

CHRONOLOGICAL FIELD NOTES

GRIZZLY BEAR PROJECT
Yellowstone National Park

1964

Robert L. Ruff

Notes from M. G. H.

April 30, 1964

1. John and Maurice sighted #39 with three yearlings at Mud Volcano while the bears were feeding on mice. Two yearlings were marked (#157, #158) and one was unmarked. Yearlings had markers and tags intact. Sow had lost rope marker and right ear tag.
2. Same saw #125 and 2 two-year olds (#141, #142) near Cascade Creek Bridge at Upper Falls. Tags and markers intact in the bears.

May 18, 1964

1. J. J. Craighead made the following observations at Rabbit Creek:
 - 2 unmarked yearlings
 - 2 unmarked three-year olds
 - 2 adult boars
 - 1. #2
 - 2. Cleft-eared boar
 - 2 adult females
 - 1. #164
 - 2. unmarked sow

Remarks:

J. J. Craighead observed two large boars breeding with #164, adult sow at Rabbit Creek.

Notes from M. G. H.

May 19 or 20, 1964

1. John observed #150 at Trout Creek Dump with 3 yearlings. Yearlings were unmarked. Sow had radio collar. Tags and markers could not be seen.

New bears:

#150 - adult sow
3 unmarked yearlings of #150

Total:

1 adult sow
3 yearlings

June 3, 1964

1. Left Missoula at 9:30 A.M. for Yellowstone Park with M. G. Hornocker. Lunch at Butte - \$1.45.
2. Arrived at Canyon at 6:00 P.M. after stopping at West. Dinner at Canyon - \$1.90.
3. Introduced to John Johnson at Canyon and made arrangements to have gas and water connected at headquarters.
4. Called George White at West Yellowstone to make arrangements to pick up groceries on June 4.
5. Began cleaning operations at headquarters.

June 4, 1964

1. Left headquarters at 5:00 A.M. and visited Trout Creek Dump. It was foggy and the 4-6 bears present could not be identified. Bears ran off when vehicle approached.
2. Left headquarters at 7:00 A.M. and went to West to pick up groceries. Store operators were George and Phil White.
3. Maurice talked with Pinky Sears, Warden at West.
4. Returned to headquarters and continued cleaning operations.
5. Observed 3 unmarked yearlings feeding on mice in open meadow at Alum Creek. One light-colored cub, one medium (grizzled) with half collar, and one dark with distinct light collar. May be young of #48, #148, or #39? No sow present. Young apparently weaned.
6. Trout Creek Observations:
 - 1 sow with 2 cubs (Marian, #40: One cub light with very light head; other medium with slightly lighter head.)
 - 1 sow with 3 yearlings (#150 sow: collar beginning to pull apart at rubber hose.)
 - 1 sow with 2 yearlings (#160 - yearlings unmarked).
 - 3 lone yearlings - (Alum Creek - See above).
 - 6 two-year olds 1. #145
 2. 1 unmarked chocolate legs & white side.
 3. 1 unmarked boney faced, small.
 4. 3 unidentified (not included in census).
 - 1 three-year old (#109 - three legs - Yellow rope in left ear and both tags are OK).
 - 1 3-4 year-old stocky bear.
 - 1 unmarked young adult.
 - 1 five-year old (#40).10 adults.

<u>Males:</u>	1. Ivan (#41) 2. #88 3. Peg Leg (#76) 4. Big black bear	5. Medium blackish boar 6. Mean brown boar
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<u>Females:</u>	(Also see above) 1. #81 (markers gone; left ear tag gone). 2. #140 (ear tags in both ears O.K.). 3. Red-backed sow (unmarked; reddish back). 4. #150 5. #160	
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Totals: 2 cubs
8 yearlings
3 two-year olds & (3 unidentifiable 2-year olds) omitted from census.
1 three-year old.
1 5 yr. old (Marian, #40)
1 young adult
12 adults
31 bears (29 indentifiable individuals)

(cont'd) June 4, 1964

General Remarks:

- #150 - Radio collared sow was present with her 3 unmarked yearlings. Yearlings suckled at dump and also played at copulating. Sow was aggressive toward other bears. Her rope marker is gone; the first such marker to be lost. Rubber hose on radio beginning to detach.
- #140 - Sow appeared with some signs of coming into estrus. The mean brown boar (unmarked) mounted her for approximately 8 minutes, then they parted. She was later mounted by the smaller stocky boar but no copulation occurred. This sow chased #109 several times, as she has done with other bears in 1963. Ear tags O.K.
- # 88 - This bear mounted and copulated with the unmarked "red-backed" sow on the dump. Copulation lasted 31 minutes and apparently was successful. Left ear tag missing.
- # 40 - (Marian) Appeared with two cubs after lingering out in meadow for 30-45 minutes. These are her first cubs and she is an established age five-year old. Her radio collar is gone but markers are O.K. One cub dark with lighter head. Other cub is light with very light head & shoulders.
- #160 - Sow with two yearlings. Tags and marker still intact and in good condition.
- #145 - Two-year old female with blue-white rope in left ear; flag missing from rope. Tag missing from right ear; left tag intact.
- # 76 - Peg Leg - Tags and marker intact.
- # 81 - Large grizzled sow with round aluminum tag in right ear.

New bears:

- 2 cubs of #40 (unmarked)
- 2 yearlings of #160 (")
- 3 lone yearlings (")
- #145 2-year old
- 2 unmarked 2-year olds (")
- #109 3-year old
- # 40 five-year old
- 1 unmarked 3-4 yr. old
- 1 unmarked young adult
- # 88 adult male
- # 41 adult male
- #76 Adult male
- 3 unmarked adult males (Big black, Medium black, Mean brown)
- #81 adult female
- #140 adult female
- 1 unmarked adult female (red back sow)
- #160 adult female

(cont'd) June 4, 1964

Totals

2	cubs
5	yearlings
3	2-year olds
1	3-year old
1	3-year old
1	5-year old
1	young adult
6	adult males
4	adult females
<u>24</u>	

June 5, 1964

1. Continued cleaning operations at Canyon headquarters.
2. Reviewed notes with Maurice on previous evening's work.
3. Met with Gerald Mernin, ranger at Canyon, and attempted to remove marked bear from Canyon campground. Bear was #143 and markers and tags were O.K. This is littermate to #144 and #145 which were cubs of #65 sow. Cap-chur gun (NPS) leaked and Maurice's shot was low on bear's leg. No drug effects and bear ran off through timber.
4. Left headquarters at 4:50 P.M. for Trout Creek and made following observations:

Trout Creek

- 1 sow (#40) with 2 cubs.
- 1 sow (#150) with 3 yearlings
- 5 two-year olds.
 - 1. #144
 - 2. #145
 - 3. #135
 - 4. boney face (unmarked)
 - 5. chocolate legs (unmarked)
- 1 three-year old (#109)
- 2 3-4 year olds
 - 1. grizzled, stocky male
 - 2. Tall, tan male
- 4 adult males
 - 1. #41-Ivan
 - 2. Scarneck
 - 3. #76-Peg Leg
 - 4. #88
- 2 adult sows
 - 1. #81
 - 2. red-backed sow (unmarked)

Totals:

- 2 cubs
- 3 yearlings
- 5 two-year olds
- 1 two year old (#143 at Canyon)
- 1 three year old
- 2 3-4 year olds
- 1 5-year old (#140)
- 4 adult males
- 3 adult females
- 21 bears at Trout Creek
- 1 at Canyon Campground

General Remarks:

#40 - "Marian" - aggressive towards all bears. Cub on periphery of dump most of time. Sows tags and markers intact.

#41 - Ivan - tags missing.

#76 - Peg Leg - Chased by #40 on several occasions.

General Remarks continued

(cont'd) June 5, 1964

- #81 - Round aluminum tag in right ear; ran from dump when car pulled up.
 - #88 - Came running to dump with red-backed sow; #88 chased Ivan from female. At dump, female fed with Scarneck and #88 did not approach. Scarneck bluffed #88 off on several occasions.
 - #109 - "Three legs" - Came in and out of dump during evening. No peculiar behavior.
 - #135 - Yellow rope and green flag in left ear of this two-year old. Right ear tag missing and ear distinctly notched.
 - #144 - Two-year old reddish bear with yellow rope and white flag in left ear. Blue square tag on upper outside right ear and round blue on upper outer left ear. Littermate #145 present at dump and #143 seen in P.M. at Canyon campground.
 - #145 - Two year old mate to #143 and #144.
 - #150 - Radio collared sow with 3 yearlings which were not marked. All left dump when vehicle approached.
- Unmarked 3-4 year old grizzled stocky male was aggressive towards Peg Leg (#76) but backed off. Marian chased both unmarked male and #76.
- Unmarked light brown, narrow faced, 3-4 year old male ran to dump but was aggressive to Scarneck, however. The two-year old later backed off and did not feed while Scarneck was at the dump. This is "tall-tan" male.
- Unmarked light colored two-year old also ran to dump and showed some aggressiveness. "Chocolate legs."
- Unmarked two-year old called "Boney face" also appeared.

New bears:

- #135 - 2yr. old
- #143 - seen at Canyon campground (2 yrs. old)
- #144 - 2 yr. old.
 - 1 - unmarked tall, tan three-year old
 - 1 - adult male (Scarneck)

June 6, 1964

1. Gerald Mernin stopped in and informed us of a sow with three cubs had been seen near Artist's Point. We left headquarters at 8:30 A.M. and investigated the report. We located sow in timber and got within 60 yards before seeing her. This was #65. Blue white rope still intact in left ear but flag (white) missing and rope frayed. Marker in right ear in good condition. Both square aluminum tags still present. This has now had the following offspring since 1960.

1960 - 2 cubs weaned as yearlings in 1961.
1962 - 4 cubs weaned as yearlings in 1963.
1964 - 3 cubs.

Jack Hughes assisted with search and identification of bear. He reported that bear was limping on hind foot. A tourist reported left hind foot of this sow was missing. However, we were unable to confirm this report.

2. Installed fuel pump on gas tank in A.M.
3. Worked on field notes in A.M. and P.M.
4. Departed for Trout Creek at 5:00 P.M. Made the following observations:
5. Trout Creek Observations:

Cubs

3 cubs of sow #65 included here although she was sighted at Artists's Point.

Yearlings

3 yearlings of sow #150 (radio collar). These young are all golden colored and are unmarked with no distinguishable physical characteristics.

2 yearlings were observed at Alum Creek and included here. These two were part of the group of three seen here on June 4. See June 4 notes and description of collared young. These young are apparently weaned. No markers.

Two-Year Olds

1 unmarked 2-yr. old with white sides and chocolate legs. This is a fairly large 2-yr. old.

1 unmarked 2-yr. old with a narrow face and blonde or golden body. Face is boney looking and this is a small 2-yr. old.

#135 - This two-year old has dark eye patches and legs with golden body. Yellow rope with green flag intact in left ear. Right ear is notched.

(cont'd) June 6, 1964

#145 - This golden 2-yr. old with blue-white rope in left ear. Rope frayed somewhat. Green flag missing.

Three-year olds

#109 - Three legged, white bear.

3-4 year olds

1 unmarked grizzled, stocky boar. Bear is fairly aggressive and have hopes for this animal to become "top dog".

1 unmarked, tall, tan bear. Probably a male.

Adults

#12 - Ingemar - came in with small grizzled and white sided sow. Ingemar chased Scarneck from dump. Also chased big brown boar and #88 from sow. Appears to be dominant bear at dump.

#41 - Ivan -

#76 - Peg Leg

#88 - Came to dump with red-backed sow for third evening in a row. He also bred this sow on June 4, apparently successfully. Subordinate to both Scarneck and #12.

Scarneck - Subordinate to #12 but bluffs out #88.

Med. blackish boar - Mounted sow which came to dump with Ingemar, but was then chased off. Also attempted copulation with #140 and followed this sow around on the plateau.

Females

#81 - Stocky grizzled sow

#140 - Mated with Med. blackish boar, but only for 1-2 min. periods. Chased #109 and tall tan 3 1/4 yr. old male.

#150 - radioed bear.

Red-backed sow - Came in with #88 for 3rd straight evening.

White sided grizzled sow - Came in with Ingemar. First observance.

(cont'd) June 6, 1964

Total -

23 bears at Trout Creek.

#65 and 3 cubs at Artist Point.

New bears:

3 cubs of #65

#65 - adult sow

Unmarked white-sided grizzled sow (Ingemar's) - adult sow.

#12 - adult male

(Notes from M. G. Hornocker)

June 7, 1964

1. Jack Hughes observed #65 and her 3 cubs in same area as June 6. Sow's left hind foot is definitely missing.
2. #143 feeding on mice in meadow -- Cascade Meadows at 9:00 A.M. and near lab at 1:00 P.M.
3. #150 has lost the radio collar. Was on her on previous evening of June 6.
4. #29 appeared and had not cubs. Later in evening she was mounted by medium blackish boar. #88 also showed interest in her.
5. #41 has lost all markers and tags. Looks as though all lower teeth, incisors as well as canines, are gone. Gum looks awfully smooth. Bear in good condition.

Total of 25 at Trout Creek

2 cubs	
5 yearlings	
5 two-year olds	
2 three-year olds	
2 five-year olds	*Also #65 and 3 cubs at Artist's Point
2 young adults	
7 adults: 4 males, 3 females	*#143 near Canyon.
<u>25 bears</u>	

#29 is one of two (other is #6) definitely known-age females. Both were marked as cubs in 1959 and are now 5 year olds. No. 6 was observed copulating in 1963. #29 was not but attracted other obears and probably bred.

New Bears:

1 unmarked "ring-eye" 2 yr. old
#29 - five year old female
1 young adult unmarked

Notes from M. G. Hornocker

June 8, 1964

1. Trout Creek Observations

5 - yearlings
4 - two-year olds (new: unmarked 2 yr.-old)
3 - three-year olds
1 five-year old
9 adults; ~~52~~

Weather is still cool and cloudy. Rained sporadically all day. Rained throughout observation period at Trout Creek. Fairly uneventful evening.

No. 88 was alone south of the dump when observer arrived. Wandered around area all evening. The unmarked sow he bred on June 4 and came in to the dump with on June 5 and 6 came in alone. No. 88 paid no attention to her.

No. 160's yearlings: one dark, one somewhat lighter (grizzled) with thin, partial collar.

New bears:

1 unmarked "other" 2 yr.-old.

Notes from M. G. Hornocker

June 9, 1964

1. John arrived at Canyon.

2. Trout Creek Observations

1 cub
8 yearlings
7 2-yr. olds
2 3-yr. olds
1 5-yr. old
1 young adult
15 adults: 8♂, 7♀
35

New individuals: No. 39 and 3 yearlings (include #157 and #158).
No. 147, a two-year old.
One large dark male, muzzle light colored.
One large dark male, may be No. 111 or Fidel.

Jack Hughes observed #144 in meadows off Artists Point Road. No. 143 observed in meadows near headquarters.

No. 40 observed at 12. P.M. with only one cub, the white-headed one. Still had only one in evening (8P.M.)

No. 41 observed copulating with No. 29, a known-age five-year old. Copulated for 8 minutes (observed) then chased away by light muzzled male. This male then pursued #29 but she ran from him. Would allow him to approach only so close, then would run. No. 41 definitely copulated with #29.

Scarneck exerting dominance at dump. Just at dark a large dark male came in and Scarneck ran from him. Looks and acts like Fidel (not observed for two years). Could also be No. 111, was too dark to make an identification of tags.

New bears:

#147 - runt 2 yr.-old.
1 unmarked light muzzled dark bear
1 unmarked dark bear (111 or Fidel?)

June 10, 1964

1. Left Missoula at 6:30 A.M. for Yellowstone. Arrived at Canyon at 2:00 P.M. Unpacked gear.
2. Departed for Trout Creek at 5:30 P.M.

Trout Creek Observations

Cubs

1 cub with #40. This was the white-faced cub. Whereabouts or fate of other cub is unknown.

Yearlings

3 yearlings of #150 were seen on hillside north of the dump. Sow #150 very aggressive at the dump and ran around periphery all evening. This may be case of weaning the young.

3 yearlings of #39 sow. This sow was not observed at close range, nor were the young. M.G.H. and J.J.C. confirmed this to be #39 and yearlings.

2 yearlings of #160. One yearling slightly darker than the other. Neither is marked.

2-Yr. olds.

3 marked two-year olds (#135 - #145 - #147) tags & markers okay.

