# John Jeffrey and the Oregon Expedition.

BY

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Among the pioneers in the botanical exploration of Western North America the most outstanding figure is David Douglas; his life, his tragic death, and his discoveries are well known. The success of Douglas in introducing new plants to this country was the direct inspiration of the expedition undertaken by John Jeffrey. Of Jeffrey's life, however, few details are known, his fate is still a mystery and his introductions, with the exception of some conifers, have been almost unrecognised. Yet his three years of exploration deserve to be better known, for though there have been indeed several short notices of his life and work none of these do justice to his achievements.

The discovery of the Minute Book of the Association which financed Jeffrey's expedition, usually called the Oregon Expedition, has prompted a fuller account of his life and work. While no fresh light can be thrown on his fate, research has revealed the place and date of his birth. It is a curious coincidence that David Douglas, Archibald Menzies, his forerunner in the same regions, and John Jeffrey should all be natives of the same county of Perth, their birth-places being only a few miles apart. In addition, George Patton, the originator of the Oregon Expedition, was also a native of Perthshire.

A search in the Herbarium of the Royal Botanic Garden, Edinburgh, revealed a considerable number of Jeffrey's specimens, and while it was impossible for the author to make the same thorough search of the Kew Herbarium and the Lindley Herbarium, some specimens were found in these which are not represented at Edinburgh.

This account naturally falls into three parts: the Association, Jeffrey's life, and a list of plants collected by him.

## THE ASSOCIATION.

Mr. George Patton (afterwards Lord Glenalmond) of The Cairnies, an estate in Perthshire, impressed by the accounts of the magnificence of the conifers of Western North America given by Douglas and others, believed that it would be possible to secure sufficient support to send out a collector to explore that country more fully.

He communicated this idea to Professor J. H. Balfour, who at once approved and set about working it out. As a result a "Meeting of Gentlemen interested in the promotion of the Arboriculture and Horticulture of Scotland" was held in the Royal Botanic Garden, Edinburgh, on 22nd November 1849, with Professor Balfour in the chair.

At this meeting Professor Balfour stated that he had in view a person peculiarly qualified to undertake the task of exploration, and it was decided to go forward and raise the necessary funds. A meeting was held on 30th January 1850 when a Committee was appointed consisting of the Hon. Lord Murray, Sir David Dundas of Dunira, Bart., William Gibson Craig, M.P., William Murray of Henderland, George Patton of The Cairnies, Prof. J. H. Balfour, Charles Lawson, James Greig, Isaac Anderson, James M'Nab, with Andrew Murray of Conland and Charles Mackintosh as Joint Secretaries, and David Smith, W.S., as Treasurer; Professor Balfour to be Chairman.

The Minute Book of the Association was recently presented to the Royal Botanic Garden by Mr. James McKie Thomson, S.S.C., and from it the following condensed account of the Association's proceedings has been taken.

At the first meeting of the Committee on 6th February, Sir John McPherson Grant was added to the number. The terms of an advertisement for subscribers were adjusted and it was agreed that it be inserted in the following newspapers: *North British Agriculturist, Gardeners' Chronicle, Edinburgh Evening Courant, Scotsman, Edinburgh Advertiser, Glasgow Courier, Dumfries Herald,* and *Bell's Life in London.*

It was also suggested that a petition be presented to the Admiralty requesting their assistance and the Secretary was directed to prepare one.

The qualifications which would be necessary in the collector were then considered, and on the testimony of Professor Balfour, Mr. M'Nab and Dr. Neill that Mr. Jeffrey, then employed at the Royal Botanic Garden, was eminently qualified, Mr. M'Nab was empowered to state to Mr. Jeffrey that such an appointment would probably be offered to him.

On 20th February the Committee met again and added to their number Lord Cunningham, Sir Wm. Jardine and Mr. Evans. As the subscriptions now exceeded £600, the Committee decided they were justified in sending out a collector to America, and appointed the following sub-committee to secure a proper person and to take the necessary steps for sending him out: Lord Murray, Sir David Dundas, Mr. George Patton, Mr. Evans, and Mr. M'Nab, along with the chairman, secretaries, and treasurer. A sum not exceeding £20 was allowed to provide books and instruments for the collector.

There were several applicants for the post but the sub-committee on 28th February decided to appoint Jeffrey, and the secretary was directed to prepare the draft of an agreement betwixt the Association and him.

On the suggestion of Sir John Macpherson Grant, who had previously conversed with Mr. Edward Ellice on the matter, application was made to the Hudson's Bay Company for assistance. The Governor and Committee of the Company generously replied that they would convey the collector on one of their ships to York Factory and give him an escort across the continent. They also offered to supply all

his needs while in their territory and supply him with money if he went outwith their limits, up to the amount of credit the Association would grant him.

This offer was reported to a meeting of Committee on 24th May and accepted. At the same meeting the agreement with Jeffrey and his instructions for the expedition were adjusted and approved.

Jeffrey signed the contract on 29th May 1850, Professor J. H. Balfour and David Smith signing on behalf of the Association (65). One of the conditions of the contract, which was for three years, was that Jeffrey was to keep a diary of his journey. Unfortunately, the diary never reached the Association, and was probably never kept.

On 20th November a circular was sent out to the subscribers intimating the arrival of Jeffrey in Canada. It also intimated that the funds then amounted to £950, and asked that subscriptions be continued for one or two years.

A letter from Jeffrey was received in September 1851 and was printed and circulated (see p. 8). A few weeks later the first box from Jeffrey was received and it was opened at a meeting of Committee held on 6th November. It contained cones of various conifers gathered east of the Rockies, referred to in the letter just mentioned, also a few birds' skins and beetles. As the seeds were few in number they were sealed up again till the arrival of the next box. The birds' skins were sent to Sir Wm. Jardine for identification and the beetles were distributed.

The next box to arrive was marked No. 3. It had been sent from San Francisco by post, and the postage amounted to £135, but through the good offices of Mr. Forbes Mackenzie the Post Office authorities waived this charge.

This box, when opened at a meeting of the Committee on 24th August 1852, was found to contain a number of seed packages and herbarium specimens, also some beetles and a specimen of gold from Queen Charlotte Islands. There was, however, no journal of Jeffrey's travels.

A list of these seeds was printed and circulated to subscribers. While this circular was in the press a package marked No. 4 was received. This contained only a small cloth bag of seeds marked *Abies taxifolia* [*Tsuga heterophylla* Sarg.]. The seeds of the three packets were divided and despatched by Dr. Greville, with the constant assistance for three days of Mr. Evans and Mr. Lawson.

The herbarium specimens were examined by the sub-committee on 25th August. Several roots of No. 32, *Lewisia rediviva*, appeared to be sufficiently fresh to grow, and were immediately sent to the Horticultural Society, London, the Royal Botanic Garden, Edinburgh, and the Caledonian Horticultural Society. Some of these certainly grew, for a specimen in flower was exhibited by Mr. Evans at the meeting of the Botanical Society of Edinburgh held on 8th June 1854 (5). At

a later meeting on 13th September 1852, it was decided to divide the herbarium specimens—one full set for the Association, one set for the Royal Botanic Garden, Edinburgh, one for the Royal Botanic Gardens, Kew, one for the Horticultural Society, London, and one to the Caledonian Horticultural Society.

Sir Wm. J. Hooker and Professor Lindley were asked to name the specimens and such names as were supplied were issued to the subscribers in a circular dated 5th October 1852 (57).

At the meeting on 24th August, Dr. Lowe and Mr. John Greig were added to the Committee in room of Dr. Neill and Mr. James Greig, deceased.

In April 1853 two letters were received from Jeffrey dated Oregon, 22nd January 1853, and Columbia City, 15th February 1853, containing a list of seeds despatched in packages Nos. 5 and 6 and with field-notes on some of the plants. These packages arrived on 8th and 9th June, and the seeds were distributed on 18th June, with a list of probable names (59).

In this circular mention is made of another letter from Jeffrey dated 14th March 1853, in which he intimated that he had despatched packages Nos. 7, 8 and 9, also that No. 2 and No. 9, neither of which contained seeds, had been sent by Cape Horn. None of these packages were received.

Letters from Sir Wm. J. Hooker and Professor Lindley giving names of some of the plants in packages Nos. 5 and 6 were before the Committee on 23rd June, and Professor J. H. Balfour and Mr. M'Nab were asked to look over the new plants and give names to them if Hooker or Lindley had not done so. The result of this was the undated circular (60) usually quoted as " Report of the Botanical Expedition to Oregon " sent out to subscribers in the first week of September 1853 (see p. 16).

Sir Wm. J. Hooker asked and readily received permission to describe and figure any new plant in his Journal, but only one, *Eriogonum pyrolifolium* was so described and figured (19).

In the " Report " it was intimated that the Committee had resolved to wind up the Association in November 1853 when Jeffrey's contract terminated. It was also proposed that a new Association be formed to engage Jeffrey for another year and subscriptions to it were invited. On 23rd November 1853 the Committee decided to write to Mr. Wm. Murray (brother of the secretary) in San Francisco, giving him power to dismiss Jeffrey or to re-engage him as he thought proper.

Another box of seeds arrived in March 1854 and these were distributed on 24th March with a note that as neither the quantity nor state of the seed was satisfactory, the Committee had abandoned their intention of engaging Jeffrey for another year (61).

On the previous day the Committee had considered the reply of Mr. Wm. Murray to their letter of November 1853. He had not been able to find Jeffrey even though he had advertised in the journal

*Alta California.* Even the British Consul did not know his whereabouts, though there were a number of letters awaiting him at the Consulate. It also appeared from the date of a Bill for £200, lately retired, that Jeffrey had been in San Francisco on 7th October, from another letter it appeared he had been there in November, and from the date of arrival in Panama of box No. 10 Jeffrey must have sent it about the beginning of January 1854 and was probably still in San Francisco on 25th January, the date of Wm. Murray's letter. Yet Jeffrey had never sent a single letter from San Francisco to the Association nor to any of its members. No Journal had been found in any of the boxes, and no information had ever been given as to his proceedings or expenses. The quantity of seed in box No. 10 was so exceedingly trifling that it was obvious that Jeffrey was not doing his duty to the Association even in this respect. It was therefore decided to dismiss Jeffrey from his post for neglect of duty and to inform all concerned. Mr. Wm. Murray was to be asked to claim anything which might belong to the Association and send it home.

A meeting of Committee was held on 11th October 1854 at which Mr. Murray intimated that Jeffrey's salary in Professor Balfour's hands had been arrested, but no decision was taken as to whether Jeffrey be paid all or any of his last year's salary.

The Committee did not meet again till 8th May 1856. The Treasurer intimated that the sum in his hands was about £430. Mr. Patton proposed that Mr. Murray should write to his brother in San Francisco and if possible secure the services of Mr. Beardsley or make some other arrangement which would secure a supply of seed to be sent home the same year. This was agreed to and the amount authorised to be spent was £300.

An agreement was come to with Mr. Beardsley for the £300 plus expenses of carriage and resulted in a collection of " 8 bushels of cones of *Pinus nobilis*, 4 bushels of *Pinus grandis*, 5 bushels of *Thuja Craigana* and 12 lbs. picked seed of *Pinus Benthamiana*." The consignment arrived in December, the seed of *nobilis* and *grandis* in indifferent condition as a result of insect attack (cf. 31, 32), the others in first-rate condition. The cones were broken up before distribution and the seeds were sent out to the subscribers on 10th January 1857.

At a meeting of Committee on 8th January the Treasurer, Mr. David Smith, submitted the following abstract of Receipts and Expenditure since the commencement of the Association :

State of Funds belonging to the Association as at 5th January 1857.

| I. RECEIPTS. | £ | s. | d. | £ | s. | d. |
|---|---|---|---|---|---|---|
| 1. Subscriptions | 1332 | 0 | 0 | | | |
| 2. Sum recovered under Decree agt. J. Jeffrey less expenses | 231 | 15 | 0 | | | |
| 3. Periodical Interest on sum in hands of Treasurer | 103 | 9 | 2 | | | |
| 4. Miscellaneous Receipts | 0 | 4 | 0 | | | |
| Total Receipts | | | | 1667 | 8 | 2 |

| | £ | s. | d. | £ | s. | d. |
|---|---|---|---|---|---|---|
| Total Receipts . . | | | | 1667 | 8 | 2 |
| II. PAYMENTS. | | | | | | |
| I. First Expedition. | | | | | | |
| 1. Printing and Engraving . . . . . | 52 | 18 | 9 | | | |
| 2. Advertising . . . . . | 10 | 7 | 6 | | | |
| 3. J. Jeffrey's Outfit . . . . . | 49 | 10 | 2 | | | |
| 4. Boxes and packing . . . . . | 15 | 0 | 2 | | | |
| 5. Premiums of Insurance on Policy on J. Jeffrey's life paid . . . . . | 95 | 17 | 2 | | | |
| 6. Wages to J. Jeffrey . . . . . | 267 | 13 | 6 | | | |
| 7. Remittances for articles furnished and money advanced to Do. in America . . . . | 663 | 18 | 10 | | | |
| 8. | 4 | 12 | 6 | | | |
| 9. and Stamps and Bank charges . . . | 0 | 9 | 4 | | | |
| 10. Expenses of distribution of seeds, etc . . . | 30 | 9 | 0 | | | |
| 11. Carriages, postages, etc. . . . . | 28 | 15 | 11 | | | |
| | 1219 | 12 | 10 | | | |
| II. Second Expedition. | | | | | | |
| 1. Sum agreed to be paid for Expedition by Mr. Beardsley . . . . . £300 0 0 | | | | | | |
| 2. Extra Expenses of Inland Carriage . 24 9 4 | | | | | | |
| 3. Boxes, packing, etc. . . . . 0 18 6 | | | | | | |
| 4. Freight from San Francisco to New York 29 10 0 | | | | | | |
| 5. Insurance and Expenses in New York 6 3 0 | | | | | | |
| 6. Freight to Liverpool and Exps. there 2 15 0 | | | | | | |
| 7. Carriage to Edinburgh . . . 0 12 6 | 364 | 8 | 4 | | | |
| Total payments . | | | | 1584 | 1 | 2 |
| Balance in the hands of the Treasurer as at 6th January 1857 . . . . . | | | | £83 | 7 | 0 |

On 26th May 1859 the Committee met again and Mr. Patton, now Solicitor-General, intimated that a quantity of seed of *Picea nordmanniana* which had just arrived in good order direct from Mingrelia had been offered on favourable terms. It was agreed to purchase £50 worth from Mr. Booth of Leith, and the Treasurer was authorised to pay this sum and also the expenses of distribution. It was also agreed to send out a circular with the seed suggesting the reorganisation of the Association and asking for the opinion of the shareholders (63). This circular is dated 30th May 1859 and signalises the end of the Association.

A new association was eventually formed which sent out Robert Brown (of Campster) on the "British Columbia Expedition" in 1863, but with this we are not concerned here.

## JOHN JEFFREY, 1826–1854.

John Jeffrey was born at Forneth in the parish of Clunie, Perthshire, on the 14th November 1826 (66). His father's name was also John and his mother's name was Helen Ambrose. Here also were born his younger brother James and his sisters Janet and Elizabeth, who were respectively 2, 5, and 8 years younger than John (67, 68).

The whole family soon removed to Fife and in 1841 were at Lochore, with the exception of young John, who was a servant at East Blair House, some three miles distant (67).

The next record we have of Jeffrey is that he was employed at the Royal Botanic Garden, Edinburgh, in January 1849 (69). Here he proved to be energetic and painstaking and attracted the attention of James M'Nab, the Principal Gardener, by volunteering to ascend a high tree to remove a branch which had been broken by the wind (22, p. 323). He also won the prize offered to practical gardeners for the best collection of dried plants made in the neighbourhood of Edinburgh (46).

In February 1850 the Oregon Association decided to appoint Jeffrey as collector to the Expedition and arranged that he should have lessons in the taking of latitude and longitude and also of altitudes. The necessary instruments and an outfit of clothes were provided. Mr. A. K. Johnston was consulted about maps of Western North America, and his reply was that the best was that of Mofras (29) which he could procure from Paris (70). Whether Jeffrey was supplied with this map or not is unknown.

Before sailing Jeffrey apparently spent a few days in London as the secretary of the Association was instructed to write special letters of thanks to Dr. Lindley, Sir William Gibson Craig, Sir William Hooker, and Mr. Murray of Henderland for the trouble they had taken and the attention they had paid to Jeffrey when there (64).

He sailed as a cabin passenger on the Hudson's Bay Company's ship *Prince of Wales*—Captain David J. Herd. It left the East India Dock on 6th June 1850 for Gravesend and five days later sailed for Stromness, anchoring in Carston Roads on the 18th June. After taking more passengers on board, the ship sailed for Hudson's Bay on the 3rd July and anchored in Five Fathom Hole off York Factory on the 12th August (74).

The sum of £18, 10*s*. was charged for Jeffrey's passage and out of this amount the Company paid the Captain £10, 10*s*. for "messing" him on the voyage (75).

