

Glen E. Sturdevant

Grand Canyon

Arizona.

Glen E. Stardevant
Park Ranger
Grand Canyon,
Arizona.



279½

Arrived Harrisburg 11:15 A.M. Apr. 2.

Left Harrisburg 6:27 PM Wed Apr. 13

Jan 1st 1926

Hiked with Sierra Club from camp near Phantom Ranch along Tonto trail, visiting cliff dwellings at lower Indian Gardens, up B. A. trail.

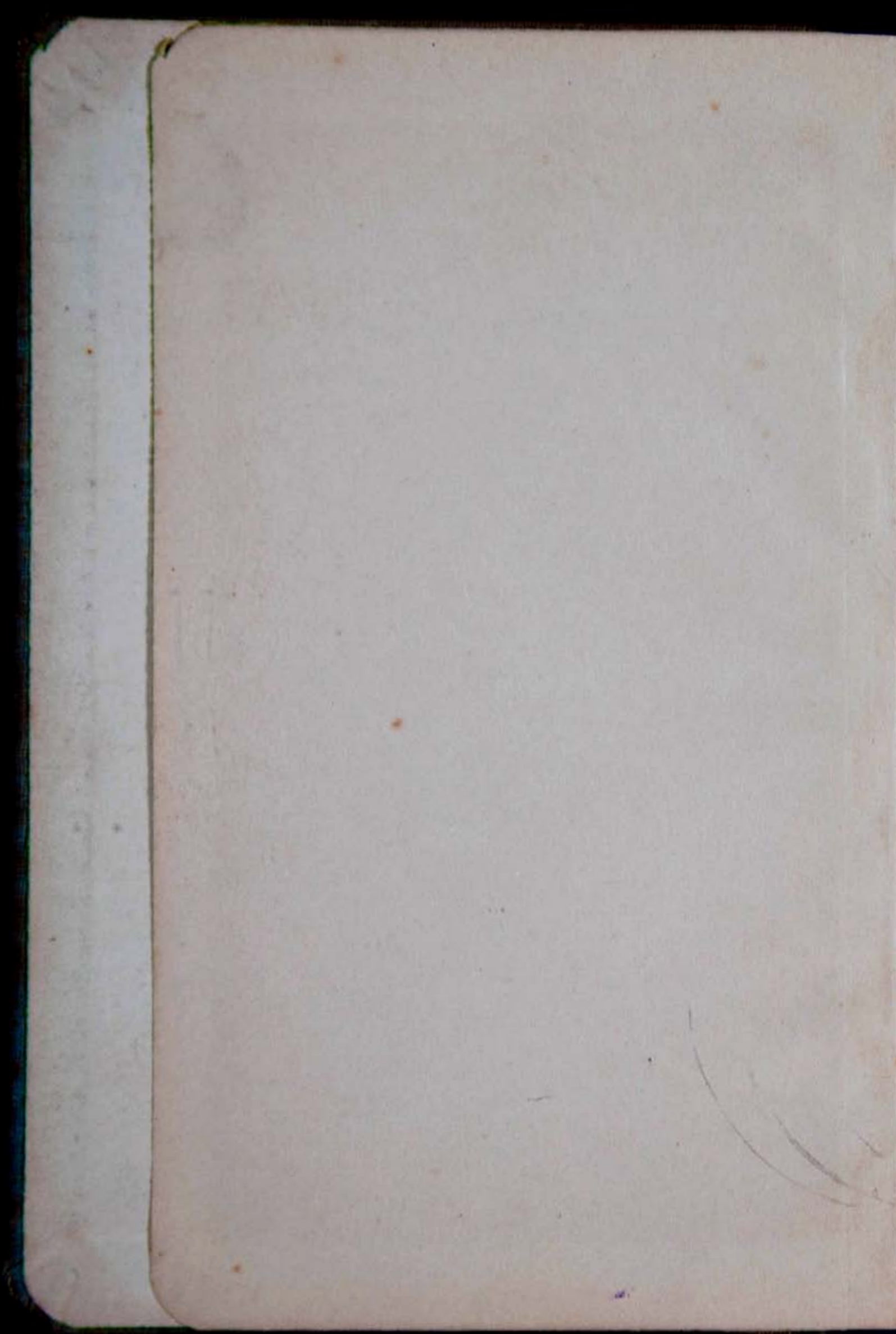
Jan 2nd

Hiked with Sierra Club to Hermit Rest, ^{& back} visiting Natural Bridges & going down on Hermit Trail a short distance. In P.M. accompanied Sierra Club while Mr Eakin & Tillotson showed the Sierra Club members the plans of the park.

Jan 3rd Sunday

Jan 4th Sick.

Jan 5th Arranged for work bench with Mr Plumlee at Carpenter Shop. Moved fossils to carpenter shop. In P.M. wrote Chief about animal tracks in Supai formation.



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on Karbat trail.

Jan 6th

Prepared & packed for mailing 5 specimens of trilobites. Wrote the list of questions needed to be answered.

Jan 7th

Worked on campfire lecture. Finished 2 typewritten sheets.

Jan 8th

Worked on campfire lecture. Finished 2 typewritten sheets total 4.

Jan 9th

Worked on lecture. Finished 2½ typewritten sheets total 6½

Jan 10th Worked in information

office. Day & evening. Identified juniper musk toe.

Jan. 11th Killed & picked 2 chickens for Mrs. Eakin. Took acid & granite ware to carpenter shop. Information office

P.M. & evening.

Jan. 12th

Worked cleaning fossils in
carpenter shop. Information
office in evening.

Jan 13th Worked on fossils in
carpenter shop in A.M. Information
office in P.M. to relieve Phillips.
Evening information office

Jan. 14th Worked on fossils
in carpenter shop.
Information office in evening.

Jan 15th Worked on fossils in
carpenter shop.
Information office in evening.

Jan 16th Worked cleaning fossils.
Information office in evening.

Jan 17. Sunday
Worked at home cleaning
house.

Jan 18, 1926

Worked in carpenter shop
on fossils

Jan 19

Worked in carpenter
shop on fossils

Jan. 20. Worked in carpenter
shop on fossils. Noted
reply from Mather &
one from Dr. Gilmore.

Jan. 21.

Worked in carpenter
shop on fossils

Jan 22. Took Chief Ranger
Hadley of Lafayette
Nat'l Park down Kaibab
Trail across Suspension
Bridge. Had lunch
at Brown's camp
Came back along Tonto &
up the B. A. Trail
Obtained samples
of water of State Laboratory

- at B.C. Creek, Burro Springs
& 3 samples at Indian
Gardens viz. - Old Hitch road
(2) Spring to East of Trail
where tourists drink
(3) Spring to W. of trail
which supplies Smith with
water.

Jan. 23, 1926

Stayed in Information
Office in A.M. while Johnson
& Haught chased down rumor
of two deer hunters in park
In P.M. worked over Fossils.

Jan 24, 1926

Sunday - Information
office day & evening

Jan 25, 1926

Took Asst. Supt. Allen
of Rocky Mtn. N.P. down
new trail to Browns Camp
at lunch at Browns Camp
Returned via Indian Gardens
Saw 5 wild Burros.
Dinner at Scopers in Evening

Discovered new set of tracks
in Supai on Karbab trail.

Jan 26,

Worked over fossils in
carpenter shop. Eve. infor. Office.

Jan 27 Worked over fossils
in carpenter shop. Infor. Office
in eve

Jan 28. Finished up fossils
in carpenter shop. Information
office in evening.

Jan 29. Rode "Mike" to Hermit
Basin. Found large slab
^{containing} of animal tracks (2 series)
Brought back one large
fern impression in
Hermit shale, 2 small
rocks containing
animal tracks, & one
small rock containing
fern impression.

Jan 30th

Rode to Yaki Pt. Gathered
several trilobites to be sent
to National museum.

Also found several gastropods & brachiopods.

Information office in evening.

Jan 31st

Sunday - Information office in evening.

February 1, 1926

Information office. Worked on monthly report.

February 2, 1926

Information office in AM.

Finished monthly report. In P.M. went with Judge John Brown of Indianapolis, Ind. & Mr. & Mrs. Harry Mizzy, on Rin Drive.

February 3, 1926.

Information office.

February 4 1926

Information

Feb 5, 1926

Rode "Mike" to Hermit Basin. Found ancient ferns & animal tracks. Brought back two pieces

of shale containing ferns
one of which contains the fern
hexagonal tip. Also brought
back one very large
animal track. Found cedar
growing on S.R.

Feb. 6 met my wife + baby at train
+ took day off.

Feb. 7. Information office

Feb. 8.

Rode to head of Grapevine
canyon + back. Found some
good Permian fossils

Feb 9 Rode down B.A. Trail
to Indian Gardens + back 7 mi.
Found some poor Cambrian
fossils in B.A. shale & Blue lime.
Information office in evening

Feb 10

Rode "Ike" south of Rowes
Well + found cones + berries
growing on the same tree.

About $\frac{1}{4}$ of the trees bear cones
& $\frac{3}{4}$ bear berries. Found some good
Permian fossils. Rode 8 miles

Feb 11, 1926

Rode "Ike" west of Loweswell
to head of Dripping Springs
trail & down to Hermit
Basin & back. Saw burro tracks
at head of Dripping Springs
also saw mtn sheep tracks.
Found some good chonetes
& other Permian fossils

Feb 12.

Rode "Ike" to Hermit Basin
& up Waldron trail & back
Found new set of animal
tracks in Hermit shale.
Brought back some
small pieces of ferns.
Saw lots of mtn sheep tracks
on Waldron trail.

Feb. 13.

Fixed up polishing machine
in A.M. Obtained brush &

carborundum wheel at
warehouse. Cut out section
of saw blade to fit on wheel.

Feb 14 Sunday. Information
office day and evening.

Feb 15, Information office
in A.M. & P.M. made out segregated
monthly travel report for
seasons of 1923-'24 & 25.

Feb 16, Moved grinding apparatus
to Albright's tent & started
work polishing rocks.

Feb 17, Polished rocks in tent.

Feb 18, Polished rocks in A.M.
Made corrected list of birds
in P.M.

Feb 19, Polished rocks

Feb 20. Information office

Feb. 21, Sunday

Feb 22, Information office.
Sent weather telegram.
worked on cover design
for Nature bulletin.

Feb. 23, Information office
Worked on article Utah juniper
for nature bulletin.

Feb. 24. - Information office.

Feb 25 Information office
Finished article on Utah
juniper

Feb. 26. Information office
Started article on
Kaibab & Abert squirrels

Feb. 27. Jamnigates house
& worked on cover design
for nature bulletin

Feb 28 Made out time slips

Feb. 28, Sunday. Washed
woodwork in new house

March 1, In A.M. moved to
quarters formerly occupied by
Ranger Phillips. In P.M.
worked on monthly report. In eve-
ning

March 2. Worked on monthly
report and finished it.
Information office in evening.

March 3 Worked on article on
Kaibab & Abert squirrels
Information office in evening

March 4 Finished article on
Abert & Kaibab squirrel
Information office in evening
Saw lots of Thurber & few red-
backed junco about yard

March 5 Fixed drawing apparatus
& helped my wife draw cover
design. Cut 2 stenels.
Information office in evening.

March 5. Wrote short article
on suicide robin.

cut 3 stencils & mailed out
43 copies of 1st nature
bulletin. Information office
in evening

March 7. Sunday Information
office day and evening.
attended boy scout meeting
at 3 P.M. while Johnson
relieved me.

March 8. Moved fossils to work
shop. Started signs for trees.
Sent weather telegram.

March 9
Worked out plans for museum.

March 10. Information in A.M.
Saw Squirrels, Shrike & red
back junco, robins, Mt. Chickadee,
& tufted titmouse, eating in
front of house where I had
scattered crumbs.

Finished sign on western yellow pine in P.M. Arranged fossils to show Dr. Merriam.

March 12. Went down Yaki trail with Dr. Merriam to see the animal tracks. Found several blocks containing tracks in Coconino ss. Found some ss. place in Supai formation. According to Dr. Merriam these tracks in place are one of the most important scientific features of the Grand Canyon.

March 12. Wrote envelopes for publicity report. Made out plans for next Nature Bulletin.

March 13. Went east to Cheeking station to see some pictographs & to find some new fossils in Lurid.

lo. Found lots of pictographs
but they are outside the park.

March 14, 1926.
Sunday off.

March 15, 1926.

Made out time slips.
Bailey had me charged with 2 meals,
meal on 3rd which I never
had. Meals charged to Wines (3/
Haught (3) A. Smith (1) none of which
were deducted. Obtained
book from Mr. Tillotson on
W. Yellow Pine. Sent weather
telegram. Inform in evening.

March 16 Outlined article
on Water ouzel, W. Y. Pine, & Ancient Ferns.
Wrote letter to Tucson for books
on fossils, & letter each to
Saginaw Lumber Co. Williams
& Venz Lumber & Timber Co. Flag.
Information office in evening.
Helped decorate for R.T.A.
dance after closed office.
3 meals at home.

March 17. Worked on article on
water-ouzel for Nature Bulletin.
Information office in A.M.
while Johnson took Mr
McCluskey Selty to Gov. Hunt
on Rim Drive. 3 meals at home
Information in evening.