2 recognizable unmarked two-year olds (boney face, Choc. legs)

2 unrecognizable two-year olds (ring-eye, other)

Three-Year olds

#109 - Three legs. Tags and markers are okay.

3-4 Year olds

1 unmarked stocky grizzled bear (like him).

5 year old

#29 - whitish-faced sow. Only had a short look at her. Tags and markers are okay.

#40 - Present with only 1 cub; the white-faced cub. Tags and markers intact.

Adults

Males - 7 males (#41, #88, #76, White-faced bear, medium blackish bear, Searneck, a large unmarked dark bear which was chased from dump by #150)

Females - 4 females (#150, #39, #81, #160)

(cont'd) June 10, 1964

Total - 31 bears

1 cub
8 yearlings
7 two-year olds
1 three-year olds
1 3-4 year old
2 5 yr. old
7 adult males
4 adult females
31

Remarks

The white-faced bear bluffed Scarneck from the dump after a round of see-saw feeling out.

#150 (sow) was nervous all night and was quite aggressive with all other dump bears. Her yearlings were not with her but were observed sitting on hillside north of dump.

#40 - Again has only the white-faced cub with her. Fate of other cub is unknown.

June 11, 1964

1. Reviewed field notes for June 7-9 with Maurice.
2. Sent Dr. Reinhardt duplicate file of grizzly bear foot measurements, both cast, and field data.
3. Fishing at upper falls with Maurice and Derek.
4. Trout Creek Observations

Cubs

None - Marian showed up with no cubs.

Yearlings

3 yearlings of #39 (tags, ropes & flags okay)
3 yearlings of #150 (includes #157, #158, one unmarked)
2 yearlings of #160

Two-year olds

#135
#145
#147 (runt)
4 unmarked 2-yr. olds (boney face, Choc. legs, ring-eye, other)

Three-year olds

#109

3-4 Year olds

Stocky bear
Tall tan bear

Five-Year olds

#29
#40 - no cubs

Adults

Males

#76 - Tags & ropes intact
#88
Medium blackish bear
Dark bear with tag (?)
White-faced bear

Females

#125 - blue tape in right ear intact; both tags okay.
#150 - rope gone; tags okay.
81 - round alum. tag in right ear only.
#140 - both tags intact
40 - showed up with no cubs tonight. Lost one cub on June 9. Fate unknown.

(cont'd) June 11, 1964

Females cont'd

#39 - present with 3 yearlings. Sow has lost green-white rope and pink flag and the right ear tag. This sow is very aggressive.

#160 - present with 2 yearlings.

Unmarked sow with white crooked claw on outside of the left front foot. Small sow. New.

Total - 33 bears

Remarks

#88 mounted #125 on two occasions but only for short periods; copulation not taking place. #88 chased dark bear with tag when the latter approached the sow.

New Bears:

Unmarked sow with white claw on outside left front foot
1 ear-tagged adult bear (unidentified) #30?

June 12, 1964

1. Checked raven nest at Mud Volcano with John and Maurice.
2. Trout Creek Observations

Cubs

No cubs. Marian present with no cubs.

Yearlings

3 yearlings of #39 (#157, #158, one unmarked)
3 yearlings of #150
2 yearlings unmarked at Alum Creek (M.G.H.) Young of #48 or #148?

Two-Year Olds

#135
#139 (New bear) See remarks
#145
#147
4 unmarked two-year olds (Choc. legs, boney, ring eye, other)

Three-Year Olds

#109

Three-Four-Year Olds

Small stocky boar
Tall tan boar

Five-Year Olds

#40
#29 - bred again with medium blackish boar definitely.

Adults - Males

#41 - Ivan
#76 - Peg Leg
#88
White face boar
Medium blackish boar
Adult unknown boar (unidentified)

Females

#39
#125
#150

Total - 30 bears

Remarks:

No peculiar behavior at dump tonight. #88 and medium blackish boar following #125 around flats. #139 came in tonight for first time. She was very nervous and finally ran from dump minutes after arriving. Color marker and flag in left ear (blue-white rope with green flag) in excellent condition. She has lost both ear tags. This two-year old is minus 3 outer toes on the left front foot but manages nicely with no limp

New Bears

#139 - marked 2 yr. old.

June 13, 1964

1. Trout Creek Observations

- 1 cub of #40 - this cub had not been with Marian at the dump since June 9. Other cub still missing
- 6 yearlings (#157, #158, 4 unmarked)
- 7 two-year olds (#135, #145, #147, 4 unmarked)
- 1 three-year old (#109)
- 2 3-4 year olds (unmarked)
- 2 five-year olds (#29, #40)
- 7 adult males (#76, #88, Whiteface, medium blackish boar, Fidel, boar with scar on right side of head, 2 unidentifiable large black boars, although one had tag in right ear)
- 4 adult females (#39, #81, #140, #150)

30

Remarks:

Boar #88 mounted sow #29, a five-year old, on two occasions, but only for 1 minute intervals. He then pursued her but she was not receptive. These were probably unsuccessful attempts. Then the "whiteface boar" chased #88 off and mounted #29 for 12 minutes. This too was probably unsuccessful. This boar then pursued her and mounted for 53 minutes - a record breeding period and apparently quite successful. #76 also mounted but not successful (1 minute)

An unmarked dark boar with large scar on right side of head chased Marian's cub for a short distance. Marian was not very defensive. However, this probably did not represent an actual attempt on the part of the boar to catch the cub.

No new bears

June 14, 1964

1. Checked Trout Creek Dump in A.M. Only #135 and #145 were present at 11:00 A.M.
2. Observed #65 on east side of Yellowstone River at Monad turnout with her three cubs. She attempted to cross the river but traffic built up and she continued south along river. The sow has her left hind leg amputated 8-10" from foot. One cub was also limping on left front foot. All three cubs were dark colored. One cub, the limping one, has a slight light collar on right side of neck. Color markers and ear tags are intact on the sow but the flag is missing on the left ear marker.
3. The following sequence of events was seen and heard where Gibbon River crosses highway from Wolf Lake. Dick Ellis and I were fishing Gibbon River when we heard a calf elk bawling on the south side of the river. After 5-6 minutes, a cow elk ran across the small valley towards the highway. Moments later a large bear ran towards the highway carrying the bawling calf in its mouth. Dick and I ran to the car and drove down the road in time to see the bear cross the highway still carrying the calf. Jack Hughes stopped and went into the timber with us in pursuit of the bear. We sighted it 200 yards into the timber and got within 60-70 yards of it. The bear was either beginning to feed on the calf or was attempting to bury it. The bear was definitely an adult grizzly and had "female characteristics". We later learned from tourists in the area and a fisherman who was standing within 50-75 yards of the bear when it made the kill, that the grizzly was chasing both the cow and calf. The cow jumped into the 15-20 feet wide stream and then made it out to the other side. The calf also jumped into the river and the bear immediately pounced into the stream and caught the calf at midstream. It did not immediately kill the elk as the calf was still bawling after the bear carried it for some 200-300 yards.

4. Trout Creek Observations

Cubs

- 1 cub of #40
- 1 cub of #101 (new)
- 3 cubs of #65

Yearlings

- 3 yearlings of #150
- 3 yearlings of #39 (#157, #158, 1 unmarked)

Two-Year Olds

#147

#145

#135

#139

4 unmarked two-year olds (choc. legs, boney, ring-eye, other)

1 unmarked two-year old with large rump (scar on rump?) NEW

Three-Year Olds

#109

Three-Four-Year olds

1 unmarked stocky boar

1 unmarked tall tan boar

Five-Year Olds

#40

#29

Adults

Females

#39, #150, #120(new), #101(new), #81, #140

Males #41, #76, Scarneck, Medium blackish boar, White-face boar, tagged unknown boar (sq. alum. on outer upper right ear).

(cont'd) June 14, 1964

Remarks: #101 came in with one small dark cub. First observance of this sow and cub. She chased #40's cub on several occasions, probably thinking it was hers. #42 appeared and chased #109 and other two-year old. She has done this before.

New bears:

- 1 unmarked two-year old
- 1 cub of #101
- 1 adult sow (#101)
- 1 adult sow (#120)

June 15, 1964

1. Discussion with John and Maurice in A.M. about grizzly project and summer's duties.

2. Trout Creek Observations

Cubs

- 1 cub of #40
- 1 cub of #101
- 3 cubs of #65

Yearlings

- 3 yearlings of #39 (#157, #158, 1 unmarked)
- 2 yearlings of #160
- 2 yearlings of unmarked sow (new bears); one young had slight "V" on chest.

Two-Year Olds

- #135
- #139
- #145
- #147

Cell 3 by 100 ft. 11 unmarked two-year olds - (boney, choc. legs, ring-eye, other) (see next)

Three-Year Olds

- #109

Gerry Atwell came in about 7-8 P.M.

Three-Four-Year Olds

- Small stocky boar
- tall tan boar

Five-Year Olds

- #29
- #40

Adults

- | | | |
|-----------------|-----------------------|------------------|
| Males: 1. #12 | 4. Scarneck | 7. Boar with tag |
| 2. #76 | 5. White-face | |
| 3. #88 | 6. Medium Back | |
| Females: 1. #39 | 5. #160 | |
| 2. #120 | 6. #82 | |
| 3. #101 | 7. #65 | |
| 4. #140 | 8. Unmarked sow (new) | |

Total - 40 bears

Remarks: Upon arriving at the dump, #12 was observed copulating with #29, apparently well along into the act. #12 continued to copulate with #29 for 16 more minutes before they broke apart. The sow appeared to roll away from the boar. #29 was then mounted by Scarneck for 18 minutes. This too was apparently a successful breeding. After breaking with Scarneck, #29 was mounted by the white-face boar but the sow turned on this boar and slapped at him. Later, the "boar with tag" sniffed around the sow, but made no attempt to mount her.

New Bears:

Unmarked sow with 2 unmarked yearlings. (Mae West)

Gerry Atwell came in about 7-8 P.M.

June 16, 1964

1. Immobilized #157 and #165 (littermate to #157, #158) at Trout Creek Dump. A new marker was placed on #157 along with the old one. All went well with the operation.

2. Trout Creek Observations

Cubs

3 of #65
1 of #40
1 of #101

Yearlings

3 of #39 (#157, #158, #165)
3 of #150
2 of #160
2 of Mae West
2 unmarked yearlings at Otter Creek (H. Reynolds)
4 unmarked at Trout Creek

Two-Year Olds

#132
#135
#136
#145
#147

Three-Year Olds

#109

Three-Four-Year Olds

1 small, stocky boar
1 tall, tan boar

Five-Year Olds

#29 #6
#40

Adults

Males:	1. #12	5. Medium black
	2. #41	6. Boar with tag
	3. #76	7. White-face boar
	4. #88	8. No. 14 (Bruno) <u>NEW</u>
Females:	1. #39	5. #150
	2. #65	6. #160
	3. #101	7. Mae West (unmarked sow)
	4. #140	8. White-clawed sow (unmarked)

Total - 48 bears

Remarks: No. 136 came in for first time. This bear is the littermate of #135 and both are cubs of #75. They were orphaned as yearlings in fall of 1963. No. 6 came in, a known-age five-year old, with no cubs. No. 14, Bruno, has tag against head in right ear. Stocky dark grizzled male. No. 132, a two-year old, came in for first time. White-clawed sow was approached by Ingemar but she was not receptive. Traps set on June 15. Trap units start as of 16th. Two trap nights and 2 successful traps.

New Bears:

#132 - two-year old
#136 - Two-year old
#6 - five-year old
#14 - adult male

June 17, 1964

1. Immobilized a new (tall, tan boar) at Trout Creek. Believed to be the 3-4 year old tall tan observed at Trout Creek in past. This is #166. Sernylan was administered at the rate of 1mg./3.39 lbs. body weight on first dose. Bear was partially immobilized in trap. Trap opened and bear pulled out. Sat momentarily, then got up and ran off unsteadily. Bear then given another 50 mg. with the CO₂ gun. This was good combined dosage. Bear was then tagged, ear marked, weighed, blood taken, tattooed and released. This was a 305 lb. bear.

2. John, Maurice, and I made trip to West Yellowstone to pick up supplies. Met Mr. Barnes at fly shop.

3. We three also made observations at Rabbit Creek - Old Faithful
Two-Year Olds

6 unmarked two-year olds (5 light and 1 dark)

#133 - This bear is a littermate to #132. Their sow is unmarked. Another yearling was adopted into this family group, #139, in 1963. Presently, #132 and #139 are at Trout Creek while #133 is at Rabbit Creek. These bears were last seen as a family group at the head of Alum Creek by John and Maurice in the fall of 1963.

Adult Females

1 unmarked adult female. This is a light colored sow with a light head.

Adult Males

1. Earless - large dark boar with very short cropped ears. Appears rather old looking.
2. White Fang - very large dark boar with canines continually exposed because of missing skin on upper jaws.
3. Marked boar - probably #2 with round aluminum ear tag at tip of left ear on the inside.
4. Unmarked boar - tall younger looking boar than the other three. Dark.

Total - 12 bears

Remarks: Bears were very shy at Rabbit Creek and accurate count was not possible. No peculiar activity was noted.

Picked up four kids from Lake who had rolled their car down embankment at Gibbon River grade. No injuries. Brought them to Canyon to Jerry Mernin.

*See May 18 observations by J.J. Craighead at Rabbit Creek.

**Bear traps not set on June 17.

Trap units - 2

Success - 1

June 18, 1964

1. Entered observations made at Rabbit Creek of June 17 on appropriate forms. Also entered Trout Creek Observations on appropriate forms.
2. Jerry Mernin stopped in and gave us report of car mishap on June 17. Also informed us of desired parking restrictions.
3. Trout Creek Observations

Cubs

- 2 of #40 (first sighting of #40's dark cub since June 9)
- 3 of #65

Yearlings

- 2 yearlings of #160
- 3 yearlings of #39 (#157, #158, #165)
- 2 yearlings of Mae West
- 2 2 yearlings of Otter Creek (unmarked)

Two-Year Olds

- #147
- #135
- #139
- #145
- 4 unmarked 2 yr. olds (choc. legs, bone, ring-eye, other)
- 1 unmarked 2 yr. old (new bear) "Foxy"

Three Years

- #109

3-4 Years

- #166
- Stocky boar

Five years

- #29
- #40

Adults

- | | | | |
|----------|------------------|-------------------------|----------------------------|
| Males: | 1. #88 | 6. Medium black | 10. Short-eared boar (new) |
| | 2. #14 (Bruno) | 7. Boar with tag (#30?) | |
| | 3. #76 (Peg Leg) | 8. White-face boar | |
| | 4. #12 (Ingemar) | 9. Scarneck | |
| Females: | 1. #140 | 5. #160 | 9. White-clawed female |
| | 2. #120 | 6. #125 | 10. Mae West |
| | 3. #65 | 7. #39 | |
| | 4. #101 | 8. #81 | |

Remarks:

Upon arriving at the Trout Creek Dump, #88 was observed mounted upon the unmarked white-clawed female. They broke apart and ran off when vehicle approached. #12 also showed some interest in her when she returned to the dump.

Bruno (#14) was observed sniffing around #29 and attempting to mount her. No copulation occurred. Short-eared boar was also attracted to her but she ran off when he approached.

June 18, 1964 (cont'd)

#39 was very aggressive at the dump tonight. She was aggressive against Ingemar and White-face boar on several occasions.

#12 (Ingemar) exerted dominance at dump tonight. Chased Scarneck and boar with tag from dump. Scarneck remained at dump's periphery but tagged boar would return.

New bears:

- 1 unmarked 2-yr. old (Foxy)
- 1 adult male (short-eared boar)

June 19, 1964

1. Checked two traps at Trout Creek. No successful traps. Trapping success to date: Traps set - 6; Successful - 3 (50%)
2. #65 and three cubs, #147 and #139 present at dump in A.M. Also Mae West and two yearlings on slope south of dump.
3. Checked raven nest along Yellowstone River.

4. Trout Creek Observations

Cubs: 3 cubs of #65
2 cubs of #42
1 cub of #101
1 cub of #40

Yearlings: 3 of #39 (#157, #158, #165)
3 of #150
2 of Mae West
2 unmarked collared yearlings at Otter Creek.

