

# **4-H Forestry Specimen Exhibit Requirements**

## **Why Make an Exhibit?**

The 4-H Forestry project gives members the opportunity to visit many different locations to learn about Oregon's trees and other plants. An important part of the learning process is the collection and identification of plant specimens. These specimens are to be properly preserved and labeled as plant mounts.

Exhibiting gives 4-H members a chance to show off their finished product. A member's exhibit begins as a collection of plant mounts. By adding 5 new mounts each year, a member may have a finished book with as many as 45 mounts in it at the end of his or her 4-H participation. It also provides the opportunity for members to receive feedback from a knowledgeable person on their work. The book can be a reference for the member and others for a lifetime.

Advanced exhibits give members an opportunity to expand their knowledge in the forestry project. Members match their project choices to their own personal goals and objectives. An exhibit may be a collection of seeds, cones, bark, lumber, conks, damaged specimens, or wood mounts.

Educational displays also may be developed. Members may compare forest practices, such as clear cutting and selective cutting, indicating when and why each practice might be best in different situations. Other possible topics for educational displays include job opportunities in forestry, forest laws and regulations, and current political forest issues.

Preparing an exhibit allows members to expand their knowledge of forestry. In future years when forestry issues are in the news, 4-H members who have participated in the forestry project will understand the ecology of forest communities and be better prepared to make informed decisions about them.

## **What Members are to Collect**

Detailed information on how to collect, press, and mount plant specimens is given in the 4-H Forestry Fact Sheet: Tree Identification Collection (4-H 33100L). Members must collect, press, and mount the foliage of forest trees and shrubs each year. For specimens whose foliage shatters easily, such as hemlock and spruce, a few sample needles along with the bare twig are acceptable.

Each mount card must include a reproductive part from the plant in addition to the foliage. Reproductive parts include: (1) seeds such as those of pine, fir, maple, or ash, or very small cones such as cedar; (2) a pencil sketch or outline of the cone, fruit, or flower with size scale and identifying features emphasized (the reproductive parts should be labeled on the sketch); (3) a pressed flower of the tree or shrub; (4) one-half of small cones or fruits, such as those of oak, juniper, alder, or locust; (5) a cone bract, such as the "pitchfork" of Douglas-fir, or a cone scale; or (6) the "staminate" or "pollen" cones.

A member's exhibit score will not be improved by adding extra parts to the mount such as bark or wood samples. It's possible that the score will be lowered if these additions detract from the overall appearance of the mount.

## **Exhibit Guidelines for Junior, Intermediate, and Senior Members**

All forestry members exhibit 5 new mounts each year. Mount cards may be obtained through your county Extension office or from the Extension Stockroom at OSU. Plastic covers may be used to protect the mounts. All woody specimens exhibited must be listed on the Official 4-H Forestry Species List, included in this publication.

Although prior years' mounts are required in exhibits, the names of exhibited specimens must be from the current Official 4-H Forestry Species List. Members are responsible for correcting the name legend on the mount if a specimen's name has changed since the mount was originally prepared.

### ***Indexing Specimen Mounts***

An exhibit collection includes a list of specimens, called the Index. The Index is to be located at the front of the collection book. All specimens are to be recorded on the Index, and the 5 new mounts should be clearly indicated. The mounts should be listed under the heading of the family names as given in the Official 4-H Forestry Species List. When Intermediate and Senior members include herbaceous plant specimens, the family names can be found in one of the reference texts listed following the Official 4-H Forestry Species List.

### ***Mount Page Numbers***

Each mount must have a page number. The page number must correspond to the current Index. Page numbers will change from year to year as more mounts are added to the collection. Place the page numbers on the protective plastic covers, not on the mounting card, so they can be changed as needed.

### ***Dividers***

Dividers may be used to separate families in the collection book, but are not required.

### ***Additional Requirements for Exhibits***

Junior members exhibit 5 new trees each year. The trees must be listed and indexed as listed on the Official 4-H Forestry Species List. The 5 new tree mounts should be clearly marked in the Index.

Intermediate and Senior division exhibitors must complete a Specimen Collection Site Analysis Sheet for each specimen collected and exhibited in the current year. This sheet is not required for Junior division exhibitors.

The Specimen Collection Site Analysis Sheet is available only as a single, reproducible copy in this publication. It is the responsibility of the 4-H member and leader to copy the appropriate quantity of sheets for individual collections. The sheets should be completed and placed in the collection book facing the corresponding specimen mount. After numbering the mounts, the 5 new mounts with their Site Analysis Sheets are to be placed in the front of the collection book just after the Index. The 5 new mounts should be clearly marked in the Index.

