



Wenatchee River, as viewed from Horse Lake Road, looking NW

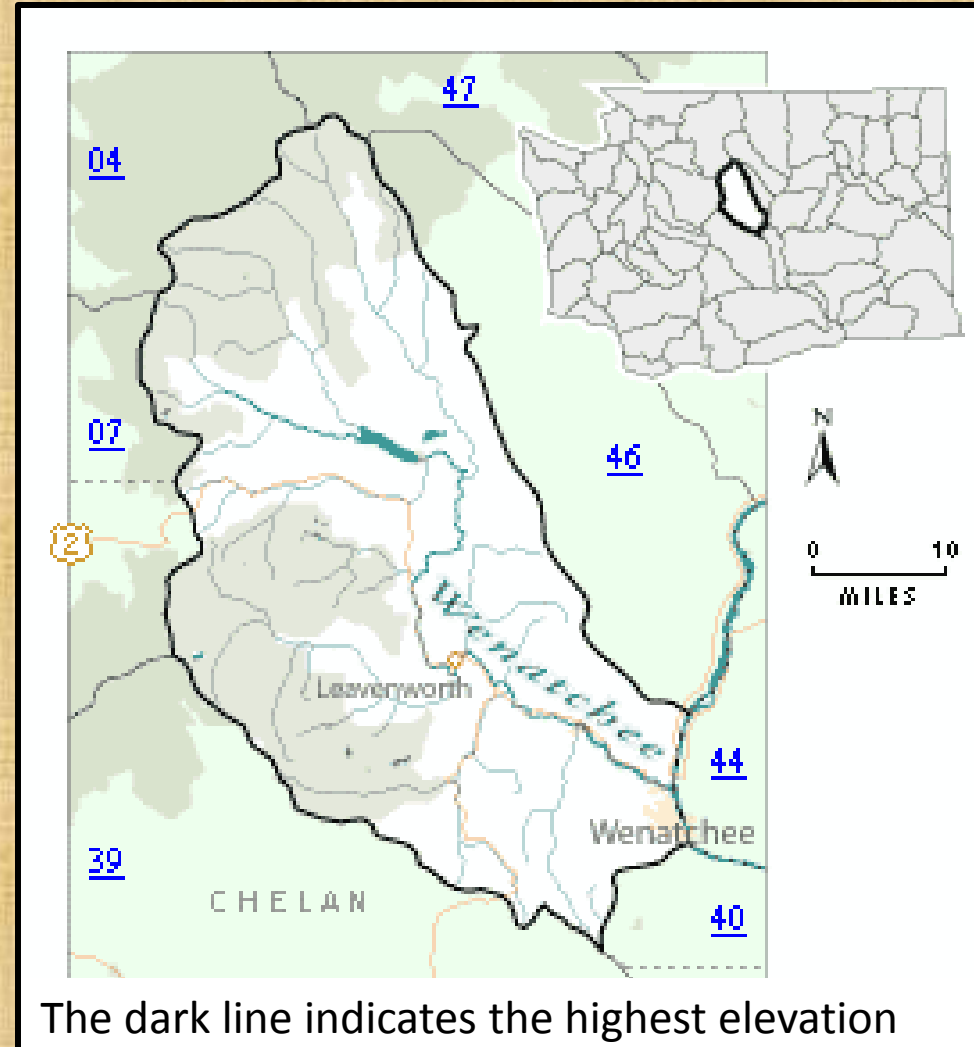
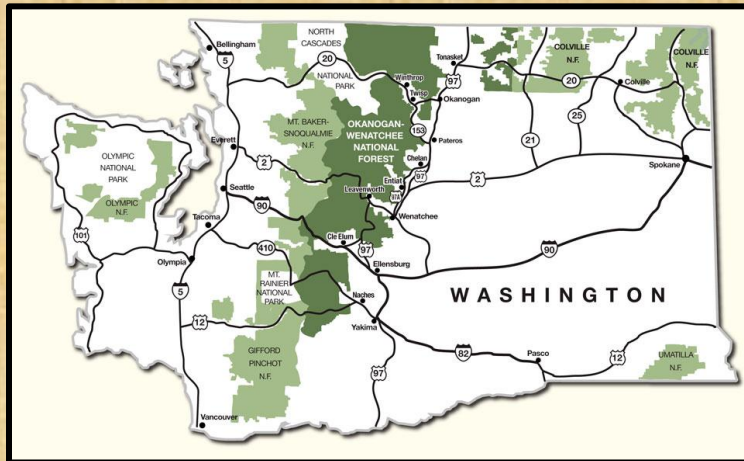
Introduction to *Wenatchee Naturalist* course and to the Wenatchee Watershed Eco-region



The Wenatchee River Watershed

The Wenatchee River watershed is all of the land drained by creeks, lakes, and rivers that flow into it.