Two-Year Olds: #132
#135
#139
#147

5 unmarked 2-yr. olds (choc. legs, ring-eye, boney, fat-rumped, other)

1 unmarked 2-yr. old (named Foxy)

1 marked unidentifiable 2-yr. old (white forehead; red flag in right ear; blue-white? rope)
New

Three-Year Olds: #109
#130 (new)

3-4 Year Olds: Small, stocky boar
#166

Five-Year Olds: #29
#40

Adults:

Males: #12 Short-eared boar
#14 Scarsneck
#76 Tall boar with tag (#30?)
#88 Medium black boar
Unmarked boar, light muzzle.
White-faced boar

Females: #39 #140
#42 #150
#65 Mae West
#81 Unmarked white sow (new)
#101 #7-radio bear (new)
#125

Total - 55 bears

(cont'd) June 19, 1964

Remarks:

An unmarked white-colored sow came into dump apparently in estrus. #88 immediately approached the sow and she was quite receptive. #88 mounted sow for 30-45 sec. on two occasions. On third try, he stayed on the sow for 5 minutes. He again mounted her two more times for 30 sec. All appeared to be unsuccessful attempts at copulation. #88 was then chased from sow by #12. #12 mounted the sow on 4 occasions for 30-45 sec. All were unsuccessful copulating efforts. On fifth try, #12 copulated successfully for 42 minutes and was still in the act when the observers left.

Scarneck and white-faced boar fought for 3-4 minutes. Appeared to be a draw but Scarneck stayed out on flat and the white-faced boar came into the dump. The white-faced boar was aggressive to begin with as he approached Scarneck while the latter bear was in pursuit of #125.

New bears:

#7 - adult female
#130 - 3-year old male
Unmarked adult sow (light colored)
1 marked unidentifiable 2-yr. old?
#42 - 2 cubs
7 new bears

June 20, 1964

1. Visited Lamar Valley on fishing expedition. Combined trip with elk observations. G. C. Atwell has notes.

2. Trout Creek Observations

Cubs:

2 of #42
1 of #101

2-yr. olds:

#132
#135
#145
4 unmarked 2-yr. olds

3-yr. olds:

#109
#130
#166

3-4-yr. olds:

small stocky boar

4-yr. olds:

#146 - new

5-yr. olds:

#29

Adults:

Males: #12 short-eared boar
#14 Med. black boar
#76 White-face boar
#88 Unmarked boar (new; cropped left ear; scar below right eye)

Females: #42
#101
#140
#120

Remarks:

#135 mounting and play copulating with #145. Both are males.

New bears:

1 adult unmarked boar (cropped left ear; scar below right eye)
#146 - 4-yr. old male

June 21, 1964

1. Fishing on Lake with John and Derek.
2. Checked area north of Yellowstone Lake for eagle nest and also observed marked elk in area.
3. Trout Creek Observations

Cubs

2 of #12
1 of #101

Yearlings

3 of #39 (#157, #158, #165)
3 of #150

Two-Year Olds

#132 #145
#135 #146
#136 #147
#144 4 unmarked 2-yr. olds.

Three-Year Olds

#109 #166 - this bear will be called a 3-yr. old henceforth. He was compared
#130 with a known-age 5-yr. old male (#130) and it was decided that
 he placed in the 3-yr. old group.

Five-Year Olds

#6

Adults

Males: #14	Med. black
#76	short-eared boar
#88	#30 (?)
Scarneck	
Females: #120	#150
#125	#39
Unmarked white sow	#101

Total bears - 39

Remarks:

#150 still nursing yearlings away from dump.

Scarneck mounted and bred with the unmarked light sow for 29 minutes. #14 and #88 were also attracted to this sow but did not mount her. #12 was not present at the dump tonight.

Lance and Charlie Craighead arrived in P.M.

#135 played copulating with #145. The former always mounts the latter. Both are males.

New bears:

1 unmarked boar with tilted left ear; scar on left side of head; light brown.

June 22, 1964

1. Checked raven nest at 5:00 A.M. with Maurice, John, and Lance. Ravens just beginning to acquire feathers.
2. Observed marked and unmarked elk in Hayden Valley and Sulphur Mountain area. Three marked elk were sighted and coded to individuals. Another individual was seen on slope near Otter Creek in the evening.
3. Checked traps in A.M. and immobilized #158 (recapture) from 3:00 to 5:00 P.M. with Maurice, Lance, Ralph, Harry.
4. Gene Peterson of Nation Geographic arrived.
5. Bill Staninger and Mr. Trusgrove visited John in P.M. to discuss eagle photography work.
6. Trout Creek observations made from 6:00 to 8:30 P.M. Gene and John photographed bears.

7. Trout Creek Observations

6 cubs

2 yearlings (Otter Creek)

9 2-yr. olds (5 marked; 4 unmarked)

4 3-yr. olds (#109, #130, #166, stocky boar)

1 4-yr. old (#146)

2 5-yr. olds (#29 & #6)

8 adult males (med. black, white-face, short-eared, Scarneck, brown boar of June 21, #88, #12, #14)

9 adult females (#7, #42, #65, #101, #120, #81, #140, white-clawed sow)

Total - 40 bears

Remarks:

Scarneck approached and was interested in #81 when she came into the dump. She appeared receptive momentarily and then ran off. Scarneck pursued her onto flats. #12 was also interested in her and #14 sniffed the sow.

#135 mounted #145 (both 2-yr. old males) on several occasions during the evening in copulating efforts. #166 (3-yr old) also mounted #146 (4-yr. old male) on several occasions.

#140 and #6 fought momentarily at the dump.

No new bears

June 23, 1964

1. Checked traps at Trout Creek. No captures.
Trap nights to date - 10. Successful traps - 4. % Success - 40%
 2. Trout Creek Observations
 - 7 cubs
 - 1 yearling (#158 was alone; we immobilized him on June 22)
 - 9 2-yr. olds (5 unmarked; foxey, large rump, boney, choc. legs, other)
 - 4 3-yr. olds (#109, #130, #166, small stocky bear)
 - 1 4-yr. old (#146)
 - 3 5-yr. olds (#40, #29, #6)
 - 8 adult males (short-eared, med. black, 2 unmarked brown boars, #12, #14, #76, #88)
 - 7 adult females (#7, #42, #65, #120, #101, #140, unmarked light sow)
- 40 bears

Remarks:

#88 appeared interested in #29 when she came to dump. The boar mounted the sow for 2 minutes on the flat after pursuing her for several minutes. This was an unsuccessful attempt. He then mounted again for 17 minutes before #12 chased #88 from #29. The latter try was probably a successful effort. #12 then mounted #29 for 4 minutes (observers left dump). #12 also showed some interest in #6 and followed her around the dump. She was not receptive, however.

Two brown bears were at dump tonight. The larger is light brown, heavy set, has scar on left side of head and short left ear. The smaller brown bear has scar below right eye and cropped left ear.

Frank Craighead arrived with family.

No new bears

June 24, 1964

1. Continued work on duplicate file system for individual bears.
2. Maurice, John and I left for Rabbit Creek at 3:00 P.M. Stopped in West Yellowstone for shells. Dick, Derek, Charlie and Ralph followed with pick-up and bear trap.

Rabbit Creek Observations

1. 3 cubs and unmarked sow. new
2. White-faced sow ("old") - new
3. Four two-year olds
4. 2 adult males
 1. Earless
 2. Medium sized brown bear; probably same as younger boar seen on June 17.

White-fang did not show up and all bears were quite shy. Dump operator pulled in with car-load of people and bears dispersed (8:30 P.M.). No bears came back within 10 minutes so observers left. Had dinner at Old Faithful.

Returned to Canyon at 11:00 P.M.

New bears at Rabbit Creek:

- 3 cubs
- 1 adult unmarked sow (mother)
- 1 white-faced old sow

June 25, 1964

1. Bear traps not set on June 24 or June 25.
2. Made back-pack trip into upper Trout Creek. The following elk and buffalo observations were made by Harry, Ralph, and myself.

Elk

1. 7 bulls - $\frac{1}{4}$ mile south of radio hill
 2. 13 bulls - northwest corner of Hayden Valley
 3. 10 undetermined sexes - northwest corner of Hayden Valley
 4. 7 bulls - small meadow about $\frac{1}{2}$ mile west radio hill.
 5. 6 bulls - small meadow about $\frac{1}{2}$ mile west radio hill.
 6. 8 bulls - central west end of Hayden Valley.
- Total - 41 bulls + 10 undetermined sexes

Buffalo

1. 11 adults
 2. 14 adults
 3. 7 adults
 4. 86 yearlings - adults
 - 23 calves
- Total - 141

UPPER TROUT CREEK

3. Located marked cow elk on slopes across (east) Yellowstone from Sulphur Mountain. Blue area - ryL - red rope - 1964.

4. Trout Creek Observations

- 5 cubs
 - 5 yearlings
 - 9 2-yr. olds.
 - 2 3-yr. olds
 - 1 4-yr. old
 - 1 5-yr. old
- 42 bears

Remarks:

Three new bears this evening. (1) #128 - adult female; light colored sow with heavy head. Tags and markers are O.K. (2) 1 unmarked 2-yr. old; dark bear with small dark eye rings. (3) 1 unmarked dark adult sow with scar beside right eye and distinct eyebrows.

#81 was chased to the area surrounding the dump by Scarneck. The white-faced bear was pursuing both bears. Scarneck was chased from the sow and the white-faced bear chased #81 to dump. #12 there pursued #81 around the dump. Attempted to mount her from time to time but could never get started. #14 was also interested in #81 but #12 would not allow him to approach the sow.

Gene and John photographed bears again tonight.

#128 showed up with no young. She has apparently weaned 2-yr. olds this year.

New bears:

- 1 unmarked 2-yr. old
- 1 unmarked adult sow
- 1 marked adult sow (#128)

June 26, 1964

1. Day off; went fishing in Canyon with John, Maurice, Gene, Harry, Ralph, and myself. John and Gene did some photographing.

2. Trout Creek Observations

7 cubs (2 new)
7 yearlings (1 new)
8 2-yr. olds (2 new)
3 3-yr. olds
2 5-yr. olds
7 adult males
8 adult females (2 new)
42 bears

Remarks:

Two men in a car had run around barricade and were at dump when we arrived. Bears slow coming in early.

#128 chased unmarked 2-yr. olds around dump and on flat on several occasions.

#140 also chased 2-yr. old bears tonight.

#15 (new bear tonight) was pursued by white-faced boar. Sow was not receptive but she may be coming into estrus. She had cubs in 1963 but was alone tonight. Has apparently weaned yearlings.

Two marked 2-yr. olds came to flats around dump but would not come in. Both were marked in right ears. Too dark to make identification.

G. C. Atwell and elk crew observed #152 (yearling) at Pelican Creek on June 25 at 3:00 P.M., two miles southwest of Pelican Springs cabin. Bear was again observed alone on June 26 at 11:00 A.M. at same place. Bear is apparently weaned.

#112 (new bear) came in with 2 cubs. She had extensive breeding record in 1963.

New bears:

#152 - yearling
#15 - adult sow (est. 7-yr. old)
#112 - adult sow
2 cubs of #112
2 marked 2-yr. olds
7 new bears

June 27, 1964

1. Cleaned up headquarters in A.M. for arrival of President Johns.
2. Completed duplicating census notes.
3. Trout Creek Observations

5 cubs
6 yearlings
9 2-yr. olds (5 unmarked)
3 3-yr. olds
1 4-yr. old
3 5-yr. olds
9 adult males (5 unmarked; white-face, med. black, 2 brown boars, Scarneck)
13 adult females (3 unmarked; white-clawed sow, black sow, light sow)
49 bears

Remarks:

Breeding: #12 checked #128 and light unmarked sow; also checked #6. #12 mounted #81 at dump for 30 sec. to 1 minute. #14 also checked #81. Then #12 mounted and copulated with #81 for some 45 minutes on flat north of dump.

#135 and #145 played copulating again this evening.

#101 showed up without her cub.

Attempted to immobilize #6 and #7 (free-ranging) with CO₂ gun. Gun not working properly. Two shots at #6 missed. Third shot hit her and injected(?). However, bear showed no effects of the drug. #7 was also hit by darts but she ran over hill and it was too dark to locate her. Not known whether drug took effect.

No new bears

June 28, 1964

1. Worked up sheet on immobilization data for priority bears.
2. Dr. Johns (President of Montana State University) and Dean Coonrod visited the headquarters with their respective families. Showed them highpoints of operation and took them to the dump. Margaret and Karen also arrived.

3. Trout Creek Observations

3 cubs
3 yearlings
8 2-yr. olds
1 3-yr. old
1 5-yr. old
4 adult males
5 adult females
<u>25 bears</u>

No peculiar activity was noted. White-faced boar chased Scarneck from dump and Ingemar (/12) chased both boars from dump.

Short observation period. Post was pulled again at the barricade and someone may have spooked bears earlier in the evening.

No new bears tonight.

June 29, 1964

1. Photographed spotting scope sequence with Maurice and Gene.
 2. Observed following elk along timber-sagebrush edge south of dump:
25 bulls
14 cows (2 marked; 1 Green area; 1 Red area)
 3. Trout Creek Observations
5 cubs
6 yearlings
12 two-year olds
3 3-yr. olds
1 4-yr. old
1 5-yr. old
10 adult males (5 marked; White-face, Med. black, Short-eared, Scarneck, Larger Brown Boar)
13 adult females (8 marked; white-clawed sow, unmarked dark sow, unmarked light sow, unmarked sow with yearlings, #? new)
- Total -51 bears

Remarks:

Visitors at dump kept bears from coming in early.

#112 suckled cubs on flat north of dump

#101 showed up without her cub. She challenged #140 for the white-faced cub several times. Cub was confused but stayed with #140.

#142 had can wedged on right forefoot. Did not use foot when walking.

#12 came in with #? and attempted to mount her at dump; #14 also checked her when she was at the dump. #12 also checked #128.

Maurice checked grizzly mortality at Mud Volcano. Bear was #155 - adult boar. Both ear tags intact; M-50 in left ear; G-61 in right ear. Cause of death unknown. Lowell Biddolph, seasonal ranger, checked kill with Maurice.

Dr. Johns and Dean Coonrod and families visited headquarters again today.

New bears:

Unmarked adult sow and 3 yearlings; #154 inc.

#? - adult sow; tags and markers O.K.

June 30, 1964

1. Ordered groceries with Pat.
2. Compiled field notes and entered data on appropriate forms.
3. Checked over equipment and drugs.
4. Set traps
5. Trout Creek Observations

6 cubs
10 yearlings
9 2-yr. olds
3 3-yr. olds
1 4-yr. old
3 5-yr. olds
10 adult males
14 adult females
56 bears

Remarks:

#12 (Ingemar) showing dominance at dump tonight. Chased all boars and sows. However, the white-faced boar did not back down and run from dump. Ingy challenged him but the two did not fight. The white-faced boar appears to be #2 in order of dominance at the dump.

Breeding: #12 checked #6, #81, white-clawed sow and #?, one adult marked sow with the following combination: Green-white rope and pink flag in left ear. Ear tags are upper outside round blue on right ear and round yellow upper outside left.

New bears:

#34 - tags and markers O.K.
2 unmarked yearlings of #34
#10

July 1, 1964

1. Checked one trap. Captured #42, adult sow. Two cubs also at trap. Only able to noose one cub. Immobilized sow and cub and remarked sow and placed markers on the cub. Operation went smoothly. Took milk and blood sample from sow. Reset 1 trap.
2. Autopsied adult male black bear. Preserved adrenals for Rich. Killed bear with sernylan and Sucostrin. Saved skull and baculum.
3. #143 was observed in horse corral at Canyon by Park Rangers.

4. Trout Creek Observations

8 cubs
8 yearlings
6 2-yr. olds
3 3-yr. olds
3 5-yr. olds
7 adult males
10 adult males
45 bears

Remarks:

Park Rangers good and ? photographed at dump until 8:15 P.M. Bears came in late.

#12 checked #10 and #? (pink tagged sow).

#76 copulated with #10 for 16 minutes. She was receptive but #76 not very energetic. The dark 2-yr. old (unmarked) also attempted to mount her.

#150 very aggressive tonight and repeatedly challenged boars and sows alike at the dump.

No new bears

July 2, 1964

1. Went to Gardiner with John, Gene, Harry, Ralph, Lance and Karen to capture cubs of sow. Sow had been trapped when we arrived. We used CO₂ gun on cubs and operation was successful. Ted Wait and Ted Scott brought sow to Trout Creek and cubs were brought back by research team.
2. Photographed elk between Norris and Mammoth.
3. Trout Creek Observations

2 cubs (#112)
3 yearlings (#150)
5 2-yr. olds
1 4-yr. old
1 5-yr. old
1 adult male
3 adult females
16 bears

Remarks:

No peculiar activity at dump, John and Gene photographed. Came back to headquarters at 7:00 P.M.

