

The British Museum
from the Entomological
Society

ADDRESS

ON THE

RECENT PROGRESS AND PRESENT STATE

OF

ENTOMOLOGY.

By J. O. WESTWOOD, F.L.S.

SECRETARY OF THE ENTOMOLOGICAL SOCIETY OF LONDON, ETC.

*Read at the Anniversary Meeting of the Entomological Society,
on the 21st January 1835.*

LONDON:

PRINTED FOR THE ENTOMOLOGICAL SOCIETY,

BY RICHARD TAYLOR, RED LION COURT, FLEET STREET.

SOLD BY LONGMAN, REES, ORME, BROWN, GREEN AND LONGMAN,
PATERNOSTER ROW;

AND J. B. BAILLIÈRE, 219 REGENT STREET, AND RUE DE L'ÉCOLE DE MÉDECINE À PARIS.

1835.

A D D R E S S

ON

THE RECENT PROGRESS AND PRESENT STATE OF ENTOMOLOGY.

GENTLEMEN,

IN rising, at the request of our late most excellent President,—whose departure from the Chair this evening will, I am sure, be regarded with the utmost regret by every member of this Society,—whose kindness, urbanity, and efficiency have afforded a most valuable model to our future Presidents,—to lay before you a statement of the recent progress and present state of Entomology, I must at the outset bespeak your kindness towards the attempt which I am about to make, feeling fully convinced of my own inefficiency to do justice to a subject of such extent as well as importance. I could, indeed, have wished that notwithstanding the numerous avocations of our late President, he would still have found sufficient leisure for the task, feeling equally convinced that in his hands ample justice would have been done to the subject, founded upon the possession both of a magnificent collection of insects and a splendid library, in which the necessary materials for such a labour as I have undertaken are alone to be found. As, however, the case is otherwise, and as he has been pleased to place this subject in my hands, I know not how I can do better than to select as my model the address delivered by himself before the Zoological Club of the Linnæan Society in the year 1827. Let us hope that our Society may flourish as that Society has done which originated in the assembly before which the address alluded to was delivered; let us hope that whatever trifling feuds may have arisen amongst entomologists,—for so long as “*humanum est errare,*” so long will there be presumed matters of offence, even where no offence was intended,—let us hope, I say, that such will be allowed to die away and sink into nothingness before the sacred cause of truth and science.

It has always appeared to me that scarcely any kind of publication surpassed in utility, annual or other periodical summaries, in which

are concentrated the various subjects which have, since the date of the preceding report, occupied the attention of those persons who are engaged, far and wide, in any particular branch of science. The celebrated traveller Burchell, shortly after his return from South America, where he had collected an immense number of zoological objects, but especially of insects, complained to me that he had no means of knowing what had taken place during his absence relating to the various branches of zoology; he could meet with no summary in which the various publications upon its different sections were brought into one view. To supply in some measure this want, as relates to the domain of entomology, is the object of the present address, although I fear that the execution will fall short of the conception of the undertaking. As, however, it is some time since the last address, by Mr. Vigers, was delivered before the Zoological Club, and as it has appeared to me to be highly desirable to refer to the invaluable publications of our continental, as well as native fellow labourers, rather than to confine these observations to the proceedings of our own Society, which must, to a considerable degree, be fresh in the recollection of the majority of our members, I have enlarged my canvas, and instead of presenting you simply with a miniature of the personification of the Entomological Society of London, I have introduced a sketch of the labours of entomologists throughout the entomological world, placing in the centre of my picture, (if I may be allowed an artistical idea,) hand in hand, the Entomological Societies of France and London, on either side of which will be seen the representatives of the scientific Societies and of the scientific men, our fellow-labourers throughout the world, whilst the venerated and deeply lamented names of Latreille and Cuvier, of Haworth and Guilding, and of Say, shine in the clouds with a glorious radiancy, throwing around a light of approval upon the ardent aspirers after science still left amongst us.

In the first place, indeed, the recent establishment of the Entomological Societies of France and London is to be mentioned as of the first-rate interest in respect to the progress of our devoted science. England, it is true, led the way by the establishment of an Entomological Society nearly forty years since, for the support of which the best energies of Mr. Haworth were in an especial manner, and for a length of time, devoted; but for the last twenty years nothing had been done by it—the Bee, which it had selected as its emblem, had become inert—until our present Society arose in its stead; so that we may very entomologically infer that the Bee of the old Society had been Styloped, and had at length given birth to the *Stylops Kirbyi*¹. But it is to the establishment of the French Entomological Society that we may in some measure regard the rousing of the energies of our own entomologists. And it is impossible to doubt that the honourable rivalry which has thus arisen between us cannot but be of the greatest service to the science which we cultivate.

The formation of these societies is likewise indicative of another circumstance, dependent thereupon, which cannot fail to impart gra-

¹ Engraved upon the seal of the present Entomological Society.

tification to the entomologist, namely, the very increased degree of general attention now paid to the study of natural history, and especially to Entomology, and which, I think, may be now considered as a powerful rival of the sister science of Botany. Moreover, it is not in England alone that this is the case; in France and Germany, Italy and Sweden, Russia, Austria, and America, we find the same energy; and now-a-days it is no easy matter even to keep *au courant* with the proceedings of the numerous entomologists of those countries.

Mr. Vigors in his address to the Zoological Club in 1830, observed, "It is one of the prominent features of the present times that naturalists aim at a happy union of true science with popular attraction. The principle of 'Gratior pulchro veniens in corpore virtus' was never more strongly exemplified than in these popular publications. When I mention to you that copies of these publications" (referring to 'The Menageries' and 'Insect Architecture', published by the Society for the Diffusion of Useful Knowledge,) "have been disseminated by tens of thousands, you may calculate not merely how many readers participate in the delights of the study, but how many of them may be induced from the perusal to become observers of nature, if not active cooperators in the science." If there were this cause for exultation when only one volume devoted to insects was published by this Society, surely we have much greater grounds for gratification when three similar volumes upon entomological subjects have been issued by it, viz.—'Insect Architecture', 'Insect Transformations', and 'Insect Miscellanies'; a similar volume by the Society for the Promotion of Christian Knowledge, two volumes on the Natural History of Insects in Mr. Murray's Family Library, two in Constable's Miscellany, and one (on Beetles) in Sir William Jardine's Naturalist's Library, besides numerous detached articles in those widely spreading papers, the Penny and Saturday Magazines. The establishment likewise of several periodical works devoted exclusively to our science in Germany, France, and England, are striking evidences of the correctness of this idea.

If we now descend a step in our views, we still find matters of equal gratification in the practical nature of a considerable portion of the proceedings of our own Society. Need I mention the memoirs which have been read before us upon the Domestic Fly by Mr. Spence; upon the Nature of Resin and Amber Insects, by the Rev. F. W. Hope; the memoirs upon Silk and Silk Insects, and upon the Ravages of *Limnoria terebrans*, by the same gentleman; the proposed establishment of premiums for Prize Essays; the memoir upon Apple Blight, by Mr. Lewis; or the proceedings of our committee upon the ravages of the Cane Fly, &c. ? In like manner the natural history and œconomy of various species of insects have been in an especial manner brought before the notice of the Society, as in the memoirs of Lieut.-Col. Sykes upon various East India Ants and other Indian Insects; that of Mr. Shuckard upon the Fossorial *Hymenoptera* of our own country; that of Mr. Christy upon the Tamarind Beetle; that of Mr. Saunders upon various species of East Indian Insects; that of Mr. Waterhouse upon *Raphidia*, &c.

In these respects, indeed, a material difference exists between the proceedings of the Societies of London and France, the latter being especially marked by a greater degree of attention paid to the technical and descriptive details of various groups of insects, as in the memoirs of Latreille upon the *Sternoxii*, of Serville upon the *Longicornes*, of Solier upon the *Heteromera*, &c.

