Catching Lapwings with cannon nets

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Introduction

For some years it has been the intention of Wader Study Group members to devote more attention to the study of inland waders, especially Lapwing *Vanellus vanellus* and Golden Plover *Pluvialis apricaria*, and in particular to see whether the cannon netting technique, now employed so successfully on coastal waders, can be used effectively at inland sites. In the past a few small cannon net catches had been made (including one of 12 Snipe *Gallinago gallinago*!) on an *ad hoc* basis, but in December 1974 the opportunity arose to make some more significant catches of Lapwing. This has triggered off a concerted study programme and 700 Lapwing have now been caught. A number of interesting aspects of Lapwing feeding and roosting behaviour have already become apparent and since these are highly relevant to catching techniques they are documented here so that others contemplating Lapwing studies may benefit.

Summer (June to September)

Flocks of adult Lapwings begin to appear as early as the end of May and from early June onwards fairly large numbers can be seen coming into eastern Britain from the Continent so that by the end of June congregations of a hundred or more are not infrequent. At this time of year most land is under cultivation and the amount of suitable Lapwing feeding roosting habitat is small. In the English Midlands and The Fens (where most of my experience lies) it is confined to short grass (grazed) fields, gravel pits, the perimeters of reservoirs and the occasional fallow (or early-cleared potato) field.

Lapwing habits depend very much on the weather and, to a lesser extent, on the moon. On a normal warm and dry summer's day birds congregate to roost between 09.00 and 11.00 and remain relatively inactive until 18.00–20.00, when they again disperse to feed. These daytime roosts are most frequently close to water and some bathing, preening and drinking takes place, though most of the time is spent sleeping. If, however, the weather is wet, or the ground is wet following rain, then this daytime roosting period is largely dispensed with and the birds will actively feed for much of the day. Over and above the effects of weather, the state of the moon also affects Lapwing behaviour. At periods of full moon a much greater proportion of daytime is spent roosting (e.g. flocks can form as early as 07.00 on a hot day). Conversely when there is no moon Lapwings spend a greater proportion of the day feeding and then congregate at dusk, often squatting down to become almost invisible on a ploughed field.

Since Lapwings can best be caught in numbers when they are concentrated at roosts – being well spread out usually when feeding – it follows that the most successful time to cannon net them is during period of hot, dry weather at the time of the full moon. Nets should ideally be set by 09.00 and the first catch can often be made before 11.00, with other catches later in the day at good sites. Decoys are helpful in getting the birds to land in the right area. Catches are typically of 20–40 birds, but one catch of 80 (in a single net) was made.

Winter (November to February)

In winter Lapwings have a very much wider choice of habitat, but they still seem to follow fairly regular patterns of behaviour. The most common routine in the Midlands is for birds to feed on grass pastures and to congregate to roost on ploughed fields, though some feeding on the latter (particularly when newly ploughed) does occur.

The moon appears to have a relatively greater effect in winter, for even in wet weather daytime roosts will form. However, in 'no moon' periods birds often spend most of the day feeding and only congregate to roost at or after dusk. Catching, with cannon nets set of ploughed fields one day to catch soon after dawn the next day is therefore much more successful in the winter at periods of full moon. Catching at roosts prior to dusk is less successful.

On frosty mornings Lapwings will often roost, whatever the state of the moon, until the sun has melted the frost sufficiently for them to be able to feed. Such mornings therefore give an increased chance of making a cannon net catch.

Apart from the above, which refers primarily to farmland habitats, an interesting pattern of behaviour has been noticed at Blithfield Reservoir, Staffs., and this has provided the opportunity for some nice winter catches. Soon after dawn Lapwings tend to come down to favoured parts of the shoreline to bathe, preen and drink in some concentration. They may only stay for perhaps half an hour before dispersing again to the surrounding fields to feed, although some may return, at irregular intervals, during the day. As before, nets are set the previous day and decoys are sometimes used. However, on moonlight nights some birds may arrive before dawn and care should be taken not to disturb these when getting into the firing position.

Other Points

Nets should be set at a comparatively low angle (10–15°) because Lapwings are extremely quick at taking off and escaping before the net comes to the ground. Their large wing area may enable them to do this. This can also lead to them falling awkwardly in the net, however, and the occasional unexpected wing injury has occurred. (Please note the circumstances of any such occurrences in Britain and Ireland and report back to the BTO.)

