

# Wader ringing in coastal Kenya – results and overview from the first AFRING waterbird ringing course

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We present an overview of the first waterbird ringing course in Africa which was held in September 2004 in Watamu, Kenya, under the auspices of the newly established African Waterbird Ringing Scheme (AFRING). A large focus of the course involved wader ringing and identification. Results of wader ringing from two sites (Mida Creek and Lake Chemchem) are presented and discussed. Two ringing sessions at Mida Creek produced good numbers of Curlew Sandpipers *Calidris ferruginea*, Little Stints *Calidris minuta*, Greater Sandplovers *Charadrius leschenaultia* and Lesser Sandplovers *C. mongolus*. An immature Crab Plover *Dromas ardeola* and Broad-billed Sandpiper *Limicola falcinellus*, the second for the creek and fourth for East Africa, were also caught. Eight birds were retrapped with no foreign controls. At Lake Chemchem, Little Stints dominated the catch while Wood Sandpipers *Tringa glareola* and Kittlitz's Plovers *Charadrius pecuarius*, the only resident waders, were the only additional wader species caught. No controls were obtained at Lake Chemchem. We discuss the future of waterbird ringing in Africa in light of the establishment of AFRING.

## INTRODUCTION

The African-Eurasian Migratory Waterbird Agreement (AEWA) is one of the major agreements under the Bonn Convention (Convention on Migratory Species) that aims to conserve migratory waterbirds in the African-Eurasian flyway region. Part of AEWA's policy is to identify, fund and implement priority projects in order to achieve its objectives. With a lack of information on migration and ecology of waterbirds in Africa, AEWA identified the need to improve coordination between ringing schemes within Africa and provided funding to establish AFRING (African Waterbird Ringing Scheme). Spearheaded by the Avian Demography Unit at the University of Cape Town, the initial focus of the five-year project will be to kick-start waterbird ringing in Africa with the goal to sustain and coordinate waterbird ringing programmes in the long-term. A large component of this includes training waterbird ringers throughout Africa and in September 2004 the first AFRING waterbird ringing training course was held in East Africa. We report on the results and outcome of this course here.

## COURSE ORGANISATION

### Participation

Eight delegates from four African countries participated in this first training course which was held from 19–26 September 2004 at the A Rocha Bird Observatory and Field Study Centre ("Mwamba") near Watamu, on the southern Kenyan coast. The course focussed on East Africa, as the ringing scheme in the region is relatively well established providing

a useful platform from which to launch waterbird ringing initiatives in Africa. The participants included three from Kenya, two from Tanzania, one from Uganda, and two from Ghana.

Of the trainees, the two representatives from Tanzania had never been exposed to bird ringing before, while the rest were either active ringers or had been involved in or exposed to some ringing in the past. The Ghanaians are members of the Ghana Ringing Scheme which has been running since 1991 and were invited to complement the East African component and share ideas and information from their wader ringing experiences in Ghana. Three additional participants joined the course during the week, all of them being based at the A Rocha centre where they were volunteering or carrying out post-graduate research projects. Training was carried out by DMH, CJ and HDO.

### Course outline

The course involved both theoretical and practical sessions, with emphasis being placed on practical training. Lectures and discussions took place daily and dealt with aspects such as the ethics and responsibilities of being a ringer, catching techniques, mapping, data recording and the use of data. Practical sessions were done mainly in the field and consisted mainly of mist-netting at two wetland sites, Mida Creek and Lake Chemchem. Here the trainees were shown how to extract birds from nets and how to ring, measure, age and record moult correctly. Passerine mist-netting was also done around the field study centre to provide delegates with extra opportunities in handling birds and gaining additional experience in ringing, and recording biometrics and moult.



## Wader ringing study sites and methods

The course focussed on wader ringing due mainly to Mida Creek and Lake Chemchem supporting relatively large wader populations, particularly between September and April, when Palaearctic migrants use these sites as non-breeding or stop-over sites.

Mida Creek (03°19'S 39°58'E) is a tidal, mangrove-lined inlet just south of Watamu and regularly supports up to 6,000 Palaearctic waders. It is one of Kenya's most important coastal wader sites and consequently has been designated an Important Bird Area (Bennun & Njoroge 2001). Catching took place at night on a rising neap tide. Three night sessions (20 September, 23–24 September and 24–25 September) were conducted at the creek using seven single-, two double- and seven four-panel wader mist-nets.

Lake Chemchem (03°13'S 40°02'E), situated to the north-west of Watamu is an inland freshwater lake which can dry up for 1–2 months of the year during years of significantly below average rainfall. When full, however, the lake has been known to support large numbers of duck species (e.g. White-faced Whistling Duck *Dendrocygna viduata*, Garganey *Anas querquedula*, Southern Pochard *Netta erythrophthalma* and Knob-billed Duck *Sarkidiornis melanotos*) but during the course the water level was low providing large areas of exposed shoreline and mudflats. Both Palaearctic and resident waders were seen at the lake a few days before the actual ringing session during a reconnaissance trip to the site. Only one ringing session (22 September) was conducted at the lake from 0530 to 1100. Ten single-panel and two double-panel mist-nets were used, together with a single walk-in trap.

Both sites afforded good wader catching opportunities and provided the trainees with a useful comparison of how planning a session and catching techniques can vary between tidal and standing water habitats.

