been removed; these were to act as a control against possible effects due to cutting the worms.

These various amputations were performed about sixty hours before the beginning of the experiments, and the worms were kept in running sea-water until required. All experiments were carried out in 75 per cent sea-water. The worms in each group gave consistent results.

The variation in weight of these groups of worms with time is shown in the accompanying figure. It will be seen that while normal worms, those lacking their crowns and those lacking the posterior end all regain their original weight within 36 hours, the worms lacking the thorax show relatively little recovery within 84 hours. It therefore appears probable that the large thoracic nephridia play an important part in the 'osmotic regulation' of *S. pavonina*.

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Siderocytes in Mammalian Blood

FOLLOWING the work of Grüneberg[1], I decided to investigate the possibility that the siderocyte might be a degenerating cell, and that the iron might be catabolic in nature. Investigations in stored blood yielded the following results and conclusions.

Siderocytes appear in large numbers in stored blood of cats, dogs and human beings. Apparently all the cells go through a phase as a siderocyte, and it is possible to demonstrate that the siderotic granules are extruded from the red cell. Concomitantly there is a fall in total blood pigment of between 2 and 7 per cent and a corresponding increase in non-hæmoglobin plasma iron and a bilirubin-like substance. The change is affected by the availability of oxygen, inhibited by storage at low temperature, and accelerated by heat and chemical agents. Phenylhydrazine is one of these agents. The change can be effected once only, and after the granules have been extruded the erythrocyte becomes susceptible to phagocytosis.

Carbon monoxide produces a partial inhibition, but the presence of leucocytes does not influence the production of the siderotic material. Fragility changes also occur, and resistant cells resembling "target cells" (Barrett[2]) appear after the extrusion phenomenon.

It is concluded that the siderocyte is not essentially a young cell; that it is probably the stage before the cell is removed from the circulation; that it probably appears in the blood of all mammals; that the iron is catabolic, and that it is closely related to, if not identical with, the 'easily-split' blood iron studied by Legge and Lemberg[3].

A detailed account of the work will be published elsewhere.

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Fragility of Erythrocytes in Hypotonic Saline

AN interesting point in connexion with hæmolysis is the variation in the resistance of erythrocytes obtained from the different species of animals towards a particular hæmolysin. It was Rywosch[1] who first attempted a sort of generalization in this connexion by pointing out that the series obtained by writing down the names of common laboratory animals according to the order of resistance of their erythrocytes to hypotonic saline is just the reverse of that obtained by ranging them according to their resistance to saponin hæmolysis. Various suggestions were put forward from time to time to explain this inverse relation, which suggested the possibility of the existence of some factor within the corpuscles which operated in a reverse manner with respect to the lysins concerned.

Subsequent work on the subject, however, showed that Rywosch's contention is neither strictly true for all hæmolysins[2], nor is it applicable to all species of erythrocytes[3]. While working on the fragility of the erythrocytes obtained from some common laboratory animals, in hypotonic saline, it struck us that some erythrocytes known to be of very small size, such as those of sheep and goat, were very fragile, while others of bigger size, such as those of man, dog, etc., were far more resistant.

A closer examination of our data showed that the fragility of the erythrocytes of the species of animals studied, namely, guinea pig, human being, monkey, dog, rabbit, buffalo, ox, cat, sheep and goat varied inversely as their respective average diameter. It remains to be seen whether this relation is a general one and true for all species of erythrocytes.

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Determination of Ascorbic Acid in the Presence of Sulphur Dioxide

WHEN an equal volume of 3 per cent hydrogen peroxide is added to a slightly acidified ascorbic acid solution, no appreciable effect on the indophenol titration value is observed, unless iron or copper salts are present. The end-point is a permanent pink colour deepening very slowly on standing. With sulphited fruit and vegetable extracts the sulphur dioxide is converted into sulphuric acid, and the true ascorbic acid value is rapidly obtained on titration. When lesser quantities of peroxide are used, the titration values are slightly lower, and the pink colour deepens more rapidly. Apparently, re-oxidation of reduced indophenol takes place during the titration, along with reduction of the reformed indophenol by ascorbic acid still present. When 1·5 per cent peroxide is present in solution, this effect is negligible. The method has been used successfully for the last three years.

Full details of these observations will be published elsewhere.

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