

thick as they were before the drought. On the other hand, Butcher-Birds are scarce and Jackasses (*Dacelo*) extremely rare. Magpies appear to have got through fairly well. Little Quail (or Turnix) are very numerous on the forest country where the grass is rank, owing to the want of stock or marsupials to eat it. Betcherrygahs are, I think, more numerous than in normal years.

I notice two of your correspondents quote instances of Fly-catchers fighting their reflections in a window. With us the Magpie-Lark (*Grallina*) does the same. At my cottage in Clermont, one bird woke me every morning by tapping at my bedroom window, and eventually knocked out the pane of glass—the putty in this climate getting very brittle and easily detached from wood, which shrinks. I cut away the branch of vine the bird used to stand on, so now he visits another window where a tank gives him a coign of vantage. The Wild Turkeys (Bustards) have not come back, and there are very few Scrub Turkeys (*Talegallus*). Pigeons and Doves are fairly numerous, but the various Ducks very scarce. Where I am at present camped Finches are very numerous. The whirr of their wings when disturbed at the drinking-trough gives one quite a start. Bower-Birds (Spotted) are fairly plentiful, and there was a very fair “play-house” quite close to my tent at my last camp, and their antics were very amusing to watch.—F. B. C. FORD. Survey Camp, Clermont (Q.), 18/8/03.

From Magazines, &c.

AMONGST publications received is one (forwarded by the courtesy of Dr. O. Finsch from the Leyden Museum) dealing with a species of African Pitta. The author prefers the name *P. argolensis* to some others which have been used for this bird.

* * *

A NATURAL HISTORY OF WESTERN AUSTRALIA.—The Government of Western Australia has issued, in a compact and profusely illustrated form, some extracts from the Year-Books of that State. This is virtually not only a natural history of the State, but a guide to its geology and many other scientific matters. The able article on birds is contributed by Mr. A. W. Milligan, and hence there is no need to give it further praise. When the new species recorded since have been added, it will prove most valuable as a work of reference to Australian ornithologists, as well as to those whose interest is confined to other branches of natural history.

* * *

LAND BIRDS AT SEA.—Mr. David G. Stead (Sydney) writing to *The Zoologist* (June, 1903), states that Mr. George Hutton, of the Orient liner *Omrah*, informed him that while this steamer was on a recent trip from Ceylon to Australia a Crow accompanied

them all the way, resting on the ship at night or when fatigued. The steamer had just left Colombo when the bird was discovered flying overhead. This incident recalls another similar note of Mr. Stead's, when he reported (*Zoologist*, 1900, p. 355) that a Bronzewing Pigeon (*Phaps chalcoptera*) flew aboard the disabled steamer *Perthshire* when about 500 miles off the Eastern Australian coast.

* * *

MR. George Henschel, writing in *Nature*, p. 610 (April, 1903) gives his extraordinary experience of having heard a Bullfinch and a Canary sing, or, rather, whistle, "God Save the King" between them. He heard them at the residence of his sister, Frau Prof. Grosse, Brunswick, Germany. The birds were in cages in separate rooms. The Bullfinch would whistle the first seven bars, or half of the stanza, and the Canary would complete the theme. Mr. Henschel concludes thus:—"I should be glad to read in a further issue of your paper whether you share my astonishment, or if any of your readers can perhaps recall or have ever heard of a similar experience."

* * *

Bulletins of the Philippine Museum.—Nos. 1 and 2 have been received. Although these initial parts are small, it is safe to predict a great future before the Museum (under American rule) in such an interesting region as the Philippines. In No. 1 is an article, "On Birds from Luzon, Mindoro, Masbate, Ticao, Cuyo, Culion, Cagayan, Sulu, and Palawan," by Mr. Richard C. M'Gregor wherein is described a new Drongo-Shrike (*Chibia cuyensis*). In view of the fact that the *Querquedula circia* (Blue-winged Teal) and *Spatula clypeata* (European Shoveller) are accidental to Australia, it is interesting to find these species noted as new to the Philippines on Mr. M'Gregor's list. Of the former Duck a male was killed at Taguig, Luzon, 12th January, 1902, while on 6th February a live pair was purchased in the Manilla market. The second number of the *Bulletin* contains a "List of Bird-Skins Offered in Exchange" by the Museum.

