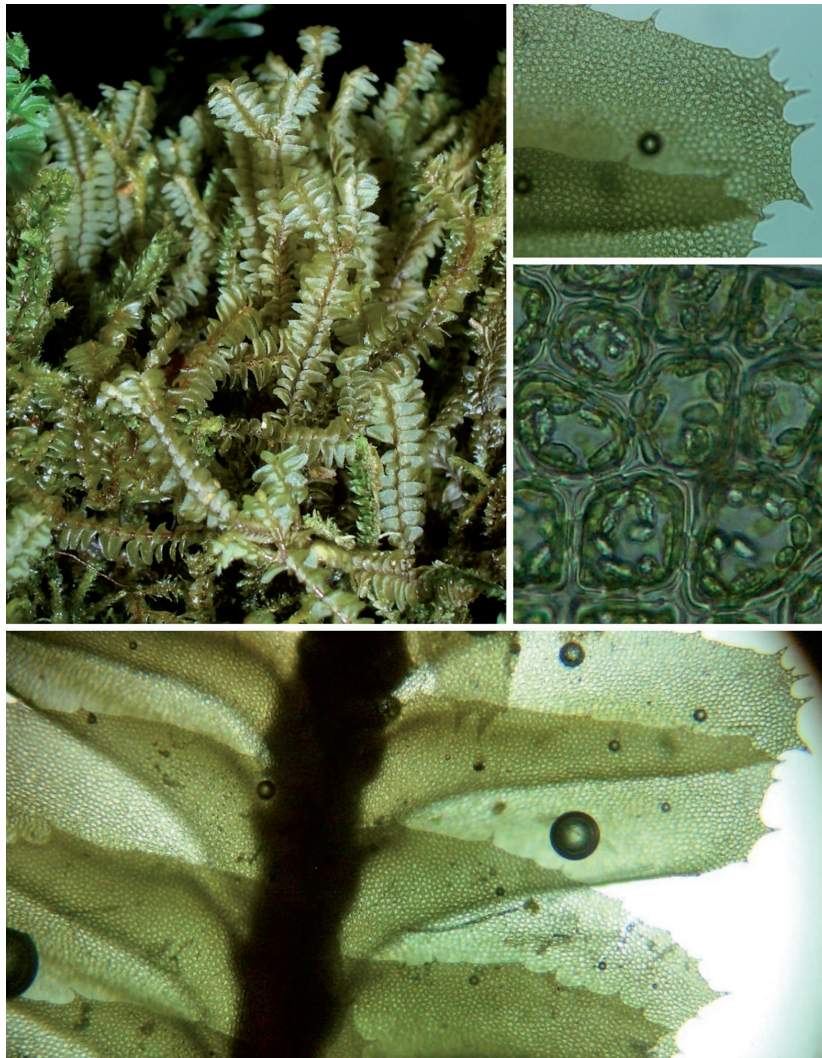




**Figs 298 and 299 (next page). *Omphalanthus roccatii* (Gola) R.M.Schust.**  
 Synonyms: *Evansiolejeunea roccatii* (Gola) Vanden Berghen; *Acrolejeunea convexa* Steph.; *Omphalanthus renistipulus* Steph. Plants robust, epiphytic, yellowish-green to brownish, shoots up to 3 cm long. Lobe ovate, rounded and obtuse at apex, decurved, 0.8 x 1 mm. Lobules subquadrangular, their free margins not incurved, apical tooth 1-celled. Cells thick-walled, trigones prominent and bulging, 18 x 27  $\mu$ m. Underleaves entire, rounded, inserted on four or more rows of stem cells, insertion arched. Dioicous. Androecia not observed. Gynoecia without innovations beneath, immersed in the cucullate bracts. Perianths emerging from surrounding bracts, pyriform-cylindrical, inflated, with 5-6 acute keels (2 ventral keels, 2 lateral keels, 1-2 dorsal keels). **Habitat:** Epiphytic in ericaceous forest, 2900-3100 m. **Distribution in Rwanda:** **Volcano NP:** Sabinyo. **Nyungwe NP:** Mt. Bigugu. **Distribution in Africa:** DR Congo (Uvira, Kahuzi, Biéga, Ruwenzori), Uganda (Ruwenzori).





