







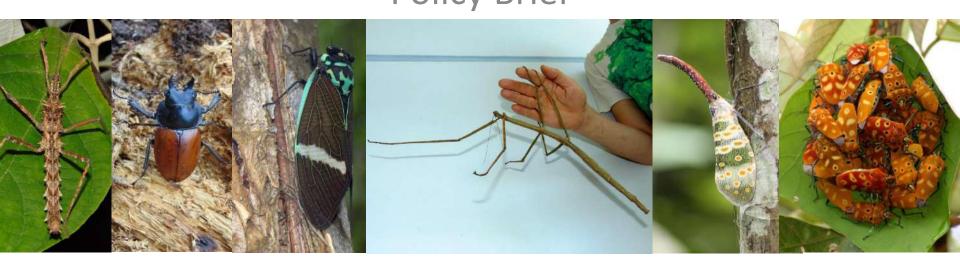




Science meets conservation



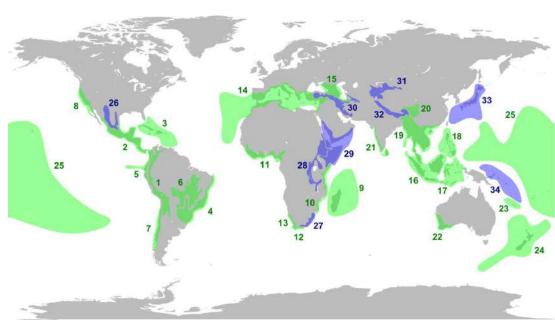
Uptake workshop – 10 years international cooperation Policy Brief



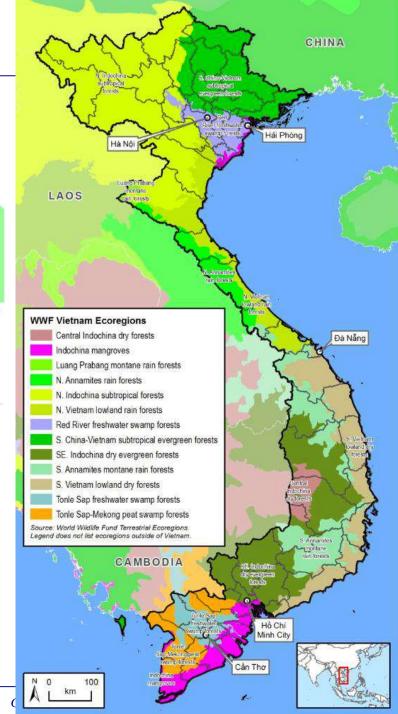
## **Contributors**

- Luca Bartolozzi Museum of Florence, Italy
- Joachim Bresseel Royal Belgian Institute of Natural Sciences, Brussels, Belgium
- Thierry Bourgoin Muséum national d'Histoire naturelle, Paris, France
- Jérôme Constant Royal Belgian Institute of Natural Sciences, Brussels, Belgium
- Eric Guilbert Muséum national d'Histoire naturelle, Paris, France
- Luc Janssens de Bisthoven Royal Belgian Institute of Natural Sciences, Brussels, Belgium
- Sokchan Lorn Royal Phnom Penh University, Cambodia
- Hong Thai Pham Vietnam National Museum of Nature, Hanoi
- Adeline Soulier-Perkins Muséum national d'Histoire naturelle, Paris, France
- Marie-Lucie Susini-Ondafe Royal Belgian Institute of Natural Sciences, Brussels, Belgium
- Sokha Kheam Royal Phnom Penh University, Cambodia

## **Vietnam Biodiversity**



- Vietnam: 16<sup>th</sup> most biodiversity rich country
- Part of Indo-Burma hotspot designated by Conservation International.
- 14 terrestrial ecoregions
- 110 key biodiversity areas

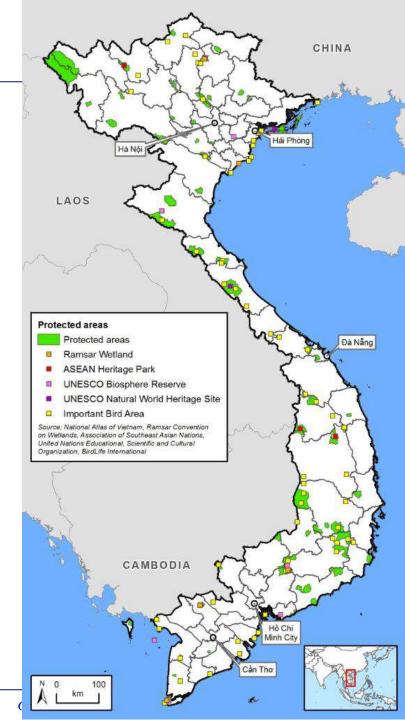


## **Vietnam Biodiversity**

#### Some general figures:

- high level of endemism: 10% of Vietnam's plants;
  12 mammals, 7 birds, 48 reptiles, 33 amphibians,
  80 freshwater fish...
- 164 terrestrial Protected Areas (32 nat. Parks and 58 nature reserves), covering 7.5% of the country's total land area, virtually address all of Vietnam's major ecosystems.

