Saving pangolins from the traditional Chinese medicine markets in China

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• About pangolins

• About traditional Chinese medicine (TCM) and pangolin scales

• About future actions based on findings from this project
Pangolin

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Order: Pholidota
Family: Manidae
Poaching of pangolin
International trafficking routes of pangolin (2010-2015)
• Market demand on pangolin for scale and meat in China is 200,000 individuals every year (Yin et al. 2015)
Traditional Chinese medicine (TCM) and pangolin

- TCM: a style of traditional medicine built on a foundation of more than 2,500 years of Chinese medical practice

- TCM is part of the mainstream health care system in China

- Pangolin scales have been used in TCM for at least 1,500 years
1) Policy regulating pangolin scale market?

2) Demand on pangolin scale from TCM?

3) People’s attitude towards pangolins, pangolin scales, and related regulations?
Q1: Regulation of pangolin scale trade

- CITES Appendix I
- Second-class National Protected Animal
- Certificates required for farming pangolin and commercially trade scales for medical use
- National Forestry Bureau assigns annual quota from pangolin scale stockpile
  
  Certain hospitals are allowed to prescribe and sell pangolin scales

林护发〔2014〕179号

国家林业局关于下达2014—2015年度
库存穿山甲片原料年度消耗控制量的通知
Surveyed hospitals in two cities in Henan province

Q2: Study site to assess demand
Hospitals in Henan:

<table>
<thead>
<tr>
<th>City</th>
<th>Number of hospitals surveyed</th>
<th>Number of hospitals selling processed pangolin scales</th>
<th>Total amount of raw scales sold by surveyed hospital in one year (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18</td>
<td>15</td>
<td>Close to 4000</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>7</td>
<td>Around 500</td>
</tr>
</tbody>
</table>

1kg processed scales $\approx 3$ kg raw scales $\approx 6$ pangolins
<table>
<thead>
<tr>
<th>City</th>
<th>Number of hospitals with permit</th>
<th>Number of hospitals sell processed pangolin scales</th>
<th>Annual raw scales use by surveyed hospital (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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**Q2:** Demand on pangolin scales
No evidence for successful commercial farming of pangolin in China

Chinese pangolin population is estimated to have declined up to 90% since 1960s and the remaining population might be 50,000 to 100,000 (Wu et al. 2004)

This level of use is only possible to be supplied from international sources
Doctors’ perspectives:

• Acknowledged the medical value of pangolin scales though don’t distinguish scales by different species

• Pangolin scale cannot be substituted with equal effectiveness but its use is dispensable

• No knowledge of policy or regulation related to pangolin scale use or pangolin conservation

• Think scales come from farmed animals

• Patients mainly follow what’s being prescribed by doctors
Close to 40% of surveyed people support trading pangolin products as medicine in the online survey in Henan.

Most of interviewees know pangolins are endangered and don’t know what the source of pangolin products in market (i.e. whether it is farmed or wild).

But people who believe trade pangolin products as medicine is legal also tend to support trade pangolin-derived medicine.
• Demand is huge with no sustainable supply
• Weak legislation with little if any enforcement
• TCM doctors don’t know pangolin related policy
• Public shows a high support towards trading pangolin scale as medicine
How can we save pangolins from TCM markets in China?

1) Cooperate with TCM community and government to legally ban pangolin scale use as medicine

2) Public campaign focusing on illegal market of pangolin scales

3) Strengthen law enforcement on TCM markets, shops, hospitals, and farms
• I would like to thank my supervisors, Prof. Nigel Leader-Williams and Dr. Samuel Turvey, for their support and guidance

• Thanks to Dr. Dan Challender for his generous help on my project

• Thanks to all the volunteers and organizations that helped me to conduct interviews
Photo:
Pangolin in a ball: credit to APWG, courtesy of ZSL
http://www.telegraph.co.uk/science/2016/03/15/pangolins-13-facts-about-the-worlds-most-hunted-animal/
Pangolin standing:
https://www.reddit.com/r/aww/comments/594okv/this_baby_pangolin_wants_to_talk_to_you_about/
Pangolin raw scales: credit to Shahzad Anwar

Platform:
Wen Juan Xing (2018), Wen Juan Xing: An online questionnaire platform. URL https://www.wjx.cn/
Thanks! Questions?