

most difficult of all insects to get rid of. In small vineries it should not be a continuous pest, as it is possible to clean it out. The case of large houses is different; it would be impossible to devote the necessary time to the pest if the same means were adopted that are applicable to small houses.

The mealy bug has been the subject of more writings than probably has any other insect; and a good many recommendations have been made for its eradication. A number of different dressings for the rods have been recommended, such as washing with soft-soap or with paraffin, and dressing with a mixture of coal-tar and clay. Although these recommendations are well authenticated, and have been put into practice with good results, yet cases have occurred of the rods being killed by each one of them. The fault, however, has not been in the dressing, but in the method of application. A vine-rod is very porous, and, unless protected by its bark, is capable of soaking up anything of a penetrating nature. It is a general custom to scrape off all the bark which it is possible to remove, but, as pointed out earlier in this series, only that bark which is hanging loose may safely be detached; all that is firmly attached should remain. Bark is often scraped off because it is thought the bug gets under it, but the insect cannot get under unless the bark is loose. If a natural covering of bark is left, a fairly strong dressing may safely be applied. It appears, however, that there is danger in the use of strong dressings, and it is therefore best to avoid them.

Scrubbing the rods with hot water has been found by many growers, including the writer, to be effective. First remove loose bark and loose scales around the buds; then scrub the rods with a fairly stiff brush, using water at a temperature of about 130° F., which is hot enough to kill the bugs but will not injure the buds. In bad cases the rods should be scrubbed twice—at the time of pruning, and again a few weeks later. Before the buds begin to move, dress the rods with a solution of Gishurst's compound—8 oz. in a gallon of water, applied with a paint-brush. All prunings and leaves should be carefully collected and burned, and everything needful done to thoroughly clean the house, so as to get rid of bugs that have fallen to the ground. The rods must, of course, be taken down for cleaning; before tying them up again thoroughly and forcibly spray the whole interior with a solution of kerosene emulsion at a strength of 1 in 12. The wires of the trellis should be rubbed with a rag soaked in kerosene. While the vines are in growth keep at hand a tin containing a little kerosene and an old tooth-brush. When a bug is seen touch it with the brush just wetted with kerosene, and it will be instantly killed.

Tedious methods are not possible in large houses, however, and for these fumigating with hydrocyanic-acid gas appears to be the only way to get rid of the pest. This gas is of a deadly nature, and human life is endangered by any carelessness. It is therefore best to avoid its use where other methods can be made effectual. A good deal of care in its use is necessary while the vines are in growth, as it can easily kill tender foliage, either of the vine or of other plants, and can also injure the berries. In theory, damage from its use can be avoided, but it proves to be difficult in practice. It is noticed that authorities in England now advise its use only after the grapes have been cut, and this is, no doubt, the wisest course. As fumigation does