

Field Guide to Volunteers at Fowlers Gap or Sturt National Park

Physical and psychological demands of this expedition; appropriate exercise for volunteers preparing for the project

We would rate the conditions as challenging. While no specific physical conditioning is necessary as preparation for the project, volunteers should have a good level of physical fitness. Volunteers should expect some disruption of normal sleep patterns and may find themselves sleeping during the day after a night's observations. Volunteers must be prepared for days in excess of 38°C (100°F) in January/February and nights around 0°C (32°F) in June/July.

Volunteers must have the ability to walk long distances (~ 5 km or more) across often rocky ground. Tasks may often be performed in isolation except for a radio-link to the project coordinator and/or the expedition accommodations.

Medical Advice

Personal limitations that would make participation difficult; immunizations; other health precautions; medical facilities

It would be advisable for those persons with acute allergies (e.g. to dust), phobias (to heights, spiders, snakes, solitude) and illnesses of a recurrent nature to avoid these expeditions. Persons with a marked hearing impairment cannot adequately participate in any radio-tracking program. No immunizations are required but immunization for tetanus is recommended; check whether you require a booster.

Medical services to Fowlers Gap are provided by the Royal Flying Doctor Service which has a base in Broken Hill. The station maintains a fully equipped medical kit supplied by the Service with general first aid supplies, antibiotics, drugs and general medicines. Emergency medical advice is available by phone at any time and evacuation by air can be quickly arranged. Broken Hill has a fully equipped general hospital. Medical services at Sturt National Park are similar. There is a RFDS clinic in Tibooburra (27 km distant from the accommodations) with a duty Sister. Tibooburra has an all-hour, all-weather airstrip to facilitate medical evacuation.

Volunteers are personally responsible for obtaining adequate travel and medical insurance for the full duration of their expedition. We will require proof of this insurance before accommodating any volunteer.

Field Communications

How volunteers can be reached by mail, telephone, fax or e-mail.

Mail addresses:

Fowlers Gap

Your name

UNSW Arid Zone Research Station,

Fowlers Gap,

via Broken Hill, N.S.W. 2880,

AUSTRALIA

Sturt National Park

Your name

C/- NSW National Parks & Wildlife Service

Mt Wood

via Tibooburra, NSW 2880

AUSTRALIA

Mail for Fowlers Gap is delivered to and collected from the station two times per week. Mail for Mt Wood is delivered with the same frequency to Tibooburra. Collection from Tibooburra will be irregular and probably not more than once per week. One should expect an air mail letter from Europe to take at least a week if not two to arrive.

Volunteers at Fowlers Gap must pre-purchase stamps and envelopes before arriving at the station. Volunteers at Sturt National Park can buy stamps and envelopes in Tibooburra as it has a post office.

Telephone and Fax:

Fowlers Gap

Phone: +61-8-8091-2511

Fax: +61-8-8091-2510

Local (i.e. Broken Hill), national and international calls can be made on the telephone system but all calls must be paid for before in ADVANCE. You can obtain pre-paid calling cards from telecommunications companies in Australia (e.g. Telstra). You can also obtain charge cards for calling home from your telecommunications company. Fowlers Gap is on central standard time which is GMT+9.5 hours. Callers from Europe must ring during the day or early evening in AUSTRALIA. They should select the extension relevant to your accommodation (usually 4) from the spoken menu. Messages will be taken if communicated in English.

Sturt National Park

Phone: +61-8-8091-3541

Fax: +61-8-8091-3541

Local (i.e. Broken Hill), national and international calls can be made on the telephone system but all calls must be paid for in ADVANCE. You can obtain pre-paid calling cards from telecommunications companies in Australia (e.g. Telstra). You can also obtain charge cards for calling home from your telecommunications company. Mt Wood is on eastern standard time, which is GMT+10 hours. Advise callers to contact you during the evening in AUSTRALIA as you will be in the field during the day and will not want your sleep disturbed in the early AM. The phone has an answering machine for messages.

