

June 23, 1887.

Prof. W. H. Flower, LL.D., F.R.S., President, in the Chair.

Mr. Sclater laid upon the table the skin of a White-nosed Monkey of the genus *Cercopithecus*, which had been presented to the Society's Menagerie by the Rev. W. C. Willoughby, December 9, 1883, and had died on the 13th November last year.

Mr. Sclater had now ascertained from Mr. Willoughby that this specimen had been obtained by him in Unyamwezi, Eastern Equatorial Africa, and was said to have been brought from Manyuema, on the western shore of Lake Tanganyika. It was undoubtedly different from the ordinary form of *C. petaurista* of West Africa, hitherto received by the Society, and was at once recognizable by having the last two thirds of the tail red. It appeared to be the species designated by Schlegel (*Mus. des Pays-Bas*, Simiæ, p. 87) *Cercopithecus ascanias*, but Mr. Sclater much doubted whether it was legitimately entitled to bear that name.

Until the synonymy of the West-African Monkeys was more completely worked out, it was not advisable to give it a new name, but it was interesting to have ascertained the correct locality of this Monkey.

Mr. Sclater exhibited a specimen of the Pheasant from Northern Afghanistan which he had described in 1885 (*P. Z. S.* 1885, p. 322, plate xxii.) as *Phasianus principalis*, and stated that he was pleased to find that his name for this bird antedated that bestowed upon it by Bogdanow, *Phasianus komarovi*¹, and must therefore be adopted. M. Menzbier had compared typical specimens of *P. komarovi* with birds from the Murghab and had found them identical.

The specimen now exhibited had been kindly presented to Mr. Sclater by Gen. Sir Peter Lumsden, G.C.B., F.Z.S.

The following extract was read from a letter addressed to the Secretary by Mr. A. Everett, C.M.Z.S., dated Labuan, April 21st, 1887:—

“You will be interested to know that Mr. John Whitehead has recently returned from the Kina Balu mountains in Northern Borneo, where he made a stay of two months on one of the spurs, at an elevation of 5000 feet. Mr. Whitehead has collected birds chiefly, and there appears to be a considerable proportion of novelties among the skins, although perhaps many of them are only new to the Bornean avifauna. Among those which seem to me to be really new to science are a huge *Calyptomena*, six times the size of the common Green Manakin, but, like it, coloured brilliant green and velvety black, only the coloration is differently disposed; a long-tailed Eurylæmid, which is a very beautiful bird about the size of

¹ Bull. Acad. Sci. St. Pétersb. xxx. p. 356.

Cymborhynchus, but coloured with very pure tints of blue, green, and yellow; a green-and-blue *Ploceus* (*Munia*?), a large sooty *Turdinus*, a very large *Arachnothera* of peculiar style of coloration, a Barbet, a *Leucocerca*, and a number of others. The only ground-birds obtained were a pair of Partridges. The only *Pitta* was *P. arcuata*. The only *Nectarinia* at all abundant was *N. temmincki*, of which the ♀ was also secured. The only mammals obtained were two or three species of Rats, Squirrels, and a *Tupaia*, with a Shrew. The *Tupaia* seems to be new, as also one of the Squirrels, an animal not much larger than the pigmy *Sciurus exilis*, and having long tufts of hair to the ears."

Dr. Günther exhibited a hybrid specimen produced by a male Golden Pheasant (*Thaumalea picta*) and a female Reeves' Pheasant (*Phasianus reevesi*). It was a male in its second year, and had been bred by Ralph Saunders, Esq., of Exeter, who had presented the specimen to the British Museum.

Dr. Günther exhibited also a hybrid specimen produced by a male white Fantail Pigeon and a female Collared Dove (*Turtur risorius*). The specimen was the survivor of the last of three broods reared by these birds in Dr. Günther's aviaries.

Dr. Günther, F.R.S., V.P.Z.S., communicated a paper by Mr. ARTHUR DENDY, B.Sc., F.L.S., Assistant in the Zoological Department of the British Museum, containing Observations on the West-Indian *Chalininæ*, with Descriptions of new Species, which will appear in full, with illustrations, in the 'Transactions' of the Society.

