Chas C Parry
given by an Indian on the
Colorado
1849



Field Note Book No 3.

Botany & Geology

U.S Boundary Commission

1850

California &

Journal - continued from Note book No 2 -

Sept 1st 1850 -

(Sunday) - The first day of Autumn marked by a cool atmosphere & cloudy sky - taken as a specimen of Weather. Therm 8 AM 67° F 2 PM 75° F 6½ PM 69° F The mornings are still & cloudy. clearing up towards 10 or 11 with a fresh sea breeze from N W. breeze going down with the sun and again hazy clouds

Sept. 2d Election, & court week, in town with the usual flare up, closing letters for the states, - cool. Thm 69° 8 AM 74° 2 PM. 69° 6 PM -

Sept 3 Day as usual - no news -.

Sept 4th Steamer from San Francisco -

Sept. 5th ———

Sept 6th & 7th I have been engaged in deciding an important question in reference to my personal affairs - I received from Major Fitzgerald Comdg post at San Luis Rey the offer of a situation as medical officer to his post with a salary of $200, per month - the acceptance of this implying my resignation in the Bdy Commission. I have had to cast the ballance and the scale has turned in favor of Maj Fitzgeralds offer - my connection with the Bdy service may thus be deemed at an end -

Sept 8th (Sunday) A pleasant temperate day —

Sept 9th Packing plants to be sent to Dr Torrey by May Emory. expecting to leave in the 6th Steamer —

Sept 10 The evenings & nights are getting quite cool.

Sept 11th (————) ?

Sept 12th Therm 8 AM 61°7 2 PM 70°3 6 PM 67°7 day cloudy rain on the mountains to the S.E. —

Sept 13th A slight drizzle of rain this morning which seemed very singular — and a timely warning of the approach of the rain season — A number of emigrants from Texas by the Gila route —

Sept 14th Day remarkably clear distant objects appear remarkably distinct, the atmosphere breezy & bracing. A ship from above bound for Realejo the pacific port for transit by the Nicaragua route to the Atlantic, — news from the States by San Francisco. the formation of the new cabinet &c — —

Sept 15th (Sunday) Day fine &c —

Sept 16th — Windy —

Sept 17th To day has turned sultry with the Therm at 82°3 & upwards — atmosphere very clear —

Sept 18th Day very hot — Therm at 8 AM 73°7 2 PM 92° 6 PM 87° — showing the greatest heat of the season — The wind has had the burning character of a sirocco — a similar spell was noticed about this time last year

Sept 19th Therm 8 AM 77°. 2 PM 89° — 6 PM 79° former part of the day sultry becoming hazy with breeze from S.E. at Evening — Steamer Gold Hunter from San Francisco —

Sept 20th A fog continuing through the day wind from S.E. temperature again cool as usual Packing up for San Luis Rey —

Sept 21st Waiting for the Steamer now overdue from Panama — Day Hazy — cool. My Portmanteau with May Fitzgerald dates from to day —

Sept 22d (Sunday)

Sept 23d Day Clear warm — to start for San Luis Rey tomorrow — The afternoon clouded up to seaward at night sky overcast — no Steamer — which gives rise to apprehensions of some serious accident

Sept 24th Start for San Luis Rey 9 AM. passing over the road travelled last March — the Tertiary hills adjoining the sea, scantily clothed with their perennial vegetation, present a singular character. forming high tables of several different elevations, their sides washed into irregular hollows trenches &c — all the stream beds crossed were dry — and the pasturage scant and brown the main stream beds crossed near the entrance to the sea. shows a wide flat esplanade their borders cutting through

the tertiary hills, forming steep embankments 100 – to 300 ft – being on horseback we made several cut offs. by which the distance is materially shortened. reach San Luis Rey 4 PM. Distance 40 miles –

Sept 25th Entering on my duties as Surgeon in place of Dr Hewit relieved

Sept 26th The temperature at this point is higher than at San Diego being shut out more from the influence of the sea breeze

Sept 27th Preparing papers &c in connection with the Medical dept – Day warm –

Sept 28th Day clear & hot – –

Sept 29th (Sunday) – " " "

Sept 30th –

Oct 1st Regular journal discontinued –

Items of information connected with San Luis Rey Mission & vicinity (Past History) –

The Mission of San Luis Rey was founded in 1798. or 29 years after that of San Diego the earliest of the mission establishments – from 1798 to 1832 it remained under the management of Father Antonia Peyri – who raised it to be one of the most flourishing of these missionary institutions and then resigned his charge at the age of 67

When left by him the Mission is said to have owned 60 000 cattle and to have raised annually 13000. bushels of grain – with an Indian population of 3000 – (Forbes. California 1835)

Average Prices in California 1832 (Forbes)

Oxen $5. – Horse $10. – Sheep $2. – Mule 10 – $

Prices in 1850

" $ 25 Horse $100. – Sheep $12 – Mules $75

Present Condition of San Luis Rey Oct 1850

The buildings are slowly crumbling & the roofs & walls giving way in various places. – The spacious church is an abode for owls & bats and the saints from their niches look down on deserted shrines – with a dusty look – the bells hang silent – and night screeches & mysterious knockings take the place of sacred chants –

The gardens are run to waste – the lower by the filling up of the ditches is turned into a swamp. – The vineyard & olive grounds are rank with weeds. reservoirs & irrigating ditches filled up; no grain, or vegetables raised and decay, ruin & desolation holds sway over the finest location in Southern California

Trip to the mountains East of
- San Luis Rey -

Oct 15th

Started from San Luis Rey - G A M. coursing up the valley to the Eastward - Its bed now dry was bedded with deep white sand & its margins thickly wooded a short distance up with willow & sycamore. interlaced with straggling vines of which the fruit now ripe is abundant the fruit is small (the size of a buck shot) purple austere to the taste & containing little pulp. hence barely edible and quite a contrast to the luscious cultivated kind - which however by neglect degenerates rapidly as I have had occasion to notice in the vicinity of the Mission gardens - the cultivated variety is also earlier the fruit being now entirely gone -

Proceeding upward the valley narrows and the rolling bluffs on each side leave the usual tertiary character and exhibit frequent exposures of granite or loose angular rocks of the same material bedded in dry ferruginous earth. the river course becomes tortuous and the road frequently takes to the hills crossing a spur to descend to the same valley - The general

aspect is rendered more desolate by the traces of recent fires that have swept over the whole face of the country burning up every green thing. and occasionally encroaching on the river bottom itself the bottom soil frequently rich but porous & only in rare places susceptible of irrigation no springs. or lakes such as are found in the vicinity of the Mission which give value to that location - about 10 miles up - the valley passing the first distinct range of granitic mountains - running water makes its appearance in the bed of the stream running over a shallow sandy bed with low adjoining bottoms - thickly bedded with willows & moist undergrowth - the mountain spurs project irregularly into the valley leaving large re-entrant angles giving the valley a basin character the view being shut up on all sides - The mountain masses on each side rising in broken knolls 8 to 12 00 ft - are of Quartzose granite coarse, and brown mottled - on whose sides as you proceed live oak begins to make its appearance

this winding mainly in an eastern course you come in sight of the high mountain ridge visible from the Mission its summit clotted sparsely with pine growth. near the base of this sierra the valley suddenly turns to the right leaving a gently sloping plain towards the mountains. on this is situated the upper Mission establishment called * Pala (15 miles from San Luis Rey) — now exclusively occupied by a village of converted Indians — there is a small church structure & a large garden with olives figs. & an excellent vineyard — the Indian willow huts are grouped in the vicinity and their cultivated fields extend along the borders of the stream irrigation is easily accomplished. by earth trenches the soil warm & porous. where uncultivated is thickly spread with mustard. an indication of rich soil — a wild species of gourd. is also very luxuriant. struggling for the mastery with its cultivated compeer the pumpkin & Mellon — naturalized tomatoes are also seen here and there mixed up with other Solanaceous weeds — in addition to these the cultivated articles are Maize beans. wheat &c — Though the season is by