Intermediate and Senior members will be judged only on the 5 new mounts and Site Analysis Sheets. The number of mounts may vary depending on the number of years in the project. All mounts should be exhibited. Only the index and 5 new mounts may include trees and shrubs. They must be listed and indexed as listed on the Official 4-H Forestry Species List. Seniors new mounts may include trees, shrubs, ferns and wildflowers. They should be indexed in this order:

(1) ferns; (2) conifers; (3) broadleaf trees and shrubs; (4) wildflowers.



## **Conifers**

### **Pine Family (Pinaceae)**

sugar pine	( <i>Pinus lambertiana</i> )
western white pine	( <i>Pinus monticola</i> )
ponderosa pine	( <i>Pinus ponderosa</i> )
Jeffrey pine	( <i>Pinus jeffreyi</i> )
knobcone pine	( <i>Pinus attenuata</i> )
whitebark pine	( <i>Pinus albicaulis</i> )
lodgepole pine/shore pine	( <i>Pinus contorta</i> )
limber pine	( <i>Pinus flexilis</i> )
subalpine fir/alpine fir	( <i>Abies lasiocarpa</i> )
noble fir	( <i>Abies procera</i> )
California red fir/red fir	( <i>Abies magnifica</i> )
Shasta red fir	( <i>Abies magnifica</i> var. <i>Shastensis</i> )
Pacific silver fir/silver fir	( <i>Abies amabilis</i> )
grand fir/lowland white fir	( <i>Abies grandis</i> )
white fir	( <i>Abies concolor</i> )
western hemlock	( <i>Tsuga heterophylla</i> )
mountain hemlock	( <i>Tsuga mertensiana</i> )
Sitka spruce	( <i>Picea sitchensis</i> )
Engelmann spruce	( <i>Picea engelmannii</i> )
Brewer spruce/weeping spruce	( <i>Picea brewerana</i> )
western larch	( <i>Larix occidentalis</i> )
Douglas-fir	( <i>Pseudotsuga menziesii</i> )

### **Baldcypress/Redwood Family**

redwood/coast redwood	( <i>Sequoia sempervirens</i> )
giant sequoia/bigtree	( <i>Sequoiadendron giganteum</i> )

### **Cypress Family (Cupressaceae)**

western redcedar	( <i>Thuja plicata</i> )
Port-Orford-cedar	( <i>Chamaecyparis lawsoniana</i> )
incense-cedar	( <i>Calocedrus decurrens</i> )
Alaska-cedar/Alaska-yellow-cedar	( <i>Chamaecyparis nootkatensis</i> )
western juniper/Sierra juniper	( <i>Juniperus occidentalis</i> )
common juniper	( <i>Juniperus communis</i> )
Rocky Mountain juniper	( <i>Juniperus scopulorum</i> )

### **Yew Family (Taxaceae)**

Pacific yew	( <i>Taxus brevifolia</i> )
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## ***Broadleaf Trees and Shrubs***

### **Willow Family—(Salicaceae)**

willow	( <i>Salix</i> spp.)
quaking aspen/trembling aspen/Aspen	( <i>Populus tremuloides</i> )
black cottonwood	( <i>Populus trichocarpa</i> )
all other cottonwoods and poplars	( <i>Populus</i> spp.)

### **Wax-Myrtle Family (Myricaceae)**

Pacific bayberry/Pacific wax-murtle	( <i>Myrica californica</i> )
sweetgate	( <i>Myrica gale</i> )

### **Birch Family (Betulaceae)**

red alder	( <i>Alnus rubra</i> )
white alder	( <i>Alnus rhombifolia</i> )
Sitka alder	( <i>Alnus sinuata</i> )
thinleaf/mountain alder	( <i>Alnus tenuifolia</i> )
California hazel	( <i>Corylus cornuta</i> var. <i>Californica</i> )
paper birch/white birch	( <i>Betula papyrifera</i> )
bog birch/scrub birch	( <i>Betula glandulosa</i> )

### **Beech Family (Fagaceae)**

Oregon white oak	( <i>Quercus garryana</i> )
canyon live oak	( <i>Quercus chrysolepis</i> )
California black oak	( <i>Quercus kelloggii</i> )
tanoak	( <i>Lithocarpus densiflorus</i> )
golden chinkapin/western Chinquapin	( <i>Castanopsis chrysophylla</i> )

### **Elm Family (Ulmaceae)**

netleaf hackberry	( <i>Celtis reticulata</i> )
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### **Barberry Family (Berberidaceae)**

tall Oregon-grape	( <i>Berberis aquifolium</i> )
dwarf Oregon-grape	( <i>Berberis nervosa</i> )
creeping Oregon-grape	( <i>Berberis repens</i> )

### **Laurel Family (Lauraceae)**

Oregon-myrtle/California-laurel/bay	( <i>Umbellularia californica</i> )
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### **Hydrangea Family (Hydrangeaceae)**

mockorange	(Philadelphus spp.)
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**Currant Family (Grossulariaceae)**

red-flowering currant	(Ribes sanguineum)
other currants and gooseberries	(Ribes spp.)

