CATCHING BIRDS WITH ARTIFICIAL LIGHT

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In the autumn of 1957 for the first time experiments under supervision of Dr. H. N. Kluyver were made to catch waders with artificial light. Jan Cupido and Jaap Taapken on two very dark nights, amidst heavy rain and much wind, even so caught over 75 birds in one night. Experiments with torch-light were continued by Taapken on the meadows near Leimuiden, where Lapwings and Golden Plovers roosted in the autumn of 1957, as also on the West Frisian island of Vlieland (spring and autumn 1958, end of the summer 1959 and 1960), on the island of Terschelling (autumn 1959), on that of Rottumeroog (autumn 1959) and near Melissant in Zuid-Holland (autumn 1959). Some of our experiences in those first experiments are related below.

Contrary to the reports from English ringers about the catching of gulls, it is our experience that the catching of all kind of birds by artificial light is most effective on dark, moonless nights, preferably with a strong wind or gale attended with rain. On the West Frisian Isles and along the coast it is necessary to take high-water tides into consideration (spring tides are very favourable) because the birds are then concentrated on only a few places of refuge. Our experience is that about one and a half to one hour before high tides seems to be the most favourable time. At high tide, the birds become restless and tend to scatter.

The birds are sought by torch-light upon the mudflats or in polders filled with several inches of water. Here above the water, the birds can be distinguished at a great distance in the light beam. We noted that birds on meadows or on other overgrown fields are not easily detected. Experiments on a meadow with hundreds of Lapwings and Golden Plovers at Leimuiden were unsuccessful because the birds were perceived only when they flew away. However, they could be closely approachable and were visible in some rainpools, but could not be detected when they walked away from them. It is of course very difficult to find the birds during a heavy mist because the light is then overdispersed and it is too quiet then to make it possible to catch birds. Mooyman, however, could catch Meadowpipits flying up from a roosting place in Spartina grass with a nylon net kept horizontal that was pushed down as soon as a bird flew up (52 birds in two nights).

A bird illuminated by the light-beam is approached slowly and cautiously and a dip-net, with the net not too slack is then led upon the bird. When this is done carefully, other birds even at a distance of only a few yards are not frightened away. During a sudden thunderstorm several kinds were caught in this way very easily on the mudflats near to Posthuis on the island of Vlieland. As soon as the thunderstorm ended the opportunities to do so decreased.

LIGHT. A faint light of an electric torch (one or two 1.5 volt-cells) is undoubtly efficient for catching. However, peering in the darkness soon makes the eyes tired, and it is then almost impossible to detect the birds at a great distance. For detecting birds in 1957, a car lamp of 12 volts (with 4 accumulators) was used. Apart from the fact that carrying this is somewhat troublesome, it soon became evident that the birds, especially flocks of them, flew away when still at a great distance and disappeared. We found that the most suitable was a three-cell electric torch (4,5 volts) in which the batteries were renewed every night, with other torches and batteries in reserve. Mooyman and Oome tried several kinds of light and found that the best technique was to approach the birds with a faint light (e.g. that of an acetylene bicycle lamp) and then to dazzle them with a clear light of an electric bicycle lamp with storage batteries. However, this makes it necessary for two ringers to work together as a team. Calcium carbide is cheaper to use than electric batteries. To make the beam of the electric torch smaller a black ring of paper is attached to the glass. Waterproof electric torches are unsatisfactory because they are difficult to switch on and usually have bad reflectors. During a rainburst, some normal electric torches became full of water within half an hour; this was later prevented by packing a plastic bag around the torch, leaving only the reflector uncovered. It is clear that to prevent loss of the torch and to keep the hands free for ringing, the torch should be carried slung round the neck. A little lamp attached to the forehead by an elastic band as used by the members of the "Nebularia" bird ringing station, may be very useful for reading the ring numbers and for making notes.

THE ART OF APPROACH. It is necessary to approach the birds without any noise or with as little noise as possible. Irregular noise in the water and upon or very close near the surface of the water seems to frighten the birds especially. Pulling one's feet out of the mud often made a sucking noise, so loud that the birds fly away already at a great distance. The setting down the feet vertically upon the water surface makes a splashing noise. Where is a mud bottom under the water and the water is more than ankle deep, the best way would be not to lift the feet out of the water but to walk sliding - as on skis. Where the water is less than ankle deep, it is necessary to lift and set down the feet streamlined in and out of the water. Set the toes in a forward direction at an angle to the surface and let the foot follow. Lifting the foot is done in the same way but in reverse direction. It is rather like the way a heron walks along a ditch. In this manner it is possible to walk very silently. In very shallow water or on wet sand it is best to walk on the heels, because walking on the toes is fatigueing.

