

# Australasian Wader Studies Group

*A special interest group of BirdLife Australia*

## NORTH-WEST AUSTRALIA WADER and TERN EXPEDITION 2022

MONDAY 14 February to SUNDAY 6 March 2022.

### JOINT LEADERS

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# Australasian Wader Studies Group

## North-west Australia Wader & Tern Expedition 2022

**MONDAY 14 February to SUNDAY 6 March 2022.**

### Background

The AWSG was formed in 1981 as a special interest group of BirdLife Australia. Its objectives are:

- To monitor wader populations through a program of counting and banding to collect data on changes on a local, national and international basis.
- To study the migrations of waders through a program of counting, banding, colour flagging and collecting of biometric data.
- To instigate and encourage other scientific studies of waders such as feeding and breeding studies.
- To communicate the results of these studies to a wide audience through the *Stilt*, the *Tattler*, other journals, the Internet, the media, conferences and lectures.
- To formulate and promote policies for the conservation of waders and their habitat, and to make available information to local and national governmental conservation bodies and organisations to encourage and assist them in pursuing this objective.
- To encourage and promote the involvement of a large band of amateurs, as well as professionals, to achieve these objectives

North-west Australia was “discovered” to be one of the prime locations in the world for wading birds during the first RAOU (BirdLife Australia) “Expedition” there in August/September 1981. It is now known to have a peak population of nearly 750,000 waders, with a huge variety of species (50, nearly a quarter of the 214 species of waders worldwide). It has also proved to be an ideal place for wader studies with a warm, sunny, dry climate for 10 months of the year (usually!). Furthermore there is easy accessibility to the principal wader areas at Roebuck Bay, Broome (150,000 birds) and 80 Mile Beach (500,000 birds).

### 80 Mile Beach Marine National Park – established 29<sup>th</sup> January 2013.

- The Eighty Mile Beach Marine Park is the 13th marine park declared in Western Australia
- The Park has 3 sanctuary zones, 1 recreation zone, 7 special purpose zones and 1 general use zone
- For more information about 80 Mile Beach Marine Park:
- <http://parks.dpaw.wa.gov.au/park/eighty-mile-beach>.



The area between Wirkinmirre (Willie Creek) and Warrawan (Barn Hill) are the traditional lands of the Yawuru people. We respectfully acknowledge the past and present traditional owners of the land on which we will be conducting research and the people we will be working alongside the Yawuru people.

The areas around Anna Plains Station are the traditional lands of the Karajarri and Nyangumarta people. We respectfully acknowledge the past and present traditional owners of the land on which we will be conducting research and the peoples we will be working with , the Karajarri and Nyangumarta people.

## **NWA 2022**

A series of special expeditions has taken place over the years to undertake comprehensive long-term studies of the waders and terns in N.W. Australia. A further major N.W. Australia Wader and Tern Expedition will take place from:

## **MONDAY 14 February to SUNDAY 6 March 2022.**

The timing of the tides means that in 2022 the expedition will begin on a Monday and end on a Sunday. Participants are of course still welcome to arrive early or stay afterwards if they wish, but please would all persons plan to participate in the **full** expedition. Expedition leaders will arrive several days earlier to manage logistics and prepare for the trip to Anna Plains, if you are coming early we would appreciate your help.

This document is intended to provide relevant information to prospective participants. A large number of people (20-25 ideally) will be needed if a satisfactory team is to be available throughout this 3-week period. You are strongly encouraged to come and take part. Details of how to contact the expedition leaders are given at the front of this note.

## Project aims

### Conservation of shorebirds and terns

1. Monitoring of annual breeding success of migratory shorebirds via the percentage of juveniles in the population in their non-breeding areas (wintering areas)
2. Obtain annual survival estimates of key species via recapture of birds already carrying bands
3. Obtain information on the site faithfulness and use (e.g. sex differences in migration terminus) of non-breeding sites by migratory shorebirds and terns by the recapture of birds already carrying bands or flags and
4. Obtain more information on the migratory pathways and breeding areas of terns and shorebird species by marking birds with unique leg flags that can be observed and reported from throughout the flyway including across Australia.
5. Continue to collect biometric information on birds.

