HISTORIC VEGETATION AS INTERPREPRETED FROM THE ORIGINAL 1850'S LAND SURVEY RECORDS IN THE UPPER ROGUE RIVER VALLEY NEAR MEDFORD, OREGON

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Historic vegetation at the time of European settlement is of great interest to both the public and land managers, but poorly documented. One source of data is the earliest land survey records by the Government Land Office (GLO). Rectangular Township surveys following the 1851 discovery of gold at Jacksonville, Oregon were carried out in the mid 1850's as settlers began to claim homesteads in the Bear Creek Valley surrounding what is now Medford. Land surveyor notes accompanying the township and section line gird for over 17 townships were examined. Vegetation notes for landscapes along survey lines and trees, used to mark section corners and quarter corners, were identified and measured (diameter) by the surveyors. A map (plat) of drainage systems, topography, cultural features and major vegetation boundaries along with the section line grid was included for each township. In this study, surveyor notes of vegetation, topography, and drainages were transcribed into an Access Data Base. Field notes recorded by the surveyors were classified into broad vegetation types (i.e. oak savanna, riparian forest) and about 30 plant communities were distinguished by major differences in plant composition or sometimes topographic features. Maps were developed to display the distribution of these historic vegetation types across the 400,000 acres inventoried. About 30% was closed upland forest, 20% conifer woodland, 1% riparian forest/brush, 25% oak savanna or oak woodland, 20% bottomland meadow or upland prairie. Forest types range from moist mixed conifer to dry valley ponderosa pine-hardwood grassland. Large areas of oak woodland/savanna and upland prairie occurred on clayey soils and southern slopes near what are now Medford and Ashland. About 35 plant species were identified by the surveyors, mostly trees and shrubs; but some were miss identified or associated with other than modern names now in use. Grazing quality was frequently noted to interpret the values for livestock. Tree density was estimated from witness tree spacing at corners to arrive at the stand classes of closed forest, woodland, savanna and prairie. Comparing historic vegetation notes with topographic maps and a modern soil survey of the study area (as well as the first soil survey of 1911) helped reveal how the plant communities are correlated with broad soil groups, which helped the author interpret GLO data and draw vegetation boundaries. Historic baseline plant data is presented for landscapes/topographic positions but is limited by the sketchy nature of the original surveyor notes . Nearly 300 homestead parcels of 160 acre units were claimed by this time and were identified on the GLO surveyor notes, revealing how soon after gold discovery that settlement across this valley began to take place. This was not only by miners, but by farmers and ranchers needed to feed the growing population. Most homesteads were claimed on prairie or savanna types, which were open and most suitable for farming and grazing. Early saw mills, grist mills, roads and major Indian trails were also identified on surveyor notes and maps. A set of GIS maps accompany this study which display the distribution of historic vegetation types.

Key words: Historic Vegetation, Upper Rogue River Valley, GLO Surveys
Oral presentation
Presenter: Gene Hickman
Related Presentation: Society for Range Management annual meeting, Vancouver, BC (2/06)

(revised July, 2006)

Historic Vegetation as Interpreted from the Original 1850's Land Survey Records In the Upper Rogue River Valley Near Medford, Oregon

O. Eugene Hickman

INTRODUCTION

Historic vegetation of our nation at the time European settlement is of great interest to natural resource managers and even some of the general public, but is poorly documented. Many assumptions about vegetation potential or historic cover have been made as a basis for management decisions, and particularly restoration goals, without good baseline data or even general information regarding site potential or site specific historic cover. One source of data is the earliest land survey records for an area, as done by the Federal government's **General Land Office** or GLO. These records have been used extensively in some locations, such as in the Willamette Valley, to develop a vegetation perspective for the era of the initial settlement. This can help provide a more accurate assessment of vegetation potential and improve our understanding of how much change from historic native cover has occurred in the vegetative composition, ecological status and extent of the remaining stands of natural vegetation.

The objective for this study was to retrieve vegetation, cultural and landscape data from the original GLO rectangular land survey notes for the large interior valley and foothills surrounding what is now Medford, Oregon. With this information, we would describe and classify plant communities as well as map these historic cover types over a 17 ½ township study area covering about 403,500 acres.

