

ABSTRACTS OF MEMOIRS

RECORDING WORK DONE AT THE PLYMOUTH LABORATORY

RED BLOOD-CELL ANTIGENS IN SOME LOWER VERTEBRATES

By DOREEN E. ASHHURST

J. exp. Biol. 1956, Vol. 33, pp. 249-55

The main aim of the work described in this paper was to discover if blood groups could be found in Amphibia and fish using human blood grouping techniques. No evidence for blood groups could be found in the whiting, pouting, plaice or frog by cross-matching the red cells and serum of animals of the same species. Some frogs were injected with the red cells of other frogs but no antibodies to red cells could be detected in the injected frogs. The experiments suggest that, in these species, all the animals used had the same antigens on their red cells.

The red cells of frogs, toads, tree-frogs and newts were tested against human ABO sera. All the sera (anti-G(A), anti-G(B), anti-G(A + B) and AB serum) reacted with the red cells of each species, but with the Anuran red cells, the reactions with anti-G(B) and anti-G(A + B) were much stronger. The weak reaction is caused by species antibodies present in all human sera, but the strong reaction was shown to be due also to the presence of a B-antigen on the Anuran red-cells. In frogs the B-antigen is identical with the human B-antigen.

D.E.A.

TOXIC MARINE FLAGELLATES; THEIR OCCURRENCE AND PHYSIOLOGICAL EFFECTS ON ANIMALS

By DOROTHY BALLANTINE and B. C. ABBOTT

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The distribution of toxic water blooms in the sea and brackish water is discussed and illustrated by a map. This distribution picture is not complete but gives indications of the cosmopolitan nature of the phenomenon. The causative organisms have also been listed as far as possible, and a brief discussion of the causes and economic importance of red tides follows.

The latter half of the paper is devoted to a discussion of the physiological effects of these toxins, with particular emphasis on the toxin from *Gymnodinium veneficum*. The effect of this toxin is compared with the action of the toxin causing paralytic shellfish poisoning.

This paper is one of a series in a symposium on plankton, held by the Society for General Microbiology, in September 1956, at Exeter.

D.B.

THE DIRECT ACTION OF ANTERIOR PITUITARY EXTRACTS ON THE
INITIATION OF LACTATION IN THE RABBIT

By D. B. CARLISLE

Physiol. Comparata et Oecologia, 1957, Vol. 4, pp. 295-312

Experiments are described which demonstrate that a crude pituitary extract, which has a systemic effect in initiating lactation in the primed male rabbit, does not possess any direct, local action. From such an extract it is possible to prepare a purified hormone which is directly, locally lactogenically active. Some of the implications are discussed.

D.B.C.

LARVAE OF THE BRITISH SPECIES OF *DIOGENES*, *PAGURUS*,
ANAPAGURUS AND *LITHODES* (CRUSTACEA, DECAPODA)

By J. D. MACDONALD, R. B. PIKE and D. I. WILLIAMSON

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Larvae, obtained both from laboratory hatchings and from plankton, are described for the species *Diogenes pugilator* (Roux), *Pagurus bernhardus* (L.), *P. pubescens* Krøyer, *P. prideauxi* Leach, *P. cuanensis* Thompson, *Anapagurus laevis* (Thompson), *A. hyndmanni* (Thompson), *A. chiroacanthus* (Lilljeborg) and *Lithodes maia* (L.), and a single larva obtained from plankton from off Plymouth attributed to *Pagurus sculptimanus* Lucas. Keys to these larvae are given.

A consideration of all the known larvae of hermit crabs and stone crabs shows that they fall into two main divisions, corresponding to the Coenobitidae plus Diogeninae on the one hand and the Lithodidae plus Pagurinae on the other: a division which can also be made from the disposition of the third maxillipeds of the adults. It is suggested that the classification generally accepted fails to reflect the phylogeny of the various groups, and a revised classification is proposed in which each of the two divisions indicated by the larvae forms a superfamily of the Anomura.

It is also shown that the larvae of the species of *Pagurus* fall into two distinct groups; when further species have been investigated the splitting of the genus might be justified.

D.I.W.