

AFRICAN PANGOLINS



UNDER INCREASED PRESSURE FROM POACHING AND INTERCONTINENTAL TRADE

Daniel W.S. Challender and Lisa Hywood

All pangolin species have been subject to exploitation historically, which continues today, but little is known about their natural history, status or conservation needs (Lim and Ng, 2007; Pantel and Chin, 2009; Challender, 2011). In Asia, the four extant species—the Chinese Pangolin *Manis pentadactyla*, Sunda Pangolin *M. javanica*, Thick-tailed Pangolin *M. crassicaudata* and Philippine Pangolin *M. culionensis*—are threatened primarily as a result of illegal hunting for illicit international trade (Wu *et al.*, 2004; Challender, 2011) to meet demand for their meat and for the use of their scales in traditional medicines (Pantel and Chin, 2009; Challender, 2011). The key consumers are China and Viet Nam. The African species, namely Temminck's Ground Pangolin *Smutsia temminckii*, African White-bellied Pangolin *Phataginus tricuspis*, Black-bellied Pangolin *Uromans tetradactyla* and Giant Ground Pangolin *Smutsia gigantea*, are also threatened by consumptive use in west, central and southern Africa (Kingdon, 1971; Soewu and Ayodele, 2009; Soewu and Adekanola, 2011). The animals are hunted for their meat, which is either consumed or traded as wild meat, and for their scales, which are used for cultural and ethno-medicinal purposes, including in traditional African medicine, *muti* or *juju* (Bräutigam *et al.*, 1994; Sodeinde and Adedipe, 1995; Soewu and Ayodele, 2009; Soewu and Adekanola, 2011).

All extant species of pangolin are listed in Appendix II of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora); international trade is permitted, but regulated through the issuance of import and export permits, subject to non-detriment findings. However, at the 11th meeting of the Conference of the Parties to CITES, in 2000, a proposal to transfer Asian pangolin species from Appendix II to Appendix I was amended to retain these species in Appendix II with an annotation of a zero quota for specimens taken from the wild and traded for primarily

commercial purposes; a zero export quota was also established for the Philippine Pangolin in September 2007 following its recognition as a species distinct from the Sunda Pangolin (see Feiler, 1998; Gaubert and Antunes, 2005). Trade in Asian pangolins and their parts may only be resumed upon submission and adoption of a proposal to remove or amend the annotation at another meeting of the Parties (CITES, 2011; Anon., 2000). In June 2012, the EU CITES Scientific Review Group (SRG) banned imports of African White-bellied Pangolins from Guinea into the EU, based on concerns about the sustainability of recent levels of trade (SRG, 2012).

A number of seizures in Asia of African pangolins (see Challender, 2011) provide evidence of an intercontinental trade in African pangolins to Asia that has long been suspected, but little is known about the extent of this trade or the figures involved. At the same time, the exploitation of pangolins specifically within Africa has received little attention from conservationists (Bräutigam *et al.*, 1994, Sodeinde and Adedipe, 1995, Soewu and Ayodele, 2009, and Soewu and Adekanola, 2011, being notable exceptions). This paper discusses trade in African pangolins targeted for export to Asia and provides some recent figures of pangolin seizures intended for this market.

Exploitation driven by intercontinental trade

The clandestine nature of illicit trade in wildlife makes it difficult to estimate trade levels; minimum volumes only can be gauged based on data from media reports of seizures and the findings of research (Broad *et al.*, 2003). Here the authors are limited to presenting selected data relating to seizures in Africa, Europe and Asia for the period 2000 to 2012 based on media reports, Customs agencies and the Tikki Hywood Trust, which operates in Zimbabwe (Table 1).

