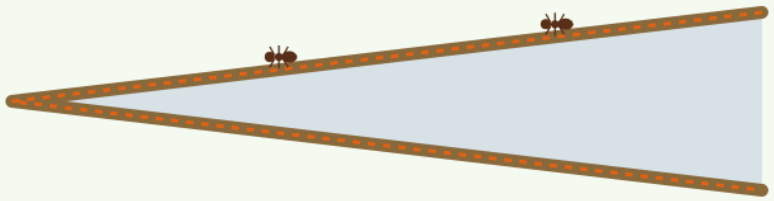
That is why

How do army ants build living bridges?

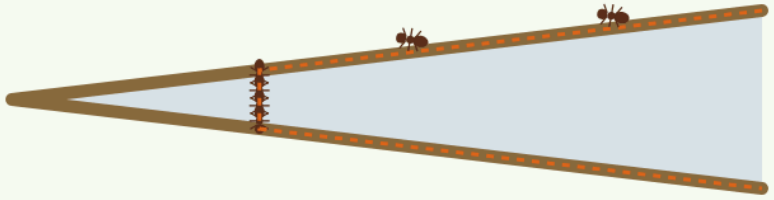
Ants link their bodies across gaps to shorten the trail, and stop growing the bridge when it would cost too many workers.

A The bridge moves to make a shortcut

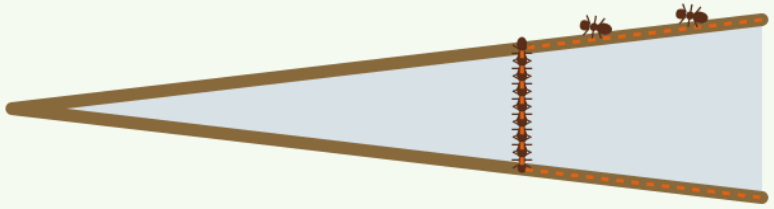
1. Ants walk around the gap



2. A bridge forms at the narrow end

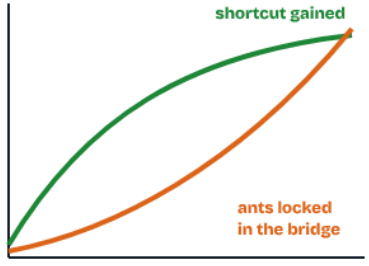


3. It slides outward to cut the path



orange dashes: the path ants walk

B Why it stops halfway



Each step outward saves walking, but traps more ants in the bridge instead of hunting. The bridge stops where the extra workers are no longer worth the shortcut.

In the experiment

At a 20° gap, bridges grew to about 8 cm² and cut the trip by almost 12 cm. Gaps of 12° to 60° were tested.

C Key facts

1 No one in charge

Each ant reacts to traffic around it; no leader plans the bridge.

2 Built and unbuilt

Bridges form when the trail jams and fall apart when traffic eases.

3 Small but busy

10 to 20 ants long, yet thousands may cross one.

Species: Eciton hamatum, studied in Panama (2015).

A bridge made of ants, sized by a simple trade-off.

Free for learning thatiswhy.com

Free for learning, teaching and research. Please credit: That Is Why, thatiswhy.com

Diagram: https://thatiswhy.com/diagrams/why-army-ants-build-bridges/ · Full guide: https://thatiswhy.com/why-army-ants-build-living-bridges/