<https://helda.helsinki.fi>

Homalia pennatula (Musci: Neckeraceae), a new combination from Southeast Asia, with a key to the species of Homalia

Enroth, Johannes

1996

Enroth , J 1996 , ' Homalia pennatula (Musci: Neckeraceae), a new combination from Southeast Asia, with a key to the species of Homalia ' , Novon , vol. 1995 , no. 5 , pp. 334-335 .

<http://hdl.handle.net/10138/26285>

acceptedVersion

Downloaded from Helda, University of Helsinki institutional repository.

This is an electronic reprint of the original article.

This reprint may differ from the original in pagination and typographic detail.

Please cite the original version.

MISSOURI BOTANICAL GARDEN

Homalia pennatula (Musci: Neckeraceae), a New Combination from Southeast Asia, with a Key to the Species of *Homalia*

Author(s): Si He and Johannes Enroth

Source: *Novon*, Vol. 5, No. 4 (Winter, 1995), pp. 334-335

Published by: [Missouri Botanical Garden Press](#)

Stable URL: <http://www.jstor.org/stable/3391959>

Accessed: 03/05/2011 04:51

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/action/showPublisher?publisherCode=mobot>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Missouri Botanical Garden Press is collaborating with JSTOR to digitize, preserve and extend access to *Novon*.

<http://www.jstor.org>

Homalia pennatula (Musci: Neckeraceae), a New Combination from Southeast Asia, with a Key to the Species of *Homalia*

Si He

Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, U.S.A.

Johannes Enroth

Botanical Museum, P.O. Box 47, FIN-00014 University of Helsinki, Finland

ABSTRACT. *Symphyodon pennatulus* (Dixon) Dixon from Southeast Asia is transferred to the genus *Homalia* of the Neckeraceae (Musci). A key to the five species and one variety of *Homalia* is provided.

Homalia (Bridel) Schimper is primarily distributed in the northern temperate regions and nearby subtropical borders, where it grows on boulders, rock outcrops, or bases of trees. It is characterized by strongly complanate plants with leaves arranged in distinct ranks; by oblong-ovate to spatulate leaves with broad apices and smooth leaf cells; and by smooth capsules with a “hypnoid” peristome. *Symphyodon* Montagne has 14 species worldwide and is primarily distributed in the tropical and subtropical regions of Southeast Asia, with one species in Hawaii, South Africa, and Central and South America, respectively. In Southeast Asia, it grows exclusively on tree trunks and tree branches. Besides its habitat distinction, taxonomic characters of generic importance for *Symphyodon* are found in the capsule ornamentation and peristomes. It has echinate capsules and an “isobryoid” peristome. Other secondary gametophyte features include: leaves often appressed and imbricate or spreading; leaf apices narrowed; and leaf cells prorate.

Symphyodon pennatulus (Dixon) Dixon was excluded from the genus *Symphyodon*, because it is epilithic and has strongly complanate to sub-distichous leaves (He & Snider, 1992). The type specimen of *Symphyodon pennatulus* is meager and contains no sporophytes. Since no other specimens of this species were available, He & Snider (1992) were uncertain of its generic placement. Recently, numerous collections of this moss have come from Thailand, and though they consistently lack sporophytes, we now have enough material to make detailed observations on the gametophytes. *Symphyodon pennatulus* exhibits many aspects of *Homalia*, such as a strongly complanate habit, a homalioid-type leaf insertion showing an eight-ranked phyllotaxy (see He, 1992), oblong-ovate to spatulate

leaves with broad and rounded apices, and a variable costal morphology. It is similar to the widely distributed *Homalia trichomanoides* (Bridel) Schimper in overall similarities of leaf shape and the absence of pseudoparaphyllia, but it differs in having distinct double costae and linear, projecting median leaf cells. On the basis of the double leaf costae and elongate median leaf cells, *Symphyodon pennatulus* appears most closely related to *Homalia glabella* (Hedwig) Schimper from Central and South America, except that it lacks pseudoparaphyllia. Although the narrowly linear and projecting median leaf cells of *Symphyodon pennatulus* and its presence in southern Asia differ from those of previously recognized *Homalia* species, the overall gametophyte features of this moss support its placement in *Homalia*. Hence, we are making the following new combination. A key to the five species and one variety of *Homalia* now recognized is provided. A description and an illustration of the species treated here will be published in the forthcoming revision of *Homalia* by the first author.

***Homalia pennatula* (Dixon) He & Enroth, comb. nov.** Basionym: *Stereodon pennatulus* Mitten ex Dixon, Rec. Bot. Surv. India 6: 66. 1914. *Symphyodon pennatulus* (Dixon) Dixon in Broth-
erus, Nat. Pflanzenfam., ed. 2, 11: 267. 1925.
TYPE: Myanmar (Burma). Moulmein, Parish
s.n. (holotype, NY; isotype, BM).

