

June: July: August 2011

Pacific Northwest Chipmunk Trapping

Kayce Bell

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Bandle McCain

29 June 2011

Left Portland, Oregon around 9:00am. Took U.S. Hwy 30 NW to Clatskanie, went south on Hwy 47 then west on Hwy 202 towards Jewell. We drove south on Wage Road, just east of Jewell. Then went NE on Walker Ridge Road in Clatsop State Forest. Found a side road that dead ends at a slash pile. The forest appears to be thinned primary forest with mature conifers. The undergrowth is very dense with vegetation and some downed trees and structure. Bryan and I started setting traps around 11a.m. and finished about 1p.m. (13:00). We set 150 Shermans. Did not see any chipmunks while setting traps, but I saw a few feeding stations that may have been Douglas squirrels. There are lots of birds singing, some thrushes, maybe a wren or two and juncos?

29 June, continued

At 19:00 we checked all the traps. There were no mammal captures. I had some slugs

in a few, they were not the big ones

and did not set off the traps. We

made dinner and went to bed around 22:00.

30 June 2011, OR: Clatsop Co; Wagner Ridge Road

We woke up and checked traps around 6:00. I did not catch anything and no traps were set off. Bryan caught and released 2 Peromyscus maniculatus and one Sorex that was dead. I think it is S. menticolus, but may be a S. beirdii, NK 21701. I thought I heard a chipmunk, but I did not see one.

We had coffee and breakfast then prepped the shrew. Bryan made a nice skin. The shrew had a tick behind its left ear and mites behind its right.

For endos it had a nematode in its stomach (I think a Sebaliophyme) and cestodes in its small intestine. I put the ectos and nematode in liquid nitrogen (no ethanol) and the cestodes in 70% ethanol.

After prepping we walked east on Wagner Ridge Road the north on Cedar Cabin spur. As we were walking down the road I saw a chipmunk run down the base of a tree. We went back to camp and drove the truck back.

We started at the tree the chipmunk had been on, then I walked south on the east side of the road (25 Shermans) and Bryan went north (20 Shermans). Right as we finished setting traps it stopped raining (~10:30) and the sun came out. It (3)

30 June 2011, continued, Wagner Ridge Road
was partly sunny for about 2 hours.
We drove down to the end of the spur
road. I saw a sciurid in a dead tree,
it ran off but I think it may have
been a Douglas squirrel. We drove around
a bit more. The forest in this area
is highly variable, old and recent clear
cuts, dense second growth conifers,
dense, closed-canopy (dark) coniferous
forest. Both of the places we have
traps set are similar. The dominant
canopy tree is fir, with some deciduous
and coniferous trees as understory. The
ground is pretty well covered by
vegetation; ferns, bracken (?), etc.
It got cloudy around 12:30 for about
an hour, then started to clear
up, by 18:00 it was clear and
sunny.
We checked traps at 18:30. Bryan
caught another Sorex, maybe bairdi,
the teeth looked right. We prepped
the shrew, it had mites and a lot
of cestodes. We went to bed
around 21:30, it was still
clear when we went to bed.

01 July 2011 OR: Wagner Ridge Road

We got up and checked traps a little before 7:00. On ~~B~~ trapline #1 Bryan caught and released 2 ♂ *P. maniculatus*. I caught and released one *P. maniculatus* and one banana slug. The slug had defecated on the door and in the trap, it left a slimy mess. On trapline #2 Bryan did not catch anything. I caught and released a *Myodes californicus*. It was kind of foggy, or misty, when we got up, there was ~~the~~ moisture in the air down low, but the sky was clear and by 8:00 the mist had burned off and the sun was shining. I saw and heard a Douglas squirrel near camp.

We packed up camp and started picking up traps at 10:30. One of Bryan's sets was kind of hard to find. After looking for an hour we found 9 of 10. Then we drove over and picked up the ^{around 13:00} second trapline. We had ~~no~~ captures. We drove out on Hwy ~~26~~ to Jewell, then took 103 south to Hwy 26 towards ~~Portland~~. There was a lot of west bound traffic, people headed towards the (5)

01 July 2011, Oregon, continued coast for the holiday weekend. We stopped in the Hillsboro area for lunch and supplies. I decided we should try using sunflower seeds for bait, so we bought some. We got on interstate 5 southbound. There was very heavy traffic. It took us over an hour to go 12 miles. We stopped outside Eugene for gas, then just south of Roseburg took Highway 42 west to Bandon, then Highway 101 south. Just south of Sixes we took Elk River Road (turns into Forest Road 5325). We found a spot to pull off around 22:30 and just put up our tents on the side of the road.

02 July 2011, Curry County, Oregon
Woke up around 7:00, packed up the tents and went scouting for a place to trap. There were not any options along the main road, so we settled on a spot north of the river on FR 5201, at the junction with FR 398, about 2.5 km SE of Mt. Butler. I set 60 traps around camp. Bryan set 30 up FR 5201 and 30 down FR 5201. The ~~is~~ habitat does not look great to me, but we (6)

29 June 2011 - trapline KCB-BSM #1

USA; Oregon; Clatsop County;
Wagner Ridge Road; 3 km East
of Jewell (junction Hwy 202/103)

45.9370~~0~~, -123.4545; 308 m; 500 m error

KCB-BSM #1

11:00-13:00-set 170 Shermans

Thinned primary forest with mature
conifers. Dense understory vegetation.

Devil's club, ferns, grasses, rose,
deciduous trees.

19:00-trap check, nothing

30 June 2011

6:30-trap check, 2 *Peromyscus maniculatus* (released)

1 *Sorex* (*menticolus?*) NK 21700

• 1 tick, some mites, 1 nematode, several cestodes

19:00-trap check

1 *Sorex*,

NK 21700/

01 July 2011

7:00-trap check, 3 *Peromyscus maniculatus* (released)

1 banana slug (released)

11:00-picked up traps, nothing

30 June 2011 - Trapline KCB-BSM #2

Oregon; Clatsop County; Cedar Cabin Spur, just North
of Wagner Ridge Road

45.9326 -123.4505 305m; WGS84, error 50m

10:00 - KCB, BSM set 45 Sherman traps along
spur road, N of Wagner Ridge Road.
Saw 1 *Tamias townsendii* run down base
of tree at road edge.

19:00 - trap check, nothing

01 July 2011

7:00 - trap check 1 *Myodes californicus* (released)

12:00 - picked up traps, nothing

2 July 2011, Coast Range, Curry Co., Oregon
did see a chipmunk on the side of
the road. It is mixed conifer, some
very dense. There is a lot of shrubby
undergrowth in the areas where
the trees are not dense. My traps
are along FR 390, at the top of a
dense forest, or at the base of a
rocky slope. I also set 15 along
a gravel ridge with some trees
and no undergrowth. We finished
setting those 120 around ~~13:00~~ 12:00.
Then we drove south on FR 520 a
little ways and set ~~45~~ 45 traps
near mile marker 20, then down
about another mile we set 20 on
a mossy/rock outcrop with a large
stump downed. I saw some sciimid
sign, something is eating the pine
seeds.

At 19:00 we checked traps, we had a
few *Citellus* and 1 *Sorex* (NK 217003).
The shrew was along FR 390 at the top
of a slope with a dense conifer forest
and shrubby growth along the edge.
We pupped the shrew (it had castrodes)
ate, and went to bed

03 July 2011 Oregon, Coast Range, FR5201

Got up around 6:40 and checked traps.

We caught Peromyscus maniculatus on every trap line. I caught one Myodes californicus near camp. Bryan caught 2 Tamias townsendii along a rocky slope next to the road. The slope is kind of mossy and has a few small conifers and rhododendrons. I

checked for ectos, they had mites but no lice.

Both had H. cucullatum in the LI/C.

I preserved all parasites in 70% EtOH then liquid nitrogen. I also caught and released a Neotoma cinerea near the fog on the side of the road at the southern most site.

~~Re~~ After prepping, checked traps at 12:00.

the trapline near camp (KCB-BSM#1), released 5 Peromyscus maniculatus and kept 1 Tamias townsendii (NK 217006). Chipmunk was along edge of FR 390 at the base of a densely forested rocky slope with small trees and shrubs at

the base. On the trapline 3.5 km SE of Mt. Butler (KCB-BSM#2) I caught 1 chipmunk in a wet, closed canopy forest with little understory but some ferns and lots of moss. Maybe a T. siskiyou ^(NK 217007)?, recorded

as Tamias townsendii but stripes around the eyes seemed lighter than the others. It had mites, no lice, 1 Heteroxynema and 1 cestode.

03 July 2011; OR; Curry County; Coast Range; FR5201, continued
NK217006 had both ♀ & ♂ Heteroxynema. So far
none of the chipmunks had lice, but had mites
on the fur on the hindquarters, and some
had mites in the ears.

Yesterday was clear with highs probably in
the upper 70's°F to low 80's°F. It cooled off
quite a bit when the sun went down,
but was still clear. It probably got down
to the low 50's°F but maybe even upper
40's°F. I woke up around 4:00 this
morning when I felt a drop on my face.

