

Figs 258 and 259 (next page). *Lejeunea tabularis* (Spreng.) Gottsche

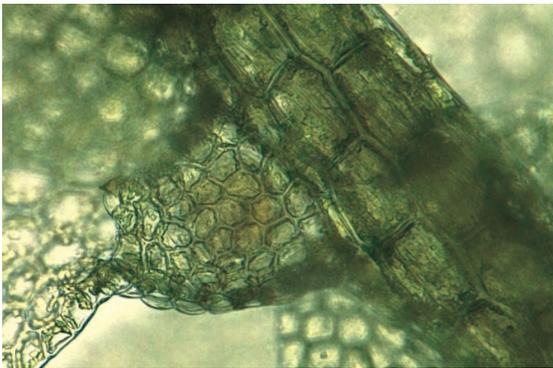
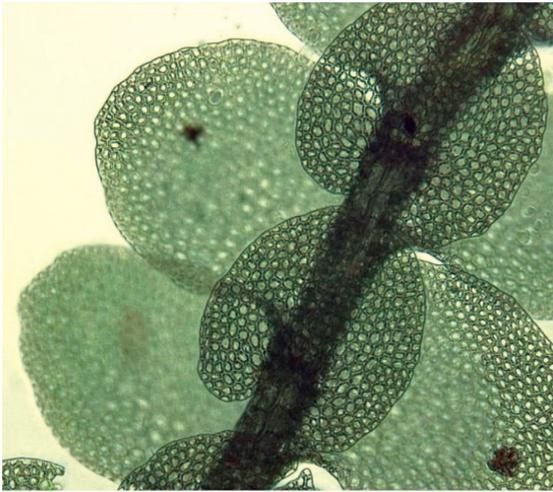
Synonyms: *Lejeunea flava* ssp. *tabularis* (Spreng.) S.W.Arnell; *L. grossecristata* (Steph.)

E.W.Jones. Plants yellowish-green to pale yellow or yellowish-brown. Stem up to 2 cm long. Leaves imbricate, spreading in about 45-55°, lobe concave, 0.45-0.65(-0.75) mm long, overlapping and crossing the stem, apex rounded. Lobule variable in size, usually large, convex, free margin incurved, 1/2 x as wide in the apex as in the base, triangular, with an unicellular tooth at apex, keel slightly arched, in about 45° to the stem.

Underleaves large, cordate to almost circular, 3-4 x as wide as the stem, longer than wide, base deeply cordate, bilobed to 1/2, sinus narrow, obtuse. Cells 16 x 20 µm, walls thin with small intermediate thickenings, trigones small to large. Monoicous. Perianth

longly pyriform, 5-plicate, rostrum 40 x 50 µm. **Habitat:** Epiphytic in montane forest up to *Hagenia-Hypericum* forest, 2000-3300 m. **Distribution in Rwanda: Volcano NP:** Karisimbi, in the saddle between Bisoke and Karisimbi, Sabinyo. **Gishwati Forest:** Gikungu. **Lake Kivu:** Tea plantation near Cyongoroka. **Nyungwe NP:** Rwasenkoko, Karamba, Kamiranzovu, Uwinka, Gisakura, Mt. Muzimu. **Central Rwanda:** Lake Bulera

Distribution in Africa: Guinea, Ivory Coast, Nigeria, Príncipe, Bioko, Cameroon, Central African Republic, Congo-Brazzaville, DR Congo, Burundi, Uganda, Kenya, Tanzania, Malawi, Mozambique, South Africa. Also Comoros, Madagascar, Mauritius, Réunion.