Prior to 2008, the authors have no records of intercontinental trade in African pangolins or their derivatives to Asia, though it is feasible that such trade has existed ►

▶ but gone undetected. Since 2008, a small number of seizures comprising African pangolins and derivatives have taken place in Asia and in Europe where the end destinations were reported to be China, Thailand and Hong Kong (Table 1), though this is undoubtedly a small fraction of actual trade levels based on the low detection rates associated with wildlife trade. Although the quantities of pangolins and scales seized are not known in all cases, some of these consignments included pangolin scales ranging in weight from between one and 115 kg; one comprised 100 African White-bellied Pangolin skins (with scales attached) that had originated in Guinea and was bound for Thailand (Table 1). The larger volumes suggest this trade is commercial in nature but operating in parallel with smaller volumes. For example, pangolin scales have been recovered from personal baggage and passengers' shoes during recent seizures in Belgium. Again, while the identity of the species concerned has not been confirmed in all seizures, photographic evidence suggests that this trade involves at least three of the four African pangolins—the Temminck's Ground Pangolin, Giant Ground Pangolin and African White-bellied Pangolin. In June 2012, the EU SRG

banned the importation of Tree Pangolins to the EU based on concerns about the sustainability of trade volumes of this species from Guinea.

How much of the hunting and trade in pangolins in Africa is intended for intercontinental trade, international trade within Africa or for domestic use is not clear. However, the nature and circumstances surrounding seizures that have been made recently suggest links to intercontinental trade rather than to local use. A pangolin seized in Zimbabwe in May 2012 had had most of its scales removed, which deviates from the local practice of *muti*, where the animal is kept alive and its scales removed as and when needed for medicinal purposes. Moreover, one of the authors has been contacted for advice by conservationists operating in Gabon in response to reports of Chinese buyers placing orders for pangolins. In July 2012, 115 kg of pangolin scales were seized in Uganda; the trader claimed that he had many suppliers and that he always exported the pangolin scales to China. He said that he received deliveries from various locations within the country and from the Democratic Republic of Congo (Mayanja, 2012). According to a spokesperson from the Ugandan Wildlife Authority, wealthy Chinese

Year	Location of seizure (Known source/destination)	Commodity	Species	No. of individuals/ weight (kg)	Source
2000	Zimbabwe	Live	Temminck's Ground Pangolin <i>Smutsia temminckii</i>	1	THT
	Zimbabwe	Live	Temminck's Ground Pangolin	1	THT
2001	Mozambique	Live	Temminck's Ground Pangolin	1	THT
	Zimbabwe	Live	Temminck's Ground Pangolin	2	THT
	Zimbabwe	Live	Temminck's Ground Pangolin	1	THT
	Zimbabwe	Live	Temminck's Ground Pangolin	1	THT
2003	Zimbabwe	Live	Temminck's Ground Pangolin	1	THT
	Namibia	Live	Temminck's Ground Pangolin	1	THT
2004	Zimbabwe	Live	Temminck's Ground Pangolin	1	THT
2008	Zimbabwe	Live	Temminck's Ground Pangolin	1	THT
	China	Scales	<i>Manis</i> sp.	4 kg	Media
	France	Live	<i>Manis</i> sp.	1	French Customs
2009	France (Cameroon)	Body(ies)	<i>Manis</i> sp.	3	Media
	France (Cote d'Ivoire/Hong Kong)	Scales	<i>Manis</i> sp.	96 kg	French Customs
	France (Central African Republic)	Body(ies)	<i>Manis</i> sp.	4	French Customs
2010	South Africa	Live	Temminck's Ground Pangolin <i>Smutsia temminckii</i>	1	Media
	USA	Body(ies)	<i>Manis</i> sp.	>4	Media
	France (Congo)	Body(ies)	<i>Manis</i> sp.	1	French Customs
	France	Body(ies)	<i>Manis</i> sp.	1	French Customs
2011	France	Meat	<i>Manis</i> sp.	15 kg	Media
	Zimbabwe	Specimen	Temminck's Ground Pangolin <i>Smutsia temminckii</i>	1	Media
	Zimbabwe	Specimen	Temminck's Ground Pangolin	1	Media
	Mozambique	Scales	Temminck's Ground Pangolin	Unknown	Media
	Namibia	Specimen	Temminck's Ground Pangolin	1	Media
	Belgium (Guinea/Thailand)	Skins (with scales)	African White-bellied Pangolin <i>Phataginus tricuspis</i>	100	Belgian Customs
	Kenya	Specimen	Temminck's Ground Pangolin <i>Smutsia temminckii</i>	1	Media
	Zimbabwe	Seizure	Temminck's Ground Pangolin	1	THT
	Zimbabwe	Seizure	Temminck's Ground Pangolin	1	THT
	China (Nigeria)	Meat/Scales	<i>Manis</i> sp.	3/1 kg	Media
2012	Belgium (Guinea/China)	Scales	Giant Ground Pangolin <i>Smutsia gigantea</i>	Unknown	Belgian Customs
	Belgium (Cameroon/Belgium)	Body(ies)	<i>Manis</i> sp.	c.200 kg	Belgian Customs
	Belgium (Unknown/China)	Scales	<i>Manis</i> sp.	c. 20 small bags	Belgian Customs
	Uganda	Scales	<i>Manis</i> sp.	4 kg	Media
	Uganda	Scales	<i>Manis</i> sp.	115 kg	Media
	Kenya	Live	Temminck's Ground Pangolin <i>Smutsia temminckii</i>	1	Media
	China (Angola)	Scales	<i>Manis</i> sp.	6	Media

