

Crossidium apiculatum differs from the other species of *Crossidium* by its apiculate leaf apices, smooth, conical apical cells of the costal filaments and suborbicular, appressed leaves.

2. ***Crossidium spiralifolium* Magill. sp. nov.**, *C. rosei* Williams *foliis oblongo-lanceolaris mucronatis, cellulis apicalibus filamentorum costae subglobosis et papillois simile, sed cellulis laminae laevibus, peristomio bene evoluto et sporibus minoribus differt.*

Type: Cape, Prieskaaport, c. 14 km from Prieska on road to Vosburg, on soil, Smook & Harding 705 (PRE, holo.; H; MEXU; MO; NY).

Plants small, loosely caespitose, dark green above, brownish below; terricolous. *Stems* 2 mm tall, unbranched; in section with central strand, cortical cells thin-walled, in 4-5 rows, outer row smaller, reddish. *Leaves* appressed, spirally twisted around stem dry, erect-spreading wet; oblong-lanceolate, 1.2 mm long; apex acute; base scarcely differentiated; margins narrowly revolute, entire. *Costa* mucronate; ventral surface bearing numerous filaments, dorsal superficial cells rectangular, smooth; in section subround, guide cells 6, ventral filaments 4-6 cells high, apical cells of filaments subglobose, with 2-4 papillae, filaments frequently

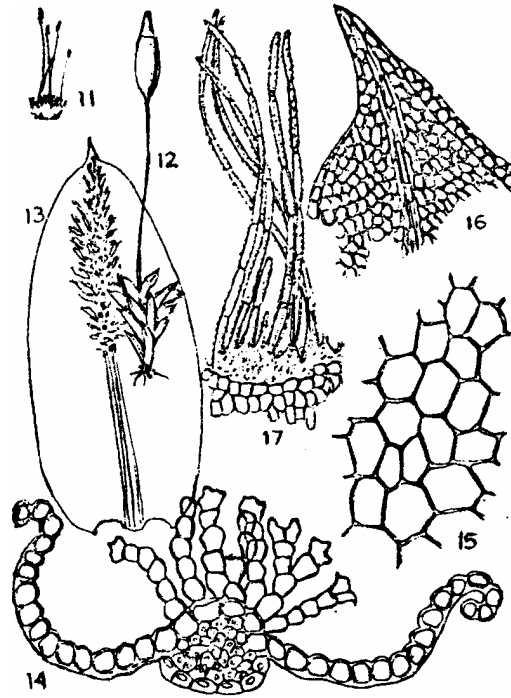
branched above, dorsal stereid band strong, to 8 cells thick, dorsal surface cells undifferentiated. *Upper laminal cells* quadrate to angular, thin-walled, smooth; in section dorsal surface strongly thickened; basal cells weakly differentiated, quadrate to short-rectangular, hyaline, thin-walled.

Dioicous or cladautoicous. Perichaetia terminal, leaves to 1.5 mm long. *Seta* to 10 mm long, yellow; capsule cylindrical, 1.2-1.5 mm long, reddish yellow; peristome with basal membrane projecting above mouth, to 50 μ m high, teeth irregularly cleft, long-filiform, 500 μ m high, twisted counter-clockwise 1-2 times, yellowish red, papillose; operculum long-conic, to 0.6 mm long, cells twisted counter-clockwise; spores round to subround, 18-20 μ m, weakly papillose. Fig. 54: 11-17.

Endemic to Southern Africa, this species is presently known from the shrublands of the central Cape Province and southern South West Africa/Namibia. Map 74.

Voucher: Hardy 4864a.

This species differs from *C. apiculatum* in size, leaf shape and costal filament morphology. *Crossidium spiralifolium* is separated from other species of the genus by the combination of mucronate leaves, smooth leaf cells, the terminal cell of costal filaments being subglobose and papillose, and the well developed peristome.



C. spiralifolium (11-17): 11. habit, x 1; 12: habit, x 10; 13. leaf, x 30; 14. leaf in distal cross section, x 170; 15. upper lamial cells, x 640; 16. leaf apex (dorsal surface), x 170; 17. part of capsule mouth with peristome teeth, x 100 (1-10, *Magill & Schelpe* 3877; 11-17, *Smook & Harding* 705).