But what about insect diversity?



# Importance of insects diversity

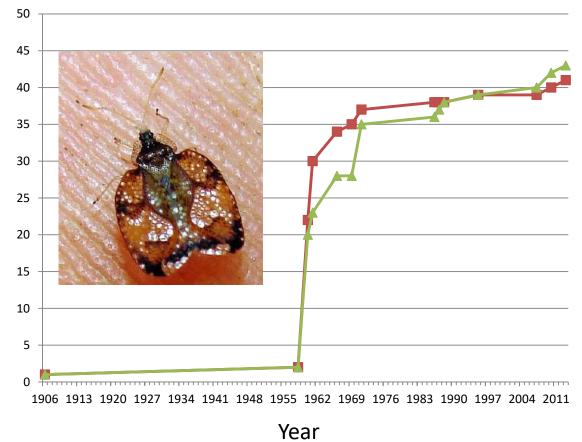
- Insects = half of known species
- Probably 80% of species on Earth
- About 20.000 species known from Vietnam
  = 10% of estimated diversity
- Very high level of endemism (species occurring only in Vietnam)

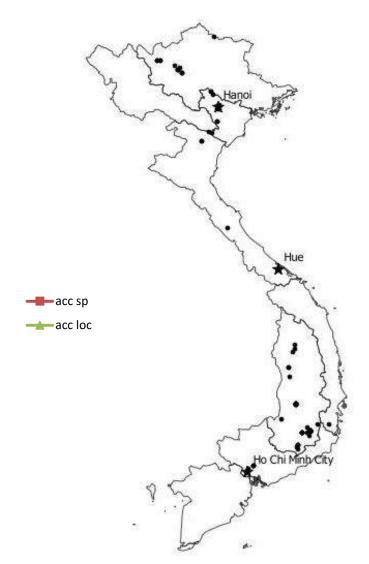
Vietnam = Hotspot also for insects!

## Case study: the Lacebugs of Vietnam

Each new location sampled = discovery of new species!

Number of species/sites

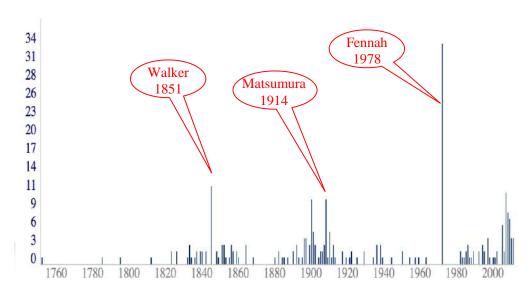


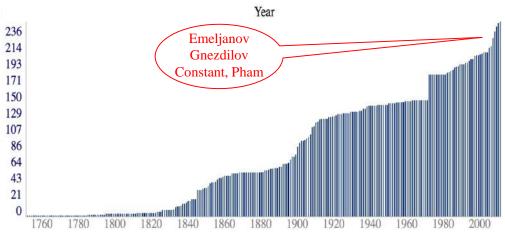


## Case study: the Planthoppers of Vietnam

More taxonomic experts = more new species!







Year

# "We only love what we know and we only protect what we love."

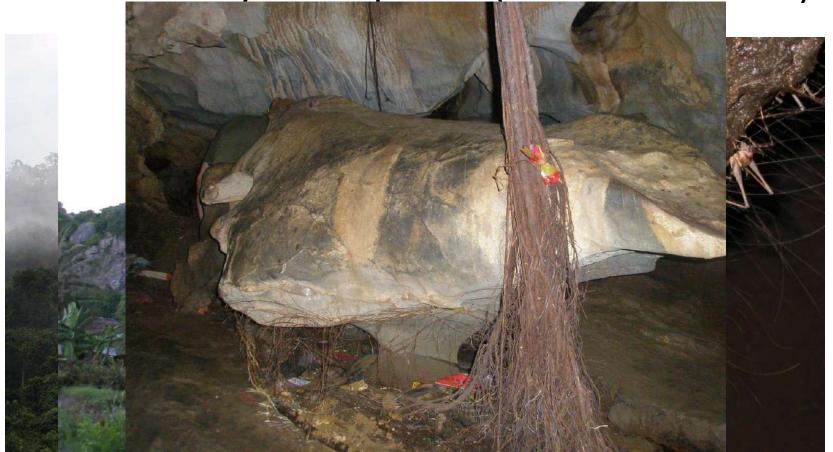
**Konrad Lorenz** 



# Insect biodiversity in Vietnam even higher than expected

Numerous peculiar habitats

= Lots of very local species (micro-endemism)