March 18. Worked on article on
water-ouzel Information in
evening. 3 meals at home

March 19. Worked on Nature Bulletin
Information in evening 3 meals at
home.

March 20 Information office
while Johnson went out
to head of Kaibab trail to
bring in Chief Snyen, Engr. Tillotson
& Landscape artist Worked
on Nature Bulletin Information
in evening.

March 21, Information office
day and evening

March 22, Finished article
on water ouzel. Started article
on Western yellow Pine.
Typed envelopes for publicity
road bulletin. Sent weather
telegram

March 23. Worked on article
on W. yellow pine.

March 24 Worked on Western
yellow pine article.

March 25. Finished article
on W. Y. pine. walked out
to cemetery plot to ^{see} example
of reforestation.

March 26.

Went out along "Y" RR. cut and
found 1 very perfect *Alouisma* ✓
Also found 1 gastropod
measuring 3-4 inches in
diameter.

March 27. Cut stencil for
daily report & printed about 100.

Went out along "Y" on R.R. cut
Found some new brachiopods
& gastropods. Also found
some nice X-tals of calcite
in a cavity.

March 28 - Sunday off

March 29. Off on two days leave.
March 30. Went to Tuba City with
Les Smith, & back to canyon
via Flagstaff.

March 31, added paragraph
to article on Water Oryz.
Put new batteries in
office telephone.

Apr. 1, Worked on monthly
report. Information office
in evening. Took lock apart on
door & oiled it

Apr. 2. Finished monthly report.
Started article on "Ancient
Furnos." Information office
in evening.

April 3. Worked on article
on "Ancient Ferns" Information
in evening.

April 4, Sunday. Information
office A.M. & Evening.
In P.M. visited "vanadium"
mine of Geo. Reed's

April 5. Finished article
on "Ancient Ferns."

April 6 Helped my wife
cut cover design.
Added H to water ouzel &
2 H to W. Y. Pine

April 7. Typed envelopes
for ~~next~~ Nature Bull etc
Made plans for next nature
Bull. Gathered some
material on Pinon pine:

April 8. Outlined articles on
Pinon pine & Stellar's long
crested jays. Wrote on Pinon
pine

April 9. Wrote on pinon
pine and gathering pinon
nuts.

April 10th. Wrote on birds, coming
to N.R. ranger station. ~~Pinon~~
pine

April 11 Sunday.

April 12. Sent weather telegram
1st Robins hatch. Worked on
Nature Bulletin. Cut road bulletin
stencil. Addressed envelopes

April 13. Spent a.m. sending
out Nature Bulletin.
Worked on nature Bulletin

April 14. Worked on Nature Bulletin
Worked out plans for Forestry
week.

April 15. Worked on Forest Week exhibit

April 16 " " " " "

April 17 " " " " "

until 1:30 P.M.

April 18. Sunday

April 19. Sent weather telegram
Worked on Nature Bulletin.

April 20 -
Met Dr. Gilmore Worked on
Nature Bulletin.

April 21, Went down Yaki trail
with Dr. Gilmore. Found two horizons
in Supai formation containing
animal tracks.

April 22, Moved to head
of Hermit trail camp with
Dr. Gilmore & Art Metzger.

Apr 23, Worked in Coconino
co. & found new animal tracks

April 24, Worked in Coconino co.

April 25 Sun. watched ball
game between single
& married men.

April 26, 27, 28, 29, 30 & May 1st
Worked with Dr Gilmore
& Art Metzgar collecting new
animal tracks & fern
impressions. Dr Gilmore
says that he has ~~the~~ more new
species represented in this
collection than on any
previous ~~trip~~ trip. "The Coconino
ss. ^{at the top} is the most fossiliferous
Permian animal track formation
in the world." New species
were collected in the Coconino
ss. Hermit shale & Supai
formation. Dr Gilmore considers
it more impressive in finding
3 successive formations containing
animal tracks along the same
trail. Two ~~formations~~ formations contain animal tracks
in Supai or Hermit
Ancient plant impressions
were found to be very abundant
in Hermit shale. 2 large
slabs measuring 4' square
& 3" thick were uncovered.
These were too large to be
moved. One contains a
single plant over 2' long

while the other contains
numerous smaller
fern impressions.

Both of these slabs ~~should~~^{would}
make a ~~very~~^{most} impress
exhibit at the park office
if a feasible plan
for moving them to the
head of the trail is found.

A fine set of tracks of
Leoporus nobilis & *Dolichopodus*
tetradactylus were brought
into the park office.

Of the new species found,
one ~~specimen~~ having been made
an animal with 8 legs & 16 toes
is of particular interest
a sample of this undetermined
species has been brought
into the park office.

Poor will was recognized
by his call nearly every
night while camped
at Hermit's rest.

The recent rains have resulted
in a prolific growth of wild
flowers within the canyon.

Wild sweet peas, snowdrops,
juncos, penstemons, low wood, filices.
& many others are very numerous.

May 2. Sunday attended ball game.

May 3 Worked on monthly report

May 4 Finished monthly report.
Addressed publicity envelopes
Practised baseball in evening.

May 5.

May 6. Went down Yaki trail with
Art Metzgar. Found several new
sets of tracks in Supai formation
One set is particularly plain.

May 7, prepared 16 lots of fossils
for shipment. Dr Gilmore
has consented to have one
labeled specimen of each
sent back to park office.

May 8, Went down Yuki trail
with Dr. Gilmore to see
animal tracks, found nice
plant impressions in Hermit
shale on this trail.

May 9, ^{Left} Information Office
Played baseball

May 10, Sent weather telegram
worked on nature bulletin

May 11 Worked on nature
bulletin.

May 12. Worked on Nature Bulletin

May 13. Finished Nature Bulletin

May 14 Information Office.
Re cut one stencil.

May 15 Information office
Fixed up display of block
in office

May 16. ~~Informa~~ Played
baseball.

May 17, Information office day & evening. Sent weather telegram
Fixed Road bulleting envelopes.
Two new birds found by
Mrs. Yost.

May 18 Sent out 120 Nature
Bulletins. Infor. day &
evening. Revised list
of birds of G.C.

May 19, Cut stencils for travel
by states cut stencils for
List of birds Information.

May 20 Information day and
evening worked on cover
design for list of birds.
Labeled one set of animal tracks

May 21, Information office day

May 22 Information office day.
and evening

May 23. AM. and evening
Information office
Baseball P.M.

May 24. Sent weather telegram
Information day.

May 25. Information day. Prepared
eight specimens for G. F. Habbe
for museum at Springfield, Mass.

May 26 Information office day.
Labeled *Leoparus nobilis*.

May 27 Information office.

May 28 Information office

May 29,

Went down Kaibab trail & up
to Church's camp with flagstaff
teachers colleges hikers 23 in party
Pointed out things of interest
along way.

May 30, Went up Phantom
Canyon with hikers. Recent
high waters have destroyed
beaver dams in this canyon.
Returned to ^{Church} Camp. In P.M. hiked
to Phantom Ranch where hikers

had dinner. Two of the hikers were in bad shape. One had a bad heart & the other was afraid of being overcome with heat.

I started up trail with these 2 members at 8.45 P.M. Sun.

and topped out at 6:15 A.M. Mon May 31st. All were pleased by novel experience of camping in Canyon in spite of hot weather.

June 1st Information office
Worked on monthly report

June 2nd Information office
Worked on Monthly report

June 3rd Information office
Finished monthly report.
Wife left on evening train. Printed 500 each of auto travel sheets.

June 4th Information office in A.M.
Walked to Yavapai Pt and back to look over route of summer trips

June 5th Worked on article on
Beaver for Nature Bulletin.

June 6th Sunday. Information
office in A.M. P.M. off
watched S.F. beat F.H. 8-0. Rattle
snake added to park collection.

June 7th. Sent weather telegram
Information office day and
evening.

June
July 8th Information office
day and evening. Received
letter from Dr. Gilmore telling
of occurrence of dragon
fly in Hermit shale. 1st found
collected on N.R. which is one week early.

July 9, Information office.
Practised ball in evening

July 10 Information office
day and evening. Cut
stencil for daily report
and printed about 600.
Rockefeller - Spelman
committee visited office.

June 11, 1926 Information office
day and evening. Scout
shelting in evening.
cut cover design for
list of birds.

June 12, Information office day
and evening printed
list of birds 100 copies.
Went fishing in evening.

June 13, Information office A.M.
and evening. Watched
game in P.M.

June 14 Information office day.
Sent weather telegram. Wrote
to my wife for cover design.
Hiked to Yavapai pt & back.
Law soap weed & mesquite
& both growing on rim. Doodle
bug very numerous on rim.

June 15. Information office day.
Made out time slips. Information
in evening. Worked on
Doodle bug article

June 16. Received letter from
Dr. Merriam stating their help
to build up library

Information office day

Received 50 B.A. maps.

10 Vishnu

20 Shinumo "

Mr. H.H. Smith who ran G.W. hotel
& worked asbestos mine in canyon
1903-4-5 reports animal tracks
very numerous on ridge W of
asbestos creek. Barnite
very numerous at horse shoe mead.

Information office day
~~and~~

June 17. Information office

June 18 Information office

June 19 Information office

June 20 Information office A.M.
Watched game in P.M. 5.12-P.O

June 21. Recd 50 B.A. maps

Rec'd Wash 10 Vishnu
20 Shinumo

Information office
Showed Lehner office work.
In P.M. went to checking
station to help put out
fire.

Evening Information

~~July~~ June 22 Information
office day and evening

Gov. Hunt

Wm. Strode

Jack Delaney } visited Park

Sam Sorensen

Harry Shea

R. W. Weeks

June 23. Information office A.M.
& evening. Worked on
Nature Bulletin in P.M. J. Ives arrived

June 24 Worked on Nature Bulletin
Information office in evening

June 25 Finished Nature Bulletin
& cut cover design
J. Ives relieved me at 7:30
while I attended Scout Meeting

June 26. Typed envelopes
for Nature Bulletin. Printed
200 copies of ^{each} 4 of the stencils
I was relieved me at 7 PM.
while I practised stunt with
Boys Scouts & Camp Fire.

June 27. Cut cover design
Run off 200 copies on mimeograph
machine. Bound the Bulletin
& mailed out about 125
copies.

June 28. Worked on Campfire
lecture. Finished to R.W.S.

June 29. Worked on Campfire
lecture.

June 30. Worked on Campfire
lecture.

July 1. Worked on monthly
report day and evening

July 2. Finished monthly
report.

July 3, 1926

Red Boy - scouts in parade
watched Park beat transportation
17-2 in innings. Took in
celebration.

July 4, Information office
in A.M. Played ball in P.M.

July 5. Sent weather telegram.
Made out ^{my} monthly report in A.M.
Worked on campfire lecture.
Gave 1st campfire lecture 93
present.

July 6. In A.M. walked to Yavapai
pt & back with J. Ives.
In P.M. took party of 18
to Yavapai P.H.
141 present at lecture.

July 7. Spent A.M. identifying
plants along rim.
Pitcher plant
Woolly yellow daisy
Fern - Pellaea wrightiana
Eugonium chrysocephalum -

On Nature hike - 10
At Campfire - 101

July 8 a.m. Identifying plants.
On Nature hike 26
At Lecture 115

July 9. Gathered new flowers on rim.
On Nature hike 14.
At Lecture 80.

July 10. a.m. made up list of
Reference publications for Dr. Merriam.
In P.M. took party of 17 on rim to
Yavapai. 131 at lecture.

July 11. On Nature Hike 29
At Campfire 120

July 12. Wrote letter to Dr. Merriam
about Refer. library.
13 Nature Hike
160 Lecture

July 13 a.m. Identifying new
flowers. Nature Hike 114.
Lecture 65.

July 14, a.m. Identifying new
flowers.

Nature hike 60

Lecture. 20

July 15. a.m. wrote out
Camp-fire lecture for Lehner

P.M. Went to Phantom Ranch

+ met Royal party. 75
23

July 16 Camp up Yaki trail
with Royal party

Crown Prince took great interest
in "Mescal" and animal tracks

P.M. stayed in office while Lehner
took nature hike. Gave

camp fire lecture - 125 present

Showed Royal Party specimens
in museum. Crown Prince

made statement that
animal tracks would be main

attraction in museum at this
place. Saw Royal party

off on train. N.W. 15

July 17. a.m. worked on Beaver
article. P.M. 9 on nature trip

87 at Lecture

July 18. Sunday
Rain at time of nature hike
I went on trip
110 at lecture.

