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The Scarlet-chested Parrot *Neophema splendida*

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SUMMARY

The past and present status of the Scarlet-chested Parrot *Neophema splendida* is discussed. A bird of the arid inland, its spasmodic occurrences in the interior of Western Australia, South Australia and New South Wales are recorded, and single reports for Victoria and the Northern Territory are noted. This parrot would appear to be seen more often in South Australia than elsewhere.

The habitat is arid and usually waterless, with an average rainfall of less than ten inches. Mallee *Eucalyptus* sp. and Mulga *Acacia* sp. are the dominant shrubs of the dry scrubs inhabited. Spiky tussocks of porcupine grass *Triodia*, often called Spinifex, form a sparse ground cover.

This parrot is a vegetarian, feeding on the ground on grass and acacia seeds. Apparently most of its moisture requirements are obtained from succulent plant stems. Reports of it drinking at surface waters are rare.

Like its relative, the Orange-breasted Parrot *N. chrysogaster* (Jarman, 1965), it has irrupted in large numbers on a few occasions, but often several years elapse between reports of its occurrence.

The Scarlet-chested Parrot is one of our rarest and least known parrots.

INTRODUCTION

Birds which inhabit the arid Australian inland fluctuate greatly in number; years of protracted drought drastically reduce populations, while good seasons enable them to multiply. Many species will rove over immense areas, following the rains and the ensuing food supply, so that after being absent from a district for years they may suddenly reappear in a favourable season.

Such a species is the Scarlet-chested Parrot *Neophema splendida*, also known as the Splendid Grass-Parrakeet. There have been times when this species was thought to be extinct; up to twenty years elapsing between reports of the bird. Its normal habitat is in sparsely inhabited or unsettled country, so that at times it could occur in large numbers but not be reported, due to the absence of people interested in birds.

However, on a few occasions there have been large irruptions, interspersed with spasmodic records of individuals or small parties.

But even though there has been a recent account of "several hundred" (Pollard, 1965), the Scarlet-chested Parrot must still be considered one of our rarest parrots, and a species which could become lost to us.

The effect on the species by the alteration of its habitat by clearing, over-grazing by stock and rabbits, and the introduction of weeds and pasture plants, is unknown. In the case of its relative, the Elegant Parrot *N. elegans*, clearing of the bush and sowing of clover is thought to have been beneficial.

The depredations of the bird-trappers can only be regarded as detrimental when they operate on a large scale, as they did in 1939 (Lendon, 1940). The bird has enough to contend with in its harsh environment, without having its numbers decimated by the indiscriminate trapping of adult birds and the taking of nestlings.

FIELD IDENTIFICATION

The resplendent male should be unmistakable. A small parrot, approximately eight inches long, it has a bright grass-green back and tail. The head is royal blue and the wing-coverts sky-blue. The breast is a brilliant scarlet and the abdomen and under tail-coverts rich yellow. In some individuals the scarlet extends to the abdomen. The flanks are green and the fanned tail shows much yellow: altogether a gorgeous creature.

The female is a duller coloured bird; the face and shoulders being pale blue and the under parts green. The scarlet chest of the male is absent.

Confusion could occur between hens of the Scarlet-chested and Turquoise Parrots *N. pulchella*. The latter has the broad wing-edge a darker blue than the light blue of *splendida*. Their ranges are not considered to overlap except perhaps in western New South Wales.

DISTRIBUTION

The Scarlet-chested Parrot is distributed over the interior of southern Australia, from Moore River, Western Australia to River Darling, New South Wales.

The northerly limit would appear to be the Tropic of Capricorn. The range of this species approximates the ten inch rainfall belt.

HISTORICAL

John Gould had the honour of describing the Splendid Grass-parakeet *Euphema splendida* in the *Proceedings of the Zoological Society*, London, 1840, 8 : 147. The type specimen reached him in 1840 with no information other than "that it was a native of Swan River" Western Australia.

In 1845 Johnson Drummond transmitted several specimens from Moore River in Western Australia. Again there were no particulars because unfortunately, Drummond was killed by a native. Consequently Gould (1848) was "unable to give more than a very slight notice of this beautiful bird" in his *Birds of Australia*.

Western Australia

Dr. L. Preiss (Glauert, 1948) was in the Colony of Western Australia between 1838 and 1842. The Scarlet-chested Parrot was

one of the rarities that he collected; Glauert assumes from the Toodyay area or toward the Moore River.

