

The African vulture crisis: western Africa

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Raptor research





~3500 nests by >1500 observers















Trouw, 14-4-'06 'Het is niet alleen hufterig, maar ook zo zinloos'

door Musike Benemer

Op een landgoed van Natuurmonumenten bij Oldenzaal zijn de eerste maanden van het jaar 29 roofvogels en een steenmarter vergiftigd. En in februari en maart vond Staatsbosbeheer 40 rootvogels in Oost-Groningen, gedood met landbouwgif.







Havilt

Rode wouw

Belangrijkne slachteffers van vervolging zijn buizerd, havik, sperver en bruine kiekendief. De rode wouse is een bijnonder tragisch grval. Dere aaseter broedt in onze buorlanden, maar in Nedertand wil het maar niet lukken. Lintburg herbergde 10 jaar terog een nest met drie jongen. Tijdens de najaarstrek maar Zuid-Turopo werden ze 20 kilometer van de broedplaars gevonden. Vergiftigd.















Black Vulture (2005)









Dpmt. Conservation Biology, Leiden University, 2005-2013

US Dept of States and Apart D 2014 Google Image Lands I Data SIO NOAA, U S, Navy PIGN DEBLO



Vulture decline 1970 – 2004

Rondeau & Thiollay 2004, Thiollay 2001, 2006, 2007



45-53%



97-100% decline in rural areas



Cameroon road surveys Thiollay 2001, Buij et al. 2013



Error Bars: +/- 1 SE

Vultures depend on parks and people

Buij et al. 2013 Biological Conservation











Case study: Waza National Park, Cameroon



Questionnaires administered to:

- 113 traditional medicinal traders at 39 markets in 8 states of northern Nigeria
- 240 village chiefs in two northern provinces Cameroon





Nigeria Of 113 traders, 11% had vulture heads, 4.4% entire vultures

40%: traditional medicine, 25%: food
Hausa (67%), Fulani (11%) and 11 eleven other tribes
90.3% inherited trade from family member
Rising prices:

2000: € 0.73-1.23/vulture, 2011: € 9.7-14.6/vulture
2010-11: € 23-75 (set of head, legs), € 6100 (4 eggs)

Saidu & Buij 2013

Traditional medicine Improved vision, rheumatism (eyes) Tuberculosis, fortune (head) Impotence (nestlings) Protection from sorcerers (feathers) ▶ Healing, chase away bad spirits (nests) Infections, alcohol abuse (faeces)





Mali markets: 1986-1987 Terrasse & Thauront 1988



The Ruppell's Griffon Vulture heads. Pho

Photo: M. Thauront

Methods used to kill vultures: Nigeria

- Dominant technique mentioned by 47% of traders in N-E Nigeria: intoxication using chemicals
- ▶ 11.5% mentioned tobacco
- ▶ 14% mentioned shotguns or traps

Methods used to kill vultures: Cameroon

| Substance | Active ingredient | Type (price in Cameroon in 2012) | | | | | |
|--------------------|--|---|--|--|--|--|--|
| CYPERCAL P 720 EC | Cypermethrin, profenofos | Organophosphate insecticide | | | | | |
| TRIAZOFOS 40 EC | Triazophos | Organophosphate insecticide (5 l @ USD 73) | | | | | |
| MONOKAL | Monocrotophos | Organophosphate insecticide (1 l @ USD 73) | | | | | |
| LAMBDACAL P 648 EC | Lamdacyhalothrine + Profenofos | Organophosphate insecticide (1 bag @ USD 3.8) | | | | | |
| OPTIMAL 20 SP | Acetamiprid | Neonicotinoid insecticide (1 bag @ USD 2.7) | | | | | |
| ACEKILL | Acephate | Organophosphate insecticide (1 l @ USD 73) | | | | | |
| ARATA | Zinc phosphide | Rodenticide | | | | | |
| WORM Force | Carbofuran | Carbamate insecticide; often imported from Nigeria | | | | | |
| Terrific BASTION | Oxamyl | Carbamate insecticide; alternative for WORM Force | | | | | |
| LANDRIN | 2,3,5-Trimethylphenyl Methylcarbamate | Carbamate Insecticide; used in cotton | | | | | |









