

PLAIN TALES

Zambia's remote Liuwa Plain National Park hosts dizzying bird life, the biggest of skies and what could be Africa's second-greatest wildebeest migration. **Paul Bloomfield** watches wildlife – and death – on a grand scale.

Finding the lions proved easier than we'd anticipated. Or, rather, finding the lions' larder did. Scouring the shadows that fringed the predators' favoured tree island amid the verdant ocean of the plain, I was pessimistic that we'd be able to pick out tawny mane from tawny grass. I needn't have been.

The smell found us: a foghorn of a stench that assailed our nostrils from a hundred leonine paces away. One long, searing-hot day after the kill, a fug of decomposition announced the location of the wildebeest – and its now-sated slayers – with startling clarity. We inched our 4WD into a copse, following our noses to find the filleted carcass piled in the shade of a snake bean tree, pendulous red pods dangling above the fly-blown remnants of flesh, fur, horns and hooves.

A trio of lions lounged nearby: the female whimsically named Lady Liuwa and her two male consorts. Our arrival provoked the merest tilt of the head. But for the glint of

amber irises, I might have believed them sleeping.

Such a passive moment might not seem noteworthy, but in Liuwa Plain, arguably Zambia's most remote national park, it's an encounter to be celebrated. Because for many years it would have been impossible: until the translocation of the two males in 2009, Lady Liuwa was the sole representative of her species here.

ROTATE OR MIGRATE?

It's no idle hyperbole to laud Liuwa as unique. Its combination of distinctive habitat and conservation structure is unlike anywhere else in Africa. It can also claim what is probably the longest history of wildlife protection on the continent – this swathe of the Zambezi floodplains has been safeguarded since it was declared a reserve by the *litunga* (king) of Barotseland in the late 19th century. Designated a national park in 1972, it suffered drastic poaching before ►

In November and December, the arrival of the rains brings 43,000 blue wildebeest to the south of Liuwa Plain National Park to calve.

THE AUTHOR

PAUL BLOOMFIELD



BBC Wildlife's deputy editor was delighted by the unexpected beauty of hyenas. The vervet monkeys that raided his tent's toilet cistern were also unexpected, if rather less delightful.

White-backed vultures compete with spotted hyenas for the spoils of a kill. With few lions in Liuwa, hyenas are the primary predators of wildebeest.



The regular late-night visits made by Lady Liuwa to Matamanene Camp are more spine-tingling now that she's accompanied by two possessive male consorts, moved here in 2009.



enjoying regeneration under African Parks, the non-profit company that has managed Liuwa since 2004.

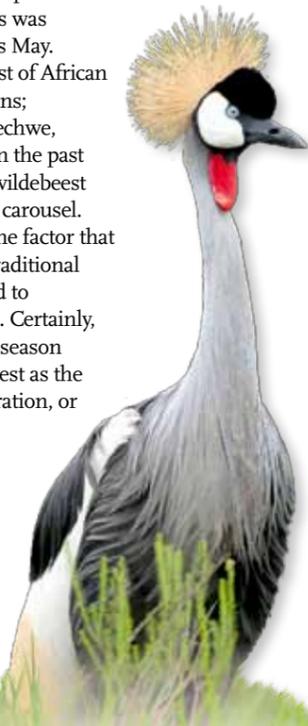
But it wasn't history that attracted me to explore this expanse of grassy plains and wetland in far western Zambia, nor even large predators – though cheetahs, wild dogs and, more commonly, spotted hyenas are all found here. And of course there's the compact but expanding lion population – along with the two male lions, a pair of lionesses was translocated in 2011; sadly, one was poached this May.

Instead, the draws are more subtle. The biggest of African skies, draped over 3,662km² of near-treeless plains; growing populations of antelope including red lechwe, tsessebe, oribi and eland (over 50 reintroduced in the past five years); and whispers of a migration of blue wildebeest second only in numbers to the epic East African carousel.

Curiosity about that mooted migration was one factor that had lured me here. Local Lozi people, Liuwa's traditional residents, believe that the park's wildebeest used to undertake a trans-border migration into Angola. Certainly, herds amass to calve in the south when the wet season arrives in November, then depart to the north-west as the rains retreat; but does this represent a true migration, or merely individuals gathering and dispersing?