Jeffrey left York Factory on 23rd August in the company of Chief Factor John Lee Lewes (77). They arrived at Norway House, near the north-east end of Lake Winnipeg, on the 18th September, and on the next day continued their journey to Cumberland House on the Saskatchewan River, the destination of Mr. Lewes (78). Here Jeffrey waited for the winter express which arrived on 3rd January 1851, and he left with it for Edmonton House. At this post they were joined by Chief Trader Robert Clouston, who had been waiting here for some time on account of the deep snow on the mountains and because the Blackfeet—a hostile tribe of Indians—were encamped at the different passes (79).

The winter express, with Clouston and Jeffrey, left Edmonton House early in March and in fourteen days reached Jasper House on the Athabasca River. Here they remained till the 26th April and experienced much warm-hearted hospitality from Mr. Colin Fraser, then in charge of the post (80).

Jeffrey indeed received hospitality at all the Hudson's Bay Company's posts, where no charge was made for his maintenance, only supplies and extra conveyance having to be paid (76).

While at Jasper House Jeffrey wrote a long letter giving an account of his journey from York Factory, which is worth giving in full (55).

Jasper House, Rocky Mountains,
April 7th, 1851.

Sir,—It is with much pleasure that I embrace this opportunity of writing to Britain; it being the first that has occurred to me since my departure from York Factory. I have little doubt that long before this reaches you I will be considered by you all far out of my duty, for not reporting my progress sooner. I am sorry to say that the means of doing so did not present itself to me in any shape before this date. I left York Factory on the 20th of August, got to Cumberland House on the 6th of October. There I had to remain for the winter. The rivers and lakes were all getting covered with ice, putting travelling by water to an end, the only means that this part of the country affords. During my stay at Cumberland it was out of my power to forward the objects of the Expedition in any shape whatever. The collecting of Insects was impracticable, owing to the severity of climate. The Birds, with the exception of a few species that are found at that place, are only summer visitors; they had taken their departure before my arrival. My opportunities of collecting en route, were limited, as I had of course to keep with the Brigade, seldom having an opportunity of travelling by land. The country is so thickly covered with underwood, and so swampy, that I could seldom walk along the banks of the river.

The Brigade that proceeds to the west of the Rocky Mountains does not start from York Factory at the time I understood it did. From the information I received before I left Britain, I was made to understand that it left York Factory on the arrival of the ships from England, and proceeded on as far as the winter would allow them, starting again as soon as the rivers opened for navigation in spring. On my inquiries after landing at York Factory, I found that such was not the case.

The only Brigades that start from York Factory on the arrival of the ships from England, are sent down from the interior posts for their supplies, returning with it to their different districts. In company of one of those Brigades I started. The Brigade that proceeds to the west of the Rocky Mountains, starts from Fort Vancouver, on the Columbia river, some time in March, reaches York Factory about the end of June, starts again about the beginning of July, reaches Fort Vancouver, its starting-place, some time in the month of November. The only means beside this, is what is called the winter packet. This packet starts from York Factory in the month of December, is carried

by men on their backs from post to post, till it reaches the Rocky Mountains. I have made known this to you, that you may understand how I was situated, so that you will be better able to judge whether the measures that I have adopted are in accordance with your views or not. In the first place, after weighing matters thoroughly, I considered, from what I had seen of the country to the east of the Mountains, that a summer spent in it would be a summer lost; and if I remained for the Brigade that crosses the Mountains, winter would meet me as soon as I reached those mountains. Again, I found that it was impossible to proceed in company of only a few people, from several causes. We would, in the first place, have to pass through the extensive prairies along the Saskatchewan Rivers, inhabited by hostile tribes of Indians; and in the second, after getting to the Mountains, the rivers would be so much swollen that they would prove great barriers.

I made up my mind to start in company with the men that carried the winter packet, and if my strength would stand me, endeavour to continue from post to post till I reached the Rocky Mountains. On the 3rd of January this packet reached Cumberland House. I had all my preparations made to be ready for a start as soon as its arrival. I was furnished with four dogs to drag my baggage that I found necessary to take along with me. What I could dispense with for the first summer, I left at Cumberland, to be forwarded by the Columbia Brigade to Fort Vancouver.

I continued to trudge on from post to post, getting a fresh man and fresh dogs at every post that I came to en route. I generally remained at each station for a few days to refresh for another stage. The route lay along the Saskatchewan River to Edmonton House; after that we steered in a N.W. course through the woods, and fell on the Athabasca River at Fort Assiniboine,—travelled by the course of that river all the way to Jasper House, at which place we arrived on the 21st of March. All this distance I walked on snow shoes, the snow being on an average 2 feet deep. The distance from Cumberland to Jasper House is 1200 miles. During this journey I slept with no other covering than that found under the friendly pine, for the space of 47 nights, on several occasions the thermometer standing from 30° to 40° below zero. I found no bad effects from exposure, the only thing that happened to me, was that once or twice I got slightly frost bit; that was nothing uncommon amongst us, and little cared for.

In the space of five or six days I expect to be able to start from this place, and get to the west flank of the Mountains before the thaw commences on the top of the Mountains. From that I shall be able to follow the route laid down in my instructions, and I am in full hopes of making a rich harvest. From what information I have collected from some of the Officers of the Hudson's Bay Company, I shall be able to pilot my own course to the Pacific, in a north-west direction

If I were once across this barrier that is before me, then, God willing, in ten more days I expect to be on the height of land; summer will then be at my feet, which will allow me to commence my labours at once. I have already reached the region of the *Pinus Douglasii*. In the proper season seed could be collected here in any quantity of this noble pine.

I have collected since my arrival at this place a good many Beetles, likewise some Birds. Amongst the Birds are fine specimens of *Tetrao obscura*. I believe this fine Grouse is not common in collections in Britain.

The small Collections that I have made since my arrival in the country will reach Britain by the return of the Hudson's Bay Company's ship; my Journals, up to this date, will likewise accompany the objects. The Collections that I may make this summer will not reach England before the autumn of 1852; that is, if I don't find an opportunity of sending them via Panama, at the close of the season.

Before it is out of my power to forward anything worthy of distribution; I am sure that many one will be longing for something to recompence their outlay. As soon as I am possessed of the objects I shall lose no chance of getting them forwarded, only avoiding the sending anything perishable by Cape Horn or Cape of Good Hope.

My expenditure with the Hudson's Bay Company has not yet exceeded L.30. I took many things from York Factory, in the way of supplies of different kinds, for a whole year. When I made up my mind to start with the winter packet, I got all my surplus stock disposed of at Cumberland, at no loss. This, of course, is charged by the Hudson's Bay Company the same; but I have the money received for what I disposed of, which is available at any time.

I intend making as full a collection of the *Coniferae* of America as may be in my power. Some of the common sort I will preserve a few specimens, for such purpose as adding them to the riches, which I hope will soon be, contained in the Royal Botanic Garden Museum.

I will write by the first opportunity from the west side of the Mountains. I would not be surprised if that letter will reach you before this.

I have little more to add at this time. I hope to have a letter from you this summer. I will reach Fort Vancouver from the north, in all likelihood, this autumn; at all events, that will be a place where my letters will be safest to be addressed to me;—there I will always find them.

I am, Sir,
Your humble servant,
JOHN JEFFREY.

It is not to be wondered at that Hector was able to write home "all who saw him say he proved a most expert and hardy traveller" (72).

It is worth recording that among the specimens collected by Jeffrey

as he went along, the first, *Abies nigra* (sine no.), was gathered "10 miles above York Factory" on the first day of his journey.

On the 26th April 1851 Jeffrey left Jasper House in company with Chief Trader Robert Clouston and crossed the Rockies by the Athabasca Pass. On reaching the limit of horse-travelling (because of the depth of snow) the Indians, who acted as carriers, were unwilling to take all their baggage, so Clouston and Jeffrey shouldered a bag each and also carried their rifles. They reached Boat Encampment, the most northerly point of the Columbia River, in a day and a half. Then they proceeded down the Columbia to Fort Colville, arriving about the 12th May, and met there Chief Trader Alexander Caulfield Anderson. Clouston proceeded on horseback to Walla Walla on his way to Fort Vancouver (80).

During the next week Jeffrey collected in the neighbourhood and then went to the Kootenay River and to the Pend d'Oreille district. From there he probably returned to Fort Colville, then went down the Columbia to the mouth of the Okanogan and up this tributary for he was at the meeting of the Okanogan and Similkameen rivers by 2nd July.

From Fort Colville he had the company of A. C. Anderson, who wandered through a considerable part of British Columbia with him (1). They probably parted company somewhere on the Similkameen as A. C. Anderson arrived at Fort Langley on the Fraser River on the 15th July (81). Jeffrey, however, went as far north as the Thomson River collecting at several places between the Fraser and Columbia Rivers, the most northerly point being a mountain east of the Fraser River in lat. 50° 23′ where he collected *Erigeron uniflorus* (No. 185). Probably following the Fraser River he went to Vancouver Island and was collecting there at the end of July and beginning of August.

He soon returned to the mainland and explored the country between the Fraser River and the Mt. Baker range and then turned northwards, keeping to the east of the Fraser. On 20th September he was at about 50° N. and gathered *Rhododendron albiflorum* Hook. at an elevation of 6,000 ft., and at 8,000 ft. he gathered *Cladothamnus pyrolaeflorus* Bong. On 23rd September, on the top of a mountain near Fort Hope, he collected specimens and seed of a conifer which was called *Pinus flexilis*, the seed being distributed under that name. It was not, however, true *P. flexilis* James, and in 1863 it was described (from other material) by Engelmann as *P. albicaulis*.

On 30th September Jeffrey was on the bank of the Fraser near Fort Langley where he collected *Abies grandis*, and on 2nd October he reached the base of Mt. Baker. By 7th October he was again on Vancouver Island—at Fort Victoria where he spent the winter of 1851–52. While here he despatched boxes of seeds and specimens (Nos. 2 and 3). At Fort Victoria he met James R. Anderson, a son of Chief Trader Anderson, and sometimes had him as a companion on his

excursions in the neighbourhood. J. R. Anderson lived till 1930 (17) and in 1926 (2) could recollect Jeffrey shooting a woodpecker in a Douglas Fir on the outskirts of Beacon Hill Park. The tree in question was still standing in 1926 and Anderson sent a photo of it to Edinburgh.

On 17th January 1852 Jeffrey embarked at Fort Victoria on the Hudson's Bay Company's *S.S. Beaver* for Fort Rupert at the northern end of Vancouver Island; returning by the same ship he was back in Victoria Harbour on the 13th March, and on the 20th went to the salmon fishery on San Juan Island, returning to Fort Victoria the following day (82).

About the end of April he started collecting and obtained a number of plants in flower on the 19th and 20th, and on the 21st he discovered a new *Ribes* (*R. Lobbii* A. Gray). On the 22nd he paid another visit to San Juan Island where he collected *Juniperus scopulorum* Sarg., *Anemone Lyalii* Britt., etc. On the 23rd–25th he was collecting on Vancouver Island again, the most important gathering (on the 24th) being seed of *Tsuga heterophylla* Sarg. (despatched in package No. 4). This was its first introduction to Britain. It was called by Jeffrey, and was distributed as, *Abies taxifolii*.

On 21st May Chief Factor James Douglas wrote to Chief Factor John Ballenden at Fort Vancouver informing him that John Jeffrey was "on the eve of proceeding on his professional pursuits by way of Nisqually and Cowlitz" to Fort Vancouver and that he would require a sum of money for his travelling expenses to California (83).

Jeffrey followed the course indicated and was collecting from 7th to 13th June in the neighbourhood of Nisqually and Puget Sound. On 20th June he left Fort Vancouver (84) and went south by the Willamette Valley, though sometimes climbing high up the Cascades as on 4th August when he gathered *Arctostaphylos nevadensis* A. Gray at 7,000 feet "near the snow line." He then continued south through the Umpqua country and on the 14th August he discovered a lily in fruit of which he sent seed (No. 609). From its description it was very probably the same as the lily he found in June 1853 near the headwaters of the Sacramento River. It was called *Lilium umpquense* by the Oregon Committee but was not described. Kellogg collected it in 1854 and described it in 1863 as *L. Washingtonianum*.

By 27th September he was at Mt. Shasta and on 29th September he discovered *Pinus Balfouriana* Jeffrey on a range between Shasta and Scott Valley. He went on by the Salmon Mountains to the Trinity Mountains where he collected cones and seeds of *Pinus monticola* Dougl. at 7,000 feet on 7th October. Here he turned north again and before the end of October collected *Tsuga Mertensiana* Carr. (which he had collected on the Mt. Baker range in 1851), *Abies magnifica* Murr. var. *shastensis* Lemm., *Pinus contorta* Dougl. var. *latifolia* Engelm., *Pinus Jeffreyi* Balf., and *Libocedrus decurrens* Torr. (*Thuja Craigana* Balf.).

On 4th December he had reached Mt. Jefferson and went on to Fort Vancouver where he wintered for some four months. Here he arranged his collections and sent off box No. 5 on 22nd January 1853 and package No. 6 on 15th February. He also sent word that he had despatched other three boxes, No. 7 (containing duplicates of some coniferae) by post, No. 8 by the Hudson's Bay Company via York Factory, and No. 9 (which did not contain any seed) by Cape Horn, but none of these three packages reached Edinburgh.

Chief Factor John Ballenden, who was in charge of Fort Vancouver at this time, was in Edinburgh in January 1854 and was present at a meeting of the Oregon Committee on the 31st of that month. There he said of Jeffrey that he thought him a very hard working, energetic and industrious person, and that he was much thought of by all who had seen him (64).

Jeffrey left Fort Vancouver for the south sometime about 6th April 1853, on which day he received 500 dollars from the Hudson's Bay Company (85). He travelled along the Umpqua Valley where he was collecting 23rd April to 3rd May, *Whipplea modesta* Torr. being one of his finds. On 15th May he was in the Rogue River Valley and on the Siskiyou Mountains by 23rd May.

By 10th June he had reached Mt. Shasta and next day at Clear Creek he discovered *Penstemon Jeffreyanus* Hook. The next six weeks he spent in the neighbouring mountains, going east to the Coast Range. Then he went west to the Sierra Nevada Range where he spent August and September, gradually going south. On 1st October he discovered *Cupressus Macnabiana* Murr.

By 7th October he had reached San Francisco where he drew a bill for £200 on the Association. He did some collecting after this in the neighbourhood, the latest recorded date being 20th November, on the Bay of San Francisco.

During part of his stay in San Francisco he was ill, but he spent some three weeks arranging the proceeds of his collecting, and his box No. 10 was sent off about the beginning of January 1854.

Jeffrey, however, must have lost interest in collecting, for the number of specimens and amount of seed sent home as the result of his work in 1853 was very small. Also, he did not even call at the British Consulate for his letters, though he had asked for them to be sent there.

He is said to have joined an American expedition which left San Francisco in the spring of 1854 for Fort Yuma to explore the Gila and Colorado Rivers, but what became of him is uncertain (46). According to A. C. Anderson (1), he was murdered by a Spanish outcast for his mules and scanty travelling appointments, while M'Nab states that he was killed when trading with the Indians (22). Coville, on the other hand, suggested that he probably died of thirst on the Colorado Desert (8). No authentic particulars of his death ever reached this country.

After his death a box containing some books, instruments, and many dried specimens was sent home in 1854 by the Hudson's Bay Company (22).

Another box of Jeffrey's material was still in the custody of the Hudson's Bay Company in 1860. In the records of the Company is a letter from Andrew Murray dated 19th November 1860 to William G. Smith, secretary of the Company, making enquiries about the box which was supposed to contain beetles and other specimens collected by Jeffrey (86). Mr. Smith replied: "I find that there is such a Box, which was given in charge of Mr. Pemberton, the Colonial Surveyor at Vancouver's Island, by Mr. Jeffrey, and forwarded by Mr. Pemberton to Mr. Roberts [accountant] of this House, to be held against Mr. Jeffrey's arrival in England. Mr. Jeffrey never having made his appearance, the Box remains in charge of Mr. Roberts on account of Mr. Jeffrey's representatives" (87).

Dr. James Hector (afterwards Sir) also heard about the box and wrote to Professor Balfour on 1st December 1860. "There is a box at the Hudson Bay House adressed to Jeffrey and it is just the one I wrote to you about that came home many years ago with Pemberton. The Company will only deliver it to the order of Jeffrey's representative so you had better get his father to give an order for its transmission to you. Mr. Smith says it contains a parcel addressed to you" (73). The contents and fate of this box are not known.

Murray's judgment of the results of the Expedition may well be allowed to stand. "Some subscribers to the Association remembering only that the third and last year of Jeffrey's engagement terminated unsuccessfully, and that they had just reason to be dissatisfied with his conduct during that year sometimes speak of his expedition as a failure. But it is unjust so to term it; and if they would only remember the quantities of novelties which were discovered and introduced through his means, they would rather treat it as a great success, which only assumes the aspect of a partial failure from the knowledge that, great as it was, it ought to have been, and might have been, greater still. No one could have worked more conscientiously and more perseveringly than Jeffrey did during the first two years of his employment, and bearing in mind that Menzies and Douglas went to a virgin country, his collections do him no discredit, even as compared with theirs" (35, p. 225; 36, p. 350).