July 19, a.m. met Dr David White
Plant expert & showed him
specimens here. In P.M. went
down B.A. trail with Dr White
Lecture 101 N.W. 20

July 20 Went down Hermit trail
with Dr. White. 168
N.W. 18

July 21 Worked on Hermit trail with
Dr White.
Lecture 141
N.W. 14

July 22 Hermit shale ^{HT.} with
Dr White. Lecture 91
N.W. 14

July 23 Hermit trail with Dr White
Campfire lecture 86
N.W. 25

July 24 Hermit trail with Dr
White. Campfire lecture 150
N.W. 25

July 25 Sunday

Campfire lecture by Dr. White 160
N.W. 18

July 26. Helped Dr. White
measure section on
Hermit trail Campfire
lecture - 65

Rain

July 27, Worked in Hermit
shale on B.G. trail with
Dr. White. Measured fault
displacement on B.G. & found
it about 181' 3" Lecture - 80
N.W. 20

July 28, Worked in Hermit
shale on dripping spring
trail found good specimens
of sphenophyllum. Lecture - 101
12

July 29, Worked in Hermit
shale on Yaki trail found
Walchia gracilis. Lecture 101
N.W. 12

July 30. Hermit shale on
Dripping springs trail with
Dr. White. Lecture - 80
N.W. 6

July 31, Bee trail with Dr. White
& Peter Mount. 140 N.W. 6

Aug 1, Sunday Lecture 140 - NW. 12

Aug 2, Worked in office
on monthly report. Lecture -
by Dr. White 120 N.W. 12

Aug 3, Went to Phantom
Ranch with Field's Party
& Dr. White. Studied formations
on way. Rain in evening
no lecture.

Aug 4, Came up B.C. trail
Dr. Field's lecture to 145
in Public Camp Grounds.
N.W. 12

Aug 5, Worked on fossils
Dr. White lectures in evening
125 Present.
N.W. 12

Aug 6, Measured section on
Hermit of Barab ls.
Lecture 81
N.W. Rain

Aug 7, Took cast of tracks
on Yaki in Suftas
Met U. Kansas party & let

sick member ride out
Dr. Shorey gave campfire
lecture in Camp Ground
& Jan Luke Wong Wye
music. 145 Present N.W. 25

Aug 8. Went down Yaki
+ I brot back animal tracks
C.F 101 N.W. 12

Aug 9. Worked on Nature
Bull. Campfire - 79
N.W 30

Aug 10, Worked on
Nature Bull. Campfire - 107
N.W 12

Aug 11, Worked on N.B
Campfire - 99
N.W 20

Aug 12, Worked on Nat. Bull.
Campfire - 160
N.W 20

Aug 13, Worked on Nat. Bull.
Campfire - 110
N.W 35

Aug 14, Worked on N.B.
Finished it.
Camp fire - 80 - 15

Aug 15 Sunday. Wife Returns
Camp fire — 91
N.W. 15

Aug 16, Identified flowers in A.M.
Stayed in Office in P.M. typed evening
Camp fire — 106
N.W. 8

Aug 17, Got out N. Bulletin
Camp fire 75
15

Aug 18 Identified flowers A.M.
P.M. Nature Walk — 13
cut wood Campfire
Lecture — 150

Aug 19 Identified flowers
A.M. Nature walk — 80
Lecture 17

Aug 20, Packed up material
in ^{York} Office shop.
Nature Walk — 13
Lecture — 80

Aug 21, Took fossil fern
won trail & animal track lab
To office Nature Walk — 9 Campfire — 95

Aug 22, Nature walk 4
Lecture - 105

Aug 23 Identified flowers
Nature Walk 2
Lecture 75

Aug 24 Built crate
& boxed set of animal tracks
from Supai formation.
Nature walk 9
Lecture 100

Aug 25 Worked on annual
report. Nature walk 4
Campfire 55

Aug 26 - A.M. Packed fossil
in worked shop
Nature Walk - 8
Lecture - 70

Aug 27. A.M. Gathered 13 plants no 1 to 13
13 *Trizonia Goldenrod* & sent them
to N. Museum for identification
N. Walk 6
Camp-fire 50.

Aug 28 A.M. plans for
next N. Bull. made.

Nature walk 2

Lecture 70

Aug 29,

Nature walk 19

Lecture 50.

Aug 30, Sent weather telegram

Nature walk 5.

Camp Fire Lecture 80.

Aug 31, Went down on Yaki trail
& made plaster cast
of tracks for Dr. Gilmore.
Returned at 3:30 P.M.

Lehner took Nature walk 22

Campfire - 80

Sept. 1. Worked on monthly report.

Nature walk 16 taken by Lehner

Campfire 52

Sept. 2 Finished monthly report
Nature walk by Lehner 14. Campfire 50

Sept 3 Boxed up plaster cast
of tracks
Nature walk 2
Lecture 52.

Sept. 4, Stayed in Office in
A.M. while Lehndt went to
checking station.
Noth nature walk 10
Lecture 60

Sept. 5. Sunday.
No one showed up for
nature walk
Camp fire 60.

Sept. 6. Labor Day
Rain no walk - No Lecture.

Sept. 7. A.M. looked up references
on tapeats ss.

Nature walk. 21

Lecture 45. Last lecture of season

Sept. 8. Looked up Tapeats ss.

12 on last nature walk of season.
Practised baseball in evening.

Sept. 9. Worked on N. Bull.

Sept 10. Met Robt. Sterling Yard
and spent A.M. with him.
He outlined the work of the
National Parks association
P.M. worked on article on
Salt in Tapeats S.S.

Sept. 11, Spent A.M. with Mr Yard.
Went over Camp fire lecture
with Mr. Yard. In P.M. Prepared
a copy of lecture for
Mr. Yard. Saw Mr. Yard
off on train.

Sept. 12. Sunday. In for Office
P.M.

Sept. 13, Finished article
on Salt in Tapeats S.S.
In for Office in P.M.

Sept 14, a.m. Hunted branch of
Cliff Rose with flowers.
P.M. Took Mr. McCoy & L.G. on walk to

Maricopa Pt.

Evening information office

Sept. 15 - A.M. Went for walk
with Mr & Mrs Wetmore of N.Y.
and another couple.

P.M. Stayed home - classified
flowers sent to N. Museum.

P.M. Information office

Sept. 16, Worked on Nature Bull.
Info Office evening.

Sept 17 Nature Bull. day
Info office evening

Sept. 18, A.M. on rim studying
cliff rose Worked on Nature
Bull. Even information

Sept 19, Sunday information office
Met Dr Merriam in P.M.

Sept. 20 Finished N. Bulletin

P.M. Typed Nature Bull. & Went
to Yavapai & Powell Memorial
with Tilly, Mrs Eakin, Dr. Merriam
& Dr Clements.

Sept. 21, Information office
day while Lehnert went with
Johnson to Desert View.

Sept 22. Helped my wife while
she drew cover design.
Ordered Batteries. Wrote letter to Dr
Gilmore concerning animal
tracks.

Sept. 23 Put out Nature Bulletin. Made up
mailing list.

Sept. 24 Worked on rim identifying flowers
Relieved Lehnert for short time in P.M.

Sept. 25. On Rim.

Sept. 26. Sunday

Sept. 27 A.M. Sent weather telegram
On Rim P.M. Went with Johnson
to remove tree from road
near Main & Grand View
road junction

Sept. 28 On Rim. Found Indian
man's stone & arrowhead.

Sept. 29, Worked on monthly report

Sept 30 ~~Finished~~ ^{Worked on Annual} monthly report

Oct 1st Finished monthly report

Oct 2nd Made out monthly weather records.

Oct. 3rd Sunday.

Information office in evening

Oct. 4th. Spent A.M. with Ansel Hall

P.M. worked on Nature notes

Evening information until 7³⁰

Oct 5th Information office
cleaned all windows

all shelves of books & labeled
3 specimens.

Oct 6th Information office day
and evening. Made list of
flowers of G.C. from Armstrong.

Oct. 7. Information office day & evening

Oct. 8 Information office day & evening

Oct 9 Information office day & evening

Oct 10. Information office day

Oct 11, Information office

Sent weather telegram
made out outline for article
on Skunk.

Oct 12 Information office

Oct 13 Information office

Oct 14 Information office

Oct 15. Information office

Oct 16 Information office

Oct 17 Information office

Oct 18 Made up mailing
list for publicity news.

Information office day &
~~evening.~~

Oct 19. Information Office

Oct. 20 Information office

Oct. 21, Infor. day & evening

Oct 22. Inf day & evening

Oct 23 " " " "

Oct 24 " " " "

Oct 25 " " " "

Oct 26 " " " "

Oct 27 " " " "

Oct 28 Information day & evening

Oct 29 " " " "

Oct 30 " " " "

Oct 31 Infor. day.

Nov. 1 Information day worked
on monthly report

Nov. 2 Information day finished
report.

Nov. 3. Information day and evening

Nov 4. Inf. day & evening

Nov. 5 Inf day & evening

Nov. 6 Inf. day & evening

Nov. 7, Sunday off.

Nov. 8 Worked on nature notes
Received 7 pub from
Carnegie Inst.

Nov. 9. Made 2 plaster casts
of fossil fish
Worked on nature notes.

Nov. 10 Worked & finished
Nature notes.

Nov 11 Put out mailing list
of nature notes.

Nov. 12. Helped my wife make
drawings.

Nov 13. Mailed 140 copies of
nature notes.

Nov 14 Sunday

Nov. 15. Worked on Inf. Manual
Sent weather telegram

Nov. 16 Plans for N.B.
Worked on Inf. Manual

Nov 17. Worked on Inf. Manual

Nov. 18 " " " "

Nov. 19. Went to Hilltop with Johnson
to get facts on Pianos being
taken to Supai

Nov. 20. Wrote Publicity article
on Pianos to Supai

Cut stencil. & mimeographed
200 copies. Put out mailing list.

Nov. 21. Went to Prescott.

Nov 22. Leave.

Nov 23. Arrived G.C. 8³⁰ A.M.

Worked on Inf. Manual.

Went to Yavapai Pt. with
Johnson. Received letter from
Dr. Gilmore concerning "fossil fish"

Nov. 24. Received 50 B.A. maps

20 Vishnu & 20 Shunims.

Worked on info. manual.

Nov. 25 Thanksgiving.

Nov. 26. Worked with Johnson
killing cats. Killed two each.

Nov. 27. Stayed in office while
Lehner & Johnson hunted
cats. "

Nov. 28. Sunday. Received
letter from Natl. Academy of

expenses totaling \$150⁰⁰
had been set aside for
my use in studying
Paleoz. + Pre-Camb. at G.C.
under direction of Natl.
Research Council.

Nov. 29. Wrote on Nature Notes
P.M. Infor. office while Johnson
& Lehner hunted cats.

Nov 30. Made out time slips.
Infor. office while Lehner & Johnson
hunted cats. got 2 = total of six.

Dec. 1. Worked on Monthly report.
Sent weather telegram.

Dec 2 worked on monthly report
and finished it.

Dec. 3. Worked on ^{Chief Rangers} monthly
report. ~~Finished~~

Dec. 4. Finished Chief Rangers
report. Wrote Calicut article
for Nature Notes.

Dec 5. Sunday information office. day & evening.

Dec 6 wrote Calicut article for Nature Notes. Inform. office evening.

Dec. 7. Went to Hermit camp with May Goldman to look over antelope & get pictures of them.

Dec. 8. Cloudy & rainy all day. so could not get pictures. till 4 p.m. Hunted fossils. found some nice ones in BA. shale.

Dec. 9. Hiked to river & back to see if there were signs of beaver & otter as reported. Found no signs. Came back & looked over forage area for antelope. Found them eating Cliff rose
acacia greggi mesquite
Coleogyne ramosissima,
Marrubium tea, one or 2 erucias
& at least 2 grasses. At present

there are 4 old bucks
3 old does & 3 fawns (does)
They eat $\frac{1}{2}$ bucket twice
daily (10lb buckets) all antelope
are in fine shape except
one buck that has lost
an eye. This buck looks
a little thin. The chances
of this experiment ^{being a success,}
putting the antelope into
the canyon are very
encouraging according
to Maj. Goldman
Left Hermit Camp at 3:30 P.M.
and arrived at the canyon
at 6 P.M.

Dec. 10 worked on Nature Notes
Infor. office in evening

Dec. 11, Worked on Nature Notes
Information in evening.

Dec 12. Infor office Sunday

Dec 13 Worked on Nature Notes.
Stayed in Infor. Part of A.M. & P.M.

while Johnson & Lehesart cleaned paths
Dec. 14. Worked on Nature Notes. Went
to Yavapai Pk while pictures
were taken from museum
site.

Dec. 15. Made out mailing list for
road bulletin. Sent check \$1.70 to bank
Worked on nature notes.

Dec. 16. Finished nature notes.

Dec 17 Cut stencils for ~~stamps~~
Nature Notes.

Dec. 18 Drew sketch of crystalline
calcite. Cut stencils &
mailed out nature notes.

Dec. 19. Sunday went down
Hermit trail with Travin
Found 3 good sets of animal
tracks lying loose, from
crossing S.S. Brought in
one cast & one set of tracks
from float material. Lepus
schuschtei.

Dec 20 - Received letter from
Dr White explaining use of
\$150. grant. Wrote letter to Dr.
Gulmore & sent sketch
of *Allopus? Arizonae?*
& of cast. answered let to
U.B. Inform. office in evening
Dec 21 Went to head of Hermit
Located some fossils. Too cold
to do much work.

Dec 22. Infor. in a.m. while
Lehnert & Winess cleaned trails.
Information office in evening.

Dec 23. a.m. worked on Nature Notes
P.M. Information office. Worked
on Vol 1. No 1 nat. Notes & recut 2
sterilils. Helped decorate Xmas
tree in Community Bldg

Dec 24. Helped with community
work in Xmas preparations
Made outline of Fossil article

Dec 25 Xmas.

