

BOTANY OF THE 1860 CHADBOURNE EXPEDITION FROM WILLIAMS AND BOWDOIN COLLEGES TO LABRADOR AND GREENLAND.

PART 1: GREENLAND

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ABSTRACT

In 1860 Paul A. Chadbourne, Professor at both Williams College and Bowdoin College, arranged a scientific expedition to Labrador and Greenland. Traveling by schooner, the party of nineteen comprised nine students and two recent graduates from Williams, three from Bowdoin, two from Harvard, and three others, plus the Professor and the ship's owner and captain, Charles E. Ranlett of Thomaston, Maine. They departed Thomaston on 27 June, left seven members of the party on Caribou Island in the Straits of Belle Isle, and proceeded toward West Greenland, hoping to make landfall at Paamiut (Frederickshåb). Instead, they were forced northward by storm-driven pack ice ca. 250 miles before making landfall near Maniitsoq (Sukkertoppen), where they collected plant and animal specimens 19–30 July. They then sailed south ca. 100 miles to the capital, Nuuk (Godthåb), where they collected additional plant specimens and purchased or were gifted various other natural history and cultural materials. Leaving Nuuk on 14 August, they returned to Caribou Island, boarded the students who had made similar collections there, and returned to Maine on 11 September.

The Expedition's Greenland plant collections, comprising more than 220 specimens and representing 93 taxa, are in two main groups. The smaller collection, with 64 specimens, was purchased from Professor Chadbourne and donated anonymously to Bowdoin College in 1881 and is now at the Pringle Herbarium. The other, larger, set of more than 175 specimens collected by Williams '61 student William P. Alcott was deposited at Williams College and is currently housed at Muskingum University in New Concord, Ohio. A few additional Alcott specimens, apparently sent to others for identification, are in other U.S. herbaria. These sets of collections and images were studied, identified, and revised as necessary and are published here for the first time. The Chadbourne Expedition specimens constitute the earliest large, systematically collected set of herbarium records for central West Greenland and should be considered historically significant.

RESUME

I 1860 arrangerede Paul A. Chadbourne, professor ved både Williams College og Bowdoin College, en videnskabelig ekspedition til Labrador og Grønland. De 18 deltagere rejste med skonnert og bestod af 11 studerende fra Williams, tre fra Bowdoin, to fra Harvard og tre andre, plus professoren og skibets ejer og kaptajn, C. E. Ranlett fra Thomaston i Maine. De forlod Thomaston den 27. juni, efterlod syv medlemmer af gruppen på Caribou Island i Belle Isle-strædet og fortsatte mod Vestgrønland i håb om at komme i land ved Paamiut (Frederickshåb). I stedet blev de tvunget nordpå af stormdrevet pakis ca. 250 sømil, før de gik i land i nær Maniitsoq (Sukkertoppen), hvor de indsamlede plante- og dyreprøver 19.-30. juli. Derefter sejlede de ca. 100 sømil mod syd til hovedstaden Nuuk (Godthåb), hvor de indsamlede yderligere planteprover og købte eller fik foræret forskellige andre naturhistoriske og kulturelle materialer. De forlod Godthåb den 14. august og vendte ti bage til Labrador, gik om bord på de studerende, der havde foretaget lignende indsamlinger der, og vendte tilbage til Maine den 11. september.

Ekspeditionens grønlandske plantesamlinger, der omfatter mere end 220 eksemplarer og repræsenterer 93 taxa, er opdelt i to hovedgrupper. Den mindre samling med 64 eksemplarer blev købt af professor Chadbourne og doneret til Bowdoin College i 1881 og befinder sig nu i Pringle Herbarium. Det andet, større med mere end 175 eksemplarer indsamlet af Williams '61-studerende William P. Alcott, blev deponeret på Williams og befinder sig nu på Muskingum University i New Concord, Ohio. Nogle få yderligere Alcott-eksemplarer, som tilsyneladende er sendt til andre for at blive identificeret, befinder sig på andre amerikanske institutioner. Tilsammen udgør Chadbourne- og Alcott-prøverne det tidligste store, systematisk indsamlede sæt herbarieoptegnelser for det centrale Vestgrønland og bør betragtes som historisk vigtige.

ABSTRAKT

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kalaallisuut sullissinerup plantesamling ataatsinik 220-nik sinnerlugit ilaginnittut aamma taxamik 91-imik takutippaat hovedgruppe marlunniippoq. ataaseq katersugaatit minneq professorimit Chadbournemit pisiaraat kinaassutsiminik isertuisoq Bowdoin Collegemut 1881 tunissutigaaullu aamma Pringle Herbariumimi. arlaat annek ataatsini Williamip' William P. Alcott katersorpari immik-koortut 175-ini sinnerlugit Williams Collegemi inissinneqarput New Concordimilu Ohio Muskingum Universitymilu opstalde. marlus-suit allat saniisigut kinaassutsimut allagartamut nassiuppassippaa herbarium Amerikamit pisuni allaniipput. assit) katersugaatinit (immikkoortut uku misissoqqissaarneqarput kinaanera uppersarsivaat atorfissaqartitsinerit kingorna kukkunersuiuppullu aamma maani pernarluni saqqummertinneqarput. Chadbourne Expedition ataatsit pingaartoq herbarieoptegnelse immikkoortoq katersuivoq siusinnerpaaq ataqaatigiisillugu aaqqituutisinermit Kitaanut qitiusumut tassaapput oqaluttuarisaanermut pingaartutut isigineqartariaqarlutillu.

INTRODUCTION

Background of 19th Century Scientific Expeditions.—During the first half of the 19th century, several exploring expeditions were made in North America, e.g., the Lewis and Clark Expedition (1804–1806) through the northern Rocky Mountains to the Pacific Ocean, Major Long's Expedition (1820) to the southern Great Plains and the foothills of the Rocky Mountains, Sir John Franklin's first Expedition from Hudson Bay to the Polar Sea (1819–1822), and the U.S. Exploring Expedition (informally, the Wilkes Expedition), which in addition to many other locations explored the Pacific Northwest as far south as San Francisco Bay in 1841. All these expeditions made significant botanical collections and added greatly to the knowledge of North American botany, with accounts published, respectively by F.T. Pursh (1814; see also Reveal 2004), John Torrey (1828), Sir John Richardson (1823), and again Torrey (1874).

A focused set of expeditions was made at midcentury (1847–1855) when both the British and American governments and several private individuals dispatched search and rescue parties to the Arctic in the hope of finding Sir John Franklin's third expedition (1845) which was lost while on a search for a Northwest Passage. That expedition, consisting of two British ships, the H.M.S. *Erebus* and H.M.S. *Terror*, ended with no survivors and it was not until the 2010s that the two ships were located in shallow waters near King William Island and the north coast of Nunavut, Canada (CBC News 2014; Watson 2016).

In 1851–1852, the First Grinnell Expedition in search of Franklin, financed largely by New York businessman Henry Grinnell but captained and manned by US Navy personnel included, as Assistant Surgeon, Elisha Kent Kane of Philadelphia (Kane 1856). That search being unsuccessful, a second Grinnell Expedition was organized in 1853 under Kane's leadership. Following his belief that the Franklin party would be discovered farther north toward an "Open Polar Sea" than originally explored (Kane 1856; Sawin 2008) he followed the west coast of Greenland north to Rensselaer Harbor (79°38'N), where he anchored and was trapped in ice through the winters of 1853–1854 and 1854–55. A sledge party of his associates William Morton and the Inuit Hans Hendrik collected plants near the coast at ca. 81°N on 22 June 1854 and the next day reached ca. 81°22'N at Cape Constitution, the furthest north of any Arctic exploration to that date. Despite extremely harrowing conditions and a remarkable summer 1855 escape overland and by lifeboat south to Kalaallisuut (Upernavik) on Greenland's west coast, Kane nevertheless managed to save and carry with him numerous plant specimens collected on the journey, including those collected near Cape Constitution. These he gave to Elias Durand, pharmacist and botanist of Philadelphia, who published them (Durand 1856) along with those from the First Grinnell Expedition in an appendix to Kane's two-volume popular account of the voyage, *Arctic Explorations*

(Kane 1856). These constituted the first major set of specimens from West Greenland collected by an American. Some of Dr. Kane's specimens are at the Academy of Natural Sciences at Drexel University (PH).

Kane's fame as an explorer-scientist in America after his return was phenomenal and can hardly be overstated (Sawin 2008). He received many honorifics from, inter alia, the American Philosophical Society, The Royal Geographic Society, the British government, and the US Congress (Stein 2012) and was considered a heroic figure for his explorations. Furthermore, he had taken great pains during the Second Grinnell Expedition to record geographical, astrological, and climatological/meteorological data—in addition to many natural history observations and the plant collection—and had great influence on the popularity of scientific endeavor in the United States (Sawin 2008).

Meantime, a tradition of pedagogic expeditions at Williams College had already started with an important first geological field trip to the Bay of Fundy in Maine, New Brunswick, and Nova Scotia in 1835 (Falcon-Lang 2009) under the leadership of Albert Hopkins, Professor of Astronomy and Natural Philosophy. In 1857, Professor of Chemistry, Botany and Natural History Paul A. Chadbourne (1823–1883, Fig. 1) led a student expedition to Florida (Durfee 1860). For the 1860 Labrador and Greenland trip, Chadbourne early involved the students of the Williams Lyceum of Natural History and, because he also held a visiting position at Bowdoin College, he invited students from their lyceum, the Cleaveland Society of Natural History, to join the Expedition as well (Evans 1893).

The Chadbourne Expedition.—Chadbourne had also traveled solo to Iceland in 1859 (Botsford 1928, where discussed at length). The impetus for a pedagogical expedition to the north may have come largely from a predicted solar eclipse, which was to pass over northern Labrador and southern Greenland in mid-July, but it was undoubtedly also influenced by his Iceland trip the previous year. Thus, the stated goals (Evans 1893) of the Expedition were: “The instruction of the students comprising the company,” “The observation of a total eclipse of the sun,” and “The gathering of specimens for the cabinet of the Natural History Society of Williams College.”

