

Zeitschrift: Acta Tropica
Herausgeber: Schweizerisches Tropeninstitut (Basel)
Band: 32 (1975)
Heft: 2

Vorwort: Blood digestion in haematophagous insects : introductory remarks
Autor: Freyvogel, Thierry

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. [Siehe Rechtliche Hinweise.](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. [Voir Informations légales.](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. [See Legal notice.](#)

Download PDF: 20.05.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

Blood Digestion in Haematophagous Insects

edited by THIERRY A. FREYVOGEL

Contents

RICHARDS, A. G.	The ultrastructure of the midgut of hematophagous insects	83
GOODING, R. H.	Digestive enzymes and their control in haematophagous arthropods	96
LEA, A. O.	The control of reproduction by a blood meal: the mosquito as a model for vector endocrinology	112
LANGLEY, P. A.	Pathogen transmission in relation to feeding and digestion by haematophagous arthropods	116

Introductory remarks

On the occasion of the Third International Congress of Parasitology in Munich, in August 1974, the present editor was asked to organize and chair the section on "Physiology and Biochemistry of Parasitic Arthropods".

Since the above topic is so broad it was decided to concentrate as much as possible on one aspect, and blood digestion in haematophagous insects was chosen. In view of this, the four papers, now presented in this journal, were invited.

In the course of evolution, haematophagous arthropods have become food specialists. This, in itself, is of sufficient interest to parasitologists, who have to ask the question what particular adaptation this newly acquired mode of feeding entailed with respect to host finding, to food intake as well as to food digestion. In addition, in close conjunction with the particular mode of feeding, several arthropod species have become important vectors of helminths, protozoans and microorganisms, which all are taken up by the arthropods concerned at the time of ingesting. The pathogens, thus, all are to spend some time in the vectors' midgut, where they are exposed, to some extent at least, to digestive enzymes, that is to say to a potentially hostile environment. It is, therefore, felt that more knowledge of blood digestion processes as well as of pathogen/vector relationship during gut passage is of great importance for a better understanding of pathogen transmission.

The questions to be asked are numerous. They refer to the structures involved in blood digestion, to the biochemistry of the various enzymes involved, to the effects of a blood meal on the general

physiology of the arthropods concerned, and, last but not least, to the implications of the mode(s) of digestion on pathogen transmission.

I am indebted to all four authors for submitting their papers for publication, since they were originally intended only for presentation at the Munich Congress. It is evident that they cannot deal with the subject extensively or in a final way. If this presentation of the subjects triggers a broader discussion among interested scientists, it, however, will fulfil its main aim.