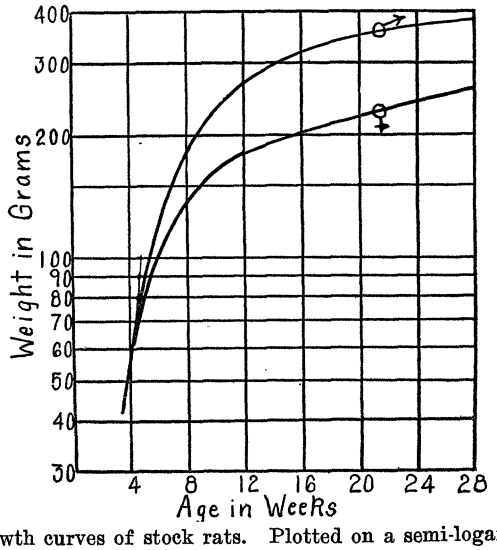

Growth curves of stock rats. Plotted on a semi-logarithmic scale diagram.

The efficiency of this diet for reproduction is indicated by the following data. In August, 1929, all the females of the stock colony which were over one hundred days of age and less than one year were mated. Of this group fifty-two were young females which had never before been mated and twenty-eight were mature animals which had produced one or more litters. A male was placed with each three females and left with them for a period of five days. All the males were young and untested as regards fertility. From these matings fifty-two of the females, 65 per cent., produced litters. In view of the fact that most of the animals used were young and untested and that the mating period was limited to five days, we feel that the above records indicate a high degree of fertility. The average number per litter from the above matings was 7.3. Each mother was given six young to rear with the exception of thirteen mothers which were given five only. Thus the fifty-two mothers were allowed a total of 299 young. Of this number over 90 per cent. were reared and successfully weaned at twenty-three days of age.

Recently this stock diet has been tried out with rats in three other laboratories and uniformly satisfactory results have been reported to us. During the past year we have used it as a stock diet for our mouse colony with excellent results. Since this ration is mixed in hundreds of tons for marketing as a calf meal, it is available at a price which is very much lower than the cost of the ingredients and labor involved in the preparation of stock diets in small quantities in experimental laboratories.

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AN IMPROVED CALOMEL ELECTRODE VESSEL

IN much previous work in this laboratory the salt bridge connecting cell and electrode has been a cotton string wet with KCl solution of the same concentration as that used in the electrode. This string led into a beaker into which also dipped a calomel electrode tip of a conventional type. When six or more electrodes were used on a single cell, there was difficulty in getting the electrode tips with their attendant beakers close enough together. Even though the beakers stood on a paraffined bench, the slight contamination of the paraffin surface with moisture and spilt KCl gave cause to doubt the perfect insulation of the electrodes from the ground and from each other. An electrode vessel of the type shown in Fig. 1 was therefore used. The cup into which the

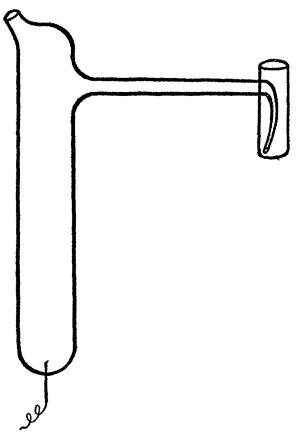

FIG. 1. Calomel electrode vessel with attached cup for string salt bridge.

string dips is blown onto the end of the electrode arm, which is long enough to permit placing the cups as close together as desired. The electrode arm enters the side of the cup, so that the entire surface of the electrode may be wiped with paraffin oil without oiling the solution in the cup. The arm is drawn to a capillary and extends to the bottom of the cup to prevent much mixing of the solution in the cup with that in the electrode. At the end of the day's work the cup is emptied with a pipette, more solution from the electrode vessel is flushed through and a rubber stopper is inserted to prevent evaporation of water and consequent creeping of KCl. The electrode vessel is held in a grounded metal clamp from which it is sufficiently insulated by the glass, oiled with paraffin. This electrode vessel has been found a great time-saver.

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