

News in the world of Radiolarians

Stefano Barone, Diatom Lab laboratory

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Image 1: Radiolarian Shop logo

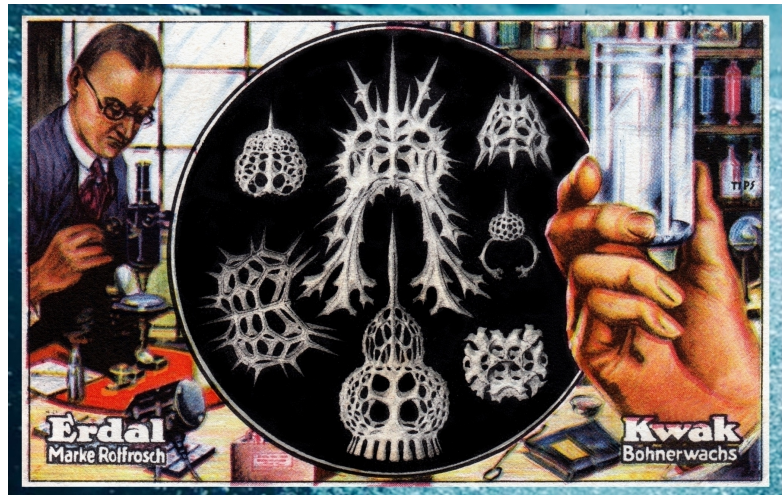


Image 2: an old German trade card depicting some Radiolarians

Since the time of Ernst Haeckel, Radiolarians have fascinated us with their architectural and hypnotic forms. Yet nowadays among professional and amateur microscopists they generally receive less attention than Diatoms and I can say this with certainty, given that almost ten years have passed since the opening of Diatom Lab, that has always offered among its preparations those containing Radiolarians. To help spread and further appreciate these latter, a website dedicated to them has recently been launched (www.radiolarianshop.com), that not only contains preparations for sale, but also a lot of information, plus several scans of antique and vintage engravings from some of the many original books kept at Diatom Lab, a company that was not born merely to sell, but also to spread passion for microscopy, artistic forms of hidden nature and culture.

As soon as possible, the website will be implemented with further prints and articles, along with new products: the current novelty compared to the past are the microscope slides of dry mounted Radiolarians on opaque background with or without cover glass: to create these products, two extremely rare and antique samples that contain some of the largest specimens in the world were selected, in fact these slides are not only intended for stereo microscopes and optical microscopes with an external side lighting source, but also for powerful magnifying glasses (from 15x magnification and up).

It is no coincidence that in ancient times it was written: “Few microscopic objects are more beautiful than an assemblage of the most remarkable forms of the Barbadian Polycystina, especially when seen brightly illuminated upon a black ground” (Carpenter, W., 1857).

Still referring to the past, the following quote can touch you very deeply: “One cannot look at these Radiolarians without noticing the striking resemblance which many of their forms bear to objects artistically wrought by man. We find architectural decorations, vases in a multiplicity of forms, devices suggestive of jewel-work, cups, balls, lamps, etc., etc. Man cannot have copied his ideas from these objects, because he made such things long before any microscope was constructed which could reveal them to his vision. On the other hand, the microscopic creatures could not have imitated man. In fact, their beautiful shells and skeletons grew long ages before man’s appearance

on this earth. Whence then comes this parallelism of design? The question is worth a moment's consideration. Before answering the question, or suggesting what may be an answer, let us see if the student of the microscope has found in any other department of microscopic life than the Radiolarians, any similar parallelism of design. He will tell us that he is constantly meeting with objects that are exceedingly minute, which bear the closest resemblance to objects used in the arts, in science, in trade, and in domestic life - that this is a special feature in microscopy which attracts the attention of every student. The answer then that must suggest itself is, that the human mind, in this respect, is a faint reflection of the Divine mind. What other answer can we give? We may enter into deep theories and learned reasons, which may only bewilder us. If the mind of man produces designs previously existing in microscopic nature, of which he had no knowledge, it is only reasonable to conclude that his efforts, however feeble, bear in a measure the impression or reflection of that Mind which 'hath made all things beautiful in its season' (Kerr, R., 1895).