The heart of Jackson County, the study site, is a central valley drained by Bear Creek on the south and traversed by the Rogue River across the north end. Numerous small creeks dissect the bottomland of the valley floor forming narrow flood plains which meander through the valley. The study area contains nine communities including Medford, Ashland and historic Jacksonville, the first settlement in southwest Oregon. Climatically and vegetatively it is in a transition between the mild coastal climate and the severe continental climate of the of the Cascades and East side. Also, it lies in a climatic gradient between northwestern Oregon and the Mediterranean climate of central California which is obvious in the study of vegetation of the region. It is the dryest valley in western Oregon and Washington, ranging from about 18-19 inches average annual precipitation in the south central area, to 30 inches at the extreme north end. This is roughly half of what the Willamette Valley receives and less than all other interior valleys on the west side as well, giving it a unique environment and ecological setting when compared with other west side valleys.

Elevations on the valley floor are roughly 1100 to 2000 feet. The valley is an old alluvial plain with fans, young and old creek terraces, low foothills with sandstone outcrops and steeper slopes of the mountains which surround this valley. The study area is divided north to south with a geological break through the center of the valley which separates the very old Siskiyou or Klamath Mountains on the west, from the younger volcanics of the Cascade Mountains on the east. The geologic implications are evident in the landscape variability encountered here. This includes a wide variety of soils often occurring in a complex geographical pattern. The Cascades side of volcanics have formed large areas of clayey soils in the valley floor east of Bear Creek, and on adjacent foothills. Several deposits of sandy granitic soils occur on the south and west

side of the valley that are connected with the adjacent Siskiyou Mountains. Some deposits of pumice and ash alluvium are found on old terraces along the Rogue River as outwash from Mt. Mazama. And a large area of compacted alluvium has formed into a thick gravel hardpan, under shallow soils, over several thousand acres just north of Medford. It has weathered into an unique topographical feature called patterened ground or biscuit-scabland. This extensive flat plain of low mini-mounds is interspersed with scabland swales which become wet drainages in the spring or form vernal pools between the mounds, then become bone dry for the remainder of the season.

The GLO survey of this valley which was used for this study, began in 1854 and was mostly done over a period of 3-4 years, with some pieces of rough mountainous topography done a few years later. This mid-1850's period was very early in the period of European occupation. In 1826-7, a Hudson Bay trapping expedition documented their travel into the area from the southeast, and their return. In the late 1840s while the Willamette valley was getting its first settlers via the Oregon Trail, an Applegate Party wagon train blazed a trail from the Klamath Falls area across the southern Cascade Mountains and through this valley, forging a travel route through southwest Oregon on its way toward the upper Willamette Valley. Indians remained in portions of the valley and occupied an early Reservation established north of the Rogue River in what is called Sams Valley, until an agreement was signed with Chief Sam in the mid 1850's.

Prospectors discovered gold at what is now Jacksonville in 1851, which quickly attracted more miners, and a community called Jacksonville was soon formed. This brought in more settlers such as farmers and stockmen to feed the miners. By the mid 1850s nearly 300 homesteads and property claims were recorded in GLO records, which were known as Donation Land Claims (DLC). By the time of the GLO land survey, settlement, development and use had initiated some localized landscape disturbance. Besides prospecting and mining around Jacksonville, some fields were being plowed for farming, cattle were being brought in for grazing, a few places were fenced as pastures, logging was providing wood for construction and firewood, wagon roads were connecting settlers homes with the mines and regional roads, and a few ditches for mining, grist mill use and very limited irrigation were established. However, out of the 17 ½ townships surveyed, probably less than 2 or 3% of the area would have altered or heavily impacted, which would not have significantly altered the results or interpretations arrived at here in terms of presettlement vegetation.

II. The General Land Office, its Function and Survey System

In 1785 the Continental Congress acted to establish a rectangular survey system through the Land Ordinance Act, the foundation for public land surveys. All unsettled land was considered public domain where the idea was to survey before settlement, In 1812, the US Congress established the General Land Office to execute the Act and supervise surveys. Over the first century of land surveys, the work was done by private surveyors who contracted with the GLO. They moved around the west where settlement was being initiated. For example, GLO contractors began surveying the Willamette Valley in the late 1840's after the beginning of the Oregon Trail, but not until the mid 1850's in the upper Rogue Valley, after gold was discovered.

