

Gradsteinia torrenticola R. Ochyra, C. Schmidt & Bültman

Status: **Vulnerable (VU)**

Class: Musci

Order: Bryales

Family: Donrichardiaceae

Description and biology. *Gradsteinia torrenticola* is a medium sized pleurocarpous moss, growing in rather soft, loose, somewhat glistening yellow-green mats. Stem is up to 2.5 cm long, irregularly branched, creeping. Leaves are usually distant, spreading when wet, straight, plane, not or hardly plicate, 1.5-1.9 mm long, 0.7-0.9 mm wide, ovate to broadly ovate or oblong-ovate, acute or abruptly short acuminate with plane margins, sharply to obscurely, distantly serrulate throughout or almost entire, mostly with prominent, fleshy, multistratose limbidia of varying degrees of completeness, rarely unistratose, especially below; costa mainly single but often variously branched or spurred and imperceptibly merging into the multistratose laminal cells, especially above, usually more intensely yellowish than, but sometimes concolorous with the laminal cells, to 80 µm wide at the base, extending to 6 of the leaf length or almost reaching the leaf apex and confluent with the marginal thickenings, in cross section composed of small, thick-walled homogeneous cells of the same size and shape as the adjacent laminal cells; laminal cells irregularly uni- to bistratose with frequent 3-4-stratose ridges and crests giving the leaf surface an uneven and rough appearance, smooth or minutely papillose by projecting cell ends (70-)80-120(-140) µm long, 6-10 µm wide, linear, straight to slightly flexuose with fusiformly narrowed ends, thin-walled, becoming shorter and wider towards the apex; basal cells wider and shorter, hexagonal to oblong-hexagonal, 30-40(-60) µm long, 10-14 µm wide, moderately thick-walled, eprose; alar cells similar to the adjacent basal cells, hexagonal to shortly rectangular, forming non-decurrent or somewhat decurrent groups. Inflorescences and sporophytes unknown.

Distribution and habitat: The species is known from only a single locality on Tenerife (Spain; Canary Islands). It is growing on non-shaded vertical permanently wetted volcanic rocks close to a waterfall wetted by splash-water the whole year.

History and outlook: The abundant supply of water in the barranco results in a luxuriant vegetation which contrasts strongly with its surroundings. It seems noteworthy that the formation of the geomorphological structures called barrancos took place in the past when a much more humid climate prevailed. Such barrancos would not form under today's weather conditions. So many barrancos on Tenerife can in former time have been potential localities for *Gradsteinia torrenticola*. Nowadays it is unique on the island in being the only barranco in south Tenerife with a permanent water body. There have been reports of other ravines with waterfalls in former times, but they became progressively drier due to extensive deforestation and excessive exploitation of ground water (Ochyra *et al.* 1998).

References:

Ochyra, R., Schmidt, C. & Bültmann, H. 1998. *Gradsteinia torrenticola*, a New Aquatic Moss Species from Tenerife. *J. Bryology* 20: 403-409.

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