This is one aspect of Liuwa's ecology being studied by the **Zambian Carnivore Programme (ZCP)** for African Parks. The ZCP base is near Matamanene Camp, my accommodation – indeed, the only accommodation – in early May. I found the project's researchers happy to discuss their findings.

The grey crowned crane, common in Liuwa, inflates its red gular sac to produce its distinctive booming call.



"So far, we have a year's data from four radio-collared wildebeest," reported Jassiel M'soka, Liuwa's ZCP project leader. "Though one has since been eaten by hyenas..."

"What we have suggests that wildebeest follow dry-season wildfires to graze newly germinated grass in the north of the park, returning south during the rains," confirmed Fred Watson, a professor from California State University, who is using satellite images to identify habitats and map the movements of the collared wildebeest. "But we don't yet know whether they cross to Angola's Cameia National Park, and if it represents a coherent group movement."

With data from 50 more adult females radio-collared this year, ZCP and African Parks hope to solve the mystery. The results could support proposals for a transfrontier park.

VIEW TO A KILL

Migrating or not, such multitudes of wildebeest contributed to my sense of smallness, of being adrift in the expanse of the plain, as the 4WD driven by Zambian guide Robin Pope emerged from the island of bushwillow surrounding camp.

Dawn licked the eastern horizon, and the nocturnal Geiger-counter churring of nightjars had been replaced by the haunting cries of fish eagles and the soft whistle of an

ZEBRA AND WILDEBEEST ROAMED IN HUNDREDS-STRONG HERDS, POCKING THE PLAIN LIKE SO MANY BLACK TICKS.

eastern clapper lark. On that cool May morning our goal was a hyena den a few kilometres west of Matamanene. But the destination was chosen to justify the journey, not vice versa, and our progress was circuitous and episodic.

Liuwa's name derives from the Lozi for 'plain'. As sagey saltbush and pink-flowered, mint-and-thyme sphaeranthus released their herby scents under our tyres, I reflected on the misleading tautology: this 'plain plain' is anything but – not homogeneous grass but a tessellated mosaic of diverse flora.

Zebra mingled with yet more wildebeest roaming in hundreds-strong herds, pocking the plain like so many black ticks; wattled cranes formed throngs almost as impressive as those of the ungulates. Interspersed among them, crowned cranes launched into courtship displays: flapping broad wings, bobbing crested heads and stooping to toss billfuls of grass into the air, to a percussive soundtrack of chinking blacksmith plovers.

By 9am the white waterlilies lining the countless pools had unfurled, a floral frame for the dense tableau of bird life in each lagoon. Herons stood sentry at the reedy fringes as yellow- and saddle-billed storks and African spoonbills towered behind. Flocks of spurwing and pygmy geese bustled in to join hottentot and red-billed teal paddling open water, while the shallows were enlivened by the traffic-light leg hues of greenshank and black-winged stilt. Pool after pool tempted us with a groaning buffet of birdwatching, loaded with waders and wildfowl, as raptors soared overhead.

We pushed on to the hyena den, following directions provided by ZCP, which tracks radio-collared individuals in several clans. The dusty mound was tufted with scrub

FUTURE PERFECT? MAKING PLANS FOR LIUWA

African Parks (AP), a private non-profit company, has managed Liuwa since 2004, in partnership with the Zambia Wildlife Authority and the Barotse Royal Establishment (BRE), the region's traditional government.

AP funds infrastructure, reintroduces locally extinct species and works with the BRE to foster support from the local Lozi people.

To date, eland, buffalo and lion have been translocated; ostrich, roan antelope and hartebeest may follow. The **Zambian Carnivore Programme** monitors the effects of introductions on existing populations.

HUMAN INTERESTS

Liuwa has a resident population of 3,500 Lozi, plus 20,000 in the wider game-management area. Many retain hereditary rights to the park's resources; a good relationship between AP and the BRE is crucial to managing the impact of incursions. The *litunga* (king) of the Lozi is still considered the highest authority, and is represented on the park's board.

