



## Mission to Vietnam, Ha Noi, Cuc Phuong National Park

1 April-8 April 2017

### Report

(Luc Janssens de Bisthoven, RBINS-CEBioS)



Fig. 1. Capture of insects at night with light trap in Cuc Phuong National Park

## Programme

<b>Monday 3 April (in Hanoi)</b>		
9.00 – 9.15	Welcoming participants and introduction	Hosts
9.15 – 9.30	Objectives of the meeting	
9.30 – 10.00	Tour de table	
10.00 – 10.15	Coffee break	
10.15 – 10.45	Presentations of the RBINS and CEBioS	L Janssens de Bisthoven
10.45 – 11.15	The Belgian GTI and its capacity building activities	ML Susini Ondafe
11.15 – 11.30	Presentation of the VNMN	H T Pham
11.30 – 12.00	RBINS research in Vietnam (collaboration with VNMN)	J Constant
12.00 – 13.00	Lunch break	
13.00 – 15.00	Research results of international participants (Europe and Asia)	15 min/ participant
15.00 – 15.15	Coffee break	
15.15 – 16.45	Research results of participants (Europe and Asia) (continued)	15 min/ participant
16.45 – 17.00	Tools to reinforce the Science-Policy interface	ML Susini Ondafe
17.00 – 17.30	Discussion on approach to produce outputs for decision makers	

<b>Tuesday 4 April (in Hanoi)</b>		
8.30 – 9.00	Discussion on outputs for decision makers (continued)	
9.00 – 10.30	Working on outputs for decision makers	
10.30 – 10.45	Coffee break	
10.45 – 12.30	Working on outputs for decision makers (continued)	
12.30 – 13.30	Lunch break	
13.30 – 15.30	Presenting results of outputs to all and discussion	
15.30 – 15.45	Coffee break	
15.45 – 17.30	Finalising outputs	
<b>18.00</b>	<b>Departure to Cuc Phuong National Park</b>	

<b>Wednesday 5 April (in Cuc Phuong National Park)</b>		
8.30 – 9.00	Welcoming participants	
9.00 – 9.30	Introduction	
9.30 – 10.00	Presentation of the RBINS & the CEBioS programme	L Janssens de Bisthoven
10.00 – 10.30	The Belgian GTI and its capacity building activities	ML Susini Ondafe
10.30– 11.00	Coffee break and group photo	
11.00 – 11.30	Presentation of the IUCN framework for protected areas	L Janssens de Bisthoven
11.30 – 12.00	Collaboration between the RBINS and the VNMN	J Constant, J Breessel & H T Pham
12.00 – 13.00	Lunch break	
13.00 – 14.00	Presentation of international scientific research and collaborations in Vietnam	
14.00 - 16.00	Presenting outputs to decision makers	
16.00 – 16.30	Coffee break	
16.30 – 17.30	Discussion / Questions	
<b>17.30</b>	<b>Closing of the meeting</b>	
17.30 – 20.00	Free time to rest and free diner	
20.00 – 22.00	Outside walk in the Cuc Phuong National Park to discover its rich biodiversity at night	

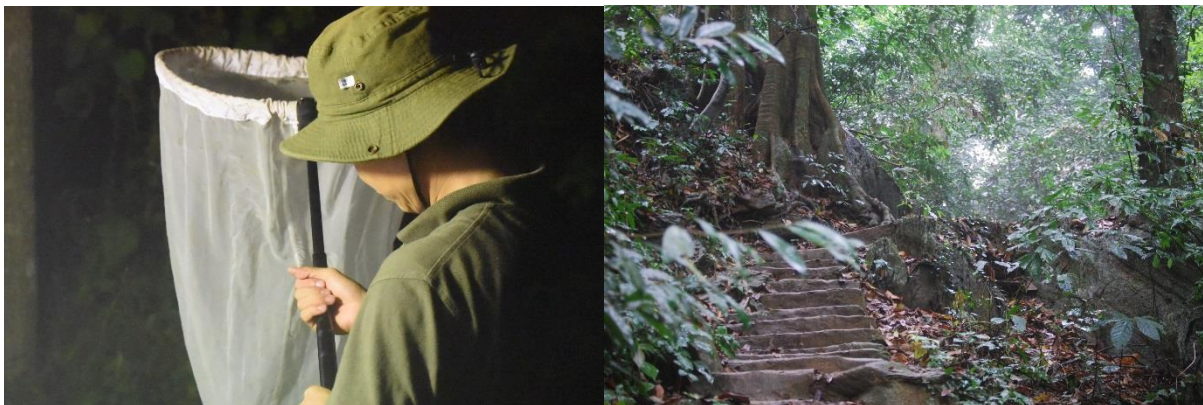
<b>Thursday 6 April</b>		
9.00 – 16.00	All day field trip in Cuc Phuong National Park (to discover its rich biodiversity during the day)	N.B.: Bring comfortable clothes and shoes

16.30 : Departure to Hanoi (Sen Hotel)