The nature of the various publications which have recently appeared in England is calculated to obtain a high degree of respect both at home and abroad for the entomologists of this country. The national work of Mr. Stephens¹ is proceeding onwards, notwithstanding the numerous and almost insurmountable obstacles with which its talented author has had to contend, whilst his Systematic Catalogue² is a work exhibiting the most astonishing exertion; the highly beautiful and invaluable work of Mr. Curtis³; the completion of Mr. Haworth's '*Lepidoptera Britannica*'⁴; the '*Australian Entomology*'⁵ of Mr. George Gray, with its beautiful illustrations from the pencil of Mr. Charles Curtis; the English Translation of the *Règne Animal*, by Mr. Griffith and others⁶; and the work upon the *Lepidoptera* of Java, by Dr. Horsfield⁷; together with numerous valuable memoirs published in the Magazine of Natural History, the Philosophical Magazine, Dr. Jameson's Edinburgh Journal, the Linnean and Zoological Societies' Transactions, in the Entomological Magazine, and last, but not least, in the Transactions of our own Society; all proving that the spirit of Entomology is rising strongly amongst us, needing only to be directed into its proper and legitimate channels.

Of continental works of a general nature, one of the most valuable is unquestionably the '*Iconographie du Règne Animal*' of M. Guérin;

¹ Illustrations of British Entomology, or a Synopsis of Indigenous Insects, &c. By J. F. Stephens, F.L.S., &c. Large 8vo. 1828—1835. In monthly parts, with coloured figures, containing generic and specific descriptions of all the indigenous insects.

² A Systematic Catalogue of British Insects, being an attempt to arrange all the hitherto discovered Indigenous Insects in accordance with their natural affinities. By J. F. Stephens, F.L. & Z.S.S., &c. 8vo. 1829. 804 pp. Containing the synonyms and references to about 10,000 species.

³ British Entomology, or Illustrations and Descriptions of the Genera of Insects found in Great Britain and Ireland. By John Curtis, F.L.S., &c. Large 8vo. 1824—1825. With coloured figures of the insects, and in many instances of the plants upon which they are found.

⁴ *Lepidoptera Britannica, sistens Digestionem novam Insectorum Lepidopterorum quæ in Magna Britannia reperiuntur.* Auct. A. H. Haworth, F.L.S. Lond. 1803—1828. 8vo.

⁵ The Entomology of Australia, in a Series of Monographs. By G. R. Gray. Part I. Containing a monograph of the genus *Phasma*. Lond. 1833. 4to. With coloured plates.

⁶ The Animal Kingdom described and arranged in conformity with its Organization, by the Baron Cuvier: with additional descriptions and other original matter, by Edward Griffith, F.L.S., and others. Lond. 8vo. Parts 28—36. Containing the Insecta, Crustacea, Arachnida, and Annelida, with very numerous plates.

⁷ A Descriptive Catalogue of the Lepidopterous Insects contained in the Museum of the Honourable East India Company. By Thomas Horsfield, M.D. F.R.S., &c. Lond. 4to. Parts I. and II. 1828—1829. With plates.

the utility of which has been already evinced by the republication of it in this country in two or three different works.

The announcement likewise, and commencement of the publication, of a series of works in Paris, in which each order of insects has been undertaken by an author distinguished in his particular branch of the science, forms a gratifying era in our science¹.

It has been well said that the field of zoology is so extensive that no one can with effect undertake the cultivation of more than a detached portion. And this remark is not less forcibly applicable to entomology alone. Hence, in proof of the justice of this observation, numerous memoirs and monographs devoted to isolated groups of insects have recently been published, which I now proceed to notice as concisely as possible, premising that it is not improbable that, notwithstanding all my exertions, many of these may not have come to my knowledge, and that in an address like the present, only the more material can be noticed, and that in a very cursory manner, and without reference to the theories or doctrines which they may in some instances elucidate. I need not say how much I shall feel obliged to any gentleman who will have the kindness to supply any of the deficiencies which must necessarily occur in my address. Perhaps it will be more convenient to arrange these notices according to the classification of the great groups of annulose animals, rather than to bring under review, in the first place, the proceedings of our own Society, and then to pass to the notice of English and foreign memoirs.

To commence therefore with the CRUSTACEA.

This class of annulose animals, it is true, has not engaged so much of the attention of modern entomologists as some of the other groups of insects, but still its investigation has not been stationary amongst us. The laborious researches of Messrs. Edwards and Audouin relative to the internal anatomy of some of the larger species² are amongst the most valuable works of the kind hitherto published. Nor must the dissections of the Lobster by our own celebrated comparative anatomist Mr. Owen, recently published³, be passed over in silence. M. De Haan of Leyden has undertaken the description of the *Crustacea* of Japan⁴, and the introductory portion of his work

¹ Suites à Buffon, formant, avec les Œuvres de cet Auteur, un Cours complet d'Histoire Naturelle, Collection accompagnée de Planches. 8vo. Paris, Roret. The following are the names of the entomological authors, and their respective portions of the work: Serville (Orthoptera, Neuroptera, Hemiptera), Boisduval (Lepidoptera), De Jean (Coleoptera), Lacordaire (Introduction), Macquart (Diptera), Milne Edwards (Crustacea), Saint Fargeau (Hymenoptera), Walckenaer (Arachnida and other apterous insects). Each portion is complete in itself, and is no ways connected with any of the works of Buffon.

² Mémoires pour servir à l'Histoire Naturelle des Crustacés. Par MM. Audouin et Milne Edwards. Paris, 1829. 8vo. Being a collection of memoirs previously published in the Annales des Sciences Naturelles.

³ In the Descriptive Catalogue of the Museum of the College of Surgeons. London, 1834.

⁴ Fauna Japonica, sive Descriptio Animalium quæ in Itinere per Japoniam collegit Ph. Fr. de Siebold. Auct. W. De Haan pro Invertebratis. Lugduni Batavorum, 1833. Folio. With plates.

promises to be of great value, as regards the classification and distribution of the species, and in which the quinarian system is adopted. The first part of a treatise upon this class by Milne Edwards¹ has lately appeared in Paris, which will form a standard work of reference when completed. The indefatigable Dr. Johnston of Berwick-upon-Tweed has from time to time published isolated descriptions of rare or unknown animals belonging to this class in the late numbers of the Magazine of Natural History; whilst a valuable memoir upon the natural history of that destructive animal the *Limnoria terebrans*, from the pen of Mr. Coldstream, appeared in 'Jameson's Edinburgh Philosophical Journal' of last year. But the subject of the highest interest connected with this class, is that of the transformations which these animals have universally been asserted to undergo in their early age, contrary to the generally received opinion that the *Malacostraca* are not subject to metamorphoses. The singular facts relative to this subject published by Mr. J. V. Thompson of Cork², (amongst which the most remarkable is the statement that some of the animals composing the extraordinary genus *Zoëa* are in fact only the young of the common edible Crab,) are sufficient, if the correctness of them shall be established, to place this author in the foremost ranks of science; but it is to be observed, that the elaborate researches of Rathke upon the development of the eggs of the Cray-fish³ and of the common *Asellus aquaticus*⁴, the observations of M. Milne Edwards in the work above alluded to as well as in several of his detached memoirs, and those of Mr. J. E. Gray lately read before the Royal Society, relative to the transformations of the Cirripedes, tend to throw some doubt upon the statements of Mr. Thompson. The subject was considered worthy of a place amongst the zoological queries by the British Association at Cambridge; and the Zoological Society of Dublin have likewise adopted the same inquiry as one of the subjects for the prize essays which they have proposed. It is to be observed, however, that the correctness of Mr. Thompson's observations upon the transformations of the Cirripedes has found a supporter in Dr. Burmeister⁵, who is thus opposed to Mr. J. E. Gray, and that Dr. Nordmann has ascertained the transformations in that remarkable group of animals the *Lernæe*⁶. Mr. Thompson has likewise sub-

¹ Histoire Naturelle des Crustacés, comprenant l'Anatomie, la Physiologie et la Classification de ces Animaux. Par M. Milne Edwards. Vol. I. Paris, 1834. 8vo. With an atlas of plates, forming portion of the Suites à Buffon.

² Zoological Researches and Illustrations on Natural History of Nondescript or imperfectly known Animals, in a Series of Memoirs, illustrated by numerous Figures. By J. V. Thompson, Esq., F.L.S. 8vo, Nos. 1—5. Cork, 1828—1834.

³ Untersuchungen über die Bildung und Entwicklung der Flusskrebse. Folio, Leipzig, 1829. With plates.

