

his intention to publish the results, when sufficiently matured.

Believe me to be, my dear Sir,

Very faithfully yours,

PECKHAM,
Dec. 1837.

J. B. READE.

P.S. Dec. 1838.—XANTHIDIUM.—(Etym. *ξανθός*, yellow.)

This genus, forming one of the numerous family of the *Bacillariæ*, was founded in the year 1832, on three species described in the Transactions of the Berlin Academy. Many new species, both recent and fossil, have been now discovered. They are characterised by a silicious shield, simple or set with spines. It appears probable that the spines or tubes surrounding the body in some of the fossil species, were supplied with cilia. Propagation by self-division is their mode of increase, and is at once a proof of their animal nature; the specimen represented Tab. 108, (a recent *Xanthidium furcatum*) shows the commencement of this process. The genus *Gaillonella* also belongs to the family of *Bacillariæ*; its principal characters are a simple silicious shield, cylindric, globose, or discoidal, and occurring in chains—(see Tab. 109.)

O. Page 566.—EHRENBERG ON INFUSORIA.—To the above interesting communication of Mr. Reade, I will add the following abstract of Ehrenberg's observations on this subject.

This eminent observer has determined twenty-eight fossil species of infusoria, all belonging to the family of the *Bacillariæ*. Of these, fourteen species are undistinguishable from existing fresh-water, and five species from marine infusoria; the others belong to extinct or unknown forms. The great sharpness of the outlines of all these silicious shields appears to have been produced by intense heat, by which all organic (particularly vegetable) carbon has been dissipated; for some of these animals, like existing species,