

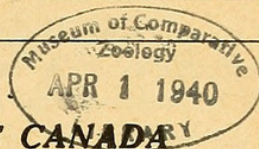
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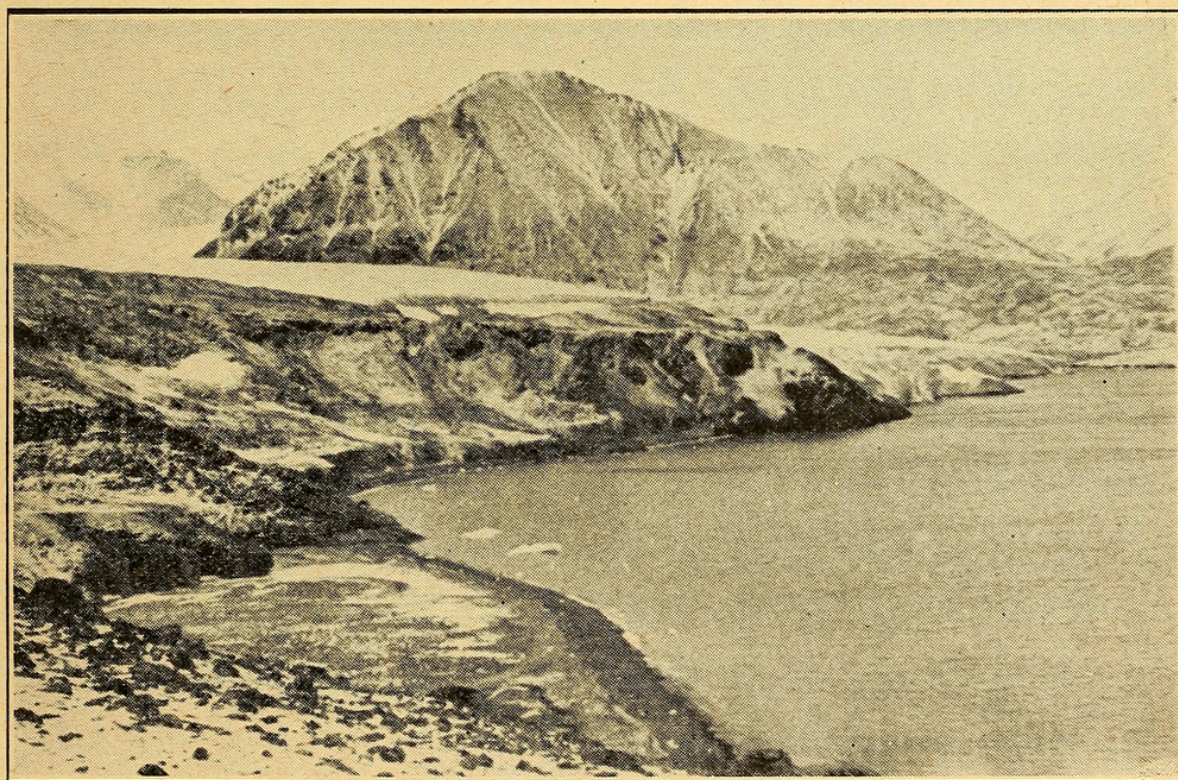
THE FLORA OF DEVON ISLAND IN ARCTIC CANADA

By **NICHOLAS POLUNIN**

DEVON ISLAND, previously called North Devon, although one of the largest units of the American Arctic Archipelago, still remains among the least known botanically. It extends from lat. $74^{\circ} 30'N.$ to lat. $77^{\circ} 5'N.$, and from long. $79^{\circ} 30'W.$ to long. $97^{\circ}W.$ (Simmons 1913, p. 34), having an estimated area of 20,484 sq. miles (Bethune 1935, p. 16). The coast is extremely rugged, consisting generally of tall cliffs or steep slopes interrupted by glaciers which in most cases come right down to the sea

(Phot. 1). The hinterland, except in the west, is lofty and almost entirely occupied by ice-cap; but although only a small portion of the total area is free from ice, there is to be found a considerable variety of plant habitats, including in some sheltered valleys large tracts of closed heathy or marshy vegetation.

