2006 Final Report

Field Inventory of Habitat and Potential Occurrence for Six Sensitive Mollusk Species

(*Deroceras hesperium*, *Fluminicola* n.sp. 1, *Fluminicola* n. sp. 2, *Monodenia chaceana, Pristiloma arcticum crateris,* and *Vorticifex klamathensis*)

Lakeview Districts, Fremont Winema National Forests and Bureau of Land Management

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Fremont Winema National Forests
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Prepared for the Interagency Special Status and Sensitive Species Program
Portland Regional Office, Oregon

Abstract

A small number of molluskan field surveys have been completed for eastern portions of the Fremont Winema National Forests (NF) and the Lakeview District of the Bureau of Land Management (BLM) in Oregon. Surveys of springs, seeps and small water impoundments for sensitive mollusk species were initiated in 2005 by the Fremont Winema National Forests for selected areas around Chemult, Chiloquin, Silver Lake, Paisley and Bly. These surveys resulted in the collection of a number of uncommon or unexpected molluskan species, and prompted suggestions that surveys be continued in 2006 on National Forest and BLM lands further east. Survey work in 2006 on National Forest land was concentrated in the easternmost segments of the Fremont Winema National Forests, east of Lakeview, north and south of Highway 140. Survey work on BLM lands concentrated on areas to the west, northeast, and south of Adel and the Warner Valley. Half the 2006 collections were of taxa not previously collected during 2005 surveys, and several of these were new (undescribed) species. A significant range expansion is demonstrated for an R6 sensitive species, *Deroceras hesperium*, because of its collection from locations further east than previously recorded.

Acknowledgements

Funding for this work was provided by the Interagency Special Status and Sensitive Species Program, Portland Regional Office. Nancy Duncan (Roseburg District, BLM) served as Regional Mollusk Expert, providing prompt and courteous specimen identifications.

Personnel from the Fremont Winema NF (Tom Gorman, Jim Chambers, and Kathy Cushman) completed the field work, with additional field assistance provided by Terry Smith. Figure 1 (map of survey locations) was designed and completed by Tami Kerr. Sarah Malaby served as Field Coordinator. Jimmy Leal provided advice and maps that were critical to the Fremont Winema portion of the surveys.

Personnel from the Lakeview District, BLM (Todd Forbes, Alan Munhall, and Lucile Housley) provided advice, logistical assistance and maps that were critical to the BLM portion of the surveys.

The interest in and support of this field work by all involved is much appreciated.

Table of Contents

I. Introduction: Survey Purpose and Study Area

A small number of molluskan field surveys have been completed for eastern portions of the Fremont Winema National Forest (NF) and the Lakeview District of the Bureau of Land Management (BLM) in Oregon. One early inventory was completed for locations at Summer Lake, around Lake Abert, and at Foskett Spring (Taylor 1976). Molluskan species collected included mostly those known to be fairly common across western drainages, with one exception. A desert spring snail from Foskett Spring and other locations (*Fontelicella* n. sp.) was believed by Taylor to be a narrow endemic, and potentially quite rare.