4. Traps were not set
5. Mr. and Mrs. Wolfe brought grade school class to lab.

No new bears

July 3, 1964

1. Processed sow and 2 cubs which were taken at Gardiner on July 2. Radio collar was placed on the sow and the three bears were released at Trout Creek. Cubs ran in direction of sow when released but apparently failed to locate her. No known whether cubs found sow later in the day. Family all marked with green-white rope. Blood, milk, and rect. temp. taken.

2. Trout Creek Observations

3 cubs
9 yearlings
10 2-yr. olds
2 3-yr. olds
1 4-yr. old
2 5-yr. olds
6 adult males
10 adult females
43 bears

No breeding activity at dump tonight. Gene Peterson photographed.
#150 very aggressive at dump.

John and Brank left for weekend in Jackson.

Maurice and Gerry went to Missoula.

#152, yearling at dump tonight. This bear had last been sighted on June 25 and 26 two miles southwest of Pelican Springs cabin, 13-15 miles away.

No new bears

#168-cub
#169-cub
#170-cub

GARDINER BEARS RELEASED AT TROUT CREEK.

July 4, 1964

1. Jerry Hammond called to see if we wanted crippled black bear which was in horse canal vicinity.
2. Entered pertinent data on appropriate form sheets. Breeding census, family history, etc.
3. Did not make observations at Trout Creek Dump.

July 5, 1964

1. Trout Creek Observations

7 cubs

13 yearlings

12 2-yr. olds

3 3-yr. olds

1 4-yr. old

3 5-yr. olds

13 adult males

1. #12

2. #14

3. #30

4. #41

5. #76

6. #88

8. white-faced boar

9. Med. black bear

10. Large brown boar

11. Small brown boar

12. Scarface boar (#111 or Fidel)

13. Scarneck

14. 7. short-eared boar

19 adult females

1. #7

2. #10 (gray bear)

3. #15

4. #34

5. #39

6. #42

7. #65

8. #81

9. #101

10. #112

11. #128

12. #125

13. #140

14. #150

15. White-clawed sow

16. Unmarked light sow (scar on bridge of nose
eyebrows)

17. Unmarked dark sow

18. Unmarked brown sow (new)

19. Unmarked grizzled sow with 3 yearlings

Total - 71 bears

No peculiar activity at dump. #42 present with both cubs. #? (adult sow; g- rope, pink flag in left ear) also present at dump. An unidentifiable marked 2-yr. old was also present.

#153, littermate to #152 who arrived at dump on July 3, showed up with ear tag in left ear only. This bear was weaned as a yearling.

New bears:

#153 - yearling

Unmarked brown adult sow

July 6, 1964

1. Continued work on form sheets.
2. Cleaned laboratory and checked over equipment kits.
3. Set 2 traps

4. Trout Creek Observations

6 cubs
11 yearlings
10 2-yr. olds
3 3-yr. olds
1 4-yr. old
3 5-yr. olds
10 adult males
17 adult females
61 bears

Remarks:

1. The limpy orphaned cub of #65 was observed by Harry Reynolds at Trout Creek dump at 5:00 P.M. The cub left as other bears came in to feed.
2. #154, yearling of unmarked grizzled sow, had can lid lodged in mouth and throat and was writhing in agony at dump. Left and returned later and apparently had dislodged lid.
3. #29 has lost half of the herculite marker in right ear.
4. Scarneck was in pursuit of "eyebrow" dark sow on way to dump. No mounting occurred.
5. #15 aggressive towards bears which approach her.

New bears:

Marked adult sow with square aluminum tag on upper outside of right ear.

July 7, 1964

1. Checked two traps. No success.
2. NPS delivered grizzly, which they had trapped at Fishing Bridge, to Trout Creek. Jerry Hammond made the delivery. The bear was a 3-4 year old male; #171. Color marker was white rope with brown flag in the right ear which we placed on. Blood specimens were taken on the 210 animal. Sernylan was used to immobilize the bear; 1st dose - 60 mg. with CO2 gun; 2nd dose - 30 mg. with jab stick; 3rd dose - 30 mg. in neck with jab stick and 4th dose - 40 mg. in neck with hand syringe. Total dosage was 160 mg. or 1 mg: 1.31 lbs body weight. This was a good dose and bear was released at Trout Creek.
3. Trout Creek Observations (Incomplete)

We were shooting at dump tonight so complete census could not be taken.

2 cubs
8 yearlings
8 2-yr. olds
1 4-yr. old
1 5-yr. old
3 males (adults)
15 adult females
28 bears

Remarks:

John, Harry, Ralph, Charlie and myself immobilized free-ranging adult sow (mother of #154 and 2 unmarked yearlings) at dump. Placed her in trap to hold overnight.

No new bears

July 8, 1964

1. Crew processed #172, adult 262 lb. female, at Trout Creek. This sow is mother of #154 and 2 unmarked littermates. Sernylan was used after some difficulty with sucostrin. A colored rope collar (yellow) was placed around the bear's neck. The following pattern was used:

Milk and blood specimens were also taken. White rope and white flags were used in both ears.

2. Attempted to immobilize #6, free-ranging at dump at 8:15 P.M. Dosage was 60 mg. sucostrin administered with the C62 gun. Bear ran to flat and went down. The dose was light and we could not administer a full dose of pentobarbital sodium. Bear recovered and moved off.
3. Set one trap at dump tonight.
4. Trout Creek Observations (incomplete census)

5 cubs
8 yearlings
12 2-yr. olds
1 4-yr. old
1 5-yr. old
2 adult males
<u>5 adult females</u>
34 bears

*#143 was at dump tonight. This bear has been observed by J.J.C. and G.C.A. at Otter Creek in the morning.

No new bears

July 9, 1964

1. Checked trap. #165, yearling of #39, was in trap. This bear was first captured on June 16, 1964. Bear was immobilized with heavy dose of Sernylan (100 mg. or 1:1.25 lb.) and held in trap at headquarters to determine effects of the dosage. Bear was able to move about in the trap by 12:30 to 12:45 P.M. This was 2 to 2½ hours after injection. This yearling was then released at Trout Creek at 6:10 P.
2. Worked on field notes and entered data on form sheets.

3. Trout Creek Observations

3 cubs
6 yearlings
9 2-yr. olds
2 3-yr. olds
1 4-yr. old
2 5-yr. olds
4 adult males
5 adult females
32 bears

*Incomplete census

Remarks:

We immobilized #6 at the dump tonight. The dosage was 270 mg. of sernylan administered in 2 doses; first was 170 mg. and second was 100 mg. This combined dosage was good.

No new bears

July 10, 1964

1. Immobilized, marked, weighed, instrumented, tattooed, and made foot and tooth casts of #6, a 5-yr. old female. The radio collar was painted red and white. Succothrin and pentobarbital sodium were used to immobilize and anesthetize the bear. Blood specimens were also taken.
2. Left for Missoula at 1:30 P.M.

July 11-15, 1964

1. At Missoula.

July 16, 1964

1. Left Missoula at 8:00 A.M. Arrived at Canyon at 2:00 P.M.

2. Trout Creek Observations

10 cubs
15 yearlings
6 2-yr. olds
1 3-yr. old
1 4-yr. old
2 5-yr. olds
19 adult females
7 adult males
<u>61 bears</u>

3. Set 2 traps at dump tonight.

4. Trap was lost from pickup and flung into Yellowstone River. Trap removed and no injuries or damage to trap occurred.

New bears:

July 17, 1964

1. Checked 2 traps. #165 in one trap and other trap was sprung but no bears in trap. Released #165.
2. Jerry Mernin and Jack Hughes called and had #143 which they captured in Canyon Campground. We immobilized this bear at Trout Creek in the A.M. with Sernylan. Foot casts and blood specimens were taken. Markers placed in both ears.

In P.M., 3:25 P.M., we immobilized this bear again at Crystal Creek where she was released. Mr. Green and assistant photographed release operations.

3. Trout Creek Observations

9 cubs
2 yearlings
4 2-yr. olds
1 4-yr. old
3 adult males
12 adult females
31 bears

*Incomplete census

4. Immobilized free ranging unmarked 2-yr. old on dump with sernylan. Also shot #15 but she did not go down and ran off across flat. Unknown whether drug took effect.

No new bears:

July 18, 1964

1. Immobilized a 2-yr. old female which was shot free-ranging on the dump on July 17. This was a 185 pound bear and designated as #173. Blood specimen was taken and foot cast also, obtained. Bear had broken all 4 canines and chipped all incisors while fighting trap.
2. Compiled field notes and entered data on appropriate mimeographed form sheets.
3. No observations were made at Trout Creek today.
4. Jim Cole and crew left for Hellroaring on elk census.
5. John and Family also went to Hellroaring on back-pack trip.

July 19, 1964

1. Day off

2. Trout Creek Observations

8 cubs
12 yearlings
6 2-yr. olds
3 3-yr. olds
1 4-yr. old
2 5-yr. olds
8 adult males
20 adult females
60 bears

*Darkness did not permit identification of all bears coming to the dump.

#108, adult female, was at dump tonight. This bear had not been seen in 1963.

New bears

#108 - adult female

July 20, 1964

1. Received call from Bryan Harry, assistant park naturalist, that a grizzly had treed him about one mile southeast of Pebble Creek campground on Thunderer Cut-off Trail to Cache Creek. He gave the following description:
right ear: yellow rope and white flag
left ear: yellow rope and pink flag
This was #145, a 2-yr. old female. This bear was frequenting the Canyon Campground during May, June and July of this year and was finally trapped there on July 16. We immobilized and marked the bear on July 17 and released her at Crystal Creek elk trap at 4:00 P.M. on July 17.
2. Harry and Ralph made trip to West Yellowstone to obtain supplies and leave bear traps to be repaired.
3. Trout Creek Observations
10 cubs
10 yearlings
8 2-yr. olds
2- 3-yr. olds
2 5-yr. olds
5 adult males
14 adult females
51 bears

*Incomplete census

Remarks:

Immobilized #10 and an unmarked 2-yr. old free-ranging with CO₂ gun and Sernylan on dump. Also hit unmarked brown sow but dart hit bone and bear did not receive the full dose. Attempt unsuccessful.

New bears

Unmarked light sow (darker eyes)

July 21, 1964

1. Harry, Ralph and I immobilized #10 and an unmarked 2-yr. old male (#174). Sernylan was used on the 2-yr. old, 265 pound male and sucostrin followed by pentobarbital sodium were used on #10, a 7-yr. old 270 pound female. Blood specimens were obtained from both bears and tooth casts were made for #10. #10 came out of drug before a foot cast could be obtained. #10 was in/or coming out of estrus as indicated by a swollen and pink vagina.
2. Worked on field notes and entered data on form sheets.
3. Trout Creek Observations

10 cubs
15 yearlings
9 2-yr. olds
3 3-yr. olds
3 5-yr. olds
12 adult males
24 adult females
76 bears

Remarks:

1. The unmarked "silver sow" is blind on the left eye.
2. #142 was observed at dump for first time tonight. She was last observed by J.J.C. at Cascade Creek bridge on April 30, 1964. This 2-yr. old and littermate (#141) were weaned by #125 this spring.
3. Arew marked sow was at dump tonight. She had red tags in both ears and a frayed rope marker in right ear; color was B-W or G-W?

New bears:

1. Marked sow with red ear tags and blue-white rope marker in right ear.
2. Adult male (Zous)

July 22, 1964

1. Worked on field data and form sheets in A.M.
2. John, Frank, Hoke, and Joel back-packed into radio track #6 in A.M. Jumped several bears and located 50-60 grizzly beds in Sulphur Mountain area. Tracked to within 110 feet of #6.
3. No accurate count was made at Trout Creek tonight. Immobilized #34, adult sow, and an unmarked brown sow (#175) on dump tonight. Sernylan was used to take both bears. Fairly successful evening.

No new bears

July 23, 1964

1. Immobilized #34 and attached radio transmitter to this sow. Foot casts, dental casts, milk specimens, blood specimen, and round worm specimens from the bear were obtained. Yellow rope and orange flag color markers were placed in both ears. Attempted to immobilize #175 but operation was unsuccessful. Bear held in trap to 7/24/64.

2. Trout Creek Observations

No observations tonight.

3. Bob Howe, Bill Barmore, Walt Kittams and Fred Grover came by for meeting tonight. Elk contract was discussed from both viewpoints. The group also questioned John about tentative black bear study which would be carried out by the Colorado Research Unit. No real agreement was reached on elk contract.
4. Bill Stanniger and Lance Craighead arrived from elk back-packing trip in north-western region of the Park. They reported seeing a sow with 2 cubs one mile N.E. of Joseph Peak. A lone adult boar? was also seen in this vicinity. These observations were made on 7/22/64.

These two observers also saw a sow with 2 cubs on Quadrant Mountain near the Pocket on 7/23/64. It was not known whether the sow and cubs were those seen on 7/22/64.

July 24, 1964

1. Again, the crew worked on #175, 440 pound adult sow. This bear was captured free-ranging at dump on 7/22/64. Approximately 800 mg. of Sernylan were needed to immobilize the bear and she still was never fully under. Dental casts, foot casts, blood specimen and rectal temperature were taken.
2. Trout Creek Observations
 - 11 cubs
 - 8 yearlings
 - 10 2-yr. olds
 - 1 3-yr. old
 - 2 5-yr olds
 - 9 adult males
 - 12 adult females
 - 53 bears

Remarks:

1. The "limpy" cub of #65, orphaned, was at dump in the A.M. alone. Appears in good shape.
2. Census not complete as the other bears were coming in when observers left.
3. John left for Jackson in P.M.

No new bears

July 25, 1964

1. Day off

2. Trout Creek Observations

None

3. John arrived from Jackson in P.M.

4. Jim Cole, Derek and Lance left for elk hunting pack-trip.

No new bears

July 26, 1964

1. Scheduled day off.
2. Cleaned cooler and swamped out headquarters.
3. Worked on field notes, etc.

4. Trout Creek Observations

7 cubs
8 yearlings
5 2-yr. olds
2 3-yr. olds
2 5-yr. olds
8 adult males
15 adult females
47 bears

Remarks:

1. #125, adult sow, chased #142, her 2-yr. old which was weaned this spring, at every opportunity.
2. A new boar to the dump, "white-clawed boar", checked #101 at dump and pursued the white-clawed sow around the dump.
3. #6, #7, #34, all with radio collars, were at dump tonight.
4. John left for Billings to pick up Dr. Lee Yeager at airport.

New bears:

White-clawed boar. (Old Mose?)

July 27, 1964

1. Bill Barmore called and reported that Russ Lumford, a professor from Purdue, had observed a marked grizzly at the Iowa Junction Dump at 7:00 P.M. on July 26. He reported the following combination:
Blue-white rope in right ear
Green tags in each ear
This is #163, a 2-yr. old female which was captured at Canyon on August 27, 1963 as a yearling.
2. Bill Stanniger & Charlie Craighead back-packed on elk trip in A.M.
3. Dr. Lee Yeager arrived with John from Billings.
4. Mr. and Mrs. Dennis from Nairobi, free-lance photographers, arrived and went to dump to photograph. No success.
5. Immobilized unmarked yearling (#177) of #34 and the "white-clawed sow" (#176), free-ranging on dump tonight with Sernylan and CO₂ gun. These two bears were then held in trap overnight for processing the next day.
6. No census was made at dump because of shooting activity.

July 28, 1964

1. Immobilized #177, 165 pound yearling of #34, which was captured free-ranging on the Trout Creek Dump on 7/27/64. Blood specimen and rectal temperature were obtained. Sucostrin & pentobarbital were used to immobilize the bear. No foot or dental casts were made.
2. Attempt to immobilize #176, "white-clawed" adult sow, was unsuccessful. Bear was held in trap overnight to be processed tomorrow.
3. Dr. Yeager observed procedure of immobilization & marking.
4. Derek, Lance, and Jim Cole returned from elk hunting pack trip.
5. Harry, Ralph, Dick and I shot #178, 1-year old male of #34, free-ranging on dump with Sernylan. Bear was placed in trap and held overnight for processing the next day.
6. Trout Creek Observations
 - a. No complete census was taken because of shooting operation at dump.
 - b. Three collared yearlings which were observed earlier in June and July at Alum and Otter Creeks were present at dump tonight. Another small blonde yearling was with the group as they came to dump and left.

New bears

1 blonde yearling

July 29, 1964

1. Immobilized #176, "white-clawed" sow at Trout Creek with Sucostrin and pentobarbital sodium. The bear died from an apparent overdose of drugs following weighing. (See complete description of events in immobilization form). The bear was skinned and autopsied. See autopsy notes.

