

sedentary one, little given to wandering. Its appearance in New South Wales inshore waters may be related to the unusual hydrographic conditions ruling during the summer and autumn, high temperatures all along the coast indicating an exceptionally strong influence of the warm eastern Australian Current in the inshore zone.

It may be that the sight records of Dr. P. Jespersen, of the Danish 'Dana' Expedition (*Vidensk. Medd. fra Dansk naturh. Foren.*, vol. 94, 1933, p. 197), reporting the bird along the New South Wales coast, between January and March, 1929, in the off-shore waters, do really refer, at least in part, to this species. But as he does not mention *P. gavia* at all in his list of birds seen, the possibilities of erroneous identification cannot be excluded.

In south-western Australia the species is represented by a number of breeding colonies from the Archipelago of the Recherche to the Abrolhos.

Stray Feathers

Elegant Parrot in the Bridgetown District, S.W.A.—Up to 1938 this species, *Neophema elegans*, was unknown in this heavily-timbered district, in fact it was unknown 20 miles further inland, where the timber is much lighter. In 1937 the Elegant Parrot appeared in the Boyup Brook district, 18 miles east of Bridgetown, and from that year the bird has steadily increased in numbers and range until it is now quite numerous around Bridgetown. To give an idea of its numbers, I may say that this morning, when walking over one of my paddocks (40 acres), within a mile of Bridgetown township, Elegant Parrots were in dozens feeding on the ground, and quite indifferent to my presence. They would not move until I was within a few yards of them, and then, as I approached closer, only flew a dozen or so yards away and settled again and searched for food. Similarly it is also numerous on another of my paddocks (100 acres) six miles east of Bridgetown.

"Elegant" is a good name for the bird, as it is neat in figure and its feathers fit closely to the slender body, giving it a trim appearance. The two shades of green, dark on the back, and with a yellow tinge on the under-surface, plus the blue distal half of the wing, are very distinctive. Judging from the numbers of immature birds, it has bred freely this year.

As with the Bronzewing, the spread of subterranean clover and other pasture grasses, combined with the clearing away of timber and the formation of open spaces, is undoubtedly responsible for the spread of the species to the south-west. Although clearing results in the decrease

of some species, it also results in the increase and spread of others. What could be more to the advantage of the Elegant Parrot than plenty of trees for nesting purposes and plenty of open spaces with seeds for food? It is not surprising that the bird has quickly populated a locality eminently suitable to its ecology.—H. M. WHITTELL, Bridgetown, W.A., 28/12/41.

Locust Poisoning.—On page 424 of volume XL of *The Emu* appeared a paragraph stating that an American University had discovered epsom salts to be a useful substitute for arsenicals in grasshopper baits. The details of these experiments were published in *Science*, vol. 85, no. 2209, p. 428, New York, 1937. The reviewer in the *Review of Applied Entomology* states: "In preliminary experiments against grasshoppers a bran bait containing 15 per cent. molasses and 20-25 per cent. magnesium sulphate with enough water to moisten appeared to be as effective as a 5 per cent. arsenic bait."

In view of the publicity which this formula has received since its appearance in *The Emu*, having been copied by other nature magazines and by the popular press, I am constrained to draw attention to further work which has been done on this bait by Roberts (*Bull. Neb. Agric. Exp. Stn.*, no. 312, 1937), whose results are summarized in the *Review of Applied Entomology* as follows: "In cage experiments with possible substitutes for arsenicals in grasshopper baits, magnesium sulphate proved to be ineffective."

During the severe grasshopper outbreak of 1937-38 in this State, several landholders tried this bait, but without any success. Before anyone uses epsom salts extensively against grasshoppers they will do well to bear in mind the above experiences. Furthermore, the statement that this bait is cheaper to use does not apply, at least in Western Australia. The cost of a 3 per cent. arsenite of soda bait, which is generally used, is about 5d. per acre for poison, whereas a 20 per cent. magnesium sulphate bait is worth about 1/-. The desirability of finding some insect poison innocuous to birds and animals cannot be denied, and I do not wish to labour a question already much discussed, but as far as experience in this State is concerned there is no evidence that grasshopper poisoning has led to wholesale bird destruction. In the plague year of 1937, 716 tons of bran were spread for grasshopper bait and 18½ tons of arsenite of soda were used. During the supervision of these campaigns many thousands of miles were travelled through grasshopper country, but investigation failed to reveal a single authentic case of bird poisoning by grasshopper baits.—C. F. H. JENKINS, Government Entomologist, Perth, W.A., 9/1/42.

