

RECOVERY AND PRESERVATION OF MARCASITIZED AND PYRITIZED MICROFOSSILS

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In order to obtain complete specimens without the loss of surface ornamentation extreme care must be exercised in removing pyritized and marcasitized microfossils from limestone. The following procedure was found to be the most satisfactory: break sample into several small pieces; place broken sample in 500 c. c. beaker; fill beaker two-thirds full of water; add dilute HCl by means of burette tube at the rate of one drop per thirty seconds; drain off the water and remove silt and clay by repeated washings, using extreme care during washing so that fragile specimens are not destroyed; for final washing use saturated solution of tartaric acid which removes iron oxide and iron sulfates that have formed on pyritized or marcasitized fossils; place washed material in oven to dry and examine material in usual manner.

The fossil material which is picked out for future use should be washed with saturated tartaric acid solution in order to remove all products of oxidation; when solution has evaporated, wash specimen in strong ammonia solution, so that a basic condition exists upon the surface of the specimen; wash in absolute alcohol to dry specimen thoroughly; orient fossils and place on slide using celloiden which coats and attaches specimen to slide. The celloiden coating prevents oxidation,¹ but can be removed with absolute alcohol.

The important rule to be observed throughout is: never coat a specimen with celloiden if the surface is acidic, because an acidic condition favors oxidation of specimens even though the specimen is coated with celloiden.

¹ Celloiden is a mixture of $\frac{3}{4}$ gram celloiden (air dry), 50 cc. absolute alcohol, and 50 cc. of ether.

The author wishes to acknowledge the helpful suggestions of Harry Kimple, University of Illinois, concerning the proper mixture for the celloiden solution.