⁴ Abhandlungen zur Bildung ant Entwicklung Geschichte der Menschen und der Thiere. 4to, Leipzig. 1832—1833. With plates.

⁵ Beiträge zur Naturgeschichte der Ramkenfusser (Cirripeda). Von H. Burmeister. Berlin, 1834.

⁶ Mikrographische Beiträge zur Naturgeschichte der Wirbellosen Thiere. Von Dr. Alex. v. Nordmann. Berlin, 1832. 4to. With plates.

Dr. Burmeister of Berlin has likewise published a valuable Memoir upon the

mitted to our Society an account of the larvæ of *Lepas anatifera*, a more detailed account of which has been laid by him before the Royal Society. A valuable report by M. Isid. Geoffroy St. Hilaire, upon a memoir by M. Edwards, entitled 'Observations sur les Changemens en forme que les Crustacés éprouvent dans le jeune âge', must also be noticed.

Various isolated memoirs have also been recently published upon this class of animals, as that of Latreille upon the genus *Prosopistoma*²; of M. Guérin upon the *Notopoda*³, a curious group of Crabs; upon *Isæa*, a genus of Hermit Crabs; and upon the Glass Crabs *Phyllosoma*⁴; of M. Polydore Roux upon the Shrimp family *Salicoques*⁵; of M. Edwards upon the order *Amphipoda*⁶; of M. Brandt upon the *Oniscide*⁷; of M. Roussell de Vauzeme upon the Whale Louse, *Cyamus Ceti*⁸; together with the description of the curious osculant genus *Praniza*, published by myself in the 'Annales des Sciences Naturelles'⁹.

The extraordinary œconomy and organization of the Opossum and Brine Shrimps, *Mysis* and *Artemia*, have been detailed by Mr. Thompson in different numbers of his 'Zoological Illustrations'. And M. Savigny's remarkable doctrine of the transformation of certain parts of the mouth into organs of locomotion, and *vice versa*, has received fresh confirmation in the memoirs of M. Edwards upon the genera *Sergestes*, *Acetes*, *Sicyonia*, and *Thysanopoda*. The same author has also published no less valuable memoirs upon the remarkable genera *Glaucothoe*, *Pontia*, *Cuma*, *Nebalia*, *Thysanopoda*, *Amphion*, and *Rhæa*, in various numbers of the 'Annales des Sciences Naturelles', and the 'Annales de la Société Entomologique de France'. The same author has more recently published a memoir on the structure of the mouth of the siphonostomous *Crustacea*¹⁰; and has also, in conjunction with M. Audouin, described a very minute and singular parasite found not uncommonly attached to the branchiæ of the common Lobster, and to which they have given the name of *Nicothoe Astaci*¹¹. We are indebted to Dr. Gruithuisen for a memoir upon the anatomy of *Daphnia Sima*¹². Dr. Leach has also published descriptions of some new genera of *Crustacea* in the Transactions of the Plymouth Institution for 1830; and Dr. Zeneker is the author of

Caligi and other Parasitic Crustacea in the last part of the Nova Acta Cæsareo Leop. Naturæ Curiosorum.

¹ In the Ann. des Sc. Nat., December 1833.

² In the Nouvelles Annales de Muséum d'Histoire Naturelle, Vol. II. 1834, 4to.

³ In the Annales des Sciences Naturelles for March, 1832.

⁴ In the Annales de la Société Entomologique de France, Vol. I. No. 3.

⁵ Mémoire sur la Classification des Crustacés de la Tribu des Salicoques. Par Polydore Roux. Marseille, 1831. 8vo. pp. 39.

⁶ In the Annales des Sciences Naturelles for November 1830.

⁷ Conspectus Monographiæ Crustaceorum Oniscodorum Latreillii, in the Bulletin Soc. Imp. des Nat. de Moscou, Tom. VI. 1833, p. 170.

⁸ In the Annales des Sc. Nat. for April and May 1834.

⁹ In the same work for November 1832.

¹⁰ In the Ann. des Sc. Nat., January 1833, Tom. XXVIII. p. 87.

¹¹ In the Ann. des Sc. Nat. for 1826, Tom. IX. p. 345.

¹² In the fourteenth volume of Nova Acta, &c. for 1828.

an elaborate treatise upon the *Gammarus Pulex*, in which the circulation of the blood has been perceived¹.

We look forward also with interest to Captain James Ross's publication of the *Crustacea* brought home in the last Northern Expedition, as well as to the result of Mr. W. Baird's examination of the *Entomostraca* of Berwickshire. Our own Society has not been entirely destitute of observations upon this class; being indebted to Lieut-Col. Sykes and Mr. Sells for some verbal communications relative to the natural history of the Land Crabs of the East and West Indies, and I have submitted to you a memoir upon the characters and affinities of the osculant genus *Arcturus* of Latreille².

The class ARACHNIDA has, in like manner with the former, met with but little favour from the majority of entomologists, few having undertaken its investigation; still our list is by no means destitute of interest.

The classification of the great typical order of Spiders has recently undergone revision by the most celebrated of arachnologists, Baron Walckenaer³, whilst M. Dufour has described various species, natives of Europe⁴, and M. Lucas, one of the zoologists employed at the Jardin des Plantes, has published the descriptions of various curious exotic species in different numbers of the 'Annales' of the French Entomological Society. M. Hahn has commenced the publication of a work containing beautiful illustrations of the species of Arachnida⁵. In England Mr. Blackwall has much increased the knowledge of the habits of the indigenous groups, adding also various new genera and species to our lists⁶; and an anonymous author in the Mag. of Nat. Hist. has commenced the publication of a series of articles upon the Spiders, in which great talent is displayed. The absence of this gentleman from England has prevented the continuance of the publication of his researches, but as his return is shortly expected, it is to be hoped that no further delay will take place, since his illustrations (as I can affirm from an inspection of them,) are of a very high character. M. Audouin has published an interesting memoir upon the nest of one of the burrowing Spiders⁷; and Mr. Sells has had the kindness to present our Society with a specimen of a similar nest from the West Indies. Mr. W. S. MacLeay has likewise published a

¹ De Gammari Pulicis Fabr. Historia Naturali atque Sanguinis Circuitu Commentatio. Auct. J. C. Zeneker. Jenæ, 1832. 4to.

² Since this Report was read, several curious species, collected by Mr. Hailstone, jun., on the southern coast of England, have been described in the Magazine of Natural History for May 1835.

³ In the Annales de la Société Entomologique de France, Vol. II. No. 3.

M. Walckenaer has also lately commenced the publication of a work entitled 'Les Aranéides de France classées par leur Organisation', &c. (L'Institut, No. 53) quoted by Mr. Jenyns, Report on Zoology, p. 203.

⁴ Annales des Sc. Phys. Brux., Tom. IV.; Ann. des Sc. Nat., Tom. II. et XXII.

⁵ Die Arachniden-Getreu nach der Natur abgebildet und beschrieben. Von Dr. Carl Wilhelm Hahn. Nurnberg, 12mo, in parts, 1831—1835. With coloured plates.

⁶ Linnæan Transactions, Vols. XV. and XVI.; and London and Edinburgh Philosoph. Mag., May 1833—34.

⁷ In the Annales de la Société Ent. de France, Vol. II. No. 1.

memoir¹ upon the gigantic *Aranea avicularia*, in which he has disproved the statements of Madame Merian as to its capturing small birds in its webs, being in fact a terrestrial species living in holes under stones, &c. We are indebted to Latreille for a valuable memoir² upon the genus *Mygale*, to which this insect belongs.

Mr. Spence has also published some observations upon the construction of the geometrical nests of spiders, in the Mag. of Nat. Hist.³.

The nature and properties of the immensely developed palpi of the male spiders is a question still left in obscurity, being one of the points of inquiry proposed amongst the zoological questions by the British Association⁴.

Amongst the smaller and aberrant *Arachnida*, the memoir of M. Dugès upon the *Acari*⁵ stands foremost, this author having not only detailed and illustrated the structure of the entire group, but also added considerably to our knowledge of the habits of the various genera, and having, for the first time, described the singular transformations which many of the species undergo, and which in the Water Mites is of so extraordinary a nature as to have deceived Latreille and Audouin. It is in justice to be observed, that Mr. Curtis had some time previously published a short notice relative to the latter subject in the Mag. of Nat. Hist.⁶. M. Theis has also published a monograph upon the *Hydrachnæ*, as well as one upon the genera *Chelifer* and *Obisium*⁷.