This system of surveying square miles involved township surveys of six miles on a side, and section lines within the townships. A strict protocol for property survey procedures was established. A manuel for standardizing national procedures was published in 1855, based on a revision of a manual prepared in 1851 for use in Oregon. The grid system in use formalized a

reference system for locating property boundaries, within which settlement claims could be made or defined and ownership established.

Survey data was available in two forms, diary notes in field notebooks and township plats or survey maps. Five sources of landscape data are found in GLO records. A. **Witness tree data** at section corners and at quarter corners midway between the section corners. B. **Section line measurements and references** on the line to features noted by the surveyor. C. **General description of section line** which briefly summarizes each line survey and often adds detail such as more species. D. **Township description**, a general landscape summary statement made about the township, after surveying the township's exterior boundary. E. **Township plats** or maps drawn to scale for each township, that were based on GLO survey notes.

A. Witness Trees - Section corners always have four trees documented, if they are available and suitable for blazing, as references for the corners. Each tree is identified as to species name, its diameter, bearing and distance to the corner. Midway between the two corners a quarter corner is established and two trees, if present, are marked to witness this corner as well. With four section corners and four quarter corners per section, this assures that up to 24 trees per section are documented when trees are present. If no suitable trees are present, this is noted and a mound or trench is used instead. In this study, tree species cited help with the classification of vegetation into plant communities and with the mapping of these communities. Tree diameters provide some general indication of stand age. Distances to corners from witness trees help us estimate stand density and stand class such as woodland vs. savanna or prairie.

B. Line measurements - This survey runs between the two section corners being set and records the distance to the locations of features noted along the route. These might include drainage crossings and size, vegetation type and its beginning or end on the survey route, field boundary or fence, house, wagon road, Indian Trail, topographic feature like a ledge or ridgetop or steep slope, sawmill or grist mill, ditch, and a tree (species and diameter) when directly intercepted by the line.

C. Line descriptions - These are written at the end of each section line survey record. This is a general description of the mile in terms of vegetation, topography, soils, and usually a short plant species list, primarily trees and shrubs. Recent burns are sometimes noted in forest types and shrub cover may include density notes like thick or brushy. Forage value for grazing was often shown by use of terms like good grazing, good grass. Soil notes are quite simple like first-rate loam, second-rate loam, rough and stony, or black garden loam.

D. Township general description - These are written after the township boundaries are surveyed. It is a box 6 miles on a side done before any of the sections are surveyed. This general description is not very detailed and is less helpful than other GLO data.

E. Township plats - These are drawn to scale, after the survey, from field notes and are very helpful at times to display such things as the section line grid, topography, drainages, major vegetation boundaries, roads, fences, farm fields, homesteads, and even settler names. Surveyors attempted to extend their data and to fill in the center of these maps, the interior of township plats, with landscape details such as drainages, topography, vegetation boundaries and cultural/settlement information.

III. Methods

The first step in the study was to retrieve all the landscape information from the GLO filed notes which were handwritten, sometimes hard to read and often included words from old English usage that are spelled differently or are not in use today and hard to interpret. All field notes were read and landscape data was transcribed in to an "Access" Data Base using a standardized format and procedure consistent with that in use by the Oregon Natural Heritage Information Center, for GLO studies. Data is organized in sets by townships covering all the sections of the township. All the data was transferred to the ONHIC at Portland, Oregon, for adding to the GLO data base for Oregon, for storing and any subsequent use.

Next, an attempt was made to retrieve and sort a set of vegetation notes into vegetation groups or plant communities. The composition of these groups needed to allow for considerable variability but be distinct enough to be mapable. Because grass and forb species were generally not documented by name in plant lists, only trees, shrubs and references to plant types like grass, prairie, creek brush, etc. could be used to map or classify vegetation and write descriptions.

Mapping vegetation and the creation of map units required the use of several sources of information. Any landscape or topographic feature that seemed to be consistently related to the map unit description, was utilized. USGS contour maps were used as base maps to overlay vegetation lines, so that contour lines could also be used to help in map development. Some vegetation breaks were precisely marked at points on the section line and other had to be projected or extended beyond known points. Use of modern (1980s) soil survey mapping was needed to extend some vegetation boundaries, and even the first survey of soils for this area finished in 1911, was helpful. Township maps, even with their errors, always provided important data, especially when vegetation lines were shown, and topographic details along with cultural details, property claims and owner names are extremely useful. In any case, all of the original GLO data was reviewed for facts and clues in how to classify and map vegetation, along with recent landscape surveys and soil/vegetation data now available.

