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rectangular crank-shaped stripe just beyond the middle; a pearly-centred reddish spot within (as well as at the end of) the cell: secondaries with a zigzag reddish stripe beyond the middle: palpi red-brown above, white below; head and thorax yellow, centre of prothorax reddish; abdomen brownish (perhaps discoloured). Under surface altogether paler, without markings. Expanse of wings 1 inch 5 lines.

"This was brought in amongst leaves, which it had bound closely by its cocoon-silk." Fianarantsoa.

Nearly allied to *B. caldusalis* of India.

SCOPULA, Schranck.

56. *Scopula*, n. sp.

Near to *S. martialis*, but much larger; it is too much rubbed for description.

XXXIV.—On the *Syringosphæridæ*, an Order of Extinct *Rhizopoda*. By Prof. P. MARTIN DUNCAN, M.B. (Lond.), F.R.S., &c.

THE late Dr. Ferd. Stoliczka collected some very remarkable spheroidal fossils in the Karakorum range of mountains, in strata beneath the Lias, and of an age which may be Rhætic or Triassic. His lamented death prevented his describing these so-called "Karakorum stones;" and Mr. W. T. Blandford, F.R.S., forwarded me the specimens, with a request from Mr. Medlicott, F.R.S., Director of the Geological Survey of India, that I should describe them for the forthcoming volume on the "Mission to Yarkand." Having carefully investigated the nature of these remarkable forms, I can come to no other conclusion, than that they will not fall within any known order in our classification, and that two genera must be founded to receive them.

As the description of the forms, illustrated by drawings, is to be published, it is only necessary to give an abstract at the present time. But, first of all, it must be noticed that these large spherical and spheroidal stones are not quite new to science. In 1867 Dr. Vauchère, in a paper on the geology of Kashmir, mentions them, and describes some as *Sphæronites*, giving very bad drawings of the outside only.

In the museum of the Geological Society there is a specimen derived from Kashmir, and presented by Captain (now Col.) Godwin-Austen in 1864. It bears the title *Sphæro-*

spongia?; and Prof. Rupert Jones, F.R.S., marked it years ago with *Parkeria*? It has the shape of one of that last group, and the external mamilliform ornamentation also. Stoliczka felt disposed to place the fossils amongst the Corals.

Having had careful radial and tangential slices taken from four differently ornamented specimens, and having examined the eleven very fine forms, I find that they are not Crinoids, Corals, Sponges, or Foraminifera.

The fossils are calcareous; they present no trace of having been attached during life; they are nearly spherical and symmetrical, and, in some instances, more or less oblately spheroidal. They are from one to three inches in their greatest diameters; and their state of preservation is wonderfully perfect. On the surface are more or less rounded or verruciform elevations, and sometimes limited depressions resembling large pores; and these may be on or between the elevations, or generally distributed.

The whole surface is composed of a close reticulation of minute tubes, of the openings of tubes on the surface, and of interspaces between the tubes. Within, the fossils consist of congeries of tubes $\frac{1}{300}$ to $\frac{1}{1000}$ inch, in limited radial groups, separated by an interrarial structure composed of a reticulation of inosculating tubes, of which some of the tubes on the surface are the representatives.

The tubes in the radial series, form very numerous cones, the apex being central and the base on the surface of the fossil, usually, but not invariably, corresponding with an eminence. The interrarial tubes may be close or wide apart; and they are derived from the radial sets by lateral branching. The walls of the tubes are composed of opaque, granular, irregular, semi-spiculate-looking, and very minute particles of carbonate of lime; there are no diaphragms. There is no intertubular structure or skeleton or coenenchyma. The spaces between the tubes are filled with calcite; and the same mineral is in the tubes.

The course of the radial tubes is sometimes straight, and they bifurcate over and over again; but usually they bend suddenly repeatedly and then pursue a straight course. The pores have a tube or tubes around their margin, and some openings of tubes on their floor; they are not always present; and sometimes they relate to the radial and at others to the interrarial sets of tubes. They appear to be conditions of growth.

The genus *Syringosphaera* has eminences and pores on its surface, and the radial and interrarial systems of tubes, and no intermediate skeleton or labyrinthic system. Probably

there are four or five species of this genus. The second genus, *Stoliczkaria*, is without pores or has them microscopically developed, the internal tubulation being remarkably close; it contains two species.

The sections of these spheres present microscopical appearances second to none in their beauty; and the polarizing apparatus enables cleavage- and other lines of a non-organic nature to be distinguished. I must apologize for this brief notice; but as the details are about to be published by the Indian Government, I am not at liberty to anticipate too much.

Sept. 5, 1878.

XXXV.—*Remarks upon the Thalassinidea and Astacidea of the Pacific Coast of North America, with Description of a new Species.* By W. N. LOCKINGTON.

THALASSINIDEA.

Family *Gebidæ*.

Gebia pugettensis, Dana.

Gebia pugettensis, Dana, U.S. Ex. Exp., Crust. i. 510, pl. xxxii. fig. 1;
Stimpson, Crust. & Echin. P. S. N. Am. p. 48.

This species is exceedingly abundant in San Francisco and Tomales Bays, and frequently attains a length of six inches or even more.

The subterranean passages made by it are usually nearly perpendicular, about an inch across, and very neatly rounded in section, with the walls smooth as if plastered, the smoothness resulting entirely from the pressure of the animal's body as it pushes itself upwards and downwards by the action of its terminal abdominal segments.

The burrows are not confined to strata of sand, but are abundant also in mud, in sandy shingle, and even among rocks, ranging upwards almost to high-water mark, and downwards to at least three or four fathoms, since large specimens were brought up in abundance by the dredging-machines in Oakland Harbour.

Almost every specimen collected in Tomales Bay, in the month of May, bore upon its abdominal feet either the curious Isopod *Phyllodurus abdominalis* (Stimpson, *op. cit.* p. 71), or a small bivalve mollusk, *Pythina rugifera*, Carpenter.