

November 2017

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Recommended Citation

Haynes Poronsky, Elizabeth D. (2017) "Science and Sentiment: Affecting Change in Environmental Awareness, Attitudes, and Actions through the Daily Nature Project," *The STEAM Journal*: Vol. 3: Iss. 1, Article 12. DOI: 10.5642/steam.20170301.12

Available at: <https://scholarship.claremont.edu/steam/vol3/iss1/12>

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STEAM is a bi-annual journal published by the Claremont Colleges Library | ISSN 2327-2074 | <http://scholarship.claremont.edu/steam>

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Abstract

Knowledge about what motivates pro-environmental behavior is important to organizations that seek to encourage environmental stewardship. Research suggests that targeting emotions and beliefs about nature can be more effective in changing environmental actions than increasing knowledge. Daily Nature, a site on the social media platform Facebook, features a daily nature photograph, a quote from a notable historical person and a related lyrical written passage. The popularity of this site lends credence to the appeal of interdisciplinary formats, and underscores the benefits of encouraging emotional and aesthetic ties to nature.

Keywords

pro-environmental behavior, social media, emotional connections to nature, nature relatedness, environmental awareness

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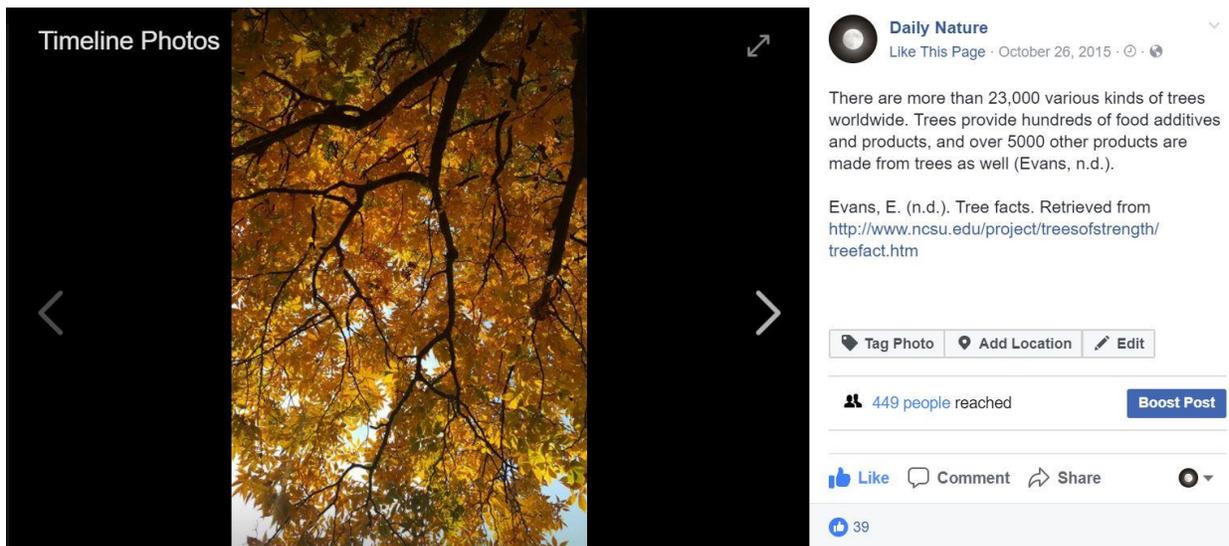


