THE

NATURAL HISTORY REVIEW:

Published Quarterly:

INCLUDING

THE PROCEEDINGS

OF

THE IRISH NATURAL HISTORY SOCIETIES

FOR THE SESSIONS 1855-56.

VOL. III.

LONDON:

WILLIAMS AND NORGATE,

14, HENRIETTA-STREET, COVENT GARDEN.

EDINBURGH: WILLIAMS AND NORGATE.

DUBLIN: HODGES, SMITH, AND CO.

1856.

PRICE TWELVE SHILLINGS.

THE

NATURAL HISTORY REVIEW.

PROCEEDINGS

OF

The Dublin Natural History Society, and the Dublin University Zoological Association,

FOR THE SESSIONS 1855-56.

With Woodcuts and Lithographic Illustrations.

VOL. III.

LONDON:

WILLIAMS AND NORGATE,

14, HENRIETTA-STREET, COVENT GARDEN.

EDINBURGH: WILLIAMS AND NORGATE.

DUBLIN: HODGES, SMITH, AND CO.

1856.

appears about a fortnight earlier than A. filipendulæ. At least two dozen of the cocoons of the latter changed about fifteen days after I first took minos, and with one solitary exception minos was the only Anthrocera I saw while in Galway.

The following trivial names are given by Ochsenheimer as synonyms of Zygæna (Anthrocera) minos :—

Zygæna pythia. *Fabricius ;* do. *Panzer* (confounds with Z. scabiosæ) *Vieweg.*
„ pilosellæ, *Borkhausen ; Schranck ; Esper ; Ernst.*
„ polygalæ, *Borkhausen ; Esper*—A marked variety, in which the red spots run together, and fill nearly the whole wing.
„ Viciæ, *Lang.*

Sphinx purpuralis *Mueller* Prodomus Zoologiæ Danicæ, A.D. 1776, is also cited as comprising both *minos* and scabiosæ ; but, as he cites Schæffer's figure of the latter, the application is best made to this, of which *purpuralis* would be the *earlier* name. I have to thank Mr. Haliday for information regarding the Synonymy.

Professor Melville, M.D., M.R.I.A., then made the following observations on the occurrence of

STEPHANOMIA CONTORTA, MILNE-EDWARDS ? AND AGALMA GETTYANA, HYNDMAN ? —ADDITIONS TO THE BRITISH FAUNA.

It becomes my pleasing duty to exhibit to the members of this Association the accompanying drawing of two Acalephæ, both of them additions to the British Fauna (*vide* Plate vii.). You are, doubtless, aware that there are both simple and compound Medusœ.

Of this latter class few are on record as frequenting the British seas, and it remained for the energetic zeal of our own Irish naturalists to draw these forth from the bosom of the ocean and to introduce them to the notice of the British naturalist. The first (Fig. 1, Plate vii.) was discovered in Kingstown harbour about the 2nd of June last, by one of the honorary secretaries of this association, Joseph Greene, Esq., a gentleman whose never-tiring energy in the cause of our marine zoology ; whose attentive memory and quick eye will let but few of nature's secrets pass by him ; and who, I doubt not, if his life be spared, will much advance our knowledge of Irish zoology. The other (Fig. 2, Plate vii.) was discovered in August, 1841, by Edmund Getty, Esq., of Belfast—a name well known to you all, whom it would be quite unnecessary to panegyrize. I will call your attention to the former one first. It belongs to the genus Stephanomia, of Peron, and I am inclined to refer it to the "contorta," Milne-Edwards, a species found by him at Nice. His opportunities of examining this animal would appear to have been but few, as it did not occur to him in any great numbers ; it is furnished with a small oval sac (*vide* Plate vii., *a*, and Plate vi. ; 3 magnified view), which is filled with air, and has the appearance, when the animal is alive, of a globule of quicksilver, and the slight inequalities of its surface reflect the light in such a manner that it often looks as if a fine network of veins, filled with a crimson coloured fluid, ramified over its surface. By the aid of this closed sac, no matter what position the Stephanomia assumes, it is always sure of coming up to the surface with its "head" foremost.

