the eggs are deposited, it was observed by the Secretary, that the circumstance that the *Calandra* are never found in corn-fields, but always about granaries, is sufficient to show that it is not whilst the wheat is in flower that the eggs are deposited, as suggested by Mr. Mills. He also read an account of some experiments lately made by M. Keferstein, relative to this insect, inserted in Silbermann's 'Revue Entomologique,' in which it was likewise stated that the eggs are deposited at one end of the grain.

Mr. Sells stated that the Rice Weevil (*Calandra Oryzae*) was exceedingly abundant in the stores in the West Indies, destroying great quantities of Indian corn and rice, and that to prevent its attacks it was necessary and customary to expose the grain to the sun, and to winnow it frequently.

December 7th, 1835.

The Rev. F. W. Hope, President, in the Chair.

DONATIONS.

A Manual of British Vertebrated Animals. By the Rev. Leonard Jenyns, F.L.S., &c., the Author thereof.

Parts I. and II. of the Annales de la Société Entomologique de France for 1835. By that Society.

The Journal of the Royal Geographical Society of London, Vol. V. Part II. By that Society.

No. 79 of Illustrations of British Entomology. By Mr. Stephens.

Nos. 15 and 16 of a Manual of Entomology. By Mr. Shuckard.

Part 11 of the Athenæum for 1835. By the Editor.

100 Species of minute *Lepidoptera*, a variety of European *Coleoptera*, and some specimens of Cocoons and Chrysalides, of various British *Lepidoptera*, formerly belonging to the Old Entomological Society. Presented by Mr. Courtney.

About 50 Species of minute British *Lepidoptera*. By William Hawkins, Esq.

M. MICHAEL CHRISTIAN SOMMER, of Altona, near Hamburg, was elected an Ordinary Foreign Member of the Society.

EXHIBITIONS, MEMOIRS, &c.

Mr. S. Hanson exhibited two Cases of Insects recently received by him from Smyrna.

Mr. Westwood exhibited a monstrosity occurring in a specimen of *Aspilates citraria* (one of the *Geometridæ*), captured by himself at the back of the Isle of Wight, and in which the two wings on the left side are united together, and not larger than the ordinary size of one of the posterior wings.

He also stated, from information received by Mr. Babington, that C. Darwin, Esq., who had been for several years past actively occupied in collecting on the shores of South America, had made a very extensive collection of insects, especially amongst the smaller species, and had obtained, in the island of Chiloe, about a dozen specimens of the *Chiasognathus Grantii*.

The following Memoirs were read :

“Notes made during a Voyage from England to Van Diemen’s Land, with a Sketch of the Entomology of the Cape of Good Hope,” in a Letter addressed to the Secretary, dated Hobarton in Tasmania, 5th June, 1835. By Mr. R. H. Lewis, M.E.S.

During the voyage the writer was greatly annoyed by the cock-roaches, which infested his cabin, flying about at night by hundreds, and running over everything. He, however, states that after midnight they are less active and troublesome, so that he was enabled then to obtain rest. They were of two kinds; the most numerous resemble *B. Americana*, but was probably an Indian species; the other similar to *B. Lapponica*. He then proceeds: “The females carried their bags of eggs attached to them for some time, the suture of the large species being placed above that of *Lapponica*, on one side. The former were in immense profusion, and had communication with every part of the ship, between the timbers or skin. The ravages they committed on everything edible were very extensive; not a biscuit but was more or less polluted by them, and amongst the cargo 300 cases of cheeses, which had holes in them to prevent their sweating, were considerably damaged, some of them being half devoured, and not one without some marks of their residence. This serious loss would I believe fall on the shippers, not being covered by insurance; and it is doubtful whether the shipowners would be liable for it, although it was certainly culpable negligence to send a ship to sea so infested with them: it would probably be a new case in a court of law. As to the means of ridding the ship of them, shipbuilders have an objection to steaming the ship, considering that it ever after remains damp; but sulphur, I think, would be efficacious, and without objection: there are doubtless many other ways, and they would form an interesting and useful memoir. I was fortunate enough to obtain four specimens of *Evania*. While upon the subject of these insect travellers, I may mention that *Musca domestica*, Linn.

and some other *Diptera*, were common in the ship from England here, breeding in the rotten potatoes, &c. No wonder, therefore, that this fly is so much diffused; and it will probably be difficult to fix its original country. I can state, from personal observation, that the *Musca domestica* of Canada, the United States, Cape of Good Hope, and Hobart's Town (where they are very numerous), are identically one and the same species with that of England, and from the facility with which it propagates, I think it probable that it is to be found in every part of the world.