The Rev. F. W. Hope has also read before the Linnæan Society the description of a most singular animal belonging to the family of the Harvest Spiders, *Phalangia*,—remarkable for the extraordinary elongation of its legs,—and which he has named *Dolichoscelis Haworthii*; and Dr. Perty has given a synopsis of the same family in his account of the insects of Brazil collected by Spix and Martius, in which numerous new genera are introduced.

Another subject connected with the *Acari*, which appears to have excited a great degree of attention in Paris, namely, the real nature of the itch insect, *Acarus Scabiei*, has very recently been elucidated by the publication of its description by the celebrated microscopic observer M. Raspail⁸.

The recent publications and memoirs upon the other APTEROUS IN-

¹ In the Transactions of the Zoological Society of London, Vol. I.

² Vues Générales sur les Aranéides à quatre Pneumobranchies, &c.; published in the Nouv. Ann. d'Hist. Nat., Tom. I. p. 61.

³ No. 30, for November 1832.

⁴ The curious question also as to the degree of value to be given to the characters derived from the nature of the respiratory apparatus in the *Arachnida* (respecting which see Mr. Jenyns's Report, p. 201,) has received fresh interest from a memoir by M. Dugès, recently read before the French Institute, in which the genera *Dysdera* and *Segestria* are stated to have four spiracles, two of which are connected with pulmonary and two with trachean organs.—See Guerin's Bull. Zool., No. 2.

⁵ Recherches sur l'ordre des Acariens, Ann. des Sc. Nat., January 1834.

⁶ Mag. Nat. Hist., Vol. VII. pl. 161.

⁷ Ann. des Sciences Naturelles, September 1832.

⁸ Mémoire Comparatif sur l'Histoire Naturelle de l'Insecte de la Gale. Par F. V. Raspail. Paris, 8vo, pp. 31. With plates.

SECTS of Linnæus may be briefly noticed. Descriptions of numerous species of *Anoplura* and *Pediculi* have appeared in Lyonnet's posthumous work, illustrated by beautiful figures¹; whilst Dr. Leach has published the descriptions of several new species, and a new genus named *Euopus*, belonging to the *Iulidæ*².

A valuable illustrated memoir upon the *Thysanura* of Ireland has been read before our Society from the pen of Mr. Templeton, in which many new objects are described; whilst the same order of insects formed the subject of one of the latest memoirs from the pen of Latreille³.

Mr. J. E. Gray has published the descriptions of some new genera of *Iulidæ* in Griffith's Animal Kingdom⁴; and a monograph by Dr. Brandt upon the same group appeared in the last volume of the Bulletin of the Natural History Society of Moscow⁵.

The genus *Pulex*, composing the order *Aphaniptera* of Kirby, has formed the subject of an elaborate memoir by M. Dugès, by whom the real analogues of two pairs of wings have been discovered⁶. The structure of the antennæ of the different species has been noticed by me in a memoir in the Entomological Magazine⁷.

On arriving at the great group of true METAMORPHOTIC WINGED INSECTS, we find the subject to be so extensive as to require not only a generalized view, but also one extending to each of the orders; indeed it will be at once perceived how impossible it is to notice, even in the shortest manner, many interesting memoirs containing the descriptions of isolated species. This must be my excuse if I should appear to have overlooked the labours of any author.

Various valuable works have lately appeared in which the organization and classification of insects in general have been detailed: of these may especially be mentioned the works of Stephens and Curtis above noticed; the 3rd and 4th volumes of the 'Introduction to Entomology', by Messrs. Kirby and Spence; the 4th and 5th volumes of the 'Règne Animal' (of Cuvier), from the pen of Latreille; the 'Cours d'Entomologie', by the same lamented author; the 'Introduction à l'Entomologie', by M. Lacordaire, forming one of the volumes of the 'Suites à Buffon'; the 'Handbuch der Entomologie', by Dr. Burmeister⁸; the 10th volume of the 'Encyclopédie Méthodique'. The 'Genera des Insectes', of MM. Guérin and Percheron, and the 'Bulletin Zoologique' of M. Guérin, are also works of much

¹ Recherches sur l'Anatomie et les Métamorphoses de différentes Espèces d'Insectes, ouvrage posthume de Pierre Lyonnet. Parts I. and II. 4to. Paris, 1832. With 54 Plates. From the Mém. du Mus. d'Hist. Nat., Vol. XVIII. XIX. XX.

² In the Transactions of the Plymouth Institution for 1830. 8vo.

³ In the Nouvelles Annales du Muséum d'Histoire Naturelle, Tom. I. p. 161.

⁴ PL 135.

⁵ Bulletin de la Société Impériale des Naturalistes de Moscou, Tom. VI. 8vo. 1833, p. 194.

⁶ In the Ann. des Sc. Nat., October 1832.

⁷ Vol. I. No. 4. p. 359.

⁸ Mr. Shuckard has commenced the publication of a very neat and cheap translation of this valuable work under the name of a Manual of Entomology, 8vo, London, E. Churton: in monthly numbers, with plates.

value. The little Manual of Mr. Newman¹, as well as the 'Entomological Cabinet' of Mr. Samouelle, will also assist in calling the attention of the public to our science.

The completion of the splendid work of Dr. Perty² upon the insects of Brazil, and that of Dr. Klug upon the insects of Arabia³, &c. are also especially to be noticed, as well as the series of observations upon the œconomy of the insects of South America, published by M. Lacordaire in the 'Annales des Sciences Naturelles', 'Annales de la Société Entomologique de France', and 'Nouv. Annales de Muséum d'Histoire Naturelle'; the entomological portion of the great national French work upon the Morea, from the pen of M. Brullé; and the work of M. Boisduval upon the insects of Madagascar, New Holland, and other islands of the Southern Ocean. Two works are in course of publication in Germany forming Supplements to Panzer's great work⁴.

The general principles regulating the distribution of insects have lately attracted considerable attention amongst us. Dr. Horsfield in his 'Lepidoptera Javanica', and Mr. Stephens in the Introduction to his Systematic Catalogue, have proposed arrangements, founded upon the views developed in that extraordinary work the 'Horæ Entomologicae'; whilst, on the other hand, Mr. Swainson has arrived at several conclusions differing from those of Mr. MacLeay, and which he has especially illustrated in his Zoological Illustrations and the introductory treatises to the Natural History portion of Dr. Lardner's Cabinet Cyclopædia. Mr. Newman also has adopted a still different series of ideas, which he has developed in his ingenious treatise entitled 'Sphinx Vespiformis', which have, however, met with some opponents, whose observations are published in the Entomological Magazine⁵.

The investigation of the natural history of insects, as illustrated by their preparatory states, has attracted a considerable share of attention amongst modern entomologists. A volume devoted exclusively to this branch of the science has recently appeared in Germany from the pen of M. Bouché⁶, in which the larvæ and pupæ of a very great number of insects of various orders are described.

Much discussion has lately taken place amongst naturalists relative to the circulation of blood in insects, of which remarkable fact, as exhibited in the larvæ of certain *Neuroptera*, an announcement was made by Carus at the German meeting of naturalists at Dresden in

¹ The Grammar of Entomology. By Edward Newman. 12mo. With 4 Plates.

² Delectus Animalium Articulatorum quæ in itinere per Brasiliam, annis 1817-1820, colligerunt Spix et Martius digessit, &c. Dr. Max. Perty. Fasc. 1-3. Monachii, 1830. Folio. With coloured plates.

³ Symbolæ Physicæ, seu Icones et Descriptiones Corporum Naturalium ex itineribus per African Borealem et Asiam Occidentalem. Berlin, folio. Insects, Dec. 1-4, 1828-1834.

⁴ Fauna Insectorum Europæ, Fasc. 1-15; Halæ, 12mo: the early numbers were published by Ahrens. And, Deutschlands Insecten von Panzer fortgesetzt von Schæffer, 12 livraisons, 12mo. Each with 24 plates.

⁵ Vol. I. p. 224.