Dec 26 Sunday. Relieved Colonel
Fred Johnson in a.m. while he

~~left to change chair~~ Top Small
for mention. Oct. 7. J.
Evening Infor. Office

Dec 27. Sent weather telegram
Worked on Nature Notes. Evening
in Infor. Office

Dec 28. Information office
made out P. Naturalists form.
Information in Evening

Dec 29 Received letter from
Dr Clements asking about
flowers. Started list.
Evening infor.

Dec 30 Worked on list of flowers
Inform. in evening

Dec 31. Worked on list of flowers
Inform in evening.

Jan 1. New Year's Evening
information office.

Jan 2. Sunday Information
office

Jan 3. Worked on monthly report

Jan 4 Worked on monthly report
& finished it

Jan 5 Completed list of flora
Wrote note concerning it
Wrote memo " " to
Supt. Cabin.

Jan 6, Worked on Nature Notes
in A.M. P.M. made up publicity
envelopes.

Jan 7. Worked on Nature Notes

Jan 8. Worked on Nature Notes

Jan 9. Worked on Nature Notes

Jan 10 Finished Nature Notes.

Jan 11, Mimeographed N. Notes
Cut Stencils.

Jan 12 Mimeographed N. Notes
and ~~typed~~ typed envelopes.
mailed them out.

Jan 13. Compiled Nature Notes
~~and~~ from Vol 1 & 2. Cut 3
stencils and made up
50 copies of each

Jan 14. A.M. Worked on
Geol. Reports. Typed envelopes
for publicity report.
P.M. Went to head of Yahi
trail to correlate beds
with Hermit. Found
some very nice fossils
in "C" lowest member
similar to those at Hermit
only better. Found fault
at head of trail about 20'
displacement $\frac{1}{4}$

Jan 15. Noted letter from
Ansel Hall to Mr Eakin
desiring Monthly report
on Summary of Educ
activities in the park.
Short statement of my
activities for each month.
"Need not be lengthy
but bring out fact that

something is being accomplished
-- and assistance needed --

at Grand Canyon"

Short summary to Edna Hedges.

Made out time slips

Recorded meas

Worked on beds of Kaibab
as meas by Dr White
& myself.

In P.M. helped Johnson
set 3 telephone poles
& fit line to desert view.

Jan 16. Went to Hermit trail
horse back. Started measuring
section. Found breccia in
"C" member. Collected fossils from
"schizodus" horizon.
Evening information office

Jan 17. Sent weather telegram.

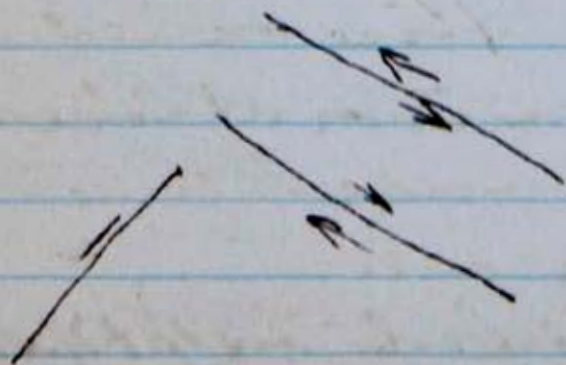
Worked at inform office on section.
Read Newberry section at Cataract
Canyon. In P.M. made outline
of next nature bull.

Eva. info. office. Rabbit dinner
at mess hall.

Jan. 18. Went to Hermit trail
Collected fossils from known
horizons. Measured section
up to massive cliff.
Evening information office

Jan 19. Went to Hermit trail
collected fossils from bed "5"
Checked Dr White's measurements
Brecciated zone not included
in his measurements. Found
several horizons of fossils
Evening information office.

Block fault at Hermit separated
by 300 yds. displacement 27'
Strike N. 65° E Dip 85° W
another fault to the west
strike N 65° W Dip 86° W



Jan 20, Worked at inform office
& home on Nature Notes. Evening
Info. Office

Jan 21, Worked on Nature Notes.

Wrote for book on Prin.
of Stratigraphy. Wrote to
Perman's book store Wash
for Inform concerning
7 publications.

Wrote to Ernest Dawson
concerning book on
N.A. Index fossils.

Evening Information
office.

Jan 22. Information office
day ~~day~~ & evening
while Johnson & Lehnert
cleared snow.

Jan 23, Information office.
Sunday

Jan 24 A.M. worked on Nat Notes
P.M. looked over books in
Lib. Warehouse to see if any

suitable for nature work.

Jan 25 Hiked down to place
near Battleship to get
pictures of mtn. sheep.
Saw no mtn. sheep but found
nice set of tracks in
Supai formation. P.M.
worked on nature notes

Jan 26 Worked on nature notes.
In P.M. ^{about 9.} small fire in Power plant

Jan 27 Information office
while Johnson & Lehnert
cleared snow from path.
P.M. worked on nature notes. Received
notification of appointment as park Nat.

Jan 28 Received letter from Dr. Bumpus
saying he might visit canyon
in Feb. from Santa Fe, N.M.

A.M. Wrote letter to exten.
div of U. of Chi. Worked on Nature
Notes.

Jan 29. A.M. Nature Notes finished
P.M. Fixed up tent. Got
stove pipe & connected it up.

Jan 30 Went to head of Hermit
Followed faults & found "B" member
which is probably breccia zone
probably due to fractures.
Displacement 27" at base
of "C" member. Displacement
is very slight at base of
"A" member.

Jan 31st Spent $\frac{1}{2}$ day with
Johnson blowing up cow
on rim west of Mojave point.
Revised Geol. Report.

Feb. 1. 55 Worked on monthly report.
Stayed in inform office & showed
Lehner about travel report.

Feb 2. Worked on geol at head
of Hermit.

Feb. 3. Head of Hermit trail

Feb. 4 Head of Hermit trail.

Feb. 5. Worked on Geol. report

Feb. 6 Hiked to Plateau Pt.
& Lower Indian Gardens.

Feb. 7. Sent weather telegram.
Made out list of birds per
classification by J. M. Bailey
& sent them to Biological
Survey with request for
pictures of as many as
possible.

Feb. 8. Worked making a table
for large set of animal
tracks for display. Cut
2 stencils for Nature Notes.

Feb. 9. Cut stencils, typed envelopes
& put out Nature Notes.

Feb. 10, Stayed in Information
office all day. Lehnert
was up all night
guarding two prisoners
& Johnson guarded them
during day.

Feb 11 Set tracks in
cement & labelled them
Wrote letter to Dr. Bumpus
" " " Supt. Doc. for
booklet on birds

Feb 12 Worked on Nature Notes

Feb 13 Sunday Information
& plowing snow 1/2 day

Feb 14 Sent weather telegram.
Stayed in infor office while
Johnson & Lehnert plowed snow.

Feb 15 Infor office made out time
slips cut daily report stencil

Feb 16 Received notification of
a trip to Washington in ^{connection}
Expenses paid. Cut one ^{with museum}
stencil for nature notes.
Worked on Nature notes.

Feb 17. Cut stencils for Nature
Notes. wrote short articles on
wild geese.

Feb 18 Collected set of tracks
on B.W. Trail from Supai
formation.

Feb. 19, Made preparations for
trip. got vouchers + Manual + instruct
ions.

Feb 20, Sunday. Rode "mike"
to meet Al Smith at Pao
Sheep Tanks. Didn't meet
him so went to Pasture
Wash. Left Pasture Wash
at 1:35 a.m. + arrived
at G.C. at 7:15 A.M.

Feb. 21. Left Grand Canyon
8 P.M. with Family for
Washington

Feb 22. On train

Feb 23 on train.

Feb 24, arrived in Chicago
at 9 a.m. Couldn't get
sleeper transfer so had
to make out out new travel

request from Chicago to
Wash. Left Chicago
at 1 P.M.

Feb 25 Arrived in Washington
at 9 A.M. Reported to
N.P.S. Mar & lunched with
Dr Merriam at Cosmos
Club at 1 P.M. Dr. Merriam
explained museum at
Yavapai to be unlike
anything ever attempted.

Exhibition of 20 objects

1. Relief model of G.C.
2. Exhibition of animal
tracks. Set of tracks
from middle horizon in
Lupai formation west
of O'Neill Butte
to be uncovered. 1 set
to be left in place
& one similar set to
be brought to Yavapai.
3. Succession of life forms
4. Contact of Tapeats as
resting on <sup>pre-
Tapeats</sup> Granite to
be located & brought to Yavapai

Dr. David White introduced me to Dr. Kirby, Bassler & Resser & many others. Saw the relief model being worked out.

Feb 26.

Took two sets of tracks to Dr. Gilmore. One was a new set of tracks from Supai formation about 100 yds west of B.C. trail Vertebrate. The second was a small invertebrate set from B.C. shale near plateau Point.

Reported to N.P.S.

Feb 27. Sunday. Went to zoological park.

Feb. 28. Reported to U.S.N.M. Dr. Gilmore showed me thru museum. Talked to Dr. Merriam over phone. P.M. was sick.

Reported to N.P.S.

March 1 Reported to N.P.S. & made out travel voucher

Spent a.m. with Dr. Girty
& looked over fossils
from Kaibab l.s.

Made sketches & took notes
on fossils. P.M. Spent
at U.S. National Museum -
Called on Judge Finney
Evening worked on Monthly
report.

Chief Clerk Holmes said
exam would be posted in
1 mo. & exam held 1 mo.
later.

March 2 Took fossils to
Dr. Girty. He looked them
over & commented on
new forms. Reported to
Mr. Holmes. Spent
remainder of day
at U.S. N. M.

March 3. Took remainder
of Kaibab "C" member fossil
to Dr. Girty. Dr. Girty
says fauna looks very

distinct from Prod. Ivesii
fauna.

New forms discovered.

1. Pleurophorus (pelecypod)
2. Nucula (teeth arched like V) ○
3. Nautiloid (prob. Fordoseras)
large gastropod ~~III~~
4. Scaphopod.
5. Schizodus.
6. Bellerophon like form.

Exchanged watch: Reported
to Chief Clerk Holmes.

Ran over to capital. In P.M.
stayed in U.S. N.M.

until closing time
studying displays.

Impressed by display of
Chonetes on black back
grounds. Large set of tracks
similar to those at
canyon are now listed &

known as. *Agostopus medius*
Gilmore

Can get pictures of animal tracks by wiring
Dr. Gilmore showed me
a great many specimens
of *Bothriodopus* the
fossil fish in Temple Butte
limestone. Wrote hist
of *Gila monst.* & name of
Chuck-Walla.

Mar. 7. Went to Interior Bldg.
Saw Mr Holmes. Asked for
tickets for Pillsbury lect.
Mr. Mather gave me two tickets
Went to U. S. N. M. Got name of
public for Childrens Museum.
Sketched fossils similar
to those common at
Grand Canyon. Got name
of set of tracks *Agostopus*
medius Gilmore

Drew sketch of pyramid
form for display of tracks.
Went to Pillsbury's lecture on
Flora of Yosemite in evening.

March 5 Spent day at USNM
studying fossils & displays

Mar 6 Sunday

Mar 7 Spent day looking over
fossils from Grand Canyon.
These were collected by
C. D. Walcott in 18- & contains
Phillipsia from Shinarump
Canyon. Made sketches.
Expect to study Cambrian
with Reeside to-morrow.

March 8. Spent greater part
of day in Dr. White's office
looking over unpublished
manuscript of L. F. Noble
on Buckskin Karbal Gulch
Utah. In this paper Noble
makes 5 subdivisions
of Karbal ls; 2 in his old "C"
member. 1 in " " "B"
" " & 2 " " "A"
" The top one being
the Bellerophon horizon.
Dr White obtained a copy

of Girty's Guadalupian
fauna for me & Holmes
bound it.

March 9. Spent A.M. in Dr. White's
office reading Noble's unpublished
manuscript. In P.M. visited
U.S.N.M. and looked over
Cambrian fossils from G. Canyon
Some some very fine trilobites
from Indian Springs B.A. shale
B.A. trail collected by Walcott.
In evening attended Geol. Society
at Cosmos Club. Heard
Dr. R.C. Moore lecture on trip
down Colo. Dr. Gilmore
showed slides & gave talk
on Animal Tracks at G. Canyon

Mar 10. A.M. in Dr. White's office
reading & taking notes on Noble's
p.p. on Karbat Gulch. In P.M.
studied displays in U.S.N.M.

Mar. 11. Obtained Govt. Pub. on
Natural History of Parks
from Chief Clerk Holmes

133M
14M
15T

Spent remainder of day in
book shops looking for
literature on G. Canyon.

March 12. Went to Park Service - N. Museum
& Geol. Survey.

March 13. Sunday. Visited U.S. N.M.
Lincoln Memorial, & Washington
Monument.

Mar. 14. Visited U.S. N.M. &
sketched Cambrian fossils
Talked on phone with R.S. Ford.

