

biology of Common Snipes, it would seem unlikely that these clutches were those of the same female. The most plausible explanation is that they were laid by different females paired with the same male. However, the probability of bigamy is not sufficient to explain such a close distance between the nests (which reminds us of a similar case noted by Trollet (1994) in Redshanks). Previous studies indicate that waders of different species will sometimes nest close to one another in order to benefit from each other's vigilance and thereby protect their clutches and broods from predators (Ibañez & Trollet 1990). We suggest that conspecifics may occasionally nest in close proximity for the same reason.

These observations suggest that counting breeding Common Snipes reliably may be problematical. Nijland (2000) advised that if display flights observed on different occasions are to be considered as relating to different territories, their centres should be at least 500 m apart; similarly behaviour indicating the presence of a nearby nest on different occasions should be at least 200 m apart. Reality, however, could be quite different and Green (1985) showed that counts of displaying males gave estimates that were lower than the peak number of nests present in the same area.

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## Short communication

### The use of tape-recorded distress calls to increase shorebird capture rates

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Over 6,000 waders were mist-netted and color marked during a long-term banding programme carried out in SW Ecuador from 1991 to 1999. Waders often reacted to the distress calls of a bird in the net and would approach and fly into the nets within close range of the banders. During the northern winter in 1995 and in 1996 an experiment was carried out near the Ecuasal salt lakes at San Pablo (2°10'S, 80°45'W) and Mar Bravo (2°15'S, 80°45'W), whereby previously recorded distress-calls of Western Sandpiper *Calidris mauri* and Semipalmated Sandpiper *C. pusilla* were played back and used to attract birds into the nets. The technique was applied to increase net capture rates particularly when populations were low.

The study site is a 1 km long, non-tidal mudflat formed by outflows from a commercial shrimp hatchery. Weather conditions throughout the year are stable, normally with no more than a light SW breeze. During the non-breeding season, both sites support several hundred shorebirds: Semipalmated Sandpipers, Least Sandpipers *C. minutilla*, Western Sandpipers, Lesser Yellowlegs *Tringa flavipes*, Short-billed Dowitchers *Limnodromus griseus* and three plover species: Semipalmated *Charadrius semipalmatus*, Wilson's *C. wilsonius* and Snowy *C. alexandrinus*.

During banding sessions some short distress-call recordings were made on a Sony Walkman TCM S63 either of a bird in the hand or still in a mistnet. Later, two series of calls of a Semipalmated Sandpiper and a Western Sandpiper were copied repeatedly to fill a 30 minute tape, after allowing 20 seconds of silence to allow banders to withdraw from the recorder. Continuous calls lasted 15–20 seconds followed by short periods of silence. After some experimentation, it was found that birds were caught most effectively when the partly camouflaged recorder was hung on a central mistnet pole, while the banders kept some distance from the scene. Depending on the capture rate, the tape was played from 5 to 30 minutes per attempt, and sometimes replayed for a second time, rarely more.

Once the distress-calls were started, waders nearby, or even 100 m distant, would often react within a few seconds but at other times up to a minute. First a few birds would start calling and this would lead to a general alert. Sometimes birds would fly directly into the net, but more commonly their approach was careful. Alerted birds quickly came together into a flock. Some flew a short distance or even ran towards the sound source. Waders captured in the nets, would flap their wings and call, attracting yet more birds and



leading to a snowball effect on the capture rate.

During the day, birds would usually fly towards the nets but often turn away when they saw them. However, it appeared that the continuous distress calls caused such confusion that several would keep on flying around the recorder, increasing the chance of being caught.

It was quickly realised that longer play back times did not lead to better results. Probably the birds soon learnt enough to know that the tape recorder could be ignored. Therefore, it is important to study the birds' reactions. When the tape is played frequently in the same area, most will get used to it. In contrast, newly arrived, inexperienced birds will react in the way described above.

In 1995 and 1996, the nets were open for an aggregate of 403 hours when play-back of distress calls was not used. During this time 1651 birds were caught; an average of 4.1 birds per hour. In the same years, play-back was used for 22.9 hours when 251 birds were caught, an average of 11.0 birds per hour, or 2.7 times the rate without play-back.

Although the calls that were played back were of only two species, at least six species reacted to them. At San Pablo, for example, Lesser Yellowlegs, Short-billed Dowitchers and Stilt Sandpipers *Calidris himantopus* showed alerted behaviour. It remains unclear, however, whether this was due to the reactions of the smaller *Calidrids*, or caused directly by the distress calls themselves. Although only one Spotted Sandpiper *Actitis macularia* was caught at the study site, this species seems to react very well to distress calls, at least of its own species (G. Boere, pers. comm.)

At Mar Bravo, Sanderling *Calidris alba* is a common species, but only one was caught. Wilson's Phalarope *Phalaropus tricolor*, a migratory species that is present all year round with peak numbers in September of 30,000, showed no reaction to the *Calidris* distress calls, neither by day nor at night.

Other locally common species captured close to the play-

ing equipment in the net at night included Common Tern *Sterna hirundo* and Black Tern *Chlidonias niger*. On migration, both species occur in hundreds. A Burrowing Owl *Speotyto cunicularia* captured close to a Least Sandpiper may have been attracted to either the playback calls or the calls of the Least Sandpiper.

Although the use of distress calls in our Ecuadorian study area increased capture rates considerably, the technique needs refining. It was only used outside the local breeding season (April–August) to avoid disturbance to birds while they were nesting. The impact of the distress calls on other species is thought to be minimal, because of the very limited power of the sound produced by the Sony Walkman. However, further research on the technique with more sophisticated and different types of equipment and calls of different species is recommended. Also, the impact on the birds of using distress calls needs to be determined in order to make quite sure that it does not cause undue stress.

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