**Rose Family (Rosaceae)**

wild blackberry	(Rubus ursinus)
(i)evergreen blackberry	(Rubus laciniatus)
(i)Himalaya berry	(Rubus discolor)
salmonberry	(Rubus spectabilis)
thimbleberry	(Rubus parviflorus)
blackcap/western raspberry	(Rubus leucodermis)
bitterbrush/antelope brush	(Purshia tridentata)
Douglas spiraea	(Spiraea douglasii)
spiraea	(Spiraea spp.)
mallow ninebark	(Physocarpus malvaceus)
ninebark	(Physocarpus capitatus)
ocean spray	(Holodiscus discolor)
little wood rose	(Rosa gymnocarpa)
(i)sweetbriar rose	(Rosa eglanteria)
all other roses	(Rosa spp.)
common chokecherry	(Prunus virginiana)
bittercherry/bitter cherry	(Prunus emarginata)
other wild cherries	(Prunus spp.)
western crabapple	(Pyrus fusca)
black hawthorn	(Crataegus douglassi)
hawthorns	(Crataegus spp.)
Pacific serviceberry/Western serviceberry	(Amelanchier ainifolia)
*Utah serviceberry	(Amelanchier utahensis)
mountain-ash	(Sorbus spp.)
curlleaf mountain-mahogany/curlleaf cercocarpus	(Cercocarpus ledifolius)
birchleaf mountain-mahogany/birchleaf cercocarpus	(Cercocarpus betuloides)
Indian-plum	(Oemleria cerasiformis)

**Pea Family (Leguminosae)**

(i)Black locust	(Robinia pseudoacacia)
(i)Scotch broom	(Cytisus scoparius)
(i)gorse/furze	(Ulex europaeus)

**Cashew Family (Anacardiaceae)**

poisonoak	( <i>Rhus diversiloba</i> )
smooth sumac	( <i>Rhus glabra</i> )
skunkbrush	( <i>Rhus trilobata</i> )

**Maple Family (Aceraceae)**

bigleaf maple	( <i>Acer macrophyllum</i> )
vine maple	( <i>Acer circinatum</i> )
Rocky Mountain maple	( <i>Acer glabrum</i> )
Douglas maple	( <i>Acer glabrum</i> var. <i>Douglassi</i> )

**Buckthorn Family (Rhamnaceae)**

casara buckthorn	( <i>Rhamnus purshiana</i> )
California coffeeberry/California buckthorn	( <i>Rhamnus californica</i> )
mountain whitethorn ceanothus	( <i>Ceanothus cordulatus</i> )
narrowleaf buckbrush/wedgeleaf ceanothus	( <i>Ceanothus cuneatus</i> )
deerbrush	( <i>Ceanothus integerrimus</i> )
squawcarpet/mahala mat	( <i>Ceanothus prostratus</i> )
redstem ceanothus/buckbrush	( <i>Ceanothus sanguineus</i> )
blueblossom	( <i>Ceanothus thrysiflorus</i> )
snowbrush	( <i>Ceanothus velutinus</i> )

**Ginseng Family (Araliaceae)**

devilsclub	( <i>Oplopanax horridum</i> )
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**Dogwood Family (Cornaceae)**

Pacific dogwood	( <i>Cornus nuttallii</i> )
red-osier dogwood	( <i>Cornus stolonifera</i> )
western dogwood/creek dogwood	( <i>Cornus stolonifera</i> var. <i>occidentalis</i> )

**Silktassel Family (Garryaceae)**

wavyleaf silktassel/coast silktassel	( <i>Garrya elliptica</i> )
Fremont silktassel	( <i>Garrya fremontii</i> )
boxleaf garrya	( <i>Garrya buxifolia</i> )

**Heath Family (Ericaceae)**

red huckleberry	( <i>Vaccinium parvifolium</i> )
evergreen huckleberry	( <i>Vaccinium ovatum</i> )
all other huckleberries	( <i>Vaccinium</i> spp.)
Pacific rhododendron	( <i>Rhododendron macrophyllum</i> )

