

# Ants and the Red List – time for a global assessment?

John Fellowes & Carsten Brühl, ANeT 2009, Cibodas, Indonesia





- ✿ the International Union for Conservation of Nature
- ✿ world's oldest and largest global environmental network (IUCN was founded in October 1948 )
- ✿ a democratic membership union with more than 1,000 government and NGO member organizations, and almost 11,000 volunteer scientists in more than 160 countries



## Species Survival Commission (SSC)

- ✿ A science-based network of some 7,500 volunteer experts from almost every country of the world
- ✿ all working together towards achieving the vision of, *“A world that values and conserves present levels of biodiversity.”*
- ✿ more than 100 Specialist Groups addressing conservation issues related to particular groups of plants or animals



## IUCN Red list

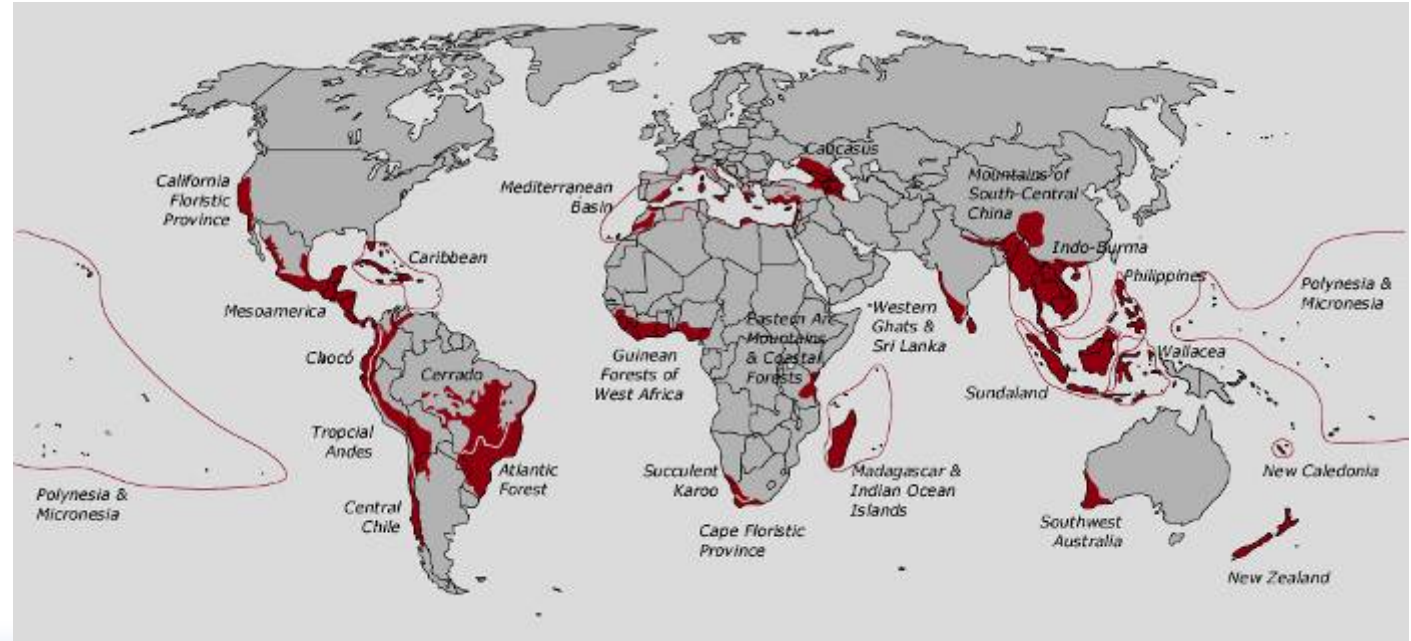
- ✿ for more than four decades
- ✿ assessing the conservation status of species, subspecies, varieties, and even selected subpopulations on a global scale
- ✿ Aim: to highlight taxa threatened with extinction, and therefore promote their conservation



## Does Red List status matter?

CRITICAL ECOSYSTEM  
PARTNERSHIP FUND

- ✂ Can influence policy makers, practitioners and donors
- ✂ e.g. CRITICAL ECOSYSTEM PARTNERSHIP FUND (biodiversity Hotspots)





## IUCN Red list

- ✿ The latest update shows that 17,291 species out of the 47,677 assessed species are threatened with extinction
- ✿ 21 % of all known mammals, 30 % of all known amphibians, 12 % of all known birds, and 28 % of reptiles, 37 % of freshwater fishes, 70 % of plants, 35 % of invertebrates assessed so far are under threat.



