

# FACTivity



## Time Needed

30-40 minutes

## Materials

- The data table provided in this FACTivity
- The two blank graphs provided in this FACTivity
- Pencil and thin black felt marker
- Piece of blank paper or science notebook
- Ruler (optional)

The question you will answer in this FACTivity is: What are general patterns, if any, between the native and naturalized ranges of 25 plant species?

## Methods

You will plot the native range and naturalized range of 25 plants on a graph. Note that these data are actual data provided to you by the scientists in this study. For each plant, place a dot on the graph at the southern and northern limits of its range. The degrees in latitude are given on the Y axis. (The y axis is on the left). Draw a dark vertical line with the felt marker to connect the two dots for each plant. See the example graph on page 85 before beginning.

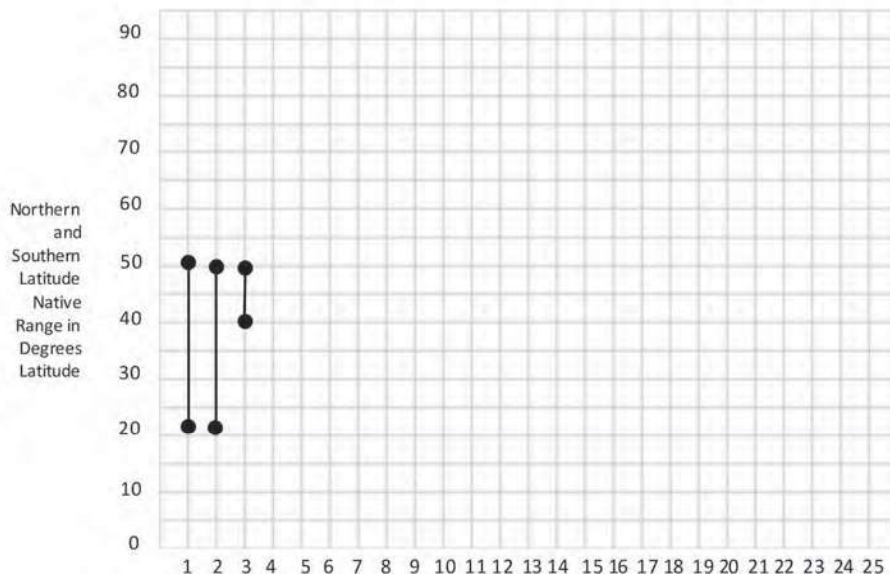
After you have finished completing both graphs, compare the two. Identify and write three observations about the overall patterns you see, using complete sentences, correct punctuation, and proper grammar.

THE MIMOSA TREE IS A NONNATIVE SPECIES. PHOTO BY JAMES H. MILLER, U.S. FOREST SERVICE, AND COURTESY OF [HTTP://WWW.BUGWOOD.ORG](http://www.bugwood.org).



Plant Number	Native Range in Degrees Latitude		Naturalized Range in Degrees Latitude	
	Southern Limit	Northern Limit	Southern Limit	Northern Limit
1	23.0	52.0	28.0	54.5
2	27.5	47.0	37.5	40.3
3	23.0	50.0	43.0	45.2
4	44.0	48.2	34.1	65.0
5	55.0	55.0	31.2	54.2
6	23.0	47.0	28.0	54.2
7	23.0	25.5	28.0	28.0
8	25.2	63.0	63.3	63.3
9	23.0	47.0	31.3	54.5
10	42.0	42.0	40.0	63.3
11	37.5	47.5	41.5	44.7
12	36.0	63.0	43.0	43.0
13	42.0	63.0	33.5	54.0
14	38.1	55.5	28.0	63.3
15	30.0	47.0	37.5	49.0
16	23.0	25.2	28.0	28.0
17	42.0	47.0	34.1	54.5
18	37.7	48.2	31.2	54.5
19	23.0	38.1	28.0	38.8
20	23.0	26.9	31.2	47.2
21	32.0	63.0	37.5	43.0
22	23.0	66.5	28.0	65.0
23	23.0	29.1	28.0	33.5
24	35.5	63.0	37.5	65.0
25	42.0	58.0	31.2	65.0