Nestling Coucal.—In describing the white hair-like structures on the body of the nestling Coucal as filoplumes (*The Emu*, vol. XLI, p. 250, pl. 35) I overlooked the investigations in the nature of these striking objects published many years ago in *The Ibis*. My thanks are due to D. L. Serventy for calling my attention to a paper "On the Pterylosis of the Embryos and Nestlings of *Centropus sinensis*" (*The Ibis*, 1900, pp. 654-667, pl. XIII), by R. Shelford of the Sarawak Museum, in which he proved these white threads to be prolongations of the horny sheaths that envelop the developing feathers. He termed them 'trichoptiles.' They break through the skin comparatively early in embryonic life, become aborted and eventually disappear as the feather papillae at their bases grow and break through their sheaths.—K. A. HINDWOOD, Sydney, N.S.W., 26/5/42.

Black-fronted Dotterel in Tasmania.—Although claimed by Littler (*Birds of Tasmania*) and other writers, to be merely an accidental visitor to Tasmania, the Black-fronted Dotterel (*Charadrius melanops*) is now known to breed regularly in different parts of the State. More than once, in the Midlands, I have seen it with eggs and young about the edges of dry or shallow lagoons. When heavy floods occurred about Ross and Campbell Town some seven years ago, and every lagoon was overflowing and riverside depressions were water-filled, there was a moderate influx of the species to those districts. Passing by train one day I counted up to a dozen near the line.

The oblitative coloration of this bird is more effective than that of any of its kind. I have watched it through powerful glasses 'twinkling' in short stages across a field or along the edge of a stream, as it approaches its eggs; then suddenly it squats down and disappears from view. The obscure brownish back, black chest and face, white throat and underparts form a striking example of bird camouflage, and if the bird did not move at one's approach it would easily pass for a piece of wood, a stone or some other inanimate object on the mud or grass.

An examination of many Dotterels' nests convinces me that the birds generally have some 'landmark' to serve as a guide when returning from a feeding excursion or after having been driven away by some intruder. The eggs are protectively-coloured and not easily seen—by us, at least. Might there not also be some difficulty for the birds?

I have found that the Black-fronted Dotterel almost invariably lays its eggs near some object that can be easily seen from a distance, although the eggs themselves are invisible from, say, a dozen paces. In one case, the object



Black-fronted Dotterel and eggs, showing large piece of bark which may have been used as an egg-location guide.

Photo. by M. S. R. Sharland.

was a blackened stump, in another, a tall thistle, in a third, a thick and heavy piece of bark which was the most prominent object in a paddock for a radius of 50 yards. Where the eggs are laid among water-worn pebbles, which they may resemble in shape and size, the guide-marks seem to be large rocks, or a branch of a tree washed down by a flood.

A Red-capped Dotterel (*Charadrius ruficapillus*), which had its eggs among some seaweed on a Lewisham beach, used a long, thin and prominent stick as one of the edges of its nest, so that, while the eggs were concealed by their contours and markings, the stick indicated the position of the nest. On an adjacent beach a Pied Oyster-catcher (*Hæmatopus ostralegus*) selected a spot at the end of two pieces of burnt wood partly buried in the sand to form a V. These objects were very conspicuous in the white sand.

It seems certain that birds use such objects as guides or 'landmarks,' and by their aid are able more readily to locate the site of the eggs when returning from a flight. With constant sitting and usage of approaches, the birds doubtless become thoroughly accustomed to the site, but in the early nesting stages guide marks are probably an advantage.

It is noteworthy that on remote beaches where the birds may seldom be disturbed and either one or other of the pair is at the nest, these guides are often absent. In this case, it is the sitting bird that affords the guide to the returning mate.

Once having selected an area, the Black-fronted Dotterel will continue to use it year after year, and whilst the nest is not made in the same spot, it is never very far from the one used the previous year. When there was no obvious difference in the landscape for a mile around, I could never understand why a Dotterel each year selected a spot in the corner of a particular paddock and laid her two clutches there in a season. It was a lightly-grassed area and close to a panel through which dairy cows passed to some stubble, but in all except the stubble paddock the same conditions prevailed. It was perhaps 250 yards from water, but as soon as the young ones were hatched the parents took them to the edge of the water, and there I would find them, either planted in the grass or flattened on the sun-hardened mud surrounding a water hole.—M. S. R. SHARLAND, Hobart, Tas., 2/3/42.