In his book entitled *Burma, Its People and Productions*, Mason (1883) published a list of plants, including mosses. *Homalia erosa* Hampe and *Homalia pennatula* Mitten were listed in this publication. Both names are apparently nomina nuda, since no descriptions or basionyms were given. The former is clearly a herbarium name, because we have seen several herbarium specimens annotated with the name *Homalia erosa* Hampe. However, we have seen no specimens bearing the name *Homalia pennatula* Mitten, nor has it ever been published

validly. Although it could be based on Mitten's herbarium name *Stereodon pennatulus*, *Homalia pennatula* Mitten has no nomenclatural bearing in our paper.

In recognizing that *Homalia trichomanoides* var. *japonica* (Besch.) He, stat. nov., cited in He (1992) has not been validly published, we make the following new combination:

Homalia trichomanoides* var. *japonica (Besch.) He, comb. nov. Basionym: *Homalia japonica* Besch. J. Bot. (Morot) 13: 39. 1899. TYPE: Japan. Sengantoge, *Faurie 14984* (holotype, PC; isotype, KYO).

Additional selected specimens examined. MYANMAR. Moulmein, *Kurz 2930* (BM). INDIA. Kerala, *Norkett 13377* (BM). THAILAND. **Changburi:** *Larsen et al. 1857* (AAU, MO). **Chiangmai:** Mt. Suthep, 98°55'E, 18°50'N, *Touw 8395* (BM, L, MO, NY). **Krabi:** Khao Phanom Bencha Park, *Schäfer-Verwimp & Verwimp 16230* (H, MO). **Nakhon Nayok:** *Larsen et al. 3380* (AAU, MO). **Nakhon Sawan:** 98°55'E, 16°40'N, *Touw 8319* (BM, L, MO, NY). **Prachinburi:** 101°30'E, 14°30'N, *Touw 12215* (BM, L, MO). **Trat:** 102°49'E, 11°59'N, *Charoenphol et al. 4982* (AAU, BM, H, MO, NY); Ko Kut, 101°31'E, 12°35'N, *Charoenphol et al. 5129* (AAU, BM, H, MO, NY).

KEY TO THE SPECIES AND VARIETIES OF *HOMALIA*

- 1. Costa single, extending $\frac{1}{2}$ – $\frac{2}{3}$ the leaf length . . . 2
- 1. Costa double or forked, less than $\frac{1}{3}$ the leaf length or indistinct 4
- 2(1). Pseudoparaphyllia present; costa stout, extending $\frac{3}{4}$ – $\frac{5}{8}$ the leaf length; leaf apices dentate, with large teeth; western Europe, northern Africa, Canary Islands . . . 1. *H. lusitanica* Schimper
- 2. Pseudoparaphyllia absent; costa slender, ex-

- tending $\frac{1}{2}$ – $\frac{3}{4}$ the leaf length; leaf apices moderately serrate, with small teeth 3
- 3(2). Autoicous; secondary stems often blunt near the apex; flagelliform branches uncommon; eastern Asia, Russia, Europe, North America, Mexico 2a. *H. trichomanoides* var. *trichomanoides* (Hedwig) Schimper
- 3. Dioicous; secondary stems often attenuate near the apex; flagelliform branches commonly present; Japan, Korea, Taiwan 2b. *H. trichomanoides* var. *japonica* (Besch.) He
- 4(1). Median leaf cells rhombic, 8.5–17.5 μ m long; Azores, Maderia, Canary Islands, Caucasus 3. *H. webbiana* (Montagne) Schimper
- 4. Median leaf cells oblong-rhomboidal to narrowly linear, 35–100 μ m long 5
- 5(4). Leaves 1.25–3.25 mm $\times$ 0.75–1.25 mm; pseudoparaphyllia present; Mexico, West Indies, Central America, Brazil, Venezuela 4. *H. glabella* (Hedwig) Schimper
- 5. Leaves 0.8–1.2 mm $\times$ 0.5–0.65 mm; pseudoparaphyllia absent; India, Myanmar, Thailand 5. *H. pennatula* (Dixon) He & Enroth

Acknowledgments. We thank Bruce Allen (MO) and Marshall R. Crosby (MO) for constructive comments on the manuscript.

Literature Cited

He, Si. 1992. A worldwide taxonomic revision of the genera *Homalia*, *Pendulothecium* (Musci: Neckeraceae) and *Symphyodon* (Musci: Symphyodontaceae). Doctoral Dissertation, University Microfilms, Ann Arbor.

——— & J. A. Snider. 1992. A preliminary survey of the moss genus *Symphyodon* (Symphyodontaceae, Musci). Bryobrothera 1: 283–287.

Mason, F. 1883. Burma, Its People and Productions. Vol. II (Botany). Stephen Austin & Sons, Hertford.