

# First widespread look at evolution of venomous centipedes

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Venomous creatures usually conjure up images of hissing snakes or stinging scorpions—but for scientists Bryan Fry, et. al., an overlooked group —centipedes—are all the rage.

Centipedes prey on bugs and other pests by stinging them with [venom](#) secreted from and injected from their first pair of pincer-like legs, called forcipules. In a new paper published in the advanced online edition of *Molecular Biology and Evolution*, the research team analyzed all venom protein and [peptide sequences](#) available for centipedes,

Next, they build these sequences into genetic trees to catalog, categorize and reconstruct their evolutionary histories.

Overall, they identified a high-diversity of 60 unique venom protein and peptide families from just five species investigated. Eleven of these families represented new proteins families, showing novel ways for centipede venom. Others proteins were convergent, or evolved independently, along with toxins used by spiders and scorpions. The results showed a vast functional diversity of centipede toxins that can significantly aid in the understanding of toxin evolution. They are also a treasure trove with a high potential for use in drug design and development.

Provided by Oxford University Press

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