

***Ulvaria blyttii* (Areschoug) K.L.Vinogradova is the correct name for a widely distributed species of *Ulvaria* Ruprecht (*Ulvaceae*, *Ulvophyceae*)**

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A recent update of the *Ulvaceae* of Britain and Ireland (Maggs & al. 2024) discussed the correct names for species of *Ulvaria* found there and elsewhere in the North Atlantic and North Pacific. As they noted, *Ulvaria obscura* (Kützinger) Gayral is distinct from a second species of *Ulvaria*, variously known as *Ulvaria blyttii* (Areschoug) K.L.Vinogradova, *U. fusca* (Wittrock) K.L.Vinogradova, *U. splendens* (Ruprecht) K.L.Vinogradova, or varietal combinations of these names.

The oldest known name for this species is *Ulva fusca* Postels & Ruprecht, 1840, *nom. illeg.*, a later homonym of *Ulva fusca* Hudson, 1778\* [= *Saccharina latissima* (Linnaeus) C.E.Lane, C.Mayes, Druehl & G.W.Saunders]. Wittrock (1866: 53) introduced *Monostroma fuscum* Wittrock, a legitimate name based upon *Ulva fusca* Postels & Ruprecht 1840 (ICN Art. 58.1, Turland & al. 2018). Meanwhile, *Ulva blyttii* Areschoug (1850: 412, pl. I-G, type locality: “*Ad insulam Renoe Finmarkiae*”, Finnmark, Norway) and *U. sordida* Areschoug (1850: 413, pl. I-H, syntype localities: various in Norway) were described from the Atlantic and *U. splendens* Ruprecht (1850: 218, type from the western Aleutian Islands) from the Pacific for what we now believe is the same circumboreal species. It is uncertain which of the 1850 Areschoug or Ruprecht publications appeared first.

Areschoug's (1850) paper was published in *Nova Acta Regiae Societatis Scientiarum Upsaliensis* series 2, volume 14. A conserved genus name, *Erythrotrichia* Areschoug, 1850, also appears in this publication, but a precise date of publication could not be established during the conservation process (see [Appendix III, ICN](#); Wiersema & al. 2018+). Ruprecht's *Algae ochotenses* (Ruprecht 1850) was issued as a preprint of a publication that later appeared in *Reise in den äussersten Norden und Osten Sibiriens während der Jahre 1843 und 1844* in the first six months of 1851 (Ruprecht 1851). A precise date for the preprint is not known (see Stafleu & Cowan 1984: 996); however, the dual pagination suggests that Ruprecht (1851) was typeset at the same time as the printed version, given as the first half of 1851 by Stafleu & Cowan (1984: 996). In the absence of any evidence to the contrary, we can only conclude that as both names appeared in the same year, probably towards the end of 1850, that *Ulva blyttii* Areschoug, *Ulva sordida* Areschoug and *Ulva splendens* Ruprecht have equal priority.

ICN Art. 11.5 states that “When, for any taxon at the rank of family or below, a choice is possible between legitimate names of equal priority at the corresponding rank, or between available final epithets of names of equal priority at the corresponding rank, the first such choice to be effectively published (Art. 29–31) establishes the priority of the chosen name, and of any legitimate combination with the same type and final epithet at that rank, over the other competing name(s)”.

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\* *Ulva fusca* Hudson may also be illegitimate (ICN Art. 52.1), as it included a reference to Linnaeus's *Fucus latissima* (Hudson 1778: 567) but Hudson's text is not clear.

As far as we have been able to determine, such a choice for this species has not been made, particularly since one or more of the species have been incorrectly treated as a variety of *Ulvaria obscura*, following Bliding (1969: 575). Maggs & al. (2024) concluded that “*Ulva blyttii* Areschoug was wrongly assigned by Bliding (1968 [sic]) to a variety of *Ulvaria obscura* [as *Ulvaria obscura* var. *blyttii* (Areschoug) Bliding] and consequently this has obscured the true identity of *Ulvaria obscura*”. Likewise, this erroneous assignment also obscured the true identity of *Ulva blyttii*. This species has long been considered a variety of various species. On the Pacific coast of North America, it was considered a variety of *Monostroma fuscum* Wittrock [as *Monostroma fuscum* var. *blyttii* (Areschoug) Batters (1902: 10), along with *Monostroma fuscum* var. *splendens* (Ruprecht) Rosenvinge and the nominate variety: Scagel 1957 (as “f. *fuscum*”); Scagel 1966 and later (Scagel & al. 1986, 1989) as a variety of *Ulvaria obscura* (following Bliding)]. It was also identified as *Ulvaria obscura* var. *blyttii* in a series of keys for the Pacific coast of North America (Gabrielson & al. 1989, 2000, 2004, 2006, 2012, Gabrielson & Lindstrom 2018; only in Gabrielson & al. 1987 was the species just identified as *Ulvaria obscura* but with citations of *Monostroma fuscum* var. *blyttii*, var. *fuscum*, and var. *splendens* as sources of illustrations). Authors have continued to use the name *Ulvaria obscura* var. *blyttii* for the species on the Pacific coast of North America (e.g. Hayden & al. 2003, Lindstrom & al. 2021). In the Northwest Pacific, Okamura (1936: 27) recognized the species as *Monostroma fuscum*, including both *Monostroma fuscum* f. *blyttii* (Wittrock) Collins and *Monostroma fuscum* f. *splendens* (Wittrock) Collins, and Yoshida & al. (1995) recognized *Ulvaria obscura* var. *blyttii*, with *Monostroma fuscum* and *M. splendens* treated as synonyms.

