Proposal of *Medeiothamnion thouarsii* (Montagne) *comb. nov.* (*Wrangeliaceae, Rhodophyta*)

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We here discuss the taxonomic history and conspecificity of two species of *Wrangeliaceae* known from New Zealand and the temperate coast of Pacific South America. *Callithamnion thouarsii* Montagne was described by Montagne (1837: 351**)** on the basis of a collection from Valparaiso, Chile made by Abel Aubert du Petit-Thouars (1793–1864), whom he honoured with the epithet. Later, Montagne (1839: 9) referred to his own species but this time with a query, and he also depicted it (Montagne 1847, pl. 7, fig. 5). Kützing (1861, p. 27, pl. 85, fig. II) later illustrated it. De Toni (1903: 1413) transferred the species to *Antithamnion* with a query, and G. Feldmann (1950: 311, fig. 13) later referred it to *Sphondylothamnion*, as *S. thouarsii* (Montagne) G.Feldmann. Dixon (1963: 222) was of the view that as there was considerable resemblance between the distichous forms of European *S. multifidum* (Hudson) Nägeli and the Chilean taxon, the retention of specific status for it was by no means certain, and to date no one has merged the two species (e.g., Maggs & Hommersand 1993, Guiry & Guiry 2021). Little is known of *Callithamnion thouarsii* other than Montagne's original Chilean material, and G. Feldmann (1950: 311, fig. 13) identified specimens distributed—as *Antithamnion plumula* (J.Ellis) Thuret—by Victor Lindauer in his *Algae Nova-Zelandicae Exsiccatae* Fasc. IX, No. 223 [Aug. 1946] as *Callithamnion thouarsii* and proposed its transfer to *Sphondylothamnion*. Fig. 1 is an example of Lindauer's exsiccata No. 223 from **F**.

Medeiothamnion lyallii (Harvey) E.M.Gordon was proposed by Gordon (1972: 59) for specimens from South I., Stewart/Rakiura I., and Ruapuke I. of New Zealand. She noted that G. Feldmann (1950) had identified the Lindauer No. 223 specimen from Valparaiso as *Callithamnion thouarsii*. When Gordon (1972: 63) later examined Lindauer's specimen in PC, she concluded it was more similar to *M. lyallii* than to *Sphondylothamnion multifidum*, particularly in the position of the tetrasporangia, which tend to be grouped at the distal ends of the whorl-branchlet cells. Adams (1994: 241) noted that "this extremely variable plant has been known locally [in New Zealand] by several names including *Antithamnion flaccidum, A. plumula* and *Sphondylothamnion thouarsii*. Its relationship with southern South American species, particularly *Antithamnion flaccidum* (J.D.Hooker & Harvey) De Toni, requires investigation." Adams felt that due to its abundance in the Foveaux Strait area (between Stewart Island and the South Island) particularly in "inlets and anchorages frequented by early sealers, whalers and traders," that it may have been introduced to New Zealand, presumably from South America. Nelson (2013: 232), however, referred to *Medeiothamnion lyallii* as a New Zealand endemic. Brauner (1979: 342) examined the type of *Callithamnion thouarsii* in **PC** noting that it was "… probably a *Medeiothamnion*". In the same work, he moved *Callithamnion flaccidum* J.D.Hooker & Harvey, a species from the Atlantic coast of southern South America, to *Medeiothamnion*, subsuming the generitype, *M. santacrucense* Pujals (Pujals 1970), under *M. flaccidum* (J.D.Hooker & Harvey) Brauner. In her comprehensive key to the species of *Medeiothamnion*, Gordon (1972) clearly distinguished the New Zealand species, *M. lyallii*, and the Argentinian *M. santacrucense* on the basis that the hypogynous cell of carpogonial branches had adaxial involucral branchlets, the number of whorl-branchlets on axial cells and whether they produced rhizoidal cortication on the axes. Therefore, as *M. lyallii* and *C. thouarsii* clearly represent a single taxon, the South American species on the east coast currently known as *M. santacrucense* is a distinct species.

In spite of multiple studies, no one has formally synonymized *Medeiothamnion lyallii* and *Sphondylothamnion thouarsii*, despite it having been assumed as such since the treatment of the two species by Gordon (1972: 49), where she stated that *S. thouarsii* "… is now recognized as *Medeiothamnion lyallii comb. nov.*". As *Callithamnion thouarsii* is the earliest available name, the following new combination is proposed:

Medeiothamnion thouarsii (Montagne) M.J.Wynne & C.W.Schneider, *comb. nov*.
Basionym: *Callithamnion thouarsii* Montagne, *Annales des Sciences Naturelles, Botanique, Seconde série* 8: 351, 1837.
Holotype: **PC** 0047016 (Fig. 2).
Type locality: Valparaiso [Chile]
Etiquette on the label: *Ceramium* (*Callithamnion*) *Thouarsii* Montag. n. sp. Capt. Du Petit Thouars 1835, Valparaiso.
Homotypic synonyms: *Antithamnion thouarsii* (Montagne) De Toni 1903: 1403.
Sphondylothamnion thouarsii (Montagne) G.Feldmann 1950: 311.
Heterotypic synonyms: *Wrangelia lyallii* Harvey 1855: 236. Type locality: Rakiura Island, Foveaux Strait, New Zealand; leg. David Lyall, January 1851, *s.n*. Type in BM. *Medeiothamnion lyallii* (Harvey) E.M.Gordon 1972: 59.
Note: Montagne (1837: 351) referred only to a collection by Du Petit Thouars from Valparaiso represented by a single specimen at **PC**. As there are no syntypes or isotypes, this specimen is automatically the holotype.

