is poured on, and if after examination under the microscope the spicules are found to be clear and dry, they may be at once mounted in balsam; if they have a dirty appearance they must be again washed with alcohol, but if the process has been carefully followed out this will seldom be found necessary. There are many advantages in this method, one of the chief being the fact that a complete sampling is obtained of the spicules of the Sponge, but few even of the most minute being lost. It is also speedy, but has the defect of not furnishing duplicates; if duplicates be desired it is best to boil the piece of Sponge in a watch-glass and to wash the residual spicules in water and absolute alcohol before transferring to glass slides; or the contents of the watch-glass may be emptied into a conical wine-glass filled with water, which may be left to siphon off through a wide capillary glass tube, the last traces being removed by a triangular piece of blotting paper supported vertically, absolute alcohol is added as before and the spicules transferred to glass slides by a dipping tube.

In the case of Lithistid Sponges, the spicules of which are grown together into a dense network, additional steps are necessary. A fragment of the Sponge is first boiled in nitric acid in a watch-glass, this liberates all the loose spicules, including the young forms of the desma, and an occasional almost adult example not yet completely incorporated with the skeleton. The skeleton itself remains as a coherent network, which may be removed with the forceps and washed in a beaker of distilled water. The nitric acid is removed from the loose spicules in the way already described in the case of the Choristida. The skeletal network is cut with a razor into fairly thin slices, which are thrown into water to separate useless chips, the slices are then removed, some are dried and mounted at once in balsam, others are subjected to further treatment in order to isolate the component desmas, with a view to studying their general form. This may be accomplished by boiling in caustic potash in a silver vessel, or by treatment with hydrofluoric acid. The later is the simplest plan, but both yield equally good results. In treating with hydrofluoric acid the thin slice of skeletal network is placed on a clean silver coin (a three-penny piece answers the purpose), it is covered with water and a drop of the acid added; after a few minutes, the exact time of course depends upon the size of the slice, the desmas fall apart with the slightest teasing, and immediately this happens the further action of the acid must be arrested; this is most simply accomplished by plunging the coin into a watch-glass filled with water, the water is then siphoned off with a wide capillary tube, and the last traces by blotting paper; a second washing with water follows, and after this is removed the spicules are washed out of the watch-glass by absolute alcohol; to accomplish this with thoroughness the glass should be held vertically and the alcohol delivered into it by means of a pipette; the edge of the watch-glass should touch the glass slide so that the alcohol as it flows out may form a continuous bridge between the slide and the watch-glass. This ensures complete transference of all the desmas to the slide.