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Captive elephant facilities contribute to in-situ and ex-situ conservation efforts by garnering support from and educating the public. As we all know, fostering an enhanced awareness and recognition of issues such as poaching and habitat loss is critical to initiating conservation-minded action. Because they have frequent access to updated reports from the field of elephant conservation, managers, keepers, veterinarians, researchers, docents, and other elephant professionals are invaluable to this information-sharing process. Additionally, elephant-specific educational materials and formal lesson plans are available through the Elephant Managers Association’s Education Committee (last updated in 2009), Disney’s Animal Kingdom, and the International Elephant Foundation.

Motivated or ‘gifted’ students are those that have above-average ability, are committed to tasks that they initiate, and exhibit creativity in what they do (Renzulli 1984). These students tend to have rather focused interests to which they show extreme dedication. However, traditional schooling formats only provide a general knowledge base that does not adequately cover the academic potential of many gifted students (Renzulli et al. 1982; VanTassel-Baska and Stambaugh 2005). Indeed, without the opportunity to pursue their educational interests, many otherwise talented students may underperform academically (Reis and McCoach 2000). As a result, some public and private school systems (on a local- and state-level) have initiated programs that foster the interests of gifted students by providing extracurricular opportunities to pursue rather specialized fields of inquiry.

One of these programs is the Texas Performance Standards Project (TPSP, www.texaspsp.org), which serves as a resource for academic enhancement for gifted and talented students from kindergarten through 12th grade across Texas. As participants in this program, high school students are required to conduct an independent project that focuses on the long-term (1-year) development of a question of interest. Besides reporting their progress through regular process records, TPSP students are assessed through a substantial written paper and a product that helps solve a problem in their field of interest. These are then presented to a panel of judges from the community in order to receive their input. Additionally, a critical component of TPSP for high school students is the involvement of...
a professional mentor from outside of the school who currently works in the student’s field of interest. This mentor provides guidance throughout the year as the student works on his or her project. Topics of previous TPSP projects have included a vast array of contemporary issues such as human rights violations, sports injuries, and food allergies.

Carnegie Vanguard High School (CVHS) in Houston, Texas, is a public school that serves gifted students from a range of cultural and socio-economic backgrounds and has embraced the TPSP program. CVHS requires students in their junior year (11th grade) to participate in the TPSP.

Ethan Hendrix, a junior at CVHS over the 2015-16 academic year, has been a teen volunteer at the Houston Zoo for 4 years. Like many EMA members, Ethan has always shown a keen interest for animals, and so he wanted to investigate a contemporary wildlife conservation issue for his TPSP project. After learning about elephants during his time at the Houston Zoo, Ethan decided to focus his project around elephant conservation, and chose Chase LaDue, a graduate student at Western Kentucky University, as his project mentor. In this brief report, Ethan and Chase provide their perspectives on the experience to emphasize the value of similar projects that can be conducted at other schools and captive elephant facilities.

Ethan’s Perspective:

I wanted to help elephants in some way with my project, so I centered it around elephants and spent the whole year researching everything that I could find out about them. I already had some knowledge of elephants due to my time spent at the Houston Zoo and my own research conducted previously. One requirement for the TPSP class at CVHS is to create a product that helps to solve the problem presented in our project in some way. I wanted to create something that had not been done before, but could still make an impact on those who saw it so they would want to contribute to elephant conservation efforts.

When I came across the tagua nut in my research, I was certain that it was what I needed to pursue. The tagua nut is grown from the tagua palm in Central America, and when it is dried and hardened, its properties are strikingly similar to that of elephant ivory, giving it the nickname ‘vegetable ivory.’ Vegetable ivory serves as a potential alternative to using elephant ivory, so I decided to incorporate it into my product. I ended up making miniature decorative tusks out of tagua nuts, and I applied them to small soapstone elephants that were made in Kisii, a city in southwestern Kenya (Figure 1). I also attached fact cards about the ivory poaching crisis that I made out of recycled elephant dung paper. In creating these figurines, I hoped to educate people about the adverse effects of purchasing ivory goods. I was surprised in my research to find that the US is one of the largest consumers of ivory products, second only to China. Based on my previous knowledge, and my experience living in the US, I did not think that it was a significant problem here, so that was one of the driving factors that led me to creating these figurines.