**Fig. 300. *Plagiochila barteri* Mitt.**

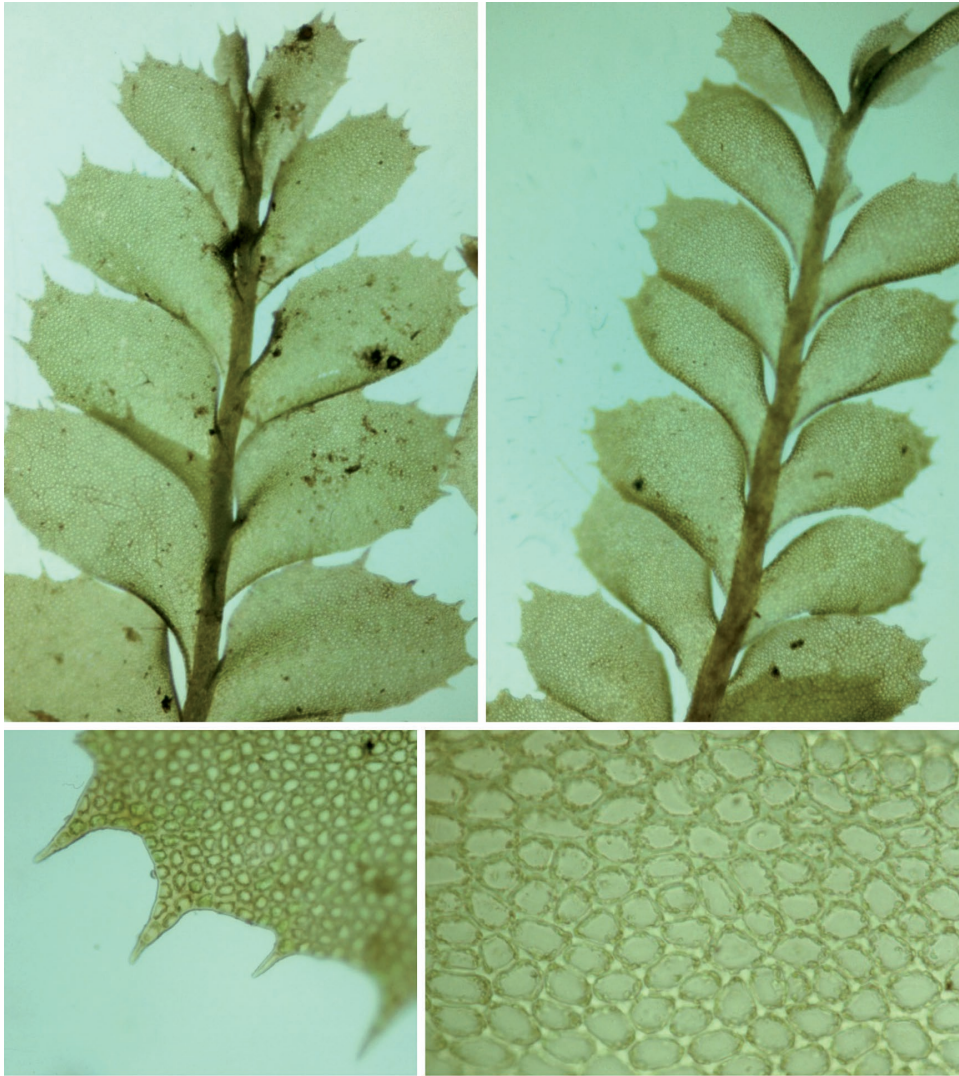
Plants up to 2-6(-10) cm long, shoots up to (2.4-)3-5(-7) mm wide, with intercalary ramifications. Leaves contiguous to imbricate, subtriangular-ovate, (0.8-)1.6-2.4 x 2-3.2 mm, ventral appendix well developed, convex, 0.8-1.2 mm high, dentate or entire-serrate at margin, ventral margin slightly convex, with 10-20 long involute, and acute teeth, dorsal margin involute, entire or dentate, prolonged by a wing. Cells with large trigones, 25-30 x 30-35  $\mu$ m. Dioicous. Perianth ovate-oblong, 2.6-3 x 4.4-5 mm, dorsal keel not winged, apex dentate at mouth. **Habitat:** Epiphyte in montane forest, 2000-2500 m. **Distribution in Rwanda: Nyungwe NP:** Rwasenkoko, Karamba, Kamiranzovu, Uwinka, W edge of forest near Gisakura. **Distribution in Africa:** Sierra Leone, Togo, São Tomé, Príncipe, Bioko, Cameroon, Gabon, DR Congo, Ethiopia, Kenya, Tanzania, Malawi, Zimbabwe. Also Comoros, Madagascar, Mauritius, Réunion.



**Figs 301 and 302 (next page). *Plagiochila colorans* Steph.**

Synonym: *Plagiochila barteri* ssp. *colorans* (Steph.) Pócs. Plants up 15-30 cm long, shoots up to 7-9 mm wide, with few or without ramifications. Leaves broadly triangular, 4.4 x 3 mm, postical base widely ampliate, shortly decurrent in a broad erose wing, antical base longly decurrent, auriculate at base, the insertions meeting at mid-line, stem completely concealed from above and below, leaf narrowed to the rounded apex, with small spiniform teeth. Cells with large trigones, 15-22 x 20-30  $\mu$ m. Dioicous. Perianth ovate-oblong, 2.6-3 x 4-5 mm, dorsal keel not winged, apex dentate at mouth. **Habitat:** Epiphyte in *Hagenia-Hypericum* forest, *Erica* forest, *Dendrosenecio-Lobelia stuhlmannii* paramo 2900-3900 m. **Distribution in Rwanda: Volcano NP:** Karisimbi, SW of Susa River, in the saddle between Mt. Bisoke and Mt. Karisimbi, on the E-slopes along trail to summit. **Nyungwe NP:** Mt. Bigugu. **Distribution in Africa:** DR Congo (Kahuzi-Biéga, Ruwenzori), Ethiopia (Bale), Uganda (Virunga Volcanoes, Ruwenzori), Kenya (Mt. Kenya), Tanzania (Mt. Meru, Kilimanjaro).