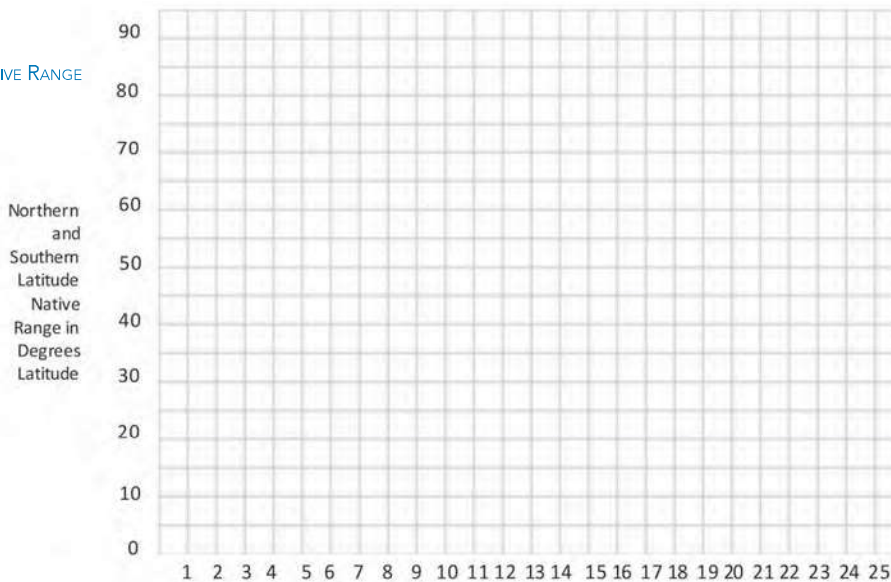
## Example Graph



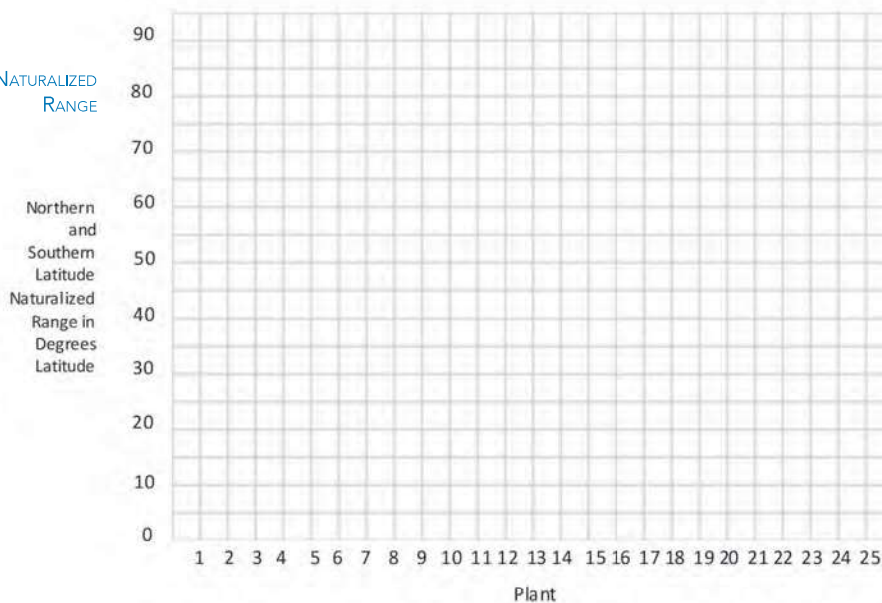
Your teacher will lead a class discussion with the following question:

*How do your observations compare with the scientists' observations for native and naturalized plant ranges and why?*

NATIVE RANGE



NATURALIZED RANGE



If you are a Project Learning Tree-trained educator, you may use *Invasive Species*, as an additional resource.

## FACTivity Extension

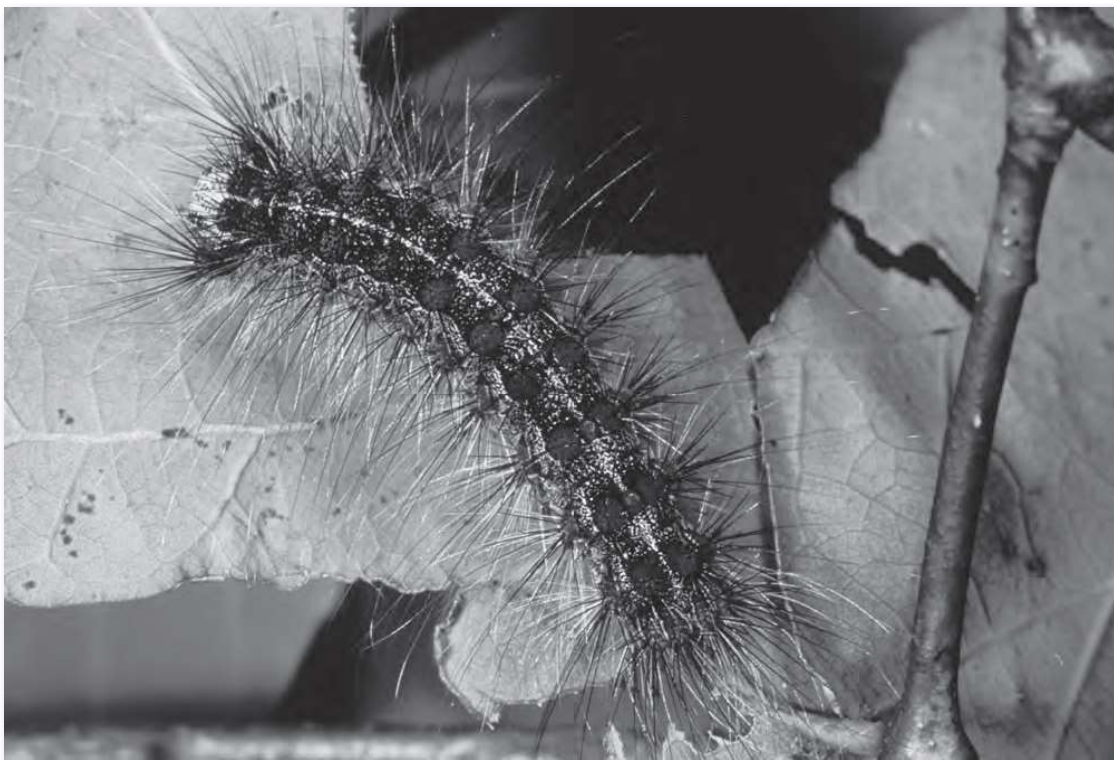


Calculate the range extent (in both ranges) for each of the 25 plants by adding the southern latitudinal limit to the northern latitudinal limit. Calculate the average latitudinal extent. Calculate the average for both the native and naturalized ranges. What pattern do you see between the two averages?

### Web Resources

Eastern Forest Threat Assessment Center Bookmarks  
<http://www.forestthreats.org/products/bookmarks>

Eastern Forest Threat Assessment Center Fact Sheets  
<http://www.forestthreats.org/products/fact-sheets>



THE GYPSY MOTH CATERPILLAR IS A NONNATIVE SPECIES. PHOTO BY U.S. FISH AND WILDLIFE SERVICE JAMES APPELBY, UNIVERSITY OF ILLINOIS.