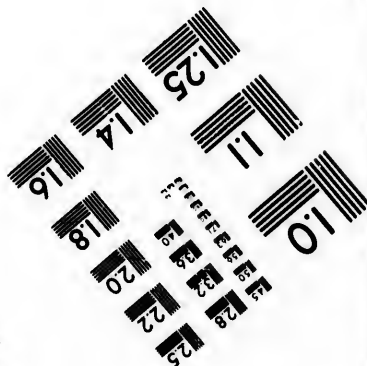
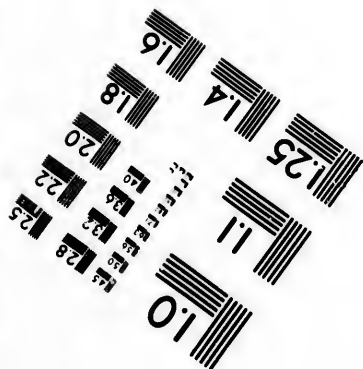
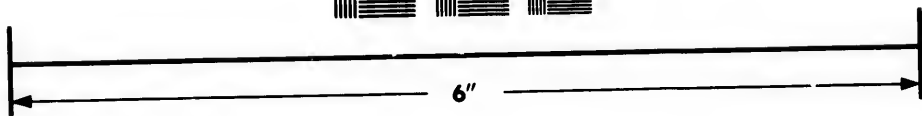
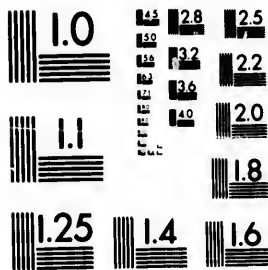


**IMAGE EVALUATION
TEST TARGET (MT-3)**



**Photographic
Sciences
Corporation**

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

**CIHM/ICMH
Microfiche
Series.**

**CIHM/ICMH
Collection de
microfiches.**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

© 1981

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured covers/
Couverture de couleur
- Covers damaged/
Couverture endommagée
- Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée
- Cover title missing/
Le titre de couverture manque
- Coloured maps/
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur
- Bound with other material/
Relié avec d'autres documents
- Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distortion le long de la marge intérieure
- Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- Additional comments:/
Commentaires supplémentaires:

- Coloured pages/
Pages de couleur
- Pages damaged/
Pages endommagées
- Pages restored and/or laminated/
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached/
Pages détachées
- Showthrough/
Transparence
- Quality of print varies/
Qualité inégale de l'impression
- Includes supplementary material/
Comprend du matériel supplémentaire
- Only edition available/
Seule édition disponible
- Pages wholly or partially obscured by errata slips, tissues, etc., have been refilmed to ensure the best possible image/
Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

| | | | | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 10X | 12X | 14X | 16X | 18X | 20X | 22X | 24X | 26X | 28X | 30X | 32X |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The copy filmed here has been reproduced thanks to the generosity of:

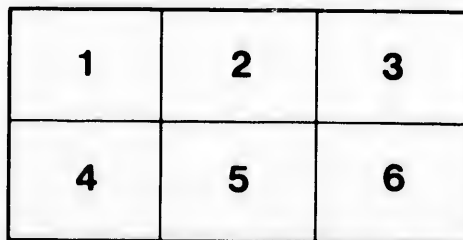
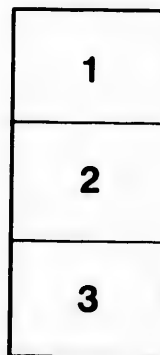
Library Division
Provincial Archives of British Columbia

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol \rightarrow (meaning "CONTINUED"), or the symbol ∇ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

Library Division
Provincial Archives of British Columbia

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole \rightarrow signifie "A SUIVRE", le symbole ∇ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

BRITISH COLUMBIA BOTANICAL ASSOCIATION.

(From *The Farmer* of May 16, 1866.)