Image 3: a new Diatom Lab product: dry mounted large Radiolarians on opaque background

I add another nice quote from the past, written in Italian: “I più complicati lampadari in ferro battuto che i più abili artefici hanno mai costruito, i più accurati ed ornamentati gioielli in filigrana che l'arte degli orafi abbia mai prodotti, le più meravigliose opere di traforo e di cesello che siano mai state pensate nella mente più immaginosa ed eseguiti dalle mani più pazienti, non reggono al confronto degli ornamentali scheletri dei microscopici Radiolari, di cui pure gli uomini, nei loro tentativi per la ricerca del bello geometrico, non hanno fatto altro che ripetere inconsapevolmente le forme” (Colosi, G., 1948), that can be translated as follows:

“The most complicated wrought iron chandeliers that the most skilled craftsmen have ever constructed, the most accurate and ornate filigree jewels that the goldsmith's art has ever produced, the most marvelous works of fretwork and chiselling that have ever been conceived in the most imaginative mind and executed by the most patient hands, cannot stand comparison with the ornamental skeletons of the microscopic Radiolaria, whose forms men, in their attempts to search

for geometric beauty, have done nothing but unconsciously repeat”.

And finally an old quote in French: “Déliçates constructions où la grâce s'allie à la solidité, les carapaces siliceuses, à claires-voies, des Radiolaires [...] nous apparaissent comme de minuscules palais de verre ou de béton, réalisés par des architectes à l'imagination fertile” (Laporte, L-J., 1949), that can be translated as follows:

“Delicate constructions where grace is combined with solidity, the siliceous, openwork shells of the Radiolaria [...] appear to us like tiny palaces of glass or concrete, created by architects with fertile imaginations.”

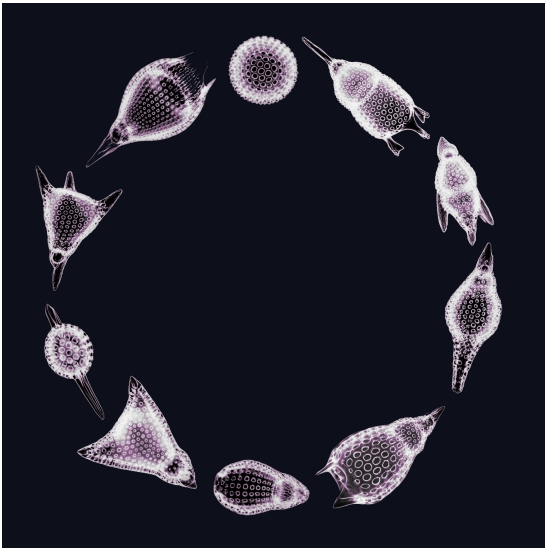


Image 4: selected Radiolarians in Darkfield illumination



Image 5: observing Radiolarians through old microscopes is very intriguing. On the left an antique Zeiss Jena model IV^a made in 1901 (serial number 34818). On the right an odd Italian microscope, the stand Delta - produced since 1936 by Fratelli Koristka - characterized by an unusual vertical objective revolver (serial number 26367). From the Diatom Lab collection.

To end on a high note and for the joy of your eyes, below you can admire a series of antique and vintage engravings and prints from some original books kept at Diatom Lab.

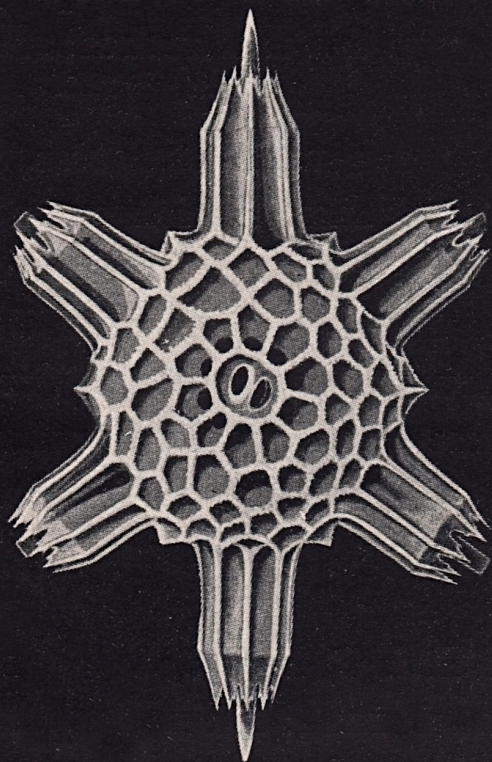


Fig. 35. *Hexacolpus nivalis*
(Acantharia).