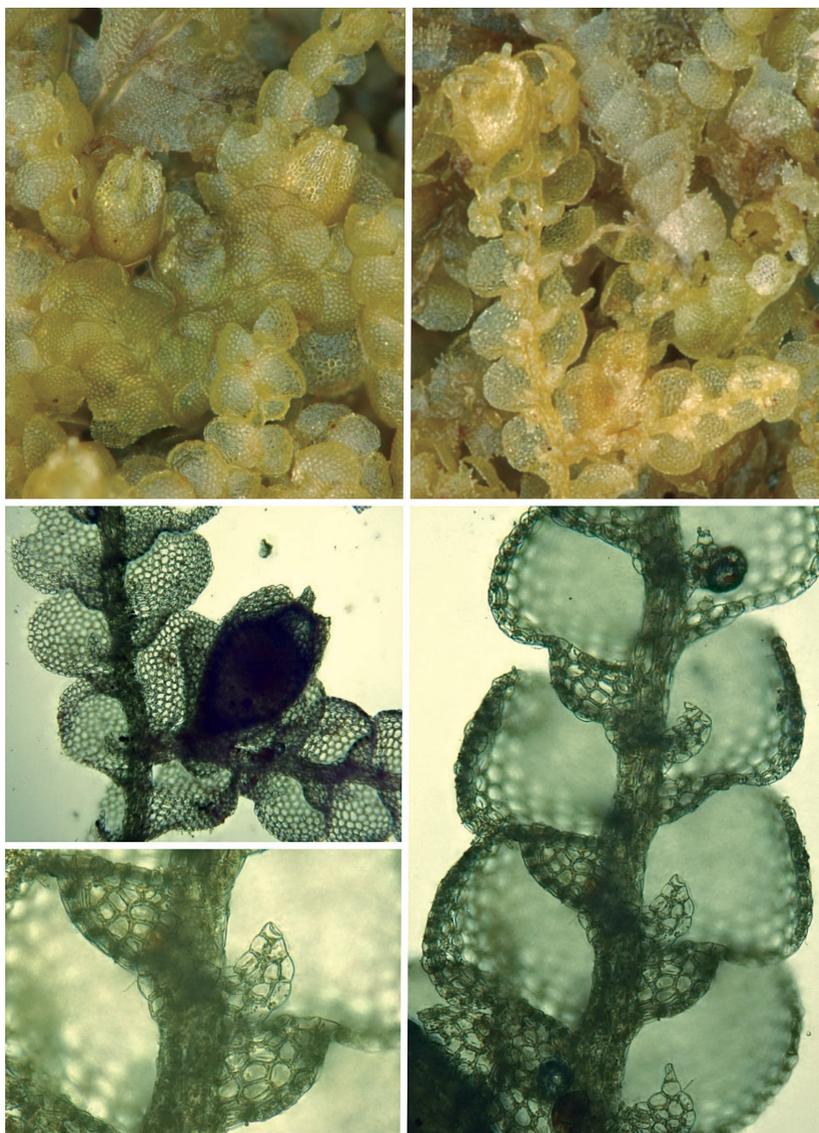


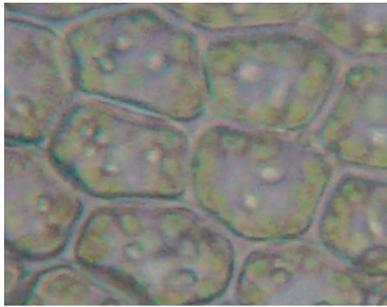
Fig. 260. *Lejeunea villaumei* (Steph.) Grolle

Synonyms: *Ciliolejeunea capensis* S.W.Arnell; *Lejeunea arnelliana* R.M.Schust. Plants yellowish green to dark bluish-green, up to 10 mm long. Leaves imbricate. Lobe 0.29 x 0.25 mm, apex rounded. Lobule 0.1 x 0.08 mm. Cells without distinct trigones, 27 x 24 μ m. Underleaves small, 0.11-0.13 x 0.15 mm, lobes spreading, sinus 0.05 mm long. Ventral margin of leaf forming deep sinus (-90°) with strongly arched keel. Autoicous. Perianth tuberculate or irregularly dentate, sometimes with 2-3-celled processes, 0.48 x 0.31 mm. **Habitat:** Epiphytic in montane forest, 2000-2100 m. **Distribution in Rwanda:** Nyungwe NP: Gisakura. **Distribution in Africa:** Uganda, Kenya, Tanzania, Malawi, South Africa. Also Madagascar, Réunion, Seychelles.