I got up to put the fly on my tent
then realized it was just condensation
in my tent. It was very foggy out. I
went back to sleep. It was still foggy
when we got up around 6:30. The fog
burned off by 10:00. After that it has
been clear, very hot in the sun, but
probably low 70's°F in the shade.

We checked traps again at 19:00. There
was nothing. We made dinner
and went to bed. The evening was
once again cool and clear. Both nights
there were a few bats flying
around camp as we went to bed.

02 July 2011 KCB: BSM 1

USA: Oregon, Curry County, Coast Range,
FR5201, 2.5 km. SE of Mt. Butler

42.7524, -124.2415, 672 m

error 500 km

14 pm
1 mc

10:30 - set 120 Shermans along FR5201 and FR390
kind of dense conifer forest

19:00 - trap check, 1 Sorex

NK 217003

03 July 2011

6:40 - trap check, ~~#~~ 22 Peromyscus maniculatus (released)
1 Myodes californicus (released)

2 Tamias townsendii ♀

NK 217004 (msB voucher) DZTM 1601 (tissues only)

4 Heteroxynema cucullatum ♀ 70% EtOH/FZ
no lice, had mites

NK 217005 (tissues only) DZTM 1602 (DMNS voucher)

2 ♀ 1 ♂ Heteroxynema cucullatum, 70% EtOH/FZ
no lice, had mites

12:00 - trap check 1 Tamias townsendii ♀ DZTM 1603 (tissues only)
10 ♀, 3 ♂ Heteroxynema; 2 large segmented nematodes(?)
mites, no lice

5 Peromyscus maniculatus (released)

19:00 check, nothing
04 July 2011

10:00 - pulled traps, 9 Peromyscus maniculatus (released)

1 Tamias townsendii (DZTM 1605
NK 217009)
Heteroxynema, no lice

02 July 2011 KCB: BSM #2 → 45 Shermans
OR: Curry County, Coast Range, FR5201, 3.5 km SE Mt. Butler

4 P.m.
42.7411, -124.2428; 593 m
19:00 trap check - nothing

03 July 2011

7:00 - trap check, 7 *Peromyscus maniculatus* (released)
12:00 - trap check, 1 *Tamias townsendii* (7) DETM 11604 (voucher)
WK 217007 (tissot)
1 ♀ *Heteroxynema*, 1 cestode
mites, no lice
19:00 - check, nothing

04 July 2011
10:00 - pulled traps, 2 *Peromyscus maniculatus* (released)
1 *Tamias townsendii* ♂ (WK 217009)
1 mouse
3 *Heteroxynema* ♀

02 July 2011 KCB: BSM #3 → 20 Shermans
OR: Curry Co.; Coast Range; FR5201 4 km SE Mt. Butler
42.7419, -124.2499; 481 m
19:00 trap check, nothing

03 July 2011

7:00 trap check, 5 *Peromyscus maniculatus* (released)
1 *Neotoma cinerea* (released)
12:00 trap check, nothing

04 July 2011

~~10:00~~^{10:00} - pulled traps 2 *Peromyscus maniculatus* (released)
1 *Neotoma cinerea* (released)

04 July 2011 OR: Curry Co.; Coast Range

We got up around 7:30. I hadn't planned on sleeping so late, but since we weren't picking up traps early it was okay. Made coffee, then I picked up my traps at the top of the slope with the dense forest around 8:30. At 10:00 we picked up the rest of the traps. Bryan caught a chipmunk at the rocky slope next to the road near camp and I caught one farther down in the same place as the day before, the closed in, wet forest at the base of a rocky hill. We went back to camp and pupped those two animals, then packed up and left around 13:00. There was a good country station we got almost all the way back to Roseburg (94.5 FM). We stopped in Bandon and put our feet in the water. It was Bryan's first time at the Pacific Ocean. Then we went to a crab shack for lunch, and were back on Hwy 42 towards Roseburg around 3:00. We took interstate 5 south to Ashland. We took Tolman Creek Road towards Mt. Ashland. At the boundary for the National Forest there were signs saying no overnight camping. After some discussion and investigating the commercial campground in town I decided to just get a hotel (10)

04 July 2011, Mt. Ashland, continued
room. We drove back to the forest and set
2 traplines of 50 traps each. The
first was in an area that had been
very thinned, there wasn't a lot of
undergrowth but there were a lot of
downed logs. I saw some squirrel
sign, but not much. The second trapline
was along either side of FR 2080-200
(which was gated off) right at the junction
with FR 2060, FR 2080-600, and an unmarked
road. The habitat was similar to
the first trapline, but there was more
understory, it had been longer since it
had been cut. Right at that intersection
there was a large circular pullout with
2 couches (1 a kid's). It was kind
of funny. We went back into Ashland
and got a room at the Roadway Inn
on Ashland Street, near the interstate.
We settled in and took advantage of a
shower and internet access. I wasn't too
sure about the habitat, but the records for
T. siskiyou were there. Ashland had fireworks
that night, but we couldn't see any, just
heard them. We went to sleep a
little after 11:00.

05 July 2011 Oregon; Jackson Co.; Base of Mt. Asl land.

We got up and left the hotel around 6:30.

We drove back up Tolman Creek Road

(FR 2080), then took FR 2080-600 to

the southeast. About 0.5 mi. past the

junction we saw chipmunks running

across the road so we stopped and set

traps. I put 20 Shermans along the

hill above the road and 5 in the

grass next to the road. Bryan set 25

Shermans along the road. The habitat

was mature conifers with some small

conifers and manzanita on the hill

and forest and grass on the other side

of the road. There were a lot of flowers.

Some were white on plants with large

leaves (~6 inches). There was also a

lot of ~~brush~~ paintbrush. Then we

drove up the road about 0.7 mi.

We passed what looked like a nice

camping spot, and there were people

camping there. At ~~0.8~~ 1.2 mi. from

the junction we set out another

50 Shermans (25 on each side of the

road). The habitat was similar to

the previous site, there was no

paintbrush. We then went and checked

the two traplines we had set the night

before, it was about 9:00. Bryan caught

a chipmunk on each of those traplines. (12)

05 July, base Mt. Ashland, continued

We drove to the pullout near the second trapline (Four Corners is what the bicyclists were calling it) and set up to prep those two Tamias siskiyou. Bryan seemed to have some doubts, thought they might be T. senex. I called them T. siskiyou since that is what the records were for that area. We prepped those two and then went and checked the traps we had set earlier that morning, it was about noon. Bryan caught one chipmunk next to the road at the trapline ~0.5 mi. SE of the junction and I caught one at the trapline ~1.2 mi. SE of the junction. The campsite between those traplines had been vacated so we set up there to prep. While I was getting ready to prep Bryan saw a chipmunk running around so I set out 4 traps. Bryan made lunch for us then set 25 traps in the area while I started to prep. While he was setting traps I caught a chipmunk in one of the traps I had set. He came back and we prepped those three (♀ T. siskiyou). We finished prepping around 3 p.m. and went and checked the first 2 traplines. We caught 2 more chipmunks⁽¹¹⁻²⁾, so went back to the (13)

05 July OR; Base Mt. Ashland, continued
campsite to pup. While we were
pupping there were several Douglas
squirrels running around. The habitat
there was similar to the others, with
less herbaceous growth and very few
flowers. At about 6 p.m. we finished
pupping and went and checked traplines
3 and 4. I caught one chipmunk and
a lizard on TL-3 and Bryan caught
2 chipmunks on TL-4. We went
back to the campsite and Bryan picked
up the traps there. There were 3
chipmunks, so he checked the sexes, there
were 2 males and a female. Since
the 2 he caught on TL-4 were females,
we kept the two males and he went
back to TL-4 and released the
females. We finished pupping a little
after 8 p.m. and packed up the pup
gear and went back to the hotel.
Since it was getting late and had been
a long day, I decided we could pick
up traps in the morning. Bryan bought
us Taco Bell for dinner. At the hotel
room I tried to get caught up on data
sheets. Google Earth for the area is not
very good, so I had to use the forest
roads and junctions for specific
localities. Went to sleep a little after 10. (14)

There was
a gopher at the
campsite we
saw it coming
up and
moving dirt.

06 July 2011 Oregon; Jackson County

We left the hotel around 7:00 a.m. and went back to the forest to pick up traps. We had caught 8 more chipmunks, 1 Myodes, and a few Peromyscus, all released. We got gas in Ashland and left town around 10:30. We took Interstate 5 north to Medford, then Hwy 62 (Crater Lake Rd) north east. Once we entered the national forest there were really nice forests along the road with large fir, hemlock, pine, and some cedar. We drove up road 68 to the west. Once we left the main highway the forest changed and the landscape was much hillier (steeper). We decided to go back and try a road to the west from highway 230, (Bybee Creek Road). We drove up the road a bit and found a site that looked good for camping and trapping. We kept driving and saw a chipmunk in the road in an area with smaller conifers ($\leq 10m$) and shrubs. We went back to the campsite which was pretty open with large hemlock, fir, spruce(?), and pine and lots of downed logs. We set out 155 Shermans around camp and up and down the road near camp, it was about 1:30 p.m.

