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THE

NATURAL HISTORY

OF

BRITISH INSECTS.

Law and Gilbert, Printers, St. John's-Square, London.

THE

NATURAL HISTORY

OF

BRITISH INSECTS;

EXPLAINING THEM

IN THEIR SEVERAL STATES,

WITH THE PERIODS OF THEIR TRANSFORMATIONS,
THEIR FOOD, ŒCONOMY, &c.

TOGETHER WITH THE

HISTORY OF SUCH MINUTE INSECTS

AS REQUIRE INVESTIGATION BY THE MICROSCOPE.

THE WHOLE ILLUSTRATED BY

COLOURED FIGURES,

DESIGNED AND EXECUTED FROM LIVING SPECIMENS.

BY E. DONOVAN.

VOL. XIV.

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THE

NATURAL HISTORY

OF

BRITISH INSECTS.

PLATE CCCCLXIX.

SPHINX DRURÆI.

DRURY'S HAWK MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ ſomewhat priſm-form, and tapering at each end: tongue generally exſerted: feelers two, reflected; wings deflected.

SPECIFIC CHARACTER.

SPHINX DRURÆI. Wings entire: anterior pair grey and teſtaceous clouded, with diſtinct fuſcous blotch in the middle: anterior wings red, with three denticulate black bands: abdomen red, with black belts.

SPHINX CONVOLVULI, *var.* POTATOE HAWK MOTH. *Smith's Inſ. Georg. V.* 1. *p.* 32.

SPHINX CONVOLVULI, *varietas. Drury, V.* 1. *pl.* 25. *fig.* 4?

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A more beautiful inſect than that before us has never been introduced to the attention of our readers, either as an exotic ſpecies, or a native of this country; but, with what propriety we have ventured to conſider it ſpecifically diſtinct from the Sphinx Convolvuli, to which it is ſo cloſely allied, or how far we may be authorized, from the occurrence of a ſingle example in a living ſtate in Britain, to admit it as an inhabitant, we are diſpoſed to ſubmit to the deciſion of others, after relating the circumſtances which induce us to include it in the preſent work.

In a former volume our ſubſcribers poſſeſs a figure and deſcription of another very intereſting ſpecies of the ſame tribe, the Sphinx Carolina; an inſect ſufficiently known as a Linnæan ſpecies, and as a native of North America, but which was inſerted as a Britiſh inſect on the authority of the late Mr. Drury, who received the individual ſpecimen deſcribed in a living ſtate. It will be found, on reference to the memorandum in the hand-writing of Mr. Drury annexed thereto, that the information it conveys relates to two ſpecies of the Sphinx tribe, the one we then deſcribed, and another, which latter is the inſect now under conſideration. The memorandum ſtates, that theſe two inſects were brought to Mr. Drury alive, one about the year 1776, the other in 1788. Whether the ſpecies Carolina, or the preſent, was diſcovered firſt, cannot be at this time aſcertained: it is only evident that both were taken within the interval of the above-mentioned periods.

The diſcovery of a ſolitary ſpecimen of any inſect in this country, which is clearly authenticated to be indigenous to extra European climates, is not altogether ſufficient in our mind to countenance its introduction into the Britiſh Fauna; yet there are circumſtances, under which it would be improper to omit the mention of ſuch extraordinary acquiſitions; and this idea applies, in an immediate degree, to the diſcovery of the preſent very elegant ſpecies in a ſtate of nature in Britain. We are nevertheleſs inclined to regard it as an accidental occurrence only, and conceive it incumbent to obſerve, as in the inſtance of Sphinx Carolina, that there appears to us every reaſon for

for believing it muſt have been originally imported in the egg, or larva ſtate, among ſome articles of American produce, though from this introduction it is not to be denied that the ſpecies may have become naturalized in this country. There does not appear any evidence ſo poſitive as to demonſtrate the fact, yet we ſuſpect this inſect, as a ſuppoſed variety of Sphinx Convolvuli, muſt have been long known among collectors as a native of Britain, under the denomination of the "Red Underwing Convolvuli;" and, if we miſtake not, under that of the "Yorkſhire Convolvuli" alſo. We believe theſe names have been applied to the preſent inſect.

The ſimilarity that prevails in the general appearance of this inſect, and the Sphinx Convolvuli, deſerves particularly to be conſidered, in order to determine whether the latter be really a diſtinct ſpecies, or only a variety.

In the firſt place, it is to be obſerved, that the deſcriptions which Linnæus, and other early writers, afford us, are taken from ſpecimens of the Sphinx Convolvuli met with excluſively in Europe: thoſe writers did not conſider the ſpecies as extra European, much leſs as a native of the tranſatlantic regions, and their deſcriptions will be found to accord with that particular kind of Sphinx which is known in England by the name of Convolvuli, or Bind-Weed Hawk Moth.

Some time after the work of Linnæus appeared, our countryman Drury publiſhed the firſt volume of his exotic inſects, the twenty-fourth plate of which includes the figure of a Sphinx, whoſe external aſpect ſeemed, in his opinion, to correſpond with the European Convolvuli: the hues and marking of the upper wings were ſomewhat ſimilar, but in this the colour of the lower wings, which in the European inſect are greyiſh white, were red, a difference which the author of that work imagined might be produced from the effect of climate, the ſpecimen being from St. Chriſtopher's; and under this perſuaſion, after ſpeaking of it as an inſect which he could not find deſcribed, he calls it in his index Sphinx Convolvuli *varietas*.

This induced later entomologiſts, and among the reſt Fabricius, to believe there muſt be two varieties of the Sphinx Convolvuli, namely, the European kind with grey poſterior wings, and the American with red poſterior wings; for this, though not directly ſtated, muſt be implied, as he refers to the plate of Drury's work, before noticed among his ſynonyms of the ſpecies Convolvuli *. This latter inſect was alſo, on ſome popular report, conſidered as a native of Britain, an idea we ſuſpect to have originated from its being underſtood that an inſect of the Sphinx family, correſponding with S. Convolvuli, but having red inſtead of grey poſterior wings, had been once taken in England, and was preſerved in the Engliſh cabinet of Mr. Drury. Such we believe to be the origin of the report, though we cannot abſolutely trace it to this ſource. Should this conjecture be well founded, we may add that the inſect, figured and deſcribed by Mr. Drury in his work, muſt have been conſidered different from the preſent ſpecies by that author: it is very evident he did not admit them to be the ſame; but whether the attention he had beſtowed upon them was ſufficient to enable him to determine this point with accuracy, we ſhall not pretend to decide. Since the diſperſion of his collection of exotic ſphinges, it is perhaps impoſſible to diſcover the genuine inſect intended by his Convolvuli *var.* His figure and deſcription is not altogether ſo definitive as we could wiſh; and in the general information ſubjoined thereto, he merely ſays, "I received it from St. Chriſtopher's. I cannot find it any where deſcribed;" and after this, in the index, he names it "Convolvuli *varietas. Linn. p.* 798. *n.* 6." In his manuſcript notes, at this time in our poſſeſſion, there is a further memorandum on the ſame ſubject, and which, though not material, may be repeated. It occurs in the following words: "Convolvuli vâr. St. Kitt's. Mr. Kearton, 1765." *Vid. Illuſt. Vol. I. pl.* 25. *fig.* 4. In the manuſcript note annexed to our preſent inſect, Mr. Drury expreſſes a different opinion of the latter; for this, he obſerves, "is not the ſame as S. Convolvuli;"

* The reference in Species Inſectorum is to plate 25. fig. 1. which latter is an error; it is intended for figure 4. The ſame error has been followed by Gmelin in his Linn. Syſt. Nat. but this is corrected in the more recent works of Fabricius.

from

from which it is to be inferred, that he conſidered the firſt of theſe inſects as only a variety of S. Convolvuli, and the latter as a diſtinct ſpecies. We ſhall not, however, adduce this as a poſitive teſtimony that they were in reality different: indeed we ſuſpect the contrary; but on a ſubject ſo ambiguous, we conceive it candid to ſtate the ideas of Mr. Drury, as well as the opinion we ourſelves entertain.

Since the production of the work to which we laſt adverted, Mr. Abbot, an aſſiduous entomological collector in the province of New Georgia, North America, furniſhed ſeveral of the Engliſh cabinets with ſpecimens of the inſects of that particular country where he reſided, and among the reſt with ſome few examples of the individual kind of Sphinx to which our attention is now directed. A ſeries of drawings by Mr. Abbot, explanatory of the various changes of a ſelect number of the inſects of that part of the globe, were likewiſe tranſmitted to England about the ſame period, one of which exhibited the transformation of this very ſpecies. Theſe drawings afterwards paſſing into the hands of the London bookſellers, were engraven and publiſhed under the title of Abbot's Inſects of Georgia, with obſervations by Dr. Smith.

Thus it appears, that of the two figures conſidered as repreſentations of our inſect, one only is certain, and that is the figure included in the laſt mentioned publication. The latter we are aſſured of, not only from an attentive inſpection of the original drawings *, but alſo from the individual example delineated in that work, and which differs in no reſpect from the inſect now before us. This we mention in order to ſhew that our compariſons are deduced with a ſufficient degree of certainty.

* Theſe original drawings were, in the firſt inſtance, conſigned from Georgia by Mr. Abbot to Mr. G. Humphreys, in London, and remained in the poſſeſſion of the latter ſome time. They were executed by Mr. Abbot on coarſe wire-marked paper, and were, more or leſs, diſcoloured and ſtained with ſea-water, an injury ſuſtained in the paſſage between America and England. With the exception of this circumſtance, we have no reaſon to diſtruſt their general accuracy, and that exhibiting the transformations of our preſent inſect had in particular eſcaped without any material damage.

From

From the remarks of Dr. Smith on this particular ſubject, it is obvious he conſidered it only as a variety of the European kind of Sphinx Convolvuli. " We cannot diſcover," ſays this author, " any material diſtinction between this and the moth which feeds on plants of the ſame genus * in Europe, and is often ſeen fluttering about in towns and houſes, making as much noiſe as a bat, or ſmall bird, for both which it is often taken by the vulgar. The reddiſh tinge on the under-wings of the American one, is the only difference we can find, and is ſurely not ſufficient to make that kind any more than a variety, as Mr. Drury ſuppoſes it. Fabricius does not even diſtinguiſh it as ſuch. Mr. (now Dr.) Latham informs us, this variety has been found in England."

Before we offer any obſervations likely to diſcountenance the perſuaſion of this reſpectable writer, it will not be amiſs to ſtate, that it appears to have been uniformly the idea of every entomologiſt, as well as Dr. Smith, with the exception of Mr. Drury, that our inſect is only a variety of Sphinx Convolvuli. Mr. Drury remarks, in the manuſcript note above adverted to, that they are certainly different, and that this difference is manifeſtly diſcernible. But while we rely on the deſcription which Linnæus affords of the ſpecies, it is perfectly conſiſtent to maintain the contrary opinion; and it was hence depending on the Linnæan character, that in our deſcription of Sphinx Convolvuli, we were inclined to ſpeak of the preſent inſect as a variety of the former, rather than as a new ſpecies. In adverting to the paſſage in which this ſuppoſed variety was mentioned, it will be however perceived, that we entertained, at that time, no inconſiderable degree of diſtruſt as to the propriety of ſuch an opinion, for it was then obſerved, that " it has all the characteriſtic marks of Sphinx Convolvuli, or we ſhould heſitate to admit it as the ſame ſpecies." Such were the ſcruples at that time prevalent in our mind: we were unwilling to oppoſe the authority of Linnæus, or we ſhould have then conſtituted it a diſtinct ſpecies. Subſequent obſervations have tended only to ſtrengthen the propriety of this ſuggeſtion, and to convince us, the Linnæan cha-

* Feeds in America on the ſweet potatoe, Convolvulus Batatus.

racter

racter of the ſpecies Convolvuli is too indefinite to form any preciſe criterion of the ſpecies.