**Figs 303 and 304 (next page). *Plagiochila ericicola* Steph.**

Synonym: *Plagiochila hedbergii* S.W.Arnell. Plants up to 30 cm long, green, shoots up to 5 mm wide, with regularly pinnate to bipinnate branching. Leaves distant, ovate except for the longly decurrent tapering antical base, antical margin not strongly inrolled, nearly straight at about 50° to the stem, postical base narrow, longly decurrent, postical half of leaf strongly deflexed to lie at right angles to the stem, apex, postical margin and distal part of postical base regularly ciliate-dentate, teeth straight, of 1-3 cells. Cells with large nodular trigones, 21-27 x 25-30 µm. **Habitat:** Epiphyte in *Hagenia-Hypericum* forest, *Erica* forest, *Dendrosenecio-Lobelia stuhlmannii* paramo, 3000-3900 m. **Distribution in Rwanda: Volcano NP:** Karisimbi, Bisoke, Sabinyo, Muhabura. **Distribution in Africa:** DR Congo, Uganda, Kenya, Tanzania.

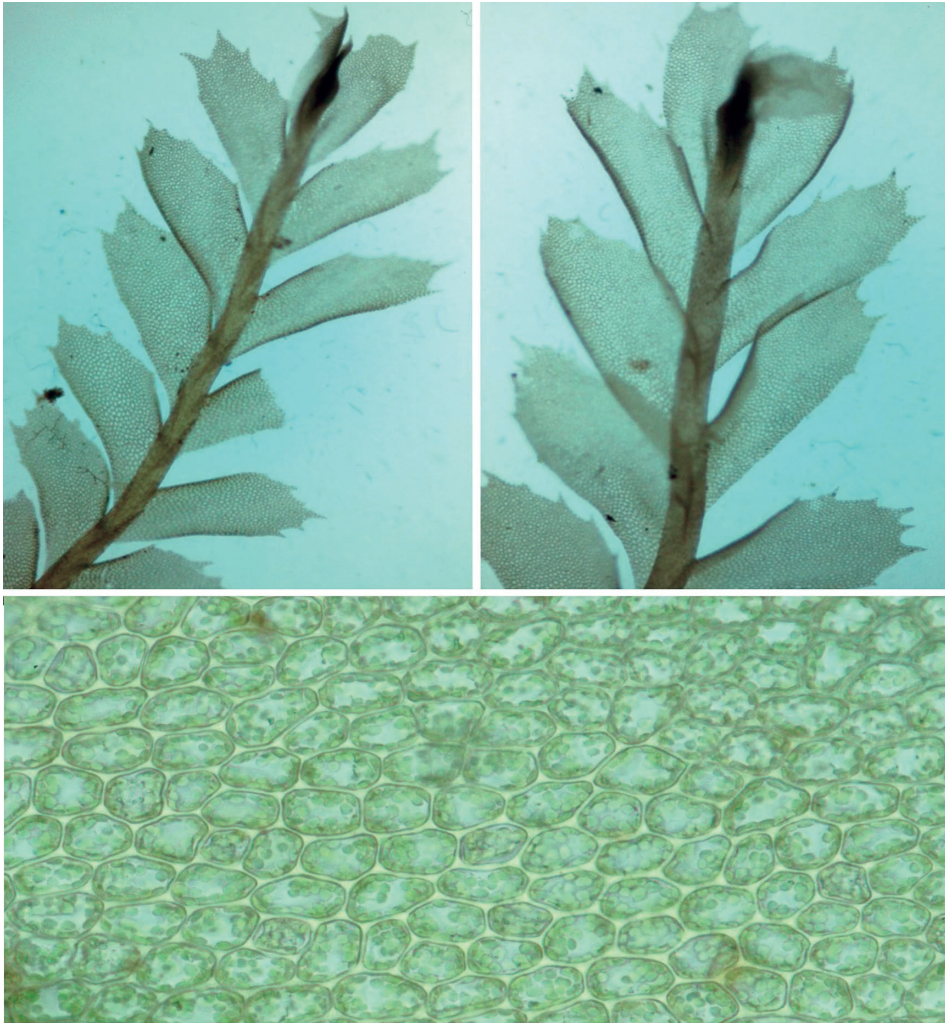






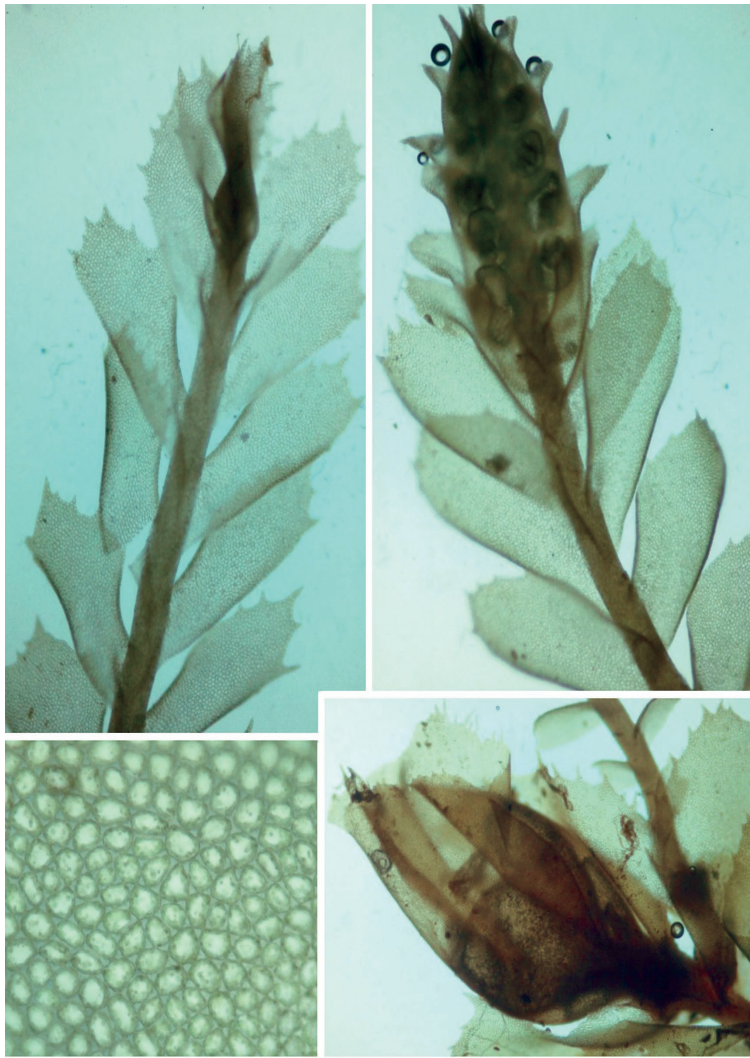
**Figs 305 and 306 (next page). *Plagiochila exigua*** (Taylor) Taylor  
 Plants up to 1-2 cm long, shoots up to 0.8-1.8 mm wide, with intercalary ramifications, microphyllous flagellae abundant. Leaves distant to contiguous, caducous, convex, distinctly narrowed at insertion, 0.5-1.2 x 0.3-6 mm, margin not or only slightly decurrent, bilobed to c. 1/3, lobes acuminate, spreading and thus V-shaped, dorsal margin entire or rarely with 1 tooth, ventral margin with 0-1(-2) teeth with 2-3 cells in a row. Cells with small trigones, 20-25 x 20-28  $\mu$ m. Vegetative