"It is about here (in the vicinity of the Line,) that the luminous appearance of the sea attains its maximum, and on a dark night, with a fresh breeze, is extremely beautiful; that it is produced by a variety of causes, some by animals and several species of them, and some by chemical action, I have but little doubt, and with proper conveniences for examination (which I had not) much might be effected. Its only abounding when the sea is agitated, has been thought by some a proof of its entirely chemical origin, but I have observed it, though faintly, in the calmest water. While lying at anchor off Margate, when returning from America, I drew up on my fishing-line a piece of sea-weed, on which a spot of light showed itself by regular pulsations or flashes, but with my common magnifiers I was unable to discover any traces of its origin.

"Of the entomological productions of the Cape of Good Hope I made but few captures. There was not much variety near the town. Grasshoppers were numerous, a large red species in particular; they are perfect salamanders; I never had so much difficulty in killing an insect before: dipping the tin in water as near boiling as I could obtain it was useless, and only made them more lively; thrusting it into the fire for several minutes was not sufficient, although it considerably injured the specimens; and I gave it up in despair, leaving them to die in their own way. I captured two specimens of *Anthia* of the species with sulcated elytra, on the sides of the Table Mountain, and some of the following genera: *Dromius*, *Harpalus*, *Onthophagus*, *Hister*, *Melolontha*, *Pedinus*? *Lytta*? *Coccinella*, *Anthicus*, *Hydrobius*, *Dermestes*, &c. Of the *Fossores* I observed several species, and should think they must be an abundant tribe here."

After giving an account of his arrival in Van Diemen's Land (or Tasmania as it is now called), with his impressions upon the country, he proceeds: "Last Wednesday I was at Mr. Frankland's, the surveyor-general; there were several gentlemen present, and we had the pleasure of instituting a Society of Natural History, which, if it exist, I trust will be of essential service to the science: at present it is but in embryo. It is proposed that we should meet once a month,

and that a subject for discussion should be fixed upon previously. We meet the first Monday of next July at Mr. Frankland's again; the subject proposed is a very interesting one,—the peculiarities of Australasia, or those points wherein it differs from other countries."

And he concludes with the following notes and lists of captures of insects since his arrival in Van Diemen's Land:

"*Lebiidæ*, several genera, including *Dromius* and *Lebia*. Individuals of the latter genus, when captured, emitted a very pungent odour, resembling muriatic acid, which, applied to the nostrils, produced considerable irritation. *Harpalus*, *Bembidium*, *Hister*, *Onthophagus*, *Melolontha*, and some allied genera. *Passalus*, and its congeners. *Dorcas*, *Lamprias*, *Buprestidæ*, though small, I have an elegant species.

"*Elateridæ*, *Curculionidæ*, several genera.

"*Longicornes*, several genera, particularly *Stenocoridæ*.

"*Luperus*? *Haltica*, *Notoclea*, *Chrysomela* and *Cryptocephalus*, *Coccinella*, *Chilocorus*, *Scymnus*.

"The interesting *Microchætes sphaericus* I captured on a blade of grass in the Government domain on the 6th of April. The last three joints of the antennæ are more bent than in the figure, when alive.

"*Telephorus*, *Cedemera*, *Engis*, *Helops*, and others of this tribe.

"*Philonthus*, and several genera of *Brachelytra*.

"A beautiful Homopterous insect, carrying its wings half erect, and certainly the most nimble of the tribe I have yet seen. It seems to be *Ricania*, Ger.

"Several beautiful and peculiar forms of *Coccus*.

"The Mole Cricket is here a very noisy animal.

"*Fossores*. Of those with apterous females I already possess two genera. I was fortunate enough in both instances to detect the sexes.

"*Mutilla*, *Pompilus*.

"*Sphecodes* and *Halictus* only of the bees.

"Ants of various genera are extremely abundant; you cannot turn over a stone (and plenty of stones there are,) without meeting with some."

"Descriptions of two Species of the Coleopterous family *Pausidæ*." By W. W. Saunders, Esq., F.L.S., &c.

"Descriptions of several new or imperfectly known Species of *Paussidæ*." By J. O. Westwood.

"Notes relative to the Natural History of the Dragon-Fly." By Robert Patterson, Esq., Treas. Nat. Hist. Soc. Belfast.

