Ciliata, the great length of the cilia, the manner in which they are employed, and the habit the animalcules exhibit of anchoring themselves to foreign substances by their long posterior cilia, is suggestive of the remote derivation of these white ant parasites from a flagelliferous type allied to *Hexamita*.

Of the two remaining Infusoria found by me in the Tasmanian white ant the one is apparently referable to Dr. Leidy's genus *Pyrsonympha*, while the other belongs to Stein's multiflagellate genus *Lophomonas*, so far recorded as a parasite only of the Orthopterous insects *Blatta* and *Gryllotalpa*. Several important points in their organization not having yet been clearly ascertained, descriptive details of these two new forms are reserved for a future communication.

XLII.—*On a Variety of the Freshwater Sponge* Meyenia fluviatilis. By H. J. Carter, F.R.S. &c.

On the 17th of December, 1883, I received from Mr. B. W. Thomas, F.R.M.S., of Chicago, a mounted preparation, with specimen in the natural state, of a variety of *Meyenia fluviatilis*, which he had found in the Calumet river near the lake of this name, in the township of Calumet, South Chicago, suggesting, if it were new and undescribed, that it might be designated "*calumetica*." At this time I did not consider the differences were sufficient to constitute a variety that should be named, so, in reply, wrote to Mr. Thomas to this effect.

Subsequently, however, I had occasion to examine some preparations of *Meyenia fluviatilis* from various localities near London, which my friend Mr. J. G. Waller had kindly sent me, and amongst them noticed one labelled "Ditchley's" which not only differed from the rest, but presented the same varietal peculiarities as the Calumet specimen; hence I began to attach more importance to Mr. Thomas's suggestion than I had hitherto done. Meanwhile I received another specimen labelled "Ditchley's—England," from Mr. H. Mills, of Buffalo, N. Y., in which there were a number of immature statoblasts together with the spiculation of the Calumet variety; and having, in reply, stated that it was the same sponge as that which Mr. Thomas had proposed to designate "*calumetica*," I learned from Mr. Thomas afterwards that Mr. Mills had sent my letter on to him; that he was glad that I recog-

nized his variety; that Mr. Mills's specimen which had come from England came from himself; and that he would be very glad, not knowing much about sponges, if I would publish a description of it.

It then struck me that the label "Ditchley's" being on both Mr. Waller's and Mr. Mills's preparations, there must be some connexion between the two, so I immediately (that is on the 28th March last) communicated the facts to Mr. Waller, who, in reply, not only pointed out the way in which the "Ditchley's" specimen got to America, but very kindly sent me a specimen of it in the natural but dried state, which, by the presence of the immature statoblasts &c., exactly corresponded with Mr. Mills's preparation. To this specimen Mr. Waller added the following statement, viz.:—that the sponge, growing around the stems of an aquatic plant, had been obtained from a large pond at "Ditchley's Manor," South Weald, near Brentwood, in the county of Essex, and had been noticed by him as a variety, in a paper entitled "Variation in *Spongilla fluviatilis*," published in the 'Proceedings of the Quekett Microscopical Club, vol. v. 1878.

As Mr. Thomas's specimen of this sponge from the Calumet river is very small in quantity, I must describe it chiefly from what Mr. Waller has kindly sent me, thus:—

Meyenia fluviatilis, var. *angustibirotulata*.

Coating the stems of aquatic plants to the extent of one sixth of an inch in thickness all round. Consistence elastic, fragile. Colour light yellow-brown. Skeletal spicule smooth, curved, fusiform, gradually sharp-pointed, varying in size under 75 by 3-6000ths in. in its greatest dimensions.

Statoblast globular, even on the surface, and white in colour when fully developed, infundibularly depressed over the hilous opening of the chitinous coat; about 85-6000ths in. in diameter; consisting of the usual germinal contents, surrounded by a layer of birotules in juxtaposition, arranged perpendicularly over the chitinous coat, and filled in between with a microcell-structure up to the umbos of the birotules, which, being naked and allowing the light to pass through them, present a dark point respectively like minute holes in the midst of the white microcell-substance; birotule consisting of a cylindrical shaft, more or less constricted in the middle, which is sometimes furnished with one or more spines; rotule fringed towards the margin rather than denticulated, so as to present a striated appearance, which does not reach the umbo or centre; total length of birotule about 6-6000ths in.