There were 19 participants as well as Professor Chadbourne and the owner and captain of the schooner *Nautilus*, Charles E. Ranlett of Thomaston, Maine (Table 1; also see Appendix 1). Nine of the members were Williams students, most between their junior and senior years, and two were recent Williams alumni. There were also three students from Bowdoin College, two from Harvard University, and three participants who were without affiliation.

According to Simeon A. Evans, a member from Bowdoin who later wrote a long unpublished account of his participation (Evans 1893), the trip was sponsored mostly by “wealthy men, friends and alumni of Williams College and parents of members,” although he himself borrowed \$100 to finance his own part. Especially there was a large contribution by Charles Amory, Esq., a Boston businessman and father of the participant Copley Amory, as noted in a letter from Chadbourne to Ranlett, 28 May 1860, in the Ranlett Papers at Williams College.

The trip itself (Fig. 2) was eventful and surprisingly well documented (Alcott 1860a; Butler 1860a; Chadbourne 1860; C.E. Ranlett 1860–1861; Rink 1861; Wallich 1862; Packard 1891; Evans 1893; S.A. Ranlett 1901; S.A. Ranlett 1942) and was recently summarized by Margolis (2019). The *Nautilus* sailed from Thomaston on 27 June 1860, bound for the Straits of Belle Isle. It was caught in a severe storm in the Gulf of St. Lawrence on 5 July. As the storm cleared the following day, the party sighted a steamship, which they believed (Packard 1891) to be the U.S. Coastal Survey steamship *Bibb* carrying a scientific observation party to Cape Chidley, Labrador, to record the predicted solar eclipse (Bache 1861). The storm having passed, the *Nautilus* made landfall at Bonne Espérance near Caribou Island (Île de la Demoiselle) about 30 miles west of the Québec-Labrador boundary, i.e. within Québec territory although referred in all accounts of the Expedition as being in Labrador. Six students, including all three from Bowdoin College, three from Williams College, and Stephen R. Butler, a recent Williams graduate, were left at Caribou Island for a planned two months of scientific observations and collecting.



FIG. 1. Professor Paul A. Chadbourne, Leader of the Expedition, was Professor of Natural History, Botany, and Chemistry at Williams College and concurrently a visiting Professor at Bowdoin College. Courtesy of the George J. Mitchell Department of Special Collections & Archives, Bowdoin College Library, Brunswick, Maine.

The rest of the party left on 11 July, bound initially for Qaqortoq (Julianehåb, 60°43'20" N) on the west coast of Greenland, with the goal of observing the solar eclipse while en route. They first sighted land (Butler 1860a; Packard 1891) on 17 July, a little north of Paamiut (Frederickshåb). But, as Chadbourne (1860) wrote:

We had all looked forward with interest to the 18th of July, the day of the great eclipse, hoping that favoring wind might bring us into the path of total obscuration. ... We did indeed pass considerably beyond it, but the morning of the eclipse brought with it one of the severest storms we encountered during the whole voyage.

In attempting to make the land off Julianehåb we encountered the ice pack probably one hundred miles from the shore, dense as a wall looking, as the Captain remarked, as though it might stretch to the North Pole.

TABLE 1. The participants. There were 19 in the Expedition, plus Professor Chadbourne and Captain C. E. Ranlett and the crew of the *Nautilus*. This list is derived primarily from the booklet of autographs of the participants in the Charles E. Ranlett papers in the Special Collections room in the Sawyer Library at Williams College, aided by a similar list in Butler (1860). Neither list specified who stayed in Labrador and who went on to Greenland. However, Butler (1860), Packard (1891), and Evans (1893) all stated that there were seven in the Labrador contingent and the seven listed here were mentioned as being in Labrador in those accounts.

Butler's (1860) list gave the affiliations but not the class year for the members from Williams and Bowdoin, and lists the others as "outsiders." Evans (1893) stated there were 11 from Williams. There were three students from Bowdoin (all in the Labrador Contingent) and two from Harvard. Three were unaffiliated, although Evans (1893) stated there was one from Columbia College, who has not been identified (perhaps Gregory or Neal).

The Greenland Contingent

William Penn Alcott, Auburndale, Mass.	Williams '61
Copley Greene Amory, Boston, Mass.	Williams '61
Arthur Amory, Boston, Mass.	Harvard '62
James Harrison Fay, Brookline, Mass.	Harvard '59
Benjamin Gregory, Elizabethtown, N.J.	Not affiliated
Frederick W. Hicks, Bennington, Vt.	Williams '60
Charles A. Ingalls, North Adams, Mass.	Not affiliated
Leonidas W. Morss, Red Falls, N.Y.	Williams '60
James L. Neal, Washington, D.C.	Not affiliated
Matthias Nicoll, Shelter Island, N. Y.	Williams '61
George Gardner Smith, Pittsburgh, Pa.	Williams '61
Morris Ashurst Tyng, New York, N.Y.	Williams '61

The Labrador Contingent

Samuel Russell Butler, Northampton, Mass.	Williams '58
William Wilberforce Chapin, South Hadley, Mass.	Williams '63
Simeon Adams Evans, Fryeburg, Me.	Bowdoin '60
Julius Augustus Fay, Jr., Elizabeth, N.J.	Williams '60
Edward Payson Hopkins, Williamstown, Mass.	Williams '64 (d. in Civil War before graduating)
Walter Stone Poor, Andover, Me.	Bowdoin '60
Alpheus Spring Packard, Brunswick, Me.	Bowdoin '61

They fled northward ahead of the ice and missed seeing the eclipse in the storm, although weather was clear in Labrador and that contingent observed a partial eclipse on Caribou Island (Packard 1891), and the USCS party observed totality at Cape Chidley (Bache 1861).

The *Nautilus* was near Maniitsoq (Sukkertoppen, 66°33'46" N, Fig. 3) and observed its distinctive "sugar-loaf" mountain on 19 July. They made an anchorage the next day but did not find the actual Maniitsoq settlement despite three separate excursions from their safe harbor (Alcott 1860a; Chadbourne 1860; Ranlett 1860–1861), which may have been about 25 miles south (Chadbourne 1860). The party ventured ashore on several days and on 25 July they changed anchorage, but still did not find the Maniitsoq settlement.

They departed the Maniitsoq area on 1 August for Nuuk and stood off the harbor on 2 August (Fig. 3). They went ashore on 4 August but the harbor was more or less ice-locked and it was not until 7 August that the *Nautilus* was towed into Nuuk Harbor by H.M.S. *Bulldog*, a steamship engaged in a search for a potential undersea telegraph cable route (Wallich 1862). As it happened, the *Bulldog* was under the command of Sir Leopold McClintock, the Arctic navigator who in 1855 had at last discovered relics, although not the ships, of the Franklin Expedition, which Kane had sought in vain.

They remained at Nuuk for several days and then departed, being towed out of harbor on 14 August by the *Bulldog* and arriving at Caribou Island on 25 August. They took on board the party that had stayed there over the intervening two months, left on 27 August, and returned to Maine where they arrived on 11 September.

Two remarkable watercolors by a Kalaallit (Inuit) artist, Aron from Kangeq (1822–1869), document the Expedition at Nuuk. Both were included in a folio of his work donated to the National Museum of Denmark in Copenhagen by the Danish Inspector of South Greenland at the time, Hinrich Rink, and are now at the National Museum of Greenland in Nuuk. The first (Fig. 4) was published as a lithograph in the first issue (1861) of the first news periodical published in Greenland, *Atuagagdliutit*. It shows H.M.S. *Bulldog* and what is



FIG. 2. Map of the Chadbourne Expedition to Greenland. After leaving several students at Caribou Island, they headed for southern Greenland but were forced northward to the Maniitsoq area, where many plant collections were made. They then traveled south to Nuuk and collected additional specimens there. They returned *via* Caribou Island.