When the Association was first formed Mr. Murray suggested to the Committee that a limited number of entomologists be admitted who would receive beetles instead of seed. Actually six were admitted.

Jeffrey, however, was not an entomologist and his collections of beetles were of small importance. Andrew Murray wrote a paper on those which fell to his share and those which Dr. W. M. Lowe received. This paper was read to the Royal Physical Society, Edinburgh, on

12th February 1853, and a summary of it appeared in a local newspaper (30), but it was apparently not published in full.

The insects included a number of blister flies, a *Carabus* (or allied genus) for which he proposed the name *apoplecticus* and a species of *Nemognatha*. There were also specimens of two which came home alive, feeding upon the cones, an *Anobium* and a *Cryptophagus* about which Murray says, "however acceptable to me as an entomologist, I can honestly say I would rather have dispensed with, for the sake of my horticultural friends, who may have suffered from their ravages."

Murray later made one of Jeffrey's specimens the type of *Brachypterus ferrugatus* (40).

Jeffrey also collected and sent home skins of a few birds which, as already mentioned, were given to Sir William Jardine. In the Minute Book of the Association the names of the following are recorded as having been identified by Sir William : 2 *Tetrao umbellus*, 1 *T. phasianellus*, 1 *Pica hudsonica*, 3 *Corythus enucleator* 2 ♂, 1 ♀, and 1 *Colaptes auratus*.

Sir William also quoted a specimen collected by Jeffrey near Jasper House as being the type of a new species which he called *Tetrao melanurus* (20).

The main object of the Expedition was to collect seeds of the conifers of the western coast, and when the specimens of the conifers had been identified, interest in the other plants apparently waned rapidly and although some of the novelties collected were made the types of new species, many others did not receive names till they had been rediscovered by other collectors. The very limited distribution of herbarium specimens also helps to explain the neglect which his collections suffered, as they were sent only to Sir Wm. J. Hooker and Dr. Lindley in order that they might help to identify the plants.

Alph. de Candolle received some fragments of plants from California from Professor Balfour in 1854 (71) which were probably of Jeffrey's collecting and one of these was made the type of *Navarretia dubia* by Brand in 1907. As recently as 1933 one of Jeffrey's specimens at Kew was made the type of *Talinum sediforme* by Poellnitz.

The Committee issued several circulars to subscribers (53–63) but only one of them contained new plant names ; this was the undated report of September 1853 consisting of 3 pages of text and 5 unnumbered plates, some copies having these coloured (60).

Hooker at first commented unfavourably upon the Report but later explained that he had been informed that it was meant for the use of subscribers only (18, 19). It has generally been considered however that the new names, of the conifers at least, were validly published, as these had illustrations of the cones as well as the short descriptions.

As the Report is a very scarce pamphlet, the text of the two pages giving the names of the plants with some descriptions is reprinted here in full.

[Page 1]

NAMES of the PLANTS of which Specimens or Seeds received from MR. JEFFREY in Boxes, Nos. 5 and 6.

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No. 393.—Pinus lasiocarpa. Hook. Cones ovate-cylindrical, about 6 inches long and 2 inches broad. (Hook. Flor. Boreali-Americana ii, p. 163.)

The Plate represents the cone, with its cedar-like appearance, a broad scale with a transversely-elongated rounded apophysis, stalk-like base and pointed bractlet, and the winged wrinkled seed.

,, 398.—Pinus flexilis. Mount Shasta, N. California. Lat. 41° 35′. Elevation 8–9,000 feet, on granite rocks. Tree 40 feet high, by one foot in diam., with a spreading top. High on the mountains it becomes a small shrub, 3 feet high, with a tabular top, so compact that a person can walk on it.

The rounded-ovate cone is represented in the Plate, with a scale, having a thickened pyramidal apophysis and a pointed umbo; leaves in a cluster of three, and a wingless seed. The leaves occur in clusters of 2, 3, 4, and .5

,, 430.—Abies Pattoniana. Jeffrey. Leaves $\frac{1}{2}$ to $\frac{3}{4}$ inch long, curved; cones crowded on the branches, elliptical, oblong, tapering slightly to both ends, from 2 to $2\frac{1}{4}$ inches long. Scales $\frac{4}{10}$ to $\frac{5}{10}$ inch in length, striated externally. Seeds small, winged.

Cascade Mountains, Lat. 42°. Elevation 6,000 feet.

In the Plate a cone is represented, with the leaves and winged seed.

,, 470.—Ribes Hookerianum. Oreg. Com. A large-flowered species from Vancouver's Island. 1852.

,, 478.—Claytonia Vancouverii. Oreg. Com. Vancouver's Island. April 24, 1852.

,, 578.—Clintonia elegans. Wallamet Valley. July 26, 1852.

,, 589.—Garrya Lindleyana. Oreg. Com. South Umpqua. Aug. 14, 1852.

,, 595.—Arctostaphylos pungens. H.B.K. On the Cascade Mountains, near the snow line. Aug. 4, 1852.

,, 599.—Cotoneaster? Californica. Oreg. Com. N. California. 1852.

,, 600.—Crucifera. Umpqua Valley.

,, 601.—Dodecatheon Californicum. Oreg. Com. N. California. Leaves very long and narrow.

,, 602.—Eriogonum Californicum. Oreg. Com. According to Lindley, near E. elatum.

,, 608.—Castanea Chrysophylla. Hook. Umpqua River.

No. 609.—Lilium Umpquense. Oreg. Com. Umpqua Valley. Flowering stalks, 7 feet high.

,, 610.—Oreodaphne Californica. South Umpqua River. An evergreen tree.

,, 611.—Xanthium spinosum. N. California.

,, 612.—Horkelia congesta. Umpqua Valley. Aug. 15, 1852.

,, 613.—Azalea calendulacea? Mich., according to Hooker. See Botany of Beechy's Voyage, p. 262. Height 6 feet. Lat. 43°.

,, 618.—Pinus Balfouriana. Oreg. Com. Leaves crowded in clusters of 2, 3, 4, and 5; about 1 inch long, curved, glaucous below. Cones dark brown, $4\frac{1}{2}$ to 5 inches long, narrowing gradually towards the summit. Scales $1\frac{1}{2}$ to $1\frac{3}{4}$ inch long, and about $\frac{1}{2}$ an inch broad. Apophysis flattened, 4-sided, umbo dark brown, transversely elliptical. Seed with a mottled spermoderm, winged, $\frac{3}{10}$ inch long, with a wing about an inch in length. Tree 80 feet high, by 3 in diam. Mountains between Shasta and Scots Valley. N. California. Lat. 40° 30′ to 41° 50′. Elevation 5–8,000 feet.

The Plate represents the cone, the leaves in a cluster of 4, and the mottle winged seed.

,, 624.—Cleome lutea? Hooker says, near C. lutea, but the leaves are trifoliolate and hairy. Shasta Valley, N. California.

,, 639.—Crucifera. Hooker says, "This is a new Arabis or perhaps a new genus, but there are no good flowers."

The Committee propose to call it Arabis Shastensis, or if it turn out to be a new genus, to dedicate it to Jeffrey, and call it Jeffreya Shastensis. Shasta Butt, at an elevation of 9,000 feet. Sept. 27, 1852.

Leaves spathulate, covered with glandular capitate hairs. Siliqua $1\frac{1}{2}$ inch long and $\frac{2}{10}$ inch broad. Seeds orbicular, surrounded by a membranous wing. Cotyledons accumbent.

[Page 2.]

,, 640.—Pentstemon Oregonense. Oreg. Com. S. Oregon.

,, 641.—Pentstemon Jeffreyanum. Oreg. Com. S. Oregon.

,, 643.—Eriogonum pyrolaefolium. Hook. MSS. Shasta Butt, N. California.

,, 644.—Eriogonum Shastense. Oreg. Com., near No. 643. Shasta Butt at the snow line.

,, 690a.—Arctostaphylos glauca. N. California. Sandy soil.

,, 690b.—Ribes Shastense. Oreg. Com. Shasta Butt. At an elevation of 7,000 feet on granite debris. Fruit round, covered with long prickles.

,, 691.—Horkelia Gordoni. Hook. MSS. Shasta Valley.

No. 704.—Eriodyction glutinosum, β. serratum. Benth. Scots Valley.

,, 705.—Pinus tuberculata. Lat. 41°, elevation 5,000 feet.

In the Plate are represented the forms of the cone, of the leaves, and of the winged seed.

,, [706.]—Pinus Monticola. Leaves 5 in a sheath, $1\frac{1}{2}$ to 2 inches long, cones about 6 inches long. Tree 150 feet high, $1\frac{1}{2}$ foot in diam. Trinity Mountains, N. California. Elevation 7,000 feet.

,, 730.—Juniperus dealbata of Douglas, according to Lindley. Shasta Mountains above the snow line, 2 feet high.

,, 731.—Pinus Jeffreyi. Oreg. Com. Leaves 8 to 9 inches long, in clusters of 3, with a brownish sheath about $1\frac{1}{4}$ inch long. Cones large ovate, about 8 inches long, and 11 inches in circumference at the broadest part, slightly unequal at the base. Scales $1\frac{1}{2}$ inch long, with a more or less pyramidal apophysis and a hooked umbo, the hook being $\frac{2}{10}$ of an inch long and slightly incurved. Seeds about $\frac{4}{10}$ of an inch in length, dark brown, winged; wings rather more than an inch in length beautifully marked with dark striae. Tree 150 feet high, and 4 in diam. Shasta Valley, N. California, Lat. 41° 30′.

In the Plate the cone is represented with the long leaves in a cluster of 3, and the large winged seed.

,, 740.—Pinus Murrayana. Oreg. Com. Leaves in pairs about $2\frac{1}{2}$ inches long,—sheaths $\frac{2}{10}$ long. Cones pendulous, between 2 and $2\frac{1}{2}$ inches long. Scales about an inch in length and $\frac{4}{10}$ inch broad, slightly narrowed at the base. Apophysis quadrangular, with an elevated umbo ending in a short spine, the point of which is directed to the base of the cone. Seeds winged, $\frac{3}{10}$ inch long. A tree 40 feet high, of a conical form, found on the Siskyon Mountains, in Lat. 43° 30′, at an elevation of 7,500 feet.

In the Plate are represented the cone, the leaves, and the seed.

,, 743.—Juniperus occidentalis of Douglas. Klamet. Lat. 41° 20′, at an elevation of 5,000 feet.

,, 750.—Thuja Craigana. Oreg. Com. Hooker says "quite new, perhaps No. 1972 of Hartweg's Californian plants, of which my specimen has only unripe fruit."

Lindley says, "a magnificent new species." It is well characterised by its large fruit. Klamet. Lat. 41° 20′. Elevation of 5,000 feet. Tree 40 feet high, 3 feet in diam., umbrella-shaped top.

Branchlets compressed, leaves quadrifariously imbricated, shining, lateral ones boat-shaped. Strobili brown, erect, more than an inch long and $\frac{4}{10}$ inch broad.

Two winged seeds at the base of each scale. Seeds $\frac{3}{10}$ inch long. Wing upwards of $\frac{1}{2}$ an inch in length.

The leaves, strobili, and seed are figured in the Plate.

No. 753.—Pinus, not yet received.

Letter A.—Quercus or Castanea. Oregon. Hooker says, "a very distinct form, but without fruit it cannot be determined with certainty. I suspect it is Quercus densiflora. Hook. Icon. Plant. t. 380."

,, B.—Quercus agrifolia *var.* N. California.

,, C.—Quercus agrifolia *var.* subintegra. N. California.

,, D.—Nuttallia cerasiformis. Hook. and Arn. Botany of Beechy's Voyage, t. 82. Nesqualley.

,, E.—Acer glabrum or circinatum ? N. California. Elevation of 6,000 feet. Small shrub, 3 feet high.

,, F.—Picea nobilis. Tree 200 feet high, and 4 in diam. Lat 41° 50′. Shasta Mountains. Elevation 6,000 feet.

,, G.—Pinus mitis. Nesqualley.

,, H.—Pinus ponderosa. Rose River Valley. Sandy soil.

,, I.—Pinus Lambertiana. Klamet. Lat. 42°.

,, K.—Prunus ? Californica. Oreg. Com.

The introduction to the Report, which is signed by Andrew Murray, as secretary, states that the descriptions of the newly-found conifers were by Professor J. H. Balfour, the figures being by R. K. Greville, so the authority for the new conifer names, as pointed out by Henry (15), should be quoted as "Balf. in Murray Bot. Exped. to Oregon."

Since several of the names cited in the Report were misidentifications and others have been superseded, the results of an examination of such of the original specimens as could be traced may be given.

393. Pinus lasiocarpa Hook. Jeffrey's plants were not this species but ABIES AMABILIS Forbes.

398. Pinus flexilis. This was not James' plant but P. ALBICAULIS Engelm. (1863).

430. Abies Pattoniana=TSUGA MERTENSIANA (Bong.) Carr.

470. Ribes Hookerianum (nom. nud.)=R. LOBBII A. Gray (1876).

478. Claytonia Vancouverii (nom. nud.)=CALANDRINIA MENZIESII (Hook.) Torr. et Gray.

578. Clintonia elegans=DOWNINGIA ELEGANS Torr.

589. Garrya Lindleyana (nom. nud.)=G. FREMONTII Torr. (1856).

595. Arctostaphylos pungens H.B.K. This was not Humboldt's plant but A. NEVADENSIS A. Gray (1878).

599. Cotoneaster californica (nom. nud.)—no specimen traced.

601. Dodecatheon californicum (nom. nud.)=*D. Meadia* Linn. fide Index Kewensis but no specimen traced. A package of seed was received (?=*D. Jeffreyi* L. van Houtte, 1867).

602. Eriogonum californicum (nom. nud.) = E. AFFINE Benth. (1856).
608. Castanea chrysophylla Hook.=CASTANOPSIS CHRYSOPHYLLA DC.
609. Lilium umpquense (nom. nud.)=L. WASHINGTONIANUM Kell. (1863).
610. Oreodaphne californica=UMBELLULARIA CALIFORNICA Nutt.
613. Azalea calendulacea ? Not Michaux's plant but RHODODENDRON OCCIDENTALE A. Gray.
618. Pinus Balfouriana still stands as a good species.
624. Cleome lutea ? Jeffrey's plant is CLEOME PLATYCARPA Torr.
639. Arabis shastensis or Jeffreya shastensis=ARABIS PLATYSPERMA A. Gray (1865).
640. Pentstemon oregonense (nom. nud.)—no specimen traced, though a package of seed was received.
641. Pentstemon Jeffreyanum—no specimen traced, probably the same as *P. Jeffreyanum* Hook. described from No. 1116 received the following year. A package of seed of this number was also received.
643. Eriogonum pyrolaefolium Hook MSS.—described by Hooker in Hook. Jour. Bot. v (1853), p. 395.
644. Eriogonum shastense (nom. nud.)=SPRAGUEA UMBELLATA Torr.
690a. Arctostaphylos glauca. This was not Lindley's plant but A. MANZANITA Parry (1887).
690b. Ribes shastense (nom. nud.)—no specimen traced.
691. Horkelia Gordoni Hook MSS. Hooker described *H. Gordoni* in Hook. Jour. Bot. v (1853), p. 341, from specimens collected by Gordon on the Upper Platte River—Jeffrey's plant is however IVESIA PICKERINGII A. Gray (1865).
704. Eriodictyon glutinosum serratum $\beta$=E. CALIFORNICUM (H. & A.) Greene.
705. Pinus tuberculata=P. ATTENUATA Lemm.
730. Juniperus dealbata. The specimens were J. COMMUNIS Linn. var. SAXATILIS Pall.
731. Pinus Jeffreyi. Still kept as a species although some botanists consider it to be a var. of *P. ponderosa* Dougl.
740. Pinus Murrayana=P. CONTORTA Dougl. var. LATIFOLIA Engelm.
750. Thuja Craigana=LIBOCEDRUS DECURRENS Torr.
F. Picea nobilis. This was ABIES MAGNIFICA A. Murr. var. SHASTENSIS Lemm.
G. Pinus mitis. Jeffrey's plant was P. CONTORTA Dougl.
K. Prunus ? californica (nom. nud.)—no specimen traced.

I have to acknowledge the kindness of the Governor and Committee of the Hudson's Bay Company in supplying extracts from their archives, which are published with their permission. I have also to thank Mr. F. R. S. Balfour, Mrs. A. C. U. Berry, Professor John Davidson,

Mr. J. M. Greenman, Mr. Lincoln Savage, Mr. Charles Piper Smith, and Professor Albert R. Sweetser for information on various points. To the Director of the Royal Botanic Gardens, Kew, and to the Professor of Botany at Cambridge I am indebted for the loan of herbarium sheets and also for help in the identification of specimens.