### Special Focus 2022:

#### Satellite Tracking of Oriental Pratincole

The Oriental Pratincole (*Glareola maldivarum*) is the most numerous migratory shorebird on the Australian non-breeding grounds, but there is an almost complete lack of knowledge of this species, not only in terms of movements within Australia but also there was very limited information about migration routes and breeding sites.

Over 2019/20 the AWSG have lead world-first research on the tracking of this species. The team have recorded the migration paths of the individuals, including one bird that crossed over from the East Asian-Australasian Flyway to the Central Asian Flyway (Figure 1).

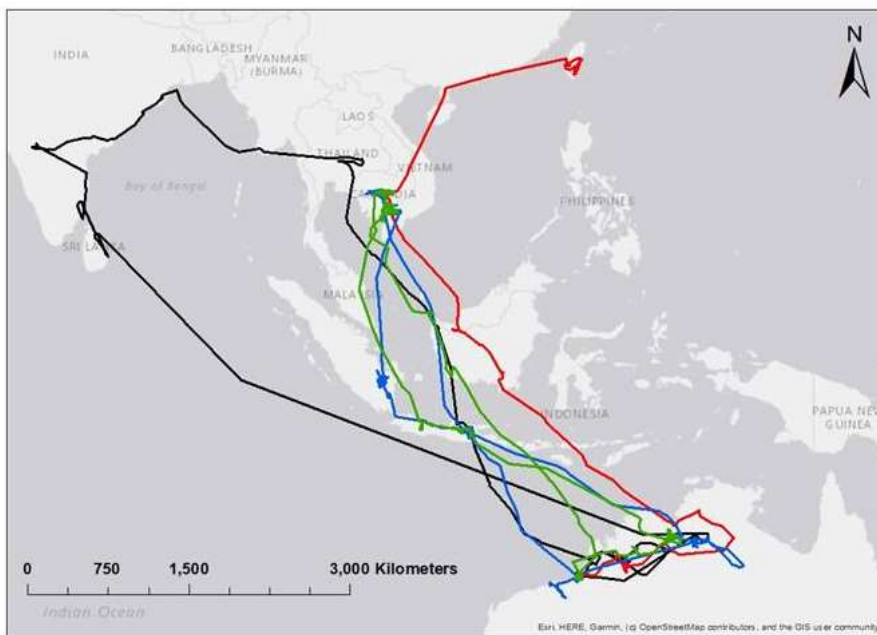


Figure 1. Migration tracks of five tagged Oriental Pratincole in the East Asian-Australasian Flyway (Image credit: Grace Maglio and Amanda Lilleyman)

We know that Oriental Pratincole spend less than 12 weeks in Australia for the nonbreeding season. This differs from many other migratory shorebirds in the flyway and we are yet to understand the drivers that influence the movement of these birds. We have many more questions about these birds that we would like to answer, but to do this, we need to track more individuals so we can confirm the migratory movements of this species.

## The aim

We aimed to capture Individual Oriental Pratincole to apply satellite tag devices (Figure 2) to birds and track their local movements. This methodology will provide us information about daily movements of birds, collect behavioural data, and also data on the timing of migration and distances travelled from the non-breeding grounds within Australia. These devices are sophisticated enough to also give us long distance movements, thus we will learn about their migration ecology outside of Australia.

We are planning the next phase of the project to involve observational studies of nesting birds and a comparison of threats that birds face across the expansive breeding grounds where Oriental Pratincole are found.



**Figure 2.** An Oriental Pratincole with a solar-powered satellite tag device attached to the rump of the bird. This bird is wearing the device as a leg-loop harness. The device sits above the uropygial gland, which enables the bird to still access this gland for oil secretion and preening. (Photo credit: [www.wingthreads.com](http://www.wingthreads.com)).

## Background

Dr Clive Minton's motivation when starting this project was simple, the almost total lack of knowledge about Australia's most numerous shorebird species. During the 2019 NWA expedition, under Clive's guidance and enthusiasm, five 2-gram Microwave Telemetry Inc. Platform Transmitter Terminals (PTTs) were fitted to Oriental Pratincole caught on Eighty Mile Beach at Anna Plains Station. Of those birds, one known as 'SUN' was tracked to Taiwan before the tag failed, reasons unknown, 'SHE' and 'SEC' were tracked to their Cambodian breeding grounds and the fourth bird, remarkably and totally unexpectedly, made its way to India becoming the first Australian wader to be recorded breeding in India.

