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Two route landmarks are more useful to navigating ant colonies when they are dissimilar

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Highlights

- House-hunting social insects need to find and navigate to a safe home
- We observed rock ant (Temnothorax albipennis) colonies walking to a new nest
- The presence of certain landmark combinations affected how straight the paths were
- Two dissimilar landmarks either side of the route resulted in straighter paths
- The distinctiveness of landmark combinations could influence route decision-making

Abstract

Visual landmarks are important navigational aids to many animals, and when more than one is available their juxtaposition can convey valuable new information to a navigator about progress toward a goal, depending on the landmarks’ comparative distinctiveness. We investigated the effect of presenting rock ant colonies (Temnothorax albipennis) with identical horizontal landmarks either side of their route, versus one horizontal landmark paired with a sloping landmark, as they navigated to a new nest site. Our findings suggest that ants can obtain more navigational information from a combination of dissimilar landmarks: the average tortuosity of the route taken between old and new...
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