## JEFFREY'S COLLECTIONS.

Despite the fact that several short accounts of Jeffrey and of his discoveries have been published (4, 8, 9, 21, 22, 30, 46, 49) and that there are other scattered references, up till now his specimens have been examined by very few botanists. It has been thought therefore that it would be useful to have a list of the plants which Jeffrey collected or introduced. The specimens quoted below are in the Herbarium of the Royal Botanic Garden, except a few which are marked otherwise; they are arranged in the order of Bentham and Hooker's Genera Plantarum.

There are large gaps in the sequence of the numbers owing to the non-arrival of some of Jeffrey's consignments, while probably some sheets have been lost. It is probable also that some numbered packets of seed had no corresponding herbarium specimens. On the other hand there are many unnumbered specimens, some of which are no doubt those sent home with his books and instruments in 1854.

The notes on the amount of seed received of a number of the plants are taken from the Minute Book of the Association, in which the number of subscribers is given as 140, the seed being divided into 272 shares.

**Clematis Douglasii** Hook.
" Pend d'Oreille. May 22, 1851." No. 54.
**Anemone deltoidea** Hook.
" Puget Sound. June 7, 1852." Sine no.
**Anemone Drummondii** S. Wats.
" Manson Mountain. July 8, 1851." Sine no.
**Anemone Lyallii** Britt.
" Belle Vue Island. April 22, 1852." No. 472.
(Belle Vue is now San Juan.)
**Anemone quinquefolia** Linn.
" Umpqua Valley. April 24, 1853." Sine no.
**Ranunculus Eschscholzii** Schlect.
" Mount Baker. Sept. 8, 1851." Sine no.
**Caltha leptosepala** DC.
" Manson Mountain. July 7, 1851." Sine no.
**Trollius laxus** Salisb.
" Mount Baker." Sine no.

**Coptis laciniata** A. Gray

"Mountains south of Kootenay River. May 20, 1851." Sine no.

*Seed.* 20 small packets, distributed as *Macrotys racemosa.*

**Aquilegia flavescens** S. Wats.

"Flowers yellow; resembles *A. canadensis* of which it may be a variety. Similkameen River. July 15, 1851." No. 178.

*Seed.* Small quantity.

**Delphinium columbianum** Greene

"Puget Sound. June 11, 1852." Sine no.

**Delphinium Menziesii** DC.

"Umpqua Valley. April 24, 1853." No. 966.

**Delphinium nudicaule** Torr. et Gray

"Sierra Nevada Mountains, near the source of the Sacramento River." No. 1125a. (Herb. Kew.)

Field Note: "Lat. 41°, elev. 6,000 ft. Red volcanic rock, soil light sandy loam. Flowers scarlet, plant 18 inches."

*Seed.* 6 shares.

**Delphinium simplex** Dougl.

"Pend d'Oreille Country. May 24, 1851." No. 66.

**Delphinium trolliifolium** A. Gray

"Umpqua Valley. May 3, 1853." No. 999.

**Paeonia Brownii** Dougl.

"Rogue River Valley. May 15, 1853." Sine no., Oreg. Com. distrib. No. B of 1854.

*Seed.* 49 shares.

**Calycanthus occidentalis** Hook. et Arn.

"Oregon Plants. 1852–3." Sine no.

**Vancouveria hexandra** (Hook.) Morr. et Dec.

"Puget Sound. June 10, 1852." Sine no.

**Achlys triphylla** DC.

"Willamette. July 1852." Sine no.

**Darlingtonia californica** Torr.

"Oregon Plants. 1852–3." Sine no.

**Dendromecon rigida** Benth.

"East flank of Sierra Nevada Mountains. August 4, 1853." No. 1398.

*Seed.* 24 shares.

**Parrya Menziesii** Greene

"Oregon Plants. 1852–3." Sine no.

**Arabis Lyallii** S. Wats.

"Mount Baker. Sept. 7, 1851." Sine no.

**Arabis platysperma** A. Gray

"Shasta Butte, elevation 9,000 ft. Sept. 27, 1852." No. 639 (Type of *Arabis shastensis* Oreg. Com.).

*Seed.* Seed received.

**Streptanthus barbatus** S. Wats.

"Oregon Plants. 1852–3." Sine no.

**Streptanthus tortuosus** Kell. forma
" Oregon Plants. 1852–3." Sine no.
**Cardamine bellidifolia** Linn.
" Cascade Mountains. August 3, 1852." Sine no.
**Cardamine Lyallii** S. Wats.
" Mountains south of Kootenay River. May 20, 1851." No. 48.
**Dentaria macrocarpa** Nutt.
" Vancouver Island. April 19, 1852." No. 455 B.
**Dentaria tenella** Pursh
" Vancouver Island. April 19, 1852." No. 455 A.
**Physaria Geyeri** (Hook.) A. Gray
" Near Colville. May 16, 1851." No. 30.
**Lesquerella occidentalis** S. Wats.
" Oregon Plants. 1852–3." Sine no.
**Draba nemorosa** Linn.
" Vancouver Island. April 19, 1852." No. 451.
**Draba stenoloba** Ledeb.
" Mount Baker. Sept. 7, 1851." Sine no.
**Sisymbrium canescens** Nutt.
" Oregon Plants. 1852–3." Sine no.
**Erysimum asperum** (Nutt.) DC.
" Oregon Plants. 1852–3." Sine no.
**Thlaspi alpestre** Linn.
" Siskiyou Mountains. May 23, 1853." No. 1066.
**Thysanocarpus curvipes** Hook.
" Umpqua Valley. May 3, 1853." No. 1017.
**Athysanus pusillus** (Hook.) Greene
" Umpqua Valley. May 3, 1853." No. 1013.
**Cleome platycarpa** Torr.
" Shasta Valley, N. California. Sept. 25, 1852." No. 624.
Field Note : " Growing by soda springs."
*Seed.* Small package of seed.
**Viola Douglasii** Steud.
" South Umpqua. May 1, 1853." No. 969.
" Siskiyou Mountains. May 23, 1853." No. 1058.
*Seed.* 34 shares of No. 969 ; 55 shares of No. 1058.
**Viola lobata** Benth.
" Oregon Plants. 1852–3." Sine no.
**Viola praemorsa** Dougl.
" Vancouver Island. April 20, 1852." No. 462.
**Viola purpurea** Kell.
" Oregon Plants. 1852–3." Sine no.
**Viola sarmentosa** Dougl.
" Umpqua Valley. April 25, 1853." No. 979.
**Polygala cornuta** Kell.
" Oregon Plants. 1852–3." Sine no.

**Silene antirrhina** Linn.
" Pend d'Oreille Country. May 24, 1851." No. 63.
**Silene californica** Dur.
" Sierra Nevada Mountains. August 8, 1853." No. 1408
*Seed.* 17 shares.
**Silene Douglasii** Hook.
" Near Colville. May 19, 1851." No. 37.
" Mount Shasta. 1852." Sine no.
A specimen near this species :—
" Cascade Mountains. August 3, 1852." Sine no.
**Silene Hookeri** Nutt.
" Umpqua Valley. April 24, 1853." No. 962.
" Siskiyou Mountains. May 23, 1853." No. 1064.
*Seed.* 8 shares of No. 962 ; 5 shares of No. 1064.
**Silene** sp.
" Willamette Valley. 1852." Sine no.
**Cerastium arvense** Linn.
" Vancouver Island. April 20, 1852." Sine no.
**Arenaria californica** Brew.
" Oregon Plants. 1852–3." Sine no.
**Arenaria capillaris** Poir.
" Mountains south of Kootenay River. May 20, 1851." No. 51.
**Sagina occidentalis** S. Wats.
" Umpqua Valley. 1852." Sine no.
**Talinum sediforme** Poellnitz
" This plant resembles a Sedum in its appearance. It is found growing on dry sandy soil : the flowers are large, white, and produced in lax umbels. The plant is perennial, with strong running roots. Similkameen River. Lat. 49°. July 15, 1851." No. 177. (Type, in Herb. Kew. ; co-type in Herb. Edin.)
*Seed.* Small quantity.
**Calandrinia Menziesii** Torr. et Gray
" Vancouver Island. April 24, 1852." No. 478. (Type of *Claytonia Vancouverii* Oreg. Com.)
*Seed.* A package.
**Oreobroma columbiana** Howell
" Elevation 6,000 ft. perennial ; a fine alpine species, growing to the height of 9 inches ; flowers pink ; chasms of granite rocks. Campment-des-Femmes, lat. 49° 51′. July 19, 1851." No. 180.
*Seed.* Complete division.
**Claytonia filicaulis** Dougl.
" Oregon Plants. 1852–3." Sine no.
**Claytonia lanceolata** Pursh
" Mount Baker. Sept. 8, 1851." Sine no.
**Claytonia parvifolia** Moc.
" Vancouver Island. April 1, 1852." Sine no.
" Mount Baker. Sept. 4, 1851." Sine no.

**Claytonia spathulata** Dougl.

" Victoria, Vancouver Island. April 20, 1852." No. 463.

**Spraguea umbellata** Torr. (*Eriogonum shastense* A. Murr.).

" Shasta Butte at the snow line. Sept. 30, 1852." No. 644. (Type of *E. shastense*, in Herb. Kew; co-type in Herb. Edin.).

*Seed.* A package.

**Montia linearis** Greene (*Claytonia linearis* Dougl.)

" Vancouver Island. April 19, 1852." No. 459.

**Lewisia rediviva** Pursh

" Near Colville. May 19, 1851." No. 32.

" This pretty little plant is only found in dry arid places, growing on pure sand. The Indians eat its roots, and consider it to be one of the Great Spirit's greatest gifts to them. The Indian name is 'Petlum asd Ilse-ne-mare.' The roots have an agreeable flavour when boiled, rather bitter. I have no doubt that it will prove to be an excellent tonic. Flowers rose, large; leaves about an inch long, narrow and awl-shaped. Columbia, June 16, 1851." No. 32 [bis].

*Seed.* 78 packets of 12 seeds each (see also p. 3).

**Hypericum concinnum** Benth.

" Oregon Plants. 1852–3." Sine no.

**Sidalcea Hendersoni** S. Wats.

" Found growing in moist prairies; flowers purple; plant 18 inches high. Mullachard, Vancouver Island. July 29, 1851." No. 380.

*Seed.* Small quantity to each subscriber. Plants in flower grown from this seed were shown at a meeting of the Botanical Society of Edinburgh on June 8, 1854, under the name *S. oregana*, the name originally applied to the specimens (5).

**Hibiscus incanus** Wendl.

" Sacramento Valley. Aug. 10, 1853." No. 1424.

*Seed.* 49 shares.

**Geranium incisum** Nutt.

" Rogue River Valley. May 15, 1853." No. 1051.

**Limnanthes Douglasii** R. Br.

" Umpqua Valley. May 3, 1853." No. 1123.

**Limnanthes Macounii** Trel.

" Vancouver Island. April 20, 1852." No. 465.

**Pachystima Myrsinites** Rafin.

" Vancouver Island. April 19, 1852." Sine no.

**Rhamnus californica** Eschsch.

" Oregon Plants. 1852–3." Sine no.

**Ceanothus foliosus** Parry

" Sierra Nevada Mountains. July 2, 1853." No. 1201.

*Seed.* 11 shares.

**Ceanothus integerrimus** Hook. et Arn.

" Rogue River Valley. May 15, 1853." No. 1048.

**Ceanothus macrocarpus** Nutt.
" Umpqua Valley. April 24, 1853." No. 974.
**Ceanothus prostratus** Benth.
" Shasta Butte. 1852." Sine no.
**Ceanothus sanguineus** Pursh.
" Nisqually. June 8, 1852." No. 495.
**Aesculus californica** Nutt.
" Cleer Creek. June 11, 1853." No. 1117.
**Acer circinatum** Pursh
" Puget Sound. June 8, 1852." Sine no.
**Acer glabrum** Torr.
" Small shrub, 3 feet high. N. California at 6,000 ft." [1852]. Sine no., Oreg. Com. distrib. No. E.
*Seed.* A small parcel.
**Acer macrophyllum** Pursh
" Nisqually. June 8, 1852." Sine no.
**Rhus diversiloba** Torr. et Gray
" Puget Sound. June 10, 1852." Sine no.
**Lupinus albicaulis** Dougl. forma
" Sierra Nevada Mountains near the summit, lat. 39°. Aug. 1 1853." No. 1384.
**Lupinus albifrons** Benth. var. **flumineus** C. P. Sm.
" Umpqua Valley. May 3, 1853." No. 1011.
**Lupinus Andersoni** S. Wats.
" Sierra Nevada Mountains near the summit. Lat. 39°. Aug 1, 1853." No. 1384a.
**Lupinus caespitosus** Nutt.
" Near Colville. May 19, 1851." No. 40.
**Lupinus densiflorus** Benth. var. **palustris** (Kell.) C. P. Sm.
" Oregon Plants. 1852–3." Sine no.
**Lupinus laxispicatus** Rydb. var. **Whithamii** C. P. Sm.
" Near Colville. May 19, 1851." No. 47.
**Lupinus lepidus** Dougl.
" Puget Sound. June 7, 1852." Sine no.
" Puget Sound. June 10, 1852." Sine no.
**Lupinus leucophyllus** Dougl. var. **belliae** C. P. Sm.
" Near Colville. May 19, 1851." No. 33.
" Near Colville. May 24, 1851." Sine no.
**Lupinus leucophyllus** Dougl. var. **retrorsus** (Henderson)
" Pend d'Oreille. May 23, 1851." No. 58.
**Lupinus micranthus** Dougl.
" Umpqua Valley. April 24, 1853." No. 965.
**Lupinus microcarpus** Sims var. **scopulorum** C. P. Sm.
" Flowers yellow; plant 6 inches high, covered with downy hairs; growing on clay soil near Victoria, Vancouver Island, July 1851." No. 375.
*Seed.* 23 small packets.

**Lupinus minimus** Dougl.

"Growing on the margin of a lake in sandy soil, near Kootenay River. May 19, 1851." No. 46.

"Near Colville. May 16, 1851." Sine no.

*Seed.* 22 packets of 10 seeds each (of No. 46).

**Lupinus nanus** Benth. var. **carnosulus** (Greene) C. P. Sm.

"Umpqua Valley. April 24, 1853." No. 973.

**Lupinus oreganus** Heller

"Oregon Plants. 1852–3." Sine no.

**Lupinus ornatus** Dougl.

"Near Colville. May 19, 1851." Sine no.

"Pend d'Oreille. May 23, 1851." Sine no.

**Lupinus sericeus** Pursh

"Near Colville. May 19, 1851." Sine no.

"Pend d'Oreille. May 23, 1851." Sine no.

**Trifolium albopurpureum** Torr. et Gray

"Umpqua Valley. April 25, 1853." No. 981.

**Trifolium bifidum** A. Gray var. **decipiens** Greene.

"Umpqua Valley. May 3, 1853." No. 1016.

**Trifolium eriocephalum** Nutt.

"Oregon Plants. 1852–3." Sine no.

**Trifolium fimbriatum** Lindl.

"Vancouver Island. July 23, 1851." Sine no.

**Trifolium longipes** Nutt.

"Oregon Plants. 1852–3." Sine no.

**Trifolium macrocephalum** Poir.

"Siskiyou Mountains. May 23, 1853." No. 1057.

**Trifolium microcephalum** Pursh

"Puget Sound. June 8, 1852." Sine no.

**Trifolium polyodon** Greene

"Umpqua Valley. April 25, 1853." No. 987 B.

**Trifolium tridentatum** Lindl.

"Umpqua Valley. August 1852." Sine no.

**Trifolium** sp.

"Umpqua Valley. April 25, 1853." No. 987 A.

**Lotus denticulatus** Greene

"Columbia, near Colville. May 12, 1851." Sine no.

**Lotus humistratus** Greene

"Rogue River Valley. May 15, 1853." No. 1047.

**Hosackia crassifolia** Benth.

"Oregon Plants. 1852–3." Sine no.

**Psoralea physodes** Dougl.

"Vancouver Island. April 24, 1852." No. 486.

**Astragalus convallaria** Greene

"Near Colville. May 16, 1851." No. 28.

