Name(s): ____________________________________________
Team: ________________________________________________

Part 1: ______/15
Part 2: ______/77
Part 3: ______/16
Part 4: ______/24.5

TOTAL SCORE: ______/132.5
Part 1: Species identification. Identify the common and scientific name of each of the following species (½ for each common name and scientific name) (15 pts)

a. 

b. 

c. [Image: Crab, Photo Credit: Carl Mazure]

d. 

e. 

f. 

g. 

h. 

i. 

j. 

k. 

l. 

m. 

n. 

o.
Part 2: Species Information. Use the species from part 1 to answer the following questions (77 pts).

1. How was Species A introduced into the United States? (1 pt)
2. What is the disease that Species A causes which affects grapevines? (1 pt)
3. State 2 different states where Species B can be found. (½ pt each)
4. Provide 2 different methods of control for Species B. (1 pt each)
5. Provide 2 harmful impacts of Species C. (1 pt each)
6. Describe the environment in which Species C reproduces. (2 pts)
7. Provide 1 feature of Species C’s adaptive anatomy. (1 pt)
8. Why does Species D have a developmental advantage over native species in its region? (2 pts)
9. What is Species D’s native region? (1 pt)
10. In which state was species E first found outside of its native range? (1 pt)
11. Provide 2 harmful impacts of Species E. (1 pt each)
12. Provide 2 methods of control for Species F. (1 pt each)
13. Describe how the bark Species F changes as it matures. (2 pts)
14. What are 2 other varieties of Species G? (½ pt each)
15. What are 2 ways in which Species G was transported? (1 pt each)
16. Describe Species G’s diet. (1 pt)
17. How does Species H reproduce? (1 pt)
18. What are 2 other Species that have been used as biological control for Species H (common name and scientific name)? (1 pt each)
19. What are 2 impacts of Species I? (1 pt each)
20. How does Species I reproduce? (1 pt)
21. Under ideal conditions, approximately how many plants can a single plant of Species I produce in 50 days? (3 pts)
22. What are 2 reasons why Species I is such a successful invasive species? (1 pt each)
23. How was Species J introduced to the US? (1 pt)
24. What are 2 features of Species J’s adaptive anatomy? (1 pt each)
25. True/false. Species J is a diurnal predator. (2 pts)
26. How long is Species K’s germination period? (2 pts)
27. *Tiebreak* What is Species K’s nickname? (1 pt)
28. How does Species K reproduce? (1 pt)
29. Provide 1 piece of legislation which aimed to control Species L. (2 pts)
30. What are 2 major impacts of Species L? (1 pt each)
31. *Tiebreak* Up to how many eggs can Species L lay per season? (2 pts)
32. If Species M is submerged under water, new growth with aquatic leaves develops in how many days? (2 pts)
33. True/false: Seeds are viable, but they are not an important means of dispersal for Species M. (2 pts)
34. Name 2 states in which Species M is NOT present. (2 pts each)
35. True/false: Species M can tolerate a pH of 3. (2 pts)
36. *Tiebreak* In how many states is Species N found? (4 pts)
37. Which of the following is a preferred host for Species N? (4 pts)
   a) Lemon  b) Sour limes  c) Grapefruit  d) Pineapple
38. If a single member of Species N is trapped in an orchard, what would be the following course of action? (4 pts)
39. Choose the best comparison of size to the fruit of Species O. (2 pts)
   a) A basketball  b) A golf ball  c) A green Skittle  d) A baseball  (Balls are to regulation sizes)
40. How does Species O reproduce? (1 pt)
41. True/false: A white seed of Species O is viable for germination. (2 pts)

Part 3: Choose one of the Invasive species above (A-O). (16 pts)

42. This invasive species had become naturalized on Vancouver Island in 1900, where it was introduced by Captain Walter Grant in 1850. (4 pts)
43. An electric dispersal barrier constructed across the Chicago Sanitary and Ship Canal is being used to stop these invaders from entering the Great Lakes. (4 pts)
44. *Tiebreak* Some females of this invasive species transition to males as they mature. All larger individuals are males, transsexual). (4 pts)
45. This invasive species exists in both diploid and tetraploid forms. Tetraploid type prefers more shady locations and frequently develops bulbils at the base of the stalk. (4 pts)
Part 4: Fungi and Viruses. Give the Scientific Name for each of the following (½ point each). Then match each letter to a corresponding Fungi or Virus (24.5 pts)

46. Dutch Elm Disease  
47. Butternut Canker  
48. Oak Wilt  
49. White Nose Bat Syndrome  
50. Bluetongue Virus  
51. West Nile Virus  
52. Bird Flu

a. HPAI virus infection can cause disease that affects multiple internal organs with mortality up to 90-100% in chickens, often within 48 hours (3 pt)

b. Mainly affects small blood vessels, causing hemorrhaging, hyperemia, and edema in the tissues of the lips, mouth, nasal linings, and eyelids. (3 pt)

c. Initially infects trees through buds, leaf scars, insect wounds, and other openings in the bark. (3 pt)

d. From the point of infestation, it moves upward and downward by 2 modes: in the liquid within xylem vessels and by the growth of fungal hyphae between xylem vessels after germination. Diseased logs were imported from Europe for making furniture. (3 pt)

e. Can cause severe encephalitis among humans; 20% people infected will exhibit fever, headache, body aches, swollen lymph glands, and skin rash. May last several weeks to months, leaving possible permanent neurological effects. (3 pt)

f. Requires cold temperatures to grow. Caused the population decline of 72-88 percent of a certain species hibernating in northeastern U.S. Originated in Albany NY, February 2006. (3 pt)

g. Vascular disease (usually found only in the vascular tissues of the outermost xylem). Upon tree death, fungus develops sporulating mats in the bark which produce conidia and ascospores when mature. Sticky pores adhere to the insects and are subsequently carried to healthy trees where they are deposited in wounds when the insects alight. (3 pt)