The recognition of *Medeiothamnion thouarsii* as a species occurring both in New Zealand and the Pacific coast of South America adds to the many species with such wide-ranging distributions in the Southern Hemisphere (Levring 1960, Santelices 1980, Hoffmann & Santelices 1997).

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Fig. 1. Victor M. Lindauer's *Algae Nova-Zelandicae Exsiccatae* No. 223 (incorrectly identified as *Antithamnion plumula* (J.Ellis) Thuret) = *Medeiothamnion thouarsii*). Cryptogamic Herbarium specimen 1210701 in **F** (Field Museum, Chicago).

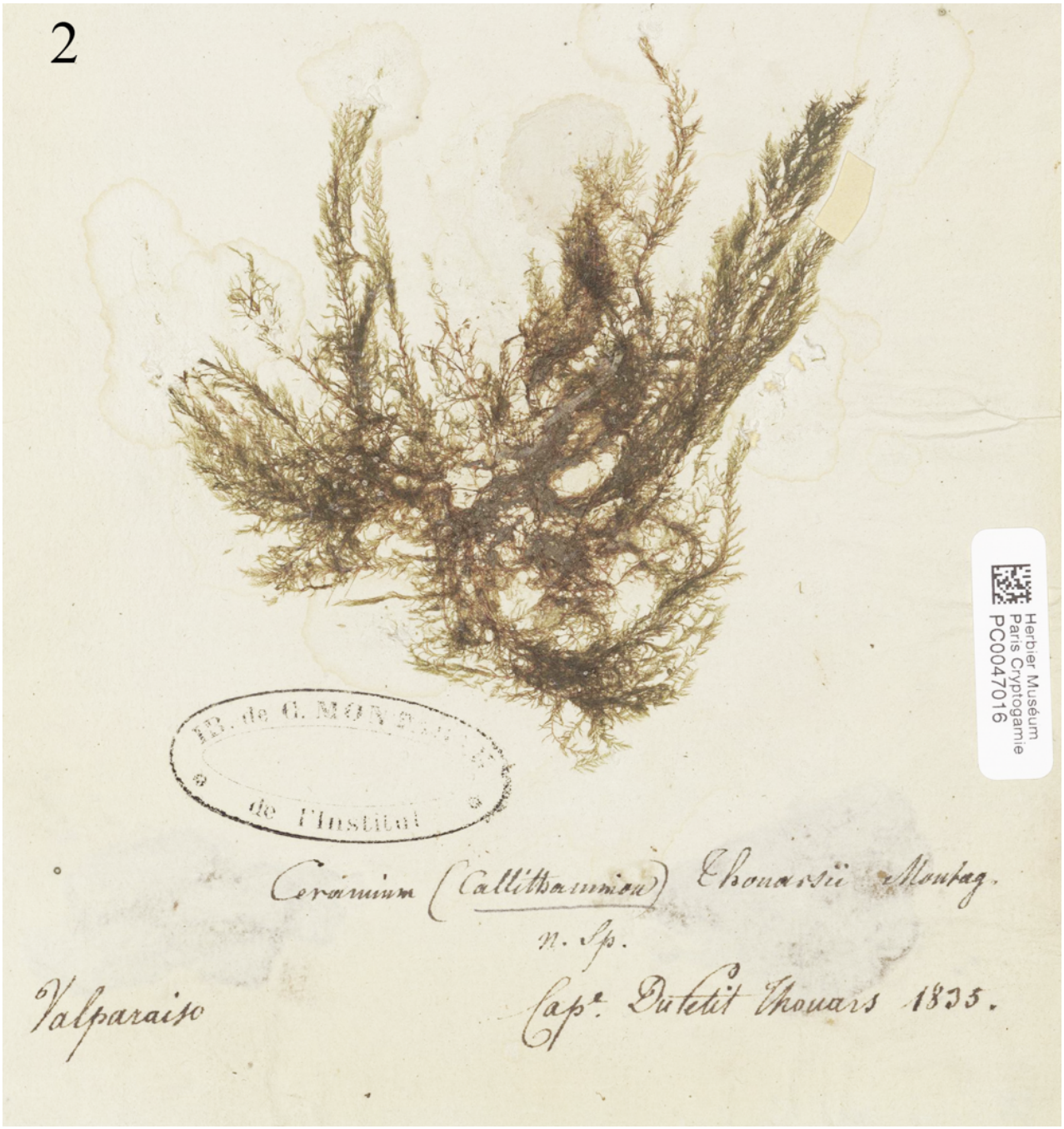

Fig. 2. Holotype of *Callithamnion thouarsii* Montagne. **PC** 0047016.