E-mail and Internet Access

Fowlers Gap

You can be contacted by e-mail at Fowlers Gap on FowlersGap@unsw.edu.au. Your name must be in the subject line. You can receive and send e-mail using an internet mail service (e.g. Hotmail) but you must pay for the connection time via a broadband 2-way satellite link.

Sturt National Park

There is internet access via a broadband satellite link at Mt Wood for volunteers. You must pay for your connection time. There is also a TeleCentre (like an Internet Café) in Tibooburra where email can be accessed during occasional trips in Tibooburra. You need an account on a mail server that can be accessed via a web browser (e.g. Hotmail). Advise correspondents that your replies to their email may be irregular.

Field Supplies

Clothing and equipment volunteers should bring; type and weight of clothes; baggage weight or equipment limitations

Winter teams:

- down sleeping bag*
- pillow slip*
- heavy walking boots
- warm clothing suitable for mild days and very cold nights
- beanie (cap)
- gloves
- waterproof/wind-proof jacket
- personal toiletries
- towel
- flashlight (torch)
- alarm clock or wristwatch with alarm facility\
- waterbottle (1L or more)
- small backpack or tote bag
- binoculars (highly recommended)
- gaiters (sock protectors**) to protect ankles and shins from thorny plants (highly recommended).

Summer teams:

- sleeping bag*
- sheet*
- pillow slip*
- heavy walking boots
- light clothing suitable for hot climate
- broad-brimmed hat
- waterproof jacket
- swimsuit
- sunglasses
- sunscreen lotion
- insect repellent
- fly/insect net**
- personal toiletries
- towel
- flashlight
- alarm clock or wristwatch with alarm facility
- waterbottle (1L or more)
- small backpack or tote bag
- binoculars (highly recommended)
- gaiters (sock protectors**) to protect ankles and shins from thorny plants (highly recommended).

* Bedding is supplied at Fowlers Gap but these items are useful for additional comfort and travel

** Can be purchased locally in Broken Hill

Spring and autumn are periods of mild-warm weather and so a combination of summer-winter clothing is appropriate. There is often a lot of insect activity in these milder periods and so insect repellent is useful. In any season weather can turn cold and so a warm jacket is essential.

Note: the most commonly forgotten item is a towel. Please remember it or purchase one before joining the expedition.

Clothes in general should be utilitarian and not purely fashionable. You should expect them to become at least dirty but possibly torn and stained. For this reason some volunteers elect to wear-out old clothes on the expedition.

There is no baggage weight limit. Note that all power sources are 240 VAC, 60 Hz, and the Australian plug is of a unique 3-pin design incompatible with the UK. You can purchase an adaptor at Australian airports, souvenir or electronics shops (the latter are cheapest).

Some supplies can be purchased on irregular trips to Broken Hill or Tibooburra or ordered by fax one-week in advance from the main supermarket in Broken Hill. Volunteers should aim to be self-sufficient for all personal items and food and plan in advance - you cannot go to a corner store at whim!

Past volunteers have found that an extra pair of glasses, a hat with ties (because it can be very windy), moisture lotion, and facial tissues are useful items to bring. Some past volunteers were unprepared, in particular, for cold weather. Note also that in spite of the arid climate, it can rain and if so conditions become very muddy.

Accommodation

Both sites provide you with a unique experience to explore parts of the Australian outback where normal tourists cannot go. You receive research training and gain research experience from professional academic staff who can charge \$100-200 per hour for such services. You are also assisted with your travel between Broken Hill and the Fowlers Gap or Sturt National Park and whilst on the site. The commercial value of this experience and training is several hundreds of dollars per week.

We ask that you make a modest investment towards the costs of providing these services by paying for your accommodation on a cost-recovery basis. For this you receive private accommodations that you at most share with a few volunteers and/or students and for which you pay a student rate at a significant discount below standard rates. You should budget about \$70 per week for accommodation. Rates for sharing and providing services to the facilities may attract additional discounts by negotiation. Note for comparison that the typical backpackers' accommodation rate in Australia is \$20 per night in dormitory accommodation.

Catering

You are required to prepare and cook your own food at both locations and keep the premises clean. In shared accommodation you may arrange these duties with your housemates.