Loc. England and America.

Obs. Described in the *dry* state. The Calumet specimen is remarkable for presenting the birotulate spicules in all stages of development *loose* in the tissue of the sponge, where it may be seen that the shaft is the first part to be formed, commencing in two minute elongated portions, constricted yet connected by a delicate thread in the centre, and thus strongly foreshadowing the characteristic hourglass form of the fully-developed spicule; while, on the otherh and, the "Ditchley's" specimen presents the *whole* statoblast in all stages of development, from a minute and shrunken, shapeless dried bit of yellowish sarcode, to the fully developed form of this reproductive body. When first recognizable, in its present dried state, as a reproductive organ, it presents an ovoid or globular form of a yellow colour, about half the size of the matured object, composed of a toughish yellow transparent capsule, filled with globules or cells of a refractive matter, which can be plainly seen through this envelope; globules or cells varying in diameter under 5-6000ths in., consisting of a semifluid refractive substance, which, although evidently undergoing subdivision in the larger portions, is sufficiently consistent to retain its globularity when forced out into the water by rupture of the capsule; so arranged as to fill up the latter except at one point in the end, which presents a minute, circular, transparent area, the future hilous opening of the chitinous coat (?). After this the capsule becomes transformed into the shape of the fully-developed statoblast, but still retaining its yellow colour, and now covered by the layer of birotules *alone*, with their inner rotules resting on the capsule, now also seen to be the chitinous coat; to which is then added the white microcell-structure which fills up the space between the birotules, and thus completes the formation of this reproductive body.

The only variety of *Meyenia fluviatilis* that can be confounded with it is that of Bombay, on account of the greater length of the birotules, which bear the proportion of six in the former to seven in the latter; but here the shaft is equal in thickness throughout and the rotules denticulated to the umbo or centre, rather than fringed or striated towards the circumference only, much as represented in my original description of 1849 ('Annals,' vol. iv. pl. iii. fig. 6, *d*); not like that given by Dr. Bowerbank in 1863 (Proc. Zool. Soc. pl. xxxviii. fig. 4), which must have been taken from an *accidental* form, and therefore is misleading. On the other hand, the *skeletal* spicule in the Bombay variety may be spiniferous as well as smooth; while I have never seen any spiniferous ones in the Calumet variety.

In general the European and American specimens of *Meyenia fluviatilis* have very short birotules, and although the shaft expands into the rotule on either side, still, from want of length, it does not present the hourglass shape of the Calumet variety, which, and the *smooth* skeletal spicule, constitute the chief distinguishing features of the latter.

XLIII.—*New Species of* Histeridæ, *with Synonymical Notes.*

By George Lewis, F.L.S.

The part of the 'Munich Catalogue' containing the Histeridæ was issued in 1868, and gave 1151 species; and in 1884 Herr Joh. Schmidt published a supplementary list of 334 species in the 'Berliner ent. Zeitschrift.' Synonymists have corrected our records from time to time, but not to the extent of materially reducing the total of 1485 species; and lately I have carefully examined the types of the species in the national collection, and the results I have obtained, which relate chiefly to synonymy, are given in this paper.

The family has not attracted the attention of many entomologists, although the monograph of De Marseul, to which too high praise cannot be given, is an excellent introduction to the study of the group, and the clear and well-defined exo-skeleton presented to the student in all the genera offers characters easily tabulated or retained in the memory. Some of the neglect at home doubtless rests on the collectors abroad, who rarely send to Europe even the most abundant species; and yet many of the most curious species may be easily obtained by searching under loosened bark.

In the United States the species have been studied as members of a "limited fauna," and it is difficult at once by the aid of the descriptive literature alone to arrange all the American species in their right order in a general catalogue, as the descriptions do not refer to the allied species existing elsewhere. But I hope before long to compile a systematic catalogue, to replace those in alphabetical order now in use. One of the results of limiting the study to local forms in America is manifested by curious irregularities in the estimated value of genera on the part of students and authors. Dr. Horn lowers *Phelister* and *Platysoma* to subgenera, and gives full generic value to others, as *Echinodes* and *Teretriosoma*. In