

# Who can cool his body fast? Toucan

July 23 2009, By RANDOLPH E. SCHMID , AP Science Writer

---



This undated handout photo provided by the journal Science shows an adult Toco toucan. The toucan's large, colorful bill turns out to be a radiator the rain forest dweller uses to lose body heat. The bill of the Toco Toucan makes up about one-third of its body length and ornithologists have long wondered about the purpose for the appendage. (AP Photo/Science, Thiago Filadelpho)

(AP) -- The toucan's colorful bill gives new meaning to the phrase cool dude. Indeed, that gigantic schnoz turns out to be a radiator the rain forest dweller uses to lose body heat. The bill of the Toco Toucan makes up about one-third of its body length and ornithologists have long wondered about the purpose for the appendage.

Could it be a sexual signal, some snicker.

Maybe a special adaptation to peel fruit, suggest the gourmand set.

Perhaps, the defense minded say, a weapon.

Or, at least, a visual warning to other toucans.

Researchers led by Glenn J. Tattersall of Brock University in St. Catharines, Ontario, Canada, wondered if the big beak might have yet another use - cooling.

After all, elephants use their ears for cooling. So do bunnies. So why not toucan beaks?

The researchers found that the beaks contain lots of blood vessels.

So they photographed the birds - which don't sweat - with heat-sensing cameras.

They found that "the toucan's bill is capable of acting as a thermal radiator of body heat," Tattersall explained.

"By altering blood flow to the bill's surface, toucans can conserve body heat when it is cold, or cope with heat stress by increasing blood flow," he explained via e-mail.

Now, that doesn't mean heat control is the only reason the bill developed, Tattersall cautioned. But it adds to the potential uses.

In demonstrating that a structure like the bill can radiate heat the finding also adds weight to the idea that some dinosaurs used large bony structures to regulate their temperatures.

The Toco Toucan lives in central and eastern South America.

---

On the Net:

Science: <http://www.sciencemag.org>

*©2009 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed.*

Citation: Who can cool his body fast? Toucan (2009, July 23) retrieved 26 April 2024 from <https://phys.org/news/2009-07-cool-body-fast-toucan.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.