Immobilized #178, yearling male of #34, with Sernylan. Blood specimen and rectal temperature were taken. Bear was released at Trout Creek.

2. Jack Hughes called and said they had captured #143, 2-yr. old female, in Otter Creek campground. Harry and I immobilized this bear at the horse corral near Upper Falls. Sernylan was used in the operation. #143 was taken from Canyon on 7/17/64 and released at Crystal Creek. It was later reported at Pebble Creek campground vicinity on 7/20/64 by Bryan Harry. Captured at Canyon on 7/28/64; to be released at Sylvan Pass tonight.

3. Trout Creek Observations

8 cubs
13 yearlings
9 2-yr. olds
1 3-yr. old
1 5-yr. old
10 adult males
18 adult females
60 bears

Remarks:

Dr. Yeager left for Ennis with J.J.C.

Bears were coming in after 8:30 P.M. and complete census was probably not obtained.

New bears

#5 -?- This bear has round red eartag on upper outside of left ear.

July 30, 1964

1. Cleaned headquarters in preparation for Dr. Gould.
2. Dr. Gould and Mrs. Gould arrived at 3:30 P.M. John discussed study with them.
3. Group departed for Trout Creek at 6:30 P.M. The following observations were made at the dump.

7 cubs
13 yearlings
6 2-yr. olds
1 3-yr. old
1 4-yr. old
2 5-yr. olds
4 adult males
9 adult females
43 bears

Remarks:

An attempt was made to immobilize #29 and an unmarked yearling of #96 with Sernylan. Both bears were hit in the neck with the drug, but neither bear went down. #29 showed some effects of the drug but she ran out on to the flat and into the darkness before she was immobilized. The yearling of #96 showed no effects of the drug.

No new bears were observed at dump.

July 31, 1964

1. Day off
2. The crew visited Trout Creek Dump with Dr. Gould in an attempt to take "free-ranging" #6 to remove her radio collar. The effort was unsuccessful. No new bears were sighted.

August 1, 1964

1. Day off
2. Dr. Gould, Pres. of the American Association for the Advancement of Science, left at 8:00 A.M. this morning.
3. J.J.C. made the following observations at Rabbit Creek:
 - 3 cubs
 - 3 2-yr. olds (one collared 2-yr. old)
 - 2 3-4 yr. olds
 - 5 adult males (Scarneck, Earless, Old Yeller(#2), 2 U.M.)
 - 1 adult female (Sow of 3 cubs)
 - 14 bears

Remarks:

Scarneck at Rabbit Creek tonight. This bear spent the early part of the summer at Trout Creek and was last seen there on July 19, 1964. This has been his habit in past years as well.

White-fang, #164, or #133 were not present tonight.

August 2, 1964

1. Entered field data for past week onto appropriate forms.

2. Trout Creek Observations

7 cubs
13 yearlings
10 2-yr. olds
1 4-yr. old
1 5-yr. old
7 adult males
12 adult females
51 bears

Remarks:

Some bears were at the dump by 7:30 P.M. but most did not come until after dark. A complete census, therefore, was not obtained. J.J.C. made observations with me. #6 was in early tonight. #34 was in by 8:00 P.M. along with her two yearlings.

J.J.C. reported that observers had seen #163 at Tower Dump on 8/1/64.

Gayle left at 12:30 P.M.

#143, captured at Canyon, released at Crystal Creek Elk trap on July 17, returned to Canyon and captured again on July 29. This bear was released at Sylvan Pass On July 29. On August 1, rangers sighted a bear believed to be #143 in Otter Creek Camp-ground again.

No new bears:

August 3, 1964

1. John, Dick, Harry and I back-packed into Sulphur Mountain area on radio-tracking trip in an effort to locate #34. Sighted the following bears just north of Sulphur Mtn. in heavy timber.

- #173 - 2 yr. old female
 - 1 unmarked 2 yr. old
- #42 - adult sow
- #167 - cub of #42
 - 1 unmarked cub of #42
 - 1 unmarked adult sow (Mae West?)
 - 2 yearlings of Mae West
 - 2 unmarked 2 yr. olds

Total - 10 bears

#34 and #6 were not sighted. However, #34 was in the area but spooked north to Alum Creek when we were searching for her.

Several bull elk (5) and 5 cows and 2 yearlings were also seen in the area. None of the elk were marked.

2. Trout Creek Observations

- 8 cubs
- 12 yearlings
- 9 2-yr. olds
- 1 3-yr. old
- 1 4-yr. old
- 2 5-yr. olds
- 3 adult males
- 7 adult females
- 43 bears

3. #143, released at Sylvan Pass Road Camp on July 29, was at dump tonight.
4. Three collared yearlings from Alum and Otter Creeks were at dump along with a blonde unmarked yearling. None of these bears have shed their winter coats and all appeared in relatively poor condition.
5. Set 2 traps tonight.
6. Collar designs of orphaned yearlings: (Front Views)
 1. Dark body with extremely white collar
 2. Body light brown in color
 3. Light brown body
 4. Not collared, blonde colored

No new bears

August 4, 1964

1. Checked 2 traps set on August 3. One trap did not trip although the trigger had been pulled. #170 was captured in the other trap.
2. Harry, Ralph, and I immobilized #170 with Sernylan. This sow had no cubs with her and was in poor condition. She was remarked, a blood specimen was obtained, rectal temperature taken, and tattooed in the upper left lip before releasing her. She had been released at _____ by the NPS on July _____. This bear had many berries in her scat -- 1st note of berries in any number in a bear's scat.

3. Trout Creek Observations

6 cubs
12 yearlings
9 2-yr. olds
1 3-yr. old
1 4-yr. old
2 5-yr. olds
3 adult males
10 adult females

Total - 44 bears

*Incomplete census because of shooting activity at dump tonight.

4. Old Mose, adult male, was shot free-ranging on the dump tonight. Sernylan (450 mg.) was used in the operation. The bear was placed in the trap and overnight for processing.

#137, 2-yr. old male, was also shot with Sernylan. However, this bear went down out on the flat in darkness and he could not be retrieved. Bear was left and appeared to be coming out of drug's effects when we departed.

5. Jim Cole and Derek Craighead, while on pack trip searching for elk, observed 2 grizzlies (unmarked) at halfway between the head of Pelican Creek and the head of Raven Creek. Another unmarked grizzly was seen approximately $\frac{1}{4}$ mile west of Pelican Springs Cabin.

The two at Raven Creek were a sow and yearling or 2-yr. old and the one at the cabin was a 2-yr. old (Jim Cole)

New Bears:

#137 - 2-yr. old male

August 5, 1964

1. "Old Mose" (#179), shot free-ranging at Trout Creek on 8/4/64, was sacrificed for autopsy today. Harry, Ralph, Joel, Dick, and I participated in the operation. Foot casts, dental casts, rectal temperature, blood specimens, and parasitic specimens were obtained. A complete autopsy was performed and representative sections of all organs were preserved. Hide was obtained and complete skeleton acquired. This bear had very little external fat and was nearly denuded of hair around hind quarters.
2. Shot #6 free-ranging on dump tonight and removed radio collar. Ear markers and eaz tags were in excellent condition. Bear was also weighed (330 lbs.) and then released. No measurements or blood specimens were taken.
3. No observations (census) could be made at Trout Creek. Only 5 bears were present during the entire evening. Bears were very spooky.
 - 2 2-yr. olds (#144, #135)
 - 1 3-4 yr. old (stocky boar)
 - 1 4-yr. old (#146)
 - 1 5-yr. old (#6)
 - 5 bears
4. Two friends of Dr. Gould's were permitted to photograph at dump. This evening at 6:00 P.M. to 7:20 P.M. They left before shooting operation started.
5. Bob Patton, Nat. Geo. Soc., arrived late in evening.

No new bears

August 6, 1964

1. Compiled field data and entered information on appropriate form sheets.
2. Received 25 vials (10 cc.) of Sernylan from Parke-Davis and company.
3. Immobilized #180, adult unmarked sow, on dump tonight with CO₂ gun and Sernylan. Bear was placed in trap and held overnight.
4. Immobilized #181, yearling, on dump tonight with CO₂ gun and Sernylan. Bear was placed in trap and held overnight. This yearling was running with the 3 collared yearlings, offspring of #48?
5. No census was conducted because of shooting activity at dump tonight. Very few bears came in and those that did were very shy.
6. "Limpy", orphaned cub of #65, was feeding at dump alone in the late afternoon.
7. A new 3-4 year old, tall, light muzzled boar was at dump tonight with the 3-4 yr. old stocky boar.

New bears

3-4 year old, tall, dark, light-muzzled boar.

August 7, 1964

1. Cleaned headquarters in A.M. in preparation for visit by Mr. Goodyear and family.
2. Immobilized #181, yearling male, with Sernylan at Trout Creek. Blood specimen and rectal temperature were taken. This yearling runs with the 3 collared yearlings.
3. Immobilized #143, a 2-yr. old female, which was trapped by NPS at Otter Creek on 8/6/64. 200 mg. of Sernylan were used. The bear was then taken by Jack Hughes who was to transport it across Yellowstone Lake for release.
4. Immobilized #180, 377 pound adult sow, at Trout Creek. This bear was shot free roaming on the dump on 8/6/64. Blood specimen, rectal temperature and foot casts were obtained. The bear had broken all 4 canines while fighting the trap during the night.
5. Made the following observations at Tower Junction Dump:
1 adult, dark, bear with very thin hind legs and walks "knock-kneed".
This was the only bear present at the dump. 8:20 P.M. to 10:00 P.M.
6. Talked with Jack Hughes concerning #143. The bear was shot by rangers while they were transporting the animal across Yellowstone Lake. See mortality sheet for complete account of incidence. Also see movement records.

New bears

1 adult, dark boar at Tower Junction Dump.

7. Bill Stanniger and Lance Craighead reported seeing a sow grizzly with 1 cub, 3 miles northeast of Calfee Creek Patrol Cabin. These bears were located in a lodgepole pine area. The observers also reported hearing at least 4 more growling in the timber, at different locations, along Cache-Calfee Ridge.

August 8, 1964

1. Morning off
2. Departed for Rabbit Creek at 5:30 P.M. Observed bears at Rabbit Creek Dump from 6:30 P.M. to 9:30 P.M.

Rabbit Creek Observations:

5 cubs
2 2-yr. olds
7 adult males
3 adult females
17 bears

Note: About 6-8 bears were also present in the surrounding timber but never emerged while observer was present. Sex, age, etc. could not be determined for these animals and they were not included in the census.

3. Arrived at West Yellowstone at 11:00 P.M. No bears were present at the dump from 11:00 to 12:00 A.M. Many cars came in and out of area and kept bears from coming in. Returned to dump at 1:00 A.M. and observed 1 2-yr. old, one 4-5 yr. old male, 1 med. adult male, 2 adult sows.
4. Bill Stanniger and Lance Craighead observed a large grizzly feeding on sparse vegetation on a slide area approximately $\frac{1}{2}$ mile north of Bootjack Gap.
5. Talked with residents of West Yellowstone and ranger at West Gate. Reports were that a maximum of 12 grizzlies were visiting the dump. They reported an extremely large male, a light adult female, and another female with 2 cubs in addition, to the bears which I observed.

No new bears at Trout Creek

West Yellowstone

2 cubs of unmarked sow
1 blonde 2-yr. old
1 young adult male
1 med. adult male
4 adult females
1 very large adult male
10 bears

August 10, 1964

1. Entered pertinent field data onto appropriate form sheets.
2. Gerry Hammond stopped by and informed us that 2 grizzlies were seen in Pelican Creek Campground on night of August 9. A trap was set by the NPS and one grizzly was captured. Harry, Ralph, and I, after taking a vehicle to East Entrance for Lance and Bill Stanniger, picked up the grizzly at the Lake Ranger Station. We hauled the bear to Trout Creek with an NPS trap and processed it there. This was #182 and blood specimens, foot cast, rectal temperature and other pertinent data were obtained. A dental cast could not be taken because of the effects of Sernylan. This bear was released at Trout Creek in the afternoon (5:30 P.M.) Animal appeared to be a 3-4 yr. old male.
3. The entire crew went to Trout Creek tonight in an attempt to shoot #12, #150 or a yearling of #150 on dump. Neither attempt was successful. #101, adult sow, which had lost her cub this spring was finally immobilized. She was placed in a trap and held overnight for processing the next day.
4. One trap was set tonight.

August 11, 1964

1. Checked trap set on 8/10/64. Two cubs were in the trap. These were believed to be young of #112. Dump operators reported that sow was fighting at trap in the A.M. in an attempt to get at her cubs. The trap was completely turned around by her efforts and she had torn up considerable ground around the trap.

The cubs, #183 (Male) and #184 (female) were processed by Harry, Ralph, and I at Trout Creek. Blood specimens and rectal temperatures were taken for both bears. The male weighed 87 pounds and the female weighed 85 pounds. The cubs were released at the Trout Creek Dump. At 7:30 P.M., the sow located her young along the Creek east of the dump and the family ran off together.

2. Harry, Ralph and I processed #101, adult female, which was shot free-roaming on dump on 8/10/64. Blood specimen, rectal temperature, foot and dental casts were taken. A new marker was attached and she was released at Trout Creek.
3. Entire crew went to Trout Creek tonight for shooting. #150 was taken and instrumented at the dump. A single vial of blood was obtained and a rope marker (yellow rope-orange flag) was placed in her right ear. She was then left at the creek where she fell.

#12, Ingemar, was also hit with 650 mg. of Sernylan. He ran from dump onto surrounding flat and into darkness. No attempt was made to locate him after he had exceeded 3-400 yards radius from the dump.

4. Two traps were set tonight.
5. Bruce Moorhead, graduate student at Logan, Utah, observed shooting operation at the dump.

August 12, 1964

1. Checked two traps at Trout Creek Dump. One trap held #182, 3-4 yr. old male, which was trapped by NPS at Pelican Creek and processed by us on 8/10/64. Bear was released without processing or immobilization.
2. Cleaned laboratory in preparation for visit by M.S.U. faculty members.
3. John and Frank arrived from Gallatin Gateway at 7:00 P.M.
4. Dr. Arnold Bolle, Dean of M.S.U. Forestry School, and Dr. Abbot, financial vice-president, arrived at 9:30 P.M.
5. No traps were set at dump.

August 13, 1964

1. Drove to upper Alum Creek with Dr. Bolle and Dr. Abbot in an attempt to move in on #34 or #150. #34 was in dense timber and no attempt was made to jump the animal. A good fix could not be made on #150.
2. Immobilized #135 and #137, both 2-year old males, free-ranging on dump tonight with Sernylan. Both bears were placed in the traps and held overnight. Drs. Bolle and Abbot observed the operation.
3. No count was made on the bears this evening and entire crew left dump at 8:30 P.M.
4. No traps were set.

August 14, 1964

1. Immobilized #135, 2-yr. old male, in trap with Sernylan. Dental casts were obtained as well as rectal temperature and blood specimen. New marker (same as previous code) was placed in ear as well as ear tags.
2. Immobilized #137, 2-yr. old male, in trap with Sernylan. Dental casts, foot casts, rectal temperature and blood specimen were obtained. Bear was also remarked (same as old code) and new ear tags were attached.
3. Drs. Bolle and Abbot observed processing of these bears.
4. Cleaned laboratory in afternoon.
5. John and Frank escorted Mrs. Nichols and guests to dump in the evening to observe the bears.
6. No traps were set.

August 15, 1964

1. Day off for crew.
2. Drove to Livingston with Jim Cole and then to Billings with Gayle.

August 16, 1964

1. In Billings today.
2. John and crew immobilized #185, unmarked yearling of #172, on dump tonight. Bear was held in trap overnight for processing on 8/17/64.
3. One trap was set at the dump.

August 17, 1964

1. Dick, Ralph, and Harry checked trap which had captured #173, 2-yr. old female. This bear was weighed and a blood specimen obtained before release. This bear weighed 185 pounds on 7/18/64 (last capture date) and now weighed 237 pounds, or a 52 pound increase in 30 days.
2. Same crew as above immobilized #185, yearling male of #172, which was shot free-ranging on the dump on 7/16/64. Blood specimen and rectal temperature were taken. Bear was marked with yellow rope and blue flags in both ears.
3. Entire crew went to dump for shooting operation in the evening. #186, yearling of #96, was shot free-ranging with Sernylan and placed in the trap overnight for processing the next day. An unmarked collared yearling (one of 4 orphaned yearlings) was also shot but was not affected by the drug.
4. One trap was set at the dump.
5. Bryan Harry, and a photographer from the Cincinnati Museum of Natural History were at the dump when we arrived. Therefore, very few bears came in until after dark and those that did were quite spooky.