06 July 2011 OR; Jackson Co; Bybee Cr. Rd.; continued

At 3:30 we drove about a mile up the road from camp and set another 50 Sheermans on either side of the road. The habitat there is different, fewer tall trees, rocky ground and a lot more shrubs. Back at camp I got all the data sheets from the last site caught up and Bryan took a nap.

I had seen lots of squirrel sign and some elk droppings while I was setting traps. I heard a weird animal noise SE of camp. I saw some legs back in the trees, I am pretty sure it was an elk. Around 6p.m. I started hearing Douglas squirrels. Bryan and I decided to wait until morning to check the traps. ~~to~~

At the last site it was warm during the day, but probably never got out of the 80's. At night it got down to the mid 50's. Here (Bybee Cr. Rd.) it was really hot (and there are mosquitos!) when we arrived and set up traps, probably in the mid-90's.

Our campsite is on Bybee Creek Road, 1.9 miles east of Highway 230, 17 km west of Crater Lake. As we were going to bed I heard something walking in the woods, probably an elk.

Bybee Cr. Rd.

07 July 2011, OR: Jackson Co.; 17 km W of Crater Lake

We got up a little before 7:00. Some time early this morning (maybe 4ish?) there was thunder to the east and the south.

It was clear here, but Bryan said he saw flashes of lightning. It was pretty warm last night, probably in the low to mid 60's. We had coffee (or tea in Bryan's case) and went to check traps a little before 8.

We saw something near camp, I think it was probably a golden-mantled ground squirrel. While I was out checking traps I saw 2 chipmunks.

I caught 3 *Peromyscus maniculatus* ^(released) and one *Tamias sorex* ^(NK 217020 ♀, embryos; heterozygous) on my traps near camp, Bryan did not catch anything.

On the traps 15.5 km W of Crater Lake (about 1 mi. E of camp) I caught 1 *P. maniculatus* (released) and Bryan caught ~~the~~ 1 *Peromyscus maniculatus* ^(sub-adult, released) and 1 *Tamias sorex* ^(DZTM 11618 ♂; heterozygous).

After pepping, we checked traps again, around 11:15. By then it had already gotten pretty warm, low to mid 80's. On the traps near camp (17 km W of Crater Lake) I caught one *P. maniculatus* (released) and 1 *Tamias sorex* ^(NK 217022 ♂, pinworms).

Bryan caught 2 *Callospermophilus lateralis* (released) and 1 *Tamias sorex* ^(DZTM 11620 ♂, lice, pinworm). On the trapline

15.5 km W of Crater Lake I caught 1 *C. lateralis* (released) and several of my traps were closed. (17)

12
06

07 July; OR: West of Crater Lake; continued

I was glad I was able to get some lice off one of those chipmunks, it has been hard to do out here. It is frustrating because over half of the chipmunks have had nits, but I haven't gotten very many lice.

After prepping those two chipmunks we ran in to Prospect for supplies. It is kind of a funny little town.

We came back and went straight to the second trapline (15.5 km W of Crater Lake). We figured those were the traps most likely to be in the sun. We didn't catch anything. While in Prospect I sent some coccidia samples to Scott Swille in Casper. I have been putting the pellets in a little water in a vial with a wet kimwipe. I sent them priority mail, hopefully they will be okay.

At 19:00 we checked all the traps. I caught one chipmunk (NK 217025)^{02TM1622} and Bryan caught one (NK 217024)^{02TM1621}. Both were pregnant females. I thought it was kind of late in the year for that.

After prepping it was close to dark and we went to bed shortly afterwards. It was much cooler than the night before, probably down into the 40's. There was only a half moon but it seemed very bright to me.

There was a lot of gopher sign around. We heard Douglas squirrels, but I only briefly saw one.

There were flowers in bloom, some very small lupine and white irises. There was also a small whitish-pink fuzzy looking flower.

The gooseberry bushes had flowers on them as well.

08 ~~11~~ July 2011; OR: Jackson Co.; Bybee Cr. Rd

We got up and packed up our tents. We decided to wait until 8:30 to pick up traps. We went and picked up the 2nd trapline (15.5 km W of Crater Lake) first. I caught one male *Tamias sorex* (DZTM 1429) (NK 217027) on that trapline. Then we picked up the others. I caught and released 2 *Peromyscus maniculatus* and one *T. sorex* (NK 217028) (DZTM 1424). The second chipmunk was a female that had gotten hypothermic. Both of the chipmunks had pinworms, and the female had cestodes and the male had lice. We finished pupping and packed up, we were on the road by 11:30. Because we were in the area we decided to drive around the west side of Crater Lake. We took Hwy 62 to Crater Lake, then drove around the rim and stopped for a few pictures. There was still a lot of snow up there, which may explain why we were catching migrant chipmunks in July. It was very pretty. From there we took Highway 138 east to Highway 97, then north. On the east side of the Cascades it was much drier, as expected. While driving on 97 we saw a chipmunk run across the road, likely a least chipmunk. We took Highway 58 northwest to I-5, just south of Eugene, and went North. At the Woodburn exit we took Highway 214 west to Highway 211. At Estacada, on the Clackamas River we went southeast on Highway 224. About 10 miles from Estacada we took Forest Road 4610 up into the Mt. Hood National Forest. We then went southeast on FR 4611 (Winslow Creek Road) 5.2 miles past the intersection with FR 4610. It was getting kind of late, around 8 p.m. (19)

08 July 2011, Oregon, Continued (Clackamas Co.)
FR 4611

I saw a cornsite to my left, there were not very many along the road. So I backed up to check it out. Doing so, I put the right rear tire off the road, which happened to be where a muddy drainage ditch was. Despite our efforts with 4 wheel drive, putting rocks under the tire, and attempting to use the jack, we could not get out. Fortunately I had cell phone service. I called and got a number for Clackamas River Towing, and then called and described where we were, they sent someone out. Because the road markers were illegible, I thought we were still on FR 4610, I thought we had stayed on the main road. After a few phone calls back and forth the tow truck driver found us and told me we were on FR 4611. They pulled us out (\$273) and left. While waiting for the tow truck I set out 25 traps and Bryan set out 60. We got to bed around 10:30. ^{09 July 2011} I got up around 6:30 the next morning and set out another 75 traps, Bryan set out 15. Then we had to go into Estacada for water. We went back to camp and checked traps around 11. I caught one deer mouse and Bryan caught a Douglas squirrel, both released. Then we drove up FR 4611 about 2.5 miles and set ⁵⁰ traps in an area that had recently been cut, I would guess within 5 years. We went back to camp and then checked the traps there at 6:30, nothing. At 7:00 we went up to the cut site to check traps, still nothing.

09

~~08~~ July 2011, OR: Clackamas Co.; FR4611, continued

There should have been Townsend's chipmunks at that site, but we hadn't seen any. On my trapline near camp there was some black bear poop that looked

pretty fresh. There were also several large burrows, which I think was Aplodontia, and they looked active.

There were deer tracks and a dead garter snake along the side of the road. We heard some birds, mostly Thrushes (Swainson's?) but only saw juncos and jays flying over once. There must have been a firing range down the hill north of camp because we heard gunfire all day. The forest was fairly dense, pretty much a closed canopy of fir and cedar, with some maple and alder. There was holly, fern, bracken, lots of downed and decaying logs with moss. Some areas the ground was covered by claver. On the 8th we went to bed around 10:00, the night before had been pretty cold and during the day it did not get much above 70°F. The night of the 8th it did not feel quite as cold, maybe low 50's °F.

10

~~09~~ July 2011

We got up a little before 7:00 and had breakfast. We started picking up the 175 traps near camp at 9:30. I caught 2 deer mice and Bryan caught nothing. At 10 we packed up the truck and drove up to the cut site. There was a mudpuddle pond there with at least 2 salamanders in it, less than 20 cm long. I caught one deer mouse and Bryan did not get anything. My very last trap was in an open area with a large stump turned on its side. There was a chipmunk sitting about one foot from my trap. I stood there and watched it, for about 3 minutes before Bryan came up and it spooked and ran into a burrow. So, this was the second site we got skunked for T. townsendii. We hit the road around 11:00. (21)

10 July 2011 - Oregon, continued

We drove back out and took Highway 224 northwest to Interstate-5 at Clackamas. We had lunch and then I took Bryan in to Portland so he could pick up a rental car to drive to Colorado. I was picking up Randle McCain at the airport at 5, so I did some grocery shopping then hung out near the airport until he arrived. We were back on Interstate 5 going south by 6. At the Eugene/Springfield exit we took Highway 126 east towards McKemie Bridge. We stopped at Rainbow for gas and water, then continued east to Hwy 242 (McKemie Hwy). At the junction there was a sign that said the snow gate was closed 11 miles ahead. I couldn't tell for sure, but I thought the site I wanted (Lane County; Scott Lake) was further than that. The gate was closed at the Lower Alder Springs Campground, still a ways from the site I had chosen because there are records for both *T. senex* and *T. siskiyou*. It was dark, almost 10, and the campground was free, so we decided to sleep there and see what it looked like in the morning. After we went to bed some cars pulled up and set up camp, there had been only one other car in the campground.