Lapwings (and Golden Plover) seem comparatively unwary of nets, but camouflaging where practicable is desirable. A "jiggler", to remove birds standing too close to the

net, is very necessary. "Twinkling" works surprisingly well on fields – especially with a vehicle, but also with someone walking or crawling. Fetching birds from further afield can sometimes be very frustrating – they can fly high and far in the wrong direction!

After catching, birds are best covered with lightweight material in the same way as shore waders, before extraction from the cannon nets and put in keeping cages.

Glossary

"jiggler" – string with rags just in front of the set, fastened by plastic to a peg at far end of net and moved by pulling from firing position or other hide in line with net.

"twinkling" – gently moving flock by approaching slowly. Ideally, flashes (twinkles) of wings are seen as the near birds fly to far side of flock.

Troubles with projectiles

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Users of UK cannon netting equipment will, at one time or another, have suffered from 'projectile trouble'. Although many readers will be aware of the *modus operandi* of cannon nets the uninitiated will need some explanation to understand what follows.

The nets (30 m long, 13 m wide) are carried from a furled position up and over birds on the ground by four heavy weights (projectiles) which are fired (by electrical detonation of explosive) from cannons placed behind or under the net. The metal projectiles (5 cm diameter, 16 cm long) are attached to the net by a projectile rope about 70–100 cm long which is in turn connected to other thinner ropes (the "traces": 3 to 5 to each projectile) which are fastened to the front edge of the net. The "trouble" with projectiles occurs when a projectile rope breaks when the net is fired – a projectile thus becoming a missile. When cannon netting on remote shores and firing out to sea or in large fields this is more annoying than dangerous although the cannon as a potential mortar does have considerable range. Nevertheless it is obviously highly undesirable and doubtless illegal to fire large lumps of metal around and every cannon netter does his best to ensure that the equipment is in good repair and that as a sensible precaution the cannons are not pointed towards places littered with people or their effects. Also a close watch is kept on the potential danger zone in front of the net to be sure that nobody is around when the net if fired. However, during the last few years cannon netting for gulls at rubbish tips has steadily increased (now almost a national sport!) and work at such sites presents a much more serious problem to those suffering from 'projectile trouble'. Everyone has doubtless noticed that many rubbish tips are sited as near as possible to human habitations thus ensuring that people experience the full benefits of wind-blown plastic and paper litter, the typical aroma of rubbish on a hot day, and the regular clamour of thousands of gulls coming to feed, squabble and deposit their guano over house, garden and washing line. Alternatively tips are sited near airfields or such that an airfield lies between tip and roost thus making sure the air strike problem continues. Obviously it is undesirable for projectiles to become missiles in such situations.

The Celtic Wader Research Group (CWRG) and its gull catching offshoots have been trying to overcome the projectile trouble for some time and we have now found the solution – hence this article. A history of the development of our projectile is of some interest because it describes the problems encountered and because some of the alternative forms made during trials may be of use, so . . .

The first projectile ropes were 8–12 mm diameter nylon rope spliced to form eyes round metal thimbles at both ends – the eye at the projectile end being spliced through a metal ring welded to one end of the projectile (Figure 1). The simplest form "trouble" with these ropes was due to poor splicing either because of inexperienced splicers not being much good at the job or because too few tucks were made into the standing rope. There should be at least five tucks with slippy nylon rope (a much longer splice is necessary than for hemp rope). However tightly the eye is spliced round the thimble the latter soon flips out of the eye after a few firings (simply because it receives severe strain in the opposite direction to that for which thimbles are designed to withstand during the first instant of firing the cannon; that is compression rather than extension). Whether or not the thimble is displaced, the projectile rope rapidly becomes abraded against the cannon barrel on firing and occasionally scorched by the explosive flash. Therefore projectile ropes have to be inspected regularly and replaced before they break. Because thimbles are useless in the situation described, our first modification (Figure 2) was to omit them and splice the rope tightly round the projectile ring (more tightly than shown in Figure 2). This worked well but the fairly rapid process of rope wear and tear continued. We then tried encasing the rope in PVC garden hose to stiffen it thus reducing wear but the hose soon broke. To gain both stiffness and strength we then used thicker rope, finally using the thickest nylon rope (about 22 mm diameter) which, when spliced round the projectile ring, would still go down the barrel without scraping the sides (Figure 3 – in practice the splice round the ring was much tighter than shown). This worked well and the thick ropes lasted longer than any other of the previous types but they still had to be replaced regularly.