Next we observe a small number of organs clustered around the common tube (*vide* Plate vii., *b*, and Plate vi. ; 3 magnified), and on watching them closely we perceive in each of them every now and then a gentle pulsating motion, caused by the taking in and rejection of the water. These organs would not appear to act necessarily in unison ; but one side, or one set, acting more vigorously than the other, sways the compound body, now hither, now thither. These are the organes natatoires of Milne-Edwards ; and I am of opinion that their number varies, according to circumstances. The slightest touch given to the organe hydrostatique, or air vessel, set these swimming bladders in motion, and they at once begun to pulsate, until, finally, the whole living mass settled quietly at the surface again.

Extending from the air-cell to a distance, in this specimen, of—when quite expanded—some six or seven inches, was the common stock or stolon, a hollow tube, capable of considerable contraction, and coiled up on irritation in the spiral form figured in Milne-Edwards ; to this, and in close proximity to the air-cell, the

swimming organs were attached; and at various intervals throughout its length the polypiform zooids were fixed, often in little assemblages of threes and fours, each covered at its base by a foliolum—the rudiment of the disk in the ordinary monogastric medusæ. Within the mouth, when contracted, ciliary motion was very apparent, and at the base a simple tiliary apparatus appeared. The polyps were found in various stages of gemmation. Ova, in clusters, were seen pullulating from the common tube, and spermatic sacs were also observed, but only after their detachment. From the base of the polyp proceeded a long, highly retractile thread, or fishing-line, with secondary branches, the extremities of which were thrown into short spirals of three or four coils, immediately before terminating. These threads often exceeded in length the whole Stephanomia, and were capable of being thrown into the most beautiful and graceful convolutions—now bent at right angles, and again thrown out in a series of light, airy-looking arches.

The spirals in the live Stephanomia were just visible to the naked eye, and were of a dark sherry colour, owing to the presence of pigment in the cells.

The minute structure of these spirals was then alluded to.

Oval sacks of stinging filaments attached by spirally coiled peduncles were found after the animal had broken itself up; but their relations could not be determined. (*Vide* Plate vi., Fig. 4).

After other details, the accordance of the facts observed with the views of Huxley and others as to the nature of these compound organisms were pointed out.

But one perfect specimen was taken (another a good deal mutilated occurred), and the weather had been for some time hot and sultry; the sea was quite calm at the time. It lived in a large globe of salt-water for several days, and was a most striking and beautiful object; it generally lay quite upright in the water, the slightest ripple upon the surface of which set it in motion; and immediately coiling up its fishing-lines, and shortening the length of its stolon by about one-third, it threw its set of little balloons into strong pulsations, until, weary of descending, it submitted to be guided by its brightly glittering head, and soon ascended to the surface. When subjected to examination it soon died, and was not long until it had completely broken itself up. In company with my friend, Mr. Wright, I spent several hours in examining it; but its minute details would require the examination of many more specimens ere I could give anything like a clear account of them. I trust the energy of Mr. Green will yet cause him to discover other specimens, when I will be enabled to complete my dissections.

For an account of the second Acalephe (*vide* Plate vii., Fig. 2), I am indebted to the kindness of George Hyndman, Esq., of Belfast. It was taken by Edmund Getty, Esq., on the 15th August, 1841, floating in great numbers on the surface of the sea (in Belfast Bay) during a calm, with warm sunshine. Their long tentacula were extended horizontally on or near the surface, having the appearance of strings of beads. Four or five living individuals were brought to Mr. Hyndman, all of which remained suspended by the upper vesicle, occasionally extending their tentacula, and suddenly drawing them up. The body of the animal was of a grayish colour, with spots of reddish brown on the central tubular portion and on the top of the air-vesicle. The knobs on the tentacula were of a yellow colour. After one night's captivity in a glass vase, all the specimens but one were dead, and sunk to the bottom. The remaining one continued alive for two days. This animal was named by Mr. Thompson, Agalma Gettyana, after its discoverer. The specimen as figured wants, for the most part, the swimming organs; but these were, doubtless, rubbed off. In July, 1852, a great many of this species were found floating in Belfast Bay; but the current was so strong that Mr. Hyndman was unable to get any without being injured. I hope that further investigation may yet enable our Irish naturalists to clear up many doubtful points in the history of Acalephe.