The first few plants known to have been collected on Devon Island were brought back in 1825 by Parry's third expedition (*cf.* W. J. Hooker 1826), while more substantial contributions were



South coast of Devon Island looking eastwards across a bay near Dundas Harbour. A glacier is seen coming from the ice-cap (upper left-hand corner) and discharging into the sea. A sprinkling of new snow lies on the otherwise dark foreground—

September 14th, 1934.

made by members of various Franklin searching expeditions in the 1850's (cf. J. D. Hooker 1857 and 1861), and in 1900-02 by the Second Norwegian Arctic Expedition in the "Fram" (cf. Simmons 1909) ¹.

Subsequently a whole series of Canadian Government expeditions made brief calls (generally at Dundas Harbour on the south coast) which allowed the making of further useful collections. Altogether the following 16 explorers, sailors or scientists have collected vascular plants on Devon Island, although in most cases so casually that in a total of about 24 hours spent at one point (Dundas Harbour) in 1934 and 1936 I was able to find no less than 14 species not previously known from the island:

J. C. Ross, 1824.

W. E. Parry, 1824-5, (cf. W. J. Hooker, 1826).

F. L. McClintock, 1850-4, (cf. Markham, 1909).

R. McCormick, 1852, (cf. McCormick, 1884).

T. C. Pullen, 1852.

D. Lyall, 1852-4, (cf. J. D. Hooker, 1857).

Dr. Walker, 1857, (cf. J. D. Hooker, 1861).

A. C. Horner, 1876².

P. Schei, 1900-01, (cf. Simmons, 1909).

H. G. Simmons, 1900-02, (cf. Simmons, 1909 and 1913).

L. E. Borden, 1904, (cf. Macoun, 1906).

J. G. MacMillan, 1908.

J. D. Soper, 1923.

M. O. Malte, 1927.

R. M. Anderson, 1928.

N. Polunin, 1934-6.

The total number of species (not to mention subsidiary forms) of vascular plants which can now be recorded as occurring on Devon Island or its accompanying islets (excluding the rather large North Kent, Coburg, and Philpot Islands) is 104, but there can be no doubt that many more will be added with further exploration. In the following list the species are delimited and arranged as in my forthcoming "Botany of the

Canadian Eastern Arctic, Part 1" ³, the symbols placed in brackets (following the name of the collector and date of collection) indicating the herbaria in which I have seen and checked the specimens, ⁴ viz.

O Ottawa—National Herbarium of Canada.

G Gray Herbarium of Harvard University, Cambridge, Mass.

N New York—Herbarium of the Botanical Gardens.

K Kew—Herbarium of the Royal Botanic Gardens, London.

B British Museum of Natural History, London.

C Copenhagen Botanical Museum.

S Stockholm—Herbarium of the State Museum.

My own specimens collected in 1934 and 1936 are mostly to be seen in one or another of the four institutions with which I have latterly been most closely connected, viz., the Gray Herbarium of Harvard University at Cambridge, Mass., the National Herbarium of Canada at Ottawa, the British Museum of Natural History, London, and the Fielding Herbarium of Oxford University.

POLYPODIACEAE.

1. *Woodsia glabella* R. Br. apud Richardson—Dundas Harbour, Malte 1927 (O,G, C).

EQUISETACEAE.

2. *Equisetum arvense* L.—Dundas Harbour, Malte 1927 (O,G), Polunin 1936.

LYCOPODIACEAE.

3. *Lycopodium Selago* L.—"Cape Warrender" (McClintock ex Markham 1909, p. 246); Dundas Harbour, Polunin 1934 & 36.

GRAMINEAE.

4. *Hierochloa alpina* (Sw.) R. & S.—Cape Sparbo, Anderson 1928 (O); Cape Warrender, Ross 1824 (K); Dundas Harbour, Soper 1923 (O,C), Malte 1927 (O,G), Polunin 1934 & 36; between Beechey Island and Northumberland Sound, Lyall 1852 (K); "Lancaster Sound" (Walker ex Hooker 1861, p. 85).

