

How can we protect giant pandas research paper examples

[Law](#), [Security](#)



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Introduction

The giant panda is a member of the bear family living in mountainous terrain in China. An article entitled “ Giant panda fact file” (n. d.) contains much useful information about the animal, including its Latin name: *Ailuropoda melanoleuca*. Adults are mostly solitary in habit, meeting mainly in the mating season, which is between March and May, when they utter loud calls to each other through the mountainous forests. Unlike some other members of the bear family, giant pandas do not hibernate; they tend to relocate to lower altitudes to avoid the worst of the winter weather, and may also move around at other times of the year to locate new or better sources of their staple food, bamboo.

The Research

- Why Giant Pandas Need Protection.

An article entitled “ Why should we save the giant panda?” published by panda. org (n. d.) gave some reasons for the giant pandas needing the protection of humans to survive. The article first explained that although

species extinction is a natural phenomenon that happens over “ hundreds of thousands and even millions of years”, due to man’s intervention and/or over exploitation of the planet we share, the current speed of that process is much higher – some suggest up to 1, 000 times faster. The giant panda – one of the threatened species – is not only a well-known icon in the world of nature conservation; it is also a species for which man has great affection. One of the principal reasons pandas are so important, is that by supporting all the initiatives to “ save the panda” we are actually helping to support and preserve the biodiversity of their natural environment (the plants, landscape and other creatures) that need to co-exist there for the pandas to thrive and survive.

The article also described the region inhabited by the giant pandas – the forests of the Yangtze basin in China, which the giant pandas share with other interesting animals such as “ dwarf blue sheep and beautiful multi-coloured pheasants; as well as other endangered species, including the , [cattle chamois or gnu goat] and crested ibis.” It mentioned how the pandas provide a crucial function in those forests by spreading seeds as they roam, aiding new plant growth. Not only do they help the forest in that way, but because that region – in the geographic center of China and important economically – is home to millions of people, increasing the sustainability of the area also helps improve the quality of life for the human population. The presence of the pandas bring tourism revenues into the region, as well as being culturally important to the Chinese.

- Protection of Their Habitat

The “ Giant panda fact file” article reported that the major cause of the

decline in giant panda numbers has been habitat loss. The article stated that because the increasing human population in the region has cleared large areas of the forests for agriculture and for timber sources including firewood, livestock grazing has also become an issue, preventing the trees and the bamboo plantations from regenerating. Because the bamboo plants flower and subsequently die back every so often (at intervals of between 15 and 120 years) large areas of bamboo can disappear simultaneously, meaning that the local panda population has to relocate to find new food sources. However, the deforestation and consequent fragmentation of their habitats mean that pandas become more vulnerable to those sudden food shortages. The article noted that although poaching had formerly been a serious problem, the imposition of stiff penalties had reduced the level to where it is not now a serious threat, although pandas are sometimes trapped and killed by snares set illegally to catch other species.

In order to tackle the fragmentation of the panda habitats, the article reported major efforts by the Chinese authorities to restore them. They have created numerous reserves in the forests, specifically to protect the giant pandas, and are creating “bamboo corridors” to link the protected areas so that the pandas can more easily roam over a wider range. Appendix A to this paper contains a map, derived from an article by Lane (2008) showing and describing these corridors and depicting the general area in China populated by the giant pandas. Although efforts are being made to preserve and even extend the panda’s habitats, Lane reported that not only do almost half of the world’s pandas still live outside of protected areas, but that construction projects such as roads, dams, and city expansion are causing more

fragmentation of some habitat areas, plus tourism is also having a negative effect on their natural environment. However, she also reported the existence of a “ Giant Panda Survival Plan” that includes various goals, some extending as far as 200 years into the future. One of the more immediate goals is to protect 100 percent of their existing known habitats and to develop the “ bamboo corridors” mentioned earlier, plus to improve the protection of those areas of nature reserves and to set up comprehensive monitoring of the panda populations.

Hoilberg (2007) also reported that the main reasons for the near-extinction of giant pandas are poaching and the deforestation of habitats. His article noted that whilst today’s populations of giant pandas are restricted to those areas of China, there is evidence from fossils that their ancestor roamed most of eastern Asia as recently as 10, 000 years ago.

Hoilberg also mentioned the periodic flowering and subsequent demise of bamboo forests, which he claimed then need a recovery period of between five and ten years. Interestingly, he explained why a giant panda needs to consume so much bamboo every day. It seems that though its diet is almost totally vegetarian (bamboo) it still has the digestive system inherited from its carnivorous ancestors. Thus, because bamboo contains a lot of cellulose which the panda cannot digest, the bamboo passes quickly through its digestive tract, which consequently renders the panda prone to various digestive problems.

As a further boost to the protection of the giant panda’s habitat, in July 2006 the Chinese government published an article through their official web portal entitled: “ Giant Panda Habitat included into World Heritage List.” That

article reported that the decision was taken at the 30th session of UNESCO's World Heritage Committee (WHC), thereby giving the panda habitats the protection of international law.

