umbilicatus on the outer reef of Observatory Island. The creature had most probably been thrown up by the waves, and remained within a ledge of coral rock when the spring tide receded. The natives frequently find Nautili entrapped in this way; but we could not prevail upon them to bring us the recent animals, although a liberal remuneration was offered. The specimen was alive when brought on board, but it was too much exhausted to exhibit any active movements when placed in a vessel containing sea-water. On touching the tentacula they curled up, or moved about irregularly, and the muscular fibres of the funnel-tube contracted slowly, without, however, producing respiratory currents." Prof. Owen says, alluding to my Nautilus, "The dissection of this unique specimen established the claims of the *Nautilus pompilius* to rank in the highest class of Mollusca, and at the same time brought to light so many important modifications in the Cephalopoda type of structure as to necessitate the establishment of a new order for its reception."

The number of tentacles with which the Pearly Nautilus is provided amounts to not less than ninety, of which thirty-eight may be termed digital, four ophthalmic, and forty-eight labial. In specimens there is a slight difference in the number of the tentacula.

XLIH.—*On a new Insect Pest at Madeira.*

By T. VERNON WOLLASTON, M.A., F.L.S.

CONSIDERING how terribly the island of Madeira has suffered from the depredations of the *Phylloxera*, whole tracts on which the vine until lately flourished having been completely laid waste, it seems a thankless task to have to place on record yet another scourge which has lately made its appearance in that otherwise highly favoured land, and which, although fortunately of a much less alarming nature, threatens at any rate to make itself felt. I would by no means wish to compare it with *either* of the calamities (as represented by the *Oidium* and the *Phylloxera*) which have overtaken the vine; but the history of the Colorado Beetle will suffice to convince us that other plants, which administer more or less to our comfort, and which constitute an appreciable item of commerce, may so far become the prey of insect parasites that their cultivation is ascertained at last to be a matter of such difficulty that it has practically to be abandoned.

In the instance to which I am alluding it is the various species of banana which have been permanently attacked; and although it may seem at first sight that no great loss would accrue were the banana to be ultimately swept away, yet those who know Madeira best will at once acknowledge that a very serious item of profit would be taken from the poorer inhabitants should the plant (under its numerous modifications and varieties) ever become extinct.

It is a beetle of the Rhynchophorous department (in other words, a weevil) which has found its way during the last few years into the banana-grounds of Madeira; and my attention was first directed to it during the spring of 1876 by Senhor J. M. Moniz, who had taken several examples in the decayed roots of an old *Musa sapientum* in his garden in Funchal. After the information which I had thus received from Senhor Moniz, I lost no opportunity of examining the rotten banana stems whenever they chanced to come in my way, and obtained the insect both in the Fazenda of the Quinta d'Ornellas and in that of Dr. Grabham at the Val; but it is to Captain Kemp that we are indebted for our principal knowledge of its economy and devastations. Happening to possess a large number of banana plants, some of them proceeding from roots of a considerable age, Captain Kemp took the trouble to examine closely many of the stems, which had all the appearance of being in an unhealthy condition; and the result was, that he not only detected the larvæ far away in the interior, but likewise many of the grooves channelled-out by the perfect insect in eating its way to the surface. As for the perfect insects themselves, Captain Kemp obtained them in fabulous numbers,—though principally adhering to the undersides of the moist and putrid trunks which had been either blown or cut down on the immediate spot; and I may add that, directed by him, I myself picked up more than fifty of them in the course of a few minutes. Here, then, we can have no doubt that a very vigorous enemy has shown itself, which, unless kept in check, may (and probably will) in the course of a few years affect the banana crops in Madeira most unmistakably. Considering with what extreme care the Funchal district was explored, from about twenty to thirty years ago, by Mr. Leacock, Senhor Moniz, the late Mr. Bewicke, the Rev. R. T. Lowe, myself, and others, I think it is not too much to assert that so large and conspicuous a beetle as the one which we are now discussing could not have escaped our united researches; and I have no hesitation therefore in expressing my belief that its introduction into the island must have taken place *since* (probably long since) that period.

Whence it came is a matter for inquiry ; but if fresh banana plants are ever imported, those who have been the means of importing them will be best able to answer this question.