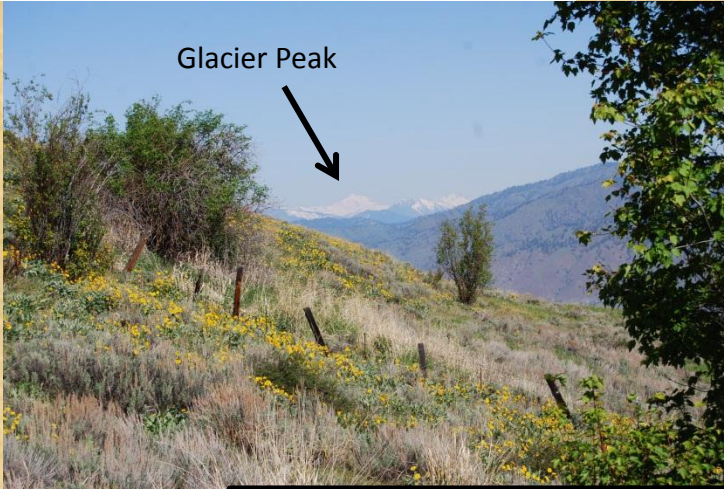
- **230 miles of major streams & rivers**
- **Annual precipitation range:**
- **150 in./yr.** at Cascade crest (includes 10-20 ft. of snow)
- **9 in./yr.** at confluence with Columbia River.



The dark line indicates the highest elevation ridgeline encompassed with the Wenatchee River watershed (**1,370 square miles**)

The Wenatchee Valley connects the east-side of the Cascade Mountains to the Columbia Basin at the Columbia River

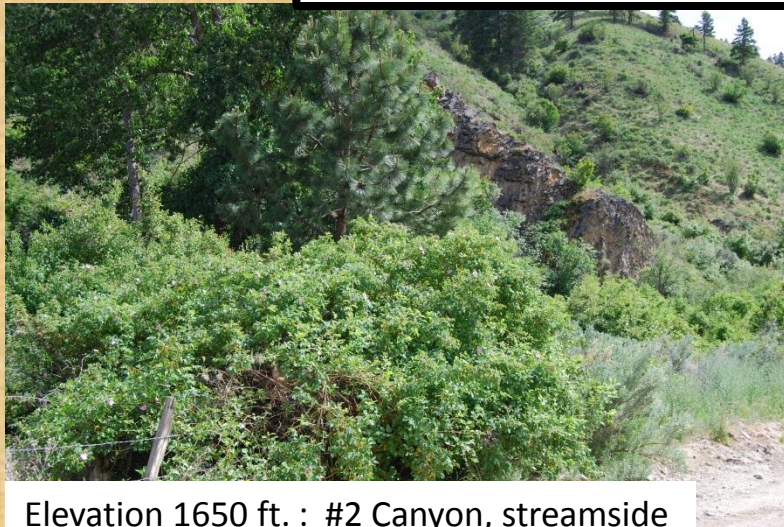
Elevation 2824 ft.: Horse Lake Preserve



Elevation: 6800 ft. Looking north from Mission Ridge



Unique character: significant elevation rise over a short distance



Elevation 1650 ft. : #2 Canyon, streamside



Elevation: 3000 ft. #2 Canyon

Ecosystem : the relationship among all of the living plants and animals and the non-living topography, geology, climate, & soils of a region.
Some use the term “**Eco-region**” to describe specific ecosystems.



The Wenatchee Watershed encompasses many Eco-regions....and scientists use a variety of names to describe them!

Depending on who's talking, our landscape is called by many names:



Geologists say: **Columbia Plateau**

Geographers say: **Columbia Basin Eco-region**

Hydrologists say: **Arid Lands**

Botanists say: **Shrub-steppe Ecosystem,**

Wildlife biologists say: **sagebrush grassland**



Surprising, all of these names are correct and thus reflect the complexity of life found in our part of Washington. Each name reflects a different focus of interest

