



GROUND OR SWAMP PARROT (*Pezoporus wallicus Kerr*).
(Photo of individual in Adelaide Zoo by the late R. R. Minchin.)

THE GROUND PARROT (*Pezoporus wallicus*) IN SOUTH AUSTRALIA

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The Ground Parrot is not only one of South Australia's rare birds with a limited distribution, but is a very difficult one to observe in the coastal swamps and heath where it is found.

In coloration it closely resembles the Night Parrot (*Geopsittacus occidentalis*), but may be distinguished from that bird by its red forehead band and somewhat longer tail.

The Ground Parrot was once a common bird on the coastal swamps near Adelaide, and was familiar to the early settlers (14). Captain White has a specimen which was captured at the Reedbeds in 1850 (15). F. W. Andrews, a well-known natural history collector of the '70's of last century, stated (1) that it once occurred plentifully in swamps at Mount Compass in the southern Mount Lofty Ranges, but was being exterminated by feral cats. It is probably fifty or more years since the species has been seen anywhere near Adelaide, and to-day, the coastal swamplands of the South-East of South Australia appear to be the last remaining haunts of the species in this State. The areas concerned extend roughly from about Point Douglas eastwards to Eight-mile Creek, the Glenelg River and Nelson in western Victoria. Its presence on Kangaroo Island has never been established, while odd reports of it being seen on islands in the Coorong (2) and Lake Alexandrina may be incorrect. S. W. P. Osborne reported seeing several birds on Mundoo Island in April, 1941.

Last year the writer spent from October 29 to November 9 in the Port MacDonnell district, near Cape Northumberland, in search of these elusive birds, and their presence in limited numbers over a wide area in the Hundreds of Caroline, McDonnell and Kongorong was established. Unfortunately, much of this country is now being cleared and drained for more intensive settlement, and it is anticipated that the Ground Parrot will be deprived of many square miles of its natural habitat. Despite representations to the Government it was found impossible to preserve even a small portion of the native

flora of this region. However, a survey of the botany was made by Prof. J. B. Cleland, who accompanied the writer during portion of the trip.

AREAS WHERE GROUND PARROT
WAS SEEN.

(1) Swamp, Section 589, Hundred of Caroline, half-mile east of Ewens Ponds, and about six miles east of Port MacDonnell. Two parrots seen on October 29. Draining of swamplands and clearing and rolling of scrub is being proceeded with in the vicinity of Deep Creek and Eight-mile Creek (or Ewens River, as it is now called) in the Hundreds of Caroline and MacDonnell, some 4,000 acres being involved. Many places are now dry, while in others the water has fallen to a depth of six inches, and will eventually be entirely drained. Herbage consisted mainly of a Sedge rush (*Cladium junceum*), about 2 ft. 6 in. high, and there were some dead tea-trees.

(2) Swamp, between Deep Creek and Eight-mile Creek, five miles east of the town in the Hundred of MacDonnell. Four or five Ground Parrots were seen on the afternoon of October 30. This area is situated behind an elevated "scrubby area" near Deep Creek, known as "Timber Island." It consists of open patches of Sedge rush swamp surrounded by dense tea-tree (*Leptospermum pubescens*) about six or seven feet high. On October 30 the water was a few inches deep, but a week later this had dried up or drained away.

(3) "Big Swamp," Hundred of Kongorong, about eight miles north-east of the town of Port MacDonnell, near Douglas Point. One bird seen on two different occasions, on November 1. This area is at present used for grazing, the scrub having been cleared many years ago. It is not included in the drainage scheme now being carried out at Eight-mile Creek. The Sedge rush *Cladium junceum* (family *Cyperaceae*) was again noted in most parts of this swamp, while the depth of water varied from a few inches (near the edge) to several feet. The solitary parrot seen was

flushed over deep water. After rains the swamp may be four or more feet deep. Some feathers of the Ground Parrot were found here in May, 1939, by a local observer (11).

HABITS OF GROUND PARROT.

The Ground Parrot seems to have been generally confined to the coastal districts when the first settlers arrived, although Sturt records having collected one in the Interior, north of Cooper Creek, "on a plain with samphire, salsolae and mesembrianthemum on it" (13). This was in 1845, sixteen years before the Night Parrot was described, so that it is probable that the bird taken was really of that species.

North, and other writers, including Peters, give the range of the Ground Parrot as extending from the coastal districts of New South Wales, and Victoria westwards to South Australia and South-west Australia. It is, however, also found in southern coastal Queensland, and Chisholm (3) reported it on Fraser Island in Hervey Bay in that State.