1. In this paper Simmons mentions a total of about 36 species of vascular plants from "North Devon". In his subsequent "Phytogeography" (1913, p. 25) he collects together and adds the records of previous investigators, so enumerating 58 species. These, however, include several of Sutherland's which had been gathered in Baffin (cf. Polunin 1936, p. 411).

2. Naturalist Horner gathered only a few common plants when visiting Beechey Island during the "Pandora" voyages of 1875-6, his reports being so merged in generalizations that his name does not appear in the detailed records which follow. These records give the chief points at which the other 15 investigators collected.

3. This work was designed to mention all plant names which have been published either erroneously or as synonyms from Devon Island or surrounding areas. It is accordingly considered unnecessary to repeat such extra names here, just as it is thought undesirable to include doubtful or ambiguous records.

4. An asterisk implies that the specimen has not actually been seen by me but is reported on the authority of a reliable author as occurring in the herbarium indicated.

5. *H. pauciflora* R. Br.—Dundas Harbour, Malte 1927 (O,G), Polunin 1936.
6. *Alopecurus alpinus* Sm.—plentiful records⁵
7. *Arctagrostis latifolia* (R.Br.) Griseb.—Dundas Harbour, Polunin 1934 & 36; Cuming Creek, Borden 1904 (O) 63096; 'Wellington Channel', Lyall 1853 (K).
8. *Calamagrostis neglecta* (Ehrh.) Gaertn. var. *borealis* (Laestad.) Kearney—Dundas Harbour, Polunin 1934.
9. *Deschampsia brevifolia* R.Br. (*Aira arctica* Spreng.)—"Cape Vera" (Simmons 1913, p. 46).
10. *D. pumila* (Ledeb.) Ostenfeld—Dundas Harbour, Polunin 1934.
11. *Trisetum spicatum* (L) Richt. var. *Maidenii* (Gandoger) Fernald—Dundas Harbour, Malte 1927 (O,G) 118474, Polunin 1934 & 36.
12. *Catabrosa algida* (Soland.) Fries—plentiful records⁵.
13. *Pleuropogon Sabinei* R.Br.—Dundas Harbour, Polunin 1934 & 36; Powell Creek, Lyall (K).
14. *Poa abbreviata* R.Br.—"Boat Cape (Schei) and Cape Vera" (Simmons 1909, pp. 6 & 8); Dundas Harbour, Malte 1927 (O,G), Polunin 1934; Powell Creek, Lyall 1852 (K) as "*Poa laxa*"; Beechey Island, Lyall 1854 (K,S*).
15. *P. glauca* M. Vahl—Dundas Harbour, Malte 1927 (O,G), Polunin 1934 & 36; Beechey Island, Lyall 1854 (K).
16. *P. arctica* R.Br.—plentiful records, incl. var. *vivipara* Hook. from "Cape Vera" (Simmons 1909, p. 8 sub nom. *P. cenisia* f. *prolifera*), from Dundas Harbour, Polunin 1934 & 36, from Beechey Island, Lyall 1854 (K,S*) as "*Poa caesia*"; incl. apparent hybrid with *P. Pratensis* s.l. from Dundas Harbour, Polunin 1934 & 36; incl. from Cape Warrender, Parry 1825 (K) as "*Poa laxa*?"
17. *Dupontia Fisheri* R.Br.—Dundas Harbour, Polunin 1934 & 36; between Beechey Island and Northumberland Sound, Lyall 1852 (K).
18. *Puccinellia phryganodes* (Trin.) Scribn. & Merrill—Dundas Harbour, Malte 1927 (O,G), Polunin 1934 & 36.
19. *P. paupercula* (Holm) Fernald & Weatherby—Dundas Harbour, Polunin 1936.

5. I.e. from almost all around the island, so that they are not considered worth citing individually.

20. *P. angustata* (R.Br.) Rand & Redfield (agg.)—plentiful records, incl. as "*Glyceria distans*" and "*G. distans* var. *vaginata*".
21. *P. Vahlia* (Liebm.) Scribn. & Merrill—"West Fjord" (Simmons 1909, p. 7); Dundas Harbour, Polunin 1934 & 36.
22. *Festuca brachyphylla* Schultes—plentiful records, incl. as "*Festuca ovina*" and "*F. ovina* var. *supina*".