Origin of vultures offered for sale in Nigeria



Saidu & Buij 2013

Cases of nest harvesting



Vulture poisoning incidents



Number of vultures per carcass has diminished and "many carcasses are left to rot"



Cited importance of vultures

| Importance | Percentage of respondents ($n = 240$) | | | | | |
|-------------------------------------|--|--|--|--|--|--|
| Track down dead animals | 63 | | | | | |
| Remove decaying animals | 52 | | | | | |
| Localize camps of nomads | 28 | | | | | |
| Localize cows that are giving birth | 27 | | | | | |
| Food & medicine | 4 | | | | | |

Photo: G. Nikolaus

100 100

Market surveys West Africa: 1999-2013 (*n* = 2545 raptor carcasses)

| SPECIES | Benin | Burkina | Congo | DRC | Ghana | Ivory Coast | Mali | Niger | Nigeria | Togo | TOTAL | % |
|-------------------------------------|-------|---------|-------|-----|-------|-------------|------|-------|---------|------|-------|----|
| Black Kite (migrans/parasitus) | 439 | 10 | 0 | 0 | 1 | 1 | 3 | 2 | 128 | 16 | 600 | 24 |
| Hooded Vulture | 181 | 33 | 0 | 0 | 7 | 2 | 7 | 11 | 201 | 10 | 452 | 18 |
| Shikra | 142 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 205 | 8 |
| Black-shouldered Kite | 99 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 9 | 155 | 6 |
| Palm-nut Vulture | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 0 | 102 | 4 |
| Lizard Buzzard | 50 | 5 | 0 | 0 | 0 | 1 | 1 | 0 | 35 | 4 | 96 | 4 |
| Eurasian Marsh Harrier | 45 | 3 | 0 | 0 | 0 | 0 | 4 | 0 | 33 | 4 | 89 | 3 |
| Rüppell's Griffon | 10 | 8 | 0 | 0 | 0 | 0 | 7 | 1 | 56 | 0 | 82 | 3 |
| Red-necked Buzzard | 12 | 16 | 0 | 0 | 1 | 2 | 2 | 0 | 30 | 1 | 64 | 3 |
| Grasshopper Buzzard | 39 | 6 | 0 | 0 | 0 | 0 | 4 | 1 | 13 | 0 | 63 | 2 |
| White-backed Vulture | 6 | 5 | 0 | 0 | 0 | 0 | 4 | 0 | 42 | 0 | 57 | 2 |
| Gabar Goshawk | 23 | 8 | 0 | 0 | 2 | 1 | 0 | 0 | 17 | 0 | 51 | 2 |
| Common Kestrel (<i>rufescens</i>) | 21 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 26 | 1 | 49 | 2 |
| Lanner Falcon | 6 | 15 | 0 | 0 | 0 | 2 | 2 | 14 | 8 | 0 | 47 | 2 |
| African Harrier Hawk | 24 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 17 | 1 | 46 | 2 |
| Dark-chanting Goshawk | 5 | 18 | 0 | 0 | 0 | 8 | 0 | 1 | 10 | 0 | 42 | 2 |
| African Goshawk | 15 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 2 | 39 | 2 |
| Lappet-faced Vulture | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 26 | 0 | 32 | 1 |
| White-headed Vulture | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 1 | 9 | <1 |
| Egyptian Vulture | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | <1 |
| other raptors (40 species) | 87 | 36 | 0 | 1 | 3 | 2 | 16 | 5 | 108 | 4 | 262 | 10 |

Buij, Nikolaus et al. in prep.





Proportion of vultures among raptor carcasses (*n* = number of carcasses)



Photo: G. Nikolaus

Photo: G. Nikolaus

Proportion of vultures and Black Kite among raptor carcasses



Conclusions

- Trade for traditional medicine and food is a major threat to vulture populations in Western Africa
- Most vultures are killed through pesticide poisoning – human exposure?
- Traditional medicine trade practiced in few countries affects wider region
- Increasing demand throughout society and plummeting vulture numbers drive up prices
- Large number of raptors, other species increasingly used as alternatives (Black Kite)

What would be needed?

- Ban trade of products
- Effective regulation or ban on certain pesticides
- Research and awareness-raising: health and cost impact of trade
- Enhanced protection of National Parks (i.e. important nest areas)

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