be avoided. Vinyl acetate resins are thermoplastic and remain somewhat flexible at room temperature.

Brief experience with the physical and chemical properties of certain industrial plastics has suggested that many other uses for such compounds may be found in histological techniques adapted for plant tissues. Reliance on the tried and true methods need not be sacrificed in the development of these new techniques or new materials for older techniques.

An Effective and Nontraumatic Method of Handling Monkeys

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A technique which we use for catching monkeys preparatory to administering anesthesia has attracted sufficient favorable comment from monkey handlers who have witnessed its operation to warrant a brief note.

The two essential items of equipment are (1) the transport cage and (2) the square-hoop net, illustrated in Fig. 1. The

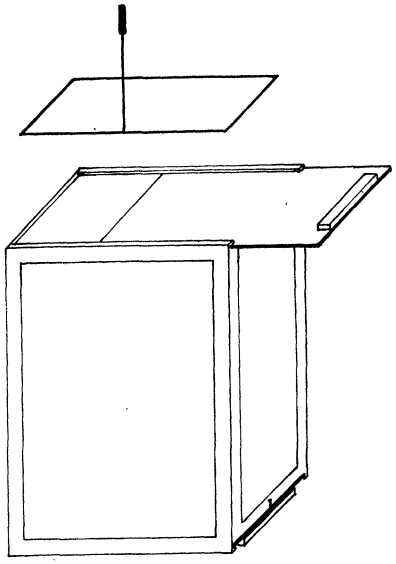

FIG. 1

transport cage, which measures 13 x 16 x 20 inches, is equipped with a sliding door on each end; its sides may be made of wire mesh to facilitate observation. The hoop of the net is constructed of $\frac{3}{8}$-inch rod. Its size (10 x 13 inches) is such that it fits easily into the transport cage.

The first step in the procedure is to chase or lure the monkey into the cage. This can be accomplished with surprising ease, for rhesus monkeys, after a little experience with the cage, react to it almost as though it were a haven of refuge. Once the animal is inside, the cage is set on end. The net is then placed in position over the sliding door, which is now on top. When the door is withdrawn, the net is moved down over the monkey. The lower door is then withdrawn and the hoop held against the floor. When the cage itself is lifted off the net, the enmeshed monkey lies helpless at one's feet.

The entire procedure is tolerated with a minimum of emotional upset for both monkey and man. Using this technique, a single unassisted worker can carry out intraperitoneal or subcutaneous injections. The various uses to which the method may be put are self-evident.

Preservation of *Plasmodium vivax* by Freezing

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There are several methods of fever therapy for neurosyphilis, but induced malaria, either alone or combined with other agents, remains the method of choice of many syphilotherapists. A serious limitation to the more general use of malaria therapy has been the difficulty of providing a constant, readily available source of parasites. Plasmodia do not remain viable in blood under the usual conditions of storage (room temperature and icebox) for more than a few days (*4*). Preliminary results of preserving *Plasmodium vivax* by low-temperature freezing suggest that this may prove a practical method of long-term preservation.

Preservation of protozoa by freezing is not new. Turner (*5*) was able to maintain *Treponema pallidum* and *pertenue* in a viable state at low temperatures for long periods of time. Coggeshall (*1*), studying human, avian, and monkey malaria parasites, reported failure with a process involving rapid freezing at −72° to −80° C. and slow thawing, but when thawing was effected rapidly, monkey parasites were preserved successfully for as long as 70 days. Others (*2, 3, 7*) have been able to preserve the various parasites of bird malaria at temperatures of −50° to −70° C. for long periods of time. Recently Weinman and McAllister (*6*) have reported the freezing and prolonged storage of several types of pathogenic human protozoa with conservation of virulence. Although human plasmodia were not studied, the preservation of *P. lophurae* in the frozen state for long periods was confirmed. Russell (*4*) has alluded vaguely to low-temperature freezing of human malaria parasites as a means of preservation for use in therapeutic malaria, but provided no documentation.

Since we have been unable to find reports of preservation of human plasmodia by freezing techniques, we wish to record the successful transmission of malaria to three subjects by inoculation of blood infected with *P. vivax* which had been frozen and maintained at low temperatures for periods of 10–15 days.

The donor from whom the strain of parasites was originally obtained was H. K., a veteran of service in New Guinea, who had been suffering from recurring attacks of vivax malaria. At the time of bleeding, blood smears showed many young ring forms of *P. vivax*; a rough estimate of parasite density was approximately 10,000/mm.^{3}. Twenty cc. of blood was withdrawn into 3 cc. of 4 per cent sodium citrate solution, of which 10 cc. was immediately injected intravenously into D. M., a neurosyphilitic receiving penicillin therapy. Five cc. of the remainder was transferred to a thin-walled glass test tube and rapidly frozen at a temperature of −75° C. by immersion in alcohol-dry ice mixture, the tube being rotated by hand until