

the back, except that the annulations are broader; the under-side is suffused with yellowish, the tip is black.

The *skull* is very long and narrow, and although undoubtedly that of a true *Sciurus*, in its restricted sense\*, it shows considerable resemblance to the skull of a *Funambulus*.

In size it is nearly equal to that of *Funambulus Berdmorei*. The nasals are intermediate, and while being flattened as in *Sciurus*, in length and proportions they resemble those of a *Funambulus*. The interorbital region and anterior end of the brain-case is bold, swollen, and rather broad in proportion to the general build of the skull. The postorbital processes are of moderate length and jut outwards more than in *F. Berdmorei*. The zygomata are moderately straight and do not jut out, especially anteriorly, so much as is usually the case in *Sciurus*. The brain-case, which reaches its maximum height at the level of the postorbital processes, falls away rapidly behind. The teeth are of the ordinary Sciurine form and the auditory bullæ rather small.

Dimensions (from flesh):—Head and body 178 millim.; tail 172; hind foot 40.

Skull: greatest length 50; basal length 38; palatal length 20.5; zygomatic breadth 27; interorbital breadth 15.5; length of nasals 15; breadth of nasals, ant. 6.7, post. 4.

*Hab.* Tjigombong, Java.

*Type* B.M. 99. 8. 6. 49. Tjigombong, Java, 28th June, 1897. Collected by Mr. C. W. Andrews.

The skull of this species is so distinct as to prevent any confusion with the existing species. Its nearest ally is most probably *S. notatus*, but its grey feet, the colour of the under-parts, and the patches of colour at the base of the limbs render its identification a matter of no difficulty.

LVII.—*Description of a new Hexactinellid Sponge from South Africa.* By R. KIRKPATRICK, Assistant in the British Museum (Natural History).

[Plate VIII.]

THE two specimens described below, which represent a new species of the Rossellid genus *Rhabdocalyptus*, were sent to the Museum by Dr. J. D. F. Gilchrist, of the Department of Agriculture, Cape Town, who obtained them by dredging

\* Thos. P. Z. S. 1897, p. 933.

from depths of 140 and 154 fathoms, about 70 miles north of Lion's Head, South Africa.

### Family Rossellidæ.

Subfamily *ACANTHASCINÆ*, F. E. Schulze, [1] p. 348.

Genus *RHABDOCALYPTUS*, F. E. Schulze, [2] p. 155.

*Rhabdocalyptus lophodigitatus*, sp. n. (Pl. VIII.)

Sponge in form of a thick-walled subglobular cup, from the base of which proceed solid digitate processes provided with tufts of basalia, forming in the fully grown condition a dense root-tuft; tufts of basalia also originating from the general basal surface of the sponge. Outer surface provided with small conical papillæ, from which bundles of pentact pleuralia project radially, the paratangential rays of the spicules forming a veil about 1.5 centim. from the surface. Orifice subcircular, with thin naked edge. Cavity of cup shallow, with smooth walls, and with very large openings at the lower part leading into wide cavernous efferent canals.

*Skeleton*.—*Parenchymalia* long diacts, wholly smooth or roughened towards the ends, the more slender in bundles and the thicker isolated, those in the digitate basal processes being stouter and more spinous than those in the body-wall.

*Autodermalia* finely spined diacts,  $600-1000\ \mu \times 10-15\ \mu$ , often with two or four central knobs.

*Hypodermalia* oxypentacts with the paratangential rays paratropal, the two external often forming an angle of  $180^\circ$ , more or less curved, smooth, or finely shagreened, or shagreened and provided with irregularly distributed thorns, sharp in young, but blunt and occasionally branched in older spicules.

*Basalia* long oxypentacts with short orthotropal or paratropal paratangentials, slightly curved, shagreened, and occasionally with small spines; the outer end of the proximal ray often shagreened. Diact basalia apparently absent.

*Autogastralia* spinous diacts similar to the autodermalia.

*Microscleres*.—1. Discocasters: *a*, large kind,  $130-160\ \mu$  in diameter, knobbed centrum  $12-14\ \mu$ , principal rays  $18\ \mu$ , terminal rays  $48-60\ \mu$ .

Principal rays appearing to split up by fission at different levels into 6-8 terminal rays, the latter being slightly curved and divergent, and provided with fine spines pointing backwards and a 4- to 8-toothed disk.

*b*, small kind,  $60\ \mu$  in diameter, with secondary rays more divergent than in the large discocasters.

2. Oxyhexasters, 90–100  $\mu$  in diameter, with usually bifurcate, but occasionally single, roughened rays.

Of the two specimens, the smaller, which is almost globular, has only a slightly developed root-tuft; the larger has several long digitate processes about 9 centim. long by 1 centim. thick, provided with tufts of long pentact basalia, forming a dense root-tuft. The total length of the large specimen is 23 centim., the breadth at the base 18 centim., length of body 13 centim., of root-tuft 10 centim.; diameter of orifice  $7 \times 6$  centim.; depth of gastral cavity about 6 centim. It should be remarked that the specimens have probably been considerably distorted by compression, as the outer veil is only intact over a small area of the smaller specimen.

The dimensions of the smaller specimen are:—Length 13 centim., with three digitate processes 2.5 centim. in length; breadth 13 centim.; orifice 4 centim.; depth of gastral cavity about 4 centim.

Diact basalia are apparently absent, though very numerous long spicules occur which are broken at the end. All the young complete spicules are pentactine, and I have been unable to find among them any diacts. In addition to the shape of the sponge and the fissile character of the principal rays of the discostasters, the occurrence of spined diacts in the gastral membrane characterizes the new species; in all of the eight previously described species, [3] p. 105, of this genus the autogastral are hexactine or hexactine and pentactine. In a species of a closely allied genus, *Staurocalyptus pleorhaphides*, Ijima, [4] p. 58, both the dermal and gastral membranes are supported by spinous diactines.

*Locality.* Large specimen, 73 miles north and 28 miles east of Lion's Head, 140 fath., Cape Colony: small specimen, 63 miles north and 34 miles east of Lion's Head, 154 fath. Both specimens obtained by shrimp-trawl.

[1] SCHULZE, F. E. "Revision des Systems der Asconematiden und Rosselliden," Sitzungsber. Akad. Wiss. Berlin, 1897.

[2] ——. 'Challenger' Hexactinellida, 1887, p. 155.

[3] ——. 'Amerikanische Hexactinelliden nach dem Materiale der Albatross-Expedition,' 1899.

[4] IJIMA, I. "Revision of Hexactinellids with Discostasters, with Descriptions of Five new Species," Annotationes zoologicae Japonenses, 1897, vol. i.

#### EXPLANATION OF PLATE VIII.

*Fig. 1.* *Rhabdocalyptus lophodigitatus*, sp. n., large specimen, reduced to one third natural size. The figure has been slightly idealized, in order to show the gastral orifice, the basal digitate processes,

and veil of pentacts, the two former features not being so plainly visible from one and the same aspect.

*Fig. 2.* Pentactine spicule (pleural prostalia),  $\times 68$ .

*Fig. 3.* Autogastral diact,  $\times 225$ .

*Fig. 4.* Large discotaster,  $\times 300$ .

*Fig. 5.* Small discotaster,  $\times 300$ .

*Fig. 6.* Oxyhexaster,  $\times 300$ .

LVIII.—*On a new Genus and Species of Vespertilionine Bat from East Africa.* By OLDFIELD THOMAS.

HARDLY had my description of *Scotæcus Hindei*\* been published than the Museum received from Dr. Hinde a second new bat, so distinct from all previously known as to require the formation of a new genus for its reception.

It is the analogue of the South-American *Histiotus* in Africa, and may be called by a name having a similar meaning to that word—

LÆPHOTIS †, gen. nov.

Most nearly allied to *Vespertilio*, but the ear and tragus enlarged as in *Histiotus*.

Skull, as compared with that of the allied form, long and narrow, flattened above, very smooth and little ridged, the crests scarcely perceptible. Palate narrow, its posterior part unusually produced backward. Bullæ rather large.

Dental formula as in *Vespertilio*.

Upper incisors close to canines, instead of being well separated from them, the tip of the lower canine biting on to the top of, or outside, the outer incisor, instead of between it and the upper canine. In correlation with this the lower canine is unusually short and feeble, its length from cingulum to tip not exceeding the outer horizontal length of *m.*<sup>1</sup>. Detailed proportions of teeth as described below.

*Type* and only species

*Læphotis Wintoni*, sp. n.

Size rather less than in *Histiotus velatus*; general appearance very much as in that species, although the ears are not so large. Fur close and fine, the hairs of the back about 6–7 millim. in length. General colour above coppery brown, the basal halves of the hairs sooty, the terminal halves clear

\* Ann. & Mag. Nat. Hist. (7) vii. p. 263 (1901).

† λαίφος, a sail.



Kirkpatrick, Randolph. 1901. "Description of a new Hexactinellid Sponge from South Africa." *The Annals and magazine of natural history; zoology, botany, and geology* 7, 457–460.

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