THE Committee of the British Columbia Botanical Association have placed in our hands a catalogue of a fourth box of seeds, &c., collected by Mr Robert Brown during the year 1865, an abstract of which we present to our readers.

In forwarding particulars of the seeds collected, Mr Brown says that, from the causes so frequently referred to in his notes, the species in this box are not in any great quantity, but he believes it to contain more valuable kinds than any former one; and that he has done his utmost to select good seeds, and carefully to dry and pack them. The greater bulk of the Conifers he has forwarded in the cones, not only for the purpose of prolonging their vitality, but, as many were imperfectly open, he considered that it would be better to sacrifice space to the all important consideration of their reaching the Association in the most favourable state, more especially as many of them were only represented by a few cones. Nos. 231 to 245 were collected in June 1865, and Nos. 246 and following were collected at a later period.

- 231. *Lilium*. I did not see it in flower. Banks of the Columbia River, east of the Cascades. June 1865.
- 232. —. Dalles of the Columbia. June 1865.
- 233. —? Banks of the Columbia, east of the Cascades. Dry soil. June 1865.
- 234. *Frit tenax*. French Prairie, Willamette Valley, Oregon. June 1865.
- 235. *Rumex*. Perhaps *R. renouxi*, Pursh. Very showy plant; shady places. Dalles of the Columbia, Oregon. June 1865.
- 236. —? (bulbs). Banks of the Columbia, near Dog River. June 1865.
- 237. *Compositæ*. Small flower, in spots on dry soil. Dalles of Columbia. June 20, 1865.
- 238. *Erythronium*. Banks of Columbia, east of the Cascades. Shady places. June 1865.
- 239. *Spiræa*. White flower; the shrub. Banks of Columbia, east of Cascades. June 1865.
- 240. *Umbellifera*. Large showy plant. Dalles. June 1865.

- 241. *Liliacæ*. Banks of Columbia, east of Cascades. June 1865.
- 242. *Compositæ*. East of Cascades. June 1865.
- 243. *Crucifera*. Dalles, Oregon. June 1865.
- 244. *Astragalus*. Banks of Columbia, east of the Cascades. June 1865.

245. *Ribes*. Purple flower; fine black currant, superior to the cultivated fruit. Banks of La Creole, C. R., Oregon. July 4, 1865.

246. *Quercus Kelloggii*, Newberry (in "Pacific Railroad Rep.," vol. vi). Leaves deeply sinuate; three principal lobes on either side terminate in several acute points; glabrous above and below; fruit solitary or clustered—nearly sessile; gland round, ovoid, or more commonly elliptical, terminating in an acute projecting point; greenish brown in colour, and from 1 to 1½ inches in length; cup hemispherical, covered with elongated acute scales. In a dryish exposed country near the Illinois river Oregon. September 1855. It is immediately distinguished from its congener, *Q. Hindii* (No. 247), with which it is associated, by its dark coloured bark; and, on comparison of an extensive series of notes, its height may be estimated at from 50 to 60 feet, exceeding on the average *Q. Hindii*, Benth. It is also freer in the branching, and more elegant in appearance, than that species. It is known to the hunter and others by the name of the "black oak." The wood is coarse-grained and "brash" and, on the whole, though an ornamental tree of a high character, yet it is inferior as a timber tree, and never used if the "white oak" (*Q. Hindii*) can be procured. If this year be any criterion, it bears fruit very sparingly, indeed; but I am told by residents that it is seldom that one species bears a good crop of "mast" two years in succession. This year *Q. Hindii* bore a comparatively plentiful crop of acorns, whilst *Q. Kelloggii* was very sparing—in fact, I found it a matter of some difficulty to obtain specimens. Last year appears to have been the reverse.

