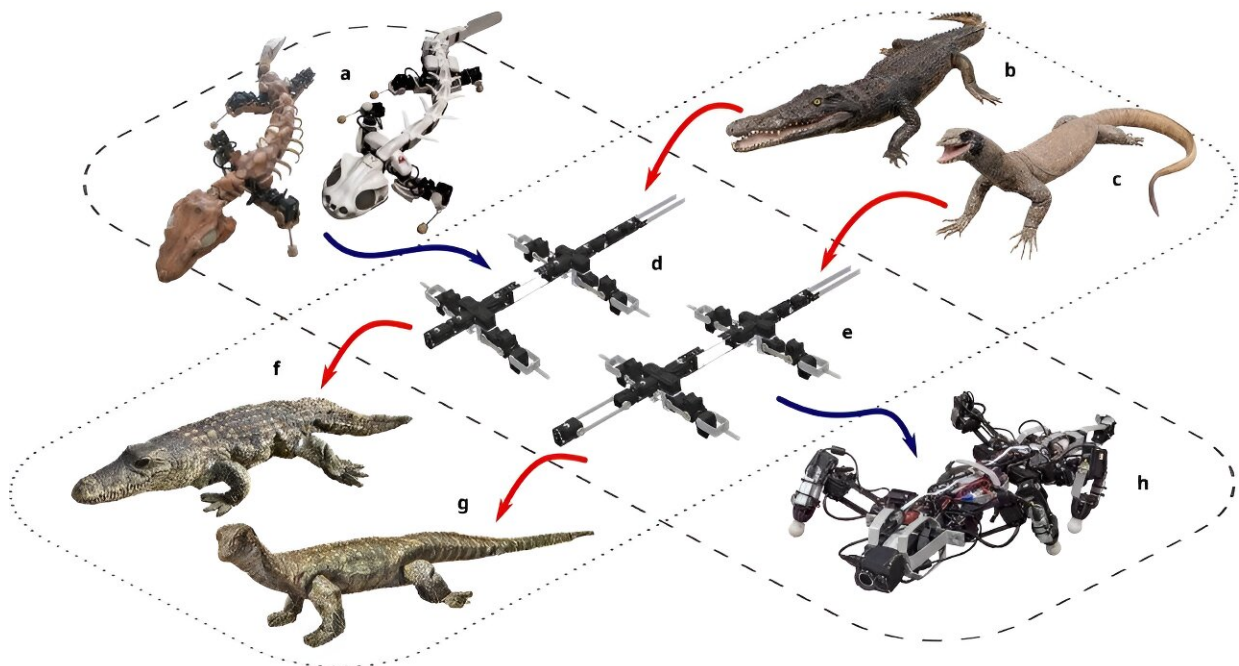


Reptilian robots used in BBC documentary considered for use in disaster response efforts

December 8 2023, by Bob Yirka



Comparison between the bioinspired robots and reptiles. Credit: Kamilo Melo

A trio of roboticists from KM-RoBoTa Sàrl, École Polytechnique Fédérale de Lausanne and Verity AG, all in Switzerland, has found that a pair of reptilian robots they built for use in a BBC documentary back in 2016 may now offer a novel means for studying marine life and could also be used in disaster efforts.

In their paper [published](#) in the journal *Science Robotics*, Kamilo Melo, Tomislav Horvat and Auke Ijspeert, describe how the robots were made, their capabilities and other uses to which they might be put.

In 2016, the BBC contacted the scientists, asking them to build a pair of reptilian robots; one that would look like a crocodile and another that would look like a monitor lizard. The BBC wanted to embed cameras in them and set them loose among the real animals in and near the Nile River to learn more about how the two species get along.

The research team responded by building and delivering SpyCroc and SpyLizard, both of which could walk along riverbanks and swim in the river. Both were also covered in skins that allowed them to blend in with natural wildlife. The footage they captured was used by the BBC to make the documentary film "Spy in the Wild."

Over the past several years, the researchers have added improvements to the robots and are now suggesting that they could be used to study other animals in the wild as well as assist in disaster response efforts.

Improvements have included making the robots look more like their biological counterparts, improving their mobility, adapting their power system to allow them to run for longer periods of time and to remain deployed for long-duration studies.

Such changes, they note, have made the robots more useful as monitoring tools, which means they could be used to learn more about how animals behave both when alone and when interacting with other animals when humans are not around. The team also suggests the robots could also be used during disaster assistance efforts such as floods and fires to aide in assessing the degree of danger to front-line rescue workers.

More information: Kamilo Melo et al, Animal robots in the African wilderness: Lessons learned and outlook for field robotics, *Science Robotics* (2023). [DOI: 10.1126/scirobotics.add8662](https://doi.org/10.1126/scirobotics.add8662)

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