

## 33. LEUCOPHANACEAE M. Fleischer

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**Plants** glossy or dull, white, whitish to glaucous green, purplish, or brownish, often with pink or red tinge below. **Stems** simple or forked; rhizoids brown, inconspicuous; axillary hairs slender, proximal cell elongate, with brownish walls. **Leaves** erect to spreading-recurved, ligulate to lanceolate from clasping base, multistratose above, border of elongate hyaline cells present or absent, with 1-stratose wings of lamina in base, largely composed of internally and externally porose hyaline empty cells, chlorophyllose cells in 1–3 internal layers, forming a network immersed among the hyaline cells; typical costa present or absent. **Specialized asexual reproduction** by 1-seriate gemmae borne at leaf tips. **Sexual condition** autoicous; perigonia numerous, minute, gemmiform, axillary, stalked, with a few highly reduced leaves. **Perichaetia** terminal, inconspicuous, leaves small, otherwise scarcely differentiated. **Seta** single, straight, smooth. **Capsule** erect, exserted; operculum obliquely rostrate; peristome single, of 8–16 linear to triangular, sometimes apparently multicellular teeth, the teeth single or all or partly paired, smooth or variously decorated, each tooth composed of an interior and an exterior layer of sometimes cell-like plates with thin or variously thickened walls, portions of the walls of the plates sometimes eroded away, prostome present or absent. **Calyptra** cucullate, smooth. **Spores** granular-papillose.

Genera 4 or 5, species ca. 34 (1 in the flora): worldwide in tropical and subtropical regions.

The multistratose “leucobryaceous” leaves of *Octoblepharum*, the sole representative of the family in the flora, may be taken to indicate its relationship with other mosses having similar leaves. But the distinctive peristome of *Octoblepharum* makes the genus difficult to classify in the Leucobryaceae, where it has traditionally been assigned, or in the Calymperaceae, where it has also been placed and from which it differs markedly in leaf structure. A. Eddy (1988+, vol. 2) assigned the genus to its own monogeneric family, Octoblepharaceae (illegitimate name), based on its peristome, but *Octoblepharum* seems best classified in the Leucophanaceae, where it was placed by M. Fleischer (1900–1922, vol. 1), along with three genera of similar mosses.

1. **OCTOBLEPHARUM** Hedwig, Sp. Musc. Frond., 50. 1801 • [Greek *okto*, eight, and *blepharis*, eyelash, alluding to peristome teeth]

**Plants** small, densely to loosely cespitose. **Stems** erect. **Leaves** crowded, erect to spreading-recurved, weakly bordered with elongate hyaline cells; chlorophyllose cells in a single layer; costa absent. **Peristome** with prostome present.

Species ca. 15 (1 in the flora): worldwide in tropical and subtropical regions.

1. **Octoblepharum albidum** Hedwig, Sp. Musc. Frond., 50. 1801 [F]



**Plants** glossy, glaucous-green to white, often with pink tinge; densely cespitose; axillary hairs 3 per axil, 5-celled. **Leaves** spreading-recurved, fleshy, fragile when dry, 4–5 mm, apiculate, older leaves sometimes with rhizoids on tips. **Specialized asexual reproduction** rare, by

gemmae. **Seta** yellow, 2–5 mm. **Capsule** brownish, 1–1.5 mm, ovoid-cylindric, slightly asymmetric, with stomata at base; operculum 0.8 mm; peristome of 8 blunt triangular pairs of teeth, teeth smooth or faintly striate, 200  $\mu$ m tall, each composed of one interior and one

exterior layer of intact, empty, cell-like plates; prostome present. **Calyptra** 1.5–1.9 mm. **Spores** finely papillose, 17–24  $\mu$ m.

Capsules mature throughout the year but most common Sep–Apr. Hammocks and open forests, primarily on stems and bases of *Quercus virginiana* and *Sabal palmetto*, and rotted logs, occasionally terrestrial on soil and humus; low elevations (0–30 m); Fla., La., Tex.; pantropical.

*Octoblepharum albidum* is a weedy and conspicuous moss that is distributed worldwide in the tropics. It grows especially on palms, often forming deep soft cushions. The flat, glossy, ligulate, spreading-recurved leaves distinguish it easily in the field from the superficially similar *Leucobryum*, which has erect or spreading, pointed, subtubulose leaves.