#### Case study: planthopper diversity

 Already very diverse but still very poorly known: 255 species in Vietnam

More efforts = more species





# Rich but fragile: threats

- Deforestation
- Slash and burn agriculture
- Mining

Poaching

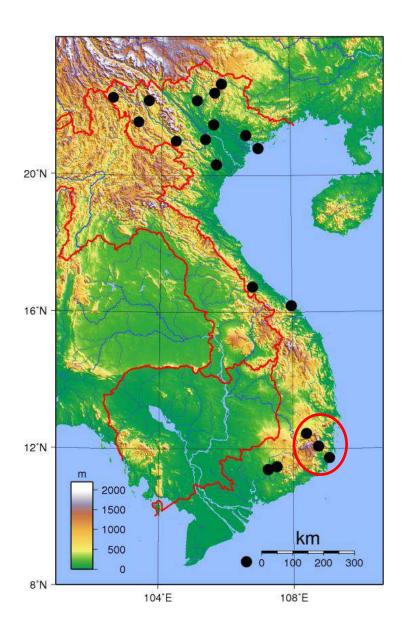


#### Sampled areas

Three locations over a short distance:

- Bidoup Nui Ba National Park
- Phuoc Binh National Park
- Nui Chua National Park

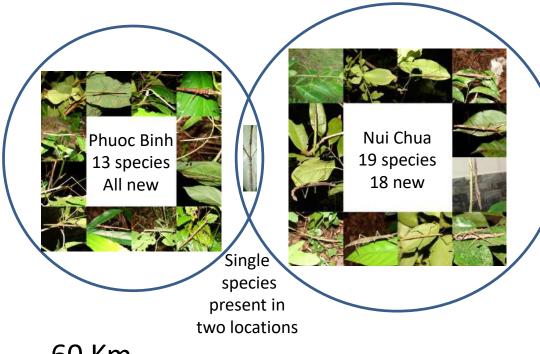




#### Each location contains its own unique species

Example of high rate of endemism in three protected areas of southern Central Vietnam.

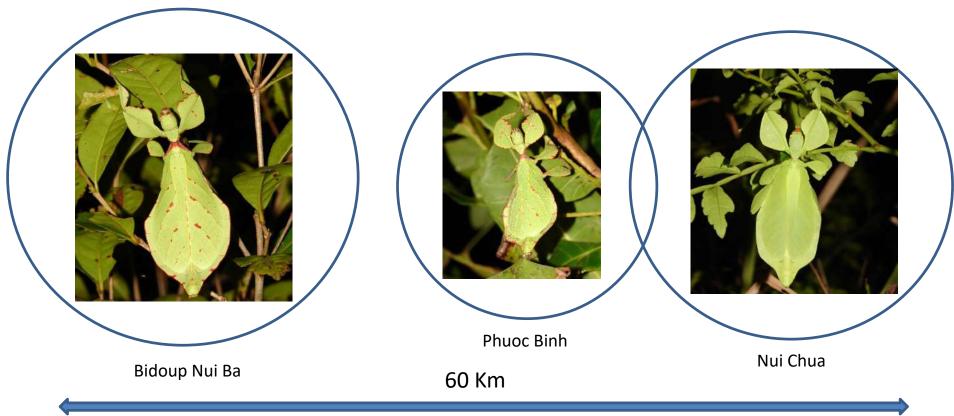




60 Km

Example of high rate of endemism in three protected areas of southern Central Vietnam

Three species of Leaf insects (Bo La – Vietnam Red Book)

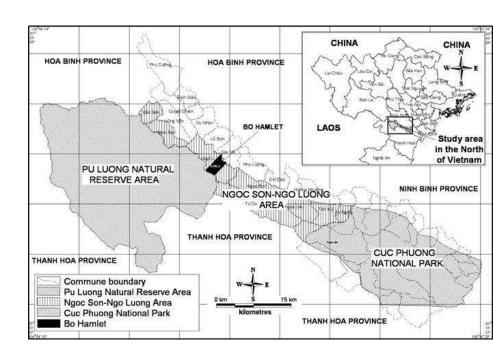


Important to create more protected areas

#### Ngoc Son – Ngo Luong Area

- Recently created (2006)
- Connection between Pu Luong and Cuc Phuong National Park (corridor)
  - Pu Luong: no data
  - Cuc Phuong: 33 species
  - Ngoc Son Ngo Luong: 42 species



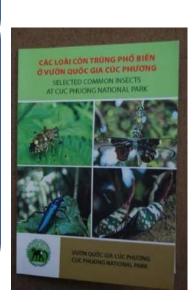


Important to connect protected areas with corridors

#### Lessons learnt and thoughts for the future

#### •Science:

- •Improve collecting and taxonomic capacities
- Explore and inventory peculiar habitats
- •Describe the new species
- International collaboration
- Complete hotspot status with insect diversity
- Management tools: Taxonomic lists, online access, digitalization for Vietnam and for each park
- Conservation
  - Communication
  - Education
  - Public awareness
  - Develop the CBD Clearing House Mechanism (CHM)
  - •Ecotourism



## Vietnam = Hotspot also for insects!

Each new location sampled = discovery of new species!

More taxonomic experts = more new species!

More efforts = more species

Important to create more protected areas

Important to connect protected areas with corridors