Neither can the capsules of F. Turtoni be mistaken for those of B. undatum, which are not more than a quarter of an inch in diameter, and contain upwards of twenty-four embryos. In conclusion, it is utterly impossible for the most casual observer to mistake the spawn of these distinct and interesting species, or to confound them with one another.

The following table will show at a glance a few of the chief

points of distinction:

		Embryos.	
escurpercularity and a local	Capsules.	Size of.	No. of, in each capsule.
Fusus Norvegicus	1 in. diam.	½ by ¼ in.	2 or 3
Turtoni	9 by 7 10	½ by ½	6
- antiquus	$\frac{1}{2}$	1 4	2-4
Buccinum undatum	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	$\frac{1}{12}$	24

EXPLANATION OF PLATE X.

Fig. 1. Fusus Norvegicus.

Fig. 2. Operculum.

Fig. 3. Ova-capsule.

Fig. 4. Embryos.

Fig. 5. Fusus Islandicus, hispid var.

Fig. 6. Fusus Turtoni.

Fig. 7. Operculum. Fig. 8. F. Turtoni, young.

Fig. 9. Ova-capsule.

Fig. 10. Embryos.

XXI.—The Birds of Calcutta, collected and described by CARL J. SUNDEVALL*.

[Continued from p. 95.]

82. Parra indica, Lath. no. 10.—P. melanochloris, Vieill. Gal. tab. 264 (colore superne nimis viridi. In descr. Parræ melanoviridis). P. superciliosa, Horsf. Jav. Linn. Tr. xiii. Obs. P. ænea, Cuv. R. A. e Brasilia, huic affinis an eadem?

Supra fusco-ænea, dorso postico castaneo, alis muticis, subtus remigibusque nigris; naribus ovalibus. (Cauda brevis, gradata, vix

excedit alas.)

Adulta. Atra, viridi-nitens, vitta pone oculos alba. Dorsum antice cum alis extus saturate fusco-ænea. Dorsum postice et cauda obscure rufa, violaceo-nitida. Iris fusco-rufescens. Rostrum flavum, basi cute libera, supra frontem jacente, postice semicirculari, instructum. Pedes fusco-virescentes. Longit. $10\frac{3}{4}$ poll. millim., tarsus 74, digitus medius 72, cum ungue 101; digitus posticus 31, cum ungue 90; rostrum e fronte 36, cauda 36. (Amense Febr. Alius Martio simillimus.)

^{*} Translated from the 'Physiographiska Sällskapets Tidskrift' by H. E. Strickland, M.A.

Junior, \$\partial\$, d. 20 Febr. (an adulta?). Gula et corpus subtus alba; latera colli vitta longitudinali pallide flavescenti, ad alas extensa. Caput supra ferrugineum, lateribus cum gula et macula brevi supra oculos albis. Collum postice nigrum, antice pallide rufescens. Dorsum et alæ paullo dilutiora quam in adulta. Dorsum postice ferrugineo-fuscescens, paullo æneo-nitens. Rectrices rufescentes, extus albidæ, linea intramarginali (concentrica) nigra. Alæ subtus pure nigræ. Iris et pedes ut adultæ. Rostrum sordide flavescens, vix ullo rudimento membranæ frontalis. Long. 10 poll. Ala 168 millim., tarsus 69, digitus medius 68, cum ungue 88; pollex 30, cum ungue 75, rostrum e fronte 34.

The genus Parra, which belongs to the torrid zone of both continents, is especially marked by its long toes, provided with quite straight, almost disproportionately long claws, so that the expanse of the foot is longer than the closed wing. They consequently tread upon a very large surface, and are enabled to run on the very softest mud, or occasionally on the surface of the water, which is covered with the leaves of aquatic plants. P. indica is not rare around Calcutta, and is often seen to run across water-tanks where Nymphaea lotos grows. Sometimes this bird is heard to utter a short whining cry almost like pja-o! In March many were seen together, running round each other; they could not be pursued in a flock, but each flew by itself when alarmed. Nothing was found in the stomach but a kind of roots or bulbs of some common water-plant. The same substance was found in the stomachs of all the herbivorous water-birds, but I omitted to ascertain whence it was procured.

83. Parra luzoniensis, Sonn., Lath. (certe a P. sinensi distincta). Supra grisea; alis spinosis, subtus albis, remigibus arcuatis: anticis apice appendiculatis. Caudæ apice elongato, acuto, adscendenti.

Indiv. sexus incerti (veris junius) d. 23 Martii. Corpus superne fusco-griseum, parum violaceo-nitens; subtus et lateribus, jugulum et major pars alæ pure alba. Frons albo varia. Vitta e rostro supra oculos alba, dein in colli latera deflexa, flava, ad alas extensa. Vitta alia nigra, per oculos in collum descendens, priorem limitans, ante pectus cum pari conjuncta, jugulum cingens. Ala alba, extus plaga magna colorata e tectricibus griseis, fusco-undatis. Remiges cubitales omnes immaculatæ albæ; primariæ falcatæ, acutæ: 1 et 2 nigræ; 3 basi late alba; sequentes albæ, apice nigro marginatæ; 1ª-3ª appendice lanceolato, e rhachide elongata, primo nuda, dein brevius plumata. Rectrices albæ; 2 mediæ fuscæ; angustatæ, acutæ, laxæ, apice paullo sursum curvato; mediæ longæ: 2 poll. ultra alas. Rostrum fuscum, limite frontali transverso absque lobo. Pedes nigricantes. Spina carpi valida, acuta. Long. 12½ poll. Ala 210 millim., tarsus 55, digitus medius 55, cum ungue 73; pollex 22, cum ungue 49; rostrum e fronte 27, cauda 105.

This species lived in the same manner as the foregoing, and on the same vegetables, but was more rare. It more often utters its restless cry, and during flight keeps its wings more still. It is remarkable for the appendage to the points of the wings, and has a strong, sharp point on the bend of each wing. This last character occurs in many waders of the torrid zone, e. g. many species of Parra, Vanellus, Charadrius, Palamedea, &c.

84. Gallinula phænicura, Lath.—Rallus ph., Gm. Gall. erythrina, Bechst., Lath.

Nigricans crisso ferrugineo. (Affinis G. chloropodi.)

Cinereo-nigricans, olivaceo tincta. Gula et vitta longitudinalis e rostro ad abdomen alba, sed corporis collique latera colore dorsi. Abdomen et plumæ tibiæ rufo-testacea. Crissum ferrugineum. Cauda mollis, rotundata, fusco-nigra. Alæ fusco-nigræ, remige 1ª margine externo albo. Rostrum et pedes flavi. Lamina frontalis minima seu vix ulla: tantum e culmine rostri, basi paullo dilatato; postice rotundata; colore rostri. Longit. (collo extenso) 13 poll. Ala 165 millim., cauda 70, rostrum cum laminula frontis 37, digitus medius 53, cum ungue 64; tarsus 53, os tibiæ 83, extensio alarum 20 poll.

Structura. Corpus valde compressum, angustius quam G. chloropodis, collo longiore in formam S inflexo. Rostrum ut G. chlorop. Lingua cartilagineo-carnosa, crassa, apice membranaceo-lacera. Ala inermis, rotundata. Pedes toti scutati, ut in G. chloropode constructi, sed ratione corporis majores. Ventriculus valde musculosus. Intestinum longit. 20 poll. pariete crassa, cavitate tenuissima. Intestina

cæca 2, longit. 1 poll.; ab ano 2 pollices distantia.

This water-hen was caught on board ship about twenty [Swedish] miles west of Ceylon, in 5° 50′ N. It had consequently flown a longer way than I could have expected one of these heavy-flying birds to do when it was not the season for migration, at which time a remarkable and peculiar vigour is excited in birds. I did not see it in Bengal, but will not assert that it is not found there. In the stomach were many pebbles, and remains of plants which resembled those mentioned under the species of *Parra*. It flew with a rapid motion of the wings almost like a partridge, and with the feet stretched backwards. The readiness with which it went upon deck, and especially on the cordage, sometimes even on the rigging, was remarkable. It grasped the ropes with wonderful security by means of its long curved toes, and seemed to be accustomed to climb among reeds and branches in the marshes of Ceylon.

85. Fulica atra. Only one specimen of the Coot was seen; I shot it on March 24, in the small lake near Sucsagor which I have often mentioned, as it was swimming among the roseate

Lotus-flowers. It presented no difference from a full-grown Swedish specimen. The frontal disc was white, and not larger than in our own specimens; after drying it as usual became red. It had fed on the same sort of water-plants as *Parra indica*. (Length 15½ inches; wing 210 mill.; tarsus 62; middle toe and claw 87; beak from front 31.)

- 86. Scolopax gallinago, Linn. The common Snipe is one of the more frequent birds near Calcutta, where it is considered to be in great measure stationary, but in all February and March they are found in much greater numbers than in April. They were met with not only near water and in swampy places, but as often on the dry and bare ground in woods, and even among the houses in the villages. In February they are said to run about in families, although those which were found together never constituted a flock, or were followed until they flew up. Later in the spring some occurred to me which must have had their eggs among the fallen leaves in the aforesaid dry grounds; but this is only a conjecture. On two occasions the well-known cry of the snipe while flying was heard in the morning. It happened that no specimen was brought home, so that I have not been able to compare the species with European specimens; but as far as I could see on the spot, not the slightest dissimilarity was noticed. Scolopax major was not seen.
- 87. Numerius arquata, Lath. Of this bird also no specimen was brought home, but I saw it in the latter half of March, once shot and twice living, on the river banks. I did not hear it cry so loud or continuously as it is wont to do at the breeding season in Europe, but only with a shorter heeee! as one also often hears with us. Temminck also mentions (in his Manuel d'Ornithologie) that the Curlew occurs in India.
- 88. Totanus glareola, Temm. This Swedish species was also met with on the Ganges, and pursues the same mode of life as with us. In its stomach were found small snails. According to a rigid comparison it precisely resembles those of our climate, and I will therefore only give the measurements of a female, shot March 24. Beak to front 30 mill.; wing 135; tarsus 37; middle toe and claw 34; tail 50.

Near Sucsagor, on March 20—25, some other Scolopacidae were seen, among which I thought I recognised Totanus glottis and Limosa rufa in their winter dress, but they did not occur very frequently. The species of Parra, Charadrius, Ardea and Scolopax gallinago seemed to be the most abundant waders in Bengal.

89. Charadrius minor, Meyer, occurred commonly near the

river in February and March; I have not noted its occurrence later. They ran upon the shores, commonly several together, but were not heard to cry. In the stomach they had much sand, with insects, larvæ, &c. The Hindoos called them Ghorta gotta. No difference was noticed between Swedish specimens and one brought from Calcutta. (\$\gamma\$ Beak to front 13 mill.; wing 113; tail 60; tarsus 22; middle toe 16, with the claw 19.)

90. Charadrius cirripedesmos, Wagl. Syst. no. 18 (?).

Griseus, subtus fronteque albus, pedibus elongatis rostroque nigris, remigibus omnibus fuscis, scapis plerisque albis; rectricibus fuscis,

margine apicis albis, extima alba macula ante apicem fusca.

Adultus (d'initio Maii) fascia pectoris latissima ferruginea (nigredine nulla). Frons late nigra, utrinque macula magna alba: albedo enim ordinaria frontis in medio divisa. Vitta ordinaria sub oculis ad aures, nigra. Vertex anterior cum superciliis pallide rufescens; nucha cum torque, in pectus descendente, ferruginea. Plumæ dorsi quædam margine sordide pallidiore. Long. 190 millim., rostrum e fronte 20, ala 125, cauda 54, tarsus 34, digitus medius 19, cum ungue 22. (♂ et ? similes; sed individua colore rufescente et maculis frontis albis paullo inter se different; quibusdam frons postice non nigra.) Pullus (\(\primitio Maii \)) superne magis cinerascens, unicolor: caret coloribus nigris rufisque. Frons cum superciliis latissimis alba, vitta sub oculis, et fascia nebulosa, indeterminata pectoris, pallide fuscescentes. Pedes fusco-nigri. Longit. alæ 120 millim., cauda 48, tarsus 32, digitus medius 19, cum ungue 22. Est avis e sectione Ch. hiaticulæ affinis Ch. cantiano, sed pedibus longioribus. Ala mutica, tectricibus colore dorsi. Cauda paullulum superat alas. Remiges primæ fere pure nigræ; 6-8 extus in medio albæ: scapus primus totus albus, reliqui basi longius, apice brevius fusci.

On the river banks south of Calcutta this bird occurred in the beginning of May in large flocks, which however were now terminated, so that individuals migrated in flights. They were very common further down, eight or ten miles from the town, on the broad swampy shores left half-dry at ebb tide. Among several specimens shot in these flocks no two were exactly alike, the brown and black on the head and breast being somewhat variable. The young bird described above was shot some miles nearer the town. It was quite alone upon the shore, and none like it was got among the flocks, though I can safely assert its specific identity. Its plumage was perfectly formed, and it could hardly have been hatched the same year. The note resembled that of our small plovers, and was heard on two occasions when they flew up. In the stomach they had small crabs and insects.

Obs. On the river banks south from Calcutta, near Culpee for instance, I saw on my homeward voyage a great number of waders, most of which seemed to be plovers. Among others I

thought I saw C. helveticus and Strepsilas collaris. There were swarms of shore-birds, but I had unfortunately only a short hour to stay in the place and had no assistance. Ibis Macei and the Charadrius above-described were procured here.

91. Larus ridibundus, var. remigibus 3 anticis nigris, basi albis.

Q d. 20 Aprilis (habitu perf. æstivali). Iris alba. Nigredo capitis, colore et limite, picturaque totius corporis exacte ut in individuis Suecanis tempore æstivo. Rostrum, pedes, palpebræ, remigum proportio etc. collata et simillima inventa; sed remiges 1^a et 2^a nigræ, basi et macula oblonga ante apicem alba (in aliis indiv. macula paullo major vel minor); 3^a nigra, basi latius alba, omnino caret macula alba; 4^a—6^a albæ apice late nigræ; sequentes et omnes cubitales dilute incanæ. Tectrices primariæ albæ, reliquæ colore dorsi. Longit. 15³/₄ poll. Ala 320 millim., tarsus 45, digitus medius cum ungue 43, cauda 118, rostrum e fronte 34.

Juniores? eodem tempore, ptilosi hiemali; capite albo, maculis solitis fuscis.

I did not see this bird before the middle of March, or at least it was not common; but in April and the beginning of May it was very abundant, so that whole flocks often made their appearance over the river. They seemed to live chiefly on the maggots which swarmed in the dead bodies in the river. The female described had her throat full of them, some of which were still living. Remains of fish were also found in the stomach. The cry, resembling laughter, was heard occasionally. The Bengalese name is gangtjeel (river-hawk), which is common both to gulls and terns, like the word Fisk-måse with us.

Obs. Another Larus, somewhat larger, much like L. canus, was seen sometimes on the river as well as in the sea off the coast. Of Sterna two or three species occurred, and one of them was common for a short time in April. It was larger than S. hirundo, with a shorter tail and white front, probably S. cantiaca of Raffles (Linn. Trans. vol. xiii.), but none such were procured. Another, seen in the Bay of Bengal, seemed like S. minuta, but of a grayer brown above; perhaps S. panayensis, as it could scarcely be S. infuscata, Licht., which is larger.

92. Halieus africanus.—Pelecanus africanus, Gm., Lath. P. graculus β . Lath. Mus. Carlss. tab. 61 (? gula lutea). P. javanicus, Horsf.

Niger, gula alba, plumis scapularibus, tectricibusque minoribus cinerascentibus, atro-marginatis, acutis. Rostrum longitudine fere

capitis. Rectrices 12, mediæ rostro quadruplo longiores.

d'adultus (d. 24 Mart. testiculis parvis). Supra subtusque niger, gula sola alba. Collum antice, pectus et dorsum antice plumis grisescenti-marginatis. Plumæ scapulares oblongæ, elongatæ, acutæ, margine atro latit. 1½ millim. Ala subtus atra: tantum caudæ basin

attingit. Cauda rigida, gradata. Pedes nigri. Rostrum fuscum, subtus pallidum. Longit. 20 poll. sv. Ala 198 millim., rostrum e fronte 34, tarsus 37, digitus externus cum ungue 62, cauda 143.

This small Cormorant, the least in the genus, was seen only in the lake near Sucsagor, ten [Swedish] miles north from Calcutta. It lived there in small flocks of from five to seven, and was not particularly shy, though difficult to shoot, for when I approached them they laid all their bodies under water, so that only the head and tip of the tail were seen above the surface. When fired at they dived, and rose again at a distance. The power of floating, in the manner mentioned, motionless in the water, exists also in many of our swimming birds, especially in young ducks, and is difficult to explain, as it seems to imply a specific gravity but little less than that of water, while the position of the bird in the ordinary mode of swimming shows that it is then at least twice as light*. When flying they resemble ducks. They were often seen sitting in trees near the water, or on roots, posts, &c. like those birds, but they were then more shy. The neck is commonly stretched out at full length. In the stomach they had fish and small crustacea.

This and the following species occur in the collection of Baron Gyllenkrok from Java, whence they were brought by Dr. Mellerborg.

93. Plotus melanogaster, Gm., Lath. p. 895 (cum var. δ). Pl. Levaillantii, Temm. Pl. Col. 380 (cum synonymia extricata).

Capite colloque fulvo-griseis, utrinque linea longitudinali alba; cauda tota nigra; plumis scapularibus nigris, linea alba notatis †.

Senior subtus niger; junior subtus rufesc.-griseus (& temp. pro-

pagationis crinibus laterum colli. Temm.).

d. 25 Mart. testic. parvis). Plumæ nullæ elongatæ colli. Corpus totum nigrum, subtus obscurius. Caput et collum ad truncum usque fulvescenti-grisea, fusco-punctata; gula et linea ex angulo oris ad medium collum, albæ. Linea e medio gutture ad alas fulvescens, nigredinem pectoris limitans. Cauda tota nigra. Alæ nigræ; plumæ scapulares longissimæ, lineari-acutæ, rigidæ, linea media alba, tectrices eodem colore, angustæ, acutæ. Iris griseo-flavescens. Rostrum fuscum, subtus flavescens. Pedes sordide virescentes. Longit. 32 poll. Suec. (collum 11, cauda 9). Rostrum 77 millim.

At the same place with the last species lived three or four of

* It is probable that in the case alluded to by Prof. Sundevall, the bird increases its specific gravity by ejecting a portion of the air contained in its pneumatic apparatus; or by partially condensing the air like the Nautilus and Ammonite.—H. E. S.

† Pl. anhinga, L.; cauda apice grisescente, capite colloque nigris vel griseis, absque linea alba; plumis scapularibus nigris, macula oblonga alba. Ex America: conf. Temm. loco supra citato.

temp. propagationis nucha crinita.

these handsome though remarkably long-necked birds. They were commonly seen sitting in trees or upon posts in the lake, and seemed hardly to enter the water in quest of food. Here they were not so shy as they are described in Levaillant's 'African Travels.' I succeeded with some trouble in shooting one. When these birds sit, they have some resemblance to gallinaceous birds of the genus Penelope, but the long neck and the long straight beak give them a very peculiar appearance. The first I saw sat motionless on a post in the lake almost upright, with the wings halfopened, the neck curved somewhat like an S, and the long tail hanging straight down; it was as though I had seen one of the monstrous animals of mythology. The food consists of fish and crustacea, with which the stomach of the specimen which I shot was filled. In the wide œsophagus were many curious intestinal worms. The Bengalese name is unknown to me. This species is found in all the warm parts of the old continent, and in the Indian islands. The warm regions of America have another species, very little different, and no more species of Plotus are known.

94. Anser — Anas indica et cana? Gm., Lath.; an A. ægyptiaca, auct.?

Dilute rufescens, speculo alarum viridi nigricanti. Magnitudo Anseris albifrontis.

Near Sucsagor at the end of March a considerable flock of small reddish geese frequented the banks of the river. They were said to come there yearly, but depart during the hot season, . so that they probably migrated soon after I saw them. Like all geese they were very wary, so that in spite of every effort I did not succeed in shooting any, though I managed to observe them tolerably with the help of a telescope. Their note was a cackling rather like that of common wild-geese, but rougher and shorter. The Bengalese name is Raz hangs or Loll hangs. The word hangs is sounded like the French pronunciation of hanse, and is the common name for geese and ducks. Loll signifies red.

95. Anser — domesticus. (Rostrum totum pallide rubicundum, longitudine capitis, basi gibbosum, pone medium fortius depressum, leviter deflexum. Pedes colore rostri. Caput superne et nucha (plerumque) castanea, limite definito, ut in A. cygnoide. Cauda alas æquans. Cutis inter pedes nunquam dependens. Magnitudo et statura A. cinerei. Corpus cinerascens (anserinum) subtus albidum, sed color sæpe alius.)

The tame geese were in general somewhat unlike those which occur with us. The beak had a large knob above the base, and the hind neck a sharply-defined brown colour, as in the so-called Turkish [Chinese] geese (Anser cygnoides), but the beak and feet were the same colour as in our tame geese. It is probably a

mixed race. The voice was also somewhat harsher than in the common goose.

96. Tame ducks (Anas boschas), as well as geese, are kept by the naturalized Portuguese and by the Musselmans, but not by the Hindoos. Perhaps both these domestic birds were introduced from Europe. I did not see Anas boschas wild.

97. Anas caryophyllacea, Lath.—A. javanica? Horsf. Linn. Tr. xiii. A. castanea, Mus. Holm.?

Rufescens, dorso nigricante, plumis subtruncatis, griseo-marginatis; ala subtus nigra, superne tectricibus minoribus ferrugineis.

Rostrum nigricans ungue lato, adunco.

Q (Calcutta Martio). Caput superne griseo-fuscum, lateribus et collo testaceo-griseis; jugulum dilutius, nucha obscurior, gula alba. Dorsum fusco-nigrum, antice plumis obtusis latis griseo-marginatis; postice immaculatum. Gastræum dilute rufum, non maculatum, crisso albido. Cauda nigra, tectricibus superioribus rufis. Alarum remiges nigro-fuscæ; tectrices maximæ, etiam primariæ, nigro-cinereæ, nullum speculum formantes. Rostrum fuscum, pedes plumbei. Longit. 15 poll. Ala 192 millim., tarsus 40, digitus medius 60, rostrum e fronte 37, cauda 42.

Rostrum longit. fere capitis, angustius, basi latitudine multo altius; lamellæ suboccultatæ; unguis validus, abrupte perpendiculariter deflexus, apice rotundatus margine acuto. Alæ breves, caudæ basin attingunt; remiges 2—3 subæquales, reliquis longiores. Cauda brevissima rotundata. Pedes postici, subelongati, tarso reticulato, digitis longis, scutatis, membrana non excisa. Pollex non lobatus longus, æqualis articulo primo digiti externi.

of (an junior? Martio) similis feminæ sed coloribus saturatioribus,

nucha nigricante. Tectrices nulla arcuata *.

This seems to be the commonest species in Bengal; it occurs both single and in flocks on every piece of water in the country, and lives on plants. The specimens examined had in their stomachs remains of the same sort of vegetables as those noticed under Parra indica. They had a strong muscular gizzard and a large pouch in the cesophagus. The voice is a rough, very short grah! grah! The Hindoos merely called this bird Hangs.

98. Anas querquedula, Linn., Temm., Nilss. (3 habitu perf. hiemali, testiculisque minutis, d. 25 Martii.)

I shot a male of our common Teal, which on comparison showed no difference from Swedish specimens. Several were seen near

* Individuum e Tranquebar in Mus. Hafniensi differt: capillitio pallidiore, rufescenti; collo medio undique cinereo-variegato; vitta nuchæ ad dorsum extensa, nigra, hypochondriis albo-maculatis.

Indiv. e Java, Mus. Gyllenkr. (certe A. javanica, Horsf.), differt capillitio

nigro, coloribusque rufis multo saturatioribus.

Calcutta, and the species was said not to be rare in that quarter. The natives knew it by the name of Bigri hangs.

99. Anas coromandeliana, Gm., Lath. 106. Alæ nigricantes remigibus omnibus apice albis, subtus alba. Pollex tenuis. Superne viridis nitens; 2 superne fusco-cinerea. Minor quam crecca.

This pretty little Duck is easily recognised even during flight, by a white margin to the wings, formed by the tips of all the quills. The male is of a fine grass-green above. It is common on the river, but I only procured a pair, which shared the same fate as the Lark, no. 28, above-mentioned;—they were destroyed by ants during the night. They had only fed on vegetables.

[To be continued.]

XXII.—Descriptions of new or imperfectly described Lepidopterous Insects. By Edward Doubleday, Esq., F.L.S., Assistant in the Zoological Department of the British Museum, &c.

[Continued from vol. xviii. p. 376.]

Genus Ornithoptera.

Orn. Poseidon. Alis supra holosericeo-viridibus, limbo nigro, anticis fascia longitudinali latissima nigra, nervulis viridibus divisa; posticis subtus aureo-viridibus, angulo ani aureo. Exp. alar. $6\frac{1}{2}$ unc. vel 168 mill.

Hab. Darnley Island.

Above, anterior wings with the entire limb deep velvety black, the disc occupied by a broad fascia of the same colour united to the black margin below the apex, divided by the median nervure and nervules, which are golden-green, its inner side more fuscous and opake. The space between this and the limb is occupied by two vittæ of a bright golden or satiny green, shading to bright coppery. The upper of these is narrow at the base and becoming gradually wider until near the apex of the wing, when it suddenly narrows. The lower follows a direction parallel to the inner margin until near the anal angle, gradually widening to this point, when it is bent abruptly upwards; and becoming somewhat macular, terminates near the second discoidal nervule. Posterior wings small, triangular, the anterior and outer margins rounded; sating green with coppery reflections, the limb narrowly black, the outer angle with one or more round black dots. and generally near the outer margin is a series of round orange spots between the nervules.

Below, the anterior wings have the limb black, broadest on the costa, with a slender green vitta below the third and also the fourth subcostal nervule, all the interstices below the fifth sub-



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