Record of work done by S. Ward Loper at Mount Franklin El Pico, Jasper, from Jan. 14th to March 13th, 1877.
Work at El Paso, Texas, 3d March 1597.

Jan. 12th - Arrived at El Paso at 8.45 a.m.

1st Made Arrangements for working around town.

2nd - Worked in town.

3rd - Worked in camp.

4th - Worked on south side of first canyon.

5th - Side of Mt. Franklin, following up the bedding and locating the strata according to Walcott section.

Collected about 19 specimens, commencing at the top of A and working south on the ridge of 2 b.

Not all collected on 2 b and not labeled according to diagram on opposite page.

1st Worked into camp without finding himself and lay into camp.
Page 2, Record. Jan. 15th
Worked on 2. Same as yesterday.
Collected about 157 specimens.

Page 3, Record. Jan. 16th
Hired thirty men to take myself and men to Fort Bliss at the morning. Then walked across the plains to the great tributary of the Ohio, directly west of Fort Bliss, followed by the river to the Hardin's rocks and spent the day searching the fossil beds south of the first canal, locating good working ground. Found the thin-furred bighorn antelope at 970 ft. in E. with fine coiled shells.

Jan. 19th. Ground covered 2 in deep with snow and unable to do anything.

Hired 2 horses at $1.00 each.

Jan. 20th. Collected 85 specimens on 2 & 3 South side of 1st Canon S. & S. E. side of 1st Canon and also searched along the upper trent on East of the Mountain. Made plans to work later on.

Page 5. Record, Jan. 21st. Tuesday. Ascended 3/4 South of the 1st Canon collected about 95 specimens, many of them rare and very fine, Meaning of side, also making more investigations to the North.

Jan. 22nd. Worked today about 5 miles North of East side of Mt. Franklin. Collected a few specimens on 2 & 3, and 60 Per cent Gyp and 40 Per cent Salt water on 2 & 3 near 225 ft. Robinson, Jan. 23rd. Worked some locality as getting getting 60 feet. Explored some distance South and found another good locality on 2 & 3.

Worked today on locality found Saturday, fine weather & with no 30 after 5 pm.

Jan. 26th.

Examined the range for about one mile in a pretty straight line & at that point found another section of the fault on 2-6 & 7-8. 10 am:

Jan. 27th.

Worked today on the high point near the old mine. Also found another ridge lying between what mountain and the high peak which stands most isolated on the plain & is a fine ones of fossils on 2-6. Shall work the fault towards seems to be a folding at this fault bringing in a repetition of what mountain did. 10 am.

Jan. 28th.

As the weather looked threatening concluded to go on the east side of the M. & south for five on the highest and cuprite hill on the south end of the M. & located a few good places & collected a box or two bismuth. Drive in in the afternoon by a changed weather.
Diary | 29 Jan.

Mountain beds covered with snow.

Great day in general repairs, getting tools in order, packing specimens at P.Q. Century and accounts correspondence.

Sat, 30th. Perched today on the ridge north to the 30 line and then supposed to be a fault. It appears to be a fault with the mountain beds repeated as indicated on secret plans. Collected 50 specimens from the 3891 barometers at 12. Found barometer at 2902 at one top of ridge and from those of fault, the ridge lies between the main barrier and a high peak which comes to the plains southwest of it. The approach at 45.
Monday, Feb. 15
13 10
Worked today on 2 & 8 north
ridge, referred to on Saturday.
Obtained 120 good specimens
at 297 ft. horizon.
Feb. 2 Collected 95 Fraser on 2 & 6 290 ft.
then followed up to 297 ft. horizon. Added to
70 high 9th to the east and found 100
Fraser fruits. Collector 20 specimens.

Feb. 3 Collected 30 Fraser on 2 & 6.
Feb. 4 Collected 20 Fraser on 2 & 6.
Feb. 5 Collected 40 Fraser on 2 & 6.
Feb. 6 Collected 50 Fraser on 2 & 6.
Feb. 7 Collected 60 Fraser on 2 & 6.

Page 11
Feb. 3th. In favorable weather, reached 6th peak and obtained 100 specimens of
fraserae. We started across over the
Main Range and searched for fossils, found a
few Phyllophylax, Sphairinae, in further bed.
12 Feb. 6. (Blizzard) Not able to work on Mountain. Attempt to nearest prairie on town, getting loads of praire on Ridge,

[Page 6]

12 Feb. 8. Worked on Large Cretone on Ridge near the old stone house. Obtained 500 feet.

12 Feb. 9. Collected 20 sp. of Large Cretone and commenced cutting out large stone on Large Cretone near same locality.

12 Feb. 10. Worked on large Cretone in this locality and obtained 12 feet of large stone on ridge near Large Cretone. Obtained 500 feet of same. Also obtained 12 feet of large stone on ridge near Large Cretone.

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13 Feb. 11. Worked on Prarie for large Smeres of coal on section. Lapse of the Large Cretone. Hadd to cut stones but in account of irregular fracture of rock failed to lift it without splitting it. Fragments were taken of them burned and packed. It was a very fine piece left on prairie radiating from a centre something like this:

In afternoon collected 12 good pieces on the prairie located one of them a foot thick. This dawn from another after it was packed to carry down the mountain.

