

## A CAST-NET FOR TRAPPING NIGHTJARS (AND OTHERS)

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There are some very effective methods for trapping nightjars. Probably the most commonly used is nightlighting whereby the nightjar is stupified by a light-beam and then caught with a handnet (Jackson 1984). A mistnet can also be used especially if a specific bird (e.g. at a nest) is the target (Davis 1981; Jackson 1984).

When I started the nightjar project at Pafuri in the Kruger National Park, some 1 200 km from home, I realised that I needed a very effective trapping method to maximise on energy and time spent during short stays in the field. Nightlighting was definitely on as the nightjars made good use of the gravel roads in the study area when foraging and a large area could thus be covered by car to trap the birds. Jackson (1984) has pointed out that nightlighting "... was virtually ineffective on bright moonlight nights" so that nightjar trapping operations should preferably be carried out when there is no moon. Nightjars are usually very wary during bright moonlight and cannot be approached closely enough to catch them by handnet. I could not always visit the area during the dark phase of the moon, especially as I was interested in studying foraging strategies both during the dark and full-moon phases and thus had to trap them no matter the moon phase.

A cast-net, as described below, was constructed and found to be very effective in trapping nightjars as well as a variety of other birds which can be stupified with a spotlight. The net is nearly 100 % successful at distances of 3-4 m but long range 6-7 m throws were also occasionally made and were successful.

The net was made from 6 mm iron rod bent in a circle to which a handle was attached. The handle was bent back on itself, firstly so that one can have a better grip on it but secondly to give the handle some 'spring' which makes the cast action easy. The handle is bent upwards to slightly above the plane of the circle so that it does not interfere with the landing of the net after a throw. A second handle attached to either side of the circle was used to stabilise the net when casting. The net 'body', the circle, was covered with three layers of fairly loose mistnet and strengthened by a number of shelf string strands in all directions (Figure 1 overleaf).

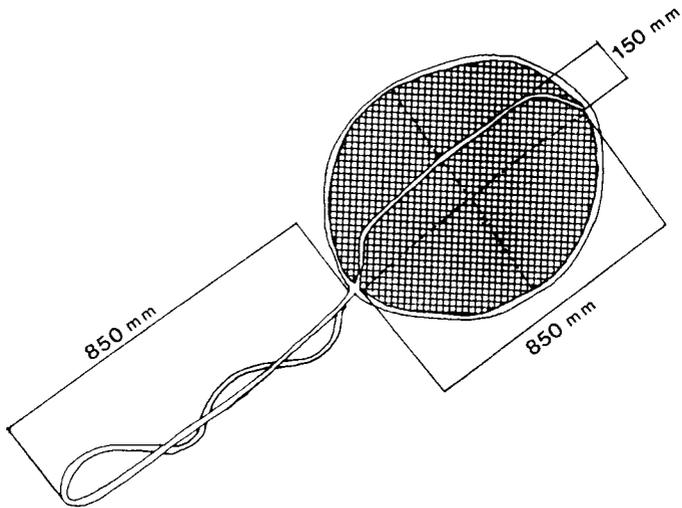


FIGURE 1  
DESIGN OF CAST-NET

To make trapping operations more streamlined, an outboard chair was constructed so that the cast-net operator could sit on the hood of the car while the driver handled the spotlight. When a nightjar was seen in the road, the headlights of the car were switched off and the bird spotlighted immediately while the speed was reduced to give the net operator time to get off the car and move swiftly towards the bird in a slightly crouched position. Often the car was still moving during a casting attempt and a few casts were even attempted from the chair. As soon as it was within range, the net was thrown over the bird which was then removed by hand. Because of the swiftness of the operation very few birds escaped, and about 50 % of all birds seen were trapped; this includes birds which flew up as soon as the spotlight was switched on and those which were actively foraging and did not settle on the ground.

After capture the bird was immediately ringed and put into either a keep box or cloth bag and taken to base camp to be identified and measured. The trapping spot was marked with a numbered reflective tape tag so that the birds could be released at the same spot again later. During 12 night-trapping operations (about 16 hours in total), five nightjar species were trapped as well as a variety of other birds ( Table 1).

TABLE 1

BIRDS TRAPPED WITH THE CAST-NET DURING 12 TRAPPING OPERATIONS

SPECIES	NUMBER RINGED	RECAPTURES
Mozambique Nightjar <i>Caprimulgus fossii</i>	46	5
Fierynecked Nightjar <i>C. pectoralis</i>	11	2
Freckled Nightjar <i>C. tristigma</i>	4	0
European Nightjar <i>C. europaeus</i>	3	0
Pennantwinged Nightjar <i>Macrodipteryx vexillaria</i>	1	0
Bronzewinged Courser <i>Rhinoptilus chalcopterus</i>	11	4
Water Dikkop <i>Burhinus vermiculatus</i>	5	1
Spotted Dikkop <i>B. capensis</i>	3	0
Doublebanded Sandgrouse <i>Pterocles bicinctus</i>	1	0
TOTAL	85	12

After using the cast-net both during full-moon and dark-moon phases, I am convinced that the best results can be obtained during the full-moon phase. During the dark-moon phase the nightjars are active for short periods only during dawn and dusk. This period might be as short as 30-45 minutes. After this active period the birds return to their roost sites and the roads are empty. One can walk through the bush and actively search for the nightjars after this period of activity as suggested by Jackson (1984) but in my study area this is not recommended; I do not much fancy casting a net at a lion or buffalo! On moonlit nights the nightjars are active for much longer periods and after the initial active foraging in the early evening, most are quite docile when their stomachs are full.

Nightjar trapping takes some practice. The first night out is always somewhat unsuccessful but as soon as one gets the hang of it a large number of the nightjars encountered are well and truly bagged. Because of the size of the net there is little chance of injuring a bird and if the aim is accurate, almost all throws will yield a catch - except the ones that are 'impossible' to miss! A number of individuals have been recaptured which indicates that the trapping of these birds had little effect on their well-being.

One last tip; check the netting each time before you start as it is difficult, and a waste of time, to untangle a bird from the mistnet layers. One sandgrouse is enough to really leave the net in a bad state!

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#### References

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