

A List of the Pteridophyta collected in Alaska in 1900 by Mr. J. B. Flett, with description of a new *Dryopteris**

BY WILLIAM R. MAXON

A short time ago Mr. J. B. Flett kindly placed in my hands for determination a set of his collection of ferns and fern allies made in Alaska, largely in the vicinity of Cape Nome, during the summer of 1900. These specimens, which have been deposited in the National Herbarium, have proven of considerable interest, especially since they come in part from a region so little explored botanically. One species is apparently undescribed; the others it seems desirable to catalogue for the record of their occurrence. The notes upon habitat have been furnished by Mr. Flett.

OPHIOGLOSSACEAE

BOTRYCHIUM BOREALE (Fries) Milde.

No. 1705. Unalaska; June 19. Rather immature.

POLYPODIACEAE

POLYPODIUM VULGARE OCCIDENTALE Hook.

No. 1510. Dutch Harbor, Unalaska. Growing abundantly among heather on level ground near the shore; June 15. Very abundant all about the island.

This specimen represents a form abundantly collected in Alaska, but less common along the lower coast, with nearly entire and blunter pinnae, for the most part, but otherwise similar to what passes as the variety *occidentale* of Hooker.

CRYPTOGRAMMA ACROSTICHOIDES R. Br.

No. 1504. Rocky ledges, vicinity of Nome City; July 21. Not common.

ATHYRIUM CYCLOSORUM Rupr.

No. 1512. Dutch Harbor, Unalaska, June 12.

PHEGOPTERIS PHEGOPTERIS (L.) Underw.

No. 1502. Sixteen miles west of Nome City; in the shade of alders and willows at the base of the mountain, and among grasses

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near the summit, without shade. Also no. 1519. Unalaska, June 18; not common.

PHEGOPTERIS DRYOPTERIS (L.) Hoffm.

No. 1503. Among grass in crevices of rocky ledges; vicinity of Nome City, August 7.

DRYOPTERIS FRAGRANS (L.) Schott.

No. 1501. In the crevices of loose rocks at the base of a mountain 16 miles west of Nome City, August 20. It was found in its best development at the base of the mountain, but smaller forms occurred at the summit, alt. 800 feet; not abundant, being found in only the one locality.

✓ *Dryopteris aquilonaris* sp. nov.

Rhizome stout, erect, chaffy with bright-brown concolorous scales; stipes 4-7 cm. long, clustered, sparsely scaly; laminae 5-8 cm. long, narrowly linear-lanceolate, with a few mostly lanceolate scales; pinnae about ten pairs, sub-opposite or alternate, 10-15 mm. long, glandular beneath; oblong-ovate, becoming triangular-oblong below; pinnulae about four pairs to the pinna, obliquely pinnatifid, the divisions with decurrent base, toothed; sori few, 2 or 3 to the pinnula; indusium broadly reniform, ragged.

Type in U. S. National Museum, collected by J. B. Flett, on the summit of a mountain sixteen miles west of Nome City, Alaska, August 7, 1900; no. 1509, altitude 700 feet.

This apparently rare species is most nearly related to *Dryopteris fragrans*, which is common in the same region. However, there seem to be many well-marked differences distinguishing it from that species. The plant is much less rigid, the lower pinnae are not reduced gradually, the pinnae have decidedly fewer pinnules, and the pinnulae are much more dissected. There is noticed also an absence of the dense scaly covering below so characteristic of *D. fragrans*, and a much smaller number of sori. The indusia, too, are rather broader, more irregular, lack the narrow sinus of *fragrans*, and apparently are not glandular at the margin. I have seen no other material referable to the species here described. It was not collected in quantity by Mr. Flett, who found, I believe, only two plants. It is proposed to publish a figure of this species at another time.

DRYOPTERIS SPINULOSA DILATATA (Hoffm.) Underw.

No. 1506. Vicinity of Nome City, ranging from the base of the mountain to the summit, but reaching its best development in the shade at the base; July 20. Also, no. 1511; Dutch Harbor, Unalaska, July 12; in open places.