**Astragalus Purshii** Dougl.
" Near Colville. May 16, 1851." No. 29.
**Astragalus Purshii** Dougl. var. **tinctus** Jones
" Siskiyou Mountains. May 23, 1853." No. 1059.
**Oxytropis monticola** A. Gray (?)
" Thomson River. July 23, 1851." Sine no.
**Vicia americana** Muhl.
" Umpqua Valley. April 25, 1853." No. 988. (With remarkably broad leaflets.)
**Vicia americana** Muhl. var. **truncata** Brew.
" Vancouver Island. April 24, 1852." No. 483.
**Cercis occidentalis** Torr.
" Oregon Plants. 1852–3." Sine no.
**Prunus demissa** (Nutt.) Walp.
" Umpqua Valley. April 25, 1853." No. 985.
**Prunus subcordata** Benth.
" Umpqua Valley. April 24, 1853." No. 964.
" Umpqua Valley. April 25, 1853." No. 986.
" Siskiyou Mountains. May 23, 1853." No. 1053.
**Nuttalia cerasiformis** Torr. et Gray
" In fruit. Nisqually. June 8, 1852." Sine no., Oreg. Com. distrib. No. D.
*Seed.* A small parcel.
**Spiraea densiflora** Nutt.
" Sierra Nevada Mountains. July 12, 1853." No. 1250.
*Seed.* 138 shares.
**Spiraea dumosa** Nutt.
" Shasta Butte, 1852." Sine no.
**Spiraea pectinata** Torr. et Gray
" Growing at the margin of perpetual snows; flowers white. Perennial. Mountains east of Fraser River. July 19, 1851." No. 193.
*Seed.* 75 small packets.
**Neillia opulifolia** Benth. et Hook. f.
" Puget Sound. June 9, 1852." Sine no.
**Adenostoma fasciculatum** Hook. et Arn.
" Scott Mountain. June 18, 1853." No. 1163.
*Seed.* 114 shares.
**Rubus leucodermis** Dougl.
" Puget Sound. June 12, 1852." Sine no.
**Rubus pedatus** Sm.
" Mount Baker. Sept. 8, 1851." Sine no.
**Rubus ursinus** Cham. et Schlecht.
" Puget Sound. June 10, 1852." Sine no.
**Chamaebatia foliolosa** Benth.
" Sierra Nevada Mountains. Sept. 7, 1853." No. 1458.
*Seed.* 16 shares.

**Cercocarpus Douglasii** Rydb.
" On dry basalt rock, South Umpqua. Aug. 29, 1852." No. 703.
" Umpqua Valley. May 3, 1853." No. 1027.
**Dryas Drummondii** Richards.
" Similkameen Valley. July 2, 1851," Sine no.
**Geum macrophyllum** Willd.
" Oregon Plants. 1852–3." Sine no.
**Sieversia triflora** (Pursh) R. Br.
" Pend d'Oreille. May 23, 1851." Sine no.
**Potentilla daucifolia** Greene
" Oregon Plants. 1852–3." Sine no.
**Potentilla Drummondii** Lehm.
" Mountains west of the Columbia, lat. 49°. July 5, 1851." Sine no.
**Potentilla flabellifolia** Hook.
" Mountains west of the Columbia, lat. 49°. July 5, 1851." Sine no.
**Potentilla fruticosa** Linn.
" Mount Baker. Sept. 4, 1851." Sine no.
**Potentilla glandulosa** Lindl.
" Umpqua Valley. May 3, 1853." No. 1018.
**Sibbaldia procumbens** Linn.
" Mount Baker. Sept. 7, 1851." Sine no.
**Horkelia congesta** Hook.
" Umpqua Valley. Aug. 15, 1852." No. 612.
*Seed.* Small package.
**Ivesia Pickeringii** A. Gray
" Shasta Valley. Oct. 2, 1852." No. 691.
*Seed.* Small package.
**Rosa gymnocarpa** Nutt.
" Nisqually. June 8, 1852." No. 494.
**Pyrus diversifolia** Bong.
" Vancouver Island. April 24, 1852." Sine no.
**Crataegus Douglasii** Lindl.
" Umpqua Valley. May 3, 1853." No. 990.
**Heteromeles arbutifolia** Roem.
" Sierra Nevada Mountains. Sept. 27, 1853." No. 1479.
**Amelanchier florida** Lindl.
" Umpqua Valley. May 3, 1853." No. 991.
**Leptarrhena pyrolifolia** (D. Don) R. Br.
" By the margins of small streams; near the region of perpetual snow. Mountains east of Fraser River. Sept. 1851." No. 201.
*Seed.* Small quantity to each subscriber.
**Saxifraga bronchialis** Linn.
" Mount Baker. Sept. 7, 1851." Sine no.
**Saxifraga columbiana** Piper
" Near Colville. May 19, 1851." No. 41.

**Saxifraga ferruginea** Grah.
" Mount Baker." Sine no.
**Saxifraga integrifolia** Hook.
" Manson Mountain. July 7, 1851." Sine no.
" Vancouver Island. April 19, 1852." No. 457.
" Willamette Valley. July 4, 1852." Sine no.
**Saxifraga Nuttallii** Small
" Oregon Plants. 1852–3." Sine no.
**Saxifraga Tolmaei** Torr. et Gray
" Perennial. Mountains east of Fraser River. Sept. 17, 1851." No. 200.
" Shasta Butte. 1852." Sine no.
*Seed.* 63 small packets (of No. 200).
**Peltiphyllum peltatum** (Torr.) Engl.
" Clear Creek, N. California. June 11, 1853." No. 1113.
*Seed.* Full division.
**Boykinia major** A. Gray
" Oregon Plants. 1852–3." Sine no.
**Tiarella unifoliata** Hook.
" Mount Baker." Sine no.
**Tolmiea Menziesii** Torr. et Gray
" Mountains east of Fraser River. Sept. 12, 1851." Sine no
**Mitella pentandra** Hook.
" Mount Baker. Sept. 8, 1851." Sine no.
**Mitella trifida** R. Grah.
" Near Colville. May 19, 1851." Sine no.
**Heuchera glabra** Willd.
" Mount Baker. Sept. 4, 1851." Sine no.
**Whipplea modesta** Torr.
" Umpqua Valley. April 24, 1853." No. 971.
**Ribes bracteosum** Dougl.
" Fraser River. Aug. 1, 1851." Sine no.
**Ribes leptanthum** A. Gray
" Coast Range. July 1, 1853." No. 1280 (in Herb. Kew.)
**Ribes Lobbii** A. Gray
" Vancouver Island. April 21, 1852"' No. 470. (Type of *R. Hookerianum* Oreg. Com.)
*Seed.* Small package.
**Ribes speciosum** Pursh
" Umpqua Valley. May 3, 1853." No. 996.
**Ribes triste** Pall.
" Similkameen Valley. July 2, 1851." Sine no.
**Sedum stenopetalum** Pursh
" Umpqua Valley. May 3, 1853." No. 998.
**Epilobium latifolium** Linn.
" Columbia near Colville. May 14, 1851." No. 18.

**Epilobium luteum** Pursh ?
" Mount Baker. Sept. 4, 1851." Sine no.
**Epilobium obcordatum** A. Gray
" Coast range. Lat. 42°. July 2, 1853." No. 1281.
**Epilobium paniculatum** Nutt. var. **jucundum** (A. Gray) Trelease.
" Umpqua Valley. July 10, 1852." Sine no.
**Zauschneria californica** Presl
" Oregon Plants. 1852–3." Sine no.
**Oenothera contorta** Dougl. var. **flexuosa** (Nels.) Munz
" Oregon Plants. 1852–3." Sine no.
**Micrampelis oregana** (Torr. et Gray) Greene
" Puget Sound. June 8, 1852." No. 493.
**Sanicula arctopoides** Hook. et Arn.
" Vancouver Island. April 20, 1852." No. 469.
**Sanicula bipinnatifida** Dougl.
" Umpqua Valley. April 24, 1853." No. 975.
**Lomatium caruifolium** (Torr. et Gray) Coult. et Rose
" Oregon Plants. 1852–3." Sine no.
**Lomatium macrocarpum** Coult. et Rose (*Peucedanum macrocarpum* Nutt.)
" Siskiyou Mountains. May 23, 1853." No. 1062.
**Lomatium nudicaule** (Pursh) Coult. et Rose
" Oregon Plants 1852–3." Sine no.
**Lomatium utriculatum** (Nutt.) Coult. et Rose
" Vancouver Island. April 19, 1852." No. 454.
" Umpqua Valley. April 24, 1853." No. 968.
**Lomatium** sp. cf. *L. ambiguum*
" Siskiyou Mountains. May 23, 1853." No. 1052.
**Lomatium** sp.
" Umpqua Valley. April 25, 1853." No. 984.
**Leptotaenia californica** Nutt.
" Oregon Plants. 1852–3." Sine no.
**Leptotaenia dissecta** Nutt.
" Umpqua Valley. April 25, 1853." No. 983.
**Aralia nudicaulis** Linn.
" Near Colville. May 19, 1851." Sine no.
**Cornus Nuttallii** Aud.
" Umpqua Valley. April 25, 1853." No. 978*.
" Umpqua Valley. May 3, 1853." Sine no.
**Garrya Fremontii** Torr. (*G. Lindleyana* Oreg. Com.)
" South Umpqua. Aug. 13, 1852." No. 589. (Type of *G. Lindleyana*.)
*Seed.* A package.
**Viburnum ellipticum** Hook.
" Umpqua Valley. May 3 " [1853]. No. 1024.
" Umpqua Valley. May 3 " [1853]. No. 1025.

**Symphoricarpus oreophilus** A. Gray
" Mountains near Kootenay River. June 8, 1851." Sine no.

**Symphoricarpus racemosus** Michx.
" Nisqually. June 8, 1852." No. 497.

**Linnaea borealis** Linn. var. **americana** Rehder
" Vancouver Island. April 23, 1852." Sine no.

**Lonicera californica** Torr. et Gray
" Puget Sound. June 13, 1852." Sine no.

**Lonicera ciliosa** Poir.
" Pend d'Oreille. May 22, 1851." No. 57.
" Puget Sound. June 13, 1852." Sine no.

**Lonicera conjugialis** Kellogg
" Oregon Plants. 1852–3." Sine no.

**Valeriana ceratophylla** (Hook.) Piper
" Pend d'Oreille. May 23, 1851." Sine no.

**Grindelia cuneifolia** Nutt.
" Vancouver Island. Oct. 7, 1851." Sine no.

**Haplopappus** (§ Ericameria) sp.
" Cascade Mountains. July 4, 1852." Sine no.

**Aster shastensis** A. Gray
" Shasta Butte. Margin of perpetual snow, 1852." Sine no.

**Aster** sp. cf. *A. Fremontii* (Torr. et Gray) A. Gray
" Rogue River Valley. Oct. 2, 1852." Sine no.

**Erigeron salsuginosus** A. Gray
" Manson Mountain. July 7, 1851." Sine no.

**Erigeron uniflorus** Linn.
" Found on the summit of a mountain 7,000 ft. high, in lat. 50° 23′; east of Fraser River. Perennial. July 1851." No. 185.
*Seed.* Small quantity.

**Xanthium spinosum** Linn.
" Dry sandy soil. N. California. Sept. 3, 1852." No. 611.
*Seed.* Package of seed.

**Calycadenia truncata** DC.
" Klamath. Sept. 9, 1852." Sine no.

**Hemizonella minima** A. Gray
" Klamath. Sept. 11, 1852." Sine no.

**Baeria hirsutula** Greene
" Umpqua Valley. May 3, 1853." No. 995.

**Gaillardia aristata** Pursh
" Pend d'Oreille. May 23, 1851." Sine no.

**Artemisia** sp.
" Found on the margin of a small stream, at the base of Mount Baker, growing on sandy soil. Perennial. Oct. 2, 1851." No. 290.
*Seed.* 46 small packets.

**Crocidium multicaule** Hook.
" Vancouver Island. Annual. April 19, 1852." No. 452.
**Senecio** sp.
" Pend d'Oreille. May 22, 1851." No. 55.
**Cacaliopsis nardosmia** A. Gray
" Umpqua Valley. May 3, 1853." No. 1001.
**Downingia elegans** Torr. (*Clintonia elegans* Dougl.)
" Willamette Valley. July 26, 1852." No. 578.
*Seed.* A package.
**Lobelia inflata** Linn.
" Oregon Plants. 1852–3." Sine no.
**Vaccinium ovatum** Pursh
" Vancouver Island. April 24, 1852." Sine no.
**Vaccinium parvifolium** Sm.
" Puget Sound. June 12, 1852." Sine no.
**Vaccinium scoparium** Leiberg
" Mount Baker. Sept. 7, 1851." Sine no.
**Vaccinium uliginosum** Linn.
" Oregon Plants. 1852–3." Sine no.
**Arctostaphylos Manzanita** Parry
" North California." No 690a.
Field Note: " Sandy soil; North California. 1852."
*Seed.* Package of seed.
**Arctostaphylos nevadensis** A. Gray
" Found on the Cascade Mountains near the snow line. Aug. 4, 1852." No. 595.
Field Note: " Cascade Mountains; lat. 43°, elevation 7,000 ft."
*Seed.* Small package.
**Arctostaphylos tomentosa** (Pursh) Dougl.
" Mountains south of Umpqua Valley, Oregon. May 3, 1853." No. 1028.
**Gaultheria ovatifolia** A. Gray
" Mount Baker. Sept. 7, 1851." Sine no.
**Leucothoe Davisiae** Torr.
" Sierra Nevada Mountains. Sept. 24, 1853." No. 1473.
*Seed.* 60 shares.
**Kalmia glauca** Ait.
" Vancouver Island. April 24, 1852." No. 487.
**Kalmia glauca** Ait. var. **microphylla** Hook.
" Mount Baker. Sept. 7, 1851." Sine no.
**Cladothamnus pyrolaeflorus** Bong.
" Found growing in the same locality with 206 only at a greater elevation. It is found along the margin of perpetual snow that is in lat. 50° about 8,000 feet above the sea. This is a small evergreen shrub growing on the shelves of the rocks in compact patches of not more than a foot in height. I was too late to procure it in flower.

But judging from some stray petals that I found on the ground the flower is scarlet and about the same size as *Rhododendron hirsutum*. Sept. 20, 1851." No. 207.

*Seed.* 21 small packets.

**Rhododendron albiflorum** Hook.

" Found on high mountains east of Fraser River in lat. 50°. Elevation 6,000 feet. It is a deciduous shrub growing about 3 feet high in moist places where the soil is chiefly composed of vegetable loam. I could not procure it in flower. My Indian guide told me that the flowers were white. Sept. 20, 1851." No. 206.

*Seed.* 29 small packets.

**Rhododendron californicum** Hook.

" Coast range. Lat. 42°. July 2, 1853." No. 1282.

**Rhododendron occidentale** A. Gray

" South Umpqua. Aug. 11, 1852." No. 613.

Field Note: " Not seen by me in flower. I was informed by those who had seen it, that its flowers are pink, and very large. It grows to the height of 6 feet, on sandy soil, by the sides of small streams. Lat. 43°."

" Umpqua Valley. May 3, 1853." No. 1125c.

*Seed.* Package (of No. 613).

**Menziesia ferruginea** Sm.

" Found in lat. 50° near Fraser River in swamps at the base of the mountains, growing to the height of 5 feet. Leaves deciduous, flowers not seen. Sept 25, 1851." No. 208.

*Seed.* Small quantity to each subscriber.

**Pyrola picta** Sm.

" Vancouver Island. July 27, 1851." Sine no.

**Dodecatheon cruciatum** Greene

" Vancouver Island. April 19, 1852." Sine no.

**Dodecatheon Jeffreyi** L. van Houtte

" Oregon Plants. 1852–3." Sine no.

*Seed.* This was first described from cultivated plants, so seed must have been sent (cf. 21, p. 551; 22, p. 333).

**Dodecatheon pauciflorum** Greene

" Pend d'Oreille. May 23, 1851." Sine no.

**Trientalis europaea** Linn. var. **arctica** (Hook.) Ledeb.

" Vancouver Island. April 24, 1852." Sine no.

**Trientalis latifolia** Hook.

" Nisqually. June 8, 1852." Sine no.

**Styrax californicum** Torr.

" Sierra Nevada Mountains. July 2, 1853." No. 1200.

*Seed.* 70 shares, 2 seeds each.

**Fraxinus oregana** Nutt.

" Umpqua Valley. May 3, 1853." No. 1023. (Ticket rather illegible.)

**Asclepias cordifolia** (Benth.) Jepson
" Rogue River Valley. May 15, 1853." No. 1050.
**Asclepias mexicana** Cav.
" South Umpqua. July 20, 1852." Sine no.
**Erythraea venusta** A. Gray
" Shasta Valley. 1852." Sine no.
**Gentiana sceptrum** Griseb.
" Banks of Fraser River, near Fort Hope. Aug. 11, 1851." No. 260.
*Seed.* 14 small packets.
**Frasera fastigiata** (Pursh) Heller
" Pend d'Oreille Country. May 24, 1851." No. 67.
**Phlox adsurgens** Torr.
" Oregon Plants. 1852–3." Sine no.
**Phlox Douglasii** Hook.
" Mountains between Columbia and Fraser Rivers. July 23, 1851." Sine no.
**Phlox speciosa** Pursh
" Near Colville. May 16, 1851." No. 25.
" Near Colville. May 16, 1851." No. 27.
**Phlox** cf. *P. longifolia* Nutt. var. *humilis* (Dougl.) Brand
" Mount Baker. Sept. 7, 1851." Sine no.
**Gilia bicolor** (Nutt.) Brand
" Belle Vue Island. April 22, 1852." No. 475.
**Gilia congesta** Hook.
" South Umpqua. July 19, 1852." Sine no.
**Gilia dichotoma** Benth.
" Oregon Plants. 1852–3." Sine no.
**Gilia leptalea** (A. Gray) Greene
" Sierra Nevada Mountains. Sept. 24, 1853." No. 1474a.
**Gilia pungens** (Torr.) Benth.
" Similkameen Valley. July 12, 1851." Sine no.
**Navarretia dubia** Brand
" Sierra Nevada Mountains. September 24, 1853." No. 1474. (Type in Herb. De Candolle; co-type in Herb. Edin.).
**Polemonium carneum** A. Gray
" May 3, 1853." No. 992.
" Applegate River, S. Oregon. July 20, 1853." No. 1236.
*Seed.* 33 shares (of 1236).
**Hydrophyllum capitatum** Dougl.
" Siskiyou Mountains. May 23, 1853." No. 1055.
**Phacelia curvipes** Torr.
" Oregon Plants. 1852–3." Sine no.
**Phacelia sericea** A. Gray (*Eutoca sericea* Graham)
No specimen traced but a plant in flower grown from Jeffrey's seed was shown at a meeting of the Botanical Society of Edinburgh, June 1855 (6).