## IUCN Red list

- ✿ Excellent (complete) data for mammals birds and amphibians
- ✿ Some invertebrates (snails, coral,..)
- ✿ but only one insect group studied by a specialist group: dragonflies





## IUCN Red list



- \* <http://www.iucnredlist.org>
- \* provides taxonomic, conservation status and distribution information on plants and animals that have been globally evaluated using the IUCN Red List Categories and Criteria



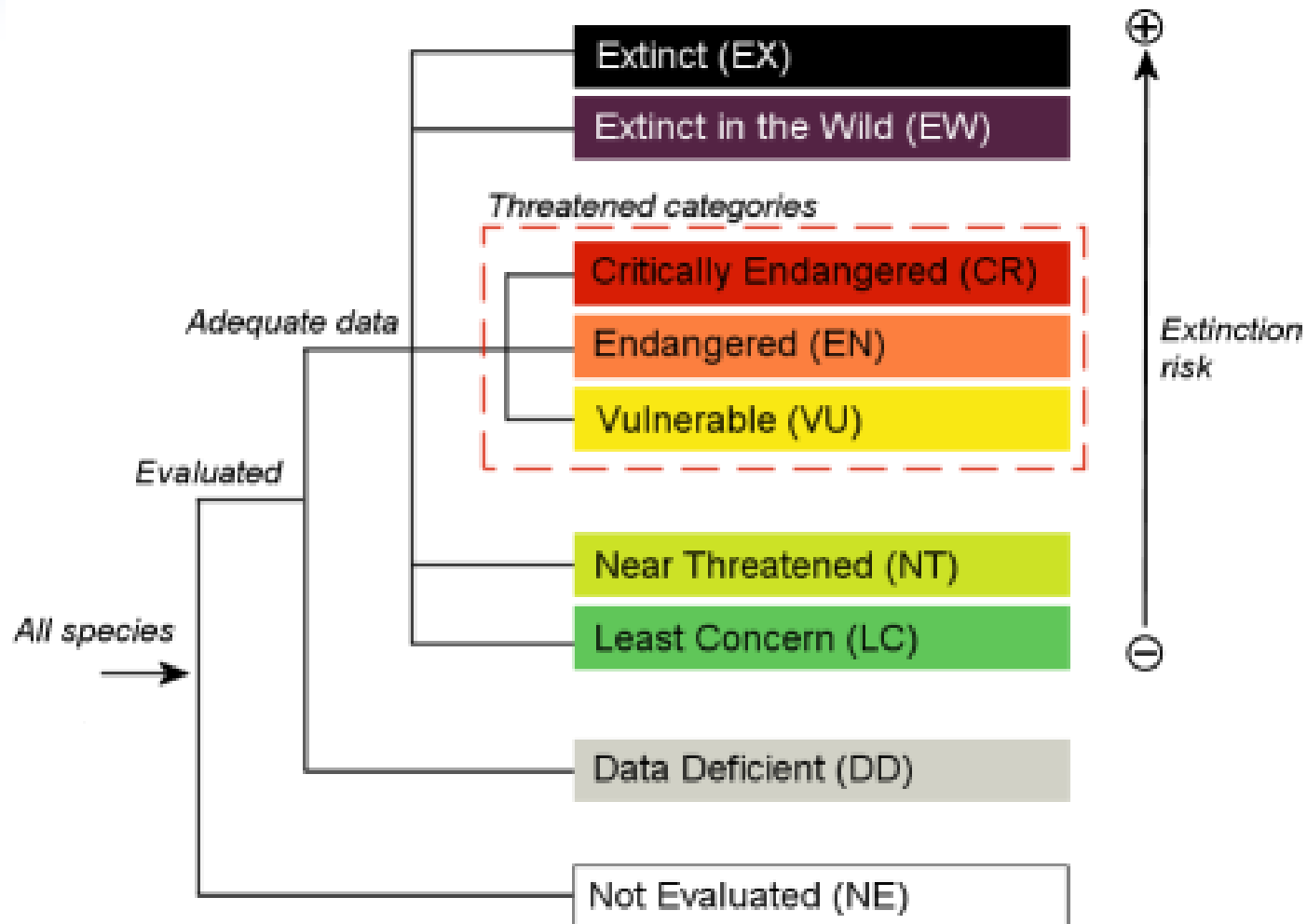


## IUCN Red List

- ✂ **Extinct or Extinct in the Wild**
- ✂ **Critically Endangered, Endangered and Vulnerable** plants and animals that are facing a higher risk of global extinction.
- ✂ **Near Threatened** taxa close to meeting the threatened thresholds
- ✂ **Least Concern** no threat obvious, common taxa
- ✂ **Data Deficient** taxa that cannot be evaluated because of insufficient information



