



PURPLE LOOSESTRIFE & CLIMATE CHANGE

THE IMPACT ON WETLAND TOOLS

Study: Colautti, R. I., and Barrett, S. C. H. (2013). Rapid adaptation to climate facilitates range expansion of an invasive plant. *Science*, 342(6156), 364-366.

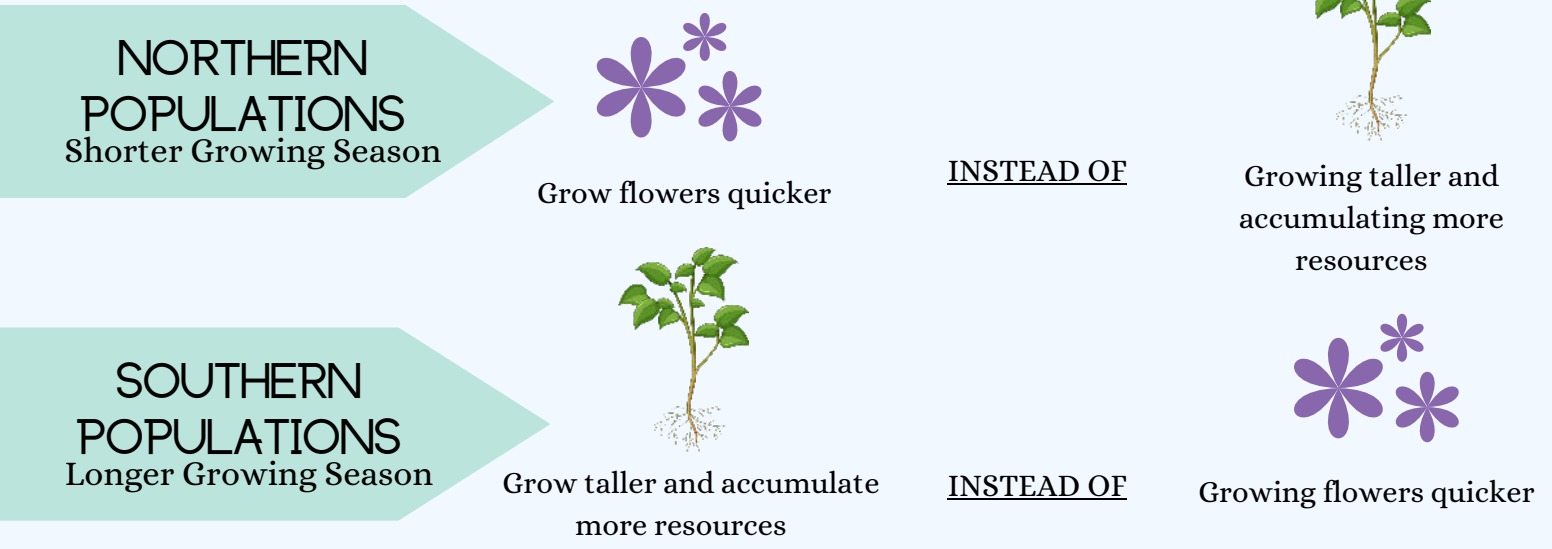
INTRODUCTION

Climate change is known to cause species to change or expand their ranges, meaning that under the influence of climate change, some species are now being seen or found in places they weren't previously before. Climate change is also causing some species to have local adaptations to specific areas, meaning that species in one area may act or behave differently from the same species in any other area, because of how climate change influences their habitats differently.

These researchers were specifically interested in examining how climate change may be causing purple loosestrife to adapt differently in northern and southern areas. Purple loosestrife is an important plant to understand, because it is considered to be invasive, and in particular, "one of the world's most serious wetland invaders" (Colautti & Barrett, 2013).

RESULTS

They found that the purple loosestrife in the northern populations were adapted to the conditions influenced by climate change in the north. For example, these plants grew their flowers quicker because of the shorter growing season. They also found that purple loosestrife in the southern populations are adapted to conditions influenced by climate change in the south. Here, these plants take more time to get bigger and accumulate more resources for reproduction, because of the longer growing season.



Therefore, we see that climate change affects plants differently in different areas.

QUESTIONS TO DISCUSS

Invasive species often reach new areas through natural range expansion, or through human and animal seed dispersion. If seeds of northern-adapted purple loosestrife plants end up in local wetlands, what could this mean for the native species here?

How will communities that use the resources in the wetlands, be affected?

How are the processes of climate change, invasive species, and sustainable resources use connected?