In conclusion, Dr. Melville stated that in his opinion these two medusæ were specifically identical.

After some remarks from the President, suggesting various objects of research for the members of the association during the long vacation, the members adjourned until Michaelmas Term. W. R. T.

Fig 1

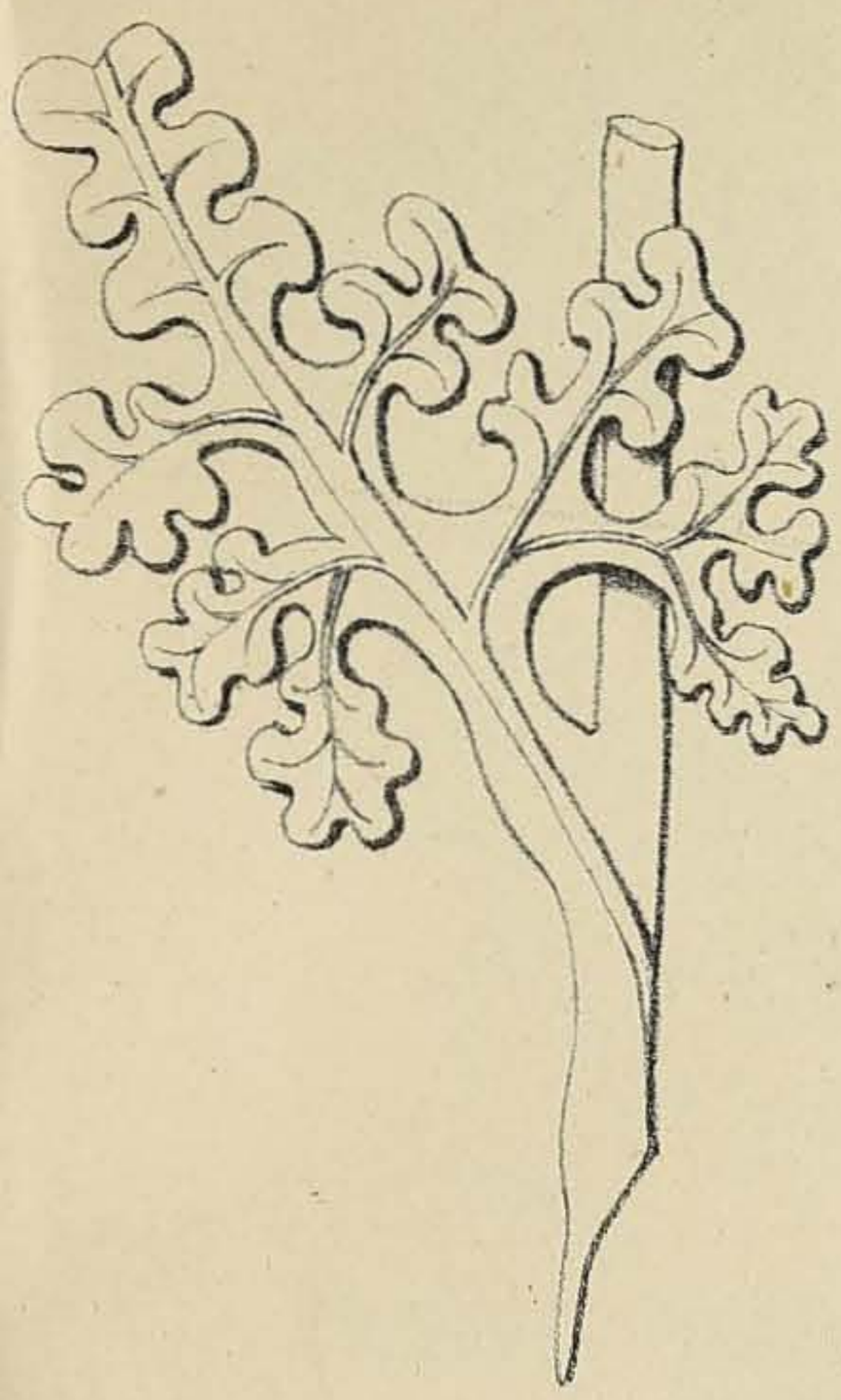

Fig 2.