USGS map overlays displaying the historic maps produced in this study were transferred to a GIS format and merged to create a data file. Composite vegetation maps were prepared with legends, one of which is shown in this presentation. This is a condensed version of the detailed mapping, where vegetation is grouped into broad cover classes, such as prairie or woodland.

IV. Results

Twenty four plant communities or groups were suggested or identified in this study along with at least thirty two plant species. These were described, although necessarily brief, due to the limited data set available. Mapping for the 403,500 acre study area was completed using GIS which provided acreages and percentages for all map units as reported below.

Prairie - comprised 25.9 % of the study area and was a composite of primarily four different prairie map units. Upland hill slope prairie occupied hot southerly slopes and 4 % of the area. It was separated from prairie on the valley floor because of the potential for differences in composition and production between these situations. About 10 % of the study area was valley floor prairie that was non-riparian or outside wetland positions, and some environmental factor such as clayey soils or possibly fire had kept in an open grass state. "Creek Prairie" as surveyors called riparian/floodplain meadows, covered about 2 % of the study, which surveyors separated

from upland prairie on valley floor plains. Mounded prairie was mapped on a network of low mini-mounds mixed with narrow scabland swales that covered several thousand acres, some too mixed with other prairie to separate for mapping.

Oak Savanna - comprised about 1 % of the area. Only one map unit of white oak grassland (savanna) was recognized. It was probably under-mapped, often included in wooded areas but noted only as "open areas" or "grassy openings." Also, it may have been found within prairie areas, being noted only as "scattered oak."

Woodland - comprised the largest vegetation class or about 45 % of the study. Mixed black and white oak with ponderosa pine and sometimes madrone, cover most of this acreage, which was separated into three groups as follows. Pine dominated uplands covered 21%, mixed oak uplands
with only secondary pine covered 18 %, and a mounded soil-scabland complex found on a compacted gravel plain where pine and mixed oak shared dominance, covered about 1%. GLO records also refer to other woodland with less pine, black oak and madrone which has been classified into two map units. A white oak-grass woodland site found on droughty hill and ridge slopes of the valley was mapped over about 4 % of the study. And nearly 1% was mapped as white oak woodland with bugwood, which we know as birchleaf mtn. mahogany. This map unit is usually found on northerly hill and ridge slopes with loamy soils, that are too droughty for coniferous forest.

Shrubland - comprised only 0.4% of the study and is a minor cover class which was not well documented. Five vegetation units were mapped, mostly minor brush or thicket areas of the plains or uplands, sometimes called chaparral, and sometimes with wedgeleaf ceanothus. About 2% of shrubland was an important riparian community surveyors called "creek brush" or "brushy bottoms."

Upland Forest with Douglas-fir - comprises about 23 % of the study and is a composite of four map units. The largest unit includes xeric stands of mixed black and white oak, co-dominant with pine, but with less Douglas-fir, madrone, and possibly incense cedar covering nearly 12% of the study area. Douglas-fir is dominate in xeric stands of mixed hardwoods and pine in another 10% of the area. One type of moist Douglas-fir forest was identified covering only 0.5 % of the area. It is located in the highest precipitation zone of the study and contains mesic species indicators. A few data records listed mixtures of sugar pine with ponderosa pine and Douglas-fir, and usually include madrone and black oak. This map unit covers about 0.4 % of the study area and is found on sandy granitic soils.

Valley Floor Ponderosa Pine Forest - a unique and quite interesting valley bottomland forest type which was mapped on 3% of the study area. Here, ponderosa pine is a prominent fast growing co-dominant with large diameter black oak, white oak, madrone and sometimes minor amounts of incense cedar and hawthorn. It was mapped on deep, loamy, usually well-drained soils of valley plains, and on high river terraces possibly with brief seasonal water tables, where large growth form trees are produced.

Riparian Forest - comprises about 1.5 % of the study and includes only 2 types. One is an ash swale, a minor sometimes thick brushy stand where Oregon ash, willow and briars are the only plants mentioned. The other community is found on flood plains of creeks and the Rogue River, and is a riparian bottomland hardwood forest sometimes called "Creek Timber." It is

composed of a mixture of hardwoods, namely Oregon ash, cottonwood white oak, black oak, cottonwood, willow, and probably white alder and bigleaf maple. Composition of the stands would have varied from place to place, depending on site conditions. Understories are variable but may include wild grape, nettles, briars, hazel and hawthorn. Large size specimens of hardwoods can still be found on remnants of this community today. It is no doubt under-mapped as it probably occurred along many smaller streams within the study which were not mentioned by GLO surveyors.