Table 1. Year, location of seizure, commodity, species and number of individuals/weight of African pangolin/derivatives in trade, 2000–2012.
Sources: media reports, Customs agencies, THT=Tikki Hywood Trust, Harare, Zimbabwe.

were encouraging the illegal trade (Mayanja, 2012). This supports the concern that intercontinental trade, if not the case already, is set to be a major threat to Africa's pangolins, especially if this practice is occurring elsewhere in Africa, facilitated by a growing Chinese presence on the continent as a result of increasing trade and economic links.

Changing culture also appears to be facilitating trade in pangolins in Africa, at least in Zimbabwe. Pangolins there are listed as Specially Protected species under the *Parks & Wildlife Act 1975*. Additionally, the recent passing of Statutory Instruments 56 and 57 of 2012 of the *Parks and Wildlife Act* means a gaol sentence is now likely for those caught poaching pangolins. The new legislation also prohibits the historical practice of taking captured pangolins to Chiefs, Sangomas or Headmen, for which the community would receive a multitude of blessings. The pangolin has a spiritual value to the Shona people, Zimbabwe's largest ethnic group (Anchors, 2002), who traditionally believe that offering a pangolin to a spirit medium, or *midzimu*, will bring protection and well-being to their village communities. However, this practice appears to be changing and the use of pangolins in Shona culture today is more often characterized by bringing a pangolin to a person of high standing, such as a politician, in order to elevate the giver's standing, or through trading the animal for economic benefit. In the past two years, the value of one pangolin has increased from USD5000 to USD7000 (Tikki Hywood Trust, unpublished data, 2011). Reports of a number of seizures of pangolins in trade in Zimbabwe are recorded in Table 1.

DISCUSSION AND CONCLUSIONS

The low detection rates associated with wildlife trade suggest that the pangolin seizures documented in this paper comprise only a small fraction of the actual trade, with real volumes potentially at unsustainable levels, though scant knowledge of African pangolin ecology precludes making a definitive assessment. However, based on the evidence presented here, it is possible that the intercontinental trade in African pangolins to supply markets in Asia, e.g. China, is now a potential threat to these little-studied species. Vigilance by Customs authorities and efforts in the field to prevent the extraction of pangolins must be stepped up. Similarly, research needs to be undertaken on intercontinental trade, given the potential magnitude of the threat and the suspected precipitous decline in Asian pangolin populations driven by demand in the region, in particular China (Pantel and Chin, 2009) and the growing economic ties between Africa and China. Such a study should be supplemented with research into the status and ecology of African pangolins in order that an informed assessment can be undertaken into the impact of trade on pangolin populations.

