

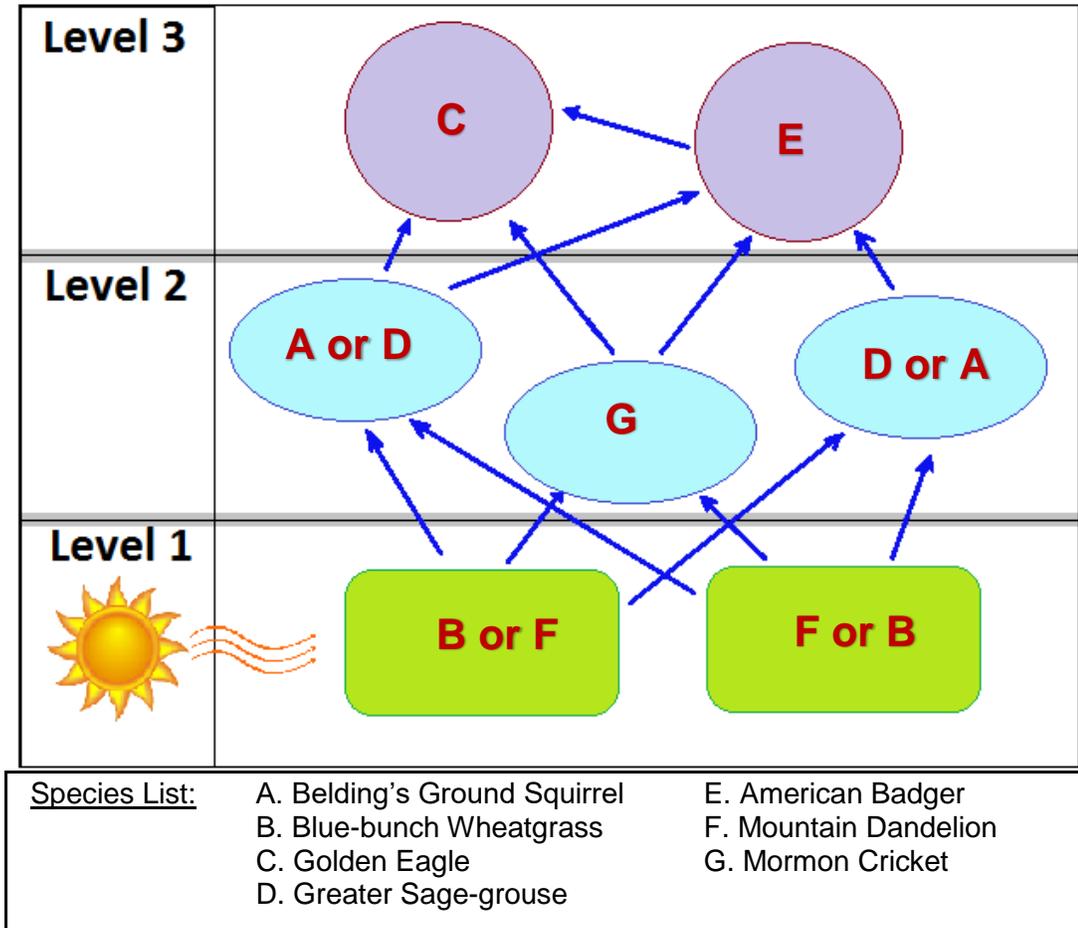
**WILDLIFE QUESTIONS**  
OREGON ENVIROTHON 2018

(Total of 50 points)

**Answers in Red**

**PART A. Wildlife Ecology Concepts.**

1). Diagram energy flow in a food-web. Write the letter of each of the species listed below into one of the circles or boxes to create a logical food web representing three trophic levels for a **Sagebrush Ecosystem** where sunlight is captured at Level-1. Arrows point in the direction of energy flow (the direction of the consumer). [7 points]



2). What trophic level of this food web has herbivorous animals? 2

3). What trophic level is most likely to be affected by bio-accumulation? 3

4). What trophic level of this food web has autotrophic organisms? 1

\_\_\_\_/ 10 points

**PART B: Wildlife Management Issue – Greater Sage-Grouse on the Edge**

Each Team should find a copy of a document entitled *Science Findings: Sage-Grouse on the Edge: Understanding and Managing Western Landscapes for Their Survival*.

**Don't worry**; you will **NOT** need to read the whole thing. Instead, just skim this document to help you answer the following questions.