reproduction with caducous leaves. **Habitat:** Epiphyte in *Erica* forest, 3300-3500 m. **Distribution in Rwanda: Volcano NP:** Gahinga, Muhabura. **Distribution in Africa:** DR Congo, Ethiopia, Uganda, Kenya, Tanzania, Malawi, Lesotho, South Africa. Also atlantic Europe (Scotland, England, Ireland, SW Norway, NW France, N Spain, Switzerland, Italy), Azores, Madeira, Canaries, Réunion, North America, Caribbean, South America, Asia (Bhutan, Japan).





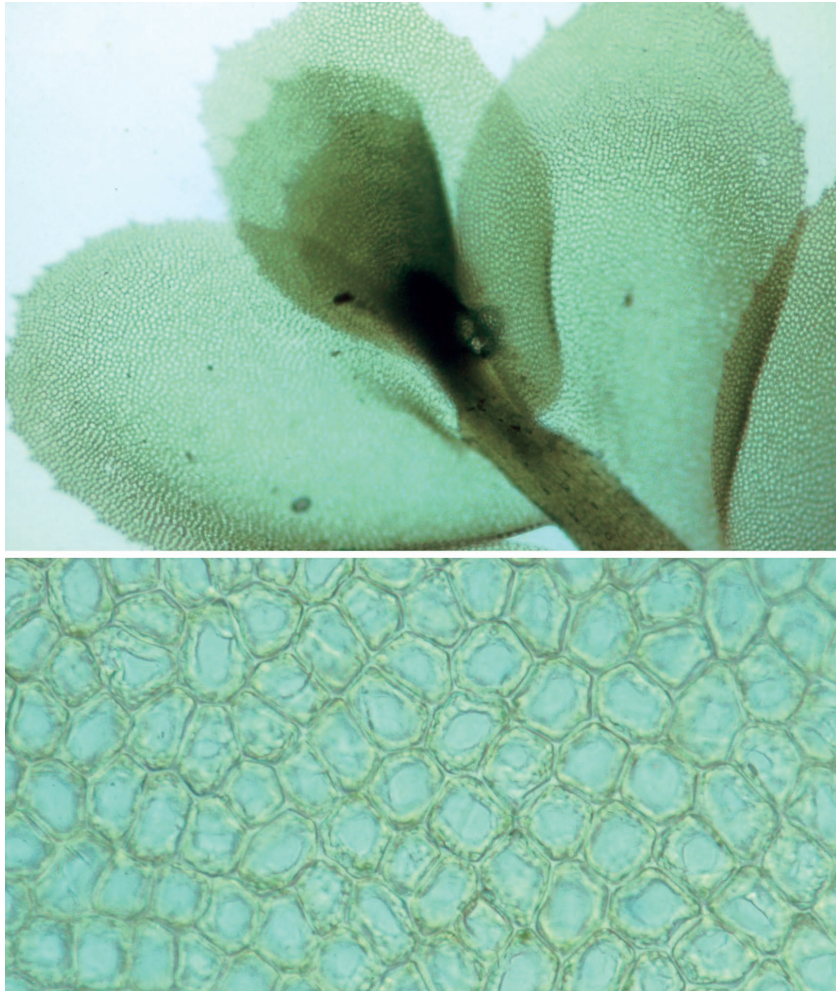
**Fig. 307. *Plagiochila fusifera* Tayl.**

Plants forming lax tufts, fronds 1-3 cm tall, arising from basal stolons, shoots 3-4.5 mm wide, dichotomously branched distally. Leaves approximate to somewhat imbricate, 1.4-1.7 mm long, ovate to oblong-triangular, dorsal margin nearly straight or weakly concave, shortly decurrent, insertion shorter than width of leaf, ventral base shortly and narrowly decurrent, leaf apex variable, rounded or truncate, leaf margin dentate around the whole of apex and ventral margin with  $\pm$  triangular teeth, often with some teeth on ventral base. Cells isodiametric, 20-25 x 20-30  $\mu$ m, trigones distinct, small or medium-sized. **Habitat:** Epiphyte in montane rainforest, 2500 m. **Distribution in Rwanda: Gishwati Forest:** N end of Gishwati, W of Gakarara. **Nyungwe NP:** Uwinka. **Distribution in Africa:** Senegal, Guinea, Sierra Leone, Ivory Coast, Togo, Ghana, Nigeria, São Tomé, Príncipe, Bioko, Cameroon, Gabon, Central African Republic, DR Congo, Ethiopia, Somalia, Uganda, Kenya, Tanzania, Malawi, Zambia.



