

Recognizing gibbons from their regional accents

February 7 2011

Crested gibbons (genus *Nomascus*) live in dense Asian rainforest, specifically in China, Laos, Cambodia and Vietnam, and, because of their environment, they communicate with other gibbons by singing. Both males and females sing in order to define territory and find a mate, and couples also sing duets to strengthen their pair bonding. New research published in BioMed Central's open access journal *BMC Evolutionary Biology* describes how gibbon song can be used to identify not only which species of Gibbon is singing but the area it is from.

Researchers from the German Primate Center, Goettingen, compared the songs and the genetic diversity of 19 populations, covering 6 species of crested gibbons, to their location. Gibbon songs are adapted to transmission in a forest so the transmission energy is concentrated in a single frequency band, with slow modulations, on an optimised song syllable. Consequently, in order to identify species, over 400 song samples were analysed using 53 acoustic parameters. [Genetic diversity](#) between the species was measured by looking at mutations in the [gene coding](#) for mitochondrial cytochrome b.

The four most related songs came from the gibbon species with the most closely related DNA and geographical location, from Cambodia, Laos and Vietnam with the gibbons from the southern most areas being more closely related to each other than to the more northerly Vietnamese gibbons and gibbons from China supporting the suggested migration direction from the North to the South.

Van Ngoc Thinh says that "Each gibbon has its own variable song but, much like people, there is a regional similarity between gibbons within the same location".

More information: Concordance between vocal and genetic diversity in crested gibbons, Van Ngoc Thinh, Chris Hallam, Christian Roos, and Kurt Hammerschmidt, *BMC Evolutionary Biology* (in press)

Provided by BioMed Central

Citation: Recognizing gibbons from their regional accents (2011, February 7) retrieved 25 April 2024 from <https://phys.org/news/2011-02-gibbons-regional-accents.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.