## **Climate Lab Student Materials**

## Lesson 4 – Climate change ecology



**Activity 2: Trends around New England** 

Figure 1-Atlantis Fritillary

In 1992, the Atlantis Fritillary butterfly was a common sight in western Massachusetts. Between 1992 and 2010, its population declined by 90%, leaving it in very real danger of vanishing altogether.



Figure 2- Frosted Elfin

At the same time, the Frosted Elfin butterfly, a rare sight in 1992, has seen a 1000% population increase in Massachusetts.

- 1. Do you think the Atlantis Fritillary is going extinct?
- **2.** How do you think we could find out?

**3.** Looking at the whole country, we know that Massachusetts is at the southern end of the Fritillary's range. Does that change our idea about what's going on?

**4.** The Frosted Elfin is at the *northern* edge of its range in Massachusetts. What do you think is a likely cause of its dramatic population increase?

5. Might the same thing be happening to the Atlantis Fritillary farther north?

**6.** Final question: What effect do you think these changes in butterfly populations might have on other species?