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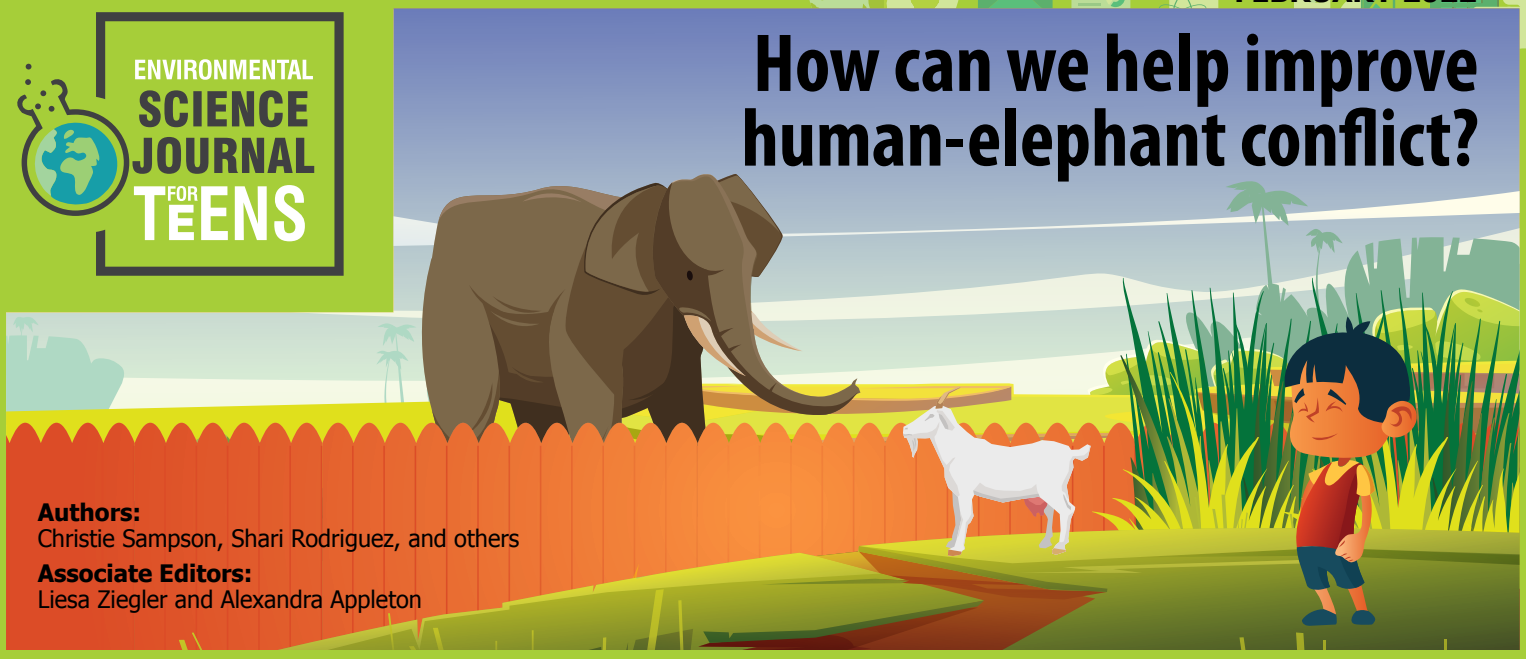
How can we help improve human-elephant conflict?



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Abstract

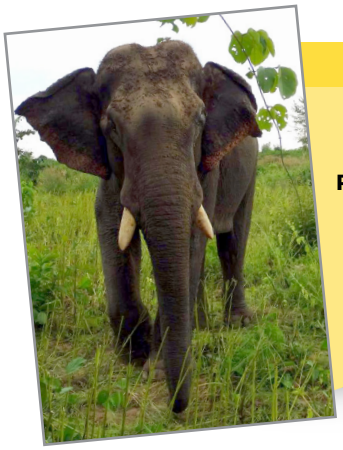
When humans and wildlife share the same areas, they can come into conflict over resources. This is called human-wildlife conflict. This can be a big problem when the wildlife in question are large mammals (like tigers, lions, or elephants). Can you imagine living alongside such giants? To understand more about these types of conflict, we did interviews with rural people in Myanmar. The results of this study will help wildlife managers find ways for elephants and people to live side-by-side with less conflict!

