

APPENDICES

Appendix No.	Description
VII.1 a&b	Larch Mountain salamander transect and habitat patch data form and code sheet.
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**Larch Mountain Salamander
Transect and Habitat Patch Form Code Definition Sheet**

1. Project Name: Record the project name or Survey Area.
2. Date: Record day, month and year (e.g., 05May 1998)
3. Page: Enter the page number for each completed data form. At the end of the survey, record the total number of pages in the space following "OF".
4. State: Record either Washington (WA) or Oregon (OR)
5. County: Record the County where the survey is conducted.
6. UTM: Record Universal Transverse Mercator coordinates, north and east, to nearest m possible.
7. Quad: Record the name of the U.S.G.S. 7.5 minute Quad map.
8. Legal Description: Record Township, Range, Section and 1/4 Section.
9. Transect/Patch #: Record the Transect or Habitat Patch that will be surveyed.
10. Patch A Dist.: This entry should be completed only for surveying Habitat Patches that are outside belt transects. Record the distance (m) along the transect to Habitat Patch.
11. Patch B Dist.: This entry should be completed only for surveying Habitat Patches that are outside belt transects. Record the distance (m) from the transect to Habitat Patch.
12. Patch Azimuth.: This entry should be completed only for surveying Habitat Patches that are outside belt transects. Record the azimuth from the transect to the Habitat Patch.
13. Size Length: Record the length of the Transect or Habitat Patch to the nearest m
14. Size Width: Record the width of the Transect or Habitat Patch to the nearest m.
15. Inter-Transect Dist. Record the distance between neighboring transects.
16. Comments: Record any notes on specific features of transect or patch, or location.

Larch Mountain Salamander Environmental Data Form Code Sheet

1. Surveyors: Starting with your name first, list the names of all people participating in the survey.
2. Page: Enter the page number for each completed data form. At the end of the survey, record the total number of pages in the space following "OF".
3. Project Name: Record the project name or Survey Area.
4. Date: Record day, month and year (e.g., 05May 1998)
5. Survey Number: Record which of the three surveys is being conducted (1,2 or 3).
6. State: Record either Washington (WA) or Oregon (OR)
7. County: Record the County where the survey is conducted.
8. UTM: Record Universal Transverse Mercator coordinates, north and east, to nearest m possible.
9. Quad: Record the name of the U.S.G.S. 7.5 minute Quad map.
10. Legal Description: Record Township, Range, Section and 1/4 Section.
11. Tran/Patch: Record the transect or habitat patch that is being surveyed.
12. T: Record the temperature to the nearest (°C). Transects will have a total of nine measurements (3 for each Cluster, A-C). Habitat patches will have three measurements (i.e., Cluster A).
13. M: Record the soil/substrate moisture condition (WET, MOIST, DRY). Transects will have a total of nine measurements (3 for each Cluster, A-C). Habitat patches will have three measurements (i.e., Cluster A).

**Larch Mountain Salamander (*Plethodon larselli*)
Animal Survey Form Code Definition Sheet**

Required elements are: 1- 21

1. Surveyors: Starting with your own name first, list the names of all people participating in the survey in a given Survey Area.
2. Page: Enter the page number for each completed data form. At the end of the survey, record the total number of pages in the space following "OF".
3. Project Name: Record the project name or Survey Area.
4. Date: Record day, month and year (e.g., 05May 1998)
5. Survey Number: Record which of the three surveys is being conducted (1,2 or 3).
6. State: Record either Washington (WA) or Oregon (OR)
7. County: Record the County where the survey is conducted.
8. Quad: Record the name of the U.S.G.S. 7.5 minute Quad map.
9. Legal Description: Record Township, Range, Section and 1/4 Section.
10. UTM: Record Universal Transverse Mercator coordinates, north and east, to nearest m possible.
11. Begin Time: Record the time the survey was started.
12. End Time: Record the time the survey was completed.
13. Weather last 24 hrs.: Describe the weather over the last 24hrs. (freezing temps, frost, rain, high winds, etc.)
14. Freezing Temperatures: Indicate whether there has been freezing temperatures during the past 72 hours. Record "yes" or "no".
15. Current Weather Conditions:

Skies	Clear, overcast, partly cloudy, drizzle, light rain, rain, snow
Temp.	Record the ambient temperature 1 m. Above ground (be certain to avoid direct sunlight when measuring temperature)
Wind	Calm, light, moderate, high
16. Transect Number: Record the transect that the animal is captured on.
17. Location: Record to the nearest meter the distance along the transect where the animal was captured.
18. Azim: If a habitat patch is surveyed outside of a belt transect indicate the azimuth from the transect line to the habitat patch.
19. Dist. If a habitat patch is surveyed outside of a belt transect indicate the distance from the transect line to the habitat patch to the nearest decimeter (10 cm).