The lectotype of *U. sordida* is **LD** 13333 (Maggs & al. 2024, legend to fig. 3), which was shown to be conspecific with *Ulvaria splendens*. As *U. blyttii* was described in the same paper as *U. sordida*, we began our search for the type specimen of *U. blyttii* in **LD**, but not being able to find it there, Arne Thell (pers. comm. March 11<sup>th</sup>, 2024) recommended we check with **UPS**, where Areschoug was active. Stefan Ekman (pers. comm. March 13<sup>th</sup>, 2024) could not find the specimen in **UPS** but recommended we check with **O**, where the main Blytt [[Axel Gudbrand Blytt \(1843–1898\)](#)] collection is housed. Wenche Eikrem (pers. comm. 21<sup>st</sup> March 2024) could not find the specimen in **O** but located a specimen marked “TYPUS” in Trondheim (**TRH**; Fig. 1). An image of the type of *U. splendens* (**LE**) is presented here as Fig. 2.

Although the types of *U. blyttii* and *U. splendens* have not been sequenced, there is little doubt about their identity based on the study of Maggs & al. (2024), which clearly showed that this species is distinct from *Ulvaria obscura*. Both *U. blyttii* and *U. splendens* dry to a dark tea-coloured brown, which stains herbarium paper, and pressed specimens detach, crack and flake easily. Specimens from Northern Ireland, Scotland and Norway had sequences identical to those found on both coasts of Canada and on the Pacific coast south to northern Washington (in the eastern Pacific) as well as Japan (in the western Pacific; Maggs & al. 2024). The types of *U. blyttii*, *U. sordida* and *U. splendens* fall within this geographic range.

As noted by Maggs & al. (2024), the type of *Ulva sordida* yielded *rbcL* and *tufA* sequences identical to *Ulvaria splendens*, and since the former species has never been transferred to *Ulvaria*, it was considered a synonym of *Ulvaria splendens*. This is a far different situation from *Ulva blyttii*, which was described by Areschoug at the same time as *Ulva sordida* and was placed in *Ulvaria* by Vinogradova (1967: 117) as *Ulvaria blyttii* (Areschoug) K.L. Vinogradova.

It is therefore necessary to treat *Ulvaria blyttii* as a species distinct from *U. obscura*, and we propose that it be designated as the preferred name of the species, which also includes *U. splendens* and *Ulva sordida*. Since there is no publication that we can find that explicitly favours any of these names, and they are clearly the same species, published at the same time as far as we have been able to determine, it is necessary for us to select one as the chosen name. We hereby select *Ulvaria*

*blyttii* with *U. splendens* and *Ulva sordida* in synonymy. We prefer the name *Ulvaria blyttii* for this species because of its longstanding and widespread use, albeit mostly at a different taxonomic rank. This confusion between *Ulvaria obscura* and *U. blyttii* is not a particularly unusual outcome for species that have been mistaken for something they are not. For a long time, *Ulva lactuca* Linnaeus was thought to be widely distributed in cold temperate waters of the North Pacific and North Atlantic. But by sequencing the type, Hughey & al. (2019) showed that *U. lactuca* was a misapplied name and applies rather to a warm-temperate to tropical species; the cold-temperate species is *Ulva fenestrata* Postels & Ruprecht, which has much the same cold-water, circumboreal distribution as *Ulvaria blyttii*. Such a distribution has been observed in many other northern species such as *Hedophyllum nigripes* (J.Agardh) Starko & al. (Longtin & Saunders 2015) and *Euthora cristata* (C.Agardh) J.Agardh (see Guiry & Guiry 2024).