Most writers are agreed on its skulking habits, its great powers of running, and its peculiar, zig-zag flight somewhat like that of a quail. It occurs on open sandy plains, heathy situations and swamps, either singly or in pairs. Most writers also state that it does not perch, although North noted them alight on a fence on one occasion, and Edwards (5) said they perch in the tea-trees. Once disturbed it is often difficult to flush again, and for this reason usually eludes observation. The most notable feature in flight is the pale yellow "wing stripe," which occurs in both sexes. The red forehead band is also easily distinguished in birds on the ground.

All birds seen by the writer were flushed over water, and it is probable that when hiding or feeding they cling to the vegetation with their feet. On flushing the birds first rise vertically to a height of about six or eight feet before darting forward. The flight is silent, and although a number of writers have stated that they do not have great powers of flight, one bird was observed to fly for more than a quarter of a mile at a height of perhaps fifty feet before pitching rapidly into the rushes.

Lord (7), Stuart Dove (4) and others have

observed the Ground Parrot in Tasmania in areas covered with "buttongrass" (*Mesomelaena*), where it is known as the "Buttongrass Parrot."

Few people have heard the call of the Ground Parrot. Andrews (1) said it had "a sweet little song much like a linnet's." He adds: "The song . . . consists of a perfect octave, given out in very beautiful sweet notes. I was a long time before I could find what bird it was, and had to shoot one singing in the twilight to be sure of its identity." Whitlock (16) says that it is the "most silent and unobtrusive bird I have encountered in Western Australia." This observer also notes that it moves with more grace and ease than the average parrot, the awkward waddling gait of the latter being absent. Whitlock also states that young birds uttered "feeble and querulous cries when handled."

Mattingley (10) describes the voice of this species, and supplies the call set to music, this apparently being based on personal observation. Gogerley (6) claims to have heard the notes of the Ground Parrot late in the evening, and also refers to an individual making "sweet dropping notes" in the aviary of a friend, where it lived for four years. Three individuals which have been kept in captivity at the Adelaide Zoological Gardens for several years have not been heard to make any sound.

FOOD OF THE GROUND PARROT.

The food is generally quoted as being seeds of grasses and herbaceous plants, as well as roots and bulbs.

Little evidence was obtained regarding the food of this species during the recent trip to the South-East by Prof. Cleland and the writer. However, careful examination of the area where the birds were seen on October 30 indicated that the only food available to the parrots was the blackish nuts of the Sedge rush (*Cladium junceum*), these being presumably taken from the shrub, as the ground was covered by water a few inches deep. On a return visit a week later no parrots were seen, and it was observed that the water had dried up and the rushes had shed their nuts. Since the above-mentioned visit the writer has been informed that the parrots have been seen near Port MacDonnell in cultivated pad-

docks among tomato bushes, and it might be that the birds feed on the seeds of this plant when they are available. Edwards (5) states that the crops of birds shot on the south coast of New South Wales contained seeds chiefly. Hindwood (7) records some observations by W. S. Campbell, who says: "I am under the impression that they used to feed on the tubes of several species of orchids which grew plentifully everywhere. The *Diuris* seemed to be the favourite. This at one time was made use of by the blacks, whose women dug them up with 'yam sticks.' . . ." These remarks refer to observations made in the 1860's in the Parramatta River district, seven miles from Sydney, N.S.W.

H. Stuart Dove (4), who observed the species in the button grass and cutting grass plains in northern Tasmania, says, "the parrots would rise from one of these clumps (of button grass—H.T.C.), fly perhaps 30 or 40 yards, and plump down into another clump. They usually flushed singly; I never saw them in parties . . . and as it was usually towards the end of summer (February or March) when I saw them, they probably lived on the seeds of the button grass. The parrot family seems partial to seeds of this kind; another great clump which grew plentifully in the district, and bore its seed on a tall spike, is locally known as cutting-grass, and botanically as *Gahnia psittacorum* or the Parrot Gahnia."

The Parrot Gahnia was originally described by Labillardiere, naturalist of the D'Entrecasteaux Expedition which visited Recherche Bay in southern Tasmania, in 1792. On this expedition Labillardiere also collected the Ground Parrot, which he distinguished by the name "black-spotted parrot." In his original description of *Gahnia psittacorum* he says (8), when referring to the nuts or "seeds," "*Nux . . . psittacis gratissima,*" which may be rendered as "Nut . . . very pleasing to parrots." From this description and Dove's remarks, it might be inferred that Labillardiere noticed the Ground Parrot feeding on the seeds of this "cutting grass."

