

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 dark 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 firs 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* (*Strobilus* of my catalogue) so far south. The term "white pine" is sometimes applied in California to *P. Sabiana*; and *P. Nevilis* 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 "barren 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 sun—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 prone 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-creek, 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* Loisi? (Carriere "Traité," &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