## Avian Influenza and pollutants

The project in NWA is part of a larger study by Deakin University evaluating the extent, structure and determinants of AIV prevalence and genetic diversity in different ecological contexts. In NWA this focusses on shorebirds in tropical north-west Australia. Using AIV prevalence and genome sequence data the project aims to determine:

- what AIV serotypes, lineages, and reassortants are present and how they change through time,
- how the viruses are connected to global AIV diversity,
- whether prevalence differ between individuals (based on age, sex, condition, pollution levels) and what environmental factors (e.g. pollution) shape these differences.

These scientific aims translate into the practical aim of catching and sampling (cloacal and buccal swabs for AIV prevalence; blood for prevalence of antibodies against AIV and pollutants) waders and terns and notably long-distance migratory waders, which are considered the second most-important AIV-reservoir in Australia and globally.

The pollutant data will allow linking species-specific pollutant levels to population dynamic parameters (i.e. recruitment or juvenile percentages, survival from banding data analysis, count data)

**As a participant:**

<b>What you are expected to gain...</b>	<b>What you are expected to give...</b>
<ul style="list-style-type: none"> <li>• Hands on experience of cannon netting and wader banding</li> <li>• Be part of the team of one of the world's most long-term wader research programmes (Commenced 1981 – 39 years)</li> <li>• Wonderful opportunity to mix with, and learn from, a team of both local Australian and overseas participants with different backgrounds and experience</li> <li>• Unique bird (and other wildlife) watching experience in remote NW Australia (300+ species on BBO's list)</li> <li>• Experience of living on an active cattle station (Anna Plains) – 400,000 hectares.</li> </ul>	<ul style="list-style-type: none"> <li>• Your readiness to work hard under sometimes hot and humid weather conditions</li> <li>• Your willingness to live with, learn, share and be a contributor to the team</li> <li>• Your financial contribution to the running of the Expedition and wader research in NWA.</li> </ul>

**Itinerary:**

The proposed itinerary for the 3-week period of fieldwork is attached. This can be summarised as:

Broome/Roebuck Bay	4 days
80 Mile Beach/Anna Plains	11 days
Travel between locations	2 days
Rest days / scanning/ bush bird mist netting	2 days

A typical catch day consists of setting the net and keeping cage up at the start of the day, followed by the catch and processing of birds on the beach. In the afternoon, participants are expected to help with gear maintenance and data entry on a rotation basis, or to enjoy their free-time birdwatching and exploring the surrounding area before the communal dinner. Presentations/talks from participants will occur on some evenings after dinner.

## Costs:

The Expedition has been a financially self-sustained programme over the past years mainly relying on financial input from each of the participants and generous support from the Western Australian Department of Biodiversity Conservation and Attractions.

The financial input from each participant not only contributes to the daily living and transportation expenses during the 3-week period, but also directly contributes to the expenses on consumable field equipment such as black powder and electric fuses for cannons, engraved leg flags and even part of the purchase costs of satellite transmitters, and satellite data downloading costs, to further research on wader migration.

Participants will be responsible for the costs of travelling to join the expedition at Broome or 80-Mile Beach.

When in N.W. Australia costs for each participant will be:

Item		Cost	Cost (20 days)
a	Daily cost of food and catering service	\$28 per day	\$560
b	Daily supplies laundry and consumable field equipment costs e.g., black-powder, engraved flags, solvent, radios etc	\$21 per day	\$420
c	*Transportation costs (hire of 4WD, fuel, servicing, and cleaning/repair vehicles, tyre repair)	\$43 per day	\$860
d	Camping fee at Anna Plains plus marquee hire	\$15 per day for 12 days	\$180
			\$2020#

\*If volunteers bring a 4WD that is available for use including on the beach at Anna Plains this charge will be waived. All fuel costs during the expedition and cost of one service and cleaning will be met from Expedition funds.

**#ADDITIONAL COSTS TO VOLUNTEERS:** Camping or accommodation costs at Broome Bird Observatory are paid directly to BBO and not included above. Transportation to and from Broome is the volunteer's responsibility.