* "Pala" is the Indian name for water)

no means far spent most of the fruits of the season. are gone. as mellons &c the rest stored for winter use so that the fields look bare & weedy, autumn like

Wishing to ascend the mountain ridge which had long excited my curiosity I pushed on for a rancheria lying directly at its base. from which the ascent can be made on horseback — followed up the same stream now turned shortly to the South its bed now rocky and its side to the East bounded by steep cliffs of loose rocks imbedded in marly earth — course approaching the southern spur of the pine ridge which now looms up skyward its fringe of pine trees and its bare lower slope. presenting a strange contrast — In 3 or 4 miles the road opens on a broad basin plain extending directly to the base of the precipitous ridge at the sharp junction of which lay the Indian village — where about sundown I found myself surrounded by barking curs. and gigling women & children finding out the Capitan of the rancharia I

imposed my self on his hospitality for the night a dish of atole - and a corner of his hut concluded the days Entertainment —

Oct 16th With the Sun. I was on my way to meet the God of day leaving him to climb the Eastern slope while I ascended by an Indian guide mounted the western —

The path leads from one table to another mounting its most gradual slope, in the steepest part twisting Zig Zag up the face of the sloping spurs to mount their rounded ridges — the surface was entirely bare & burned over the sides composed of the debris of the higher slopes the sharper ridges showing the bare exposure of Micaceous granite Gneiss in structure thus tabling from one rounded ascent to the other about half way up the soil assumes a richer character with more consistency, forming gently swelling undulations - in the angles of the steeper slopes these are the grain fields of the Indians and as we passed the young shoots of wheat on the lower slopes & barley on the

upper was just making its appearance thus natural adaptation of climate & soil securing at the same time the protecting influence of the snow of winter & the fertilizing moisture of the fogs of dryer seasons — The next belt of vegetation brings us to the Mountain oak. which occurs in scattering groves a deciduous leaved variety resembling Quercus Virgia - being most characteristic this bears a very large acorn much prized by the Indians. but at the present season they are almost entirely without fruit — and the various ranches established at them fruitful seasons. for their collection deserted — from this by a short distance we mount the ridge Juniper. and here the fir tribe makes its appearance represented by a Species of Abies — same as before seen. on the divide near San Felipe. and the Thuya — of large size —

From this highest point turning back towards our ascent and extended

view of that peculiar bare California scenery makes its appearance - stretching towards the Ocean. the dry brown rocky mountains dwindle away towards the fog land shore - The Mission of San Luis. is visible as a white speck & the valley winding its dry sandy bed amidst verdant willow growths to its mouth - directly below us the valley assumes that peculiar oblong basin Character so frequently noticed - bounded on all sides by lomated hills. sending down to the main depression their branch valleys so as to carry our comparison farther we have a large irregular scolloped dish (a good vegetable dish for the ancient Gods if they would only furnish the vegetables)

Turning round a point to the eastern slope the view takes in ranges of pine ridges similar to the one we are on the view being thus contracted - our path soon enters a thickly over-arched path and the deep grateful shade of lofty & Majestic pines, & Cedars.* - here again grows the Elm barked oak - of which, I succeed

* It was from this place the Franciscan Padres. procured the building materials for the Mission. at San Luis Rey -

in obtaining good fruit specimens - the acorn is large, smooth of an apple green color and bedded in a thick shallow cup covered with a glaucous bloom -

- My Indian guide took occasion to remind me of the danger of bears which are known to abound in this ridge - "Muchos. Orsus" - "Muy brava." he kept repeating soon we saw recent tracks sure enough - and fresh dung the tracks were as large as an Irishman paw and looked capable of giving a monstrous squeeze - but that was all we saw of Mr Bruin - coming then to a delicious ice-water spring we quenched our thirst & prepared for the descent - descending by a still steeper, but more direct path. we reached the village about 11 A.M. - here getting rid of my Extra shirts to meet the obligations incurred - I made the best of my return way to the Mission and reached quarters at 7 P.M.

The Month of October 1850. at the Mission of San Luis Rey - California -

The month of Oct at San Luis Rey has been characterized by generally fine temperate weather. frequently cloudy. and light breezes Thunder & lightening occured. in the West. in the first week followed. several showers of rain for 3 days after which the atmosphere was remarkably clear - the latter half of the month was marked by frequent morning & evening fogs - The amount of rain fallen during the month was 0,2 of an inch - its effect was shown by a slight tinge of green over the burned hills. the Mustard & Mallows about the Mission Const also made a start - general thermometric mean for the month 66°F. an approximate mean for the year

Thermometric observations at Mission of - San Luis Rey California -

October 1850	Sunrise	9 AM	3 PM	9 PM	Daily mean -	Remarks
Oct 1st	68°F	70°F	72°F	68°F	70.°F	Lightening 7 PM
" 2	66	64	71	64	68,5	
" 3	70	72	76	67	73	
" 4	66	72	79	68	72 5	
" 5	66	72	72	69	69	slight shower
" 6	68	70	78	68	73	several showers

October	Sunrise	9 AM	3 PM	9 PM	Daily mean
" 7	67	71	72	68	69,5
" 8	65	66	64	63	64,5
" 9	60	67	70	62	65
" 10	53	66	73	62	63
" 11	54	71	77	66	65,5
" 12	52	72	76	64	64
" 13	53	66	72	62	62 5
" 14	54 fog	63	69	63	61,5
" 15	63 fog	66	71	64	67
" 16	54 fog	68	73	60	63 5
" 17	52 fog.	74	78	65	65
" 18	54	77	83	66	68,5
" 19	61	78	78	66	69,5
" 20	59 fog	64	69	63	64
" 21	57 fog	63	72	65	64 5
" 22	58 fog	68	69	62	63,5
" 23	57 fog	63	82	68	69 5
" 24	56 fog	66	72	64	64
" 25	58 fog	65	70	64	64
" 26	59 fog.	60	68	62	63 5
" 27	60	64	68	64	64
" 28	62	66	68	62	65
" 29	60	64	66	62	63
" 30	62	68	68	62	65 several showers
" 31	60	59	66	63	63
Monthly mean	59.8	67.58	70.38	64.38	66.03