CYPERACEAE.

23. *Eriophorum Scheuchzeri* Hoppe—Dundas Harbour, Malte 1927 (O,C), Polunin 1934 & 36; Powell Creek, Lyall 1852 (K).
24. *E. angustifolium* Roth (*E. polystachyon* of authors, possibly not L.)—plentiful records.
25. *Kobresia Bellardi* (All.) Degland apud Loisel—Dundas Harbour, Malte 1927 (O, G,C) 118659, 118667, Polunin 1934 & 36.
26. *K. simpliciuscula* (Wahlenb.) Mackenzie (*K. caricina* Willd.)—Dundas Harbour, Polunin 1934 & 36.
27. *Carex nardina* E. Fries—Dundas Harbour, Malte 1927 (O,G,C), Polunin 1934 & 36.
28. *Carex maritima* Gunn. (s.l.) (*C. incurva* Lightf.)—Dundas Harbour, Malte 1927 (O,G), Polunin 1934 & 36, incl. nos. 750, 810, 818, 820, 2512, 2521 var. *setina* (Christ) Fernald.
29. *C. ursina* Dewey—Dundas Harbour, Polunin 1934 & 36.
30. *C. bipartita* All.—Dundas Harbour, Malte 1927 (O,G,C) 118499 heterogeneous, Polunin 1936.
31. *C. rupestris* All.—? Cape Sparbo, Anderson 1928 (O); Dundas Harbour, Polunin 1934 & 36.
32. *C. scirpoidea* Michx. (s.l.)—Dundas Harbour, Malte 1927 (O,G,C), Polunin 1934 & 36.
33. *C. atrofusca* Schk. (*C. ustulata* Wahlenb.)—Dundas Harbour, Malte 1927 (C), Polunin 1934 & 36.
34. *C. misandra* R.Br.—Dundas Harbour, Soper 1923 (O,C), Malte 1927 (O,G,C), Polunin 1934 & 36.
35. *C. Bigelowii* Torrey ex Schwein. (*C. rigida* Good. not Schrank, *C. concolor* of authors, not R.Br.)—Cape Sparbo, Anderson 1928

6. Subsidiary forms of this species will be dealt with in my forthcoming "Botany of the Canadian Eastern Arctic, Part I". Typical *C. bipartita* (*C. lagopina* Wahlenb., *C. Lachenalii* Schk.) appears to be absent from Devon Island.

(O); Dundas Harbour, Malte 1927 (O, G, C) 118552, Polunin 1934 incl. nos. 758, 772, 801, 818 transitional to *C. aquatilis* var. *stans*.

36. *C. aquatilis* Wahlenb. var. *stans* (Drej.) Boott—Cape Sparbo, Anderson 1928 (O); Dundas Harbour, Malte 1927 (O, G) 118555, Polunin 1934 & 36; Powell Creek, Lyall 1852 (K).

37. *C. salina* Wahlenb.—Dundas Harbour, Polunin 1936 no. 2492 approaching var. *subspathacea* (Wormskj.) Tuckerm. and nos. 2522, 2523 transitional to *C. aquatilis* var. *stans*.

38. *C. membranacea* Hook. (*C. membranopacta* L. H. Bailey)—Cape Sparbo, Anderson 1928 (O); Dundas Harbour, Polunin 1934 & 36.

JUNCACEAE.

39. *Luzula nivalis* (Laest.) Beurl. (*L. arctica* Blytt, *L. hyperborea* R.Br. in part)—Dundas Harbour, Malte 1927 (O, G, C), Polunin 1934 & 36; between Beechey Island and Northumberland Sound, Lyall 1852 (K) as "*Luzula confusa*"; 'Wellington Channel', Lyall 1853 (K) as "*L. confusa*".

40. *L. confusa* Lindeb. (*L. hyperborea* R.Br. in part)—Cape Sparbo, Anderson 1928 (O); Dundas Harbour, Polunin 1934 & 36; Powell Creek, Lyall 1852 (K); "Lancaster Sound" (Walker ex Hooker 1861, p. 84 sub nom. *L. arcuata*).