* * *

ON SHOW IN ENGLAND.—The Crystal Palace Bird Show was (according to the *Avicultural Magazine*) held in February under the rules of the London and Provincial Ornithological Society. Of Australian birds there was exhibited in the class "Parrakeets, &c.," a pair of Varied Lorikeets (*Ptilosclera versicolor*), which took first prize. These birds were the first of the kind exhibited in that country. A pair of Blue-bellied Lorikeets (*Trichoglossus novæ-hollandiæ*), a Black-tailed Parrakeet (*Polytelis melanura*), King Lories (*Aprosmictus cyanopygius*), Red-winged Parrots (*Ptilinopus erythropterus*), Crimson Parrakeets (*Platycercus elegans*), and Rosella Parrakeets (*P. eximius*) were also shown. In the class "Finches, &c.," there were Ringed (*Sticteptera annulosa*),

Double-banded (*S. bichenovii*), and Red-tailed (*Bathilda ruficauda*) Finches, besides Gouldian (*Poephila gouldiæ*), Long-tailed (*P. acuticauda*), and Masked (*P. personata*) Grass-Finches.

* * *

Bird-Lore (July–August, 1903) contains a bright and chatty article by Mr. Charles Keeler entitled "In the Haunts of New Zealand Birds." In this article the writer gives his casual field observations of such familiar bush birds as the Bell-Bird, Pied and Black Fantails, Grey Warbler, South Island Tomtit, the well-known Australian White-eye, Bush-Wren, Wild "Canary" (Yellowhead), the famous Kaka Parrot, and the unique Owl-Parrot. Other New Zealand avifauna are incidentally mentioned. Some of the popular names of the colonists sorely puzzled Mr. Keeler. "It happens," he writes, "that the Robins of New Zealand are really old world Warblers, the Tomtit belongs to the same family, while the Bush-Wren is a Pitta." It must have pained such a bird-lover as Mr. Keeler to conclude his brief *résumé* with the warning—"If these New Zealand birds are to be known, it must be done at once, for a host of relentless enemies are sweeping them from the face of the earth."

* * *

EAGLES AT CLOSE QUARTERS.—Rochester, Tuesday.—Hunger has made the Eagles in this district very daring. Yesterday Mr. Keenan, of Nanneella, saw a pair of Eagles, that had taken up a position close to a large flock of turkeys, fly just above the flock. Like a flash of lightning one of the Eagles made a swoop, and seized one of the largest turkeys in its talons. On account of the great weight of its prey the Eagle's flight was very slow, and Mr. Keenan, armed with a stout stick, by dealing several vigorous blows at the Eagle, caused it to relinquish its hold of the turkey, which made good its escape. Later in the day Mr. E. Waters, who was shooting in the locality, espied the two birds, and brought one to earth. It measured 7 feet from tip to tip of wings.—*Argus*, 24/4/03.

Timmering, Friday.—Mr. Henry Bradford, rabbit trapper, when setting traps about two miles from Rochester on Thursday afternoon, heard a commotion in the vicinity of an adjacent rabbit burrow. He went to investigate, when he found an immense Eagle-Hawk engaged in fierce combat with a large male fox. The bird had attacked the fox, which was getting much the worse of the conflict. Getting free of its adversary's talons, Reynard had sought refuge in the burrow, at which the Eagle-Hawk darted fiercely, striking a rabbit trap, which closed on its claw, holding it fast. Mr. Bradford advanced, and after an exciting struggle, lasting several minutes, despatched the Eagle—which proved to be a magnificent specimen, its pinions measuring 6 feet 3 inches from tip to tip. The fox, on seeking

to leave the burrow a few hours later, was caught in the same trap and killed, and proved to be one of the largest of its kind seen in the district. Mr. Bradford secured the brush as a trophy of a unique haul, and has claimed the shire bonus on the scalp.—*Age*, 28/3/03.

* * *

THE FLIGHT OF THE ALBATROSS.—In *The Ibis* for January, 1903 (pp. 81–88), appeared a paper from Captain F. W. Hutton, F.R.S., on this subject. After reviewing the varieties of this bird, and pointing out that no two species “are known to breed in the same locality,” the author argues that the theory of natural selection will not account for the variation in species, and that “we must believe that isolation preceded the development of their specific characters.” Some Darwinians will possibly not agree with Captain Hutton, but he has put his aspect of the case well. By means of illustrations, his subsequent remarks on the “sailing” flight of Albatrosses and the larger Petrels are made very lucid. He favours the inclined plane theory to account for the bird’s power to “keep on the wing all day with very little exertion,” and urges that “as the velocity of the wind near the surface of the sea is diminished by the friction of the waves, when the bird ascends into the more rapidly moving upper current, its *vis inertia* makes the wind blow past it, and so its stock of energy is increased.” Much close observation and keen reasoning have gone to the making of this paper; but it would be interesting to know what the author has to say as to the “football” theory mentioned in the next note. How wings as Captain Hutton depicts them could form an oval eddy is not easy to see, nor is it clear that passive resistance against wind force would enable a bird to rise. One problem which has hardly been fairly faced by many writers on the subject may be put thus:—Is *vis inertia* (absence of effort or power) sufficient to raise any bird against the wind?

