

Grimmia olneyi Sullivant – W. S. Sullivant and C.L. Lesquereux,
Musc. Bor. Amer. 141. 1857.

Type: U.S.A., Connecticut, Rhode Island, leg. S.T. Olneyi, lectotype, designated by Muñoz & Pando (2000), FH!; isolectotypes, F, MO, NY!

Synonyms: *Grimmia austinii* Kindb.

Distribution: Am.1

Description

Grimmia olneyi grows in blackish-green, sand-filled, flat patches, leaves are rigid and appressed to slightly twisted when dry, spreading when moist, linear- to oblong-lanceolate, gradually tapering to an acute apex, concave-keeled above, the costa is firm, terete, not projecting at dorsal side, hair-points are usually short, rigid, yellowish, denticulate, margins are plane, incurved in distal part of leaf. The distal areolation is bistratose, mid-leaf cells are irregularly quadrate with rounded angles and slightly incrassate walls, basal marginal cells are quadrate with thickened transverse walls, basal juxtacostal cells are subquadrate to short-rectangular with straight incrassate walls. The sexuality is dioicous, seta is arcuate, capsules are occasionally present, they are exserted, shiny, ovoid to oblong-ovoid, smooth, with a rostrate operculum.

Discussion

G. olneyi, endemic to northeastern U.S.A., is distributed from Nova Scotia east to Ontario and south to Georgia. For *Grimmia*, the species has a peculiar ecology because it prefers river banks, often in places subject to inundation (Crum & Anderson 1981). It is, just like *G. montana* and *G. ovalis*, characterized by leaves with plane margins, incurved above, and an opaque bistratose upper lamina. When capsules are present, *G. olneyi* can be easily distinguished from these species because it has an arcuate seta, while the other two have straight setae. However, when sterile, it can hardly be distinguished from small forms of *G. ovalis*, especially from forms growing on rocks close to or even in water, as frequently occurs in Britain and Ireland (Hill *et al.* 1992). The most important gametophytic difference with *G. ovalis* are the subquadrate to short-rectangular basal juxtacostal cells and the irregularly quadrate, frequently oblate, mid-leaf cells. *G. ovalis* has rectangular to elongate basal juxtacostal cells and small rounded mid-leaf cells.

Specimens examined

U.S.A. Connecticut, Rhode Island, Smithfield, leg. S. T. Olneyi, NY!; Connecticut, Hamden, West Rock, leg. Setchell s.n., 17-04-1887; Virginia, Fairfax Co., Great Falls, gorge of the Pontomac River, leg. Patterson nr. 1982, 09-04-1954, NY!; New York, Rockland Co., Dunderberg, leg. Smith & Crum nr. 40132, 28-05-1966; New York, Warren Co., Hudson River, below The Glen, alt. 900 ft., leg. Smith et al. nr. 42442, 19-04-1968;

References

- Crum, H.A. & L.E. Anderson. 1981. Mosses of Eastern North America. Vol 1. Columbia University Press, New York.
- Hill, M.O., C.D. Preston & A.J.E. Smith. 1992. Atlas of the Bryophytes of Britain and Ireland. Vol. 2. Harley Books, Colchester, Essex, England.