In 1854 Surveyor Robert Austin encountered the parrot on his expedition to the East Murchison country (Serventy and Whittell, 1967).

The British Museum (Salvadori, 1891) had five specimens in the 1880's; the *Catalogue* listing three from south-western Australia collected by J. T. Cockerell. The other two were merely labelled "Australia". The National Museum of Victoria has a clutch of eggs from Menzies dated 1901 (A. R. McEvey, *in litt.*)

New South Wales and Queensland

Captain Charles Sturt (1849) obtained a male Scarlet-chested Parrot during one of his expeditions into the interior. One of his party, Mr. Poole, shot the bird, which was in the company of several others at Lake Cawndilla, in the vicinity of Menindee, on the River Darling, approximately lat. 32°. It was not until the party had passed the 26th parallel near Eyre Creek, beyond Cooper's Creek, Queensland, that the species was seen again.

Two skins in the Australian Museum, Sydney (Ramsay, 1891), were from the River Darling and dated 1863.

Robert Grant, taxidermist at the Australian Museum, informed A. J. North (1912) that in November 1892, he shot a male which flushed from polygonum near Bourke, on the River Darling, western New South Wales. It was his only encounter with the species. A. R. McGill (1960) remarks on the curious similarity of North's accounts of the collecting of a male Bourke Parrot, *N. bourkii*, and a male Scarlet-chested Parrot by Grant. The date is identical and the localities and legend similar.

South Australia

J. Gardner was apparently the first person to have recorded Scarlet-chested Parrots in South Australia. He informed Gould (*loc. cit.*) that "he had procured examples in the Murray scrub near the north-west bend of that river, and had been told that it is found in the country bordering the head of St. Vincent's Gulf". There have, apparently, been no further records to substantiate this latter report, based on hearsay, but there are several records from the head of Spencer Gulf, further north. Gardner found this parrot to be "of a very shy disposition and nowhere very numerous".

William White saw numbers of Scarlet-chested Parrots on a trip to the Murray over the Overland Cattle Track in 1863. On September 29, 1863, on Pudnooka Station, eleven miles east of Morgan, White found a nest in the hollow limb of a mallee tree *Eucalyptus dumosa* (Campbell, 1900). Four eggs had been laid on decayed wood. They were white, nearly round and the shell texture very fine and almost lustreless. Two eggs were broken while being collected but the remaining pair, the type specimens, are still in the collection of The South Australian Museum (H. T. Condon, *in litt.*)

White captured the female bird, which lived for several years in his aviaries. He also collected a male "far in the scrub". In 1936 Captain S. A. White still had a skin from this excursion in the collection. (Cleland, 1937). William White considered the parrot to be solitary and shy, at times having "come across an almost noiseless bird which darted out from a clump of mallee".

The Zoological Society of London purchased a male and female of this species from a dealer in January 1871, for the sum of seven pounds. They had arrived in a vessel coming from Adelaide and were believed to be the first of this species of parrot to be brought alive to the United Kingdom. A single bird was also acquired from a dealer in June 1872. The *List of Vertebrated Animals, 1883*, incorrectly stated that this latter bird was "hatched in Gardens, 21/7/1872" (Seth-Smith, 1903, 1932).

F. W. Andrews was the collector with the South Australian Government's Lake Eyre Expedition of 1874-75, which surveyed the western, northern and eastern shores of that huge salt lake. The specimen of the Scarlet-chested Parrot that he collected in that extremely inhospitable region, was lodged in the South Australian Institute Museum (Sutton, 1927). It no longer exists.

The Australian Museum in 1891 (Ramsay, *loc. cit.*) had in its collection a male bird from the Gawler Ranges, and five other specimens labelled "South Australia".

RECENT RECORDS

Western Australia

After a lapse of about fifty years with no reports of the Scarlet-chested Parrot for the state, H. Collins (1934) saw them on the western margin of the Nullarbor Plain, at Naretha in October, 1932, as well as forty miles north-west of that locality.

There are a few other modern reports. H. M. Wilson (1954) saw an adult male in 1941, at Bullabulling, west of Coolgardie. L. R. M. Hunter (1949) reported seeing the species several times at Roe's Dam, south of Coolgardie and just to the east of Lake Cowan, in October 1948. These birds were in open forest country, with denser thickets of jam and gimlet. They did not appear shy. A bird was seen to enter the hollow limb of a dead tree at a height of forty feet.

