A technique to catch free-flying flamingos (or the saga of how I tried)

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While talking to Rob Simmons in early 1998 about all the flamingos present on the Ekuma River in Etosha National Park he mentioned that it was very difficult to catch free-flying flamingos and only a handful had been caught using foot nooses. Rob was interested in ringing Etosha birds to see whether or not there was interchange between various population centers. Some ringed and patagially tagged birds from Etosha have been seen at Walvis Bay and one Lesser Flamingo *Phoenicopterus minor* was recovered at Ghanzi, Botswana but it is not known if Etosha, Walvis Bay or Sandwich Harbor birds go to Sua Pan, Botswana.

A variety of techniques have been tried to catch adult flamingos but the success rate has required maximum effort for minimal results. Natives catching the birds for food in the Caribbean islands have stripped naked, coated themselves with white clay and then stealthily belly-crawled up on the birds when their heads are below the water feeding (Allen 1956). Others have noted that foot nooses made from string or nylon and laid out in the water have been used by Africans at Lake Natron in Tanzania to catch the birds. Adapting the foot noose technique in Kenya, Brooks Childress (pers. comm.) caught 35 Lesser Flamingos in Lake Bogoria. In Botswana Graham McCulloch (R. Simmons pers. comm.) caught 29 Lesser Flamingos and 3 Greater Flamingos *Phoenicopterus ruber* using the foot noose technique over a 2–3 week period, checking the nooses both day and night. Flightless chicks have been caught for ringing purposes all over the world, and cannon nets have been used in the Orange Free State (Johnson 1986) but have the potential to harm such long-necked birds.

Since we had been very successful catching Kori Bustards *Ardeotis kori* with a gillnet, my wife Laurel and I took Rob's quest as a challenge for us to try and catch flamingos using the same net. The net we use for the kori is a monofilament gillnet hung flag style (only a 3 mm top line) as a special order from the Nylon Net Company, Memphis, Tennessee, USA (www.nylonnet.com). The net is 300 feet (90 m) long by 10 feet (3 m) deep with 8 inch (20 cm) square mesh using #208 monofilament (0.52 mm) with a 26 pound (12 kg) breaking strength. The monofilament is whitish. We dyed the net a golden brown using 2 packets of regular clothing dye but leaving the net in the dye overnight for better penetration of the monofilament. Since we use the net flag style for the bustard we modified the net with an addition of a 3 mm bottom line threaded through the lowest webbing. We tied the top of the net to a 4 m long thick-walled (3 mm) aluminum pole which was guyed with 5 mm nylon ropes tied to 1 m × 20 mm steel pipes driven into the ground. By stretching the net tight enough we were able to keep the sag in the middle high enough so the bottom edge of the net cleared the water. The bottom line was stretched tight and tied to the base of the poles. The end result is a giant one-shelf mist net.

We first tried the net over the Ekuma River (the northern feeder river to the Etosha Pan) between 19h00–23h00 on 23 April 1998. The river was about 0.6 m deep and 40 m across so we only used a portion of the net, leaving the rest coiled up at the base of one pole. After dark we caught four Lesser and one Greater Flamingo and one Cape Teal *Anas capensis*. The next morning we found one Greater Flamingo in the net but standing on the river bottom. Rob was concerned that the nets might break the birds' legs or necks

Table 1. Measurements of Greater Flamingos captured in Namibia.

Ring number	Date	Age	Weight (g)	Wing (mm)	Culmen (mm)	Tarsus (mm)	Notes
856682*	26-07-97	Juv.	1000	299			still flightless, caught by hand
856683*	26-07-97	Juv.	940	224			still flightless, caught by hand
856678	24-04-98	adult	2120	360			
none	24-04-98	imm					leg broken by gunshot, released unringed
856680	19-11-98	imm	2298	380	111		
none	19-11-98	imm					old break on leg, released unringed
none	20-11-98	adult					killed by jackal
9A08204	12-08-99	adult	2495	376	132	290	
9A08205	12-08-99	adult	2755	380	121	254	
9A08206	12-08-99	adult	2778	372	125	284	
9A08407	12-08-99	adult	2720	395	122	248	
9A08408	12-08-99	adult	2660	403	123	283	
9A08209	30-11-99	adult	2280	315		255	
9A08210	30-11-99	adult	2960	410		265	
9A08211	30-11-99	adult	2560	372		253	
9A08212	30-11-99	adult	3240	415		335	

* These birds were not caught with the gillnet.

but the impact is cushioned by the size of the net. We did, however, catch birds with legs already broken by shotgun pellets. The moon did not rise until early in the morning. We informed Rob of our success but he wanted to know if the technique would work in an open situation like Walvis Bay or Sandwich Harbour. He invited us to join him at Sandwich Harbour on 2 November.

Before November I returned to America and ordered another kori net but with special modifications for flamingos. The net was the same length but I ordered it 4 m deep with 15 cm square mesh and I did not dye the net. We set up the net over a small tidal inlet and waited for birds to fly in. During the day the birds would fly up to the net and veer over the net after seeing it. The moon was full that night and I checked the net every 3 hours. Finally at 04h30, near high tide, one immature Lesser Flamingo was in the net. I woke Rob by letting the bird nibble on his nose to prove my success. We also caught a Curlew Sandpiper *Calidris ferruginea*. Occasionally when I awoke to check the net I could see flamingos flying up and down the inlet but when they saw the net they veered away from it. The next night we caught only an Avocet *Recurvirostra avosetta* and a Whitefronted Plover *Charadrius marginatus*. The capture of the sandpiper and plover was surprising considering the size of the mesh!

Slowly I was beginning to get an idea of the conditions which I needed to utilize the net successfully. We needed a dark night (new moon) with an incoming tide. We decided to have another try near the next new moon. On 19 November, three days after the new moon, we set up the net at the Walvis Bay salt works. At the first dehydration pond thousands of Lesser Flamingos feed and thousands of Greater Flamingos roost during the high tides when they are pushed off Walvis Bay. We had dyed the net brown in the interim. We set up 2 nets, one parallel to and on the water's edge and the other on top of the pond dike near where the water was being pumped into the pond. The nets were out

Table 2. Measurements of Lesser Flamingos from Namibia.

Ring number	Date	Age	Weight (g)	Wing (mm)	Culmen (mm)	Tarsus (mm)
856674	23-04-98	adult	1400	345		
856675	23-04-98	imm	1360	335		
856676	23-04-98	imm	980	311		
856677	23-04-98	imm	1040	305		
856685	12-08-99	adult	1770	331	110	224
856686	29-11-99	adult	2100	349		245
856687	29-11-99	imm	2000	350		197
856688	30-11-99	adult	2080	355		224
856689	30-11-99	adult	1240	295		178
856690	30-11-99	adult	1460	316		199
801551	30-11-99	adult	1690	332		197

from 19h00–23h00 and we caught 2 Greater Flamingo along with Swift Tern *Sterna bergii*, Kelp Gull *Larus dominicanus*, Hartlaub's Gull *Larus hartlaubii*, Cape Teal, Avocet and Arctic Tern *Sterna paradisaea*. The next night was a disaster with the first two birds, a Greater Flamingo and Swift Tern, both killed by a Blackbacked Jackal *Canis mesomelas* before we could get to the net. The rest of the night was spent chasing off the jackals and we ended up catching a Hartlaub's Gull, an African Black Oystercatcher *Haematopus moquini*, an Eastern White Pelican *Pelecanus onocrotalus* and a jackal who was busy chewing up the net one metre away from the pelican.

My next attempt was on 11 August 1999 during the new moon but with a high tide at 15h29 so night would fall while the tide was falling. I did, however, add a new twist to the setting of the net. We placed the net about 50 m out in the water, where it was about 0.5 m deep, to discourage jackals. I also placed 6 life-sized plastic lawn flamingos ('Real-mingo™' Union Products Inc., Leominster MA 01453, USA) near the center of the net. The hope was that flamingos flying to roost at the salt pan would fly low 1–2 m above the mud flats then rise up to clear the pond dike and drop back low again and try to land where they saw other flamingos (our decoys). The first night we were still setting up the net as the first birds came in and our catch was nil. On 12 August we caught one Lesser Flamingo, five Greater Flamingo and five Greenshanks *Tringa nebularia*.

Checking the moon and tide cycles I decided that the next good time (new moon, high tide 20h47) to test all my theories was 29 November. Again I set a single net with the decoy flamingos and between 19h00–00h30 we caught two Lesser Flamingo, ten Hartlaub's Gulls, three Bartailed Godwits *Limosa lapponica*, one Swift Tern, and one Avocet. The next night we caught five Lesser Flamingo, four Greater Flamingo, one Black Oystercatcher, one Bartailed Godwit, one Avocet, three Black Terns *Chlidonias niger* and 24 Hartlaub's Gulls. We had planned to call it an early night and checked the net for the last time at 21h00 but it was full of gulls, etc. so we worked until 02h30.

In conclusion, after much trial and error, the technique worked on nine evenings totalling 53 hours to catch 13 Lesser and 14 Greater free-flying flamingos; provided that the moon is set or new, the tides are incoming to force the birds to their roosts, the net is placed over the water and set up before dark and decoys are used.

The net costs US$300 without any shipping charges so the price might be a bit high for the casual ringer. When ordering nets, if you plan on using 4 m-high net poles, order a net 4 m deep. The nature of the monofilament strands causes the netting to curl, espe-

Fig. 1. Plastic flamingo decoys. (Holder is Gunther Friederich.)

cially if it is stuffed into a sack for transportation, and the working depth will be about 1/3 less.

I purchased a net for R. Simmons but he did not try it under all the caveats listed above (no moon, no tides at Sua Pan), caught no birds and declared it too big and unwieldy. He is convinced that the foot nooses are the best method. We are going to have a contest on 14–15 November 2001 to see who catches the most flamingos at Walvis Bay each using our own techniques (but the tides are not in my favor then until 02h24!).

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References

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Lesser Flamingo ringing programme: appeal for information

A long-term ringing programme for Lesser Flamingos has been started by Leicester University, The Wildfowl & Wetlands Trust, and the National Museums of Kenya, supported by the Earthwatch Institute, at Lake Bogoria National Reserve, Kenya, under the auspices of William Kimosop, Warden. The primary purposes of the programme are to collect up-to-date biometrics on the species and to study their migratory patterns. To date, 37 birds have had metal rings placed on their right legs and large orange Darvic (plastic) rings on their left legs, both above the tibia-tarsus joint.

If you observe a bird with these rings, please notify the Ornithology Department, NMK, PO Box 40658, Nairobi, Kenya (e-mail: kbirds@africaonline.co.ke). If you find a dead Lesser Flamingo with these rings, please send the ring number and finding information to the same address.

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