11 July 2011, OR: Lane Co.; 2 km S of Two Butte

I woke up around 6:30 and checked out the habitat. I did not think it looked very good, but decided to make coffee and see if any chipmunks appeared. While I was waiting for the water to boil one came running through camp. So, I set ~~60~~^{out} 60 Sherman's just behind our camp site and Randle set 60 east of the campground, along the road, past the closed snow gate. The forest is dominated by tall Fir (~25-30 m) with an understory of maple. Randle's traps are right along the road, in the rocks on the north side of the road. The ground cover is a lot of holly, with some ferns, dogwood, and others. Randle also set 30 traps in the forest on the south side of the road, west of camp.

(22)

11 July 2011, OR: Lane Co.; 2 km S of Two Butte, continued

At about 1:00 pm we checked traps. Near camp we caught two Tamias siskiyou and behind the campground I caught one T. siskiyou (NK 217028-217030) and one Tamias townsendii (NK 217031). The T. townsendii was at the top of a little hill

near some moss covered rocks. Randle caught 2 T. siskiyou (NK 217032-33) ~~east~~ ^{near the road} of camp, and nothing on his trapline west of camp.

It took us a while to prep, and I was struggling with the species ID's for those chipmunks, I am still not 100% certain those are correct. At 6:00 pm we checked traps again. I caught 2 T. townsendii (NK 217034-35) and 1 T. siskiyou (NK 217037). Randle caught one T. townsendii (NK 217036) west of camp. We finished pupping, Randle made a fire, we ate dinner, and went to bed around 10.

12 July 2011, OR: Lane Co.; 2 km S of Two Butte

I decided to wait until 9:00 am to pick up traps, so we made coffee and packed up our tents. The day before had been mostly sunny, but not very warm. This morning was overcast and it rained a little off and on. When we picked up traps I caught 1 T. siskiyou (NK 217038), west of camp Randle caught 1 Peromyscus maniculatus and 1 Neotoma cirrca (both released) as well as 1 Sorex (NK 217146) and 1 T. townsendii (NK 217039). East of camp along the road he caught and released 2 P. maniculatus. The shrew was a light brown with no bi-colored tail and 3rd unicuspisid < 4th. We could not ID it. All of the T. siskiyou we caught were females, ~~pregnant~~ and most were pregnant. We caught a few male T. townsendii, but one of the T. townsendii females was also pregnant. We finished pupping, packed up, and were out of camp by 11:30. I kind of wanted to trap a nearby locality that should only have Tamias townsendii to confirm my species ID's. We drove around the road to Horse Pasture Mountain as well as the Cougar ~~Road~~ Dam Road (FR 19).

(23)

12 July 2011, OR: Lane Co.; continued

None of the areas had good spots for camping, and the trapping did not look very good either. I have gotten a little worried about finding spots to trap I. townsendii because I have not had much luck in the really wet forests, which this was. We decided to drive over to Deschutes County.

We took Highway 20/126 over Santiam Pass and down to Sisters. Once we got on the east side the habitat changed drastically. It is dominated by Ponderosa Pine and shrubs.

I think it is considered a shrub-sage steppe. We took Forest Road 16 (Three Creek Road) south out of Sisters.

There were a few spots along the road that looked good for camping and trapping, but there were already people camped there. The road climbs a little and leaves the creek. At the top of the hill we found a spot on the west side of the road at the top of a basalt (lava?)

bluff. At about 5:00 p.m. we set out traps. Randle set 60 Shermans at the base of the rocks east of camp and I set 30 at the rocks west of camp (ROM-KABE).

Randle set another 40 out in the forest and I set 90.

While setting traps I saw a chipmunk on a rock in the forest, so I set my trapline there. We had seen some golden-mantled ground squirrels around. After setting traps we set up camp and had dinner. At dusk some night hawks (or night jays?) came out and were flying around above camp.

13 July 2011, OR: Deschutes Co.; 7.5 km SE of Trout Creek Botte

We waited a little while to check traps in the morning, checked them around 8:30. We caught deer mice and Neotoma in the rocks and Randle caught a Tamias senex.

Out in the forest Randle caught 2 P. maniculatus and I caught 1 Callospermophilus lateralis (released) and one chipmunk.

The chipmunk seemed very small so I thought it was a juvenile I. senex. It turned out to be a lactating

Tamias minimus. The weather has been partly cloudy (24)

13 July 2011, OR: Deschutes Co; 7.5 km S of Trout Cr. Butte, continued
with a breeze. When the sun is behind the clouds it is a little chilly, but thankfully it did not get too cold last night. I decided we should check traps again around 1:00, I wanted to make sure that none of mine were in the sun. We caught and released 3 Callospermophilus lateralis and 1 Peromyscus maniculatus died in the trap (NK 217046).

We also caught 3 Tamias minimus (NK 217043-217045).

We checked traps again around 7:00 p.m. We caught and released 2 Callospermophilus lateralis and 1 Peromyscus maniculatus. After we had dinner some mule deer came near camp, 3 or 4 does and a young buck with velvet antlers.

14 July 2011, OR: Deschutes County

At 9:00 we began picking up traps. There were some interesting mammal tracks in the dust. One looked maybe like a skunk, the other was probably a weasel. I also saw snake tracks in the road. We caught and released 7 P. maniculatus and 1 C. lateralis.

We packed up and left camp around 10:00. We drove back to Sisters, then north and east on Highway to Interstate 5, then north on I-5. We stopped in Wilsonville for lunch, groceries, and gas, then continued north. At a rest stop in Washington (around mile marker 50) we got water and saw a chipmunk there. It looked too brightly colored to be T. townsendii, but nothing else is supposed to occur there, it was too big for T. amoenus. We got off on exit 68 and took Highway 12 east in Lewis County. At Randle we went southeast on Highway 131 to FR 16. We checked out several side roads and a campground near Cispus. We did not see any rocks or chipmunks and the people in the campground said they had not seen any. So, we went back to Randle and checked out Silverbrook Road. The forest roads there were washed out so we just went back to the interstate and north again. I decided to get a hotel room in Centralia, we got showers and washed our clothes at the Motel 6 there.

15 July 2011, Washington

After using the dryer at the motel we hit the road around 8:30. I decided we should try for J. townsendii on the Olympic Peninsula since it showed rocky spots on the map, and the best places we have caught them was near rocks. So we took I-5 north to Highway 101 at

Olympia, then north on Highway 101. Just north of Quilcune we went northwest on Lords Lake Loop Road to FR 2909. An unmarked road goes west, south, west, and north then dead ends at what looks like a rocky spot on the map. We did not see very good places to trap or to camp, so went back out to FR 2909, which I think

became FR 28, and continued northwest. There is a large gravel pullout about 3 miles southeast of the Mt. Zion (TL-1) trailhead. We set up camp there and I set out 60 traps

in the forest near camp, then another 20 down the road in the forest near a stream on the ~~west~~^{east} side of the

road and 30 in the forest on the west side (TL-2). Randle drove northwest on the road to set traps. He set 40 up on the hillside and 20 below there next to the road near rocks.

Then a little farther up the road he set 40 along the rocks on both sides of the road near the junction of FR 2909 and FR 2849. It took a little while, but we started setting traps at 12:00 and finished around 2:00. At about 4:30 it started to rain then rained off and on for the rest of the night.

It was pretty much completely overcast with varying levels of cloud/mist density. At 7:00 we checked traps and caught nothing. There is a little trail from camp off

to the northwest along a stream. It goes up to a small but very long waterfall. There are a lot of very small orangish beetles around camp that land on

everything. I threw a few of them in a vial with 70% ethanol so I can find out what they are.

It was still light when we went to our tents to read and go to bed at about 9:30.

(26)

16 July 2011, Washington; Clallam Co.; Olympic Peninsula,
FR 28, south of Mt. Zion; 47.8958, -123.0053, 822m

We got up and had coffee then checked traps at 8:30. On my trapline near camp I caught 1 Peromyscus keeni (released) and 1 Myodes gapperi (dead in trap, NK 217051). On my trapline near the road (TL-2), I caught and released 1 Zapus

trinitatus and 6 P. keeni. Randle caught 2 Zapus

trinitatus (1 dead, NK 217050), 1 Microtus longicaudus

(dead in trap, NK 217049), 1 Myodes gapperi (dead in trap, NK 217048) and

1 Tamias townsendii (NK 217047). The voles and mouse

had some mites and fleas, the Microtus had a nematode,

the chipmunk had no parasites, that I could find anyway.

At 2:00 we checked traps again, Randle caught a

banana slug, I got nothing. The forest here seems pretty

mature, but it has obviously been logged some time

in the past. There are tall (~20m) firs, maybe some

hemlock (?) and a few cedars. The undergrowth is

ferns, Rubus, dogwood, moss, lichen, and lots of small

green plants that I have no idea what they are.

