21 June — 18 August 2002

Rapid Biological Survey of the Hank Roberts Property,

Sequim, Clallam County, Washington.

Prepared by:

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Summary

A basic, rapid, biological inventory was conducted on Hank Roberts' approximately 10-acre property south of Sequim, Clallam County, Washington. Identifications of habitat types, birds, reptiles and amphibians, and plants were emphasized. Five habitat types, 26 bird species, 4 amphibians, 1 reptile, and 43 plants were recorded. Of these, two birds (Pileated Woodpecker and Vaux's Swift) and one amphibian (Western Toad) are state Candidate Species for legal protection. Additionally, Western Toad and Red-legged Frog are federal Species of Concern. Potential future surveys may well add to the species lists. Finally, ideas for future management of the property were developed based on field observations. Specific recommendations are as follows:

1. Selectively thin the small, slender conifers on the west side of the property.
2. Leave unmanaged the riparian zone and the forest east of the creek for at least the near future.
3. Monitor the creek's water chemistry and benthic macroinvertebrates.
4. Mark the southern and eastern property lines with visible, lasting boundaries.

Introduction and Methods

This survey was conducted for Hank Roberts (contact info here) on his approximately 10-acre property south of Sequim, Clallam County, Washington. Fieldwork was carried out from 21 June to 18 August 2002. Initial work led to the identification of different habitat types. Following this, birds, reptiles, amphibians, and plants were rapidly surveyed on the property. The property was typically visited

once or twice a week, amounting to approximately 5 hours of surveys and identification per week. About 30 concentrated hours in mid-August were dedicated to plant identification.

This work was a rapid, quick-and-dirty assessment of some of the flora and fauna of this property. This survey does not allow for rigorous quantitative estimates of local populations. However it does differentiate habitat types and identifies some of the organisms living within this property. Based on this study, organisms that were not found on the property, but can reasonably be expected to be found in this kind of habitat elsewhere, can not be classified as 'absent.' This work yielded results that can best be classified as 'present' or 'not detected.' Further time spent surveying this property will undoubtedly result in (perhaps many) additions to the species lists.

Areas of the property were classified as forest, forest openings, roadside, marsh, or riparian habitat types. Habitat was not classified according to an established technical protocol. In accord with the rapid nature of this assessment, habitat types were broken out by eye, based on observable differences in flora, particularly forest structure, geomorphology, and soil moisture. These classifications do indeed represent real differences in the land, and so should match at least somewhat closely the results of a more thorough, time-consuming process.

Bird surveys commenced at ~0700 and ran for a few hours. Birds that were heard or seen were identified and recorded. Any birds that exhibited breeding behavior, such as singing, carrying nesting material or food, or the presence of juveniles, were recorded as well. Birds seen incidentally in the course of other work were also noted. Nighttime bird surveys were not conducted. Questions of identification that arose were solved with

consultation of National Geographic (1999), Sibley (2000), Rising and Beadle (1996), and Peterson (1992) for songs and calls.

Herpetological surveys were few and carried out typically before 1100. Surveys involved searching by hand through leaf litter, decaying logs, riparian edges, low vegetation, and the like. Most herps encountered were observed while in the course of other work. Herp identification was based on Leonard et al. (1993) and Storm and Leonard (1995).

Plants were identified in the field in each of the different habitat types and recorded. Some specimens were gathered and identified indoors but ultimately, based on time constraints, were not preserved as vouchers. In the field, Pojar and MacKinnon (1994) was the primary source, supplemented by Little (1998) and Alden and Paulson (1998). Hitchcock and Cronquist (1973) served as the final arbiter of identification questions, although nomenclature in this report follows the more up-to-date Pojar and MacKinnon (1994).

Finally, notes were taken in the course of fieldwork to comment upon the land and its health, and to point out future issues that may arise. Also, the owner of the property to the north, Sharon Gagne (phone number (360) 876-6732), shared her observations on the land.

Location and Description

The property is located a few miles south of Sequim, Clallam County, Washington, on the northeast corner of the Olympic Peninsula. It is accessed by taking Palo Alto Road from Highway 101 south of Sequim, and driving ~1.1 mile. It can be

found in Township 29N, Range 03W, Section XX, xx ¼ of xx ¼. Palo Alto Road at this point runs roughly north-south, and the Roberts property fronts the east side of the road and extends east.