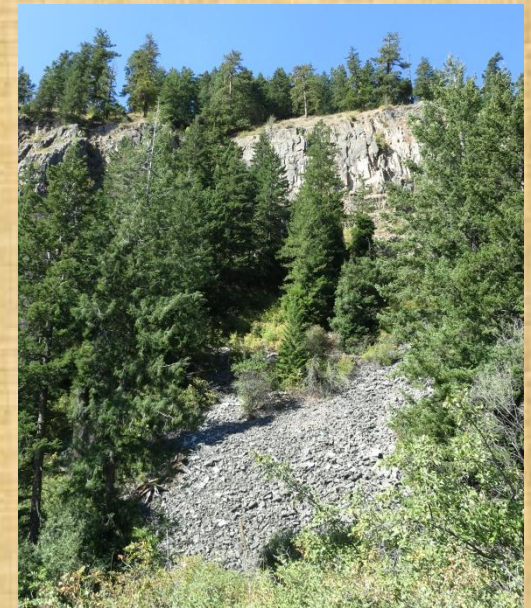
Groups of plants tend to be found together in recognizable geographical settings – termed “plant communities”



East-side low **montane** forest



wetlands: plants that need moist soils .



talus rock slopes: plants tolerant of heat & low moisture

shrub-steppe: sagebrush grasslands



riparian: trees & shrubs along streams & rivers

Think of the Wenatchee Watershed as a HOUSE,
composed of eco-regions



Bathrooms: water determined
eco-regions including
riparian and **wetlands**

Chimney-top: **alpine**

Roof-top: **subalpine**

Attic: **high montane forest**

2nd floor: **low montane forest**

Main floor: **shrub-steppe**

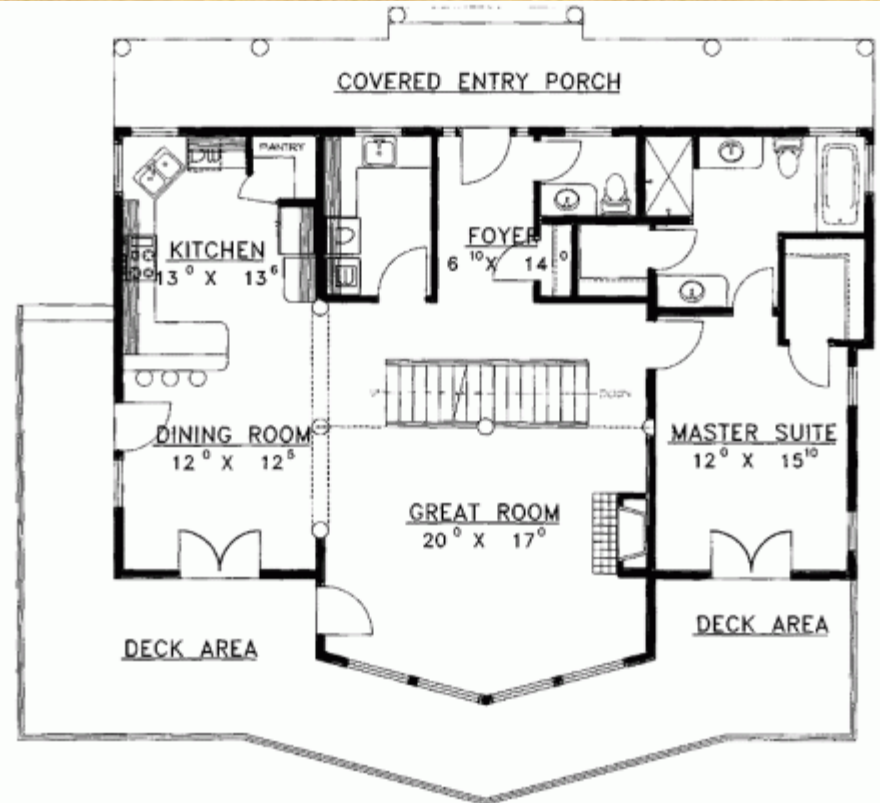
Yard: **Geography-surface**

Foundation: **Geology-bedrock**

Like rooms in a house, plants and animals can move between rooms (habitats), and go between floors (eco-regions)

Animals move between eco-regions:
daily
seasonally
yearly

Plants move between eco-regions
Wind
Water
Animal carried

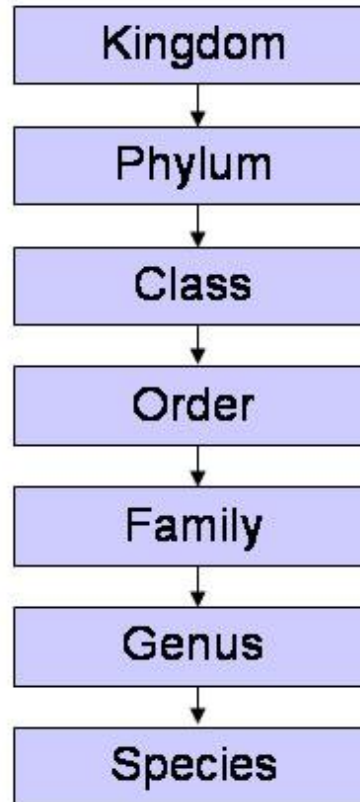


Groups of plants typically found together
Are called a **PLANT COMMUNITY** and used to name habitats.

