

about 3 feet high. A local friend subsequently visited the mound, which was conical-shaped on that occasion. It contained a single egg, at a depth of about 18 inches, where the thermometer registered 93° , the temperature of the sand on the top of the mound being 121° .

Psephotus hæmatorrhous (Red-vented Parrakeet).—The true "Blue Bonnet" is one of the most interesting of elegant Parrakeets, and makes an endearing aviary pet. Mr. J. A. Hill (Victoria), who was spending a holiday near Wellington, about 170 miles inland or westward of Newcastle, N.S.W., kindly brought me a skin of the Red-vented species from that locality. It distinctly differs from the Victorian and South Australian bird—*P. xanthorrhous*—by having (1) the under tail-covert crimson-red instead of primrose-yellow; (2) point of the shoulder verditer-green instead of blue; and (3) the centre of the greater wing-coverts reddish-chestnut instead of saffron-yellow. For other details see Gould's "Handbook," vol. ii., pp. 62–65. Wellington is about 160 miles south of the Namoi, where Gould obtained his type of *P. hæmatorrhous*. It would be interesting to know how much further south it extends, or where it intergrades with *P. xanthorrhous*. As there has been some confusion about the two varieties, I do not think authentic eggs of the former have yet been described, although, doubtless, they are similar to those of the Yellow-vented Parrakeet.—A. J. CAMPBELL.

From Magazines, &c.

CLOSE SEASON IGNORED.—The close season for game throughout the Northern district seems to be little better than a farce. Game is almost openly shot, and wild-fowl is a common article of diet in several quarters. Land-owners in the vicinity state that shooting parties are numerous, though the most common game is that named in the Act.—*The Argus*, 13th December, 1906.

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HAWK AND WILD DUCK.—A strange scene was witnessed at Mooropna on Monday evening, when a wild Wood-Duck was chased about the township by a Hawk. The latter was gaining rapidly on it, when the Duck darted under the verandah of a store, and darted through a frosted window-pane. Inside it caused great consternation, narrowly missing a table covered with kerosene lamps. Eventually it was caught, and was found to be cut on the head and feet. The Hawk flew into a tree near the footpath, and waited for the Duck to reappear.—*The Argus*, 2nd February, 1907.

VARIETY OF GOURA PIGEON.—In the *Records of the Australian Museum*, vol. vi., No. 3, p. 230, Mr. A. J. North has described a variety of the Crowned-Pigeon of New Guinea as *Goura coronata*, var. *nigra*. The specimen which was brought under his notice was originally a donation received in 1897 from the Director of the Botanic Gardens, Sydney, where are some five aviaries. Instead of the normal bluish slaty-grey plumage of *Goura coronata*, the plumage may be described as sooty bluish-black, including the head and crest. Mr. North somewhat discounts the value of his variety by stating that the dark plumage may be due to climatic influences or confinement, if it were not typically a distinct variety.

An instance is known where a Crimson Parrakeet (*Platycercus elegans*), through improper feeding in confinement, changed nearly the whole of its red feathers into bluish. For the same reason the Crowned-Pigeon may have changed its bluish feathers into blackish.

* * *

NESTING SHIFTS.—Mr. H. W. Ford, of Marong, writes:—"We noticed that the Brown Hawks take turns at sitting on the eggs, in about three-hour spells. On the appearance of the returning bird, the one on the nest would scream and fly off, and the other took its place. Sometimes the male bird brought a frilled lizard in its claws. The female would then fly screaming to him, and after a few moments would take the food in her claws, fly to a tree, and eat the lizard. We were near the nest till young ones were hatched and nearly ready to leave, but never saw any other food brought but frilled lizard. When the young were first out the male bird used to bring the lizards, and the female would take them and tear them up, swallow them, and then go to the nest and feed the young. Once there seemed to be an extra supply of lizards, as the male took one and left it on an old nest 100 yards away for two hours, when he came back for it. The White-fronted Herons take turn about at sitting; only one change, as far as I know, in nine hours, and that was usually about 3 p.m. The returning bird would give a cry and light on or near the nesting tree, when the other would get off and fly away. The pair under observation reared six young ones, which is more than I have seen before. I never saw more than four in a nest, and usually two. In nesting the Magpie-Larks change shifts every 20 minutes or half-hour. One goes away to feed and it comes back right to the side of the nest, when the other gets up and off, and the relieving bird takes its place."—"Nature Notes," *The Argus*, 8th February, 1907.

* * *

NATIVE BIRD PROTECTION ASSOCIATION.—It is pleasing to find that in Rockhampton, Queensland, a strong society has

been formed for the protection of native birds, and members of the Australasian Ornithologists' Union look forward to the time when numerous kindred societies will exist in all parts of the Commonwealth, through whose efforts native game and ornamental or useful birds will be properly protected by far-reaching, well-framed game laws. Mr. W. M'Ilwraith, A.O.U., at the annual meeting of the above-mentioned association, held at Rockhampton on 2nd February, 1907, said :—"The action of the society in the past had had the effect of making those who were inclined to shoot on every occasion at everything that came in their way more guarded in their movements. The society was to be congratulated also on having had reserves proclaimed in various parts of the district. There were a number of birds in the district, of which the society had a list, which it would be well that the boys at their grammar schools and State schools, who were going in for nature study, should make themselves familiar with and endeavour to find out if there were any birds other than those which were recorded. It would be to the credit of the boys to have their names mentioned as having added new names to the list. The study of birds, when they came to acquire the taste for it, would be found more enjoyable than the mere shooting of them. The society was doing good work in observing these things in this district. There were those who were inclined to go out with rifles and guns and slaughter birds indiscriminately, and it was well that they had friends on the outskirts of the town who could advise them when anything was going on which should not be permitted."

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Bulletin of the British Ornithologists' Club, No. cxxvii., contains an account of the hundred and twenty-sixth meeting of the Club, including the president's address. Dr. P. L. Sclater, F.R.S., in the course of his address, said he thought one of the leading features of the present epoch in connection with the science of ornithology was the number of expeditions despatched in quest of discovery to every part of the globe. Possibly he excepted the island-continent of Australia. Save for the little private enterprise recorded from time to time in *The Emu*, no well-organised or national expedition has taken place for years. How much money is spent in the Commonwealth over matters of far less importance than the science of zoology, botany, &c. ! In his address Dr. Sclater is sympathetic towards oologists. Referring to recent ornithological events of the Palæarctic Region, he is of opinion that one of the most noteworthy is the commencement of several new works on its oology. Mr. Dresser has already issued the first two numbers of his "Eggs of the Birds of Europe." Mr. Jourdain's "Eggs of European Birds," so far as it has proceeded, also deserves commendation,

while Krause's "Oologia Universalis Palæarctica" is not, in Dr. Sclater's opinion, quite so successful, but may prove to be a useful work.

Anent the subject of egg-collecting: Some discussion has taken place recently in the columns of the American publication, *Bird-Lore*, for and against the practice. Australians are mindful that the principal authorities of the present day on Australian ornithology have all been egg-collectors in their early days.

* * *

THE METHODS AND TECHNIQUE OF MEASURING BIRDS.
—In *The Journal of the South African Ornithologists' Union* for December, 1906, Prof. Anton Reichenow contributes useful instructions. After pointing out that it is highly desirable when describing a bird that the parts and colours be correctly named (a diagrammatic chart of a bird is printed on the same page), he states:—

"It is desirable to give measurements in millimetres, because in the case of small measurements with centimetres the employment of decimals may easily lead to mistakes and misprints.

"1. The *total length* (T.L.) is the measurement from the tip of bill to the tip of central tail feather, measured on the outstretched body of a bird; the body must not be forcibly lengthened.

"2. The *length of wing* (L. of W.) is the measurement taken from the carpal (wrist) joint to the end of the longest flight feather. The method is as follows:—Place a millimetre rule under the wing and press the wing gently on to it, reading the scale thereafter.

"3. The *length of tail* (L. of T.) is the measurement from the root of the tail feathers to the end of the longest feather. The measurement is taken by placing the rule underneath the tail with one end of the rule against the place where the under tail coverts start, and where also can be easily felt the roots of the tail feathers proper.

"4. The *length of tarsus* (T.) is the measurement from the notch in the posterior part of the joint between the leg and the lower thigh, to the notch between the upper ridge of the middle toe and the lower edge of the lowest scale of the front part of the leg; should be taken with a pair of compasses.

"5. The *length of the middle toe* (M.T.) is the measurement from the notch on the anterior ridge of the lowest scale between the leg and the root of the middle toe to the point of the claw on the middle toe—the toe being outstretched.

"5a. The *length of the middle claw* (M.C.) is the measurement taken from the upper anterior edge of the last scale on the toe to the point of the nail on the claw.

"6. The *length of the bill* (B.) is the measurement taken in a straight line from the point of the root of the upper ridge of the bill, where the forehead feathers begin, to the tip of the upper mandible. One point of the compass is placed where the horny substance of the bill and the forehead feathers meet, and it is sometimes necessary to move the feathers to one side. In birds which have a cere (bare membrane) at the root of the bill, the measurement is a straight line taken from the upper anterior part of the cere to the tip of the upper mandible."

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WILD BIRD SANCTUARIES.—A new country is usually in such a hurry to make money that arts and study are neglected, but the fauna of a land like ours is really a substantial asset, and should be regarded from a utilitarian as well as a sentimental point of view. Other countries have found this fact out, and they have, in a great multitude of instances, instituted a strict watch upon their birds and beasts. The north-western States of America, for example, which, so far as settlement is concerned, much resemble our own States, have a highly effective and well-paid system of supervision. We have no large game, except a few kangaroos in the extreme north-east and north-west of the State, but we have still many birds and a few animals that are well worth preserving. We are fortunate in possessing a splendid collection of water-fowl, many of which are interesting and showy to a degree. Owing to the fact that anyone with a little loose silver may possess a gun and cartridges, and that game preservation is practically unknown here, our wild-fowl has, of late years, been having a most unpleasant time. Both in and out of season the pot-hunter haunts the lakes and dams, and prowls along the creeks on the look-out for Ducks, and he spreads havoc wherever he goes. So serious is the position becoming in the southern portion of the States that a movement has been initiated in Mortlake which has for its object the setting apart of some of the most suitable lakes in the Western District as permanent game reserves. With, say, eight or ten suitable lakes set apart for breeding purposes, there would always be a supply of birds to stock up the neighbouring lakes, dams, and creeks. For, as is well known, practically the whole of the wild-fowl on the lakes are almost continually moving from one sheet of water to the other. The only time when they remain at one place for any length of time is when they are nesting, and it is then, of course, that they need the most protection. As might be expected, the wild-fowl have their favourite lakes for breeding purposes. If, then, the land is cut up and parcelled out into farms, and no steps are taken to preserve the lakes, the result can very easily be predicted. The Ducks will go first, and very quickly. Then the Swans will

follow them, and the only occupants of the lake will be a rather full supply of huge yellow mud-eels. One has only to see these lakes now, with their broad, blue bosoms thickly dotted with Swans and clumps of Ducks, to realize the difference that the absence of bird life will make in them. In the same connection, great care should be exercised in connection with shelter plantations. At present there are huge belts of plantations, mostly sugar and other gums, but also acacia, tea-tree, and *Pinus insignis*, all over the plains. Some of these plantations are miles long, and their individual area sometimes runs into hundreds of acres. It is pretty well known that these are the only trees there are on the plains, which, before the plantations grew up, were a wide, wind-swept waste. The amount of bird life that they already contain is indeed surprising. The great bulk of this bird life is not native to the plains, but has been attracted thither by the plantations.—*The Argus*, 2nd February, 1907.

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TWO EARLY AUSTRALIAN ORNITHOLOGISTS.—In *Records of the Australian Museum*, vol. vi., No. 3, Mr. A. J. North, C.M.Z.S., has contributed a sympathetic article on two early ornithological workers.

(1) John William Lewin, who was the author of the first work published on Australian birds, arrived in New South Wales in 1798 by H.M.S. *Buffalo*. He is thus referred to by the Duke of Portland in a communication to Governor Hunter, under date 6th February, 1798 :—"Mr. Lewin is a painter and drawer in natural history, and, being desirous of pursuing his studies in a country which cannot fail to improve that branch of knowledge, you will allow him the usual Government rations during his residence in the settlement." In 1801 Lewin accompanied Colonel Paterson, the Lieutenant-Governor of the colony, and party in an exploring expedition up the Hunter and Paterson Rivers. In 1808 Lewin's "Birds of New Holland" appeared, the plates being engraved and coloured by the author. It is not without interest to learn that, with the exception of Lewin's "Insects of New South Wales," published in 1805, his bird plates were the earliest engravings produced in Australia. Lewin originally called his ornithological work "Birds of New South Wales," but it is believed the publisher in England, where the letterpress was printed, styled the work "Birds of New Holland"—a somewhat unfortunate title. Lewin died 27th August, 1819, at the comparatively early age of 49, and was buried in the Devonshire-street Cemetery, his remains, with others buried there, being transferred a few years ago to the northern shore of Botany Bay, to make room for the new metropolitan railway station at Redfern.

(2) John Gilbert. As Mr. North remarks, the labours of the

ill-fated John Gilbert are well known, being closely connected with those of John Gould in the latter's great work on "The Birds of Australia." A plate is given of a mural tablet which was erected to Gilbert's memory by the colonists in the historic St. James's Church (of England), Sydney. It reads:—

"Dulce et decorum est pro scientia mori."

THIS MONUMENT IS ERECTED
BY THE COLONISTS OF NEW SOUTH WALES
IN MEMORY OF
JOHN GILBERT,
ORNITHOLOGIST,

Who was speared by the blacks on the 29th of June,
1845, during the first overland expedition to
Port Essington by Dr. Ludwig Leichhardt and
his intrepid companions."

It will be observed that a slight error occurs in the date. Poor Gilbert was speared on the 28th, not the 29th, of June.

No doubt when the annual session of the A.O.U. meets in Sydney this year members will visit Gilbert's tablet, also Lewin's tomb at Botany, thanks to Mr. North for drawing attention to them. If Mr. North has any further "old-time memories," of, say, Macgillivray, Swainson, and other early ornithologists who were known to visit Australia, all present-day bird-lovers would welcome them.

Reviews.

["The Useful Birds of Southern Australia, with Notes on Other Birds." By Robert Hall, F.L.S., C.M.Z.S., &c. T. C. Lothian, Melbourne and Sydney, 1907.]

THIS little work will be gladly welcomed as a "pocket edition" of much useful information pertaining to the utility of Australian birds.

The contents have been divided by the author into—(1) Insect-eating Birds; (2) Insect and Vermin-destroying Birds; (3) Insect and Seed-eating Birds; (4) Insect and Fruit-eating Birds; (5) Insect, Nectar, and Fruit-eating Birds; and (6) Insectivorous Birds and others introduced from the Northern Hemisphere. The work is fully illustrated, chiefly with reduced blocks in monotone from Gould's celebrated work on birds and by several excellent reproductions of nests, &c. (from the author's negatives and others), some of which have already been used in *The Emu*, as acknowledged by the author. The picture of the little favourite—the Blue Wren—on page 79 is an original and exceedingly happy snap by Mr. A. H. E. Mattingley.

Mr. Hall has apparently written this book for the masses, and clearly demonstrates the important part birds play in

relation to agriculture, fruit-growing, forestry, &c. He treats of nearly 300 species. To cover such a large field in so small a compass some of his remarks are necessarily scant, if not scrappy, while some of his notes are somewhat beside the question—such as, for instance, albino or “sport” varieties, traits of birds in semi-domestication, &c. What the reader wants is information about the habits of typical birds of the bush. But, nevertheless, Mr. Hall has managed to bring out important points which must prove instructive to his readers, and the more his readers are country dwellers the more practical will the instruction become. The book is within easy reach of all, and can be purchased for the modest sum of 3s. 6d. The work is neatly bound with an attractive cover—plate of Blue Wrens—and that it is printed by Messrs. Walker, May and Co. is a guarantee that the printing is first-class.

[“The Bird: its Form and Function.” By C. W. Beebe, Curator of Ornithology of New York Zoological Park.]

UNDER this attractive title a book has appeared of the American Nature Series, published by Henry Holt and Company, New York, September, 1906, which will give nature-lovers generally, and ornithologists especially, an insight into the structure and meaning of bird life which it was difficult to obtain before. In the preface the author aptly states his case in this manner:—“When a new bird is shot it is labelled, preserved in a collection, and often forgotten; or if studied with a field-glass, all effort is centred in finding some characteristic by which it can be named. Observing the habits, the courtship, the nest-building is a third phase of bird study, but few indeed have ever given a moment’s thought to the bird *itself*.” The book is an untechnical study of the bird in the abstract, and is illustrated profusely throughout with excellent photographs, mostly from life.

The frontispiece is a coloured drawing of a prehistoric bird form—*Hesperornis*—a wingless, toothed, diving creature, about 5 feet long, which lived in the great cretaceous seas some four millions of years ago. After treating of the ancestry of the bird the chapters deal in order with the feathers, framework, organs, food, breath, muscles, senses, beak, head, body, wings, feet, tail, and eggs of the bird in such a comprehensive yet simple manner that any reader cannot fail to be impressed with that beauty and adaptability in bird life for which the author endeavours to bespeak continuous admiration.

The book not only contains precise facts, but points out the why and wherefore of most structures, and the bird-lover is immediately enabled to see the full force of some observations that before may have been isolated and solitary. When the

governing principle is explained these isolated facts piece together into one continuous chain of meaning and of interest. In the light of what this extremely useful book has to say, no bird, however monstrous its structure or its habits may at first appear, will be anything but a beautiful expression of the influence of surroundings in the great scheme of things to which it belongs.

Correspondence.

To the Editors of "The Emu."

GALDENS.

SIRS,—Referring to Mr. E. Scott's letter in *The Emu*, vol. vi., part 3, page 151, respecting the probable identity of the birds called "Galdens" by Dampier, I think it is taking too much for granted in assuming that the Little Mangrove Bittern was meant. Mr. Scott refers to the colony of these birds (*Butorides stagnatilis*) mentioned by Gould as observed by Gilbert near Port Essington, and says:—"This may well have been the same colony as observed by Dampier." Now, according to Mr. Scott's letter in *Emu*, vol. vi., part 1, page 22, Dampier observed Galdens (not a colony) in Shark's Bay. It is a far cry from Shark's Bay to Port Essington—a distance of about 1,800 miles. As I have seen a good deal of Shark's Bay, I venture to assert that the following species of the Herodiones would be much more likely to come under notice there (especially in a passing visit, as Dampier's was) than *Butorides stagnatilis*, viz.:—*Demiigretta sacra* (Blue and White Reef-Heron), *Notophox nova-hollandiæ* (White-fronted Heron), *N. pacifica* (White-necked Heron), or *Nycticorax caledonicus* (Night-Heron). My personal experience of *Butorides stagnatilis* is that it is a very shy and solitary bird, only seldom seen feeding outside its favourite shelter of dense mangroves. I have not observed this species myself south of the North-west Cape, and take it to be mostly found in the tropics, although it possibly does occur in the mangroves which grow along the north and east sides of Shark's Bay, and between the mouths of the Gascoyne River, which empties into the northern portion of Shark's Bay. It was near the mouth of the Gascoyne River that Gregory, in the early exploring days, observed two Jabirus (*Xenorhynchus asiaticus*) and shot one, parts of which were sent to Gould—probably the only record of this species for that locality. I have spent many days shooting for specimens in the vicinity of the Gascoyne River delta, but never came across *Butorides stagnatilis*, though, as I say, it is possible it may have been overlooked. Upon turning over my book of field notes, made during my residence of 16 years in the north-west of this