

Telemetry Lab Goals

1. Discuss animal handling issues and telemetry history
2. Get locations on stationary collars for triangulation
3. Interpret habitat use issues from telemetry testing and small mammal trapping

Animal Handling Information

Laws and Regulations for handling many species

Game / Non-Game animals

State DNR has authority over non-federal animals
(not ESA, or covered by treaty)

University issues – IACUC

Human safety

Diseases – Lymes Disease, Hantavirus, Rabies

Pets – don't set to catch them

When setting traps – you are responsible for animal's life

Check traps – regular interval

Avoid non-target species

Trail camera use – motion activated, digital cameras

Price range, considerations

Telemetry Lab Information

Began 1960's, Cedar Creek Natural History Area (UM-TC)

Types of information – Location and Mortality most common

Also heart rate, body temperature, activity

Types of collars (now)

VHF – Very High Frequency. Need to locate animal

100 – 300+ m accuracy

Triangulation

Aerial locations can be higher accuracy

Long collar life – 3 – 8+ years

GPS – Global Positioning System.

3 m accuracy

May need to recover collar to get locations

2 years or less collar life

Argos – also called PTT – Platform Transmitter Terminal

Collar transmits to satellite network

Satellite network data enables triangulation

1 km + accuracy

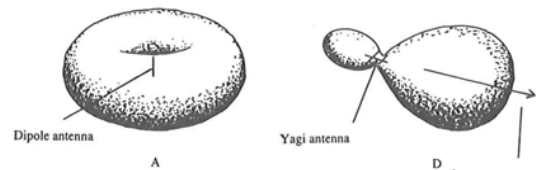
About 2 years collar life

Types of studies with different collars

Survival

Migration

Habitat Use



Trapping Lab Information

- Goals:**
1. Learn about different types of traps and animal handling
 2. Use a GPS to record locations
 3. Set a line of Sherman traps for small mammals

Some Trap types:

Live traps – Many have same basic conceptual approach of a box that animal goes into, and then a door that shuts. Variations in size and material in trap based on target animal.

Examples that we have today include a trap for lynx or bobcat, a trap that can be used for rabbits, snowshoe hares, skunks, marten or similar sized animals, and a Sherman trap for voles and mice.

Leghold traps: Jaws that clamp on leg (foot). Used for canids. Modifications. Why?

Snap traps: Typical mouse trap. Used for collecting specimens (teaching collection) or when study needs dead animals (Stable isotope, Energy content, Disease).

Bait: Usually a food item that is used to draw animal into trap

Lure: A scent that is an attractant. Example bottles are by the barn.

When handling animals, or doing fieldwork (vegetation measurements) you need to plan – don't want to drive for 2 hours and then discover you forgot a measuring tape, for example.

This is done for you in the lab, but if working in field on your own, lists and maps are essential, including planning ahead on creating a data sheet — don't freeform data collection on a sheet of paper in the field.

Trapping lab – In van or in the field next week -- Equipment / Initial Group Work

1. Break into your groups, take your traps and tool box
2. Inventory equipment / Familiarize yourself with it
e.g., set traps, test waypoints, etc.
3. Identify a leader and assign tasks – work through what you will do in field
Do this for both setting trapline and checking traps
Leader is the one indicated as “Responsible”
Assign Recorder (neat enough handwriting to read)
4. Begin setting your trapline – see below

Each group should have this as equipment inventory (provided):

Field Equipment List	Qty	Notes
Sherman traps	15	Select 15 traps from bin
Tool box	1	Equipment to carry on trapline
GPS unit	1	
Oatmeal/Potato bait mixture	1 bag	
Bedding	1	Put in Sherman traps
Flagging	1 or 2 rolls	1 extra
Flags	20	1
Latex gloves	1 bag	Use if want
Hand sanitizer	1	At end
Extra AA batteries	4	For GPS unit
Leather gloves/Black gloves	2 pair	Extra pair in most bins
Restraint bag w/ spares	1 + extras	Gallon Ziploc bag
Marking Sharpie	2	1 extra
Pens (not black)	2	1 extra
Clipboard	1	
Map / Air photo packet	1	
Trapline map data sheet	1	
Trapline data sheet	1	

What to enter on the data sheet

Date: Enter date mm/dd/yy

Team: Use first/last initials (e.g., RM, XA, FL)

Lead: Who is responsible on this line

Rec: Who is recording data

Line Trap line – A, B, C, or D.

TID Trap ID number

WP Waypoint for trap location. May be accurate to meters. Trap also flagged.

Status code	Species / Action	Common name
T	Tripped, nothing caught	
N	No action, bait not touched	
A	Action—bait eaten some, but nothing caught	
NAIN	<i>Napaeozapus insignis</i>	Woodland jumping mouse
ZAHU	<i>Zapus hudsonius</i>	Meadow jumping mouse
PELE	<i>Peromyscus leucopus</i>	White-footed mouse, Wood mouse
PEMA	<i>Peromyscus maniculatus</i>	Deer mouse
CLGA	<i>Clethrionomys gapperi</i>	Southern red-backed vole
MIPE	<i>Microtus pennsylvanicus</i>	Meadow vole
TAMI	<i>Tamias minimus</i>	Least chipmunk
GLSA	<i>Glaucomys sabrinus</i>	Northern flying squirrel

Trapline Setting -- Set a transect of 15 traps in an identifiable cover type near parking location

1. Get 15 traps ready to go (bait at truck)
2. Initial WP where park car – note on Trapline Data sheet, start drawing map
Fill in top fields on data sheet (e.g., recorder, people, GPS unit serial number)
3. Go to start of trapline, take waypoint, and mark with flagging where go off road
4. Set trap, Mark it with flagging on branch/stem
Don't do 3' Christmas tree decoration – big enough to see
Place flagging directly over trap, if not then make note in comments
Place flag at trap too
Place on trapline map
Take WP and put this on trapline map (separate sheet of paper)
5. Pace 10 m in transect direction and repeat setting trap protocol so 15 traps on this transect
Set 8 traps out and then 7 back

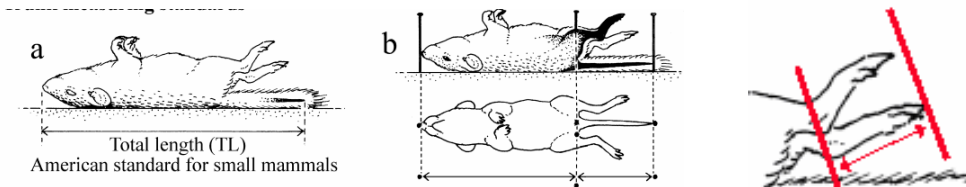
Trap Checking -- Check the previously set traps in the morning

1. Have trapline data sheet/map and appropriate GPS unit
2. Go to start point on transect
Fill in top fields on data sheet (e.g., recorder, people, gps unit serial number)
3. Work along transect – At each trap fill in data sheet with appropriate information

Caught Animal (if small such as vole, mouse, or shrew) –

1. Have gallon Ziploc bag ready
Open trap door to make sure animal at bottom
Tip up trap, holding door open w/ one finger (knock to get into bag if needed)
Weigh animal with spring scale while inside the handling bag
Hold with left hand in place in bag and scruff neck
Pull out and take measurements
2. Take measurements (length, tail length, hind foot)
3. Mark animal belly with Sharpie
4. Release animal

Measurement Techniques – body length, tail length, and hind foot length



Picture modified from image on www.loris-conservation.org/