

Cladonia deformis (L.) Hoffm.

New Zealand plants listed by me (4) as f. *cyathiformis* Kov. should be f. *crenulata* Ach. I am indebted to Dr Oscar Klement for this correction.

Subsection FOLIOSAE

Cladonia foliacea (Huds.) Schaer. var. **alcicornis** (Lightf.) Schaer.

Previous recordings have all been from the South Island, but it was recently collected by me at Wellington, in the North Island. Lewis Pass (6710); Awarua Bay (7213); Kaimate, Westland (6765).

— f. **epiphylla** (Schaer) Vain.

Botanical Gardens, Wellington (8038).

Subsection PODOSTELIDES

Cladonia subcariosa (Nyl.) Vain.

This species is at once distinguished from the other species of this subsection by the application of KOH, which induces a yellow reaction quickly changing to red. New records include: Rangitoto Island (H.H.A. 8244, 8261); Lake Manapouri (8254).

— f. **descendens** Vain.

Whitianga, Coromandel Peninsula (8240).

Subsection CHASMARIAE

Pending confirmation, the following species each listed on a single determination, cannot be recorded as certainly indigenous to New Zealand:

Cladonia cenotea (Ach.) Schaer.; *C. rangiformis* Hoffm. f. *pungens* (Ach.) Vain.; and *C. chondrotypa* Vain.

The following variety based on a single recording is, however, listed by Vainio and presumably accepted as valid.

Cladonia squamosa (Scop.) Hoffm. var. **cornuta** Müll. Arg.

Recorded by Müller, to whom plants were submitted by Dr Charles Knight. It is listed by Vainio (5) in the appendix to Vol. 2 of his monograph (1894), and is presumably a valid record.

Subsection UNCIALES

Some forms of *Cladonia amaurocraea* are difficult to discriminate from forms of *C. capitellata*. One constant distinction concerns the spermagonial jelly which in the former is white and in the latter red, but this test can seldom be applied. As a rule *C. capitellata* is less branched, the branches are shorter, and the habit is more erect. Some authors regard *C. capitellata* as a variety of *C. amaurocraea*.

Cladonia boryi Tuck

In his "*Lichenes Novae Zelandiae*", Zahlbruckner records this species from Mt Technical, in Nelson, and Allan has so determined plants from Mt Trovatore and from Lead Hills, also in Nelson. The writer has recorded it from Awarua Bay, but these Southland plants differ from *C. boryi* and are here described as constituting a new species.

Cladonia southlandica sp nov.

TYPE. New Zealand; lodged in herbarium of Botany Division D.S.I.R., Lincoln.

DESCRIPTION. Thallus primarius 1.5–2mm longa, demum evanescens. Podetia crassiuscula, erecta, pallida, impellucida, esorediata, 12–40mm longa, plus minusve cylindrica, scyphifera, prolifera, squamarum destituta aut rarissima parvisse basi squamulosa, simplicia vel irregulariter dichotome ramosa, ecorticata, axillis imperforatis aut interdum perforatis; stratum chondroideum bene evolutum, nec reticulatum, vulgo lateribus integris