247. *Quercus Hindii*, Benth. ("Bot. of the Sulphur" and *Q. longicarpa*, Torr. in Fremont's "Geographical Memoir of California"). Allied to that of the Eastern States, but different. Known as the "white oak," and the acorns are stored up by the Digger Indians

* This is the Californian representative of the black oak (*Quercus laevis*) of the Eastern States of North America. It is described and figured in the number of the *Farmer* of 6th December last.

for winter use. Whilst the timber is superior to that of No. 246, yet it is not equal to some others in this collection. I saw it as before, Illinois river. September 1865. The trunk will sometimes attain a diameter of 3 feet.

248. *Quercus*, sp. (c). *agrifolia*, Nees in Ame. Nat. S. C., Hook, Icones 3 t. 377; Nuttall's "Sylva" 1, p. 5, t. 21 and *crassipocula*, Torr., in Williamson's Report. *Q. crassipocula*, Torr., I am not acquainted with, but according to Torrey's figure of *Q. oxydiana* (Sitzevay's Rep., p. 172, pl. xvii.) it is a very different plant; and the figure of Nuttall ("North American Sylva," pl. 2) is to be relied upon. *Q. agrifolia* has long-pointed acorns, similar to *Q. oxydiana*, differing totally from my plant. Agassiz, Torr., in p. 138, "Pacific Railroad Explorations," vol. iv., says that the species described by him as *Q. oxydiana* is *Q. agrifolia* of Nees, with the acorns fully developed, leaves generally dentate, grows to the height of 40 feet (though generally a shrubby, with a handsome and graceful curved stem from 6 inches to 3 feet in diameter. It is generally known as the "live oak," and is accounted one of the best woods for feloes, hats, and shafts of waggon, though it is not straight enough for spokes. It is very tough, and is used near Illinois River for such purposes. Its acorns are the sweetest. It grows on the sides of gulches, but to the greatest heights in more elevated situations. I saw, however, enormous trees of it in the rich river bottoms of Smith's River Valley, Alta California. Sept. 1865.

249. *Quercus*, sp. (h). Lobel-leaved, bears acorns very plentifully, which are accounted good for fattening hogs. It is never more than a shrub, but the produce of forty to fifty will fatten a hog. It prefers prairies and low land. I have, however, seen it in gulches 4000 feet above the sea level, but never higher. Canon Ck. Sept. 1865 (3 bags).

250. *Quercus*, sp. (c). Echinaceous, cupped leaves slightly serrate, and sometimes, as in the old "live oak," plain (No. 248). It is a small shrub; bitter acorns. It grows as high up as 8000 feet above the sea level, which Q. No. 251, *ut supra*, to which it is most nearly allied, does not. This species has smaller leaves, cups deeper, and acorns more ovoid and very bitter, so that nothing but squirrels will eat them.

The black bear (*Ursus Americanus*), if hard pushed by hunger, may also venture on them, but never by choice. It is always looked upon by the miners and hunters as very distinct from *Quercus* No. 251. All over the mountains of Canon Ck., Oregon. Sept. 1865.

251. *Quercus*, sp. (i). This is perhaps *Quercus chinensis*, Torr. It is a tree 30 to 70 feet in height, and from 6 inches to 2 feet in diameter; long acorned, shallow cupped, bark black, leaves large and rarely serrate, the opposite holding true in *Q. No. 250 (ut supra)*. It is found along the sides of mountains, in damp ground, or by streams, but never on the top or at great elevations. It is often found associated with *Q. No. 250*, but never limited to the diminutive size of that species, or departing from its characters, though subject to the same influence of soils and topographical situation. In form and habit it differs much from the traditional idea of an oak, and is more like *Fraxinus Oregonica*; growing very straight, and in this respect it is the antipodes of *Quercus Garryana*, Hook (H. Ann. 2, p. 159), so characteristic of the open pleasant clivities in the vicinity of Victoria, Vancouver Island. It is accounted the best timber in Southern Oregon or North California for all parts of waggon, on account of which it is a superior tree to *Q. No. 248*. The tree from which most of my specimens were taken grew on the flat on Canon Ck. (Southern Oregon), near Bailie's Old Camp, and attained a height of 70 feet, with a diameter 2 feet. Sept. 1865.