**Hesperochiron californicus** (Benth.) Wats.
" Headwaters of the Sacramento River. June 27, 1853." No. 1135.
*Seed.* 72 shares.

**Hesperochiron pumilus** (Dougl.) T. C. Porter
" Siskiyou Mountains. May 23, 1853." No. 1054.

**Eriodictyon californicum** (H. et A.) Greene
" Scott Valley. Oct. 6, 1852." No. 704.
*Seed.* Small package.

**Nama Lobbii** A. Gray
" Oregon Plants. 1852–3." Sine no.

**Cynoglossum grande** Dougl.
" Umpqua Valley. April 25, 1853." No. 979*.

**Cynoglossum** sp.
" Kootenay River. June 7, 1851." Sine no.

**Lappula ciliata** (Dougl.) Greene
" Forks of Okanagan River. July 2, 1851." Sine no.

**Allocarya californica** (DC.) Greene (*sensu lato*)
" Vancouver Island. April 20, 1852." No 464. (Fruit immature.)

**Allocarya chorisiana** (Cham.) Greene ?
" Umpqua Valley. May 3, [1853]." No. 1021.

**Allocarya hispidula** Greene
" Near Colville. May 19, 1851." No. 39.

**Cryptanthe affinis** (A. Gray) Greene ?
" Umpqua Valley. April 25, 1853." No. 982.

**Cryptanthe flaccida** (Dougl.) Greene ?
" Vancouver Island. April 24, 1852." No. 488.

**Cryptanthe Torreyana** (A. Gray) Greene
" Near Colville. May 19, 1851." No. 38.

**Mertensia ciliata** G. Don
" Near Colville. May 19, 1851." No. 36.

**Mertensia paniculata** G. Don
" Near Colville. May 19, 1851." No. 35.

**Amsinckia spectabilis** Fisch. et Mey. (*sens latiss.*)
" Umpqua Valley. May 3 " [1853]. No. 1022.

**Solanum Pseudocapsicum** Linn.
" East flank of Sierra Nevada Mountains. Aug. 4, 1853." No. 1400.
*Seed.* 30 shares.

**Penstemon acuminatus** Dougl.
No specimen traced but a plant in flower grown from Jeffrey's seed was shown by W. W. Evans at a meeting of the Botanical Society of Edinburgh, July 1856 (7).

**Penstemon confertus** Dougl.
" Near Colville. May 16, 1851." Sine no.
" Pend d'Oreille. May 22, 1851." No. 56.
" Mountains between Columbia and Fraser Rivers. July 3, 1851." Sine no.
" Similkameen Valley. July 4, 1851." Sine no.

**Penstemon deustus** Dougl.

"Near Colville. May 19, 1851." No. 34.

**Penstemon diffusus** Dougl.

"Growing out of the chasms of the rocks, perennial. Elevation 6,000 ft. Near Campment-des-Femmes. Lat. 49° 50′. July 18, 1851." No. 183.

*Seed.* A few seeds to each subscriber.

**Penstemon fruticosus** Greene (*P. Scouleri* Dougl.)

"Columbia near Colville. May 14, 1851." No. 20.

"Found growing on dry rocky places; flowers purple, perennial, 1 foot high. Columbia near Colville. May 15, 1851." No. 27.

*Seed.* Complete division (of No. 27).

**Penstemon glaber** Pursh

"Pend d'Oreille Country. May 24, 1851." No. 68.

**Penstemon Jeffreyanus** Hook.

"Clear Creek, North California. June 11, 1853." No. 1116. (Type, in Herb. Kew.; co-type in Herb. Edin.)

*Seed.* 39 shares, 3 capsules each.

**Penstemon Menziesii** Hook.

"Summit of Manson Mountain east of Fraser River. July 20, 1851." No. 188.

"Shasta Butte, 1852." Sine no. (Form not quite typical.)

*Seed.* 83 small packets (of No. 188).

**Penstemon Newberryi** A. Gray

"Sierra Nevada Mountains. Lat. 38°. Alt. 8,000 ft. Sept. 18, 1853." No. 1336.

*Seed.* 20 shares.

**Penstemon ovatus** Dougl.

"Oregon Plants. 1852–3." Sine no.

**Penstemon pruinosus** Dougl.

"Near the base of the mountain, perennial; along the bank of a small stream on clay soil. Campment-des-Femmes. July 18, 1851." No. 184.

*Seed.* 60 small packets.

**Penstemon Roezlii** Regel

"Umpqua Valley. May 3, 1853." No. 1003.

"East flank of Sierra Nevada Mountains. Aug. 4, 1853." No. 1397.

*Seed.* 17 shares (of 1397).

**Collinsia tinctoria** Hartw.

"Oregon Plants. 1852–3." Sine no.

**Mimulus coccineus** Congdon

"Sierra Nevada Mountains. Sept. 25, 1853." No. 1477.

*Seed.* 2 shares.

**Mimulus Lewisii** Pursh

"Mount Baker. Sept. 5, 1851." Sine no.

**Mimulus primuloides** Benth.
" Sierra Nevada Mountains. Sept. 25, 1853." No. 1476.
*Seed.* 13 shares.

**Synthyris reniformis** Benth.
" Umpqua Valley. April 24, 1853." No. 967.
*Seed.* 15 shares.

**Veronica peregrina** Linn.
" Swamps near Victoria, Vancouver Island. April 25, 1852." No. 491.

**Castilleja** sp.
" Near Colville. May 16, 1851." No. 22.

**Orthocarpus** sp.
" Belle Vue Island. April 22, 1852." No. 474.

**Pedicularis densiflora** Benth.
" Sierra Nevada Mountains. June 26, 1853." No. 1124c.
*Seed.* 19 shares.

**Pedicularis racemosa** Doug.
" Forks of Okanagan River. Lat. 49°. July 9, 1851." No. 60.
*Seed.* Small quantity.

**Orobanche uniflora** Linn.
" Near Colville. May 16, 1851." No. 24.

**Monardella villosa** Benth. var. **Sheltonii** Jepson
" Cascade Mountains. July 23, 1852." Sine no.

**Micromeria Douglasii** Benth.
" Vancouver Island. Aug. 20, 1851." Sine no.

**Salvia carnosa** Dougl.
" Pend d'Oreille. May 23rd, 1851." No. 59.

**Scutellaria augustifolia** Pursh
" Oregon Plants. 1852–3." Sine no.

**Mirabilis Greenii** Wats.
" East flank of Sierra Nevada Mountains. August 3, 1853." No. 1393.
*Seed.* 55 shares.

**Abronia umbellata** Lam.
" Herb, perennial. Stem trailing; leaves cordate, fleshy, and viscous; flowers golden yellow, produced in compact umbels at the axils of the leaves on rather long slender stalks; flowers sweet-scented. Vancouver Island on sandy soil on the sea-shore. This is the finest plant that I have seen on Vancouver Island. August 1851." No. 400.
*Seed.* Small quantity to each subscriber.

**Pentacaena ramosissima** Hook. et Arn.
" Oregon Plants. 1852–3." Sine no.

**Eriogonum affine** Benth.
" South Umpqua. Aug. 14, 1852." No. 602. (Type of *E. californicum* Oreg. Com.)
*Seed.* A package.

**Eriogonum compositum** Dougl.
" Pend d'Oreille. May 24, 1851." No. 65.
**Eriogonum heracleoides** Nutt.
" Near Colville. May 16, 1851." No. 24*.
" Kootenay River. June 8, 1851." Sine no.
**Eriogonum pyrolaefolium** Hook.
" Shasta Butte, N. California. Sept. 30, 1852." No. 643. (Type, in Herb. Kew. ; co-type in Herb. Edin.)
**Eriogonum umbellatum** Torr.
" Campment-de-Shiveroux. July 12, 1851." Sine no.
**Eriogonum umbellatum** Torr. var. **stellatum** (Benth.) Jones
" Shasta Butte. 1852." Sine no.
**Eriogonum umbellatum** Torr. var.
" Oregon Plants. 1852–3." Sine no.
**Chorizanthe stellulata** Benth.
" Siskiyou Mountains. May 23, 1853." No. 1060.
**Polygonum Paronychia** Cham. et Schlecht.
" Vancouver Island. July 27, 1851." Sine no.
**Polygonum shastense** Brew.
" Shasta Butte, 1852." Sine no.
**Asarum caudatum** Lindl.
" Near Colville. May 19, 1851." No. 45.
**Umbellularia californica** Nutt. (*Oreodaphne californica* Nees)
" An evergreen tree found on the river bank, South Umpqua River. Aug. 16, 1852." No. 610.
*Seed.* Seeds rotten, not distributed.
**Comandra umbellata** Nutt.
" Oregon Plants. 1852–3." Sine no.
**Comandra** sp.
" Willamette. July 1, 1852'" Sine no.
**Betula pumila** Linn. var. **glandulifera** Regel
" Vancouver Island. April 24, 1852." No. 485.
**Quercus chrysolepis** Liebm.
" N. California. Sept. 20, 1852." Sine no.
" N. California. Oct. 4, 1852." Oreg. Com. distrib. No. B.
*Seed.* Seeds received of " B " ; distributed as *Q. agrifolia* var.
**Quercus densiflora** Hook. et Arn.
" Oregon. Aug. 7, 1852." Oreg. Com. distrib. No. A.
*Seed.* Seeds received.
**Quercus Engelmanni** Greene
" N. California. Sept. 20, 1852." Oreg. Com. distrib. No. C.
*Seed.* Seeds received, distributed as *Q. agrifolia* var. *subintegra*.
**Quercus Sadleriana** R. Br. Campst.
" Oregon Plants. 1852–3." Sine no.
**Quercus Wislezeni** A. DC.
" Oregon Plants. 1852–3." Sine no.

**Castanopsis chrysophylla** A. DC. (*Castanea chrysophylla* Dougl.)

"South Umpqua. July 10, 1852." Sine no.

"Evergreen tree, 40 feet high; on elevated situations, on reddish loamy soil, Umpqua. Aug. 5, 1852." No. 608.

*Seed.* Seeds received of 608.

**Libocedrus decurrens** Torr. (*Thuja Craigana* Balf.)

"Scott River on dry sandy soil. Lat. 41°. Oct. 29, 1852." No. 750. (Type of *Thuja Craigana* Balf.)

*Seed.* Seeds were received.

Plate in Oreg. Com. Rept.

**Thuja plicata** D. Don (*T. gigantea* Nutt.)

"Vancouver Island." Sine no.

*Seed.* Seeds were received and plants raised from them—fide J. M'Nab (21, p. 503; 22, p. 330) and Nicholson (42).

**Chamaecyparis Lawsoniana** (A. Murr.) Parl. (*Cupressus Lawsoniana* A. Murr.).

"Oregon Plants. 1852–3." Sine no.

**Chamaecyparis nootkatensis** (Lamb.) Spach (*Cupressus nootkatensis* Lamb.)

"Vancouver Island." Sine no.

**Cupressus Macnabiana** A. Murr.

No. 1481 (in Herb. Kew.)

Field Note: "Sierra Nevada Mountains, growing in barren sandy places. Tree 15 ft. high, 1 ft. diameter. Oct. 1, 1853." (cf. 13.)

*Seed.* 87 shares.

**Juniperus californica** Carr. (*J. pyriformis* Lindl.)

"Summit of Sierra Nevada Mountains. Sept. 25, 1853." No. 1475.

Field Note: "Tree 20 ft. high, 2 ft. diameter. Granite rocks, 8,000 ft., lat. 39°."

*Seed.* 120 shares, 3 seeds each.

**Juniperus communis** Linn. var. **saxatilis** Pall.

"Shasta Butte, elevation 9,000 ft., found above the line of perpetual snow growing in chasms of the rocks. A small shrub about 2 ft. high. Oct. 12." 1852. No. 730.

**Juniperus occidentalis** Hook.

"Klamath River, lat. 43°. Oct. 25, 1852." No. 743.

Field Note: "Klamath, 41° 20′. Found growing on desert tracts of country, at an elevation of 5,000 ft., where there was scarcely any other vegetable production the soil being almost entirely composed of sand, and very dry. The few springs met with were strongly impregnated with soda. This tree is 40 feet high, with an umbrella-shaped top and sometimes 3 feet in diameter. Foliage covered with a silvery bloom. It has a strong disagreeable odour."

*Seed.* Package of seed.

**Juniperus scopulorum** Sarg.

"Belle Vue Island. April 22, 1852." No. 471.

**Taxus brevifolia** Nutt.

" Puget Sound. June 8, 1852." No. 496.

**Pinus albicaulis** Engelm. (*P. flexilis* Balf. non James)

" Found on the summit of a mountain near Fort Hope, Fraser River. I could only find a few specimens of this tree on which there were cones ; the few that were, Corvus Columbianus had deprived them of nearly all their seeds. Leaves in fives, short and rigid ; cones small, nearly round ; bark smooth ; tree 30 feet high, 1 foot diameter ; growing on granite decayed. Lat. 50° ; elevation, 7,000 feet. Sept. 23, 1851." No. 398.

Another gathering was made the following year, with the same number.

Field Note : " Mount Shasta, N. California ; lat. 41° 35′, elevation from 8,000 to 9,000 feet. This species I likewise forwarded in case No. 3. I was not fortunate enough last year to procure a supply. This season I found it more abundantly on a snow-capped mountain in N. California, 14,000 feet high ; its lowest range on this mountain being 8,000 feet, its highest being 9,000. When first it makes its appearance on the mountain, it is a small tree about 40 feet high, by 1 foot in diameter, with a wide-spreading top, the branches being very strong and much contorted. It dwindles down to a small shrub at the upper part of its range, not more than 3 feet high, of a tabular form, so compact that a person can walk along the top of the trees. Found growing on granite rocks, where the soil is very scanty " (1852).

No specimen of this 1852 gathering has been traced.

*Seed.* Of the 1851 gathering only 22 perfect seeds were received, of the 1852 gathering both cones and seeds were received.

This was wrongly identified as *P. flexilis* James in the Oreg. Com. Rept., p. 1 and tab., and the seed was distributed under this name.

**Pinus attenuata** Lemm. (*Pinus tuberculata* Gordon)

" Salmon River Mountains, lat. 41°. Oct. 1, 1852." No. 705.

Field Note : " Lat. 41°, elevation 5,000 feet. Leaves three in a sheath, slender, light green ; cones ovate, crowded together, when matured of an orange colour, very hard, adhering to the tree. In several instances I numbered twenty whorls of cones on the trunk, being the growth of as many years. The branches are covered with them in the same way as the trunk. The branches are long and slender, growing nearly horizontally, the points turning upwards. Bark smooth, of a brown colour ; timber red and hard ; tree of a conical form. The few specimens that I saw did not appear to be more than thirty years old. They were about 40 feet high, growing on poor sandy soil. Oct. 1, 1852."

Figured as *P. tuberculata* in Oreg. Com. Rept.

*Seed.* 2 bags of cones and seeds.

**Pinus Balfouriana** Jeffrey

" Found on a range of mountains between Shasta and Scott Valley, lat. 41° 30′." No. 618 (Type).

Field Note: "Lat. 40° 30′, elevation 5,000 to 8,000 feet. Found on a range of mountains between Shasta and Scott Valley, N. California. Leaves 2, 3, 4 and 5 in a sheath, glaucous, triangular, 1¼ inch long; cones cylindrical, smooth, produced at the points of the branches, generally singly; branches pendulous and flexible. Bark smooth, of a reddish colour; timber white, tough, and fine-grained; tree 80 feet high by 3 in diameter. Growing on volcanic debris. Sept. 29, 1852."

*Seed.* Cones and seeds.

Plate of cone, leaves, and seed in Oreg. Com. Rept.

**Pinus Banksiana** Lamb.

"Hill River. Aug. 29, 1850." Sine no.

*Seed.* 105 cones in a green state.

**Pinus contorta** Dougl.

"Columbia, near Colville. May 14, 1851." Sine no.

"Nisqually. June 8, 1852." Sine no., Oreg. Com. distrib. No. G.

"Sierra Nevada Mountains. Sept. 26, 1853." No. 1478.

