Grimmia wilsonii H.C. Greven – J. of Bryol. 20: 398-400. 1998.

Type: New Zealand, Southern Alps, Mt. Cook National Park, summit of Sebastopol, 4820 ft, leg. H.D. Wilson No. 3139, holotype CHR!; isotype, herbarium H.C. Greven;
Distribution: Austr. 2

Description

Grimmia wilsonii grows, when moist, in dark green, not very hoary, shiny, dense patches that, when dried up, become totally black, the leaves are appressed to flexuose when dry, upper leaves erect, lower leaves erecto-patent with incurved tips when moist, of uniform length throughout stem, linear-lanceolate with concave subula, the costa is firm, not sharply differentiated, not projecting on dorsal side, hair-points are short, smooth to bluntly denticulate, brittle, the margin is plane below, slightly incurved above. The distal areolation is bistratose, the mid-leaf cells are rectangular with rounded edges and incrassate straight walls, the basal marginal cells are elongate, thin-walled, the basal juxtacostal cells are elongate with straight incrassate longitudinal walls. The sexuality is dioicous, capsules on straight setae are sporadically present, they are emergent to exserted, oblong-ovoid, smooth, with a rostellate operculum.

Discussion:

Grimmia wilsonii is endemic to New Zealand. Under the microscope, it is a well differentiated species, easy to distinguish from other New Zealand Grimmias. However, in the field the sterile blackish patches can be confused with *G. reflexidens* and forms of *Racomitrium crispulum* (Hook. f. & Wils.) Dix. There is some resemblance to small blackish forms of *G. ovalis*. However, the differences are numerous. *G. ovalis* has ovate-lanceolate leaves, arcuate ascen-ding when moist, not of uniform length throughout stem. In 1997, during a visit to Mt. Cook Nat. Park, *G. wilsonii* was frequently found in the vicinity of the Hooker and Tasman Valleys, at altitudes from 800-2000 m. The species has a preference for steep south-facing boulders where it forms flat rounded patches with diameters from 2-10 cm, frequently growing in half-moon shape as the initial vegetation has died off and eroded. While growing on exposed slanting rock, the plants are firmly attached to the substratum with a dense web of reddish-brown rhizoids. Capsules are extremely rare and propagation occurs by rhizoid-bearing innovations and by leaf fragments from the brittle subulate apices.

Specimens examined

New Zealand. South Island, Mt. Cook Nat. Park, Hooker valley, lateral moraine along Hooker glacier, alt. 3500 ft, leg. Science students, 21-05-1966, OTA 14309; South Island, Mt. Cook Nat. Park, Malte Brun, Tasman glacier, alt. 1800 m, leg. P.M.F. Smith, 12-02-1966, OTA 14656; South Island, Mt. Cook Nat. Park, summit of Sebastopol, leg. H. D. Wilson nr. 3139, 18-11-1972, CHR 255583; South Island, Fiordland, Homer saddle, alt. 3000 ft, leg. J. Child nr. 4285, 15-04-1974, BM 3769/ 29; South Island, South Canterbury, Winterslow basin, alt. 1420 m, greywacke bedrock, leg. D. Glenny nr. 89-203, 10-02-1989, WELT M 26720; South Island, Canerbury, Rakaia slopes above Lyell Hut, alt. 1500 m, leg. D. Glenny nr. 4300, 02-01-1993; South Island, Fiordland, just below Homer saddle, alt. 1350 m, leg. D. Glenny nr. 5230, 12-03-1994, WELT M 29356; South Island, Canterbury, Craigieburn Range, Mt. Cockayne, alt. 1750 m, leg. H.C. Greven nr. NZ 54, 56, 18-02-1997; South Island, Mt. Cook Nat. Park, track to Hooker glacier, close to campsite, alt. 780 m, leg. H.C. Greven nr. NZ 58, 61, 20-02-1997; South Island, Mt. Cook Nat. Park, track to Sealy Tarn, alt. 1080 m, leg. H.C. Greven nr. 57, 59, 60, 21-02-1997; South Island, Mt. Cook Nat. Park, Hooker glacier, alt. 850 m, leg. H.C. Greven nr. NZ 55, 62, 22-02-1997; South Island, Mt. Cook Nat. Park, Red Tarns, alt. 1070 m, leg. H.C. Greven nr. NZ 64, 23-02-1997; South Island, Fiordland Nat. Park, Homer tunnel, alt. 1000 m, N-facing dolorite rock, leg. H.C. Greven nr. NZ 63, 25-02-1997;

References

Greven, H.C. 1998b. Synopsis of *Grimmia* Hedw. in New Zealand, including *Grimmia wilsonii* sp. nov. Journal of Bryology 20: 398-402.