

**Grimmia attenuata (Müller Hal. & Kindberg) Kindb. - Eur.  
N. Am.  
Bryin. 2: 228. 1898.**

**Type:** Canada, British Columbia, Selkirk Mts., Rogers Pass, Aug. 1890, leg. J. Macoun (Canadian Musci No. 524), lectotype, designated by Muñoz (1999), FH!; isoelectotype NY! **Synonyms:** *R. alternuatum* (C. Müll. & Kindb.) Kindb., *R. heterostichum* var. *macounii* (Kindb.) Jones., *Racomitrium macounii* Kindb.

**Distribution:** Am.1

### **Description**

*Grimmia attenuata* forms robust plants in loose tufts, reddish in upper part, black and frequently defoliated below, the leaves are dull, densely implanted, straight appressed when dry, erectopate when moist, lanceolate, sharply keeled above, the costa is 70-120 µm wide below, channeled above, projecting on dorsal side, the hair-points are terete, firm and short, denticulate, the margins are narrowly reflexed on both sides. The distal areolation is unistratose, apex and margins bistratose, mid-leaf cells are elongate with extremely incrassate and nodulose longitudinal walls, the basal marginal cells are in few rows short rectangular with thin walls, the basal juxtacostal cells are linear with extremely incrassate, ± porose walls. The sexuality is dioicous, the seta is cygneous, 3.5 mm long, capsules are sporadically present, they are exerted, ovoid, smooth with a rostrate operculum.

### **Discussion**

*Grimmia attenuata* was initially published as *Racomitrium attenuatum*, nom. nud., subsequently described as *R. alternuatum* (C. Müll. & Kindb.) Kindb. (nom. err. pro *R. attenuatum*), and finally published as *Grimmia attenuata* (C. Müll. & Kindb.) Kindb. It resembles forms of the extremely variable *Racomitrium heterostichum*, and because Jones (1933) mentioned five varieties of this latter species, it is not surprising that in herbaria, e.g. in NY, all specimens of *G. attenuata* had been stored as varieties of *R. heterostichum*. Kindberg realized that his species was not a *Racomitrium* but a *Grimmia*, and he wrote: "Habit of *G. elatior*". In spite of Kindberg's correct transmission to *Grimmia*, Frye (1918) synonymized it with *R. macounii*. The confusion was enlarged when Möller (1929) synonymized it with *Grimmia elatior*, and Muñoz (1999a) published *Grimmia attenuata* incorrectly as *G. arcuatifolia* Kindb., which is a synonym of *G. lisae* De Not.

## Specimens examined

### Canada :

Vancouver Island, Exsiccata Series Canadian Mosses nr. 99, NY!; British Columbia, Gowlland Harbour, Quadra Island, Schofield nr. 61331, June 1976, H!, NY!; British Columbia, Selkirk Mts., rocks along the C.P.R'y at the summit of Roger's Pass, Canadian Musci nr. 524, 06-08-1890, NY!; Vancouver Island, summit of Malahat Highway, Schofield nr. 77369, 01-04-1983, H!; British Columbia, Selkirk Mts., Roger's Pass, Macoun, NY, (**isotype**); Canadian Musci nr. 524, as *Racomitrium alternatum* C. Müll. & Kindb. (from the herbarium of J.M. Holzinger), NY (**isotype**); Canadian Musci nr. 99a, Alberta, Rocky Mts., Mt. Hector, Macoun, NY; Canadian Mosses Nr. 99, edited by Macoun & Kindberg, British Columbia, Pass bank, Rim. B.b., Macoun, NY; Canadian Musci Nr. 99, Vancouver Island, NY; British Columbia, Vancouver Island, Victoria, V.Q., Macoun, (Canadian Mosses nr. 88a, *Grimmia ovataeformis* Kindb., changed by Macoun into *Grimmia procera* Kindb.), BM; Vancouver Island, summit of Malahat Highway, Schofield 77369, H. **U.S.A.** : Washington, Snohomish Co., Big Four Mountain, east of Silverton, on rock bluff, leg. Ireland nr. 6091, 04-07-1962 U 274085; Alaska, Romanzoff Mts., Spetzman, NY; locality unreadable, herb. Mitten, NY;

### References:

- Frye, T.C. 1918. The Rhacomitriums of Western North America.  
The Bryologist 21:1-16.
- Jones, G.N. 1933. Grimmiaceae. In: Grout (ed.), Moss Flora of North America  
Vol. II, Part I: 1-66. Newfane, Vermont.
- Möller, H. 1929. A revision of some new species and varieties of *Rhacomitrium*  
described by N.C. Kindberg from North America.  
Revue Bryologique 2(56): 82-86.
- Muñoz, J. 1999a. *Grimmia arcuatifolia* and *G. leibergii* (Musci, Grimmiaceae),  
two neglected species from Northwestern North America.  
Ann. Jardin Botánico de Madrid 57: 7-13.

