



Microscopic Characters of the Leaf and Stem of *Brunfelsia pilosa* Plowman (Solanaceae)

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SUMMARY. Species of *Brunfelsia*, whose flowers change colour progressively from violet to white, are popularly known as yesterday-today-tomorrow and used in folk medicine, mainly as anesthetic and diuretic. Based on ethnobotanical surveys, they have been investigated chemically and pharmacologically for expanding the knowledge on the native medicinal flora and for searching bioactive compounds. In order to contribute to pharmacognostic analyses, especially in distinguishing the species *B. pilosa* Plowman from the allied *B. uniflora* (Pohl) D. Don, this work has aimed to study the microscopic characters of the leaf and stem of the former. Mature leaves and young stem fragments were fixed in FAA, freehand sectioned transverse and longitudinally, and stained with astra blue and basic fuchsin. Microchemical tests and scanning electron analysis were also performed. The leaf is hypostomatic, having predominantly paracytic stomata. Multicellular non-glandular trichomes and capitate glandular ones are found on both surfaces. The mesophyll is dorsiventral and the midrib is traversed by a bicollateral vascular bundle in open arc. The stem, in incipient secondary growth, shows a uniseriate epidermis and the phellogen is formed in the sub-epidermal layers. The cortex has angular collenchyma, chlorenchyma and a starch sheath, and the vascular system shows external and internal phloem. Crystals of calcium oxalate are seen in the leaf and stem.

KEY WORDS: Bicollateral bundle, *Brunfelsia pilosa*, Calcium oxalate crystal, Solanaceae, Trichomes, Yesterday-today-tomorrow.

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