On the latter topic we wiſh to ſpeak more fully in explanation. There is nothing, we would obſerve, laid down in the Linnæan character to prove the two above-mentioned inſects diſtinct; but, on the contrary, every character is calculated to confirm it. Linnæus had not, in all probability, ſeen this ſuppoſed variety: his ſpecifical definition was apparently drawn from examples of the European Convolvuli; and he was doubtleſs not aware that the character he aſſigned thereto was ſo far inapplicable as to apply to two diſtinct inſects; theſe according in every character with the ſpecifical diſtinction he propoſes, though in other reſpects they are remote from each other. Hence it is obvious, that our preſent inſect may really, according to that character, be the Sphinx Convolvuli, or Convolvuli *vâr.* of Linnæus, though as a ſpecies it may be ſtill diſſimilar. The accuracy of this obſervation will be more amply demonſtrated from the following compariſon of the two inſects, at preſent under conſideration, with the ſpecific character which Linnæus affords of the Sphinx Convolvuli.

Linnæus, in the earlier editions of his Syſtema Natura, thus defines the laſt mentioned ſpecies:—"Alis integris poſticis albo faſciatis margine poſtico albo punctatis, abdomine rubro cingulis atris." According to which, the two inſects before us would be at once diſtinguiſhed as ſpecifically diſtinct, the bands on the poſterior wings being red in one, and white, or at leaſt greyiſh white, in the other.

This deſcription occurs in the tenth edition of the Syſtema Natura, and it is poſſible, though it appears otherwiſe expreſſed in the later editions of that work, that Linnæus ſtill intended to preſerve the ſame interpretation: it would be uncandid to conclude the contrary, though his words may bear a different acceptation, becauſe he does not himſelf contradict this ſuppoſition. It appears, however, confining our attention ſolely to the deſcription given of the ſpecies in the twelfth edition of that work, and in the ſubſequent editions publiſhed by Gmelin, that the two kinds may be ſtill confounded, the colour of the paler bands forming,

forming, according to thoſe deſcriptions, no criterion of the ſpecies. In the laſt mentioned work, the S. Convolvuli is thus deſcribed:—"Alis integris, poſticis nigro-faſciatis margine poſtico albo punctatis, abdomine rubro cingulis atris." And this deſcription will be found applicable to either of the inſects before us: in both the wings are entire, the poſterior pair barred with black, the hinder margin dotted with white, and the abdomen red, with belts of black.

The Fabrician character of S. Convolvuli:—("Alis integris nebuloſis, poſticis ſubfaſciatis abdomine cingulis rubris atris albiſque." *Syſt. Ent.* 544.) will alſo agree very nearly with either: the wings in both are entire, and clouded: in both the poſterior wings are barred, though ſlightly in Convolvuli, and conſpicuouſly in the other, and in each the abdomen is belted with black and red, though in Convolvuli every ſegment is marked at the baſe with a band of white, no trace of which appears in the other.

From the above it will be inferred, that the deſcription which the lateſt work of Linnæus offers will correſpond with both the inſects in queſtion, and that of Fabricius will alſo accord in almoſt every eſſential particular; notwithſtanding which, we are perſuaded, for the following reaſons, they ought to be conſidered as diſtinct:—

1. The Sphinx Convolvuli, ſo far as we have been enabled to compare the two kinds, is rather larger: this difference, we admit, may ariſe from the influence of climate, or any other adventitious cauſe.

2. There is a ſlight difference in the contour, the curvature in the ſloping margin of the wings being moſt diffuſe in S. Convolvuli.

3. The anterior wings in both are clouded and greyiſh, but in our preſent inſect the grey is finely varied with ochraceous hues; and there is, beſides, in the middle of the wings of the latter, a perfectly characteriſtic fuſcous blotch, margined behind with an irregular greyiſh ſubcatenated band, neither of which appear in the wings of S. Convolvuli.

4. In

4. In both kinds the anterior wings are tranſverſely barred, or lineated with a number of indented dark ſtreaks, but in the form of thoſe the moſt obvious difference prevails. Theſe lines are moſt numerous in S. Convolvuli, and are in that inſect ſo deeply indented as to exhibit a lozenge-form zic-zac, the arches (if the expreſſion be allowable) being greatly elongated, and extending into an acute ſalient point. In our preſent inſect, the correſponding lines are diſpoſed acroſs the anterior wings, in a ſimilar manner; but theſe, beſides being leſs conſiderable in number, are neither zic-zac, nor pointed, for though indented, the angles are almoſt uniformly rounded, ſo as to aſſume a ſcalloped inſtead of pointed arch-like appearance.

5. Another difference ſubſiſts in the under wings, and which, as well as that of the upper wings, is conſiderable. In S. Convolvuli the prevailing colour is grey, in the preſent fine roſe-colour; in S. Convolvuli the black bands are four in number, in the preſent only three. The two middle bands in ſome examples of S. Convolvuli are indeed confluent, but in no inſtance whatever have we ſeen thoſe bands ſo cloſely united as to conſtitute only a ſingle apparent band; while in our preſent inſect, the middle of the wings are traverſed by a ſingle band only, and that of a black colour, far more intenſe than we have ever obſerved in the bands of S. Convolvuli.

6. The larva or caterpillar of Sphinx Convolvuli is of a fine green colour, with a ſingle narrow darker green line along the back; each of the ſegments alſo are marked on the ſides with an oblique whitiſh yellow line, edged above with duſky or blackiſh; and four duſky ſpots, two of which are placed adjacent to the anterior part of the dorſal line, and the others are on each ſide contiguous to the ſpiracles. This is the laſt appearance it aſſumes before it paſſes into the pupa form; in the ſtate previous to this last appearance, its colour is brown, with the ſides ochraceous. The larva of our preſent inſect we have not ſeen, but from the drawing made by Mr. Abbot, and which we have attentively compared with the former, there can remain no doubt of its being altogether a diſtinct ſpecies. Theſe caterpillars, according to Abbot, are frequent in Georgia, though the moth is rare, and in the

former ſtate its appearance muſt be familiar, therefore, to this aſſiduous collector. The prevailing colour in this delineation is brown, with longitudinal ſtripes of pale orange, roſy-white and yellow. Along the upper part of the back is a broad ſtripe of faint orange, incloſing, on each joint, an oblong, or ſomewhat ſhuttle-form ſpot of black, and which altogether exhibits a ſlightly interrupted or ſubcatenated band: this is ſucceeded beneath by a fuſcous band of moderate breadth: a line ſtill narrower, and of a delicate roſy-white, runs parallel to this lower edge of the fuſcous band; and beneath that the body is brown, with the exception of a yellow band, diſpoſed immediately under the ſeries of ſpiracles. The laſt mentioned band extends throughout the whole length, but is confluent on the anterior part of each ſegment, and there becomes ſo much produced and curved backwards as to appear deeply falcated. This is the laſt ſkin of the larva according to Abbot.

7. The difference in the pupa ſtate is not conſiderable: they are nearly of the ſame form and colour; a ſimilarity in this ſtate is, however, obſervable in many inſects of very different ſpecies.

8. Neither is it concluſive, from the nature of their food, that they muſt be ſpecifically allied, as vaſt numbers of very diſſimilar inſects are known to ſubſiſt on plants of the ſame kind.—The European S. Convolvuli feeds on the common bindweed Convolvulus Major, and the Georgian inſect on the Convolvulus Batatas.

9. The time in which the Sphinx Convolvuli makes its firſt appearance in the winged ſtate, is about the middle of September. The larva of the other, Mr. Abbot informs us, went into the ground on the 20th of Auguſt, and the fly came forth on the 11th of September: this was in Georgia; but in Virginia, where he met with the ſame ſpecies, a larva of this kind buried itſelf on the 3d of October, and did not produce the fly till the 30th of May following.

We have thus endeavoured to ſtate preciſely every material circumſtance, within our own knowledge, that could poſſibly tend to determine

mine in what particulars the two above-mentioned inſects accord or diſagree. For the prolixity of our ſtatement we may claim ſome indulgence, as it was deemed incumbent to ſhew, that we were not diſpoſed, on very trivial grounds, to contradict an opinion ſo generally prevalent, as that of the preſent inſect being a variety only of S. Convolvuli; an opinion that ſeems to have obtained an uniform aſcendancy over the minds of entomologiſts in this country, and apparently of ſome on the continent alſo. Thoſe inſects, when examined with ſcrupulous attention, appear indeed to differ in ſo many eſſential reſpects, that it would ſeem impoſſible they could heretofore have been conſidered fully, or we apprehend it would not have remained for us to point out their differences. Upon the whole, therefore, we feel impreſſed with the propriety of conſidering them ſpecifically diſtinct, though, at the ſame time, it muſt be acknowledged, at the firſt view, they might be caſually admitted as varieties of each other.

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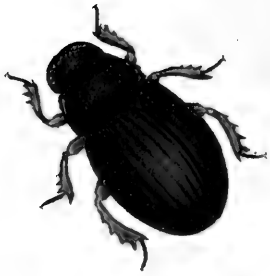

PLATE CCCCLXX.

SCARABÆUS GLOBOSUS.

GLOBOSE BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavate, the club lamellate; feelers four; the anterior ſhanks uſually denticulate.

SPECIFIC CHARACTER

AND

SYNONYMS.

SCARABÆUS GLOBOSUS. Gloſſy blackiſh: head granulated: wing-caſes ſtriated.

ÆGIALIA GLOBOSA. *Latr. Gen. Cruſt. et Inſ.*—Aphodius. *Illig. Panzer.*

A few years ago we diſcovered this curious inſect in ſome plenty, feeding, as it appeared, on the remains of certain marine vermes of the Meduſa tribe, thrown on the ſandy ſhore of Barmouth, in the great bay of Cardigan, North Wales. Before that period we have reaſon to conclude this inſect was unknown: it has been ſince deſcribed by Panzer and Latreille, both of whom mention it as an inhabitant of maritime marſhes. The ſame inſect has been alſo taken ſince we obſerved

ſerved it at Barmouth, in ſimilar ſituations, in other parts of Britain. Mr. Hooke met with it near Hull, and Mr. Leach, at Clonkelty, in Ireland. It therefore appears, upon the moſt ſatisfactory information, to be a local ſpecies, and one confined to marſhy and ſandy places in the vicinity of the ſea.

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PLATE CCCCLXXI.

FIG. I.

MUSCA MYSTACEA.

DIPTERA.

GENERIC CHARACTER.

Mouth with a ſoft exſerted fleſhy proboſcis, and two equal lips: ſucker furniſhed with briſtles: feelers two, and ſhort, or ſometimes none: antennæ generally ſhort.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black: head, margin of the thorax and tip of the abdomen yellow.

MUSCA MYSTACEA: nigra, thorace abdominisque apice flavis. *Linn. Fn. Suec.* 1793.

Syrphus myſtaceus. *Fabr. Spec. Inſ. T. 2. p.* 421. 175. 1.—*Schæff. Elem. t.* 131.—*Icon. t.* 10. *f.* 9.

