

Transcriptomics in Entomological Research

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Bridging the gap between genome and phenotype, the transcriptome is a molecular-level snapshot of the act of living. Transcriptomics shows which genes are expressed into proteins in a specific tissue of a specific organism at a specific time and condition.

This book gives an account of the extraordinary diversity of ways transcriptomics has been and can be utilised in basic and applied entomological research.

It encompasses a vast range of disciplines within entomology, applying transcriptomics to the study of over one million described species of insects. It covers a vast range of disciplines from phylogenomics to pest management, from ecology to physiology, and from behavior to evolutionary biology.

The book covers the breadth and depth of transcriptomics use in research to showcase the utility of this technology in all disciplines. Research examples in the book are relevant to fish, birds, plants, and fungi, as well as insects and other arthropods, helping scientists in any field, using any system, to understand what transcriptomics can do for them. The book:

- Introduces transcriptomics theory and practice for researchers of all levels wishing to gain an insight into how to apply these techniques to their own fields.
- Showcases the myriad ways transcriptomics can be used to answer biological questions.
- Is written by a team of international experts describing their own experiences, giving guidance for applying it to the reader's own work.
- Reviews how transcriptomics research has helped entomologists push their fields further and make new discoveries.

Cover photo shows the insect *Peruphasma schultei* reproduced with permission from the photographer Mayk de Haan.