5). In which state in the Pacific Northwest has the current occupied range of sage-grouse shrunk by the highest percentage from the historical range? (circle one) [1 point]

Oregon      **Washington**      Idaho

6). Which federal land management agency has the highest percentage of current occupied sage-grouse range? [1 point]

\_\_\_\_\_ **Bureau of Land Management (BLM)** \_\_\_\_\_

7). Name 3 factors that are implicated in the decline of the greater sage-grouse. [3 points]

\_\_\_\_\_ **habitat loss, human development**, \_\_\_\_\_

\_\_\_\_\_ **agricultural conversion, grazing** \_\_\_\_\_

\_\_\_\_\_ **power lines, cell phone towers, cheat grass** \_\_\_\_\_

8). Scientists have found that most sagebrush habitats at higher elevation offer better habitat quality than similar areas at lower elevation. Briefly explain why. [3 points]

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ **Higher elevation corresponds to** \_\_\_\_\_

\_\_\_\_\_ **better precipitation, vibrant natural plant communities** \_\_\_\_\_

\_\_\_\_\_ **resistance to invasive plant species** \_\_\_\_\_

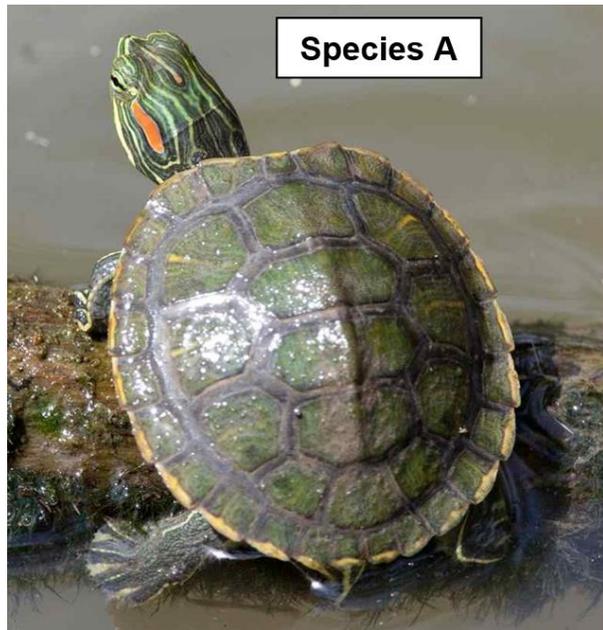
\_\_\_\_\_ **less human activity and less disturbance** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_/ 8 points

**PART C: Wildlife Interaction: Oregon Turtles**

Oregon has just two native species of turtles. Only one of the turtles shown here is a native species, the other is non-native that could previously be purchased at pet stores. In 1996, the State of Oregon adopted a set of **Wildlife Integrity Rules** to classify non-native species as either Prohibited, Controlled, or Non-controlled. One of the species shown here is the non-native species that has been classified as prohibited. This means it can not be sold in pet stores.

- 9). Give the common name of Species A. \_\_\_\_\_ Pond Slider or Red-eared Slider \_\_\_\_\_
- 10). Give the common name of Species B. \_\_\_\_\_ Western Pond Turtle \_\_\_\_\_
- 11). List two physical adaptations that turtles have which allow them to persist in their chosen habitat. [2 points]  
 \_\_\_\_\_ protective shell, claws, hard beak, webbed toes \_\_\_\_\_  
 \_\_\_\_\_
- 12). These two species utilize the same types of wetland and pond habitats and they will eat similar prey items. Circle the term that best describes this type of interaction. [1 point]  
 Predation    Parasitism    Commensalism    Competition

\_\_\_\_\_/ 5 points

**PART D: Skins, Skulls, and Bones.**

Your test station should have **Field guides** and **materials** to help answer the following questions.

- 13). Examine and identify the set of **6 skins** of animals that are **all found in Oregon**.
- a) Match the **Letter** attached to each **skin** to the correct mammal species in the list below. [6 points]
- |   |                                      |
|---|--------------------------------------|
| <u>  <b>B</b>  </u> Virginia opossum      | <u>      </u> American mink          |
| <u>  <b>D</b>  </u> American badger       | <u>  <b>A</b>  </u> common gray fox  |
| <u>      </u> northern river otter        | <u>      </u> coyote                 |
| <u>      </u> red fox                     | <u>      </u> long-tailed weasel     |
| <u>      </u> ermine                      | <u>  <b>F</b>  </u> northern raccoon |
| <u>      </u> coypu                       | <u>  <b>C</b>  </u> bobcat           |
| <u>  <b>E</b>  </u> eastern gray squirrel | <u>      </u> yellow-bellied marmot  |

- 14). Examine each labeled **Animal skull** displayed on the table. (**be gentle with them**).