No of entirely clear day 5 entirely cloudy - " 1

Maximum - 83°F
Minimum 52°F
Range - 31°F

65.63

Observations Continued —

The Mission buildings occupy a plateau elevated some 20 ft above the ordinary valley level thus covering an area of several acres. is isolated approaching nearest to the left or Southern bluff. of the valley separated by a slight depression in which at its lower edge several fine running Springs make their appearance this was formerly fenced in as a fruit garden but the ditches being now choked up. it is converted into a swamp the fruit trees being all drowned out and their place supplied by willow & cane thickets & rush ponds — these all center in a shallow pond whose exit furnishes a scanty supply of water to the Indian village in the bottom ½ mile below the Mission in the fresh parts of the streams grows a species of Hydrocotyle — and the more stagnated parts are covered with Ms Lemna and a floating Cristal-wort plant — Anemopsis Californica, is also common — the Cane, is an introduced species, resembling bamboo but more fragile. it is used in

making mats — On the northern slope of the Plateau is the other garden in which are now found vines, olives Maguey & Cactus — the former are struggling out a precarious existence with weeds. the olive trees are in tolerable condition. & the Maguey grows luxuriantly sending up a flowering stalk 30 ft high — this garden runs down to the river bank. and was formerly watered by a long canal leading from a lake some mile above — its soil is light & well adapted to vine raising —

The main river bottom presents a wide flat sandy plain. requiring irrigation to produce crops — The Indian village below consists of some 20 houses the grounds about. are devoted to raising pumpkins. Mellons. beans. maize & tomatoes there are a few fruit trees including apple pear peach and some thrifty fig trees — of these the pear & fig are most reliable in the pear however are an unimproved variety and never get soft & ripe — The figs are excellent & produce 2 crops in

the year – in May & Sep & Oct – the fruit is very luscious and to an acquired taste very palatable – and wholesome. The river bed like that at San Diego is dry about 6 month in the year towards its exit to the sea it is narrowed by the approximating of the bluffs on each side and presents a thick willow & Alder bottom its mouth is composed of salt water lagoons shut in by a line of leach – (An account of the upper part of this valley see pg 6.) The bounding bluffs on each side of this lower valley are composed of tertiary strata composed of varying material coarse sand pebbles & marls in several places about these tertiary hills beds of chalk are exposed – sufficiently pure for the making of lime – a pure form near Santa Margarita is used mixed with ashes for making ley for making soap – these uses are important in this region where lime fetches a high price – Occasionally where the hills assume a flattened rounded form a

preponderance of Clayey Earth renders a soil fit for raising of grain, sufficiently manifest by abundant crops of wild oats, which is the best index of the capability of soil in such situations and will eventually be looked upon as the best guide in future farming selections – a like valuable index of barrenness may be gathered from growth of Cactus. Artemesia. Adenostoma &c –

Throughout the river bottom in various parts are ponds which retain the surplus waters of the rainy season in their lower depressions – though many of them dry up at certain seasons they are generally encircled by saline weeds. and have no outlet –

Crossing the valley opposite the Mission about 1/2 mile wide. you enter the range of tertiary hills bounding the valley on the north of similar character to the opposite side – then passing over a divide in about 3 miles you drop down into the valley Santa Martanita

There are several good ranches among them the Branch Mission now held as a rancho by Pio Pico the ex-governor of California - Irrigation here is accomplished roughly by conducting the waters of the main stream here perennial over a rich bottom flat. Here is here a fine vineyard & orchard of pears & figs - and might be made of more account than at present - In this vicinity a fine variety of chalk is found and is burned for lime & the manufacture of soap. The valley is narrower than San Luis and the bluffs bounding it to the N & W rise in the distance into high ridges with scattering oak timber -

This includes all my principle observations for this month in this section - over which the sweeping fires added to the desolations of the dry season have left little for a Botanist to call - brown deadness is the prevailing feature -

In some of the lower locations a mild form of intermittent fever has been common & but yielding readily to the usual remedies - In my official duties I have been principally occupied with nervous diseases, which seem to prevail in this climate especially among hard drinkers - I am now expecting to break up my duties here shortly and take passage for the U. S.

So much for Oct. at San Luis Rey

Meteorological register for November 1850
Mission San Luis Rey California.

November	Sunrise	9 A.M.	3 P.M.	9 P.M.	Daily mean	Remarks –
1	58°7	61°7	62°3	59°7	60°2	
2	56	60	58	53	57	Rain Wind S E
3	50	56	54	51	52	Rain. Wind S E; Hail
4	49	56	62	53	55,5	
5	52	60	68	56	60	Clear, Cloudless Wind N W
6	57	67	71	57	64	do do " "
7	57	64	71	59	64	
8	51	62	72	58	61°5	Clear
9	52	62	72	57	62	
10	50	64	71	66	60°5	Fog 9 P.M
11	50	65	70	56	60	Fog 9 P.M. Clear Day
12	48	60	69	58	58,5	Fog at Sunrise
13	47	59	68	59	57,5	
14	59	66	72	60	65,5	
15	53	65	74	63	63,5	
16	58	64	70	63	64	
17	62	63	72	64	67	
18	50	59	67	61	58,5	
19	56	61	67	56	61,5	
20	56	58	59	58	57,5	Light rain
21	46	54	65	52	55,5	Clear Cloudless
22	47	55	70	54	58,5	
23	48	60	66	58	57	

Register Continued

Date	Sunrise	9 A.M.	3 P.M.	9 P.M.	Daily mean	Remarks –
24	54	56	63	56	58,5	Heavy rain at night. Wind W.
25	59	59	58	57	58,5	Showers
26	48	53	57	51	52,5	Clear Cloudless
27	40	49	60	48	50	Mostly clear
28	41	49	66	49	50,5	
29	42	50	59	48	50,5	
30	46	49	61	56	53,5	
Monthly mean	51.4	58,86	65,6	56,53+	58,5	Maximum 74° Minimum 40° Range 34°

Rainy days 4 Amount of rain fallen 3/4 inches
Mean temperature for the month 58,5°7

The weather for the month has been characterized by a diminution of mean temperature below that of Oct of some 8°. Two principal rainy spells as indicated by register preceded by cloudy weather and followed generally by remarkably clear cloudless weather the evenings & mornings Cool.

The effect of rain on the vegetation has been very striking the weeds & pasture grasses have spread a rich green over the face of the

Landscape - grazing is even tolerable - The herbs first to make their appearance have been Wild oats. Erodium cicutarium - wild mustard. Malva obtusifolia - and last, Medicago - ?
On the 15th of the month, I detected in flower on the hill sides. a species of Saxifraga noted for a tuberous root - the flower is small white streaked with purple in few flowered racimes its tuber is small ovoid about size of a filbert apparently highly charged with fecula. and gathered by the Indians for food by whom it is called — — The flower stalks preceed the leaves which afterward make their appearance consisting of a single round crenate lobed leaf pressed close to the ground - many of the flower stalks had already gone to seed and its period of flowering does not last longer than last December the leaves then commence their functions and prepare the tubers for another seasons flowering - thus rendering the plant perennial Besides this. the Dodecatheon dentatum has begun to show its leaves - and the Polopodium to unroll its ferny leaf - and all these progressive changes - the deciduous leaved

trees. have begun to cast their leaf - and the coarse bottom weeds are withering up under the influence of the same rain that has given such a start to the annual & perennial Spring vegetation
The wild mustard has advanced far enough to add the article of greens to our Commissary larder —
While thus we have Autumn & Spring in our muds. at no great distance the neighboring mountains have assumed their wintry covering of snow - derived from the same rains that refressed us -
I have not extended my tramps far from this vicinity and have been mainly occupied in tracing out the remains of former agricultural apperations - with an Eye to future Capacity — The rich flat bottom ground lying East of the Mission covering an extensive track about 1 mile square was originally traversed by an irrigating ditch deriving its water by a circuitous course from a small runnery stream terminating in a rushy marsh

