EFFECTS OF SUNLIGHT ON EGERIA DENSA DENSITY AT BIG BREAK REGIONAL SHORELINE, OAKLEY, CA

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Sunlight can highly affect metabolism and growth of plants. It is one of the most limiting factors on aquatic plants' productivity because photosynthesis deeply depends on the amount of available light. The aim of this study in the outer California Delta is to discover in which way light concentration in a freshwater environment – Big Break Regional Shoreline, Oakley, CA – can affect population density of *Egeria densa*, a common invasive freshwater plant in California, and throughout much of North America. The method used will be comparing densities of many correlated species, with focus on *Egeria densa*, in different sites with distinct amounts of light: Fully Sunlit, Open Shade and in Dark Shade (under a dock). This paper also graphs the relationship between density of *Egeria densa* (*Elodea*), cyanobacteria, *Myriophyllum* (Pondweed), and sponges. The present study demonstrates that sunlight highly affects density of *Egeria densa*, at least at observed sites. The collected information can be useful to better understand which factors regulate growth of this invasive plant and help to control them. By comparison, it was observed that not only the densities of *E. densa* were higher in sunlight, but cyanobacteria and waterweed as well. The site with less counting of *E. densa* was Dark Shade. All these observations lead to believe that the motive for higher growth on sun is that there is more light available for photosynthesis, since it is a tropical plant growing in a temperate climate. This study may be useful to encourage further research on the matter and is likely to help to control this invasive plant.

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