Figs 261 and 262 (next page). *Lepidozia cupressina* (Sw.) Lindenb. in Gottsche, Lindenb. & Nees

Synonym: *Lepidozia truncatella* Nees. Plants forming mats and cushions to large swelling tufts. Shoots to 3-4 cm, procumbent, pinnately or occasionally bipinnately branched, branches sometimes becoming attenuate. Leaves closely imbricate, incubous, overlapping and concealing stem, markedly asymmetrical, very convex, insertion oblique, 0.48-0.84 x 0.5-0.88 mm, (2-)3-4-lobed to 1/4-1/3 of their length, lobes triangular, acute (4-)7-12 cells wide at base, ending in 1-4 uniseriate cells. Underleaves erect, concave, 0.28-0.48 x 0.3-0.56 mm, 4-lobed to 1/3. Dioicous. **Habitat:** Epiphytic in montane forest, 2100-3200 m. **Distribution in Rwanda:** **Volcano NP:** Sabinyo. **Nyungwe NP:** Rwasenkoko, Uwinka, Mt. Bigugu. **Distribution in Africa:** Bioko, DR Congo, Uganda, Kenya, Tanzania, Lesotho, South Africa. Also Europe (Scotland, Ireland, France, Germany, Spain, SW Norway), Atlantic Islands (Azores, Madeira, Canaries), Jamaica, Yunnan. **Note:** *Lepidozia cupressina* ssp. *quinquefida* (Steph.) Pócs differs mainly in the leaves with 4-5 lobes. It is known from Ruwenzori and Kilimanjaro.