POLYSTICHUM LONCHITIS (L.) Roth.

No. 1523. Mountains, Unalaska, June 19.

FILIX FRAGILIS (L.) Underw. (*Cystopteris*)

No. 1508. Common in crevices of rocks in the mountains, vicinity of Nome City, July 8 and July 28. Also, no. 1717; common on rocky ledges, Dutch Harbor, Unalaska, June 15.

FILIX MONTANA (Lam.) Underw. (*Cystopteris*)

No. 1507. Growing only in one station, among willows at the base of Anvil Mountain, four or five miles north of Nome City; abundant here within a restricted space; July 8 and August 16.

This species was first recorded from North America upon specimens collected by Drummond in the Rocky Mountains, Lat. 52° – 56° . It has since been found in Labrador (*Butler*); on Mt. Albert, Quebec (*Macoun*); near the Current River, north of Lake Superior (*Macoun*); at Kicking Horse Pass, Rocky Mountains (*Macoun*); and near Lake Mistissini, Northeast Territory (*J. M. Macoun*).*

WOODSIA ILVENSIS (L.) R. Br.

No. 1505. Vicinity of Nome City, July 21, August 1 and August 7. Fairly abundant on rocky ledges, but curiously restricted to a belt between 600 and 700 feet in altitude.

WOODSIA GLABELLA R. Br.

No. 1500. Thriving in dry soil in the shelter of minute terraces on the side of Anvil Mountain, four or five miles north of Nome City; widely distributed from base to summit, but nowhere abundant; July 8 and August 16.

The range of this species, originally described from specimens

* See Hooker, Fl. Bor. Am. 2: 260, and Macoun, Cat. Can. Pl., Part V., p. 280, 1890.

collected at Great Bear Lake, is now known to extend from central New York and Vermont to New Brunswick, westward in Canada to the Rocky Mountains, northward to Alaska and the Arctic coast from the Mackenzie River to Baffin Bay. It is apparently rather uncommon in Europe, but has a wide range, occurring in Siberia. The National Herbarium contains specimens also from Arakamtchetchene Island, Bering Straits.

EQUISETACEAE

EQUISETUM ARVENSE L.

No. 1520. Common in the vicinity of Nome City, June 18. This is forma *boreale* (Bong.).

EQUISETUM SYLVATICUM L.

No. 1524. In moist shady places among alders along the border of the tundra, at a point 16 miles west of Nome City; August 5.

EQUISETUM VARIEGATUM Schleich.

No. 1521. Swamps, Unalaska, June 18.

LYCOPODIACEAE

LYCOPODIUM SELAGO L.

No. 1513. Common on hills, Dutch Harbor, Unalaska, June 13. No. 1527; in shady places near the tundra at Nome City, July 22. No. 1526; on the tundra, Nome City, July 22.

These plants represent a considerable diversity with respect to habit and size, but are undoubtedly referable to the single species.

LYCOPODIUM ANNOTINUM L.

No. 1518. On the hills, Unalaska, June 19. No. 1528; in shady places, vicinity of Nome City, July 22. Both numbers represent the form usually known as var. *pungens* Spring.

LYCOPODIUM CLAVATUM L.

No. 1522. Dutch Harbor, Unalaska; June 17; common.

LYCOPODIUM SITCHENSE Rupr.

No. 1514. Common on the hills enclosing the harbor, Unalaska, June 13. No. 1516; Unalaska, alt. 1-2000 ft., June 17.

LYCOPODIUM ALPINUM L.

No. 1515. Unalaska, June 17. No. 1525; in moist shady places, vicinity of Nome City, July 22.

SELAGINELLACEAE

SELAGINELLA RUPESTRIS (L.) Spring.

No. 1529. Common in dry rocky places on mountain summits near Nome City, July 15.

Professor Underwood, who has kindly determined this as the forma *Sibirica* of Milde (Fil. Eu. et Atl. 262), suggests that it probably represents a distinct species.

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