We here choose *Ulvaria blyttii* as the correct name for this species and place *U. splendens*, *U. sordida* and *U. fusca* in synonymy:

*Ulvaria blyttii* (Areschoug) K.L.Vinogradova 1967: 117

Basionym: *Ulva blyttii* Areschoug 1850: 412

Holotype: **TRH** A-122928 (Fig. 1).

Type locality: "Ad insulam Renoe Finmarkiae" [Reno Island, Finnmark, Norway]

Homotypic synonyms: *Monostroma fuscum* var. *blyttii* (Areschoug) Batters 1902: 10. *Ulvaria obscura* var. *blyttii* (Areschoug) Bliding 1968: 574

Heterotypic synonyms: *Ulva fusca* Postels & Ruprecht, 1840: 21, *nom. illeg.* *Ulva sordida*

Areschoug 1850: 413. *Ulva splendens* Ruprecht 1850: 410. *Monostroma fuscum* Wittrock 1866: 53.

We are grateful to the curators of the herbaria mentioned in the text for searching for types. We thank Richard L. Moe for a diligent search for evidence in the *materia* of Paul C. Silva of priority of publication of the 1850 works of Areschoug and Ruprecht, Kristian Hassel for providing the image of the type of *Ulva blyttii*, and Wolf-Henning Kusber and John McNeill for helpful nomenclatural discussions.

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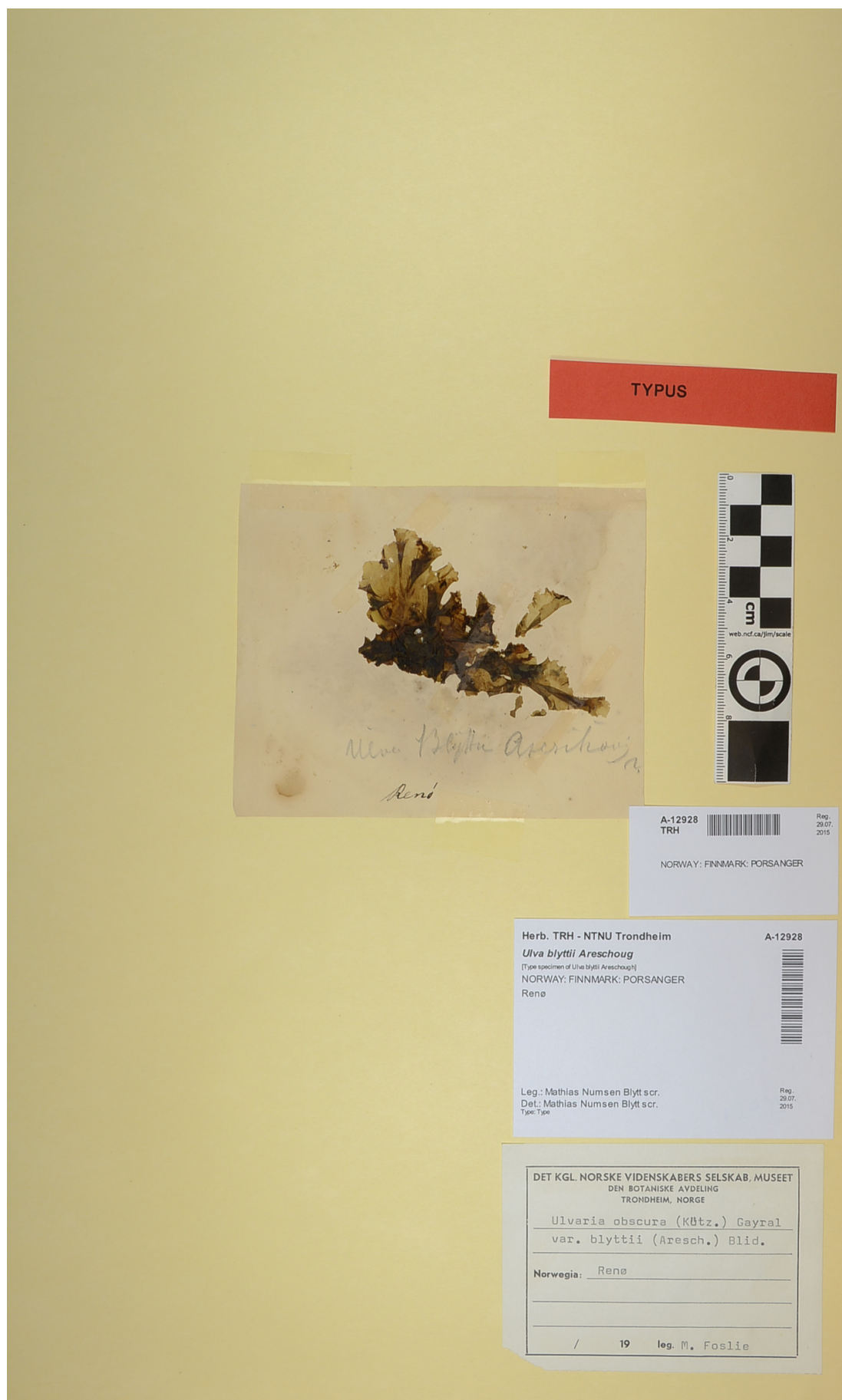
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**Fig. 1.** Type of *Ulva blyttii* Areschoug at TRH.

