These instances of autografting can be viewed as accidental fusion of parts whose paths had crossed and which remained pressed together as they continued to enlarge in diameter. For underground parts, the resistance of the soil is clearly responsible for maintaining firm contact during growth, but the instance of fusion in *E. rudis* is harder to understand: initial intertwining of the stems may have been involved. Its accidental nature apart, there are at least two advantages to the plant that autografts may provide. The first is to interlock and hence reinforce the underground support system for the aerial part of the plant, reducing the incidence of windthrow — especially important in the weak-stemmed *Nuytsia*. The second is to direct water and nutrients locally abundant in one root or stem to at least two major sinks further along the plant, so increasing their overall distribution through the plant (and suckers in the case of *Nuytsia*). In this regard, it is worth noting that roots on one side of a plant tend to supply water and nutrients only to stems and leaves on that side, a limitation partly overcome by autografts.

Barbara Piercey assisted in the wandoo study, and Barrie Oldfield took the photograph of *E. rudis*.

# FROM FIELD AND STUDY

Sighting of the European Common Tern (Sterna hirundo hirundo) in breeding plumage, at Quobba Point, via Carnarvon.— About 1230 hours, on 6 July, 1979, whilst observing sea birds at Quobba Point, which becomes isolated as a small island at high tide, a short distance from the blowholes, a popular tourist attraction about 80 kilometres north of Carnarvon, my attention was drawn to a number of very colourful terns standing on a sandy beach on the western side of the island.

I managed to view these birds from a distance of about 15-20 metres with 7 x 50 binoculars for about 45 minutes, and my field notes are as follows: "14 terns, bright red legs and beak, with a black tip to beak, very black head that extends over the eyes to base of beak, and extends over crown to about collar length. Very light grey back with white underparts. About same size as Roseate Tern (Sterna dougallii), and smaller than Crested Tern (Sterna bergii) that were standing nearby".

On 29 August, 1978, when in company with Barbara and Peter Menkhorst, of Melbourne, I sighted approximately 40-50 Common Terns in non-breeding plumage, in the same area.

On returning to Carnarvon, and checking various field guides the birds sighted appeared to have been either the Arctic Tern (Sterna paradisaea) coming into breeding plumage with only the remainder of the beak to turn fully red, or else the European Common Tern (Sterna hirundo hirundo) in breeding plumage.

Whilst this western form of the Common Tern is very similar to the Arctic Tern in breeding plumage, Arctic Terns have extensive smoky grey underparts which contrast to white cheeks and sometimes white throats.

Elsewhere in Australia Common Terns, mainly of the black-billed eastern form (longipennis) have been found in flocks, particularly common in South Queensland, and New South Wales (G. Roberts pers. comm.) but there does not appear to be any previous record of a flock of Common Terns in Western Australia. More recently Dr. R.J. Raines, found a small party of Common Terns in non-breeding plumage near Mandurah.

It appears possible that parties of Common Terns can be found on the coast of Western Australia in both summer and winter, and should be looked for in order to further define the regularity of occurrence.

Recent reports of Arctic Terns in Western Australia indicate that when S. paradisaea occurs on the Western Australian coastline it does so only in one's and two's, and either as corpses or birds in poor condition in spring and in midwinter. There are no reliable reports of flocks of Arctic Terns anywhere on the Australian coastline (P.J. Curry pers. comm.)

It is of interest that Tom Carter, in the *Emu*, 3, 1904: 208 reported the following observation in his account of the birds of North-West Cape: "Sterna frontalis, White-fronted Tern, seen in the summer about Sandy Point". This was an obvious mis-identification and the bird he sighted may have been a Common Tern.

### REFERENCES

CARTER, T. 1904. Birds occurring in region of the Nor West Cape. Emu, 3; 207-213.

SERVENTY, D.L., SERVENTY, V., and WARHAM, J. 1971. The Handbook of Australian Sea-Birds, Sydney.

SLATER, P. 1970. A field guide to Australian Birds, Non Passerines, Adelaide.

### **ACKNOWLEDGEMENTS**

I wish to extend my thanks to Peter Menkhorst of Melbourne, who kindly made his notes available on the Common Tern, and also to Peter Curry of Kelmscott, who assisted and advised me in the preparation of this paper.

- MAX HOWARD, Roleystone

A record of a centipede killing and feeding on a sawfly larva. — The following observations were made on 30 March 1980, about 20km SW of Pemberton, W.A. (34°33'S, 115°55'E) at approx. 1530 hrs (WST). The vegetation of the area consists of a Eucalyptus diversicolor (Karri) and E. calophylla (marri) forest (the dominant eucalypts) with some E. marginata (jarrah), growing in white sand over laterite, with an understorey of Xanthorrhoea preissii, Agonis parviceps and Pteridium esculentum with scattered plants of Banksia grandis, Macrozamia riedlei and two Acacia species. At the time when observations took place, the temperature was 24°C and the weather overcast.

Overturning a marri log in the search for insects, we observed an aggregation of 20 sawfly larvae (probably a *Perga* species; Pergidae: Hymenoptera). They were not very active and were simply lying together partially covered by the white sand. Upon disturbance, some of the larvae exuded a mustard-coloured offensive fluid from the mouth and anus. (Regurgitation of semi-digested eucalypt leaves is a typical defensive mechanism of sawfly larvae, Norris, 1970: In *Insects of Australia*, C.S.I.R.O). The larvae possessed a black head capsule, the general dorsal body surface was grey-pink, the undersurface cream and the body varied from 3.5cm to 5.5cm in length and from 7mm to 9mm in width.

In addition, a centipede was noticed partially covered by sand but retreated under the overturned log after being exposed to light for a few seconds. (This is the typical behaviour pattern displayed by centipedes when disturbed). The centipede (Order Scolopendromorpha) measured 7.5cm in body length (with 1cm long pedipalps), the antennae were blue, the head and carapace red-brown, the body segments blue-black, and the legs and undersurface of the body were dirty yellow.

The larvae were then examined and were photographed as a group. During this time (5 minutes) one larva, which had remained in a crevice in the overturned log, fell to the ground below, near the other larvae. Suddenly, the previously secretive centipede emerged from its retreat, attacking this larva in the middle of its body by inserting its poison claws (Fig. 1). The centipede then began chewing on the cuticle of the still alive larva and was probably injecting venom simultaneously through the inserted poison claws. The sawfly larva emitted only small amounts of defensive secretion upon attack by its predator and made little effort to struggle away. The centipede spent about five minutes feeding on the fluids and tissues of the sawfly larva before it was disturbed by the electronic flash from the camera. During this time, the accompanying photograph was able to be taken (Fig. 1).



Howard, Max. 1981. "From Field and Study: Sighting of the European Common Tern (Sterna hirundo hirundo) in breeding plumage, at Quobba Point, via Carnarvon." *The Western Australian Naturalist* 15(1), 28–29.

View This Item Online: <a href="https://www.biodiversitylibrary.org/item/274050">https://www.biodiversitylibrary.org/item/274050</a>

Permalink: <a href="https://www.biodiversitylibrary.org/partpdf/310482">https://www.biodiversitylibrary.org/partpdf/310482</a>

# **Holding Institution**

Western Australian Naturalists' Club (Inc.)

## Sponsored by

Atlas of Living Australia

## **Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Western Australian Naturalists' Club (Inc.) License: <a href="http://creativecommons.org/licenses/by-nc-sa/4.0/">http://creativecommons.org/licenses/by-nc-sa/4.0/</a>

Rights: <a href="http://biodiversitylibrary.org/permissions">http://biodiversitylibrary.org/permissions</a>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at https://www.biodiversitylibrary.org.