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Fig. 33. Mergelstein von Barbados.



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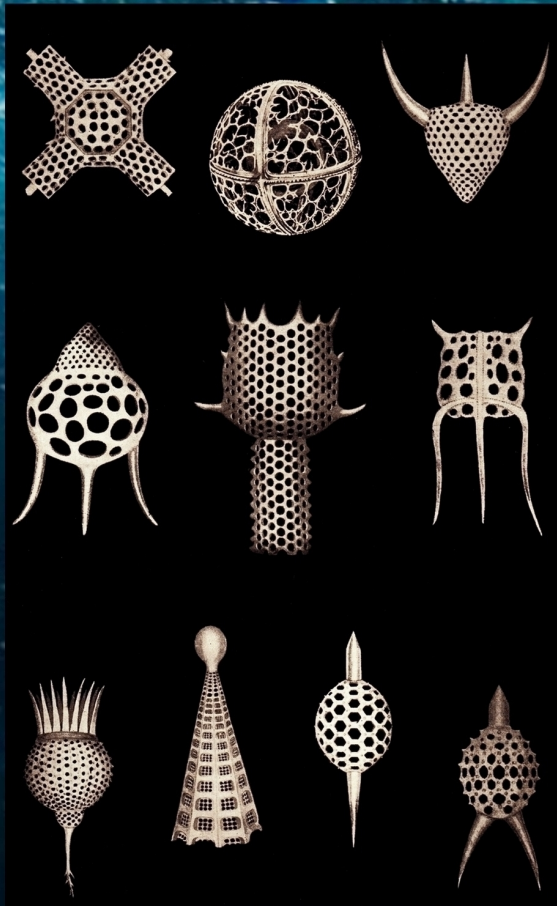
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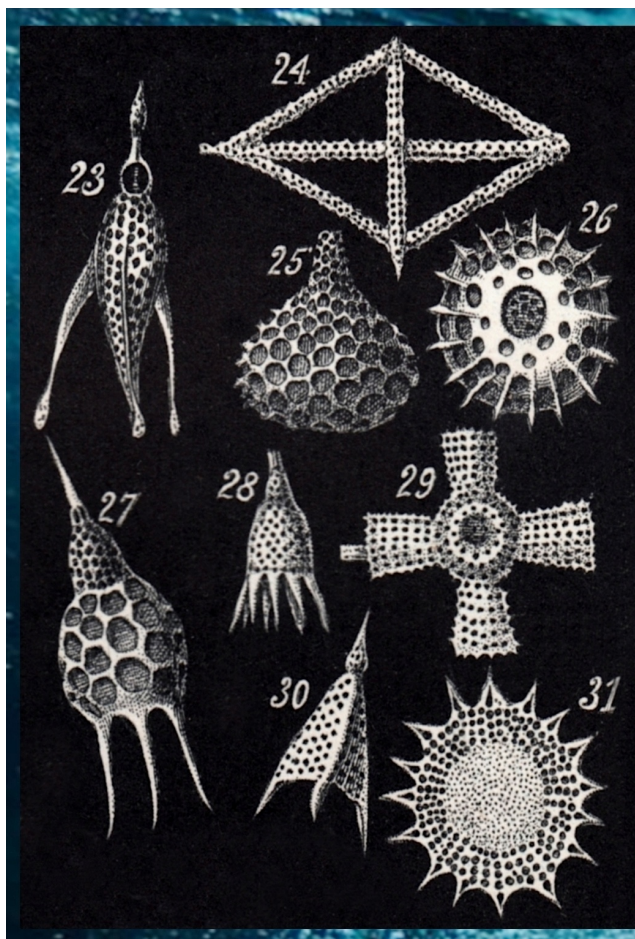