The paper was divided into two sections—(1) Introductory Remarks; (2) Description of Genera and Species. It was based upon the study of the large collection of West-Indian Chalinine Sponges accumulated in the Natural-History Museum.

In the first part of the paper it was pointed out that the species described in the second part were especially interesting from two points of view:—(1) they afforded excellent illustrations of the great variability in external form to which species of Sponges living in shallow or comparatively shallow water are subject; and (2) they illustrated in a very striking way the manner in which the siliceous spicules gradually degenerate and ultimately completely vanish as the horny skeleton becomes more and more strongly developed.

The first of these two general laws was best exemplified in the cases of *Spinosella sororia*, D. & M., and *Pachychalina variabilis*, n. sp. The second was clearly demonstrated, first, by the genus *Siphonochalina*, in which the various species described showed different degrees of degeneration in the spicules, ranging from *Siphonochalina spiculosa*, n. sp., with great numbers of well-developed spicules, constituting a most important part of the skeleton-fibre, to *Siphonochalina ceratosa*, n. sp., in which the skeleton consisted almost entirely of spongin, the spicules being represented by the merest vestigial traces lying in the horny fibre.

But this law was illustrated in a still more striking manner by two species of the genus *Spinosella*, viz. *Spinosella plicifera*, D. & M., and *Spinosella maxima*, n. sp., which sometimes still contained traces of spicules imbedded in the horny fibre, and apparently on the verge of disappearance, while at other times they contained no spicules whatever, the skeleton-fibre being entirely horny; and yet specimens with spicules and specimens without were specifically undistinguishable. It appeared that spicules might persist as vestigial structures long after they had ceased to be of any functional importance, and that they disappeared first from the secondary fibres of the skeleton.

The bearing of these facts upon the systematic position of the so-called "*Keratosa*" was pointed out, and was, indeed, sufficiently obvious.

The immediate cause of the disappearance of the spicules appeared to be the development of the spongin to such an extent as to form by itself a sufficiently strong skeleton. In such a skeleton spicules would probably be not only useless, but actually harmful, in that they would tend to make the fibre rigid and brittle when it is desirable that it should be elastic and flexible, in order to facilitate the free contraction and expansion of the various parts of the canal-system, and in order better to withstand the action of the waves and currents in the shallow water in which horny-fibred Sponges occur. Spongin appeared to be developed to a large extent only in warm climates and in tolerably shallow water; and under such conditions Sponges with a strongly developed horny skeleton are abundant.

In the second part of the paper eight species were fully described, five of them being new. The following is an enumeration of the genera and species, together with brief diagnoses of the new species¹.

Genus PACHYCHALINA, Schmidt.

PACHYCHALINA VARIABILIS, sp. n.

External form extremely variable; usually the same specimen is both lobose and digitate. Size of largest specimen 38 cm. high by 37 cm. broad. Colour (dry) light yellowish grey. Texture hard, fibrous, somewhat elastic. Surface smooth. Oscula large and round, about 5 millim. in diameter; for the most part scattered irregularly over one surface of the specimen.

Main skeleton a very irregular reticulation of strong spiculo-fibre, containing both a large amount of spongin and a great number of spicules. Primary and secondary lines much confused, longitudinal fibres strongly developed. The dermal skeleton also forms an irregular network.

Spicules long and very slender, normally oxeote or strongylote; size 0.126 by 0.003 millim. Occurring in the fibre and scattered outside it.

Nassau, Bahamas.

¹ All the specimens were examined in the dry condition.

Genus SIPHONOCALINA, Schmidt.

SIPHONOCALINA SPICULOSA, sp. n.

Sponge consisting of a number of long, smooth, upright cylindrical tubes, united together at the base and also at points of contact. Height 27 cm., greatest width 21 cm. Diameter of tubes at top 3 cm. Colour (dry) light yellowish grey. Texture rather brittle.

Main skeleton consisting of a network of coarse spiculo-fibre, composed of very numerous spicules with rather a small proportion of spongin. Primary and secondary fibres distinct, giving rise to more or less rectangular meshes. Diameter of primary fibres about 0.06 millim., of secondaries somewhat less; both contain much foreign matter, grains of sand &c., imbedded amongst the spicules. The dermal skeleton (on the outer surface) is a polygonally meshed network of stout spiculo-fibre, 0.03 millim. in average diameter.

Spicules slightly curved, sharp-pointed oxea; size 0.138 by 0.006 millim. Occurring in the fibres and scattered between.

Turk's Island, Bahamas.

SIPHONOCALINA PROCUMBENS, Carter, sp.

1882. *Patuloscula procumbens*, Carter, Ann. & Mag. Nat. Hist. ser. 5, vol. ix. p. 365.

West Indies, Grenada.

SIPHONOCALINA CERATOSA, sp. n.

Sponge consisting of a number of upright, cylindrical, thick-walled tubes, united together in an irregular basal mass, and also united laterally in places by the development of horizontal trabeculæ or by direct fusion. Total height 24 cm., breadth about 30 cm. Diameter of orifice of tubes averaging about 1.5–2 cm. Surface smooth but uneven. Colour clear, pale yellow. Texture firm but elastic.

Main skeleton a regular, rectangularly and close-meshed reticulation of stout horny fibre. Primary fibres about 0.053 millim. thick, secondaries but little less. Dermal skeleton (on the outer surface) a polygonally meshed reticulation of stout fibre, not distinguishable from the main.

Spicules represented by mere traces of slender oxea, which appear to have been almost completely absorbed.

Nassau, Bahamas.

Genus SPINOSELLA, Vosmaer.

1864. *Tuba*, Duchassaing and Michelotti, &c.

SPINOSELLA SORORIA, Duchassaing and Michelotti, sp.

1864. *Tuba sororia*, Duchassaing and Michelotti, Spong. Mer Caraïbe, p. 46, pl. viii. fig. 1.

1870. *Siphonochalina papyracea*, Schmidt, Spong. Atlant. Gebiet. p. 33.

West Indies.

SPINOSELLA SORORIA, var. DILATATA.

Differing from the typical form of the species in its more luxuriant and bushy habit, and in the much greater width of the larger tubes.

Bahamas.

SPINOSELLA SORORIA, var. FRUTICOSA.

This variety also differs from the typical form in its bushy habit. The tubes are cylindrical and somewhat narrow, their walls are thicker, and the venation on the inner surface is not strongly marked.

SPINOSELLA SORORIA, var. ELONGATA.

Differs from the typical form in having the tubes much elongated and rather narrow; moreover they are cylindrical and of approximately the same width all the way up. The margin of the tubes is usually smooth, and the spines on the outer surface are almost entirely obsolete. The venation on the inner surface of the tubes is usually not discernible.

SPINOSELLA PLICIFERA (? Lamarck, sp.), Duchassaing and Michelotti, sp.

1813. ?*Spongia plicifera*, Lamarck, Ann. Mus. Hist. Nat. tom. xx. p. 435.

1864. *Tuba plicifera*, Duchassaing and Michelotti, Spong. Mer Caraïbe, p. 53, pl. x. fig. 2.

Bahamas.

SPINOSELLA MAXIMA, sp. n.

Sponge forming great irregular masses, composed of a number of tubes of various shapes and sizes, all united at the base and some united laterally at points of contact. Tubes usually wide, either funnel-shaped or constricted at the mouth, commonly the wider ones are compressed. Greatest height 45 cm., greatest breadth nearly 50 cm. Outer surface aculeated by very numerous blunt, spinous processes, of various lengths up to 1.25 cm. Margin of orifice extremely thin and papyraceous. Colour pale yellow. Texture firm and hard, but elastic.

Main skeleton very irregular, consisting of a large-meshed reticulation of very stout fibres (0.12 millim. thick), and a smaller-meshed reticulation of fine fibres (0.013 millim. thick) which take their origin from the stout ones. Dermal skeleton a network of stout horny fibres, with comparatively small, rounded meshes.

Spicules entirely absent in the typical examples.

Nassau, Bahamas.

There is also a slight variety which differs from the types in two respects—(1) the spinous processes are represented only by low warts and ridges, (2) there still exist within the fibre a very few vestigial oxea.

Jamaica.





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