

BRYACEAE (MUSCI)

A NEW SPECIES OF *ANOMOBRYUM*

Anomobryum drakensbergense *Van Rooy*, sp. nov., *A. sharpii* A.J. Shaw similis, sed costa percurrenti, capsula pyriformi breviori et endostomio segmentis late perforatis differt. Plantae caespitosae foliis imbricatis, costa percurrenti; laminae cellulis superioribus brevi-rhomboidalibus vel lineari-rhomboidalibus interdum vermicularibus, endostomium ciliis rudimentalibus.

TYPE.—Natal, 2929 (Underberg): Organ Pipes Pass (–AA), 7000–8000 ft., *Esterhuysen* 34594 (PRE, holo.; MO; BOL).

Plants small to medium-sized, caespitose, yellowish green to brownish above, yellow-brown to brown below; saxicolous to terricolous. *Stems* to 20 mm

tall, branching by forks or subperichaetial innovations, occasionally tomentose below, yellowish green or reddish brown to brown; in section round, central strand of thin-walled cells present, inner cortical cells in 2–4 rows, thin-walled, outer cortical cells in 1–2 rows, thin-walled to incrassate. *Leaves* ± equidistant, about equal in size or subperichaetial leaves larger, imbricate, frequently concave, erect when dry, erect-spreading when wet, shortly oblong-acute or ovate to ovate-lanceolate, (0,5–) 0,6–1,3 mm long; apex acute; margins plane or rarely recurved, entire; border absent. *Costa* percurrent or occasionally mucronate, generally yellow, frequently reddish below; in section subround to round, lamina inserted ventrally, ventral surface