No new bears

August 18, 1964

1. John and I went over notes in early A.M.
2. John, Frank, Bob Patton, Ralph and I immobilized #186, yearling male of #96, with Sernylan at Trout Creek. This bear was taken free-ranging on 8/17/64. Blood specimens and rectal temperature were obtained before releasing the grizzly. Bob Patton photographed this bear as well as the processing operation.
3. John, Frank and I outlined plans for future study through August.
4. Entire crew participated in shooting operation at dump this evening. Mr. McFadden and sons, Mrs. Patton and Gayle also observed the operation. #39, adult sow, was shot free-ranging at the dump. She was hauled up from the flat, placed in trap and held overnight.
5. Mr. Hertzag, director of Park Service; Mr. Garrison, regional director from Omaha; Mr. McLaughlin, park superintendent; Mr. Fosbrooke, conservation agent from Tanganyika; Mr. Martinek, district ranger from Lake, came to dump at 8:30 P.M. to observe grizzlies this evening. Very few bears were present. This group left at 9:00 P.M.
6. Shooting operation extended through 10:30 P.M.
7. A census was not possible, but a marked sow with 3 yearlings was at dump and may have been new bears. Not included yet until positive identification is made. (note: this sow was #150; R.L.R. 8/19/64). She had lost her radio collar.

August 19, 1964

1. Worked on field data in A.M.
2. Harry, Ralph, and I processed #39, adult female, at Trout Creek. This sow was captured on 8/18/64 free-ranging with Sernylan. Blood specimen, milk sample, and rectal temperatures were obtained. The sow was also remarked before release.
3. Entire crew went to Trout Creek for evening shooting operation. Sucostrin was used in an attempt to capture #29, five-year old female, and #7, adult female. #29 was hit with 80 mg. of Sucostrin but dart apparently failed to inject as the bear showed no effects of the drug. #7, still carrying radio transmitter from 1963, was also hit with 90 mg. of Sucostrin. Immediately after being shot, she bolted from the dump and disappeared in the darkness. Attempts to locate her were unsuccessful. Crew returned to headquarters at 10:00 P.M.
3. #150 was at dump tonight with her 3 unmarked yearlings. She had lost the radio transmitter which was attached on August 11, 1964.
4. #96 was present with one yearling which we had just captured and marked on August 18, 1964. Her other yearling, unmarked, was also present but the sow chased the yearling whenever the young bear approached her. This may constitute an attempt on the part of #96 to wean her offspring as a yearling.
5. See attached observation sheet for census figures.

No new bears

6. John departed for Missoula at 9:00 A.M.

August 20, 1964

1. Worked on family history, litter size, and census data in the A.M.
2. Frank, Harry, Ralph, Dick, and Joel searched Sulphur Mountain area for lost radio transmitter of #150 from 2:30 to 5:00 P.M.
3. Mr. and Mrs. Stanniger arrived at 2:00 P.M. I showed them around laboratory and explained grizzly and elk work to them.
4. Barry Franciscus and family arrived in the afternoon.
5. Entire crew went to Trout Creek for evening shooting operation. #29 was shot with 80 mg. of Sucostrin. She rolled to bottom of dump and appeared to be not completely under drug's effects. 25 cc. of pentobarbital sodium were hastily administered and it is believed that not all of this anesthetic got into the lungs. Within minutes she regained her feet and walked off.
6. Marian's cub (#188) was captured with Sernylan as was an unknown weaned yearling (#187). Both bears were taken free-ranging and placed in the trap overnight to be processed the following day.
7. Crew arrived from dump at 10:30 P.M.

New bears:

#187 - yearling of ?

August 21, 1964

1. Harry, Ralph and I processed #187 and #188. Marian's cub (#188) was weighed, measured, marked, tattooed, rectal temperature obtained, and released. A blood specimen was obtained from #187 in addition to the forementioned data. Both bears were released at Trout Creek.
2. Harry picked up Bill Stanniger, Jerry McGahan and horses at Heart Lake in the afternoon.
3. Harry, Ralph, Dick and I went to dump in evening for shooting operation. #189, yearling of #172, and #190, yearling of #96, were captured free-roaming on the dump with CO₂ gun and Sernylan. Both bears were held in the traps overnight.
4. Don Worden and family from Missoula observed the shooting operation.
5. Note: The yearling captured on 8/20/64, believed to be 96's yearling, was a new bear at the dump. It is not known which family #187 was from at the present.
6. Frank Craighead left for Moose, Wyoming in the A.M.

August 22, 1964

1. Harry, Ralph and I processed #189 and #190. #189, yearling male of #172, was processed with tattooing, weighing, measuring, blood specimen, rectal temperature and marking being accomplished. #190, yearling male of #96 was also processed with the above data also being obtained. #189 was in considerable trouble from the Sernylan dosage which was administered. See immobilization forms
2. Harry, Ralph and I cleaned laboratory upon returning from dump.
3. Bill Stanniger went to South Gate in A.M. to pick up horses and pack gear.
4. Entire crew went to dump for evening shooting. Bears were very spooky and only a few came into dump. We spent $2\frac{1}{2}$ hours at dump, 7:00 P.M. to 9:30 P.M., but no priority bears showed up. Consequently, no bears were captured. #96 was present, but had not regained possession of yearling which we had processed in the morning.

August 23, 1964

1. Ralph and I cleaned equipment and prepared gear for shooting this evening.
2. Harry removed claws from hide of Old Mose and buried hide.
3. Continued work on form sheets and tabulated past week's data.
4. Entire crew went to dump for shooting operation in the evening. We immobilized #191, yearling of Mae West. This bear was placed in the trap and held overnight for processing the next day.
5. Dr. Edwards, M.S.C., stopped by in the afternoon. We discussed radio tracking program and he offered his assistance when needed.

August 24, 1964

1. Harry, Ralph and I immobilized and processed #191, yearling male of Mae West. A blood specimen was taken in addition to rectal temperature, marking, measuring and tattooing. The bear was released at Trout Creek.
2. Received Paxarms equipment from New Zealand.
3. Entire crew participated in shooting operation at dump. #192, dark collared yearling, and #193, light collared yearling were shot free-ranging. Both bears were placed in traps and held overnight for processing the next day.
4. Mr. Simon, photographer from Wyoming, photographed at Trout Creek tonight until 7:30 P.M.

August 25, 1964

1. John, Harry, Ralph and I processed #192 and #193 at Trout Creek. #192, yearling male with chocolate body and vivid white collar, was immobilized with Sernylan and blood specimens, rectal temperature, weight and measurements were obtained. This bear was only marked with ear tags in both ears. #193, blonde male yearling with complete distinct collar was also processed and the foregoing information also obtained on this bear. It was also marked with red-white rope and white flag in the left ear. John photographed both of these bears with the movie camera as they came out of the effects of the drug. Lance and I also took a series of 35 mm. slides. It is not yet known whether these particular bears are orphaned cubs (1963) of #148 or weaned or orphaned yearlings of #48. These two bears run with 2 other yearlings, #181 and unmarked "V" collared yearling.
2. Afternoon was taken off and the entire crew participated in the Y.P. Co. Christmas Dinner party.

August 26, 1964

1. Continued tabulating field data and entering information on form sheets in the A.M. John left for Jackson at 2:00 P.M.
2. Crew took afternoon off to 4:00 P.M.
3. Cleaned laboratory today.
4. Entire crew participated in evening shooting operation at the Trout Creek dump. No bears were captured. #7 came in momentarily but ran from dump when she saw observers. The 4 collared yearlings were also present but did not approach close enough for a shot. A census was taken of bears visiting the dump.

Trout Creek Census

8 cubs
17 yearlings
6 2-yr. olds
3 3-yr. olds
2 3-4 yr. olds
1 4-yr. old
3 5-yr. olds
7 adult males
14 adult females
61 bears

*Observation period from 7:00 P.M. to 11:30 P.M.

Remarks:

#12 arrived at 8:00 P.M. and #7 at 10:45 P.M.

An unmarked sow was present with 2 cubs. The sow was light grizzled with extremely white claws.

A new sow with herculite ear marker was also present (see form sheet) as were 2 U.M. collared yearlings.

New bears:

1. Unmarked sow and 2 cubs
2. Herculite sow (#?)
3. 2 unmarked partially collared, blonde yearlings. It is not known which family these yearlings are from.

August 27, 1964

1. Harry and Ralph removed front and rear claws from hide of #179, Old Mose, and buried hide at Trout Creek Dump.
2. Dick and Bill continued attempts to locate #34, radio collared sow with 2 yearlings
3. John arrived from Jackson at 12:30 P.M. Left for Goodyears.
4. Dr. Stoliker, Parke-Davis Co., stopped by. We discussed our future and past work with Sernylan.
5. Entire crew participated in shooting operation at dump. Attempts to capture #29 or #7 were unsuccessful. The last unmarked collared yearling (#194) was subsequently shot and placed in the trap overnight for processing the next day.
6. A new large bear came into dump tonight and exerted some dominance. This male (750-800 lb.) had large scars on both sides and one on the hump. His left ear was cropped off nearly to the skull and his right canine on the lower jaw protruded nearly a 70° angle from the jaw. When he came into the dump, #6 and #96 both backed out and the bear fed alone. He allowed no others to approach. Apparently he was recognized as a dominant or sub-dominant bear from the past. May be old "Cutlip"

lower jaw

New bears:

Adult male - "Crooked Fang".

August 28, 1964

1. Harry, Ralph and I processed #194, collared yearling of the 4 musketeers, and released him at Trout Creek. Blood specimen, rectal temperature, and dental chart were obtained. The bear was also tattooed with the electric tattoo.
2. Harry packed into Pelican Creek with quad antennae in an attempt to locate #34. No signal was received.
3. Dr. Stoliker stopped by in the afternoon for a short talk with John and me about the effects of Sernylan.
4. John and I observed at Trout Creek tonight between 11:00 and 12:00 P.M. Very few bears were present and it appeared that they may have fed and left the area before we arrived.
5. Attempted to contact Bob Morey about crippled elk at Fishing Bridge which we may sacrifice and place out for the grizzlies. He would not be in until Monday.
6. Jerry Mernin contacted us that he had killed a black bear male with Sucostrin on the evening of 8/27/64. We made arrangements to obtain the carcass. This bear apparently had been raiding campgrounds at Canyon.

August 29, 1964

1. John and I, along with Dr. Stoliker and family, met with 2 rangers from Lake at the Trout Creek gravel pit. They had recaptured #171, 3-4 yr. old male grizzly at Bridge Bay with a culvert trap. This bear was captured at Fishing Bridge Campground on July 6, 1964, was released at Trout Creek and now recaptured. This animal gained 110 pounds in 54 days since his last capture. The bear was weighed, a blood sample obtained, and then released.
2. The black bear which was killed at Canyon by an overdose of Sucostrin was skinned for eagle meat and the skull saved. No weight was taken.
3. The entire crew went to Trout Creek in the evening for shooting. #12, Ingemar, was hit with approximately 700 mg. of Sernylan. He ran from the dump and disappeared in the darkness. It was not known whether the drug took effect. Very few (20) bears were at the dump tonight.
4. Crew returned from dump at 9:30 P.M.

August 30, 1964

1. Worked on form sheets and field data throughout the day.
2. Entire crew went to dump tonight for shooting operation. The "white-faced" bear was hit with 200 mg. of Sucostrin. He went down on top of dump hill and we subsequently gave the bear 50 cc. of pentobarbital sodium to anesthetize the animal. From the sounds of the bear when the pentobarbital was administered, it is believed that the drug did not get into the lung. The bear was also given another 75 mg. of Sucostrin in an attempt to immobilize it for more pento-injections. However, the bear regained its feet after 25 minutes and ambled off. No attempt was made to capture another bear because of the time.
3. Crew returned from dump at 9:45 P.M.
4. Checked out radio transmitter collars with Dick. Reception of all collars from Mt. Washburn was good.

August 31, 1964

1. Continued paper work in A.M.
2. Checked out radio equipment with Dick & Frank; checked reception of tracking and temperature transmitters.
3. I was knocked out of commission by virus (?) infection in back; received hypo and penicillin from nurse.
4. No work at dump tonight.

September 1, 1964

1. Continued paper work in A.M.
 - a. mapped bear locations in back country.
 - b. tabulated weight and growth changes for long-history bears.
 - c. prepared list of bears breeding this year and bears which may wean young next year.
 - d. recapture data
 - e. census, movement, family history data to date.
2. Entire crew participated in evening shooting operation at the Trout Creek Dump. #14 and #195, both adult males, were hit with 900 mg. of Sernylan each on the dump. #14 rolled to bottom and could not be retrieved for weighing. J.J.C. and I estimated this bear's weight at 900 pounds. Measurements were taken and the bear was ear-tagged on the spot. #195, estimated at 700 pounds, ran across stream after being hit and went down on the flat. A blood specimen was obtained, measurements taken and the bear was marked with ear tags only. Radio transmitters were too small and neither animal could be instrumented. Both bears were well under the effects of the Sernylan and were immobilized for 2 hours before the observers left.
3. Art DeVries, M.S.U. alum and currently working in the Antarctic as well as taking course work at Stanford, stopped by to discuss grizzly research and sought information concerning fishery research in Yellowstone.

September 2, 1964

1. Gene Peterson arrived from Jackson at 9:45 A.M.
2. Continued work (paper) and tabulation of data in the A.M.
3. Plotted bear movements on YNP map.
4. Mrs. Nichols stopped by and talked with Frank & John.
5. Chuck Reindenaar arrived from Pennsylvania.
6. Two traps were set at the dump tonight.
7. John and I observed at Gardiner tonight. #170, adult female, was at dump alone. She had been last seen at Trout Creek on August 28, 1964. See movement sheets.
8. Frank and Bill observed at Rabbit Creek. They reported seeing only 6-8 bears but no positive identification of the animals could be made.

September 3, 1964

1. Checked two traps which were set on September 2. Two yearlings, #181 and #193 were in the traps. These are two of the "four muskateers". Both bears were weighed and released. Sernylan was used to immobilize the animals.
2. Harry and Dick accompanied Ralph to Madison Junction area to remove Ralph's car from ditch. Car was total loss following Ralph's accident on the morning (2:30 AM.) of Sept. 3. Car was towed to West Yellowstone by tow service from that town.
3. John, Frank, Chuck and I photographed the two collared yearlings as they were coming out of the effects of Sernylan. Movie and still cameras were used.
4. Entire crew went to dump for evening shooting operation. #40, 5-yr. old female, was shot free ranging with Sernylan and CO₂ gun. She was placed in the trap overnight for processing the next day. She had a cub at her side, #188, but no attempt was made to capture this young animal.

September 4, 1964

1. Paper work in A.M. Gene Peterson arrived in P.M.
2. Rangers from Lake called to see if we wanted a black bear which was trapped at Fishing Bridge. We accepted delivery of the animal at the Trout Creek gravel pit. The bear was used for experimental dosages of Sucostrin and Sernylan. 35 mg. were given to immobilize the bear and transfer it from NPS trap to our own. Three hours later, the bear was given 30 mg. of Sucostrin, followed by 145 mg. of Sernylan. (1:1.00 lb. of body weight) while he was still under the effects of Sucostrin. The bear was still under full effects of the drug when this observer left at 3:30 P.M., some $2\frac{1}{2}$ hours following the combined use of Sucostrin and Sernylan.
3. Entire crew assisted with immobilizing and processing #40, 5-yr. old female (has 1 cub). Measurements, weight, blood specimen, milk specimen, rectal temperature, foot impression, and dental impressions were obtained. She was tattooed under right foreleg with electric tattoo; her "04" tattoo in right upper lip was in good shape. A new marker replaced the old one in the left ear and a new marker was also replaced in the right ear which had none. She was also instrumented with a radio transmitter collar. John photographed operation. Marion was checked again at 10:00 P.M. and she was still unable to move from trap area. She appeared to be partially blind and her hind quarters appeared to be partially paralyzed.
4. Attempt to recapture #14 at dump for instrumenting tonight was unsuccessful.

September 5, 1964

1. Dick checked #40 and she had moved from trap area and was in mountain area surrounding the dump.
2. John and Frank photographed at Firehole today with entire crew swimming.
3. Day off in P.M.
4. Checked, fed and watered black bear in trap.