*Cascade azalea	( <i>Rhododendron albiflorum</i> )
western azalea	( <i>Rhododendron occidentale</i> )
salal	( <i>Gaultheria shallon</i> )
kinnikinnick/bearberry	( <i>Arctostaphylos uva-ursi</i> )
green manzanita	( <i>Arctostaphylos patula</i> )
hairy manzanita	( <i>Arctostaphylos columbiana</i> )
whiteleaf manzanita	( <i>Arctostaphylos viscida</i> )
other manzanitas	( <i>Arctostaphylos</i> spp.)
rusty menziesia	( <i>Menziesia ferruginea</i> )
Pacific madrone	( <i>Arbutus menziessii</i> )
*red heather	( <i>Phyllodoce empetriformis</i> )
*yellow heather	( <i>Phyllodoce glanduliflora</i> )
Pacific Labrador—tea	( <i>Ledum glandulosum</i> )

### **Olive Family (Oleaceae)**

Oregon ash	( <i>Fraxinus latifolia</i> )
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### **Honeysuckle Family (Caprifoliaceae)**

black twinberry	( <i>Lonicera involucrata</i> )
*orange honeysuckle	( <i>Lonicera ciliosa</i> )
*hairy honeysuckle	( <i>Lonicera hispidula</i> )

### **Sunflower Family (Compositae)**

big sagebrush	( <i>Artemisia tridentata</i> )
all other sagebrushes	( <i>Artemisia</i> spp.)
gray rabbitbrush	( <i>Chrysothamnus nauseosus</i> )
green rabbitbrush	( <i>Chrysothamnus viscidiflorus</i> )
Kidneywort baccharis	( <i>Baccharis pilularis</i> )

The above list includes species from the 1994 edition of Randall, Keniston, Bever & Jensen, *Manual of Oregon Trees and Shrubs*, Oregon State University Bookstore. Species from other sources are indicated by an asterisk (\*). Non-native or introduced species are indicated by an (i).

### **Other Reference Texts for Intermediate and Senior Members**

#### ***Forestry Exhibit Specimens***

Gilkey, Helen M. and La Rea J. Dennis. Handbook of Northwestern Plants, 1980, Oregon State University Bookstores, Inc., Corvallis, OR.

Jensen, Edward C. and Charles Ross. Trees to Know in Oregon, Extension Circular 1450, reprinted 1995, Oregon State University Extension Service, Corvallis, OR.

Niehaus, Theodore F. Field Guide to Pacific States Wildflowers, 1996, Houghton Mifflin Co., Boston.

Peterson Field Guides Series, Houghton Mifflin Co., Boston.

Ross, Charles. Ferns to Know in Oregon, Extension Bulletin 785, reprinted January 1977, Oregon State University Extension Service, Corvallis, OR.

Ross, Robert and Henrietta Chambers. Wildflowers of the Western Cascades, 1988, Timber Press, Portland, OR.

Taylor, Ronald and Ronald Valum. Wildflowers 2 Sagebrush Country, 1974, Touchstone Press, Beaverton, OR.

Taylor, Ronald. Sagebrush Country, A Wildflower Sanctuary, 1992, Mountain Press Publishing Company, Missoula, MT.

Taylor, Ronald. Northwest Weeds, 1990, Mountain Press Publishing Company, Missoula, MT.

Underhill, J.E., Sagebrush Wildflowers, 1986, Hancock House Publishers, Inc., Blaine, WA.

*[insert "Specimen Collection Site Analysis/score sheet 1)*

*[insert "Forestry Exhibit Analysis/score sheet 2)*

### ***Advanced Forestry Exhibits***

4-H members are encouraged to make an advanced forestry exhibit by broadening their collections to include other types of mounted specimens or by making an educational display.

Members may exhibit in one topic or make one exhibit by combining topics. Exhibit topics from which members may select are: (A) cones; (B) tree seeds; (C) conks; (D) damaged specimens; (E) bark; (F) wood mounts; (G) lumber mounts; and (H) other educational displays. Educational displays may include management plans, tree farm maps, model camp-sites, career opportunities, or forestry concepts.

The exhibit may be flat board or three-dimensional. The maximum size for a flat board display is 30 inches by 30 inches. The maximum size for a three-dimensional display is 30 inches wide, 24 inches deep (front to back), and 30 inches high.

Specimens from topics A through G may be mounted on plywood, pressed board, or other firm surface using glue, wire, nails, screw hooks and eyes, or other mounting techniques. The specimens in the exhibit must be collected and prepared in the current 4-H year.