In 1949, D. Marchant (Serventy and Whittell, *loc. cit.*) noted a small party between Pingelly and Corrigin, about the western extremity of the species range, and J. H. Calaby (1959) records a pair from Coonana, in *acacia* scrub.

K. Griffiths (1959) has records for March 1957, and for the same month in 1958, at Laverton. In one instance an injured male bird was picked up. The country is principally mulga, with mallee along the dry watercourses.

Three birds were encountered at Queen Victoria Spring by W. H. Butler (Serventy and Whittell, *loc. cit.*) in January 1959, and a male was at a waterhole in the Great Victoria Desert, in August 1960.

Dr. G. M. Storr (*in litt.*) reports a pair, forty miles south of Balladonia, in December 1959. They appeared to be eating the berries of an unidentified shrub, but may have been waiting to drink at an adjacent small waterhole.

F. Lewitzka (*in litt.*) reports that his son saw a solitary male at Newman Rock, near Balladonia, in April 1967. Ford and Sedgwick (1967) were informed of the occasional presence of the species on Seemore Station, twenty miles north of Rawlinna, on the Transcontinental Railway.

None of these reports is as far west as the Moore River records of Gould and Preiss.

New South Wales

Modern records for this state are also few in number. Florence M. Irby (1927) writes that, in the winter and spring months of 1915 and 1917, she saw flocks of Scarlet-chested Parrots feeding about the red gum flats of the Castlereagh River, near Gilgandra, some 200 miles south-east of Bourke. Clutches of three eggs were laid in hollow spouts.

Even more surprisingly, Miss Irby considered this dry country bird to be an inhabitant of the well-watered Tenterfield and Boonoo Boonoo districts of New England. She had seen a flock at Boonoo Boonoo in July 1926, and a keen observer had reported to her that he had seen them at Lismore.

A. J. Campbell (1927) must have reflected the doubts of many people when he queried Miss Irby's reports of this inland species being in eastern New South Wales. A. H. Chisholm (1928¹), in an editorial footnote, sprang to the lady's defence, vouching for her ability as an observer, as well as being a painter of birds. Also, 1926 was a drought year and the birds may have been driven east. A. R. McGill (1960) remarks that all of Miss Irby's records are for localities well within the range of the Turquoise Parrot, the female of which is very similar to the female Scarlet-chested Parrot.

Chisholm (1927, 1928²) writes that a man had shot a parrot in the north of New South Wales, one hundred miles from the coast, and had identified it as a Scarlet-chested Parrot from a black-and-white drawing, by N. W. Cayley, in a newspaper. Chisholm accepted this as the second record of the species for the state.

Northern Territory

There is only one note of the species from the Northern Territory. H. H. Finlayson (1933) was informed by W. H. Liddle that Scarlet-chested Parrots were seen feeding on the seeds of mulga *Acacia aneura* in company with Bourke *N. bourkii* and (Princess) Alexandra *Polytelis alexandrae* Parrots. The location was near the Basedow Range, which is 140 miles south-west of Alice Springs. The latitude, 25°, is comparable with Captain Sturt's Queensland encounter, and is the most northerly record for the species.

Victoria

There is only one record of the Scarlet-chested Parrot in Victoria. F. E. Howe (1927) makes vague references to the species in his

reminiscences of twenty years' experience in the mallee. He stated that he had often seen a parrot in the mallee, of the extreme north-west of Victoria, which he thought was referable to the species.

However, Howe and Burgess (1942) very briefly remarked that they had found a nest with six heavily incubated eggs, in September 1941. W. Burgess (*in litt.*) enlarges on the episode. The location was on the Manya Road, one mile south of Bolton's Crabhole, and the nest eight feet up in a dead tree, standing on the roadside. There could be no doubt about the identity of the bird.

South Australia

The most observations of the Scarlet-chested Parrot, and the largest numbers of birds, are recorded from South Australia.

H. B. Scholz (1965) was the first to see the species in more recent times, having encountered a male near Lake Hart, north-west of Port Augusta, in 1914.

Then at the September 1919, meeting of the South Australian Ornithologists' Association, F. E. Parsons (1920) exhibited the skin of female Scarlet-chested Parrot. It had been forwarded to him by L. K. McGlip of Mooloolowatana Station, on the western side of Lake Frome, in the far north of the state. The bird had flown into a fence. About the same time some station hands had seen a few birds feeding on the ground, in the sandhill country; while four birds had been seen a year earlier.

