

would be worth while attempting to preserve specimens for future microscopic examination by means of osmic acid.

25. *Algæ*.—Marine algæ may be found between tide-marks attached to rocks and stones, or rooting in sand, etc.: those in deeper water are got by dredging, and many are cast up after storms; small kinds grow on the larger; and some, being like fleshy crusts on stones, shells, etc., must be pared off by means of a knife.

The more delicate kinds, after gentle washing, may be floated in a vessel of fresh water, upon thick and smooth writing or drawing paper; then gently lift out paper and plant together, allow some time to drip; then place on the sea-weed clean linen or cotton cloth, and on it a sheet of absorbent paper, and submit to moderate pressure—many adhere to paper, but not to cloth; then change the cloth and absorbent paper till the specimens are dry. Large coarser kinds may be dried in the same way as land-plants; or are to be spread out in the *shade*, taking care to prevent contact of rain or fresh water of any kind; when sufficiently dry, tie them loosely in any kind of wrapping-paper; those preserved in this rough way may be expanded and floated out in water at any time afterward. A few specimens of each of the more delicate algæ ought to be dried on mica or glass. A note of date and locality ought to be attached to every species.

Delicate slimy algæ are best prepared by floating out on smooth-surfaced paper (known as "sketching-paper"), then allowed to drip and dry by simple exposure to currents of air, without pressure.

26. Very little information exists regarding the range of depth of marine plants. It will be very desirable that observations should be made upon this subject, as opportunity from time to time presents itself.

Professor Dickie remarks, and the caution should be borne in mind: "When the dredge ceases to scrape the bottom, it becomes, in its progress to the surface, much the same as a towing-net, capturing bodies which are being carried along by currents, and therefore great caution is necessary in reference to any marine plants found in it. Sea-weeds are among the most common of all bodies carried by currents near the surface or at various depths below, and from their nature are very likely to be entangled and brought up."

27. Carefully note and preserve algæ brought up in dredge in moderate depths, under 100 fathoms, or deeper. Preserve specimens *attached* to shells, corals, etc., which would indicate their being actually *in situ*, and not caught by dredge as it comes up.