Take care that catcher or dip net is never in the light.

CLOTHES AND EQUIPMENT. As the weather during the catching is usually cold, windy and rainy, clothing must be appropriate. Plastic army macs are unfit, oil-skins also, as they make too much noise. A so-wester is recommended, while waders may have advantages. Clothes

will become wet and there must be clothing in reserve. Furthermore, wet clothes make no noise. A leather waistcoat without sleeves with a waterproof windcheater keeps the back warm and protects the chest against rain and wind. As long as you have dry feet wet clothes do not matter. Of course it is necessary to be in good form and to be sure of your ground. And do not forget a compass. Peering along in the light-beam and walking around after the birds you can lose all sense of direction if a mist arises.

CATCHING EQUIPMENT. A dip-net constructed in October 1957 after the model described in "Bird Ringing" by Lockley and Russell proved unsatisfactory. It was made of a net (mesh-size 1 by 1 inch) held between two bamboo poles 4 yards long. The front was about 5 feet wide and the back 2 feet. This net was found very unmanageable. During high winds too much noise was produced by the whistling of the wind through the net when sometimes it blew unexpectedly. Later on, with the help of Jan Cupido, smaller dip-nets were made; bamboo poles about 3 yards in length with a 24" hoop of iron wire on which the net was stretched. In 1958, the dip-nets were made more solidly and after another model. For the catching of Eiderducks still stronger dip-nets must be used. On October 28, 1957, during a very bad weather, even Dunlins were caught by hand, and birds were caught with a dip-net without a bamboo pole in August 1960. The dipping of the net must be done very quietly and under good control. Cupido, who lives on the island of Vlieland, told that he pushed against the birds with his boots and they flew against his chest during a very dark stormy night. Undoubtly it is possible to catch hundreds of birds in such nights. In such case, the birds would be kept in cages sheltered from rain and wind before ringing. Cotton or jute sacks for carrying away the birds are not recommended.

The best method of catching is for two workers to go together.unhindered by other persons in the neighbourhood. In silent teamwork, with two light-beams one can work very well. It is possible that a third man could follow this team in order to ring the birds and make notes. A ballpoint pen is useless during the rain and an ordinary hard pencil is the best to use. Enough notepaper must be taken so that a leaf can be turned when it becomes wet. The pencil should be carried slung round one's neck.

Approaches with the wind in front or to the back both have advantages. With the wind in the back, the bird looks towards the light, is more easily seen and dazzled, because it stays with his head towards the wind. With the wind in front the birds do not hear the catchers so soon, but during bad weather the water will splash so loudly that the birds will not hear the catchers.

Experience in the United States shows that birds do not mind a steady louder noise, for this screens off any noise made by the catcher. Dr. O. H. Hewitt, for instance, caught sleeping ducks although he used a boat with an outboard motor and a generator for light, and this undoubtly made an ear-splitting noise. As an imitation of this noise, Mooyman constructed a

buzz apparatus and with this noise birds were caught in August 1960 on Vlieland, even during starlit nights. The results, however, did not make it sure that the noise had been loud enough, for Taapken reported several occasions when birds flew away quicker as a result. Experiences with a louder noise are being carried on.