Introduction

The Asian elephant is an endangered species with only an estimated 20,000-40,000 individuals left in the wild. One of the biggest problems is that humans are taking up more and more of the elephant's natural **habitats** each year. This limits the resources elephants need to survive. With less space to move around, people and elephants have to live closer together. This can sometimes lead to either humans or elephants being injured or killed.

Myanmar is one of the last, and best, places for Asian elephants to survive. It has the most habitat left out of all the countries where Asian elephants live. But there are also a lot of people living in rural areas in Myanmar. Many of them are farmers who grow crops to make a living. Elephants living there often try to eat the crops, like rice or cashew nuts, since they are an easy source of food. Farmers have to guard their crops (especially at night) to keep them safe from elephants. They use firecrackers, flashlights, or loud shouting to try to scare elephants away. Sometimes this works, but other times the elephants become **desensitized** to these methods or feel threatened. A threatened elephant may charge people or destroy fences, crops, and sometimes homes.

Before we can fix a problem as big as **human-wildlife conflict**, we need to understand how it impacts people. Our study identified the problems that people face living alongside elephants. The direct impacts include losing crops or facing damage to property. But people can also experience indirect impacts. One example is extreme stress from being afraid of elephants. Also, some people may not be able to travel or go to school because of the risk of coming face to face with an elephant. Understanding both the direct and indirect impacts of human-wildlife conflict is important. Then we can help people find solutions to feel safer around their giant neighbors. If people feel less threatened, they may be more willing to actively support elephant conservation programs. Our hope is that, one day, humans and elephants can respectfully coexist.



