

An elephant's self-taught banana peeling offers glimpse of elephants' broader abilities

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Pha peeling bananas. Credit: Current Biology/Kaufmann et al

Elephants like to eat bananas, but they don't usually peel them first in the way humans do. A new report published in the journal *Current Biology* on April 10, however, shows that one very special Asian elephant named Pang Pha picked up banana peeling all on her own while living at the Berlin Zoo. She reserves it for yellow-brown bananas, first breaking the banana before shaking out and collecting the pulp, leaving the thick peel behind.

The female elephant most likely learned the unusual peeling [behavior](#) from watching her caretakers peel [bananas](#) for her, the study authors report. The findings in a single elephant show that [elephants](#) more broadly have special cognitive and manipulative abilities, they say.

"We discovered a very unique behavior," said Michael Brecht of Humboldt-Universität zu Berlin's Bernstein Center for Computational Neuroscience. "What makes Pang Pha's banana peeling so unique is a combination of factors—skillfulness, speed, individuality, and the putatively human origin—rather than a single behavioral element."

Like other elephants, Pha eats green or yellow bananas whole. She rejects brown bananas outright. But when it comes to yellow bananas spotted with brown—the kind one might reserve for banana bread—she eats after peeling them first.

Brecht and colleagues including Lena Kaufmann, also at Humboldt-Universität zu Berlin, and Andreas Ochs, Berlin Zoological Garden, made the discovery after learning from Pha's caretakers about her unusual banana-peeling talent. At first, they were confused. They brought Pha nice yellow and green bananas, and she never peeled them.

"It was only when we understood that she peels only yellow-brown bananas that our project took off," Brecht said.

When yellow-brown bananas are offered to a group of elephants, Pha changes her behavior, they report. She eats as many bananas as she can whole and then saves the last one to peel later.

Banana-peeling appears to be rare in elephants as far as anyone knows, and none of the other Berlin elephants engage in peeling. It's not clear why Pha peels them. The researchers note, however, that she was hand raised by human caretakers in the Berlin Zoo. They never taught her to

peel bananas, but they did feed her peeled bananas.

Based on this, the researchers suggest she acquired peeling through observational learning from humans. Earlier reports on African elephants suggest elephants can interpret human pointing gestures and classify people into [ethnic groups](#), but complex human-derived manipulation behaviors, like banana-peeling, appear rather unique, according to the researchers. The findings in Pha nevertheless suggest that elephants overall have surprising cognitive abilities and impressive manipulative skill.

"Elephants have truly remarkable trunk skills and that their behavior is shaped by experience," says Brecht.

The researchers find it surprising that Pha alone picked up on banana peeling. It leads them to wonder if such habits are normally passed on through elephant families. They're now looking into other sophisticated trunk behaviors, such as tool use.

More information: Wataru Brecht, Elephant Banana Peeling, *Current Biology* (2023). [DOI: 10.1016/j.cub.2023.02.076](https://doi.org/10.1016/j.cub.2023.02.076). [www.cell.com/current-biology/f ... 0960-9822\(23\)00266-X](https://www.cell.com/current-biology/fulltext/S0960-9822(23)00266-X)

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