

# **The Interdependence of Native Plants and Fender's Blue Butterfly**

## *Field Biology*

Read through the paper carefully before answering the questions. Answer each question in detail and using your own words. When you have completed the assignment, please e-mail your responses to [dan.bregar@corvallis.k12.or.us](mailto:dan.bregar@corvallis.k12.or.us) with the subject "per X your name interdependence". (This is an individual assignment - your work should be done and submitted individually, and should be in your OWN WORDS.)

1. In the Introduction, the paper states that more than 99 percent of native grasslands in the Willamette Valley have been destroyed. How do you think these areas were destroyed? In other words, what happened to the former grassland areas? (Hint – look at the "Habitat" section.)
2. In the section "Larval Host Plants", explain how the authors concluded that the native lupines being discussed are the sole food sources for Fender's Blue Butterfly larvae. Remember to explain the answer to this question in your own words – do NOT simply quote from the paper.
3. What is the distinction between "Larval Host Plants" and "Nectar Sources" – how do each of these categories contribute to the survival of the Fender's Blue Butterfly?
4. Describe the two highest-quality habitats remaining in the Willamette Valley that support Kincaid's Lupine and Fender's Blue Butterfly.
5. In the section "Implications", what is meant by the term "umbrella species"? Why do the authors of this paper think that Fender's Blue Butterfly should serve as an umbrella species? What other native species are associated with Fender's Blue Butterfly and Kincaid's Lupine?
6. Why do you suppose it is so difficult to protect endangered plants and animals? Why might it be easier to protect endangered species on federally- or state-owned lands than on private land?
7. (This question will require additional Internet research.) What is a "conservation easement"? How can conservation easements help overcome some of the difficulties presented by protecting endangered species on private lands?