How Biologists organize living things

Linnaeus's System of Classification

All field guides
Use this system
Of organization



In *Wenatchee Naturalist*, we'll focus on 8 groups of organisms that are common in our local eco-regions:

insects

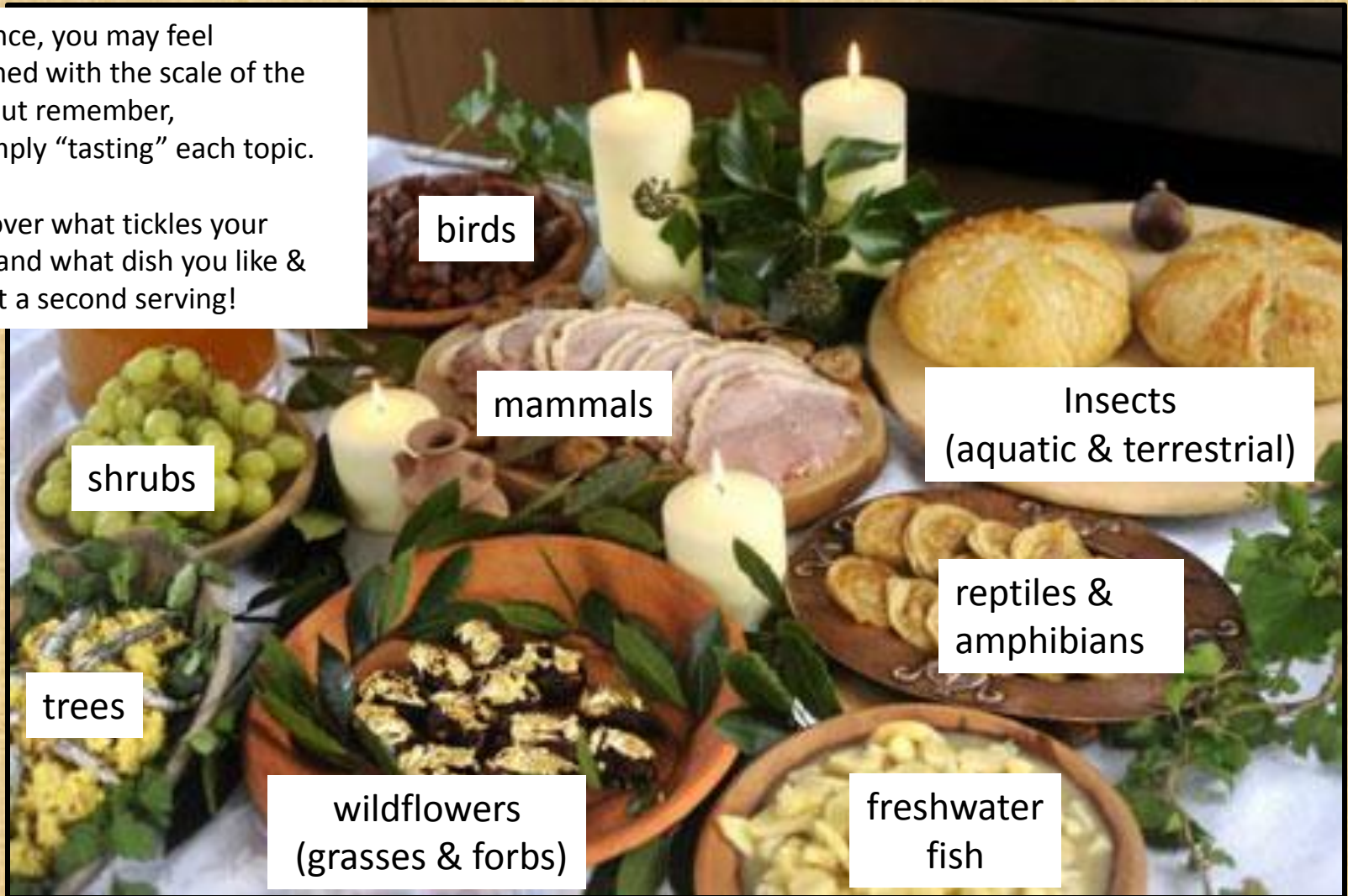
wildflowers

mammals conifers
reptiles shrubs
amphibians birds

Think of the 12-week *Wenatchee Naturalist* course as a grand feast where each person *tastes* many dishes to find their favorite.

At first glance, you may feel overwhelmed with the scale of the banquet, but remember, you are simply “tasting” each topic.