Immediately surrounding the property is a mix of rural land usage. Country homes, small farms, pastures, and forest are the norm. Forest lands along Palo Alto Road vary in age and have experienced significant harvest over the last several decades. No large-scale timber harvest is currently occurring along Palo Alto, primarily because the landowners are mostly private homeowners. Farther south along Palo Alto, the county road system merges into both state and federal lands. Timber harvest here is ongoing albeit patchy from a landscape perspective.

The property comprises several different habitat types, and is split by a creek that runs roughly on a southwest (upstream) to northeast (downstream) axis. For ease of reference, areas on the property will be referred to as either west of the creek (the 'road side' of the property), or east of the creek (the 'far side').

The primary habitat type is forest. In general, west of the creek is an older forest, with a more diverse array of understory plants and wider spacing between trees. East of the creek, the trees are in general younger and more tightly packed. The forest floor here has less plant diversity. A second habitat type consists of areas that are not dominated by conifers, termed simply 'forest openings.' These are openings in the forest canopy, ranging from ~100 square feet to much larger. From a landscape perspective, these openings would be included within a forest habitat classification; however from a microhabitat perspective these areas differ in light regime and flora and so are treated separately.

Three more habitat types are present. Along the creek is a healthy riparian area, with trees that, even on the west bank (the road side), are similar in age to the older trees found east of the creek. Immediately south of the northern property line and to the west of the creek is a small marsh, covering an estimated 1000 square feet in late July. The fifth and final habitat type present is roadside. This type is most evident along Palo Alto Road, but fragments of this type occur throughout the property where old pieces of logging road are under reclamation by the forest. Weedy roadside-type plants are mixed throughout the property wherever old roads were present.

Plant Communities

In all, 43 plant species were identified, including 6 species of trees, 16 small trees or shrubs, 18 wildflowers, and 3 ferns (Table I). Members of the grass (Poaceae) and rush (Juncaceae) families were not identified to species, as these groups require attention by specialists. Grasses were very common in roadside habitats, and careful scrutiny might reveal a dozen or so species. The marshy area of the property was dominated in part by rushes (*Juncus* sp.), of which it appeared only one species was present. Table II, at the end of the report, contains a full list of species observed and their habitat associations.

Table I. **Species Diversity by Habitat Type**

	Forest	Openings	Roadside	Riparian	Marsh	Total
# of Species	17	13	26	17	9	43
Unique Species	3	0	14	4	2	n/a
Trees	4	3	4	5	2	6
Shrubs	7	6	10	6	5	16
Wildflowers	4	2	10	4	1	18
Ferns	2	2	2	2	1	3

In areas of forest, 17 species consisting of 4 trees, 7 shrubs, 4 wildflowers, and 2 ferns were identified. Conifers such as Western Hemlock (*Tsuga heterophylla*), Douglas-fir (*Pseudotsuga menziesii*), Grand Fir (*Abies grandis*), and Western Redcedar (*Thuja plicata*) comprised the canopy. In the understory, Salal (*Gaultheria shallon*), Dull Oregon-grape (*Mahonia nervosa*), and Sword Fern (*Polystichum munitum*) predominated. The native blackberry (Trailing Blackberry, *Rubus ursinus*) was also present. In this survey, 3 species were identified only in the forest: Twinflower (*Linnaea borealis*), Rattlesnake-plantain (*Goodyera oblongifolia*), and Pathfinder (*Adenocaulon bicolor*).

In forest openings, 13 species consisting of 3 trees, 6 shrubs, 2 wildflowers, and 2 ferns were identified. These small areas seemed less diverse in their flora as Red Alder (*Alnus rubra*), Salal, and Salmonberry (*Rubus spectabilis*) were the most common by far. As seral succession continues, these openings will transform into conifer-dominated areas. Small (<3' tall) conifers like Douglas-fir and Western Redcedar were present in many openings. Forest openings did not yield any unique species.