⁶ Naturgeschichte der Insekten. Berlin, 1834. 8vo. With outline plates.

1826¹. A paper has appeared by Mr. Bowerbank in the *Entomological Magazine*, vol. i. p. 239; and a memoir by Mr. Tyrrel upon this subject has also been recently read before the Royal Society.

Of works devoted to the anatomy, external and internal, of insects, we have especially to notice the posthumous work of Lyonnet above referred to, in which his great work on the *Cossus* is rendered complete by the publication of the dissections of the pupa and imago. The admirable work of M. Straus Durckheim² (second only to that of Lyonnet) upon the Cockchaffer, *Melolontha vulgaris*, is highly important, illustrating the Coleopterous order as that of Lyonnet does the *Lepidoptera*³. The Hornet, as an example of the *Hymenoptera*, has also been treated in like manner; but an analysis only of the latter has as yet appeared in the 'Bulletin des Sciences Nat.' for 1830⁴, and in Cuvier's 'Analyse des Travaux' for the same year.

Mr. MacLeay also has published an elaborate memoir upon the Structure of the Thorax, in the *Zoological Journal*⁵, which memoir has since been translated into French and published by M. Audouin, with additional observations, in the 'Annales des Sciences Naturelles'⁶. Mr. Newman has also published some osteological sketches in various numbers of the *Entomological Magazine*.

The numerous memoirs of M. Dufour (published chiefly in the 'Annales des Sciences Naturelles'), Heroldt, Müller, Carus, Suckow, Treviranus, and others, as well as the important memoir of Mr. Newport upon the internal anatomy of the *Sphinx ligustri*, published in the *Transactions of the Royal Society* for the last year, are all of great value, and cannot fail to place this intricate part of the subject upon a firm basis.

I now proceed to the order COLEOPTERA, which has been more extensively cultivated by modern entomologists than any other group of insects.

Of works upon this order in general Dr. Klug has had the kindness to forward to our Society a memoir published by himself, containing descriptions and numerous figures of the *Coleoptera* of Madagascar⁷. The second edition of the Catalogue of the Collection of the Count DeJean has been in part published; and Dr. Perty has issued a notice of the *Coleoptera* of the East Indies⁸.

¹ See also his memoir in the *Nova Acta Nat. Cur.*, Vol. XV. Pl. II.; his *Entdeckung eines Einfachen*, &c. with 3 plates. Leipzig, 1827. And his memoir in the *Isis*, 1828, p. 477.

² *Considérations générales sur l'Anatomie comparée des Animaux articulés; auxquelles on a joint l'Anatomie descriptive du Melolontha vulgaris* (Hanneton), donnée comme exemple de l'organisation des Coléoptères. Paris, 1828. 4to.

³ A full abstract of the general considerations and laws to which M. Straus has, in his introduction, endeavoured to refer the different modifications of structure undergone by the various organs in different groups of articulated animals, has been given by Mr. Doubleday in the *Entomological Magazine*, Vol. I.

⁴ Tom. XXII. p. 347.

⁵ *Zoological Journal*, No. 18. Vol. V. p. 145.

⁶ January and February 1832.

⁷ From the *Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin aus dem Jahre 1832*.

⁸ *Observationes nonnullæ in Coleoptera Indiæ Orientalis*. Auct. Dr. Max. Perty. Monachii, 1831. 4to. With 1 plate.

The first portion of a work¹ containing the descriptions of the *Coleoptera* found in the neighbourhood of the Scottish capital has been published. The first part of the entomological portion of the 'Naturalist's Library' of Sir Wm. Jardine is in the press, in which a great variety of showy *Coleoptera* are figured². And the publication of Sturm's valuable little 'Deutschlands Insecten Fauna' has recently been recommenced.

The Rev. F. W. Hope has described, not only in our own Transactions, but also in those of the Zoological Society, numerous remarkable novelties belonging to this order. He has likewise published an account of the various species of Beetles found in mummies³; whilst Mr. Waterhouse has laid before the Society the descriptions of numerous Coleopterous larvæ, a branch of the subject of the highest interest. Mr. S. S. Sanders has also described various remarkable exotic *Coleoptera* at one of our meetings, belonging to various genera.

Carabidæ.—Following in the steps of the Baron DeJean, the completion of whose descriptions of the *Carabidæ* and *Cicindelidæ*⁴ has recently taken place, we find Messrs. Gory⁵, Laporte⁶, Brullé⁷, Klug⁸, and Chevrolat⁹ giving descriptions of supplementary species of the same family, whilst descriptions of the *Carabidæ* of New Holland may shortly be expected from the pen of Mr. G. R. Gray. Mr. Say has also published a recent memoir upon the American species of these two families¹⁰. Descriptions and figures of the European species of these families are in course of publication by Dejean and Boisduval¹¹. Zimmerman also has published two monographs upon *Zabrus* and *Amara*

¹ Entomologia Edinensis. By James Wilson, F.R.S., and Rev. James Duncan. 8vo. Edinburgh, 1834.

² Since this Report was read, this work has been published with the title 'The Natural History of Beetles, illustrated by thirty-two plates, numerous wood-cuts; with memoir and portrait of Ray. By James Duncan, M.W.S. Edinburgh, 1835.'

³ In the History of Egyptian Mummies, &c. By Thomas Jos. Pettigrew, F.R.S., &c. London, 1834. 4to. With plates.

⁴ Species général des Coléoptères de la Collection de M. le Comte De Jean. Paris, 8vo, Vol. 1—5, 1825—1831.

⁵ Centurie de Carabiques nouveaux. Par M. Gory, Ann. Soc. Ent. Paris, Vol. II. p. 168.

⁶ Etudes Entomologiques, ou Descriptions d'Insectes nouveaux et Observations sur leurs Synonymes. Par M. De Laporte. 1^{er} et 2^{me} Livraisons. Paris, 1834—1835. 8vo. With Plates.

⁷ Observations Critiques sur la Nomenclature des Carabiques in Silbermann's Revue Entomologique, Livr. 9; and in the 4th Vol. of Histoire Naturelle des Insectes. Par Messrs. Audouin and Brullé. 8vo. With an atlas of plates. Paris, Pillot, 1834.

⁸ Jahrbucher der Insectenkunde, von Dr. Fr. Klug. Erster band, 1834. 8vo. 296 pp. With 2 coloured plates.

⁹ Coléoptères du Mexique. Par A. Chevrolat. 2nd Fascicule, 1834. Strasbourg, 12mo.

¹⁰ Descriptions of some new North American Insects, and observations on some already described. By Thomas Say, in the 4th Volume of the Transactions of the American Philosophical Society, New Series.

¹¹ Iconographie et Histoire Naturelle des Coléoptères d'Europe. Paris, 8vo. With plates. Published in Livraisons 1827—1835.

and their respective divisions¹. The attention of our Society has been called to the specific distinctions of various British species of the genus *Dromius* by Mr. Babington.

Dyticida.—The family of the Water Beetles, *Dyticida*, has been revised by Dr. Erichson², who has added several new generic groups, and also, together with the *Gyrinida*, by M. Laporte in his 'Etudes Entomologiques' above mentioned.

Hydrophilida.—M. Solier has undertaken the revision of the *Hydrophilida* in the 'Annales' of the Entomological Society of France³; and Mr. Waterhouse has published a monograph upon one of the genera, *Hydrana*, in which numerous new British species are described⁴.

The *Brachelytra*, or Linnæan *Staphylini*, have been submitted to a minute analysis by the Count De Mannerheim, whose memoir has been published in the Transactions of the Petersburg Academy⁵; and Dr. Gravenhorst, one of our Honorary Members, has announced to us his intention of again directing his attention to the same group. M. Laporte has also published descriptions of various new exotic genera and species in the 2nd part of his 'Etudes Entomologiques'. The curious little family *Pselaphida* has formed the subject of a valuable and recent monograph by M. Aubé, published in Guérin's Magasin de Zoologie, in which highly magnified figures of all the species are given⁶, forming a fit companion to Mr. Denny's monograph upon the same family.