- b) Assign each of the **4 skulls** to the appropriate mammal family. [4 points]

- |   |  |
|---|--|
| <u>      </u> Felidae (cats)              | <u>      </u> Castoridae (beavers)                 |
| <u>  <b>D</b>  </u> Mustelidae (weasels)  | <u>      </u> Ursidae (bears)                      |
| <u>  <b>B</b>  </u> Canidae (dogs, foxes) | <u>  <b>A</b>  </u> Cervidae (deer, elk)           |
| <u>      </u> Mephitidae (skunks)         | <u>  <b>C</b>  </u> Procyonidae (coatis, raccoons) |

- 15). Examine the two **Antlers** provided. There two antlers are from two different species that are native to parts of Oregon. Which of these antlers is from a **white-tailed deer** ?

Antler-A

**Antler-B**       / 11 points

**PART E. Identifying Tracks and Sign.**

Examine the large laminated **Track Board** lying on the ground nearby. It depicts animal tracks and sign that were found at **Silver Falls State Park**. Use the available **Field Guides** and **rulers** to help you answer the following questions. All tracks and sign are **actual size**.

- 16). Match the number for each **Track set** to the correct wildlife species in the list below. [6 points]

<u>5</u> Lynx rufus	<u>3</u> Ursus americanus
<u>1</u> Canis latrans	_____ Silvilagus bachmani
<u>2</u> Erethizon dorsatum	_____ Cervus elaphus
_____ Urocyon cinereoargenteus	_____ Castor canadensis
_____ Spilogale gracilis	<u>6</u> Odocoileus hemionus
<u>4</u> Mustela vison	_____ Procyon lotor
_____ Didelphis virginiana	_____ Lynx canadensis

- 17). Look at **Track Set-3** and determine which foot print represents the front foot. (circle the correct answer). [1 point]

3a

3b

- 18). Look at **Track Set-4** and determine which mode of movement is displayed ? (circle the correct answer) [1 point]

Walking

Bounding

Gallop

\_\_\_\_/ 8 Points

**PART F: Bird Identification.** You can use the Field Guides to identify the **common names** of each bird species. Compare the taxidermy mounts with the bird photos on next page.

**Bird Species A.** This year-round resident species is sometimes found at residential bird feeders in the winter time, but is nests in conifer forests throughout western Oregon.

19). Give the Common Name: \_\_\_\_\_ **varied thrush** \_\_\_\_\_

20). This individual is a male, but its plumage is rather dull because it was found dead in the late summer, just before it began replacing its feathers. The regular renewal of a bird's plumage is called what ?

\_\_\_\_\_ **molt or molting** \_\_\_\_\_

**Bird Species B.** This bird has been expanding its range northward through western Oregon and has now become quite common around wetland habitats and riparian hardwood forests in the Willamette Valley.

21). Give the Common Name: \_\_\_\_\_ **red-shouldered hawk** \_\_\_\_\_

22). Two of these 3 images provided on next page are adult plumage birds. Which image is of the immature plumage bird ? (circle one)

B.1      B.2      **B.3**

**Bird Species C.** This bird is a native species and year-round resident that can be found in deciduous and mixed forest habitats in western Oregon.

23). Give the Common Name: \_\_\_\_\_ **ruffed grouse** \_\_\_\_\_

24). Which of the 2 images provided on the next page is the **male** bird ? (circle one)

**C.1**                      C.2

**Bird Species D.** This is an introduced, non-native species that finds suitable habitat in the rocky canyons of eastern Oregon.

25). Give the Common Name: \_\_\_\_\_ **chuckar** \_\_\_\_\_

26). Circle one of the term below that best characterizes the trophic functional role of this bird. (circle one).

autotroph      **heterotroph**      decomposer      chemotroph

\_\_\_\_\_/ 8 points

Using the **Field Guides** provided, identify the common name of the bird species represented in the photos below. All of these species can be found in Oregon. To aid in your identification, examine the **taxidermy mounts**.

**Please DO NOT HANDLE the taxidermy specimens.**



**Species A**



**Species B**



**Bird Species** (continued). Be sure to examine taxidermy specimens that correspond to pictures.