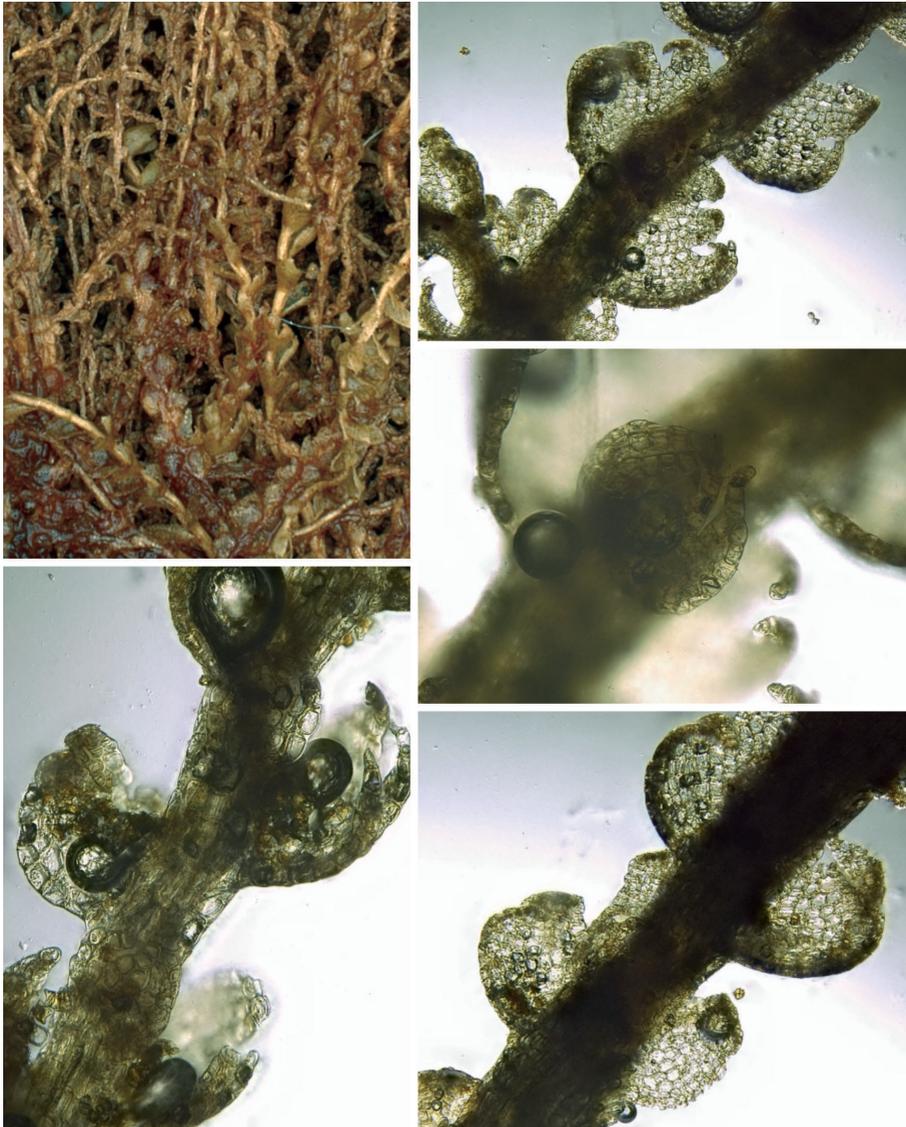


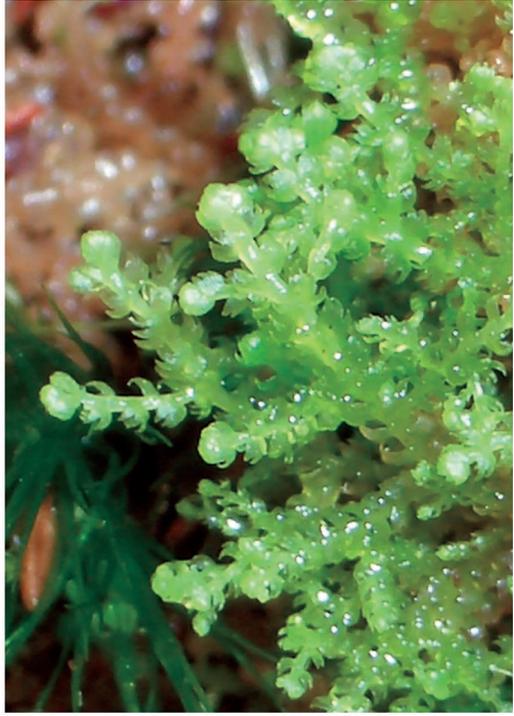
Fig. 263. *Lepidozia pearsonii* Spruce

Synonym: *Lepidozia hyalina* Steph. Plants pale or yellowish green. Shoots up to 6 cm long, stems procumbent, pinnate, branches usually becoming attenuate. Stem leaves usually distant, spreading to erecto-patent, not overlapping stem, plane to convex, asymmetrical, insertion oblique, 0.32-0.59 x 0.18-0.48 mm, (2-)3-lobed to 1/2-2/3 of their length, lobes narrowly triangular, acute, (2-)4-7 cells wide at base, ending in 1-2 uniseriate cells, branch leaves smaller, distant, mostly 3-lobed. Underleaves slightly concave, 0.2-0.4 x 0.26-0.4 mm. Dioicous. **Habitat:** Epiphytic in Paramo, 3800-4200 m. **Distribution in Rwanda: Volcano NP:** Karisimbi. **Distribution in Africa:** DR Congo, Uganda, Malawi, South Africa. Also Europe (England, SW Norway).



Figs 264 and 265 (next page). *Lepidozia reptans* (L.) Dumort.

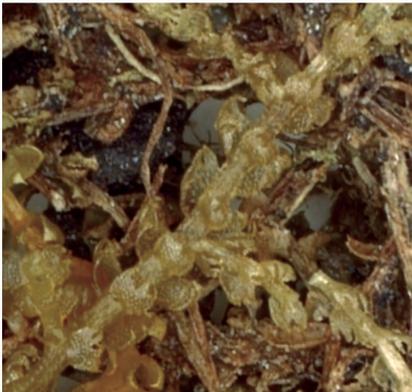
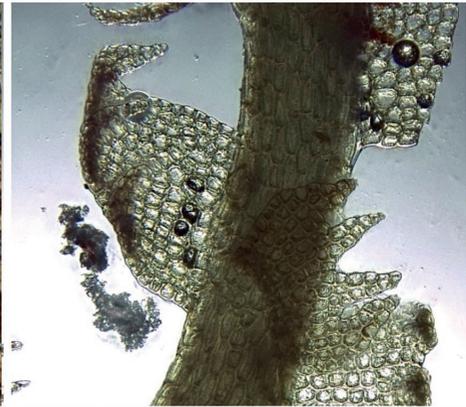
Plants small, dull dark green. Shoots up to 3 cm long, procumbent, stems pinnately branched, small-leaved flagelliform branches often arising from ventral side of stem. Stem leaves distant to imbricate, not overlapping stem, insertion oblique, 0.24-0.56 x 0.18-0.48 mm, 3-4-lobed to 1/4-1/3 of their length, lobes triangular, acute to obtuse, 4-7 cells wide at base, ending in 1-2 uniseriate cells, branch leaves smaller, imbricate, mostly 3-lobed. Underleaves somewhat concave, 0.2-0.4 x 0.26-0.4 mm. Autoicous. Perianths narrowly ellipsoid or fusiform, plicate above, mouth small, denticulate. **Habitat:** Epiphytic in montane forest, 2800 m. **Distribution in Rwanda:** Nyungwe NP: Mt. Bigugu. **Distribution in Africa:** DR Congo (Mt. Kahuzi). Widespread in the Northern Hemisphere (Europe, Asia - China and Taiwan, N America).





