**Life in the City**

1. What is species richness?
2. What species did you find among your assigned pictures from northern Virginia?
3.  Draw a species accumulation curve for this community.
4. What was the class estimate of species richness for the whole community? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. If you had only sampled three times, what would your estimate have been? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Why does sampling effort matter when you are counting species in a community?
7. Using the spreadsheet you were provided, complete the following table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Habitat** | **Richness** | **Most Common Species** | **2nd Most Common Species** | **Unique Species?** |
| Urban |  |  |  |  |
| Rural |  |  |  |  |
| Wild |  |  |  |  |

1. Are the common and second most common species different among the habitats? What are some possible reasons these species are so abundant in these habitats? Use specific examples.
2. What species are only found in a single habitat? What are some possible reasons for this?
3. What is an ecological niche?
4. There are many parts of species’ niche that make them more or less able to live close to humans. Think about the three traits listed below and answer the questions provided.

* Do you think animals with large or small **home ranges** would do better in urban areas? Why?
* Do you think animals with large or small **body sizes** do better in urban areas? Why?
* Do you think animals with large or small **litter sizes** would do better in urban areas? Why?

1. Search for black bear (*Ursus americanus*) and red fox (*Vulpes vulpes*) on Encyclopedia of Life (eol.org) and complete the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| **Species** | **Litter Size** | **Home Range** | **Body Mass** |
| Black Bear |  |  |  |
| Red Fox |  |  |  |
| Which is bigger? |  |  |  |
| How many times bigger? |  |  |  |

1. a) Make a bar graph of the abundance of black bears in each habitat in your spreadsheet. Have your teacher check your graph before moving on.

\_\_\_\_\_\_\_\_\_\_ Teacher initials

b) Where are black bears most commonly found?

c) Looking at black bear traits from Encyclopedia of Life, why might your answer to (b) make

sense?

1. a) Make a bar graph of the abundance of red foxes in each habitat in your spreadsheet. Have your teacher check your graph before moving on.

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b) Where are red foxes most commonly found?

c) Looking at red fox traits from Encyclopedia of Life, why might your answer to (b) make

sense?

HOMEWORK: In a short essay, answer the two questions below.

* Imagine a friend says to you, “Cities are for people, farms are for food, and national parks are for animals. There aren’t any wild animals in cities or on a farm!” Would you agree with your friend? What have you learned about urban and rural wildlife? Can cities (urban areas) or farmland (rural areas) support wild animals?
* If the human population keeps growing, our cities will too. Which animals will do best in a planet with more cities? Which will have the hardest time in a world with more people?