

SEPT 10, 2004 FRI

> Go back to Today

STI HOME

NEWS

Latest News

Eye On East Asia

Today's Paper

Prime News

Singapore

Asia

Money

World

Tech & Science

Sports

ST Forum

Commentary

Our Columnists

Life!

WHAT'S NEW

National Day Special

Olympics 2004

The Next Change

MULTIMEDIA

Channel i News Clips

News in Pictures

Interactive Graphics

Photo Gallery

INTERACTIVE ZONE

STI Webchat

Take our Poll

What's On

E-Cards

SERVICES

Get news on your PDA

Weather

Site Map

FAQ

About Us

Bookmark Us

Advertise

SUBSCRIBE

Free E-Newsletter

Print Edition

Tech & Science




 Print-Ready | Feedback | E-mail article

<< Previous | Next >>

Extinction figures may be dead wrong

When a species vanishes, others may die too, and experts say this effect has been under-estimated

By Chang Ai-Lien

THERE are 12,200 threatened and endangered plant and animal species, but should they die out, it will also be the curtain call for at least 6,300 others.

This is the bleak assessment of an international study published in the one of the world's top journals Science, which predicts the loss of affiliate species when the lights go out on hosts.

Many plants and animals have a diverse selection of unlikely bedfellows - insects, fungi, and other organisms associated with them that are uniquely adapted to their hosts, said Associate Professor Navjot Sodhi, one of the researchers involved.

The team used mathematical equations to calculate the expected levels of what is called co-extinction across a diverse selection of hosts and associate systems. This is a widely overlooked phenomenon, perhaps because some of the most susceptible organisms were 'uncharismatic parasites'.

While estimates show that at least 400 species have been lost through extinction, it found that a further 200 species - mainly butterflies, beetles, lice and parasites - have also disappeared alongside their hosts.

'We often forget the ugly-looking creatures such as lice and parasites in favour of their more appealing cousins, but they all have a function in the ecosystem,' said Prof Sodhi.

So, while many herald the success of conservation efforts to save the majestic Californian condor from extinction, he said, few mourn the condor louse that went extinct as a result of efforts by well-meaning conservation biologists to rid the birds of their parasites.

Closer to home, he added, fig plants in regional forests rely on special species of wasps for pollination. In turn, the wasps lay their eggs in the fig flowers.

Neither could exist without the other, and since the figs are an important food source for larger animals such as monkeys and hornbills, the loss of either the wasps or the fig plants could mean the demise of much more than two species, he said.

The researchers are from the National University of Singapore, Princeton University, the University of Tennessee and the University of Connecticut in the US, Canada's University of Alberta, and Scotland's University of Glasgow.

They believe that co-extinction could be a substantial contributor to the present global extinction crisis, and that estimates of species extinction should be re-looked, taking the new estimates into account.



Till death do us part: when this butterfly host plant *Tylophora* disappeared locally, its affiliate butterfly species *Parantica aspasia* died as well. It has been estimated that should the 12,200 threatened and endangered plant and animal species vanish, they will take at least 6,300 others with them

Story Index

- ▶ Time really does fly when you're having fun
- ▶ All wired-up but machine washable
- ▶ Of lice and men: Dispute finally over
- ▶ Fingered by DNA
- ▶ Observatory

'It is sad that we will never know the role of the condor louse, both in the ecosystem and if it has possible benefits for humans,' said Prof Sodhi, who is from the NUS biological sciences department.

Many medicines and treatments used today have come from unlikely sources.

Blood-sucking leeches, for example, are widely reviled, but they are often used in reconstructive surgery, because an anti-coagulant they secrete fights blood clots and helps to restore proper blood flow to inflamed parts of the body.

Prof Sodhi, a bird expert, was also a key member of the team which discovered that Singapore has lost about half its animal species in the last 200 years, and that the same fate could befall the rest of the region.

The predictions were published in the prestigious journal Nature last year.

Like many important collaborations, this project was a matter of chance, said Prof Sodhi, conceived over tempura and sake, when the group met in Japan during a conference on extinction earlier this year.

The result - an international group which crystallised the idea of co-extinction and gave it new meaning.

Prof Sodhi added: 'The work shows that the bio-diversity crisis could be much deeper than we thought, because species are so interlinked that if we take one link out, others will go too.'

[◀◀ Previous](#) | [Next ▶▶](#)

Subscribe to The Straits Times print edition today. In it you get exclusive reports, analyses and news packages. Do it by [email](#) or [fax](#)



Copyright © 2004 Singapore Press Holdings. All rights reserved. [Privacy Statement & Conditions of Access](#)

[Back to the top](#)

Best viewed in 800 x 600 resolution with Internet Explorer 5.x or Netscape Navigator 4.x or above