

# Literature Review for Pangolin Project

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## The Pangolin

With a name derived from the Malay word '*pengguling*' which means 'one who rolls up,' pangolins form a complex part of the environment and cultures around which they live. When threatened, they roll themselves into a ball and expose their scales for protection. There are eight existing species of pangolin – four in Asia and four in Africa.



[7]

## International Pangolin Trade

According to the IUCN SSC Pangolin Specialist Group [1], pangolins are the 'most illegally traded wild mammals on the planet'. They are used in traditional medicine in many different cultures across Asia and Africa, and their meat and scales are traded as luxury products [2]. The illegal trade of pangolins was originally concentrated in Asia, but as Asian pangolin populations have depleted there is an increase in the export of African pangolins since 2001 [3]. As a result, all eight species are now classified as vulnerable or endangered, with three of the Asian species being critically endangered [1].

## Data Set

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provides a comprehensive database [4] regarding the international wildlife trade. The data can be filtered by year and species, among other criteria. It is accessible in a .csv format and includes variables such as the number of items traded, type of item (e.g. skins, scales), and importing and exporting countries,

## Project Outline

This project will focus on predicting the future levels of legal and illegal trade in pangolins worldwide. The CITES dataset will be used to provide historical estimates of recorded pangolin trading. Monte Carlo simulation will then be utilised to provide estimates of future legal trade. There is obviously a substantial amount of trading that occurs illegally, so existing literature will be examined to create a reasonable estimate of illegal activity. For example, according to the IUCN Specialist Pangolin Group [5], trade in pangolins between the years 1977 and 2000 accounted for an additional 88 – 163% of the trade reported to CITES. These figures will be added to the estimated legal trades. Finally, a geometric model for population growth [6] may be used to obtain predictions regarding the overall decline of the pangolin population.

## Getting Involved in Conservation

- Adopt a pangolin through the WWF: [Adopt a Pangolin | Symbolic Adoptions from WWF \(worldwildlife.org\)](https://www.worldwildlife.org/adopt-a-pangolin)
- Donate to the pangolin specialist group: [Pangolin Specialist Group \(pangolinsg.org\)](https://pangolinsg.org/)

## Bibliography

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