At final exit after a course of some 2 miles is into the lower garden & vineyard It also radiates branches upon the bottom above mention of a loose warm earth suitable for raising Maize &c —
The different ponds occupying the lower depressions at several points on each side of the valley might be made available for irrigation by raising the water to the required height by hand or machinery — The irrigating ditches before notice occasionally approximate to these points sufficiently to warrant the idea that they they were sometimes used for this purpose in times of scarcity but no permanent works are apparent

Near the source of the stream which furnishes water to the main irrigating ditch is an Indian Rancheria affording a fair grazing section — and some portions of land suitable for irrigation in the same vicinity over a small divide is another Ranch called Buena Vista occupying a contracted valley with a deep gulled stream — This is a favorite spot

with the Indians who congregate to eat beef & play Monte —

The largest lake of those occupying the bottom is on the north side of the valley enclosed between two parallel hills — it is more than a mile in length and of varying breadth the waters apparently shallow and much frequented by immense flocks of wild geese & ducks — which at this season triangulate through the air in extended columns accompanying their flight with a euphonious and epicurean squalk — The river bed is still dry & no signs of a speedy overflow —

There has been no general news of any importance — except the adjournment of Congress — and the appearance of the Cholera in the upper country —



Meteorological Register San Luis Rey Calᵃ for December 1850

December	Sunrise	9 A.M.	3 P.M.	9 P.M.	Daily Mean	Remarks —
1	57	57	57	56	57	
2	43	50	58	47	50.5	Clear
3	45	51	53	45	49	"
4	36	45	53	39	44.5	" White frost & ice
5	38	45	50	40	44	" " " "
6	33	46	53	44	43	" Hard frost ice ¼ inch thick
7	37	53	61	47	49	Cloudless ice
8	47	57	70	51	58.5	
9	45	65	70	51	57.5	Clear
10	45	53	59	49	52	
11	42	56	60	49	51	Fog at sunrise
12	45	51	59	49	52	" " "
13	43	49	57	49	50	Cloudy rain
14	53	56	59	55	56	" "
15	49	58	59	53	54	" "
16	54	57	56	52	55	" "
17	50	54	55	49	52.5	Heavy dew
18	44	51	56	49	50	" "
19	41	49	59	50	50	" "
20	43	49	57	47	50	Cloudless
21	40	53	59	49	49.5	
22	43	49	58	45	51	
23	41	46	58	46	49.5	

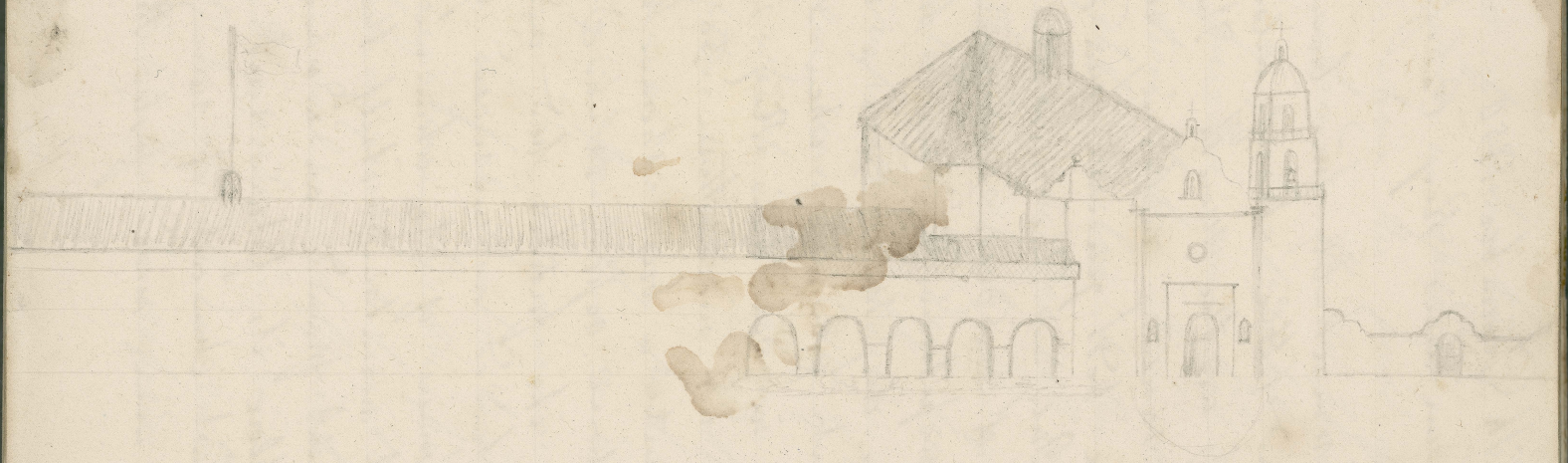
December	Sunrise	9 A.M.	3 P.M.	9 P.M.	Daily Mean	Remarks
24	42	49	58	48	50	
25	45	55	57	47	51	Cloudless
26	41	50	61	45	51	"
27	38	42	59	44	48.5	" Frost & ice
28	43	56	62	47	52.5	"
29	42	57	65	45	53.5	"
30	39	47	62	46	50.5	"
31	45	50	62	49	53.5	"
Monthly Mean	43.51	51.80	59.41	47.7	51.16°	Maximum 70° minimum 33° Range 37°

Amount of rain fallen 2.22 inch —

The weather for this month has been characterized by frosts sufficiently severe to check vegetation and form ice a rainy spell of 4 days in the middle of the month was succeeded by the usual fine clear weather the last 7 days of the month were entirely cloudless — —

Topographical sketch vicinity San Luis Rey Cal^{a} 1850





Month December 1850

Mission San Luis Rey California

A month of remarkably fine bracing weather has furnished little else of interest to be noted — Early in the month — The streams commenced running including all along the coast. whose beds generally run dry in the month of July — The rise this year was not as seen at San Diego last year viz. namely an impetuous current transforming in an hour a dry sandy into a booming current, but gradual. when I first noticed it in San Luis Rey river. Its progress was not more than 30 ft per hour the water quite a brisk stream a short distance above. rapidly extended itself in saturating its future bed and its progress was thus retarded or increased by the saturating power of its channel — where the current maintained itself the swiftest above it sent forward. an advanced arm as if to explore its future route in the traces less of the last channel of running water thus running arm moved faster than the

slow process of saturation, which came into play afterwards in spreading its proper channell — when the point of saturation was fully attained the surplus water furnished a quite navigable stream and if a previous rain had accomplished the saturation before hand, we might have had a sight similar to the descent of San Diego river in Dec 18th 1849 — see note book)

There streams which always dry up later or earlier in the dry season. might furnish comparative indices of the dryness of particular seasons. 1st by the height upward to which the stream becomes dry doubtless variable. 2d the time of its reappearance at any particular point. indicating a premature or delayed quantity of rain — This phenomenon might also give some useful hints to the proper use of irrigation by comparisons suggested of the slow or quick saturating power of certain soils — different processes of bestowing the water in regard to different crops, would be suggested — roots, as potatoes &c should probably not be exposed by a soil

watered by ditch saturation but the water should be bestowed directly on the surface — for others as maize the former process may be preferable, also for trees —

The month of December is devoted in this vicinity for sowing wheat & barley nearer to the mountains the period is earlier by a month or 6 weeks — the ground occupied for this purpose is the valley flat, lying some 4 to 6 ft above the river bed. the soil is mellow but too sandy and the crops have to fight their way with a species of quack or salt grass — some of the clayey hills now bedded with a luxuriant growth of wild oats would yield much finer crops, but from the want of fencing the crop would have to be protected from cattle & horses.