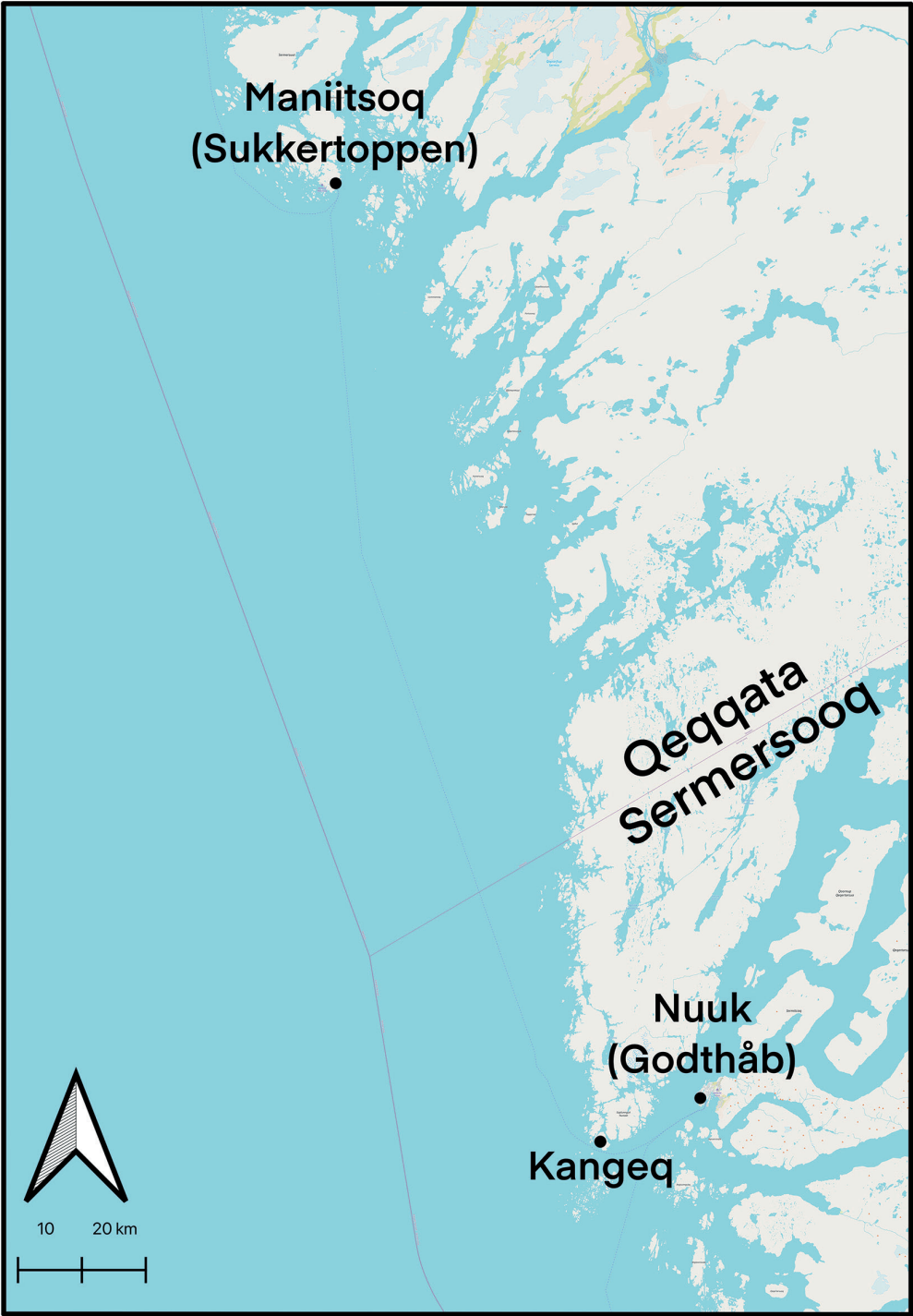


FIG. 3. The central West Coast of Greenland showing the locations of Maniitsoq (Sukkertoppen) and Nuuk (Godthåb). The indigenous artist Aron (see Figs. 4 and 5) was from the village of Kangeq, just west of Nuuk.



FIG. 4. “The large British steamer *Bulldog*, the American ship *Nautilus* and other ships at Nuuk 1860” (transl. R. Margolis). Watercolor by Aron of Kangeq, as originally published in the first Greenlandic news periodical, *Atuagagdliutit*, 1861. The *Bulldog* assisted the Expedition by towing the *Nautilus* into and out of Nuuk Harbor. Courtesy of Richard Margolis (eskimo-art.com).

probably the *Nautilus* in Nuuk Harbor. The second (Fig. 5) shows “Englanders and Americans in Godthåb”—no doubt including some of the Expedition members. Aron from Kangeq was a well-known indigenous artist (Knuth 1968; Kaalund 1979; Hansen 2019; Margolis 2019) who, being disabled by tuberculosis, made a living with sketches and paintings. He is today considered the “forefather of modern Greenlandic art” (Hansen 2019).

Collections of the Chadbourne Expedition.—Members of the Expedition gathered many natural history specimens. Not only plants but fossils, mammal skins, birdskins, bird’s eggs, insects, shells, and other marine specimens were collected in Labrador (Packard 1891; Evans 1893). In Greenland, the party collected birdskins, eggs, minerals, and plants (Chadbourne 1860) and also purchased or bartered for numerous items from the locals including a polar bear skin (Adams 1893), items of clothing (e.g., eiderdown muffs, slippers), and a small kayak (now at the Peabody Museum at Harvard University). Chadbourne (1860) wrote that Mrs. Hinrich Rink gifted birds from her husband’s collection to the Expedition. Copley Amory of the Greenland party also obtained several other artworks by Aron of Kangeq (Margolis 2019).

Numerous plant collections were made by both parties. Collections from the Labrador contingent are also housed at MUS and at VT and will be addressed in a separate planned paper. Expedition member S. R. Butler, who later became a missionary to Labrador, enumerated 124 species from Caribou Island in a report published a decade later (Butler 1870) and his list was later expanded by Macoun (1891) who referenced many Caribou Island specimens.

There were two sets of plants collected in Greenland. The first, smaller, set was purchased, unmounted, unidentified, and without substantive label data, from Professor Chadbourne and donated anonymously to



Fig. 5. "Englishmen and Americans at Godthåb." Watercolor by Aron of Kangeq from the summer of 1860, also published in *Atuagagdliutit*, 1861. This presumably shows the crew of the *Bulldog* and the passengers of the *Nautilus*. Courtesy of Richard Margolis (eskimo-art.com).

Bowdoin College in 1881 (D. S. Barrington, The Pringle Herbarium, pers. comm.). It was later transferred to Bates College when the Bowdoin herbarium was closed and acquired from Bates through purchase by the Pringle Herbarium in 1981. The specimens were later mounted but not identified.

The second, larger, set was collected by Williams student William P. Alcott. Alcott sent them on loan, apparently unmounted, to Asa Gray at Harvard University for determination. Two undated lists of Gray's determinations, written in Alcott's hand, survive: one for Maniitsoq and one for Nuuk (Alcott 1860b, 1860c; Fig. 6). Once named, the specimens were mounted and labeled, with Alcott's printed label and handwritten identifications (Fig. 7) and accessioned into the Williams Lyceum herbarium. Although originally labeled and listed as to locality i.e., Sukkertoppen or Godthåb, with one of the latter also labeled "Ny Herrnhut" (the Moravian Brethren mission house in what is now "Old Nuuk") no additional location data are found on Alcott's labels and no specimen has any habitat data. Some, especially from Maniitsoq, are labeled as to the actual date, but not all specimens include this information. The Alcott specimens are currently housed at Muskingum University, New Concord, OH (MUS), and total 203 specimens.

Finally, Alcott gifted about 50 Greenland specimens to Butler when the *Nautilus* returned to Labrador (Butler 1860a). The disposition of these specimens is not known at present, but Butler may have forwarded them along with his own Labrador specimens to D. C. Eaton, Professor of Botany at Yale University. Eaton was a friend of Chadbourne who had been on the 1857 Williams Expedition to Florida (Durfee 1860) and Butler (1870) asked him to name his "more obscure specimens." Altogether, twenty Alcott specimens are represented in other herbaria. At least two of these passed through Eaton's hands and are now at YU (and duplicated at KU). Others may yet be discovered.

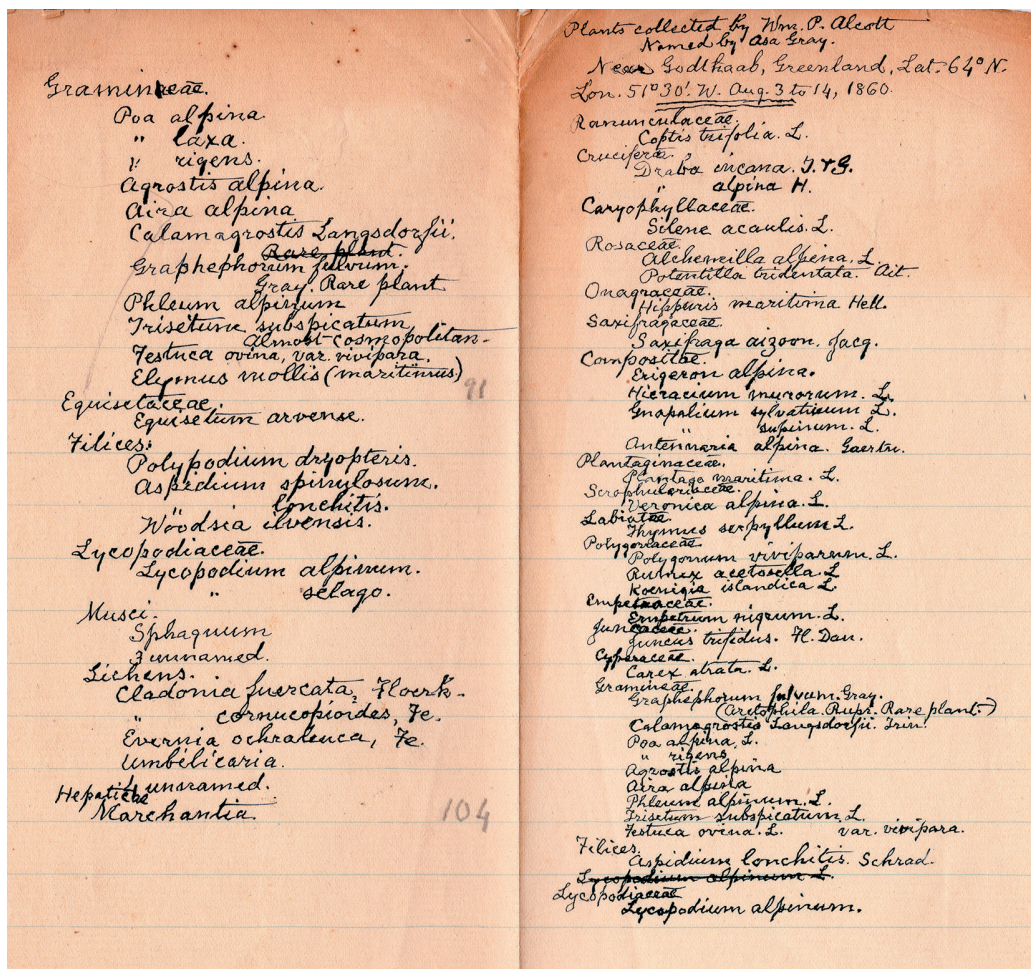


Fig. 6. Alcott's list: "Plants collected by Wm. P. Alcott, named by Asa Gray, near Godthaab, Greenland, Lat. 64° N Long. 51° 30' W, Aug. 3 to 14, 1860." Image courtesy of the Boxford Historical Document Center, Boxford, MA.

METHODS

A set of Alcott's Greenland specimens, comprising 88 sheets and including all taxa represented, was obtained on loan from MUS. These and Chadbourne's Greenland specimens from the Expedition residing at the Pringle Herbarium (VT) were studied using standard herbarium equipment (e.g. measurement tools and dissecting scopes) and identified with respect to historical and current botanical literature, specifically regarding the flora of West Greenland (Kane 1856; Lange 1890; Rosendahl 1918; Porsild & Porsild 1920; Jorgensen & Sørensen 1958; Böcher 1959; Böcher et al. 1966; FNA1993 et seq.; Fredskild 1996; Elven 2002 et seq.; and Bay 2020). Reference was also made to current field guides to Greenland plants, e.g. Rune (2011) and Holt and Johanssen (2020). On-line herbarium databases were queried for additional specimens collected from Greenland in 1860.