The roadside habitat, with 26 species identified, was the most diverse. This group consisted of 4 trees, 10 shrubs, 10 wildflowers, and 2 ferns. Weedy species such as Giant Vetch (*Vicia gigantea*) and Oxeye Daisy (*Leucanthemum vulgare*) mingled with a backbone of shrubs such as Baldhip Rose (*Rosa gymnocarpa*) and Oceanspray (*Holodiscus discolor*). Both of Washington's exotic blackberries, Himalayan (*Rubus discolor*) and Evergreen or European (*R. laciniatus*), were established, but the native blackberry (*R. ursinus*) was not present. Unique roadside species included 5 shrubs and 9 wildflowers. In addition to the roadside plants found alongside Palo Alto Road on the western edge of the property, fragments of former logging roads were scattered

throughout the forest. Roadside-type plants could therefore be found in small patches within the property.

In the riparian zone, 17 species were identified. These consisted of 5 trees, 6 shrubs, 4 wildflowers, and 2 ferns. Four species occurred only in the riparian: Bigleaf Maple (*Acer macrophyllum*), Mexican Hedge-nettle (*Stachys mexicana*), Stinging Nettle (*Urtica diocia*), and Skunk Cabbage (*Lysichiton americanum*). Trees in the riparian included hemlock, Douglas-fir, cedar, alder, and Bigleaf Maple. Grand Firs were not observed.

In the small marsh, 9 species were documented (10 if rushes, *Juncus* sp., are included). These included 2 trees, 5 shrubs, 1 wildflower, and 1 fern. Unique marsh plants included Pacific Willow (*Salix lucida*), Pacific Water-parsley (*Oenanthe sarmentosa*), and rushes. Neighbor Sharon Gagne reported that the marsh usually contains shallow (<6") open water throughout the late fall, winter, and early spring, and sometimes beyond those bounds as well. During this survey (June-August), no standing water was present at any time. However, the marsh mud stayed wet and viscous until fieldwork was finished. Based on its small size, it is unclear how long the marsh will persist as such. The presence of Pacific Willow and Red Alder indicate that seral succession is occurring.

Birds

All told, 26 species of birds were detected on or above the property (Table III). In addition, up to 30 unidentified swallows (Hirundinidae, likely *Tachycineta* sp.) were often observed wheeling above the forest on mild days. For the most part, the species

encountered are fairly typical of what can be expected in forested areas of western Washington and the Olympic Peninsula. Most any of the species observed might potentially breed on the property.

Table III. Birds Present, 21 June to 18 August 2002.

Name	Binomial	Comments
Canada Goose	*Branta canadensis*	flyover, subspecies unknown
Turkey Vulture	*Cathartes aura*	flyover
Ruffed Grouse	*Bonasa umbellus*	
Vaux's Swift	*Chaetura vauxi*	flyover, state Candidate Species
Northern Flicker	*Colaptes auratus*	
Pileated Woodpecker	*Dryocopus pileatus*	state Candidate Species
Pacific-slope Flycatcher	*Empidonax difficilis*	Singing males plentiful.
Hutton's Vireo	*Vireo huttoni*	1 observed
Steller's Jay	*Cyanocitta stelleri*	
Common Raven	*Corvus corax*	
Black-capped Chickadee	*Poecile atricapillus*	
Chestnut-backed Chickadee	*Poecile rufescens*	More numerous of the two chickadees.
Brown Creeper	*Certhia americana*	Singing males present.
Red-breasted Nuthatch	*Sitta canadensis*	Singing males present.
Winter Wren	*Troglodytes troglodytes*	Singing males present.
Golden-crowned Kinglet	*Regulus satrapa*	
Ruby-Crowned Kinglet	*Regulus calendula*	
Swainson's Thrush	*Catharus ustulatus*	Singing males present.
American Robin	*Turdus migratorius*	Singing males present.
Wilson's Warbler	*Wilsonia pusilla*	Several sightings, one with nesting material.
Spotted Towhee	*Pipilo maculatus*	Singing males present.
Song Sparrow	*Melospiza melodia*	Singing males present.
Dark-eyed Junco	*Junco hyemalis*	Juveniles present.
Black-headed Grosbeak	*Pheucticus melanocephalus*	Singing males present.
House Finch	*Carpodacus mexicanus*	
Red Crossbill	*Loxia curvirostra*	Heard flocks on two occasions.