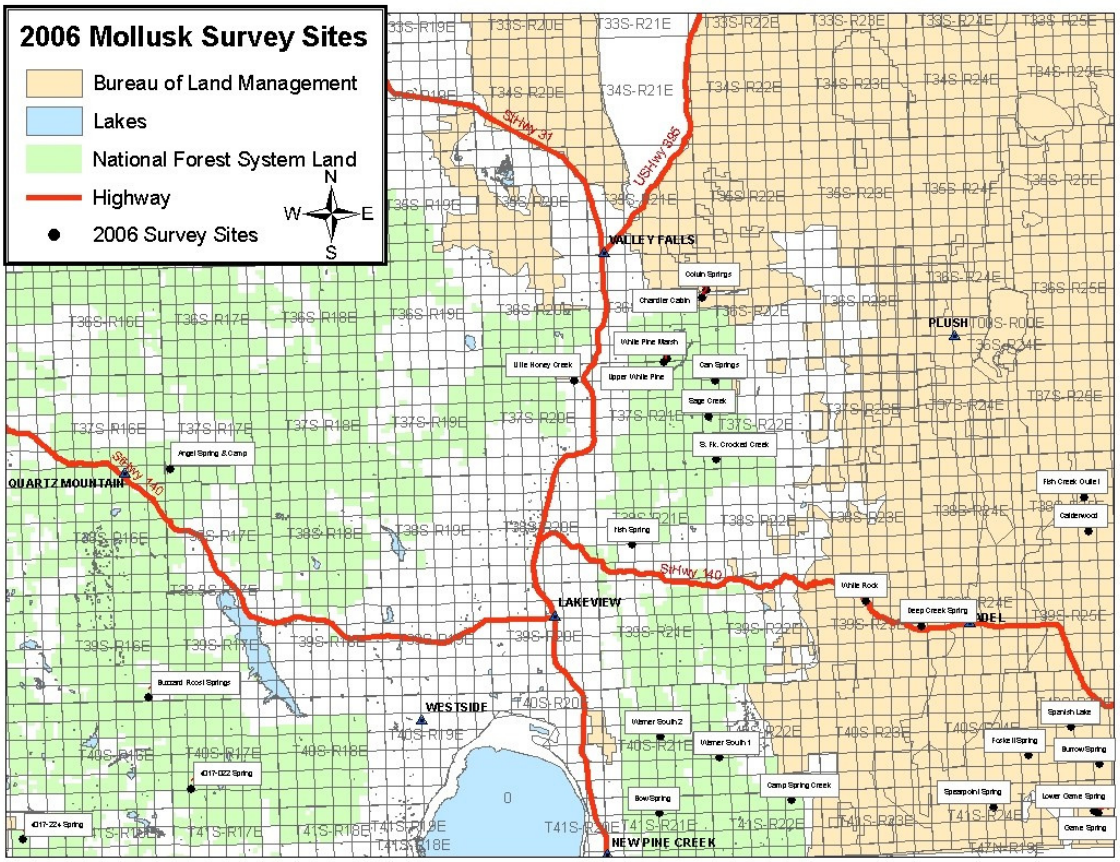
Another early field inventory on 'aquatic life' was conducted on the Lakeview BLM District, and provided background information for managers on temporary pond habitats (Hunter 1978). These studies focused primarily on waterholes, potholes and shallow lakebeds, areas having a limited amount or duration of water for organism growth and development. Most of the fauna observed in these habitats during these surveys were crustaceans and insects (Hunter 1978).

Subsequent surveys done for freshwater mollusks by T.J. Frest and E.J. Johannes (1996 and 1998) laid the foundation for recent federal agency surveys in drainages east of the Oregon Cascades. As noted by Frest and Johannes (1998) mollusk diversity in eastern Oregon drainages is generally high, with numerous regional endemic species, and several species with type localities. The relative abundance and variety of water sources and bodies varying in size, type, and integrity suggests that additional field surveys may continue to reveal information on the abundance and distribution of sensitive mollusk species.

Surveys of springs, seeps and small water impoundments for sensitive mollusk species were initiated in 2005 by the Fremont Winema National Forest for selected areas around Chemult, Chiloquin, Silver Lake, Paisley and Bly. These surveys resulted in the collection of a number of uncommon or unexpected molluskan species, and prompted suggestions that surveys be continued in 2006 on National Forest and BLM lands further east. Field inventories continued in 2006 to investigate areas not previously or recently inventoried for US Forest Service Region 6 Sensitive mollusks (*Deroceras hesperium*, *Fluminicola* n. sp. 1, *Fluminicola* n. sp. 2, *Monodenia chaceana, Pristiloma arcticum crateris,* and *Vorticifex klamathensis)*.

Survey work in 2006 on National Forest land was concentrated in the easternmost segments of the Fremont Winema National Forests, east of Lakeview, north and south of Highway 140. Survey work on BLM lands concentrated on areas to the west, northeast, and south of Adel and the Warner Valley (Figure 1).

Figure 1. Map: 2006 Survey Locations for Sensitive Mollusks in Lake County, Oregon.