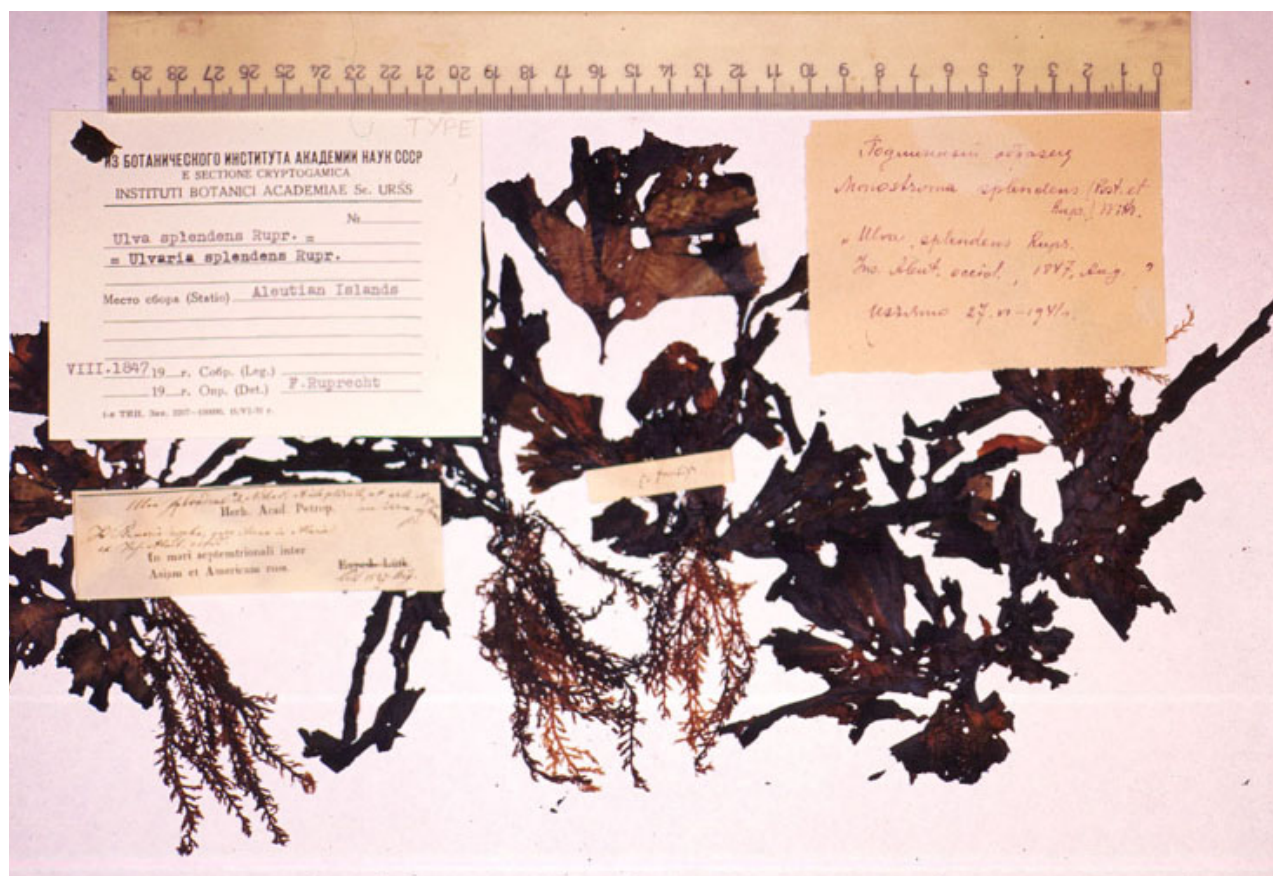


Fig. 2. Type of *Ulva splendens* Ruprecht at LE.