Inhabits woods.

FIG.

FIG. II.

MUSCA MERIDIANA.

SPECIFIC CHARACTER.

Hairy, black: front golden: wings ferruginous at the baſe.

MUSCA MERIDIANA: nigra, fronte aurea, alis baſi ferrugineis.
Linn. Fn. Suec. 1827.
Fabr. Sp. Inſ. 2. *p.* 435. *n.* 3.
Muſca nigra, alis baſi ferrugineis. *Geoff. Inſ.* 2. 495. 5.

Common in woody places throughout moſt parts of Europe.

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PLATE CCCCLXXII.

LIBELLULA CANCELLATA.

CANCELLATED DRAGON FLY.

NEUROPTERA.

GENERIC CHARACTER.

Mouth armed with jaws, more than two in number: lip trifid: antennæ very thin, filiform, and ſhorter than the thorax: wings expanded: tail of the male furniſhed with a forked proceſs.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings immaculate at the baſe: abdomen on the back and ſides interrupted with yellow.

LIBELLULA CANCELLATA: alis baſi immaculatis, abdomine, dorſo lateribuſque interrupte luteis. *Linn. Fn. Suec.* 1465.—*Syſt. Nat.* 12. 544.—*Fab. Spec. Inſ.* 1. *p.* 522. *n.* 15.—*Mant. Inſ.* 1. *p.* 337. *n.* 15.

The deſcription which the work of Linnæus affords of his Libellula Cancellata is remarkable for its brevity, and as he refers to no other authority, ſome diſtruſt might ariſe as to the identity of the inſect intended, were it not materially different from the other European ſpecies; inſomuch, indeed, that it cannot eaſily, we ſhould imagine, be

 confounded

confounded with any other: the deſcription, though conciſe, is expreſſive, and perfectly applicable to the inſect before us. Fabricius ſpeaks of the ſpecies only in the words of Linnæus.

There is a figure of one of the Libellulæ in the work of Sulzer, given under the name of Cancellata, which nearly reſembles the preſent inſect, but is ſcarcely more than half its ſize; and this figure is repeated from the ſame plate in the work of Roemer, but neither is referred to by Fabricius. The magnitude of L. Cancellata is not ſpecified; the figure appears to be tolerably correct, ſo far at leaſt as to be underſtood, and we ſhould rather ſuſpect it to be a dwarf example of the ſame inſect.

The "*Icones Inſ. circa Ratiſbon.*" of Schæffer, plate 137, fig. 1. preſents another repreſentation, if we miſtake not, of the ſpecies Cancellata, in ſize approaching much nearer to the ſpecimen delineated in the annexed plate. It appears without any ſpecific name, as uſual, in that work. Theſe are the only figures we at preſent recollect, that, in our opinion, are to be eſteemed ſynonymous.

This intereſting inſect is delineated from a ſpecimen in the cabinet of Mr. W. Leach, F. L. S.

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PLATE CCCCLXXIII.

CIMEX NIGRO LINEATUS.

BLACK-LINED ELDER BUG.

HEMIPTERA.

GENERIC CHARACTER.

Snout inflected: antennæ longer than the thorax: wings four, folded acroſs, the upper pair coriaceous on the ſuperior part: back flat: thorax margined: legs formed for running.

SPECIFIC CHARACTER

AND

SYNONYMS.

Red: thorax with five black lines, ſcutel with three: abdomen yellow, with black dots.

CIMEX NIGRO-LINEATUS: ruber: thorace lineis quinque, ſcutello tribus nigris, abdomine flavo: punctis nigris. *Fabr. Spec. Inſ.* 2. *p.* 341. *n.* 15.—*Mant. Inſ.* 2. *p.* 281. *n.* 17.—*Gmel. Linn. Syſt. Nat.* 2131. *n.* 6.—*Schæff. elem. t.* 44. *f.* 1. *Icon. t.* 2. *f.* 3.

This beautiful inſect is found in vaſt abundance in the ſouth of Europe, and infeſts the flowers of the elder: in Britain the ſpecies is very rare.

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PLATE CCCCLXXIV.

BEMBEX OCTO-PUNCTATA.

OCTO-PUNCTATED WASP.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth horny, with arched and pointed jaws: tongue inflected and quinquefid: upper lip much advanced: feelers four, ſhort, unequal, filiform: antennæ filiform, the first joint thrice the length of the others: eyes large, and occupying the whole ſides of the head: body glabrous: ſting pungent, and concealed in the abdomen.

SPECIFIC CHARACTER.

BEMBEX OCTO-PUNCTATA. Greeniſh, varied with bands and lines of black: two black dots on each of the firſt four ſegments of the abdomen.

The ſmaller figure in the annexed plate denotes the natural ſize of Bembex octo-punctata; the enlarged repreſentation being intended to expreſs its appearance before the lens of the opake microſcope.

We are not aware that any ſpecies of the Bembex genus has been before deſcribed or mentioned as a native of this country. The genus is rather limited in point of number, and is confined, with few exceptions, to extra European climates. Bembex roſtrata is the moſt common of the European kinds, and is found in France, and other parts

parts of the continent, in ſome abundance, but has never, to our knowledge, occurred in England. Our preſent inſect, and which is probably the only example of its kind hitherto diſcovered in this country, was taken by the late Mr. Drury, and is preſerved in his cabinet now in our poſſeſſion. Though extremely rare, it is not, however, to be conſidered as an unique inſect, except as a Britiſh ſpecies, for we have obſerved two examples of the ſame kind in the ſplendid entomological collection of our worthy friend, A. M'Leay, Eſq. F. R. S.

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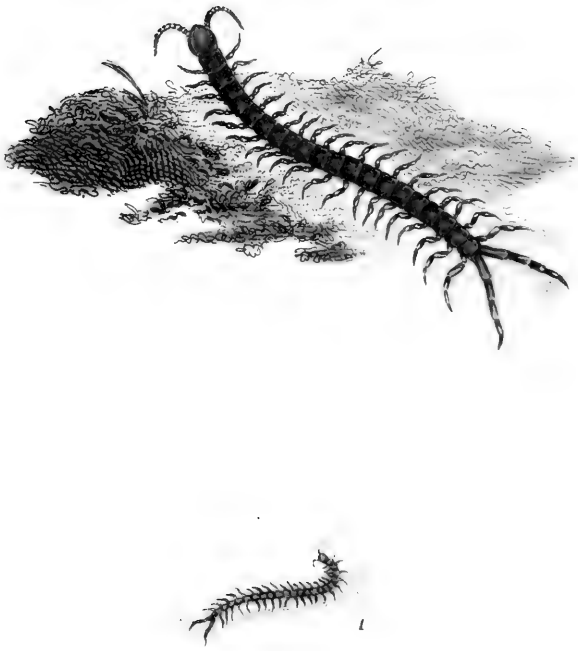

PLATE CCCCLXXV.

SCOLOPENDRA HORTENSIS.

GARDEN CENTIPEDE.

APTERA.

GENERIC CHARACTER.

Antennæ ſetaceous: feelers two, filiform, and united between the jaws: lip toothed and cleft: body long, depreſſed, conſiſting of numerous tranſverſe ſegments: legs numerous.

SPECIFIC CHARACTER.

SCOLOPENDRA HORTENSIS: fuſcous: legs on each ſide twenty-one.

This Centipede appears to be of an undeſcribed ſpecies: it was diſcovered, in ſome abundance, by Mr. W. Leach, in the gardens at Exeter.

The natural ſize of this inſect is delineated in the lower part of the annexed plate; and from this it will be obſerved, that the ſpecies is of the more diminutive kind. In its general aſpect it bears a very ſtrong analogy to the great venemous Centipede of the eaſtern parts of the world, Scolopendra morſitans. The reſemblance is indeed ſo ſtriking, that notwithſtanding the diſparity of ſize, were it not for the preſent ſpecies differing, in having a pair of legs more than that inſect, we ſhould not be inclined to think it ſpecifically diſtinct. The number of legs in the Scolopendra genus is admitted by entomological writers

writers as a criterion of the ſpecies, and for this reaſon it is ſubmitted as a new inſect.

The figure in the upper part of the plate exhibits its magnified appearance.


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PLATE CCCCLXXVI.

FIG. I. I.

ICHNEUMON LEUCORHÆUS.

WHITE-TAILED ICHNEUMON.

GENERIC CHARACTER.

Mouth with a ſtraight horny membranaceous bifid jaw: the tip rounded and ciliated: mandibles curved, ſharp; lip cylindrical, membranaceous at the tip, and emarginate; feelers four, unequal, and filiform, and ſeated in the middle of the lip: antennæ ſetaceous, of more than thirty articulations: ſting exſerted, incloſed in a cylindrical ſheath compoſed of two valves, and not pungent.

SPECIFIC CHARACTER.

ICHNEUMON LEUCORHÆUS. Head and thorax black: body ſubgloboſe, and rufous, terminating in a black band, and yellowiſh white tip.

Ichneumon octogeſimus primus. *Schæff. Icon. pl.* 187. *fig.* 1.?

The ſmaller figure denotes the natural ſize of this curious inſect, the larger being conſiderably magnified. The globoſity of the abdomen is remarkable, but not peculiar to this ſpecies: its legs are brown and black, and the antennæ rather longer than the wings. We have reaſon to believe this a rare ſpecies.

FIG. II. II.

ICHNEUMON COSTATOR.

YELLOW-MARGINED ICHNEUMON.

SPECIFIC CHARACTER.

ICHNEUMON COSTATOR. Head and thorax black: body black, with the ſurrounding margin, and edge of the ſegments yellow.

A minute ſpecies, the natural ſize of which is repreſented by the ſmaller figure, No. I.

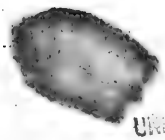
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PLATE CCCCLXXVII.

FIG. I.

CARABUS SYCOPHANTA.

GENERIC CHARACTER.

Antennæ filiform: feelers generally fix, the laſt joint obtuſe and truncated: thorax flat and margined: wing-caſes marginate.

SPECIFIC CHARACTER

AND

SYNONYMS.

Winged: ſhining violet: wing-caſes green-gold and ſtriated.

CARABUS SYCOPHANTA: alatus violaceo-nitens: elytris ſtriatis aureis. *Fabr. Sp. Inſ.* 1. *p.* 303. *n.* 25.—*Mant. Inſ.* 1. *p.* 197. *n.* 34.

CARABUS SYCOPHANTA: aureo-nitens, thorace cœruleo, elytris aureo-viridibus ſtriatis, thorace ſubatro. *Linn. Fn. Suec.* 790.—*Gmel. Linn. Syſt. Nat.* 1966. *n.* 12.—*Geoffr. Inſ. p.* 1. *p.* 144. *n.* 5.—*Reaum. Inſ.* 2. *t.* 37. *f.* 18.—*Sulz. Hiſt. Inſ. t.* 7. *f.* 1.—*Bergſtr. Nomencl.* 1. t. 12. *f.* 1. 2.

One of the largeſt and moſt ſplendid of the European Carabi, and which has not, till very lately, been diſcovered in England. It is mentioned, in the firſt inſtance, by Dr. Turton, as a Britiſh ſpecies,

and has, ſince that time, been met with by entomological collectors, both in Norfolk and Ireland. Mr. Hooker, F. L. S. poſſeſſes an example taken in England.

FIG II. II.

CARABUS CRUX MAJOR.