FIG.7. Alcott's specimen of *Alchemilla alpina* with his printed label and handwritten data. Courtesy of Muskingum University, New Concord, OH.

RESULTS

Fortunately, the timing of the shore excursions in late July and early August allowed most of the collections to be readily identified from mature foliage, flowers and well-formed fruits. A total of 90 species are represented in the collections as reviewed (Table 2.1), with 3 additional species (*Antennaria alpina* (L.) Gaertn., *Carex atrata* L., and *Woodsia ilvensis* (L.) R. Br.) housed elsewhere (Table 2.2), with 70 species from Maniitsoq and 28 species from Nuuk. There is little overlap between the two locales: only six taxa (*Oreojuncus trifidus* (L.) Záv. Drábk, & Kirschner, *Calamagrostis langsдорфii* (Link) Trin., *Erigeron alpiniformis* Cronquist, *Silene acaulis* (L.) Jacq., *Thymus praecox* Opiz, and *Veronica fruticans* Jacq.) were collected at both locations. Many but not all of the Chadbourne specimens duplicate the Alcott specimens and it seems that they were independently collected. As a general rule, the Chadbourne specimens are smaller, physically, than Alcott's.

The collections account for an increase in the taxa known in 1860 from these areas combined (Lange 1890) from 61 to 93, i.e., 32 taxa. It also adds 7 species to the 176 specifically recently mapped by Fredskild (1996) for these areas and one of these (*Draba alpina*) appears to be a range extension southward from Disko Island.

Six Chadbourne specimens (Table 2.3) of taxa known in Greenland but remote from Maniitsoq and Nuuk (Fredskild 1996) may have been obtained at localities outside of Greenland and inserted into the collection in error before its arrival at the Pringle Herbarium. For example, Chadbourne is known to have traveled to Newfoundland (Botsford 1928), where *Amerochis rotundifolia* (Banks ex Pursh) Hultén, *Galium boreale* L., *Galium triflorum* Michx., *Geum rivale* L., and *Parnassia kotzebuei* Cham. ex Spreng. are more common than in Greenland. He had also traveled in 1859 to Iceland, where *Dryas octopetala* L.—and several of the others—occur. A seventh specimen, comprising several very small but flowering *Galeopsis* sp., a genus not known in Greenland, may also have been collected elsewhere. There does not appear to have been any mixup with the specimens collected by the Labrador party, as not all are among the species collected by them, and some are not known from Labrador. These few taxa should not be credited to Maniitsoq or Nuuk based on the Chadbourne specimens. With these probable errors discounted the Chadbourne specimens do not contain any particularly unusual or rare species.

Context and significance of the Chadbourne Expedition botanical collections.—Prior collections from Maniitsoq and Nuuk were enumerated by Lange (1890). They included those of the Danish botanists Jens Vahl, collected in 1829–1836 and Morten Wormskjold, collected in 1812–1813, as well as those of German mineralogist Charles Lewis Giesecke collected in 1806–1813, and those of Dr. Kane, collected in 1851–1853 (Pringle 1995). These total some 85 collections representing 61 taxa. The Chadbourne Expedition specimens, however, were not mentioned by Lange (1890) or by subsequent authors on the flora of Greenland, no doubt because the Expedition—although publicized at the time (Rink 1861)—was little remembered and the specimens were either housed at Williams College or were in Professor Chadbourne's possession. They were, therefore, remote from the Denmark Natural History Museum in Copenhagen (C; see de Vere 2024), where botanical study of Greenland has been located historically (Lange 1890) through to current times (Fredskild 1996).

The 19th century collections cited by Lange (1890) apparently represent gatherings of relatively short and non-focussed visits, whereas the Chadbourne Expedition gathered systematically across the taxonomic spectrum over the course of several days at each location, thus collecting in total about half of the currently known taxa in these areas. The collections reported here represent the most complete set of West Greenland plant specimens collected in these two locales during the 19th century and are significant both historically and scientifically.

TABLE 2.1. Taxonomic list of specimens seen from the Chadbourne Greenland Expedition. Dates are Maniitsoq: 19 Jul–30 Jul 1860 and Nuuk: 31 Jul–14 Aug 1860. Nomenclature is based on Fredskild (1996) and the Flora of North America (FNA1993 et seq.) with more recent taxonomic literature as referenced in footnotes. Taxa marked with an asterisk (*) were not mapped for either location by Fredskild (1996).

LYCOPHYTES	
1. <i>Diphasiastrum alpinum</i> (L.) Holub	Nuuk: Alcott, (MUS)
2. <i>Huperzia selago</i> (L.) Bernh.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
FERNS	
3. <i>Equisetum arvense</i> L.	Maniitsoq: Alcott (MUS)
4. <i>Dryopteris expansa</i> (C. Presl) Fraser-Jenk. & Jermy	Maniitsoq: Alcott (MUS)
5. <i>Gymnocarpium dryopteris</i> (L.) Newm.	Maniitsoq: Alcott (MUS)
6. <i>Polystichum lonchitis</i> (L.) Roth	Nuuk: Alcott (MUS)
CONIFERS	
7. <i>Juniperus communis</i> L. var. <i>saxatilis</i> Pall. ¹	Maniitsoq: Chadbourne (VT), Alcott (MUS)
ANGIOSPERMS	
MONOCOTS	
CYPERACEAE	
8. <i>Carex bigelowii</i> Torr. ex Schwein.	Maniitsoq: Chadbourne (VT)
9. <i>Carex saxatilis</i> L.	Maniitsoq: Chadbourne (VT), Nuuk: Alcott (MUS)
10. <i>Eriophorum angustifolium</i> Honkn.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
11. <i>Eriophorum scheuchzeri</i> Hoppe	Maniitsoq: Chadbourne (VT), Alcott (MUS)
12. <i>Trichophorum cespitosum</i> (L.) Hartm.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
JUNCACEAE	
13. <i>Oreojuncus trifidus</i> (L.) Záv. Drábek. & Kirschner ²	Maniitsoq: Chadbourne (VT), Nuuk: Alcott (MUS)
14. <i>Luzula parviflora</i> (Ehrh.) Desv.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
15. <i>Luzula spicata</i> DC.	Maniitsoq: Alcott (MUS)
POACEAE	
16. <i>Agrostis mertensii</i> Trin.	Nuuk, Alcott (MUS)
17. <i>Calamagrostis langsдорфii</i> (Link) Inman	Maniitsoq: Chadbourne (VT), Alcott (MUS)
18. <i>Deschampsia cespitosa</i> (L.) P. Beauv.	Nuuk: Alcott (MUS)
19. <i>Dupontia fulva</i> (Trin.) Röser & Tkach ³	Nuuk: Alcott (MUS)
20. <i>Festuca fredericksenia</i> E.B. Alexeev	Nuuk: Alcott (MUS)
21. <i>Koeleria spicata</i> (L.) Barberá, Quintanar, Soreng, & P.M. Peterson ⁴	Maniitsoq: Chadbourne (VT), Alcott (MUS), Nuuk: Alcott (MUS)
22. <i>Phleum alpinum</i> L. ⁵	Nuuk: Alcott (MUS)
23. <i>Poa alpina</i> L.	Nuuk: Alcott (MUS)
24. <i>Poa flexuosa</i> Sm. ⁶	Maniitsoq: Alcott (MUS)
TOFIELDIACEAE	
25. <i>Tofieldia pusilla</i> (Michx.) Pers.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
DICOTS	
APIACEAE	
26. <i>Angelica archangelica</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
ASTERACEAE	
27. <i>Antennaria canescens</i> (Lange) Malte	Nuuk: Alcott (MUS)
28. <i>Erigeron alpiniformis</i> Cronquist	Maniitsoq: Chadbourne (VT), Nuuk: Alcott (MUS)
29. <i>Erigeron uniflorus</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
30. <i>Omalotheca norvegica</i> (Gunnerus) Sch.-Bip. & F.W. Schultz	Nuuk: Alcott (MUS)
31. <i>Omalotheca supina</i> (L.) DC.	Nuuk: Alcott (MUS)
32. <i>Hieracium hyparcticum</i> (Almq.) Elfstr.	Maniitsoq: Alcott (MUS), Nuuk: Alcott (MUS)
33. <i>Taraxacum croceum</i> Dahlst.	Maniitsoq: Chadbourne (VT), Alcott (MUS)