The goal is for tourism to fund park and community self-sufficiency. But Liuwa is too remote to attract many visitors; at present, revenue covers only 5 per cent of the park's costs. To boost income, a small high-end lodge may be built to augment Matamanene and four community-run camp sites.



Local Lozi people trap catfish in Liuwa's rivers.



Herd of plains zebra crop the long grass, exposing the shorter, fresher leaves preferred by the wildebeest that often mingle with them.



Liuwa's wetlands attract profuse bird life: some 334 species have been recorded – here, yellow-billed storks.



Researchers use radio telemetry to track wild dogs, cheetahs, lions and wildebeest.

African fish eagles are a familiar sight in Liuwa, often spotted perching on traditional fish traps on lagoons and rivers.



and perforated with burrows from which pups, round-nosed as bear cubs, emerged and retreated under the watchful eyes of their babysitters. These tunnel-riddled mounds can host a diverse community, with monitor lizards, porcupines and cobras retreating into burrows adjacent to the hyenas'.

We turned the vehicle to follow a pair of hyenas moving purposefully south, struggling to keep pace as their shrug-shouldered forms flickered in and out of the long grass. Cresting a small ridge, a tense scene appeared: a dozen hyenas surrounding a wildebeest standing belly-deep in a small lagoon. Whether it was injured, or had simply rushed into the pool to seek sanctuary from its pursuers, we couldn't guess. The predators, for their part, seemed happy to play a waiting game – at first. Gradually, reinforcements arrived, singly or in twos and threes from the direction of the den.

The endgame unfolded slowly. Five hyenas entered the water – not rushing, but with a methodical restraint that was more chilling than a full-blooded attack. They circled the groaning, grunting herbivore for several minutes; then, at an invisible signal, they bit. At first, avoiding the horns, they latched on to the ungulate's rump, retreating when the wildebeest bucked, then re-attaching, until their exhausted victim slumped in the water. Endurance predators, clans use this long-game strategy to kill prey many times the size of an individual hyena, which weighs perhaps 60kg.

"Watch as they take out the udder," our *fundi* (armed scout), Jacob Tembo, whispered. He was neither exulting in the wildebeest's demise, nor lamenting,

HYENAS HAVE A TASTE FOR NUMBERPLATES – BUT THIS ONE DECIDED THAT OUR TAILGATE HINGES WERE MORE APPETISING.

It was simply a fact: "That's how hyenas kill." And they did. After perhaps a quarter of an hour, the grunting faded, as well as the bucking.

Then the truly fascinating behaviour began, as the pecking order (well, the tearing, chomping and grinding order) was re-established among the 25 hyenas that had by now gathered. The clan's female leader, identifiable not only from her markings but also by her ZCP radio-collar, had asserted her dominance during the hunt. Now she calmly took her place at the head of the metaphorical table, picking sweetmeats from the carcass's underbelly as those around her snarled and bickered, intermittently looking up from her meal to shoot glances in our direction. Meanwhile, curious adolescents trotted over to sniff us out.

GOOD GNUS STORY

"By reputation, hyenas have a taste for numberplates," Robin said ruefully, as a peckish youngster approached; in the event, he decided that the tailgate hinges of Robin's 4WD were more appetising, gnawing for a few seconds before grudgingly admitting defeat and loping back to wait his turn at the kill. I say his – sexing hyenas is notoriously difficult, thanks to the erectile pseudopenis and fatty 'scrotum' sported



THE INFORMATION

ZAMBIA Tucked between the Zambezi, the Kalahari and Central and East Africa, Zambia covers a range of habitats.

THE NAVIGATOR



Bangweulu Wetlands

This large protected area surrounding Lake Bangweulu hosts large herds of the endemic black lechwe. Birders come to watch the Vulnerable, 1.4m-tall shoebill – this is its only breeding site in Southern Africa.

Cameia NP

ANGOLA

Liuwa Plain NP

Zambezi River

Lower Zambezi NP

Canoe safaris on quiet stretches allow visitors to watch hippo, elephant, buffalo and profuse bird life from water level – you'll spot several species of kingfisher, particularly the beautiful malachite.