252. *Quercus*, sp. (g.). Allied to *Q. No. 248*, but with no serratures on the leaves, and so obovate; smaller acorns, and covered with flattened tubercles; small shrub 3 feet in height; on the sides of gulches. Southern Oregon. Sept. 1865. This is closely allied to *Quercus oblongifolia*, described by Torrey in Capt. Sitzevay's "Report of an Expedition down the Zuni and Colorado Rivers," p. 173, pl. xix. (from Western Mexico).

253. *Quercus*, sp. nov. Shrub 4 feet in height; leaves large, deeply serrate; serratures pointing to apex of leaf; leaf sub-acuminate at base and at apex; broad in the middle, glaucous above and below; dark green foliage; acorns small, slightly ovate or compressed at both ends; cup deep, very thin, and covered with flattened tubercles. The only ally (if I may be allowed to style it as such) is *Q. No. 250*, which

it resembles very slightly in the form of the leaves and size, but differs totally in the form of the cup which is not covered with spines, but with tubercles. I found a few shrubs bearing fruit very sparingly on the ridge of mountains between Sailors' Diggings in Oregon and Smith's River in California, on the Crescent City Trail, and nowhere else. The locality was near the boundary line (lat. 42° N.).

254. *Pinus, speciosa* (A.). The average height of this tree is 70 or 80 feet, and about 1 foot or more in diameter; sub-pyramidal in shape; upper branches starting from the trunk at right angles, and lower down gradually at a more acute angle, until near the butt of the tree they start from the stem at an acute downward angle, with a long drooping sweep. The branches increase in length (descending), giving the tree the pyramidal form referred to. At the base of the tree they are long, and bear a ratio to the height as 1 to 5. They sweep out from the stem at an acute angle, with a downward sweep, curling up at the ends a little. The branchlets are what gives the tree its peculiar and characteristic beauty. Towards the apex they project as in other species, but whenever they open (at maturity) they become dependent, and henceforward their growth is downward, so that these little twigs or branchlets droop (from 1 foot to 2 feet in length) in a slender pendulous form, depending from the superior surface of the branches, giving the tree the "weeping willow" aspect in immature stages. The colour of the foliage is dark green; the young leaves lighter green; bark smooth or scaly; epidermis whitish; outer bark (mesophloem and epiphloem) firm and reddish coloured; liber very hard and springy; the white thickness of the bark is 1½ in.; wood very tough, close grained, and in its living state pale yellow coloured. The tree branches almost to the bottom of the trunk. At a hasty glance its general appearance is not unlike *A. Douglasii*, with which it is associated, and may have been passed by former botanists in mistake for that tree. It grows on poor stony soil, on the summit of the mountains, about 8000 feet above the sea. Though I found many very good specimens of last year's cones, yet after searching the major portion of the day in searching all around, shooting down branches with the rifle or climbing the trees, yet I failed to find one of this year's cones in any state of progress, and my joy at the discovery of this really beautiful tree was damped by getting none. I subsequently found a grove of gigantic trees in a shady gulch, about 1000 feet lower down the mountain. Their height was not less than 150 feet, but stems not over 1½ feet in diameter. They possessed the general characteristics of the last group, only that the branches were much shorter in proportion to the height of the tree. Locality, on the old trail of Carpenter's Gulch, on the very summit of the mountain leading to Pierre Sault Bar, just as you lose sight of Canon Creek. I send many specimens of the foliage and cones for its more minute description. S. P. (1865).