41. *Juncus biglumis* L.—"West Fjord, Cape Vera, Mount Belcher" (Simmons 1909, pp. 7, 8 & 9); Dundas Harbour, Malte 1927 (O, C), Polunin 1934 & 36; "Powell Creek and Wellington Channel" (Lyall ex Hooker 1857, p. 118).

42. *J. albescens* (Lange) Fernald—Dundas Harbour, Malte 1927 (O), Polunin 1934.

43. *J. castaneus* Sm.—Dundas Harbour, Polunin 1934 & 36.

LILIACEAE.

44. *Tofieldia coccinea* Richardson—Dundas Harbour, Malte 1927 (O, C) 118594, Polunin 1934? & 36.

SALICACEAE.

45. *Salix reticulata* L.—Dundas Harbour, Soper 1923 (C), Malte 1927 (O, N), Polunin 1934 & 36.

46. *S. herbacea* L.—Dundas Harbour, Polunin 1934 & 36; Powell Creek, Lyall 1852 (K).

47. *S. arctica* Pall. (s.l.)—plentiful records, incl. det. B.F. (loderus) as "*Salix arctica* x *callicarpaea*" and "*S. callicarpaea*".

POLYGONACEAE.

48. *Koenigia islandica* L.—Dundas Harbour, Polunin 1936.

49. *Oxyria digyna* (L.) Hill—plentiful records.

50. *Polygonum viviparum* L.—"Viks Fjord" (Schei ex Simmons 1909, p. 6); Dundas Harbour, Polunin 1934 & 36; Powell Creek, Lyall 1852 (K); Beechey Island, Lyall (K); "Wellington Channel" (Lyall ex Hooker 1857, p. 117).

CARYOPHYLLACEAE.

51. *Silene acaulis* (L.) L. var. *exscapa* (All.) DC.—Dundas Harbour, Malte 1927 (O, G, C), Polunin 1934 & 36.

52. *Lychnis furcata* (Raf.) Fernald (*Melandrium affine* of authors)—Dundas Harbour, Polunin 1936; Beechey Island and neighbourhood, Lyall 1854 (K, S*) as "*Lychnis apetala*".

53. *L. apetala* L.—Dundas Harbour, Malte 1927 (O, G, C) 118773 118774, Polunin 1934 & 36; "Cape Riley" (McClintock ex Markham 1909, p. 246); Beechey Island, Lyall 1854 (K, S*); 'Wellington Channel', Lyall 1853 (K, S*).

54. *Cerastium alpinum* L. (s.l.)—plentiful records.

55. *C. Regelii* Ostenfeld—Dundas Harbour, Polunin 1936; between Beechey Island and Northumberland Sound, Lyall 1852 (K); 'Wellington Channel', Lyall 1852 & 53 (K).

56. *Stellaria longipes* Goldie—"West Fjord, Cape Vera, Mount Belcher" (Simmons 1909, pp. 7, 8 & 9); Dundas Harbour, Soper 1923 (O) incl. f. *humilis* (Fenzl) Ostenfeld ex Grøntved, Malte 1927 (O, G) f. *humilis*, Polunin 1934 & 36 incl. f. *humilis*; Powell Creek, Lyall 1852 (K) f. *humilis*; Beechey Island, MacMillan 1908 (O) as "var. *laeta*"; between Beechey Island and Northumberland Sound, Lyall 1852 (K) f. *humilis*; 'East side Wellington Channel', Lyall 1852 (K).

57. *S. humifusa* Rottb.—Dundas Harbour, Malte 1927 (O, G, C), Polunin 1934 & 36.

58. *Arenaria rubella* (Wahlenb.) Sm.—"West Fjord, Cape Vera, Mount Belcher" (Simmons 1909, pp. 7, 8 & 9 sub nom. *Alsine*

verna); "Boat Cape" (Schei ex Simmons 1909, p. 6 sub nom. *Alsine verna*); Dundas Harbour, Malte 1927 (O,C) 118722 118723 118729, Polunin 1934 & 36; Beechey Island and neighbourhood, Lyall 1854 (K).