ACKNOWLEDGEMENTS

The authors thank the Belgian and French Customs agencies for permission to use data presented in Table 1.

REFERENCES

- Anchors, J.C. (2002). Zimbabwean Land and Zimbabwean People: Creative Explorations. Electronic Theses and Dissertations. Paper 41. www.digitalcommons.library.umaine.edu/etd/14.
- Anon. (2000). The 11th meeting of the Conference of the Parties to CITES. *TRAFFIC Bulletin* 18(3):106.
- Bräutigam, A., Howes, J., Humphreys, T., and Hutton, J. (1994). Recent information on the status and utilisation of African Pangolins. *TRAFFIC Bulletin* 15(1):15–22.
- Broad, S., Mulliken, T., and Roe, D. (2003). The nature and extent of legal and illegal trade in wildlife. In: Oldfield, S. (Ed.). *The Trade in Wildlife. Regulation for Conservation*. Fauna and Flora International, Resource Africa and TRAFFIC International: 3–22.
- Challender, D.W.S. (2011). Asian Pangolins: increasing affluence driving hunting pressure. *TRAFFIC Bulletin* 23(3):92–93.
- CITES (2011). The CITES Appendices. www.cites.org/eng/app/appendices.shtml. Viewed 12 January 2011.
- Feiler, A. (1998). Das Philippinen Schuppentier, *Manis culionensis* (Mammalia: Manidae). Zoologische Abhandlungen Staat. Museum Tierkunde Dresden 50:161–64.
- Gaubert, P. and Antunes, A. (2005). Assessing the taxonomic status of the Palawan Pangolin *Manis culionensis* (Pholidota) using discrete morphological characters. *Journal of Mammalogy* 86(6):1068–1074.
- Kingdon, J. (1971). *East African Mammals: An Atlas of Evolution in Africa*. London and New York, Academic Press.
- Lim, N.T.L. and Ng, P.K.L. (2007). Home range, activity cycle and natal den usage of a female Sunda pangolin *Manis javanica* (Mammalia: Pholidota) in Singapore. *Endangered Species Research* 3:1–8.
- Mayanja, B. (2012). www.newvision.co.ug/news/632887-police-foil-attempt-to-smuggle-pangolin-scales.html. 11 July 2012.
- Pantel, S. and Chin, S.Y. (Eds) (2009). *Proceedings of the Workshop on Trade and Conservation of Pangolins Native to South and Southeast Asia* 30 June–2 July 2008. Singapore Zoo, Singapore, TRAFFIC Southeast Asia, Petaling Jaya, Selangor, Malaysia.
- Sodeinde, O.A. and Adedipe, S.R. (1995). Pangolin in South-west Nigeria—current status and prognosis. *Oryx* 28:43–48.
- Soewu, D.A. and Adekanola, T.A. (2011). Traditional-medical knowledge and perception of pangolins (*Manis* spp) among the Awori People, southwestern Nigeria. *Journal of Ethnobiology and Ethnomedicine* 7(25).
- Soewu, D.A. and Ayodele, I.A. (2009). Utilisation of pangolin (*Manis* spp) in traditional Yorubic medicine in Ijebu Province, Ogun State, Nigeria. *Journal of Ethnobiology and Ethnomedicine* 5(39).
- SRG (2012). European Union-Scientific Review Group, Short Summary of Conclusions of the 60th meeting of the Scientific Review Group on Trade in Wild Fauna and Flora, June 2012.
- Wu, S.B., Liu, N., Zhang, Y., and Ma, G. (2004). Assessment of threatened status of Chinese Pangolin (*Manis pentadactyla*). *Chinese Journal of Applied & Environmental Biology* 10(4):456–461.

Daniel W.S. Challender, PhD Candidate,
Durrell Institute of Conservation & Ecology (DICE),
University of Kent, UK;
Co-Chair, IUCN-SSC Pangolin Specialist Group.
Lisa Hywood, Tikki Hywood Trust, Zimbabwe;
Member, IUCN-SSC Pangolin Specialist Group.