In the following (April) issue of *The Ibis*, p. 265, Captain Hutton writes:—“In reference to my remarks on the Albatrosses, I wish to add that Dr. Davidson, of s.s. *Morning*, has just brought to the Museum two specimens of a Mollymawk from the Indian Ocean, which I take to be the true *Diomedea culminata*. They are certainly distinct from *Diomedea bulleri* of the Snares, and therefore the latter remains a good species. The difference between *D. bulleri* and *D. culminata* is in the culmicorn, which is more expanded posteriorly in *D. bulleri* than in *D. culminata*. If *D. bulleri* had been put into the genus *Thalassogeron*, and the difference between it and *D. culminata* pointed out, there would have been no difficulty in the matter. *D. bulleri* is certainly congeneric with *D. salvini*. Neither of them is such a typical *Thalassogeron* as *D. culminata* or *D. chlororhyncha*, but they cannot be separated generically. It is *Diomedea bulleri* which breeds on the Snares, not *D. culminata*. *D. chlororhyncha*

and *D. culminata* are both found occasionally in our seas, but I do not know that they breed here. Dr. Filhol says that *D. chlororhyncha* breeds at Campbell Island, but he probably did not distinguish the species accurately. I saw none when I was there in January, 1901, only *D. melanophrys*, which was extremely abundant, and a few *D. bulleri* or *D. culminata*."

* * *

THE ASCENT OF BIRDS ON "MOTIONLESS" WINGS.—Writing to the *Daily Mail* (London) Mr. E. C. Malan thus explains the power some birds have to rise in the air without apparently moving their wings:—"The air that is divided by the bird's body does not pass away on either side of it, but forms two eddies under the bird's outstretched wings, which act as screw-jacks and literally screw the bird up higher and higher. Thus we should see, if our eyes were sharp enough, two large footballs of air under a bird's wings, ever winding and screwing so as to support the bird, and continually to raise it higher. To ensure this result, the bird must sail against the wind, otherwise there will be no anguish at work under the wings." "Anguish," he previously says, "must be taken to mean that snake-like, curling, writhing, enfolding action, with many contortions and convolutions, which in a twining fluid or a jointed object is familiar to all. Thus the air, when divided by a bird, is thrown into a state of anguish, which is not the case when it is perforated by an arrow; and this state of anguish is the excellent and most simple secret of flight." Against Mr. Malan's theory must be placed the doubts as to whether, even in a strong wind, the air has of itself sufficient buoyancy to support a bird's weight without effort on the part of the bird, and whether it would produce the "football" effect without such effort. The "screw" theory as to a bird's flight is not borne out by scientific investigation, and if, as the photographic records of Prof. Marey (confirmed by the more exhaustive experiments of Anschütz, in which every detail in the motion of a bird's wing in flight is revealed to the microscope) tend to prove, each feather has an independent action whilst the bird is on the wing, is it not possible that (granting for the moment the "anguish" or eddy theory to be correct) there is some truth, after all, in the older idea that when a bird is "sailing" there is some movement in the wings (imperceptible, it may be, to the observer) and that the "eddies" are thus maintained in proper form to enable it to ascend?

* * *

DESTRUCTION OF BIRDS BY POISONED GRAIN.—Timmering, Sunday.—The laying of poisoned wheat for the destruction of Sparrows throughout the Echuca and Deakin shires has resulted in the wholesale destruction of native birds, particularly Magpies and Magpie-Larks, which are supposed to be protected under the *Game Act*, and are to be seen lying dead in scores, while Plover are also destroyed. The Sparrows are getting too wary to touch

the poisoned baits. There will not be a native insectivorous bird in the district if the present wanton destruction continues. Experienced farmers state that the Magpies only eat grain that is on the surface, or early in the season when the shoots just come through, and then only when other food is not available. This district has suffered in previous seasons from locust and caterpillar pests, when the native insectivorous birds proved invaluable allies of the farmers. Messrs. Ingram Bros. were attracted by the movements of a flock of Magpies in one of their paddocks on Thursday, and on examination they discovered the birds were feeding on caterpillars that had made their appearance on the bare patches.—*Age*, 6/7/03.

