

REPORT ON FIELD WORK AT ROEBUCK BAY (26
 FEBRUARY TO MARCH 9 1996)
 or "A birdwatchers guide to the tyre depots of
 the north-west"

The 1996 North-West wader expedition began on March 2 1996 from the Broome Bird Observatory. It was arguably the largest group of wader enthusiasts and leading shorebird authorities from around the world to gather at Broome for an extended 8 week migratory wader catching and banding exercise. Woodvale Wetlands and Waterbird staff have been involved in some way in these projects since 1981. The main purpose of our involvement this year was to participate in the studies of the interaction of benthic invertebrates and shorebirds of Roebuck Bay led primarily by Dr. Theunis Piersma from the Netherlands Institute for Sea Research. Our presence was made possible by the contribution from training funds of a return air fare to Broome.

It was also important that there were participants in the expedition from Western Australia and specifically CALM to complement the many overseas and interstate participants. Amongst the total of 63 expeditioners there were likely to be two other Western Australians and no other participation from CALM. With the receipt of the funds from Training Branch Technical Officer Alan Clarke of the Wetlands Group was also able to participate at the end of the expedition and ensure the safe return of CALM equipment.

The Melbourne cannon netting equipment was transported free by Myer to their Cannington depot and transported, for the last time hopefully, to Broome with the CALM Toyota Diesel FourRunner (read "firebreathing blancmange") and the ancient but essential Wetlands tandem trailer. This magnificent combination trundled the tonne or so of cannon netting excrement along the great Northern highway at breath taking speeds often leaping into top gear on steep descents. The two new trailer spares were shuffled between axles to periodically share and reduce the pain experienced by the other four tyres. During the trip assistance with driving was received from a 200cm 150kg (estimates based on subjective assessment) South African ornithologist Tony Tree and a 100cm 50 kg German wader enthusiast, Gabriele Muller. Balancing the load in the fourrunner was almost as difficult as balancing the climate control. Gabriele spent most of the trip swathed in blankets and parkas in spite of the almost non-existent airconditioning and 40+C heat. The highlight of the journey was the very accurate measurement of the vehicles fuel capacity at 595.5 kms and warm friendships made with naked truck drivers doing the Hedland-Derby run who offered assistance with the bleeding process.

An important census of the waders and an assessment for suitable cannon net and mist net catching sites were carried out at Cargill Salt at Port Hedland. During this survey a flock of 2000 Banded Stilts was closely examined by telescope for leg flags with a positive result of 3 yellow leg flags. It was interesting to note that all three first year birds had half developed breast bands and about 60% of the flock also had at least some partial development of chestnut breast bands in spite of being in a non-breeding state. At the time this was the only confirmed sighting of flagged stilts in the Pilbara from the 1995 Lake Ballard/ Marmion nesting effort in the Eastern Goldfields.

At the Broome Bird Observatory preparations were made for the catching and banding program with the cleaning and setting up of cannon nets and equipment. A generator for use at 80 Mile Beach and boat and motor for the mud sampling were borrowed from the Broome CALM office. Many thanks Allen Grosse.

Cannon netting activities dominated the first three days at Broome. Theunis Piersma arrived and we discussed the possibilities for a monitoring program for benthic invertebrates. This would involve local Broome people, the CALM office and myself in a supervisory role. Danny Rogers, a wader enthusiast and member of the RAOU HANZAB team was approached by Theunis to consider a PhD project on wader food and feeding in Roebuck Bay. This project may well proceed with Allen Grosse offering to provide some of the operating costs, and the application for a salary through an ARC grant. During the ensuing week Theunis, Petra De Goej, Danny Rogers and I spent considerable time at the conclusion of cannon netting activities, assessing various sites for invertebrate populations and suitable monitoring sites. A number of samples were collected from four sites at Crab Creek, BBO, Fall Point and Quarry Beach. Theunis will provide identifications at the Netherlands Institute for Ocean Research at Texel NL for voucher specimens and arrange for the samples return.

The cannon netting resulted in a catch of about 2000 birds in total for the first five days in very hot and humid conditions. A few of the participants suffered heat exhaustion having had little time to acclimatise from the northern hemisphere winter.

The method employed to reduce the heat stress on captured waders included elaborate shading, removal of the top layer of sand before erecting keeping cages, provision for air flow beneath shade structures, rapid processing of birds and careful selection of species and numbers for data processing. The ability of the net firer to select small groups of birds for capture was paramount. Not only for the bird's safety but many of the participants in the early stages had no experience handling birds and needed time to adjust and develop skills before being thrust into a large catch with all the associated panic and confusion. At most times there was

a minimum of 25 participants to assist with removal of birds from the net.

The expedition was well organised and ultimately very successful. A total of nearly 9000 waders and terns were banded and flagged. About 90% of the birds captured were processed for biometric data. One recapture, a Terek Sandpiper, was reported from China during the expedition and appears to have flown the several thousand kms from Roebuck Bay in 7 days. The catch mortality was relatively low and well below acceptable limits. The involvement of two CALM personnel was valuable from a CALM perspective, enhancing the Departments reputation with the local and overseas participants.

Grant Pearson

grantp@wood.sid@calm