Bending of the Saguaro Cactus

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Previously unstudied "bending" in the central stems of the Saguaro Cactus, a plant unique to the Sonoran Desert, gives cause for concern about the effects on the health of this protected species. As this seems to be a newly observed problem, it gave rise to the question of possible climate change effects. Therefore, this project, while collecting many other data points, mainly aims to see if there is a correlation between higher temperature areas and greater percentages of bent saguaros. Ten plots from the two districts of Saguaro National Park were selected, each consisting of thirty saguaros, and temperature data for each was taken over a period of twenty-five days. The thirty saguaros were measured for a variety of variables, the main one being "bentness". If the saguaro was bent, direction of the bend was recorded, and it was photographed for further analysis. No positive correlation was found between higher temperature and greater percentages of bent saguaros, however it was found that every single bent saguaro was bent in the southern direction. This striking data lead to the question: Does exposure to solar radiation influence the bending of a saguaro? Despite the data not supporting the hypothesis, this experiment gathered an enormous amount of data on a subject that before had no existing data, and was conducted in a way that can be repeated to monitor these bent saguaros.

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