CAUSES OF DISAPPEARANCE.

Edwards (5) considers there are three main causes which have contributed to the

extermination of the Ground Parrot in certain districts. Firstly, the increase in numbers of the European fox; secondly, the use of poisoned wheat and other grain as bait for rabbits; and thirdly, the destruction of its natural environment, are given.

As is well-known, the Ground Parrot emits a strong scent, and dogs will point to it as they do to ordinary game birds. It is possible, therefore, that the various introduced predatory animals, such as dogs, foxes and cats have played no small part in its extermination, for, as the nest is built on the ground, the young would be easy prey. However, the Ground Parrot was equally open to the predations of native carnivorous creatures such as the native cat (*Dasyurus*), and it is more than likely that the clearing and draining of swamps and other areas for settlement was the major cause of its disappearance in the Adelaide region. As the flesh is delicate in flavor its numbers were probably greatly reduced in the early days by shooters also.

The name "Swamp Parrot" is considered to be more appropriate than that recommended in the R.A.O.U. Checklist (1926), although "Ground Parrot" appears to have been used first.

THE GROUND PARROT AND "NATURAL REGIONS."

There is little doubt that the true Australian avifauna, which originally came from Asia, represents but a small remnant of that which existed in former times. This is indicated to some extent by the peculiar distribution of many species and by the occurrence of others which exhibit many primitive characters, and may be regarded as "ancient forms." Among these is the Ground Parrot, which was probably derived from the same stock which gave rise to the flightless Kakapo (*Strigops habroptilus*) of New Zealand, and later to the higher forms of parrots. Its closest relatives are the Night Parrot and the Budgerygah (*Melopsittacus undulatus*), and it may also have affinities with certain New Guinea forms of *Psittacella*, such as *P. brehmi*, which have similar barred plumage. The distribution of the Ground Parrot, as with many other Australian birds, has been governed by the climatic changes which have occurred during the last quarter of a million years. With the onset of unfavorable con-

ditions, the Ground Parrot moved southwards with the climate, and at present occupies a greatly restricted range. In some cases the birds were trapped in "dead-end" regions, such as in South-western Australia, and the semi-humid Mt. Lofty Ranges, and also certain islands close to the mainland in Bass Strait and Queensland, where they occur as "outliers" of the main stock. Humid conditions having been present on Tasmania for a long period of time, the island race has undergone little or no change, while the mainland forms, which have been subjected to periods of more arid conditions, have assumed distinctive features. Thus it is probable that not more than three geographical races have been evolved, as follows:

(1) *Pezoporus wallicus wallicus* Kerr: Occurs in southern Queensland, New South Wales and Victoria, and South Australia.

(2) *Pezoporus wallicus flaviventris* North: Occurs in South-western Australia, formerly as far north as about Perth, and distinguished by the yellower under-surfaces, with broken barrings.

(3) *Pezoporus wallicus leachi* Mathews: Occurs on Tasmania and the islands of Bass Strait, being darker and greener.

There seems to be little doubt that new geographical races and also species often arise as a result of climatic changes, and in cases where a species is unable to withstand or escape such changes, it will eventually be exterminated. Certain "natural regions" in Australia at the present time are probably areas which have not experienced drastic climatic changes recently, and here we find conditions preserved which are similar to those which were once extant over a much wider area. Such areas are found in mountain ranges or in the more southerly portions of the continent and often harbour well-marked endemic geographical races or subspecies, which are usually not of recent origin.

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- (5) Edwards, H. V., 1924: Emu, xxiv, p. 35.
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- (15) White, Captain S. A., 1919: S. Aust. Orn., iv, p. 110.
- (16) Whitlock, F. L., 1914: Emu, xiii, p. 204.

Other references to the Ground Parrot will be found in the following: "South Australian Ornithologist," i, p. 17; iv, p. 13; viii, p. 44; ix, p. 135; xi, p. 173; xiv, p. 112; xv, p. 61; "Emu," ii, p. 98, 170; viii, p. 79; ix, p. 69, 94; x, p. 138; xiii, p. 186; xiv, p. 139; xix, p. 293, 301; xx, p. 132, 163; xxiii, p. 46, 180, 193; xxiv, p. 111, 281; xxvi, p. 264, 268, 316; xxvii, p. 50, 184; xxviii, p. 59; xxix, p. 18; xxxii, p. 224, 241; xxxv, p. 223; xxxvi, p. 210, 212, 317.

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