Behaviour of Dollar-birds.—The strange behaviour of three Dollar-birds (*Eurystomus orientalis*) attracted my attention at Wahroonga, N.S.W., on January 3, 1942. Two

of them at first flew down from a tall *Angophora lanceolata* to within fifteen feet of the ground. After a few minutes one of them came right on to the ground, spread its wings horizontally, lifted the tail and head, and with bill wide open remained in this position for two minutes, resembling very much the coloured plate in Leach's *An Australian Bird Book*. It then flew up again to a low branch and preened itself. The same procedure was followed by a second bird in another part of the garden, this one remaining for about 1½ minutes. The third bird then did likewise, and this went on at intervals for about fifteen minutes. In between times the birds were swooping over the garden, catching large brown beetles in mid-air. This is the first occasion on which I have seen Dollar-birds on the ground. Perhaps other readers have noticed the same thing elsewhere. The day was fairly hot (about 80°) but not as hot as the next day, when the temperature was 107° and the birds were not seen. Perhaps they gained some relief from a draught through or under the outspread wings, although they squatted in the sun each time, sometimes on grass and at others on bare earth, and several times came down on practically the identical spot. The following Saturday, January 10, two Dollar-birds were seen at 1.15 p.m. and went through the same procedure in the same place for half an hour—one bird remained on the ground for five minutes—the temperature being about 80°.—K. H. MACKNIGHT, Sydney, N.S.W., 16/1/42.

Breeding of the Great Crested Grebe in southern Western Australia.—After a period of nearly five years of bird-observation at Lake Jandakot, a sheet of water about ten miles south of Perth, it has been my good fortune to record the breeding of *Podiceps cristatus* in southern Western Australia. Hitherto, although there are a few records of the occurrence of the species in this State, there is no record of its having been found breeding.

I have followed with great interest the occurrence of this Grebe on Lake Jandakot, and in September, 1936, observed eight individuals swimming on the southern portion of the lake. The lake being open, the water slightly brackish, and very clear, it did not occur to me that the species might breed there, but during subsequent visits it appeared that the bird was present at the same period every year. On September 14, 1937, there was again a pair in full breeding plumage on the lake, the male having a very pronounced collar-ruff, whilst his mate had a much smaller adornment. After two searches the remains of two probable nests were noted.

The winter of 1939-40 was very dry and the lake was

almost devoid of water, and no Great Crested Grebes were seen.

On August 8, 1941, a pair was again located, and their movements indicated some evidence of mating. On December 23, I again visited the portion of the lake where the pair had been noted and, donning a pair of bathers, decided to make a search for the nest. After I had waded about a chain and a half the male Grebe was seen moving gradually away from the reeds which line the shore of the lake, towards the open water. On going forward to the clump of reeds from which he had emerged I saw the female slip off the nest. The nest was approximately fifty yards from the edge of the lake, and was a platform of reeds and other aquatic plants interlaced one over the other. A quantity of mud assisted to stabilize the nest. At the back of the nest there was a depression, intended, presumably, for one of the birds to rest on when not engaged in incubation. The nest was about four feet in circumference, and was entirely independent of standing reeds, but pieces of broken rushes and other debris formed a link with the standing reeds and prevented its drifting away. The water was about four feet deep. Five nest-stained, incubated eggs were in the nest.

The parent birds remained about twenty yards away, the female keeping well behind the male, but neither bird appeared to be unduly agitated at my presence. On my retiring towards the bank, one bird immediately returned to the nest and clambered back on to the eggs.—K. G. BULLER, Perth, 15/2/42.

Migrants around Melbourne.—The 1941-42 season was without doubt one of the most interesting around Melbourne, so far as migratory birds were concerned. A number of the birds nested and bred close to the city. At Wattle Park, Orioles, Rufous Song-Larks, White-browed Wood-Swallows and Regent Honeyeaters nested. Along the Yarra, from East Kew to Heidelberg, Brown and Rufous Song-Larks, White-winged Trillers, White-browed Wood-Swallows, Reed Warblers, Sacred Kingfishers, and Fairy Martins nested in numbers. Several Masked Wood-Swallows appeared with the first flocks of Wood-Swallows but were not noted during the nesting period. In the Dandenong Ranges the Satin, Leaden and Black-faced Flycatchers were seen. This last bird is definitely increasing, as several pairs were noted.

At a bayside swamp Little Greenshanks (Marsh Sandpipers) and Black-tailed Native-Hens were observed, and the Wood Sandpiper made its appearance among the numerous waders there. Red-kneed Dotterels bred in

dozens at this same swamp, whilst amongst some timber there, Mr. Jack Jones and I noted several Red-capped Robins and a Rufous Fantail during a visit in December. Overhead a small party of Pacific Swifts flew.