Unusual or especially noteworthy birds observed included a flyover flock of Canada Geese (*Branta canadensis*) and a single Turkey Vulture (*Cathartes aura*) on 16 August. A single Vaux's Swift (*Chaetura vauxi*) was observed above the canopy on 29 June. Vaux's Swift is a state Candidate Species for legal protection (WDFW 2002). Although neither swift nests nor breeding behavior were observed, the property does contain a number of potential swift nest sites such as hollow trees and other trees with

large vertical cavities. Pileated Woodpeckers (*Dryocopus pileatus*), another state Candidate Species, were observed as well. Woodpecker-drilled trees and stumps are common on the property. Several of these featured large rectangular or ovoid excavations, which are typical of *Dryocopus*.

This property is within the breeding range of the Marbled Murrelet (*Brachyramphus marmoratus*), which is classified as a Threatened Species by both the state and federal governments (WDFW 2002). None were detected incidentally on or above this property (murrelet surveys follow a specific protocol). Although forest stands with breeding murrelets lay within a few miles of this property, the trees here lacked the platform branches and/or mistletoe growths that are typical of murrelet nest sites. Therefore this property seems unlikely to harbor Marbled Murrelets.

Many species exhibited breeding behaviors. Singing males included Pacific-slope Flycatcher (*Empidonax difficilis*), Brown Creeper (*Certhia americana*), Winter Wren (*Troglodytes troglodytes*), Red-breasted Nuthatch (*Sitta canadensis*), Swainson's Thrush (*Catharus ustulatus*), American Robin (*Turdus migratorius*), Spotted Towhee (*Pipilo maculatus*), Song Sparrow (*Melospiza melodia*), and Black-headed Grosbeak (*Pheucticus melanocephalus*). A pair of Wilson's Warblers (*Wilsonia pusilla*) was observed on 29 June, one of which was carrying nesting material. Two juvenile Dark-eyed Juncos (*Junco hyemalis*) were seen on 17 August. Neighbor Sharon Gagne reported that, in the past, Black-headed Grosbeaks, Common Ravens (*Corvus corax*), Rufous Hummingbirds (*Selasphorus sasin*), and Cassin's Finches (*Carpodacus cassinii*) have bred on the property. The normal range of Cassin's Finch does not extend west of the Cascade Mountains in Washington, so it is plausible that Gagne misidentified House or Purple

Finches (*C. mexicanus* or *purpureus*) instead. House Finches were observed consistently at Gagne's bird feeders throughout the summer. Gagne also reported that Evening Grosbeaks (*Coccothraustes vespertinus*) visited her feeders in 1998.

Amphibians and Reptiles

In contrast to the diverse avifauna, only 4 species of amphibians were encountered (Table IV). Rough-skinned Newts (*Taricha granulosa*) and Western Toads (*Bufo boreas*) seemed to be the most common. Pacific Chorus Frogs (*Pseudocris regilla*, also called Pacific Tree Frog, *Hyla regilla*) were not hard to find. Finally, two Red-legged Frogs (*Rana aurora*) were seen in the riparian zone on 16 August. Red-legged Frogs are federal Species of Concern, and Western Toads are state Candidate Species and federal Species of Concern (WDFW 2002).

***Table IV.* Amphibians and Reptiles Present, 21 June to 18 August 2002.**

Name	Binomial	Comments
Rough-skinned Newt	*Taricha granulosa*	
Western Toad	*Bufo boreas*	state Candidate Species, federal Species of Concern
Pacific Chorus Frog	*Pseudacris regilla*	also called Pacific Tree Frog, *Hyla regilla*
Red-legged Frog	*Rana aurora*	federal Species of Concern
garter snake sp.	*Thamnophis* sp.	