In this communication the author states that the dragon-flies appear to be attracted by particular colours, the species of *Agrionidæ*

having been observed to settle on the blue float of a fishing-line ; five or six resting on it at a time ; whilst great numbers of *Calepteryx Virgo*, and *Ludoviciana* had been seen flying about some beech trees, and frequently alighting on the smooth light-coloured stems. A friend who observed the latter circumstance, conceiving that it might originate in the attraction caused by the white shining colour of the trunk, laid aside such parts of his dress as were not of a white colour, and several specimens immediately flew to him and alighted on his breast. The two last-named insects are common at Ballymena and Portarlinton, being 160 miles apart, and yet neither of the species occurs in the intermediate locality of Belfast.

The author also states, from information given to him by B. J. Clarke, Esq., of Portarlinton, the following particulars respecting the mode of oviposition in the *Agrionidæ*. After alighting upon aquatic plants during the coupling, the male flies off, but the female descends the stem or leaf of the plant to a depth of some inches below the surface of the water, and there remains, as is supposed, for the purpose of depositing her eggs. On being disturbed, the female desisted from her work, crawled up to the surface, and after remaining there for a few minutes, again directed her way downwards, in order to complete her task. Mr. G. C. Hyndman had observed in one of the ponds of the botanic garden in Belfast, an analogous fact, with respect to one of the larger *Phryganeæ*.

“On the Predaceous Habits of the Wasp.” By George Newport, Esq. (See p. 228.)

“Some account of the Economy of the Hymenopterous genus *Perga*.” By Mr. R. H. Lewis. (See p. 232.)

The President stated, with reference to the destruction of the turnips by the “blacks,” that in Buckinghamshire they had been equally abundant and destructive, and that a meeting of several of the principal farmers had lately taken place, a report of which meeting he hoped to be able shortly to lay before the Society. He added, that in that county the Swedish turnips had suffered equally with the other kinds.

Mr. Shuckard, in allusion to some circumstances mentioned in the letter of Mr. Lewis, stated that he had been long induced to believe that the species of the genus *Thynnus* were the males of *Myrmecodes*, and that he had recently received a male insect from the same country, and belonging to the same family, which he considered to be the male of *Diamma*, Westw.

Relative to Mr. Patterson’s observations, several circumstances were mentioned, showing the attachment of insects to particular colours ; the falling of the *Dyticidæ* whilst on the wing upon the panes

of garden-frames which strongly reflected the rays of the sun, was also noticed, in support of the power of the visual organs of these insects, and which it was impossible to account for by their sense of smell, the former power, to any distance, having been denied to them by some writers.

Mr. Scales stated, that in the summer of 1834 he had observed for a length of time the repeated attempts made by one of the smaller dragon-flies (*Agrionidæ*) to couple with a tortoiseshell butterfly (*Vanessa Urticæ*), adding, that he was convinced that the object of the former was not in the slightest degree predaceous.

Several instances were alluded to of a somewhat analogous singularity, Mr. Shuckard stating that he had observed individuals belonging to two distinct genera of bees, *Osmia* and *Chelostoma*, coupled; and Mr. Hope mentioned that in the Collection of the Zoological Society a *Donacia* and *Crioceris* were thus preserved coupled together, and that he had himself seen the same occurrence in a *Buprestis* and *Elater*.

The President stated, in allusion to Mr. Lewis's communication, that he had recently captured *Lamprias chlorocephalus* (one of the *Lebiides*.) under the bark of trees, and had observed the emission of a caustic and pungent fluid by it when seized. Likewise, that notwithstanding the asserted want of carrion feeders (*Necrophagi*, &c.) in tropical countries, he was well convinced of their existence in such regions.

He also stated that the application of gas tar, obtained from the gas works, in the interior parts of ships, would probably have the effect of ridding them of the *Blattæ*, that material having been found efficacious in various bakers' shops, &c. in London. The use of the glass beetle-trap was, on the other hand, strongly recommended by Colonel Sykes.

Relative to Mr. Newport's observations, the President also stated that he had often noticed at Netley the wings of white butterflies scattered about on the ground, but had always supposed them to have been destroyed by the bats. He had also found the wings of various Lepidopterous insects, especially *Noctuidæ* and *Mormo Maura*, in the wasps' nests, and supposed that these moths having entered the mouth of the nest, had been destroyed by the wasps.

Mr. Scales mentioned the great numbers of ladybirds (*Coccinellidæ*) at the present time found in swarms in various situations about his house at Stoke Newington, adding that they occasionally made their way into the webs of spiders, which were deterred from attacking them in consequence probably of the disagreeable fluid which they emit.