The size of the mounting board should be in proportion to the size of the mounts on it. It need not be finished, but should be neat. Some specimens such as cones may be cut in half. Wood mounts should be 2 to 4 inches in diameter and about 4 inches long. Lumber mount dimensions should be about 1 x 4 x 6 inches. Each specimen must be identified with the location where it was collected (e.g., Salem), the range where it naturally grows (e.g., the Willamette Valley), and the date it was collected.

The exhibit specifications make up the requirements that are currently accepted at fairs. Educational displays are scored using the Educational Display Check Sheet. Advanced Forestry Exhibits are scored with the Advanced 4-H Forestry Exhibit Score Sheet.

*Advanced 4-H Forestry Exhibit Score Sheet*

Exhibitor's Name or

No. \_\_\_\_\_ Class \_\_\_\_\_ Placing \_\_\_\_\_

Members may exhibit in one topic or make one exhibit by combining topics. Exhibit topics from which members may select are: (A) cones; (B) tree seeds; (C) conks; (D) damaged specimens; (E) bark; (F) wood mounts; (G) lumber mounts; and (H) other educational displays. Educational displays may include management plans, tree farm maps, model camp-sites, career opportunities, or forestry concepts.

The exhibit may be flat board or three-dimensional. The maximum size for a flat board display is 30 inches by 30 inches. The maximum size for a three-dimensional display is 30 inches wide, 24 inches deep (front to back), and 30 inches high.

Specimens from topics A through G may be mounted on plywood, pressed board, or other firm surface using glue, wire, nails, screw hooks and eyes, or other mounting techniques. The specimens in the exhibit must be collected and prepared in the current 4-H year.

The size of the mounting board should be in proportion to the size of the mounts on it. It need not be finished, but should be neat. Some specimens such as cones may be cut in half. Wood mounts should be 2 to 4 inches in diameter and about 4 inches long. Lumber mount dimensions should be about 1 x 4 x 6 inches. Each specimen must be identified with the location where it was collected (e.g., Salem), the range where it naturally grows (e.g., the Willamette Valley), and the date it was collected.

**Scoring**

Points Off	Excellent	Good	Fair	
Accuracy—Correct common name; names used in H project material, names correctly spelled, required for first 2 years, Capitalization optional proper names and genus in				4- (Scientific names are not but are required in later years.) on labeling—mounts except scientific names.

Completeness—The required number of specimens. of information—Accurate and complete—concise.	Source(s) Clear and
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Selection and Condition of Specimen—that “looks right” for the species—not oversized, off color, underdeveloped, or deformed.	
Mounting and Appearance—Specimens carefully prepared, arranged neatly, and securely fastened. sturdy, attractive, and easy to leaf through.	Notebook
January 1998 40-595	Exhibit Score

**4-H Forestry Identification Contests**

Forest identification contests are fun and challenging, and help 4-H forestry members learn the trees and shrubs of their community and state.

Forestry members should learn the complete common name of the trees and shrubs exactly as it is listed in the Official 4-H Forestry Species List. Where two or more common names are listed, any are acceptable, but the first is preferred. Scientific names are not required.

In addition to learning the names of the trees and shrubs on the Official 4-H Forestry Species List, members should learn the distribution of each plant. There is a great difference between the climates of eastern and western Oregon. These climate differences contribute to the size and location of the range where each plant may grow.

Official county, or state 4-H Forestry Identification Contests will include only plants that appear in the Official list.

#### Contest Rules

1. Be on time, have a pencil, listen carefully, and follow instructions.
2. Do not talk with anyone except the person(s) in charge of the contest.
3. Do not look at any other contestant's card, or let another contestant see your card.
4. Handle specimens very carefully.
5. Names must be written as shown in the Examples on the following lists. Handwriting must be neat.

#### Scoring

1. Allow three points for each correct name.
2. Allow two points if name is correct, but misspelled.
3. Allow two points if incorrect species is added when only one genus is called for.
4. Allow one point for correct last name when species name is called for.
5. Allow no points for incorrect name, illegible hand writing, misspelled partial name, or if left blank.

#### Examples

ponderosa pine  
pondosa pine  
ponderosa pine  
or sugar pine  
pine

#### Points

3  
2  
2  
1  
0

Revised by Virginia Thompson, Extension specialist, 4-H youth development; and Fay Sallee, 4-H volunteer, Linn County; Oregon State University. Based on original work of Mike Holroyd, Duane P. Johnson, Cal Monroe, and John Kiesow, Oregon State University faculty.