59. *A. Rossii* R.Br. apud Richardson—"West Fjord and Mount Belcher" (Simmons 1909, pp. 7 & 9); Dundas Harbour, Polunin 1936; Beechey Island and neighbourhood, Lyall 1854 (K); between Beechey Island and Northumberland Sound, Lyall 1852 (K); 'East side Wellington Channel,' Lyall 1852 (K).

60. *Sagina intermedia* Fenzl—Dundas Harbour, Polunin 1934 & 36.

RANUNCULACEAE.

61. *Ranunculus hyperboreus* Rottb.—Dundas Harbour, Polunin 1934 & 36.
62. *R. nivalis* L.—Dundas Harbour, Malte 1927 (O,G,C), Polunin 1934 & 36; between Beechey Island and Northumberland Sound, Lyall (K*)⁸.
63. *R. sulphureus* Solander apud Phipps—"Cape Vera" (Simmons 1909, p. 8); Dundas Harbour, Malte 1927 (O,G,C), Polunin 1934 & 36; Cuming Creek, Borden 1904 (O) 26906 as *R. nivalis*."

PAPAVERACEAE.

64. *Papaver radicum* Rottb.—plentiful records, incl. var. *albiflorum* Lange from "Cape Vera" (Simmons 1909, p. 8 sub nom. f. *Hartianum*), from Dundas Harbour, Polunin 1936.

CRUCIFERAE.

65. *Cochlearia officinalis* L. (s.l.)—plentiful records, incl. var. *groenlandica* (L.) Gelert from "West Fjord, Cape Vera, Castle Island, and Devils Island" (Simmons 1909, pp. 7 et seq.), from Dundas Harbour, Malte 1927 (O, G, C).
66. *Eutrema Edwardsii* R.Br.—Dundas Harbour, Malte 1927 (O,G,C), Polunin 1934 & 36; Powell Creek, Lyall 1852 (K. pars).
67. *Cardamine bellidifolia* L.—Dundas Harbour, Malte 1927 (O), Polunin 1934 & 36 incl. f. *laxa* (Lange) n. comb. (*Cardamine bellidifolia* L. var. *laxa* Lange, Medd. om Grønland, III, p. 251, 1887).

68. *C. pratensis* L. var. *angustifolia* Hook.—Dundas Harbour, Polunin 1936; Beechey Island, Pullen 1852 (K, pars) as "*Cardamine digitata*".

69. *Draba alpina* L. (s.l.)—plentiful records, incl. from Dundas Harbour, Malte 1927 (O,G) 118897 var. *gracilescens* Simmons as "*D. alpina* x *lactea*", and 118899 var. *nana* Hook. emend. Fernald as "*D. Bellii*", Polunin 1934 & 36 typical form and var. *nana*, from Beechey Island, Lyall 1854 (K) apprg. *D. subcapitata*, Borden 1904 (O) 26913 var. *nana* as "*D. Bellii* f. *gracilis* potius ad *D. macrocarpum*" scr. Ekman, MacMillan 1908 (O) 77274 var. *nana* as "*D. Bellii*", Soper 1923 (O) 111536 var. *nana* as "*D. Bellii*", Malte 1927 (O,G) 118894 var. *nana* as "*D. Bellii* f. an var. *svalbardensis*" scr. Ekman.

70. *D. subcapitata* Simmons—"West Fjord, Devils Island, Mount Belcher, Castle Island, and Cape Vera" (Simmons 1909, pp. 7 et seq.); Beechey Island, Lyall 1854 (K,S*) as "*D. micropetala*"; 'Northumberland Sound', Lyall 1853 & 54 (K).

71. *D. fladnizensis* Wulfen ex Jacquin (s.l.)—Dundas Harbour, Malte 1927 (O,G) incl. 118914 as "*D. fladnizensis* x *lactea*" and 118906 as "*D. lactea*", Polunin 1934 & 36; "Cuming Creek" (Borden ex Macoun 1906 p. 320 sub syn. *D. Wahlenbergii*); Powell Creek, Lyall 1852 (K) as "*D. rupestris*"; between Beechey Island and Northumberland Sound, Lyall 1852 (K); 'East side Wellington Channel', Lyall 1852 (K) as "*D. micropetala*".