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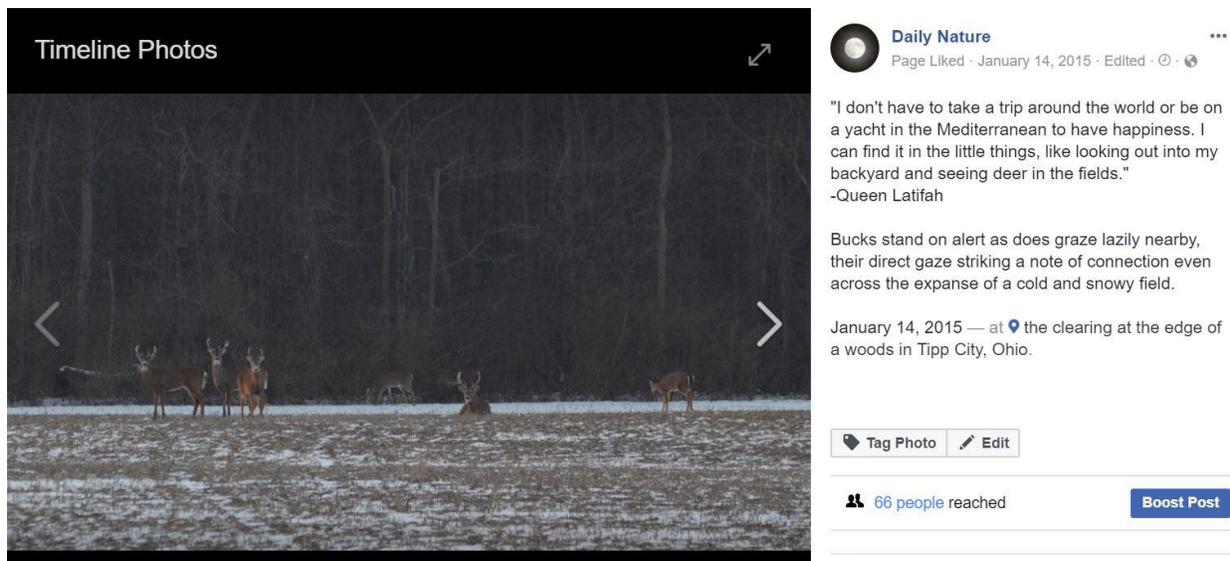
Elizabeth D. Haynes Poronsky

Society faces various environmental issues, and there are numerous organizations which look to educate the public about nature, and ultimately strive to inspire environmental stewardship. A central challenge and continuing question remains: what motivates people to act in pro-environmental ways? Pro-environmental behaviors are defined as actions that minimize harm to the environment as much as possible, or move a step beyond this to actually be of benefit to the environment (Kollmuss & Agyeman, 2002; Steg & Vlek, 2009). Looking at behaviors and determining what actions are necessary to achieve conservation goals is one layer of encouraging pro-environmental action, but further examination involves considering what motivates people to engage in these actions.



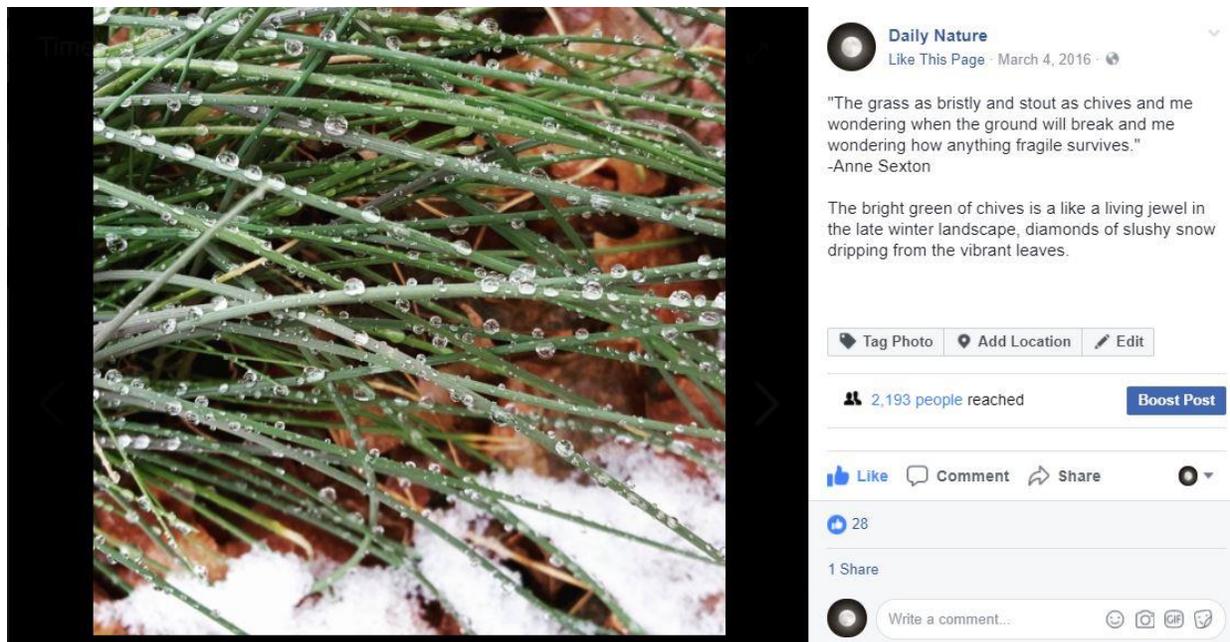
In 1968, Baba Dioum made a now famous statement at a meeting of the General Assembly of the International Union for the Conservation of Nature and Natural Resources (IUCN). He said,