V. Discussion and Analysis

Even with a short list of about 32 species (primarily trees and shrubs) from GLO field notes, plus other general vegetation references and topographic notes, we were able to separate the twenty four vegetation groups and map these with some confidence, and that even the low precision at times still presented a realistic window into this time period in history. The greatest amount of information for developing composition data for vegetation descriptions was in the woodland and forest habitats since trees and shrubs were always the primary species cited. Prairie units and (even the small areas of shrub types) were poorly documented and defined primarily by grass or prairie references along with soil landscape position.

Prairie map units are found mostly on soil restricting (or enhancing) environments, and some with hot droughty climatic situations as well. We know this is true by relating these areas to the associated soil groups which we can determine by referring to modern soil maps for prairie areas. Most of the now open hot grassy foothills and steep south slopes between Medford and Ashland were mapped as upland prairie. This area is also part of the Cascades geology which has weathered into large areas of clayey vertisol soils which shrink and swell as they dry in this hot summer climate. The climatic transition and gradient across southern Jackson County toward a more Mediterranean climate is obvious here and encourages the abundance of prairie and droughty hardwood grassland or oak/brush ecosystems.

The large gravel alluvium plain just north of Medford is also a strong prairie unit in GLO notes. The heart of this area is known as the White City area, site of a World War II Army Base, Camp White. Soil is no doubt restricting for many species here because of the shallow mounds of soil interspersed with scabland which act as drains or become ponded vernal pools in the spring runoff. This mounded prairie map unit rests on a compacted gravel hardpan which prevents internal drainage and warrants separation from other historic prairie types, even without much GLO data to describe its vegetative composition. Sometimes the surveyors noted a few scattered white oak trees on this prairie, so that trees were either incidental in occurrence or possibly inclusions of oak savanna in more favorable locations, within the mounded prairie.

White Oak Savanna was minor even though we might have expected it to be more common at settlement. This study was not designed to look for evidence as to whether these were being maintained by fire, or to explore whether some savanna had been converted to prairie by periodic burning. It is likely, as we have already stated, that some savanna existed within other vegetation types but was not reported or mappable.

The amount of **Shrubland** identified was minor because most brushy areas and thickets reported by surveyors were also associated with trees and classified differently. Brush patches of wedgeleaf ceanothus were noted on the plains within the mounded prairie, and chaparral thickets were noted in uplands within woodland areas. Both could represent early successional stages of woodland or savanna. And some examples of "Creek Brush" on flood plains may be young "Creek Timber" in an early stage of development.

Woodland in GLO vegetation studies, is normally separated from Forest cover classes by wider witness tree spacing at the corners, with the typical spacing being roughly 60 feet. This was so variable and often straddled both sides of the spacing guidelines, so that it appeared to be un-mappable and not a useful division for this study area in southwest Oregon. Here the distinction is related more to hardwood dominance and the presence of Douglas-fir. Upland hardwood stands with little or no Douglas-fir fit best in the Woodland cover class, while stands with significant Douglas-fir (but not necessarily dominant) were classified as Forest. One exception is found in the valley floor where pine dominated bottomland with large dense mixed hardwood canopies are given a Forest cover class.

Historic Woodland plant communities in the uplands appear to have a climatic relationship when geographic distribution is compared with precipitation patterns. White oak woodland which may include minor black oak but little or no ponderosa pine and madrone, is primarily mapped in the dry, warm south end of the valley. Pine dominated woodland with mixed oak and madrone is generally found in the higher precipitation zones on the outer edges of the study area adjacent to forested map units. And hardwood dominated woodland with pine as only a secondary species or in pockets, are mostly in between these locations.

Pine-mixed oak dominated woodland found on the shallow, mounded soil plain is hard to explain. The same gravel hardpan alluvium, with shallow soil mini-mounds (biscuit-scabland) was mapped by a USDA soil survey team where both this historic woodland community was found and also where historic prairie was located. The majority of this soil landscape is prairie but both remain, even today, side by side, just north of Medford, without explanation.