The early frosts of this month & a diminished quantity of rain rather checked the luxuriance of vegetation but it is now rapidly recovering. all the grazing

herbs are now in a forward state particularly the Erodium — most of the wild flowers have also pushed forth their leaves. of those in bloom at present there is the Phaca — ? a species of Nyctaginaceae — & the pretty Dodecatheon dentatum — Oxalis — and Isomeris arborea. the Artemisia — & Saxifraga tuberosa are now out of blossom having fulfilled their short period — the species of Calachortus & Scilla — have put forth their leaves also the Viola Pedunculata &c &c —

My Geological observations have been limited — seeking to discover the true position of the chalk pertaining to these tertiary hills in the only two places where I have noticed it. it occupies the higest summit of the bluff hills. lying on a coarse white or gray sandstone, the apparent base & body of all the tertiary hills — varying considerably in character. where in contact with the chalk it partakes of its character & its medium is evidently calcareous —

Meteorological Register for January 1851 at Mission San Luis Rey Calif^{a}

January 1851	Sun Rise	9 A.M.	3 P.M.	9 P.M.	Daily mean	Remarks
1	42	50	64	48	53	Cloudless
2	42	59	67	50	54.5	"
3	41	51	66	59	53.5	"
4	42	49	63	52	52.5	Fog 9 P.M.
5	43	50	60	49	51.5	
6	41	49	54	51	47.5	
7	47	51	58	50	52.5	Cloudy
8	50	51	59	48	54.5	Slight shower at day light, 04 ins
9	42	54	61	48	51.5	Clear
10	40	55	63	48	51.5	
11	45	58	69	52	57	Clear
12	52	62	73	56	62.5	
13	51	59	63	55	57	
14	42	53	58	50	50	Fog at Sun set
15	46	50	52	52	49	Fog at Sun-rise Cloudy
16	50	52	56	48	53	Cloudy
17	41	47	65	48	53	
18	40	56	64	48	52	Cloudless —
19	38	51	65	48	51.5	White frost-
20	46	54	66	51	56	Cloudy —
21	45	56	66	50	55.5	Clear
22	40	48	64	48	52	White frost-
23	43	55	69	51	55.5	" Clear

January	Sun Rise	9 A.M.	3 P.M.	9 P.M.	Daily mean	Remarks —
24	46	56	66	52	56	
25	56	53	63	49	56.5	Cloudy —
26	40	50	61	48	50.5	Heavy fog. Sunrise
27	44	56	64	51	54	
28	41	56	63	53	52	Heavy dew
29	43	56	59	55	51	"
30	53	54	57	55	55	Thick fog at Sun-rise Cloudy
31	53	55	59	52	56	Cloudy —
Monthly Mean	44.48	53,57	59.25	50.8	53,12	Maximum 73° Minimum 38° Range 35°

The weather this month has been marked by unusual dryness, but a single small shower having fallen on the 8th since Dec 16th the cloudless days at the close of last month continued till the 4th making ten days in succession without a cloud! the remainder of the month has been alternately clear & cloudy with some days even quite sultry — Heavy dews & occasional night fogs have served to keep the vegetation fresh but exposed places are suffering from the drought — Wheat is principally sown in this vicinity & is in a forward state but needs rain —

Of the plants that have made their appearance are a species of Lepidium — & making quite a fine sallad equal to the cultivated Nasturtium. Viola pedunculata was first seen on the 20th inst - a species of Hydrophyllaceæ -; Ribes speciosum :- Ceanothus — ? Salvia dumosa :- Ribes Malvaceum several mosses & Hepaticeæ — some Compositæ — Oxalis — Avena — ? (wild oats) Erysimum canescens ? — Tillæa. (scarce.) &c — Echinocystites — ? The dry weather has probably expedited some of these —

On the 24th I rode down to San Diego - the appearance of the country further south indicating more serious drouth — the ordinary streams were quite shallow & some entirely dry — in the vicinity of San Diego the plains were parched & brown, quite in contrast with their appearance this time last year — building improvements were going on in town — but gaming seemed the only profitable business —

Capt Hardcastle, having received funds in behalf of the Commission, is settling up the old accounts, & will advance my transportation to the U.S. which I intend to avail myself of in March — He has lately returned from the Colorado, where things seem to be going on peacably under the auspices of the Military Post established there

He brought with him, some of the most interesting of my last collections among other things. Marine shells fossil from Carisso creek. a most interesting discovery. The removed volcano turns out to be a mud spring —

Of late there are quite authentic accounts of the discovery of gold in Lower California — not far from the Boy line — the natives are at work in considerable force — and as a retaliation measure say they will not allow Americans to dig — should the discovery be traced north of the line its demarkation will be more important than first supposed

On Feby 8th started with Majr Brown on trip to the Rancho del Chino — leaving San Luis Rey at 9 A.M. — passing over same road travelled in March last — crossing the divide between the San Luis & Santa Margarita valleys. we drop down into the latter. and crossing the stream now quite shallow on the north side ascend the defile leading to the table land looking down on the plain of Los Flores. adjoining the sea — the slate rock noticed in the defile. seems to be an accidental erratic deposite the valley sections showing the usualy tertiary Shatta — with irregular slate rocks in the washed debais — noticed in the defile the Peonica — in flower also some species of Euchroma — ? &c — passing over the plain of Los Flores the vegetation was far more scant than last year being parched up by the want of rain — from Los Flores we

spurs to valley San Matea — & take the beach road — passing under high bluffs tertiary strata 1 to 200 ft — in horizontal layers — in the vicinity of valley the upper cappings are of pebbles stratified under which rest strata of sand stone gray & Buff colored changing into clay or marl — in some 8 miles we enter San Juan Capistrano valley — and passing the Mission follow up the valley & crossing its upper portion put up for the night at Rancho Aliso we got a supper of beef & frioles. and the privelege of laying our blankets on the outside porch Distance 36 miles —

