



# Our Ecological Footprint Activities

ASSOCIATION  
OF ZOOS &  
AQUARIUMS

## Shake a Shrub

### **Audience/Group Setting**

This activity is designed for children five years and older. It should be completed outdoors.

### **Goal**

Participants will discover insects living on and around plants.

### **Objectives**

Participants will gain an appreciation for insects by exploring nature.

### **Big Idea/Main Message**

Shrubs provide habitats for a variety of insects and can easily be overlooked.

### **Environmentally Responsible Behavior Addressed**

Go outside! Enjoy nature and animals!

### **Background Information**

Shrubs and other plants often contain entire insect communities comprised of a variety of species. Insects may be so well adapted as to go unnoticed by passers-by. Upon closer examination an entire ecosystem may be revealed.

Climate Change Connection: Warming temperatures have changed the emergence time for some insects and allowed others to expand their range. As temperatures become warmer insect populations will expand; tropical insects moving to temperate zones and temperate to polar. If climate change occurs more quickly than native plants and insects can adapt, entire ecosystems may change. In addition to changing ecosystems, some of the insects expanding their range include mosquitoes carrying deadly viruses, such as West Nile. In Britain, vegetation and insects emerge earlier in spring than they have historically. By the time returning birds hatch their young, there is not enough food to raise them.

### **Materials Needed**

A light-colored bandana or sheet, magnifying glasses, collection jars, insect field guides, insect repellent, sun screen.

### **Staff**

A ratio of 1 staff for every 10 participants is suggested.

**Length of Activity**

Minimum 30 min.; maximum – as long as you like!

**Set Up**

Scope an outdoor area for shrubs or field plants. Clear the area of poison ivy or other noxious plants. Prepare participants to wear closed-toe shoes, pants, insect repellent and sun screen if necessary. Gather materials.

**Procedures**

Find a small bush, shrub, or field plant and spread a bandana or sheet underneath. Gently shake the shrub and let insects fall onto the bandana or sheet. How many can be identified? How many flew away? Are any of the insects the same color as the shrub? Can beneficial characteristics for the insect be identified? Gently put an insect in the observation jar. Look at its mouth parts. What might it eat? What might eat it? How does it move? How many wings does it have, if any? What do its eyes look like? When observations are completed gently return insects to the host plant.

**Extensions**

Research one or more of the insects and identify its predators and prey. Examine historic and current ranges for insects observed.

**National Science Education Standards**

Populations and Ecosystems

Diversity and Adaptations

Nature of Science

Form and Function

**Resources**

Adapted from “Shake a Shrub” with permission from the North Carolina State Parks.

<http://www.ncparks.gov/Visit/main.php>

Insect collection kits can be purchased from Acorn Naturalists: [www.acornnaturalists.com](http://www.acornnaturalists.com)

An excellent on-line resource for bug identification is: [www.whatsthatbug.com](http://www.whatsthatbug.com)