**Accommodation bookings should be made directly with the BBO; a deposit may be required** PHONE: +61 8 9193 5600 E-mail [broome@birdlife.org.au](mailto:broome@birdlife.org.au)

At Broome you can book an air-conditioned room at the Bird Observatory or you can camp, indoor accommodation is recommended. For camping see comments on the need for quality tents and to keep electronic equipment indoors.

Items a-d need to be paid 10 days prior to the commencement of the expedition. Payment amounts will be notified to participants with banking details attached about 3 weeks prior to the start of the expedition.

Payment to be made by bank deposit in AUD. A non-refundable deposit may be imposed for late expedition cancellations within 7 days, as some communal food and other supplies will need to be ordered and purchased in advance and cannot be returned.

Those who cannot use bank transfer, i.e. overseas participants, can pay with cash at the start of the expedition. Queries regarding finances should be directed to

Prue Wright [prue327@gmail.com](mailto:prue327@gmail.com)

BBO accepts cash, credit or direct debit cards (a small surcharge applies to credit card payments).

All participants, other than local residents, will be expected to be full members of the team, residing at the one location. "Self catering" is not permitted. As far as possible dietary requirements will be accommodated, however please note Broome is a remote town with limited types of food are available.

### **Travel:**

Broome is easily reached by air from Perth and Darwin. Flights from Melbourne, Adelaide or Sydney usually go via Perth during February. Connections from Queensland (Brisbane or Cairns) usually go via Darwin or Perth. Buses also run from Perth and Darwin.

Some participants will be driving from Melbourne to Broome and return. If you would like to travel by car please contact Prue Wright. The journey takes between six and seven days each way.

Prue Wright [prue327@gmail.com](mailto:prue327@gmail.com)

People are strongly encouraged to come for **the whole period of three weeks**. This maximises efficiency with everyone becoming fully integrated into the team. It maximises enjoyment and benefits, and enables everyone to contribute as well as to learn. It also leads to a more effective team if changes in personnel are minimal.

Although the expedition will formally start on 14 February participants are welcome to arrive earlier. The main "briefing" for the team will take place that evening.

Would all participants please ensure that the expedition leaders are aware of your specific arrival and departure details well in advance (contact names are at the front of this document). All airline or bus travellers will be met on arrival at Broome airport. BBO is 25 km away from Broome and there is no public transport to BBO.

Emails should be addressed to BOTH

Roz Jessop [moonbird39@gmail.com](mailto:moonbird39@gmail.com)  
Tegan Douglas [Tegan.douglas@birdlife.org.au](mailto:Tegan.douglas@birdlife.org.au)

### **Membership of AWSG:**

You are encouraged to join AWSG if you are not already a member. As a member of AWSG you will be able to follow other research results from throughout the flyway in the AWSG publication *Stilt* and in the periodic newsletter "*Tattler*". An application form is attached.

### **Climate:**

February is in the "wet" season in N.W. Australia with day temperatures reaching 32-35°C and night temperatures of around 25°C. There is still much sunshine even though it is cloudier than in the dry season. Heavy thundery showers occur almost daily in February, and there can even be a cyclone (as in February 2018). Humidity may also be very high.

### **Clothing:**

Light clothing (e.g. hiking gear) is ideal for daytime wear. Light long sleeved shirt and long trousers should be worn in the field. Several sets of clothing are required to cater for the tropical environment and the high chance of getting sandy and muddy.

A wide-brimmed hat and sunscreen/blockout are essential. Make sure your hat can be retained in a strong breeze. Sunglasses are required to reduce glare.

Bring your swim wear – there is a pool in Broome and at Anna Plains. You may also be able to go swimming in the ocean depending on the stinger situation (deadly jellyfish – see <http://www.broome.wa.gov.au/comm/jelly.htm>) – variable with weather conditions.



It may also be necessary to have some warmer clothing as a tropical storm can drop the temperature significantly. Although it is not uncomfortable getting wet in such a warm climate a lightweight waterproof top is advisable and an umbrella can be helpful!

There are good laundry facilities in Broome, and these are visited every day (communal laundry bag so put your initials on your clothing!) when we are based at this location (one of our shared tasks). At 80 Mile Beach we are also able to use laundry facilities at the station so daily washing of clothes is practicable (shared task). However, drying clothes in the wet season can be a problem, so bring enough changes of clothing – please avoid denim jeans and other slow drying materials.