APPENDIX VII.3b

20. Species: Use four letter code of latin binomial; first two letters of the genus and first two letters of the specific name. For example: *Plethodon larselli* would be recorded as PLLA.
21. Stage: Categories will vary among species, but will include the following: AD = adult, SA = sub-adult, JUV = juvenile

Optional elements are: 22 - 30

22. ID #: Assign specific ID #s to all animals retained as vouchers specimens.
23. Habitat: Con = conifer, DEC = deciduous, MIX = mixed con/dec, TALUS, CLIFF, STREAM, SEEP, SPZ = splash zone (e.g., an area adjacent to a waterfall where there is a constant misting or light spray), POND, BANK, OTH = specify in notes.
24. SVL: Snout-vent length is measured in millimeters (mm). It is defined as the distance from the tip of the snout to the anterior margin of the vent.
25. TL: Total length is measured in millimeters (mm). It is defined as the distance between the tip of the snout to the tip of the tail.
26. Microhab: Record the microhabitat where the animal was captured. BH = bark heap, RP = rock pile, ROC = rock outcrop, SNAG, Wood (see description under Cover Object), OTH = give detailed description in notebook.
27. Cover Object: Cover objects are defined as the object under which the animal was found.
ROCK: Grav = gravel; COB = cobble; Boul = boulder,
WOOD: Bark; Slab = non-round; Bran = <10cm dia. LOG1 = 11-25 cm dia.;
LOG2 = 26-50cm. dia.; LOG3 = 51-100cm. dia.; LOG4 = >100
28. Sur. Rock: Record if surface rock is present within the microhabitat where the animal was captured.
29. % Slope at level slope measured down aspect. Measurements should be taken over the longest distance possible. Do not include land of a different slope than that where the animal was captured.
30. Aspect: Cardinal directions and combinations (e.g., N, NE, S, SW)

**Larch Mountain Salamander
Survey Effort Form Code Definition Sheet**

1. Project Name: Record the project name or Survey Area.
2. Page: Enter the page number for each completed data form. At the end of the survey, record the total number of pages in the space following "OF".
3. State: Record either Washington (WA) or Oregon (OR)
4. County: Record the County where the survey is conducted.
5. UTM: Record Universal Transverse Mercator coordinates, north and east, to nearest m possible.
6. Quad: Record the name of the U.S.G.S. 7.5 minute Quad map.
7. Legal Description: Record Township, Range, Section and 1/4 Section.
8. Transect/Patch #: Record the Transect or Habitat Patch where the animal was captured.
9. Date: Record day, month and year (e.g., 05May 1998)
10. Size Length: Record the length of the Transect or Habitat Patch to the nearest m
11. Size Width: Record the width of the Transect or Habitat Patch to the nearest m.
12. Breaks: Record breaks from surveying (e.g., lunch, rests, consultations).
13. Begin Time: Record the time that surveying or breaks begin.
14. End Time: Record the time that surveying or breaks end.
15. Total Time: Record the total time spent surveying or on break.
16. End Location: Record distance (location) along transect (or patch) where survey ended for the day.
17. Completed: Record if the survey of the transect or patch was completed ("yes" or "no").

APPENDIX VII.5

Equipment list for performing surveys for the Larch Mountain salamander.

Equipment	Number (per crew member)	Use
compass	1	installing transects and determining aspect of survey sites and capture locations.
Flagging	several (3 colors)	marking transects and capture locations
measuring tape	1- 50 or 100 m	transect installation and measuring distance of habitat patches and capture locations.
String box (hip chain)	1	described above for measuring tape
Clinometer (optional)	1	measure gradient of site
Clipboard	1	hold data forms
pencil & markers	3 each	writing on data forms and flagging
thermometer	2	measure microclimatic conditions
garden trowel	1	dig soil pits to evaluate moisture
rulers (15 cm, optional)	3	measure captured animals
plastic bags	several	secure captured animals for measuring
rigid plastic container	2	hold retained specimens
water resistant paper	12 notebooks	record field notes
data forms/code sheets	complete sets	record field data
collapsible cooler	1	keep retained animals cool
field guides	1 or 2	aid in identifications
back pack (day)	1	carry field equipment and personal gear