Occupational Health and Safety

You will be required to undergo an induction at both sites on Occupational Health and Safety. You should review the following information that has been prepared for Fowlers Gap but is generally relevant to conditions at Sturt National Park. You will also be required to read and agree to a resident's policy document which will be provided on arrival. You are also strongly encouraged to provide details of next of kin and chronic medical conditions and allergies on a standard form (Fieldwork Medical Questionnaire) on arrival. This information assists in any medical emergency.

Fowlers Gap Field Work Safety Guidelines

Communications

All persons working outside the homestead complex must carry a UHF radio capable of transmitting and receiving to the base station in the Office. A 1 watt transmitter is adequate within the range of hills bounding the homestead (i.e. in a 1-2 km radius provided the homestead is visible from the point of transmission). A 5 watt transmitter is necessary for activities at a greater range than the immediate environs of the homestead. A satellite mobile phone is recommended for the remote northern parts of the station.

- The UHF channel is **16**
- Always test the transmission and reception of the UHF transceiver before departure
- Always check that you have adequate battery life for an extended conversation.

- Always inform a staff member or a colleague remaining resident on the station of your intended destination, route of travel and likely time of return.

Hazards

Concealed holes, unstable slopes, rocky surfaces

A large part of the Fowlers Gap landscape is covered with stony surfaces and/or cracking clay soils. These represent hazards that may cause ankle or knee injuries or falls. Sturdy boots with strong ankle support are a necessity for walking across the Fowlers Gap landscape.

Hot Environment/UV

Fowlers Gap regularly experiences high temperatures and intense UV radiation from September through April with the maximum in January-February. You should protect exposed skin with a 15+ or better sunscreen and cover most skin with clothing having a high UV protection factor. A broad-brimmed hat should be worn in the sun as well as sunglasses with a maximum UV protection factor.

AVOIDING HEAT STRESS

- Wear light weight, light coloured, loose porous natural fibre clothes.
- Drink adequate water for conditions (up to 1 Litre per hour).
- Avoid alcoholic, caffeinated or carbonated (soft) drinks.
- Don't take salt tablets unless prescribed by a doctor.
- Avoid heavy protein foods (eg meat, dairy products) which increase the body heat and fluid loss.
- Spend as much time as possible in air conditioned buildings and avoid the hottest part of the day (12 – 4 PM summer time).
- Use shade (e.g. red gums along ephemeral creeklines) where practical.
- Wear a hat and sunscreen as sunburn limits your ability to cope with heat.

Dehydration/Hyponatremia

Under hot temperatures (> 30 °C) the average person uses about 1 litre of water per hour. The very low humidity on Fowlers Gap leads to rapid evaporation of sweat and so one may not be aware of this water loss. Clean drinking water to meet this requirement plus a reserve should be carried by persons working in the field at all times. If you are feeling dizzy or nauseous you probably need some additional electrolytes such as provided by Staminade. Water infused with a fruit cordial will often prevent nausea accompanying high consumption. Note that it is possible to drink **too much** water and to induce a condition known as *Hyponatremia* (lowering of salt levels in the blood). The initial symptoms of nausea and dizziness are similar to those of dehydration. The best advice is to drink when you feel thirsty and be aware of how much you have drunk. If the weather is humid then your consumption should be lower as you evaporate less sweat.

HEAT STRESS

Symptoms:

- Unusual discomfort and heat cramps.
- Heavy sweating, tired and thirsty, irritable, loss of appetite, prickly heat rash, moist cool skin, muscle cramps.

