Bee Fencing Project: A Global Impact!

By Lorna McCallister, September 22, 2021

As rural communities develop and expand agricultural production into natural systems, conflicts between humans and native wildlife become more frequent. These human-wildlife conflicts are especially dangerous when the native wildlife are intelligent, strong, and weigh 3 to 7 tons! This is the reality facing many rural African and Asian communities that share the landscape with elephants. As their habitat shrinks due to human development, elephants become desperate for food and water resources and will enter communities to raid crop fields and food and water stores, threatening human lives and damaging houses and crops in the process. In response, these communities are desperate to protect their food, families, and livelihoods from elephants and sometimes turn to violence and retaliatory killings to scare elephants out of their communities.

To promote human-elephant coexistence, Butterfly Pavilion has been working on projects in Nepal and Tanzania to expand the use of an elephant deterrent method that has been scientifically proven to reduce conflicts with elephants, increase community support for elephant conservation, and provide additional income for participants—beehive fencing. Beehive fencing was first developed and studied by Dr. Lucy King of Save the Elephants (in Kenya) after researchers were inspired to study elephant reactions to honeybees based on the observations of Kenyans who noticed that elephants avoid trees and hives containing bees. Due to its affordability and effectiveness, this method has since expanded throughout Africa and Asia, and has been used to guard crops, homes, schools, and even the iconic baobab trees. A beehive fence is composed of hanging beehives connected using wire and placed around the perimeter of a crop field or homestead. When elephants attempt to cross the fence, the wire is moved and the hives shake, disturbing the honey bees inside. Elephants run from the sound and stings of the defensive bees to protect the sensitive skin around their eyes, ears, and trunk. Elephants then learn to avoid the fences and teach their family groups to do the same. Not only do communities using beehive fences benefit from protecting their crops and increased safety, they also gain supplemental income from selling the wax, propolis, pollen, and honey produced by the hives. In addition to promoting elephant conservation, beehive fences also promote the appreciation and protection of insects near and dear to Butterfly Pavilion—bees! Specifically, our work with beehive fence projects in Africa will promote the ecological and agricultural benefits of African honeybees, Apis mellifera scutellata, which are native to eastern Africa.

Butterfly Pavilion has been working on beehive fencing since 2018 and expanded from Nepal to Tanzania in 2019. This November, scientists from the Butterfly Pavilion will travel to Tanzania to expand the use of beehive fences to communities facing human-elephant conflict outside of Nyerere National Park and Mkomazi National Park. These communities requested help with establishing beehive fences through our partners at the Tanzanian Elephant Foundation. Butterfly Pavilion is excited to partner with the

Tanzanian Elephant Foundation and the Katie Adamson Conservation Fund to fund the construction of beehive fences, train community members in beekeeping and beehive fence construction and maintenance, and provide essential beekeeping equipment for these communities