CARNIVORES · BEHAVIOUR & CONSERVATION

# Painted Wolves

*Sneeze votes, a feeding queue that puts the pups first, and why the edges of Hwange National Park matter so much to Africa's most social predator.*

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> African wild dogs — painted wolves, or painted dogs — live in tight, noisy packs that hunt together, share almost everything and raise one family's pups as a team. Recent research from Botswana has changed how we describe both their decision-making and their "teamwork".

## 01 Meet the painted wolf

The scientific name *Lycaon pictus* is usually translated as "painted wolf-like animal". Each dog's blotched coat of black, tan and white is **unique to that individual**, like a fingerprint — which is how researchers and guides recognise individuals in a pack. They have **four toes on each foot**.

### ~6,600

**ADULTS LEFT IN THE WILD**

In about 39 subpopulations, of which only around 1,400 are mature individuals (IUCN Red List, 2020).

### Endangered

**IUCN STATUS**

The population is decreasing. The main threat is habitat fragmentation, which brings dogs into contact with people, livestock, snares, roads and disease.

### 20–30 kg

**BODY WEIGHT**

They mainly hunt medium-sized antelope averaging around 50 kg — impala are a staple in many areas, kudu too.

### Up to 21

**PUPS IN A LITTER**

Litters of 7–12 are typical, but up to 21 pups have been recorded.

## 02 How a pack is built

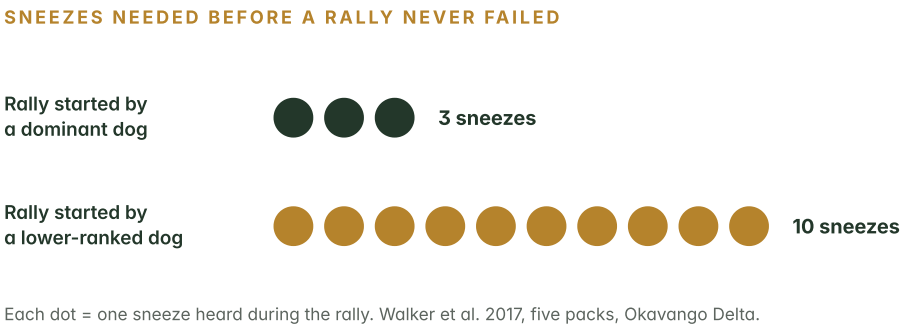
Wild dogs are **obligate cooperative breeders**: a pack cannot raise pups alone. Within a pack, the **dominant (alpha) male and female are the parents of most surviving pups**. The other adults — often their grown offspring — help feed, guard and raise the litter.

- **Denning:** pups are born in a den, often an old burrow such as a warthog hole, and leave it by about 16 weeks old. Females can first breed at about three years old.
- **Feeding the den:** from a few weeks old, pups at the den are fed on meat that adults **regurgitate** for them after a hunt.
- **Babysitters:** while the pack hunts, one or more adults may stay behind to guard the den.
- **Pack size** commonly ranges from about 5 to 20 dogs, but can change sharply in a short time through deaths, big litters and dispersal of young dogs of both sexes.

## 03 Sneeze to leave: how a pack decides to hunt

Before setting off, a pack holds a **rally**: a burst of greeting, head-touching, tail-wagging and running side by side. Some rallies end in a hunt; others fizzle out and the dogs lie down again. So how does the pack decide?

A study in and around **Moremi Game Reserve in the Okavango Delta, Botswana** (Walker et al., 2017, *Proceedings of the Royal Society B*) recorded **68 rallies in five packs**. The researchers found that **sneezing** — a short, sharp exhalation through the nose — was the best predictor of whether the pack moved off. Rallies that led to departure averaged about 7.5 sneezes; rallies that failed averaged just over one.




*When a dominant dog started the rally, at least three sneezes were enough for the pack to leave. Lower-ranked initiators needed at least ten.*

The authors interpret the sneezes as a kind of **vote with a variable quorum**: the pack moves once enough sneezes have been "cast", but the threshold drops when the dominant pair is behind the idea. In other words, not every dog's vote counts equally — but subordinates can still get the pack moving if enough of them agree.

KEEP IT HONEST

This is **one study of five packs in Botswana**. The researchers could not tell which dog sneezed, and they note that sneezes might be a *by-product* of a decision the pack had already reached through signals they couldn't see, rather than the vote itself. A researcher in South Africa has said she and colleagues haven't noticed much sneezing at rallies, so it may not apply to every population. Present it as "research suggests", not settled fact.