¹ Adams 2008

² Závieska Drábková & Kirschner 2013

³ Tkach et al. 2020

⁴ Barberá et al. 2019

⁵ Kula et al. 2006

⁶ Soreng et al. 2017

TABLE 2.1. continued

DICOTS continued	
BRASSICACEAE	
34. <i>Arabis alpina</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
35. <i>Cardamine pratensis</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
36. <i>Cochlearia groenlandica</i> L.	Maniitsoq: Alcott (MUS)
37. <i>Draba alpina</i> L.*	Nuuk: Alcott (MUS)
CAMPANULACEAE	
38. <i>Campanula gieseckeiana</i> Vest. ex Roem. & Schult.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
CARYOPHYLLACEAE	
39. <i>Cerastium arcticum</i> Lange	Maniitsoq: Chadbourne (VT), Alcott (MUS)
40. <i>Dichodon cerastoides</i> (L.) Rchb. ⁷	Maniitsoq: Alcott (MUS)
41. <i>Geocarpon groenlandicum</i> (Retz.) E.E. Schill. ⁸	Maniitsoq: Chadbourne (VT), Alcott (MUS)
42. <i>Lychnis alpina</i> L. subsp. <i>americana</i> (Fernald) J. Feilberg	Maniitsoq: Alcott (MUS)
43. <i>Silene acaulis</i> (L.) Jacq.	Maniitsoq: Alcott (MUS)
44. <i>Stellaria humifusa</i> Rottb.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
45. <i>Stellaria longipes</i> Goldie*	Maniitsoq: Chadbourne (VT), Alcott (MUS)
46. <i>Viscaria alpina</i> (L.) G. Don subsp. <i>americana</i> (Fernald) Böcher	Maniitsoq: Alcott (MUS)
CORNACEAE	
47. <i>Cornus suecica</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
CRASSULACEAE	
48. <i>Rhodiola rosea</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
59. <i>Sedum villosum</i> L.*	Maniitsoq: Chadbourne (VT)
DIAPENSIACEAE	
50. <i>Diapensia lapponica</i> L.	Maniitsoq: Alcott (MUS)
ERICACEAE	
51. <i>Harrimanella hypnoides</i> (L.) Coville	Maniitsoq: Chadbourne (VT), Alcott (MUS)
52. <i>Kalmia procumbens</i> (L.) Gift, Kron & P.F. Stevens	Maniitsoq: Alcott (MUS)
53. <i>Phyllodoce caerulea</i> (L.) Bab.	Maniitsoq: Alcott (MUS)
54. <i>Rhododendron groenlandicum</i> (Oed.) Kron & Judd	Maniitsoq: Alcott (MUS)
55. <i>Vaccinium uliginosum</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
LAMIACEAE	
56. <i>Thymus praecox</i> Opiz subsp. <i>arcticus</i> (E. Durand) Jalas	Maniitsoq: Chadbourne (VT), Alcott (MUS)
LENTIBULARIACEAE	
57. <i>Pinguicula vulgaris</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
MENYANTHACEAE	
58. <i>Menyanthes trifoliata</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
ONAGRACEAE	
59. <i>Chamaenerion latifolium</i> (L.) Sweet	Maniitsoq: Chadbourne (VT), Alcott (MUS)
OROBANCHACEAE	
60. <i>Bartsia alpina</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
61. <i>Pedicularis flammea</i> L.	Maniitsoq: Chadbourne (VT)
PLANTAGINACEAE	
62. <i>Hippuris lanceolata</i> Retz. ⁹	Maniitsoq: Alcott (MUS)
63. <i>Hippuris tetraphylla</i> L. f.	Nuuk: Alcott (MUS)
64. <i>Plantago maritima</i> L. subsp. <i>borealis</i> (Lange) A. Blytt	Nuuk: Alcott (MUS)
65. <i>Veronica alpina</i> L.	Maniitsoq: Chadbourne (VT)
66. <i>Veronica fruticans</i> Jacq.	Nuuk: Alcott (MUS)
PLUMBAGINACEAE	
67. <i>Armeria scabra</i> Pall.*	Maniitsoq: Chadbourne (VT)
POLYGONACEAE	
68. <i>Bistorta vivipara</i> (L.) Delarbre	Maniitsoq: Chadbourne (VT), Alcott (MUS)

⁷ Arabi et al. 2018

⁹ Schilling et al. (2022)

TABLE 2.1. continued

DICOTS continued	
POLYGONACEAE continued	
69. <i>Koenigia islandica</i> L.	Nuuk: Alcott (MUS)
70. <i>Oxyria digyna</i> (L.) Hill	Maniitsoq: Alcott (MUS)
71. <i>Rumex acetosella</i> L.	Nuuk: Alcott (MUS)
RANUNCULACEAE	
72. <i>Coptis trifolia</i> Salisb.	Maniitsoq: Alcott (MUS)
73. <i>Ranunculus hyperboreus</i> Rottb.	Maniitsoq: Alcott (MUS)
ROSACEAE	
74. <i>Alchemilla alpina</i> L.	Nuuk: Alcott (MUS)
75. <i>Alchemilla filicaulis</i> Buser	Maniitsoq: Alcott (MUS)
76. <i>Dryas integrifolia</i> Vahl	Maniitsoq: Chadbourne (VT), Alcott (MUS)
77. <i>Potentilla crantzii</i> (Crantz) Beck ex Fritsch	Maniitsoq: Alcott (MUS)
78. <i>Sibbaldia tridentata</i> (Aiton) Paule & Soják ¹⁰	Maniitsoq: Alcott (MUS), Nuuk: Alcott (MUS)
89. <i>Sibbaldia procumbens</i> L.	Maniitsoq: Chadbourne (VT)
SALICACEAE	
80. <i>Salix arctophila</i> Cockerell	Maniitsoq: Alcott (MUS)
81. <i>Salix glauca</i> L.	Maniitsoq: Alcott (MUS)
82. <i>Salix herbacea</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
SAXIFRAGACEAE	
83. <i>Saxifraga aizoides</i> L.*	Maniitsoq: Chadbourne (VT)
84. <i>Saxifraga caespitosa</i> L.	Maniitsoq: Chadbourne (VT), Alcott (MUS)
85. <i>Saxifraga foliolosa</i> R. Br.	Maniitsoq: Alcott (MUS)
86. <i>Saxifraga nivalis</i> L.	Nuuk: Alcott (MUS)
87. <i>Saxifraga paniculata</i> Mill.	Nuuk: Alcott (MUS)
88. <i>Saxifraga rivularis</i> L.	Maniitsoq: Alcott (MUS)
89. <i>Saxifraga tricuspidata</i> L.*	Maniitsoq: Chadbourne (VT)
VIOLACEAE	
90. <i>Viola labradorica</i> Schrank.	Maniitsoq: Chadbourne (VT)

¹⁰ Eriksson, T. et al. (2015)

TABLE 2.2. Specimens located in other institutions as posted by them on their websites or on various consortia; these have been reviewed only as far as possible from the images posted on-line. Specimens at YU and CONN are labeled as coming from the herbarium of D.C. Eaton, Professor of Botany at Yale University; these may have been among those gifted by Alcott to the Labrador participant S.R. Butler (Butler 1860). Those at BDI, MI, NY, and PH came from the herbarium of G.W. Clinton of Buffalo, New York, and are labeled as being collected “by a party of Williams students.” The specimen at A (The Arnold Arboretum at Harvard University) has an Alcott label but no intermediary owner is noted: it was perhaps retained by Asa Gray when he identified Alcott’s specimens. Specimens at KU are listed but have no images posted and are not localized as to Maniitsoq or Nuuk.

Taxon	Location collected	Current location and barcode
<i>Agrostis mertensii</i> Trin.	Nuuk	NY-1792209
<i>Antennaria alpina</i> (L.) Gaertn.		KU-121027
<i>Calamagrostis langsdorfii</i> (Link) Trin.	Maniitsoq	PH-0709267
<i>Carex atrata</i> L.	Nuuk	NY-2237846
<i>Cornus suecica</i> L.		KU-250735
<i>Cerastium alpinum</i> L.	Maniitsoq	YU-093001; KU-214176
<i>Cochlearia groenlandica</i> L.		KU-218742
<i>Dichodon cerastoides</i> (L.) Rchb.		KU-214343
<i>Draba alpina</i> L.	Nuuk	CONN-00088412
<i>Erigeron alpiniformis</i> Cronquist	Nuuk	NY-2076925
<i>Omalotheca supina</i> (L.) DC.	Maniitsoq	NY-02240495
	Nuuk	YU-003514
<i>Harrimanella hypnoides</i> (L.) Coville	Maniitsoq	A/HUH-01593260
<i>Oreojuncus trifidus</i> (L.) Záv. Drábk. & Kirschner	Nuuk	BDI (Putnam Museum)
<i>Ranunculus hyperboreus</i> Rottb.	Maniitsoq	MI-1498979
<i>Rhodiola rosea</i> L.	Maniitsoq	YU-247761
<i>Silene acaulis</i> (L.) Jacq.		KU-292108
<i>Stellaria humifusa</i> Rottb.		KU-296156
<i>Stellaria longipes</i> Goldie		KU-296249
<i>Woodsia ilvensis</i> (L.) R. Br.	Maniitsoq	NY-3800738

TABLE 2.3. Chadbourne specimens at VT that were received and labeled as from Maniitsoq, but were likely collected elsewhere, e.g. Newfoundland or Iceland. Except for *Galeopsis* these are present in Greenland but not near Maniitsoq or Nuuk (Fredskild 1996). *Galeopsis* is represented on the relevant sheet by a group of very small, yet flowering individuals, i.e., as if flowering seedlings. Given the status of Maniitsoq as a trading depot (Kane 1856) they may have represented an ephemeral introduction from elsewhere.

- Amerorchis rotundifolia* (Banks ex Pursh) Hultén
- Dryas octopetala* L.
- Galeopsis* sp.
- Galium boreale* L.
- Galium triflorum* Michx.
- Geum rivale* L.
- Parnassia kotzebuei* Cham. ex Spreng.

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APPENDIX 1

Later lives of the participants in the Chadbourne Expedition to Labrador and Greenland.

Nine members of the Expedition served in the Union Army in the Civil War—Alcott, C. Amory, Evans, J.A. Fay, Gregory, Hopkins, Packard, Poor, and Smith—and one of them (Hopkins) was killed in action. Three—Butler, Chapin, Hicks—became missionaries and two of these died of disease in foreign lands within the next decade. Two—Alcott and Smith—became pastors. Packard became an academic naturalist like his mentor Chadbourne, and Evans became an M.D. The others, as far as can be determined, became businessmen (A. Amory and C. Amory, Gregory, Ingalls, Morss, Nicoll) or lawyers (J.A. Fay, J.H. Fay, Poor, Tyng). No information has been found for Neal. This Appendix has been compiled, primarily, from on-line resources (see references) and does not purport to be complete.

Professor Paul Ansel Chadbourne, Williams '48, Leader of the Expedition

(1823–1883). Left his position of Professor at Williams in 1866 to become President of the Amherst Agricultural College (later the University of Massachusetts Amherst), then President of the University of Wisconsin 1867–1868. Returned to Williams College as President 1872–1881, then had a second term as President of the Amherst Agricultural School.

Refs: Anonymous 1 (1883), Botsford (1928), O'Grady (2024).