Upland Forest map units with Douglas-fir, as with woodland vegetation, appear to have a climatic relationship. They are located on the outer edges of the map in higher rainfall areas but are closer to the valley on northerly aspects. These are believed to occur in areas where average annual precipitation is over about 25 inches. Precipitation in this study area probably ranges up to at least 35 inches in the highest precipitation zone. There are apparently two such areas of high precipitation. A moist forest community was mapped at these two locations on opposite sides of the valley and vegetation map. Mesic species indicators were noted here in GLO notes that were normally absent in other descriptions. This list included big leaf maple, yew, chinkapin, Pacific dogwood, hazel, cherry, serviceberry and willow.

Some comments are in order regarding the status of Douglas-fir in the more xeric forest units. These were mapped on a variety of environmental conditions involving variations in elevation, aspect, climate, and soils ranging from loams and clay loams to clay pans and sandy granitics. Dominance between Douglas-fir and pine or hardwoods in these stands relates to inherent site characteristics, past disturbance history and the elapsed time since disturbance. Historic Douglas-fir dominant stands in this data set may have been mid or late seral stands. But pine or hardwood dominated stands may either have been in early seral status (fire recovery, etc.) or older stands responding to more xeric precipitation and/or site restricting (soil-aspect) environments.

Valley Floor Pine-Mixed Hardwood Forest is of special interest in this study. First, the exceptional growth rate and large growth form of trees on this site as noted in present day examples is outstanding and no doubt enhanced by inherent soil landscape features. Second, since it occurs on both deep well-drained bottomland and on high terraces of the Rogue River which rarely flood and may have some seasonal watertable influences, differences in stand composition may be expected and justify two similar but separate mapping units of this plant community. However, GLO notes were not detailed enough to reveal any of the likely differences between these situations. Third, ponderosa pine is the dominant and primary conifer (except for miner incense cedar) in these stands, until they approach the valley edges where Douglas-fir increases in the composition. Other valleys in western Oregon with non-restrictive valley soils, generally support Douglas-fir, sometimes with sugar pine or grand fir, depending on location. The difference is apparently precipitation so that the low precipitation zone of this valley floor favors ponderosa pine and restricts Douglas-fir.

VI. Conclusions and Questions

In conclusion, I will report that this study has had its disappointments, that some important questions remain to be answered, and that more data and research is needed to fill in data gaps. However, this effort provided a great deal of incite into the past and into the presettlement vegetation complex.

First. GLO Surveys have a very limited amount of information recorded about landscapes and vegetation. Almost all plant notations are limited to a few trees and shrubs without herbaceous species which provide only a short list with which to work. Some errors in species identification were obvious which needed correction (greasewood, redwood, bugwood, etc.). Since notes followed section lines, there is little information provided within the interior of sections so that much area is missed in the inventory. Errors in the maps were found repeatedly regarding drainage way and topographic sketches on township plats. The amount of field notation was not always consistent between survey areas so that less information was sometimes provided than expected. And since surveyors were better trained in engineering than as botanists, the amount of vegetation data included was not very extensive.

Second. Questions remain which this study was not designed to explore or answer. What role did fire have in shaping this historic landscape and explaining what was found in the survey? This relates to the vegetation boundaries, stand densities, species dominance, stand maintenance and the high degree of brush cover in many forest and woodland areas. What are some of the important species left out of GLO notes, such as prairie grasses/forbs and additional woody species? What are the modern names for a few species which are not known now by the names in GLO use? What type of changes in composition and ecological status have typically occurred in native cover since European settlement? And, what is the change in extent or acreage of native cover, and the percent of cover remaining or lost for the vegetation types reported?

Third. This study is only the first phase of a bigger project envisioned, so as to complete and publish the historic vegetation base line for this valley. These results support the need for doing additional research, data collection and analysis, when more money can be raised for an expanded project. This would include transcribing and mapping the Donation Land Claims (nearly 300) for homestead property claims established in the 1850's, to retrieve more historic vegetation data. Old landscape photography for the decades following settlement, and some early diary records and reports need located at museums and libraries. Large remnants of native cover need to be mapped and sampled to look at the present situation. And, recent data available in the USDA soil survey and vegetation plot sampling of local remnant stands need correlated with the historic data set to add detail and improve or complement our interpretation of historic data. This would help correct errors or wrong assumptions made in interpreting the historic data. It would also enable the development of a much greater native species list for the baseline data set, while making it even more site specific. Lastly, it would serve as a model for other similar project efforts.