March 15. A.M. Went to Park Service
and to U.S. N.M. Dr. Reaser
showed me fossils found
at G.C. made sketches
& notes on ones I saw.
Promised me cuts on some.
Tried to call up Dr. Merriam
in P.M. from N. Museum.
was Report at 933 B. \$5⁰⁰

March 16. A.M. went to Park Service
Spent A.M. with Dr. White & asked
about literature. Took lunch
with R.S. Yard at Cosmos Club.
Mr. Yard showed me his office
& invited me to use it.
Met Dr. Merriam. He believes
tracks will be found in Algonkian
in less than 1 year's time.
Wants Cambrian searched.

" Devonian in region of
Pipe Creek searched. Said
\$150⁰⁰ was for my use in Pre-Camb.
Spent P.M. with Mr. Yard.
In evening bought

Powells report \$2⁰⁰
Sitgreaves " 2⁰⁰
Insect Fossils of Kans. 5⁰⁰

March 17. Went to Park Service
Spent A.M. with Dr. White
He showed me where to search
for fossils in Pre-Camb.
Spent P.M. with Dr. Resser
sketched & took notes
on Camb. fossils of Grand
Canyon. He will search

pictures of
for fossils for me. Dr. Reaser
will determine any fossils
I send in. If only 1 specimen
he will send cast back.
Dr. Reaser will be in office
until May 15th & then be back in
Oct. Expects to visit G.C. with
party in July.

March 18 Went to Park Service
& then to Biol. Survey. Met
Maj. Goldman & Vernon Bailey
Met Mrs. Oberhauser & he handed
me pictures of birds. Requests
list of birds & also all numbers
of nature notes. In
P.M. Mr. Bailey took me
over to Fairview my dept
Met Mr. Barrett. Watched
him skin Cooper's Hawk.
Round tail. Went to Biol. Museum
met Dr. Jackson. He showed
me specimens collected
from Grand Canyon.

March 19. Went to Park Service
Went to Pub Library
Met Dr. White at Cosmos Club
& went to ^{old} Smithsonian Inst.
& met Drs Rose, (Cacti); Hitchcock (Grasses)
Maxine (ferns). Have listed their wants

March 20. Sunday. Took dinner
with R.S. Yerd & family. Went
for ride to Arlington, Va. &
to Cherry Chase, Md.
Dr. Merriam wants me to
call him 10³⁰ A.M. Wed
for date for lunch.

March 21, Went to Park Service.
Mr. Holmes said prerequisite
for exam is degree in Bot. Paleont.
Biol or Ornithology. Received check
at home. Went to Biol. Survey. Watched
Mr. Barrett prepare skin of muskrat.
width is required in skin. Excelsior
slightly dampened is good for
sub for cotton.

Mar 22nd Worked with Mr. Barrett
of Biol Survey making up skins
of birds + mammals.
Obtains Biol. Survey Bull # 3
of S. F. Mtns.

Mar 23rd Worked at Biol. Survey
on skins of birds + mammals

Mar 24. In A.M. at Biol Survey
Took lunch with Dr Merriam
& C. W. Gilmore. Spent P.M. discussing
problems in field at G. Canyon.

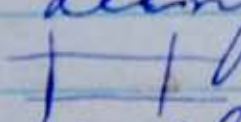
Mar 25. Spent A.M. at P. Service
with Mr. Holmes discussing Ranger
Exam. + at Veterans Bureau
& at War Dept. P.M. skinning
at Biol. Survey.

Mar. 26. Spent day at Biol. Survey
making up skins.

Mar 27. Studying botany + at zoo.

Mar 28. Reported to N.P.S.
Spent day at U.S.N.M. Met Dr.
Hoff of U.S.N.M. (curator of Archaeology)

He promised to send valuable books relating to Ethnology of Grand Canyon region. Said they would be sent to G. C. after Apr 20th. They (per Dr. Merriam) should be put in locked case, numbered & not allowed out of room. Dr. H. wants to know more about circular ruins at Pasture Wash. If like his pits at Lunas N.M. Walls are 6' + fire pit in center. Kinds of ruins of pottery around whether B & W. designs - etc.

Watched Mr. Boss make plaster cast of tracks in Supai on Hermit trail. Method add all powder water will take. Shaken in. Stir up immediately. Apply in thin coat to let it cover tracks. Reinforce with wires  laid on. add rest of plaster. Let set until it has heated showing it has thoroughly set. Took bird skin to U.S. Biological survey.

Filed out application blanks.

Mar 29 Reported to N.P.S. Procured
old Pub. & obtained Pub on recent
mammals from Dr. Bennett Miller.
Spent day in U.S. N.M.

Mar 30. Reported to N.P.S.
Visited Biol. Sur. & Natl Acad. of Sci.

Mar 31. Spent day at Biol. Sur.
& U.S. N.M.

April 1, Went to N.P.S. Spent
about 30 minutes with Dr Merriam
Went to Biol. Survey obtained
Bird skins went to U.S. N.M.
Submitted vouchers.

April 2. Left Wash. D.C. 7:55 A.M.
Arrived in Harrisburg 11:15 A.M.
Went on Leave arrived in New York Pa
6 P.M.

April 3. On Leave Went to Laceyville
via auto with Nels family;

arrived in Silvana Pa 7 P.M.

Apr. 4. Tapped maple trees

Apr. 5. visited with mother

Apr. 6. Home. Went to Careyville
for tanks

Apr. 7. Went to Newark Valley,

Apr. 8. Returned to Silvana

Apr. 9. Made Syrup.

Apr. 10. Went to Tankhannock via
car. Went to Harrison via train.

April 11. Went to N.Y. with Mary Merle
saw aquarium. Went up in
Columbus Tower. Walked on Brooklyn Bridge

April 12. Went to Amer Museum of Nat. Hist.

April 13. Left for Harrisburg 12:27 P.M.
arrived in Harrisburg Pa

Left " " & went on

Govt expense travelling 6 27 P.M.

Apr 14. Arrived in Chi 9:10 A.M.

Met Pettis & wife. Left Chicago 1:40 A.M.

April 15 On train

April 16 On train. Arrived in
Grand Canyon 6:30 P.M.

April 17 Sunday

April 18. A.M. at Conference
P.M. at Pub. Auto Camp.

April 19 Wrote publicity article
Cut 1 stencil for Nature Notes.

April 20. Put out Pub. article
Typed envelopes.

Apr 21. Got out Nature Notes
Typed envelopes.

April 22. Finished Nature Notes
& Mailed them out.

Worked on Forestry week display

April 23, Worked on Forestry
Week display.

April 24 Finished forestry
display.

April 25 a.m. Conference.
P.M. Identified flowers.

April 26, Read features of
other N. Parks.

April 27. Took examination
P.M. Worked on flowers.

April 28. a.m. chased down
rumor of dead man reported
below Yavapai. Worked
over list of birds.

April 29, Worked over list
of birds.

April 30. Camp grounds
& tending to correspondence.
got ready to make trip in
Canyon

May 1. Tearing down exhibit
& putting labels on block.

May 2. Went with Art
Brown and two pack mules
to Lone tree Canyon &
established camp.

Went up to head of Lone tree
Canyon but saw no burros

May 3. Returned along
Tonto & went to head of
east spur of Cremation Creek.

Art shot 7 burros. 4 skulls
boned out. (2 by Art)

Went back to Lone tree
to camp.

May 4 Broke camp &
returned. Picked up skulls
at Cremation Creek.

Gathered flowers on
Tonto Platform. Redbud
had been in bloom about
2 weeks before trip.

Now in bloom

mormon tea, manposalily

Apache plume, Cliff Rose
Coloogyne ramosissima
Pin cushion cactus.
Penst. barbatus
Fleabane.

Compositae.

Stopped at O'Neill saddle
& looked for antelope animal
tracks. Could not get down
over ledge so followed
around Butte.

Big Ram Mtn sheep
went around ahead of us.
Returned to top.

May 5. Made out monthly
report.

May 6. Put out publicity
bulletin. Went to public
auto camp grounds with Brooks
to pick camp site.

May 7. Went to point below
2 mile mark & found
tracks in Supai on west.

May 8. Sunday. Wrote report
to Dr. Gilmore on animal tracks.

May 9. A.M. at conference
P.M. With Chauncey Hamblin
& Wife & Tillie. Went to Yavapai,
Yaki Pt. Drive to East-Camp
Grounds - Industrial area

May 10. Am got supplies to go
into Canyon. Worked putting in
display of fossils Indian
Ruins, & Rock specimens.

May 11. Made out list of reference
books. Put padlock on case
for reference books & fossils
Worked on ^{Dewey} decimal system
for library. Received letter
from Herbert Maier announcing
he would be here latter part
of week.

May 12 Left Grand Canyon 8⁰⁰ A.M.
on Mike. Packed supplies on
Buck mule. Went down B.G.
trail. Pitched camp at Pipe Creek
Went to Tipoff trail & turned

animals over to Packers. Went
up Pipe creek Saw no exposure
of Devonian west of Pipe creek
Worked on flowers in evening.

May 13th Examined devonian exposure
on East of promontory to
North of Yavapai Pt.
Devonian is about 125' x 50'
Failed to find good specimens.

May 14. Hiked to top arriving
at G.C. at noon Met Mr
Herbert Maier, Architect for
new museum. Went to Yavapai
Pt. Camp grounds & to his
tent. Saw his plans for
museum.

May 15 Mr Maier, Mr
Widdiforss, Brooks & I were
taken to head of trail by
Jilly. Hiked down ^{Yavapai} to
Pipe Creek. Mr Maier remains
in canyon. In P.M. we went
to head of Pipe Creek. Don't
believe Devonian is exposed

in this vicinity. Saw several deciduous trees not as yet described from this park. Water occurs in seeps at base of Red wall.

Caught wingless insect 6 legs. known as walking stick. Pale ^{gray} brown, looks like stick - about 4 inches in length.

May 16. Visited 2 good exposures of Temple Butte ls. N. of Yavapai Pt. Failed to find good specimens.

Went to Tip off & collected imprints of something in Algonkian. Impressions are faintly preserved.

May 17 Hiked to top in 2³⁸ from Pipe Creek.

Wrote lecture. Attended P.T.G. Banquet in P.M.

May 18 A.M. attended P.T.G. Picnic at Grandeur Pt.

Gave talk on the Grand Canyon
In P.M. Went to Desert View
about 1 mile south of Lipan
Pt with Dean Byron Cummings
of the U. A. Scovyer & Harrison
Ruins 125' long 12' wide
L. is 50' Dr. Cummings says
it can be ^{restored} replaced for
\$2000. Is one of largest
in this region. Probably
over 100 people lived in
this vicinity. Belongs to
Mesa Pueblo type
smaller rectangular
structures in the same
vicinity. Returned to
G. Canyon. Attended
N.T.A. ^{meeting} Banquet in
evening!

May 19. Met Dean Cummings
at Park Office & obtained
outline of early Indian
culture in this vicinity.
In P.M. wrote up outline
of Dean Cummings'

May 20. Worked on classifying
and labelling books for
Reference library.

May 21 Worked & finished
reference library.

May 22 - Sunday.

May 23, A.M. Conference
P.M. Worked on Nature Notes

May 24, Worked on story of
Grand Canyon. P.M. with
Prof. Bacon on rim.

May 25 Worked on story of
Grand Canyon. Met
Dr. White.

May 26 A.M. with Maier
& Dr. White at Yavapai
P.M. Worked on story of
Grand Canyon.

May 27. Went down Yaki
trail with Dr. White & A. Maier.
Hunted for ferns in Hermit.

Noticed a great many worm trails in Hermit shale which Dr. White is describing as a new species. Dr. White found one small locality that contained ferns as seen from Yavapai Pt.

In evening met Mr. Deaver about 36 members are present. Dr. White loaned me his aneroid barometer to take measurements. ~~Sun 2~~
gray foxes

May 28 Worked on Nature Notes wrote article on "Flora of Jonts Platform"

May 29 Went to Yavapai with Dr. White & Herb. Maier Sunday. Baseball. Went to Maricopa. Met Dr. Gilmore

May 30

Went to head of Yaki Pt. with Tilly, Dr. White & Gilmore. Hiked down to west side of Oneill. Did not find all of tracks found on my earlier

trip. Scaled 50' wall & hunted
for specimens in Harmit.

Found one slab with ferns
apparently in Sipaai.

Jilly thinks it would make
a good article on "Horns of Antelope"
Time shed

Velvet or not

Do does have horns, how do they differ

" they have eye guards

" " rub the velvet.

What use are they. etc etc.

May 31, Finished Nature Notes

Typed envelopes & mimeographed
4 sheets.

June 1, Put out Nature
notes. Converted ins.

June 2. Went down Yuki
trail with Dr. White & Dr
Gilmore. failed to find
good tracks in place.

Noticed a great many worm trails in Hermit shale which Dr. White is describing as a new species. Dr. White found one small locality that contained ferns as seen from Yavapai Pt.

In evening met Mr. Draven about 36 members are present. Dr. White loaned me his aneroid barometer to take measurements. ^{Sun 2}
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4 sheets.

June 1, Put out Nature
Notes. Converted ins.

June 2. Went down Yuki
trail with Dr. White & Dr
Gilmore. failed to find
good tracks in place.

June 3 Did blasting in Supai formation but failed to get good tracks on Yaki

June 4. Worked locating tracks in Supai formation. Collected 1 set of tracks.