Charles Everett Ranlett, Owner and Captain of the Nautilus

(1816–1917). A native of Maine, for many years followed the sea and commanded numerous vessels. Built and commanded the 140-ton topsail schooner Nautilus on the Chadbourne Expedition, later built the 640-ton bark Sunbeam and sailed on a round-the-world trip. He was involved in many types of shipping (e.g., food to Ireland during the great famine, the guano trade, etc.). Removed to Massachusetts and was there a member of the Massachusetts House of Representatives.

Ref: S. Ranlett (1942).

THE GREENLAND CONTINGENT

1. William Penn Alcott, Williams '61

(1838–1919). Alcott was a third cousin of novelist Louisa May Alcott. Taught Natural History at Williams 1862–1865; then attended Andover Theological Seminary (Congregationalist) and was for many years pastor at various locations (Vermont, New York, Massachusetts); long-time minister in Boxford, Mass. Traveled widely and collected plants widely. His U.S. herbarium was deposited in the Peabody Academy of Science in Salem, Mass. and later transferred to the Harvard University Herbaria with specimens in A, GH, and NEBC. His Greenland herbarium was donated to Williams College; it is now housed at Muskingum University in New Concord, Ohio. He long resided and died at Boxford, MA.

Refs: Anonymous 6 (1919); Anonymous 7 (1920), Knowlton (1921), Clark (2014).

2. Arthur Amory, Harvard '62

(1841–1911). Second cousin to Copley Amory. President of Amory Browne & Company, a large textile producer. Resided in Boston.

Ref: Anonymous 9 (2023).

3. Copley Amory, Williams '61

(1841–1879). Entered the US Army, Fourth United States Cavalry, at the rank of 2nd lieutenant. Aug 1861; saw action in the skirmish at Black Water Creek, Milford, Missouri. Resigned his commission due to ill health, Dec 1863. Became a stock-broker in Boston, but ill-health restricted his energy so he retired and traveled some, in an effort to regain his health. Died Boston.

Refs: Segelquist (2011), Margolis (2019).

4. James Harrison Fay, Harvard '59

(1838–1919). From Brookline, Mass. Later a lawyer in New York but upon retirement returned to Brookline.

Ref: Stearns (1920).

5. Benjamin Gregory, not affiliated

(1839–1885). From Elizabeth City, N.J. where his father was Mayor. Served in several NY regiments in the Civil War: private, 7th Regiment NY State Militia, Company B; 1st lieutenant, 2nd NY Cavalry, Companies A & H; Major, US Volunteers, Paymaster's Department. Business-man in the steel industry in New York City, also an organist in the Grace Church Methodist in Manhattan.

Refs: Green-Wood (2024), NYCAGO (2024).

6. Frederick W. Hicks, Williams '60.

(1834–1871). Became a privately funded missionary to Central America and d. in Panama in 1871, a victim of disease.

Refs: Bennington Museum (2024), Spared & Shared 4 (2024).

7. Charles A. Ingalls, not affiliated

From North Adams, Massachusetts, which neighbors Williamstown. Later a banker there. No additional information has been found.

Refs: Spear (1885). Anonymous 4 (1909).

8. Leonidas W. Morss, Williams '60

(1838–1912). First Lt., 18th Regiment, NY Volunteers. Later a postmaster, businessman (a tanner), and farmer in Red Falls and New Salem, NY.

Ref: Greene-Dreher Historical Society (2024).

9. James. L. Neal

Stated (Butler 1860a) to be an “outsider,” i.e. not affiliated with Williams or Bowdoin, and to be from Washington, D.C.; a later (undated) list in the Ranlett papers at Williams College stated he was from Georgia. No additional information has been found.

10. Matthias Nicoll, Williams '61

(1841–1921). An insurance executive in New York City. Elected member of the American Geographical and Statistical Society 1868.

Refs.: Straznicky (1868), Anonymous 8 (1921).

11. George Gardner Smith, Williams '61

(1838–1919). The General Catalogue of the Officers and Graduates of Williams College notes that he was commissioned Second Lieutenant and later Captain of the 29th U.S. Colored Troops. He also attended West[ern] Theological Seminary in Allegheny, now the Pittsburgh Theological Seminary, a Presbyterian institution and was said to be “pastor of a Presbyterian Society at Williamsport, Indiana 1868.” He later returned to Pittsburgh. Perhaps his most interesting association is as author/editor of a book (Smith 1903) about Spencer Kellogg Brown, a young man from Kansas executed as a spy during the Civil War.

Refs: Smith (1903); Anonymous 3 (1905).

12. Morris Ashhurst Tyng, Williams '61

(1841–1915). Graduated Columbia College Law School 1863 and became a lawyer in New York City. His father, Rev. Stephen H. Tyng being a prominent Protestant Episcopal minister, he later studied theology and taught at the Protestant Episcopal Theology Seminary (now Kenyon College) in Gambier, OH. Later returned to the law, res. and d. Summit, NJ. The Tyng family has long retained ties with Williams College and has an endowed scholarship in his father's name.

Refs: Atkins (1891), Russiello (2024).

THE LABRADOR CONTINGENT

1. Samuel Russell Butler, Williams '58

(1837–1893). Kept a very detailed diary of the Expedition (Butler 1860a). Returned to Labrador as a missionary. Published (Butler 1870) botanical results of the Labrador portion of the Chadbourne Expedition (with additions made during his later residency). Author of The Labrador Mission, giving the history 1856–1878 of the nondenominational Canada Foreign Missionary Society's work in Labrador. His Labrador collections were donated to Williams College and are now housed at Muskingum University in New Concord, OH.

Refs: Butler (1860, 1878).

2. William Wilberforce Chapin, Williams '63

(1836–1865). Attended Andover Seminary, ordained 1864. A missionary to Pimpalwandi, near Amhmednagar, India, with the American Board of Commissioners for Foreign Missions (ABCFM). Died there of diphtheria only a few months after his arrival. His widow, Isabel Hayes Chapin, later Barrows, became a famous social activist in later years.

Ref: Lemons et al. (2007).

3. Simeon Adams Evans, Bowdoin '60

(1837–1895). Attended the Portland School for Medical Instruction. Entered the US Army, 13th Maine Volunteers in 1861 as Medical Steward, promoted to Assistant Surgeon with the 14th Maine 1863. Saw service in many areas of the South, discharged 1865. Received M.D. degree 1865 and settled 1870 in Conway, NH where he resided the rest of his life. He wrote an unpublished book of “Reminiscences” which, drawing on his daily diary, gives a very detailed account of the activities of and natural history observed by the Labrador participants.

Ref: Evans (1893a, 1893b).

4. Julius Augustus Fay, Williams '60

(1840–1891). Served in the Union Army 1862–1865, rising to the rank of Lieutenant Colonel. Later a lawyer and Union County Prosecutor in his hometown of Elizabeth, N.J.

Refs: UCPO (2024), Zouave Archives (2024).

5. Edward Payson Hopkins, Williams undergraduate, Class of '64

(1843–1864). His father Albert Hopkins was Professor of Mathematics and Philosophy at Williams College (and his uncle, Mark Hopkins, was president of the college). Left college before graduation and enlisted Jan 1864 as first lieutenant in the 1st Massachusetts Cavalry, Army of the Potomac. Killed in battle 11 May 1864 at Ashland, VA.

Refs: Durfee (1871), Anonymous 2 (1888).

6. Alpheus Spring Packard, Jr., Bowdoin '61

(1835–1905). Served in the Civil War as Assistant Surgeon with the 1st Regiment, Maine Veteran Volunteers 1864–1865. The only member of the Expedition to become a professional naturalist/biologist. Was an entomologist (primarily a lepidopterist) and Professor of Zoology and Geology at Brown University from 1878 until his death. A longtime editor of *The American Naturalist*. Wrote introductory textbooks on zoology and a monograph of bombycine moths. He memorialized his time in Labrador, and a later (1864) trip in his 1891 book, “The Labrador Coast,” which he dedicated to Chadbourne. Elected to the American Philosophical Society in 1878.

Refs: Kingsley (1888), Packard (1891).

7. Walter Stone Poor, Bowdoin '60

(1836–1906). Enlisted 1861 in 10th N.Y. Regiment. He rose through the ranks and in 1864, was made Col. in the U.S. Heavy Artillery and later commanded Fort Macon, N.C. Mustered out Dec. 1865. A letter to a companion, George Fox, shortly after enlistment is widely quoted: “War is bad, heaven knows, but slavery is far worse. If the doom of slavery is not sealed by the war, I shall curse the day I entered the Army, or lifted a finger in the preservation of the Union.” Later, a lawyer in New York City, 1868 onward.

Refs: Anonymous 5 (1911), Barrister (2016), Aydelott (2023).