72. *D. nivalis* Liljebl.—Dundas Harbour, Malte 1927 (O), Polunin 1934 & 36.

73. *D. glabella* Pursh var. *brachycarpa* (Rupr.) Fernald—"Castle Island" (Simmons 1909, p. 11 sub nom. *D. hirta*); 'East side Wellington Channel', Lyall 1853 (K) as "*D. hirta*".

74. *D. cinerea* Adams (*D. arctica* J. Vahl)—'Wellington Channel', Lyall 1852 (K) apprg. *D. glabella* as "*D. groenlandica*" scr. Ekman; Beechey Island, Lyall 1854 (K).

75. *Braya purpurascens* (R.Br.) Bunge apud Ledeb.—Dundas Harbour, Malte 1927 (O,G) 118930 var. *dubia*, Polunin 1934 & 36 incl. var. *dubia*; Powell Creek, Lyall 1852 (K, pars) as "*Eutrema Edwardsii*".

8. J. D. Hooker (1857, p. 116), when dealing with Dr. Lyall's collections, gave "Beechey Island and Northumberland Sound" as distinct localities for this species. Owing to confusion with *R. sulphureus* it seems best to ignore all unconfirmed reports of members of this group.

SAXIFRAGACEAE.

76. *Saxifraga rivularis* L.—“West Fjord” (Schei ex Simmons 1909, p. 7); Dundas Harbour, Malte 1927 (O,G,C), Polunin 1934 & 36; Powell Creek, Lyall 1852 (K); ‘East side Wellington Channel’, Lyall 1852 (K).
77. *S. cernua* L.—plentiful records, incl. f. *latibracteata* (Fernald & Weatherby) Polunin from Beechey Island, Soper 1923 (O) 111555, Malte 1927 (O,G) 118966.
78. *S. caespitosa* L. (*S. groenlandica* L.)—plentiful records, incl. from “Devils Island,” “*S. groenlandica* f. *flavescens*” (Simmons 1909, p. 12).
79. *S. stellaris* L. var. *comosa* Retzius—“West Fjord” (Schei ex Simmons 1909, p. 7); Dundas Harbour, Malte 1927 (O, C), Polunin 1934 & 36.
80. *S. hieracifolia* Waldst. & Kit.—Dundas Harbour, Polunin 1936.
81. *S. nivalis* L.—plentiful records.
82. *S. tricuspidata* Rottb.—plentiful records, incl. f. *subintegrifolia* (Abrom.) Polunin from Dundas Harbour, Soper 1923 (O,G) 111568.
83. *S. flagellaris* Willd., ex Sternb.—no locality (McClintock ex Markham 1909, p. 246); “Cape Vera and Mount Belcher” (Simmons 1909, pp. 8 & 9); “Northumberland Sound” (Lyall ex Hooker 1857, p. 117); ‘Wellington Channel’, Lyall (K*); Beechey Island, Lyall 1854 (K,S*); “Baring Bay and Caswalls Tower” (McCormick 1884, pp. 86 & 127); Cape Riley, Pullen (K*).
84. *S. Hirculus* L.—plentiful records, incl. var. *propinqua* (R.Br.) Simmons.
85. *S. oppositifolia* L.—plentiful records, incl. f. *pulvinata* Andersson & Hesselman.
86. *Chrysosplenium alternifolium* L. var. *tetrandrum* Lund—Dundas Harbour, Polunin 1936; ‘Wellington Channel’, Lyall 1853 (K).

ROSACEAE.

87. *Potentilla emarginata* Pursh—Dundas Harbour, Soper 1923 (O) 111584 apprg. *P. rubricaulis* Lehm., Malte 1927 (O,G,C) 119073 119088 119092, Polunin 1934 & 36, incl. 780c 791 2494 apprg. *P. rubricaulis*.
88. *P. rubricaulis* Lehm.—Dundas Harbour, Malte 1927 (O,G) 119097 as “*P. Peder-*

senii”, and 119091 apprg. (hybrid with ?) *P. pulchella* R.Br. as “*P. groenlandica* x *pulchella*”, Polunin 1936; Cape Riley, Pullen (K*).