But it is now time that I should state what the creature is which is answerable for so much mischief to the plants in question, and which bids fair to become a nuisance at Madeira which cannot well be ignored. It is a large and black Calandrid (and therefore of the same *family* as the common, but comparatively minute, weevils of the rice and corn), but belonging to Schönherr's extensive genus *Sphenophorus*. The exact *species* appears to have been described by Fahræus in 1845, in the 8th vol. of the 'Gen. et Spec. Curc.,' under the name of *Sphenophorus striatus* ; and the country which he cited for its *habitat* is Brazil. There can be no doubt that it belongs to a somewhat American type of form ; and it is highly probable therefore that Brazil may have been its aboriginal area. But be this as it may, the insect now, although certainly not cosmopolitan, has acquired for itself a wide inter-tropical range,—for I have examined individuals at the British Museum (emanating from no less than *three* different sources) which were brought from India, and others (which seemed *hardly* to differ) from Tasmania and Japan. I have no doubt, therefore, that its *modus vivendi* and powerfully developed wings have greatly facilitated its introduction into many countries (sufficiently warm) of the civilized world, and that, where plants are exported and interchanged, conditions are constantly arising favourable for its accidental transport. And, moreover, we have yet to learn that the banana is the only plant to which it is liable to become attached.

The following short diagnosis, drawn out from Madeiran and Brazilian examples, may suffice to characterize the species :—

Genus SPHENOPHORUS.

Schönherr, Curc. Disp. Meth. 327 (1826).

Sphenophorus striatus.

S. ellipticus, niger ; capite parvo, nitido, impunctato ; rostro prothoraceque nitidiusculis ; illo modice arcuato, ad (et præsertim ante) basin, *i. e.* ad antennarum insertionem, ampliato-robusto, inde ad apicem angustiore subcylindrico, postice dense et grosse sed antice parcius ac multo levius punctato ; hâc longiusculo, suboblongo, basi truncato, apice transversim constricto, et ubique (sed præsertim versus latera) dense grosseque punctato ; elytris plus minus cinereo-indutis, profunde varioloso-sulcatis, interstitiis antice nitidis calvis ac uniseriatim punctulatis ; pygidio (pro-

funde punctato), femoribus versus apicem, tibiis, tarsisque plus minus cinereo indutis.
Long. corp. lin. 5-6.

Calandra striata, Petit, in litt.

— —, in Dej. Cat. (edit. 3) 329 (1837).

Sphenophorus striatus, Fahræus, in Schönh. Curc. viii. 251 (1845).

Hab. in Brasilia, Madera, India orientali, et (nisi fallor) Japonia et Tasmania; truncos *Musæ* destruens.

The larva of this weevil is a thick fleshy grub, ovate or fusiform in outline, without legs, and of a dirty white, though with an obscure darker line (obsolete in parts) down the dorsal region. Its head is shining, of a pale reddish brown, and studded with a few erect hairs; and there are also a few erect hairs towards the anal extremity.

Teignmouth, Sept. 17, 1877.

XLIV.—*Remarks on Prof. E. Haeckel's Observations on Wyvillethomsonia Wallichii and Squamulina scopula.* By H. J. CARTER, F.R.S. &c.

I HAVE just received the first number of the 'Jenaische Zeitschrift für Naturwissenschaft,' published on the 20th March last; and in this I find that Prof. E. Haeckel has identified his *Haliphysema echinoides* (p. 16, Taf. ii. f. 127) with Dr. Perceval Wright's *Wyvillethomsonia Wallichii* (Quart. Journ. Micr. Sci. 1870, vol. x. p. 7, pl. ii.); also that he has identified his *Gastrophysema scopula* (p. 24) with my *Squamulina scopula* ('Annals,' 1870, vol. v. p. 309, pl. iv. figs. 1-3).

Now, as I had already identified *Wyvillethomsonia Wallichii*=*Dorvillia agariciformis*, Kent,=*Tisiphonia agariciformis*, Sir Wyville Thomson, with one of the sponges dredged up on board H.M.S. 'Porcupine' in the Atlantic Ocean ('Annals,' 1876, vol. xviii. p. 471), unmistakably, and have stated with respect to its plentifulness (p. 405) that "there is hardly a specimen [of *Tethya cranium*] among the sponges dredged up by the 'Porcupine' which has not one or more in various degrees of development adhering to it (the same might be said, almost, of *Tisiphonia agariciformis*),"—I must protest against this ignorance!

Further, as regards *Squamulina scopula*, I have found the original specimen, called by the late Dr. Bowerbank "*Haliphysema Tumanowiczii*," and given to him by Mr. Tuma-