LARGER CRUCIATE CARABUS.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax and head black and downy: wing-caſes ferruginous, with a black croſs.

CARABUS CRUX-MAJOR: thorace capitque nigro-villoſa, coleoptris ferrugineis: cruce nigra. *Linn. Syſt. Nat.* 673. 39.—*Faun. Suec.* 808.—*Fabr. Ent. Syſt.* 1. *a.* 160. 158.—*Gmel.* 1978. 39.—*Marſh. Ent. Syſt. T.* 1. *p.* 471.

CARABUS BIPUSTULATUS. *Fabr. Syſt. Ent.* 207. 59.—*Sp. Inſ.* 1. 312. 74.

Le Chevalier noir. *Geoffr.* 1. 150. 17.

Buprestis cruciata. *Panz. Voet.* 2. 70. 7. *t.* 34. *f.* 7.

An inſect of elegant formation, very beautiful in colour, and of the greater intereſt to the Engliſh naturaliſt, as being rare. The black cruciate mark on the red wing-caſes conſtitute a character of much ſingularity.

ſingularity. The ſpecies is of a moderate ſize, or rather ſmall, and appears to peculiar advantage when magnified.

The ſmaller figure on the blade of graſs in the upper part of the plate exhibits the natural ſize; the magnified figure is enlarged to about the magnitude of Carabus Sycophanta, a ſize which admits of its being depicted with the greater fidelity.

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PLATE CCCCLXXVIII.

ICHNEUMON BILINEATOR.

BILINEATED ICHNEUMON.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth with a ſtraight horny membranaceous bifid jaw, the tip rounded and ciliated: mandibles curved, ſharp; lip cylindrical, membranaceous at the tip, and emarginate: feelers four, unequal, filiform, and ſeated in the middle of the lip: antennæ ſetaceous, of more than thirty articulations: ſting exſerted, incloſed in a cylindrical ſheath compoſed of two valves, and not pungent.

SPECIFIC CHARACTER.

ICHNEUMON BILINEATOR: black: two incurvate yellow lines on the head: ſcutel and antennæ in the middle whitiſh.

ICHNEUMON MOLITORIUS *var.?*

This curious inſect reſembles, in a very peculiar degree, the Ichneumon molitorius, from which it is, however, diſtinguiſhed by its ſuperiority in ſize, and the two yellowiſh lines on the back part of the head: theſe lines are placed between the eyes as remotely as poſſible, each forming a marginal fillet, which partially ſurrounds the contiguous eye. We ſcarcely feel authorized in the perſuaſion of its being only a variety of the above-mentioned inſect, although, from its general aſpect,

aſpect, this opinion does not appear altogether improbable: to us it ſeems rather a diſtinct ſpecies than variety. Many examples of Ichneumon molitorius have occurred to our own obſervation, but we have never perceived in any of theſe the ſlighteſt trace of the yellow lines, ſo conſpicuous on the head of the preſent inſect.

The ſpecimen, from whence the above figure is taken, is the only one of its kind with which we are acquainted.

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PLATE CCCCLXXIX.

FIG. I.

PHALÆNA PECTINATARIA.

GREEN CARPET MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ gradually tapering from the baſe; wings in general deflected when at reſt. Fly by night.

SPECIFIC CHARACTER.

PHALÆNA PECTINATARIA. Anterior wings greeniſh, with baſe, and two denticulated bands darker: two fuſcous V-like marks on the coſtal margin, and fuſcous ſpot near the tip: poſterior wings with a band of dots below the middle.

PHALÆNA PECTINATARIA. *Marſh. M.S.*

One of the moſt frequent of the moth tribe, diſtinguiſhed by the name of "Carpets."

FIG. II.

PHALÆNA RUPTATA.

BROKEN BAR, or HORNSEY CARPET MOTH.

SPECIFIC CHARACTER.

PHALÆNA RUPTATA. Anterior wings ſubteſtaceous: baſe, interrupted broad band in the middle, and ſpot at the tip fuſcous, jagged, and margined with white: poſterior wings pale, with central dot.

GEOMETRA RUPTATA. *Hüb. Schmet. Geom.* 57. 295.—*Sepp.* *p.* 11. *pl.* 14?

An elegant and by no means abundant ſpecies, found in the woods during the month of June. This inſect appears to be rather local, and from being uſually taken by collectors in the woods of Hornſey, has long ſince obtained among them the trivial appellation of the Hornſey Carpet Moth.

FIG

FIG. III.

PHALÆNA MIATA.

AUTUMN GREEN CARPET.

SPECIFIC CHARACTER.

PHALÆNA MIATA. Wings grey-green, with three greeniſh bands; the middle one waved with brown: poſterior wings pale, with faint ſcalloped bands, and central dot.

PHALÆNA MIATA: alis griſeis: faſciis tribus viridibus: inter media latiore fuſco undata. *Linn. Syſt. Nat.* 2. 869. 249.—*Clerk. Icon. pl.* 8. *fig.* 2.

PHALÆNA MIATA. *Fab. Ent. Syſt.* 3. 180. 183.

Appears in the winged ſtate late in Autumn, whence it has obtained the name of Autumn Green Carpet. The ſpecies varies in point of colouring as well as ſize, and alſo ſeems to be very local, if not rare. Among the collectors near London, it is rather better known by the title of Dartford Green Carpet, (from being met with chiefly in the woods adjacent to the town of Dartford, in Kent) than by that of Autumn Green Carpet.

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PLATE CCCCLXXX.

CARABUS MELANOCEPHALUS.

BLACK HEADED CARABUS,

GENERIC CHARACTER.

Antennæ filiform: feelers generally fix, the laſt joint obtuſe and truncated: thorax flat, and margined: wing-caſes marginate.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax and legs ferruginous: head and wing-caſes black.

CARABUS MELANOCEPHALUS: thorace pedibuſque ferrugineis, elytris capiteque atris. *Linn. Fn. Suec.* 795.—*Gmel. Linn. Syſt. Nat.* 1973. *n.* 22.—*Fabr. Sp. Inſ.* 1. *p.* 310. *n.* 64.—*Mant. Inſ.* 1. *p.* 202. *n.* 89.—*Marſh. Ent. Brit.* 1. 438. 15.

Buprestis dorſo rubro. *Panz. Voet.* 2. 73. 15.

Le Bupreſte noir à corcelet rouge. *Geoff.* 1. 162. 42.

The ſmall figure in the annexed plate denotes the natural ſize. Linnæus deſcribes it as a ſylvan ſpecies. We met with it in plenty in the woods of Erdig, Denbighſhire.

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PLATE CCCCLXXXI.

PAPILIO ARGIOLUS.

AZURE BLUE BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed at the end: wings erect when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings without a tail: above blue, with black margin: beneath blueiſh, with black dots.

PAPILIO ARGIOLUS: alis ecaudatis ſupra cœruleis margine nigris, ſubtus cœruleſcentibus: punctis nigris diſperſis. *Linn. Fn. Suec.* 1076.—*Gmel. Syſt. Nat. T.* 1. *p.* 5. 2350. 234.

HESPERIA ARGIOLUS. *Fabr. Spec. Inſ.* 2. *p.* 123. *n.* 551.—*Mant. Inſ.* 2. *p.* 73. *n.* 686.

Papilio Argiolus is a very beautiful ſpecies: the female, which is rather larger than the male, is of a vivid azure blue on the upper ſurface; the female blueiſh, inclining to purple: the under ſurface in both are very nearly ſimilar.

The

The larva of this butterfly is rarely met with: in the fly ſtate the ſpecies is not uncommon, appearing about the middle of the day, in ſunny weather, on the ſkirts of meadows: one brood in the month of June or July, and another the latter end of Auguſt. The larva is to feed on graſs.

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PLATE CCCCLXXXII.

GRYLLUS RUFUS.

RUFOUS GRASSHOPPER.

HEMIPTERA.

GENERIC CHARACTER,

Head inflected, armed with jaws: feelers filiform: antennæ fetaceous or filiform: wings four, deflected, convolute: the lower ones plaited: hind legs formed for leaping: claws double on all the feet.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax cruciate: body fuscous: abdomen rufous: antennæ subclavated and pointed.

GRYLLUS RUFUS: thorace cruciato, corpore rufo, elytris grifeis, antennis subclavatis acutis. *Gmel. Linn. Syst. Nat.* 2081. *n.* 56.—Gryllus antennis subclavatis acutis. *Linn. Fn. Suec* 629.

GRYLLUS FUSCUS: abdomine rufo, antennis subclavatis. *Fabr. Sp. Inf.* 1. *p.* 371. *n.* 48.—*Mant. Inf.* 1. *p.* 239. *n.* 55.

Schæff. Icon. tab. 136. *fig.* 4, 5?

The ſtructure of the antennæ in this ſpecies of graſshopper is altogether ſingular and characteriſtic, the extreme end being dilated into a pretty conſiderable capitulum of a compreſſed ſubovate form, terminating in nearly an acute point; and which at the firſt view bear a ſtrong reſemblance to the antennæ of certain ſpecies of the papiliones. Appearances of this kind are rare in the Gryllus tribe; the ſpecies clavicornis, a native of Surinam, has antennæ nearly correſponding, and we poſſeſs another Britiſh ſpecies, the antennæ of which are conſtructed in a ſimilar manner.

We muſt acknowledge, that it appears ſomewhat anomalous to place theſe inſects with clavated antennæ, among the true Grylli, one deciſive character of which conſiſts in the antennæ being filiform; notwithſtanding their ſimilitude in other particulars, they might, perhaps, with far more propriety, conſtitute a diſtinct genus.

This ſpecies is of the ſize repreſented, and it is to be obſerved, that the antennæ in one ſex is larger than in the other.

Gryllus rufus is deſcribed as being very common in ſterile fields in various parts of Europe: on the banks in the Batterſea meadows, near the river, it is obſerved in ſome abundance during the month of September, as we are informed by Mr. Leach.

PLATE CCCCLXXXIII.

SIREX DROMEDARIUS.

DROMEDARY SAW-FLY.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth with a thick horny truncated ſhort denticulated mandible: feelers four, the poſterior ones longer and thicker upwards: antennæ filiform, of more than twenty-four equal articulations: ſting exſerted, ſerrated, ſtiff: abdomen ſeſſile, terminating in a point: wings lanceolate, incumbent, the lower ones ſhorter.

SPECIFIC CHARACTER

AND

SYNONYMS.

Abdomen black, rufous in the middle, with a white dot on the ſide of each ſegment: ſhanks white at the baſe.

SIREX DROMEDARIUS: abdomine atro: medio rufo; puncto utrinque albo, tibiis baſi albis. *Fabr. Ent. Syſt. T. 2. p.* 128. 16.—*Roſs. Fn. Etr. 2.* 34. 737.—*Gmel.* 2673. 5.

This elegant little inſect is moſt accurately and minutely deſcribed by Fabricius*, from a ſpecimen taken at Kiel, in Pruſſia, and preſerved in the cabinet of Daldorf. According to Roſſius, it is alſo a native of Italy. We believe the ſpecies has not been before noticed as an inhabitant of Britain.

Our drawings are taken from a ſpecimen in the cabinet of Mr. W. Leach, F. L. S. The ſmaller figure denotes the natural ſize.

It ſhould be obſerved, that the antennæ do not ſtrictly agree with thoſe of the Sirex genus in general, the joints being fewer in number, and exhibiting alſo ſome leſs material difference in their general ſtructure.