There are a lot of downed decaying logs, mostly moss

covered. I haven't seen a lot of them, but there are

mushrooms around. It was raining when we got

up, then ~~clear up~~ quit around 10:00. It

kind of looked like it might clear a little bit, but

it did not. We went into town for ice. I wanted to

get some postcards but the gas station in Brinnon did

not have any. On the way back to camp we stopped

at a gravel dig out (shooting range) and set 20 traps

along the rocks on the top. At 7:00 we checked the

other traps, I caught 1 P. keeni (released) and Randle

did not catch anything. It did not rain again

all day, but stayed overcast. Both nights we could

hear frogs in the beaver pond north of camp.

17 July 2011; WA, Clallam Co; S of Mt. Zion

It did not rain all night, but was still overcast when we got up at 7:00. At 8:30 we started picking up traps. I caught and released P. keeni and Z. trinotatus on both lines. I saw a chipmunk on TL-2, on the east side of the road. Randle caught and released

one Z. trinotatus and got one Tamias townsendii (NK 217052). We went and picked up the traps around the gravel

scrape, Randle did not catch anything, I caught and released 2 P. keeni and 1 Z. trinotatus. I saw several large black slugs, which Randle had seen on one of his

lines. I was surprised to catch the Zapus up there; it wasn't close to any water that I could see. After snipping the one chipmunk and packing up, we left camp at 11:30. On the drive out we saw a grouse and a mule deer in the road. What I realized at this site is that Peromyscus keeni must have been elevated after Vets; Casaway's Mammals of Oregon was published; the mice we caught in the Coast Range, and on the west side of the Cascades were probably P. keeni and not P. maniculatus. In Quilcene we stopped at Logget's

hanging to get lunch and watch the U.S. Women play Japan in the World Cup. There were two women in the bar that said they saw chipmunks down at Cape Disappointment in Pacific County, down on the coast, on the Washington side of the

Columbia. There was also an older local man there that was telling me about chipmunks on the Olympic Peninsula. He told me there are a lot of chipmunks around the Boy Scout camp near Mt.

Walker. He also said there are a lot of them along Hwy 112 on the north end of the peninsula, particularly on the Makah

Indians Reservation. The U.S. Women's team lost the soccer match after extra time and a penalty kick shoot out. We left Quilcene around 2:30 and took Highway 101

back south to Interstate 5 at Olympia, then went north on I-5.

17 July 2011, Washington, continued

At Highway 512 we got off I-5 and took Hwy 512 east to Hwy 167 north to Highway 18 northeast. There was a lot of traffic on I-5. We took Hwy 18 to Interstate 90, then went east. It was overcast and raining off and on. We got off I-90 at exit 62 and took FR 54 west over Stampede pass. I thought it looked like there would be a lot of rocky areas on FR 50 to the north, so we checked it out. We saw 2 cow elk, but no chipmunks, no good places to trap, and nowhere to camp. So, we continued west on FR 54 to FR 52 to the southeast. On FR 5286 there were some rocks along the road. We did not see much else but it was getting late so we put out 114 Shermans on either side of the road and found a spot to camp up the road a little ways. It was still overcast but not raining. The vegetation under the trees was extremely dry. After setting up camp we went to bed around 10:30.

18 July 2011, WA; King Co.; FR 5286, Wolf Bearpaw Butte

We got up at 7:00 and realized we had no propane. So we had to drive to Cle Elum. We got back and checked traps around 9:30. We caught 6 *Peromyscus*. We went back to camp and I set 30 Shermans along the road and Randle set 40 west of camp. Then we went to see if there were any areas to camp up on ~~Stampede~~ Stampede Pass because we had seen 2 chipmunks on the road up there in the morning. On the way we stopped and set 20 Shermans (40 total) in the rocks on either side of the road under the railroad bridge. Up near the pass we saw 2 golden-mantled ground squirrels and found a potential place to camp, but I am not convinced the trapping would be any better up there.

18 July 2011; WA; King Co.; FR5280, W of Bearpaw Butte, cont'd

It was mostly clear into the afternoon, probably in the upper 60's °F. Around 3:30 some dark clouds rolled in.

The forest ~~area~~ here appears to be primarily used for logging, and maybe snowmobiling in the winter.

Most of the forest is dense secondary (or cleared) with fir (and/or hemlock?). There are ferns and moss on the

edges of the forest, but under the trees is very dry. In open areas there is grass, fern, strawberries, and clover.

Up on the pass the hillsides have lots of flowers in bloom; lupine, paintbrush, daisies, some kind of pea, and a pink flower that I do not know. Last night there

were a lot of night hawks flying around making a lot of noise. I don't know if it was them or another

bird, but there was another noise overhead that sounded like a whooshing quint. It was weird, I

don't remember ever hearing it before. Before we set traps yesterday we drove up FR 52 a little ways and

found a strange dwelling made of tarps with a cargo net hammock and an American flag on a pole.

We continued up the road for about a mile, but then the road was completely washed out. There were people

camping on the other side. At 6:35 p.m. we checked traps again, I caught 2 Tamias townsendii on

rocks ~~at the top~~ on the west side of FR5280, which was the top of a steep slope. We prepped these

two, made dinner, and went to bed.

19 July 2011; WA; King Co.; W of Bearpaw Butte.

We got up and packed up camp, then started picking up traps. We caught and released Myotis and

Peromyscus. Then we went to the east side of Stampede Pass and set 60 shermans on the road where we saw

chipmunks yesterday. We finished setting traps at

10:30, and went to a potential campsite we had seen

(30)

19 July. WA; King Co.; Continued

near a pond, on the south side of FR 54. Once we parked we realized the skeletons had gotten some mold on them. We doused them really well with 95% ethanol, then hung them under the hood of the truck with the engine running until they were dry. A suburban, actually 2, pulled into the campsite at noon. It was an outdoor high school leadership program from the Sea-Tac area. The group leaders asked what we were doing and if we were camping there. I explained the whole trapping thing and told them we weren't camping. They parked a vehicle there, they were going on a 4-night back-packing trip. There were about 10 or 12 students. The leader told me they were mostly first generation immigrants from the city. I got out some skins and explained what we were doing and why. It had been raining during the morning, but stopped around 11:30. At 1:30 I decided we should just pick up traps and go east. We went back to I-90, then to Cle Elum, and Highway 970 east to Highway 97 north. On that drive we saw a lot of beetle-killed trees. We took Highway 2 east to Waterville, then attempted to find some public land in the Badger Mountain area. There was no public land up there. We went to a farm on the west end of Baseline Road, right before the road turns left into Badger Mountain Road. The first person I talked to there was Rod, who told me there were a lot of chipmunks in his whop, and I could trap them, but it was actually his brother's place, so I should check with his sister-in-law in the house. Her granddaughter answered the door. I told her that we would like to ~~trap~~ trap chipmunks in the whop, so she went and asked her grandma. Apparently she was not very comfortable with it, so I told her I understood. (31)

19 July 2011; WA; Douglas County; S of Waterville, cont'd

I went back and talked to the guys in the shop. They suggested we go back east on Baseline Road and talk to Neil Petersen. At Mr. Petersen's house it took him a few minutes to answer, I almost left. He is an older gentleman, apparently a pilot, or something; he had a lot of plane and flying stuff in his yard. I told him that Rod had suggested we talk to him about potentially trapping and camping on his land. He really did not hesitate to give permission. There is a ~~very~~ very old, falling apart, cabin in a grassy meadow up Round Canyon on the northwest side of the road.

Mr. Petersen said we could trap and camp up there, but was doubtful there were very many chipmunks. He said there used to be squirrels, but he wasn't sure if they were still up there. I thanked him and told him we would stop by when we were finished. Behind the cabin

are some hills and a few patches of *Ponderosa* Pine. There is a spring with aspen growing along it. Outside of the meadow is predominately sagebrush, but there is also grass, roses, and gooseberries. I thought the area looked promising. Before it got dark we set traps, Randle set 34 on the hill SW of the meadow, and 50 about 150 m up the road behind the cabin. I set 95 along the road near the meadow and on the hill with rocks and a few pine trees north of the cabin.

20 July 2011; WA; Douglas County; Round Canyon

I woke up at 6:00 to the sound of a Douglas squirrel, so that answered that question. I got up and set another 25 traps near rocks on the hill, a little further past the line I set last night. Then I checked traps. I caught 7 *Peromyscus maniculatus* and 2 *Tamias minimus* (NK 217057, 217058).

I went back to camp and made coffee while Randle checked his traps. The two chipmunks I caught were under sagebrush, near rocks, on the hillside. Randle caught

(32)

20 July 2011; WA; Douglas Co.; Road Canyon; continued
two Tamias minimus (NK 217055, 217056) on the hillside SW
of the meadow. We processed those four animals, then
checked traps again at 10:30. Randle checked his on the hillside
and I checked mine on the road next to the meadow. I caught

3 Tamias minimus (NK 217062, 2 released), Randle caught 6
(NK 217059-217061, 3 released). We picked up all our traps,
on the hillside behind camp I caught and released 4
Tamias minimus and Randle caught and released another 4.