REFERENCES FOR APPENDIX 1

- ANONYMOUS 1. 1883, 24 Feb. Death of Paul A. Chadbourne. *The Springfield [Massachusetts] Republican* Vol. 36, No. 54. Available at [wisconsinhistory.org](https://www.wisconsinhistory.org). Accessed March 2024.
- ANONYMOUS 2. 1888, 30 Jun. A noble young officer [Edward Payson Hopkins]. *The Troy Daily News, Supplement*. Troy, New York. Available at fultonhistory.com/Fulton. Accessed Sep 2024.
- ANONYMOUS 3. 1905. General Catalogue of the officers and graduates of Williams College 1795–1905. Williams College, Williamstown, MA. Available at the Library of Congress, loc.gov. Accessed Jul 2023.
- ANONYMOUS 4. 1909. North Adams, Massachusetts Old Home Week Souvenir [booklet]. Available at Internet Archive, archive.org. Accessed Nov 2024.
- ANONYMOUS 5. 1911. Obituary record of the graduates of Bowdoin College and the Medical School of Maine for the decade ending 1 June 1909. Bowdoin College Library, Brunswick, ME. Available at HathiTrust Digital Library, catalog.hathitrust.org. Accessed Mar 2024.
- ANONYMOUS 6. 1919, 15 October. Pastor, Explorer, Writer, and Botanist [Obituary of William P. Alcott]. *The Boston Globe*. Available at newspapers.com. Accessed Apr 2024.
- ANONYMOUS 7. 1920, 30 October. Obituary of William P. Alcott. *The Congregationalist and Advance* 104(44):613. The Pilgrim Press, Boston, MA.
- ANONYMOUS 8. 1921, 7 November. Old insurance man, descendant of the first Colonial Governor. [Obituary of Mathias Nicoll]. *New York Tribune*. Available at newspapers.com. Accessed Aug 2024.
- ANONYMOUS 9. 2023. Collector's Shelf: Arthur Amory. Atlantic Wildfowl Heritage Museum. Virginia Beach, VA. Available at awhm.org. Accessed Sep 2024.
- ATKINS, F.H. 1891. *Joseph Atkins, the Story of a Family*. Dudley Atkins Book & Job Publisher, LasVegas, NM. Available at google.com/books. Accessed Sep 2024.
- AYDELOTT, K.C. 2023. My Maine Heritage: Person sheet for Walter Stone Poor. Available at freepages.rootsweb.com. Accessed 24 Sep 2024.
- BARRISTER, I. Contributor. 2016. Maine in the American Civil War. Available at wikipedia.org. Accessed Sep 2024.
- BENNINGTON MUSEUM. 2024. Person record for Frederick W. Hicks. Available at bennington.pastperfectonline.com. Accessed 23 Sep 2024.
- BOTSFORD, E.H. 1928. Fifty years at Williams under the administrations of Presidents Chadbourne, Carter, Hewitt, Hopkins, and Garfield. Press of the Eagle Printing and Binding Company, Pittsfield, MA. Available at Internet Archive, archive.org. Accessed Aug 2024.
- BROWN S.K. & SMITH, G.G. 1903. *Spencer Kellogg Brown, his life in Kansas and his death as a spy, 1842–1863, as disclosed in his diary*. D. Appleton and Co., New York. Available at Internet Archive, archive.org. Accessed Oct 2024.
- BUTLER, S.R. 1860. Journal of an expedition to the Caribou Island, Salmon Bay, Labrador., Schooner Nautilus. Capt. Ranlett. Unpublished document (transcript). Archives & Special Collections, QEII Library, Memorial University, St. John's, Newfoundland.
- BUTLER, S.R. 1878. *The Labrador Mission*. “Witness” Printing House, Montreal.
- CLARK, M. 2014, 23 Mar. History Column: William Alcott and the Boxford Natural History Society. *The Chronicle & Transcript*, Beverly, MA. Available at wickedlocal.com. Accessed Apr 2024.
- DURFEE, C. 1860. *A history of Williams College*. A. Williams and Company, Boston. Available at archive.org. Accessed Mar 2024.

- DURFEE, C. 1871. Williams Biographical Annals. Lee & Shepard, Boston. Available at HathiTrust Digital Library, catalog. [hathitrust.org](https://www.hathitrust.org). Accessed Mar 2024.
- EVANS, S.A. 1893a. Reminiscences. Unpubl. Handwritten manuscript. Miscellaneous Manuscript Collection. George J. Mitchell Department of Special Collections and Archives. Bowdoin College, Brunswick, ME.
- EVANS, S.A. 1893b. The Descendants of David Evans of Charlestown, Mass. Privately published. Available at Google Books, [google.com/books](https://www.google.com/books). Accessed May 2024.
- FAY, O.P. 1898. Fay Genealogy: John Fay of Marlborough [Massachusetts] and his Descendants. Press of J. B. Savage, Cleveland, Ohio.
- GREEN-WOOD. 2024. Civil War Biographies: Benjamin Gregory. Green-Wood Cemetery, Brooklyn, NY. Available at [greenwood.org](https://www.greenwood.org). Accessed Nov 2024.
- GREENE-DREHER HISTORICAL SOCIETY. 2024. From Tannerytown to Ledgesdale recreational center. Available at [greenedreher.org](https://www.greenedreher.org). Accessed Oct 2024.
- KINGSLEY, J.S. 1888. Sketch of Alpheus Spring Packard. Popular Sci. Monthly 33:3–17. Available at en.wikisource.org. Accessed May 2024.
- KNOWLTON, C.H. 1921. Herbarium of W.P. Alcott. *Rhodora* 23:47.
- LEMONS, M., K.L. SOUTHWORTH, & B.C. KAMSLER, Preparers. 2007–2013. Finding Aid for William Wilberforce Chapin Papers, 1860–1865. Missionary Research Library Archives: Section 3. The Burke Library Archives, Columbia University Libraries, Union Theological Seminary, New York. Available at library.columbia.edu. Accessed May 2024.
- MARGOLIS, R. 2019. The 1860 Copley Amory collection of works by Aron from Kangeq, Greenland. Pp. 2–38 in Margolis, R. Nineteenth Century Watercolors and Drawings from Greenland. Aron from Kangeq and Isak from Igdlorpait. Kindle Direct Publishing. Seattle, WA. Available at [eskimo-art.org](https://www.eskimo-art.org). Accessed Feb 2024.
- NYCAGO (NEW YORK CITY CHAPTER OF THE AMERICAN GUILD OF ORGANISTS). 2024. Benjamin Gregory Residence. Available at nycago.org. Accessed Sep 2024.
- O'GRADY, E. 2024. Dr. Paul Ansel Chadbourne, Williams College President 1872–1881. Williams College Special Collections. Available at specialcollections.williams.edu. Accessed Jul 2024.
- PARSON, E.B. 1896. Williams College Alumni Register. [Alumni Association], North Adams, MA. Available at Internet Archive, archive.org. Accessed Mar 2024.
- RANLETT, S.A. 1942. Charles Evertt Ranlett, Master Mariner of Maine. Penobscot Maritime Museum, Searsport, Maine.
- RUSSELL, J., Contributor. 2024. Stephen H. Tyng. Available at [wikipedia.org](https://www.wikipedia.org). Accessed May 2024.
- SEGELQUIST, D., Poster. 2011. Report of Lieutenant Copley Amory, Fourth U.S. Cavalry. Civil War days and those surnames. Available at civilwarhosesurnames.blogspot.com. Accessed May 2024.
- SEWALL, A.C. 1879. The life of Prof. Albert Hopkins. Anson D. Randolph & Company. New York.
- SPARED & SHARED 4. 2024. Correspondence of Frederick Hicks to R. D. Douglas. Available at sparedshared4.wordpress.com. Accessed Mar 2024.
- SPEAR, W.P. 1885. History of North Adams, Mass., 1740–1885. Hoosac Valley News Printing House, North Adams, MA. Available at Internet Archive, archive.org. Accessed Nov 2024.
- STEARNS, C.H. 1920. Address of the President [inc. notice of death of James H. Fay]. Proceedings of the Brookline Historical Society at the Annual Meeting, 28 January 1920. Available at brooklinehistoricalsociety.org. Accessed Jul 2024.
- STEIN, G.M. 2012. British and American awards to the American Second Grinnell Arctic Expedition. *J. Orders and Medals Research Society* 51:1.
- STRAZNICKY, E.R. 1870. Transactions of the Society for 1868. *J. Amer. Geogr. Statistical Soc.* 2(2):xxx1x–1 [39–50]. Available at [jstor.org](https://www.jstor.org). Accessed Sep 2024.
- UCPO [Union County Prosecutor's Office]. 2024. History of the Union County [New Jersey] Prosecutor's Office, entry and photo for Julius Augustus Fay. Available at ucpo.org. Accessed Sep 2024.
- ZOUAVE ARCHIVE. 2024. 35th N.J. Infantry Regiment. Available at palmettoriflemen.org/ZouaveArchive. Accessed Nov 2024.

REFERENCES

- ADAMS, R.P. 2008. *Juniperus* of the World: The genus *Juniperus*. Trafford Publishing Co., Vancouver, Canada.
- ALCOTT, W.P. 1860a. Journal of the expedition to Greenland, synopsis. See Butler 1860b.
- ALCOTT, W.P. 1860b. Plants collected by Wm. P. Alcott, named by Professor Asa Gray. Near Sukkertoppen, Greenland, Lat. 65°, Lon. 53°, July 20 to 31, 1860. Two page handwritten document. Boxford Historic Document Center, Boxford, MA, U.S.A.