Treatment:

- Drink water.
- Have a cold shower or bath
- Lie in a cool place with legs supported and slightly elevated
- Massage cramping muscles, apply ice packs and drink glucose/sweet drinks - **NO SALT**

HEAT STROKE**Symptoms:**

- Confusion, headache, nausea, dizziness
- Skin flushed, hot and unusually dry
- Dry swollen tongue
- Body temperature 40°C +
- Rapid pulse at first and then weaker
- Deep unconsciousness may develop rapidly

Treatment:

- Lay victim in a cool place and remove outer layer of clothing.
- If unconscious, place person in recovery position and check their breathing and circulation.
- Cool victim rapidly by applying cold water or wrap in a wet sheet and fan them (keep wet).
- When conscious give sips of water.
- Call for medical assistance from Royal Flying Doctor Service

Airborne objects

A feature of warmer temperatures is the transmission of willie willies (dust devils, twisters) across the landscape which carry dust and debris in the swirling wind. You should take evasive action if you are in the path of such an unstable air mass.

Annoying insects

Over most of the year bush flies are present on Fowlers Gap and these will settle on a person and attempt to access moisture around the eyes. Flies can transmit bacterial infections to the eyes so they are best brushed away, repelled or constrained by a physical barrier (fly net). We recommend the latter as it avoids distraction in the field and potential irritation of the eyes from repellents or flies.

Biting insects

Mosquitoes: Around water bodies and after rain in the warmer months, large numbers of mosquitoes may be active around dawn and dusk. Ross River virus is known from Tibooburra (220 km north of Fowlers Gap) and although no known infections have occurred on Fowlers Gap it is strongly recommended that persons avoid contact with mosquitoes using protective clothing, repellents or avoiding places where they are present at times when they are active.

Ants and wasps: Treat all ants and wasps as potentially capable of inflicting a painful bite and avoid contact with any ant or wasp.

Spiders: Treat all spiders as potentially capable of inflicting a painful bite and avoid contact with them.

Venomous animals:

Spiders: Red-back, white-tail and mouse spiders can inflict very painful bites that are dangerous to children. Avoid all contact with any spider that has red or white markings on the body and seek medical advice if bitten by such a spider.

Snakes: The majority of snakes on Fowlers Gap are elapids and venomous. Always retreat from a snake and do not attempt to handle or harm it. Be snake aware during the warmer months when walking around the Station or picking up objects that could conceal a snake. Always report any snake bite immediately for treatment and be aware of the use of pressure bandages. You should carry a bandage with you during warmer months when snakes may be a hazard.

Spiny plants:

Many plants on Fowlers Gap have spines (copperburrs and prickly wattle) or strong woody stems (salt and bluebushes). We recommend sturdy boots with closed toes, socks and sock protectors when walking through vegetation and the use of garden gloves when handling vegetation. In tall vegetation we recommend long pants to protect the legs. If your skin is penetrated by a spine whose tip breaks off then you can allow it to migrate out of the skin as a natural healing process or if you wish to dig it out then always use a sterile needle.

Vehicles, plant and equipment

Only authorised persons with demonstrated competency and appropriate licensing may use any vehicles, plant or equipment belonging to the Station. You should not enter any area marked with hazard warnings unless you have appropriate protection. You should not enter any area marked for 'Authorised personnel' unless you have appropriate authority. You must not use any vehicle, plant or equipment without seeking authorisation.

Smoking and fire hazards

The University of NSW is a smoke-free workplace. Smoking of any substance is not allowed in any of the accommodations provided for visitors, the library, the offices and the laboratory or any other place designated as smoke-free. You should familiarise yourself with the location of fire extinguishers and fire blankets. Bedrooms in residences and accommodations are fitted with smoke-detector alarms. You should vacate and move well away from any building that has ignited and inform Station staff immediately of any such event. The assembly area is in front of the office block.

Firearms:

No firearm may be discharged on the property without authorisation from the Director. All wildlife is protected and may only be trapped/harmed/taken if the Director sights a current authority from NSW National Parks and Wildlife Service and a current approval from a recognised Animal Care and Ethics committee.

Medical assistance:

All persons conducting field work on the Station must complete or provide a risk assessment and must complete a 'Field Work Medical Questionnaire'. Medical services are provided by the Royal Flying Doctor Service (RFDS). The station maintains two medical chests – one for staff and one for students and visitors. Access to the medical chests is only via a staff member. The following information is provided to assist with the treatment of medical emergencies:

24 hour Medical Line - RFDS

- **(08) 8088 1188**