



# Let's Improve the Habitat

## STUDENT ACTIVITY INSTRUCTIONS

### Materials Needed:

- Pencil
- Paper or Notebook
- Ruler
- Pictures of schoolyard, backyard, or local park to compare
- Map from Lesson 2 Activity
- Notes from previous two lessons

### Introduction (Read before doing the activity)

Birds live in many different kinds of habitats. Although all birds need food, water, shelter, and space; the proportion of and access to these habitat components is different in each. When performing a survey or evaluation of a habitat, all of these components need to be reviewed for their presence, amount, and proportion. This activity will help you evaluate habitats by taking a closer look at the habitat components and other plants and animals present in your backyard, local park, schoolyard, or the view out your window.

### Activity Instructions:

1. Review your notes from the previous two lessons and your map of a quality habitat for the King Rail.
2. Find a habitat around you to evaluate. This could be your backyard, a local park, your schoolyard, or the view out your window. If you can't be in that habitat during this activity, try to take a picture to refer to later, or find a picture online.
3. Create a map in your journal or on a separate sheet of paper that illustrates the current conditions of the habitat you chose to evaluate.
4. Describe the habitat by answering the questions below in your notebook:
  - a. What is the major vegetation?
    - i. What fraction of the total habitat are trees? What fraction is cut-grass vs long grass?
  - b. What wildlife is known to be on-site?
  - c. What birds have been seen on this site?

5. Evaluate the habitat for the King Rail by referring to your notes from the previous lessons and answering the following questions in your notebook:
- Does this site provide food for the King Rail? Yes or no?
  - If yes to the question above, list the foods found on site.
  - Are foods limited to one or more seasons? Which season(s)?
    - If the foods are limited to certain seasons, what fraction of the 12 months out of the year is food available?
    - Convert this fraction into a decimal by dividing the nominator by the denominator.
    - Convert this decimal into a percentage by taking the decimal from above and multiplying it by 100. That is the percentage of the year that food is available on this site for the King Rail.
  - Does this site provide areas and/or materials for the King Rail to breed and nest?
  - Does this site provide areas and/or materials for the King Rail to roost or rest?
  - Does the site provide any protection from predators and weather?
  - Does the site provide adequate water? Yes or no?
  - If yes to the question above, list the water sources.
    - What percentage of the habitat contains water?
    - Does this site provide adequate space for the King Rail? Explain.
6. Evaluate the interaction between humans and wildlife in your chosen habitat by answering the following questions in your notebook:
- Is this site used for any activities by people? Yes or No?
  - If you answered yes to the question above, list the activities and the fraction of the landscape that each activity takes up.
  - Would these activities interfere with the King Rail being able to live in this site? Explain.
7. Based on this habitat evaluation or answers to the questions above, could the King Rail live on this site? Why or why not?
- You could also ask: Does this species live on this site, to your knowledge? If not, why not?
  - Record your answer in your notebook.
8. Refer back to your quality habitat map you created for Lesson Two. Could this new site be improved to look more like your map? If yes, how?
- Write your answer in your notebook.
  - Mark on the map you created for this site what changes you would make to improve the quality of the habitat.
9. Congrats! You have now done a simplified version of what wildlife scientists do all the time!

## Conclusion

As we learned from the virtual field trip on the Missouri River, maintaining and improving a habitat can take a lot of work and a lot of different people. We also learned that is not always straightforward how we can improve habitat, but we can learn along the way to discover even better methods. In this activity, you took what you have learned from the previous two lessons to create a plan for how a local area around you could be improved as habitat for the King Rail. This is what land managers, conservationists, and other wildlife scientists aim to do when conserving a declining species. They look at the needs of the species, evaluate the habitat and make a plan to make improvements. You did it!