II. Field Methods, Data Collection and Specimen Processing

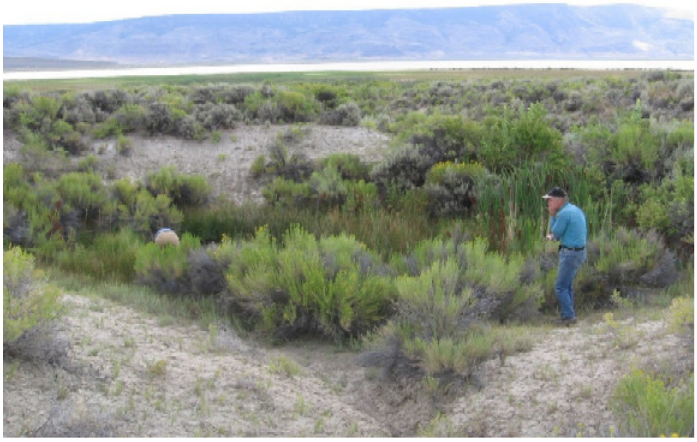
The 2006 field surveys were reconnaissance in nature, and were neither designed nor implemented to collect detailed information with statistical significance. The final identification of specimens resulted in a list of important species present at each site, and may provide some direction for prioritizing site importance.

Field surveys were completed in three increments: July 10-13, August 7-10, and September 25-27, and required a total of 30 person days in the field. Collection protocols followed Duncan et al. 2003 (Attachment A). Data sheets were drafted specifically for this work (Attachment B). A total of 27 locations

were sampled from July through September, covering approximately 22 acres (Attachment C).

Sampling locations were suggested by field biologists familiar with springs, seeps, riparian areas, and small water impoundments on the easternmost portion of the Fremont Winema National Forests (east of Lakeview), and on the Lakeview BLM District. A photo showing a typical sampling site is shown in Figure 2.

Figure 2. Representative site photo from a Lakeview BLM spring site: Foskett Spring, Lake County, Oregon



All mollusk specimens collected were processed according to protocol outlined in Duncan et al. 2003 (Attachment A). Sample preparation and data organization required 10 person days. On completion of processing, specimens were submitted to Nancy Duncan, Regional Mollusk Expert, for identification.

III. Results and Discussion

The 2006 survey efforts resulted in contributions to current knowledge about the diversity of molluskan species around springs, seeps and riparian areas on the Fremont Winema National Forests and Lakeview BLM District. Of 23 molluskan taxa collected, 12 of these (or about half) were also collected during 2005 surveys from areas to the west. Half the 2006 collections were thus of taxa not previously collected during 2005 surveys, and several of these were new (undescribed) species. Specimen identifications are listed in the Memorandum, Attachment D.

Although the Fremont Winema survey crew visited Foskett Spring (Figure 2) a *Fontilicella* specimen (referenced in Taylor 1976) was not collected. Of the six Interagency Special Status and Sensitive Species targeted by these surveys, one species, *Deroceras hesperium* (Evening field slug) was collected in both 2005 and 2006. *Deroceras hesperium* is listed by Oregon Natural Heritage Program as a List 1 species, that is "critically imperiled because of extreme rarity or because it is somehow especially vulnerable to extinction or extirpation". Fremont Winema survey efforts responded to Research and Inventory needs outlined for this species in a Conservation Assessment (Duncan 2005) by providing additional data on its geographic range as well as its range of habitat conditions. A significant range expansion can be demonstrated for this R6 sensitive species because of its collection from locations further east than previously recorded. All sites visited by the Fremont Winema survey crew were disturbed by livestock to some extent. Those springs or seeps surrounded by exclosure fences were generally less disturbed, but in every case, intrusion by at least one cow was evident. In spite of periodic failures (as evidence by trampling and dung deposits) exclosures serve an important protective function for spring and seep water quality and for the animals dependent on those conditions.

IV. References Cited

Duncan, N., T. Burke, S. Dowlan, and P. Hohenlohe. 2003. Survey Protocol for Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan. Version 3.0.

Duncan, N. 2005. Conservation Assessment for *Deroceras hesperium*, Evening field slug. Originally issued as Management Recommendations, February 1998, authored by Thomas E. Burke. USDA Forest Service Region 6 and USDI Bureau of Land Management, Oregon and Washington. 16 pp.

Frest, T.J. and E.J. Johannes. 1996. Freshwater mollusks of the Upper Klamath Drainage, Oregon. Yearly Report 1996, Prepared for Oregon Natural Heritage Program, Contract # ORFO 092094.

Frest, T.J. and E.J. Johannes. 1998. Freshwater mollusks of the Upper Klamath Drainage, Oregon. Yearly Report 1998, Prepared for Oregon Natural Heritage Program, and USDI Bureau of Reclamation, Klamath Project, Contract # ORFO 092094 and BuRec # 1425-97-PG-25-00903.