Figs 266 and 267 (next page). *Lepidozia stuhlmannii* Steph.

Synonyms: *Lepidozia stuhlmannii* var. *abyssinica* (S.W.Arnell) Pócs; *L. abyssinica* S.W.Arnell; *L. lacerata* Steph. Plants forming loose mats. Shoots regularly pinnate or weakly bipinnate, usually 1-2 cm long, lateral branches distant, attenuate or flagelliform. Leaves approximate, 0.3-0.4 mm long, mostly 3-4-lobed, the lobes less than 0.5 of the leaf length, narrowly triangular, decurved or inflexed so that the whole leaf is convex, lobes 4-5 cells wide at base, with 1-2 uniseriate cells at apex, dorsal lobe often wider (7 cells), ventral lobe often narrower (3 cells). Underleaves usually narrower or only slightly wider than stem, 3-4-lobed. Autoicous. **Habitat:** Epiphytic in montane forest up to *Hagenia-Hypericum* forest and *Erica* forest, 2000-3300 m. **Distribution in Rwanda:** **Volcano NP:** Karisimbi, in the saddle between Bisoke and Karisimbi, Bisoke, Sabinyo. **Nyungwe NP:** Rwasenkoko, Gisakura, Rwasenkoko, Kamiranzovu. **Distribution in Africa:** Bioko, Cameroon, DR Congo, Ethiopia, Uganda, Kenya, Tanzania, Malawi, South Africa.





Figs 268 and 269 (next page). *Lepidozia succida* Mitt.

Synonym: *Sprucella succida* (Mitt.) Steph. Plants deep green, often forming cushions, stems pinnate or bipinnate. Main stems 2-3 cm long, sometimes stoloniform, branches regularly spaced, complanate or ascending and secund. Stem leaves 3-lobed to 0.25 of their length, distant to approximate, 0.5-0.6 mm long, not much longer than wide, branch leaves 2-lobed to 0.25 of their length, oblong, much longer than stem leaves, 0.5-1 mm long, 1.5-2 x as long as wide, approximate, nearly longitudinally inserted, dorsal margin forming an angle of 45°-80° with the stem. Underleaves mostly 4-lobed, lobed to 0.5 of their length. Dioicous. **Habitat:** Forest floor in dense montane forest, 1800-2000 m. **Distribution in Rwanda: Nyungwe NP:** Gisakura. **Distribution in Africa:** Guinea, Sierra Leone, Ivory Coast, Ghana, Nigeria, São Tomé, Bioko, Cameroon, Gabon, Rio Muni, Central African Republic, Congo-Brazzaville, DR Congo, Uganda, Angola. Also Madagascar.



