

1. Helena Puche, IL/USA**2. Title:** What inspires Manatee conservation action?**3. Goals:** To determine which poster inspired people to help the manatee conservation campaign.**4. Summary:**

i. Project participants: Luetta Coonrod , Aileen Mueller , Helena Puche, and Michael Schaeffer formed a group and created one poster each (one for each of the four categories of posters: Biospheric (B), Environmental concern (E), Family-related (F), and Knowledge-Species-specific (K) which they shared with each other. Each person sent out the four posters (via Facebook or email) to a target audience of about ten people asking them to rank the four different posters according to which they thought best inspired conservation action (1st, 2nd, 3rd 4th). A few days after I sent these posters to my corresponding target audience, I asked them for additional information about their experiences with the posters. Their comments are included in the Reflection section. The posters were presented as B1, E2, F3, K4. The participant's rankings were shared by the group. Helena's prediction was that women were going to choose the Family posters because traditionally they are the ones that take care of the children while men were going to identify most with factual posters, such a Biospheric or Knowledge based as opposed to the first.

ii Audience used We had a variety of participants, with about 10-14 people on each of four age classes: 0-19, 21-40, 41-60 and 4 individuals for the 61-80 age-class. Of the 42 participants, 25 were females and 17 were males.

iii. Poster content and methods. The Biospheric poster (B1) contained information about how to protect wildlife, conserve water and preserve the environment to save the everglades and the manatees (Appendix 1), with an everglades landscape background and a floating manatee that moved around the poster. The environmental concern poster (E2) expressed concern about fishing lines tangling the manatees, propellers colliding them, plastic bags hurting them and encouraged people to protect them (Appendix 1). This poster had a picture of one manatee lying down on a blue blanket where a woman was touching its snout. The Family oriented poster (F3) had two manatees touching each other's snouts, and a floating manatee moving around the words: "Manatees are moms, too" (Appendix 1). The Knowledge poster (K4) had a picture of a manatee looking at you with information about manatees: cousin of elephants, eat 7 hours a day, weigh up to 3,500 pounds and had noisy grass moving on the side of the animal (Appendix 1). The message "Save the Manatee" was in all posters.

iv. Statistical Analysis. Total number and percentage of responses for each ranking was used to identify preferences that promoted conservation action among the four posters. Data were tested for normality and homocedasticity prior to performing analysis of variance. Because normality was not reached after any transformation, a Kruskal-Wallis ANOVA was used to determine if results were different among groups. Statistical differences were detected by a non parametric multiple comparison between treatments (NP_MCBT; $P < 0.05$; Siegel and Castellan 1988).

4. Results

Respondents were more willing to donate for manatee conservation with posters E2 and F3 than for posters B1 and K4 (Fig 1). This general trend was the same for both males and females. Therefore, since the choices were not distinguishable between males and females, I grouped the data “a posteriori” for the analysis by age groups and preferences. No differences were detected among preferences (Kruskal-Wallis ANOVA, $H=0.419$, $P=0.9363$) within age groups.

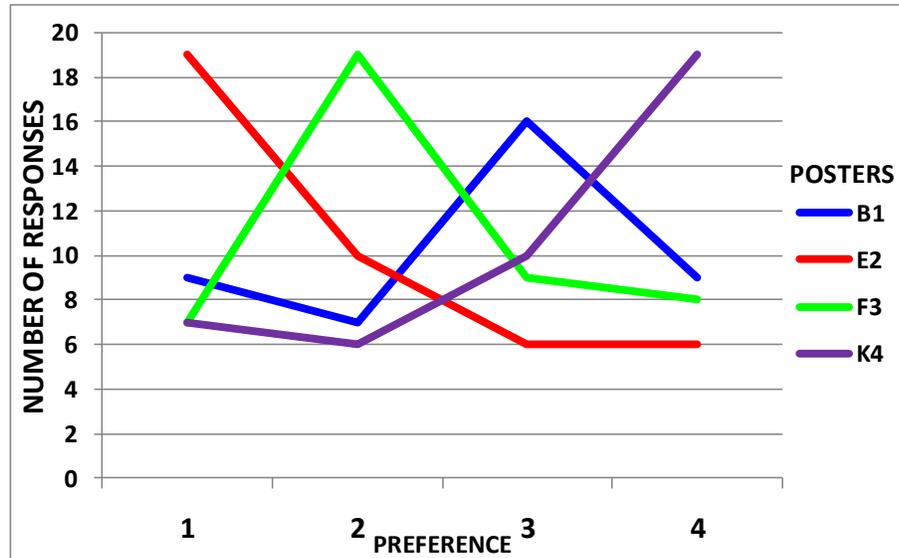


Figure 1: Overall number of participant responses ranked according to which poster (B1: Biospheric, E2: Environmental, F3: Family oriented, or K4: Knowledge based) they thought best inspired conservation action (preferences: 1st, 2nd, 3rd 4th).

