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How are we saving the monarchs?

There are many different and important conservation efforts happening right now and there are many more needed. With that in mind how we go about these conservation efforts is important; any wasted efforts take away from other issues. Many believe the monarch butterfly is going extinct, and without knowing the full story jump to action with less than fruitful results. The best thing to do with the monarch butterfly is to research the matter at hand.

Monarchs are a species of butterflies that are native to North America; they are pollinators that feed on the nectar of flowers and lay their eggs in milkweed plants. Some of these monarchs go through a yearly migration; once fall comes, the monarch butterfly flies from as far away as central Canada all the way down to Mexico, where they winter in the forests of Mexico, taking up every inch of trees for miles. Once winter is over, the monarch travels back north over many generations of butterflies. The winter grounds have been monitored since 1993, and scientists soon saw potential trends in the data; many scientists believe the monarch butterfly is going extinct.

There is debate in the scientific community on whether or not the monarch is going extinct, but the public is very concerned that they are. The problem is there is no consensus as to why the monarchs might be going extinct. The most popular opinion in the public is that milkweed populations have gone down and thus reduced the number of monarch eggs that can be laid. As a response, there have been large conservation movements to increase the planting of milkweeds. Although the public has been spending most of its time on milkweed, scientists don’t necessarily think that these efforts are what needs to be focused on. There is not even sufficient research that says these newly cultivated milkweeds are surviving well or attracting monarchs, as there are many different subspecies of milkweed and not a lot of concern as to what milkweed gets planted where.

The conservation efforts of many groups are not scientifically backed, and there is a large potential waste. It is good that people want to save the monarch butterfly, but in order to do that we need to know how to save them. The best way to save the monarch is to fund more research into monarchs and milkweeds. As leaders of student environmental groups, I know you want to push for immediate action, but the best thing to do now would be to fund research. In the last four years three largely influential articles were published about this exact issue. one article by Inamine proposed that milkweed was not the main reason monarchs populations were declining, but instead food shortages during the fall migration south was to blame or potentially loss of habitat in Mexico. Stenoien refuted this article 2 years later, claiming that there were no shortages of food in the fall migration, but milkweed growth patterns had been disrupted by GMs (Genetically Modified crops) and herbicide use by farmers, taking away much of the birthing area for monarchs. Stenoine proposes GMs and herbicide regulation are needed for monarch populations to survive. However, later that same year, Boyle published an article that proposed general milkweed decline was the main issue, but this trend in loss of milkweed and monarch populations predates the use of GMs and has been going on since the 1950’s. These articles all had fine methods and reached plausible conclusions, but they still contradict each other. As the environmental leaders of this school, you all should want to protect the monarch butterfly, and the best way to do that is more research. To get more research, more publicity is needed; make the people that fund the research know this is an issue worth funding: petition them to fund research, persuade others to get involved, help scientists that need volunteers for population counts, participate in wildlife surveys, become an amateur Lepidopterist, and if you want, plant milkweed. Although planting milkweed might not have the conservation effects we need, it is still a beautiful flower that feeds many different plants and animals. One way to spread awareness and bring funding in would be to sell milkweed seeds with information about the issue attached.

Overall, the scientific jury is out on what can help the monarch population rebound, and we all need to do our part to make sure that research is done. As the leaders of these potential conservation efforts I hope you realize that the best action to take is to fund research rather than funding potentially wistful methods of conservation.

References

Boyle, John H., Harmony J. Dalgleish, and J. R. Puzey. "Monarch butterfly and milkweed declines

substantially predate the use of genetically modified crops." *Proceedings of the National*

*Academy of Sciences* 116.8 (2019): 3006-3011.

Inamine, Hidetoshi, et al. "Linking the continental migratory cycle of the monarch butterfly to understand

its population decline." *Oikos* 125.8 (2016): 1081-1091.

Stenoien, Carl, et al. "Monarchs in decline: a collateral landscape‐level effect of modern

agriculture." *Insect science* 25.4 (2018): 528-541.