255. *Pinus, nov. spec.* (A.). From 80 to 100 feet in height, pale light green foliage, and not unlike in general appearance to *Pinus Lambertiana*, and sometimes approaching the dark green of the foliage of that pine; it branches to near the bottom, the branches departing from the trunk at right angles; cones near the top of the tree; wood soft; light-coloured bark, and smooth, with blisters of resin; cones, and indeed the whole of the tree, very resinous. I found one tree on the sides of a creek flowing into Canon Creek, just below the flat. The above is the general characteristics of the tree; but I found one on the mountains without branches for 100 feet. It was 130 feet high, and 2½ feet in diameter. It is slightly allied to *P. monticola*, of Douglas, which you pronounce to be the "white pine" of this coast, but which this No. 255 certainly is not. Indeed, I have never seen *P. monticola* (Stephens in my catalogue) so far south. The term "white pine" is sometimes applied in California to *P. Sabotiana*; and *P. Nevilii* of James is the "Rocky Mountain white pine." I do not know of a locality in which it has been found nearer than New Mexico, in the Scandia Mountains, at 12,000 feet elevation. It is said also to grow around Santa Fe in this same territory. Is this species identical? Often on this tree—indeed, in tall trees very frequently—there are none but barren cones, and hence I was told by some mountaineers that it is sometimes called the "barstard sugar pine." It bears sparingly, and the cones sent were all that I obtained from two trees after very laborious climbing. Sept. 1865.

256. *Pinus, nov. spec.*, or form of *P. ponderosa*. A tree about 130 feet in height, on mountains. Sept. 1865 (2 bags).

257. *Pinus, sp.* I found these cones floating down Klamath River, Oregon. Aug. 1865.

258. *Pinus, n. sp.*, or *Jeffreyi* (D.). 150 feet or more in height, possessing the general habit of the division, Cascade Mountains, near Rogue River. Aug. 1865.

259. *Pinus, sp.* Illianis River. Sept. 1865.

260. *Pinus, sp.* (F.); 2 bags. This tree reaches the height of 100 feet, and I found it seen in flocks amongst others under the generic name of "white pine," at a little mining camp in Southern Oregon

known as Sailors' Diggings, where the lumber sold for \$15 to \$25 per 1000 feet, according to its clearness. Here, also, I may mention that *Abies macrophyllum* was worth from \$75 to \$100 per 1000, whilst *Quercus* (No. 251) was only \$30. It (i. e., 260) was distinguished by the woodmen as the "ball pine." The timber is whiter than the following (No. 261), cones smaller, though in its general habit it resembles the rest of the *ponderosa* division, from all the members of which I believe that it is distinct (two bags, with foliage, &c.), vide No. 261.

261. *Pinus, spec.* (G.). Is this distinct, or a variety of *P. 257*? It grows very straight to the height of 150 feet and is accounted in Southern Oregon better for many purposes than *A. Douglasii*, which is in that district getting rather rare, until it almost disappears in California, though I am told—and according to the laws of phytogeography I do not doubt it—that it is found in the mountains of Mexico. The centre of the growth of *A. Douglasii* is in the country west of the Cascade Mountains, from the Colombia to—it may be safely affirmed—the tree limit. *Pinus* No. 261 is hard, and does not readily warp, as does *A. Douglasii*. Shingles are also made of it by splitting, but it is so free from knots that it will split with the saw—indeed, this is so much so that to drive nails into it holes must be bored; this is its worst fault. Very large cones. All these pines are known as "pitch pines," but this species is distinguished as the "yellow pine." Though there are doubtless many varieties of the *ponderosa* type, yet I am convinced that *P. 256*, *P. 260*, and *P. 261* are all as distinct as most species of the order *Coniferae*; and that *P. 260* and *P. 261* were very different in appearance there and in different situations. The whole type or sub-genus (embracing the species allied to *P. ponderosa*), as I have ventured to remark in former catalogues and letters, would form a curious study for the botanist; but these species just named are recognized as distinct by the woodmen who are too ignorant to mistake identity for similarity, though doubtless many varieties have been described as species, and which may be found on the same tree; but where we find a difference prevailing in all the cones on the same tree, and this difference permanent in widely different localities—geographically, topographically, and climatologically—then assuredly they have right, as in those named, to be ranked as distinct species. In box No. 1 I sent cones of what I take to be the true *P. ponderosa*, from trees growing on the banks of the Frazer River, at Fall-oval, B. C., and these trees were very different from any I saw in Southern Oregon. Instead of splitting easily, so knotty were the trees, that the miners, in order to make shingles of the tree—the only one growing so conveniently near—had to saw them. In the present pine the cones are nearly terminal, in clusters of from two to three—generally two; branches with a gentle sweep; bark lightish brown, with longitudinal wrinkles or cracks; light green foliage. Found growing on stony or rocky places near Sailors' Diggings, Oreg., Sept. 12, 1865.

