Piggy’s Invasive Species Test

ANSWER KEY

Directions:
There will be 20 stations. Each station will have 5 questions. There will be a total of 100 questions, each worth 1 point. You have 50 minutes to complete the test.

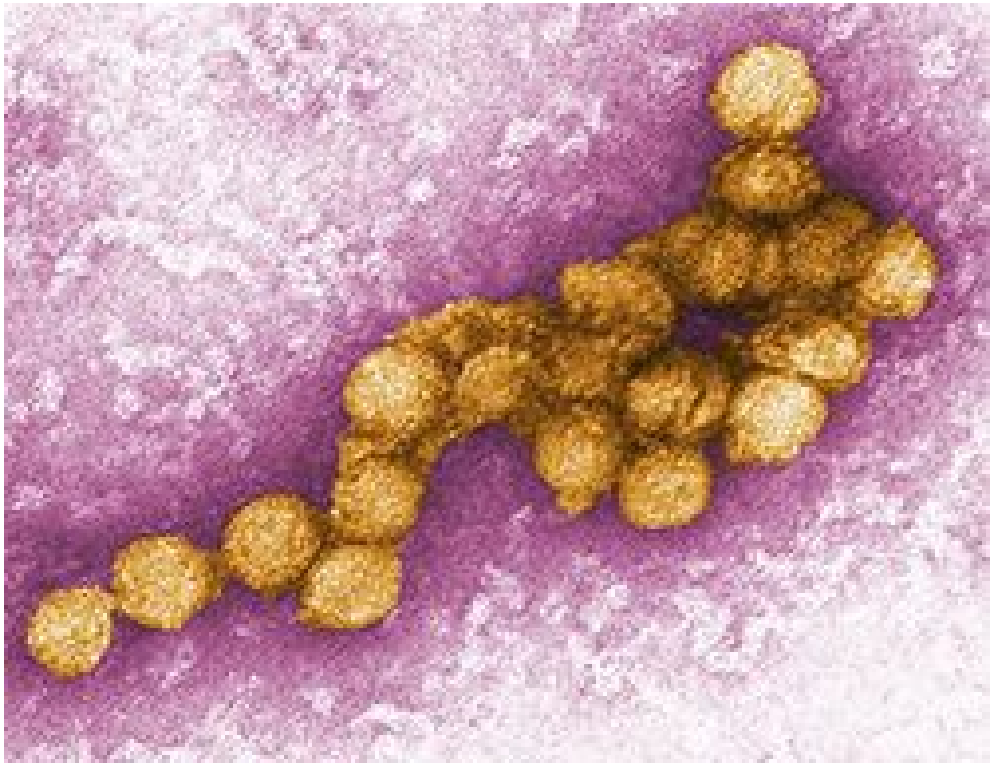
Station 1

1. Common Name: Autumn Olive
2. Scientific Name: *Elaeagnus umbellata*
3. Average Height: 6 to 20 ft tall
4. Unripe Fruit Color: Silvery-scaled and yellow
5. Native Habitat: Eastern Asia/Asia

Station 2

6. Common Name: Asian long-horned beetle
7. Scientific Name: *Anoplophora glabripennis*
8. Native to: Eastern Asia, primarily eastern China, Korea, and Japan
9. What trees does it primarily infest in its native range? maple, poplar, willow , and elm trees
10. How was it introduced? Accidentally arrived in cargo from China

Station 3



11. Common name: West Nile Virus
12. Also known as: Flavivirus
13. Most commonly transmitted by: Mosquitoes
14. At least 2 symptoms caused by it in humans? Any 2 of the following: fever, headaches, feeling tired, muscle pain or aches, nausea, loss of appetite, vomiting, and rash
15. Vaccine?: Currently no vaccine for it

Station 4

16. Scientific name: *Potamogeton crispus L.*
17. Common name(s): Curly pondweed, Curly-leaf pondweed
18. Native To: Eurasia, Africa, Australia
19. Introduction: Unknown, possibly introduced accidentally with fish stocking operations
20. Negative impact: Forms dense mats that inhibit growth of native species and negatively affects recreational activities

Station 5

21. Common name: Multiflora rose
22. Scientific name: *Rosa multiflora*
23. Uses: ornamental plant, rootstock
24. Introduced for: soil conservation, as natural border for grazing land, attract wildlife
25. Removal technique: full removal of the plant and its roots; biological controls including rose rosette disease and the rose seed chalid

Station 6

26. Common name: Canada thistle
27. Scientific name: *Cirsium arvense*
28. How does it reproduce?: reproduces by tufted seeds dispersed by the wind (which can be viable in the soil for over 20 years), small pieces of its root can also grow into new plants.
29. Removal technique: Repeated tillage, planting competitive crops (e.g. alfalfa and forage grasses), Fly larvae of the stem gall fly Urophora cardui, herbicides, shading
30. Normally initiates growth in what season?: Spring

Station 7

31. Common name: Dutch elm disease
32. Scientific name : *Ophiostoma*
33. Distribution: Europe, North America, and New Zealand
34. Spread by: elm bark beetles
35. Causative agent: ascomycete microfungi, the three species identified are *Ophiostoma ulmi, Ophiostoma himal-ulmi, Ophiostoma novo-ulmi*