REACTIONS OF BIRDS. In a strong light, large troops of birds like Oystercatchers and Avocets and gulls often flew up sooner. Oystercatchers and Avocets went into the sky calling, but sometimes they stayed sitting down calling in the light-beam. Dunlins start to feed or scrub themselves, often they jumped like fleas in the beam of the light. Redshanks and Greenshanks, nervous birds by nature, also move very nervously in the light and their movements are incalculable. Gulls keep sitting down and sagged at the knees, while other ones carry on swimming quietly or swim away from the light. Care then must be taken that they remain in the light. Herring Gulls start to feed, Avocets, Curlews, Redshanks and sometime also plovers run or fly towards the light or run away. At this moment the catcher should not move but let the bird quieten down, perhaps for several minutes, and not allow it to come out of the light-beam. A short-eared Owl flew into the light-beam and a Common Tern flew towards the light and alighted on a mudflat near the catcher. The secret is to keep the given bird as long as possible in the light-beam. For this much patience and perseverance is necessary, because this can be very strenuous. When the beam is switched from one bird to another time after time, the birds become restless and fly away. The light-beam must be turned around to detect resting, quiet birds. Large gatherings of birds cannot be approached so easily as some solitary birds. However, it is possible to use the light in the midst of great flocks of Oystercatchers, Black-headed Gulls, Dunlins, Shieldducks or Eiderducks, as we did.

Ringed and released birds sometimes stay for a long time around the ringer and can be seen feeding or preening their feathers. We have seen Dunlins taking a bath at such times. It is remarkable that many young birds are captured. We especially noted that young Herring Gulls in the first year can be caught more easily than adults. We believe the same hold true for Redshanks and Oystercatchers. That invalid birds are more easily caught may be possible, although a clear case of a pair of Widgeon is known where this was not true. The retrapping of ringed Dunlins within one or two days, however, would indicate this, although they seemed to be in good condition and flew very well. A special permit is required for catching with artificial light in Holland and this way of catching birds is prohibited during the breeding season.

So far, twenty-seven different species have been caught by artificial light in the open in Holland. Among them were more than 150 Dunlins, 25 Oystercatchers, about 20 Herring Gulls, 7 Black-headed Gulls, 6 Redshanks,

4 Sheld Ducks, and also specimens of Mallard, Teal, Widgeon, Common Scotter, Eiderduck, Lapwing, Grey Plover, Golden Plover, Kentish Plover, Turnstone, Common Snipe, Curlew, Bar-tailed Godwit, Greenshank, Knot, Little Stint, Sanderling, Avocet, Great Black-backed Gull, Common Tern and Meadow Pipit.

Who Banded What?
1963

Edited by Betty Knorr

Black & White Warbler	Mabel Warburton (Pa. & N. J.)	49
Prothonotary Warbler	T. A. Beckett (S. C.)	19
Worm eating Warbler	C. Douglas Hackman (Md.)	13
Golden-winged Warbler	Powdermill Nature Reserve (Pa.)	18
Blue-winged Warbler	C. Douglas Hackman (Md.)	20
Tennessee Warbler	Powdermill Nature Reserve (Pa.)	145
Orange-crowned Warbler	" " " "	9
Nashville Warbler	" " " "	71
Parula Warbler	Mrs. Robert W. Patterson (Maine)	28
Yellow Warbler	Robert Leberman (Pa.)	55
Magnolia Warbler	Powdermill Nature Reserve (Pa.)	167
Cape May Warbler	" " " "	73
Black-thr. Blue Warbler	Mabel Warburton (Pa. & N. J.)	46
Myrtle Warbler	Betty Knorr (N. J.)	455
Black-thr. Green Warbler	Powdermill Nature Reserve (Pa.)	30
Cerulean Warbler	" " " "	8
Blackburnian Warbler	Mabel Warburton (N. J.)	6
Yellow-throated Warbler	T. A. Beckett (S. C.)	17
Chestnut-sided Warbler	Powdermill Nature Reserve (Pa.)	26
Bay-breasted Warbler	Gail C. Cannon (N. J.)	136
Blackpoll Warbler	William Pepper (Pa. & N. J.)	261
Pine Warbler	Mr. & Mrs. Sydney Mitchell (Va.)	3
Prairie Warbler	C. Douglas Hackman (Md.)	22
Palm Warbler	Walter S. Terry (N. Y.)	121
Ovenbird	W. T. Van Velzen (Md.)	100
Northern Waterthrush	Mabel Warburton (Pa. & N. J.)	76
Louisiana Waterthrush	Powdermill Nature Reserve (Pa.)	19
Kentucky Warbler	C. Douglas Hackman (Md.)	51
Connecticut Warbler	Powdermill Nature Reserve (Pa.)	18
Mourning Warbler	" " " "	21
Yellowthroat	" " " "	341
Yellow-breasted Chat	" " " "	59
Hooded Warbler	" " " "	56
Wilson's Warbler	" " " "	53