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* Statura & ſumma affinitas S. Cameli. Caput globoſum, nigrum lineolis duabus verticalibus albis. Thorax antice auguſtatus, niger puncto ante alas albo. Alæ obſcuræ. Abdominis ſegmentum 1, 2 nigra, 3, 4, 5, 6, 7 rufa, 8 nigrum macula utrinque alba, 9 nigrum, immaculatum.

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PLATE CCCCLXXXIV.

CARABUS CEPHALOTES.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform: feelers generally fix, the laſt joint obtuſe and truncated: thorax flat and margined: wing-caſes marginate.

SPECIFIC CHARACTER

AND

SYNONYMS.

Deep black, thorax attenuated behind, the poſterior margin rugoſe with dots: wing-caſes ſmooth, and ſcarcely ſtriated.

CARABUS CEPHALOTES: ater, thorace poſticè attenuato, margine poſtico punctato-rugoſo, elytris lævibus obſoletiſſimè ſtriatis. *Marſh. Ent. Brit. T.* 1. 472. *n.* 107.

CARABUS CEPHALOTES: apterus, elytris atris lævibus, thorace exſerto oblongo. *Linn. Fn. Suec.* 788.—*Gmel. Linn. Syſt. Nat. T.* 1. *p.* 4. 1964. 9.

CARABUS CEPHALOTES: apterus ater læviſſimus, thorace orbiculato convexo. *Fabr. Sp. Inſ.* 1. *p.* 304. *n.* 27. —*Mant. Inſ.* 1. *p.* 198. *n.* 39.

SCARITES CEPHALOTES. *Panz. Ent. Germ.* 37. 5.

Pſeudocupis major. *Panz. Voet.* 2. 64. 2. *t.* 33. *f.* 2.

Found on ſandy ſhores of the ſea.

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PLATE CCCCLXXXV.

FIG. I. II.

PHALÆNA LINEATARIA.

PALE TRIPLE-BAR MOTH.

GENERIC CHARACTER.

Antennæ gradually tapering from the baſe to the tip: tongue ſpiral: wings in general deflected when at reſt. Fly at night.

* GEOMETRA.

SPECIFIC CHARACTER.

PHALÆNA LINEATARIA. Pale: anterior wings with an oblique bilineated band at the baſe: trilineated band near the tip: bar in the middle angulated, and incloſing a dot near the coſtal margin: poſterior pair ſublineated: exterior margin of all the wings dotted.

This we are inclined to conſider as an extremely rare ſpecies. The ſpecimen repreſented in the upper part of the plate, and to which the figure I. is annexed, will be obſerved, at the firſt view, to differ from that ſhewn beneath at figure II. in the diſtinctneſs of its markings; but this alone ſeems to conſtitute their real difference, as every lineation in the lower ſpecimen accords with thoſe exhibited in the inſect ſhewn above. The latter appears to be either a pale variety, or an example of the ſpecies in leſs perfect condition than the other. Both inſects are ſhewn in their natural ſize.

FIG.

FIG. III.

PHALÆNA RUBRO-VIRIDATA.

BULLSTRODE GREEN CARPET MOTH.

SPECIFIC CHARACTER.

PHALÆNA RUBRO-VIRIDATA. Anterior wings grēeniſh, tinged with rufous: baſe and broad band in the middle ſubfuſcous: poſterior wings browniſh.

PHALÆNA RUBRO-VIRIDATA. *Marſh. M. S.*

PHALÆNA PSITTACATA. *Fabr. Ent. Syſt.* 3. 195. 238?

Occurs in the winged ſtate in the month of October.

We are not without ſuſpicion, that the moth repreſented in that ſcarce work, the "*Icones*" of Clerk, (fig. 8. pl. 4.) may be intended for an inſect of this ſpecies. The figure appears without any name.

PLATE CCCCLXXXVI.

CARABUS CREPITANS.

MUSKETEER BEETLE.

GENERIC CHARACTER.

Antennæ filiform: feelers generally fix, the laſt joint obtuſe, and truncated: thorax flat and margined: wing-caſes marginate.

SPECIFIC CHARACTER

AND

SYNONYMS.

Head, thorax, and legs ferruginous: wing-caſes blue-black.

CARABUS CREPITANS: capite thorace pedibuſque ferrugineis, elytris nigris. *Linn. Syſt. Nat.* 671. 18.—*Fn. Suec.* 792.—*Fabr. Syſt. Ent.* 242. 35. *Sp.* 1. 307. 44.—*Mant.* 1. 200. 61.—*Panz. Ent. Germ.* 51. 35.—*Oliv.* 3. 35. 64. 80.—*Marſh. Ent. Brit.* 1. 468. 96.

Le Bupreſte à tête, corcelet, et pattes rouges et étius bleus. *Geoffr.* 1. 151. 19.

An inſect of ſmall ſize that inhabits Europe, and is ſometimes found in England, where it is far from common.

This ſpecies is remarkable only for the peculiar mode of defence which it inſtinctively adopts when cloſely purſued by carnivorous inſects, or other enemies: on theſe occaſions, it emits a diſtinct, and rather loud noiſe, either from the vent, or, as ſome ſuppoſe, from the friction of the wing-caſes. This ſound it has the ability to repeat ſeveral times, and which, it may be imagined, is ſeldom exerted without ſucceſs; the unexpected exploſion for the moment alarming or repulſing its purſuer, and allowing, by that means, a convenient interval for the inſect purſued to effect its eſcape.

An enlarged figure of this inſect is given with its natural ſize.

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PLATE CCCCLXXXVII.

FIG. I. I.

PHALÆNA TESTACEATA.

PALE SCALLOP MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ gradually tapering from the baſe to the tip: tongue ſpiral; wings in general deflected when at reſt. Fly at night.

* GEOMETRA.

SPECIFIC CHARACTER.

PHALÆNA TESTACEATA. Whitiſh, with numerous teſtaceous ſcalloped lines: a common broad pale band in the middle; and marginal ſeries of oblong black dots.

The inſect from whence the above deſcription and annexed figures are taken, is the only example of its ſpecies we have ſeen, and hence we are inclined to conſider it exceedingly ſcarce, if not perfectly unique. The ſmaller figure exemplifies the natural ſize.

FIG. II.

PHALÆNA CUNEATA.

CUNEATE MOTH.

SPECIFIC CHARACTER.

PHALÆNA CUNEATA. Anterior wings fuſcous, with two pale broad bands, the inner one angulated, and the exterior marked in the middle with a ſingle ſeries of cuneate fuſcous ſpots.

A ſpecies of very ſtriking appearance, and ſufficiently diſtinguiſhed by the ſeries of wedge-formed ſpots diſpoſed along the pale exterior band of the upper wings. The fuſcous ground colour forms a pretty broad and diſtinct band in the middle of the wings, and is further characterized by an oblong, and ſomewhat paler ſpot, contiguous to the anterior margin, as well as a geminous or rather bipupillate ſpot at the poſterior edge of the ſame band. The lower wings are whitiſh, with pale fuſcous ſcalloped marginal lines, and a duſky dot in the middle.

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PLATE CCCCLXXXVIII.

CARABUS COMPLANATUS.

SAND CARABUS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform: feelers generally ſix, the laſt joint obtuſe and truncated: thorax flat and margined: wing-caſes marginate.

SPECIFIC CHARACTER

AND

SYNONYMS.

Pale: two black-waved lines on the wing-caſes.

CARABUS COMPLANATUS: pallidus, elytris faſciis duabus undulatis nigris. *Linn. Syſt. Nat. 2.* 671. 17.

CARABUS ARENARIUS: pallidus elytris maculis duabus dorſalibus atris. *Fabr. Spec. Inſ.* 1. 305. 34.—*Syſt. Ent.* 241. 26.—*Mant. Inſ.* 1. *p.* 199. *n.* 46.

The very elegant and intereſting ſpecies of Carabus, at preſent before us, appears to be the original C. Complanatus of Linnæus: this we learn from the authentic ſpecimen of that inſect deſcribed by Linnæus himſelf, and which, conſtituting a part of the Linnæan cabinet, is now in the poſſeſſion of Dr. Smith.

The

The ſame inſect is, beyond diſpute, the genuine Carabus arenarius of Fabricius, as may be clearly aſcertained from the original example of that ſpecies deſcribed by Fabricius in the Bankſian cabinet. Fabricius was doubtleſs not aware that it had been previouſly deſcribed, and therefore, from its habits of life, very appoſitely aſſigned it the ſpecific name of arenarius: the Linnæan name, however, deſerves the preference in point of priority, and, being perfectly admiſſible, ſhould in candour be retained.

Linnæus, perhaps on authority not ſufficiently explicit, ſpeaks of his ſpecies Complanatus as an inhabitant of the iſland of St. Domingo. It is poſſible, his information in this reſpect might be correct, but we are rather inclined to think it doubtful. Its exiſtence, as a Britiſh ſpecies, is determined in the moſt concluſive manner.

It will not be improper to obſerve, that the firſt example of this ſpecies, diſcovered in Britain, was taken, ſome years ago, by Sir Joſeph Banks on the ſandy ſhores of Wales, a circumſtance to which Fabricius adverts, though ſlightly. From the time of its diſcovery, we have reaſon to believe it was not again obſerved till within a very recent period, when, on further ſearch about the ſame ſhores where it was firſt obſerved, it was again found, and in conſiderable plenty. During the ſummer of the year 1809, it was taken in abundance under the drift-wood on the ſhores near Cromllyn Burrows, in the vicinity of Swanſea, by Mr. W. Leach, F. L. S.; and prior to that period, Mr. L. W. Dillwyn, F. L. S. met with it on the ſands below the town of Newton, in Glamorganſhire.

In a living ſtate, this curious inſect appears uncommonly pellucid, and this appearance is retained in a certain degree even in the examples dried, and prepared for the cabinet: the general colour is pale teſtaceous, or yelloweſh, with the extreme tips of the jaws and eyes brown. The two black or deep brown ſpots on the back conſtitute diſtinct denticulated bands; and two or more of the longitudinal ſtriæ, which interſect the pale tranſverſe band between thoſe ſpots, are likewiſe

likewiſe black. The whole of the lower ſurface, with the legs and antennæ, are pale yellowiſh teſtaceous.

In conclusion we ought to mention, that this inſect varies materially in the form, and alſo in the intenſity of the black or duſky marks on the wing-caſes.

PLATE CCCCLXXXIX.

APIS MANICATA.

MANICATED BEE.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth horny: jaw and lip membranaceous at the tip: tongue inflected: feelers four, unequal, and filiform: antennæ ſhort and filiform in the male, in the female ſubclavated: wings flat: ſting of the females and neuters pungent, and concealed in the abdomen.

SPECIFIC CHARACTER

AND

SYNONYMS.

Cinereous, abdomen black, with yellow lateral ſpots: tail armed with five teeth.

APIS MANICATA: cinerea, abdomine nigro, maculis flavis lateribus, ano quinque dentato. *Fabr. Ent. Syſt. n.* 73.

APIS MANICATA: nigra, pedibus anticis hirſutiſſimis, abdomine maculis lateribus, ano tridentato. *Linn. Syſt. Nat.* 12. *n.* 28.—*Fn. Suec.* 1701.
Fourcroy. Ent. Par. n. 3.
Geoff. Hiſt. Inſ. Par. 2. 408. *n.* 3.
Kirby. Ap. Angl. V. 2. 248. 47.