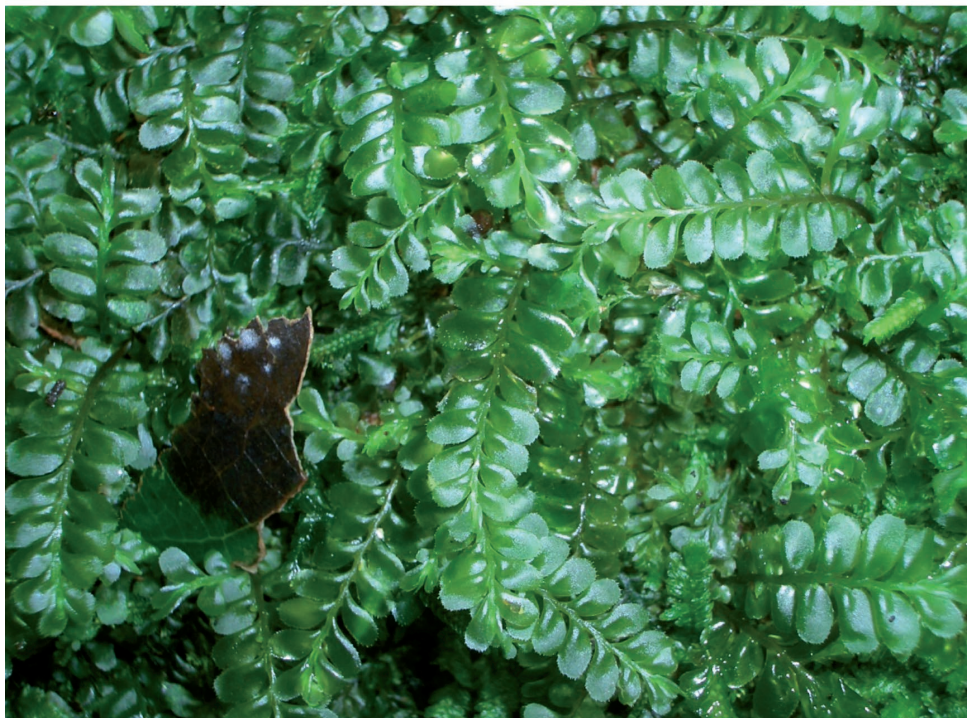
**Fig. 308. *Plagiochila heterostipa* Steph.**

Plants with fronds up to 5 cm long, distantly pinnate to bipinnate, 3-4.5 mm wide. Leaves (1.2-) 1.5-2(-2.5) mm long, contiguous or distant, ovate to oblong, dorsal base moderately to longly decurrent in a narrow wing, obliquely inserted, leaving the dorsal side of the stem well exposed, dorsal margin arching outwards at an angle of 45°-70°(-80°), ventral base shortly decurrent, leaf apex truncate, leaf margin coarsely and irregularly dentate with 3-4(-5) teeth at apex, and 2-4 teeth on ventral margin, dentition generally coarser and shorter than in *P. terebrans* (see below). Cells 17-20 x 20-23  $\mu\text{m}$ , trigones medium-sized, sharply defined. Dioicous. Perianth widely triangular, slightly longer than wide. **Habitat:** Epiphyte in submontane to montane rainforest, 2000-2500 m. **Distribution in Rwanda:** Nyungwe NP: Uwinka. **Distribution in Africa:** Ivory Coast, Gabon, DR Congo, Burundi, Uganda, Kenya, Tanzania, Angola, Malawi, Zimbabwe, Swaziland, South Africa.



