

Although we have felt compelled to say thus much against the theory so ably pleaded for in Mr. Darwin's book, we repeat that, *in a very limited sense indeed*, there seems no reason why the theory may not be a sound one; but at present, even to that extent, it remains to be substantiated. The volume is eloquently written, and its immense array of facts most carefully collected. But we are bound to add, that many an equivocal idea is shrouded under the fairest garb; and we find that we have sometimes swallowed a dose unconsciously, on account of the pleasant medium through which it was administered. And, as an instance of this, we will quote the concluding sentence of the whole work, which is certainly very beautiful, though we can scarcely believe that our author was in earnest when he wrote it. Here it is, without comment (the italics are our own):

“It is interesting to contemplate an entangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us: these laws, taken in the largest sense, being Growth with Reproduction; inheritance, which is almost implied by reproduction; variability from the indirect and direct action of the external conditions of life, and from use and disuse; a ratio of increase so high as to lead to a struggle for life, and as a consequence to Natural Selection, entailing divergence of character and the extinction of less-improved forms. Thus, from the war of nature, from famine and death, *the most exalted object which we are capable of conceiving, namely, the production of the higher animals*, directly follows. There is a grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed laws of gravity, from so simple a beginning, endless forms most beautiful and most wonderful have been and are being evolved.”

Would not one step more plunge us headlong into the Nebular Hypothesis, and the whole theory of Spontaneous Generation?

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## PROCEEDINGS OF LEARNED SOCIETIES.

### ZOOLOGICAL SOCIETY.

March 22, 1859.—Dr. Gray, F.R.S., V.P., in the Chair.

Mr. Gould exhibited and characterized two new species of birds, one belonging to the family *Cuculidæ*, the other to the *Coturniceæ*, and remarkable as forming probably the smallest species of the groups to which they respectively pertained.

For a small Shining Cuckoo, killed at Port Essington, on the north coast of Australia, and of the same form and very nearly allied to the *Chrysococcyx lucidus* of New South Wales and the *C. basalis* of Java, Mr. Gould proposed the name of *Chrysococcyx minutillus*;

and for the Quail, which belonged to the genus *Excalfactoria* of Bonaparte, that of *Excalfactoria minima*.

The following are the descriptions of these new species :—

**CHRYSOCOCCYX MINUTILLUS, Gould.**

Head, all the upper surface, and wings shining bronzy-green; all the under surface white, barred with bronzy-green, the bars being most distinct on the flanks; primaries and secondaries white on the basal portion of their inner webs; two centre tail feathers bronzy-green; the next on each side bronzy-green on the outer web, rufous on the inner web, crossed by a broad band of black near the tip, and with an oval spot of white across the tip of the inner web; the two next on each side bronzy-green on their outer webs, their inner webs rufous, with large spots of black near the shaft, most conspicuous in the outermost of the two feathers; their inner webs are also crossed near the tip with a very broad band of black, and have an oval spot of white at the tip; the outer feather on each side is barred alternately on the outer web with dull bronzy-green and dull white, and on the inner one with broad decided bars of black and white, and tipped with white; bill black; feet olive.

Total length  $5\frac{1}{2}$  inches, bill  $\frac{5}{8}$ , wing  $3\frac{1}{4}$ , tail  $2\frac{1}{2}$ , tarsi  $\frac{1}{2}$ .

*Remark.*—This bird is perhaps more nearly allied to the Javanese species, *C. basalis* of Horsfield, than to the *C. lucidus*; but it is as much smaller than the *C. basalis* as that bird is less than *C. lucidus*. The type of *C. basalis*, which is the only one I have seen, is not a fully adult bird; and yet the measurement of its wing exceeds by half an inch that of the *C. minutillus*.

**EXCALFACTORIA MINIMA, Gould.**

Forehead and sides of the head grey; crown of the head, all the upper surface, and wing-coverts reddish-brown, conspicuously spotted and minutely freckled with brownish-black, a line of buff down the crown and nape, and a narrow line of brownish-white down the centre of the feathers, changing to broad and conspicuous stripes of buff on the lower part of the back and tail-coverts; wings pale brown; chin and throat black, on each side of which is an oblong patch of white encircled by a narrow line of black; below the black a broad crescent of white, fringed on the sides with black, and bounded below by a narrow semicrescent of deep black; under surface grey, mottled on the flanks like the upper surface; line down the centre of the abdomen, thighs, and under tail-coverts chestnut-red; bill black; feet yellowish.

Total length 3 inches, bill  $\frac{1}{4}$ , wing  $2\frac{1}{2}$ , tarsi  $\frac{5}{8}$ .

*Hab.* Vicinity of Macassar, Celebes.

*Remark.*—For this, the most diminutive species of the *Gallinaceæ* yet discovered, we are indebted to the researches of A. R. Wallace, Esq. It is of precisely the same form and very nearly allied to, but quite distinct from, the well-known Chinese Quail, *Excalfactoria chinensis* (*Coturnix chinensis* of authors).

The following extract from a Letter received by Mr. S. Stevens

from Mr. Wallace, dated Batchian, Moluccas, Oct. 29, 1858, was read :—

“Here I have been as yet only five days ; but from the nature of the country, and what I have already done, I am inclined to think it may prove one of the best localities I have yet visited. Birds are as yet very scarce ; but I still hope to get a fine collection, though I believe I have already the *finest and most wonderful* bird in the island. I had a good mind to keep it a secret, but I cannot resist telling you. I have a new *Bird of Paradise!* of a new genus!! quite unlike anything yet known, very curious and very handsome!!! When I can get a couple of pairs, I will send them overland, to see what a new Bird of Paradise will really fetch. Had I seen the bird in Ternate, I should never have believed it came from *here*, so far out of the hitherto supposed region of the *Paradiseidæ*. I consider it the *greatest* discovery I have yet made ; and it gives me hopes of getting other species in Gilolo and Ceram. There is also here a species of Monkey—much further eastwards than in any other island ; so you see this is a most curious locality, combining forms of the East and West of the Archipelago, yet with species peculiar to itself. It also differs from all the other Moluccas in its geological formation, containing iron, coal, copper, and gold, with a glorious forest vegetation and fine large mountain streams : it is a continent in miniature. The Dutch are working the coals ; and there is a good road to the mines, which gives one easy access to the interior forests.

“I can do nothing at drawing birds, but send you a horrible sketch of my discovery, that you may not die of curiosity. I am told the wet season here is terrible, and it begins in December ; so I shall probably have to leave then.”

The sketch alluded to in the above extract having been placed in Mr. G. R. Gray's hands for examination and comparison with the other known species, the following notes of that gentleman, relative to it, were read to the meeting :—

“This Paradise-Bird proves, as Mr. Wallace remarks in his letter, to be a new form, differing from all its congeners, approaching most nearly to the King Bird of Paradise ; but in place of the lengthened caudal appendages, it has, springing from the lesser coverts of each wing, two long shafts, both of which are webbed on each side at the apex. It is the possession of these peculiar winged standards that induces me to propose for it the subgeneric appellation of *Semioptera*.

“I have endeavoured to transform the rough sketch into the probable appearance of the living bird ; and I further add the provisional specific name of *Paradisea Wallacii*, which appellation I think is justly due to Mr. Wallace for the indefatigable energy he has hitherto shown in the advancement of ornithological and entomological knowledge, by visiting localities rarely if ever travelled by naturalists.

“I wait for the arrival of the specimens before venturing to give more detailed accounts of its subgeneric characters, or a full description of its coloration, &c., which I hope to have the pleasure of laying before the members at some future meeting of the Society.”

Mr. G. R. Gray laid before the meeting a drawing of *Tringa pectoralis*, which was made by the late Mr. Adams, Surgeon of H.M.S. 'Enterprise.' It exhibited the bird in the act of having inflated its throat and breast in the manner of the Pouter Pigeon. From the correctness of the other drawings by the same gentleman, Mr. Gray had little doubt that Mr. Adams observed this singular phenomenon in the specimen from which the drawing was taken. The drawing was more especially placed before the members, in the hopes of learning whether such a singularity of habits had been noticed before in this species or in any other of the *Tringæ*.

The bird has peculiar feathers on its breast.

April 12, 1859,—Professor Busk, F.R.S., in the Chair.

DESCRIPTION OF A NEW SPECIES OF OWL OF THE GENUS  
*CICCABA*. BY PHILIP LUTLEY SCLATER.

Mr. Gurney has invited my attention to the example of an Owl of the genus *Ciccaba*, which I now exhibit. It has already passed through my hands once, having been submitted to my examination by M. Verreaux, along with other birds from Southern Mexico, of which I gave some account in these 'Proceedings' for last year. As will be seen by referring to my remarks given on that occasion\*, I then somewhat unwillingly referred it to *Ciccaba huhula*. Mr. Gurney, however, having acquired the specimen for the Norwich Museum, agrees with M. Jules Verreaux (whose opinion to that effect I have already recorded) in insisting on its distinctness; and having lately had an opportunity of examining a second specimen of this bird in the collection of the Jardin des Plantes at Paris, I am now quite prepared to coincide with their views, and to characterize this Mexican *Ciccaba* as an independent species, differing from, though closely allied to, the S. American *Ciccaba huhula*. It may be recognized at once by the more uniform colour above, there being hardly a trace of white transverse markings, except on the elongated feathers of the neck-collar; and by the ground-colour below being pure white, crossed by frequent narrow bands of black, each feather showing three or four of such cross-bands. I propose to call this bird

*CICCABA NIGROLINEATA*.

*Schistacescenti-nigra, colli postici plumis elongatis et albo ter quaterve transfasciatis: maculis in regione superciliari et auriculari quibusdam albis: subtus alba, lineis nigris crebro transfasciata: mento nigro: subalaribus albis, nigro variegatis: cauda nigra, albo quinquies transfasciata: rostro et pedibus flavissimis: tibiis nigris, albo sparsis.*

Long. tota 15·0, alæ 10·5, caudæ 6·78, rostri a rictu 1·35, tarsi 2·1.

*Hab.* In Mexico Meridionali. *Mus.* Norfolciense et Parisiense.

NOTE ON THE SPUR-WINGED GESE (PLECTROPTERUS) NOW  
LIVING IN THE SOCIETY'S GARDENS. BY PHILIP LUTLEY  
SCLATER.

The Society have frequently possessed living examples of the Spur-

\* See P.Z.S. 1858, p. 96.

winged Goose of Western Africa (*Plectropterus gambensis*); and we have at present two male examples of this bird in the Gardens. Last summer, along with the Secretary-birds (*Serpentarius reptilivorus*), came two Spur-winged Geese from Eastern Africa. They were placed in the Gardens along with the W. African pair, and immediately attracted the notice of those who take an interest in such matters, as being apparently of a different species. Comparing the males of the eastern and western birds together, we observe that the former is larger, stands considerably higher, and has longer tarsi and larger feet. There is a large oblong naked space of bare pink skin on the throat, which is wholly wanting in the West African bird; the beak is longer, and the bony protuberance on the front is much larger and more elevated. We have not, unfortunately, the female of the eastern species; but Rüppell tells us that in her too there is a stripe of naked skin between the eye and the base of the bill. Now in the western bird the whole sides of the head in both sexes are closely feathered: the male has a frontal protuberance (much smaller, however, than in the eastern species); the female has none. It appears therefore that two species have been confounded together under the name *gambensis*. The West African bird, originally brought from the Gambia (whence the name), and which has been described and figured as such by Latham, Yarrell, and other writers, is obviously the proper owner of the title *Plectropterus gambensis*; while the East African bird, first accurately figured and described by Dr. E. Rüppell in the third volume of the 'Museum Senckenbergianum,' may very appropriately take the name of *Plectropterus Rüppellii*.

On examining the stuffed specimens in the gallery of the British Museum, as I have been enabled to do through Mr. G. R. Gray's kindness, I find examples of both species. Of the larger *Plectropterus Rüppellii* there is a male bird procured during Clapperton's expedition in Central Africa, and a female which died in the Zoological Gardens. Of the smaller *Plectropterus gambensis* there is one from Western Africa, and one of which the locality is not marked. An immature bird from the Cape is certainly referable to the smaller species.

The separation of these two birds may not perhaps be entirely satisfactory until we have had an opportunity of examining their internal structure, several parts of which, particularly the trachea, are well known to afford good characters for discriminating nearly allied species among the *Anatidæ*, as has been so successfully shown in Mr. Eyton's Monograph.

NOTES ON THE SCALY ANT-EATER (*MANIS JAVANICA*), TAKEN DURING LIFE AND AFTER DEATH. BY ARTHUR ADAMS, F.L.S., SURGEON H.M.S. 'ACTÆON.'

#### A. During Life.

Two living specimens of this singular mammal having come under my observation, I am induced to offer some account of their habits as far as I was enabled to make them out.

Our first Ant-eater is a female, and rejoices in the *sobriquet* of "Scales." She is crepuscular, and remains coiled up in a ball during the day, secure in her scaly panoply; but at the decline of day she grows lively. Now a creature whose habits require to be studied by the aid of a dark lantern must needs be interesting even to the most incurious; and a Lizard-like Mammal whose every movement and attitude is probably a living illustration of those great extinct quadrupeds which once peopled the earth before man was created, must certainly have the power of arresting the attention, if not of stimulating the imagination. I doubt not Professor Owen would have lain prone on his stomach all the livelong night to watch the evolutions of this gnome-like mountaineer. And indeed there is something old-world and weird in her aspect as she prowls about at night. The Scotch would say she has an "uncanny" look; and truly, if but ten times bigger, she would unmistakably remind one of the times before the Deluge. When she walks she treads gingerly on the bent-under claws of her fore feet, and more firmly on the palms of her hind feet. A very favourite attitude with her is that assumed by her gigantic extinct analogue the *Myiodon*, as seen in the wondrous model of Waterhouse Hawkins in the Gardens of the Crystal Palace. The fore feet in my "Madam Scales" are raised; and the animal is supported by the strong hind limbs, and firm, flattened, powerful muscular tail, the head and body being at the same time moved from side to side, and the little round prominent eyes peering curiously about in every direction. In walking, the fourth toe of the hind foot is also extended. The Chinese, in their sly manner, say that she pretends to be very quiet; but "s'pose no man lookee," she runs very fast. She is certainly of a very timid and retiring disposition, tucking in her head between her fore legs on the least alarm. So apathetic a quadruped appeared our "Pangolin" (for such is she called by the Malays), that, coiled up in a strong net, I considered her properly secured, and carefully deposited her in my cabin. But no sooner did the last gleam of light vanish from my little "scuttle" than she knew the period of her lethargy had expired, and, bursting the trammels of her hempen toil, she roamed abroad; and the first intimation I had of her escape was the ominous bark of Master "Wouff," a clever little terrier we had on board. Dog, puzzled by the queer scaly rat he had suddenly encountered, regarded with impotent rage the lizard-like intruder; while "Scales," secure in her coat of mail, bid defiance to the attacks of her canine assailant.

The Scaly Ant-eater is called by the Chinese of Quang-tung "Chun-shau-cāp," which literally means "Scaly Hill-borer." They also name it "Ling-li" or "Hill-Carp;" and it seems to be regarded by them as truly "a fish out of water." They say it lives in the sides of the great mountains, and that it lays a trap for insects by erecting its scales, when, suddenly closing them, flies, ants, and other intruders are secured, and, when dead, fall out and are eaten. They also assert that it feeds upon fish; but both these stories appear to be myths something similar to those told of our own familiar "Hedge-pig" sucking the teats of cows, and impaling apples on her

quills in the orchards. The *Manis javanica* is sold in the markets at Canton, and is often carried about the streets as a curiosity. The scales are employed by the Chinese for medicinal purposes; but the flesh does not appear to be eaten, though it is very excellent food when roasted, as I can testify from personal experience, having had a portion of the defunct "Scales" nicely cooked. The *Manis* climbs very well, and can suspend itself head downwards by means of its strong flat tail. We fed our "Scaly Hill-borers" on raw eggs and chopped raw beef, on which they seemed to thrive. The unfortunate "Scales" fell a victim to female curiosity. Exploring the hold of the ship in one of her midnight rambles, she was lost for a time, and at length found her way back to her box, where she died of starvation.

#### B. *After Death.*

Our specimen was an adult female, weighing 4 lbs. The length from the end of the nose to the root of the tail was  $14\frac{1}{2}$  inches, of the head 3 inches, and of tail  $10\frac{3}{4}$ ; extreme length 2 feet  $1\frac{1}{4}$  inch.

*Head.*—The eye is protuberant, and the cornea remarkably convex; the vision is lateral; the eyelids are pyriform, the pointed end forward, the upper lid well-rounded; the iris is brown, with a tinge of green. The nostrils and lips are fleshy, naked, and, when the animal is alive, constantly moistened by a mucous secretion. The ears are naked and open. The tongue (used as a feeler during life) is 9 inches in length, and is enclosed in a membranous sheath; it is highly retractile and muscular, subcylindrical at the base, flattened at the anterior half, grooved on the upper surface, and beset with prominent papillæ. At the hinder end of the groove, arranged in the form of an equilateral triangle, are three pores which secrete a viscid fluid. The epiglottis is broad and hood-like; the thyroid glands are  $2\frac{1}{2}$  inches in length and  $1\frac{1}{4}$  in width: they are very large, ovate, and pointed at each end.

*Thorax.*—The mammary glands are large, pectoral, two in number, and well developed. The lungs are composed of three lobes on the right, and two on the left side; the middle lobe very small; the lower lobe furnished with a process which embraces the base of the heart. The heart is central, large, and oval; the auricles very distinct; the ventricles thick and fleshy; the columnæ carneæ and chorda tendinea very strong; the vena cava very large. The liver is large and five-lobed; the upper lobe is large, the middle is notched in front, irregular and trilobate; the left lateral is rounded, with a thin edge; the right lateral is subcylindrical and truncate below. The gall-bladder is large, and placed between the upper central and right lateral lobes of the liver. The pancreas is of loose texture, transversely elongated, flattened and pointed, obliquely truncate at one end, angular and pointed at the other; coiled up, imbedded in a sac on the outer surface of the truncate extremity, was a small slender worm.

The omentum is thin and membranous, with no fat; the mesentery is membranous and transparent, the vessels conspicuous, and the glands large, brown, and flattened.

The stomach is simple, 4 inches in length, the greatest breadth 3 inches; coats muscular, especially at the pyloric extremity, where the muscle is thickened so as almost to form a fleshy gizzard. The mucous membrane is loosely corrugated at the cardiac end, and densely covered with papillæ at the pyloric extremity. There is a central pyriform tubercle suspended from the lesser curvature, projecting into the cavity of the stomach.

Between the thickened parts of the stomach, imbedded in the coats on the greater curvature, and midway between the cardia and pylorus, is a small sac surrounded by a mass of glands, the use and structure of which are to me unknown.

The small intestines are 10 feet 10 inches long, and half an inch in circumference; they are dark-coloured and vascular.

The cæcum is  $2\frac{1}{2}$  inches in length and 1 inch in circumference. The large intestines are 10 inches long and  $1\frac{1}{2}$  inch in circumference.

The kidneys are ovoid, large, and smooth; the pelvis ending in a single follicle or sac; the ureters end near the neck of the small pear-shaped bladder.

The ovaries are  $\frac{1}{4}$  inch long, small, yellow, ovoid, and spotted, and situated at the inner side of the horns of the uterus.

The uterus is divided above into two horns, which are curved inwards and downwards; each cornu is 1 inch in length; body of uterus  $1\frac{1}{2}$  inch long and subcylindrical. Fallopian tubes 2 inches in length. Vagina long and muscular. Anus immediately behind vulva at root of tail; there is a transverse linear opening leading to a *cul de sac*  $\frac{1}{2}$  inch deep, studded with conical papillæ, and which is the seat of the peculiar alliaceous odour of the *Manis*.

A second Entozoon was found in the muscles of the lumbar region.

## MISCELLANEOUS.

*On the Nidification of the Kingfisher (Alcedo ispida).*

By JOHN GOULD, V.P., F.R.S., &c.

ORNITHOLOGISTS are divided in opinion as to whether the fish-bones found in the cavity in which the Kingfisher deposits its eggs are to be considered in the light of a nest, or as merely the castings from the bird during the period of incubation. Some are disposed to consider these bones as entirely the castings and fæces of the young brood of the year before they quit the nest, and that, the same hole being frequented for a succession of years, a great mass is at length formed; while others believe that they are deposited by the parents as a platform for the eggs, constituting in fact a nest,—in which latter view I fully concur; and the following are my reasons for so doing.

On the 18th of the past month of April, during one of my fishing excursions on the Thames, I saw a hole in a precipitous bank, which I felt assured was a nesting-place of the Kingfisher; and on passing a spare top of my fly-rod to the extremity of the hole, a distance of