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Notes on Sponges from South Africa, with Descriptions of new Species.

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A COLLECTION of sponges made by Professor T. A. Stephenson during the course of an ecological survey has revealed the existence of several new species and afforded considerable other additions to the steadily increasing list of species recorded for South Africa. The species represented are as follows :—

From Oude Kraal.

Leucosolenia coriacea (Montagu).
Leuconia crambessa (Haeckel).
—— *pumila* Bowerbank.
Oscarella lobularis (Schmidt).
Stelletta agulhana Lendenfeld.
Geodia littoralis Stephens.
Tethyopsilla metaclada Lendenfeld.
Haliclona ciocalyptioides Burton.
Callyspongia tubulosa (Esper) Stephens.
Haliclona anonyma (Stephens).
Oceanapia eumitum (Kirkpatrick).
Fibulia ramosa (Ridley & Dendy).
Platychalina multiformis (Stephens).
Guitarra fimbriata Carter.
* *Mycale macilenta* Bowerbank.
Myxilla simplex (Baer).
Lissodendoryx isodictyalis var. *jacksoniana* (Lendenfeld).
—— *stephensoni*, sp. n.
Forcepia mertoni Hentschel.
Tedania brondstedi, sp. n.
Iophon proximum (Ridley).
Rhaphidophlus flabellata, sp. n.

Hymeniacidon sanguinea (Grant).
Polymastia littoralis Stephens.
Aplysilla rosea Schulze.
Dysidea fragilis (Montagu).

From St. James.

Leucosolenia coriacea (Montagu).
—— *gardineri* Dendy.
—— *variabilis* (Haeckel).
—— *canariensis* (Macleay).
Leuconia lunulata (Haeckel).
Oscarella lobularis (Schmidt).
Lissodendoryx isodictyalis var. *jacksoniana* (Lendenfeld).
—— *arenaria*, sp. n.
Placospongia melobesioides Gray.
Tethya aurantium (Pallas).

From Seaforth.

Spirastrella spinispirulifer (Carter).

From Muizenberg.

Aplysilla rosea Schulze.

Systematic Notes and Descriptions of new Species.

[The great majority of the species given in the faunal list (see above) are either well known in the literature or are referred to in Stephens (1915) or Burton (1933).]

Haliclona ciocalyptioides Burton.

Haliclona ciocalyptioides Burton, 1933, p. 238, fig. 2.

Remarks.—The present specimens are quite typical, except that in one at least the supposedly characteristic papillate oscules are lacking. In this specimen the exhalant apertures are level with the general surface and are composed of groups of five or six openings.

Haliclona anonyma (Stephens).

Siphonochalina anonyma Stephens, 1915, p. 459, pl. xxxix. fig. 6, pl. xl. fig. 9.
Reniera saldanhae id. l.c. p. 463, pl. xxxix. fig. 8, pl. xl. fig. 18.

Remarks.—The close similarity between the two species, listed here as synonyms, is very apparent in the present specimens. There is, in fact, every reason to believe that they are simple varieties of the same species.

Genus Fibulia Carter.

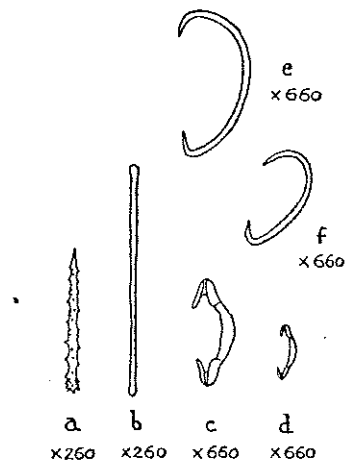
In proposing the name *Plumocolumella* for *Fibulia carnosa* Carter I had assumed that *Fibulia* Carter (1886, p. 51) was a misprint for *Fibularia* Carter (1882, p. 282). It is even now possible that this is correct, but there is no substantial evidence for believing it to be so. It is here proposed, therefore, to revert to the name *Fibulia* for the species listed by me (1929, p. 424) under *Plumocolumella*.

Genus Platychalina Ehlers.

In reviving the use of the name *Isodictya*, Dendy (1924) was evidently under the impression that the name was first used by Bowerbank in 1866 for *I. palmata* (Johnston). It dates, however, from 1858, with *I. anomala* Bowerbank as the only species.

Platychalina foliacea (Esper) Ehlers is a lipochelous form of *Homœodictya elastica* (Vosmaer) and, as a consequence, the name *Platychalina* pre-empts *Homœodictya*.

Fig. 1.



Lissodendoryx arenaria, sp. n.

a, acanthostyle ; *b*, tornote ; *c* and *d*, isochelæ ; *e* and *f* sigmata.

Lissodendoryx arenaria, sp. n.
(Fig. 1.)

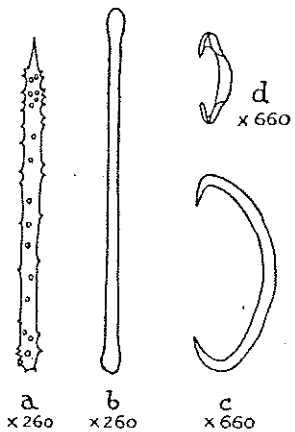
Holotype.—B.M. 35.10.21.5.

Diagnosis.—Sponge massive ; surface uneven, marked with meandrine ridges ; oscules 2–3 mm. diameter,

scattered on upper surface of body; texture hard, incompressible, friable; colour, in spirit, light brown; skeleton a mass of sand-grains echinated by acanthostyli, ·07 by ·007 mm. with strongylote to subtylote tornota, ·11 by ·003 mm., scattered interstitially; microscleres chelæ, ·021 and ·01 mm. chord, and sigmata, ·021 to ·029 mm. chord.

Remarks.—The species is the only one belonging to *Lissodendoryx* in which the skeleton is largely displaced by sand.

Fig. 2.



Lissodendoryx stephensoni, sp. n.
a, acanthostyle; *b*, tornote; *c*, sigma; *d*, isochela.

Lissodendoryx stephensoni, sp. n. (Fig. 2.)

Holotype.—B.M. 35.10.21.6.

Diagnosis.—Sponge massive or massively flabellate; surface smooth, but uneven, or markedly shaggy; oscules small, numerous, along upper margins of body; texture firm, slightly compressible, inelastic; colour, in spirit, yellowish white; skeleton an isodictyal reticulation, with uni- to trispicular mesh, of acanthostyli, ·16 by ·003 mm.; dermal tornota, with equal ends, tylote, ·18 by ·005 mm.; chelæ, ·022 mm. chord, and sigmata ·045 mm. chord.

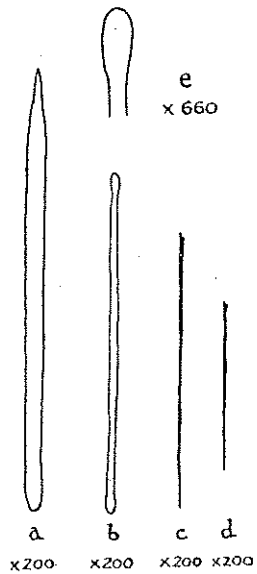
Remarks.—The species most nearly resembles *L. cratera* (Row), from the Red Sea, but differs in details of the spiculation as well as the absence of specialised pore-areas.

Tedania brondstedi, sp. n. (Fig. 3.)

Holotype.—B.M. 35.10.21.1.

Diagnosis.—Sponge irregularly massive, with tendency to produce low digitate processes; surface uneven; oscules not apparent; texture firm, compressible, inelastic;

Fig. 3.



Tedania brondstedi, sp. n.
a, style; *b*, tornote; *c* and *d*, onychæta; *e*, head of tornote.

colour, in spirit, pale yellow; skeleton of styli, ·28 by ·007 mm.; tornota, with smooth oval heads, ·22 by ·004 mm.; microscleres onychata, roughened, anisoxeote, of two sizes, ·18 (rare) and ·11 mm. long.

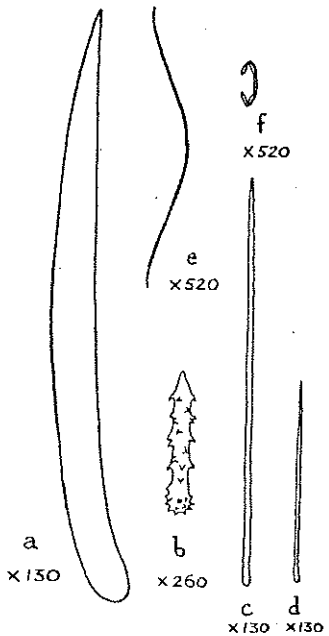
Rhaphidophlus flabellata, sp. n. (Fig. 4.)

Holotype.—B.M. 35.10.21.3.

Diagnosis.—Sponge erect, massively flabellate; surface smooth, even, minutely hispid, marked by branching

subdermal canals running from near base to outer margin; oscules 2–3 mm. diameter, irregularly scattered on upper margins of sponge; texture firm, compressible, resilient; colour, in spirit, pale yellowish white; skeleton composed of ascending fibres, cored by principal and auxiliary spicules, connected at irregular intervals by single transversely-arranged principal spicules, and echined profusely by acanthostyli; in distal ends of ascending fibres,

Fig. 4.



Rhaphidophlus flabellata, sp. n.

a, style; *b*, acanthostyle; *c*, auxiliary subtylostyle; *d*, dermal subtylostyle; *e*, toxon; *f*, isochela.

auxiliary spicules become more numerous; dermal skeleton of outwardly-directed tufts of dermal auxiliary spicules; larger auxiliary spicules, chelæ, and toxa scattered interstitially.

Spicules:—

(1) Principal styli, ·65 × ·035 mm.
(2) Larger auxiliary subtylostyli, ·4 × ·014 mm.

(3) Dermal auxiliary subtylostyli, ·2 × ·004 mm.
(4) Echinating acanthostyli, ·07 × ·01 mm.
(5) Isochelæ, ·011 mm. chord.
(6) Hair-like toxa, ·07 to ·2 mm. long.

List of Literature referred to.

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