*Seed.* Seeds received of 1852 collection, distributed as *Pinus mitis*.

**Pinus contorta** Dougl. var. **latifolia** Engelm. (*Pinus Murrayana* Balf.; *Pinus Tamrac* A. Murr.)

"Found on the Siskiyou Mountains in lat. 43° 30′, elevation 7,500 feet, growing on moist, deep, loamy soil. This, all the cones I could procure. Tree 40 feet high of a conical form. Oct. 21 [1852]." No. 740. (Type of *Pinus Murrayana* Balf.) (Lat. 43° 30′ is evidently a mistake for 41° 30′.)

"Same as 740 of 1852 collection. Summit of Sierra Nevada Mountains near Walker's Pass, Sept. 20, 1853." No. 740.

*Seed.* Seeds were received of the 1852 gathering; of the 1853 gathering a few cones as specimens, seeds bad.

Plate in Oreg. Com. Rept. (60), cf. also Murray (41).

The following gathering should probably be placed here:

Field Note: "Collected December 4th, 1852, on Mount Jefferson, Cascade Range, lat. 44°, elevation 6,500 feet. Growing on red stony soil. Leaves solitary or in pairs, sheaths very short, rigid, and pungent, cones ovoid about three inches long. Branches verticillate. The leaves are from 1 inch to 3 inches long. Tree 20 feet high, 10 inches in diameter. No. 753."

No specimen has been traced. Parlatore (43) quotes the number under *P. monophylla* Torr. et Fremont, apparently without seeing a specimen, but from the recorded distribution he can hardly be correct.

*Seed.* According to a circular (59) seeds were received, but the Report issued three months later says of 753 "not yet received."

**Pinus Coulteri** D. Don

Three cones (seeds bad), so named, were received in Mar. 1854 (61), but no specimens have been traced.

**Pinus Jeffreyi** Balf.

"Shasta Valley, lat. 41° 30′. Oct. 24, 1852." No. 731 (Type).

Field Note : " Lat. 41° 30′, Shasta Valley, N. California. Growing on poor sandy soil. Leaves three in a sheath, long, pendulous at the points, cones ovate produced generally in clusters. Timber yellow, heavy and tough ; tree 150 feet high, and 4 feet in diameter. Oct. 24, 1852."

*Seed.* 2 fine cones and a good quantity of seed.

Plate in Oreg. Com. Rep. (60), cf. also Murray (35, p. 224, pl. 8–9 ; 36, p. 351, pl. 10–11).

**Pinus Lambertiana** Dougl.

Field Note : " Klamath, lat. 42°. I am sorry that I have to relate an accident which deprived me of a fine stock of the seeds of this tree. I was encamped one night, and had a small sack of the seeds of *P. Lambertiana* along with me. During the night a ground-rat found them out, and appropriated them all, except about two dozen. The season was too far advanced for me to replace them. The few that remain I forward. September 4, 1852." Sine no., Oreg. Com. distrib. No. I. No specimens traced.

*Seed.* Small parcel of seeds (those mentioned above) ; and received in Mar. 1854—2 cones (seeds bad) and bag of seeds—all bad.

**Pinus monticola** Dougl.

" Trinity Mountains, N. California, 7,000 ft. Volcanic rocky summits. Oct. 7, 1852." No. 706.

Field Note : " Trinity Mountains, N. California, elevation 7,000 feet. Growing on granite rocks, on a poor scanty soil. Tree 150 feet high, 1½ foot diameter. Bark smooth grey, timber white, fine-grained, and tough. Oct. 7, 1852."

*Seed.* Cones and seeds were received.

**Pinus ponderosa** Dougl.

Field Note : " Rose River Valley ; growing on sandy soil. Sept. 11, 1852." Sine no., Oreg. Com. distrib. No. H.

No specimens seen.

*Seed.* Seeds were received.

[*Pinus Torreyana* Parry

" Oregon, 149." Two sterile specimens in the Lindley Herbarium so numbered are marked as collected by Jeffrey (cf. 10, p. 84) ; but this plant has a very restricted range in Southern California where Jeffrey never collected.]

**Picea glauca** (Moench) Voss (*Abies alba* Michx.)

" Tree 100 ft. high, 18 inches in diameter. Near Oxford House. Sept. 19, 1850." Sine no.

*Seed.* 22 cones.

**Picea mariana** (Mill.) Britt. Sterns et Pogg. (*Abies nigra* Poir.)

" Banks of Hayes River, 10 miles above York Factory. 7 ft. high. Aug. 20, 1850." Sine no.

*Seed.* 60 cones, immature ; also 33 cones from a tree 40 feet high and 6 inches in diameter, on the Grand Rapid of the River Saskatchewan taken on Sept. 30, 1850.

**Picea rubens** Sarg. (*Abies rubra* Poir.)

"Oxford House. Tree 50 ft. high, 9 inches diameter. Sept. 19, 1850." Sine no.

*Seed.* 54 cones.

**Picea sitchensis** (Bong.) Carr. (*Abies Menziesii* Lindl.)

No specimen traced.

*Seed.* Package received Aug. 1852—complete division; also 52 packets of one cone each (cf. 11).

**Tsuga heterophylla** (Raf.) Sarg. (*Abies Albertiana* A. Murr.)

"Vancouver Island. April 24, 1852." Sine no.

*Seed.* Complete division, distributed as *Abies taxifolia* (cf. 21, p. 464; 22, p. 326; 47; 52).

**Tsuga Jeffreyi** A. Henry (*Tsuga Mertensiana* Carr. × *T. heterophylla* Sarg.; *T. Pattoniana* Sénécl. var. *Jeffreyi* A. Henry)

Raised from seed collected in 1851 sent as seed of *Abies Pattoniana* Jeffrey, No. 430 (16).

Ravenscroft (45) says that very few of Jeffrey's seeds of *Pattoniana* grew, probably on account of their hybrid origin. Those which did grow were the cause of much confusion (cf. 23, 27).

**Tsuga Mertensiana** (Bong.) Carr. (*Abies Pattoniana* Jeffrey)

"Found on the Mount Baker range of mountains. This sp. makes its appearance at the point where *A. Canadensis* disappears; that is, at an elevation of about 5,000 feet above the sea; from that point to the margin of perpetual snow it is found. Along the lower part of its range it is a noble-looking tree, rising to the height of 150 feet, 13½ feet in circumference. As it ascends the mountains it gets gradually smaller, till at last it dwindles into a shrub of not more than 4 feet high. Leaves solitary, dark green above, silvery beneath, flat and rounded at their points, thickly placed round the branches; cones about an inch long, produced at the points of the branches; branches pendulous; bark rough, of a greyish colour; timber hard and very fine in the grain, of a reddish colour. Soil on which this tree was growing most luxuriant, was red loam, very stony and moist. If this tree proves undescribed, I hope it will be known under the names of *Abies Pattonii*." 1851. No. 430.

"Cascade Mountains, lat. 42°, elevation 6,000 ft. Oct. 15, 1852." No. 430. (Type of *Abies Pattoniana* Jeffrey.)

*Seed.* Of 1851 gathering, complete division and a cone to each subscriber; of 1852 collection, a bag of cones and seeds. The seeds, however, of the 1851 gathering were not true (see *T. Jeffreyi*, supra).

Plate in Oreg. Com. Rept. as *Abies Pattoniana*.

**Pseudotsuga taxifolia** (Poir.) Rehder (*Abies Douglasii* Lindl.)

No specimens traced.

*Seed.* Complete division with cone to each subscriber (received 1852).

**Abies amabilis** Forbes (*Pinus lasiocarpa* Balf. non Hook.)

" Mountains east of the falls of Fraser River, Sept. 27, 1851." No. 409.

Field Note : " Mountains east of Fraser River, lat. 50°. Found on the sloping sides of the mountains ; growing on gravelly soil, at an elevation of 400 feet ; leaves very small, dark green, above silvery, beneath pectinated ; distichal cones, erect, ovate, oblong, 5 inches long, found only on the top of the trees ; branches horizontal, short and bushy ; tree large, 250 feet high, 5 feet diameter, 60 feet without branches ; bark smooth, and covered on the young trees with large globules filled with balsam ; bark red ; timber white and soft. This tree is seen from a great distance towering its head above all her sisters of the forest. September 27, 1851." No. 409.

The only specimen seen is a sheet in Herb. Edin. with a few leaves and cone scales in a capsule marked " leaves belonging to the large capsule 409 " ; on the sheet are also four branchlets of *Abies grandis* Lindl.

A second collection in 1852 was sent under number 393 (which was the number given to the 1851 collection of *A. grandis* Lindl.) and in the Oregon Committee Report it is so numbered (as *Pinus lasiocarpa*). In the Report the cone, scale, bractlet, and seed are figured (as " Picea lasiocarpa "), and there is no doubt that these represent *A. amabilis* Forbes (cf. 15). A Murray (39, p. 314) drew attention to the error of numbering in the Report. No specimen of this sending has been traced.

*Seed.* Of the 1851 collection, complete division ; of the 8 cones sent, 5 had fallen to pieces—the remaining 3 retained for museums. Of the 1852 collection cones and seeds were received. Greville in his report on the division of the seed of the 1851 collection (64) says that the branches sent under 409 had no connection with the cones and seed with this number.

[*Abies bracteata* Nutt.

A sterile specimen in the Lindley Herbarium at Cambridge is marked as having been collected by Jeffrey, without locality or date, No. 119. (Cf. 10, p. 91.) This plant has a very restricted range in Southern California, and Jeffrey did not collect so far south (33, p. 4 ; 34, p. 213). The specimen is probably one of Lobb's collecting (cf. 24, p. 676).]

**Abies concolor** Lindl. et Gord. var. **Lowiana** Lemm. (*A. Lowiana* A. Murr.)

No specimen of Jeffrey's has been traced.

J. M'Nab (21, p. 464 ; 22, p. 325) says *Lowiana* was sent by Jeffrey as *Picea grandis* and a few plants were raised from his seed, one in particular being 15 feet high in 1872.

W. R. M'Nab (24, p. 681) states : " In the museum, Royal Botanic Garden, Edinburgh, is a cone with a shoot having leaves tied to it which is marked ' Picea Lowii (P. grandis), Oregon, Mr. Jeffrey, 1854.'

. . . The number on Jeffrey's list is not given. . . . I have little doubt that the seeds were mixed with those of Jeffrey 393 and 409 and the three things all sent out as P. lasiocarpa Oregon Committee; hence the name it received in certain gardens" (cf. also 25, p. 505; 26, p. 104).

Sargent (50) includes *P. Lowiana* under *A. concolor* Lindl. et Gord., so his statement that Jeffrey found the tree probably refers to the variety.

The specimens and seed sent, without number, but distributed under Oreg. Com. distrib. No. C (of 1854) as "Abies grandis. Sierra Nevada Mountains, lat. 39°, Sept. 29, 1853" were probably this variety. Unfortunately no specimen has been traced, though there were 92 shares of the seed.

**Abies grandis** Lindl.

"Found on the banks of Fraser River, from the falls all the way down to the ocean. This tree resembles the *Picea pectinata* of Europe. The only points that it differs from that tree is in the smallness of its cones, and its leaves are larger. Found growing on the alluvial banks of the river, near Fort Langley, 280 feet high, and 5 feet diameter, 50 feet without branches." Sept. 30, 1851. No. 393.

The date is that quoted by W. R. M'Nab (24, p. 679).

*Seed.* Complete division of No. 393 (see sub *A. concolor* var. *Lowiana*).

[*Abies lasiocarpa* Nutt. (*Pinus lasiocarpa* Hook.)

W. R. M'Nab (24, p. 683) quotes a specimen in Herb. Edin. "Oregon 1853" but the specimen has not been traced.]

**Abies magnifica** A. Murr. (*Picea campylocarpa* A. Murr.)

Field Note: "Near summit of Sierra Nevada Mts., lat. 39½°, elevation 7,500 ft., clay soil. Could not get good seed, climbed many trees, all seed bad. 3 ft. diam., 200 in height, dense forests, bark rough like *A. nobilis*, young trees covered with much resin" (1853). No. 1480.

This specimen has not been traced but it is cited by W. R. M'Nab (24, p. 701) and Masters (28, p. 652).

The name *Picea campylocarpa* was given by Murray (37, p. 167; 38, p. 370) to certain specimens sent home by Jeffrey. Murray quotes no number, but apparently they were No. 1480 (cf. 24, p. 701).

*Seed.* 5 packets, bad. But J. M'Nab (21, p. 464; 22, p. 326) mentions a tree 11 ft. high grown from Jeffrey's seed; W. R. M'Nab (26, p. 106) says it was cultivated at the Royal Botanic Garden, Edinburgh, under the names *magnifica* and *robusta*, while Elwes and Henry (12) say that seedlings from Jeffrey's seed were distributed as *A. amabilis*.

**Abies magnifica** A. Murr. var. **shastensis** Lemm.

"Shasta Mountains, lat. 41° 50′, elevation 6,000 feet. Oct. 7, 1852." Sine no., Oreg. Com. distrib. No. F.

*Seed.* Large parcel, distributed as *Picea nobilis*.

Specimens in Herb. Edin., Herb. Kew., Herb. Lindley. (at Cambridge, England) and Herb. Engelmann. (in Missouri Bot. Gard., St. Louis), all without cones. The last-named specimen is that cited by Professor Sargent (51) when stating that var. *shastensis* was discovered by Jeffrey.

*Abies nobilis* Lindl.

There are several records of specimens sent by Jeffrey under this name, but all the specimens traced are either *Abies magnifica* or its var. *shastensis*, which were confused with *A. nobilis* in Jeffrey's time, and were not named till 1863 and 1890 respectively.

**Larix laricina** (Du Roi) K. Koch

" Banks of Saskatchewan River near the Grand Rapid. Tree 18 feet, branches very pendulous. Oct. 1, 1850." Sine no.

*Seed.* About 300 small cones, distributed as *Larix pendula.*

**Epipactis gigantea** Dougl.

" Oregon Plants. 1852–3." Sine no.

**Cypripedium montanum** Dougl.

" Near Colville. May 19, 1851." No. 44.

**Odontostomum Hartwegi** Torr.

" Oregon Plants. 1852–3." Sine no.

**Iris missouriensis** Nutt.

" Oregon Plants. 1852–3." Sine no.

**Iris Purdyi** Eastw.

" On hills south of the Umpqua Valley. May 3, 1853." No. 993.

**Iris tenax** Dougl.

" Umpqua Valley. April 24, 1853." No. 978.

**Maianthemum bifolium** Schmidt var. **dilatatum** Wood (*Unifolium dilatatum* Howell)

" Nisqually, 1852." Sine no.

**Schoenolirion bracteosum** Jepson

" Oregon Plants. 1852–3." Sine no.

**Brodiaea capitata** Benth. (*Milla capitata* Baker)

" Columbia near Colville. Found on dry sand-banks, height two feet, flowers in umbels, dark blue. May 13, 1851." No. 21.

" Vancouver Island. April 24, 1852." No. 489.

" Umpqua Valley. May 3, 1853." No. 1026.

*Seed.* 66 packets of 12 seeds each (of No. 21).

**Brodiaea ixioides** S. Wats. (*Milla ixioides* Baker)

" Shasta, N. California. June 10, 1853." No. 1124a.

**Brodiaea multiflora** Benth.

" Shasta, N. California. June 10, 1853." No. 1125b.

*Seed.* 10 shares.

**Hookera californica** (Lindl.) Greene (*Brodiaea grandiflora* Sm. var. *major* Benth.)

" Shasta, N. California. June 10, 1853." No. 1124b.

**Hookera coronaria** Salisb.

" A handsome bulb, growing to the height of 6 inches, flowers dark blue, in lax umbels. Growing on vegetable soil on the sea shore off Vancouver Island. July, 1851." No. 374.

*Seed.* 38 small packets.

**Allium attenuifolium** Kell.

" A small species only 4 inches high, growing on dry sandy soil. Vancouver Island. July 1851." No. 376.

*Seed.* 42 small packets.

(" 4 inches " is obviously a mistake, the specimens are about 12 inches.)

**Allium sibiricum** Linn.

" Oregon Plants. 1852–3." Sine no.

**Allium validum** S. Wats.

" Pend d'Oreille. May 22, 1851." No. 53.

**Camassia Leichtlinii** S. Wats. (*Quamasia Leichtlinii* Coville)

" Umpqua Valley. May 3, 1853." No. 1007.

Field Note : " Flowers white."

*Seed.* 6 Bulbs.

Discovered by Jeffrey and first described by Baker, from a cultivated specimen, as *Chlorogalum Leichtlinii* (3, cf. also 44).

**Camassia Quamash** Greene (white form) (*Camassia esculenta* Lindl.)

" North Bank of Kootenay River. May 21, 1851." No. 52.

**Lilium Bolanderi** S. Wats.

" Scott Mountains. June 11, 1853." No. 1162. (In fruit.)

" Coast Range. Lat. 42°. Alt. 6,000 ft. July 27, 1853." No. 1283 (Herb. Kew. and Herb. Lindl.).