Light footwear only is necessary for day to day wear at BBO and Anna Plains.

Because we frequently have to run into the edge of the sea when the net is fired and occasionally wade around in mud and water on inland waters on Roebuck Plains/Anna Plains, one set of footwear should be “old” i.e. suitable for regular inundation. If you are planning on going bush bird banding appropriate enclosed protective footwear is required.

### **Catering:**

All the main cooking utensils will be supplied by AWSG or loaned to the expedition by the BBO. All food is purchased and organised communally by an out-sourced catering organiser. Participants are expected to help in some basic food preparation, washing up (about one day in every four days) and taking clothes to the laundromat (when in Broome) on a rostered basis

Please bring your own water bottle (about 500ml to one litre). A small plastic lunch box to hold your lunch is also needed. Extra water will be taken in the field to replenish your bottles. Cool boxes will also be provided to keep lunches cold.

Those having special dietary requirements such as vegetarians, diabetics, celiacs etc, or if you are allergic to any particular food please contact Prue Wright as soon as you know you are coming so that your requirements can be weaved into the menus and appropriate food ordered. Please note that as Broome is only a small town, food choices are limited.

Prue Wright [prue327@gmail.com](mailto:prue327@gmail.com)

### **Other Things to Bring:**

#### **Camping**

Everyone needs to bring sleeping equipment, a tent or mosquito net with cover, and a towel. A light sleeping bag or even just a cotton sleeping bag liner may be sufficient. Foam rubber or an inflatable mattress, plus pillow, are highly desirable. You can purchase tents in Broome.

It may be very humid and can rain **very heavily with strong winds** at this time of year - tropical downpours from thunderstorms, so you would need a good quality, rain-proof tent.

It is strongly suggested you bring a waterproof bag/case to put your personal items such as bird books, note pads, cameras, computers, mobile phones in while camping as there is a risk of thunderstorms bringing strong winds and rain.

**A torch** should always be used when walking around at night due to the presence of snakes, scorpions and centipedes that hunt at night (other small animals not people!). A head-torch is useful for mist-netting at night.

Binoculars, telescope, camera and small tripod etc are, of course, all desirable. Anyone wishing to purchase a field guide (e.g. overseas people visiting Australia for the first time) are strongly recommended to obtain either the most recent edition of “The Australian Bird Guide” by Peter

Menkhorst, Danny Rogers, Rohan Clarke, Jeff Davies, Peter Marsack, Kim Franklin, or “Field Guide to the Birds of Australia” by Graham Pizzey and Frank Knight, or “Field Guide to the Birds of Australia” by Ken Simpson and Nicholas Day or Morcombe (compact).

Some of THESE FIELD GUIDES MAY BE PURCHASED AT THE BROOME BIRD OBSERVATORY, they can also be purchased over the web.

E-mail to check what is available: [broome@birdlife.org.au](mailto:broome@birdlife.org.au)

Mobile phone / notepad apps are also available for some of these books in the iTunes store or for android phones on the web.

### **Health:**

NW Australia is a very healthy area and climate. The domestic water is clean and potable.

Mosquitos and sandflies can be a problem, especially after spring tidal series. Repellents (“Rid” is the most popular) can be purchased in Broome. If purchasing elsewhere they should contain the chemical DEET. Flies are very occasionally known to occur in plague proportions so a “hat net” can be a lifesaver.

Because we visit farmland it is wise to ensure that your anti-tetanus protection is current before leaving home.

The mosquito borne Ross River Fever occurs throughout Australia - and preventative injections are not available - but its incidence is low. Long sleeved shirts and trousers should be worn in the early evenings and mornings and when frequenting areas such as the mangroves to avoid being bitten. Mosquito repellent with DEET should be worn. Prevention measures are highly recommended.

Crocodiles have been seen at the Crab Creek mangroves, so do not go bird watching alone at this location. Ask the BBO Wardens for advice before going to the mangroves.

You are strongly advised not to walk around bare foot on any grassed or irrigated areas due to the potential presence of hookworm (parasite). Always use footwear when outside – flip-flops or thongs or other light footwear will do for casual wear.

### **Travel Insurance:**

Overseas visitors are required to have travel insurance. We are in remote areas. Evacuation by air ambulance and possible transfer to a major hospital can be very costly. Australian participants should check that their ambulance cover is appropriate for Western Australia.