South Luangwa NP

Renowned for excellent guides and walking safaris, 'the Valley' covers 9,000km² of mopane forests, lush riverine vegetation and grassland plains. It's noted for big herds of buffalo, plus elephant, lion and most other big game species. Specialities include Thornicroft's giraffe.

NOW YOU DO IT

GETTING THERE

► **British Airways** flies direct to Lusaka from Heathrow. 0844 493 0787; www.britishairways.com
► Kalabo, the nearest town, is served by **charter flights** from Lusaka. A 4WD is required to reach the park.

VISAS

► British nationals require a **tourist visa**, which is currently available on arrival at Lusaka for US\$50 (cash only).

WHEN TO GO

► The rains arrive in November and December, bringing wildflower blooms, migrant birds and calving wildebeest. The park is then flooded and inaccessible until May, when the water recedes but shrinking pools offer superb birding.

GUIDED TOURS

► Realistically, unless you have extensive experience

with self-drive 4WD safaris, the only way to access Liuwa is on a guided tour organised locally with **Robin Pope Safaris**, which has exclusive access to Matamanene Camp (below) in the heart of the park in November, December, May and June.

► The author travelled with **Expert Africa**, which offers four- and five-night trips to Liuwa. 020 8232 9777; www.expertafrika.com. Several other UK operators also run tours.



FURTHER INFORMATION

► **Newman's Birds of Southern Africa** by Kenneth Newman (New Holland, 9781770078765, RRP £19.99).

► Buy this book for £13.99 on p83, using WAUT12/07.

WILDLIFE SPOTTER WATTLED CRANE

► **NAME** *Bugeranus carunculatus*

► **ID TIPS** Up to 175cm long (head to tail); black cap and underparts, white neck and breast, long secondary feathers, red facial patch, wattles.

► **BEHAVIOUR** Usually seen in breeding pairs or as a trio with offspring, sometimes in the company of crowned cranes.

► **DIET** Aquatic plants, seeds, invertebrates and small vertebrates.

► **LIFE-CYCLE** Lays 1 or 2 eggs in August or September, incubated for 33–36 days. Single surviving chick fledges at least 90 days after hatching. Typically lives 20–30 years.

► **DISTRIBUTION** Wetlands in Eastern, Central and Southern Africa. Zambia is believed to host over half of the total population of up to 8,000, with perhaps 1,700 in Liuwa.

► **STATUS** Vulnerable.



Breeding pairs of wattle cranes build 1m-wide grass-and-sedge nests on water.

Zebra, eagle & cranes: Dale Morris/geckoye.com; storks & researcher: Lorenz A Fischer/allvisions.ch

by females. And I had no desire to get close enough to a hungry hyena to make a more decisive gender assessment.

Once the dominant animals were replete, the rest of the clan moved in. Juveniles begged from their seniors with loud screeches; others cowered submissively, or chastised upstarts with a snap. Quickly the body had been butchered into bloody chunks and strips, the sound of those powerful carnassial teeth tearing flesh and crunching bones echoing across the water to us, like nutmeg on a grater.

Back at camp, I asked Jassiel how the park's predators – three or four packs of wild dogs and some 50 cheetahs, as well as four hyena clans comprising about 150 animals in the central area – might be affected by a growing lion population.

"That's one of the key questions we're investigating, and the answer will influence African Parks' strategy for future reintroductions," he replied. "We have a unique opportunity to study the progression of predator population dynamics, starting from a near absence of lions." Liuwa is a case study in progress, examining a range of interactions – between individuals of a species, between predators, between the park's ecosystems and its animal and human inhabitants.

As for the wildebeest, the population has rocketed from about 15,000 in 2004 to some 43,000 today. And it could become larger still, though just how much larger is another question ZCP aims to answer, using its radio-collaring programme to investigate the factors limiting this growth.

As it was, during six days in the park I watched thousands of ambling, grazing, dust-bathing wildebeest. Their future seems assured – and with theirs, I hope, that of Lady Liuwa and the other predators of the plain. ☒