In August 1921, while near Lake Callabonna in the extreme north-east of the State, members of Dr. W. MacGillivray's party (1923) reported a pair of these parrots.

A few months later, October 1921, E. le G. Troughton, of the Australian Museum, collected a female at Immarna, at the 407 mile post on the Transcontinental Railway. There were twelve birds in the flock and numbers were said to be nesting in the spouts of mallee trees (Kinghorn and Fletcher, 1927).

Another record from the extreme western part of the State, was from Koonibba Mission, at Denial Bay, unusual because it was adjacent to the coast. In September 1928, two specimens, one a male and the other a female, were sent to Professor (now Sir) J. Burton Cleland (1929). Pastor Hoff of the Mission also advised Cleland that he had seen several of these parrots, in December 1928.

The early 1930's gave rise to several reports of Scarlet-chested Parrots. J. N. McGilp (1932¹) wrote that they had been "fairly numerous west of Oodnadatta for the past two seasons". He had collected a set of four eggs, one hundred miles to the west of Oodnadatta, in August 1931. McGilp (1935) further noted that they had been in numbers in the Musgrave and Everard Ranges region, which is along the northern border of South Australia, towards the north-west. With rarely more than twelve birds in a flock, they nested in hollow mulga trees, and secured moisture from the parakylia, a succulent plant, growing in the sandy mulga country.

Acquisitions to the South Australian Museum's collection from the same area were a male and a female from Indulkana, dated May 1930, and two males collected in July 1931 (H. T. Condon, *in litt.*). The death of a captive bird at Todmorden Station was noted by H. Simpson (1933). He was informed also of a nest that was under observation near the Musgrave Ranges.

J. N. McGilp (1932²) saw three birds in mallee on Carriewerloo Station, 36 miles west of Port Augusta, during August 1932, and a male was found dead, in March 1936, on Yalymboo Station in the same area (Sutton, 1937).

Simon Harvey (1932), a prominent aviculturist, wrote that several pairs had arrived in Adelaide, in August 1931. Some had come from west of Oodnadatta; others from the Transcontinental Railway, and a female from Yaninee; indicating a wide-spread influx of the species in the western part of the State.

There was a major irruption of Scarlet-chested Parrots in 1939. Great numbers bred near Wynbring Siding, on the Transcontinental line. Dr. A. H. Lendon (1940, 1950) estimated that not less than 500, and possibly 1000, of these hitherto extremely rare parrots were captured. The result of this devastating onslaught was that the selling price in the cage-bird trade fell from £8 to 30/- a pair. No field observations of this major influx were recorded.

H. B. Scholz, who formerly farmed at Yaninee, has had extensive field experience with the species on upper Eyre Peninsula. Early in 1931 he rescued a female bird from a hawk on his farm (Cayley, 1938). He searched without success for further sightings of the parrot that year. However, in 1932 he found four nests, from which he captured several young birds and an old pair. During the following years he searched over several hundred square miles of country, with very little success, apart from five birds seen in 1936. Although it was the breeding season no nests were found.

From 1937 to 1957, Scholz (1965) searched the scrub country fairly regularly but he only had an occasional sight of the parrot. They inhabit most desolate looking country; spinifex-covered sandhills, with stunted mallee in the gullies and an occasional patch of larger mallee.

The country is waterless but the parrots obtain moisture by moving their beaks along the edge of the sappy, round leaves of a low shrub. Scholz is certain that Scarlet-chested Parrots can survive on the moisture from succulent plants, without recourse to "surface drinking water" although, of course, they would not disdain a dam or trough in very hot weather. He never saw the birds in colonies. At most there were a few pairs living in close proximity, but nearly always only a single pair was found.

W. C. Kempster as a youth also covered much of the upper Eyre Peninsula, while kangaroo shooting in the depression years of the 1930's. He guided Simon Harvey and Scholz on some of their excursions in their quest for Scarlet-chested Parrots. Kempster (*in litt.*) says that he has seen the birds as far north as Iron Knob and Wynbring, and as far west as Minnipa. They were always associated

with mallee. In spite of their brilliant colouration, the birds are very well camouflaged when they are resting in mallee trees. Their green backs are the same colour as healthy mallee leaves, while their scarlet breasts resemble the red of the smaller twigs and dying leaves. The mallee scrub frequented by the parrots was in a virgin state with no sheep present, and there were very few rabbits. The mallee shrubs grew in belts between sandhills, that were clothed with porcupine grass tussocks. A needle-leaved *acacia* provided a very small seed which was eaten after rain. Scattered claypans supported succulents such as pigface *mesembryanthemum*. The pigface, thistles and thicker grass-stems are chewed open for their moisture content. The spring flush of native grass-seed provides the staple diet while the birds are breeding. During the winter months fallen spinifex seed is eaten. It blows into heaps and is almost rotten.