### **Contacts:**

During the expedition participants can be contacted through BBO

Postal Address:

Broome Bird Observatory,  
PO Box 1313,  
Broome, W.A. 6725.  
Australia.

PHONE: +61 8 9193 5600

E-mail: [broome@birdlife.org.au](mailto:broome@birdlife.org.au)

Mobile phones work at the BBO but can be erratic – you can text all the time but voice calls will depend on weather conditions – reception for calls is about 20-40% of the time but some days there is no reception. A 10-15min walk along the beach towards Broome often improves reception.

The BBO has Wi-fi internet connection available for Visitors there are also options for email and internet access, such as the Broome Library, MacDonald's. At Anna Plains there is mobile reception at various places around the station.

If you purchase a sim card for use in Australia it is **strongly recommended that you get a Telstra card** as other options will not work, especially at Anna Plains. There is some internet access at Anna Plains but the signal is variable and is not guaranteed.

### **Conclusion:**

It is always a great challenge trying to undertake expeditions during the hotter/wetter season in NW Australia. It is essential that we have a large and experienced team available to cope with the expected conditions. A team of 15-20 people is considered the optimum. Usually half the expedition participants are from outside Australia.

Previous wader banding or expedition experience is not essential. What is important is the readiness to work hard (when required) and be a contributor to the team (lazy/loners won't fit in!). It is a wonderful opportunity to mix with, and learn from, others with different backgrounds and experience.

Would anyone receiving this "brochure" (sent to recent expedition participants and others who have already expressed interest in coming) please try and indicate, to Rob and Roz, their likely availability and intentions for 2022 **as soon as possible**. This doesn't need to be a firm commitment at this stage - just an indication of the most likely/desirable situation. Such information will greatly assist the leaders in planning – especially in obtaining an adequate cover throughout the period and in securing appropriate transport etc. So please take action now just to give us an idea. Then in due course, advise Roz Jessop of specific details and travel arrangements.

Roz Jessop [moonbird39@gmail.com](mailto:moonbird39@gmail.com)

We hope to see you on NWA2022

Joint Leaders:

Robert Bush, Rosalind Jessop, Tegan Douglas and Prue Wright.

**N.W. Australia 2022 - Locations Schedule**

DATE	DAY	HIGH TIDE TIME	HEIGHT	COMMENT (9 catching days on beach at 80 Mile – 4 catching days a Roebuck Bay)
14-Feb	Mon	10.16	7.22	Arrive at BBO - Evening briefing
15-Feb	Tue	10.45	7.84	Travel to Anna Plains – Recce of 80-Mile Beach in afternoon + plains
16-Feb	Wed	11.12	8.39	First beach catching day - Between 1-20 south
17-Feb	Thurs	11.39	8.85	Catching 1-30 south
18-Feb	Fri	12.05	9.22	Catching 30-40 south
19-Feb	Sat	12.31	9.45	Catching 30-40 south
20-Feb	Sun	12.59	9.64	Catching 30-40 south
21-Feb	Mon	13.26	9.62	Catching 30-40 south
22-Feb	Tues	13.54	9.40	Catching 30-40 south
23-Feb	Wed	14.25	8.98	Catching 30-40 south
24-Feb	Thurs	14.58	8.36	Catching 1-30 south
25-Feb	Fri	15.38	7.6	Difficult to catch on beach – focus on plains
26-Feb	Sat	17.07	6.8	No Beach Catch – focus on plains – day off
27-Feb	Sun	07.43	6.00	Travel back to BBO
28-Feb	Mon	09.34	6.91	Day off- recce- set shade in late afternoon
1-Mar	Tue	10.16	7.89	Catching Roebuck Bay
2-Mar	Wed	10.51	8.74	Catching Roebuck Bay
3-Mar	Thurs	11.24	9.39	Catching Roebuck Bay
4-Mar	Fri	11.54	9.80	Catching Roebuck Bay
5-Mar	Sat	12.22	9.99	Packing up
6-Mar	Sun	12.50	9.96	Depart

7.0 minimum tide height required for cannon net catching on beaches

**Catching Days:**

Broome – Roebuck Bay - 4 days

80 Mile Beach – 9 days plus catching on the plain