Station 8

36. Common name: Kudzu, japanese arrowroot
37. Name comes from: Japanese name for the plants
38. Negative impact: kills other plants by its rapid growth and heavily shading other plants
39. Reason for introduction: ornamental purposes, shade producer, prevent soil erosion
40. Spreads by: vegetative propagation, seeds in pods (rarely)

Station 9

41. Common Name: Brown Marmorated Stink Bug
42. Scientific Name: Halyomorpha halys
43. Length: 1.7 cm/0.67 in. long
44. Why and how was it introduced? Accidentally introduced into the United States from China or Japan, possibly through shipping material
45. Native to: East Asia

Station 10

46. Common Name: Asian Carps
47. Encompasses which invasive species: grass carp, common carp, silver carp, largescale silver carp, bighead carp, black carp, goldfish, crucian carp, mud carp
48. Why introduced to United States?: Introduced to the US in the 70's to filter pond water in fish farms in Southern States
49. Impact: Competes with native species, feed on endangered species, displace native species, altering communities
50. Native to: Asia

Station 11

51. Common Name: Lionfish
52. Scientific Names: *Pterois volitans*
53. Consumption classification: Carnivores
54. Food: small crustaceans and fish
55. Its venomous dorsal spines are used purely for: defense

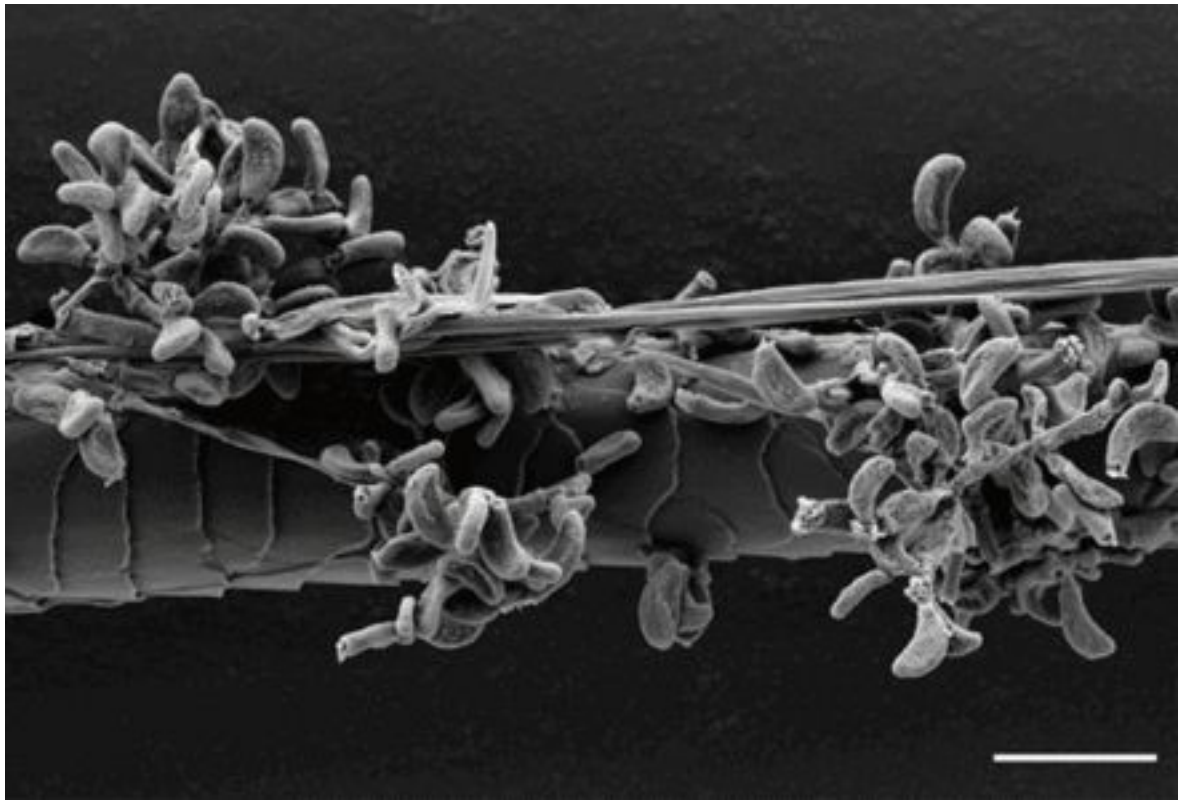
Station 12

56. Common Name: Emerald Ash Borer
57. Scientific Name: *Agrilus planipennis*
58. Native range: Eastern Asia
59. Highly destructive to: Ash trees native to Northwest Europe and North America
60. Found mostly in which state: Michigan

Station 13

61. Common Name: Scotch Broom, Common Broom
62. Scientific Name: *Cytisus scoparius*
63. Native to: Western and Central Europe
64. Removal Methods: cutting, pulling, burning, or using herbicides on the plants
65. Date of Introduction to the United States: 1800s