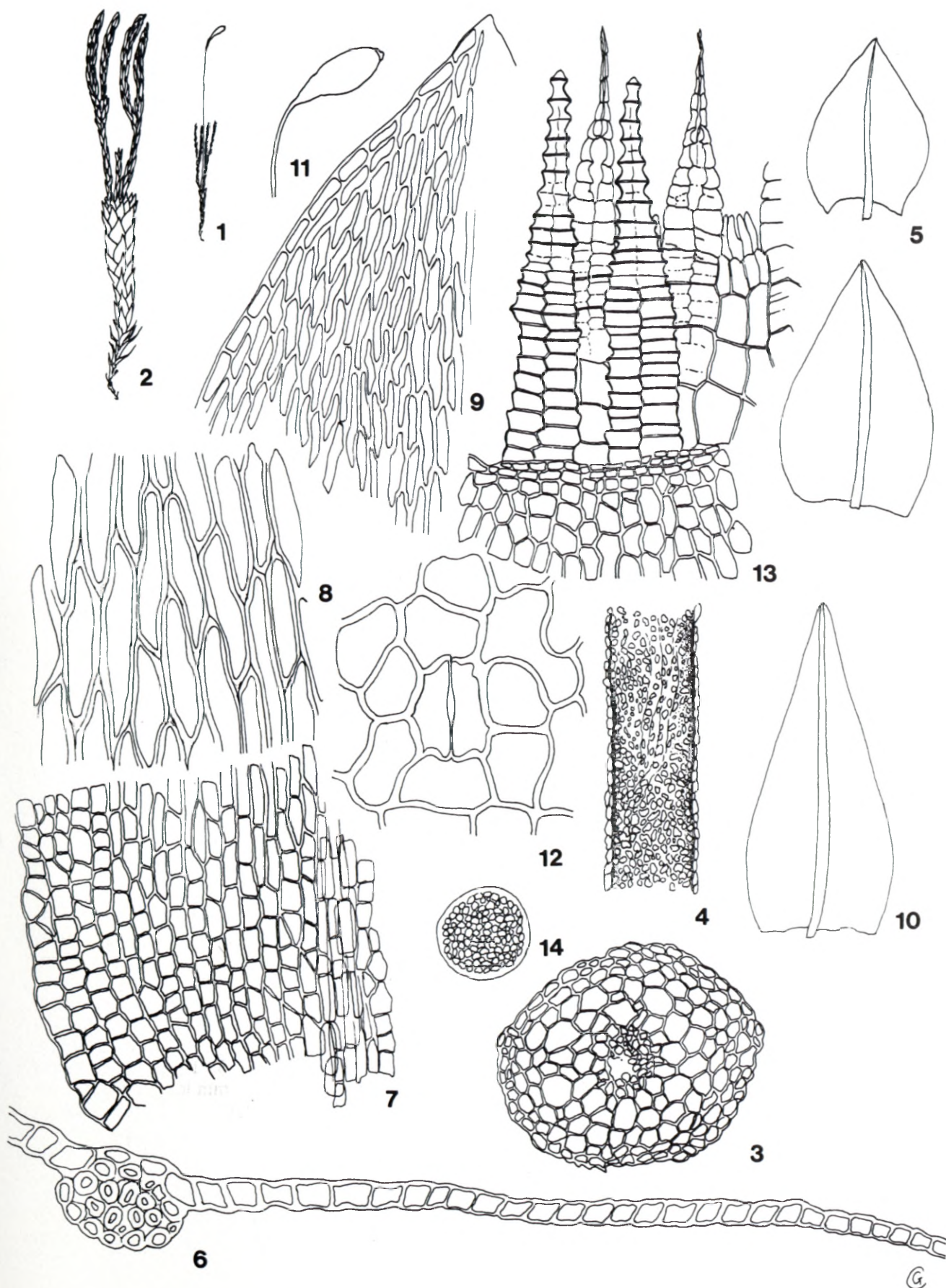


FIG. 3. — *Anomobryum drakensbergense*: 1, habit, $\times 2$; 2, habit, $\times 5$; 3, stem in cross section, $\times 175$; 4, rhizoid, $\times 350$; 5, leaves, $\times 35$; 6, part of leaf in cross section, $\times 350$; 7, basal leaf cells, (left side), $\times 175$; 8, upper laminal cells, $\times 350$; 9, leaf apex showing upper laminal cells, $\times 175$; 10, perichaetial leaf, $\times 35$; 11, capsule, $\times 5$; 12, portion of capsule base showing stomatal apparatus, $\times 350$; 13, part of capsule mouth showing cells and peristome, $\times 175$; 14, spore, $\times 700$. (1, 4, 6, 11–14, Esterhuysen 34594; 2, 7, 10, Smook 1095; 3, 5, Van Rooy 21; 8, 9, Smook 1096a).

cells present, dorsal stereid band strong, dorsal surface cells incrassate, guide cells incrassate. *Upper laminal cells* short-rhomboidal to linear-rhomboidal, occasionally vermicular, frequently incrassate, (25–) 35–63 (–85) \times 7–19 μ m; basal laminal cells frequently reddish, quadrate.

Dioicous. Perichaetia terminal but quickly overgrown by innovations; leaves ovate-lanceolate to lanceolate, 1–1,5 mm long, apex acute to acuminate, margins frequently recurved, costa percurrent to mucronate, upper laminal cells vermicular, basal laminal cells quadrate to rectangular. *Seta* 10–16 mm long, yellowish red or reddish brown; capsule pyriform, inclined to horizontal, yellowish to reddish or brown, frequently contracted below mouth when dry, urn 1–1,5 mm long, neck 0,8–1,5 mm long, wrinkled when dry; exothecial cells irregularly rectangular to quadrate, incrassate, smaller at mouth; stomata present on neck, phaneropore; annulus present; peristome teeth narrowly oblong-acuminate, frequently irregular in outline, 220–300 μ m long, bordered, trabeculate, yellowish to reddish, frequently hyaline above, minutely papillose; endostome segments broad below, tapering above, keeled, broadly perforated, yellowish to hyaline, cilia rudimentary, basal membrane high, yellow, minutely papillose; operculum conic, blunt to mucronate; calyptra cucullate; spores round, 12–18 μ m, granulose. Fig. 3.

The species is known from the Drakensberg of Natal and Lesotho. It is found on soil in rock crevices in the Subalpine and Alpine Belts, from 2 100–3 050 m.

NATAL.—2828 (Bethlehem): on rocks below cliffs at Sentinel (–DB), *Smook* 1095, 1096a (PRE; MO). 2929 (Underberg):

Giant's Castle Game Reserve, on the escarpment at the Judge Pass (–AB), *Van Rooy* 21 (PRE; MO; H).

LESOTHO.—2828 (Bethlehem): Oxbow, on cliff above road 8 km west of Lodge (–DC), *Magill* 4604 (PRE). 3028 (Matatiele): 15 km west of Ongeluksnek, cliffs above Lake Letsie (–AC), *Magill* 4705 (PRE).

The slender plants, branching pattern of the stem, imbricate, erect leaves, leaf shape and areolation indicate the gametophytic relationship to other species of *Anomobryum*. The upper laminal cells are variable in shape, size and degree of cell wall thickening. Stem and innovation leaves have short-rhomboidal to rhomboidal or occasionally vermicular cells with thickened walls. Subperichaetial and perichaetial leaves have linear-rhomboidal to linear-vermicular cells with incrassate walls.

Sporophytically the peristome structure of this species falls within the infrageneric variation in peristome development. Both exostome and endostome show signs of reduction. Some exostome teeth are relatively short, blunt and irregular in outline and the endostome cilia are rudimentary.

A. drakensbergense is related to the Mexican *A. sharpii* A.J. Shaw but differs in the percurrent costa, shorter pyriform capsule and the broadly perforated endostome segments. *A. filiforme* (Dicks.) Solms, the other species occurring in southern Africa, has taller, julaceous and glossy stems, longer, narrower and strongly incrassate upper laminal cells, costae ending below the leaf apices and well developed peristomes.

The specific epithet *drakensbergense* refers to the Drakensberg mountains of Natal and eastern Lesotho where this species occurs.