

## MSU helps take pandas off endangered species list



Pandas pictured in their natural habitat in the China Center for Research and Conservation of the Giant Panda in the Wolong Nature Reserve. Photo courtesy of Sue Nichols

By Jameson Draper  
November 16, 2017 9:02 am



Over the past decade, efforts have been made to restore the revered pandas establishment in the wild. It had become an endangered species, and by 2003, MSU launched a reintroduction program for pandas through the China Center for Research and Conservation of the Giant Panda in the Wolong Nature Reserve.

Now, in 2017, pandas are no longer endangered. While MSU still works in the habitat to try and fix the problems involved with food scarcity, climate change and pollution, they've achieved their initial goal of getting pandas out of endangered territory.

MSU helps take pandas off endangered species list



What are pandas today?

“Threatened,” Dr. Jianguo “Jack” Liu, who holds the Rachel Carson chair and is director of of the Center for Systems Integration and Sustainability, said. “Threatened is less concern in terms of having a larger population and a better habitat for them to survive in the Wolong.”

They picked the Wolong Nature Reserve for the density of pandas — if there is such a thing — as of the roughly 1,900 living pandas in the world, 10 percent live in the reserve.

“Wolong Reserve is a ‘flagship’ nature reserve for panda conservation,” Liu said. “It’s one of the first nature reserves established for panda conservation. Also it’s one of the largest. If that one can work well and set a good example for other reserves and if that works well, we can find other reserves.”

Hongbo Yang, a doctoral candidate in fisheries and wildlife, studies the impact conservation efforts have on the panda research.

“Both impact on local people and also on the ecosystems,” Yang said. “How well these policies work, that’s my concern.”

The group studies Hetaoping, a region in the Sichuan Province. DNA noted that between 16-25 pandas were being studied. The territory studied was about 2-3 square miles of panda roaming, which is a large amount. Pandas are always on the move, so they'll naturally move further distances than humans. In fact, many researchers don't even get to see the pandas.

So how do these scientists find pandas?

Poop.

"The main method I use is just kind of roaming the mountains and hiking the mountains looking for feces," Doctoral candidate Thomas Connor in the department of fisheries and wildlife said, who studies with Dr. Liu. "I don't really get to see many pandas or anything myself in the wild. I get all the genetic information from feces."

Yes, that's correct. By using DNA from recently excreted fecal matter, scientists can tell where the panda has recently been and can discover individual characteristics of the panda.

"There's DNA in there, and you can also see where they distribute it — where they go," said Liu. "And because we know the location of those poops, and you can track also you can know how long they were there."

The studies purpose was not only to save pandas but figure out the interaction between pandas and humans, and how to provide a sustainable environment for pandas in the future by reintroducing them to the wild.

"I'm particularly interested in how humans interact with the natural environment," Liu said. "So, in the past, people that worked on pandas focused on the biological side. How much bamboo pandas eat? How many babies they produce? Which are important issues to work on. But the most important thing is the human impact on pandas. That's why pandas become endangered, why pandas lost their habitat. So, in order to solve the problem, we need to find solutions. To find solutions, we need to work on the humans — how humans interact with the habitat."

While they seem cuddly and loving, pandas tend to live as far away from humans as they can. The places they find in the forest are generally a lengthy distance from any human settlement.

"They have good noses -- they can sense people and smell. So they try to stay away from people," said Liu. "We really need to consider both humans and pandas at the same time. Because when we try to protect the pandas, we need to consider what people need."

Liu said that over time, efforts have been made to push humans out of the Wolong Reserve. Instead of displacing them, now Liu and his team are working on helping the humans move out on their own, get jobs and go to college. According to Liu, the biggest step is helping them move on their own, not forcing them out.

Liu has been conducting his panda studies for the last 20 years, despite the research at the Wolong Reserve commencing 14 years ago.

"Before I came here — after I got a position here — then I began to think about what to do," Liu said. "And I'm in the department of fisheries and wildlife, and so pandas seemed like a good subject to work on."

For some, it was an easy decision to make to start getting involved with this study.

“Because pandas!” said Yang.

This is a big step for MSU’s Center for Systems Integration and Sustainability, or CSIS, which helped spearhead the study. It’s a project in which they’ve been recognized globally for their efforts in panda habitats and sustainability. As a research university, successes like this is what the university strives for.

“MSU has a goal to promote sustainability,” Yang said. “Not only in the US, but also global. Panda, as a case, in China, a developing country, can help MSU have a more diverse research under different context to increase the diversity.”

Besides the shift in the giant panda's status resulting in a better future for the species, it brings them to the forefront of global attention in a way few others are privy too.

“I think it is a pretty good case study of successful conservation, and I think it’s really cool how involved Michigan State has been in that,” said Connor. “Giant pandas are probably, maybe, the flagship conservation species in the world. Everyone knows about pandas and the fact that they’ve been b-listed as not endangered anymore.”

**Want more articles like this? Subscribe to our email newsletter!**