The *Histerida* have been revised by Dr. Klug in his Jahrbucher, and not less than twenty-one genera have been proposed in the family, and a very great number of species described. The family *Lucanida* has recently received several splendid additions, including the *Chiasognathus Grantii* of Mr. Stephens⁷, and several other new genera, of which I have given characters in the 'Annales des Sciences Naturelles'⁸, accompanied by a synoptic table of the entire family. M. Percheron has just published a monograph upon the exotic genus *Passalus*⁹, containing not less than fifty species. Mr. Waterhouse made a verbal communication at one of our early meetings upon the habits of the common Stag Beetle. Numerous additions have been made to the great Linnæan group of *Scarabæus*, especially in the 'Encyclopédie Méthodique,' vol. x.; and Messrs. Gory and Percheron have

¹ Monographie der Carabiden, von Zimmermann; Erstes Stuck: 8vo, Berlin and Halle, 1831. Containing the Zabroides. The Amaroides form the subject of a memoir in the first number of the Faunus, von J. Gistl, Munchen, 1832.

² Genera Dycticeorum Dissertatio inauguralis. Auctore Dr. G. F. Erichson. Bero- lini, 1832. 8vo, pp. 48.

³ Vol. III. Part II.

⁴ Entomological Magazine, Vol. I. p. 292.

⁵ Mém. présentés à l'Acad. Imp. Sc. St. Pétersbourg, Tom. prem. 5^{me} Livraison, 1831.

⁶ Plates 78—93.

⁷ Cambridge Phil. Soc. Trans., Vol. IV. Pl. 9, 10.

⁸ 2nd Series, February 1834.

⁹ Monographie des Passales et des Genres qui en ont été séparés, &c. Par A. Percheron. Paris, 1835. With outline figures of all the species.

undertaken a beautifully illustrated monograph of the family *Cetoniidae*¹, which is now in course of publication.

The splendid family *Buprestidae* has been enriched with some singular species from Madagascar², and has been revised by M. Eschscholtz³ and M. Solier⁴, each of whom have added numerous generic groups.

The *Elateridae* have in like manner been revised by Eschscholtz⁵ and by Latreille⁶, whilst the *Rhipiceridae*⁷ and *Lampyridae*⁸ have been submitted to similar treatment by M. Laporte.

M. Solier has undertaken the difficult task of illustrating the *Heteromera*, and his first memoir, published in the Annals of the French Entomological Society⁹, affords promise of great value. Eschscholtz likewise added many new genera belonging to the *Melasoma* in the 'Zoologischer Atlas' above noticed; and M. Guérin has more recently commenced the task of illustrating the same division in his 'Magasin de Zoologie'. I need not do more than name the nearly completed work of Schönherr upon the *Curculionidae*¹⁰, a family supposed to be connected with the *Cerambycidae* by a series of Xylophagous insects, portions of which, belonging to the family *Cucujidae*, I have submitted to a minute examination, the result of which has been published in the Zoological Journal¹¹.

Whilst, in the last place, the distribution of the *Cerambycidae* given by M. Serville in various numbers of the Annals of the French Entomological Society¹² cannot fail to be of essential benefit.

STREPSIPTERA.—Our attention has very recently been called to the very rare and interesting group of parasitic insects *Strepsiptera*, of which a very decided new species, named *Stylops Spencii* (in honour of one of our distinguished honorary members), has been described, and its habits detailed to us by Mr. Pickering. Two other new genera, *Elenchus* and *Halictophagus*, have been published in Mr. Curtis's 'British Entomology'.

HYMENOPTERA.—The highly interesting order *Hymenoptera* has lately attracted much of the attention of entomologists, and it is understood that a general work upon the order by the Count de St. Fargeau will shortly appear in Paris.

Dr. Klug has recommenced his memoirs upon the *Tenthredinidae* in the 'Jahrbucher der Insectenkunde' above noticed; whilst the great

¹ Monographie des Cétoines et genres voisin. Par Messrs. Gory et Percheron. Paris, 1833—1835. 8vo. With coloured plates.

² Figured at the same time and under different names by M. Guérin in his Magasin de Zoologie, and by Dr. Klug in his account of the Madagascar Coleoptera.

³ Zoologischer Atlas. Von Dr. Fr. Eschscholtz. Erstes Hefte. Folio, 1829. Berlin.

⁴ Ann. Soc. Ent. de France, Vol. II. Pt. II.

⁵ In Thon's Entomologisches Archiv for 1829.

⁶ Ann. Soc. Ent. de France, Vol. III. Pt. I.

⁷ *Ib.* Vol. III. Pt. II.

⁸ *Ib.* Vol. II. Pt. I.

⁹ *Ib.* Vol. III. Pt. III.

¹⁰ *Synonyma Insectorum Genera et Species Curculionidum.* Paris, 1833—1834.

¹¹ No. 18. p. 213.

¹² Vol. I. Pt. II. (*Prionidae*) Vol. II. Pt. IV. and Vol. III. Pt. I. (*Cerambycidae*).

work of Gravenhorst upon the true *Ichneumon*¹ will not easily be surpassed.

The *aberrant Ichneumonidæ* have been described by Dr. Nees von Esenbeck²; and Mr. Haliday³, whose lucid details have thrown great light upon this abstruse part of our science, has entered the same field. A generic distribution of the Gall-flies has been published by me in the *Mag. Nat. Hist.*⁴, where I have described several new species. M. Fonscolombe has also described numerous French species of the latter family in the '*Annales des Sciences Naturelles*'⁵; and Dr. Hammerschmidt of Vienna has published a valuable memoir upon this group of insects⁶.

But the minute and splendid family of the *Chalcididæ* has perhaps received a greater share of the attention of recent Hymenopterologists than any other groups belonging to the order; Fonscolombe in France⁷, Dalman⁸, Bohemann in Sweden⁹, Dr. Nees von Esenbeck in Germany¹⁰, and Messrs. Walker¹¹, Haliday¹², and Curtis¹³, as well as myself¹⁴ having especially undertaken its illustration in various works.

The families of the Ants¹⁵ and Wasps¹⁶, notwithstanding their great interest, are both waiting for a monographer. The annoyances produced by a minute species of the former family have, upon several occasions, been noticed at our meetings; whilst the fossorial *Hymenoptera*¹⁷ have been investigated with much care both by M. Vander-

¹ *Ichneumonologia Europæa*. Auctore J. G. C. Gravenhorst. Vratislaviæ, 1829. 3 Vols. 8vo.

² *Hymenopterorum Ichneumonibus affinium monographiæ, Genera Europæa et Species illustrantes*. Scripsit C. G. Nees ab Esenbeck. 2 Vols. 8vo. Stuttgartiæ et Tubingæ, 1834.

³ Published in various Numbers of the *Entomological Magazine*.

⁴ November 1833, Vol. VI. p. 491.

⁵ For June 1832.

⁶ *Observationes Physiologicæ Pathologicæ de Plantarum Gallorum ortu Insectis qui excrescentia proferentibus*. Vienna.

⁷ *Annales des Sciences Nat.*, July 1832.

⁸ *Stockholm Transactions (Köngl. Vetensk. &c., 1820—1822*.

⁹ *Ib.* 1833.

¹⁰ In the Series of Monographs above referred to.

¹¹ In various Numbers of the *Entomological Magazine*.

¹² *Ib.*

¹³ In various Numbers of the *British Entomology*.

¹⁴ *Zool. Journal*, No. 13; *Magasin de Zoologie*, Cl. 9. Pl. 4; *Lond. and Edinb. Phil. Mag.*, Aug. 1832, June 1833, Nov. 1833; *Mag. Nat. Hist.*, March 1833, September 1833, November 1833, March 1835; *Proceedings Zool. Soc.*, April 1835; *Ent. Mag.*, No. 7.

¹⁵ A memoir by Signor Losana, '*Saggio sopra le Formiche indigene del Piemonte*', in the *Mem. delle Reale Acc. delle Scienze de Torine*, Tom. XXXVII. 1834, must be excepted, as well as Col. Sykes's account of several Indian species read before the Society.

¹⁶ The work of M. Wesmael, entitled '*Monographie des Odyneres de Belgique*', 51 pp. 1 Pl. Bruxelles, 1833, should be excepted.