“In the end we will conserve only what we love. We will love only what we understand. We will understand only what we are taught” (Maginnis & Wheeler, 2011, para 4). Education has often been cited as a predictor for pro-environmental behavior, with early models erroneously assuming a simple increase in awareness through education would yield a change in attitude about environmental issues, which would lead to more pro-environmental behavior (Kollmuss & Agyeman, 2002). This knowledge-deficit model (Heberlein, 2012) has been called into question by studies like the one completed by Schultz (2011) which showed that knowledge and attitudes are not strongly connected with behavior; education does not always yield more conservation minded actions (Schultz, 2011). Removing the idea of education as a determinant of behavior leaves the statement about love, and brings forth the question of how important an emotional connection to nature is in predicting or causing behaviors that benefits the environment?



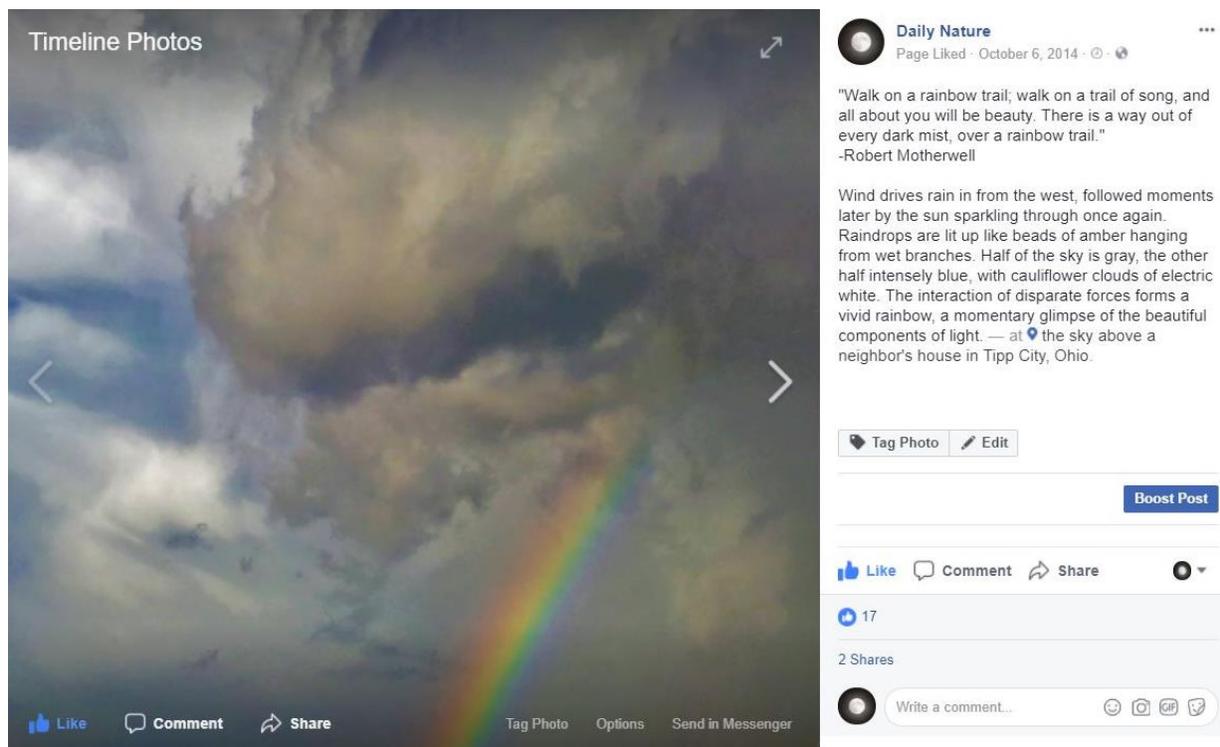
Although awareness of environmental issues and concern about them has grown (Schultz et al., 2005), the action needed to confront these problems is still lacking (Schultz, 2011; Miller, 2005). One potential reason for the absence of attention in addressing the crisis of biodiversity

loss is a lack of connection between people and nature (Miller, 2005). People are unaware of the natural world, with more people living in urban areas than ever before (Miller, 2005), spending more time on electronic pursuits and less time in nature (Kaiser Family Foundation, 2010). They may not even be aware that the planet is currently going through what most scientists believe to be a human-caused sixth mass extinction (Freeman, 2012). Loss of biodiversity can begin a self-perpetuating cycle that Pyle refers to in Miller's 2005 article as an extinction of experience. Lack of biodiversity leads to impoverished landscapes that people are detached from, which leads to a lack of time in nature and knowledge about nature. Less time spent in nature then leads to further degradation of biodiversity and ignorance about the importance of biodiversity (Miller, 2005).



