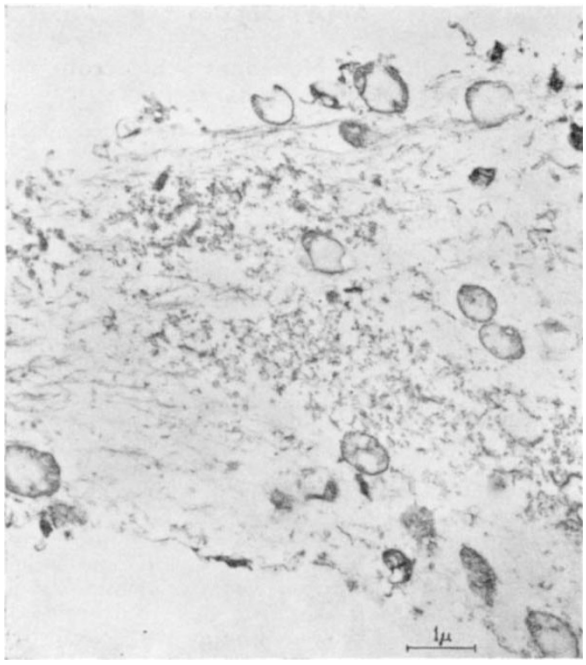

Fig. 1. Longitudinal section of a dendrite of a neurone hand-dissected from the lateral vestibular nucleus of rabbit brains. Osmium tetroxide fixed 12 min after death of the animal

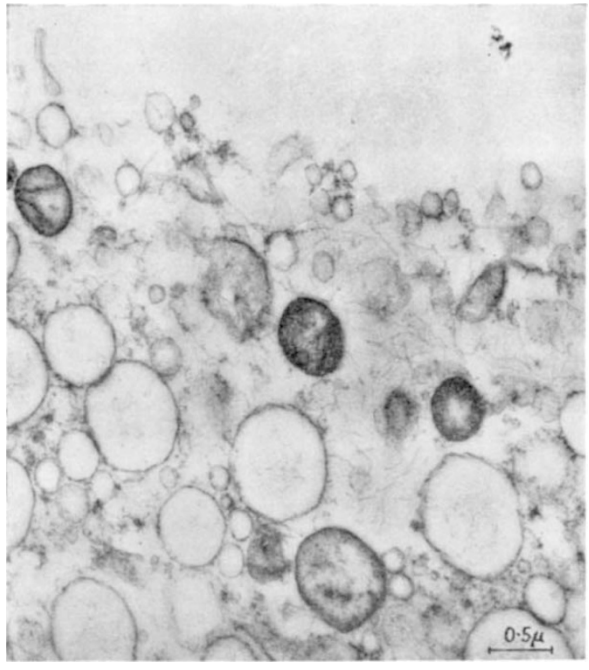

Fig. 2. Part of the soma of a cell similar to that shown in Fig. 1, but fixed after 2 h incubation in succinoxidase assay mixture

extent to which these systems reflect other essential features of the situation *in vivo*.

We thank Mr. David Gunn for assistance with photography.

Note added in proof. Since this communication was submitted for publication it has been reported that membrane potentials have been recorded from neurones hand-dissected from Deiter's nuclei of rabbits[5]. This observation is surprising in view of the findings described here. Further investigations are necessary both of the changes in the surface following dissection and of the mechanism of the development of the recorded potentials.

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BIOLOGY

Oscillation in the Simple Logistic Growth Model

The logistic curve is often used in teaching ecology as a first description of growth of an animal population. For many reasons, frequency related to age structure and time-lag effects, it does not usually fit in practice; and a population may undergo oscillations of one type or another. The causes of oscillations have been discussed in detail by numerous authors (see refs. 1–5), some of whom propose more or less complex conditions which would generate them. Nevertheless, the logistic growth curve is a useful starting point in the study of population ecology, so that the following simple relation between the rate of increase, generation time and the type of approach to the 'saturation' level may be of interest.

If we assume that adult numbers in any generation are determined by the number of adults in the previous generation the type of approach can be predicted immediately from the intrinsic rate of increase (r). The logistic equation can then be re-written:

$$N_{n+1} = N_n \cdot e^{r(1-N_n/K)}$$

where r is expressed per generation, K is the saturation density and N_{n+1} is the population size after one generation. Then, if $\Delta N = N_{n+1} - N_n$, we find $d\Delta N/dN = (1 - Nr/K) \cdot e^{r(1-N/K)} - 1$. From this equation it is seen that when N is equal to K, $d\Delta N/dN = -r$.

The relation between ΔN and N allows us to predict the type of approach to equilibrium that will occur[6]. In the present instance the population will (*a*) approach K gradually, provided r lies between 0 and 1, (*b*) undergo damped oscillations when r has values between 1 and 2, and (*c*) show oscillations increasing to the point of extinction when $r > 2$.

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Deposition of Human Polymorphonuclear Leucocytes on Glass

The phagocytic activity of human polymorphs has been examined by depositing the cells on glass coverslips and observing their behaviour under phase contrast[1]. The coverslips were first prepared for use by boiling in distilled water followed by soaking in glass-distilled water for 3 h and then drying after washing in two changes of absolute alcohol, but it was found that cells collected from the buffy layer of human blood made up within 1 h of venepuncture adhered poorly to the surface of such cover-