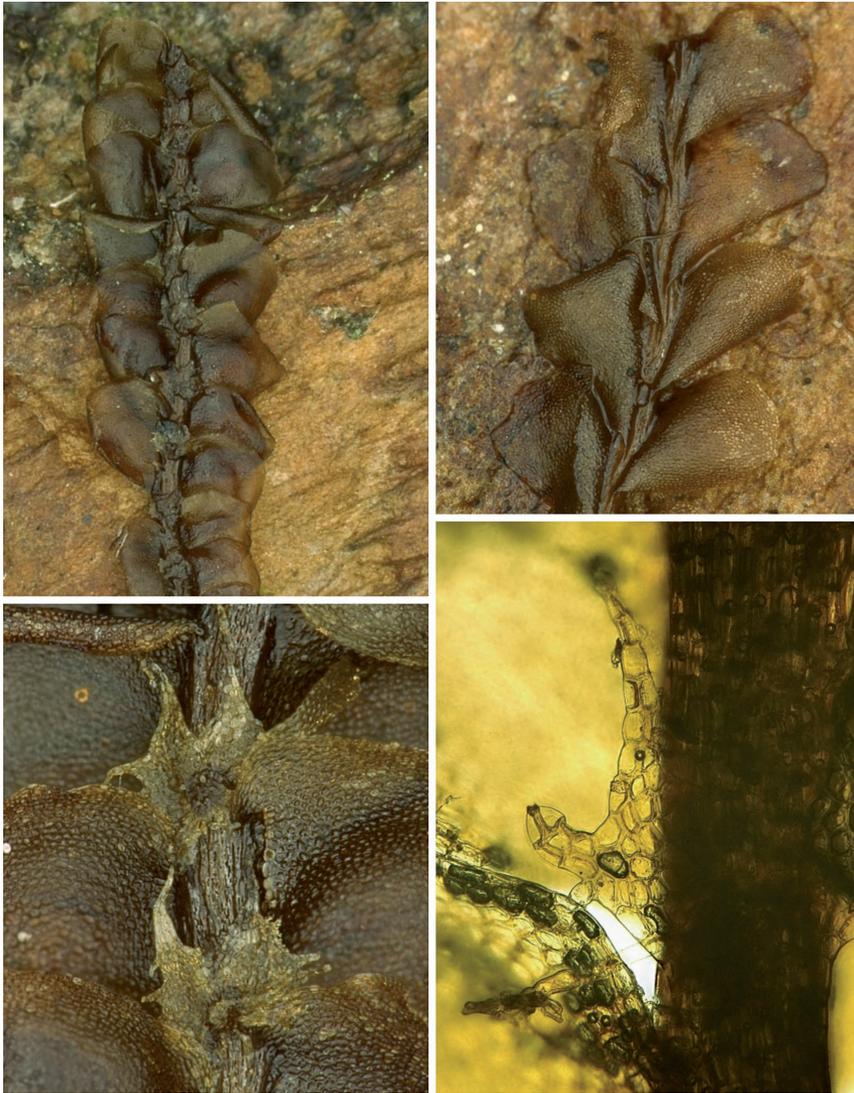


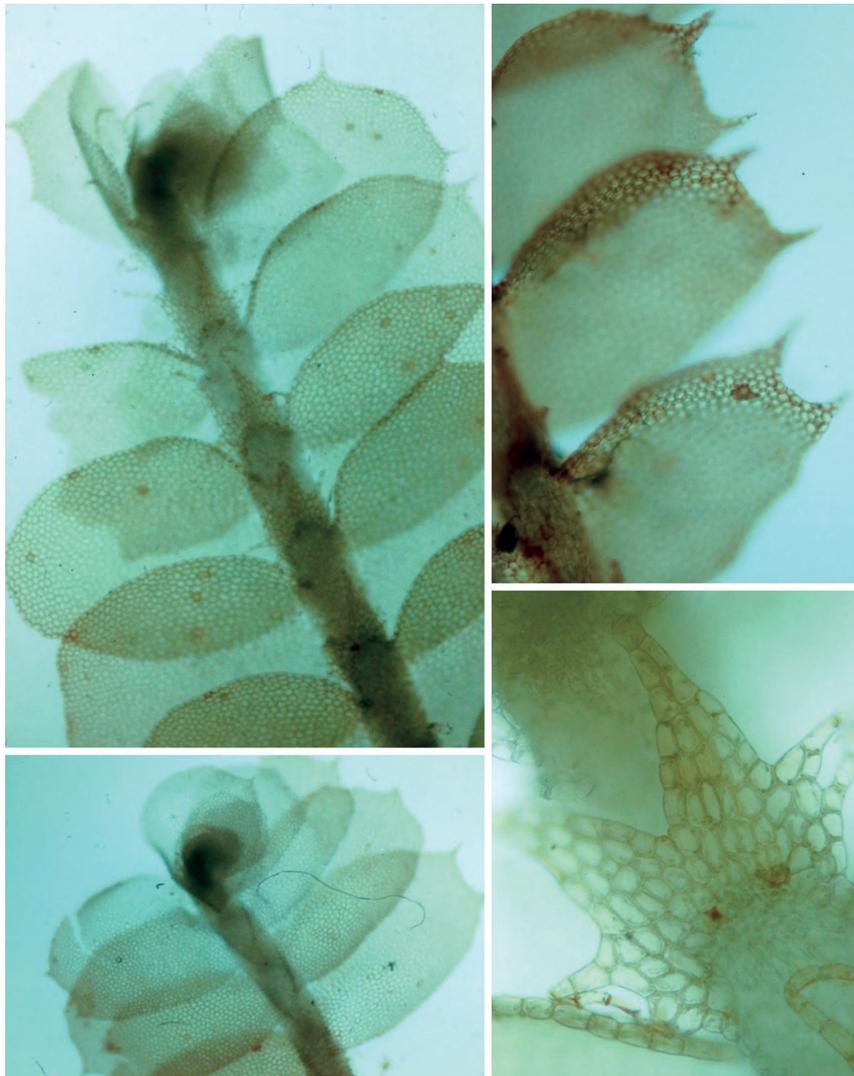
Fig. 270. *Leptoscyphus expansus* (Lehm.) Grolle