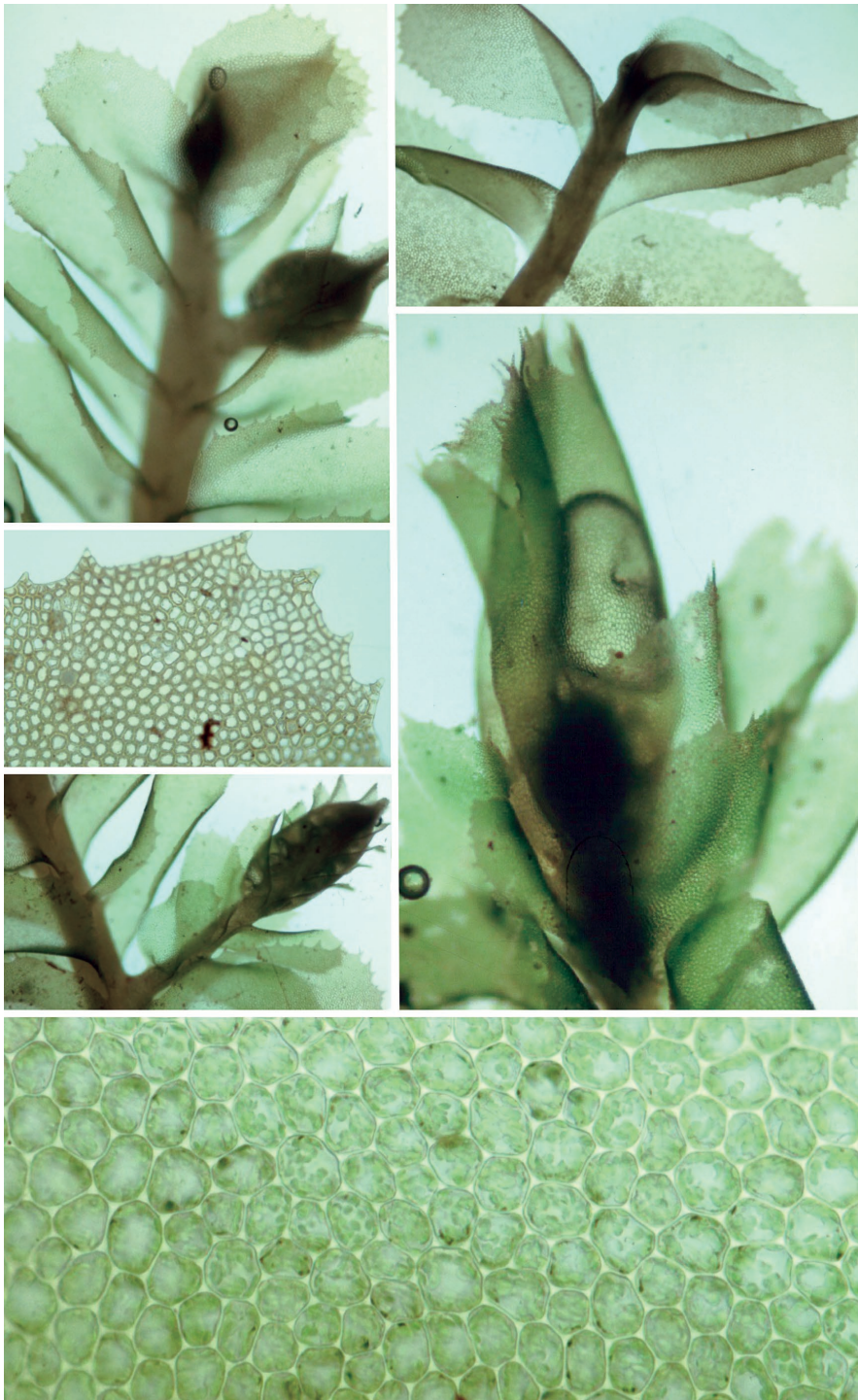
**Figs 309 and 310 (next page). *Plagiochila integerrima* Steph.**

Synonym: *Plagiochila blanda* Steph. Plants forming dense mats up to 1-3 cm tall, shoots 0.5-2 cm long and 3-4.8(-6) mm wide with exclusively intercalary ramifications. Leaves distant to contiguous or slightly imbricate, obovate-oblong, cuneate at base, (1-)1.2-2 x 1.8-3.4 mm, ventral margin shortly decurrent on stem, sinuate, with 1-6 small teeth in distal part towards apex, apex rounded or truncate, subentire or irregularly dentate, with 3-8 acute teeth. Cells without trigones or with small nodulose trigones, 24-30 x 30-40  $\mu\text{m}$ . **Habitat:** Lithophytic or terrestrial, occasionally epiphytic in montane rainforest, often near streams or rivers, 1900-2400 m. **Distribution in Rwanda: Nyungwe NP:** Nyungwe, c. 7 km E of Pindura, Kamiranzovu, Uwinka. **Distribution in Africa:** Guinea, Sierra Leone, Ivory Coast, Togo, Ghana, Nigeria, São Tomé, Bioko, Cameroon, Gabon, Rio Muni, Central African Republic, Congo-Brazzaville, DR Congo, Burundi, Ethiopia, Somalia, Uganda, Kenya, Tanzania, Malawi, Zimbabwe. Also Madagascar, Mauritius, Réunion, Seychelles.