In general, the summer season and its resulting lack of ground moisture did not provide ideal conditions for amphibian surveys. Although not observed during this study, this type of lowland forest looks like potentially productive habitat for other amphibian possibilities such as Northwestern Salamander (*Ambystoma gracile*), Long-toed Salamander (*A. macrodactylum*), Ensatina (*Ensatina eschscholtzii*), and/or Western Red-backed Salamander (*Plethodon vehiculum*). On the other hand, this property does not seem like likely habitat for Olympic Peninsula specialties such as the Olympic Torrent

Salamander (*Rhyacotriton olympicus*) and Cope's Giant Salamander (*Dicamptodon copei*). Although present in the Olympic Mountains, little is known about the rare Van Dyke's Salamander (*P. vandykei*) and its habits; this property may or may not be suitable habitat. These are only speculations, and further amphibian surveys would help to sort things out.

Among reptiles, only garter snakes (*Thamnophis* sp.) were observed (on several occasions). Based on range maps found in Storm and Leonard (1995), these snakes could have been Common Garter Snakes (*T. sittalis*), Northwestern Garter Snakes (*T. ordinoides*), and/or Western Terrestrial Garter Snakes (*T. elegans*).

Discussion and Future Issues

All in all, this property seems to be a functioning part of western Washington's forests. While it has apparently seen timber harvest in the past, it seems well on its way to recovery. Still, there are items that may be of interest for planning future management of the land. These are particularly so if the land is to be managed for biodiversity, forest health, and/or wild habitat.

The trees on the property west of the creek (the road side) tend to be younger, thinner, and more densely packed than the trees east of the creek. This portion of the property could justifiably undergo selective timber harvest, to remove some of the crowded trees and accelerate its approach to a more natural, multilayered, and age-diverse forest stand. Unfortunately, the trees on the road side that in the recent past were illegally harvested tended to be older and larger than typical trees in this section. Those cut trees were precisely the ones that should have been retained to promote a diverse

forest stand. This harvest of larger trees right on the southern property line may also accelerate the invasion of weedy roadside and/or exotic species into the forest. Apart from these issues, a good sign for the dense trees west of the creek is that natural forest openings have occurred in this area and are beginning seral succession. This natural production of canopy openings is an important component of stand diversity. Also, the dense trees contain a number of snags, which are important for wildlife. Woodpecker excavations and drillholes are particularly in evidence.

Beginning in the riparian zone and extending to the forest east of the creek, the trees tend to be older, larger, and less densely packed. These conditions, along with canopy openings and the younger trees within, are much more like a stereotypical natural forest. This section of the property can likely manage itself for the foreseeable future.

The riparian zone and the creek itself also appear to be in good shape. Healthy portions of large woody debris (LWD) are present in both the bankfull width of the creek and in the larger riparian zone as well. The presence of Red-legged Frogs in the riparian zone is another good sign. There is some evidence of recent downcutting in the stream channel itself: some few areas show up to 18" of downcut clay on the banks. It is unclear if this is due to the range of typical flow processes, or perhaps to an anthropogenically altered flow regime caused by land-use practices upstream. In either case the issue does not seem serious at present. In the channel, both LWD and riparian vegetation are plentiful, so it is doubtful if adding wood and/or willow mats would have much of an effect to bank stability. Water quality may be another item to monitor in the future. Upstream of the property, the creek passes through cow pastures, and elevated levels of bacteria, nitrogen products, and other nutrients are a possible result. Neighbor

Sharon Gagne stated that in some summers, milky white foam (of unknown cause) has appeared in portions of the creek. A cursory examination of the creek substrate revealed benthic macroinvertebrates in the gravel; however, more formal monitoring of these creatures, and water chemistry, may be wise avenues to pursue in the future.

Another potential problem is that property lines are often unclear and/or obscured. This is less of a problem on the northern boundary, where Sharon Gagne has proven to be a good neighbor, and the western boundary, which is defined crisply by Palo Alto Road. However the southern boundary, although it has been surveyed in the past few years, is fast becoming obscured. This will be particularly true in the upcoming years in the areas that were logged illegally, as light-loving, fast-growing shrubs like Salmonberry will fill up the opened areas and conceal property markers. Because respect for the boundary has been an issue on this border, it is very important to set up a clear line of demarcation that will survive and be visible even through the dense layer of shrubs that is expected to grow in response to the illegal logging. The eastern boundary, on the far side of the creek, is also unclear. The forest beyond the creek is not contiguous; as the eastern boundary is approached, cleared (logged) areas in regrowth and fragments of old gravel road become evident. In this matrix, the boundary markers have been lost.