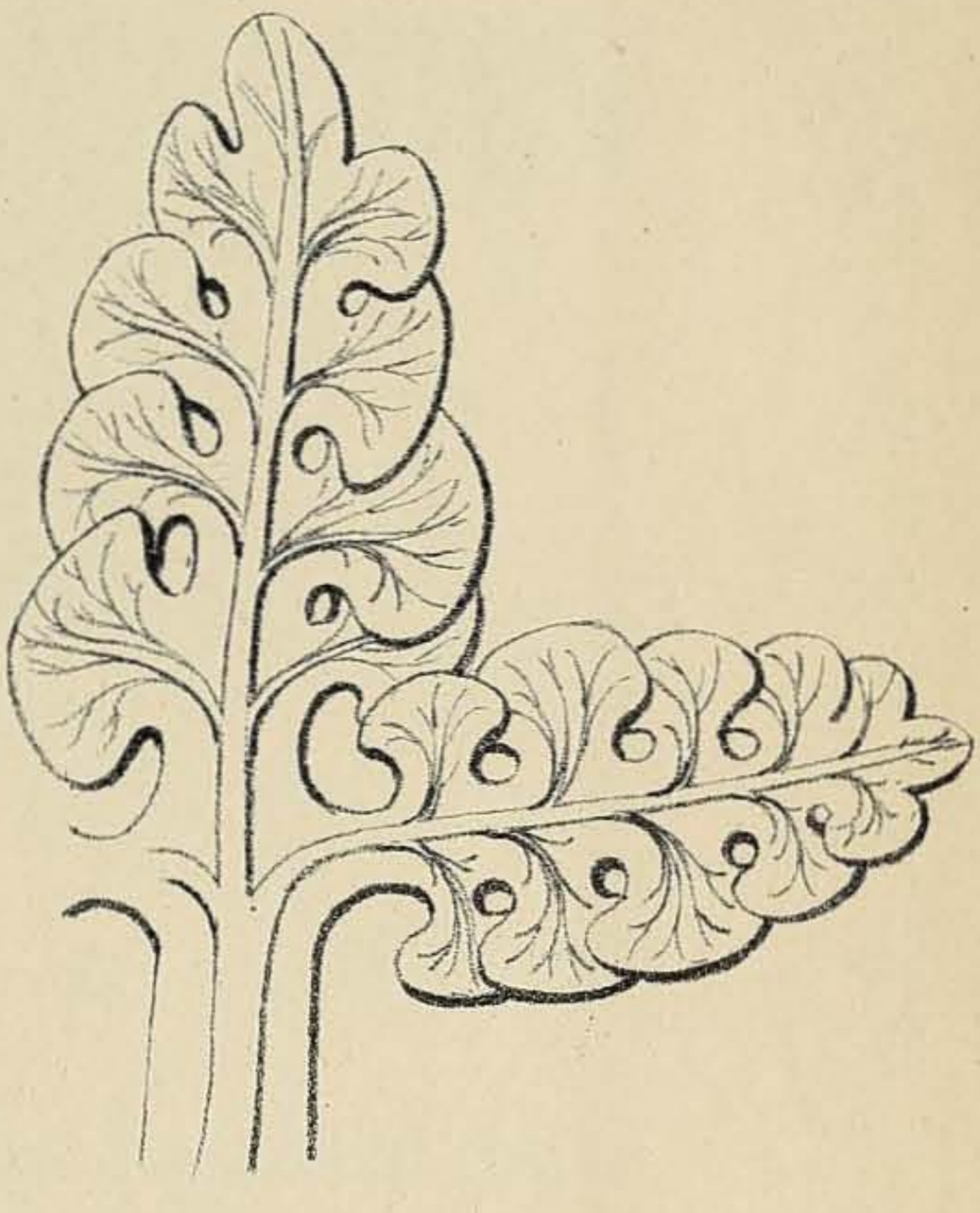

Fig 3.

