

PROPER PRESERVATION OF SPECIMENS

S. K. MUKERJEE

Howrah

The importance of a herbarium in taxonomical work can not be over-emphasized. The specimens incorporated in a herbarium serve as reference materials and are to be preserved for ever. Type sheets are no doubt the most important specimens but all old specimens are no less important because these having been examined by experts become authentic and are often considered as good as type sheets. What appears to be a poor old specimen in a herbarium turns out to be more valuable than a recently collected good specimen. Herbarium specimens are irreplaceable. They are different from museum exhibits.

The mounted specimens are preserved in a herbarium usually in pigeon-hole almirahs. In some cases there are drawers in the pigeon-holes that serve like boxes and give better protection. But in such cases to bring out the specimen bundles and to replace them requires very careful handling. However keeping the specimens in pigeon-hole almirahs with or without drawers is not enough protection against the insect and fungus-attack. The specimens are therefore poisoned by applying corrosive sublimate before they are mounted. The effect of poisoning lasts for some time but not for a long period. So the mounted specimens are periodically cleaned and poisoned. Napthaline powder is sprink-

led in the pigeon holes and in between the sheets to take away the dampness and for repelling the insects if there be any. For this purpose manual labour is engaged. This method has the disadvantage that it necessitates much handling of the valuable sheets by persons who little realise the value of an old, dry, very brittle specimen and some times do more damage themselves by breaking and throwing away small bits of the specimens if they are not very careful in handling the sheets. Further repeated application of Mercuric chloride does much damage to the paper on which the specimen is mounted and eventually to the specimen itself.

The task of keeping the specimens free from the ravages of insect and fungal attack is best served by fumigating them. Once fumigated the specimens remain proof against such pests for several years. Rough handling is therefore reduced to minimum; and left undisturbed the specimens will keep in perfect condition for a pretty long time. With that object in view fumigation of specimens in bundles is being resorted to for tackling the problem of preservation. A proper fumigation chamber is to be constructed and by means of a strong poison-gas, preferably Potassium cyanide, specimens are to be fumigated. The fumigation chamber will have several open racks where specimen bundles are to be

placed and after tightly closing the door gas is allowed to enter through the inlet. After some time the inlet is closed and the gas is allowed to remain in the closed chamber for about 24 hours. The gas is then expelled through an outlet by blowing in fresh air. The chamber should not be opened forthwith but may be allowed to remain closed for

another day and then opened, and the specimen-bundles taken out.

It is however dangerous to work with a poison gas and this work should not be entrusted to an untrained person but workers should be engaged in the task after proper training.