## RESULTS

A total of 239 waders of 15 species was caught during the four sessions at both sites (Table 1). At Mida Creek, 209 birds of 13 species were caught. All species were Palaearctic migrants and were dominated by Curlew Sandpipers (20%), Greater Sandpipers (19%), Little Stints (17%) and Terek Sandpipers (16%). The one session at Lake Chemchem produced 30 birds, four Palaearctic species and one resident species. Dominant species included Little Stints (67%) and Curlew Sandpipers (17%). A single Wood Sandpiper and two Kittlitz's Plovers were the only additional wader species caught at the lake.

Eight birds were re-trapped at Mida Creek, all having been previously caught at the same place. These comprised six Curlew Sandpipers, one Little Stint and one Greater Sandplover. No birds were re-trapped at Lake Chemchem (Table 1).

## DISCUSSION

### Mida Creek

Wader ringing has taken place at the creek since 1998 by the A Rocha research team and over 3,500 birds of have been ringed to date. The most frequently caught species include Little Stint, Curlew Sandpiper, Terek Sandpiper and Lesser Sandplover.

The Broad-billed Sandpiper caught during the course is the second to be caught at Mida Creek in the last 20 years (D. Pearson pers. comm.) and only the fourth in East Africa (G. Backhurst unpub. data), although they have been recorded during waterbird counts conducted at the creek (Dodman & Diagana 2003, CJ pers. obs.).

The Crab Plover was aged as an immature and was probably one of the first birds to have arrived from the breeding

**Table 1.** Numbers of waders ringed and re-trapped at Lake Chemchem and Mida Creek near Watamu, Kenya. Species names taken from *Checklist of the Birds of East Africa*, EANHS, 1996.

Species	Lake Chemchem		Mida Creek	
	No. ringed	No. re-trapped	No. ringed	No. re-trapped
Crab Plover <i>Dromas ardeola</i>			1	
Ringed Plover <i>Charadrius hiaticula</i>	2		7	
Kittlitz's Plover <i>C. pecuarius</i>	2			
Lesser Sandpiper <i>C. mongolus</i>			25	
Greater Sandpiper <i>C. leschenaultii</i>			40	1
Grey Plover <i>Pluvialis squatarola</i>			4	
Little Stint <i>Calidris minuta</i>	20		37	1
Curlew Sandpiper <i>C. ferruginea</i>	5		42	6
Sanderling <i>C. alba</i>			2	
Broad-billed Sandpiper <i>Limicola falcinellus</i>			1	
Bar-tailed Godwit <i>Limosa lapponica</i>			4	
Whimbrel <i>Numenius phaeopus</i>			2	
Common Greenshank <i>Tringa nebularia</i>			1	
Wood Sandpiper <i>T. glareola</i>	1			
Terek Sandpiper <i>Xenus cinereus</i>			35	
<b>Site totals</b>	<b>30</b>	<b>–</b>	<b>201</b>	<b>8</b>
<b>Total number of birds caught</b>		<b>30</b>		<b>209</b>



grounds along the Red Sea and Persian Gulf coasts (Urban *et al.* 1986). Up to 1,040 birds or nearly 1.5% of the estimated global population spend the non-breeding season at the creek (Dodman & Diagana 2003, CJ pers. obs.) and it is not uncommon to catch these birds during this period.

Greater and Lesser Sandplover are relatively common migrant waders at the creek and are frequently caught during wader ringing sessions (CJ unpubl. data). Other less frequently caught Palaearctic migrants which were netted during the course included Bar-tailed Godwit and Whimbrel.

### Lake Chemchem

Only one other wader ringing session has ever taken place at this lake – by the A Rocha research team in 2003, which produced mainly Little Stints but also Wood and Common Sandpipers.

The lake produced the only catch of a resident wader during the course, two Kittlitz's Plovers. Spur-winged Plover and Black-winged Stilt were present at the lake, the latter in relatively large numbers (~50 birds), but none were caught.

Wood Sandpiper was the only additional Palaearctic wader caught and highlights this species preference for freshwater rather than coastal wetlands.

### Course overview

The structure and implementation of the course proved to provide adequate training for the delegates, and although the course focussed on waders, examples from other species groups as well as general ringing principles and guidelines were emphasized. An AFRING ringers network was subsequently established which will ensure constant communication between trainees and AFRING. This network is planned to be extended to other stakeholders and interested parties in the future.

### Future of waterbird ringing in Africa

With the paucity of information on waterbird movements within Africa, the course addressed one of the primary concerns of waterbird and general ringing in Africa; that of a lack of suitably qualified bird ringers. Training is therefore critical in developing a strong ringing base which is needed to generate a larger ringing output. Sustaining ringing programmes in Africa in the long-term will ultimately lie in the hands of African ringers and associated regional ringing schemes, and although resources are limited, building indi-

vidual capacity through training courses can only assist in providing a starting point for this.

As waterbirds continually use the large and extensive network of wetlands throughout Africa, it will be through coordinated and regular ringing programmes that we will better understand their movements and ecology. In turn this information will help scientists and conservation managers determine how best to manage these sites for waterbirds and formulate adequate management plans for their protection.

The next waterbird ringing course is scheduled to take place in Ghana in 2005 which will be hosted by the Ghana Ringing Scheme and the Centre for African Wetlands. This will have West African focus, but hopefully with some representation from East Africa.

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