An Asian elephant
Photo: Christie Sampson

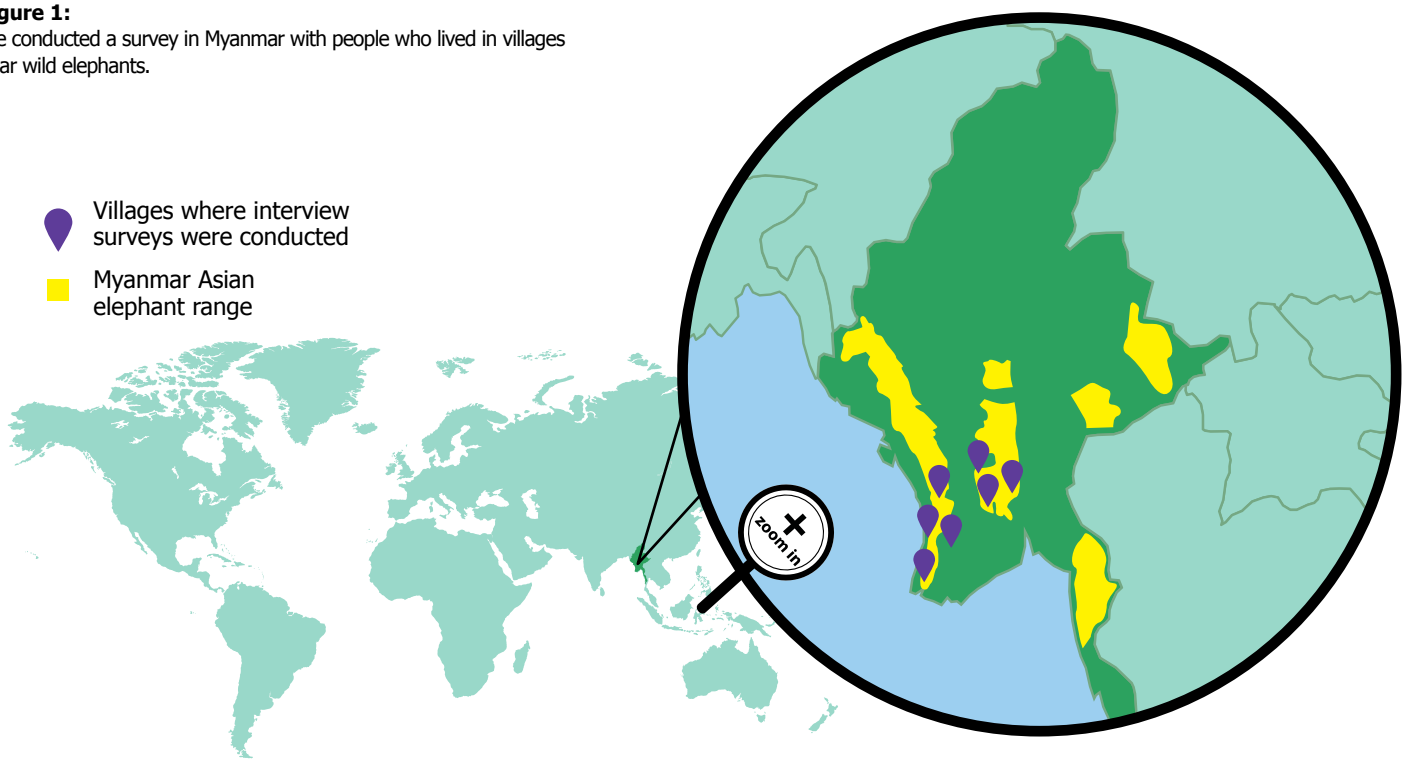
Methods

We used a structured questionnaire (translated into **Burmese**) and went to two rural areas in Myanmar (Figure 1). We met the leaders of each village we visited and asked for their permission to talk to the people in their community about living near elephants. We then interviewed 381 people in 44 villages to learn about:

1. Their background (for example, what their job was and how long they had lived in the area).
2. Their knowledge about elephants.
3. Their experiences with elephants.

We analyzed the data and used percentages to show how many people had similar answers. 100% represents all the people that took part in our study.

Figure 1:
We conducted a survey in Myanmar with people who lived in villages near wild elephants.



Results

We found that many people experienced direct impacts.

- Around one in three people had been chased at least once by a wild elephant.
- 14% had their home damaged by elephants.
- 3% of people had a family member killed by wild elephants.
- 2% had been hurt by elephants.

But almost everyone (99%) had experienced indirect impacts from conflict with elephants. Most people commonly feared for the safety of their family and that their crops or houses would be destroyed. Despite frequent interactions with elephants, only 16% felt like they knew how to act safely near wild elephants to avoid conflict.

A common effort to prevent elephants from raiding crops is to stay up all night to guard them. This means that villagers may not be getting enough sleep, which can cause medical problems. It can also give them less time for other important things in life, such as looking after their own children. The villagers believed that their children had a lower quality of life because they were afraid of elephants. Over a quarter (26%) reported that their children were unable to attend school when elephants were near their homes (Figure 2).

Despite these challenges, it was extremely encouraging to find that villagers expressed strong support for the protection of elephants and elephant habitat. Many people stated that elephants are a key part of the cultures and religions of Myanmar and important for the health of the ecosystem.

