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Coordinating associative and ecological accounts of learning in the garden snail *Cornu aspersum*

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Highlights

Associative learning contributes to the adaptation to environmental demands.

The adaptive value of associative learning in snails is not clear.

A more detailed exploration of ecological variables is important for this.

The data reviewed shows the importance of ecological aspects in learning.

The coordination between learning and ecology is needed for the study of adaptation.

Abstract

Pavlovian conditioning of tentacle lowering in the snail, *Cornu aspersum*, as an instance of associative learning, has proven effective to show evidence of paradigmatic associative phenomena (e.g., blocking) explained by current models of conditioning. Nevertheless, the available literature questions the biological function of the conditioned response (i.e., tentacle lowering) in snails since no advantages in terms of food finding had been observed. Ecological accounts of learning claim that learning abilities contribute to the adaptation to the environmental demands, and there is experimental evidence supporting this reported in several species (e.g., grasshoppers, fish, or antlions). However, there is a lack of evidence in snails, which is surprising

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