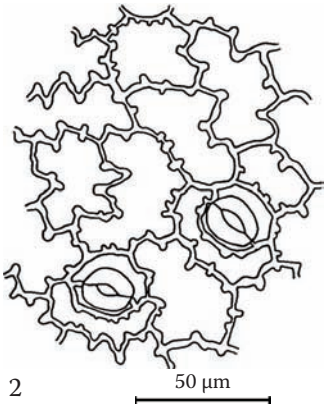

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