262. *Pinus, sp.* (one bag and one paper parcel). I found this pine in great numbers on the sides of gulches, and high up in the mountains on spurs of the Siskiyou mountains (so named by the early French Canadian voyageurs, from the Cree word, signifying a hob-tailed horse, in memory of an incident connected with a fur-trapping adventure). Cones dependent, and attached by a thick pedicel to the body of the tree; leaves in whorls below the cones; the upper side strongly marked with stout prominent cuspidate scales, whilst the lower, protected from the sun, are different (vide cones). Are these cones abortive? None have yet opened, and though I searched abundantly, yet I could find none in any other state, and I thought it was better to send them as they were. One must just take the chances in these matters, and hope for better fortune next time: I refer to Nos. 254 and 262. Is this *P. insignis*? or the "lost" *P. Californica* Lois? (Carriere "Traite," &c.) It bears when very young. I saw shrubs of it not over 6 feet in height with abundance of cones. The soil affects it poorly, and is associated with the grease wood (*Parshia tridentata*).

263. *Pinus, sp.* I found this *Pinus*, with the enclosed leaves lying associated with it, on the ground on Fremont's Trail in Eastern Oregon, but never saw it growing. Aug. 1865.

264. *Pinus, sp.* Cone, found washed up on the banks of Rifle Creek, Eastern Oregon. The creek heads near Mount Scott on the Cascade Mountains. Aug. 1865.

265. *Pinus, sp.* Found washed down Clear Creek, flowing out of the Cascade Mountains. Aug. 1865. N. B.—The three foregoing may have no commercial or scientific value, but I enclose them nevertheless.

266. *Pinus Lambertiana*, Dougl. (2 bags, &c.). This well-known pine is perhaps—taking into account its beauty and economic value—one of the noblest trees on the continent of America. The seeds are collected for food by the Digger Indians in the vicinity of Sailors' Diggings; hence we should be cautious in talking about the distribution of the aut pine, as

this name is applied to *Pinus Sabiana*, *Pinus edulis*, *monophylla*, and *flexilis*, all of which are gathered for food in their respective localities, most generally where neither of the others grow; hence, in speaking of the "nut pine" of non-botanical travellers, we must take it to be the "nut pine" of the particular region he is describing. The seeds of the sugar pine are extracted by beating the cones with a stone, after scorching them to destroy the resin. The Indian climbs the tree, throws the cones down, which are collected and manipulated by his squaw at the foot of the tree. These Higger Indians (the lowest of the Indian races on the Continent), are great pests of the seed collector; for cut down a tree and leave it for a few minutes anywhere within hail of a wigwam, and you will be notified, on returning, to find an astute squaw and a brood of children disposing of the last of your collection, adding, perchance, insult to injury, by laughing a good-humoured laugh at your blank amazement. I lost the bulk of mine by a mishap of this nature, and never obtained another opportunity, as the "sugar pine," like others of its order, bore very sparingly this year; on many I did not see more than two or three cones. Still more inimical to the seed collector are the squirrels of several species; whenever a tree is felled they attack the seeds, and in a few minutes will clear it. They also run up the tree, cut off the cones, and, rushing to the ground, extract the "nuts." Then come the birds—a host in themselves—that, what with one thing and another, the collector has but a sorry time of it, and to obtain any quantity, even in good seasons, much activity is requisite. The wood of *P. Lambertiana* is so free from knots that shingles are made from it, and many a house in California is wholly "clap-boarded" with it without planing. It, however, shrinks more than any other wood, and is rather soft for flooring. In this respect it differs from *Seyoua sempervirens* (redwood), which, let it be ever so wet, will not contract. *P. Sabiana* is said to be too knotty to make good plank. The sugar pine is beautifully straight, but too "brash" for spars—independently of its not being found near the coast in any quantity.