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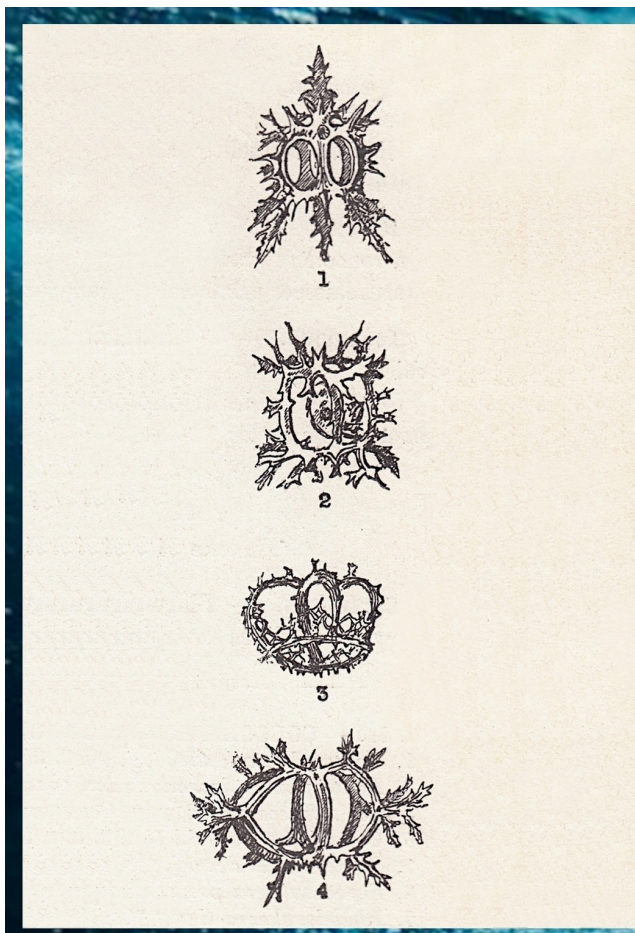
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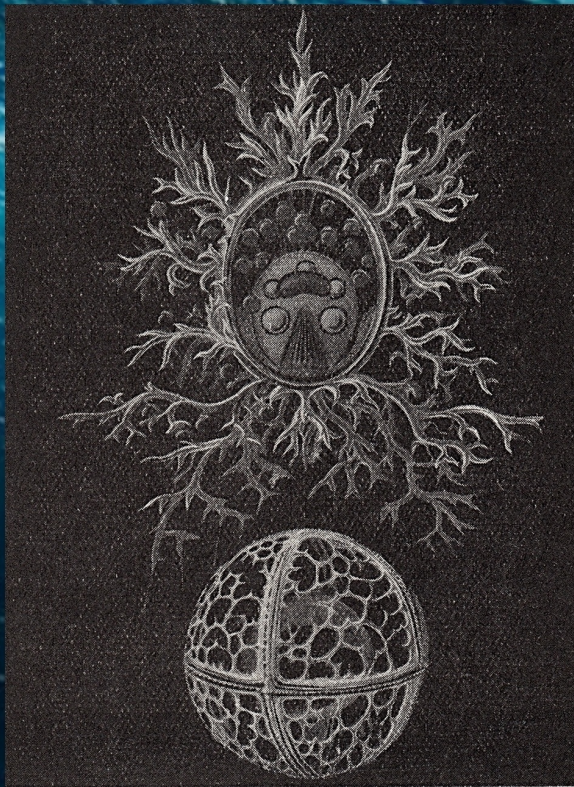
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Scheletri di due bellissimi Radiolari:
Lithocircus magnificus e *Trissocylus sphaeridium*.