The five diſtinct denticles at the extremity of the abdomen form an excellent ſpecifical diſtinction of this kind of bee. The ſpecies is very common in ſome parts of Britain. When on the wing, it is obſerved to hover over flowers in the ſame manner as Sphinx Stellatarum: the Glechoma hederacea (ground-ivy) appears to be its favourite, being found during the greater part of the ſummer on beds of theſe fragrant plants.

When the female prepares to conſtruct the nidus in which the infant brood is to be depoſited, ſhe ſeeks a convenient hollow in old palings, the cavity of a wall, or other retreat eligible for her reception; and having determined the ſpot, ſhe next reſorts to ſome tomentous or woolly kind of plant, to obtain materials for the completion of her object. The portion of down required ſhe ſtrips or ſhaves off with aſtoniſhing celerity and addreſs, conveys it away to her hiding-place in bundles between her head and fore legs, and repeats her viſits till the quantity procured prove ſufficient for her uſe. She then proceeds to line the inſide of the cavity with the down, and lays her eggs, each of which is enveloped in a ſeparate covering, compoſed of the ſame vegetable materials.

Some accurate obſervers of the habits of this induſtrious little inſect have been led to imagine, that it employs only the tomentum or down of one particular kind of plant, namely, that of Agroſtemma coronaria; and it does indeed appear, from the reſult of their remarks, that the nidus is in general conſtructed with the down of this ſpecies of vegetables. There is nevertheleſs ſome reaſon for believing, that the down collected for this purpoſe is not on every occaſion confined excluſively to the plant before mentioned.

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PLATE CCCCXC.

FIG. I.

MUSCA INANIS.

DIPTERA.

GENERIC CHARACTER.

Mouth with a ſoft exſerted fleſhy probosſcis, and two equal lips: ſucker furniſhed with briſtles: feelers two, and ſhort, or ſometimes none: antennæ generally ſhort.

SPECIFIC CHARACTER

AND

SYNONYMS.

Brown: abdomen pale yellow, with three black bands.

MUSCA INANIS: antennis plumatis piloſa flaveſcens, abdomine pellucido cingulis duobus nigris. *Linn. Syſt. Nat. XII.* 2. *p.* 989. *n.* 61.—*Fn. Suec.* 1825.

SYRPHUS INANIS: fuſca, abdomine pellucido: cingulis tribus nigris. *Fabr. Spec. Inſ.* 1. *p.* 435. *n.* 1.—*Mant. Inſ.* 1. *p.* 342. *n.* 1.

Muſca apivora. *Degeer. Inſ* 6. *p.* 56. *n.* 3. *t.* 3. *f.* 4.

Volucella ſexta. *Schæff. Icon. pl.* 36. *fig.* 7. 8.

This is an intereſting ſpecies, and not common: the figure denotes the natural ſize.

FIG. II.

MUSCA HIRSUTA.

SPECIFIC CHARACTER.

Deep black, gloſſy, and beſet with long briſtly hairs: wings blackiſh, at the baſe ſubfuſcous.

MUSCA TREMULA. *Fabr. Spec. Inſ. 2. p. 442. n. 32?*

The preſent inſect bears a ſtrong reſemblance to the Muſca groſſa, of which it might be conſidered, at the firſt view, as a dwarf variety, being rather leſs than half the ſize of that ſpecies. As in Muſca groſſa, the thorax and abdomen are beſet with ſtiff briſtly hairs, but theſe are more numerous, and at leaſt twice the length in proportion, in the preſent ſpecies, to thoſe on the former inſect.

The Muſca hyſtrix of Drury is very ſimilar to this in appearance, but is larger: it approaches, however, ſtill nearer the inſect called by Harris (Expoſ.) Muſca obſidianus, than Muſca hyſtrix.

From the cabinet of Dr. Letſom.

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PLATE CCCCXCI.

CERAMBYX CORIARIUS.

LARGE ELM CERAMBYX.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ ſetaceous: eyes lunate, and embracing the baſe of the antennæ: feelers four: thorax ſpinous, or gibbous: wing-caſes linear: body oblong.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax three-toothed: body pitchy: wing-caſes mucronate: antennæ ſhorter than the body.

CERAMBYX CORIARIUS: thorace tridentato, corpore piceo, elytris mucronatis, antennis brevioribus. *Linn. Syſt. Nat.* 622. 7.—*Fn. Suec.* 647.—*Gmel.* 1815. 7. *Marſh. Ent. Brit. T.* 1. *p.* 325. 1.

PRIONUS CORIARIUS. *Fabr. Syſt. Ent. t.* 24. *f.* 4.—*Spec. Inſ.* 1. 206. 9.—*Mant.* 1. 129. 13.—*Ent. Syſt. i. b. Panz. Faun. Germ.* 9. *t.* 8.

Cerambyx Prionus. *Degeer, v.* 59. 1. *t.* 3. *f.* 5.

Le Prione, *Geoff.* 198. 1. *t.* 3. *f.* 5.

Both

Both ſexes of this curious beetle are repreſented in the annexed plate, the male in the attitude of crawling on the ground, the female in the act of flight. The female is rather larger than the male, and has the antennæ of a more ſetaceous form. The antennæ of the other ſex are remarkable for their magnitude, and contribute very materially to the intereſting appearance of the inſect.

Cerambyx Coriarius is the moſt conſpicuous inſect, in point of ſize, among the Britiſh cerambyces, and is always conſidered as a ſcarce and valuable ſpecies. It is found chiefly in decayed wood, more eſpecially in the trunks of rotten elms.

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PLATE CCCCXCII.

APIS MELLIFICA.

COMMON BEE.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth horny: jaw and lip membranaceous at the tip: tongue inflected: feelers unequal, and filiform: antennæ ſhort and filiform in the males: in the female ſubclavated: wings flat: ſting of the females and neuters pungent, and concealed in the abdomen.

SPECIFIC CHARACTER

AND

SYNONYMS.

Pubeſcent: thorax greyiſh: abdomen brown: poſterior ſhanks ciliated and tranſverſely ſtriate within.

APIS MELLIFICA: pubeſcens, thorace ſubgriſeo, abdomine fuſco, tibiis poſterioribus ciliatis: intus tranſverſe ſtriatis. *Linn. Fn. Suec.* 1697.—*Fabr. Sp. Inſ.* 1. *p.* 480. *n.* 37.—*Mant. Inſ.* 1. *p.* 302. *n.* 42.

Apis domeſtica ſive vulgaris. *Ray. Inſect. p.* 240.

Apis gregaria. *Geoff. Inſ. Par.* 2. *p.* 407. *n.* 1. *Reaum. Inſ.* 5. *Tab.* 21, 22, 23.

The

The Common Honey Bee is rarely found in a wild ſtate in Britain: ſuch as occur in this ſtate of nature build neſts in the hollows of decayed trees, which they inhabit in large ſocieties, and are ſaid to obſerve the ſame order and policy in the regulation of their community as when domeſticated in the hive. The figures in the annexed plate are from examples diſcovered wild.

The two upper figures repreſent the male and female, that in the lower part of the plate is the figure of the neuter. The male or drone is diſtinguiſhed by having the eyes remarkably large, and approximate behind, and alſo by the abdomen being robuſt, and ſomewhat obtuſe; in the female, or queen bee, the eyes are ſmall and remote, the wings ſmaller, and the abdomen remarkably large, elongated, and conic. The neuters are the working bees, and it is the office of thoſe induſtrious creatures to collect the nectareous juices of flowers for making honey and wax, to feed and protect the young, and defend their ſociety againſt every aſſailant.


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PLATE CCCCXCIII.

FIG. I.

PHALÆNA BERBERATA.

BARBERRY MOTH.

LEPIDOTERA.

GENERIC CHARACTER.

Antennæ gradually tapering from the baſe: wings in general deflected when at reſt. Fly by night.

* GEOMETRA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Anterior wings cinereous and ſubrufous, with three brown lineate bands, the poſterior one incloſing a pale ε.

PHALÆNA BERBERATA: ſeticornis alis anticis cinereis: faſciis tribus faſcis: poſteriori nigro undata. *Fabr. Mant. Inſ. T. 2. p. 203. n. 154.—Ent. Syſt. T. 3. p. 2. 182. 189.*

GEOMETRA BERBERATA. Der Gauerdorn Spanner. *Wiener Verz. p. 113. et No. 23.*

GEOMETRA BERBERATA Jungs Alphabet. *Berzeichn. 1. p. 75. —11. p. 370.*

PHALÆNA BERBERATA. Der Gauerdorn Spanner. *Kleem. Beytr. Naturf. Inſ. Geſch. p.* 32. *n.* 9.

This pretty Moth is produced, according to Fabricius, from a ſcabrous larva of a brown colour, varied with rufous and white, and which, according to the continental writers in general, as well as Fabricius, is found on the common barberry, *berberis vulgaris*. The larva we have not ſeen, but, from a minute deſcription and plate in the latter part of the Supplement of Kleeman's *Beytraege*, we are enabled to ſpeak of it in more preciſe terms than Fabricius, and alſo to deſcribe its pupa. The larva is of the looper kind, and rather thick in proportion to the length; of a browniſh colour, with black dots, and two ſhort black parallel lines at the poſterior extremity, extending the length of the three or four laſt ſegments. The pupa is cheſnut brown, rather inclining to an ovate form, and is incloſed in a ſpinning woven between two or three leaves, which are drawn nearly together for that purpoſe.

The ſpecies occurs in the winged ſtate, as a native of Britain, in ſeveral cabinets, though we have never underſtood it to be common. We have named it the Barberry Moth, in alluſion to the plant on which the larva uſually feeds: among the Engliſh collectors, it bears two or more indefinite appellations.

FIG.

FIG II.

PHALÆNA RUMIGERATA.

SCALLOPED-WING FOUR-DOT MOTH.

SPECIFIC CHARACTER.

PHALÆNA RUMIGERATA. Wings deeply angulated, produced behind, and ſcalloped: pale teſtaceous, with two tranſverſe dark lines on the anterior wings, and one on the poſterior: a fuſcous dot in the middle of each wing.

The elongated form of the wings, and depth of the remarkably produced poſterior extremity of the lower pair, ſufficiently diſtinguiſh this from the following ſpecies. The example, from which the above figure is taken, appertains to the collection of the late Mr. Drury.

FIG. III.

PHALÆNA QUADRIPUNCTATA.

QUADRIPUNCTATE MOTH.

SPECIFIC CHARACTER.

PHALÆNA QUADRIPUNCTATA. Wings ſubangulated: ſomewhat teſtaceous, with a common line near the baſe, dot in the middle, and common line behind.

From the ſame cabinet as the preceding.

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PLATE CCCCXCIV.

MUSCA HOTTENTOTTA.

DIPTERA.

GENERIC CHARACTER.

Mouth with a ſoft exſerted fleſhy proboſcis, and two equal lips: ſuckers furniſhed with briſtles: feelers two, very ſhort, or ſometimes none: antennæ generally ſhort.

SPECIFIC CHARACTER

AND

SYNONYMS.

Body covered with yellow hairs: wings hyaline, with fuſcous rib.

MUSCA HOTTENTOTTA: hirta flaveſcens, alis hyalinus: coſta fuſca. *Linn. Fn. Suec.* 1787.—*Gmel. Linn. Syſt. T.* 1. *p.* 5. 2831. 13.—*Fabr. Spec. Inſ. 2. p.* 415. *n.* 16.

