red colour, which deepens on being boiled into the pinky red of our Prawn. It may be readily distinguished from *Penæus Caramote*, which has also been taken on the coast of Portugal, by the single crest on the carapace, by the absence of teeth from the underside of the rostrum, by the presence of a spine near the anterior lateral angles of the carapace in addition to the spine between the bases of the inferior antennæ and the eye-stalks, by the much greater length of the filaments of the superior antennæ, which in *P. Caramote* are not more than a fourth of the length of the carapace minus the rostrum, by the absence of spines from the two basal joints of the second and third pairs of legs, and by the presence of a single spine, in place of three, at each side of the caudal segment of the abdomen.

Examples having a total length, including the rostrum, of $5\frac{1}{4}$ inches, and a carapace with a width of rather more than half an inch, are not uncommon; but the finest specimen I have seen was kindly presented to me by Dr. J. V. Barbosa de Bocage, Director of the Royal Museum of Lisbon. This specimen, which is now in the British Museum, has the following dimensions:—

	inches.
Total length from tip of rostrum to end of caudal plates	$6\frac{6}{16}$
Rostrum, length	$1\frac{1}{8}$
Carapace, without rostrum, measured at the side, and including the frontal spine	$1\frac{10}{16}$
Carapace, width	$\frac{10}{16}$
Abdomen, length to the tip of the caudal segment	$3\frac{19}{32}$
First legs, length	$1\frac{1}{8}$
Fifth legs, length	$2\frac{1}{16}$
Outer pedipalps, length	$1\frac{9}{16}$

Description of a New Siliceous Sponge from the Coast of Madeira. By James Yate Johnson, Corr. Mem. Z. S.

Order SILICEA, Bowerbank.

Dactylocalyx, Bowerbank, Phil. Trans. 1862.

Skeleton siliceo-fibrous. Fibres solid, cylindrical. Reticulations unsymmetrical.

Dactylocalyx Bowerbankii, sp. n.

The skeleton of this sponge is composed of an inelastic network of silex of a dense and irregular structure. Under a power of sixty diameters a slice of it resembles the crumb of bread, without any trace of the structure resembling spoked wheels, such as is exhibited by a siliceous sponge preserved in the Museum at Paris under the name of *Iphiteon*,—a similar structure being also seen in the pith of some water-plants. The fibre is smooth, but somewhat nodulous. The skeleton is covered with a rather thin crust, of a close texture, without conspicuous orifices, and this crust abounds with large spicula of the form denominated "spiculated patento-ternate" by Dr. Bowerbank in his memoir read before the Royal Society in 1857; and some of them are developed into the dichotomo-patento-ternate

form, such as is represented in fig. 48 of plate 23 of the 'Philosophical Transactions' for that year. But in the sponge under description the shaft is not prolonged through the common base of the triradiating branches, and the second division of these branches is much longer than the first or third; the third division, or ultimate branchlets, are pointed, and not in the same plane with each other or with the preceding portion of the branch, just as in the case of the spiculum represented in the figure already referred to. The shafts of the spicula project into the reticulations of the skeleton. In addition to the large spicula, the dermal membrane abounds with minute elongato-stellate spicula having short stout cylindrical radii; and a very few of these are dispersed in the interstitial membranes beneath the dermis. On the surface of the skeleton, immediately beneath the dermis, there is an abundance of long acuate spicula, disposed either singly or in fasciculi which are often parallel with each other. These acuate spicula are not found in the deeper interstitial portions of the sponge, but a few long, very slender, and flexuous spicula are occasionally to be found there. No sexradiate spicula could be detected, nor were any gemmules observed.

The single example of this sponge which has been obtained was brought up from deep water off the coast of Madeira. It was attached to a rock or stone by the middle portion of the underside. Its colour is white; and although its texture even when fresh was firm, the finger-nail easily made a permanent impression upon its surface. The animal matter was in comparatively small quantity. When a portion of the sponge was immersed in nitric acid it acquired a yellow tinge. The shape is that of a concave disk or shallow cup, with the border undulated into a few strong folds, some of which rise two or three inches above the rest of the surface. In one instance the opposite sides of a fold have grown together. The general appearance calls to mind a large fungus such as is sometimes seen attached to the trunk of an old tree. It measures fourteen inches across in one direction, in another twelve inches, and it has a thickness varying from half an inch to nearly an inch.

Dr. Gray has had the kindness to let me examine the half of a siliceous sponge which came into his possession from Mr. Stutchbury, who obtained it, I understand, from Barbadoes, and described it in the 'Proceedings of the Zoological Society,' 1841, p. 86, under the name of *Dactylocalyx pumiceus*, in these words:—"Sponge fixed, siliceous; incurrent canals uniform in size; excurrent canals large, forming deep sinuosities in the outer surface, radiating from the root to the outer circumference." Comparing the sponge now described with Dr. Gray's, I find in mine no well-marked system of incurrent and excurrent canals with large orifices, as in the Barbadian sponge, which latter is of a much more open and porous texture, and besides exhibits in its present state not the slightest trace of a skin.

Dedicated to Dr. J. S. Bowerbank, F.R.S., who has devoted his attention for many years to the Spongiadæ, and who is now giving to the scientific world, through the medium of the 'Philosophical Transactions,' the results of his important investigations.