# Red List categories





## Criteria include:

- ✂ RESTRICTED RANGE
- ✂ OBSERVED or INFERRED DECLINE
- ✂ LOW NUMBER OF POPULATIONS
- ✂ SMALL POPULATION SIZE
- ✂ HIGH POPULATION FLUCTUATIONS
- ✂ HIGH ACTIVE THREATS
- ✂ LOW POPULATION VIABILITY



# Ants in the database



The IUCN Red List of Threatened Species™

2009.2

[About](#) [Initiatives](#) [News](#) [Photos](#) [Partners](#) [Sponsors](#) [Technical Documents](#)



OTHER SEARCH OPTIONS

 378 ants listed



# An ant example

## Taxonomy [\[top\]](#)

Kingdom	Phylum	Class	Order	Family
ANIMALIA	ARTHROPODA	INSECTA	HYMENOPTERA	FORMICIDAE

**Scientific Name:** *Aneuretus simoni*

**Species Authority:** Emery, 1893

**Common Name/s:**  
English – Sri Lankan Relict Ant

## Assessment Information [\[top\]](#)

<b>Red List Category &amp; Criteria:</b>	Critically Endangered B1+2c <a href="#">ver 2.3</a>
<b>Year Assessed:</b>	1996
<b>Annotations:</b>	Needs updating
<b>Assessor/s</b>	Social Insects Specialist Group
<b>History:</b>	1994 – Insufficiently Known (IUCN) 1990 – Insufficiently Known (IUCN 1990) 1988 – Insufficiently Known 1986 – Insufficiently Known (IUCN Conservation Monitoring Centre 1986) 1983 – Insufficiently Known





## *Aneuretus simoni*

- ✿ Prior to Ed Wilson's rediscovery of the species in July 1955, around Ratnapura (including the Pompakelle forest), at the foot of Adam's Peak and at Gilimale, *A. simoni* was known only from some 5 or 6 specimens in museum collections.
- ✿ E. Wilson "Naturalist" (1994, pp. 197-199). "Twenty years later one of my undergraduate students, Anula Jayasuriya, a native Sri Lankan, found the species rare or absent in the same localities. I recommended placement of *Aneuretus simoni* in the *Red Data Book of the International Union for Conservation of Nature and Natural Resources*, and in time it became one of the first of several ants to be officially classified as a threatened or endangered species."
- ✿ Jayasuriya was able to find the species, in June-August 1979, only at Gilimale, although it was searched for at several other likely sites (Jayasuriya & Traniello, 1985).



## *Aneuretus simoni*

- ✿ Also recorded in Sinharaja Forest, in logged forest and unlogged forest (Gunawardene et al. in press.)
- ✿ Deforestation rate Sri Lanka 2000- 2005: 15% (<http://news.mongabay.com/2005/1115-forests.html> )
- ✿ Today, Sri Lanka forest cover has dropped to almost 20 percent from the 70 percent recorded in 1990 (<http://www.highbeam.com/doc/1P2-18140279.html>)
- ✿ Using the information available in our assessment:  
**ENDANGERED**



## *Camponotus gigas*

Distribution Sumatra, Borneo up to Thailand.  
Mangrove to lower montane forest.

Lowland forest cover in Sumatra is completely lost in the past 10 years, past and future estimations for Borneo high.

*Camponotus gigas*: Estimated decline over 50% in the last 10 years due to habitat reduction

**ENDANGERED**





## *Myrmica draco*

- ✘ Only recorded from Mount Maoershan in Guangxi, altitude 1850 – 1930 m. Highest mountain in S China. Living on top of mountain.
- ✘ Global warming projections with 1 C warming result in altitudinal shift of 150 m in 10 years and therefore could eliminate the only known population.
- ✘ *Myrmica draco*: estimated future population decline is above 80%
- ✘ **CRITICALLY ENDANGERED**



## Why red listing ants?

- ✱ Include more information on insects for conservation of biodiversity
- ✱ More diverse, other distribution than birds & mammals (endemics, rare species)
- ✱ Compared to other insect groups there are many scientists studying the speciose group of ants in many aspects



## How to red list ants?

What information do we need for each species?

- ✂ Distribution pattern
- ✂ Habitat affiliation (type and strength)
- ✂ Habitat decline

For more information please come to the workshop and bring you own ant.