Plants greenish to brownish, shoots 50 mm long and up to 4 mm wide. Leaves opposite to alternate, patent, convex, rounded or oblong, 1.3-1.8 mm long, ventral margin arched, dorsal margin less arched, shortly decurrent, margin entire. Underleaves free from the leaves or narrowly connate on one or both sides, deeply 2-lobed, the lobes longly acuminate, sinus V-shaped, with 2-4(-rarely 6) teeth or spines on each side. Cells hexagonal, 35-40 μm wide, walls thin, oil bodies 2-3 per cell. Dioicous. Perianths 3 x 2 mm, inflated at base, mouth bilaterally compressed, truncate. **Habitat:** Forest floor in dense montane forest, 2000 m. **Distribution in Rwanda: Gishwati Forest:** Gikungu. **Distribution in Africa:** DR Congo, Kenya, Malawi, Zimbabwe, Lesotho, South Africa. Also Madagascar.



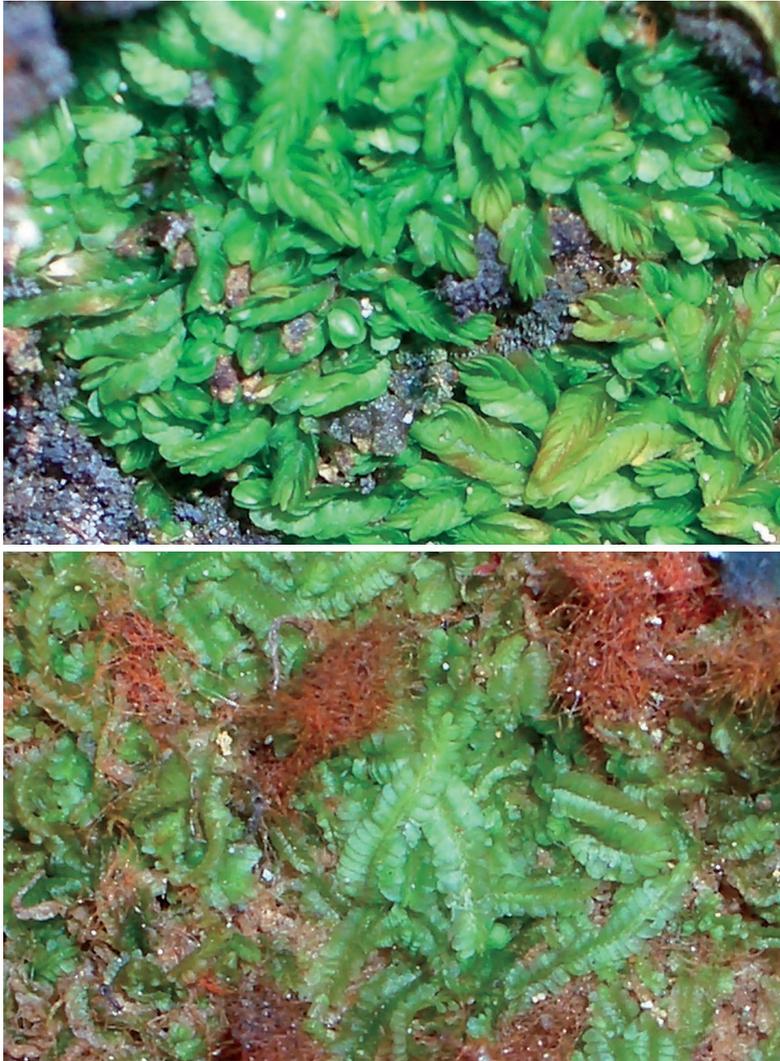
Figs 271 and 272 (next page). *Leptoscyphus hedbergii* (S.W.Arnell) R.M.Schust. Plants greenish to brownish, shoots 50 mm long and up to 4 mm wide. Leaves opposite to alternate, patent, convex, rounded or oblong, 1.3-1.8 mm long, ventral margin arched, dorsal margin less arched, shortly decurrent, margin entire. Underleaves free from the leaves or narrowly connate on one or both sides, deeply 2-lobed, the lobes longly acuminate, sinus V-shaped, with 6-8 spines on each side. Cells hexagonal, (25-)35-40(-50) μm wide, walls thin, oil bodies 2-3 per cell. Dioicous. Perianths 3 x 2 mm, inflated at base, mouth bilaterally compressed, truncate. **Habitat:** *Hagenia-Hypericum* forest, ericaceous belt and *Dendrosenecio*-Paramo, 2700-3400 m. **Distribution in Rwanda:** **Volcano NP:** Sabinyo, Karisimbi, Bisoke. **Distribution in Africa:** DR Congo (Mt. Kahuzi, Ruwenzori), Uganda (Ruwenzori and Virunga Volcanoes), Kenya (Mt. Kenya), Tanzania (Kilimanjaro).