Trillers were most plentiful on the plains around Werribee and Little River, whilst large flocks of Budgerigars were often seen in that district. Royal and Yellow-billed Spoonbills, Egrets, Pacific Herons, White and Straw-necked Ibis, Pink-eared Ducks, White-headed Stilts and Marsh Terns were all seen in numbers in the Point Cooke and Werribee districts. Crop paddocks resounded with the 'two-to-weep' call of the Stubble Quail. Spine-tailed and Pacific Swifts have been recorded more than is usual throughout February and March of this year (1942). For three days during a heat wave recently Pacific Swifts were seen hawking low over the paddocks at East Brighton, most likely snapping up the grasshoppers which were abundant at the time.

Most of the birds mentioned have left these parts now, on their migratory flights to other lands or other states, but fresh species are coming here even now. On a recent visit to Fishermen's Bend with Peter Bull, a New Zealand member, we saw the forerunners of the Double-banded Dotterel flocks, four being noted feeding in the tidal mud. Scarlet Robins have already started their migration from the hills, and a party of five was seen this week in the suburbs.—ROY WHEELER, Elwood, Vic., 25/3/42.

The Toxic Properties of the Bronzewing Pigeon.—It is well-known to settlers in southern Western Australia that cats often die after eating Bronzewing Pigeons which have been feeding on the seeds of the heart-leaved poison (*Gastrolobium bilobum*). In an article on "The Vegetation of Western Australia" in the *Western Australian Year-Book* for 1900-01, the then Government Botanist, Dr. A. Morrison, wrote: "Bright and interesting as the flora of Western Australia is, a shadow is cast on it by the poisonous plants that make themselves known by their fatal effect on cattle, sheep, and horses browsing on them. . . . Some of the species grow in abundance over large areas, and being virulent poisons the loss they cause is very great. A majority of them are comprised in a tribe of the *Leguminosæ*, represented by the genera *Oxylobium*, *Gastrolobium*, and *Isotropis* . . . there can be no question regarding the deadly effect, frequently demonstrated of a considerable number of species of *Oxylobium* and *Gastrolobium*. While they are closely allied botanically the poisonous effects of the various species appear to be similar, the main symptoms being griping, delirium, and paralysis, involving the sympathetic system of nerves, with convulsions."

When dealing with the subject in "The Poison Plants of Western Australia," in the *Journal of the Department of Agriculture*, 1926, the Government Botanist, Mr. C. A. Gardner, wrote: "Box Poison. Native marsupials eat the plant, and birds, particularly bronzewing pigeons, eat the seeds. Dogs and cats, however, may be poisoned through eating the entrails or bones (not the flesh) of these animals, whether they be cooked or uncooked; they have fits, become mad, biting at anyone within reach, and finally die in convulsions."

When looking through the files of some Western Australian newspapers, the writer came across the following note written by the Albany naturalist and botanist, William Webb, in the *Albany Mail* of July 28, 1885. Webb wrote: "I have just had a valuable dog poisoned by eating the breast-bone of a bronzewing pigeon. I skinned the bird for stuffing, and as it was a fine plump fellow I roasted it for my breakfast and threw all the bones in the fire excepting the breast-bone, which the dog managed to get. Ten minutes after eating it he was quite mad, running about and yelping most piteously. I caught him and poured castor oil down his throat which caused him to vomit the contents of his stomach. This, however, did not ease him, as in a quarter of an hour the poor dog died in dreadful agony. I wish you to notice this circumstance in your valuable paper for the benefit of those people who have dogs and cats they value to keep out of their way the bones of the wild pigeon. For my own part I shall be very badly in want of animal food before I eat another of these birds. I have seen dogs poisoned with strychnine, but their sufferings seemed mild compared to that caused by poisoning from the bones of the bronzewing pigeon. The birds in this locality feed almost exclusively on the seeds of the poison bush, *Gastrolobium bilobum*, and there is every reason to believe that they owe their poisonous properties to this circumstance."—H. M. WHITTELL, Bridgetown, W.A., 3/5/42.

Reviews

Avicultural Notes.—In the *Avicultural Magazine*, 5th ser., vol. v, no. 2, Sydney Porter has "Notes on the *Neophema* Parrakeets," and "The Grey Struthidea." The Grass Parrakeets are so often the subject of avicultural writings that there is little of novelty to be expected, although non-avicultural birdmen usually consider that aviculturists do not exploit to the full their opportunities for observation. Mr. Porter's notes, which deal with *Neophema splendida*, *N. chrysogaster* and *N. petrophila*, are largely a recounting of Adelaide bird fanciers' gossip. The Orange-bellied parrot is said to nest "at the angle where a stem [of tea-tree] is broken off about 3 or 4 feet from the ground, the bird laying its eggs on the top of the dead stump," which does not agree with earlier accounts.