Field Note : " Flowers scarlet, plant 18 inches high on red loamy soil on the Coast Range of mountains. Lat. 42°, elev. 6,000 ft. July 27, 1853."

*Seed.* 38 shares (of 1162) ; a few bulbs dead (of 1283).

Baker in Jour. Linn. Soc. xiv (1874) 241 quotes No. 1283 as *L. canadense* L. var. *parvum* (Kellogg).

**Lilium pardalinum** Kell.

" Oregon. 1852." Sine no.

**Lilium rubescens** S. Wats.

" Oregon. 1852." Sine no.

**Lilium Washingtonianum** Kell.

" Headwaters of the Sacramento River. June 29, 1853." No. 1139. (Herb. Kew. and Herb. Lindl.)

Here certainly belongs No. 609 which was named *Lilium Umpquense* Oreg. Com. in Circ. Oreg. Com. 1.

Field Note : " Umpqua Valley, Aug. 14, 1852. This I found late in the season and could not procure specimens in flower. The dry stalks were 7 feet high. The Indians informed me that the flowers

are white and pink. Grows on sandy soil." No specimens have been traced.

*Seed.* A package of seed (of 609); 5 bulbs dead (of 1139).

**Fritillaria lanceolata** Pursh

"Oregon Plants. 1852–3." Sine no.

**Fritillaria recurva** Benth.

"Siskiyou Mountains. May 23, 1853." No. 1061.

*Seed.* A few roots, dead.

**Erythronium grandiflorum** Pursh (*E. giganteum* Lindl.)

"Near the Kootenay River, lat. 49° 20″, elevation 3,400 ft. Growing in the crevices of granite rocks." [1851] No. 49.

"Vancouver Island. April 20, 1852." No. 468.

*Seed.* Complete division (of No. 49).

**Erythronium Hendersoni** S. Wats.

"Siskiyou Mountains. June 30, 1853." No. 1142 (Herb. Kew. and Herb. Lindl.).

Field Note: "Petals pink with dark purple eye; found growing on the summit of Siskiyou Mountains, on sandy soil."

*Seed.* 53 shares, and a few bulbs dead.

**Calochortus apiculatus** Baker, forma antheris brevioribus

"North Bank of Kootenay River. May 21, 1851." Sine no.

**Calochortus elegans** Pursh

"Umpqua Valley. April 24, 1853." No. 976.

*Seeds.* 11 shares, 2 bulbs each.

**Calochortus macrocarpus** Dougl.

"Okanagan River. July 12, 1851." Sine no.

"Coast Range of mountains, N. California." Sine no., Oreg. Com. distrib. No. A of 1854. (No specimens seen.)

*Seeds.* 126 shares (of A).

**Calochortus uniflorus** Hook. et Arn.

"Oregon Plants. 1852–3." Sine no.

**Calochortus venustus** Benth.

"Coast Range [California]. July 26, 1853." No. 1276.

*Seeds.* Bulbs, 4 shares.

**Disporum trachycarpum** (S. Wats.) Benth. et Hook.

"Near Colville. May 19, 1851." No. 42.

**Clintonia uniflora** Kunth

"Near Colville. May 16, 1851." No. 31.

**Trillium petiolatum** Pursh

"Near Colville. May 19, 1851." No. 43.

**Zygadenus venenosus** S. Wats.

"Pend d'Oreille Country. May 24, 1851." No. 69.

**Lysichitum camtschatcense** (L.) Schott

"Vancouver Island. April 19, 1852." No. 460.

**Juncus orthophyllus** Coville

"Swamps near Victoria. April 25, 1852." No. 492.

**Carex Engelmanni** Bailey
" Cascade Mountains. Aug. 3, 1852." Sine no.
**Carex macrocephala** Willd.
" Vancouver Island. April 24, 1852." No. 479.
**Alopecurus saccatus** Vasey
" Umpqua Valley. May 3, 1853." Sine no.
**Agrostis exarata** Trin.
" Oregon Plants. 1852–3." Sine no.
**Avena barbata** Brot.
" Oregon Plants. 1852–3." Sine no.
**Danthonia americana** Scribn.
" Oregon Plants. 1852–3." Sine no.
**Koeleria cristata** (L.) Pers.
" Oregon Plants. 1852–3." Sine no.
**Poa confinis** Vasey
" Vancouver Island. April 24, 1852." No. 480.
**Poa gracillima** Vasey
" Umpqua Valley. May 3, 1853." No. 1015.
**Poa juncifolia** Scribn.
" Oregon Plants. 1852–3." Sine no.
**Poa macrantha** Vasey
" Vancouver Island. April 24, 1852." No. 481.
**Festuca bromoides** Linn.
" Umpqua Valley. May 3, 1853." No. 1004.
**Festuca rubra** Linn.
" Oregon Plants. 1852–3." Sine no.
**Elymus condensatus** Presl
" Oregon Plants. 1852–3." Sine no.

## REFERENCES.

### PRINTED BOOKS.

1. Anderson, Alex. C., 1872. The Dominion at the West. A Brief Description of the Province of British Columbia, its Climate and Resources, footnote p. 56.
2. Anderson, Jas. R., 1926. A Historic Tree and John Jeffrey, Naturalist. The Daily Colonist, Victoria, B.C., May 23, 1926.
3. Baker, J. G., 1874. New Garden Plants—Chlorogalum Leichtlinii. Gard. Chron. n.s., i, p. 689.
4. Balfour, F.R.S., 1932. The History of Conifers in Scotland and their Discovery by Scotsmen. Conifers in Cultivation, London, R.H.S., pp. 203–4.
5. Botanical Society of Edinburgh, 1854. Report of Proceedings, North British Agriculturist, June 21, 1854, p. 419.
6. —— 1855. Report of Proceedings, Scottish Gardener iv, p. 330.
7. —— 1856. Proc. Bot. Soc. Edin. 1856, p. 46.
8. Coville, Frederick V., 1897. The Itinerary of John Jeffrey, an early botanical explorer of Western North America. Proc. Biol. Soc. Wash. xi, pp. 57–60.
9. Dallimore, Wm., 1932. William Lobb and John Jeffrey. Forestry vi, pp. 5–8.
10. Dümmer, R. A., 1913. The Conifers of the Lindley Herbarium, Botany School, Cambridge. Jour. Roy. Hort. Soc. xxxix, pp. 63–91.

11. Elwes, H. J. & A. Henry, 1906. The Trees of Great Britain and Ireland, i, p. 94.
12. —— 1909. The same, iv, p. 794.
13. —— 1910. The same, v, p. 1175.
14. Hector, Jas., 1858. Letter to Prof. J. H. Balfour, dated Jan. 5, 1858. Trans. Bot. Soc. Edin. vi, pp. 80–82. (See 72.)
15. Henry, Augustine, 1914. A rare pamphlet on conifers. Gard. Chron. ser. 3, lv, pp. 12–13.
16. Henry, A., & M. G. Flood, 1919. The history of the Dunkeld hybrid larch, *Larix eurolepis*, with notes on other hybrid conifers. Proc. Roy. Irish Acad., xxxv, B., pp. 55–56.
17. Hill, Sir A. W., 1930. J. R. Anderson (obituary notice of). Kew Bull. 1930, p. 217.
18. Hooker, Sir Wm. J., 1853. Botanical Expedition to Oregon. Hooker's Jour. Bot., v, pp. 315, 395.
19. —— 1853. Description of a New Species of Eriogonum, discovered in California by Mr. Jeffrey. Ib. v, p. 395, tab. X.
20. Jardine, Sir Wm., 1859. Observations on some of the Birds received from the Hudson's Bay Company's Territories. Proc. Roy. Phys. Soc. Edin., ii, pt. 1, p. 57.
21. M'Nab, James, 1872. Jeffrey's British Columbian Conifers. The Garden, i, pp. 464, 502, 551.
22. —— 1873. On the Discoveries of Mr. John Jeffrey and Mr. Robert Brown, etc. Trans. Bot. Soc. Edin., xi, pt. 2, pp. 322–333.
23. M'Nab, Wm. R., 1875. Remarks on the Structure of the leaves of certain Coniferae. Proc. Roy. Irish Acad., ser. 2, ii, pp. 209–213.
24. —— 1876. A Revision of the Species of Abies. Ib., pp. 673–704.
25. —— 1876. Notes on the Synonomy of certain species of Abies. Trans. Bot. Soc. Edin., xii, pp. 503–506.
26. —— 1877. On the Anatomical Structure of the Leaf as a means of determining the species of Abies. Trans. Scott. Arb. Soc., viii, pt. 2, pp. 93–109.
27. —— 1882. Note on Abies Pattonii, Jeffrey MSS., 1851. Jour. Linn. Soc., xix, pp. 208–212.
28. Masters, M. T., 1885. Abies nobilis. Gard. Chron. n.s., xxiv, p. 652.
29. Mofras, Duflot de, 1844. Exploration du Territoire de l'Oregon etc. Paris.
30. Murray, Andrew, 1853. On some Insects from the Rocky Mountains, received from the Botanical Expedition to Oregon under Mr. Jeffrey. Read at meeting of Royal Physical Society, Feb. 12, and summary in North British Agriculturist, Feb. 23, 1853.
31. —— 1857. Account of the Insect which infests the Seeds of *Picea nobilis*. Edin. New Phil. Jour., vi, p. 175.
32. —— 1858. The same (with additions). Trans. Bot. Soc. Edin., v, pt. 3, pp. 187–189.
33. —— 1859. Notes on Californian Trees. Pt. 1. Edin. New Phil. Jour. n.s. x, No. 1, pp. 1–8.
34. —— 1859. Reprint in Trans. Bot. Soc. Edin., vi, pt. 2, pp. 210–217.
35. —— 1860. Notes, etc. Pt. 2. Edin. New Phil. Jour. n.s., xi, No. 2, pp. 205–227.
36. —— 1860. Reprint in Trans. Bot. Soc. Edin., vi, pt. 3, pp. 330–353.
37. —— 1860. Notes, etc. Pt. 3. Edin. New Phil. Jour. n.s., xii, No. 1, pp. 166–167.
38. —— 1860. Reprint in Trans. Bot. Soc. Edin., vi, pt. 3, pp. 369–370.
39. —— 1863. On the synonomy of various conifers. Proc. Roy. Hort. Soc., iii, pp. 140–150, 202–207, 308–325.
40. —— 1864. Monograph of the Nitidulariae. Trans. Linn. Soc., xxiv, p. 250.

41. —— 1869. Pinus Tamrac sp. nov. Gard. Chron., p. 191.
42. Nicholson, G., 1886. Giant Arbor-vitae and White Cedar. The Garden, xxix, pp. 266–268.
43. Parlatore, F., 1868. Coniferae, in DC. Prod., xvi, pt. 2, p. 378.
44. Piper, C. V., 1916. Notes on Quamasia, etc. Proc. Biol. Soc. Wash., xxix, pp. 78–79.
45. Ravenscroft, E. J., 1863. Pinetum Britannicum. Pt. 4 (ii, pp. 157–158). Abies Pattoniana.
46. —— 1864. The same. Pt. 5 (i, pp. 45–46). Pinus Jeffreyi.
47. —— 1865. The same. Pt. 12 (ii, pp. 111–114). Abies Albertiana.
48. Sargent, C. S., 1895. The Silva of North America. Quercus Sadleriana, viii, pp. 61–62.
49. —— 1897. The same. Pinus albicaulis, with note on John Jeffrey, xi, p. 41.
50. —— 1898. The same. Abies concolor, xii, pp. 123–124.
51. —— 1898. The same. Abies magnifica, xii, pp. 137–139.
52. Webster, A. D., 1888. Prince Albert's Fir (Abies Albertiana). The Garden, xxxiii, p. 44.

CIRCULARS ISSUED BY THE OREGON ASSOCIATION.

53. 1850. Minute of meeting of gentlemen interested in the promotion of the arboriculture and horticulture of Scotland. (Minute of meeting held November 22, 1849, with list of subscribers up to January 9, 1850.) Pp. [1]+[1].
54. 1850. Botanical Expedition to Oregon. (Report of progress, dated Edinburgh, November 20, 1850.) 2 pp.
55. 1851. Botanical Expedition to Oregon. (With Jeffrey's letter of April 7, 1851, reprinted p. 8. Issued October 3, 1851.) 3 pp.
56. 1852. (No heading.) (Dated 7 Nelson Street, Edinburgh, September 4, 1852, announcing the reception of boxes No. 1, 3, 4, and giving their contents.) 4 pp.
57. 1852. Botanical Expedition to Oregon. (Dated 7 Nelson Street, Edinburgh, October 5, 1852, giving names of some specimens identified by Sir Wm. Hooker and Prof. Lindley, also a list of the subscribers with amount subscribed totalling £1,440.) 4 pp.
58. 1853. Oregon Botanical Expedition. (Dated Edinburgh, April 16, 1853, giving a letter from Jeffrey containing his field notes on specimens in packages No. 5 and 6.) 3 pp.
59. 1853. Botanical Expedition to Oregon. (Dated Edinburgh, 7 Nelson Street, June 18, 1853, announcing the arrival of Boxes No. 5 and 6, with a list of seeds received.) Pp. [1]+[1].
60. 1853. Botanical Expedition to Oregon. [Edinburgh, September 1853.] (With "Names of the Plants . . . in Boxes Nos. 5 and 6," including descriptions of new conifers, reprinted p. 16.) Pp. [1]+2+5 plates.
61. 1854. Botanical Expedition to Oregon. (Dated Edinburgh, 7 Nelson Street, March 24, 1854, announcing the arrival of Box No. 10, the distribution of the seed received, and giving names of the plants, also announcing that Jeffrey was not to be kept on after the termination of his contract.) Pp. [1]+2.
62. 1857. Oregon Botanical Association. (Dated at end, Edinburgh, 7 Nelson Street, January 10, 1857, intimating that no further communication had been received from Jeffrey and that the seed distributed at the same time had been collected for the Association by Mr. Beardsley.) 2 pp.
63. 1859. Oregon Botanical Association. (Dated Edinburgh, 1 Scotland Street, May 30, 1859, intimating the purchase of seed of *Picea Nordmanniana* and its distribution, also suggesting the reorganisation of the Association.) P. [1].

MANUSCRIPTS.

64. Minute Book of The Association for the Promotion of the Arboriculture and Horticulture of Scotland (November 22, 1849–May 26, 1859, kept by Andrew Murray). (R.B.G. Edin.)
65. Minute of Agreement Betwixt the Association for procuring seeds from Oregon, etc., and John Jeffrey, 1850. (R.B.G. Edin.)
66. Register of Births and Baptisms for the Parish of Clunie in the County of Perth. (General Registry Office, Edinburgh.)
67. Cenus Returns for the Parish of Lochore in the County of Fife, 1841 (do.).
68. Do. do. do. do. 1851 (do.).
69. List of men employed in the Royal Botanic Garden, Edinburgh. (R.B.G., Edin.)
70. Letter from A. K. Johnston to Prof. J. H. Balfour, Mar. 9, 1850. (R.B.G., Edin., J.H.B., mss. corr., J. 121.)
71. —— Alph. de Candolle to the same. Genève, Dec. 24, 1854. (R.B.G., Edin., J.H.B., mss. corr., D. 55).
72. —— Dr. James Hector to the same. Fort Edmonton, Jan. 5, 1858. (R.B.G., Edin., J.H.B., mss. corr., H. 77; printed, see 14.)
73. —— the same to the same. (London), Dec. 1, 1860. (R.B.G. Edin., J.H.B., mss. corr., H. 79.)

LETTERS, ETC., IN THE POSSESSION OF THE HUDSON'S BAY COMPANY.

74. H.B.C. Arch. C. 1/863.
75. Archibald Barclay to Andrew Murray, Mar. 9, 1853. H.B.C. Arch. A. 5/18, pp. 74–5.
76. The same to the same, June 18, 1850. H.B.C. Arch. A. 5/16, pp. 285–6.
77. H.B.C. Arch. B. 239/a/179.
78. H.B.C. Arch. B. 154/a/52.
79. Chief Factor John Rowand to Sir George Simpson, Dec. 24, 1850, also Chief Trader Robert Clouston to the same, Dec. 29, 1850. H.B.C. Arch. D. 5/29.
80. Chief Trader Robert Clouston to the same, Fort Vancouver, June 5, 1851. H.B.C. Arch. D. 5/30.
81. Chief Factor James Douglas to Eden Colvile, July 5, 1851. H.B.C. Arch. D. 7/1.
82. H.B.C. Arch. C. 1/208.
83. Chief Factor James Douglas to Chief Factor John Ballenden, May 21, 1852. H.B.C. Arch. B. 226/b/4.
84. Chief Factor John Ballenden to A. Barclay, July 23, 1852. H.B.C. Arch. B. 223/b/40.
85. Chief Factors P. S. Ogden and Dugald Mactavish to Archibald Barclay, June 6, 1854. H.B.C. Arch. A. 11/52.
86. H.B.C. Arch. A. 10/48.
87. H.B.C. Arch. A. 5/24, p. 120.

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