You’ll discover what tickles your tastebuds and what dish you like & want to get a second serving!



birds

mammals

Insects
(aquatic & terrestrial)

shrubs

reptiles &
amphibians

trees

wildflowers
(grasses & forbs)

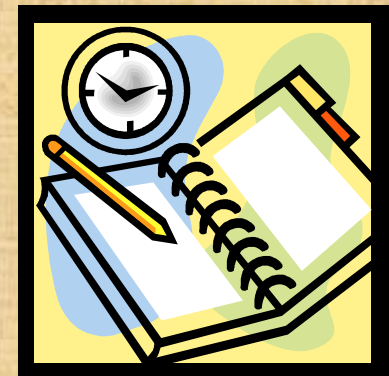
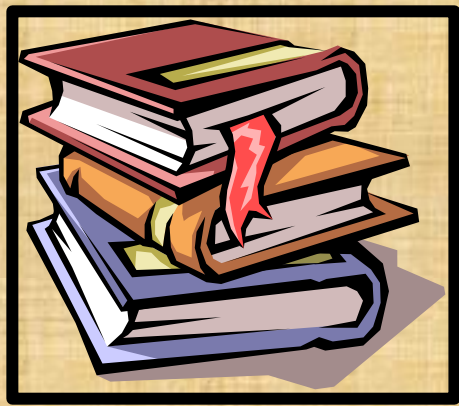
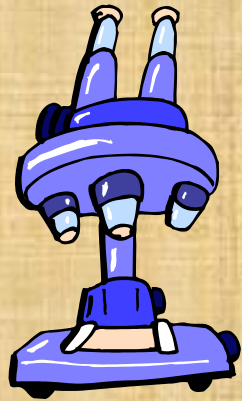
freshwater
fish

Course Goal: To familiarize you with **Naturalist** “tools of the trade”



Each week, you will:

- practice field observation skills
- use scientific tools
- be introduced to common plants & animals or our eco-regions
- learn about field guides & websites to utilize as your own future reference library
- Be familiar with local destinations for nature study & recreation
- Learn about volunteer opportunities with local non-profit conservation organizations and citizen science projects



Field trips led by guest scientists are designed to introduce our interconnected eco-regions



The syllabus offers you:

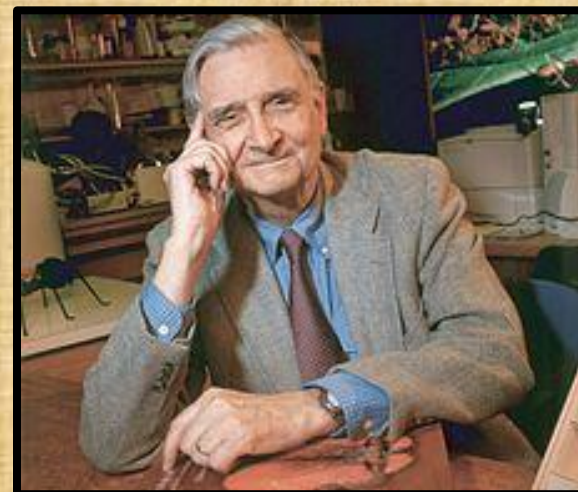
- loaner box options for suggested readings prior to coming to class
- websites to visit and to serve as a reference library
- class website documents that serve as a library-at-your-fingertips
- the “LEARN 10” game aims to help you learn 100 common plants & animals by sight recognition (wenatcheenaturalist.com)



The only “required” homework is to do weekly field journaling at the site you select & on field trips

E.O. Wilson, American biologist, emeritus Harvard professor, researcher, theorist, naturalist and Pulitzer Prize winning author. He is the leading authority on the study of ants.

His thoughts on scientific natural history:



The wellspring of the new biology is scientific natural history...

Earth remains a little known planet. A large majority of its species (probably over 90% when microorganisms are included) are still unknown. Of approximate two million species that have been described and given a scientific name, fewer than 10% have been studied in depth. Many of the world's ecosystems have been examined only cursorily, if at all.

...Scientific naturalists are blessed. As researchers, everything they touch turns to gold, because the living world is so little known...

...Naturalists know that what they see on a field trip, whether a day's excursion or a year's residence in a camp or research station, is only a tiny part of what exists around them. They also know that whether they go to the Amazon or just to a city park near their home, they can find biological novelty...

...If there is a heaven and I am allowed entrance, I will ask for no more than an endless living world to walk through and explore. I will carry with me an inexhaustible supply of notebooks...

Excerpt from Foreword by Edward O. Wilson, *Field Notes on Science and Nature*, 2011