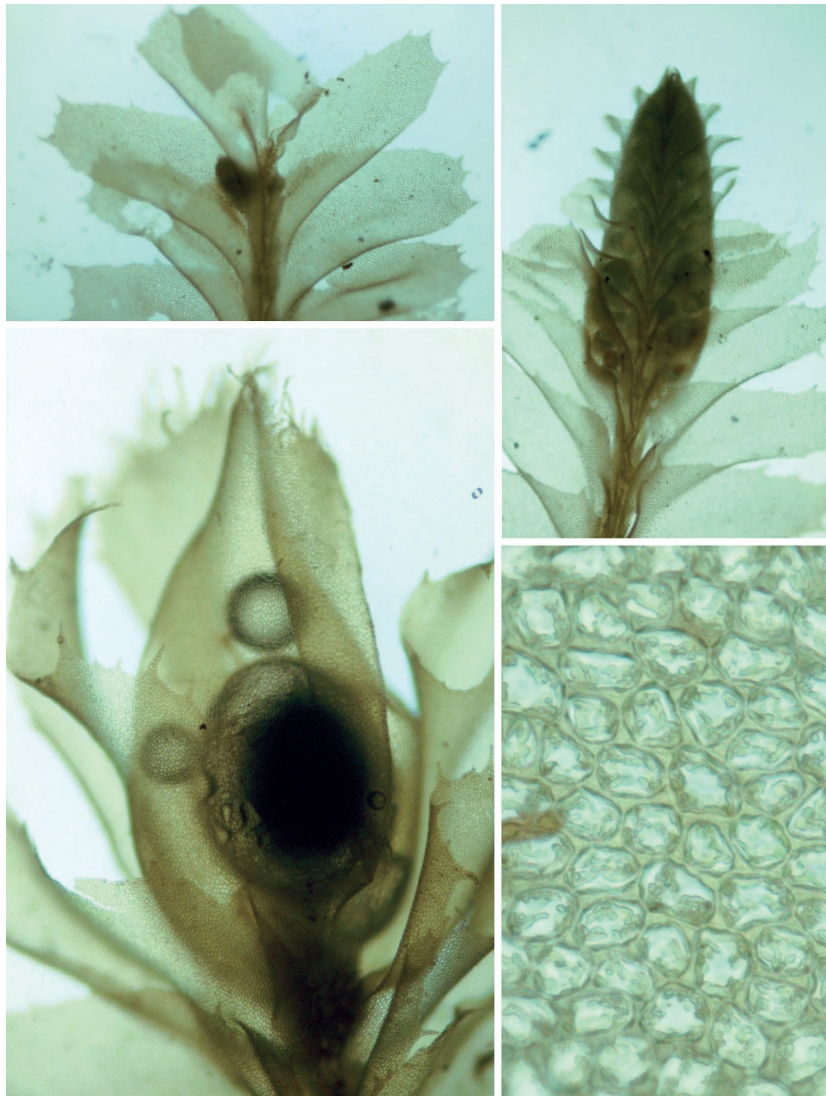




**Figs 311 and 312 (next page). *Plagiochila kiaerii* Gottsche**  
 Synonym: *Plagiochila divergens* Steph. Plants similar to *Plagiochila fusifera*, differing mainly in being much larger and more richly branched, fronds pinnately or bipinnately branched, 4-8 cm tall, shoots 4-6 mm wide. Leaves 2-3.5 mm long, dentition variable, usually dentate near apex and in the distal part of the ventral margin, entire proximally, involute leaf margin prolonged by an obliquely inserted wing on stem. Cells with large nodulose trigones, 18-22 x 20-26  $\mu$ m. Dioicous. Perianth subtriangular, 1.4-1.6 x 1.5-2 mm, mouth ciliate. **Habitat:** Epiphyte in montane rainforest, 2000 m. **Distribution in Rwanda: Nyungwe NP:** Rugege. **Distribution in Africa:** DR Congo, Burundi, Uganda, Kenya, Tanzania, Angola, Malawi, South Africa. Also Madagascar, Seychelles.

