

## II. Wissenschaftliche Mittheilungen.

### 1. On the Hydroid Stony Corals.

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In the Proc. R. Soc. No. 172. 1876. I published a preliminary note on the structure of the Stylasteridae giving some of the results obtained from an examination of the soft parts of six genera of the family obtained by means of the trawl net in 600 fathoms off the mouth of the Rio de la Plata. In the spring of this present year I presented to the Royal Society a detailed account of the structure of the family Stylasteridae illustrated by eleven plates, which will appear in the second volume of the Transactions for 1878. The results attained are summed up shortly as follows.

The Milleporidae and Stylasteridae are both essentially Hydrozoan in nature and not Anthozoan and the two families agree in many details of structure. They may, for the present at least, be placed together in a suborder Hydrocorallinae. The generative organs of the Milleporidae are at present unknown; their discovery may perhaps necessitate a separation of the two families.

The following are the characters of the suborder Hydrocorallinae H. N. M. (Phil. Trans. R. Soc. Vol. 167. 1877. p. 132).

Compound Hydroid stocks, growing by gemmation. Hydrophyton consisting of a meshwork of ramified coenosarc cal canals, composed of an ectoderm and pigmented endoderm, lodged within channels permeating a hard calcareous support, »corallum«, which is deposited by the ectodermal investment of the canals, and forms masses of very various shape. Surface of the Hydrophyton covered with a continuous layer of ectoderm. Zooids of two forms, the one provided with a mouth and gastric cavity, »gastrozooid«, the other mouthless and simply tentacular in function, »dactylozooid«. Tentacles, when present, mostly with knobbed extremities. A well-defined muscular layer present in the zooids. Zooids lodged within chambers excavated in the substance of the Hydrophyton, »gastropores«, and »dactylopores«, lined by reflections of the surface layer of the ectoderm, forming the »sacs« of the zooids. Zooids of the two forms either scattered irregularly over the surface of the stock, or gathered into groups more or less regular, in each of which a centrally-placed gastrozooid is surrounded by a ring of dactylozooids. Cavities of zooids communicating with coenosarc cal meshwork by large canal offsets.

The Family Milleporidae may be thus distinguished.

## I. Family Milleporidae (L. Agassiz).

Corallum irregular in growth, arborescent or encrusting, composed of a thin superficial living layer, supported by a dead mass made up of successive preceding dead layers. Pores devoid of styles, divided into a series of vertically succeeding chambers by transverse calcareous partitions, »tabulae«. Usually scattered irregularly, but in some species grouped with tolerable regularity into systems, in which a centrally-placed gastropore is surrounded by a ring of dactylopores. Nematocysts of two kinds present—the one, the three-spined form, occurring only in Hydroids; the other ovoid in shape, with a thread beset with a spiral of spines. Gastrozooids short, cylindrical, with from four to six tentacles with knob-like tips, set in a single whorl. Dactylozooids long, filiform, and tapering, with an irregular number of short knob-bearing tentacles set on at irregular intervals. Gonophores unknown, but not contained within special cavities in the substance of the corallum, »ampullae«.

There seems to be only one genus which can be now included in the family viz, *Millepora*. *Heliopora* I have shown to be an Alcyonarian (Phil. Trans. Roy. Soc., Vol. 166, pt. 1), and I have confirmed Prof. Verrill's results as to the nature of *Pocillopora* which is Hexactinian. There can be no doubt that *Seriatopora* is closely allied to *Pocillopora*. There seem to be no fossil genera other than *Millepora* itself which can with certainty be referred to the family.

The following are the principal facts concerning the structure of the Stylasteridae.

## II. Family Stylasteridae (Gray).

Corallum arborescent, with a strong tendency to assume a flabellar form, and to the development of the zooid pores on one face only of the flabellum, or on the lateral margins only of the branches composing it. In some genera a superficial layer only of the coral is living; in others, nearly the entire mass retains its vitality. Pores with tabulae in two genera only. The gastropores usually provided with a conical calcareous projection, »style«, at their bases. In some genera, a rudimentary style present also in the dactylopores. Pores scattered irregularly, or grouped into more or less symmetrical systems, composed of a centrally-placed gastropore surrounded by a circlet of dactylopores. In some genera the mouths of the dactylopores appear as elongate chambers, disposed radially towards the centre of the gastropore into which they open, and the chambers being separated from one another only by thin partitions, »pseudo-septa«; the systems, »cyclo-systems«, simulate closely calices of Hexactinian corals. Nematocysts of two kinds, large and small, and of uniform shape in all the genera. Three-spined nematocysts absent. Gastrozooids cylindrical or flask-shaped in form,

always entirely retracted within the gastropores when at rest; those of the former shape with from four to twelve tentacles, set in one whorl, and regular in number in all the gastrozooids in each species; those of the latter devoid of tentacles. Dactylozooids simple elongate-conical bodies, devoid of tentacles, sometimes capable of entire retraction within the pores, sometimes not. Stocks of distinct sexes. Gonophores adelocodonic, developed within sacs, »gonangia«, which are contained within special cavities in the substance of the corallum, »ampullae«. Stocks of the two sexes alike in form as far as known, except in the size of the ampullae, which are larger and more prominent in the females. Ampullae containing in male stocks several gonophores; in female, in some genera, a single gonophore, in others several. Spadix, in the female gonophores, cupshaped, embracing a single ovum only, which becomes developed into a planula within the gonangium.

Twelve genera of Stylasteridae are distinguished and a list of all described species is appended to the paper.

## 2. Notiz über retardirte Milchzähne.

Von Ivan Sahlertz, Kopenhagen.

In einem Aufsatze über einige Anomalien in dem Gebisse der See-hunde<sup>1)</sup> habe ich die Meinung ausgesprochen, dass in gewissen Fällen die Entstehung überzähliger Backenzähne eine natürliche Erklärung findet, wenn man annimmt, dass unter den bleibenden Zähnen noch ein Milchzahn persistirt. Man hat gegen diese Anschauung hervorgehoben, dass sie gegen die Natur streite, und dass die Milchzähne der Säugethiere immer vertreten werden, oder doch wenigstens ausfallen müssten, bevor das Thier ausgewachsen sei. Ich gestehe natürlich gern, dass dies die Regel ist, und dass die Milchzahnatur eines gewissen Zahnes am besten bewiesen wird, wenn ein solcher von einem anderen Zahne verdrängt wird; jedoch muss ich behaupten, dass es wirklich, obwohl nur als Anomalien, Milchzähne gibt, die nie vertreten werden.

Ich besitze in meiner privaten Sammlung drei Cranien von dem gemeinen Haushunde (*Canis familiaris* L.), welche, so weit ich sehe, diese Behauptung rechtfertigen. Das erste trägt nämlich im Oberkiefer jederseits zwei Reisszähne, von denen der vordere unstreitig der Reisszahn des Milchgebisses sein muss, und doch ist das Thier, eine Hündin, sehr alt gewesen und hat schon längst seinen Zahnwechsel beendet. Es ist übrigens eine von den Misgeburten mit verkürztem Oberkiefer

1) Videnskabeligt Meddelelser fra den naturhistoriske Forening i Kjøbenhavn 1877/78, p. 304.

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Zeitschrift/Journal: [Zoologischer Anzeiger](#)

Jahr/Year: 1878

Band/Volume: [1](#)

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