

Behavioral responses to a changing world

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Male beetles are mating with beer bottles. Credit: University of Toronto Mississauga

(Phys.org) -- Male beetles in Western Australia are mating with beer bottles in response to environmental change caused by human activity. A new book examines why, and the impacts on biodiversity.

Oxford University Press today announced the launch of Behavioral Responses to a Changing World: Mechanisms and Consequences by Dr. Bob Wong, of Monash University, and Ulrika Candolin from The University of Helsinki, Finland.

Drawing on international experts from across the globe, it is the first book of its kind devoted to understanding animal behavioral responses to environmental change. [Behavioral Responses](#) emphasises the vital links between environmental change, behavior and [population dynamics](#) which

have been rarely examined in the context of one another.

Co-editor Dr. Bob Wong, Senior Lecturer at Monash University's School of Biological Sciences and an expert in behavioural and evolutionary ecology, said how animals respond to changed conditions was a growing area of research interest.

"Due to human activities, almost all creatures live in environments that have been altered to some degree. The ability to behave accordingly under new conditions is crucial for survival," Dr. Wong said.

"Environmental change caused by human activity is considered the greatest single threat to global biodiversity. Scientists are only now beginning to appreciate the important ecological and evolutionary implications of altered behaviours due to environmental change."

Dr. Wong said the initial response of many animals to human-induced [environmental change](#) is often behavioral, which in turn affects species' interactions, population viability, evolution, and ultimately, biodiversity.

"Some of these behaviors can be beneficial and buy more time for populations and species to genetically adapt to altered conditions. Some species might even thrive in urban environments. But behaviors can also be maladaptive," Dr. Wong said.

"Male beetles, for example, are mating with beer bottles because they resemble female [beetles](#) and female fish in Mexico, living in polluted streams, are mating with male fish of the wrong species."

The comprehensive text discusses impacts on both the mechanisms underlying behavioral processes, as well as the longer-term ecological and evolutionary consequences. Topics as diverse as endocrine disruption, learning, reproduction, migration, species interactions and

evolutionary rescue are canvassed.

Dr. Wong will officially present 'Behavioural Responses to a Changing World' at a [post-congress symposia](#) of the [14th International Behavioral Ecology Congress](#) on 18 August in Sweden.

Provided by Monash University

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