It took until 4 to process and pup. All the chipmunks had
lice, most had fleas, and 6 of the 10 had pinworms, I am
pretty sure at least some of those are Syphacia. I really hope
those are T. minimus griseus. By the time we packed up
camp and stopped by Mr. Petersen's house it was 5:00.

I told him we had seen and heard multiple Douglas squirrels, saw
some mule deer (at least one doe with 2 fawns) and that
he had a booming population of chipmunks. I told him
how much I appreciated his allowing us to trap and
camp. He generously gave us a bag of Prairie cherries, and
we left. We went east on Highway 2 to Coulee City. South
of there it really looked like what I thought should be
the channeled scablands. We went south on Highway 17, then
SW on Highway 28 towards Ephrata. It looks like one of the
T. minimus griseus records is from the Bangley Hills region of
Grant County. So, we drove around on the north side of the hills
and up to Monument Hill. All the land appeared to be
private, either agricultural or Nature Conservancy. At a
house along Baird Springs Road I stopped to ask about public
land. The woman directed me to Bill Sieverkropp on Road
16-NW, she said he owned most of the land in the area.
At the Sieverkropp place Bill told me he mostly sees
chipmunks on his land near Owen Road and P Road. He
said we could camp and trap up there. We drove up
the P road to a gated side road that goes along the field

20 July 2011, WA; Grant Co; N of Beezley Hills, cont'd.
to the top of a hill to the east. Besides the wheat fields, the habitat is very scrubby, with sagebrush, grass, and very few rocks. There is also a lot of bare ground with sparse, small vegetation growing. There is a fantastic view of the Cascades, we saw a great sunset. We got out 105 Shermans in the sagebrush, or along the edge of it before it got dark. I saw lots of evidence of rodents, holes and some pellets. I also saw what I think are badger burrows. It was clear and windy when we went to bed, we decided to sleep in the truck (one in the back seat + Randle in the bed) because the ground is very bumpy.

21 July 2011, WA; Grant Co; N of Beezley Hills

At 7:00 we checked traps. We caught and released Peromyscus maniculatus (27) and Perognathus parvus (9). Then we drove down to the Green Road and set out 80 Shermans along the side of the road in some sagebrush, grass, and even a few rosebushes. After that we set 40 traps along the P Road, just a bit south of camp. The morning was a little cool, probably in the 50's °F, with some clouds and a pretty good breeze blowing. By noon there were still clouds and wind, but it warmed up to the mid-to-upper 60's °F. When we checked traps at noon Randle and I each caught a chipmunk on our lines near camp (NK 217065 & 217066). On the traps along the P Road I caught 2 (NK 217067 & 217068), and we caught ~~one~~ none along the Green Road. I am pretty sure these are Tamias minimus griseus. I am also pretty sure the chipmunks we caught on the Peterson Ranch in Douglas County were Tamias amoenus, not T. minimus. Also, the ones we caught in Deschutes County Oregon, are T. amoenus. We checked traps again at 6:00 p.m. We caught two more Tamias minimus along the P Road (NK 217069 & 217070)

21 July 2011; WA; Grant County; N of Beezley Hills, cont'd

We collected bacula and bacubella for all of those chipmunks. I think two of the females were adults, but the rest of them are probably juveniles. It stayed partly cloudy and windy all day.

22 July 2011; WA; Grant Co.; N of Beezley Hills

We got up and released the mice and voles at 6:30. There was one Lemmiscus curtatus ^(NK 217071) dead in the trap. I had 2

Perognathus parvus that were hypothermic, but I was able to revive them both. I also had a slow moving L. curtatus,

but it bit me. I figured that if it was that feisty it would be fine. At 10:30 we started pulling traps, beginning

with the ones on the Owen Road then working our way back. I caught one T. minimus on the P Road (NK 217072),

and that was all. After prepping and packing up, we left at 1:00 p.m. We went back out to Baird Springs Road, to

Sagebrush Flats Road, back into Ephrata. Then we went east ~~west~~ (north east) on Highway 28 to Odessa, then north on

Highway 21. One of the records for T. minimus griseus is on Lone Pine Road in Lincoln County. It is a small

chunk of land near Swanson Lakes Wildlife Area, between Hwy 21 and Seven Springs Dairy Road. There was all private land

on that part of Lone Pine Road, so we went SE on Seven Springs Dairy Rd. There is access to the Twin Lakes Recreation Area (BLM), but it did not look very good on the north side.

There is another access point on the south part, right to Twin Lakes, off Coffee Pot Road. This spot has camping sites and a boat launch. We found a good spot between the two

Twin Lakes, on the west side of the camping areas and the boat launch sites. It is at the end of the road, at the top

of a small basalt cliff overlooking the western lake. There is a lot of exposed basalt, small cliffs. The vegetation is dominated

by sagebrush and grass, with some rabbit brush. There is dense, green vegetation along the shores of the lakes. We

set out 189 Shumans; 159 in the sagebrush and rocks

22 July 2011; WA; Lincoln Co.; Twin Lakes; continued
and another 30 along the side of the access road NW of the main camping and boat launch sites. We finished setting traps around 6:30. While we were settling in to camp a pick-up pulled up and a guy from Harrington, WA got out to visit with us. I cannot recall his name, but I think it was

Bill or Dave. He is a wheat farmer that came out here to fish.

We talked for a little bit about chipmunks and the area. He offered to give us fish if he caught any, but we did not see him again. It was very warm, probably in the mid-80's°F, and did not get cooler than 50°F overnight. I saw some turtles in the lake and red-winged blackbirds along the shore.

There were also a few cottontails running around. The night hawks came out at dusk.

23 July 2011; WA; Lincoln Co.; Twin Lakes

At 7:00 we released the Peromyscus maniculatus (24) and Perognathus parvus (11). After coffee and a left over potato ~~was~~ Randle made in the fire last night, I went into Harrington for water and ice. Before I left we saw a few cormorants fly overhead, and a few gulls. We also saw what looked like turkeys above the southern part of the east end of the west lake. On the way to Harrington I saw a bald eagle flying above the lakes. I also saw a burrowing owl on a fence post, on Coffee Pot Road, just east of the Twin Lakes access road. I haven't written much about the deer in Washington, but we see quite a few of them. Yesterday a doe and a fawn with spots (mule deer) crossed Hwy 21 in front of us. This morning I saw a doe along Coffee Pot Road just west of Harrington. At noon we checked traps; Randle caught and released 2 Peromyscus maniculatus and 1 Perognathus parvus. I caught and released 1 P. maniculatus near the road. I felt a pinch on my side while checking traps. I lifted my shirt and looked and a red tick was biting me. I gave out a little yelp and flicked it off. My first ever tick bite, and it looks like it got two bites in. While we were eating lunch we saw the bald eagle again. (36)

23 July 2011; WA; Lincoln Co.; Twin Lakes, continued

We checked traps again at 6:30 p.m., nothing. It was a little windy, but the sky was clear and it was in the lower or mid 80's °F.

24 July 2011; WA; Lincoln Co.; Twin Lakes

We got up at 6:30 and released the *Perognathus* and *Peromyscus*. After packing up camp and having coffee, we picked up traps at 9:30. I was kind of surprised we did not catch any *Neotoma*, I saw some of their pellets near the rocks. There is a sign at the boat launch warning of rattlesnakes in the area. We did not see any, but yesterday we found a piece of one that had been cut up on the grass in the main camp area. At 10:45 we left, heading for Spokane. We took Coffee Pot Road to Harrington then Highway 28 north to Highway 2 east. In Spokane we had lunch and got groceries. We were going north on Highway 2 by 3:00 pm. Before Newport we took Highway 211 north to Hwy 20, then Highway 31 north. Just a little south of Ione we went ~~west~~ east on Sullivan Lake Road. There were a lot of people at the lake. Randle spotted a road-killed *Tamiasciurus hudsonicus*. We stopped but it was in terrible shape, the skull was completely crushed, the fur was slipping badly, it was bloated, and there were fly eggs on it. At the north end of Sullivan Lake we took Sullivan Creek Road east. At 1.3 miles we found a nice campsite that looked like there was good chipmunk trapping nearby. It was a little before 6:00 p.m. When we started setting traps. Randle put out 70 Shermans east of camp between Sullivan Creek and the road. I set 60 ~~west~~ east of camp between the creek and the road. We walked just a little east of camp and I set 40 on the south side of the road and Randle set 30 on the north side at the base of a slope. It was mostly sunny and warm, probably upper 60's to low 70's °F.

25 July 2011; WA; Pend O'Reille Co.; Sullivan Cr. Rd.

At 6:30 we got up and checked traps. The sky was overcast but there was no precipitation. I caught and released 10 *Peromyscus maniculatus* and 1 *Zapus princeps*. Randle caught and released 5 *P. maniculatus* and 1 *Microtus longicaudus*. He also caught 1 *Sorex monticolus* (NK217073).