September 6, 1964

1. Day off
2. Ralph and I fed and watered black bear which is being held in trap for experimental dosing.
3. Entire crew went to Trout Creek for evening shooting operation. #14, adult male, was shot free-ranging at the dump with 900 mg. of Sernylan. The bear went down on top of dump hill and was processed on the spot. Blood specimen, weight and right foot cast were obtained. Measurements had been taken previously on 9/1/64. This bear was also instrumented with a radio transmitter collar. The weight was 860 pounds.

September 7, 1964

1. Harry, Ralph, and I worked on black bear in the A.M. and experimented with dosages combining Sernylan and pentobarbital sodium. The bear was given 100 mg. of Sernylan initially. Its weight was 145 lb. Probably due to stress and fact that the bear had been held in the trap for 4 days, this dose appeared to be rather heavy. We waited for 1 hour and 15 minutes and then administered 5 cc. of pentobarbital when the bear was coming out of the effects of Sernylan. The bear then went out within 8 minutes and was under the effects of the pentobarbital for 57 minutes before recovery. The black bear was then released at Trout Creek.
2. Paper work in the P.M.
3. Mr. McIntyre and daughter stopped by to discuss wildlife work with John and Frank.

September 8, 1964

1. Paper work in A.M.
2. Frank, Charlie, Bill, Dick, Ed and I radio-tracked #40 in upper Trout Creek Area. We located one large den (not in use), one collapsed den and a digging apparently done by #40, in a small drainage in upper Trout Creek. Frank photographed these sites and also mapped the location. Tracking lasted from 12:00 P.M. to 7:30 P.M. We never actually sighted any grizzlies during the day.
3. Bill and I checked dump at 7:45 P.M. #150 and 3 yearlings, #42 and 2 cubs and #6 were at the dump.
4. Gayle arrived at 4:30 P.M.

September 9, 1964

1. Dick and I tried to locate #14 with mobile unit. No fix could be obtained from Mt. Washburn, Lake area, and Bridge Bay. Too windy to repair field station antennae.
2. John, Frank, Bill and Charlie left for elk hunting trip to south end of Park at 3:30 P.M.
3. Harry departed for elk hunt at 5:30 P.M.
4. Gayle and I visited Trout Creek Dump at 10:30 P.M. and stayed to 11:30 P.M. #40 was observed on dump with cub and her radio collar was transmitting a loud signal. #14 was also present in the area but was not actually sighted. The signal from this bear was only $\frac{1}{4}$ to $\frac{1}{3}$ as strong as that received from #40's transmitter.
5. Ingemar, #76, #30(?) or (14?) and another large boar were all at dump tonight. #150 and her 3 yearlings were also present.
6. Talked with Jerry Mernin about tentative plans for shooting elk to be placed out for grizzlies. He planned shoot for early Saturday morning.
7. Dr. Margaret Altmann visited lab today along with her assistant. Discussed elk and grizzly study with John and Frank.

September 10, 1964

1. Dick and I obtained fixes on both #14 and #40 with mobil tracking unit and field station in the A.M. Weak to moderate signals on both bears were obtained from the Monad turnout and Trout Creek Dump. No signal from Birds along the River Turnout. Strong to weak signals for both bears were obtained from the field station.
2. Jerry Mernin called and we planned shooting operation for 4:30 A.M. on Friday. He reported that we could have either elk or buffalo for kill purposes.
3. Gayle and I visited Trout Creek Dump at 8:00 P.M. Both #14 and #40 were at dump tonight. Signals were obtained from both bears although Marion's (#40) signal is much stronger than #14's.

Trout Creek Census

1 cub
5 yearlings
2 2-yr. olds
2 3-yr. olds
1 3-4 yr. old
1 5-yr. old
3 adult males
<u>4 adult females</u>
19 bears

4. John, Frank and Charlie returned from elk hunt to south end of Park at 10:30 P.M.

September 11, 1964

1. Jerry Mernin and I departed for elk hunt to Trout Creek at 4:30 A. M. We waited at dump until 5:30 A.M. and then proceeded along Trout Creek road. Two bulls and one cow were spotted at the first bridge. Mernin downed one bull with one shot at a distance of approximately 250 yards. The elk ran a short distance, before going down from the shoulder shot. The animals was left until a crew could be brought out to move the animal. The kill was made at about 5:40 A.M.
2. Paper work from 8:00 A.M. to 11:00 A.M.
3. Entire crew left for Trout Creek at 2:30 P.M. We moved elk down to road and deposited it at the dump. We then proceeded to the field station where the field station where the field antennae was lowered, repaired, and mounted again.
4. John, Frank, Gene, Charlie, Bill, Gayle and I went to Trout Creek dump in the evening to photograph bears visiting the elk kill. Gayle and I left at 11:10 P.M. and the rest of the crew at 11:45 P.M.; approximately 3½ to 4 hours of photographing.
5. Bill and Harry returned at noon with spike elk which Frank had killed near South Gate on September 10th.

September 12, 1964

1. Crew cleaned laboratory in the A.M. in preparation for visit by Dr. Schaeffer. He arrived at 12:30 P.M.
2. Paper work in the A.M.
3. Gene and I checked elk carcass at dump. Grizzlies had eaten the entire carcass with exception of head and hide.
4. John, Frank, Charlie and Dr. Schaeffer spent afternoon fishing in Canyon; only fair fishing.
5. John and Frank took Dr. Schaeffer to dump at 8:00 P.M.
6. Dick spent night on Mt. Washburn in an attempt to track #14 and #40. No signal was received from #14 but #40 came in well.

September 13, 1964

1. Paper work and photography in the A.M.
2. John spent A.M. with Gene going over films.
3. Frank and Charlie left at 10:00 A.M. with mobil tracking unit in attmept to locate #14 in Pelican Creek area. They returned at 8:30 P.M. with report that #14 was in Pelican Valley.
4. Paper work in P.M.

September 14, 1964

1. Jerry Mernin and I left headquarters at 5:15 A.M. on elk hunting trip in Trout and Alum Creek areas. No elk were spotted. Four buffalo were seen $\frac{1}{4}$ mile south of hilltop station and a lone bull was observed crossing road at Gravel Pit. No attempt was made to obtain these animals. Returned to headquarters at 8:00 A.M.
2. John, Charlies and I back-packed into Trout Creek area in search of den which #40 had started. She had not begun any further work on that den. We returned to vehicle at 6:00 P.M.
3. Tried fishing on Yellowstone near Trout Creek. Fair success; not many fish but all nice sized.

September 15, 1964

1. Left headquarters at 5:05 A.M. with Jack Hughes on elk hunting trip in Trout and Alum Creek areas. Jack took one shot at cow elk in Alum Creek thermal area at distance of 100 yards. Shot apparently missed the elk. Several other elk were also in the meadow but spooked following shot. Returned to headquarters at 8:10 A.M.
2. Jerry Hammond delivered yearling grizzly to Trout Creek in the afternoon at 12:30 P.M. We transferred the animal to our trap and then photographed movie sequences in the afternoon. Grizzly held in trap.
3. Tied fishing on Yellowstone from 4:30 to 5:00 P.M. No success.

September 16, 1964

1. I left headquarters at 5:15 A.M. with Jerry Mernin on elk and buffalo hunting trip in Trout Creek and Alum Creek areas. Mernin dropped an adult bull buffalo at 100 yards with Winchester 30-06 at 6:00 A.M. This kill was made approximately $\frac{1}{2}$ mile west of hilltop radio tracking station. Mernin also killed a $3\frac{1}{2}$ year-old bull elk in the Alum Creek thermal area with one shot at 6:50 A.M. This kill was left at the scene of killing.
2. Crew removed hind quarters of buffalo in the afternoon and staked them out at the Trout Creek Dump for bear bait.
3. Entire crew participated in photographing operation, at the dump tonight; 7:30 P.M. to 10:30 P.M. Harry received a smashed finger while moving bear traps around at the dump. We took him to Lake Hospital where an intern treated him. Returned to headquarters at 12:00 midnight.
4. I spotted bull elk with rope collar marked in meadow at Alum Creek thermal area. Combination: Red area - 1964 - white rope - red, red, left (?).

September 17, 1964

1. John and Gene checked buffalo kill at Trout Creek. No bears were at kill in early morning. Some of the bait at Trout Creek Dump had been taken by bears.
2. I checked elk kill at Alum Creek thermal area at 12:00 P.M. No bears present and none had visited the kill. One coyote and several ravens were present.
3. Attempted to locate #40 from hilltop station. No success.
4. Entire crew at dump this evening. Harry and I processed #196, yearling female, which had been delivered to us on 9/15/64 and held in trap since then. Noweight was obtained but rectal temperature, blood specimens, and measurements were taken. She was released later in the evening after being photographed at "den site".
5. John, Gene, Frank, Charlie and Harry remained at dump for photographing. I left at 7:30 P.M. for headquarters because of illness.
6. Bill Stanniger returned from elk spotting trip in the evening. He reported the following grizzly observations on elk kills in the Fawn Pass area and Patrol Cabin vicinity.

Patrol Cabin Kill

9-15-64

6:15 P.M.: Grizzly sow and 2 large cubs spooked black bear from kill and fed on elk. All were light colored. Still feeding when observer left.

Fawn Pass Kills

9-14-64

5:30 P.M.: Located kill. Carcass partially covered by bears but none seen in vicinity.

9-15-64

6:45 P.M.: Two grizzlies seen on southeast slope of pass coming down hill on the run and turning rocks in search of food; both were light in color and with cream colored saddles about 8" wide just behind shoulders; especially pronounced on one but no so noticeable on the other. Probably 2-year olds. Did not go to kill.

7:00 P.M.: Sow and 2 cub grizzlies came to kill and ate until 7:20 P.M. Sow was slightly darker than cabin kill sow and cubs were somewhat smaller.

Lower Fawn Pass Kills

9-14 to 9-16-64 - No bears on kills.

September 18, 1964

1. Bill, Harry and I departed from headquarters at 10:30 A.M. We obtained fix on #40 from field station at 11:00 A.M. and commenced radio-tracking operation. We had bearings of 130° with field antennae and 115° with loop antennae from hilltop station. We proceeded up Trout Creek and obtained a weak signal on east slope of Trout Creek. Taking this bearing we climbed to slope above Trout Creek to the east. No signal was obtained after 4 hours of tracking. When we returned to the Trout Creek Bridge, we again picked up strong signal at 5:00 P.M. which placed Marion to the southeast of the hilltop station. We did not move in on here there because of lateness in the evening.
2. Paper work in the evening.

September 19, 1964

1. Crew took day off and visited Old Faithful and West Yellowstone. Photographed elk along Gibbon River.
2. John and I observed 2 bears on West Yellowstone Dump at 1:00 A.M. One was a large male grizzly and the other could not be identified as to species.
3. Frank, Charlie, John and I camped along the Madison and left for headquarters at 8:00 A.M. on 8/20/64.

September 20, 1964

1. John, Frank, Charlie and I arrived at headquarters at 9:00 A.M.
2. The four of us then departed on radio-tracking trip at approximately 11:00 A.M. Left field station at 12:30 A.M. Had some trouble with directional receiver but finally jumped Marion (#40) about 3/4 mile from field station. Frank has detailed notes. Returned at 5:00 P.M. to Trout Creek Bridge.
3. Bill and Harry returned from Pelican Cone at about 8:00 P.M. They obtained fix on Bruno (#14) near Mud Kettle area in Pelican Creek Valley. Jerry Hammond accompanied Bill and Harry made a kill of a bull elk within one mile of Bruno's location.

September 21, 1964

1. Frank and John departed for Jackson in A.M.
2. Charlie, Harry and I departed for Trout Creek at 11:00 A.M. We checked elk kill in Alum Creek area. Carcass was completely disposed of. #88, adult male, was at the kill. We shouted and frightened him from the area in order to check kill. Photographed kill.
3. The three of us then tracked #40 from 2:00 P.M. to 6:00 P.M. We never sighted the animal, but were within 200 yards of her at one time as judged from the signal received. Charlie wrote up notes for this tracking operation. All tracking was in Trout Creek.
4. Continued paper work in the evening.
5. Black or grizzly bear broke into Dick's trailer. Very large animal, head like black bear but could not be certain. Called Jack Hughes and received permission to immobilize or over-dose the animal. Returned to trailer as animal was coming out. No chance to capture it. The bear had peeled away the door and completely broken out one window in Kitchen area. Set Park Service trap.

September 22, 1964

1. Checked trap at Trailer. Bait stolen. Set again.
2. Charlie and I left headquarters at 11:00 A.M. Departed from Upper Hayden Valley at 11:50 A.M. for den of #164. Arrived at den at approximately 1:15 P.M. Den had not been lined nor was there any evidence of activity at the sight ~~since~~ ^{since} early spring. Photographed den. Arrived back at vehicle at 3:00 P.M.
3. Drove to hilltop station and obtained fix on #40. Departed from gravel pit for area to south at 3:30 P.M. Tracked Marion in timbered area and were probably within 100 yards of her. Signal very loud and piercing. No null or direction could be determined at this close range. Because of thick cover and lack of direction from the receiver, we did not jump her and returned to vehicle at 5:30 P.M. Charlie has detailed notes on tracking.
4. Talked with Jack Hughes and arranged for elk hunting trip at 5:30 A.M. on 8/23/64.
5. Began cleaning laboratory in evening.

September 23, 1964

1. Jack Hughes and I departed for elk hunting trip in Hayden Valley at 5:30 A.M. No elk was spotted. Between 2 and 3 hundred buffalo were grazing on hill just northwest of Trout Creek Dump. Returned at 7:45 A.M.
2. Cleaned portions of laboratory in A.M. Set up table and formulated plans for paper work on grizzly study.
3. Charlie and I departed for Trout Creek at 2:30 P.M. Obtained fix on #40 at 3:15 P.M. Signal was weak and bear appeared to be too distant for tracking at this late time.
4. Returned to laboratory and began compiling grizzly data for 1964.
5. John and Frank returned from Jackson at 10:30 P.M.

September 24, 1964

1. John, Frank, Charlie and I discussed bear contract and future work in the A.M. John called Lemuel Garrison and Lee Yeager to discuss contract and future work with them.
2. Charlie and I departed for Trout Creek at 12:30 P.M. Began radio-tracking on foot at 1:40 P.M. Located #40 and cub (#188) in wooded area directly south of gravel pit at Trout Creek. Several day beds and an apparent attempt at digging a den (by #40) were located in the immediate vicinity where bear was jumped. Returned to vehicle at 5:00 P.M. All beds and den attempts were located on north slopes.
3. John and Frank departed for Mammoth for meeting with Park Superintendent McLaughlin and staff at 1:00 P.M. Returned at 8:30 P.M. Grizzly contract was discussed.
4. Continued compiling 1964 grizzly data in the evening.

September 25, 1964

1. Jerry Mernin brought road-killed mule deer (doe) to headquarters. Deer was held in trap at headquarters.
2. John, Frank, Charlie and I departed for Pelican Creek in A.M. Day was spent tracking #14 in Pelican Creek area below Chittendon Peak. Arrived back at headquarters at 8:00 P.M. Checked kill made by Hammond on 9/20/64. No bears had been to carcass.
3. Paper work in evening.

September 26, 1964

1. John, Frank, Charlie and I departed for Pelican Creek in A.M. Day was spent tracking #14 in Pelican Creek area. See tracking notes. We camped at vehicle.

September 27, 1964

1. Frank, John, Charlie and I spent day tracking #14 in Pelican Creek area. See tracking notes. Camped in mountains northwest of Mount Chittendon.

September 28, 1964

1. John, Frank, Charlie and I again spent day tracking #14 in Pelican Creek drainage. See tracking notes. Camped in mountains as on 9/27/64.

September 29, 1964

1. John, Frank, Charlie, and I spent day tracking #14 in Pelican Creek drainage. See tracking notes. Returned to vehicle at 3:00 P.M.
2. John photographed crew setting up quad antennae and various phases of radio-tracking in Pelican Creek.
3. Returned to headquarters at 8:30 P.M.

September 30, 1964

1. Jack Hughes brought black bear to headquarters which he had killed in Canyon Trailer Court on 9/29/64. This bear is believed to be the one which had broken into several trailers, including the Wildlife Unit Trailer on 9/21/64. Sucostrin was used to immobilize the bear while it was in a tree. It fell about 20 feet and then was shot in the neck with "00" magnum buck shot. We obtained weight (420 lb.), foot casts (rear and front), and dental casts. Skull was also taken. Carcass taken to dump.
2. Deer carcass which was brought in by G. Mernin on 9/25/64 was taken to dump and placed in trap.
3. John and Charlie spent afternoon tracking #40 in Trout Creek area. See tracking notes.
4. Paper work in evening.