At no time has Kempster seen the birds drink. He thinks that they rely on the succulents and dewy vegetation for moisture, and he has seen them stripping wet grass with their beaks.

Between the mid-thirties and 1964 he has found the birds nesting in the Minnipa district on many occasions. They arrive and begin breeding in September. Only one brood is raised in a season, due to the birds' reliance on annual grasses for food. After November the vegetation is withered in the summer heat. All of the birds have left the district by February.

The parrots will nest in close proximity to each other. In one instance two nests were only twelve feet apart, and in another case three nests were in an area of ten square yards. Any rough mallee spout or hollow serves as a nesting site, the entrance being from four to fifteen feet from the ground. The nesting chamber is from one to four feet from the entrance, which often has a little down adhering to it. Up to five eggs are laid on the decayed wood at the bottom of the hollow, no other nesting material being used.

The parents are very quiet and confiding at the nest. Kempster has seen them come back to feed the young birds while he was in full view, only ten feet from the nest. Both sexes entered the nest with food.

The South Australian Museum received a juvenile male from Minnipa, in November 1964.

B. M. Pollard (1965) first encountered Scarlet-chested Parrots, in 1960, in the great tracts of mallee scrub to the north of his home at Barmera, on the River Murray. This is a little to the east of Pudnooka Station, William White's "country" of a century ago. Pollard was first informed of the whereabouts of the birds by a kangaroo shooter. He was agreeably surprised to find them "not in ones and twos but in hundreds". They were in flocks of from ten to eighty birds and they were quite fearless. When disturbed they flew a short distance only and then settled down to feed again. It was estimated that in the period from April to July, 1960, there were from 800 to 1000 parrots in the area.

They were seen in the same locality in the winter and spring months of 1961, 1963, 1964 and 1965, and they were never more than a mile or two from the original spot. In 1965 they were in reduced numbers, probably due to the dry winter, while in 1966 they were absent. The writer visited the area in the winter of 1966!

Drought conditions prevailed in the district in 1966 and 1967, and the Scarlet-chested Parrots were not in their usual haunts. However, there were good rains about 90 miles further north, in November 1966. Pollard (*in litt.*) visited this locality briefly in May 1967. Here the spinifex was seeding, whereas it had not done so in the old rainless location further south. Pollard saw fifteen to twenty parrots, including five males just acquiring adult plumage.

In Pollard's experience, Scarlet-chested Parrots are always in mallee country, the habitat comprising low, fixed dunes with shallow valleys or flats in between, the whole clothed with stunted mallee, about eight to ten feet in height, and porcupine grass tussocks. The parrots seem to favour mallee which has been burnt and has sprouted again. They avoid the ridges. Pollard has never seen them in stubble paddocks or pastures, lignum *muehlenbeckia* flats or salt-bush.

Triodia seed seems to be their principal food, although Pollard has seen them eat spear grass seed occasionally. They arrive at their feeding grounds about one and a half hours after daylight, and leave again an hour or so before nightfall. He has never known them to take moisture from leaves, and assumes that they rely on surface water for drinking purposes. A local pastoralist told him that a pair came to drink at a trough on several occasions, and Pollard once saw three parrots come to a dam in December. After being repeatedly disturbed as they endeavoured to alight on the edge of the dam, one bird at last settled on the water, in the middle of the dam, and drank. The remaining two birds were then allowed to drink at the water's edge.

Pollard has not been able to find any nests of this parrot, but several years ago some wood-cutters found a nest in a hollow mallee limb. One nestling was reared in captivity and it proved to be a male.

Other recent notes are those of D. B. Mack (1964) who remarks that the species is very rare in mallee scrub and open spear-grass plains, between Morgan and the Victorian border. Mack (*in litt.*) says that the mallee scrub is open with many of the trees dead and dying. There is no *Triodia* or any under scrub, but there is a seasonal covering of grasses, particularly *stipa*. Scarlet-chested Parrots also stray into the stunted belah and black oak *Casuarina cristata* which fringe the northern extremity of the mallee belt.

