

Linked With Limulus: Superheroes Of The Sea

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Situation:

Horseshoe crabs (*Limulus polyphemus*) are ancient superheroes still walking our beaches today.

- Prey item for fish and wildlife
- Horseshoe crab blood used by pharmaceutical companies to ensure sterility of drugs, vaccines, and medical equipment.
- Life history information about Florida's horseshoe crabs is lacking.
- Comprehensive surveys are expensive to conduct.

Response:

- As part of a statewide program, Hernando volunteers are trained to count, measure, weigh, age, and tag horseshoe crabs (Fig. 1 and Fig. 4).

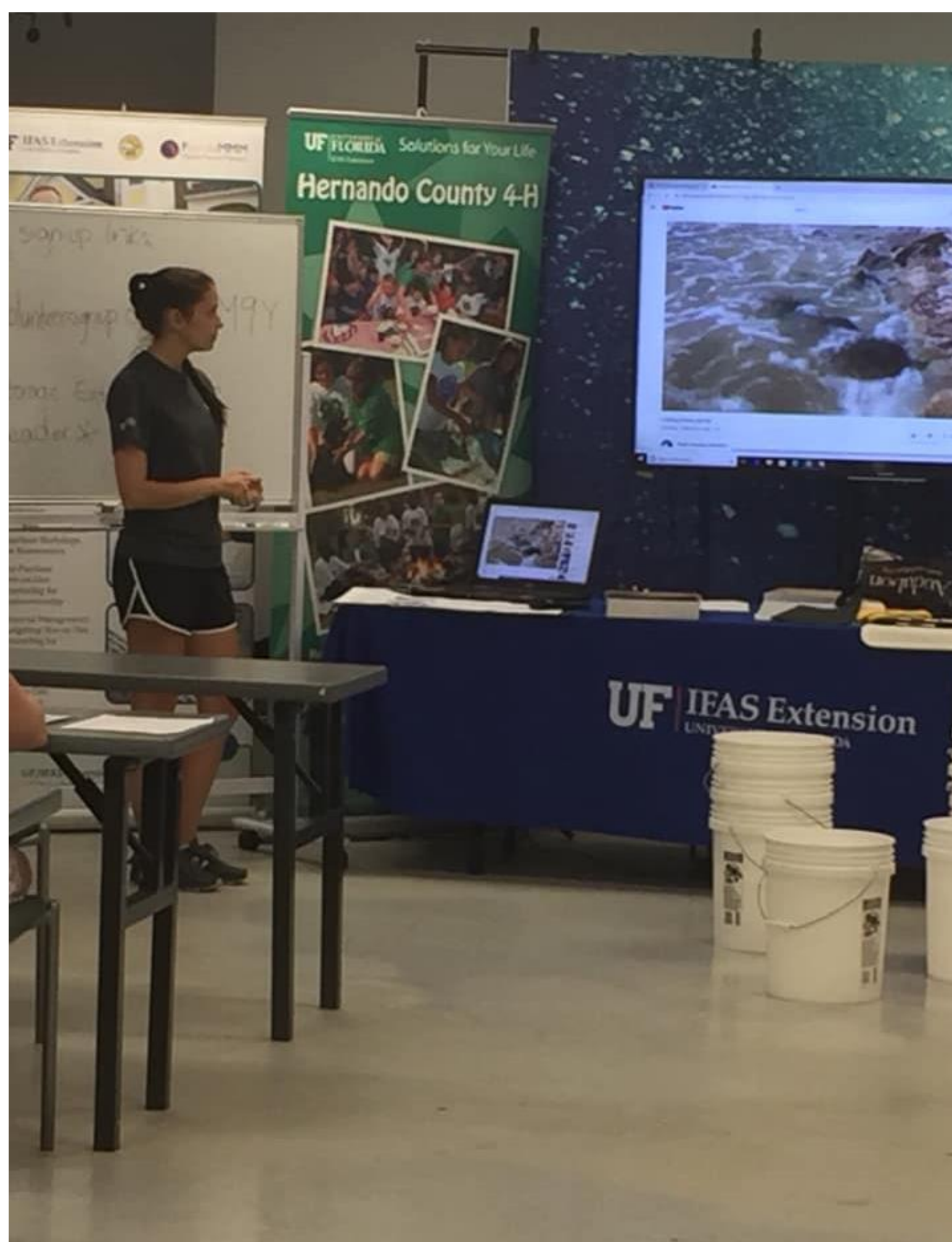


Figure 1: Agent teaches volunteers about horseshoe crab biology and program responsibilities in classroom portion of training. Photo Credit: Theresa Weglarz



Figure 2: Volunteers survey nesting horseshoe crabs along Pine Island and collect subsamples to be tagged and released. Photo Credit: Brittany Scharf



Figure 3: Volunteers measuring the carapace of a horseshoe crab collected during beach survey. Photo Credit: Alice Mary Herden

Results:

- Hernando's 32 volunteers have dedicated 202+ hours (\$4,859 value).
- Over 650 crabs properly identified, and 214 crabs tagged by trained-volunteers (Fig. 2 and Fig. 3).
- Public has reported 9 crab re-sightings in Hernando.
- Volunteer-collected data contributed to a United States Fish and Wildlife Service's mark-recapture program along the Atlantic coast.
- Data used by fishery managers for the state stock assessment of the Florida horseshoe crab population.



Figure 4: Agent in field teaching volunteers how to collect data on live horseshoe crabs. Photo Credit: Alice Mary Herden

Conclusion:

Intricacies of this program are described, with special emphasis on Hernando County's training regimen. This case study can be used to help inform those interested in using effective citizen science programs to answer questions where volunteer involvement may supersede the limitations of available funding and staff.