

and the same specimen, that the young vesicles had long spines at their tops, the more mature shorter ones, and on full-grown vesicles they were nearly or altogether obsolete ; while bluntly tubulous and acutely pointed cells occurred promiscuously, on the same stalk, in specimens of every size and exterior habit. Linnæus, apparently swayed by these assertions, followed Pallas ; but Ellis, in a later work, adhered to his first opinion, for, " besides the difference of their denticles (cells) and ovaries," which he evidently regarded as permanent, they have, he says, " quite a different habit and manner of growing." All subsequent writers have assented to Ellis's views, most of them, at the same time, expressing a suspicion of their correctness, and my own limited observations have possessed me with the same dubiety. Specimens can be readily produced which, from habit and the figure of their cells, will be at once pronounced the representatives of distinct species, but a larger examination may lead to another conclusion. I have seen no specimens of *S. cupressina* with the *cells* of *S. argentea*, * but I have seen several which, from their habit, I would refer to the latter, with the *cells* and *vesicles* of the former. Such a specimen is figured in Plate XII. I can also state that on the same specimen I have observed cells that might be considered as belonging to either species ; and with these facts I should, perhaps, have amalgamated the synonymes, had I not been aware that some of our best naturalists, for example Bean and J. V. Thompson, are opposed to the junction. " Besides," to adopt the words of Professor Lindley in a somewhat similar discussion, " our daily experience shows us that excessive analysis is far preferable to excessive synthesis, especially for the purposes of students ; the former leads to no other inconvenience, than that of increasing the degree of investigation which *species* must receive to be understood : the latter has a constant tendency to render investigation superficial, and characters confused," *Syn. of the British Flora*, Pref. p. ix.

Professor Jameson has inserted *SERTULARIA CUPRESSOIDES* among those species found in the Frith of Forth, Wern. Mem. i. 564 ; and in the work entitled " *Corallina*," p. 83, the elegant Australasian *S. ELONGATA* and *S. PECTINATA* are said to be found on the English coast. I believe there is some error in all these instances.

I have repeatedly observed on oyster-shells, and among the roots

* It deserves to be remarked, in connection with this point, that the characters of *S. argentea* given by Lamarck are really those of *S. cupressina* ; and this has ascribed to it the diagnostics of *S. argentea*.