Mack informed McGill (*loc. cit.*) that a nest was found in a felled tree on the South Australian and New South Wales border, which would be north of the Murray River.

C. N. Austin (*in litt.*) reports a mixed party of five birds and a pair (male and female) west of Broken Hill, in September 1952.

In May 1967, Austin saw a male bird on the South Australian-Northern Territory border, west of the main Alice Springs road.

F. Lewitzka (*in litt.*) has reports of Scarlet-chested Parrots breeding near Kyancutta on Eyre Peninsula, from 1957 to about 1960. He was shown the hollows in large mallees which were used as nests in the months of October and November. Lewitzka is emphatic that the colour of the Eyre Peninsula parrots is scarlet; a much brighter red than that of the eastern birds from Barmera, which is brick-red.

BREEDING

The Scarlet-chested Parrot breeds in hollows in trees; mallees and mulgas both being used. Apparently dead spouts are preferred. Miss Irby (*loc. cit.*) records the much larger red gum *Eucalyptus camaldulensis* as a nest site, in a record which is not always accepted.

Scholz and Kempster (*loc. cit.*) found their nests in mallees; Scholz mentioning the presence of a few dry leaves at the bottom of the perpendicular hollows. In most instances the eggs are deposited on decayed wood. However, some aviculturists have had their aviary birds use green leaves in the nest, so one could assume that wild birds would do the same on occasion.

T. R. Holmes-Watkins (1952) had two different females, in his English aviaries, which carried green leaves to the nest while brooding; one bird completely covering the bottom of the nest.

A. Y. Pepper (1966) had an aviary-bred hen which, during three breeding seasons, bit small leaves from various shrubs; cotoneaster, honeysuckle, cumquat, tree-lucerne and eucalyptus. Each leaf was twirled around with a circular motion and then tucked under the rump feathers. When several leaves were gathered the bird would fly to the nest with them. This odd behaviour was evident only when eggs were in the nest, and only a few leaves were ever present. Pepper assumes that they are used in order to create humidity, and not as a lining material.

R. Graham, another aviculturist, had a similar experience, and A. H. Chisholm in "A History of Anting" (1959) notes that the species use aromatic leaves.

S. Harvey (1932) bred the rare Scarlets in 1931, being the first aviculturist to do so. He noted that only the hen brooded the eggs, but that the cock fed her in the nest. Both parents fed the nestlings, which left the nest two months after brooding began. When the female started to brood a second clutch, only the male fed the flying young from the first nest.

Fortunately, Scarlet-chested Parrots are prolific in captivity. Harvey bred at least twelve in 1932 from two pairs, and Scholz (*loc. cit.*) had a hen which hatched 22 young birds in one season and 14 during the next year. She was then about 12 years old.

R. R. Minchin (1934) bred the species in the Adelaide Zoo in 1933. The male parent rarely fed its young in the nest, preferring to pass the food onto the female. Minchin's male had been hand

reared from the nest in the previous season, so the Scarlet-chested Parrot will breed at the age of one year.

Scholz has had birds breeding from August until January in aviaries.

Wild birds will breed from August to November, probably depending on the onset of rains and the resultant seeding of the grasses.

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The Pectoral Sandpiper in mid-southern Victoria

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During the course of several years of interest in the field-identification of the Charadriiformes, I have paid particular attention to the Pectoral Sandpiper *Erolia melanotos*. My activities among the migratory waders have been confined mainly to the close vicinity of Melbourne, with an occasional excursion further afield.

For the past five north-south migratory wader seasons, August to April, in succession, I have noticed this species in mid-southern Victoria. During that time I have seen close to one hundred different *melanotos*.

The Pectoral Sandpiper is generally regarded to be a North American shore-bird that breeds in arctic America and migrates to southern South America.

Large numbers, however, are also known to nest in Siberia, and it has been said that the wintering ground of these birds is "uncertain". G. M. Sutton, *The Birds of the British Isles*. It seems possible that the small numbers of Pectoral Sandpiper that are reaching Australia, in the non-breeding period, are coming from Siberia rather than North America. At the present state of knowledge this is a matter for conjecture rather than a scientific truth, and it remains a question for answering in the future.

With regard to my own observations it seems apparent that the species is a regular, but scarce, migrant to this area.

The best place, within fifty miles of Melbourne, to see the Pectoral Sandpiper is the Werribee Sewerage Farm, which lies