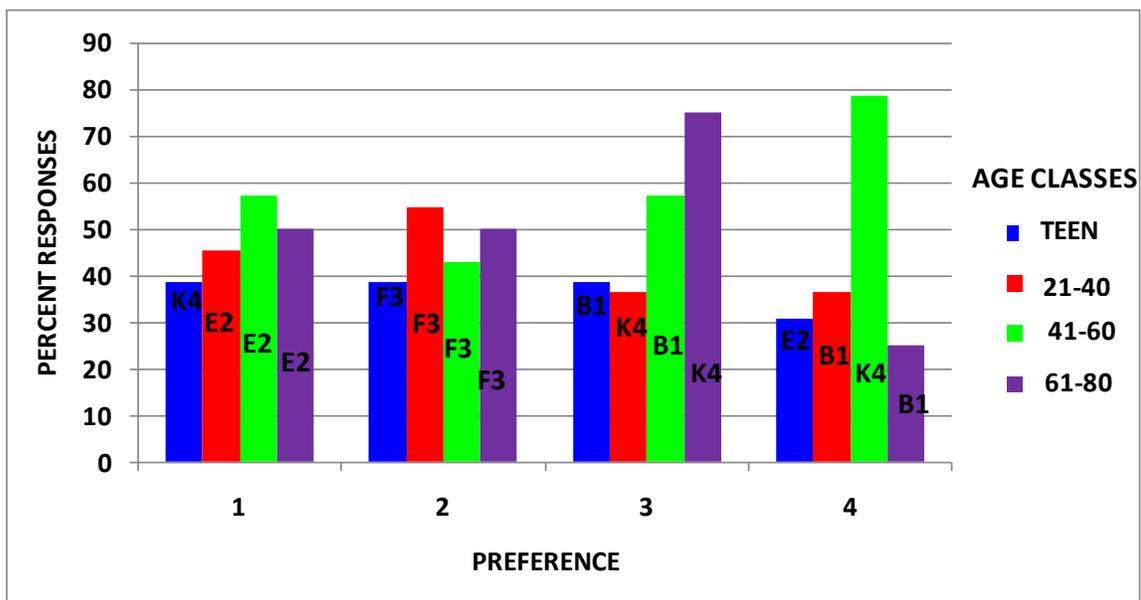


Figure 2: Percent of participant responses ranked according to which poster (B1: Biospheric, E2: Environmental, F3: Family oriented, or K4: Knowledge based) they thought best inspired conservation action (preferences: 1st, 2nd, 3rd 4th) for each of the four age-classes considered (teenager (blue), 21-40 (red), 41-60 (green) and 61-80 (purple)).

The first choice for teenagers (blue bar, Fig 2) was the Knowledge poster (K4) while the other age classes chose first the Environmental poster (E2). For all four age classes, the unanimous 2nd choice was the Family poster (F3; Fig 2). The 3rd and 4th choices for each age class oscillated between the Biospheric (B1) and the Knowledge (K4) posters. The percent responses by either teenagers or people from the 21-40 age-class were not significantly different (NP_MCBT; $P > 0.05$). In the 41-60 age-group (Fig 2, green bar) a significantly higher percent response was obtained compared to the other three age-groups (K-W ANOVA, $H = 12.447$, $P = 0.006$). This was due to the 41-60 age-old people disliking the K4 and B1 posters (~ 80% 3rd and 4th choices) more than in the other three age-classes. The percent response by the 61-80 age-group was significantly lower than the other age groups. However, this result could be due to the small sample size (4 people; Fig 2, purple bar).

5. Reflections:

My predictions were incorrect. Preferences were related more to the age group than to gender. Both men and women preferred the family poster which proves that positive images of biodiversity can have lasting effects on conservation action (Hyvarinen 2004). However, knowledge of the consequences of human actions (Butler and Matt 2001) on manatees (Environmental poster, E2) had more effect on the audience, making this poster their first choice. The design of the posters is important. Five of the 10 people that I questioned complained about the moving manatee in posters B1 and F3 which interfered with the written information, and about the sound of the K4 poster, which was too loud. Additionally, placement of words on the images of some posters annoyed 4 of the 10 people that I approached who would have preferred to have the wording arranged on the side of the poster in areas where there were no manatees or people. The potential for this social media is to promote environmental behavior change by taking action, although only donations or making more posters were the only alternatives. Because people fail to make the connection between helping biodiversity and their everyday lives (Farrior 2005), other possible more tangible actions that could promote individual behavior change would be pledging in writing (Farrior 2005) not to use propellers while in the everglades, picking up fishing lines after use because those entangle manatees, and/or not throwing garbage in the sea because manatees may confuse plastic bags with algae.

6. Next Steps and applications. The Manatee Conservation tool (Manatee campaign) could be used to create campaigns for other focus groups such as climate change or helping protect the environment as long as those use facts that connect the issue with people's everyday lives or experiences (Biodiversity Project 1999). In addition, making a poster or donating for the manatee campaign does not preclude that a supportive environmental behavior will follow (The Hartman Group 1996). Instead, people need to get involved with the campaign in order to understand the issue and to feel good about the change (Farrior 2005). That is the best way to encourage conservation of the natural world (Saunders 2003).

