

on the base, and the upper whorls are strongly spiralled. *R. acuta*, Phil., from the Red Sea, is smaller, with a less swollen body-whorl and more tumid base; the whorls of the spire are less tumid and less exerted. *R. Someri*, de Folin, from the Cape Verde Islands, which is like in general aspect, is a much smaller, thicker, and more spiralled shell, with a less tumid body-whorl and more regularly conical spire, the slope of the whorls being more flattened; the apex, too, is much finer. *R. semistriata*, D'Orb., from Cuba, is shorter, broader, and less spiralled. *R. auriculata*, Menard, which is perhaps as like as any, has not the contracted base, and its extreme tip is 0.004 in. broad, while here the tip is 0.008 in., or half as much.

I have called this species *peracuta*, because, though certainly not very sharp, it is much more so than *R. acuta*, Phil.

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On a new Peritrichous Infusorian, *Gerda caudata*.

By FREDERICK W. PHILLIPS, F.L.S.

[Read April 5, 1883.]

THE infusorian here recorded was found by me in water from a pond at Hertford Heath, in company with large numbers of that rather rare Rotifer *Æcistes pilula*. It is most nearly allied, and is now provisionally attached, to the genus *Gerda* (the first genus of the subfamily Vorticellina), which is thus diagnosed in Mr. Saville Kent's recently published 'Manual of the Infusoria':—

"Animalcules solitary, elongate, subcylindrical, recumbent upon, or simply adherent to, submerged bodies; not possessing a distinct sucker or specialized organ of attachment as in the genus *Scyphidia*; oral system including a peristomal border, vestibulum, and ciliary disk as in the ordinary *Vorticellæ*; increasing by longitudinal fission."

The genus at present is limited to two species. The first, *Gerda glans*, was discovered by Claparède and Lachmann in vegetable débris near Berlin, and is thus described:—

"Body elongate, subcylindrical, highly contractile, three or four times as long as broad, the wider posterior region during contraction of a cup-like form; surface of the integument transversely striate; oral aperture narrow; pharyngeal cleft deeply pro-



longed ; endoplast ribbon-like, placed longitudinally ; contractile vesicle spherical, giving off a canal-like ramification, occasionally branching a second time, and extending to within a short distance of the ciliary disk."

The second species, *Gerda fixa*, was discovered by D'Udekem in a pond in the neighbourhood of Brussels, and described in 1864 ("Infusoires de la Belgique," Mém. Acad. Royale de la Belgique, tom. xxxiv.). It is distinguished from the foregoing in having a body of greater proportional length, the surface being smooth, the body tapering abruptly, and terminating in a blunt point ; the contractile vesicle is spherical and is situated close to the vestibulum.

In the new species about to be described, the body is elongated, about seven times as long as broad, of an undulating contour, subject to changes ; it is highly contractile, assuming a globular shape when retracted ; the integument is of a reddish tint, and transversely striate, annulate when contracted. The posterior extremity of the body terminates in a peculiar imbricated tail-like appendage, resembling the telescopic tail of a rotifer, but is not telescopic ; this appendage is finely striate longitudinally ; the body when extended, before the ciliary disk is projected, is broad and rounded at both ends and depressed in the middle. The ciliary disk is convex ; the peristome border thick ; cilia very fine and long ; vestibular setæ distinct ; contractile vesicle spherical, situated at the extremity of the vestibular cleft ; minute non-contractile vesicles distributed throughout the whole of the parenchyma ; the endoplast is spherical and conspicuous ; endoplasm granular, and maintains a continual cyclosis or circulation. The eversion of the cilia is extremely gradual, occupying about five to ten minutes ; retraction is instantaneous. Mr. W. Saville Kent points out an analogy between the tail-like appendage and the telescopic tail of his *Vorticella telescopica*. It is proposed to bestow the specific title of "*caudata*" in allusion to this appendage.

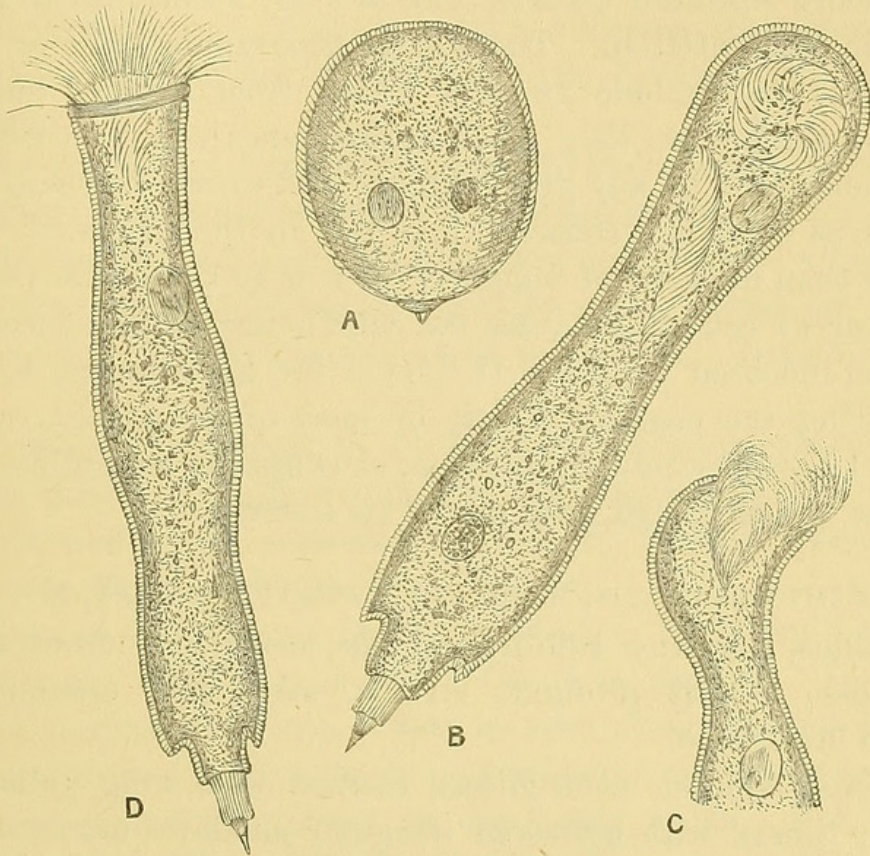
The accompanying woodcut delineates the animal in various aspects, the same being from drawings by myself of the living object, and here greatly magnified.

Assuming the present form either to be regarded as a species of *Gerda* or closely allied to that genus, I tentatively draw out the subjoined technical diagnosis.



*GERDA CAUDATA*, n. sp.

Body elongate, cylindrically-undulate, seven times as long as broad, transversely striate, highly contractile, spherically-ovate when contracted, terminating posteriorly in an imbricated longitudinally striated tail-like appendage; ciliary disk convex; peristome-border thick; contractile vesicle spherical, anteriorly placed; endoplast spherical and conspicuous.—*Hab.* Pond-water.



*Gerda caudata* in different stages and positions. A. Retracted state. B. Extended, but with cilia withdrawn. C. Showing gradual eversion of cilia. D. Fully expanded.

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On Japan Brenthidæ, and Notes of their Habits.

By GEORGE LEWIS, F.L.S.

[Read June 7, 1883.]

(PLATE XII.)

THE new Brenthidæ made known in this paper are those I acquired in Japan during the summers of 1880 and 1881, and comprise five species. The Japanese archipelago lies too far north of the equator to be rich in species of the family, yet still, in the southern island of Kiushiu and in the warm peninsula which borders on the Kii Channel, a fair number of beetles of a truly tropical type exist; and to this class the Brenthidæ noted



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