June 24 – Microscoping, etc.

June 25 – Preparing for a jaunt to a coal mine.

June 26 – Started for the Soledad Valley, being some 10 miles up the coast. The contrast between the fresh green hills and running brooks of this same region when last passed, and the dead brown, dried up soil of today is very striking. Dropping into the Soledad Valley we found the stream nearly dry and the ground which afforded such luxuriant pasturage dry and scant. In moist places the Anemopsis was growing and the side hills were covered in spots with the leafless stalks of Mustard gone to seed. Taking down the valley some 2 miles to its wide mouth opening on the sea-beach we wind round the high bluff on its northern side, its base washed by the high tides [149]. Some guarter of a mile up we come on the coal diggings. The bluff here rises some ft., its strata of different material lying in near horizontal layers. The first for nearly half the distance down is of coarse ferruginous colored sand with occasional stratified pebbles. This by the washing of periodic rains is shaped into a most singular and unique character of sharp ridges with deep depressions & miniature peaks, combing down the nearly perpendicular face of the cliff. This contrasts singularly with the even wall-like look of the lower strata, consisting of alternations of white sand and tough clays.

About 10 ft. above the high-water mark the seam of lignite makes its appearance, consisting of thin and variable layers of pure lignite imbedded in a tough clay, buff-colored above and merging into a slaty impure carbonaceous mixture in connection with the layers of pure lignite. The latter occurs in irregular seams, is of a fine jet color and fissile into small irregular fragments, doubtless the formation of more geological than economical importance. It is found in a variety of similar situations up the coast to the vicinity of San Francisco; in no place as far as I can learn does it go to indicate a deposit that would repay the labor of working, nor does its occurrence in tertiary strata favor the idea.

Near the digging, in sheltered places on the bluff, I was surprised to meet with a new species of Pine. It is small-sized and often depressed from exposure to the sea breezes. It is 5-leaved, leaves long in sheaths, at base uniting into a close cylinder, 6 to 8 inches, distinctly serrate upwards at their edge, cones large, inclined downwards on the branches, sessile, with a very large winged seed and tough shell enclosing a fine lasting kernel. Returning to camp I noticed [the tree] at the mouth of Soledad Valley in various places generally growing near the junction of the coarse ferruginous sand and the white hard sandy layers below. The tree is rather disposed to be round-topped and branches near the ground. One specimen measured 3 ft. 10 inches in circumference just

[149] Torrey Pines headland, or Del Mar bluff N of rivermouth (unclear).

above the base, and 25 to 30 ft. high. I propose if new to name this the *Pinus torreyana* [150].

June 27 – Scouring over the brush-covered hills that form the tableland adjoining the ocean, the layers described yesterday are plainly marked, being frequently washed into steep trenches. The *Adenostoma* is of course characteristic of all these dry hills, and I have found also frequent clumps of the *Dendromecon*, this being the locality where I first detected it March 11th. It is still in blossom. Its branches grow in dense clusters from a common root. It sends up shoots frequently 12 to 15 ft. Some of the thicker branches are near 2 inches diameter, the bark shaggy, wood brittle but heavy having a central pith. Reviewing the coal diggings I noticed a thin siliceous seam, presently a metallic appearance, about 1/2 inch thick embedded in the clay above the coal (Sulphured of Iron).

June 28 – The San Diego River, having gradually diminished its channel for some time, ceased to run this morning, having thus been in running order since Dec. 18th (192 days), at times during the winter & spring being unfordable. Water can always be obtained however in its bed by digging 1 or 2 ft. The different lengths of time in which the water flows, and ceases, seasons would I think afford an interesting criterion for measuring the relative amount of rain fallen on this western slope, and perhaps give useful information in respect to the agricultural facilities different seasons may afford.

June 29 – Day warm, not oppressive.

June 25, 1850 [and June 30, 1850]. San Diego. Dr Torrev,

My Dear Sir – As I informed you in my last, I left Monterey in the June steamer (Maj. Emory being on board) and in two days reached San Diego. In looking about the warehouse in San Francisco Maj. E. was fortunate enough to light on the long lost box, which notwithstanding its plain direction lay neglected and covered with dust. Though late we were glad to get at its contents, which we found however in rather moldy plight. The instrument boxes fell to pieces as we took them out and your present to the Major looked like a fair candidate for the antequarian society; my own books owe their better preservation to an extra allowance of covering. The instrument with the exception of the box was in good order and I am quite delighted with it. I have not sufficient practice in dissection to use it to much advantage but hope to improve. The books sent are invaluable.

[150] The earliest known written reference to the Torrey Pine. LeConte may have accompanied Parry on the expedition; in an 1885 remembrance, Parry called the Torrey Pine a "joint discovery" with LeConte.