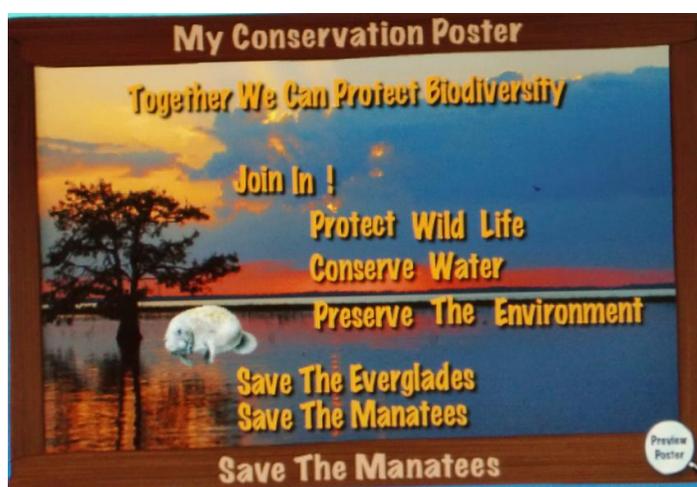
7. References.

Biodiversity Project (1999). Life. Nature. The Public. A Communications Handbook from the Biodiversity Project. Madison, WI: The Biodiversity Project.

- Butler, B., and Mattern, V. (Eds.) (2001). Reaching Out to the Garden Visitor: Informal Learning and Biodiversity. Kennett Square, PA: American Association of Botanical Gardens and Arboreta.
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- The Hartman Group (1996). The Hartman Report and the Environment: A Consumer's Perspective, Phase I. Seattle, WA: The Hartman Group.
- Hyvarinen, J. (2004). Communicating Biodiversity. A report from a working group from the Global Initiative on Communication, Education, and Public Awareness for the Conference of the Parties to the Convention on Biological Diversity.
- Manatee campaign http://www.wildresearch.org/manatee_campaign
- Saunders, C. (2003). The Emerging Field of Conservation Psychology. Human Ecology Review. 10: 137-149
- Siegel, S, and N. J. Castellan. (1988). Non-parametric Statistics for the Behavioral Sciences. Boston. Pp 213-215.

8. Appendix 1: Poster Links and poster pictures:

B1: http://www.wildresearch.org/manatee_campaign/nmuLGFk7pK/view_poster



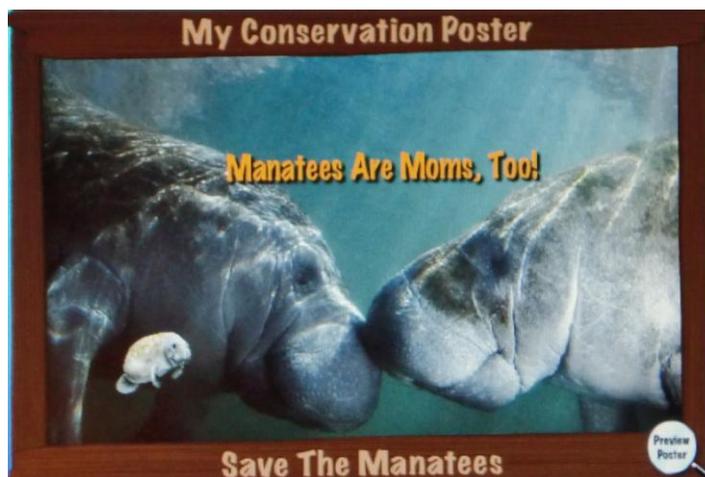
Biospheric Poster

E2: http://www.wildresearch.org/manatee_campaign/rP6ZdoODXe/view_poster



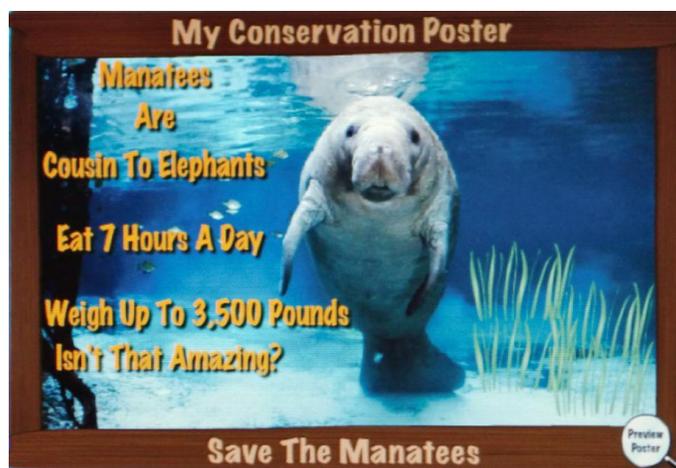
Environmental Poster

F3: http://www.wildresearch.org/manatee_campaign/P64NYYvQYY/view_poster



Family oriented Poster

K4: http://www.wildresearch.org/manatee_campaign/xbAjmcYKPo/view_poster



Knowledge Poster