## 04 Teamwork: what it really means

Wild dogs are famous for "cooperative hunting", and the classic image is of a pack running down prey over long distances on open plains. GPS-collar work on a pack in the Okavango woodland (Hubel et al., 2016, *Nature Communications*) painted a different picture for that habitat:

**~15.5%**

**INDIVIDUAL SUCCESS**

Each dog's chases succeeded only about one time in six — but the pack still ate well because kills were shared.

**~1.2**

**KILLS PER DAY**

The study pack averaged about 1.16 kills a day across 104 days.

**~450 m**

**AVERAGE CHASE**

Mean chase distance was about 446 m (median about 317 m), lasting around a minute.

**~13 km**

**TRAVELLED PER DAY**

The focal pack covered about 13.2 km a day.

The study found **no evidence of choreographed tactics** such as dogs taking set positions or relaying the chase. Instead, the pack spread out and made **many short, fast, opportunistic chases** — and the "teamwork" was in **travelling together and sharing the food**. That sharing is what makes the pack so successful.

### THE FEEDING QUEUE: KIDS EAT FIRST

Another Botswana study (Jordan et al., 2022, *Behavioral Ecology and Sociobiology*) watched who fed at kills. It confirmed a **youngest-feed-first** system:

1. **Pups** — uncontested access to kills they didn't make themselves
2. **The dominant pair** — usually eat after the pups
3. **Everyone else, youngest to oldest** — the oldest subordinates get least

The authors suggest this extends help to the dogs least able to hunt, and that fast, whole-pack attendance at kills may help a pack eat before **lions or spotted hyenas** arrive to steal the carcass. Older subordinates, low in the queue, were somewhat more likely to join in the kill itself.

## 05 Why Hwange matters

The IUCN names **western Zimbabwe**, alongside northern Botswana, eastern Namibia and western Zambia, among the places where the **largest remaining populations** survive. Hwange's dogs have also been studied for decades, through long-term work by **Painted Dog Conservation**, founded in 1992 by biologist Greg Rasmussen and based on the edge of Hwange National Park.

Two decades of data from the northern edge of Hwange (van der Meer et al., *Oryx*, 2014) showed why the park boundary is so important:

**WHERE 327 REPORTED WILD DOG DEATHS HAPPENED (1989–2010)**




Northern Hwange National Park and its surrounding buffer zone, about 6,000 km².

*Odds of being killed by people were about 47 times higher outside the park than inside.*

- People were responsible for about **62% of deaths** (73% counting knock-on effects), and most of these were **indirect** — caused by **snares set for other animals and road collisions** rather than deliberate shooting. After 2000, every recorded human-caused death was indirect.
- Pack territories drifted towards and across the park boundary over time. Litters there were larger, but **deaths outpaced births**, and 11 of the 15 study packs went extinct.
- The authors conclude the buffer zone is likely an **ecological trap**: good conditions draw the dogs in, but they can't perceive the hidden risk from snares and traffic.
- More than 3,000 snares were removed from the buffer zone in 2009–2010 alone.

Community anti-poaching units, snare removal and reflective collars are part of the response, and Painted Dog Conservation has reported more packs using Hwange's buffer zone in recent years.

AT THE SIGHTING — HOW TO SAY IT

*"Watch them when they wake up. All that greeting and squeaking is the pack deciding whether to hunt. In Botswana, researchers found the dogs sneeze during these rallies — and when enough of them sneeze, the pack goes. If the dominant pair start it, three sneezes will do. If a junior dog starts it, it takes about ten. Nobody's certain the sneeze is really a vote, but it's a lovely idea."*

THEN ADD

*"And when they kill, the pups eat first — even before the parents. Out here, the biggest danger to these dogs isn't lions; it's snares and roads just outside the park."*

## 06 Key terms

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|---|---|
| **Rally** | The excited greeting ceremony before a pack sets off; it may or may not lead to a hunt. |
| **Quorum** | A minimum number of "votes" or signals needed before a group changes what it is doing. |
| **Cooperative breeder** | A species in which non-parents help raise the young. |
| **Regurgitation** | Bringing up swallowed food to feed pups or other pack members. |
| **Kleptoparasitism** | Stealing food that another animal has caught — lions and spotted hyenas often do this to wild dogs. |
| **Ecological trap** | A habitat that looks attractive to an animal but where its chances of survival or breeding are actually poor. |

## In summary

- Painted wolves are **Endangered**: about 6,600 adults remain, roughly 1,400 of them mature.
- The **dominant pair breed**; the rest of the pack helps raise the pups.
- One Botswana study found **sneezes predict when a pack leaves to hunt**, with fewer needed when dominants lead.
- Their teamwork is mostly **travelling together and sharing kills** — and **pups feed first**.
- Western Zimbabwe holds one of the largest populations, and around Hwange **snares and roads** outside the park are the main killers.

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