The correct values are given in Table 1 and compared with the results of Mangum and Schopf and with their values for the oxygen consumption of the animals. (The correct values are calculated with an oxygen pressure of 0·21 atm. which corresponds to that in water in equilibrium with air, not the value of 0·29 used by Mangum and Schopf which corresponds to considerably oversaturated water. It should also be noted that this is not a measure of oxygen concentration as they state, but of the pressure which together with the solubility determines the concentration.)

Table 1. SUMMARY OF CALCULATIONS OF OXYGEN DIFFUSION IN A SINGLE ECTOPROCT

Part of animal	Oxygen supply by diffusion Calculation of Mangum and Schopf ($mm^3/h \times 10^{-3}$)	My calculation $mm^3/h \times 10^{-3}$	Observed oxygen uptake from Mangum and Schopf $mm^3/h \times 10^{-3}$
Lophophore	23·9	280	0·026
Tentacle sheath	0·3	3·6	0·029
Zoecium	0·004	2·0	0·37

These data are after Mangum and Schopf, who called attention to the misprint in the original table for their calculation for the zoecium.

It can be seen from Table 1 that the zoecium can be supplied with oxygen by diffusion with only a 20 per cent reduction in partial pressure of oxygen at the back wall, the point farthest from the water. There is no reason to assume circulation of the fluid within the body is necessary to satisfy the oxygen needs of ectoprocts.

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CYTOLOGY

Nuclear Pockets in Normal Monocytes

NUCLEAR pockets (or nuclear blebs, nuclear loops) have been described in leukaemic cells in different treated and untreated leukaemias[1–4], and their specificity for leukaemic cells has been discussed. They are similar to the material joining nuclear lobes of segmented granulocytes. Smith[5] has demonstrated nuclear pockets in non-leukaemic lymphocytes.

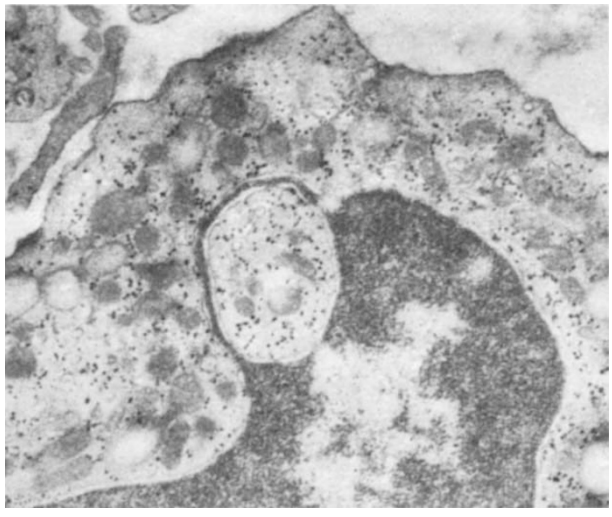

Fig. 1. Nuclear pocket in neutrophil leucocyte of peripheral blood (×26,400).

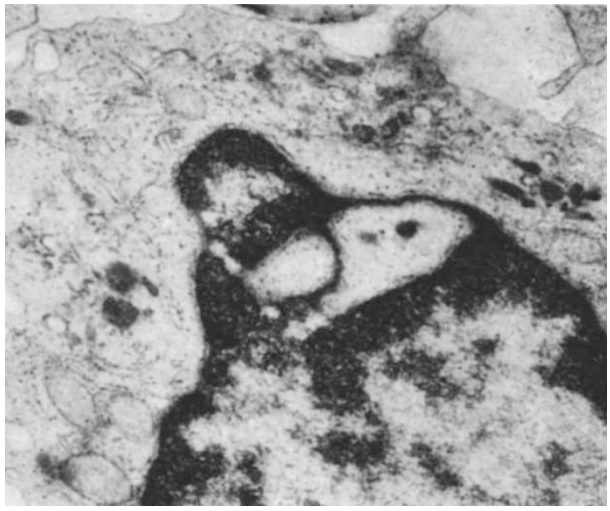

Fig. 2. Nuclear pocket in normal monocyte of peripheral blood (×16,000).

Fig. 3. Different form of nuclear pocket in a normal monocyte of peripheral blood (×70,400).

We have frequently found nuclear pockets in lymphocytes, neutrophils (Fig. 1) and also in monocytes (Figs. 2 and 3) of healthy subjects. Nuclear pockets can therefore be considered not to be specific for leukaemic cells. They seem to be a physiological structure in all forms of leucocytes. Nuclear pockets may have the function of enlarging the surface of the nucleus—they are not necessarily a malformation of the nuclear envelope.

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