

PHYLLOGONIACEAE

(B.J. O'Shea)

A monotypic family.

Phyllogonium (Fig. XX)

Three species in Africa, *P. fulgens* (Hedw.) Brid. (Réunion, and also South Atlantic islands (Tristan da Cunha, Gough), Mexico, West Indies, Surinam, tropical Andes), *P. viride* Brid. (Réunion, and also South Atlantic islands (Tristan da Cunha), Mexico, West Indies, Surinam, Bolivia, SE Brazil), *P. viscosum* (P. Beauv.) Mitt. (South Africa, Madagascar, possibly Mauritius, Réunion and also South Atlantic islands (Tristan da Cunha), Mexico, tropical Andes); the genus exhibits a tropical American-African distribution.

Plants medium sized to rather large, forming long pendent strands from loose mats, glossy green, yellowish-green or golden-brown. **Primary stems** creeping; leaves scale-like. **Secondary stems** usually pendulous, to 50 cm or more, irregularly pinnately branched, few to many; in cross-section outer 2-4 rows of cells small, thick-walled, inner cells larger, rather thick-walled, central strand absent; pseudoparaphyllia foliose. **Leaves** loosely imbricate, usually appearing 2-ranked, ovate-oblong to oblong, 2.5-4.5 mm long, deeply concave and compressed laterally, smooth or undulate, apex rounded or truncate, apiculate and recurved or erect, base auriculate; margins plane, entire; costae absent or short and forked; laminal cells smooth and strongly porose throughout, median cells linear to oblong-rectangular; alar cells differentiated, shortly rectangular to subquadrate-rounded, strongly porose, usually rusty-red. **Dioicous**. **Perichaetia** lateral, leaves differentiated, abruptly long acuminate from an broadly ovate base. **Seta** short to somewhat elongate, 0.5-3.5 mm long, equal to or longer than capsule, smooth. **Capsule** shortly exserted or immersed, suberect, urn oblong-cylindrical to ovoid, 1.2-2.5 mm; exothecial cells mostly quadrate, \pm thick-walled; stomata present or absent; annulus absent. **Operculum** conic-rostrate, oblique. **Prostome** present, represented by 1-3 layers adnate to the exostome. **Peristome** single or double, exostome teeth 16, smooth; endostome absent or if present represented only by a low, hyaline basal membrane. **Calyptra** mitrate or cucullate, sparsely to densely hairy. **Spores** spherical, papillose.

HABITAT. Commonly epiphytic on branches and occasionally trunks of trees, treelets and shrubs, less often on humus or leaf litter, particularly on steep banks; lowland adjoining montane or premontane to more commonly in mid and high montane forests, 150-4200 m.

DISCUSSION. *Phyllogonium* is characterized by the pendent habit, 2-ranked, oblong or oblong-ovate, conduplicate leaves, apiculate or truncate apex, auriculate base, short and forked costae, and strongly porose laminal cells. The genus is a typical element of montane forests, and is one of the more conspicuous pendent mosses. The species can be distinguished by the following features:

- a. Leaves undulate, 3.8-4.7 mm long, apex truncate *P. viscosum*
- a. Leaves smooth, less than 3.8 mm long, apex cuspidate b.
- b. Leaves ca. 3.6 mm long, apex cuspidate-recurved *P. viride*
- b. Leaves ca. 3.0 mm long, apex cuspidate-erect *P. fulgens*

The African distribution of this genus needs further study: for instance Lin (1983) mentions no collections from Madagascar despite there being a number of published collections, and also there seems some discrepancies amongst early authors about which islands were visited by which collectors.

LITERATURE. Lin, S.-H. 1983. A taxonomic revision of Phyllogoniaceae (Bryopsida). Part I. Journal of the Taiwan Museum 36(1): 37-86 [keys, illustrations, maps].