Furnish, J., R. Monthey, and J. Applegarth. 1997. Survey protocol for aquatic mollusk species from the Northwest Forest Plan. Version 2.0. Unpublished government document, Bureau of Land Management.

Hunter, C. 1978. A faunal survey of aquatic habitats in Lake County, Oregon. Work conducted for the Bureau of Land Management, Lakeview District, Oregon, by Southwestern College, Winfield, Kansas.

Taylor, D. W. 1976. Field report to L. Doughty, Lakeview BLM, November 12, 1976. University of the Pacific, Pacific Marine Station, Dillon Beach, California.

ATTACHMENT A

Collection Protocols for Mollusk Surveys on the Lakeview District of the Fremont Winema National Forests and Bureau of Land Management 2006

(Additional information can be found in

(1) *Duncan, N., T. Burke, S. Dowlan, and P. Hohenlohe. 2003. Survey Protocol for Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan, Version 3.0; and (2) Furnish, J., R. Monthey, and J. Applegarth. 1997. Survey Protocol for Aquatic Mollusk Species form the Northwest Forest Plan, Version 2.0*

and from

Nancy Duncan, Regional Interagency Mollusk Specialist, Roseburg BLM, 777 Garden Valley Blvd, Roseburg, OR 97470, 541.464.3338, nduncan@or.blm.gov

- How to Survey: The purpose of our surveys is to look in the most likely habitat types for any of our targeted species. (See habitat descriptions provided on our field guides for what appropriate habitats might look like). A good representation of all habitat types will be searched; that is, **sample areas within the delineated survey area.**

    - We will allow at least 20 minutes each for intensive searches of sample areas between ¼ and 1 acre in size within the survey area. Time spent in surveys will be proportional to the size of areas surveyed; start and ending times for sample areas will be recorded.
        - Habitats will be partitioned into different kinds of substrates where appropriate (different vegetation or soils for terrestrial species, different substrates---sand, cobbles etc---for aquatic species).

    - Field forms will be completed for each survey area, and will include information on sample areas contained within, and specimens collected where appropriate.

- What to collect

- Collect specimens from different habitats if the survey area contains some variation in habitat type.
- Be sensitive to numbers of individuals when collecting terrestrial species. If there are only a few, please collect only a few larger (mature) specimens.
- For aquatic specimens, collect enough so that male individuals, needed for positive identification, are likely to be adequately represented.

- How to collect:

  - For live **Terrestrial** slugs & snails: keep them **moist** (unbleached paper towels work best) and **cool** in hard-sided containers. Moisture is more important than fresh air so air holes are not necessary and may reduce humidity.
  - For live **Aquatic** snails: Cover the specimens with water from the site where collected, allowing enough room so that individuals are not crowded. To minimize the chance for cross contamination between sites, rinse collecting screens well with clean water, and let dry between collection sites.

- How to preserve them for transport:

  - For live **Terrestrial slugs**: Animals may be shipped live for identification if packaged with insulated cold packs and shipped by overnight mail. Please contact Nancy Duncan before shipping live animals. Or, animals may be placed in closed containers filled with water (no air) for 12-36 hours. Transfer drowned specimens to 30-50% ethanol or isopropyl alcohol for a few hours, then to labeled, leak-proof (!) containers with at least 70% alcohol.
  - For **Terrestrial snails**, adult shells in good condition are usually sufficient. Collection of live individuals may not be necessary. If live animals are collected, they should be air-dried for long-term curation. **Note**: Drying will not work for larger terrestrial live snails (like *Monadenia*). They should be drowned and preserved in alcohol like slugs, or, they can be shipped live if preferred. Drying will work for anything less than 1/4 inch length.
  - For live **Aquatic** snails, use cool, clear, preferably well-oxygenated water for relaxing specimens. Add 1-2 menthol crystals, ground, to the water and leave undisturbed in a cool dark room overnight. (Specimens may die or contract if left in the water/menthol solution longer than 12 hours). After 8-12 hours, replace the water with 4% formalin to fix the specimens. For specimens > ½", consider carefully chilling or *nearly* freezing them first in order to slow their metabolism prior to using the formalin. In 1-2 days, replace the formalin with 70% isopropyl or ethyl alcohol.

