the annexed cut, which belongs to a species very abundant in England,



has covered its case with shells of a small *Planorbis.* In the same manner a large species of caddis-worm, which swarmed in the Eocene lakes of Auvergne, was accustomed to attach to its dwelling the shells of a small spiral univalve of the genus *Paludina*. A hundred of these minute shells are some-

times seen arranged around one tube, part of the central cavity of which is often empty, the rest being filled up with thin concentric layers of travertin. The cases have been thrown together confusedly, and often lie, as in fig. 180, at right angles one to the other. When we consider



a. Indusial limestone of Auvergne.

b. Fossil Paludina magnified.

that ten or twelve tubes are packed within the compass of a cubic inch, and that some single strata of this limestone are 6 feet thick, and may be traced over a considerable area, we may form some idea of the countless number of insects and mollusca which contributed their integuments and shells to compose this singularly constructed rock. It is unnecessary to suppose that the *Phryganeæ* lived on the spots where their cases are now found; they may have multiplied in the shallows near the margin of the lake, or in the streams by which it was fed, and their cases may have been drifted by a current far into the deep water.

In the summer of 1837, when examining, in company with Dr. Beck, a small lake near Copenhagen, I had an opportunity of witnessing a beautiful exemplification of the manner in which the tubular cases of Auvergne were probably accumulated. This lake, called the Fuure-Soe, occurring in the interior of Seeland, is about twenty English miles in circumference, and in some parts 200 feet in depth. Round the shallow borders an abundant crop of reeds and rushes may be observed, covered with the indusize of the Phryganea grandis and other species, to which shells are attached. The plants which support them are the bullrush, Scirpus lacustris, and common reed, Arundo phragmites, but chiefly the former. In summer, especially in the month of June, a violent gust of wind sometimes causes a current by which these plants are torn up by the roots, washed away, and floated off in long bands, more than a mile in length, into deep water. The Cypris swarms in the same lake; and calcareous springs alone are wanting to form extensive beds of indusial limestone, like those of Auvergne.

* I believe that the British specimen here figured is P. rhombica, Linn.