

# Orangutans unique in movement through tree tops

July 27 2009

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*Pongo pygmaeus* (orangutang). Credit: Malene Thyssen, via Wikipedia

Movement through a complex meshwork of small branches at the heights of tropical forests presents a unique challenge to animals wanting to forage for food safely. It can be particularly dangerous for large animals where a fall of up to 30m could be fatal. Scientists found that dangerous tree vibrations can be countered by the orang-utan's ability to move with an irregular rhythm.

Professor Robin Crompton, from the University of Liverpool's School of

Biomedical Sciences, explained that these challenges were similar to the difficulties engineers encountered with London's 'wobbly' Millennium Bridge: "The problems with the Millennium Bridge were caused by large numbers of people walking in sync with the slight sideways motion of the bridge. This regular pattern of movement made the swaying motion of the bridge even worse. We see a similar problem in the movement of animals through the canopy of [tropical forests](#), where there are highly flexible branches.

"Most animals, such as the chimpanzee, respond to these challenges by flexing their limbs to bring their body closer to the branch. Orang-utans, however, are the largest arboreal mammal and so they are likely to face more severe difficulties due to weight. If they move in a regular fashion, like their smaller relatives, we get a 'wobbly bridge' situation, whereby the movement of the branches increases."

Dr Susannah Thorpe, from the University of Birmingham's School of Biosciences, added: "Orang-utans have developed a unique way of coping with these problems; they move in an irregular way which includes upright walking, four-limbed suspension from branches and tree-swaying, whereby they move branches backwards and forwards, with increasing magnitude, until they are able to cross large gaps between trees."

The team studied orang-utans in Sumatra, where the animal is predicted to be the first [great ape](#) to become extinct. This new research could further understanding into the way orang-utans use their habitat, which could support new conservation programmes.

Dr Thorpe continued: "If the destruction of forest land does not slow down, the Sumatran orang-utan could be extinct within the next decade. Now that we know more about how they move through the trees and the unique way that they adapt to challenges in their environment we can

better understand their needs. This could help with reintroducing rescued animals to the forests and efforts to conserve their environment."

The research is published in *Proceedings of the National Academy of Sciences*.

Source: University of Liverpool ([news](#) : [web](#))

Citation: Orangutans unique in movement through tree tops (2009, July 27) retrieved 23 April 2024 from <https://phys.org/news/2009-07-orangutans-unique-movement-tree-tops.html>

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