October 1, 1964

1. Crew went to Trout Creek just southwest of field station. John photographed various phases of radio-tracking for movie.
2. Group then tracked #40 in timbered area to the southwest of field station. See tracking notes.
3. Departed for West Yellowstone at 5:30 P.M. to obtain grocery supplies. Returned at 11:30 P.M.
4. Checked black bear kill at Trout Creek. No evidence of grizzlies visiting the kill.

October 2, 1964

1. John and Charlie photographed otter along Yellowstone in A.M. Checked black bear kill at Trout Creek. No sign of grizzlies at kill.
2. Paper work in the P.M.

October 3, 1964

1. John, Frank, Charlie, and I departed for Jackson in the A.M. Spent day at Craighead cabins.

October 4, 1964

1. Crew spent day at cabins and swimming south of Jackson.
2. #182, 3-4 yr. old male, was shot by hunter from Kansas City, Missouri on this date. The bear was killed on the North Fork of Crandall Creek northeast of the Park. The kill was brought to our attention by Ken Winter, Wyo. Fish and Game, 569 South Ferris, Powell, Wyoming. The hunter was:
Dr. Berneil W. Anderson
2nd West 43rd Street
North Kansas City, Missouri

October 5, 1964

1. John, Frank, Charlie and I floated the Snake River for about 15 miles. John photographed sequences on rafting and fishing.

October 6, 1964

1. Spent day at cabins and photographing sequences on fishing.
2. Shipped grizzly milk specimens by air freight from Jackson.
3. I departed from Jackson at 5:45 P.M. and arrived at Canyon at 7:45 P.M.

October 7, 1964

1. Checked #40 from base. Good signal received in the A.M.
2. Called Lake for fire permit. No rangers available at either Canyon or Lake to authorize permit.
3. Departed for Trout Creek at 10:00 A.M. Checked black bear carcass. Entire kill was cleaned up.
4. Obtained fix on #40 from hilltop station. Moved in on her and jumped her with cub at distance of 90 feet. She saw me before I saw her and was beginning to move out when I first observed her. Did not check vicinity for beds or den.
5. Arrived at upper Pelican Creek at 1:00 P.M. Set up quad antenna on hill at camp site. Loud and steady signal (no null) received from #14 in Raven Creek area. Fix with loop and again with quad from another area put #14 in lower west side of Raven Creek.

Checked elk kill at Pelican Creek. Kill was completely cleaned up. Large hole present where grizzlies had partially buried and then drug up carcass.

6. Arrived back at headquarters at 6:30 P.M.

October 8, 1964

1. Paper work in the A.M. Began preparation of Quarterly Report for July-September.
2. Frank Goodyear and wife arrived at 3:30 P.M.
3. I departed for Missoula at 4:00 P.M. Took dental and foot casts, tri-pod, resuscitation, and minor equipment back.

October 9, 1964

1. In Missoula

October 10, 1964

1. In Missoula
2. Two traps were set at Trout Creek by crew.

October 11, 1964

1. In Missoula
2. John, Frank and Charlie processed and instrumented #158, yearling male of #39. See below.
3. Checked 2 traps. #158 captured in one trap. Other trap was sprung but no bear was captured.
4. Jerry Hammond shot two elk, both cows, at Pelican Creek horse corral for bears. See form sheets.
5. Jerry Mernin and John shot two buffalo in Trout Creek to draw in bear. One kill was made 200 yd. northwest of field station and the other was at the gravel pit. See form sheets.
6. One trap set at Trout Creek Dump.

October 12, 1964

1. In Missoula
2. John, Frank and Charlie processed #157, yearling male of #39. See below
3. #157, captured in trap at dump. One trap again set.
4. Both buffalo kills were checked. See form sheets.

October 13, 1964

1. In Missoula
2. Checked one trap. No capture. One trap set again.
3. Checked both buffalo kills. Bears had been to both kills. See form sheets.

October 14, 1964

1. In Missoula
2. John, Frank and Charlie processed #194, yearling male of "4 Muskateer" group. bear was held in trap for instrumenting on 10/16/64.
3. #194 captured in one trap. No traps set.
4. Checked buffalo kills in Trout Creek. Bears had been to both kills. See form sheets
5. Checked elk kills in Pelican Creek. Both carcasses were consumed by bears and coyote. See form sheets.

October 15, 1964

1. Departed from Missoula at 9:00 A.M. Arrived at Canyon at 4:00 P.M.
2. Continued work on quarterly report in evening.
3. Began snowing heavily this evening.

October 16, 1964

1. Finished preparation of radio transmitter cellar for instrumenting #194.
2. Mr. and Mrs. Reid and Hershel Conley arrived in P.M.
3. Crew instrumented #194, yearling male, at Trout Creek in the afternoon. Returned to headquarters at 4:00 P.M.
4. John photographed crew simulating various phases of radio-tracking work.
5. Snowing heavily most of day and into the night.

October 17, 1964

1. Frank, Charlie, and I obtained bearings on #158 and #194 from Trout Creek gravel pit with quad antenna in the A.M.
2. John and Reids were in Mammoth in A.M.
3. Continued work on quarterly report.
4. Frank, Charlie and I tracked #194 in timbered area south of Trout Creek gravel pit. Jumped #194 and another yearling from day beds. The two bears were located 50-75 yards from a den under construction.
5. Observed 2 bulls, 1 spike, 7 cows and 2 calf elk at lower end of Hayden Valley. No marked animals.
6. Returned to headquarters at 5:30 P.M.

October 18, 1964

1. John, Frank, Charlie and I moved in to den in upper Trout Creek. John photographed tracking sequences and deserted den site. We also obtained a bearing and strong signal on #40 in this area -- near her old digging site. We tracked her for about 1 hour and then began hike out. Returned to headquarters at 6:50 P.M.
2. Continued work on quarterly report.

October 19, 1964

1. Entire crew, Reid's, and H. Conley tracked #158 in area to south of Trout Creek gravel pit. We jumped the bear and sow and 2 littermates at 100 feet. Tracking began at 12:45 P.M. and we returned at 4:30 P.M.
2. Set one trap at dump today.
3. Continued work on quarterly and bear data.

October 20, 1964

1. John, Frank and Ed departed for Mammoth at 8:00 A.M. Bear contract to be discussed.
2. Charlie, Hersh and I went to field station and obtained bearing on #158. No other instrumented bears could be picked up.
3. Checked buffalo kill at gravel pit. Carcass cleaned up.
4. No bear in trap which was set on 10/19/64. Trap left set.
5. Cleaned laboratory and continued work on field data and quarterly report.
6. Called Mernin to check on removal of horses from Canyon.

October 21, 1964

1. Checked trap. No bears.
2. Frank informed us that a grizzly sow was shot on Frank Goodyear's place in the Yellowstone Valley north of the Park. This bear has been apparently killing cattle in the area.
3. Reids', Frank, John, Charlie and I traveled to Old Faithful. Fishing along the way and then observed at Rabbit Creek. Two 2-yr. olds present at 5:00 P.M. Returned at 7:30 P.M. and 3 or 4 bears ran from dump. Could not distinguish age in darkness.

October 22, 1964

1. Checked trap at Trout Creek. Captured #40, 5-yr. old female with cub. Bear was immobilized, blood specimen obtained, collar sprayed with paint, released and photographed by John, Frank and rest of crew. Cub was not in vicinity when trap was checked.
2. No traps set.
3. Paper work in the P.M. Repaired trailer window.

October 23, 1964

1. Paper work in the A.M.
2. Frank, Reids' and Hersh departed for Jackson in the A.M.
3. Paper work all day. Plotted bear ranges on map and finished quarterly report.
4. Bill Staniger, Harry Reynolds Jr., Harry Reynolds Sr., Jerry McGahan and Dick Ellis arrived at midnight.
5. John and Frank attempted to locate #194 in P.M. from Mt. Washburn. No success.

October 24, 1964

1. Jerry McGahan and Bill Staniger left in morning for Missoula with loads of equipment.

October 25, 1964

1. Charlie and I radio-tracked #158 to vicinity of gravel pit from 10:00 A.M. to 12:00 P.M. See tracking notes.
2. Entire crew departed for Old Faithful at 1:30 P.M. Met Frank and then set trap at Rabbit Creek. Crew camped in Black Sands area overnight. Did some fishing on Firehole with little success. Two 2-yr. olds were on dump in evening.
3. Trap set at Trout Creek.

October 26, 1964

1. Checked trap at Rabbit Creek. No bear in trap. Two 2-yr. olds were observed at dump on evening of 10/25/64.
2. Report from garbage tender at Trout Creek that #158 had been trapped on 10/25/64 set. Bear held in trap.
3. Set trap at Rabbit Creek again. Left word with Terry Manforth to call us if we captured bear.
4. Entire crew observed at West Yellowstone dump. Adult sow was present as was an adult male. The sow had white markings on chest and lighter pelage on left foreleg. Boar ran over edge of dump and no distinguishing marks or characteristics were noticeable.

October 27, 1964

1. Received call from rangers at Old Faithful that bear was captured at Rabbit Creek. Entire crew went to Rabbit Creek in the P.M. and picked up bear and transported it back to Canyon for release on the 28th.
2. Transported trap and #158 from Trout Creek to headquarters. Bear held in trap for release on 10/28/64.
3. Paper work in evening.
4. Frank and I went to West Yellowstone to vote and pick up packing boxes.

October 28, 1964

1. Entire crew took #198, 2-yr. old male, to Virginia Meadows at Norris Junction for processing, release and photography. The bear was marked, weighed, measured, blood specimen taken, rectal temperature recorded, and dummy transmitter collar attached for photographing. The bear was not tattooed.
2. Entire crew transported #158, yearling male of #39, to Otter Creek for release and photographing. Only 50 mg. were administered to the nearly 250 lb. animal but the effects were such to nearly immobilize the bear for nearly $\frac{1}{2}$ hour. When last observed he was heading south right at dusk.
3. John, Frank, Charlie to Mammoth in evening. I continued paper work.

October 29, 1964

1. John, Frank in office on paper work.
2. Charlie and I departed for Pelican Creek and Lake area in the A.M. Could not get up Pelican Valley more than a mile past horse corral. No signal from Bruno. Proceeded to Lake Butte where we obtained loud and steady bearing #158 with both quad and loop antennae. See tracking notes.
3. Charlie went to Washburn in the afternoon in attempt to obtain bearing on #158 or #194. No success. I went to hilltop station and obtained bearing of 80° on #40. No signal from #158 or #194.
4. Paper work in late afternoon.

October 30, 1964

1. Began snowing this morning fairly heavily at 2:30 A.M.
2. John and Charlie departed for south gate and fishing at 8:00 A.M. $4\frac{1}{2}$ inches of snow by 8:00 A.M.
3. Frank and I obtained fix on #40 from hilltop station, and bearing on #158 also. We then proceeded to south gate with car-mounted antenna in attempt to locate #194. No success.
4. Entire crew fished at Flagg Ranch Bridge. Caught about 75 whitefish.
5. Returned to Canyon at 7:00 P.M. where there were $7\frac{1}{2}$ " to 8" of snow.

October 31, 1964

1. Entire crew went to Trout Creek for radio-tracking. Charlie and John followed Marion's tracks from dump area to timber south of gravel pit. They jumped her there in day bed. See tracking notes.
2. Frank and I proceeded to hilltop station where we obtained bearings on both #40 and #158. We then tracked #40 in area south of hilltop station. No success. Located one old den on northern exposure beneath lodgepole. See tracking notes.
3. Returned to lab at 2:30 P.M. Paper work.
4. Drove to Lake in attempt to locate #194. No success.

November 1, 1964

1. Paper work; preparation of range maps.

November 2, 1964

1. Entire crew and P. Hackett, park naturalist, spent day obtaining bearings on #158 and #40 from hilltop station. See tracking notes. The group of us then camped in meadow below hilltop station and spent the night. Bearings were obtained during the night as well.
2. Strong to moderate wind most of day causing drifting in upper Trout Creek.

November 3, 1964

1. John, Frank, Charlie, P. Hackett and I left camp at hilltop station at 9:30 A.M. Proceeded up Trout Creek road and then took trail into Alum Creek. Rest of crew returned from Alum Creek at 3:00 P.M. while Frank and I continued on into Alum Creek in search of Marion. We picked up #40's signal at 4:30 P.M. and camped on ridge west of upper Alum Creek. No snow fell although 12"-18" were on the ground at 8200 feet. See tracking notes. Obtained strong signal from #40 throughout the night.

November 4, 1964

1. Frank and I broke camp at 9:30 A.M. and proceeded on bearing for #40. We located #40's den at 11:30 A.M. beneath a large lodgepole pine at the head of small drainage emptying into Alum Creek. Frank and I photographed den and left area at 12:15 P.M. Walked drainage down to Alum Creek and marked tree there to denote location of den. See tracking notes.
2. We then proceeded on to den of #164. No activity was noted in the area which might indicate den was in use or was to be used.
3. Proceeded on to cut over into Trout Creek. Made camp on ridge about 1 mile east of upper Alum Creek meadow. Picked up signal from #40 throughout the night. No signal from #158. Approximately 12" of snow in the area. See tracking notes.
4. Dr. Lamprey arrived at lab at 5:30 P.M. from Tanganyika.

November 5, 1964

1. Broke camp at 9:00 A.M. Frank and I proceeded east to upper Trout Creek area where we picked up signal from #158. We then headed south towards Beach Lake in attempt to locate #158. We had picked up signal at 11:30 A.M., but because of bounce, etc., did not actually locate the bear until 3:00 P.M. Frank and I each had to take to a tree as the signal suddenly boomed in. We shouted for several minutes before bear moved. She never did leave the area and we could not approach to locate den. We left site at 4:00 P.M. and reached the Trout Creek Bridge at 9:30 P.M. See tracking notes.
2. Returned to lab at 10:00 P.M. John had alerted Park Service for possible rescue operation and had called Jackson for helicopter search and Mammoth for horses and snow weasel aid. Jack Hughes and Jerry Mernin arrived and spent the night. Considerable confusion!!
3. Gerry Atwell arrived from Missoula at 7:00 P.M.

November 6, 1964

1. John, Frank, and Dr. Lamprey departed for Mammoth in the A.M. and spent the day photographing in the area. Returned at 5:00 P.M.
2. Gerry and I closed up cabins, packed bear traps in compound, arranged with winter keeper to take care of trailer and then turn off gas and water at headquarters next week.
3. Cleaned lab and began packing gear.
4. Viewed Lamprey and Craighead movies in the evening.

November 7, 1964

1. Dr. Lamprey and Gerry Atwell departed for Missoula at 9:30 A.M.
2. Began packing and cleaning operations in laboratory.
3. Packed bear skeletons and skulls. Bear skeletons left in wash house. Skulls packed for transport to Missoula.

November 8, 1964

1. John, Charlie and I departed for upper Alum Creek at 10:00 A.M. Arrived there at 1:00 P.M. (approx.) and proceeded to #40's den site. Both #40 and cub were at den entrance. John took short movie shot and we departed for camp. Stayed night at mouth of ravine where den was located. Signal from #40 had slowed to 72 pulses/minute from 80 pulses/minute. See tracking notes. Clear all day and night.
2. Frank to West Yellowstone in P.M. on way to Bozeman.

November 9, 1964

1. John, Charlie and I broke camp at 9:30 P.M. and proceeded to area where Frank and I had jumped #158 on 11/5/64. Arrived in area at 12:30 P.M. John climbed tree and observed #39 and at least 2 yearlings when we were close. Located den site shortly thereafter. Den was dug into side of bank in sand and gravel on northern exposure. John photographed den site with movie camera. Departed from area at about 2:00 P.M. and arrived back at camp at 4:00 P.M. John and Charlie left to check den of #164 and I hiked out via Trout Creek. John and Charlie spent night in Alum Creek. I arrived at headquarters at 6:30 P.M.
2. Frank arrived from Bozeman at 9:30 P.M.
3. Continued packing in evening.

November 10, 1964

1. John and Charlie arrived at Trout Creek bridge at 9:30 P.M. Reported no activity at den of #164.
2. Put up shutters, prepared grizzly range maps for Frank, and continued packing and cleaning operations.

November 11, 1964

1. John and I departed for Missoula at 12:30 P.M. Heavy snows falling and roads drifting some within the Park.
2. Arrived in Missoula at 10:30 P.M.