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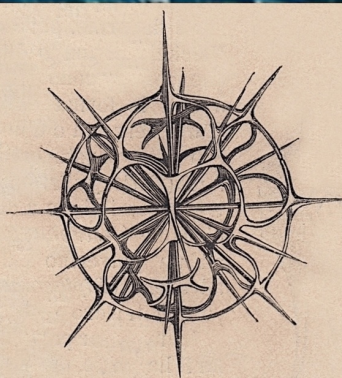


Fig. 57.
Doralaspis bipennis.

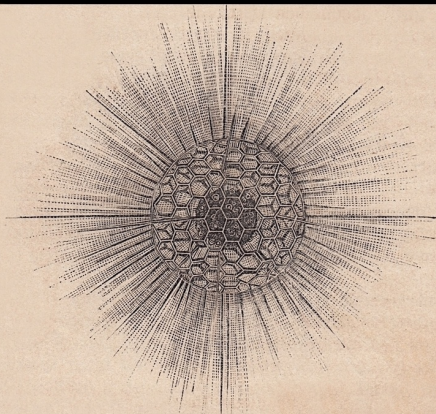


Fig. 56.
Heterosphaera actinota.

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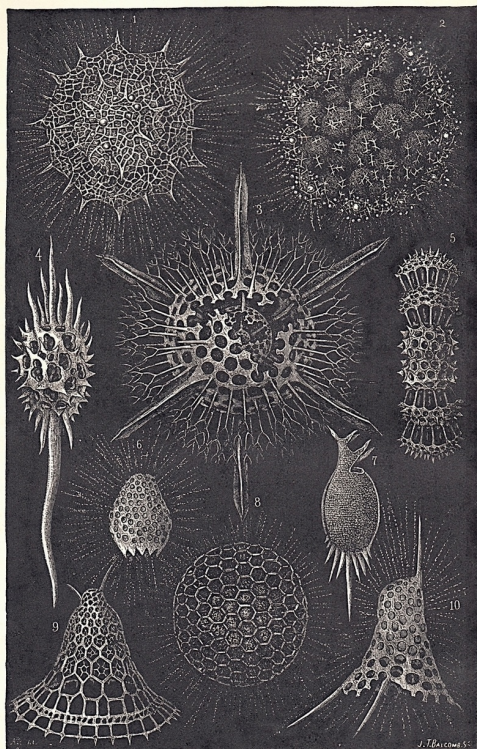
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RADIOLARIA.

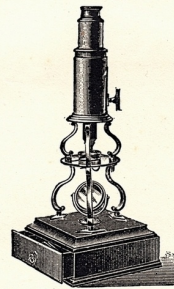
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GENERAL STRUCTURE OF POLYCYSTINA. 483

forms (among them *Haliomma*, Fig. 231) been detected by Prof. Ehrenberg in the chalks and marls of Sicily and Greece, and of

FIG. 229.

FIG. 230.

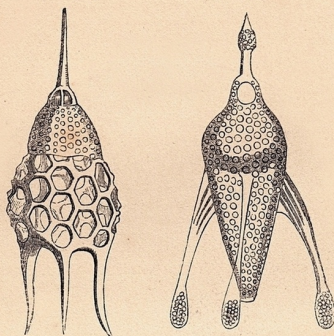


FIG. 229. *Podocystis Schomburgkii*.
FIG. 230. *Rhopalocanium ornatum*.

Oran in Africa, and also in the diatomaceous deposits of Bermuda and Richmond (Virginia); but a large proportion of the rock that prevails through an extensive district in the island of Barbadoes, has been found by him to be composed of Polycystina, mingled

FIG. 231.

FIG. 232.

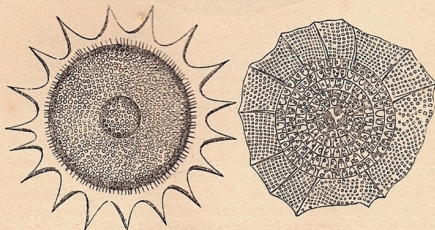


FIG. 231. *Haliomma Humboldtii*.
FIG. 232. *Perichlamydon proteus*.

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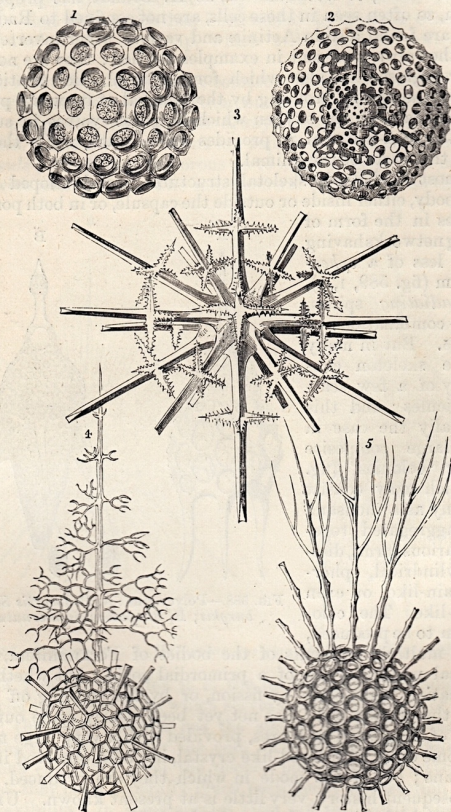


FIG. 589.—Various forms of Radiolaria (after Haeckel): 1, *Ethmosphera siphonophora*; 2, *Actinomma inerme*; 3, *Acanthometra xiphicantha*; 4, *Arachnosphera obligacantha*; 5, *Cladococcus viminalis*.

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