

Public divided over how to manage invasive animal and plant species on Cumberland Island

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Visitors to Cumberland Island flock to the barrier island to see its famed feral horses, likely unaware of the damage the wild animals can inflict on the seashore's ecosystem. Park managers are often in a quandary over what to do about the horses and other invasive species that threaten a local environment. A new study by the University of Georgia could help shed some light on what management methods the public would support—and that could help shape future park policies on how to control damaging invasive species like the island's charismatic horses.

Researchers with the Warnell School of Forestry and Natural Resources found that among all the invasive species on Cumberland Island, feral pigs were singled out as the greatest danger to Cumberland Island's ecosystem—with 72 percent of visitors saying they were either a moderate or severe threat. Although the well known feral horses that roam the island were ranked second, with 68 percent of visitors identifying them as a damaging species, visitors were strongly divided on what should be done about the invasive species problem facing the island.

Results showed that public support for various invasive species management methods depends on many different factors. "Understanding public preferences could minimize conflict should steps be taken to reduce the spread of an invasive species," said Ryan Sharp, a Warnell alumnus who worked on the project. "Once we know more about the control methods that stakeholders will or will not tolerate, we can begin to work towards socially acceptable management practices."

Sharp, Gary Green, a Warnell associate professor, and current Warnell Ph.D. student Lincoln Larson surveyed visitors to Cumberland Island National [Seashore](#) in Georgia during the summer of 2009 to

gauge public support for invasive species management. Their results were recently published in a paper in *Biological Conservation*. Controlling invasive species on public lands has become a management priority because they compete with native species and often create an ecosystem imbalance. But controlling invasive species can spur controversy, either because some members of the general public find management techniques distasteful or because they don't understand why control methods are necessary. For instance, although a tourist draw, the island's non-native feral horse population tramples beach ecosystems and can spur erosion by eating grasses along the dunes. Park managers understand that the horses, descended from domesticated stock brought over by the Carnegie family a century ago, are a major attraction, but they also struggle with how to also limit the animals' negative impacts on the unique National Seashore.

"Attempts to manage invasive species' populations can produce political and cultural conflicts," said Larson. "At this point, we have a pretty good grasp on the ecological damage caused by invasive species. However, we are just beginning to comprehend some of the economic and social ramifications."

The survey team questioned 1,166 visitors leaving the Cumberland Island boat docks, asking a variety of questions to characterize their knowledge of, attitudes toward, and preferences for invasive species management on the Island. Participants were specifically asked about potential threats posed by conspicuous invasive plants and animals like feral horses, feral pigs, ambrosia beetles, tung oil trees, privet and bamboo.

Results indicated that, in general, visitors to Cumberland Island prefer that land managers use

non-lethal methods to control invasive species' populations rather than other methods such as leaving them alone or eliminating them completely. Non-lethal approaches also were the least controversial methods. Visitors were particularly opposed to completely eradicating the feral horse population, and instead preferred alternative measures such as contraceptives.

Visitors also could be divided into two distinct groups based on their preferences: 41 percent believed all species, even invasive ones, have a right to persist and favored leaving them alone; the other 59 percent supported invasive species control. The survey found that those who opposed invasive species management tended to be younger, less educated and less knowledgeable about how non-native animals and plants can threaten a local ecosystem. They also had spent less time at Cumberland Island or other national parks than the pro-management group, made up of older and more educated people who were aware of invasive species' impacts.

Green acknowledged that similar systematic strategies for assessing public attitudes could help land managers identify appropriate strategies for controlling [invasive species](#) in other contexts. "Public input is an essential component of public land management," Green said. "This type of research highlights the importance of informing the public and incorporating stakeholders into land management decisions."

Provided by University of Georgia

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