- ***Field Notes: Please don't release live specimens at locations other than those from where they were collected.***

- ***Safety Notes: (1) If Tribal Members ask us to leave an Area, we will leave the area. (2) Please resist the temptation to drink any spring, creek or river water.***

ATTACHMENT B

Survey for Interagency Sensitive and Special Status Species (ISSSSP)
Mollusks
Lakeview Districts of Fremont Winema National Forests and Bureau of Land Management
2006
(Field inventory of habitat and potential occurrence of sensitive mollusk species)

Survey Area (Name and D#)_____
_____

Date_____Start time_____End time_____

Personnel_____
_____
_____

General location (County, USGS Quad map, driving directions)_____
_____
_____
_____

General habitat types, vegetation communities represented_____
_____
_____

Weather (Air temp, cloud cover, recent precip) _____
_____
_____

General observations (Any live creatures observed other than those collected? Any circumstances which might affect the integrity of today's surveys?) _____
_____
_____
_____

Sample Area (Survey Area ID +…) _____
_____
_____

Site Description: General Size of Area _____

Type of Habitat: Spring Channel Wetland Other_____
Character of Habitat: Lentic (still waters/ lakes, ponds, swamps) _____
Lotic (moving waters)_____
Approximate water depth _____
Approximate water width _____

Topographical Location: Valley Bottom; Mid Slope; Ridge Top; Other
_____

Approximate Elevation _____

UTM Coordinates _____

Use: Developments? (spring boxes, impoundments, etc…)_____
_____

Animal Use: Mammalian(tracks, scat, human)_____
_____

Insects: Lentic (pond type-dragonflies, water boatmen, etc...)
Lotic (stream type-caddisfly, stoneflies, etc…)

Dominant Substrate: Silt/Sand, Muck, Gravel, Cobble? _____

Vegetation: Riparian Veg Description (extent and type):_____
_____

Non-native spp. Present: No Yes: What spp._____

Distribution: Ubiquitous, Scattered, Clumped?_____

Aquatic Veg.: No Yes? (Algae, Pondweed, Duckweed?)_____

Soil Temp_____
H2O Quality: Temp_____ DO_____ pH_____

ATTACHMENT C

2006
Sites Sampled for Six R6 Sensitive Mollusks
Fremont Winema National Forests
Lakeview District Bureau of Land Management

Site Number	UTM Location	Spring or Area Name	Approximate Size of Area Surveyed (Acres)
LV06-01	Zone 10 732831 4703746	Colvin Springs	Linear 0.1 Acre Outside exclosure
LV06-02	Zone 10 732449 4703057	Chandler Cabin Creek	Linear 0.1 Acre Aspen grove
LV06-03	Zone 10 747090 4675951	White Rock Spring	@ 1 Acre Exclosure
LV06-04	Zone 11 256493 4673355	Deep Creek Spring	@1 Acre
LV06-05	Zone 11 269134 4663518	Spanish Lake/Kyhoya Waterhole	About ½ of eastern side of lake, linear @ 3 Acres
LV06-06	Zone 11 271053 4655663	Game Spring	Linear @ 0.5 Acre Developed spring
LV06-07	Zone 11 270656 4655884	Lower Game Spring	@ 0.1 Acre Developed spring
LV06-08	Zone 11 271417 4660023	Burro Spring	@ 0.5 Acre Exclosure
LV06-09	Zone 11 265163 4661218	Foskett Spring	@ 1 Acre Exclosure
LV06-10	Zone 11 271919 4680800	Calderwood Reservoir Outlet	Reservoir, Area searched=0.5Acre

LV06-11	Zone 11 271803 4683892	Fish Creek Outlet	Flows from Calderwood, Area searched = 0.5 Acre
LV06-12	Zone 11 261765 4656830	Spearpoint Spring	@ 1 Acre Exclosure
LV06-13	Zone 10 726204 4680996	Irish Spring	@ 2-3 Acres linear
FRE06-01	Zone 10 729317 4697589	White Pine Marsh	@ 1-2 Acres linear
FRE06-02	Zone 10 720995 4695669	Little Honey Creek	0.5Acre linear
FRE06-03	Zone 10 729056 4697323	Upper White Pine Marsh	0.1Acre
FRE06-04	Zone 10 733595 4695625	Can Springs	0.5 Acre linear along seep
FRE06-05	Zone 10 732974 4692458	Sage Creek	0.5 Acre linear along seep & creek
FRE06-06	Zone 10 733674 4688625	South Fork Crooked Creek	0.5 Acre linear along seep
FRE06-07	Zone 10 734019 4662037	Warner South 1	@1 Acre
FRE06-08	Zone 10 728740 4663840	Warner South 2 (013 Road)	@ 1 Acre
FRE06-09	Zone 10 728629 4657025	Bow Spring (Meadow to south)	@ 1 Acre
FRE06-10	Zone 10 740423 4658215	Camp Spring Creek(019 Road)	@ 1 Acre
FRE06-11	Zone 10 686846 4659185	4017-022 Spring	@ 1 Acre

