

be published in the first number of the proceedings of the society, which will appear during the summer. Besides these set experiments, Mr. W. H. Pickering of Boston met with some success in the experiments which have attracted so much attention from the English society, — experiments in which a drawing thought of by one person, is reproduced by another, who has no visible means of obtaining information as to what the drawing may be. In the accompanying illustration we have reproduced all the figures as they were drawn, numbering them from 1 to 52. The upper line in each case contains the originals, and the lower the reproductions. The originals were made either by Mr. Pickering or by one of his friends, and the reproductions were most of them made by a young lady, who, on one or two evenings when the experiments were tried, met with some success. It may be well to state, that with figs. 6, 7, 8, and 20, certain extraneous causes acted which interfered with the results. The first forty figures were all made in one day; figs. 41 to 47 inclusive were made by another person; the remaining figures were made by the sensitive, so called, on a day when apparently there was no thought-transference.

MIMICRY AMONG MARINE MOLLUSCA.

It is a curious fact, that, while among the terrestrial animals the number of known cases of protective mimicry is very large, among aquatic animals it is very small. I have no doubt that the comparative poverty of our knowledge of the habits and situation of aquatic animals in part accounts for this, but I believe also that there is really vastly less mimicking. I do not know of any marine species, that, harmless in themselves, mimic formidable species for protection; but there are instances in which forms are modified in color or shape so as to resemble the surroundings in which they live, and thus escape the observation of their enemies. In the summer of 1879, Dr. E. B. Wilson, while studying in Brooks's laboratory at Beaufort, N.C., found abundant specimens of *Ovulum uniplicatum*, — a mollusk living upon the stems of *Leptogorgia virgulata* (a sea-fan abundant there in shallow sounds). The stem of the sea-fan is of an orange-yellow color, and, further, is often marked with yellow swellings where the coral has spread itself over the shell of an attached barnacle. The *Ovulum* has a yellow shell; and the skin folds up over the shell, and is also of an orange-yellow color, — precisely the same color as that of the pen-

natulid, — so that the snail escapes notice very readily indeed. It is abundantly found upon the *Leptogorgia*, and never met with except associated with it.¹ Last summer at Beaufort, in trawling in ten fathoms of water, a few miles off Cape Lookout, we took a *Leptogorgia* whose general habit was the same as that of *L. virgulata*, but which was very different from it in color. In this one the color is deep rose, almost purple, and mottled with white at the openings, where the polyps are fixed. Now, the question was, Is there an *Ovulum* for this *Leptogorgia*? and on examination, sure enough, there was found a large number of the *Ovulum*s, in this case again imitating the colors of the host. This *Ovulum* is undoubtedly of the same species as the yellow one, for it presents no difference except in color. The shell is red-brown; and the folds of skin that surround it in the expanded snail are deep-rose color, and *mottled with white spots*. Here, then, is another very good illustration of the familiar principle that forms will vary in adaptation to their surroundings, and of the part that mimicry may play in natural selection. Confined in aquaria, the snails sought their own corals to creep over them; and, if the red snail and yellow coral only were put into the same aquarium, the snail showed not the least desire to creep over the coral, but remained creeping about the walls of the aquarium.

I observed another snail last summer that I feel sure must owe its shape and color, at least in part, to mimicry, though here there were not so good grounds for the conviction as in the case just mentioned. I found on the beach at Fort Macon, one day after a strong southerly gale, a single specimen of an undetermined species of *Scyllaea*, — a nudibranch characterized by a pair of tentacle shields, and two pairs of elongate narrow processes of the skin upon the back, on the inner side of which white delicate gills are placed. This creature, when placed upon the Sargassum, or gulf-weed, shows the closest resemblance to it. The color is almost identical with that of the alga, a light brown. The body is elongate and much compressed, and the foot-sole an elongate, narrow groove, perfectly adapted for adhering to the alga stem. The tentacle sheaths and the skin processes upon the back are thin, and at the edges are wavy, and present the most perfect resemblance to the leaves (?) of the alga. The compressed body is further terminated posteriorly by a thin vertical portion like a fin,

¹ Dr. W. Breitenbach, in *Popular science monthly*, January, 1885, p. 365, mentions vaguely some nudibranch that imitates the sea anemones upon the stems of Sargassum.