- ALCOTT, W.P. 1860c. Plants collected by Wm. P. Alcott, named by Asa Gray. Near Godthaab, Greenland, Lat. 64°N, Lon. 51°30' W, Aug. 3 to 14, 1860. One page handwritten document. Boxford Historic Document Center, Boxford, MA, U.S.A.
- ARABI, Z., F. GHahremaninejad, R.K. RABER, R.K., I. SOKOLOVA, G. HEUBL, G. & S. ZARRE. 2018. On the taxonomic status of the genus *Dichodon* (Caryophyllaceae: Tribe Alsineae): morphological and molecular evidence reassessed. *Phytotaxa* 360:220–236.
- BACHE, A.D. 1861. Report of the Superintendent of the Coast Survey showing the progress of the Survey during the year 1860. Government Printing Office, Washington, DC, U.S.A.
- BARBERÁ, P., A. QUINTANAR, P.M. PETERSON, R.J. SORENG, K. ROMASCHENKO, & C. AEDO. 2019. New combinations, new names, typifications, and a new section, sect. *Hispanica*, in *Koeleria* (Poeae, Poaceae). *Phytoneuron* 2019-46:1–13.
- BAY, C. 2020. Four decades of new vascular plant records for Greenland. *Phytokeys* 145:63–92.
- BÖCHER, T.W. 1959. Floristic and ecological studies in Middle West Greenland. *Meddelelser om Grønland* 156(5):1–70.
- BÖCHER, T.W., K. HOLMAN, & K. JAKOBSON. 1966. The flora of Greenland, English translation. P. Haase & Son, Copenhagen, Denmark.
- BOTSFORD, E.H. 1928. Fifty years at Williams under the administrations of Presidents Chadbourne, Carter, Hewitt, Hopkins, and Garfield. Press of the Eagle Printing and Binding Company, Pittsfield, MA, U.S.A. Internet Archive: <<https://archive.org/details/fiftyyearsatwill01bots/page/n3/mode/2up>>
- BUTLER, S.R. 1860a. Journal of an expedition to the Caribou Island, Salmon Bay, Labrador. Schooner *Nautilus*. Capt. Ranlett. Unpublished document (transcript). Archives & Special Collections, QEII Library, Memorial University, St. John's, Newfoundland.
- BUTLER, S.R. 1860b. Synopsis of a journal of the expedition to Greenland, compiled from the account of W.P. Alcott, Esq. Appendix to Butler 1860 (transcript). Archives & Special Collections, QEII Library, Memorial University, St. John's, Newfoundland.
- BUTLER, S.R. 1870. The Canadian Naturalist and Quarterly Journal of Science, new series, 5(3):350–353.
- CBC News. 2014, 1 October. Franklin expedition ship found in Arctic ID'd as H.M.S Erebus. Available at cbc.ca/news/politics. Accessed October 2024.
- CHADBOURNE, P.A. 1860. The Greenland expedition. *Williams Quart.* 8(2):77–98.
- DURAND, E. 1856. Enumeration of plants collected by Dr. E.K. Kane, U. S. N., in his first and second expeditions to the Polar Regions, with descriptions and remarks. Appendix 18 to Kane, E. K. Arctic Explorations: The second Grinnell expedition in search of Sir John Franklin, 1853, '54, '55. Vol. 2:442–467. Childs & Peterson, Philadelphia.
- DURFEE, C. 1860. A history of Williams College. A. Williams and Company, Boston, MA, U.S.A. Available at Internet Archive, archive.org. Accessed March 2024.
- ELVEN, R. 2002–present. Panarctic flora. Available at panarcticflora.org. Accessed June 2024.
- ELVEN, R., D.F. MURRAY, & H. SOLSTAD. 2019. *Hippuris*. Flora of North America Editorial Committee, eds. Flora of North America north of Mexico vol. 17, Magnoliophyta: Trochodendraceae to Orobanchaceae. Pp. 56–57.
- ERIKSSON, T., M. LUNDBERG, M. TÖPEL, P. ÖSTENSSON, & J.E.E. SMEDMARK. 2015. *Sibbaldia*: a molecular phylogenetic study of a remarkably polyphyletic genus in Rosaceae. *Pl. Syst. Evol.* 301(1):171–184.
- EVANS, S.A. 1893. Reminiscences. Unpubl. handwritten manuscript. Miscellaneous Manuscript Collection, George J. Mitchell Department of Special Collections & Archives, Bowdoin College. Brunswick, ME, U.S.A.
- FALCON-LANG, H. 2009. The 1835 Williams College Expedition to Maine, New Brunswick and Nova Scotia: the first geological field trip by a North American College. *Atlantic Geol.* 45:95–109.
- FNA (Flora of North America Editorial Committee, eds.). 1993 et seqq. Flora of North America north of Mexico. Oxford University Press. New York, U.S.A. and Oxford, UK.
- FREDSKILD, B. 1996. A phytogeographical study of the vascular plants of West Greenland (62°20'–74°00'N). *Meddelelser om Grønland*, Bioscience 45.
- HANSEN, S.L. 2019. [Commemoration of the] 150th anniversary of the death of Aron from Kangeq. Nuuk Art Museum, Nuuk, GL. Available at nuukkunstmuseum.com. Accessed August 2024.
- HOLT, S. and J.T. JOHANSSON. 2020. Plants of Greenland. Field Museum Field Guide 548, version 3. Field Museum, Chicago, U.S.A. Available at fieldguides.fieldmuseum.org. Accessed March 2028.
- JØRGENSEN, C.A. & T.V. SØRENSEN. 1958. The flowering plants of Greenland: a taxonomical and cytological survey. *Biol. Skr. Danske Videnskabernes Selskab* 9(4):1–172.
- KAALUND, B., translated by K. Tindall. 1979. The art of Greenland: sculpture, crafts, painting. English edition. The University of California Press, Berkeley, Los Angeles, U.S.A. and London, UK.

- KANE, E.K., M.D. U.S.N. 1856. Arctic Explorations in the years 1853, '54, '55. Childs & Peterson, Philadelphia, PA, U.S.A. 2 vols.
- KNUTH, E. 1968. Ålut Kangiermo—Aron fra Kangeq—Aron of Kangeq. Det Grønlandske forlag, Godthåb.
- KULA, A., B. DUDAK, F. SLIWINKA, A. GRABOWSKA-JOACHIMINAK, A. STEWART, H. GOLCZYK, & A. J. JOACHIMIAK. 2006. Cytomorphological studies in American and European *Phleum commutatum* Gaud. (Poaceae). Acta. Bio. Cracov., Ser. Bot. 48:99–108 (as cited in the Flora of North America 24:672).
- LANGE, J. 1890. Conspectus Florae Grønlandicae: Oversigt over Grønlands Flora. Meddelelser om Grønland Bd. 3, Hefte 3. Available at Biodiversity Heritage Library, biodiversitylibrary.org. Accessed April 2024.
- MACOUN, J. 1891. Catalogue of the plants reported by various travellers and others as growing on the coast of Labrador. In: Packard, A.S. 1891. The Labrador Coast. N.D.C. Hodges. New York, U.S.A. Pp. 451–474.
- MARGOLIS, R. 2019. The 1860 Copley Amory collection of works by Aron from Kangeq. In: Margolis, R. Nineteenth century watercolors and drawings from Greenland. Aron from Kangeq and Isak from Igdlorpait. Kindle Direct Publishing. Seattle, WA, U.S.A. Pp. 2–38. Available at eskimo-art.org. Accessed February 2024.
- PACKARD, A.S. 1885. Life and nature in southern Labrador. Amer. Naturalist 19:269–275, 365–372.
- PACKARD, A.S. 1891. The Labrador Coast. N.D.C. Hodges, New York, U.S.A..
- PORSILD, M. & A.E. PORSILD. 1920. The flora of Disko Island and the adjacent coast of West Greenland from 66°–71° N. Lat. Den Danks Arktiske Station paa Disco No. 11; Særtryk af Meddelelser om Grønland 58.
- PRINGLE, J.S. 1995. History of the exploration of the vascular flora of Greenland. The Canad. Field-Naturalist 109(3):362–377.
- PURSH, F.T. 1814. Flora Americae Septentrionalis. White, Cochrane, and Co. London, UK.
- RANLETT, C.E. 1860–1861. The cruise of the *Nautilus* to Labrador and Greenland. The Maine Teacher and School Officer. Typescript copy in the Special Collections, Sawyer Library, Williams College, U.S.A.
- RANLETT, S.A. 1901. In the *Nautilus* to Greenland. The Newton Journal. Reprinted as Appendix 1 to Ranlett, S.A. 1942.
- RANLETT, S.A. 1942. Charles Everett Ranlett, Master Mariner of Maine. Penobscot Maritime Museum, Searsport, Maine, U.S.A.
- REVEAL, J.L. 2004. Frederick Pursh, Cataloguer of Expedition plants. Lewis & Clark Trail Heritage Foundation, Great Falls, MT. Available at lewis-clark.org. Accessed July 2014.
- RICHARDSON, J. 1823. Botanical appendix. In: Franklin, J. Narrative of a journey to the shores of the polar sea, in the years 1819, 20, 21, and 22. J. Murray, London, UK. Pp. 730–763.
- RINK, H. 1861. About the ships in Nuuk harbor in summer 1860. Atuagagdliutit 1:1. Nuuk, GL. Originally written in Danish, first published in Greenlandic (Kalaallisut), Berthelsen transl.; English transl. by Margolis. In: Margolis (2019). Pp. 20–21.
- ROSENDAHL, H.V. 1918. A list of the pteridophytes of Greenland with their localities. Meddelelser om Grønland 56:207–220.
- RUNE, F. 2011. Wild flowers of Greenland/Grønlands Vild Plante. Gyldenlund Publishing, Hillerød, Denmark.
- SCHILLING, E.E., A. FLODEN, A.S. WEAKLEY, C. WINDSOR, & R.L. SMALL. 2022. Molecular barcoding reveals unexpected diversity in eastern North American stitchworts (Caryophyllaceae). Bot. J. Linn. Soc. 200(1):75–84.
- SORENG, R.J., L.J. GILLESPIE, & L.L. CONSAUL. 2017. Taxonomy of the *Poa laxa* group, including two new taxa from Arctic Canada and Greenland, and Oregon, and a re-examination of *P. sect. Oreinos* (Poaceae). Nordic J. Botany 35:513–538.
- STEIN, G.M. 2012. British and American awards to the American Second Grinnell Arctic Expedition. J. Orders Medals Res. Soc. 51:1.
- TKACH, T., J. SCHNEIDER, E. DÖRING, A. WÖLK, A. HOCHBACH, J. NISSE, G. WINTERFELD, S. MEYER, J. GABRIEL, M.H. HOFFMAN, & M. RÖSER. 2020. Phylogenetic lineages and the role of hybrid evolution in grass supertribe Pooideae. Taxon 69(2):234–277.
- TORREY J. 1828. Some account of a collection of plants made during a journey to and from the Rocky Mountains in the summer of 1820 by Edwin P. James, M.D., Assistant Surgeon U.S. Army, Ann. Lyceum Nat. Hist. New York 2:161–254.
- TORREY J. 1874. Phanerogamia of Pacific North America. United States Exploring Expedition under the command of Charles Wilkes, U.S.N. 17:212–514. C. Sherman, Philadelphia, PA, U.S.A.
- DE VERE, N. L. 2024. Natural History Museum Denmark Collections: Greenland Herbarium. Available at samlinger.snm.ku.dk. Accessed August 2024.
- WALLICH, G.C. 1862. The North-Atlantic Sea-bed: Comprising a diary of the Voyage on board H.M.S. Bulldog in 1860. John van Voorst, London, UK.
- WATSON, P. 2016, 12 Sep. Ship found in Arctic 168 years after doomed Northwest Passage Attempt. The Guardian, UK.
- ZÁVESKA DRÁBKOVÁ & J. KIRSCHNER. 2013. *Oreojuncus*, a new genus in the Juncaceae. Preslia 85(4): 483–503.