The Effectiveness of Pontederia cordata in the Phytoremediation of Copper Sulfate

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The presence of copper in water is easily overlooked and not addressed. If this rate of negligence is continued, it can have devastating consequences on the environment. Many methods to remove copper from water are expensive and can have negative side effects. Phytoremediation is a cheap and low maintenance method to remove pollutants from an environment using plants. A plant known as Pontederia cordata has shown promising signs in this field. It was hypothesized that Pontederia cordata is effective in the phytoremediation of water with traces of copper and that it would be able to remove around 50% of the copper from the water unless the copper concentration reaches an excessive amount. This hypothesis was created based on the results of experiments conducted by other scientists who explored Pontederia cordata's ability in phytoremediation. For three weeks, six plants were placed in environments with varying copper concentrations of 0 ppm, 1 ppm and 2 ppm. The copper concentration in the water was measured and it was found that all the environments with starting concentrations of 1 ppm and 2 ppm were able to reach concentrations of 0 ppm of copper by the third week. This provides support for the hypothesis that Pontederia cordata is effective in the removal of copper from an environment. It opens up the possibility of the strategy being implemented in locations with high concentrations of copper to effectively remove the pollutant from the environment.

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