NEMOTELUS HOTTENTOTTUS. *Degeer. Inſ.* 6. *p.* 190. *n.* 12. *t.* 11. *f.* 7.—*Schæff. Icon. t.* 76. *f.* 6.

A large, curious, and elegant ſpecies, and one of conſiderable rarity in this country: in the north of Europe it appears to be very far from uncommon.

PLATE

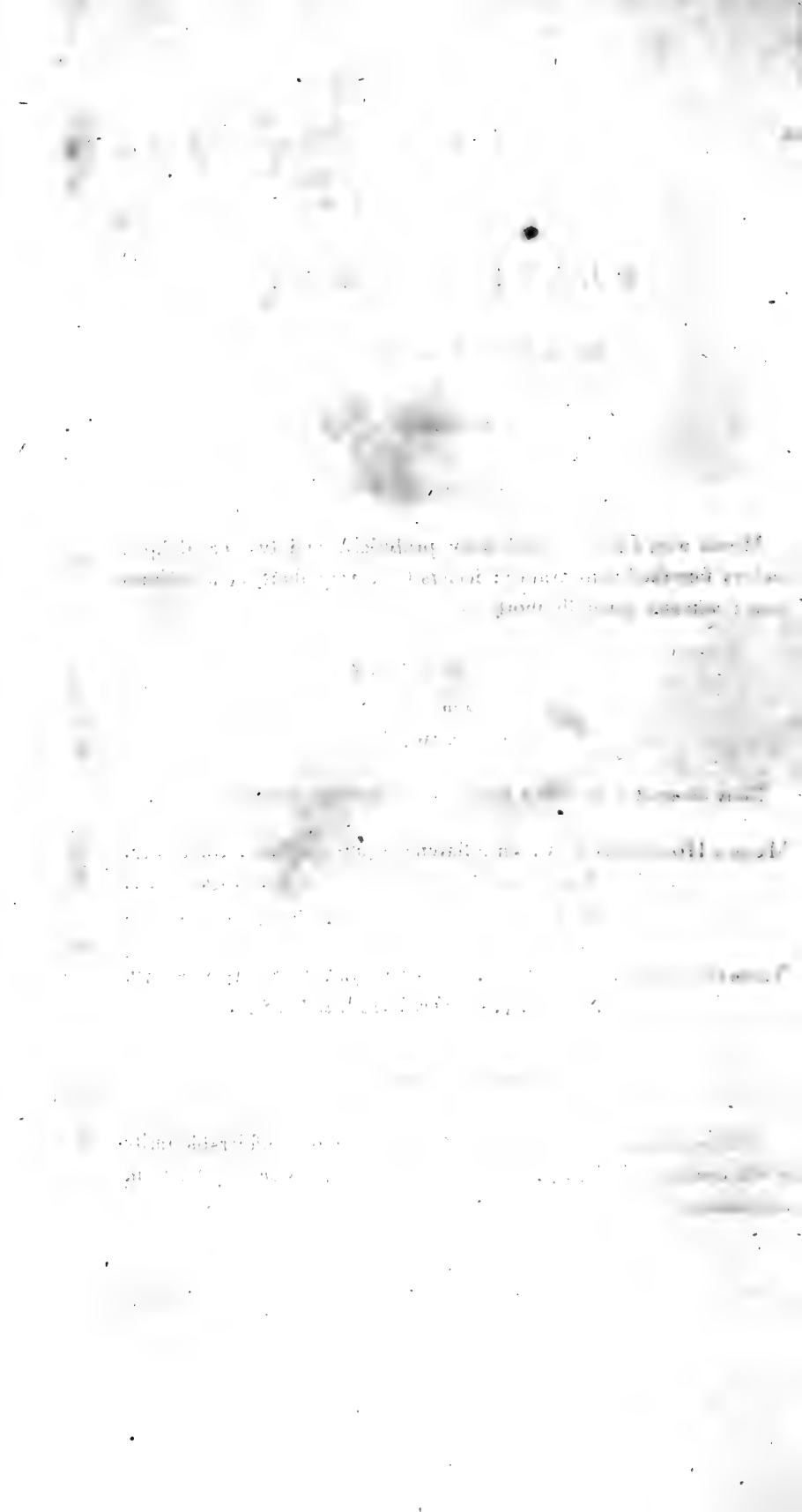


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PLATE CCCCXCV.

FIG. I. I.

VESPA ANGULATA.

ANGULATE WASP.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth horny, with a compreſſed jaw: feelers four, unequal and filiform: antennæ filiform, the firſt joint longer and cylindrical: eyes lunar: body glabrous: upper wings folded in each ſex: ſting pungent, concealed in the abdomen.

SPECIFIC CHARACTER.

VESPA ANGULATA. Head black: thorax black, with yellow anterior margin: abdomen yellow, with triangular black ſpot at the baſe, and broad black band in the middle.

This is one of the ſmalleſt ſpecies of the waſp genus: the head and thorax black, except the margin in the front of the latter, which is yellow: the body yellow, with a peculiar angulate or triangular black ſpot at the baſe, pointing downwards, and a band of the ſame in the middle. The antennæ and thighs are black, legs yellow.

This inſect does not appear to have been before deſcribed. The ſmaller figure denotes the natural ſize.

FIG.

FIG. II.

VESPA QUADRATA.

QUADRATE WASP.

SPECIFIC CHARACTER.

VESPA QUADRATA. Head and thorax black, the latter with yellow anterior margin: abdomen with a ſquare ſpot of black at the baſe, and broad black band in the middle.

VESPA QUADRATA. *Panzer. Inſ. Germ.*

Exceeds the former ſpecies in ſize, and differs in having a quadrangular inſtead of triangular black ſpot at the baſe of the abdomen, and the thorax marked in the middle with dots of yellow. This ſpecies is not uncommon.

It has not been conceived requiſite to add an enlarged figure of this inſect.

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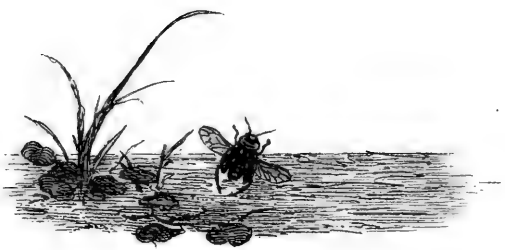

PLATE CCCCXCVI.

DYTISCUS 12-PUSTULATUS.

12-SPOT WATER-BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ ſetaceous: palpi ſix, and filiform: poſterior legs formed for ſwimming: fringed on the inner ſide, and nearly unarmed with claws.

SPECIFIC CHARACTER

AND

SYNONYMS.

Teſtaceous: wing-caſes black, with ſix teſtaceous ſpots on each.

DYTISCUS 12-PUSTULATUS: teſtaceus, elytris nigris: maculis ſex teſtaceis. *Fabr. Ent. Syſt.* 1. *a. p.* 197. 50.
Paykul. Faun. Suec. 1. 220. 29.
Oliv. 3. 40. 31. 35. *t.* 5. *f.* 46. *a. b.*
Marſh. Ent. Brit. 1. *p.* 422. 12.

Few of the Dytiſci are diſtinguiſhed for their beauty: their colours in general are either black, or blackiſh, variouſly gloſſed with blueiſh purple, or olive, or of a dull ferruginous; and it is for this reaſon, more eſpecially than any other, that the preſent ſpecies claims particular attention: it is certainly one of the prettieſt inſects of its tribe.

The ſize of this ſpecies is inconſiderable, which renders it neceſſary, in order to convey a correct idea of the ſubject, to repreſent it both in its natural ſize, and as it appears when magnified. The colour of the antennæ, legs, and thorax, are teſtaceous, the latter marked in the middle with a band of black; the wing-caſes are black, with ſix teſtaceous ſpots of an irregular form, diſpoſed in two longitudinal ſeries on each. Like the reſt of its tribe, Dytiſcus 12-Puſtulatus is of the aquatic kind.

PLATE CCCCXCVII.

FORMICA RUFA.

RUFOUS ANT.

HYMENOPTERA.

GENERIC CHARACTER.

Feelers four, unequal, with cylindrical articulations, placed at the tip of the lip, which is cylindrical, and nearly membranaceous: antennæ filiform: a ſmall erect ſcale between the thorax and abdomen: females and neuters armed with a concealed ſting: males and females furniſhed with wings, neuters wingleſs.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black: thorax compreſſed, and with the legs ferruginous.

FORMICA RUFA: nigra, thorace compreſſo pedibuſque ferrugineis. *Fabr. Sp. Inſ.* 1. *p.* 489. *n.* 6.—*Mant. Inſ.* 1. *p.* 308. *n.* 7.

FORMICA FUSCA? *Geoff. Inſ. p.* 2. *p.* 428.

Except the Formica herculanea, to which the preſent ſpecies bears a ſtriking reſemblance both in appearance and magnitude, this is one of the largeſt ſpecies of the ant tribe found in Europe. Like the

 former,

former, it inhabits woods, and reſides chiefly in hollow trees. The neuters, as in the reſt of the genus, are wingleſs.

The figure in the upper part of the plate is magnified, the lower repreſents it in its natural ſize.

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PLATE CCCCXCVIII.

PAPILIO ÆGERIA.

SPECKLED WOOD BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clavated at the tip: wings erect when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented, fuſcous with yellow ſpots: anterior pair with an ocellar ſpot on each ſide: poſterior ones ocellated above, beneath marked with four dots.

PAPILIO ÆGERIA: alis dentatis fuſcis luteo maculatis: utrinque anterioribus ocello, poſterioribus ſupra ocellis, ſubtus punctis quatuor. *Fabr. Spec. Inſ.* 2. *p.* 73. *n.* 325.—*Mant. Inſ.* 2. *p.* 37. *n.* 381.
Gmel. Linn. Syſt. Nat. T. 1. *p.* 5. *n.* 2295. 143.
Ray Inſ. p. 128. *n.* 5.
Schæff. Icon. t. 75. *f.* 1. 2.
Hübn. Schmet. pl. 40. 181. 2.

Very

Very common in the lanes leading through woody ſituations during the whole ſummer, two or three diſtinct broods being produced annually. The larva is green, with a white line, and ſpinous tail; the pupa greeniſh, and bulky in proportion to its length.

In the larva ſtate it feeds on graminiferous plants, and is obſerved in this ſtage from March till the end of June. The firſt brood appears in the fly ſtate in the month of April, the lateſt in Autumn.

Papilio Ægeria is not only one of the moſt abundant and generally diffuſed ſpecies of Papiliones in this country, but appears to be found in plenty throughout the reſt of Europe.