FRE06-12	Zone 10 683033 4667334	Buzzard Roost Spring	@ 1 Acre
FRE06-13	Zone 10 671787 4654671	4017-224 Spring	@ 1 Acre
FRE06-14	Zone 684938 4687772	Angel Spring & Camp	@ 0.5 Acre

ATTACHMENT D

MEMORANDUM

TO: Kathy Cushman, Sarah Malaby, Fremont Winema NF

FROM: Nancy Duncan, Roseburg Bureau of Land Management Office
DATE: October 4, 2006, January 22, 2007
RE: Identification of samples from Lakeview Districts, Fremont Winema National Forests and Bureau of Land Management

Identifications

FRE06-001	White Pine Marsh	Prophysaon n sp. (Klamath)	7/10/2006
FRE06-002a	Upper Little Honey Creek, on wood	Unknown –embryonic shell	7/11/2006
FRE06-002b	Little Honey Creek, on wood	Discus whitneyi	7/11/2006
FRE06-002c	Little Honey Creek, on wood	Pisidium casertanum	7/11/2006
FRE06-002d	Little Honey Creek, on wood	Euconulus fulvus	7/11/2006
FRE06-003a	White Pine Marsh	Pisidium casertanum	7/11/2006
FRE06-003b	White Pine Marsh	Physella gyrina	7/11/2006
FRE06-003c	White Pine Marsh	Stagnicola caperata	7/11/2006
FRE06-003d	White Pine Marsh, on wood	Vertigo modesto	7/11/2006
FRE06-003e	White Pine Marsh, on wood	Euconulus fulvus	7/11/2006
FRE06-003f	White Pine Marsh, on wood	Vitrina pellucida	7/11/2006
FRE06-003g	White Pine Marsh, on wood	Stagnicola caperata	7/11/2006
FRE06-003h	White Pine Marsh, on wood	Pisidium casertanum	7/11/2006
FRE06-003i	White Pine Marsh, on wood	Promenetus umbillicatellus	7/11/2006
FRE06-003j	White Pine Marsh, on wood	Deroceras hesperium	7/11/2006
FRE06-003k	White Pine Marsh, on wood	Deroceras hesperium	7/11/2006
FRE06-003l	White Pine Marsh, on wood	Pisidium casertanum	7/11/2006
FRE06-004a	Can Spring	Euconulus fulvus	7/11/2006
FRE06-004b	Can Spring	Vitrena pellucida	7/11/2006
FRE06-004c	Can Spring	Vertigo modesto	7/11/2006