In addition to my product, I wrote a paper detailing everything that I had learned in my research. It covers everything from the various threats to elephants in the wild to the benefits of keeping elephants in captivity for research and education. I tried approaching this subject from every perspective I could think of, so I also spent time researching the role of elephants in their ecosystems, particularly in Africa, and the effects that the loss of the elephant species would have on all of the other organisms that relied on them. One story that fascinated me while I was researching was the consequences that ivory poaching has on vultures (e.g. Warchol 2004; Ogada 2014). At first I thought that vultures may benefit from having an excess of elephant carcasses to feast off of, but they are actually in danger as well. Certain conservationists have begun using vultures as a signal of areas where elephants were recently poached. Poachers have also caught onto this trend, and have started killing any vultures that come near them. Stories like this were fascinating to me, as I was able to start viewing the ivory crisis from multiple perspectives. I now recognize the impact that it has on everyone and everything around it.
Figure 2. Just like enrichment is important to the development of young elephants, it is also critical to provide learning opportunities to motivated students.

I believe that everything that I have learned in the course of accomplishing this project will continue to help me quite a bit later in life. I always knew that I wanted to work to protect and save animals in the wild, but now I am more motivated than ever to help make a difference for the future of wildlife. Writing a full-length research paper about something that I care deeply about has been invaluable in preparing me to write other papers in college. Additionally, the help that Chase provided for me during this project made it an amazing experience that I am incredibly grateful for.

Chase’s Perspective:

As I’m sure many EMA members would agree, we owe our professional progress to those who have taught us in the past, so I was humbled that Ethan asked me to serve as his mentor for his elephant-focused TPSP. To start, I should emphasize that this project was almost completely driven by Ethan himself: he was responsible for defining his questions, finding reliable sources of information, and integrating what he learned to create his products. Many of the other students in Ethan’s TPSP class chose Houston-based mentors for their projects. Because we work hundreds of miles apart, Ethan scheduled monthly meetings with me over the phone, and I followed his progress through frequent emails and updates to his online blog. He independently investigated many possibilities for his product, including remote-control drones, 3D printing, and carving tagua nuts. I simply provided the context with which Ethan could frame his project by informing him of the most current knowledge and trends in the field. It was truly remarkable to observe how self-motivated Ethan was, but because he designed the project from the beginning based on his own interests, I was not surprised.
It may be difficult for some keepers, managers, researchers, or zoo educators to devote time to mentor students from schools in their communities, and it is probably not practical to actively seek out opportunities to engage with students like I did with Ethan through the TPSP. However, one characteristic of gifted students is their propensity to commit to projects that they find engaging. Simply put, they are motivated to learn and discover on their own with minimal guidance. Elephant professionals have a specialized set of skills and knowledge beyond what is taught in traditional education formats. Many facilities actively educate the public in formal (e.g. camps or internships) or informal (e.g. keeper talks) settings. These programs are meant to inspire conservation-minded behavior among visitors, and there are likely motivated students participating in these programs. Any students who illustrate an eager commitment to the field should be encouraged, and it is conceivable that elephant professionals can help to facilitate the application of a student’s interests.

The future of in-situ and ex-situ elephant populations depends partly on fostering the rising generation of elephant professionals. The amount of elephant knowledge gained everyday from husbandry-, research-, and conservation-related efforts is simply amazing, but this means almost nothing without preparing and inspiring someone else to continue the progress of these achievements. Therefore, it is critical that we support students who show strong interests in elephants by providing them with the opportunity for self-guided discovery. I found this experience to be professionally and personally engaging, and I urge others to take advantage of any similar opportunities that they may encounter.

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References: