

Papers: Trapping techniques

Methods of capturing and handling wild Lesser Flamingos for research

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This paper describes a capture method that has been used successfully with wild adult Lesser Flamingos at Lake Bogoria in Kenya. The method involves placing traps in shallow water along the shore of a lake where Lesser Flamingos gather to rest and preen. An earlier version of the capture method was developed by Dr. Ramesh Thampy of WWF, in conjunction with William Kimosop, Senior Warden of the Lake Bogoria National Reserve.

NB: Wild birds should only be captured and ringed by experienced persons trained in the proper handling of birds and who have the appropriate permits.

The trap

The base of the trap consists of a 120 cm x 245 cm rectangular wire mesh grid made with strands of 3 mm wire placed across and down at 7.5 cm intervals and welded where they cross. To prevent birds and researchers from impaling themselves on the ends of the wires, a border of 5 mm wire is welded to the ends of the interior wires around the outside edge of the rectangle, and any sharp protuberances trimmed off.

Nooses of dark-coloured (brown is preferable) 50 lb test polyethylene fishing line are attached to the wire mesh grid where the wires cross. In the grid described, there are 512 places where the wires cross. If a noose is tied to every third crossing in each direction, approximately 50 nooses per grid (5 x 10) will result.

Each noose is made from a piece of fishing line approximately 75 cm long. Small

(2 cm) loops are tied at both ends of the line. One loop is used to tie the line to the grid, while the other is used to make the noose by slipping the main length of line back through the loop. Fifty-pound test line is used, not for strength, but for thickness, to keep the loops from injuring the birds' legs when they are caught. Dark-coloured line is important as the birds are less likely to see the line under the water.

Before deploying the grid, the nooses need to be opened up to form "circular" openings about 20-25 cm in diameter. This is easier said than done, as the fishing line will retain the memory of the spool it came on and will try to recoil into a tight circle. To help prevent this, stretch the 75 mm lengths of line in the sun for an hour or so before using them. This can be done by, for example, attaching one set of end loops to a hook and the other end to a weight.

The trapping site

At Lake Bogoria, when not feeding, Lesser Flamingos tend to gather to rest and preen in shallow areas along the shore where the bottom is flat mud or sand, and they often walk back and forth along the shore in these areas. An ideal trapping site would be one with these characteristics and one that is also near a source of fresh water for drinking and bathing.

Placement of the traps

Place the grid(s) perpendicular to the shoreline at one or more locations along the shore where the flamingos walk. The

water should be sufficiently deep to obscure the loops from view. The specific depth will vary depending upon where the flamingos have been walking and how high the loops float in the water in each particular situation. Use some type of markings on shore (e.g. arrows in sand) to indicate where the grid is located in the water, as Lesser Flamingos are suspicious of markers in the water and avoid the areas around them.

We often use more than one grid at a time at the same location along the shore. As Lesser Flamingos quickly discover the location of the first grid and walk around it in deeper water, a second grid can be placed in deeper water at the same location, but offset diagonally from the first, in a checkerboard pattern.

Capturing and extracting caught birds

The grids should never be left unattended, even for a few minutes, because it is important to be able to get to the birds quickly after they are caught to prevent them from injuring themselves or being predated. To avoid scaring the flamingos away from the trapping sites, the attendant(s) need to remain out of sight behind a vehicle or vegetation, and to be quiet.

When a Lesser Flamingo gets its foot caught in one of the nooses, it flaps its wings and struggles to get free. The other flamingos around it will begin to move away, and this is when the attendants must get to the trapped bird as quickly as possible, but without running. Running will cause all of the birds in the area to fly away and spoil the trapping session. Many birds will fly away when the attendants walk out into the water to retrieve the trapped bird, but the objective should be to accomplish this with as little disruption as possible.

Retrieving a trapped bird should always involve two people trained in the safe handling of birds, one person to control the bird, and the other to remove the noose from its foot.

The first objective when retrieving a trapped Lesser Flamingo is to get its body safely under control and out of the water. Excessive soaking of the feathers not only leads to hypothermia, but also makes it more difficult, if not impossible, for the bird to fly when released. The first move should be to safely control the wings by using the two-handed grip. In the two-handed grip, one hand is placed on each side of the bird near its shoulders and its wings are gently folded back against its body. (Birds should never be lifted or controlled solely by holding onto their wings or their necks as this may lead to serious injury.) Once the wings are against the bird's body, the fingers of each hand should be curled under the bird's chest and abdomen in a gentle but firm grip. The firmness of this grip is critical and can only be learned through proper guidance and practice. If the grip is too loose, the bird may partially escape and injure itself, or the handler may injure the bird trying to regain control. If it is too tight, there is a risk that it may restrict breathing and heart function and lead to internal injury or death. Like those of all birds, Lesser Flamingo bones are hollow and easily cracked or broken.

The second step is to get the bird's legs under control. The skin on Lesser Flamingo legs is easily damaged, and the birds often damage their own legs by knocking them together in struggling to get free. Therefore, it is important for the person controlling the legs to use a grip that keeps the legs apart. This is best done by holding both legs in one hand with the middle finger between the joints at the lower end of the tibias. The third step is to extract the bird's foot from the noose. This is the job of the second person, who will need both hands to loosen the noose, extract the foot and open the noose again before placing it back in the water.

After the bird's foot is extracted from the noose, the bird should be handed to the second person to take it to the research station, the place where the re-

search (e.g. ringing, measurements, blood samples) is being carried out. In handing the bird to the second person, the first person should place the body of the bird, with its wings still held closely to its sides, under the second person's left arm with its head facing toward the back of the person. The second person should control the bird's body and wings in the crook of his or her left arm and hold the bird's legs apart with the left hand, again placing the middle finger between the joints below the tibias, keeping the legs angled downward from the body. The right hand should then be placed on the back of the bird to keep its wings under control. The downward angle of the legs is important to avoid spraining or dislocating the knee joints at the top end of the tibias.

Ringing station

Flamingos are large birds that usually occur in locations where there is full sun. In order to reduce stress and avoid injury during the ringing and measurement process, it is important to have a suitable ringing station set up to accommodate them. The ideal station would consist of a sheltered work surface out of the wind and sun. A sturdy plastic table and a tarpaulin that can be erected to provide shade are ideal.

Bird handling during ringing and measuring

Usually, it is best if the person who brought the bird from the trap continues to hold it in the same position while the other person does the ringing and measuring. These operations should only be undertaken by experienced ringers with the required permits. Care should be taken not to position oneself directly behind the bird as the stress of being held captive and measured often results in explosive

projectile diarrhoea. Plastic aprons are helpful in protecting clothing during handling.

Ringing and measurements of the bird's skull, mandible and tarsus can be made in the standard way with standard tools. Rings should be 16 mm inside diameter.

Special custom-made tools can be helpful with measurements of wing length and weight. For wing-length measurements, a rule made from galvanised sheet metal with a graph paper insert varnished to protect it from the elements is useful. For weight measurements, fold the bird's legs underneath, wrap a towel around the entire bird and use a custom-made sling to keep the bird still while it is being weighed.

After ringing and taking measurements, and before releasing the bird, it is important to provide it with approximately 50 ml of fresh water. This can be done with a syringe by squirting water directly into the bird's bill and letting it swallow small amounts at a time.

The release

Releasing Lesser Flamingos on dry land produces superior results to releasing them in the water. Flamingos need to run to gain momentum to take off and this can be done more easily on land. In preparation for the release, the person who did the ringing should take the bird from the person who has been holding it during the ringing operation. The body of the bird should be held gently with one hand against the chest of the person taking it, with the stomach and legs facing outward. The person's other hand should control the legs as described earlier. To release the bird, find a relatively flat area with easy access to the water. Squat and release the bird's legs so that it gets a feel of the ground. When the bird becomes steady on its legs, the body can be released and the bird allowed to run/fly away.