It rained a little off and on throughout the morning but the sun kept coming out, it probably got into the mid to upper 60's °F. At noon we checked traps again. I caught and released 1 *P. maniculatus* and 1 *Tamiasciurus hudsonicus*. I also caught another *S. monticolus* (NK217074). After pupping the shrew we drove up the road for a ways to see if there were any better places to trap. Nothing looked very different from where our traps are, so we did not set any more traps.

When we got back to camp the sun was out so we took turns bathing in the creek. It was very cold but refreshing. Around 3:30 p.m. it started raining again.

A few times there were bursts where the rain came down really hard. There was also a little thunder and lightning.

There was a pause in the storm at 6:00 p.m. so we went and checked traps again, we did not catch anything. The forest here looks like pretty good chipmunk habitat, mature cedar, fir, and hemlock, with a few small pine and spruce. Some of the forest is very dense, but there are a lot of spots that are more open. There are a lot of downed logs. The ground cover is grass, clover, moss, with other forbs. There are deciduous shrubs for understory. There are a lot of red squirrels around, but to me it does not look like bad chipmunk habitat. I had forgotten this was grizzly bear country. The Forest Service requires that you only camp in designated sites and use the food storage box or your vehicle for all attractants. I think this is the first time I have ever camped in grizzly country in the lower 48. It rained off and on all night.

26 July 2011, WA, Pand O'Raille Co.; Sullivan Cr. Rd.

At 6:30 we got up to check traps. Randle caught two shrews, but one was alive so we released it. The other was a Sorex monticolus (NK 217075). Other than those, we caught and released 17 P. maniculatus. The sky was completely overcast when we got up, but around 8:30 the sun came out a little. Yesterday when we were looking for places to trap we saw 2 white-tail deer. I only got a good look at one, which was a 4 point buck with velvet on his antlers.

At 10:30 we picked up traps, we caught and released 6 Peromyscus maniculatus and kept 1 Sorex (NK 217076).

Next, I wanted to go NE of Deer Lake in Stevens County, so we went S on Hwy 31, then SW on Hwy 20 to Colville. While we were in town a woman approached me in the truck and said she used to live in Santa Fe. She told me there are chipmunks out by her house, which was back east on Hwy 20, then north, near Little Twin Lakes. Since we had just gotten skunked at 2 sites in a row, I decided we should go check out the lakes. The campground there is a no fee site and there were only two of the sites occupied. I asked at a large family if they had seen chipmunks. The father said he had seen several of them around and asked why. I told him we were trapping them because I study them and their parasites. We decided to stay there. I put out 50 and Randle set 50 Shermans before it started raining hard and lightning. After the storm, Randle set another 30 and I set 40. Half of my traps were in the open spaces under near full canopy, with lots of ground cover and logs. The forest is cedar, fir, and hemlock. My other traps were set in more open areas, shrubby, with few large trees. At 7:30 p.m. (the first 50 traps had been set around 5:00 p.m.) we checked traps. I caught one Tamias puticandus (I think) (NK 217077).

27 July 2011; WA; Stevens Co.; Little Twin Lakes

At 8:00 we got up and checked traps. It was a clear sky and a little chilly. We caught and released 3 Peromyscus maniculatus and 2 Myodes gapperi. Two Sorex and 1 M. gapperi had died in the traps (NK 217080, 217081 (Sorex), NK 217079 (Myodes)).

I caught 1 Tamias ruficaudus (NK 217078) in one of the clearings. We processed those animals and then I set another 40 and Randle set another 40 Shermano.

The family I spoke to last night was interested in what we were doing, so I told them to stop by. They came over while we were pupping; the father and

his daughter Elena. They told us they had seen a moose by the water this morning and that there were wolf tracks on the road, which Randle and I later saw, I am pretty sure they are from a wolf.

Elena is 8, and very interested in zoology. She is bright and gets very excited about animals, she

was really in to the pupping process. While they were there we heard a trap close so I took them to check it. It was a trap on top of a log in a clearing

under a small conifer. There were two shrews in the trap, which we released. At 1:30 p.m. we

checked traps, 2 Sorex (released) and 1 Tamias ruficaudus (NK 217082). It stayed clear throughout the day, but

not too warm, probably in the 70's °F. There were a lot of red squirrels around. In the afternoon we

went into Colville, I took a wrong turn and we drove down roads that were "closed" but they weren't gated, we saw the signs when we came out.

We checked traps again at 7:00 p.m. Randle caught 1 Sorex (NK 217085) and I caught 2 Tamias ruficaudus

(NK 217083, 217084) just behind campsite #6, which was kind of open, but not as clear as the other places I caught them.

(40)

28 July 2011; WA; Stevens Co.; Little Twin Lakes
We picked up traps at 9:00. We released 7 Peromyscus maniculatus, 4 Myodes gapperi, 2 Zapus princeps, and 2 Sorex. We kept 3 Sorex (NK217086-217088) and 1 Tamias ruficaudus (NK217085). I found pinworms in some of the chipmunks, the adults. I only recovered one louse from an adult, then a lot of lice from the last juvenile we caught. Elena and her cousin Hannah stopped by again. Hannah and her family are from Yemen, they are spending the summer in the U.S. because of the civil unrest going on there right now, but her dad had to stay there. I was really impressed with Elena, she goes hunting with her dad and they practice survival skills, like finding quabs to eat. Elena has cystic fibrosis and had kidney cancer, but they removed one kidney and she is cancer free. I gave Elena my email and told her if she ever has questions or wants to chat about science to let me know. After supping and packing, we left at 1:00 p.m. We went back to Colville, then south on Highway 395. We drove NE on N Deer Lake Road, along Deer Lake. There are a lot of houses and vacation businesses on the shore of the lake, the entire shore. A few miles past the lake the road was gated and said it was private. We weren't in the National Forest yet, so we turned around. We took Grouse Creek Rd north and NE for a while, then Horseshoe Lake Rd NW. The habitat did not look very good and there was nowhere to camp, so we went east on Flavey Trail Road, which goes east out of Chewelah. After we crossed the summit we took FR 4347 SW. We drove up the road for 6 miles. There was only one decent camping spot and the trapping did not look great, but it was getting late. When we turned around we saw a chipmunk

28 July 2011; WA; Stevens Co.; FR4347; 5.5 km E of
Chelawah Mountain; continued

run across the road in a lightly forested, kind of meadowy
area. Randle dropped me off at the campsite we had
seen about 1.5 mi from Flawey Trail Road with some
traps. I set 60 traps along the edge of the road
and Randle drove back to where we saw the chipmunk
and set 80. The forest is very dense, with tall trees
(~20-30 m). There is hemlock, fir, cedar, spruce, and what
I think is larch. We finished setting traps at 7:00 p.m.
and set up camp in a meadowy (very small) area with
some cow poop, grass, and signs of people shooting
things. Like televisions. There ^{are} also quite a bit of
moose droppings, but they look old.

29 July 2011; WA; Stevens Co.; FR4347; 5.5 km E of
Chelawah Mountain

Because the habitat here does not look great, we picked
up traps at 10:00. It did not get too cold last night, it
stayed clear. There was a lot of moisture on the inside
of my tent when I got up. Randle caught and released
9 Peromyscus maniculatus and I caught and released
another 5. We left at 11:00. We stopped in Spokane
for lunch after taking 395 south. After lunch we
took I-90 west to Hwy 395 south from Ritzville to
Tri-Cities. From there we took I-82 south to I-84
east. South of Baker City we took Old Hwy 30
NW for about a mile to Ebell Creek Road south. When
that road reaches the Wallawa-Whitman National Forest
it becomes East End Rd, FR 11. About 2 miles from
the NF boundary we found a little clearing where
we could set up camp. I was hoping to find a
place on the edge of forest with rocks and sagebrush
nearby so we could catch both Tamias minimus and T.
amoenus. It was 9:00 p.m. so we waited until morning
to set traps. (42)

30 July 2011, Oregon, Baker Co.; East End Rd (FR11); 5.5 km
E of Dodley Mountain

At 6:00 we got up and set traps. I set 30 at the base of a small hill with rocky outcrops and a few Ponderosa pine and some gooseberry. Then I set 40 traps along the side of the road, I saw two chipmunks, both T. amoenus I think. Randle set 50 traps in the forest S of camp in mostly Ponderosa pine. We finished setting traps by 7:00 and while I was making coffee I saw several chipmunks running around near camp. There are several large burrows ~20 cm in diameter. They look like ground squirrel burrows but we haven't seen any. Using Vento and Canaway, my best guess would be Belding's ground squirrel. There are cattle in the area and there is a small creek running next to the road. The forest is dominated by Ponderosa pine with a few larch (I think) and small junipers. There are a few shrubs for understory, mostly gooseberry. The ground is almost completely covered by grass with some yarrow and other forbs scattered.

It was mostly cloudy when we got up, but then went to mostly sunny. All of a sudden I heard several chipmunks chipping from different directions as I was sitting here writing notes. Then a large hawk flew by. It did not appear to catch any chipmunks. At 9:30 we checked traps. I caught 6 Tamias amoenus (NK 217090-217095).

