

coast here comprises a series of rocky outcrops and small shallow bays with stony beaches. The birds landed on a flat, narrow, rock-covered neck of land leading out to a higher outcrop. Westerly gales which lash this coastline in winter pile up kelp on this narrow neck, making it a favoured feeding ground for waders.

A weekly visit was made to the area in June, July and August. On each visit the birds were in scattered groups of 15 to 30, but when flushed converged on the same neck of land to form a single flock. They proved quite tame and could be approached to within 10 metres. By June most were in full breeding plumage and from a close study, on July 23, with the aid of 8 x 30 binoculars, only three were found to be still in eclipse plumage. On August 26 all were found with the breeding plumage well advanced.

Turnstones have been reported in small numbers, in winter months, from New South Wales, Queensland, and Rottnest Island, Western Australia, with the largest flock of 32 at Raby's Bay in July 1955 (Amiet, *Emu*, 57 : 243). The only bird reported in nuptial plumage was at Rottnest Island in July 1957 (Storr, *Emu*, 64 : 105). Clive Minton (*Birds of the World*, 3 : 860) states, "Small numbers of Turnstones will remain all the year round in winter quarters. The over summering birds appear to go into a full summer plumage, unlike many of the larger waders, which in similar circumstances remain in winter dress". This statement is supported by the birds wintering on King Island.

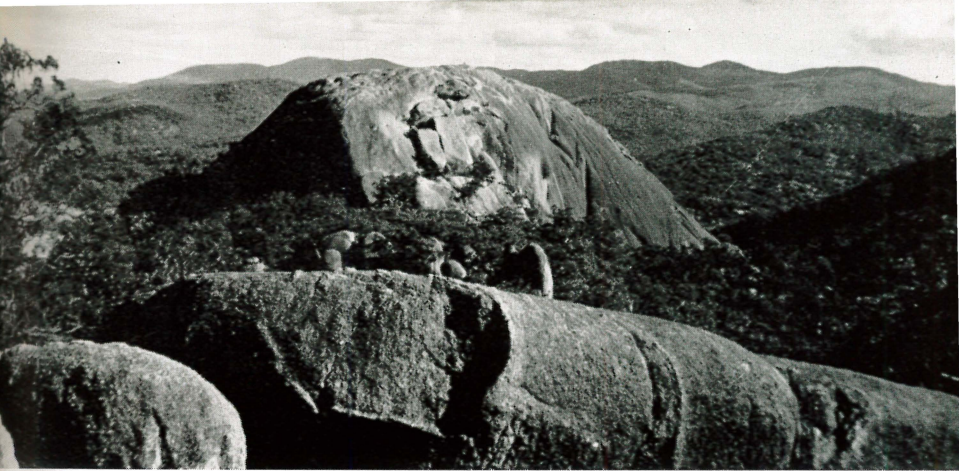
M. T. Templeton, Currie, King Island, 22/9/1972

Territorial Behaviour of the Superb Lyrebird in Queensland. The Wyberba district, approximately 11 km north of Wallangarra, in south-eastern Queensland, is the northern limit of range of the Superb Lyrebird, *Menura novaehollandiae*, in eastern Australia.

At 1000 hours on August 26, 1968, William Goebel, who is an honorary National Parks Ranger and competent naturalist, observed the behaviour of two adult male lyrebirds which had well-developed tails. His observations were made near Pyramid Creek, a tributary of Bald Rock Creek, which rises and flows through the rugged granite boulder-strewn country close to the Queensland-New South Wales border.

Male bird No. 1 was performing his usual repertoire, and sang from one of his several mounds for about five minutes. Male bird No. 2, approximately 500 m distant began mocking him as he sang. The song of No. 1 was heard, followed by No. 2 which imitated No. 1, and then followed a pause. After the silence, the procedure of song, mock and pause was continued, with the sequence getting shorter each time, until it stopped.

From a distance of about 100 m Goebel heard the commotion, and observed the confrontation, as both birds fought with their necks extended and their wings thrashing and flogging. This round continued for a few minutes before a break occurred. It seems that



Open forest and granite ridge habitat of the Superb Lylebird, in the Pyramid Creek area, south-eastern Queensland.

Plate 15

Photo by Donald P. Vernon

territory holder No. 1 had crossed into the territory of No. 2, and tired to quieten him by forceful ejection.

After the break, No. 1 folded his wings and hopped onto a large granite boulder, but was quickly chased by No. 2 into the bracken beyond. After about 40 m No. 1 stopped, and the birds resumed fighting with their necks extended and wings flogging as before. This performance was repeated three times, then No. 1 returned to his territory and began a short song. This brief performance was not responded to by No. 2, and there were no further calls that day.

This aggressive behaviour was especially interesting because it occurred at the end of the breeding cycle. From September to March the birds disperse and are sometimes seen in small groups. On one occasion, in the non-breeding season, Goebel observed two males, one female and two immatures together; on another three male birds together, and on a third occasion two males and a female. From March onwards, male birds return to their territory, and pairs become bonded. In June and July male bird performances reach their peak. Copulation follows and the egg incubation by the female continues into July, with fully-fledged young free from the nest by mid-August.

Seasonal territory-holding by male Superb Lyrebirds in the Wyberba district is centred around the rocky gullies. Each area is approximately 100 hectares. Along the banks of the rugged creeks and rock escarpments pairs nest, and they forage for food out to the ridges, which appears to be the lateral extent of their well-defended territory.

Donald P. Vernon, Queensland Museum, Brisbane, 5/6/1972