267 (b). *Pinus, spec. (ambalis?) Dougl.*. Tree of small height; but this immaterial, as it must be stunted from its elevation, on one of the spurs of the Siskiyou Mountains (8000 feet). Branches in whorls; cones bright brown color. This is sometimes called by the woodmen the balsam fir, from the blisters of resin on the trunk, &c. Some of these blisters will yield as much as an ounce of resin. I have also heard it called the silver fir, white fir, and occasionally white pine, though the latter name in the North Pacific territories is used for *P. monticola*, the ally or representative of the Weymouth pine (*Pinus strobus*), Sept. 1865.

267 (b). *Picea, spec.*. Found in the Redwood Forests near Smith's River. Sept. 1865.

268. *Labodinus decurrens*. Torr. (*Thaps Crostana*, Oreg. Com.). In Catalogue No. 3 I have made some remarks upon the synonyms of this species, regarding which, trusting to "authorities" (?), I had fallen into error. In my letter, written to you from Jacksonville (descriptive of my journey from the Willamette across the Cascades, via Fort Klamath, to Rogue River Valley), I have described this tree. It is seen into lumber in some places under the name of the "red cedar," but it is not a very good timber. It cannot be split into planks easily, as it is too apt to fly into ribbons. Like some of its allies (*Thaps and Cupressus*), it will last long if protected from the air by being under ground or in water; but *vice versa* if not. In this respect it differs from *A. Douglasii*. An acquaintance of mine in Southern Oregon (Governor Briggs) tells me that he put up a ring fence of this timber, but in two years it was so rotten that you could push it over. I found a great scarcity of seeds on this tree this year, though, from the remains, it appears to have borne profusely last year. This is true, as I have previously remarked, on nearly all the trees, with the exception of perhaps *Quercus Blainii*. Beets, which bore plentifully, and accordingly, in the districts where it grew, I heard the exclaimers talk of the fall of 1865 as a good "bar year"—beats eating the acorns and getting fat upon them—though the contrary was the case in the "chinchip" (*Castanea chrysophylla*) thickets, which bore almost no fruit, with an accompanying scarcity of "bars" in the neighbourhood. Trees of *Labodinus*, which last year bore profusely, here this year were sparingly, and in some cases not at all. From the day I saw it first in the Cascade Mountains, in lat. 42° 50' N., to the end of the season, I am certain that we climbed, cut down, or otherwise examined upwards of a hundred trees, yet I do not think that, after all our labour, we obtained more than a dozen cones, representing twice or thrice as many seeds, though the same trees produced last year by the bushel. Sept. 1865.

269. *Taxus*, sp. 25 feet in height; on a spur of the Siskiyou Mountains, on the border line between

Oregon and California (lat. 42° N.), Sept. 1865. Though gathered long after the season of ripening (June or July), I fear that, though sufficiently matured to spring, yet they are not fully ripe.