We started processing those chipmunks, but by 12:30 it was getting pretty warm so we checked traps again.

Randle caught 1 T. amoenus (NK 217099) and I caught 6 (NK 217096-217098, 3 released), so we picked up traps.

We processed all of the animals then put the carcasses on ice. Since Boise and a shower were so close we went to my sister's house there. We took I-84 to Boise, left around 4:00 p.m., Pacific time. (43)

31 July 2011 Boise, Idaho

Since today is a Sunday, I couldn't get more liquid nitrogen or talk to the Idaho Fish & Game Wildlife managers about where we would be trapping. We made skins and carcassed the animals from yesterday. I looked on an older Idaho map to find places to try and catch Tamias cratericus. According to that map we have access to BLM land east of Carey, in Blaine County. I suspect that the old map doesn't have the current boundaries of Craters of the Moon NP.

01 August 2011 Boise, Idaho

This morning I went to the Norco on Broadway, south of I-84. Since I did not have an account to charge it to and it was only 4 liters, they just gave us the liquid nitrogen. I also called the IDFG ~~office~~ regional offices to inform them of my trapping plans. I left a message for Randy Smith in the Magic Valley office about trapping east of Carey and I spoke with Tracey Anderson in the Upper Snake office about trapping in the Lost River Range and the BLM land near Howe. I decided that since that took most of the day, we could get groceries, stay one more night in Boise, then leave early tomorrow morning.

02 August 2011 Idaho

We left Boise by 7:00 a.m. We took I-84 ^{south} east to Mountain Home, then Highway 20 north and east to Carey. During the drive we discovered that where I wanted to trap east of Carey was part of Craters of the Moon National Monument. So I left another

02 August 2011, Idaho, continued

message for Randy Smith, telling him we would not be trapping in his region and spoke to Michelle Shropshire in the Upper Snake office about trapping in Howe on earlier dates than I had previously told them. I then realized that gophers are on the Idaho permit, but I don't have any gopher traps. We took Highway ^{20/}26/93 from Carey to Arco. Since it was on the way, we did the loop drive at Craters of the Moon.

At the entrance gate I asked about roadkill chipmunks. I was told they just scoop them off the road and to contact the Resource Manager, John Apel (sp?) [208-527-1350] about specimens.

Randle and I saw several chipmunks, I don't know what species, but they did not look like the gray *T. minimus* in the nearby sagebrush that I trapped last year. One of the chipmunks was in the brittle brush eating something, but I couldn't tell what part of the plant it was eating. In Arco we went to a farm supply store and the hardware store looking for gopher traps. Neither store carried them. So, we continued east on Hwy 20, then northeast on Highway 22/33 to Howe. We set traps ^{along} ~~near~~ the Little Lost River because the sagebrush is larger there (~1-1.5m) than other areas. It is about 9 miles north of Howe, 12.8 km SW of Saddle Mountain. We set 70 traps in the sagebrush and juniper near the river. Then we went up Box Canyon, 8.6 km SSE of Saddle Mountain and set 90 traps in the vegetation along the base of the rocks. There are very small shrubs and a few pines and junipers next to the rocks. Then we went to my mom's house, which is NE of Howe, 12.3 km S of Saddle Mountain.

(45)

02 August, ID: Butte Co.; near Howe, continued

The traps were all set by 3:30 p.m. There is an irrigation ditch on the north and west sides of my mom's yard, with really ~~big~~ tall grass. We set 40 traps on the edge of the yard, I was hoping we could get some *Microtus*.

03 August 2011, ID: Butte Co.; near Howe

At 7:00 a.m. we checked traps around the yard.

We caught 3 *P. maniculatus* (NK 217103, 217104, 1 released).

Then we checked Box Canyon; 3 *P. maniculatus* (NK 217100, 217101, 1 released). We checked the river traps last. On that line

we caught 14 *P. maniculatus* (NK 217102, 13 released) and 3 *Perognathus parvus* and 1 *Dipodomys ordii* (all released).

We processed the 5 mice, all vouchers were assigned as DZTM's, but we took tissues for MSB as well. I

don't have a copy of MSB's Idaho permit, I'm not sure we have one, so I did trapping based on the DMNS permit. It was clear and warm in the

morning, through the afternoon. At 1:00 p.m. we checked traps again; we released 2 *Peromyscus*

maniculatus from the line near the house, that was all we caught. It got overcast and rained a

little in the late afternoon, then stopped.

04 August 2011, ID: Butte Co.; near Howe

We started picking up traps at 8:00, starting with the house line (1 *P. maniculatus*, released), then the river

line (7 *P. maniculatus*, 2 *P. parvus*, released), then the

Box Canyon line (2 *P. maniculatus*, released). I told my mom I wanted a site in the Last River Range with

forest, sagebrush, rocks, and, ideally, water. She

suggested Cedarville Canyon NW of Howe, on the east side of the range. We took the Little Last

Highway for about 11 miles north of Howe, then

went west on the Cedarville Canyon Road. (46)

04 August 2011, ID; Butte Co.; Lost River Range, cont'd

We went up the "Left Fork" of Cedarville canyon, which is what the locals call the main, or South Fork. Up there we set up camp and Randle set 50 traps along the forest edge and I set 60 in the sagebrush/cedar/juniper, including at the base of some rock outcrops. Then mom drove us up the "Cabin Fork", which is the right, or north fork of the canyon. There is a small spring that runs near the road for about the last 0.5 miles of the road. Randle set 60 traps along the hillside and at the base of the hill. I set 20 in the trees on the NE side of the meadow and 40 traps along the edges of the stream. Trapline 1 (the 110 traps near camp, the South Fork of Cedarville Canyon) is near spruce, but mostly under sagebrush, cedar, and mahogany. There is really no sign of cattle, and we heard that there is a lot of bear activity in the area. Trapline 2 (the 80 traps under trees, up the Cabin (or north) Fork of Cedarville canyon) are under mature spruce and fir. There are some downed logs and very little ground cover of grass and forbs. There is some common juniper. Trapline 3 (the 40 traps near the stream) are set under mostly bluebells, but also some larkspur, columbine, grass, and stinging nettle. It got a little overcast but did not rain in the afternoon. All of the traps were out by 4:00 p.m. At 7:00 p.m. we checked the traps near camp, TL-1. I caught 7 Tamias amoenus (NK 217165-217167, 4 released), mostly at the base of the rock outcrops near mahogany, but a few (2) were under sagebrush. We processed the animals but put the carcasses in the ~~box~~ cooler. It started raining around 10:30 p.m., and rained off and on all night.

05 August 2011, ID: Butte Co.; Lost River Range,
Cedarville Canyon

At 6:00am we went over to the Cabin Fork to pick up traplines 2 and 3. My step-dad drove us up there and thankfully found 2 Sheermans that had bounced out of the pick-up yesterday. On TL-2 Randle caught 1 Tamias amoenus (NK 217114) and I caught 1 Peromyscus maniculatus (NK 217118). On TL-3, along the stream, I caught 1 Microtus richardsoni (NK 217115), and 2 M. longicaudus (NK 217116, 217117). Then we picked up TL-1 near camp. Randle caught 1 T. amoenus (NK 217108), 1 M. longicaudus (NK 217109), and 1 P. maniculatus (NK 217110). I caught 8 P. maniculatus (5 released, NK 217111-217113) and caught and released 5 T. amoenus. We began processing after breakfast. At about 2:00 p.m. it started to rain. Then it also got windy. We finished up processing and put the carcasses in the freezer in mom's camp trailer. It was too windy and rainy for making skins. It rained until about 6:00 p.m., but then cleared up completely. I still decided to wait until tomorrow morning to finish processing. During the day we heard a red-tailed hawk, and saw two mule deer bucks (the deer were up Cabin Fork in the morning). We did not see much wildlife besides that. Last night there were a few bats right at dusk.

06 August 2011, ID: Butte Co.; Cedarville Canyon

In the morning we started defrosting the specimens then made some study skins. We packed up and were out of camp around 1:00 p.m. We took the Cedarville Canyon Road back to the Little Lost Highway, which we went NW on, then drove west over the Lost River Range on the Pass Creek Road.

06 August 2011, Idaho, continued

We saw one chipmunk on the east side of the pass and one on the west side. I don't know what species they were. We went to Mackay briefly, then back to Howe on Hwy 92 to 20, to 22/33.

07 August 2011, Idaho to Albuquerque, NM

We left my mom's house at 7:00 a.m., taking Hwy 22/33 back to Hwy 20/26, then Hwy 26 SE to Blackfoot. From there we went south on Interstate 15, all the way to Spanish Fork. Then we took Highway 6 east over Soldier Summit, to Price, Utah, then on to I-70 eastbound. Past Green River, UT we went southeast on Hwy 191 to Monticello, UT. We took Hwy 491 east into Colorado, through Cortez, CO and south to Shiprock, NM. Then we continued east on Hwy 64 to Bloomfield, then southeast on Hwy 550 to I-25 at Bernalillo. The interstate took us to Albuquerque. I did not record the total mileage, but it was well over 6,000 miles for the whole trip.