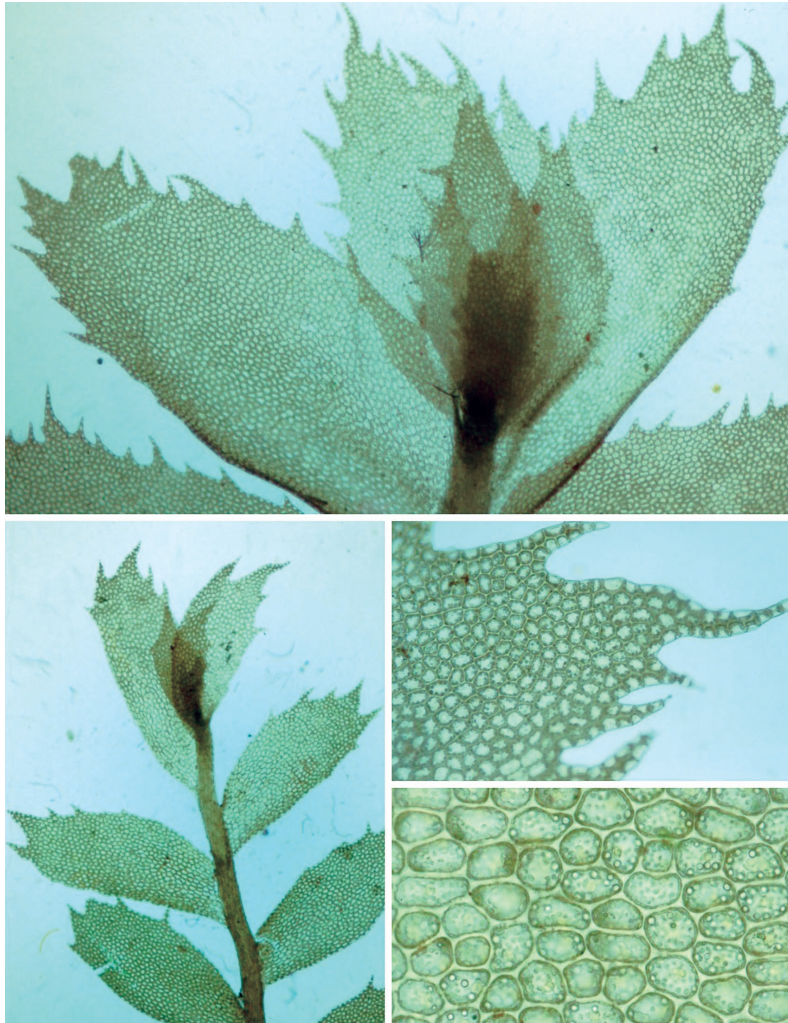




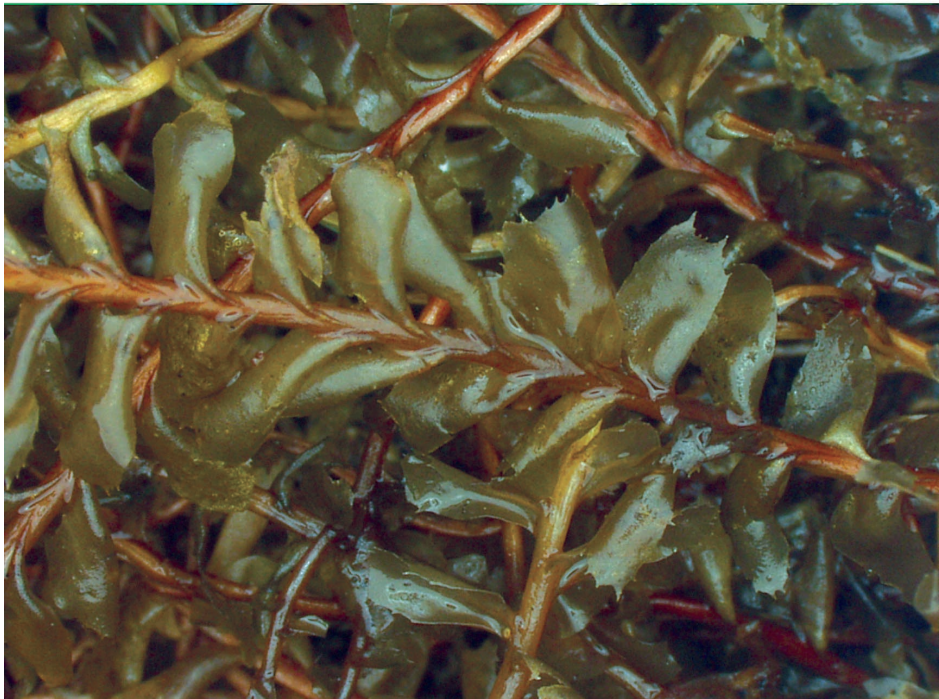


**Fig. 313. *Plagiochila lastii* Mitt.**

Plants up to 6-8 cm long, shoots up to 3-5 mm wide, often pendulous, laxly pinnate or bipinnate. Leaves distant to contiguous, triangular, postical margin on main axis at 90°, postical bases forming a low but well-marked crest, longly decurrent in a narrow and undulate wing, postical margin at apex coarsely and irregularly dentate or biserrate with 2-4 principal teeth. Cells with distinct trigones and intermediate thickenings, 15-24 x 20-40  $\mu\text{m}$ . Underleaves often conspicuous, bifid, deeply lacinate. Dioicous. Perianth ovate or elliptic, 2 x as long as wide, apex closely and shortly lacinate. **Habitat:** Montane rainforest, 2450 m. **Distribution in Rwanda:** Nyungwe NP: Uwinka. **Distribution in Africa:** DR Congo, Ethiopia, Uganda, Kenya, Tanzania, Malawi, Zimbabwe, South Africa.



**Figs 314 and 315 (next page).** *Plagiochila pectinata* (Willd. ex Web.) Lindenb.  
 Plants up to 2-6 cm long, shoots up to (2.8-)4-6(-7) mm wide, with intercalary ramifications  
 Leaves distant to contiguous, slightly imbricate, slightly falcate, cuneate at base and  
 convex dorsally, usually 2 x long as wide, (0.8-)1-2 x (1.8-)2.3-3.8 mm, ventral margin  
 convex, slightly decurrent at stem, forming an angle of 45° with the stem, in distal part  
 2-4(-7) triangular teeth, apex acute, rarely truncate, in proximal part (1-)2-6(-8) triangular  
 teeth. Cells with distinct trigones, 23-30 x 32-45 µm. Dioicous. Androecium 2.4-4.5  
 mm long, bracts imbricate. Perianth ovate or elliptic, 1.1-1.7 x 1.7-3.4 mm, not winged,  
 apex with 10-16 cilia on each side of mouth. **Habitat:** Epiphyte in montane rainforest  
 and ericaceous forest, 2450-3000 m. **Distribution in Rwanda:** Nyungwe NP: Uwinka.  
**Volcano NP:** Muhabura. **Distribution in Africa:** Sierra Leone, Ghana, São Tomé, Bioko,  
 Cameroon, Gabon, Rio Muni, DR Congo, Uganda, Kenya, Malawi. Also Madagascar,  
 Mauritius, Seychelles.





**Figs 316 and 317 (next page).** *Plagiochila squamulosa* var. *sinuosa* (Mitt.) Vanden Berghen

Synonym: *Plagiochila sinuosa* Mitt. Close to *P. squamulosa* var. *squamulosa* but differing in shorter teeth that are triangular rather than spiniform, plants usually more closely and regularly pinnate or bipinnate. **Habitat:** Epiphyte in *Lobelia mildbraedii*-*Cyperus denudatus* bog, ericaceous heath with *Andropogon shirensis* and montane forest, 2400-2500 m.

**Distribution in Rwanda:** **Gishwati Forest:** W of Gakarara. **Nyungwe NP:** Rwasekoko.

**Distribution in Africa:** Cameroon, DR Congo, Burundi, Ethiopia, Uganda, Kenya, Tanzania, Angola, Malawi, Zambia, Zimbabwe. Also Madagascar, Mauritius.