89. *P. pulchella* R.Br.—“West Fjord” (Simmons 1909, p. 7); “Lancaster Sound” (Walker ex Hooker 1861, p. 83 sub nom. *P. nivea* var. *pulchella*); Dundas Harbour, Malte 1927 (O,G,C), Polunin 1936; Powell Creek, Lyall 1852 (K); Beechey Island and near, Lyall 1854 (K,S*); “Northumberland Sound” (Lyall ex Hooker 1857, p. 116).
90. *Dryas integrifolia* M. Vahl—plentiful records, incl. from “Cape Riley” (McClintock ex Markham 1909, p. 245 sub nom. *D. octopetala*).

ONAGRACEAE.

91. *Epilobium latifolium* L.—Dundas Harbour, Polunin 1934 & 36.

ERICACEAE.

92. *Rhododendron lapponicum* (L.) Wahlenb.—Dundas Harbour, Malte 1927 (O,G,C), Polunin 1936.
93. *Cassiope tetragona* (L.) D. Don—plentiful records.
94. *Vaccinium uliginosum* L. var. *alpinum* Bigel.—Dundas Harbour, Soper 1923 (O,C) 111653, Malte 1927 (O,C), Polunin 1934 & 36.

PLUMBAGINACEAE.

95. *Armeria labradorica* Wallr.—Dundas Harbour, Malte 1927 (O, G, C) 119107, Polunin 1934.

BORAGINACEAE.

96. *Mertensia maritima* (L.) S. F. Gray var. *tenella* Fries—Dundas Harbour, Malte 1927 (O,G,C), Polunin 1934.

SCROPHULARIACEAE.

97. *Pedicularis sudetica* Willd.—Dundas Harbour, Malte 1927 (O,C), Polunin 1934 & 36.
98. *P. hirsuta* L.—‘Lancaster Sound’, Walker 1857 (K); Dundas Harbour, Malte 1927 (O,C), Polunin 1934 & 36; Cuming Creek, Borden 1904 (O*); between Beechey Island and Northumberland Sound, Lyall 1852 (K); “Wellington Channel” (Lyall ex Hooker 1857, p. 117).
99. *P. flammiea* L.—Dundas Harbour, Polunin 1936.
100. *P. capitata* Adams—Dundas Harbour, Malte 1927 (O,G,C), Polunin 1934 & 36.

9. Subsidiary forms of this species will be dealt with in my “Botany of the Canadian Eastern Arctic, Part I”.

CAMPANULACEAE.

101. *Campanula uniflora* L.—Dundas Harbour, Polunin 1934 & 36.

COMPOSITAE.

102. *Antennaria labradorica* Nutt.—Dundas Harbour, Polunin 1934.
 103. *Chrysanthemum integrifolium* Richardson—Cape Sparbo, Anderson 1928 (O).
 104. *Taraxacum phymatocarpum* J. Vahl (s.l.)—Cape Sparbo, Anderson 1928 (O).

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A QUANTITATIVE STUDY OF MUSKRAT FOOD

By L. BUTLER



ANY studies have been made (Errington et al.), of the social and breeding habits of the muskrat, *Ondatra zibethica* and most of these accounts have been prefaced by some qualitative feeding data; but no one has tried to arrive at a quantitative estimate of the amount of natural food required by an individual muskrat. This study was undertaken with the twofold purpose of finding how much of each type of food muskrats normally consume, and whether food plays an important part in the population cycle. These experiments were carried out on the Hudson's Bay Company's

marsh near Mafeking, Manitoba. The marsh is fed by the Steeprock River, and has an abundant supply of natural muskrat food and a fairly stabilized water level.

Plants growing on the marsh, which are used by muskrat for food, are listed in order of their importance in Table No. 1. There is nothing unusual in the first two plants on the list as cattail and bulrush are recognized by most investigators as important food plants, but the third one has never been mentioned in this capacity. *Equisetum fluviatile* or stovepipe reed grows in two to four feet of water and is found



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