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Table II. **Full List of Plants and their Habitat Associations.**

X indicates that plant is present in that habitat; **X** indicates that plant is found only in that habitat.

Group	Name	Binomial	Forest	Opening	Roadside	Riparian	Marsh	Alternate Names
Trees	Western Hemlock	*Tsuga heterophylla*	x		x	x		
	Douglas-fir	*Pseudotsuga menziesii*	x	x		x		
	Grand Fir	*Abies grandis*	x		x			
	Western Redcedar	*Thuja plicata*	x	x	x	x	x	
	Red Alder	*Alnus rubra*		x	x	x	x	
	Bigleaf Maple	*Acer macrophyllum*				**x**		Oregon Maple
Shrubs	Salal	*Gaultheria shallon*	x	x	x	x	x	
	Red Huckleberry	*Vaccinium parvifolium*	x			x	x	
	Pacific Rhododendron	*Rhododendron macrophyllum*	x			x		California Rhododendron
	Twinflower	*Linnaea borealis*	**x**					
	Common Snowberry	*Symphoricarpos albus*			**x**			Waxberry
	Oceanspray	*Holodiscus discolor*	x	x	x			Creambush
	Saskatoon	*Amelanchier alnifolia*			**x**			*A. florida*
	Baldhip Rose	*Rosa gymnocarpa*			**x**			Dwarf Rose
	Salmonberry	*Rubus spectabilis*		x		x		
	Thimbleberry	*Rubus parviflorus*		x	x			
	Black Raspberry	*Rubus leucodermis*			x		x	Blackcap
	Trailing Blackberry	*Rubus ursinus*	x	x		x	x	Dewberry
	Evergreen Blackberry	*Rubus laciniatus*			**x**			European Blackberry
	Himalayan Blackberry	*Rubus discolor*			**x**			*R. procerus*
	Pacific Willow	*Salix lucida*					**x**	*S. lasiandra*
	Dull Oregon-grape	*Mahonia nervosa*	x	x	x	x		*Berberis nervosa*
Wildflowers	Western Trillium	*Trillium ovatum*	x			x		
	Rattlesnake-plantain	*Goodyera oblongifolia*	**x**					
	Field Chickweed	*Cerastium arvense*			**x**			
	Giant Vetch	*Vicia gigantea*			**x**			
	White Clover	*Trifolium repens*			**x**			

	Red Clover	*Trifolium pratense*			**x**			
	Fireweed	*Epilobium angustifolium*			**x**			Rosebay Willowherb
	Pacific Water-parsley	*Oenanthe sarmentosa*					**x**	
	Self-heal	*Prunella vulgaris*		x	x			Heal-all
	Mexican Hedge-nettle	*Stachys mexicana*				**x**		*S. emersonii, S. ciliata*
	Apargidium	*Microseris borealis*			**x**			*Apargidium boreale*
	Oxeye Daisy	*Leucanthemum vulgare*			**x**			*Chrysanthemum leucanthemum*
	Pathfinder	*Adenocaulon bicolor*	**x**					
	Stinging Nettle	*Urtica diocia*				**x**		*U. lyallii, U. gracilis*
	Broad-leaved Starflower	*Trientalis latifolia*	x	x				Western Starflower, *T. europaea* var. *latifolia, T. borealis* ssp. *latifolia*
	Ribwort	*Plantago lanceolata*			**x**			English Plantain
	Sweet-scented Bedstraw	*Galium triflorum*			**x**			
	Skunk Cabbage	*Lysichiton americanum*				**x**		Swamp Lantern
Rushes	rush sp.	*Juncus* sp.					**x**	
Ferns	Bracken Fern	*Pteridium aquilinum*	x	x	x			
	Sword Fern	*Polystichum munitum*	x		x	x	x	
	Lady Fern	*Athyrium filix-femina*		x		x		