FRE06-005a	Sage Cr spring	Vitrena pellucida	7/13/2006
FRE06-005b	Sage Cr spring	Vertigo modesto	7/13/2006
FRE06-005c	Sage Cr spring	Euconulus fulvus /Discus whitneyi	7/13/2006
FRE06-006a	S F Crooked Creek	Vertigo modesto	7/13/2006
FRE06-006b	S F Crooked Creek	Vitrena pellucida	7/13/2006
FRE06-006c	S F Crooked Creek	Promenetus umbillicatellus	7/13/2006
FRE06-006d	S F Crooked Creek	Fossaria dalli	7/13/2006
FRE06-007	E Chiloquin grazing allotment -450 rd spring	Dead slug- decomposed - unknown species	No date
FRE06-08a	Slabhouse Springs	Deroceras hesperium	No date
FRE06-08b	Slabhouse Springs	Vitrena pellucida	No date
FRE06-021	Angel Camp Spring	Specimen lost	8/14/2006
FRE06-022a	Angel Camp Spring	Vertigo modesto	8/14/2006
FRE06-022b	Angel Camp Spring	Stagnicola	8/14/2006
FRE06-045	Angel Camp Spring	Deroceras laeve	8/21/2006
FRE06-046	4-mile Creek, north side	Promenetus umbillicatellus	8/21/2006
FRE06-047	Buzzard Roost Spring	Deroceras laeve	9/27/2006
FRE06-048	Buzzard Roost Spring	Vitrena pellucida	9/27/2006
FRE06-054	Lower Rock Creek	Monadenia n.sp1	6/16/2006
FRE06-055	Rd#013 Spring, Warner South 2	Vertigo modesta	
FRE06-055	Rd#013 Spring, Warner South 2	Vitrena pellucida	
FRE06-056	Bow Springs	Fossaria sp.	9/27/2006
FRE06-056	Bow Springs	Vertigo modesta	9/27/2006
FRE06-056	Bow Springs	Vitrena pellucida	9/27/2006
FRE06-056	Bow Springs	Zonitoides arboremus	9/27/2006
FRE06-058	Camp Spring Creek	Fluminicola ?	9/27/2006
FRE06-058	Camp Spring Creek	Pseudosuccinea columella	9/27/2006
FRE06-059	Lily Lake	Gyraulus circumstriatus	9/27/2006
FRE06-060	022/4017 Spring	Fossaria sp. Juv?	9/27/2006
FRE06-061	224/4017 Spring	Vertigo modesta	9/27/2006
FRE06-062	Camp Spring Creek	Deroceras laeve	9/27/2006
FRE06-063	224/4014 Spring	Deroceras laeve	9/27/2006
FRE06-056	Bow Springs	Fossaria sp.	9/27/2006
FRE06-056	Bow Springs	Vertigo modesta	9/27/2006
LKV06-013f	Irish Spring	Unknown slug - decomposed	8/10/2006
LKV06-01a	LV06-01	Discus whitneyi / Vitrena pellucida	7/12/2006
LKV06-01b	LV06-01	Physella gyrina ampullacea	7/12/2006
LKV06-01c	LV06-01	Pisidium sp.	7/12/2006
LKV06-02a	LV06-02	Vertigo modesto	7/12/2006

LKV06-02b	LV06-2	Physella hordacea	7/12/2006
LKV06-02c	LV06-2	Pisidium ultramontanum	7/12/2006
LKV06-03	White Rock Springs	Stagnicola caperata	8/7/2006
LKV06-04a	Deep Creek Spring	Fluminicola n. sp.**	8/7/2006
LKV06-04b	Deep Creek Spring	Discus whitneyi / Vitrena pellucida	8/7/2006
LKV06-04c	Deep Creek Spring	Planorbella sp (juv)	8/7/2006
LKV06-06a	Game Spring	Discus whitneyi	8/8/2006
LKV06-06b	Game Spring	Physella gyrina	8/8/2006
LKV06-06c	Game Spring	Pisidium casertanum	8/8/2006
LKV06-06d	Game Spring	Juga n. sp.**	8/8/2006
LKV06-07a	Lower Game Spring	Unknown hatchlings – embryonic shells	8/8/2006
LKV06-07b	Lower Game Spring	Lymnaea stagnalis appressa	8/8/2006
LKV06-08	Burro Spring	Vallonia cyclophorella	8/8/2006
LKV06-09a	Foskett Spring	Prophysaon n. sp. (Klamath)	8/8/2006
LKV06-09b	Foskett Spring	Fluminicola n. sp. **	8/8/2006
LKV06-09c	Foskett Spring	Physella gyrina	8/8/2006
LKV06-09d	Foskett Spring	Fossaria bullimoides	8/8/2006
LKV06-09e	Foskett Spring	Juga n. sp. **	
LKV06-010	Calderwood Res.	Planorbella sp.**	8/9/2006
LKV06-013a	Irish Spring	Vitrena pellucida	8/10/2006
LKV06-013b	Irish Spring	Discus whitneyi	8/10/2006
LKV06-013c	Irish Spring	Fossaria sp.	8/10/2006
LKV06-013d	Irish Spring	Pisidium sp. **	8/10/2006
LKV06-0131e	Irish Spring	Physella gyrina spp. **	8/10/2006
LKV06-013f	Irish Spring	Unknown slug - decomposed	8/10/2006