June 5. Sunday.

June 6. Helped Dr. Gilmore prepare exhibit in Coconino on Yaki.

June 7. Went to head of Dripping Springs trail with Drs. White & Gilmore. Collected tracks in Hermit.

June 8. Went down Hermit trail with Drs. White & Gilmore. Found big slab containing 3 sets of tracks.

June 9. Went to Phantom ranch with Dr. White, Gilmore. Went up on Pre-Cambrian

with hopes of finding life
Dr. White found
Alga reefs.

June 10. Returned to top.
leaving specimens for pack
train.

June 11. Went down B. A. Trail
with White, Gilmore, Kew & Gale
Found insect wings.

In P.M. Dr. Gilmore & I went
to point below Yarapai
to find animal tracks.
Failed to find good ones.
in place.

June 12. Met Dr. Merriam
Went to Yarapai with Dr. White
Gilmore, Merriam, Kew, Gale
& Maier. Discussed museum
Plans. Evening dinner with Merriam
White & Gilmore.

June 13. Went to Hermit Basin
with Gilmore. to assist in
helping get fossils up to packers.

June 14 Went down Yaki trail
with Dr. Merriam, Dr. Gregory, White,
Gilmore, Matthes, McKee. Took "Ractus"
to head of trail. Got "Ike" from
pack string. Located tracks
in situ in Supai. Dr. Merriam
left in evening.

June 15 Went to Phantom
with Drs. White, Matthes, ~~Gilmore~~ Gregory,
Mrs. Matthes, Mr + Mrs. Maier
Went up to Pre Cambrian
horizon & found fossils.
In eve. Silly arrived. Talks in
eve. by Gregory, Matthes +
White.

June 16. Went to pre-Camb.
horizon with Dr. White. & brought
back great number of
slabs with tabloid algae.
Dr. Gregory wants location of
gravel bars in B. quad.
& will write a report.
Wants list of public. needed.

June 17. Went down Yaki
with Matthes, White, Gilmore

Davis + McKee. I discovered
tracks above. exhibit

June 18. Helped pack specimens

June 19. Sunday. In evening
we were guests of Dr. White + Gilmore
at dinner. Those present:

Dr. White - Dr. Gregory - Gilmore
Matthes + wife - Maier + wife
myself + wife + son. McKee
Mrs White + Gregory

June 20. A.M. Helping ship boxes
+ getting animals for McKee
+ Matthes. P.M. With Dr. Gilmore
Saw. Dr. Gilmore left.

June 21. A.M. with McKee + Dr. Matthes
helping repair model + get
instructions on what is left
for me to get out for museum.
P.M. Went to Yavapai pt.
+ gathered flowers for
deter. Dr. Matthes leaves

June 22. A.M. Went with
McKee on foot path to Maricopa
to look over flowers for

identification P.M. Creating
animal tracks & tagging
them.

June 23 Worked on Nature Notes
in A.M. In P.M. helped hunt
bandit

June 24. Worked on Nature Notes.

June 25 Went down to Supai
formation to get corner
stones for museum. Davis with
me.

June 26. Sunday

June 27 Bert Moses & Davis & I
worked in Supai formation.
getting corner stones for
museum.

June 28 In Supai formation

June 29 Supai & Hermit
shale formation

~~June 30~~ Worked on Nature Notes.

July 1st Went with Moses & McKee to river on mules. to get corner stones for museum.

July 2. Went to top of Bass ls. with Moses & McKee.

July 3. A.M. Went to top of Bass ls. P.M. came to top.

July 4 Day off.

July 5. getting out Nature Notes In A.M. went to head of Yalbit & back. Worked on monthly report.

July 6 Splitting out tracks in Supai

July 7 Tonto Plateau getting corner stones

July 8th In Canyon with B. L. Moses
9th getting corner stones.

July 10th Sunday Butterflies

July 11th Went into canyon

12 collected rocks from

13th Tapeats-Shinarump, Hakatai

B.G. & M. Nav. & Returned to top.

July 14th A.M. on rim. Started

camp-fire talks. 50

July 15th On Nature walk 10.

Dr. H. Ries gave talk on
erosion or effects of erosion
to crowd of about 100

met Mr. Johnson & party of Newark Valley.

July 16th

On Nature Walk. ~~50~~ 5

• Camp Fire 100

July 17 No Nature Walk

Camp Fire - 100

July 18 Nature Walk - 6

Camp Fire - 85 Music

July 19 Nature Walk - 6

Camp Fire - 115 Music

July 20 Put up signs.
Worked on story of Canyon for Harway
Bus drivers.

Nature Walk 16

Campfire - 56

Edwin McKee collected & mounted

7 species of butterflies.

July 21. For monthly report.

Accessions

Publications

76 No. at Campfire - 6 Nature Walks.

Accomplishments

Butterflies } McKee

Birds

Talk to Bus Drivers

July 22 A.M. with McKee

Catching butterflies at Yaki

P.M. 10 on Nature Walk.

Campfire - 60

Went to Indian Gardens

at 11:50 P.M. returned to top

at 2 P.M. saw Lazuli bunting

Rock Wren, desert Sparrow.

Sparred Towhee. Caught

butterflies. Found tracks in

Tonto.

July 23 N.W. 8 C.F. 76

July 24 E.M. at Indian Gardens
Returned to top.

Helped in hunt.

No Nature Walk.

Rain at Camp Fire.

July 25 Help. Prof. H. Hubbard
prepare board.

Nature Walk 5

Camp Fire by Hubbard 135

July 26

Nature Walk 4

Camp Fire 100

music

Average
N.W. 10 @ 7.6
C.F. 11 @ 86.6

July 27 Wrote on story of G Canyon
for Fred Harvey.

On N Walk 4

Camp Fire 90

Dog performance

July 28 Wrapped & sent seeds
of *Cercis arizonica* to

Dr. J. N. Rose collected July 24th

Nature Walk - 12

Camp Fire 105

July 29. Met Dr. J. M. Kuehne, Univ
of Tex Nature Walk - 13

Camp Fire - 135

Music by Miss M. Mullin of Brooklyn

July 30 -

Nature Walk 11

Camp Fire 115

July 31st

Nature Walk 15

Camp Fire - 120

For month Nature walks 15 attend. 131

Camp Fire Lectures 16 attend. 1517

Aug 1st Worked on monthly
report

On Nature Walk 15

No Camp Fire Lecture - Rain

Aug 2nd Cut stencils &
mimeographed nature notes

On Nature Walk 15

Camp Fire 130

Talk on Colo. River by Hilgemann

Aug 3rd Put nature notes
together

On Nature Walk 15

Camp Fire lecture

by Prof. H. V. Hibbard 126

Aug 4th Typed envelopes.

On Nature Walk 21

No Camp Fire Lecture Rain

Aug 5th Rain all day
no Nature Walks

Put out nature notes.

Aug. 6. Wrote letter to Dr. Gilmore

On Nature Walk # 14

Camp-Fire Rain went fishing
to rain Tank.

Aug 7. Sunday

On Nature Walk 21

Dean Cummings started
to speak but rain interferred

Aug 8. Letter to Dr. White

On Nature Walk 12

Camp Fire 115

Aug 9. Letters to R. S. Yard
F. Sylvester, J. Davis.

On Nature Walk-26

Camp Fire - 125.

Mr. Keith Kennedy gave entertainment

Aug 10 Wrote Story of G. Canyon
for Fred. Harvey

On Nature Walk 32

Camp Fire 155.

Mr. Keith Kennedy of Australia

gave entertainment on primitive
musical instruments of Australia

New Zealand, China, So. Africa & Russia

Hawaii

- Entertainment especially good as Mr Kennedy had studied music in Vienna

Aug. 11, Went on rim drive
to write up views from rim
for Fred Harvey

On Nature Walk 15

Campfire 115

Fig by G.B. Galloway.

Aug 12, Wrote story of Grand
Canyon for Fred Harvey

On Nature walk 6

Campfire 160

Mr. J. S. Masters Prin
of Central high school
gave interesting talk
on Wagon Box battle
of Sioux War.

Gave talk to F.H. busdrivers
Aug. 13.

On Nature Walk 15

Campfire 115

Mouth organ music by
Mr. Conway of Canada.

Aug 14 Went into Canyon
to get corner stones

Returned 6:15 P.M.

No Nature Walk

Camp Fire 90

Aug 15 Took oral Exam.

Met A. Hall.

On Nature Walk 15

Camp Fire 115

Short talk by A. F. Hall

Aug 16 Went to Lower Indian
Gardens with A. F. Hall

Took pictures of Agave
Antelope Prickly Pear
Red-bud

Nature Walk by Lehner - 15

Camp Fire 110

Aug 17. A.M. with Dr. Merriam.

A. Hall, Maier, McKee & Carrell

at Yavapai. Conference on

Yavapai project in P.M. no

Nature Walk.

Camp-Fire - 125 Given by

Dr. J. C. Merriam. Many questions asked.

Aug 18. A.M. With Dr. Merriam
Maier, McKee, Correll at Yavapai
A Hall left at 5 A.M. P.M. Hermit
rest. & Yavapai

No Nature Walk or Camp Fire Rain
Dr. Merriam wants study of tracks
made in dry & wet places
Pictures taken of tracks

" " " Boulder at
head of Pipe Creek. 2 boulders
6 or 8" in dia. brought up.
Contact of Vish & Peg & Tapeats
& " " " & Hotauta Cong.

Pub. from W. W. Bass, Tilly & James
Aug. 19. A.M. wrote on Rim Drive
for F. H.

P.M. 11 on Nature Walk.

Camp Fire — 140

Received Pub. from G. H. Stoyanow.

Outline of Nature Notes.

Mr. McKee wrote article.

Talk by Willis A. Rowe on
Poisonous reptiles

Aug 20 Wrote on "Rim Drive"

On Nature Walk 11

Camp Fire 110

Entertainment by trail finders
of L.A. under direction of
Harry James
Sneezes & Snores by Bowman Jr.

Aug 21. Wrote on article for F. Haverly
On Nature Walk 12
Camp Fire — 85

Aug 22 a.m. writing up rim
views.

P.M. on Nature Walk 7
Camp Fire. 110.

Talk to Bus Drivers

Aug 23. Went to Desert View with
Hale

Camp Fire 105

Aug 24 Wrote on article for F. H
Nature Walk 5
Rain — Talked to Drivers

Aug 25 Nature Walk — 12
Rain in Evening

Aug 26 Article on Cats & Pole cats
Nature Walk — 7
Camp Fire 100.

Aug 27. A.M. Wrote
Annual report. Finished
Letter to A. Hall.

Aug 28. Went to Tuba City
with "Chick" Maddox & Miss
Story. Got stuck 2 times
at Grand View. Ate
lunch in Moencopko.
Saw Buffalo dance. Met
Mr. Rowe, Webb. Marooned &
couldn't get back so spent
night at Tuba.

Aug 29 Let Tuba 8³⁰ A.M. & arrived
at G. Canyon 1³⁰ P.M.
On Nature Walk 10
Camp Fire 70
music on the

Aug 30 - A.M. wrote on rim
drive for F.H. P.M.
Nature Walk 11
Camp Fire 105

Aug 31. Received letter from
Dr. H. Reis. Wrote up Yavapai
& Grandview Pts.
Nature Walk - 18 Camp Fire - Rain.

		<u>No</u>	<u>Attendance</u>
Total	N.W.	24	- 413
	C.F.	20	- 2306

Sept. 1, 1927

A.M. Monthly report
P.M. N.W. 21 C.F. 100

Sept. 2 1927

A.M. Finished write-up
for Fred Harvey. Gave report to F.H.
P.M. Nature Walk 14
Camp Fire - 103
Stein

Sept 3. 1927

A.M. Nature Notes
P.M. Nature Walk 8
Camp Fire - 80
Stein

Sept 4 1927

Nature Walk 13
Camp Fire 80
Stein

Sept 5

Labor Day Wrote Nature
Notes. Rain no walk or Camp Fire

Sept 6

N. W. 10

C. F. 80

Talk to J. H.

Sept 7

18

60

Sept 8. Mameographed 6 copies of Nature Notes
Nature Walk - 12
Camp Fire - 34

Sept. 9. Started File

Request for Nature Notes

N. Museum

Dr. Gilmore - White - Carney Inst
Chief Naturalist - Sept Grand Canyon

In Nature Walk 8

Camp Fire 50

Sept. 10

N. W. 7

C. F. 50

Camped at Rain Tank

Sept. 11. Sunday went
rabbit hunting with D.T.
got 11 cottontails & 2 jacks

Sept 12. Went to Pipe Creek
with Peter Mount.

Sept. 13. Failed to find good
contact with Peg & Tapeats.
3 old dogs, 1 young doe & 1 old buck
in good shape. bred

Sept. 14
Came to Canyon.

Sept. 15. Met Dr. Merriam
Went to Yavapai

Sept. 16. Separated rocks at Yavapai
Took mules to head of Yuki
Heavy rain so Dr. ^{Merriam} ~~Silmon~~ Day
could not go out. Went to P.T.A.
in evening.