Feb 9th Leave the ranch at day break fast on the ground — we pass over a rolling ground of coarse sandy layers — and descend on the wide plain of Santa Anna — passing on for 7 miles over the clayey soil. moistened by rain and spotted in every direction with cattle. the vegetation less luxuriant than last year — coming to the line of Sycamore trees we stop & take our breakfast — and then leaving

the Los Angelles road inline to the East — reaching the Santa Anna river at a fine Ranch of the Yanba [illegible] we follow up the stream and cross near the entrance of the river into high mountain Range of tertiary — Our most direct course to the Rancho of Chino led over these mountains to our left — but the trail being obscure we conclude to follow up the river and pass the Spur — the river in passing through the range of mountains — is a brisk dashing stream 100 ft across. with a sandy & pebbly bed — the bottom loses the fertility it has lower down becoming sandy and narrow the mountains rising on either hand in steep irregular cliffs we cross the stream some 6 times and after passing the mountain spurs on our left leave the Santa Anna river behind and open on an extended basin valley bounded on the right by an irregular range of granite peaks forming irregular [illegible] cones & hogs backs

the higher points capped with snow
the N W corner of this vide basin
the Ranch of del Chino where we
arrive a little before Sundown
Distance 36 miles —
Feb 10th & 11th — Remain At Chino — being
entertained by the officers of the Infantry just
established here — This valley being subject
to the incursions of Indians from the
desert plains & mountain valley on the
other side of the Mountains — The Debouch
is made by what is called the Cajon
pass — plainly visible from here behind
a depressy spur of the mountain Range
to S.E. about 25 miles distant to its
entrance & 15 miles through — passable
for waggons — forming the end of the Spanish
trail from Santa Fee — the water shed is
said to be 10 miles from the western exit —
the 25 miles from this mouth of the pass
is the Mohave river a tributary of the
Colorado — all the valleys & plains on
the other side are sandy & destitute of
grass — there is a chain route by which
the Salada valley may be entered by

the pass known as Walkers — (see Fremonts
at which point the Sierra Nevada range
terminates to the South —

This Ranch — owned & occupied by an
American resident — William — Don Davis
greatest amount of irrigable land I have
yet seen in a body — the soil is a
clayey dark loam easily worked — the
stream coming from a deep gully down
the snow capped mountains to the N E.
these mountains are bare in outline seamed
with peaks & gutters & terminates at
the base on the plain by a steepy
even descent and the stream to the
S W skirts the base of the hills bounding
the ranch to the N & W — before reaching
the ranch. it is easily led by a number
of irrigating ditches in every direction —
over the fertile cultivated plain passing
in front of the houses and acquiring
sufficient descent in one place to afford
an extensive water power — to a grist mill
the water is of a comfortable temperature
and drawing its source from the high neighboring
mountains — furnishes an abundant perennial

supply – The elevation of this plain
cannot be very much above the sea
level. to judge from the vegetation which
little less advanced than on the coast
it is 30 miles from Los Angeles. and
the high road by the Gila rout from
New Mexico. & Sonora. as well as the
Spanish trail – which now draws
considerable winter emigration from the
Salt lake – Timber is scarce in the
vicinity. a small fringe of pine trees
is seen on the spurs bounding the
Cajon pass. the tertiary hills are
sparingly scattered with stunted oak
& sycamores grow in the upper part of
the valley – the ranch is well adapted
for grazing & might support an immense
dairy – potatoes flourish – also peaches
grapes – and the usual grains
the weather is agreeably tempered by
mountain breezes – and only slight frosts
during the winter

It is in the tertiary hills toward
Los Angelles. that the springs of
mineral pitch are found. in which

it occurs. in a bubbling issue of
liquid tarry consistence thickening on
exposure – its only use to which
is applied here is as a covering of
roofs – used as it is in a simple
state it has the inconvenience of
melting & dripping in the hot sun
and cracking in the cold. causing
leaks easily repaired but as easily
caused again – an improvement might
be made in some sort of composition
less easily rendered liquid – and more
durable – it might also enter into
the construction of adobes & reservoirs.
I was here fortunate enough to find
some specimens of the fruit of the
walnut. which I had before seen
above Los Angelles. – it resembles
the specimens collected on the Gila
by Mr Randall – nothing new in
the way of plants – to return tomorrow
to San Luis by the way of Temicula
—

Feby 12th Leave "Chino." by sun rise on our homeward track. passing down the valley basin on the skirt of the tertiary hills on our right - leaving to the same side our previous path down the Santa Anna river we pass directly across. and. ascending a gentle gulled slope. enter on an upland plain of coarse sandy gravel - granitic mountains approximate our left side - and to the west the tertiary hills assume a mountain character reaching in one point sufficient height - to sport a snowy cap the plain farther on assuming more of a valley character - is cut up by wide gulches. from the Eastern mountains affording in a short distance a running stream. its drainage flowing to the Santa Ana. in 18 miles we reach a ranch - called "Mezcal" watered by a fine spring the product of the snowy range on the right on this same ridge is noticed. a Coniferous tree - which judging from some cones seen in the dried bed of a mountain torrent I judge to be the the common Abies of this Southern District - I

also found at this locality a singular species of Carex. the persistent remains of its lower leaves. forming quite a symetrical trunk 3 or 4 ft high. & 6 inches diameter supporting a green head at top somewhat resembling some  forming species of Yucca —

leaving this place our previous hard sandy compact road - is changed into a variously cut up ravine or stream bed which hugs the granitic range to the East - deriving from its debris. occasional pebbles — these near granitic mountains. show an aspect of coarse brown rounded masses - bedded in a dry ferruginous soil sparse of shrubery & herbage in aspect following up like the main course of a stream bed drawing its main affluents from the adjoining ridges on each side - we imperceptibly cross a divide. and in clinging in the opposite direction that is a southerly course - come in view of an extensive lake. embossomed in adjoining hills

It is of an oblong square form & 3 to 4 miles in length. Its edges on its northern extremity grassy & apparently fertile - near its head is a deserted ranch where we stopped to lunch. To the west the bounding mountains, whose main features character and are composed of the usual spotted granite exposed in mural blocks with an intervening thickness of bare earth we follow the western edge of the lake over an excellent hard gravelly road and passing its head ascend gradually on an upland basin plain. Its lower (northern) edge apparently an extended bed of the same lake - the features of this lake would encourage the notion of this being the previous state of all these fertile basin plains. China for instance, in which Evaporation on a paved exit to the ocean, has dried up their bed —

Passing on over a wide grassy valley the first stream passed flows a direction from the Lake Southerly and finally opens on the wide grassy valley of Temecula - we passed on our left

a noted locality of warm sulphur springs temperature said to be almost scalding did not have time to visit them continuing on our usual Easterly course we make toward a pile of high rocky mountains in a lower depression of which is a gap for the passage of the streams draining this quarter the first gap affording exit for a stream in this coast range between here & the Santa Ynez - this gap is probably the head of Santa Margarita valley — by sun down we made a short turn somewhat out of our course to the left and rode up to the Indian village of Temecula — where we passed the night bivouacking in a nest of dogs. Cats hens & squaws — by whom including our drunken host we were hospitably entertained — Distance 45 miles

Feb 13th We left the ranch under a lowery sky which soon turned to hail & rain — entering a mountain gap to the left of the stream pass we

come among a confused mass of rocky blocks among which our trail winds it devious course - mean while being pelted by hail and chilled to the bone by a piercing wind - after passing the main elevation we come on a broken country of ridges covered with their evergreen shrubbery Adenostoma &c - here we wind & twist passing steep crests or winding in live oak valleys (the oak being of the sub alpine character) from the crests we look over a desolate scene of rocky swells covered with the prevailing deep green tint of its characteristic shrubbery emerging from these we pass down into the San Luis valley entering it about 4 miles below the ranch of palo fran whence we pursued our way to the mission over the same road travelled in Oct last see pg - 6 - 13th) Distance 22 miles

Description of a plant found at San Luis Rey - Feb 20th

Nat. Ord. Boragineae - Stems several from the same cluster of radical leaves - assurgent - Peduncles axilary in the forks of the branching stem - forming secund racemes above - elongating in flower - Calyx oblong bell form 5 cleft with a contracted neck below divisions extending nearly to the base - hispid & marked with a red median nerve. divisions nearly as long as the petal: petals (white) salver form with a short tube stamens & style included - throat nearly closed with a row of 5 glandular yellow bodies placed opposite the base of each division of the petal extending in a yellow band into the tube of the petal with hispid edges & tip: Stamens inserted in the throat corresponding to the divisions of the petal and between the glandular prolongations, anthers attached by a short filament on the outside near their base color whitish: pistil 2 capitate shorter than the stamens: (seeds smooth)?