Note: A set of GIS maps accompany this study which display the distribution of historic vegetation types.

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Presented 3/25/05 at the NW Scientific Association Annual Meeting, Corvallis, Oregon

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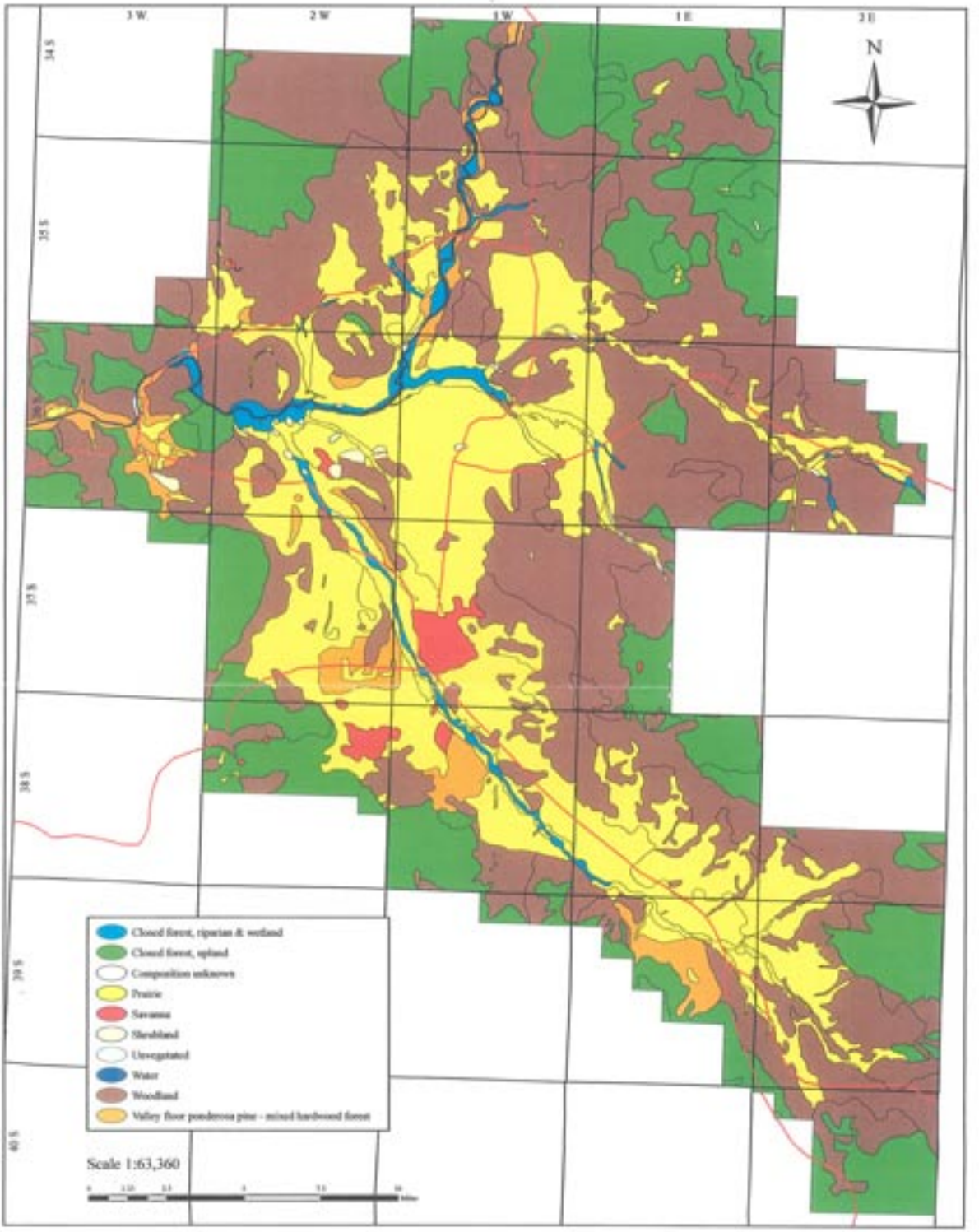
HISTORIC VEGETATION OF ROGUE VALLEY, 1850



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2004

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Historic Vegetation of the Upper Rogue River Valley, Circa 1855

By Gene Hickman, 2004