Also collected 50 good pieces from Large Cretone.

This locality is due east from the smelter.
Feb. 17th

12. Went over mine with Mr. Judd. Collected 70 Colias fans.

13. To north end of basket on east side. Reached down to Colias fans in spring. West of Great Salt Grass. No fossils. Did not go to camp there.

Monday, Feb. 18th

14. Went up into the cliffs above the high peak or the east side of the mountain and nearly to north end of the cliff on the western slope of the east range found fine fossils at horizon 240 ft. 89 ft. Collected 70 fine things. Refer to diagram on Page 7 for location.

Oct. 10th

One west slope of the Vate, pine south from the dam. East of five pine lower. Buelton fossils near the top. Collected 24 good ones. Also collected 50 from the upper damage on the ridge to the west.
Page 6. North east from Smelter, and just south of old mine and stone quarry found splendid loose quartz fossils. Collected 12.

An old stone house stands south west from this. A road runs from the quarry across to the Smelter.

Page 17. Feb. 18th. Yesterday. About 9 miles south of locality marked yesterday found effusion of 2 to 570 ft. horizontal Collects 1 .

Collected 7 feet in size. In the middle there weathered rock underlying & I found one fine caliche shell. This rock here forms the crest of the mountain & from beneath it the clayish rock slopes down the whole face of the ridge to the point. A barrow after rains off from the main mountain at this point nearly south west. The crest of the hill makes a sharp sharpened out on the top of the crest the soil runs found on the yellowish brown rock.
Feb. 17th.

Collected 680 slips on lower slatetar of
 upper silvery-地点 rich with hard cobs.
 Weather hot, came in from after noon and went to bed.

Feb. 21st. Very unpleasant, but went out searching along
 Conninch on back side of Mountain, saw pineRes in
 finding place, collected a few on 9th Cherry.
Page 20.

Location of fossils on reddish rock in basin
ridge, north of Marfa. Location marked XX


My men from Marfa left this morning for the
City of Mexico. Cleared the South concession in this place
and went towards mouth end of mountain. Found good
location planted about 6 miles south of 10 miles
and collected 127 specimens.
Page 22  Feb. 24

Worked on south end of Mt. Franklin
on upper brenton and collected 73 specimens

Thurs. 25th
Collected 100 specimen towards the
south end of the Mt. on gray, dusty, sand and
sometimes, chiefly里面 numbered.
Upper beds of upper brenton.

Page 23  Feb. 26th

Friday, Feb. 26th
Cut out two sites to work near
the crest of the Mt. on upper brenton.

Collected for 13 miles of brentonite in the face
of the yellowish along with ash tunicum above the dark grey
and yellowish tunicum.

Water grey, sandy, and cold.

Approximately
67 ft yellowish brown earthed in tunicum 5 24, 25, 6cm.
65 cm for yellowish brown earthed in tunicum 5
35 cm for yellowish brown earthed in tunicum 5.
35 cm for yellowish brown earthed in tunicum 5.

27th Packing up and getting tools ready to go to the north end
of the Mt. on Monday into brenton.
Monday, Mar. 17

Hunted & caught end of Pits & a suck of 100. Reached the springs called Cottonwood Spring about 2-30 P.M. While men put up tent & got everything in order climbed over the hill of the mountain about 1 mile south of the spring but found no timber at that point & left the supplies.

Pablo Rivera & Amado Ortega took Camp with one ox & have to start Pablo at Camp, post & cook for addition to regular rations.

Mar. 2nd. Went south as far as the first spring about 3 miles, crossed over peak at North & turned around for 1 mile short of Copper hill Spring, collected 1 bush of Gentian. Found nothing of this kind in our route, just under the Copper hill on next north & collected a few pots of some stuff.

Mar. 3rd. Marched along face of mountain to the north end, found south of 2-1/2 miles east of Spring but found good & brought only a 1/2 degree. Went across south end of Pit found one timber & swept office below. Began to rain at 4 P.M. Horse all afternoon got back to Camp just at dark.
March 5th

Visited some mountains again at the ridge just west and at a point about 70 ft higher than where the kendalliums was found yesterday. Found every fine specimen of Proctertia a. sp. species also Diotryx and other sp. Must be subsp. The whole ridge offered abundant fossils and everything collected 100 Specimens. The kendalliums collected yesterday lie about 75 ft above the bank of the Valley toward the South end of the ridge, Independence on the ridge with that.

Sound Kendalliums at point marked X which is at said are abundant collected 25 pc each.

[Diagram of mountain ridge and valley with annotations nearby.]
Mar. 6

Back on Cal. Peto.  His upstairs None have been leaving sage for dinner at the Folke.  We
Mar. 7

Work on the rooms at Post Office.  Getting paper & material together.
10. Packed at 4 P.M.
11. Get the finest and boldest paper and went on the south end of the flat, and reach with 5 or 6 miles along the road and then from this time forward down to the folke.  Packed at 4 P.M.  Dwell from this date the first of the collection of the court of the back from the leaves of the leaves and galing cards.

Left on Monday, everyday turned over the box to the Cincinnati at 4 P.M.