¹⁷ Since this Report was read, a valuable memoir by MM. Saint Fargeau and Brullé, upon the genus *Crabro*, has appeared in the 4th Part of the 3rd Volume of the *Ann. Soc. Ent. de France*.

linden¹ in Holland, and by our own member Mr. Shuckard, whose work upon the British species is on the point of publication. The latter gentleman has likewise read an interesting memoir upon the habits of this group, which has been published in the first part of our Transactions. Dr. Ratzburg has lately published a curious memoir upon the development of the segments in the apodal larvæ of the *Hymenoptera*, in which (if correct,) he appears to have arrived at some singular facts². Mr. W. W. Saunders has likewise recorded some interesting facts relative to the œconomy of one of the East Indian species of this family, which has likewise been published in our Transactions. Little of novelty upon the family of the Bees has recently appeared either in the way of systematic classification or œconomical details, if we except the memoirs of the Count de St. Fargeau inserted in the 10th volume of the 'Encyclopédie Méthodique', and those upon *Bombus* by Dahlbom³ and St. Fargeau⁴.

NEUROPTERA, TRICHOPTERA.—In like manner, but little novelty has appeared in the order *Neuroptera*⁵; but in the *Trichoptera*, or order of Caddice-flies, a splendid work has recently been published by M. Pictet of Geneva⁶, and which has gained one of the prizes established by Lady Davy in the Academy of that city. Mr. Curtis has likewise published a series of short descriptions of numerous British species in the Philosophical Magazine⁷. Instances of the ravages of the *Termites*, or White Ants, have been brought under our notice by Capt. Smee and the Rev. Mr. Hope.

ORTHOPTERA.—We are indebted to M. Serville for a revision of the order *Orthoptera*⁸, in which numerous new generic groups have been proposed. The Count Fischer de Waldheim has likewise published a distribution of the Russian species in the last volume of the Bulletin of the Nat. Hist. Soc. of Moscow⁹; M. Zetterstedt¹⁰ a monograph upon the *Orthoptera* of the North of Europe; and M. Phillipi a memoir upon the *Orthoptera* of Berlin¹⁰. I have already alluded to Mr. George R. Gray's monograph upon the *Phasmidæ* of Australia. The same author has likewise just completed an entire monograph upon the family, in which a great number of new genera and species are described¹¹.

¹ Observations sur les Hyménoptères d'Europe de la Famille des Fouisseurs. Par P. L. Vander Linden. 4to. Bruxelles, 1829.

² Ueber Entwicklung der fusslosen Hymenopteren Larven, in the Nova Act. Nat. Cur., Vol. XVI. Pt. I.

³ Bombi Scandinaviæ. Small 8vo.

⁴ Annales Soc. Ent. France, Vol. I.

⁵ The monographs upon the Libellulidæ, by Charpentier (*Horæ Entomologicæ adjectis tabulis* 9 col. Vratislaviæ, 1825. 4to.) and Vander Linden (*Æshnæ Bononienses; Agriones Bononienses descriptæ* a P. L. Vander Linden, *adjecta tabula ænea*, Bononiæ, 1820, et *Monographia Libellularum Europæarum Specimen*, Bruxelles, 1825,) must be excepted.

⁶ Recherches pour servir à l'Histoire et à l'Anatomie des Phryganides. Par Fr. I. Pictet, Genève, 1834. 4to. With 20 plates.

⁷ Lond. and Edinb. Phil. Mag., February and March 1834.

⁸ Annales des Sciences Nat., January and March 1830.

⁹ *Orthoptera Sueciæ*, Lund. 1832.

¹⁰ *Orthoptera Berolinensia*. A small quarto pamphlet.

¹¹ Synopsis of the Species of Insects belonging to the Family *Phasmidæ*. By G. R. Gray, F.E.S. Lond. and France. London, 1835. 8vo, pp. 48.

DERMAPTERA.—In the order to which Dr. Leach applied the name of *Dermaptera*, M. Géné has published a monograph of the Italian *Forficula*¹, and I have read at one of our meetings some observations relative to the respiratory apparatus and sexual organization of the common species.

HETEROPTERA.—In the order *Heteroptera*, or the families of Land and Water Bugs, the elaborate memoir² of M. Dufour upon the comparative anatomy and internal organization of these insects is worthy of its distinguished author; the classification of M. de Laporte is also especially to be noticed, published in M. Guérin's *Mag. de Zoologie*³, in which numerous new genera are proposed. The same groups have likewise formed the subject of valuable memoirs by Drs. Burmeister⁴ and Schilling⁵. M. Hahn has also undertaken the pictorial illustration of the species in his elegant '*Die Wanzenartigen Insecten*'⁶. Fallen also has again resumed his publications upon these groups⁷; and still more recently a memoir by myself upon several curious genera has appeared in the *Annales of the Ent. Soc. France*⁸.

HOMOPTERA.—In this order Dr. Germar has lately published a valuable synopsis⁹, as well as a monograph upon the *G. Cicada*¹⁰. M. Guérin has in like manner published a partial synopsis of the order in his *Account of the Voyage de Belanger*. M. de Laporte has likewise characterized various remarkable exotic groups¹¹, whilst our own *Transactions* are enriched by a memoir of Mr. R. A. Lewis upon several new British genera. The ravages of the *Delphax saccharivora* upon the canes in the West Indies have in an especial manner been made the subject of attention by our Society.

The remarkable family of the *Coccidæ* has likewise been illustrated

¹ Saggio di una Monografia delle Forficule indigene di Prof. Giuseppe Géné. Padova, 4to, 1832. From '*degli Annali del Scienze del Regno Lombardo Veneto.*'

² Recherches Anatomiques et Physiologiques sur les Hémiptères, accompagnées, de Considérations relatives à l'Histoire Naturelle et à la Classification de ces Insectes. Par M. Léon Dufour. 4to. Paris, 1833. Published in the *Mémoires de l'Institut*.

³ Essai d'une Classification Systématique de l'Ordre des Hémiptères. Par F. L. de Laporte. Paris, 1833. 8vo. From the *Magasin de Zoologie de Guérin*.

⁴ Mémoire sur la Division Naturelle des Punaises terrestres considérées surtout relativement à la Structure des Antennes. By Dr. H. Burmeister, in *Silbermann's Revue Entomologique*, Vol. II. No. 1. 1834.

Since this Report was read, Dr. Burmeister has published an entire revision of the Homoptera and Heteroptera in the 2nd Volume of his *Handbucher der Entomologie*.

⁵ In the *Beiträge zur Entomologie*, 1 Heft, Breslau, 1829. 8vo. With 17 plates.

⁶ *Die Wanzenartigen Insekten*. Von Dr. C. W. Hahn. Nuremberg, 1831—1836. Small 8vo. With plates.

⁷ Hahn refers not only to the Hemiptera Sueciæ, but also to a *Monographia Cimicum* by Fallen, which latter I have not seen. Burmeister refers to Fallen's *Mon. Cim. Suec.*, Hafn. 1807; *Spec. Nov. Hem.*, Lund. 1814; *Hemipt. Suec.*, Lund. 1829, 8vo, fasc. I.—X.

⁸ Vol. III. No. 3.

⁹ *Conspéctus Generum Cicadarium* in *Silbermann's Revue Entomologique*, No. 4.

¹⁰ In *Thon's Entomologische Archiv*, Vol. II. fasc. II. 1830, and in *Silbermann Rev. Ent.* No. 8.

¹¹ In the *Annales Soc. Ent. de France*, Vol. I.

by M. Fonscolombe¹, M. Génés², Dr. Brandt³, and M. Bouche⁴, in various valuable memoirs⁵.

LEPIDOPTERA.—In this beautiful order our continental neighbours have been making great advances. Two distinct and beautiful periodical works are now in progress of publication in Paris, devoted to the illustrations of the larvæ and pupæ of European *Lepidoptera*⁶. Three also, in like manner, devoted to figures of the perfect insects, forming, in fact, supplements to the great works of Hübner and Godart, are in course of publication⁷. M. Boisduval has published a work upon the *Lepidoptera* of the islands of the Southern Ocean⁸. Mr. Swainson has illustrated numerous exotic groups of Butterflies in the New Series of his 'Zoological Illustrations.' Meigen has commenced an illustrated work upon the *Lepidoptera* of Europe; but perhaps the most valuable undertaking connected with this order is the *Microlepidopterology* of Count Fischer, of which the commencement has just appeared⁹, in as much as the objects to which it is devoted, the *Tortricidæ* and *Tineidæ*, especially in their preparatory states, have most need of careful illustration. The beautiful work of Mr. Wood will be found exceedingly serviceable to the English Lepidopterist. Mr. Stephens has laid before the Society an account of

¹ In the *Annales Soc. Ent. de France*, Vol. III. Part II.