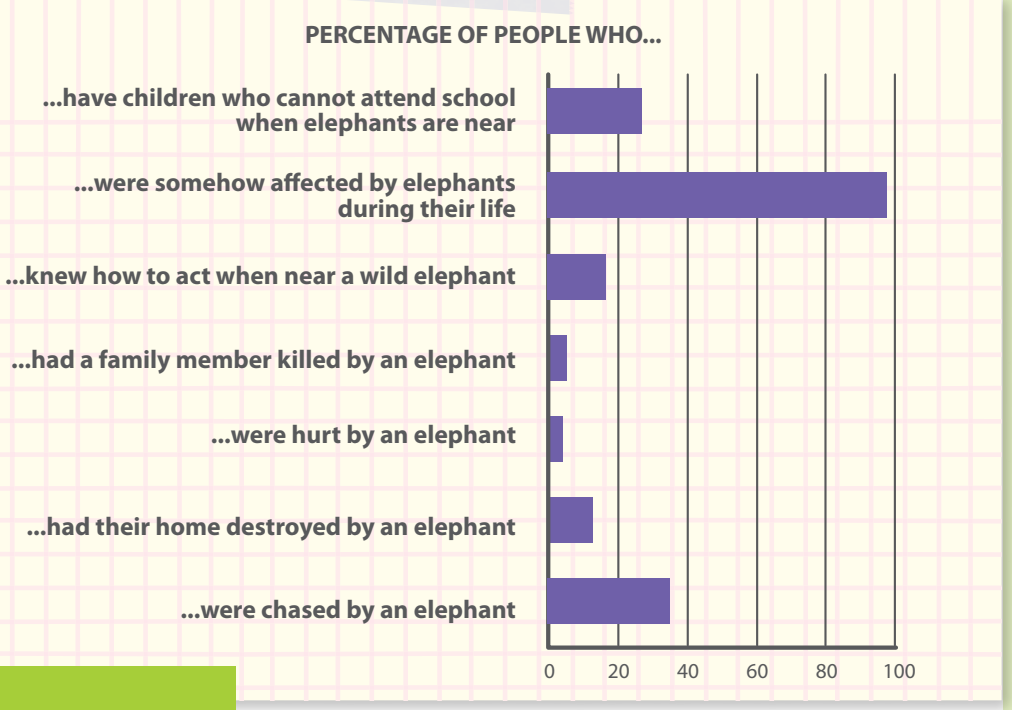


Figure 2:
Nearly everybody living near wild elephants is affected by them at some point in their life.

What percentage of children living in these areas in Myanmar are sometimes unable to go to school because of elephants? Can you say roughly how many of your classmates would not be able to come to school if you all lived near wild elephants?

Discussion

So, how do we reduce conflict between humans and elephants? Government and conservation organizations often only look at the direct problems. This leaves out many of the indirect impacts. Actions that could help with these indirect problems include:

- Working with communities to teach safe behavior around elephants.
- Increasing access to medical services for people injured by elephants.
- Making construction material and agricultural supplies more available. This will enable people to rebuild their homes and replant their crops.
- Improving the quality of life for children (e.g. access to school when elephants are present).
- Designing strategies for avoiding conflicts that take both people and elephants into account.

We hope that our study will help with managing these conflicts. People are more likely to protect wild elephants if they understand why elephants behave certain ways and if they have fewer negative experiences from living near them.

Conclusion

Sharing land with elephants can be difficult. But there is strong support for elephant conservation from rural villages in Myanmar – and across the world! If you live near a zoo, you could ask your parents or teacher if you can visit it so that you can learn more about elephants and other wildlife around the world. Zoos often have programs aimed at protecting wild animals. Organizations like Elephant Family and International Elephant Foundation also have great projects you can explore. They aim to develop a more peaceful coexistence between elephants and humans.

Glossary of Key Terms

Burmese – Refers to the people of Myanmar in Asia and the main language spoken there.

Desensitized – Reacting less strongly than normal to feelings of pain, anxiety, stress, or suffering.

Habitat – A place or an area where an organism (plant or animal) naturally lives. It has the right conditions and resources for that organism to survive.

Human-wildlife conflict – Any negative interaction between humans and animals. This often happens when animals and humans live in the same area and have to share resources.

Check your understanding

1. About how many Asian elephants are left alive in the wild? Now compare this number to the number of people living in your hometown.
2. How many participants in our study were actually injured by a wild elephant?
3. If you lived in a village near Asian elephants, what kind of problems could you expect to have?
4. How can our study help humans and elephants coexist more peacefully?
5. Are there any human-wildlife conflicts in your area? Do you know how to act when facing a wild animal living near your home?

REFERENCES

Christie Sampson, Shari Rodriguez, Peter Leimgruber, Qiongyu Huang, and David Tonkyn (2021) *A quantitative assessment of the indirect impacts of human-elephant conflict*. PloS One.
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Smithsonian National Zoo & Conservation Biology Institute: Asian Elephant Conservation
https://nationalzoo.si.edu/conservation-ecology-center/asian-elephant-conservation

WWF: Disappearing Wildlife in Myanmar
https://www.wwf.org.mm/en/disappearing_wildlife/

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