Leaves radicle forming a loose rossette linear & lanceolate upper scattering alternating. subtending on one side the lower solitary peduncles - strongly nerved with irregular branch veins on the margin swolen at their sessile insertion stem & leaves hispid - Stem 2 to 8 inch - marked by the decurrence of the leaves from their insertion downward -

The stem particularly at the nodes. veins of the leaves & calyx - covered with a redish secretion

in the shape of lenticular glands lying under a thin pelicle the secretion leaving a beautiful pink permanent stain

Hab. foot of the hills near the mission growing in large patches, root small tapering. flower small fragrant This may turn out to be a useful dye —

Meteorological Record — Mission San Luis Rey Cal^a for month February 1851

Feby 1851	Sun-rise	9 AM	3 PM	9 PM	Daily mean	Remarks —
1	42	50	61	52	51.5	Clear Frost — Morning & evening fog
2	43	53	59	50	51	Clear " " " "
3	43	59	64	49	53.5	Clear " " " "
4	41	50	57	50	49	Clear — " " "
5	45	49	56	49	50.5	— — " " "
6	48	53	58	50	53	Shower afternoon & night
7	49	53	54	50	51.5	amount fell ,6 of inch
8	46	50	58	50	52	Fog at Sun set
9	43	51	59	51	51	Frost Clear
10	51	52	58	49	54.5	
11	49	57	67	52	58	Clear
12	40	49	55	50	47.5	Misty rain PM

Feby	Sun Rise	9 AM	3 PM	9 PM	Daily mean	Remarks &c
13	49	46	54	45	51.5	Misty rain with hail ,18 inch
14	39	48	58	45	48.5	Frost Clear day
15	39	48	60	49	49.5	" Cloudless
16	42	49	61	45	51.5	"
17	42	51	59	50	50.5	"
18	49	52	57	49	53	
19	46	49	57	49	51.5	Rain AM ,12 inch
20	41	50	57	51	49	
21	46	51	54	51	50	Misty rain in night ,05 inch
22	50	54	58	49	54	
23	40	51	63	47	51	White frost Clear day
24	36	48	61	48	48.5	" " & ice — Clear
25	49	53	56	49	52.5	
26	40	52	62	51	51	Frost —
27	39	52	63	46	51	Cloudless frost
28	36	49	67	52	51.5	" Frost & ice
Monthly mean	43.67	51.03	59.03	49.21	51.35	amount of rain fell ,95 inch

Max 67° min 36° Range 31°

The month of February has been marked by occasion small showers. freshening the vegetation a little but not sufficiently to affect the ground or streams. — frequent morning frosts with occasional ice have been more frequent

than any one previous month —
Pasturage is comparatively thin on exposed plains & hill sides — but shows itself ranker in sheltered places — The wheat in this vicinity suffers most from the drought — and fears are entertained of its entire failure
The trees are beginning to put out their young shoots especially the willow which is now shedding its seed — Sycamores & ash in bud — peach trees in blossom
The full complement of Spring flowers are out in the usual profusion — including a Lilium —(—)? Erodium Macrophyllum Leptosiphon — ? Sanicula —
several Cruciferae & Umbelliferae —
the Chrysis — Californica — Dodecatheon is still the prevailing plant — several small Compositae have begun to spot the hills with yellow — Lupine, Ranunculus, Delphinium Paronychia — ? and several Boraginaceae including the red dyeing plant described above may also be mentioned —
My trip to El Chino afforded little of botanical novelty except the Carex mentioned & probably a new species of

Cruciferae —( )?

To morrow March 1st I leave for San Diego expecting to leave in the Steamer of the 4th for "Estados Unidos" having concluded my duties here & received orders from Secretary of Interior to report to Major Emory at Washington

March 1st Start early for San Diego & arrive at 4 P.M —
March 2d (Sunday —)
March 3d Visiting some of my old haunts to complete my collection of plants among them Mecconopsis — ? the ground is very dry and grazing scant. The river about half leg deep — at P.M having made my arrangements & am packed off for the beach to await the Steamer due tomorrow —
March 4th No Steamer — cruising about the shrubby hills in the vicinity, exhibiting horizontal strata of brown sand capped with the usual ferruginous colored sand — the gullies presenting

down its side are cut into irregular
trenched ditches with precipitous and fantastically
washed sides. the ferruginous sand at top
is scattered iron colored pebbles, and black
iron sand is seen in the washed beds.
the greatest height of the promontory is
about 3 or 400 ft. 20 to 40 of this being
composed of the ferruginous sand
The vegetation on the hills is of the
usual shrubby character on the dry tertiary
hills - viz. Adenostoma fasciculata, Ceanothus
cuneatus? Pitavia dumosa. Styphonia serratta
and Ericaceae? - Pycanthemum. Artemisia
&c - all more or less balsamic and coated
with a glutinous resin, no doubt intended
to modify & check the evaporation, necessary
to maintain growth on such an arid soil
I find here the Zuckermanna - a very
handsome Campesiteae - which I had barely
seen before on the previous season now in
full bloom also a singular shrubby Euphorbia
with very abundant milky juice - and
clothed with a singular fringed Lichen
a species of Carex must be added to the list
and adios to the Botany of California.

March 5th Still detained by the non arrival
of the steamer - vexatious enough -
An Artesian well is being bored here
they have reached a depth of 200 ft having
passed through various layers of sand
rock & clay - they are now working in
a very hard gritty sand stone or granite
powder being of a grayish color & coarse
feel with black specks - perhaps favoring
the idea of its success if persevered in
I notice the dip of the sand stone rocks
to seaward is slightly inclining to the east making
a shallow basin with the strata more
to the Eastward - water is now in the
well at the depth of 35 ft below the surface
how abundant the supply or of what quality
is yet to be determined - Ride to town, walk back
March 6th No steamer - various surmises
but the chances of getting off rather slim
March 7th Leave for town again - rather
a disgusted individual - hear that the
steamer had advertized to leave for
Panama without touching at San Diego
March 8th Woke in the morning by
the report of two guns announcing the

arrival of the missing steamer - pack off in a hurry. with a fair prospect of being left behind at last - the steamer loomed up through the fog as we approached & my heart was in my throat fearing to see her show us her stern but a delay in getting on beef saved me and in due time I was embarked having under my charge beside personal baggage of about 3/4 ton of instruments as I cast my eye for the last time on the old brown hills fading to view I suppose I had somewhat the feeling of Dana when he had stowed away his last hide - we passed in fair view of the Coronadas Islands. which rise abrupt from the waters edge in furrowed peaks & ridges apparently granitic rock - the brown hills of California abajo loomed up among the rest "table mount" - lying nearer the beach than I had supposed & evidently of the tertiary character lower down the ridges assume the washed & serrated character of

primitive rock - we have some 300 passengers on board, mostly steerage a mixed set of fellows - some with their piles. others —. Sea sickness soon absorbed my attention & I was glad to skulk into a dark corner & grin & bear it —