Kindly permit me to draw attention to the effect of rabbit-poisoning on our feathered friends. In some cases birds pick up baits, and this has led to a large decrease in the number of such birds as our Water-Hens. How this destruction is to be avoided at present is beside the question.

Anyone walking over a successfully poisoned paddock must have noticed numbers of birds, chiefly Magpies, Crows, and Hawks, lying dead. Now, as these birds are poisoned by eating poisoned rabbits, I think their destruction could and should be prevented. The birds cannot reach the rabbits lying in their burrows; they scavenge the land between the burrows and the water, towards which phosphorus-poisoned rabbits always make. Most deaths from poison occur in the first two days after baits have been laid. Now, could not the farmers, in their own interest, dispose of exposed carcasses by pushing them into the nearest burrows? A short time with a forked stick would rid the paddock of these death-traps.

So far as I have seen, decomposition is fairly well advanced before the birds attack the carcass, so that extra work in the busy part of the day need not be caused by this profitable employment.—“Field Naturalist,” writing in *Yackandandah Times*.

* * *

PERENNIAL MOULT AND ORIGINAL FEATHERING OF WING.—Mr. Edward Degen, F.Z.S., who will be well remembered in Melbourne, has contributed a technical but very important paper to the *Proceedings of the Zoological Society* (vol. xvi., part 8, No. 1, May, 1903). Its title is “Ecdysis as Morphological Evidence of the Original Tetractyle Feathering of the Bird’s Fore-limb, based especially on the Permanent Moulting in *Gymnorhina tibicen*.” One aim of the writer is to furnish evidence of a really important link in zoology. From saurian to bird always seems a long step. But if Mr. Degen’s contention as to the four-fingered form of the original bird’s wing be proved (one would surely think it was from the close examination he has made of 32 specimens of one of our “Magpies,” and various other birds, and from the investigations of other workers in this field, Professor Spencer for one, into the embryological stages of a bird’s wing, &c., in some of which

even the scale-like markings which precede the feathers have been clearly revealed on portions of the body, thus furnishing another link in the evidence) the gap has been to some extent bridged. To prove his thesis the author found it "necessary to ascertain the mode by which the perennial moult of the individuals of a species of birds is made up, from the earliest to the last stages of renewal; and, further, to what extent each feather participates in this annual process during the period of complete feather-change." To carry out this investigation the specimens observed were procured at intervals of a week, and whilst in a comparatively fresh state, both wings of each specimen were examined and measured, the stages of feather development being most carefully noted. What may be called the processional history of a bird's plumage is recorded, from "downy investment" to its mature stage, even the order in which feathers are cast having been observed. Moult problems are very fully entered into, and by means of copious notes, plates, and diagrams much is done towards their elucidation. *Re* change of plumage without moult, Mr. Degen writes, in a letter to Mr. A. J. Campbell:—"Feathers are funny bits of tissue, so that after a year they are not worth even sending to the dyer's. . . . Colour-change without moult, indeed! The disciples of the fraud are fast vanishing, both in Europe and America. Does not replacement of pigment suggest vitality of an organ, and, as a natural consequence, vascularity? And the latter, again, how can it exist without the accompaniment of nerves? A bird will not even wince if you cut one of its feathers. . . . Of course, if you pull it out the effect is different, the old stump sitting tightly on the newly-formed papilla beneath."

It will be recollected the last time we referred to Mr. Degen's work was in connection with a projected trip with Colonel Harrington to Abyssinia.* Mr. Degen has distinguished himself as a careful collector, bringing back five new animals, including *Otomys degeni*, which have been described by Mr. Oldfield Thomas, F.R.S.† Mr. Degen's principal haul, however, was 350 specimens of fish from Lake Tsana. Mr. G. A. Boulenger, F.R.S., who examined the fish, described no less than 21 new species, including *Barbus degeni*.‡ Two new lizards were also collected, which were also described by Mr. Boulenger, and Mr. Degen received a well-merited third dedication in *Latastia degeni*.§

A CORRECTION.—"Notes on a Collection of Bird-skins from the Fitzroy River, North-Western Australia" (Hall—Rogers). The notes of No. 122 (page 42) refer to *Scythrops novæ-hollandiæ* (Channelbill), instead of *Eudynamis cyanocephala* (Koel).

* *Emu*, vol. i., p. 155.

† *Proc. Zool. Soc. Lond.*, vol. ii., part 2, p. 308 (1902).

‡ *Ann. Mag. Nat. Hist.*, 7th ser., vol. x., p. 421 (1902).

§ *Ann. Mag. Nat. Hist.*, 7th ser., vol. xi., p. 54 (1903).