In order to address this extinction of experience people need to spend time in nature. Time spent in the natural world allows individuals to form a personal, subjective relationship with nature. This is what Zelenski and Nisbet (2014) refer to as nature relatedness, a term that encompasses emotional, cognitive, and experience based ties to the natural world. Schultz (2002)

defines nature relatedness as a measure of how extensively one connects the idea of self to include nature, viewing the natural world as one with the individual. Data suggests that targeting emotions and beliefs about nature is more effective in changing environmental actions than increasing knowledge (Pooley & O'Connor, 2000). This is not reliant upon trips to the wilderness; these benefits can be harnessed even through repeated exposure to local landscapes (Richardson & Hallam, 2013). There are studies that show that emotional connections to nature are more effective at changing awareness, attitudes, and actions toward the natural world than transmission of knowledge. This runs contrary to common perception, since many believe that if people only knew more about nature, they would feel and act differently toward nature.



This knowledge that emotional connections to nature are key in shaping actions toward nature was part of the impetus for the creation of the Facebook page Daily Nature. The Daily Nature site, which began on December 5, 2013 and can be found on Facebook at

<https://www.facebook.com/OurDailyNature/>, features a daily photograph of some aspect of nature. It also includes a relevant quote from a notable person in history and a descriptive, lyrical, or philosophical reflection that ranges in length from one sentence to a short paragraph. The aim of the Daily Nature project is to increase appreciation for the everyday beauty of nature, and to tie together nature, history, literature, philosophy, photography, and aesthetic awareness of the natural world (Daily Nature, 2013). Daily Nature's vision is to create a vehicle for people to celebrate nature wherever it is found. This is all in support of making mindfulness of the earth a part of everyone's daily habit of thinking, in order to encourage emotional ties to, and advocacy for, the environment. Further, the project seeks to positively impact viewers' attitudes and actions toward the natural world by making nature visible in all of its forms, from spectacular scenes to everyday vistas.

This visual, arts-based component of the project serves to impact conservation in two ways. Outreach that is arts-based can reach new audiences that may not be reached by traditional conservation or science based messages; it can help change the dialogue and introduce new concepts and actions, as well as encourage creative solutions to environmental problems (Jacobson, Mcduff, & Monroe, 2006). The aesthetic qualities of the natural world have a great capacity to create feelings of communion with the environment, to inspire awe and affection. Paying attention to the visual beauty in the outdoors can encourage a deeper appreciation of nature, a growth in knowledge about nature, and ultimately promote conservation of nature. An artistic approach can also support multi-sensory engagement with nature, and thus promote closer emotional ties to the natural world, which can lead to more pro-environmental behavior (Jacobsen et al., 2006).

The Daily Nature project attempts to link together experiences of nature and aesthetic appreciation, to unite emotion and observation of the biological world. Knowing which motivators are more likely to encourage action on behalf of the environment, or to inspire change in attitudes or awareness of nature, is of central importance to individuals and institutions that look to impact these measures. An interdisciplinary approach has been advocated for in educational settings as well, and can be a bridge between subjects that are at times divided in an academic sense but are united in terms of real world questions and issues (Koichiro, 2013; Yang, 2011; National Research Council, 199; Siler, 2011). This approach enhances learning and opens learning up to a larger variety of the population, who learn in different ways and through different formats (Jacobsen et al., 2006). The popularity of Daily Nature, which has over 15,000 followers from more than 40 countries, supports offering a diverse and balanced approach when attempting to encourage awareness and positive attitudes and actions toward the natural world. Taking an interdisciplinary approach can also serve to reflect the way that people actually experience nature, encountering it as a connected whole, simultaneously processing facts, impressions, visual stimuli, emotions, and thoughts. In this view, all pursuits are inherently connected even if we do not always consciously acknowledge these connections. Maintaining the cohesion between science and emotional experience, and focusing on their complementary aspects, can provide a synergistic effect that is more than the sum of their parts. This should not be a question of either/or; instead, this should be a case of both/and, where knowledge and emotion, thoughts and feelings, information and subjective experience, may be seen as complementary approaches that produce a positive effect for the benefit of conservation.

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