Sept. 17. Went to Yavapai with
Dr. Merriam, Wright. V.P. & Dr. Day
Separated rocks.
Needed Vishnu
Basalt.

Holanta Cong.

Boulders 2 to 6 in diam & several smaller ones.

Maas ls.

Hermit

Kaibab

Cocconino

Received letter from Dr. Taylor.

Sept. 18. Sunday ^{Pickett} picked pinons

Sept 19 Went to Canyon with Peter Maier

Sept 20 In Canyon after corner stones

Sept 21 ^{see} Came to top to H Maier

Sept 22 In Canyon

Sept 23 " "

Sept 24 Came to top Stung by Scorpion.

Sept 25 Picked pinons

Sept 26 N. Note

Sept 27 Nature Notes

Sept 28 $\frac{1}{2}$ day at Yavapai
Nature Notes in P.M.

Sept. 29 Nature Notes

Sept 30 Nature Notes

Oct. 1. - Nature Notes & Monthly
report.

Oct 2 - Sunday Went on Old Flag
road.

Oct. 3 - Nature Notes

Oct 4 - Hunting 4.30 - 8⁰⁰

Mineog opened M.

Wrote publishing on Pinson Pine

Oct 5 - Laid out rock at Museum
Nature Notes

Oct. 6 Got fossils for museum
Hunting in Rivanna,

Oct 7. Collected fossils for museum

Put nature notes together

Oct 8. Ran off 2 old numbers of Nature Notes. 50 copies each & put them together.

Oct 9 Sun. Went hunting

Oct 10. At Yarapai Point

Oct 11. Collected fossils for Museum

Oct 12. At Yarapai Point.

Oct 13. At Yarapai

Oct 14. Letters to Dr White & Gilmore
sent fossils to " "

Oct 15. In Canyon to get musk
which I sent up with Jack Way.

Oct 16. Sunday

Oct 17. In Canyon with Russian

Oct 18 Worked getting Harmit shale
Cocconino + Karbat with P. Mount.

Oct. 19. To Tipoff with P. Mount.

Oct. 20 To River to get Redwall
Saw 2 burros east of Yavapai Point.

Oct 21 ^{km. at Yavapai} To Phantom with Dr. F. E. Wright

Oct 22. To Algae horizon with Dr. Wright
& Back to Canyon.

Oct 23. Sunday home. Oglesby-Eastman
got deer.

Oct 24. at Yavapai Point in
A.M. & Cocconino Wash in
P.M. in connection with
museum.

Oct 25 }
26 } Nature Notes.
27 } Hillard Hall got buck. at Red Butte
Sent Gila Monster to N.M.
" 5 flowers to N.M.

Oct. 28. Nature Notes
No. of deer killed Hall, Davis, Eastman, Oglesby,
Albee, Hal., Webster, Nichols, Schenk.

Oct 29 Wrote Nature Notes.

S H. Hall 1 buck Red Butte 5 Pt. Oct. 27
D D. T. 1 buck 3 miles SE. Kinosh Oct 9th 26 pts
P Hal 1 " Lockett Lake Oct 9th 11 pts.
P Eastman 1 " 3 miles SE. Kinosh Oct 23. 10 pts
P Oglesby 1 " " " " " " 7 "
F Dan Allee 1 " " " " " " 1st 2 "
S Ray Scheck 1. Rock Crusher. " 1st 6 "
R Nichols 1 Red Butte.
R Webster 1 Old Flag road 1st 4^{pts}
P Nichols Killed one 13^{pts}
S Ray Scheck. 6 pts
S Fellow living with Leo 4 pts.
S Tracy Red butte Oct 1 10 pts
P M. Co 10 pts
Oct 30 Sunday hunting near Red Butte

Oct. 31. Finished Nature Notes

Nov. 1. Made out monthly report.

Returned pants to S. R.

Letter to M. P. Skinner

Check 150.43 to bank

Nov. 2. Mimeographed 275 copies
each of nature Notes.

Nov 3 Placed Nature Note together
reception. Received 2 letters
from Dr. White & 2 Pub

Nov. 4 Pub received on M. B. Edge.

Nov. 5 Mimeographed cover design
275 copies.

Nov. 6

Sunday.

Nov. 7. Put Nature Notes together
& mailed them out.

In evening made out
order to M. W. Identifications
of 5 flowers rec'd from M. M.

Nov. 8. Wrote on article for F. H.

Nov. 9 A.M. wrote for F. H.
P.M. at Yavapai

Nov. 10. Wrote article for F. H.

11th ..

12th

Nov. 13th Sunday.

- Nov. 14 F.H. article
- Nov. 15 F.H. "
- Nov. 16 F.H. "
- Nov. 17 Finished "
- Nov. 18 ~~Corrected~~ Informat. on Squirrels
Letter to Taylor.
- Nov 19 A.M.
P.M. With Dr. Forest to Yavapai
- Nov. 20 Sunday. Followed.
- Nov 21 mimeographed & put nature
Nature Notes together
- Nov 22 Mailed Nature Notes.
- Nov. 23 A.M. Letter to Lt. Farrell
collected 25 branches
of pinon & juniper for Wm. M. Bottenberg
P.M. on rules & Reg. with Supt
- Nov. 24 Thanksgiving
- Nov 25 Worked with Supt
Correcting rules & Regulations
1st Horns on Bucks.

Nov. 26. Went to Supai with Brooks.
Logged road to Hill Top. - 38.5 miles
Law mtn sheep track below Hill top.
Stayed at school house in evening
with Mr. McCrory.

Nov. 27. Went down ^{Havas} Canyon
Lemuel gave story of last Apache
raid -

Houses of Supais very interesting
1st Falls Havas - series of cascades
2nd " " Havas - drops 93.5'

Mine at carbonate canyon
3rd Falls Mooney drops 96'
breaks in two strands.

Wiggly Evey.

Water very plentiful along
creek. Racoon very plentiful
Coyote seen in Canyon occasionally
Collected samples from mine.

Nov. 28. Went to headwaters
of creek & found it rising
in Supai formation. Went down
to third falls. Took pictures.
2 of Havas, 3 of Havas, 3 of
Mooney. Collected samples of

Pinons sent to H. S. Thornberry
781 No Hamilton Blvd Pomona, Calif

water between Havasu & Mooney
& at headwaters

According to analysis upper
part contains twice amount
of CaCO_3 No ppt of travertine
until top of Redwall. Action
appears $\text{H}_2\text{O} + \text{CO}_2 = \text{H}_2\text{CO}_3$
or $\text{CaCO}_3 + \text{H}_2\text{O} + \text{CO}_2 =$
 $\text{H}_2\text{CO}_3 + \text{CaCO}_3$ ppt. or
 CaC(OH)_4

Nov. 29 returned to Grand Canyon
Saw Coup de Paw
Pictographs.
Fault at Hill top 40'

Nov. 30. Wrapped rocks & sent
to D. White. Pinon request answered
Letters to D. W. Park. Card to Thornberry
Inc.

Dec. 1st Made out monthly report.

Dec. 2nd Nature Notes.

" 3rd " "

" 4th Sunday.

" 5th Nature Notes.

Dec. 6th Nature Notes

Dec 7th Cut sterilis

Dec 8th Left G.C. on Mike
& rode to Cottonwood.

Left "Mike" in corral & hiked
to Nash Camp.

Dec. 9th Went with C. Nash
to North Rim. saw numerous
tracks in Coconino ss.

No tracks in Hermit.

Found two sets of tracks
in Supai 2 turns below spring
& on left of trail on descent
carried smaller set to canyon

Dec 10th Returned to G. Camp

Dec. 11th Sunday.

Dec. 12th Wrapped tracks
& sent them to Dr. Gilmore
Worked on Nature Notes

Dec. 13th Mimeographed & sent

out Nature Notes.

Had supper at Maier's

Collected ^{rocks} samples of each
formation in answer to
a request from an
astronomer at Lowell
Observatory Flag. who
wishes to carry on experiments
with them.

Left on even. train.

Dec 14th On train
Write report of tracks
to Dr. Gilmore

Dec. 15th Arrived in Berkeley.

Dec 16th - 26th Berkeley.

Dec 26th ^{Dec 31st} Jan 1st Dixon

Jan 1st dinner at Pedrazzi's
East Oakland.

Jan 2. Monthly report.

Jan 13 Left Berkeley with Ansel
Hall for Yosemite.

Jan 14 Yosemite

Jan 15 " & left for Merced.

" 16th On train

17th " "

18th Arrived Grand Canyon 8⁴⁵ AM

Until 31st material for
Nature Notes. Monthly report
Plant (ash) to G. Pearson.

Feb. 1 To Pasture Wash to Bass
Camp. to 1 mile above Bed Rock
Canyon. Camped in shelter of
rocks. Went down for
water. Holes in sand
dug by burros. Did not
look favorable. Found water
at St. tank. Fire from Cats Claw

Feb. 2. Brooks & I went to river
to Bass tram & back to camp.

— Mortar in bloom. Sizzards
started from rocks.

Feb. 3. Went to Cu Canyon.

Cactus uprooted. Agave
yucca eaten & grass

1 mesquite pits in Buas.

2 in Cu. 1 in draw between

Garnet + Cu + 1 in other draw
Camped in Cu Canyon.

2 nights.

Back to Base on Feb 5th
Came out on Feb 6th

Brooks Johnson + Miles
went between Ruby +
Turquoise. Brooks saw
2 Coveys of quail.

Arrived at Pasture Wash
4:30

Feb 7th Hiked to rim
saw 2 Indian ruins
collected fossils +
minerals. Returned to camp
& cooked supper.

Saw tracks of deer +
cottontails + Jack rabbits.

Feb 8th Returned to Canyon 4 P.M.

Stuck in mud twice
Cattle dropping their calves.
" in fine shape.

Feb 9th Worked on report
of Educ. activities in this park.

Feb 10th to March 1st Fixing old
Nature Notes. Writing two
reports to S. B.

Writing Nature Notes.

Received - Pm's from Dr. Gilmore
on trucks

March 1st Put out Nature Notes

March 2nd Monthly report

March 3rd Made up list

of mammals

March 5. Worked on list of
mammals made up!

Gila chipmunk skin.

March 6. Typed 2 lists of
mammals. Flowers in

bloom on rim cordy tuft. red-stem
filaree.

Wrote letter to Maj. E. A. Goldman
& included list of mammals.

March 7. Saw letter to M.R.T.

from Reynolds asking for

pictures. Made skin of

mouse. gathered pictures

Saw Robt.

2 SPECIMENS

March 8 Cactus sent to U.S. N.M.

identified as *Coryphantha*

arizonica Engl.

April 1 Went down trail with Dr. Mueser

" 2 Mailed out Nature Notes
& bound them

April 3 Made out Monthly report.

" 4 Letters to Velma & to Dr. Holmes

Ran off & bound 40 copies of Vol 1 #4.

Met Dr. Pedersen of Den.

April

5 Met Dr. Danes of Chesapeake

Labeled & wrapped 43 pictures
from Eng. Corps U.S.A.

April 6.

Yaki

Coronino ss measured May 25

74 intervals at $55\frac{7}{8} + 2" = 404'$

Hermit Shale measured May 26

33 intervals + 2" = $181\frac{1}{4}"$

Supai formation measured
with the level May 26

146 intervals = $80\frac{1}{2}'$

May 1, Nature Notes. Read 3 feet each of ^{horizontal} ~~strata~~
May 2. Nature "
May 3. Monthly report.

H. E. Brown Nature Notes

May 22 Dr White arrived
May 23 - Yavapai A.M. on "P.M.
May 24 - Cocorino Wash
May 25 - Yaki
May 26 - J. mormon mesa
with Dr. White Found good
contact with Redwall
algae built ls.

June 1st Worked on monthly
report. Lecture in evening.
June 2nd On Grand View trail
June 3rd Worked with Chas
on Lectures.

June 4th A.M. Conference
P.M. to River

June 5th to Algae horizon
at night came to top.

June 6th Returned to Canyon

June 7th to Cottonwood

June 8th to U.P. Camp. measured ^{section}

June 9th Measured section
on trail. At night U.P. Camp.