270. *Cupressus*, sp. 15 bags and 1 paper parcel. The largest tree of this species which I saw was about 100 or 150 feet in height, and 2 feet in diameter; subercent in outline, though no regular outline can be ascribed to it, as it differs in shape and size in different localities. Some trees are light green in foliage; others dark green, and might be mistaken for *Labodinus decurrens*, or, as Mr. Newberry most probably did, for *Thaps gigantea*. The shrubby clusters on the superior surface of the fronds, near the apex, or on the twigs, though not on the extreme apices of the branches; branches with an upward sweep, coming off from the stem at an acute angle; in older trees the branches have rather a downward tendency, and the middle ones project straight out, and never with the upward sweep, as on the upper part of the tree, and in young shrubs all the branches have a general upward growth; bark roughish, madder brown colour, like bark of *Labodinus*, though whitish epidermis; in young trees the epidermis is nearly white and smooth; the cones are shown in light green, upper and lower; male catkins yellowish; tree generally unbranched for 20 feet. I found this in the mountains of Southern Oregon in sunny exposures. This is most probably *Cupressus Lawsoniana*, Muir, which Dr. Cooper (Patent Office Reporter, 1865, p. 432) designates as the "Port Orford Cedar," though this is generally known to the California botanist as *Cupressus Fragrans*, under which name Dr. Albert Kellogg has described it in the "Proceedings of the California Academy of Nat. Sciences," San Francisco, Part 1, and been lately introduced into England, though in most cases it has been distributed as *C. Lawsoniana*. I need scarcely say that, from its situation in Oregon, it must be perfectly hardy. *C. fragrans*, of Kellogg, is said to be principally found in the forests of South Oregon bordering on the sea. Notwithstanding the utmost care, I find that these cones and seed are, like many other species of conifers, affected by the larva of an insect, against which no care in collecting or packing can guard. This has been a source of great vexation to me, but your experience of similar mishaps will, I am sure, acquit me of any blame. Sept. 1865.

271. *Cornus sericea*, Torr. (Durand, Pl. Pratt. p. 80). On a spur of the Siskiyou Mountains, between Oregon and California, in lat. 47° N. A shrub 6 to 20 feet in height. Sept. 1865.

272. *Castanea chrysophylla*, Dougl. (*Castanea sempervirens*, Kellogg). Tree 60 feet in height; gulches near Canon Creek. Sept. 1865. Beets feed greedily upon the chinchip, and the old hunters talk about thickets of this plant as his "bar school." This is not positively a different species from the succeeding (No. 273), though the hunters look upon it as such. It attains the height of 60 feet, and 1 foot in diameter. Bark, epidermis whitish; sapwood tough and rather white; and the duramen hard and brown (true specimens); the nuts are much larger, and the leaves broader and less golden colored on the under surface than No. 273; the branches are nearly at right angles to the stem, and twisted and curved irregularly; branchlets at acute angles to branches; fruit near the apex. Canon Creek. Sept. 1865.

273. *C. chrysophylla*. Mount between Great Klamath Marsh and Fort Klamath. 4 feet in height. August 1865.

273 (b). *Thaps, new species*. A glaucous foliage, the cones, and general appearance of this plant, is quite sufficient to establish its non-identity with *Thaps gigantea*, Nutt. I therefore prefer to leave it without further description. I found the tree growing on the banks of the Willamette River in Oregon, not far from Portland, and was induced to collect specimens of it from its appearance being somewhat different from any specimens of *T. gigantea* which I had seen on the banks of that river. The period of its gathering was in May 1865; and though it was covered with old cones, of course there were none in seed. At the time I was busily occupied, and did not consider it distinct, having no specimens to refer to; but on subsequent examination, and a consideration of the fact that in all the specimens which I examined the remarkable differences were permanent, I concluded that it was a distinct species.

Mr Brown has also sent home specimens of woods, viz. Nos. 247, 251 (bark); 251 (two specimens of wood); 254 (bark); 268 (two species); 270 (two species); 272 (two species); also, dried specimens of plants, the seeds of which are either in this box or have been sent previously, with one or two doubtful species:—*Juniperus Henryana*, *Abies Bridgii*, *Pinus Lambertiana* (abortive cones), *Quercus Garyana*, *Pinus contorta* (male catkins), *Acer circinnatum*, *Quercus* sp., *Juniperus* sp.—no seeds.