Station 14



66. Scientific Name: *Pseudogymnoascus destructans*
67. Causes what?: Whitenose Bat Syndrome
68. Affects: Bats
69. Transmission Method: Physical contact with infected bats/caves
70. Preferred Temperatures: Cold Temperatures; grows best in grows in the 4 to 15 °C range (39–59 °F); will not grow at temperatures above 20 °C (68 °F)

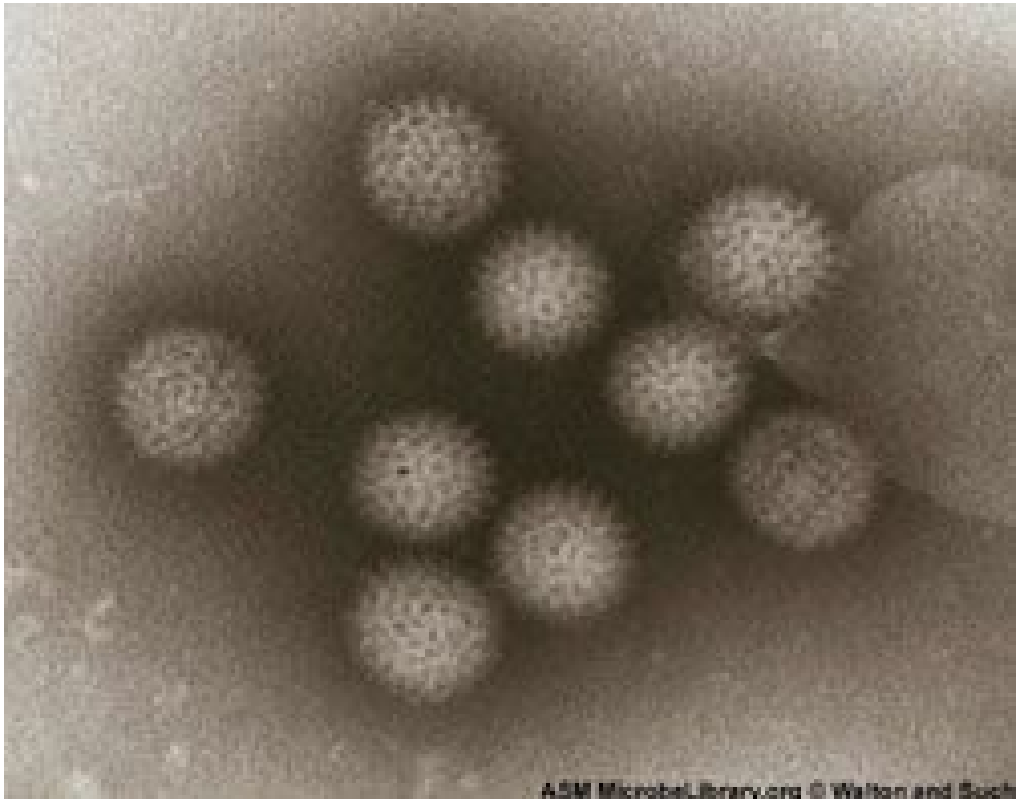
Station 15

71. Common Name: Tree-of-Heaven
72. Scientific Name: *Ailanthus altissima*
73. Native to: northeast and central China and Taiwan
74. Found in what climates: temperate climates
75. Known for what scent: Foul odour

Station 16

76. Common Name: Water Spinach
77. Scientific Name: *Ipomoea aquatica*
78. Commonly grown in: East, South and Southeast Asia
79. Especially invasive in which three US states: Florida, California, and Hawaii
80. Uses: popular ingredient in Southeast Asian dishes

Station 17



81. Common Name: Bluetongue Virus
82. Genus: *Obivirus*
83. Causes what?: Bluetongue Disease
84. Name three symptoms that it causes in affected animals: ulcers, sores, pain, swelling tongue, lameness, and reproductive problems
85. Spread by: biting midges, and also ticks and sheep keds

Station 18

86. Common Name: white-spotted jellyfish, floating bell, Australian spotted jellyfish
87. Scientific Name: *Phyllorhiza punctata*
88. Native To: West Pacific; Australia and the Philippines
89. How was it introduced?: may have entered from the Pacific Ocean through the Panama Canal on the hulls of ships
90. Feeds primarily on: Zooplankton

Station 19

91. What is the U.S. legal definition of Invasive Species?

an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.

92. About how much do invasive species cost in damages, etc. per year in the US?

Over $137 billion/year to the US economy

93. What percent of introduced species survive? What percent of those that survived become invasive?

10%; 10%

94. Name at least two characteristics of most invasive species.

- No natural predators
- Reproduces very quickly
- Short time to maturity and reproduction
- Small body size
- Successful invader somewhere else in the world

95. Side effects of biological control of invasive species:

control species can become invasive

Station 20

96. When was the National Invasive Species Act (NISA) passed?

1996

97. What act did NISA amend?

The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990

98. When did NISA expire?

2002

99. Which president signed the Executive Order 13112 on Invasive Species?

President Bill Clinton

100. What act establishes a list of injurious species, as well as penalties for importing or shipping them?

The Lacey Act