² In the *Fauna del Regno di Napoli*. 4to. With plates.

³ In *Mémoires Acad. Imp. Scienc. St. Pétersbourg*. 6th Series. Vol. III. Liv. 1.

⁴ *Naturgeschichte der Insecten*, Vol. I. 8vo. 1834. With plates.

⁵ Dr. Burmeister has also, since this Report was read, published some very valuable observations upon this family in the 2nd Volume of his *Handbucher*; in which he has given an entire revision of the whole of the Suctorial Hemiptera, to which the *Pediculidæ* are added.

⁶ *Collection Iconographique et Historique des Chenilles*: par MM. Boisduval, Rambur et Graslín, Paris, 8vo, Livr. 1—30. *Iconographie des Chenilles*: par M. Duponchel, Livr. 1—12, Paris, 8vo.

⁷ *Histoire Naturelle des Lépidoptères ou Papillons de France*. Par Godart, continuée par M. Duponchel, Tom. I—XII. Paris, 8vo.—*Supplément à l'Histoire Naturelle de Lépidoptères*. Par M. Duponchel, Livr. 1—17. Paris, 8vo.—*Icones Historiques des Lépidoptères nouveaux ou peu connus*. Par le Docteur Boisduval. Livr. 1—30. Paris, 8vo.—M. Cantener has commenced a *Histoire Naturelle des Lépidoptères Rhopalocères* (knobbed-horned) des Départemens du Haut et du Bas-Rhin. Livr. 1—4. Paris.—Treitschke has begun a *Hulfsbuch für Schmetterlings Sammler*. Vienne and Paris, 1834. With coloured figures. He has also completed the great work of Ochsenheimer '*Die Schmetterlinge von Europa*.'—M. Freyer is also publishing a periodical work upon the *Lepidoptera*, with coloured plates, entitled '*Neuer Beiträge zur Schmetterlingskunde*, &c. Dregsburg, 1—16 Hefte, each with 6 plates.—MM. Villiers and Guénéé have undertaken a comprehensive work under the title of *Tableaux Synoptiques des Lépidoptères d'Europe*, which is announced as likely to form 8 Volumes, 4to.—M. Poey's *Centurie des Lépidoptères de l'île de Cuba*, Paris, 8vo, commenced in 1832, must not be omitted.

⁸ *Faune Entomologique de Madagascar, Bourbon, Maurice; Lépidoptères* par M. Boisduval. Large 8vo. M. Boisduval has also published a memoir upon the same subject in the *Nouv. Ann. de Mus. d'Hist. Nat.*, Tom. II. No. 2. The same author has published a *Monographie des Zygænides*, including a Synopsis of European *Lepidoptera*, 8vo, Paris, 1828; and, in conjunction with M. Lecomte, has commenced the publication of an illustrated work upon the *Lepidoptera* of North America; parts 11—22 have just been published in Paris.

⁹ *Abbildungen zur Berechtigung und Ergänzung Schmetterlingkunde besonders der Mikrolepidopterologie*, &c. Von J. E. Fischer. 4to, in parts. Leipzig, 1834. With coloured plates.

the original specimen of the *Sphinx Ephemeraformis*¹ of Haworth, an insect which has much perplexed Lepidopterists, and which proves to be allied to *Psyche*, &c.; and our Transactions contain a memoir by myself upon a remarkable gregarious species of Butterfly, communicated to me by Mr. Rees, from Mexico.

DIPTERA.—In the order *Diptera*, if we except the ponderous work of Robineau Desvoidy upon the genus *Musca* of Linnæus², and the publication of M. Macquart's volume forming part of the series of the 'Suites à Buffon'³, but little novelty of any extent has appeared since the completion of the works of Meigen⁴ and Weidemann⁵. I must not, however, omit to mention Mr. Haliday's valuable memoir upon the *Dolichopidæ*, published in the *Zoological Journal*⁶, as well as several detailed memoirs from the pen of the same gentleman and Mr. Walker, in various numbers of the *Entomological Magazine*, in which considerable additions have been made to our indigenous list. And lastly, Mr. Spence has laid before our Society several communications relative to the Hessian Fly and its parasites, upon which subject a memoir from the pen of Mr. Kerrick is expected.

I have at length brought this long list to a close, not I fear, however, before I have fatigued many of my hearers with the recital. I would willingly have compressed the subject into narrower limits; but this has been impossible, from the great number of invaluable works recently published upon the various branches of our science. One thing is certainly evident from what has been brought forward, namely, that the attention of many distinguished men has been especially devoted to Entomology, and great has been the result of their labours. But, gentlemen, how much remains still to be done—how boundless are those fields of pure and unalloyed delight in which the observer of nature may wander from "morn till dewy eve," plucking bright flowers at every step! The science which we cultivate is one not of names alone; we have living objects for our contemplation—and who will affirm that a single individual of all the ten or twelve thousand British species of insects has been thoroughly studied in all the various relations of its natural history and œconomy, internal and external anatomy, in its affinities and analogies, &c. Take, for instance, the very commonest of the insect tribes, the Domestic Fly, and how many interesting queries, including those suggested by Mr. Spence, might be proposed, to which not even the most skilful entomologist would be able to give a reply!

Truly, the harvest is plenteous—but let us hope that the labourers

¹ Index Entomologicus, &c., 8vo. With plates. By W. Wood, F.R.S., &c.

² Essai sur les Myodaires par le Docteur J. B. Robineau Desvoidy, 1830, 4to, pp. 812, being the 10th volume of the Mémoires présentés par divers Savans à l'Acad. Roy. des Sc. de l'Institut de France.

³ Hist. Nat. des Ins. Diptères. Par M. Macquart. 8vo. Vol. I. Paris, 1834. With an atlas of plates.

⁴ Systematische Beschreibung der bekannten Europaischer Zweiflugeligen Insekten. Von J. W. Meigen. Vol. I—VI. 1818—1830. 8vo.

⁵ Aussereuropaische Zweiflugelige Insekten; beschrieben von Dr. Ch. R. W. Wiedemann. 2 Vol. 8vo. Hamm, 1828.

⁶ No. 19.

are not few. The objects of our inquiry are within the reach of every one. It was, I think, St. Pierre who observed that several hundred distinct species of insects visited a rose-tree placed in the window of his study. And it was upon the leaves of trees growing within reach of his window that Evan Webster Lewis, whilst lying, even in the commencement of his career, upon a lingering bed of sickness,—from which, alas! he rose no more,—made those interesting observations upon *Tinea Ruficapitella* and *Pimpla Stercorator*, which while they soothed his painful hours, proved how valuable would have been his researches had he been spared to us.

There are also, I grieve to say, other names of those departed from us, who occupied the foremost ranks of our science, which cannot be mentioned without a sigh.

The merits of Cuvier, Latreille, Haworth, Guilding, and Say are so well known to every one of my hearers, and so immeasurably beyond my weak powers to accord justice to, that I dare not do otherwise than leave this part of my subject in your hands.

Indeed, it is time for me to conclude. Allow me, therefore, to thank you in the first place for the attention which you have bestowed upon this lengthened address; and in the second, for the honour which you have conferred upon me by re-electing me to the office of your Secretary. I could have wished that your choice had fallen upon an individual possessing greater capabilities than I can pretend to.

This much, however, I may safely affirm, that although others may far exceed me in talent, I will yield to no one in point of zeal either towards our favourite science or towards our Society as its organ. Indeed, I feel convinced that no one, considering the great influence which a Society, embodying the highest names of its students, must unquestionably have in promoting the extent and welfare of that science, will refuse to lay aside all trifling differences of opinion and join me in my most heartfelt wish, not only that Entomology may flourish, but also in the fervent exclamation,

Floreat Societas nostra, esto perpetua!