

2nd. That the coat is uniformly spread over the whole surface of the shell; in all parts of the shell it is only formed of a single series of spicula placed side by side parallel to each other and perpendicular to the surface of the shell, and that the spicula gradually increase in length, and consequently the coat in thickness, as the shell increases in size and thickness.

3rd. That this velvet-like coat bears no resemblance to any specimens of sponge that have come under my examination; the spicula are not interwoven or felted together, but are placed parallel to each other in a most uniform manner; and the coat always presents a uniform and even surface, and never shows any inclination to form prominences or branches on the surface, which is the habit of all the sponges I have seen which envelope and are parasitic on shells or other marine animals.

4th. Our previous knowledge of the œconomy of Mollusca has prepared us to believe that they can secrete siliceous bodies and form appendages on the surface of the periostraca separate from the body of the shell. Mr. Hancock has shown that the teeth on the tongue of various Gasteropodous Mollusca are siliceous, and he has shown that the surface of the foot and of various parts of the mantle of different acephalous and gasteropodous Mollusca is studded with siliceous granules, by which these animals are enabled to rasp away the surface of different marine bodies.

Well-preserved specimens of *Lucina pennsylvanica* have each of the concentric ridges which ornament the surface of the shell fringed with a membranaceous or semicartilaginous expansion, which is edged with a series of most beautiful, regular, thick, convex, pearl-like pieces of shell, and the concentric ridges which cross the whorls of the outer surface of the horny operculum of *Liopa* (*Delphinula*, sp. Lam.) are fringed with beautiful regular subglobular pieces of shell.

I may further observe, that the outer surface of the periostraca of many shells, both univalve and bivalve, is often covered with short crowded hair-like processes forming a velvety outer coat, as is easily seen in various species of *Pectunculus*, *Buccinum*, *Triton*, &c.

I am therefore inclined to believe that in these *Trigona* every layer or line of periostraca which is added to the edge of the one before deposited is furnished with a series of erect siliceous spicula, which, in conjunction with those previously deposited, form the velvet-like coat of the periostraca found in that genus of bivalve shells.

Though I am not willing to adopt the views of my friends Drs. Fleming and Johnson, yet I think that the discovery of the velvet-like coat of the *Trigona* being formed of siliceous spicula, is a most interesting addition to our knowledge of the œconomy of Mollusca.

THE TORTOISE-SHELL OF CELEBES*.

Amongst the more valuable of the commodities which the enterprising and industrious Bugis annually bring to us from Celebes and

* Translated from the 'Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen,' vol. xvii. p. i.

other eastern islands, tortoise-shell holds one of the first places. The quantity imported into Singapore sometimes rises above 13,000 and sometimes sinks below 7000 lbs., but the average, one year with another, is about 10,000 lbs. The following account by Mr. Vosmaer of its collection by the Orang Bajo of the south-eastern peninsula of Celebes will interest our readers.

The Orang Bajo distinguish four principal kinds of Tortoise, and name them Kulitan, Akung, Boko, and Ratu. The first-named is the kind which, on account of its costly shell, is the most prized. It is the so-named Karet tortoise. The shell or back of this creature is covered with thirteen shields or blades, which lie regularly on each other in the manner of scales, five on the middle of the back and four on the sides; these are the plates which furnish such costly tortoise-shell to art. The edge of the scale or of the back is further covered with twenty-five thin pieces joined to each other, which in commerce are known under the appellation of feet or noses of the tortoise. The value of the tortoise-shell depends on the weight and quality of each head, under which expression is understood the collective tortoise-shell belonging to one and the same animal, which is the article of commerce so much in request both for the Chinese and European markets.

Tortoise-shells which have white and black spots that touch each other, and are as much as possible similar on both sides of the blade, are, in the eyes of the Chinese, much finer, and are on that account more greedily monopolized by them, than those which want this peculiarity, and are on the contrary reddish, more damasked than spotted, possess little white, or whose colours, according to their taste, are badly distributed. The caprice of the Chinese makes them sometimes value single heads at unheard-of prices, namely such as pass under the name of white heads, which they also distinguish by peculiar names. It is almost impossible to give an accurate description of these kinds, and of their subdivisions, for these depend on many circumstances which remain inappreciable to our eyes. It is therefore enough for me to remark on this subject, that such heads as, possessing the above-named qualities, are very white on the blades, and have the outer rim of each blade to the breadth of two or three fingers wholly white, and the weight of which amounts to $2\frac{1}{2}$ catties (qualities which are seldom found united), may be valued at one thousand guilders and upwards. The feet of the tortoise-shell are only destined for the Chinese market; whenever the two hinder pieces are sound and have the weight of $\frac{1}{4}$ catty or thereabouts, which is very seldom the case, they may reach the value of fifty guilders and more. The whole shell of a tortoise seldom weighs more than three catties, notwithstanding it is asserted that there sometimes occur heads of four and five catties. Tortoise-shells are also sometimes found, of which the shell, instead of thirteen blades, consists of a single undivided blade; the Orang Bajos call this kind, which very seldom occurs, Lojong.

The Akung also furnishes tortoise-shell (Karet), but the shell being thin, and of a poor quality, much less value is attached to it.

The Boko is the same as that which is called Panju by the Malays. It is the common sea-tortoise, which is of no other use than to be eaten. To these sorts the Panjubui ought to be added, being the common tortoise with a thick shell, like that of the proper tortoise, but of poor quality and therefore of trifling value; so also the Akung Boko, which is distinguished from the common Boko by its much larger head.

The Ratu, lastly, furnishes a sort which is distinguished by its peculiarly great size, the Orang Bajos asserting that it is usually twice as big as the largest tortoise-shell tortoise, and therefore 5 to 6 feet long, and even more.

The usual modes by which the Orang Bajos catch the tortoise are principally by the hadung, the harpoon and the net; to these we add the simplest of all, namely falling upon the females when they resort to the strand to lay their eggs. This is also the most usual, I may almost say the only way, by which the inhabitants of the coast catch this animal. They need nothing more, than, as soon as they have got the creature, to turn it on its back, when, unable to turn itself again, it remains lying helpless in their power. It sometimes also falls into the hands of the dwellers on the coast through means of their fishing-stakes, into which it enters like the fish, and from which it can find no outlet, but remains imprisoned in the inner-most chamber.

Whenever the Orang Bajos have caught a tortoise, they kill it immediately, by bestowing some blows upon the head. They then take its upper shield, or the back itself quite off, being the only thing about the animal which is of value. The tortoise-shell adhering so fast to the shield, that, if they at once pulled it off, there would be danger of tearing the shells, they usually wait three days, during which time the soft parts become decomposed and the shells are loosened with little trouble. When they wish to remove the shell immediately after the capture, they separate it by means of boiling water. They also often accomplish this object by the heat of a fire, in the application of which, however, a danger is run of injuring the shell by burning it, for which reason this mode is only adopted by those who do not know its value.—*Journal of the Indian Archipelago and Eastern Asia*, April 1849.

Notice of some Mollusca recently taken by George Barlee, Esq., off Lerwick, and exhibited at the Meeting of the British Association for the Advancement of Science, 17th Sept. 1849. By J. G. JEFFREYS, Esq., F.R.S.

Diphyllidia lineata, Otto. New to the British seas, but (according to M. Milne-Edwards) only one-fourth the usual size.

Rissoa eximia, nov. sp. Shell oblong, rather solid, white. Whorls 5, the last equal in length to all the rest, rather swollen and ribbed longitudinally. The ribs are sharp, deep, and curved in the direction of the spire. There are about twelve of them on the last or body whorl. The two first whorls are destitute of ribs or any markings.