June 10th Measured sect. to
North rim gave talk
at Lodge

June 11th On N. Rim preparing
talk. gave talk in evening

June 12th Took Nature
trips with Chas Merriam

Sept. 1. Putting out Nature Notes
Campfire Nature walk Yards

Sept 2

Sept 3

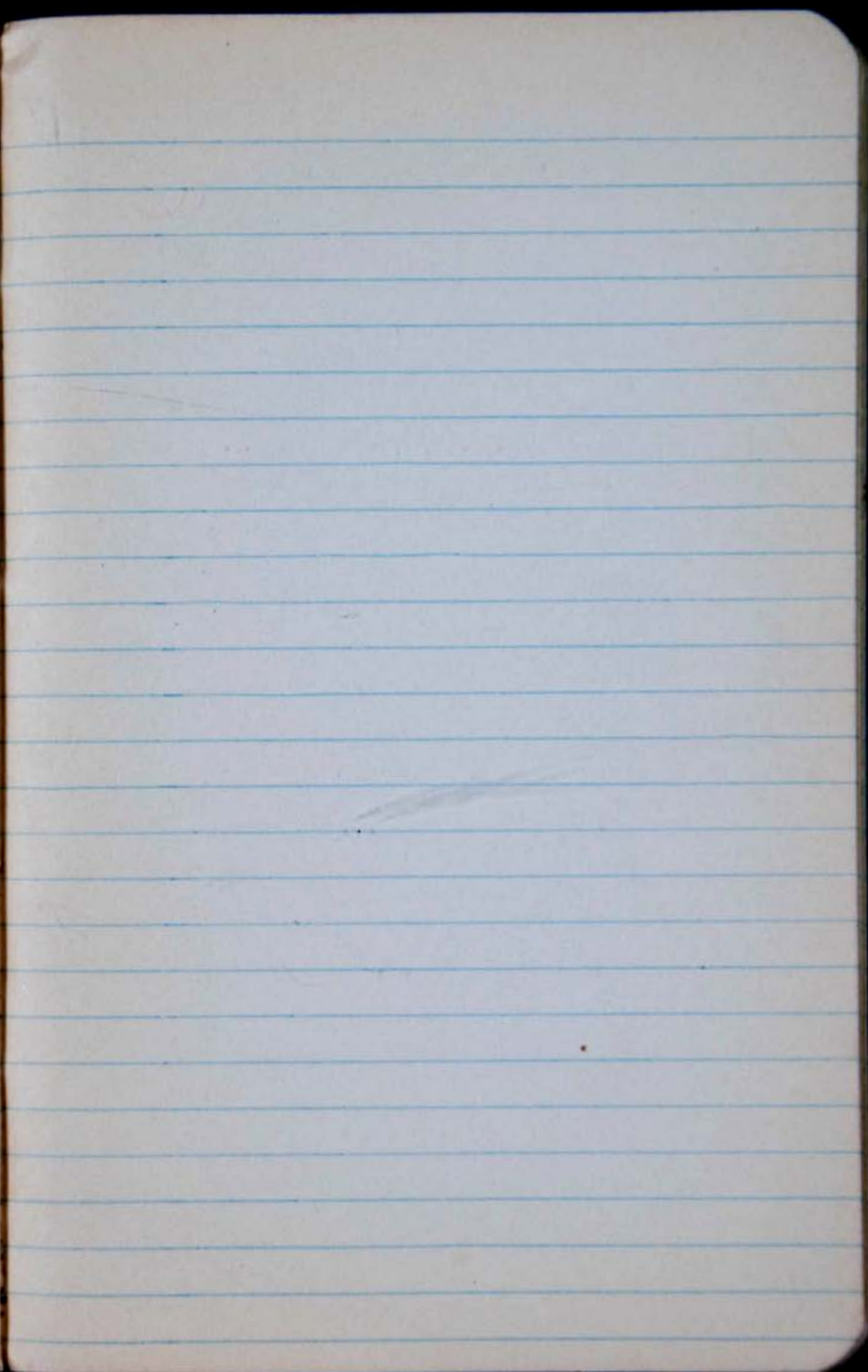
Sept 4

Sept 5 Took Shovel to head

Jan. 1929.

- 1st Yavapai - 3
2nd Yavapai - 5 Dr. Colton
3rd " - 4 monthly report
4th " - 20 Article on trout
planted in Clear Creek.

Mr. Albert D. Mead Vice-Pres of Brown Univ - a close friend of Dr. Bumpus & who succeeded Dr. B. as Prof. of Biol. visited the Obsv Stat & Inform office.



11/11/11

11/11/11

11/11/11

3. flowers identified by Natl Mus.

1. Mesal - *Agave utahensis* Engl.

✓
2. Soapweed - *Yucca baccata* Torr.

✓
3. ^{sage-like bush} Compositae - *Chrysopsis depressus* Nutt.

✓
4. Buckwheat plant shrub - *Eriogonum microthecum* Tuttle

5. Mormon Tea - *Ephedra viridis* Coville

✓
6. Encelia - Daisy 2' high yellow center & petals
Actinea richardsoni (Hook.) Kuntze

x MA.

7. Crag rock flower

Laphamia toumeyii Rob. & Greenm

x
8. Small purple flower (perst.)
Hedeoma nana (Torr.) Briq.

9.

1870

Jan 1st

Jan 2nd

Jan 3rd

Jan 4th

Jan 5th

Jan 6th

Jan 7th

Jan 8th

Jan 9th

Jan 10th

Jan 11th

Jan 12th

10 Flowers identified by Dr. Paul Standley
U.S. N.M. 6/14/27

1. Honeysuckle Family - Snowberry -
Symphoricarpos longiflorus Gray

2. Spurge Family - Spurge.
Euphorbia chaetocalyx (Boiss)
Small-low lying - spreading flower on
Cedar Ridge.

3. Waterleaf family -
Phacelia glechomaeifolia Gray.
Grows in shade under cliffs near
O'Neill Butte in damp ground.

4. Four-O'Clock Family.
Quamoclidion multiflorum Torr.
Large purple flower - blooms
at night. Common at Pipe Creek
where ^{large} moths pollinize them at
night.

5. Aster family.
Hymenopappus filiflorus Hook.
Aster with sepals but not petals.

6. Madder Family Bedstraw.

Galium Matthewsii Gray

Flower 1' tall with delicate insignificant flowers. Common at O'Neill saddle.

7. ^{Aster:} Sunflower Family

Encelia frutescens Gray

Daisy common on Tonto Platform. Has light green leaves with oily appearance. Rough to touch

8. Mint Family Sage.

Salvia carnososa Dougl.

Rich sage smelling perennial common near O'Neill Butte.

9 (1) Rue Family.

Thamnosma montana Torr. & Frem.
Warty appearing plant common on Tonto Platform.

10. Mustard Family

Lesquerella arizonica Wats.

Bladderpod. Common on South rim. Blooms May 1. to latter part of June.

Articles for Nature Bulletin

Minerals of Grand Canyon
Strata & Rocks

Trails

Packing at G.C.

Cable

Tramway

Suspension Bridge

Birds

Flowers

Trees

Shrubs

Cactus

Faults

Parasites

Butterflies

Moths

Weeds

Fossils

1. Invertebrates

2. Tracks

3. Ferns

4. Fish

Springs

Vol. I No. 6. Released. Sept 22,

Ciff Rose

Button Button -

Salt in Tapeats ss

Kailab deer arrives on S.R. E.T.S.

No 7. Released Nov. 11

Common skunk.

Fossil fish

Autumn

Pub. received for Ref. library

No 8. Released Dec. 18

Turkey Buzzard

Calcite

Bear.

Cats claw.

No 9. Released Jan, 10, 1927

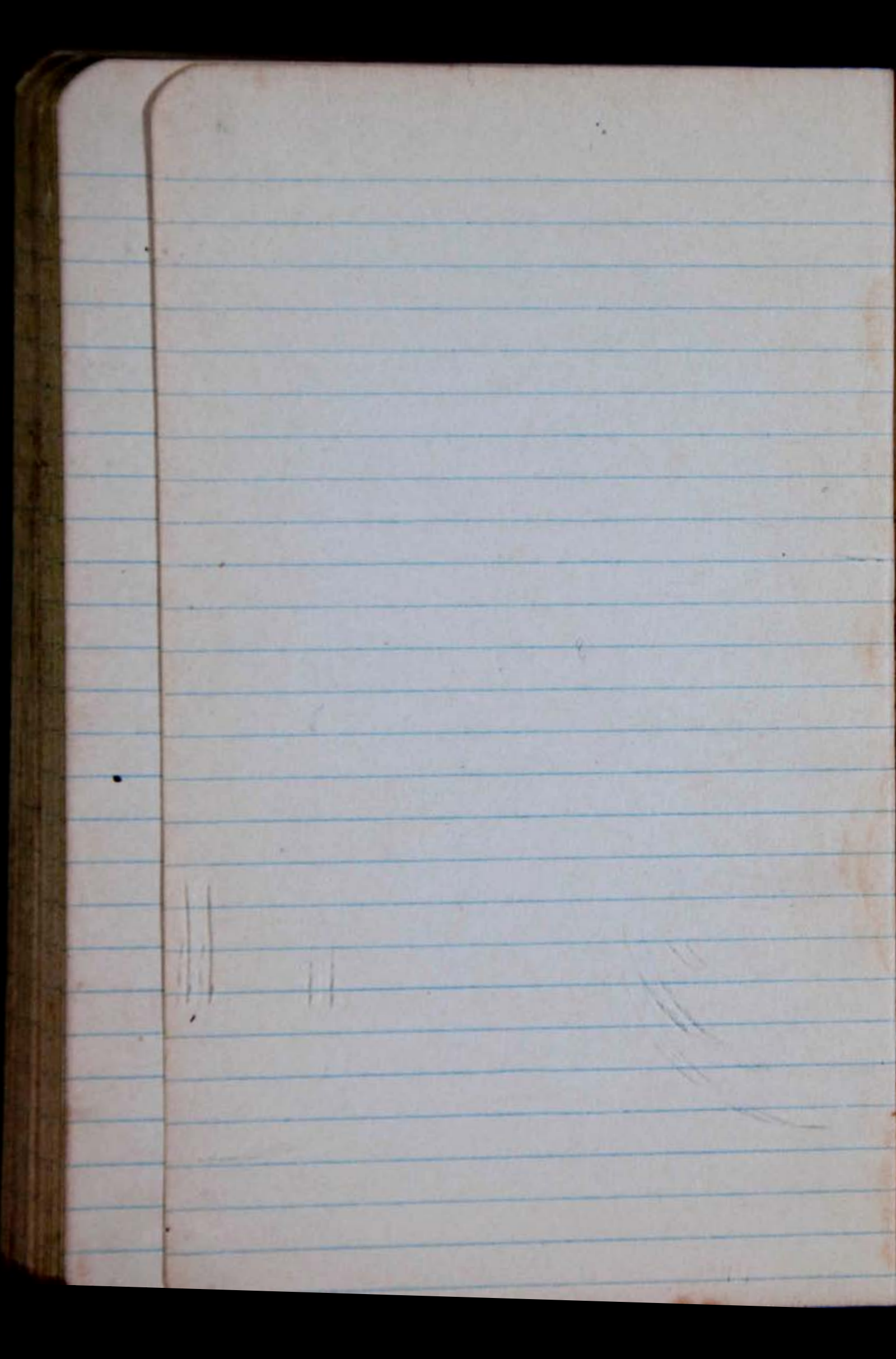
Fossils -

Conservation.

No 10. Released

from the
1465 Valencia st., bet. 25th and 26th sts.
Interment, Cypress Lawn Memorial Park.
STEELE—In Alameda, September 17, 1930.
Susie M. Steele, beloved wife of the late
Thomas Steele and loving mother of Eva,
Chester and Albert Steele, a native of
California. A resident of Alameda for
the past 19 years.
Services will be conducted Friday, Sep-
tember 19, 1930, at 2 p. m., at the resi-
dence chapel of Fowler-Anderson, fu-
neral directors, 2244 Santa Clara ave.,
Alameda. Graveside services will be
conducted at Arroyo Grande, Cal., Mon-
day, September 22, 1930, at 11 a. m.
TRENDT—In this city, September 17, 1930.
Beatrice, dearly beloved wife of Harry
Trendt, loving mother of Adelaide and

Thomas Steele



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Less Invoice 159

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Feb 1 100

Mar 750

50

800

50

Apr

250

May

50

900

B.F.S. Jr. Jan 10. 100

April 1st 500

600.

As a rule the strata in the hollow exhibit pale
purplish or pinkish tints, which contrast slightly
with the prevailing buff or gray of the dolomite.
Softer than dolomite & are irreg. bedded, so that
they weather more easily than the dolomite
& form slopes. Commonly these slopes are wholly
granular, & with ~~dolomite~~ talus.

Exposures

- (1) N. End of promontory that separates
canyon of Garden Creek from Pipe Creek.
- (2) ~~Some~~ hollows exposed in the canyon of
Garden Creek.
- (3) Pipe Creek canyon contains at least
10 of them.
- (4) Several are exposed in each canyon west
of Garden Creek to Hermit Creek.
- (5) A hollow nearly 80' deep lies in the n. slope
of Cope Butte just east of & above Hermit trail
n. end of hollow affords good exposures of the
granular, irregularly bedded pinkish or purplish
calcareous sand rock that constitutes
the typical deposit of known Devonian
age in this part of the G Canyon.
- (6) A similar hollow is exposed on west side of
the canyon of Hermit Creek about a mile west
of the canyon just described. It lies near north

end of the promontory that separates canyon
of Hermit Creek from canyon west of it.

7. Best exposures of unconformity are in Slate,
Creek, agate, Sapphire, + Turquoise canyons;
also in Ruby Canyon, $2\frac{1}{2}$ miles S.E.
of Bass Canyon.

8. At Cottonwood Creek 7 miles

from Pipe Creek, unconformity is represented
by a slightly wavy surface which does
not appear to exhibit vertical
irregularities of more than 3 or 4 feet
in horizontal distances of hundreds
of feet.

Fossils found in Sapphire Canyon
at elev of 3700' in main stream course
of the canyon. Thickness about 50'
Fossils, ^{some} nearly 3' above. are abundant but
fragmentary.