Adult sandflies of either sex live as long in the plaster-plug tubes as in the standard breeding-pots, and we believe that the average yield of eggs is greater. The larvae, however, get along better and with less attention in the earthen pots. Our routine rearing technique is therefore a combination of the two methods. The tubes may be autoclaved and used a number of times, but in practice it is more satisfactory to use only fresh plaster.

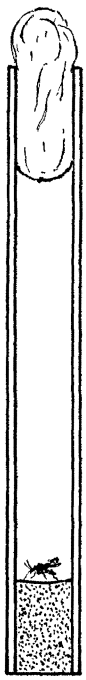

FIG. 1.

In addition to serving as breeding-vessels for Phlebotomus, the plaster-plug tubes have proved useful in a number of other ways. They permit any desired degree of moisture and thus provide an excellent container for the transportation and temporary storage of living insects. They are in routine use for catching sandflies and other insects in the verruga zone and transporting them alive to the laboratory in Lima. They may prove useful in shipping live insects considerable distances. With these tubes we have secured, through the cooperation of a physician whom we instructed in their use, living sandflies and eggs from a region several days' journey from Lima.

Tubes of this type can doubtless be adapted to the rearing of various other insects. Though we have not had occasion to try them out extensively, we have used them successfully in rearing several species of fleas.

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THE ADMINISTRATION OF DRUGS TO RATS

IT is often necessary to give experimental animals quantitative doses by mouth, and frequently the material given is distasteful. Even those with much experience in giving a stomach tube to rats occasionally kill a valuable animal and at best the process is time consuming and unpleasant. A substitute technique has been found to be successful. Dissolve or suspend the material in a sucrose solution and measure it from a needleless tuberculin syringe into a rat's mouth. All rats like sugar and will take anything that can be made to taste sweet. Bile salts and other bitter material is consumed better in suspension than solution. It is recommended that two or three practice periods precede the experimental feeding. If the rat lies on its back with head slightly raised, there is no danger of spilling if the stream from the syringe is adjusted to the rate at which the rat laps. Most rats will try to turn over until this position is conditioned to the pleasure of drinking the sugar water.

This method has been used on several hundred rats, including many suffering from complete anorexia due to adrenalectomy or severe diseased conditions. Vitamins, ethynil testosterone and other hormones, sulfapyridine and many other substances have been given. The method has failed only in the administration of such irritants as CCl_4, where the trauma to the tissues of the mouth outweighs the appeal to the "sweet tooth."

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KEEP BOTTLE-TOPS FREE FROM DUST

LABORATORY bottles invariably gather dust. After pouring from them fluid remains on the lip and around the stopper, to dry out, effloresce or otherwise create and attract dust. Cleaning them daily is a time-consuming labor, with danger of contamination from the usual wet cleaning-cloth. Such dirt and contamination may affect laboratory procedures adversely, particularly in the case of preparations for microscopic study.

A simple and effective means of keeping bottle-tops clean is to cover each with an inverted paper drinking-cup. These cups may be had in various sizes to fit different types of bottles; they are inexpensive and may be discarded when soiled.

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