Figs 273 and 274 (next page). *Leptoscyphus infuscatus* (Mitt.) E.W.Jones
 Plants brownish, shoots 2.5-3.5 mm wide. Leaves opposite to alternate, patent, convex, rounded or oblong, 1.3-1.8 mm long, ventral margin arched, dorsal margin less arched, shortly decurrent, apex with 1-3(-4) distant spiniform teeth, each tooth of 2-6 elongate cells. Underleaves free from the leaves or narrowly connate on one or both sides, deeply 2-lobed, the lobes longly acuminate, sinus V-shaped, with 1-4(-6) spinose teeth, short cilia or laciniae on each side. Cells hexagonal, 30-45 μ m wide, walls thin, oil bodies 2-3 per cell. Dioicous. Perianths 3 x 1.5-2 mm, strongly inflated at base, mouth bilaterally compressed, truncate, shortly lacinate. **Habitat:** Epiphytic, on litter or on ground, 2500-3200 m. **Distribution in Rwanda:** Volcano NP: Bisoke. **Nyungwe NP:** Rwasenkoko, Mt. Bigugu. **Distribution in Africa:** Bioko, Cameroon, DR Congo, Ethiopia, Uganda, Tanzania, Malawi, Zimbabwe. Also Madagascar, Réunion.





Figs 275 and 276 (next page). *Lethocolea congesta* (Lehm.) S.W.Arnell
 Plants green, sometimes with purple margins. Stems 5-10 mm long, basally with leafless stolons. Leaves lingulate-ellipsoid, larger towards apex of the shoot, alternate, hardly decurrent on dorsal face. Underleaves only present in top below female organs, entire to slightly dentate. Marginal cells in a distinct row, 16-22 x 30-40 μ m, cells in the centre rounded. Paroicous. **Habitat:** On soil with poor vegetation cover, in swamps, on rocks, cliffs or roadcuts, from montane forest to *Hagenia-Hypericum* forest and *Dendrosenecio-Lobelia stuhlmannii* paramo, 2000-3700 m. **Distribution in Rwanda: Volcano NP:** Karisimbi, in the saddle between Bisoke and Karisimbi, Karisimbi, on the E-slopes along trail to summit. **Nyungwe NP:** Rwasenkoko, Karamba, along abandoned road to Burundi. **Distribution in Africa:** DR Congo, Uganda, Kenya, Tanzania, Lesotho, South Africa. Also Comoros, Réunion.