March 9th Wind fair, and under the double influence of wind & steam make about 10 knots per hour Hazy to land ward. and a damp disagreeable atmosphere on board to day is the anniversary of my leaving Davenport for California two years ago —— now it is "Carry me back" —

March 10th Getting my sea legs again, and practicing with the knife & fork - coast in sight a various points -

March 11th A fine day - the weather acquiring a tropical touch and thin coats & straw hats getting in vogue - by 10 P.M. we come off Cape San Lucas. & double it in

the night making a course a little N of East toward Mazatlan. where we expect to touch & leave a mail

March 12th Crossing the mouth of the Gulf of California Sea smooth weather comfortably warm - the Mexican coast was visible at sun down - and we expect to reach Mazatlan during the night

March 13th Coming to anchor about midnight - in the morning we find ourselves on the northernmost edge of Mazatlan harbor the shipping lying mostly on the inside the harbor is shut in by a variety of steep rocky islands the one abreast of the ship to the N W - rising some 300 ft the exposed rock shows irregular shattered condition and seems to be of a metamorphic character. of a reddish mottled cast the hill slopes about town of an arid red soil. has a growth of stunted trees & Cacti - the former mostly of a leaf. and showing long exposure to the drought of the dry season

the town occupies a sand flat

occupying the N Eastern corner of the bay an arm of the sea washing its western edge the buildings occupying a terraced elevation - rocky hills similar to the island rise in the vicinity of the town. and a tower shaped knoll afford a fine view of the town & bay - the town has narrow crooked but paved streets with narrow side walks. most of the building are of quite recent erection and quite stylish. being constructed of brick neatly plastered on the outside & set off with cornices &c - there seems to be considerable activity in trade and a very extensive show of fancy & dry goods &c - there is a large wood yard. at which jack mules are continually arriving loaded with Logwood from Guatemala in the interior - The market is supplied with a variety of tolerable fruits including oranges Bananas. plantains sweet potatoes onions &c

the town is variously scattered

with Cocoa groves. their graceful foliage forming quite a relief to the close walled streets. after considerable trouble I found out a bathing establishment, which I was glad to patronize — It bore the patriotic name of "Baños del Libertad" not free baths as might be feared but the baths of Liberty — I was amused with some of the regulations of this establishment — 2 fine looking young ladies escorted by a Cavallero, succeeded me in my ablutions ——

The people are thoroughly mexican petty overreaching in making change, and light fingered in habit — some 15 of the passengers in coming on board found themselves minus their pocket handkerchiefs ——

The weather is warm but not oppressive — some of our passengers leave here for U S via Mexico & Vera Cruz

The town is healthy at present. several of the stores are of French english & American proprietors

March 14th Detained till 4 P.M. in repairing some part of the engine machinery weather comfortable — nights pleasant in passing out of the harbor — the rocks at the extreme western part are evidently of a basaltic character with a strong western dip 45° — the same dip exhibited in several islands at some distance from each other — there is a small irregular knoll of rock nearly covered at high tide at the mouth of the harbor — we are now 120 miles from San Blas —

March 15 — The isolated rocky islands marking the harbor of San Blas rendered more striking from their white deposite of guano was in sight at day break — and we reach the Harbor at 9 A.M. sending a boat on shore for the mail. we do not drop anchor — not seeing the town I cannot vouch for its improvement since last seen some 2 years ago — the rocks in the vicinity

appears to be Trap. and the isolated rocks are probably of the same character - the mountains in the back ground are in quite high ridges, and as said to afford a fine scope of cultivated & mineral country - the mouth of the Rio grande which rises from the lakes in the vicinity of city of Mexico has its mouth in an extensive low delta above the town, and renders a portion of this country unhealthy in certain seasons - This is now the extreme of the Dry season and vegetation does not look very fresh for a tropical region Take our departure about 11 A M Distance to Acapulco 480 miles —

March 16th A fine breeze & pleasant Atmosphere — we had preaching on board from Mr Dennison a minister from Boston In P M we pass in sight of the highest mountain range yet seen

the highest peak called Collima is said to be 12000 ft and of Volcanic character — in one point hidden by an intervening cloud we see a column of smoke proceeding from an inland volcano. owing to its distance there was nothing particularly grand about it. only the idea of seeing a real volcano - This region is subject to frequent Earthquakes

Latitude at 12 M 18°. 52'. Longitude 104°. W. Distance from Acapulco 300 miles —

March 17th Latitude at M. 17°. 30'. Longitude 101.°+"

we pass quite near several rocky points of land. the thickly mountains. bound the view on the right & occasional lines of white beach with. houses & curling smoke - set off the view - The day has been sultry - and in the evening we are pursuing our course through the steamy tropical atmosphere lighted up by a full & resplendent moon — preferring the deck to the pent up Cabin. I

occupy myself in pacing the deck & taking an occasional nap— Soon after midnight we come in view of the island land marks for Acapulco harbor and winding into its beautiful land locked bay we make fast to a coal schooner, within a short distance of the town beach —

March 18th Considerable shipping in the harbor including 2 steamers bound above.— visiting the town once more. find little improvement in building since 2yrs ago— the market was well supplied with fruit including fine bunches of Bananas— water melons ice— Yankee groceries are now brought in competition with the native, and you will see. lettered signs to inform you that good liquors & boiled eggs, & coffee may be had for paying the dimes the town. is very hot being in a measure shut out from the sea breeze this was in a measure remedied in the old Spanish times by cutting a gorge through the mountains

to sea ward— but still it is a pent up place at best — took a salt bath started again in evening. expecting on 7 days run to find ourselves in Panama harbor

March 19th Day very hot & oppressive breezy at night— sleek on deck. quite a blow at 4 A.M.

March 20th Crossing the Gulf of Tiaguantepec out of sight of land considerable swell. appetite rather slim— Latitude at noon 14°-08' N Longitude 94°-23' W Distance run the last 24 hours. 200 miles —

March 21st noon observation Lat. 12°-33'-17" N Longitude 91°-22'-48" W— out of sight of land. breeze from S.E.

March 22 Noon observation Latitude 11°-09'-42" N Longitude 88°-17' W out of sight of land breezy from E night cool & damp —

March 23d (Sunday) Land again in sight 11 A.M— day calm— noon observation Lat 9°-37'-21" Longitude 86°-08'-17 W— night still very sultry

March 24th Pass an island at day light
called Rina or something like it
morning cloudy — Noon observation
Latitude 8° — 06 — N Longitude 83° — 18 — W
small thunder shower about noon
in the evening we found ourselves headed
directly for an island & had to shear
off

March 25 — Expected to be the last day
on board not much to our regret —
morning cloudy high land on our left bow
its lower point forming the cape that
bound the bay of Panama on the west
3 o'clock P.M — we have doubled the cape
in the teeth of a fresh west breeze &
are now pointed on our course due
North !! and here closes this voyage
& my book for I must pack up in
preparation for landing —
Noon observation Lat. 7° — 15 N Lon 80° 03' W

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