

III.—BOTANY.

ART. XXXVII.—*List of the Algæ of the Chatham Islands, collected by H. H. Travers, Esq., and examined by Professor John Agardh, of Lund.*
Communicated by Baron FERD. VON MUELLER, C.M.G., M.D., F.R.S.,
Hon. Mem. N.Z.I.

[Read before the Wellington Philosophical Society, 1st September, 1873.]

EARLY last year I was entrusted by Mr. H. H. Travers with a collection of Algæ, obtained by him with a large number of other plants during his second visit to the Chatham Islands. I was glad to induce my friend Professor Dr. Agardh, of Lund, to undertake the laborious task of the examination of these Algæ, as here, not only the Museum material for comparison of this kind of plants, but also the extent of our libraries for phycologic studies, are quite inadequate; and besides the systematic determination requires great circumspectness, many Algæ being of wide and much interrupted oceanic distribution. Moreover, no one could have brought to bear on this investigation the unrivalled experience of the great phycologist of Lund, gained after life-long special researches, which came to him as an inheritance from an illustrious parent. Dr. Agardh had already, at my request, examined the few Algæ brought by Mr. Travers from the Chatham Islands in 1864. The latter gentleman, encouraged by the well-proved discovery of a few new species on that occasion, effected last year a far more extensive search. The result has been that he brought together 46 genera and 62 species of these kinds of oceanic plants; and it is further gratifying to observe that he thereby added now again 2 genera and 10 species to the New Zealand flora, and indeed to science. Of the whole series a list is appended, arranged in accordance with the sequence adopted in Dr. Hooker's handbook. Diagnoses of the new generic and specific forms will soon be published in Sweden by Dr. Agardh.

It is, however, not likely that Mr. Travers' creditable exertions have already rendered known all the sea plants of this order occurring on the shores of the Chatham group; on the contrary, it may be expected that settlers on the various islands, able to watch what the gales may cast ashore at various seasons, or equally able to effect dredging at various places, will still largely add to the number of the Algæ now recorded from thence. It is also to be hoped that the enthusiastic young naturalist, to whom we mainly owe our knowledge of the vegetation of the Chatham Islands, will soon gain a new and fruitful field for a continuation of his important exertions.

LIST OF ALGÆ.

- Sargassum*
plumosum, Ach. Rich.
 _____ a species allied to
S. sinclairii, J. H. and Harv.
- Carpophyllum*
phyllanthum, J. H. and Harv.
maschalocarpum, J. H. and Harv.
- Marginaria*
urvilleana, Ach. Rich.
- Cystophora*
scalaris, J. Ag.
distenta, J. Ag.
- This, by a writing or printing error, was called *C. dissecta* in Trans. N.Z. Inst., Vol. III., p. 214.
- Landsburgia*
quercifolia, J. H. and Harv.
myricifolia, J. Ag.
- Fucodium*
gladiatum, J. Ag.
- Carpomitra*
halysensis, J. H. and Harv.
- Ecklonia*
radiata, J. Ag.
- Zonaria*
turneriana, J. Ag.
- Dictyota*
kunthii, Ag.
- Adenocystis*
lessonii, J. H. and Harv.
- Sphacelaria*
paniculata, Suhr.
- Rhodomela*
traversii, J. Ag., n. sp.
- Polysiphonia*
lyallii, J. H. and Harv.
muelleriana, J. Ag.
ramulosa, Harv.
- Or a species closely allied to it.
- Polyzonia*
incisa, J. Ag.
- On *Pterocladia lucida*.
- Champia*
novæ-zealandicæ, Harv.
- Laurencia*
urceolata, J. Ag., n. sp.
thyrsifera, J. Ag., n. sp.
- Dactyloctenium*
oblongifolium, J. Ag.
 (*Cladhymenia oblongifolia*, Harv.)
- Amphiroa*
corymbosa, Harv.
- The identity with Decaisne's South African plant doubtful.
- wardii*, J. Ag.
- Jania*
cuvierii, Decaisne.
- Nitophyllum*
palmatum, Harv.
- Gracilaria*
flagelliformis, J. Ag., n. sp.
- Caulacanthus*
spinellus, Kuetz.
- Pterocladia*
lucida, J. Ag.
- Apophleea*
lyallii, J. H. and Harv.
- Wrangelia*
lyallii, Harv.
- Rhodymenia*
corallina, Grev.
- Hymenocladia*
lanceolata, J. Ag.
- Rhodophyllis*
acanthocarpa, J. Ag.
 (*Callophyllis acanthocarpa*, Harv.)
- Plocamium*
coccineum, Lyngb.
- Gymnogongrus*, sp.
 The collected specimens are sterile.
- Callophyllis*
hombrobianiana, Kuetz.
- Gigartina*
angulata, J. Ag., n. sp.
marginifera, J. Ag.
decipiens, J. H. and Harv.
radula, J. Ag.
- Epymenia*
obtusa, Harv.
- Perhaps distinct from the South African plant.
- Chrysymenia*
linearis, J. Ag.
- Grateloupia*
caudata, J. Ag., n. sp.
- Ceramium*
nodiferum, J. Ag., n. sp.
stichadiosum, J. Ag., n. sp.
- Centroceras*
clavulatum, Montagn.

Ptilota
formosissima, Mont.

Pandorea
traversii, J. Ag., n. g.

Griffithsia
sonderiana, J. Ag., n. sp.
antarctica, J. H. and Harv.
gracilis, Harv.

Or an allied species in a sterile state.

Ballia
brunonis, Harv.
scoparia, Harv.

Caulerpa
furcifolia, J. H. and Harv.

Codium
tomentosum, Ag.
adhaerens, Ag.

Bryopsis
prolifera, J. Ag.

Ulva
rigida, Ag.

ART. XXXVIII.—*Notes on the Flora of the Province of Wellington, with a List of Plants collected therein.* By JOHN BUCHANAN, of the Geological Survey of New Zealand.

[Read before the Wellington Philosophical Society, 16th January, 1874.]

THE following list of plants has been determined from specimens chiefly collected in the southern portion of the Province of Wellington. The district now under notice may be defined as south of a line drawn between the Wanganui River on the west and Castle Point on the east. The surface features of this area will be found to present two main lines of watershed with a north and south axis, the altitudes ranging up to 5,000 feet. The relative area of bush and open land are, according to Mr. J. T. Stewart, nearly equal,* the bush being more confined to the western range, while the great central river basin and hills of the eastern range are comparatively open land, and covered by a vegetation of fern, grass, and low-growing plants, little having as yet been done to improve upon the primitive condition of the country, except partial clearing by fire.

The river basins of this district are well adapted for agriculture; the inorganic matter from the wear of rocks, brought down by the streams from mountain ranges of a varied geology, with the added organic matter of a luxuriant natural vegetation—the accumulation of ages—present all the elements of a fertile soil. The extension of pasture is the main object at present in clearing land, but where bush is cleared for this purpose the rough and slovenly method usually adopted does not produce a first-class pasture, although bush soil is capable of growing excellent crops of either roots or cereals.

On the extensive hill lands of the eastern division of the district, however,

* Trans. N.Z. Inst., Vol. II., Art. XLVIII., "On the River System of the South Portion of the Province of Wellington," by J. T. Stewart.