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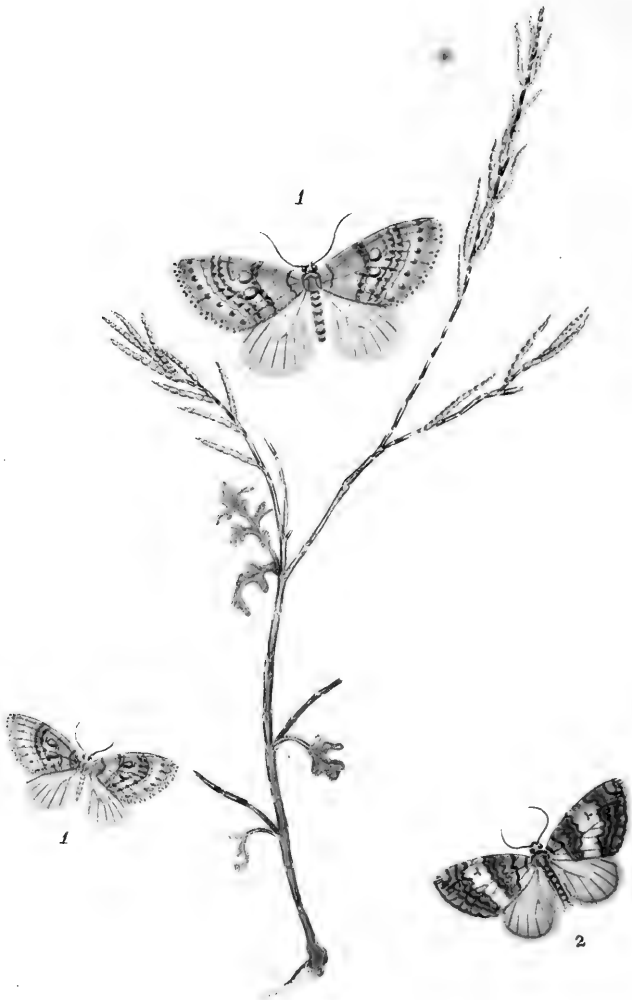
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PLATE CCCCXCIX.

FIG. I. I.

PHALÆNA TRINOTATA.

TRINOTATED MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ gradually tapering from the baſe to the tip: tongue ſpiral: wings generally deflected when at reſt. Fly by night.

* GEOMETRA.

SPECIFIC CHARACTER.

PHALÆNA TRINOTATA. Very pale teſtaceous: anterior wings with two whitiſh lobate ſpots in the middle, incloſed between two bands of ſcalloped lines: exterior margin with a ſeries of triangular pale ſpots, each containing three black dots.

An extremely rare and probably unique inſect of the Geometra family of Phalæna. It is a ſpecies of elegant and very pleaſing aſpect, though not in any degree remarkable for the gaiety of its colours.

The chain or ſeries of pale triangular ſpots, which extends along the outer margin of the anterior wings, is altogether characteriſtic of this

this ſpecies, each of thoſe ſpaces containing three diſtinct black dots; which alſo are diſpoſed in the form of a triangle.

Our preſent ſpecies is of moderate ſize, as is expreſſed by the ſmaller figure: an enlarged view of the ſame is ſhewn in the upper part of the plate.

FIG. II.

PHALÆNA LITERATA.

LETTERED MOTH.

SPECIFIC CHARACTER.

PHALÆNA LITERATA. Anterior wings dark fuſcous, with waved lines, and a black lineole: band in the middle milky, with a black character reſembling T

Larger than the preceding, and perhaps no leſs uncommon. Both are preſerved in the cabinet of Mr. Drury.

A moth very nearly allied to the preſent occurs in the ſecond part of the work of Sepp, (plate 5.): the general colour differs in being tinged with greeniſh, notwithſtanding which it may be a variety of this ſpecies.

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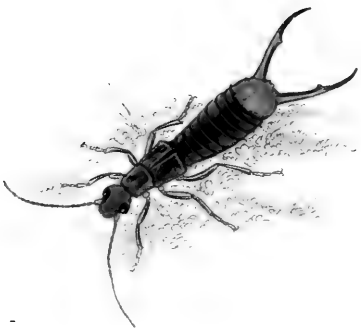

PLATE D.

FORFICULA GIGANTEA.

GIGANTIC EARWIG.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ ſetaceous: feelers unequal, filiform: wing-caſes half as long as the abdomen: wings folded up under the wing-caſes: tail armed with a forceps.

SPECIFIC CHARACTER

AND

SYNONYMS.

Pale: above variegated with black: tail bidentated: forceps extended, in the male armed with two teeth, in the female ſhorter, and ſerrated within.

FORFICULA GIGANTEA: pallida ſupra nigro variegata ano bidentato: forcipe porrecta unidentata. *Fabr. Ent. Syſt. T.* 2. 1. *n.* 2.

The largeſt of the European ſpecies of Forficula, if not of the whole genus, and which has not, till very recently, been diſcovered in this country: it is taken in ſome plenty at Chriſt Church, in Hampſhire.

From the figures in the annexed plate, it will be obſerved, that the female is conſiderably larger than the other ſex, and that the difference in the ſtructure of their forceps is ſtrikingly obvious. The female has been conſidered by ſome collectors as the Erythrocephala of Fabricius.

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PLATE DI.

FIG. I. I.

DYTISCUS HERMANNI.

HERMANN'S WATER-BEETLE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ ſetaceous: palpi ſix, and filiform: poſterior legs formed for ſwimming, fringed on the inner ſide, and nearly unarmed with claws.

SPECIFIC CHARACTER

AND

SYNONYMS.

Gibbous: head and thorax ferruginous: wing-caſes truncated, at the baſe ferruginous.

DYTISCUS HERMANNI: gibbus, capite thorace elytrorumque baſi ferrugineis, elytris truncatis. *Fabr. Syſt. Ent.* 232. 14.—*Sp. Inſ.* 1. *p.* 295. 19.—*Mant.* 1. 191. 24.—*Gmel. Linn. Syſt. Nat.* 1949. 41.—*Marſh. Ent. Brit. T.* 1. *p.* 418. 13.

Dytiſcus Hermanni does not appear to be a very common inſect in this country: it is of an amphibious nature, and reſides chiefly in the water, like the other ſpecies of its tribe.

The ſmalleſt figure repreſents the natural ſize.

FIG. II. II.

DYTISCUS MACULATUS.

SPOTTED WATER-BEETLE.

SPECIFIC CHARACTER

AND

SYNONYMS.

DYTISCUS MACULATUS. Teſtaceous or pale: thorax duſky, with a pale band: wing-caſes varied with black ſpots, and lines.

DYTISCUS MACULATUS. *Fab. Spec. Inſ.* 1. 295. 23?

A rare ſpecies, ſhewn both in its natural ſize and magnified. The varieties of this inſect are very numerous, and diſſimilar.

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PLATE DII.

VESPA CRABRO.

HORNET.

HYMENOPTERA.

GENERIC CHARACTER.

Mouth horny, with compreſſed jaw: feelers four, unequal, filiform: antennæ filiform, the firſt joint longer and cylindrical: eyes lunar: body glabrous: upper wings folded in each ſex: ſting pungent, concealed in the abdomen.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax black: the anterior part rufous and immaculate: inciſures of the abdomen with a double contiguous black dot.

VESPA CRABRO: thorace nigro: antice rufo immaculato: abdominis inciſuris puncto nigro duplici contiguo. *Linn. Syſt. Nat.* 2. 948. 3.—*Fn. Suec.* 1670.—*Fabr. Ent. Syſt. T.* 2. *p.* 255.
Geoff. Inſ. 2. 368. 1.
Schæff. Icon. 53. *f.* 5. *tab.* 136. *fig.* 3.
Reaum. Inſ. 4. *tab.* 10. *fig.* 9.
Mouffet. Inſ. 50.

The

The Hornet lives in ſocieties, conſtructing its neſt in the trunks of hollow trees, or among timber, wood-lofts, and other ſimilar ſituations: the neſt is capacious, being adapted for the reception of a numerous family, though ſmaller than that of the common waſp, and containing a leſs conſiderable number of cells: its texture reſembles that of parchment, or ſtrong paper.

In its manners of life the Hornet reſembles the waſp, being, like that inſect, fierce, voracious, and ſubſiſting on freſh animal ſubſtances, on fruits, and the nectar of flowers; and in particular committing vaſt havoc among the lower tribes of inſects. Its animoſity towards the bee is well known: it often enters the hive of theſe induſtrious creatures, and plunders them of their honey with impunity.

Both ſexes of this ſpecies are ſhewn in the lower part of the plate, the ſpecimens ſelected for which purpoſe rather exceed the uſual magnitude. The figure in the upper part of the plate is the repreſentation of a ſmall variety of the ſame ſpecies.

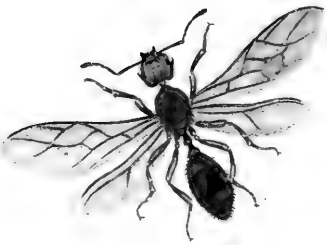

PLATE DIII.

FORMICA RUBRA.

RED ANT.

HYMENOPTERA.

GENERIC CHARACTER.

Feelers four, unequal, with cylindrical articulations, placed at the tip of the lip, which is cylindrical, and nearly membranaceous: antennæ filiform: a ſmall erect ſcale between the thorax and abdomen: females and neuters armed with a concealed ſting: males and females furniſhed with wings, neuters wingleſs.

SPECIFIC CHARACTER

AND

SYNONYMS.

Teſtaceous: eyes and dot under the abdomen black.

FORMICA RUBRA: teſtacea, oculis punctoque ſub abdomine nigris. *Linn. Fn. Suec.* 2. *n.* 1725.—*Fabr. Sp. Inſ.* 1. *p.* 490. *n.* 9.—*Mant. Inſ.* 1. *p.* 308. *n.* 11.—Formica minima rufa, *Ray.*

Inhabits woods, and lives in neſts under ſtones. During the winter they remain torpid, like moſt others of this genus.

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PLATE DIV.

FIG. I.

CARABUS INQUISITOR.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform: feelers generally ſix, the laſt joint obtuſe and truncated: thorax flat, and margined: wing-caſes marginate.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wing-caſes ſtriated, braſſy-green, with three rows of dots.

CARABUS INQUISITOR: elytris ſtriatis viridi-æneis: punctis triplici ordine. *Linn. Syſt. Nat.* 669. 11.—*Fn. Suec.* 789.—*Gmel. Syſt. Nat.* 1965. 11.
Fabr. Syſt. Ent. 239. 18.—*Spec. Inſ.* 1. 303. 23.
Mant. 1. 197. 31.
Paykull. Monogr. 39.—*Fn. Suec.* 1. 127. 40.
Panzer. Ent. Germ. 54. 50.
Marſh. Ent. Brit. T. 1. *p.* 448.
Le Bupreſte quarré couleur de bronze antique. *Geoff.* 1. 145. 6.
Bupreſtis Sycophanta minor. *Panz. Voet.* 2. 86. 39. *t.* 38. *f.* 39.

A rare ſpecies in Britain: it has been taken in Norfolk.

FIG. II.

CARABUS ROSTRATUS.

SNOUTED CARABUS.

SPECIFIC CHARACTER

AND

SYNONYMS.

Apterous: wing-cafes fmooth and black: thorax narrow: head very flender.

CARABUS ROSTRATUS: apterus, elytris læviuſculis nigris thorace anguſtiori, capite anguſtiſſimo. *Fabr. Syſt. Ent.* 240. 21.—*Spec. Inſ.* 1. 304. 26.—*Mant.* 1. 198. 36.—*Ent. Syſt.* 1. *a.* 131. 31.
Paykull. Monog. 26. 14.
Marſh. Ent. Brit. T. 1. *p.* 470.

TENEBRIO ROSTRATUS. *Linn. Syſt. Nat.* 677. 20.—*Fn. Suec.* 823.

CYCHRYS ROSTRATUS. *Payk. Fn. Suec.*

Taken by G. Milne, Eſq. F. L. S. The ſpecies has been found in Scotland and Devonſhire, and though generally eſteemed rare, was lately met with in conſiderable plenty on mountains in Ireland by Mr. W. Leach, F. L. S.

LINNÆAN

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