

luscous fauna of the "faluns" is on the whole much more littoral than that of the Red and Coralline Crag of Suffolk, and implies a shallower sea. It is, moreover, contrasted with the Suffolk Crag by the indications it affords of an extra-European climate. Thus it contains seven species of *Cypræa*, some larger than any existing cowry of the Mediterranean, several species of *Oliva*, *Ancillaria*, *Mitra*, *Terebra*, *Pyrula*, *Fusciolaria*, and *Conus*. Of the cones there are no less than eight species, some very large, whereas the only European cone is of diminutive size. The genus *Nerita*, and many others, are also represented by individuals of a type now characteristic of equatorial seas, and wholly unlike any Mediterranean forms. These proofs of a more elevated temperature seem to imply the higher antiquity of the faluns as compared with the Suffolk Crag, and are in perfect accordance with the fact of the smaller proportion of testacea of recent species found in the faluns.

Out of 290 species of shells, collected by myself in 1840 at Pontlevoy, Louans, Bossée, and other villages twenty miles south of Tours; and at Savigné, about fifteen miles northwest of that place, seventy-two only could be identified with recent species, which is in the proportion of twenty-five per cent. A large number of the 290 species are common to all the localities, those peculiar to each not being more numerous than we might expect to find in different bays of the same sea.

The total number of testaceous mollusca from the faluns, in my possession, is 302; of which forty-five only were found by Mr. Wood to be common to the Suffolk Crag. The number of corals, including bryozoa and zoantharia, obtained by me at Doué, and other localities before adverted to, amounts to forty-three, as determined by Mr. Lonsdale, of which seven (one of them a zoantharian) agree specifically with those of the Suffolk Crag. Only one has, as yet, been identified with a living species. But it is difficult, notwithstanding the advances recently made by MM. Dana, Milne Edwards, Haime, and Lonsdale, to institute a satisfactory comparison between recent and fossil zoantharia and bryozoa. Some of the genera occurring fossil in Touraine, as the *Astrea*, *Dendrophyllia*, *Lunulites*, have not been found in European seas north of the Mediterranean; nevertheless the zoantharia of the faluns do not seem to indicate on the whole so warm a climate as would be inferred from the shells.

It was stated that, on comparing about 300 species of Touraine shells with about 450 from the Suffolk Crag, forty-five only were found to be common to both, which is in the proportion of only fifteen per cent. The same small amount of agreement is found in the corals also. I formerly endeavored to reconcile this marked difference in species with the supposed coexistence of the two faunas, by imagining them to have severally belonged to distinct zoological provinces or two seas, the one opening to the north, and the other to the south, with a barrier of land between them, like the Isthmus of Suez, separating the Red Sea and the Mediterranean. But I now abandon that idea for several reasons; among others, because I succeeded in 1841 in tracing the Crag fauna southwards in Normandy to within seventy miles of the Falunian type, near Dinan,