- Supportive Breeding Programs

There are various captive breeding programs around the world. Perhaps the most significant is that reported by Davies (2010) for BBC Earth News. Her article reported on a program which conservationists claim could result in reintroducing captive bred animals back into the wild, perhaps within 15 years. The breeding program is based in China at the Chengdu Panda Breeding Research Centre. Davies explained various difficulties that had to be overcome to achieve success. The first was that there is a very short "window of opportunity" in the reproductive cycle of the giant panda, because a female panda is on heat for only about three days each year and is only able to become pregnant during a period of between 12 and 24 hours within that "window." As part of the breeding program, the scientists accordingly had to check urine from the female pandas on a daily basis, in order to monitor hormone levels. A further barrier to success was that male pandas have relatively short penises, requiring a fairly exact mating position, which seemed to be difficult for the pandas to understand or achieve. Eventually, the scientists had to resort to using artificial insemination techniques, but even then had to monitor pregnant females very carefully, because their pregnancy duration could be anywhere between 11 weeks and 11 months. Also because the pregnancy was difficult to detect until just prior to birth, the scientists always had to be ready.

Over 50 percent of pandas have twins, but usually will only care for one, so

the scientists routinely removed the second one to an incubator, but then “ stealthily” swapped the cubs between mother and incubator on a regular basis so that both cubs survived. Using that method, the survival rate for cubs was increased to 98 percent. At the date of the article, the program had achieved 300 captive pandas, permitting the start of construction of a dedicated reintroduction facility, located in the Sichuan Mountains. This was partly funded by loaning giant pandas out to zoos around the world. As reported in the ehow. com article referenced earlier, there are also panda mating programs in various zoos. As the article stated, a zoo is not the ideal environment for the pandas, but such breeding programs - supervised by trained zoologists - do at least ensure that the species continues, whatever may happen in the wild.

On an optimistic note, the “ Giant panda fact file” article reported that following years of decline, even though the species is still in potential danger of extinction, the numbers of giant pandas in the forests are believed to be increasing, thanks in part to the conservation efforts of the Chinese government and other organizations including the WWF, who have used the giant panda as their logo since the organization was founded in 1961.

- Adopting a Giant Panda

The China Internet Information Center published an online article entitled “ Panda FAQs” (n. d.) in which they provided information on how to adopt a giant panda based at one of four locations in Sichuan province, China. Those locations are: “ the Wolong Natural Reserve, the Fengtongzhai Natural Reserve, Chengdu Zoo, and the Chengdu Research and Breeding Base.” The “ adoption” helps finance further research and thus helps protect the pandas

and help secure their future. However, it does seem that adopting a panda is quite costly, starting at \$5, 800 per year. For that you can be photographed with your panda (if you visit there) and receive a certificate and regular updates on the panda's progress.

- Individual Initiatives to Help Protect Pandas

The organization Pandas International has a program called "pennies4pandas." The website for that program published an online feature entitled "Panda Protectors" (n. d.) describing some individual efforts by young children to raise funds for the protection of the giant pandas, including some examples as below:

- Conor: requested friends to donate to Pandas International in lieu of birthday gifts. He also staged a commercial in his acting class to raise awareness;

- Teresa (8) and Michael (6): held a school fundraiser for Pandas International, raising a total of \$132;

- Amelia: made clay animals and sold them at a local art show. She raised \$370 as well as raising awareness of the pandas' situation;

- Alexa: hosted lemonade stands in summer and hot cocoa stands in winter, raising \$100. Pandas International called her a "true Panda Protector";

- Jamie (7): youngest child in Australia to raise funds for pennies4pandas and has raised almost \$1000 that will be used to buy incubators for baby pandas in China, and will help the replanting of a bamboo plantation.

- Panda Protection Within China

"Wanglang Nature Reserve - Panda Threats and Protection" (2001) was published by this nature reserve in Sichuan province. Although it described

some of the threats to the giant pandas there, it was interesting for the descriptions of how the reserve goes about protecting their pandas. They regularly patrol the reserve, keeping a lookout for poachers and for sick or injured pandas, at the same time as protecting the habitat that is the forest. They also educate visitors to the reserve with regard to protection of the pandas and on environmental issues, as well as educating the local human population about the need to protect and conserve the giant pandas. At the same time, the reserve supports economic development within their local communities so as to obviate any need for them to use panda habitats to supplement their livelihood. The reserve is also actively involved in the provision of “bamboo corridors” as described earlier in this paper.

Conclusions

A key to the ultimate success and continued longevity of the species is the series of panda breeding programs around the world in zoos, but predominantly in China itself, where the program has been so successful to date that a program to reintroduce captive-bred pandas back into the wild is in hand. Also the massive Chinese initiative in protecting the natural habitats and providing “bamboo corridors” between them is helping to ensure the pandas can roam freely to find more food sources.

Overall, for a species that not too many years ago seemed to be possibly facing extinction, the outlook currently looks much brighter, as a consequence of all those globally sourced and diverse programs for their protection.

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Appendix A: Geographic Distribution of Giant Pandas

The map below (reproduced from “A Plan to Save the Giant Pandas” by Carol Lane, June 2008) provides an indication of the distribution of the giant panda populations located in the central Chinese provinces of Sichuan, Shaanxi, and Gansu:

The beige and brown coloured areas indicate the locations of four large and 16 small panda populations. The green areas show further potential panda habitats and the existing “bamboo corridors” are numbered 1-12, in total

comprising some 136 miles (218km) between habitats. Individual corridor details are as below: