

XVI. *On some rare and beautiful Insects from Silhet, chiefly in the Collection of FREDERICK JOHN PARRY, Esq., F.L.S., &c. By the Rev. FREDERICK WILLIAM HOPE, M.A., F.R.S., F.L.S., &c. Continued from page 112.*

Read November 1st, 1842.

Order LEPIDOPTERA.

Family PAPILIONIDÆ.

TEINOPALPUS, *Hope*, n. g.

Corpus robustum; capite fronte conico. *Palpi* capite longiores, conici, porrecti. *Antennæ* clavâ sensim increscenti. *Pedes* antici perfecti, tibiis in medio appendiculatis. *Alæ anticæ* apice acutè falcatae; cellulâ discoidali clausâ; venâ medianâ ramos quatuor emittente, ramo postico venæ subcostalis ad ramum furcatum præcedentem approximato. *Alæ posticæ* caudatae.

Sp. 16. TEINOPALPUS IMPERIALIS. TAB. XI. fig. 1, 2.

Alis viridi-pulverosissimis; anticis fasciâ tenui transversâ medianâ nigrâ extûs flavo-marginatâ nebulisque duâbus fuscis submarginalibus; posticis caudâ unicâ terminatis maculâ magnâ medianâ flavâ nigro-cinctâ squamulis cinereis lunulisque marginalibus flavis viridibusque; omnibus subtûs auran-
tiis nigro-striatis dimidio basali viridi; posticis apicibus nigris griseo viri-
dique variis.

Long. corp. lin. 15; expans. alar. unc. 3, lin. 10.

Habitat in Indiâ Orientali, Silhet; e Museo Dom. Parry descriptus.

Sp. 17. TEINOPALPUS PARRYÆ. TAB. XI. fig. 3, 4.

Affinis præcedenti at major, alis omnibus basi viridibus; anticis minùs fal-
catis nigro transversè strigatis nebulosisque; posticis bicaudatis plagâ
magnâ medianâ pallidè luteâ nigro-pulverosâ strigâque undulatâ nigrâ:

extus griseo-pulverosis lunulisque marginalibus viridibus flavisque ornatiss: angulo anali latè flavo.

Long. corp. lin. 17; expans. alar. unc. 4, lin. 7.

Habitat in Indiâ Orientali, Silhet.

The above magnificent insect was sent to me by Captain Parry for description, and I have consequently named it after Mrs. Parry: it is possible that the present may be the female of the former species. There is, I believe, only another specimen in this country, which is in the rich Lepidopterous collection of the East India House.

Family BOMBYCIDÆ.

Genus SATURNIA.

Sp. 18. SATURNIA ZULEIKA. TAB. XI. fig. 5.

Alis pallidè puniceis fusco-irroratis albidoque variis: apicibus fuscis; anticis plagâ magnâ basali rufo-brunnâ; omnibus maculâ magnâ medianâ semilunari sanguineo-fuscâ lunulis tribus albis griseisque lineis ternis fuscis undulatis valdè angulatis inter ocellum marginemque posticum aliisque duâbus submarginalibus.

Long. corp. lin. 14; expans. alar. unc. 4, lin. 8.

Habitat in Silhet.

Order HOMOPTERA.

Family FULGORIDÆ.

Genus APHANA.

Sp. 19. APHANA AMABILIS. TAB. XII. fig. 1.

Viridis, alis anticis cretaceis maculis numerosis ovalibus aspersis; posticis coccineis: apicibus pallidè virescentibus.

Long. corp. lin. 12; expans. alar. unc. 2, lin. 9.

Corpus suprâ aurantium; capite viridi, cornu erecto acuto tenui. *Prothorax* viridis, maculis tribus fulvis insignitus. *Corpus* infrâ viride; pedibus concoloribus; pectore lanugine albidâ asperso.

This remarkably beautiful insect was received lately from Silhet; the spots

which on the upper side appear to be white and green intermixed, are beneath entirely green.

Sp. 20. *APHANA AURORA*. TAB. XII. fig. 2.

Affinis *Aphanæ aurantiæ*, Hope; at minor, ferè totum corpus aurantium, alis anticis externè vix virescentibus internè aurantiis maculisque albidis minutissimis aspersis.

Long. corp. lin. 9; expans. alar. unc. 2, lin. 5.

Habitat in Indiâ Orientali, Silhet.

Corpus infrà concolor; alis maculis cretaceis insignitis; tibiis posticis externè spinosis.

LYSTRA.

Sp. 21. *LYSTRA WESTWOODII*, Parry. TAB. XII. fig. 3.

Fusco-flava, rostro concolore inter oculos recurvo, fronte ferè trigono elongato, alis anticis dimidio basali fusco-flavis maculis fuscis magnitudine variis aspersis; posticis basi sanguineo colore fucatis lineâ atrâ marginatis punctisque tribus insignitis: reliquâ parte immaculatâ hyalinâ, corpore infrà nigro.

Long. corp. lin. 6; expans. alar. unc. 1, lin. 11.

The above insect is described from the rich collection of Captain Parry.

Sp. 22. *LYSTRA DIMIDIATA*. TAB. XII. fig. 4.

Fusca, capite thorace pedibusque concoloribus, alis anticis dimidio basali virescente maculis minutis crebris atris asperso: apicibus subaurantio-hyalinis maculis cretaceis insignitis; posticis dimidio basali viridi: posteriori albidâ atropunctatâ: apicibus fuscis maculis virescentibus irroratis.

Long. corp. lin. 7; expans. alar. unc. 1, lin. 10.

Habitat in Silhet. In Museo Dom. Hope.

Sp. 23. *LYSTRA PUNICEA*. TAB. XII. fig. 5.

Punicea, capite thoraceque pallidioribus, alis anticis dimidio basali roseo colore tincto maculis crebris nigris asperso: apicibus fusco-puniceis hyalinis maculâ in medio disco pellucidâ; posticis basi puniceis maculis atris insignitis: medio albidis: apicibus fusco-hyalinis.

Long. corp. lin. 6; expans. alar. unc. 1, lin. 11.

Habitat in Silhet; e Museo Dom. Hope descripta.

EURYBRACHIS.

Sp. 24. EURYBRACHIS BASALIS. TAB. XII. fig. 6.

Fusco-flava, capite flavescente, thorace brunneo, abdomine miniato, alis anticis fuscis flavo-reticulatis; posticis ad basin antrorsum lineâ cæruleâ incurvâ insignitis posticè subroseis: reliquâ parte nigricante.

Long. corp. lin. 10; expans. alar. unc. 2, lin. 3.

Habitat in Silhet.

Sp. 25. EURYBRACHIS PULVEROSA. TAB. XII. fig. 7.

Candida, capite thoraceque flavis, abdomine concolore, caudâ gossypio ornata, alis anticis dimidio basali virescente: apicibus fusco-hyalinis sparsim maculatis; posticis albidis maculâ irregulari nigrâ ad marginem anticum aliisque minutis concoloribus posticè locatis, pedibus quatuor anterioribus miniatis; posticis fuscis.

Long. corp. lin. 7; expans. alar. unc. 2, lin. 3.

Habitat in Silhet.

Sp. 26. EURYBRACHIS REVERSA. TAB. XII. fig. 8.

Fusco-flava, capite thoraceque concoloribus, abdomine medio albido: posticè gossypio flavo ornato: apice candido, alis anticis fusco-flavis ad basin subsanguineo colore tinctis: maculâ albâ rotundatâ ad marginem anticum secundâ minore ferè circa medium disci aliisque minutissimis sparsim irroratis; posticis dimidio basali albido: apicibus irregulariter fusco-irroratis, pedibus quatuor anterioribus flavo-fuscis: tibiis obscurioribus; posticis femoribus pallidè testaceis: tibiis nigricantibus.

Long. corp. lin. 7; expans. alar. unc. 2, lin. 7.

Habitat in Indiâ Orientali, Silhet.

Sp. 27. EURYBRACHIS INSIGNIS, *Westwood*. TAB. XII. fig. 9.

Candida, capite thoraceque flavis, abdomine lateribus sanguineo colore fucatis, alis anticis flavescentibus maculis variis minutis nigris aspersis; posticis albidis maculâ irregulari nigrâ ad marginem anteriorem aliisque minutis concoloribus posticè; pedibus anterioribus fusco-flavis; posterioribus viridibus: tibiæ spinis nigricantibus.

Long. corp. lin. 7; expans. alar. unc. 2, lin. 2.

Habitat in regione Malabaricâ, e Museo Dom. Westwood descripta.

CORETHRURA*, *Hope*, n. g.

Corpus breve, crassum, abdominis apice longissimè floccoso. *Caput* anticè carinatum, ferè ut in genere *Derbe*; facie anticè visâ angustâ. *Promusci* longitudine mediocris. *Clypeus* magnus, inflatus. *Antennæ* sub oculos insertæ, brevissimæ, apice longè setoso. *Ocelli* minuti, paulò ante oculos locati. *Pedes antici* tibiis depressis instructi. *Tibiæ posticæ* extùs 3-dentatæ.

Sp. 28. CORETHRURA FUSCO-VARIA. TAB. XII. fig. 10.

Subfusca, capite lineâ transversâ albidâ insignito, abdomine fusco-viridi: caudâ subochraceâ gossypio ornatâ, alis anticis fusco-variis farinâ albidâ irroratis; posticis pallidioribus hyalinis.

Long. corp. lin. 9; expans. alar. unc. 2, lin. 4.

Habitat in Silhet. In Museo Dom. Hope.

EXPLANATION OF THE PLATES.

TAB. XI.

- Fig. 1. *Teinopalpus Imperialis*, upper side.
2. *Teinopalpus Imperialis*, under side.
3. *Teinopalpus Parryæ*, upper side.
4. *Teinopalpus Parryæ*, under side.
5. *Saturnia Zuleika*.

TAB. XII.

- Fig. 1. *Aphana amabilis*.
2. *Aphana Aurora*.
3. *Lystra Westwoodii*.

* From κέρηθρον a broom, and οὐρά a tail.

Fig. 4. *Lystra dimidiata*.5. *Lystra punicea*.6. *Eurybrachis basalis*.7. *Eurybrachis pulverosa*.8. *Eurybrachis reversa*.9. *Eurybrachis insignis*.10. *Corethrura fusco-varia*.



XVII. *Some further Observations on the Nature of the Ergot of Grasses.* ByEDWIN J. QUEKETT, *Esq.*, *F.L.S.*, &c.

Read December 20th, 1842.

IN the third part of the eighteenth volume of the Transactions of the Linnean Society, are published my observations on the structure of the ergot of grasses, with a view to the discovery of the cause of that formation, which from numerous observations was there attributed to the grain becoming infected with a parasitic fungus, the nature of which was also described. It was stated that "the manner in which this singular production originates (for at present much respecting this part remains uncertain) is, that the sporidia, or more likely the nuclei within them, are by some means introduced into the interior of the grass and ultimately arrive at the grain, which they find the most suitable matrix for their development; or they may be brought into contact with the young grain from without, probably by the viscid fluid; but this is less likely to be the case, as the ergot can be detected before the paleæ have opened to admit the fluid."

Since the publication of the above theory of the production of ergot, experiments have been made to carry out the view there stated, and which have succeeded, I imagine, so far as to leave but little doubt as to the true origin of this substance.

The experiments were as follows. In the beginning of March 1840, twelve healthy grains of *rye*, of *wheat*, and of *barley* (grown in the neighbourhood of Epsom) were selected and placed in a shallow vessel, which contained a sufficient quantity of distilled water to moisten the grains, the whole being covered with a glass shade. In a few days germination commenced in nearly all the grains. At this period an ergot (taken by Prof. Henslow from some wheat grown in Suffolk the preceding year and given me by Dr. Pereira) was placed with the grains; and the sporidia, which were in abundance on its exterior,

were detached in the water by means of a pencil brush, and the body of the ergot was then removed.

A similar experiment was performed with the same number of grains of the several plants, but the sporidia were in this case obtained from an ergot found on *Elymus sabulosus*.

The growth of the young plants was allowed to proceed for several days, until, by the exhaustion of the albumen, the grains appeared wrinkled; the leaves having at this period attained the height of three or four inches. In this state the several young plants were packed in wet mould during the third week in March, conveyed into the country, and planted side by side in the garden of William Hyder, Esq., of Court Lees, near Canterbury, who had kindly undertaken to watch the progress of the experiment.

The greater number of the plants failed in their growth, so that, when the harvest had arrived, there only remained four of rye (one grown with the fungus of the ergot of *Elymus* and three with the sporidia derived from the ergot of wheat), three plants of barley and four of wheat.

The ears on the rye were remarkable, scarcely one having a healthy corn, the paleæ being generally quite empty; yet there were nine ears containing ergots, some having a single specimen, others as many as six. In the barley the ears were full of healthy grains, with one exception where there appeared to be a diseased grain; and in the wheat the ears were full and without disease*.

Considering that these results were not altogether satisfactory, from the fact that grains of the same sample had not been sown and allowed to germinate without coming in contact with the sporidia diffused in water (for if ergots could not be detected on these, but frequently on the others, it seemed that the question would be set at rest), another experiment was instituted in the following autumn after this manner:—

Twelve grains of rye, of wheat, and of barley, were again selected and made to germinate as before described; and the sporidia from the exterior of one of the ergots of rye, produced in the previous year, were diffused in the water.

* Whilst the ergots were making their appearance, I had the opportunity of confirming Philippar's assertion of their very rapid growth, and also of satisfying myself that the fluid found on these bodies had an internal origin.



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