

## **Bee Fencing to Protect People and Elephants**

By Mario Padilla, December 18, 2018

At Butterfly Pavilion, we believe in conserving, protecting and educating the public about invertebrates from habitats around the globe. This is necessary because many of these animals are often forgotten. They tend to be small, hide in dark places and may trigger fears in many people. The truth is invertebrates make up 97% of the animal life on earth, with 1.2 million described species. Invertebrates are the foundation of countless food chains, control pests, pollinate our food, have vast research implications and are eaten by humans around the world.

In order to protect these important animals, Butterfly Pavilion participates in research and conservation both domestically and abroad. From the coast of northern California to the Gobi desert in Mongolia, Butterfly Pavilion makes an enormous impact all over the world. Recently, Butterfly Pavilion has launched a collaborative effort with the Katie Adamson Conservation Fund (KACF) and Denver Zoo to mitigate human and elephant conflict using honey bees, in western Nepal. This project was inspired by work in eastern Africa that has shown that elephants are afraid of bees and will avoid foraging in trees where bees nest. Bees will actively defend their hives by sending guard bees to sting any intruder. Elephants have sensitive trunks, ears and eyes and will avoid getting stung by avoiding bee hives. This work inspired researchers to test the feasibility of constructing “fences” of beehives, connected by a wire to block the elephants from entering human areas. Elephants enter human areas looking for crops, which provide them easy to access, concentrated source of nutrition. The problem arises when elephants damage property, homes and crops and raid grain stores, which can impact a family’s livelihood immensely.

This conflict is increasing because humans and elephants are coming into closer proximity due to population growth. Astonishingly, “20% of the global human population shares the present range of the remaining 30,000 Asian elephants”. Encounters between humans and elephants can lead to elephant death or injury, human death or injury, and can have large impacts on surrounding communities. Bee hive fences have been successful throughout Africa and Asia, and are currently being tested in Nepal. Butterfly Pavilion was in Nepal in September and October of this year supporting a new bee hive installation on a major elephant route that abuts to Bardia National Park. Butterfly Pavilion trained local community members in best beekeeping practices, supported hive installation and bee acquisition, and visited a local school to educate schoolchildren about the importance of pollinators. Bee fences not only discourage elephants from coming into human populated areas, the beekeepers can keep and sell the honey, learn a new skill and their crops can be pollinated by the bees, resulting in more buy-in than a regular fence.

This initial work will lay the foundation for a strong conservation program in Nepal that not only benefits the native elephant populations, but the people who share the

environment with them. It is vital that we do our best to protect the remaining wild elephants populations and innovations like these that have a positively environmental impact will always be the most successful.