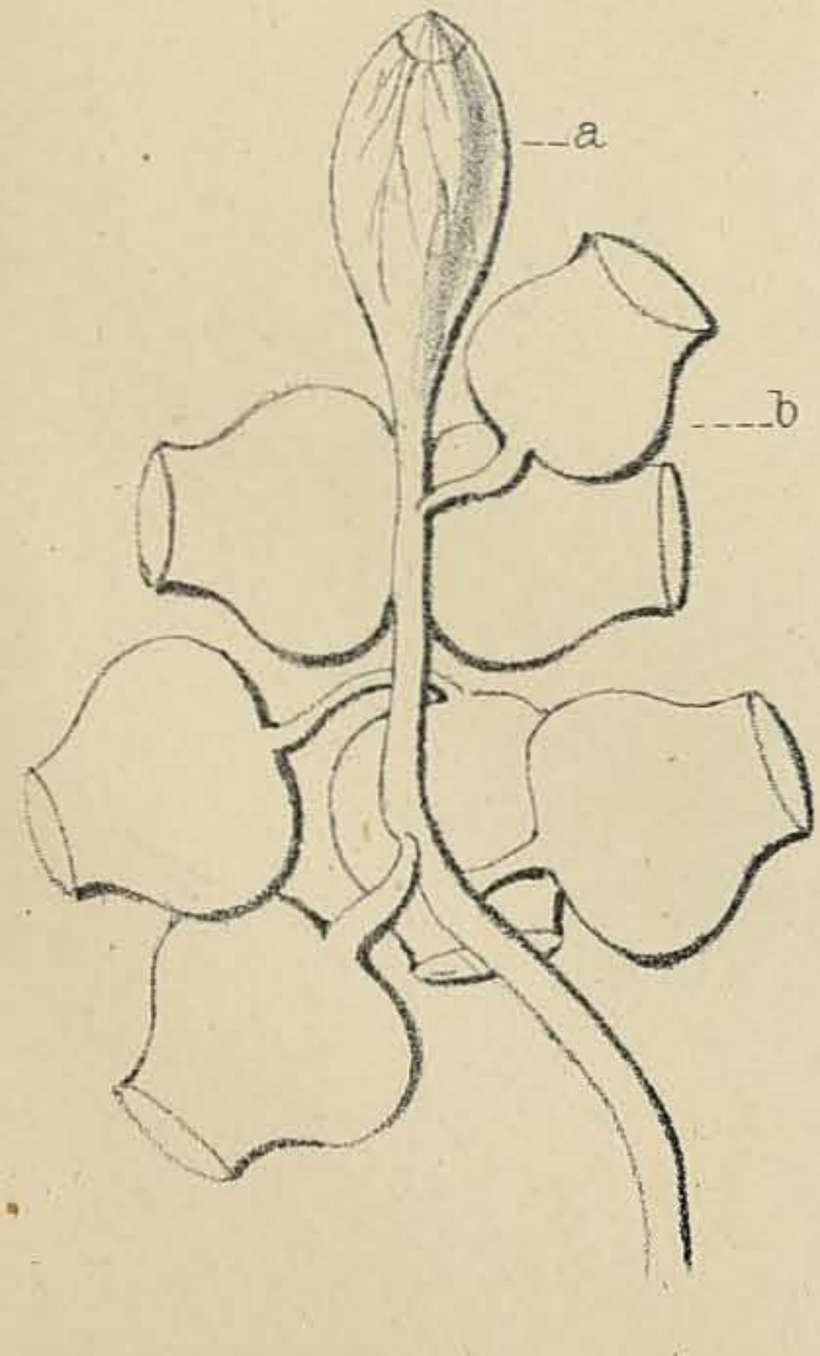

Fig 4.

E.P.W. ad. nat. del.

Forster & Co. lith. Dublin.