## Introduction

This mission was attended by the following RBINS staff: Marie-Lucie Susini Ondafe, Jérôme Constant and Luc Janssens de Bisthoven. Joachim Bresseel, a long term taxonomist and collaborator of Jérôme accompanied the party as well. Its objective was to reconstitute almost 10 years of entomological research within the CEBioS GTI programme in the rain forests of Vietnam to the stakeholders of conservation and to make recommendations as a basis for a policy brief. The mission was in 2 parts: first a preparatory workshop with the scientists, including experts from France, Italy, Vietnam and Cambodia. This took place at Sen Hotel in Ha Noi. Second, the whole group joined the stakeholders, mainly directors of national parks, in Cuc Puong National Park, some 150 km South of Ha Noi, to reconstitute the work of the first part and discuss about the benefits and the needs for future work. Finally, the workshop was explained to Mr. Geert Vansintjan of the Belgian embassy in Ha Noi.

The output of the workshop will be a policy brief, which will be produced in cooperation between CEBioS and the National Museum of nature of Vietnam.



Dr. Tai hunting insects in the night, Cuc Phuong N.P.

## Diary

### **1 April, Saturday**

- Departure from Zaventem at 13:30 with Thai Airlines

### **2 April, Sunday**

- Stop-over in Bangkok at 5 AM
- Arrival in Ha Noi at around 11 AM
- Shuttle to Hotel with Thai and curator
- Lunch with RBINS and MHN Paris, Thai and curator collections
- Viewing of meeting room at hotel, banners, projector, printed programmes and discussion of the programme and translation with Thai, curator and Marie-Lucie
- Preparation of presentation and mails
- Dinner at 7 PM
- Preparation of introduction to workshop

### **3 April, Monday (25 participants)**

#### Workshop day 1

- Introduction to the workshop by Thai
- Context by Luc
- Tour de table
- Coffee break
- Presentation of RBINS and CEBioS by Luc
- Presentation of GTI by Marie-Lucie
- Presentation of the VNMN (Vietnam National Museum of Nature)

60 staff, but 150 volunteer scientists, some days 3000 visitors to the museum! Almost 100.000 visitors in 3 years, insect collections etc...system of Vietnam natural musea, taxidermy service support. 34 new species. DNA techniques. Just published in Nature. Cooperation with 18 countries. E.g. Cologne, Sweden, Australia etc...Smithsonian....Berlin Museum. 3 big projects: (1) to build a new museum 16 km from Hanoi, 32 ha, in 10 years finished. 200-300 M USD! (2) Building centre for rescue animals and plants at Phong Dien, Thua Thien Hue. (3) National specimen collection of Vietnam, 10 M specimens and more. Medal of government after 10 years achievement.

#### RBINS research in Vietnam by Jérôme Constant



Fig. 2. Jérôme Constant and Joachim Bresseel looking for bugs in the forest at night. Jérôme handing over specimens to the VMNM's Director during the workshop at Cuc Phuong NP.

Thai contacted Jerome 10 years ago. First step in 2007, Mr. Thai. With a lot of support by Patrick Grootaert, head of department. Cicadidae and Fulgoromorpha, and training in collection management. First publications were local based on literature in Vietnamese. To fill these gaps, he came to Brussels for training. Dissection, drawing, describing...and extrapolate to other groups of insects. 2010 new step of the project. Extension in Vietnam to inventories groups of insects in protected areas of Vietnam and to provide training in field collections, to assess the entomological collection and provide advice. 2010 until 2017 ad more...20 locations all over Vietnam. Workshop at IBPR and NMVN about insects. First idea is to have idea of biodiversity in North, Central and South Vietnam. It was not enough, too much new species

to sample more locations. Lots of materials, new species, >25 papers in peer reviewed journals, 18 new species, genera etc...Second longest insect in the world (walking stick, 54 cm long).

Also in Cambodia, Royal Phnom Penh University. Stopped project without right people, and then restarted with excellent people. They started an insect collection in 2015, recent but very well done, cofounder of Cambodia entomology initiative. Thai in 2015 in Cambodia, to promote south-south contacts. In the future maybe to Laos and Thailand.

Collection in mountains along the border between Vietnam and Cambodia.

Case of Thai: met Jérôme, then PhD in Taiwan on Cicadas, then head of specimen management of national museum of Vietnam. Director of centre for insect diversity and systematics in 2015.

The future of GTI projects: go on in poorly documented zones in VT and in Cambodia (even less known). Incredible insect biodiversity. Mimicry but also very colourful! Types, paratypes for collections of the country. Also breeding in captivity in Europe for observing the behaviour. Proposals for the centre, reference collection, research centre on taxonomy, phenology etc... To build digital collection of Vietnamese species preserved abroad!

Necessary to know what we protect! No data= no problem. Richness/peculiarity of each area. Eg in Cuc Phuong (oldest, opened by Ho Chi Minh), 15+ new phasmid, 10+ plant hopper still to describe. To discuss when economic versus ecological arguments, unique things to protect. Species seem to have restricted range, so it is important to have many protected areas. Example of 3 national Park, distance between Bio Ba and Nui Cha, and in between is Phuoc Binh: Bidoup Nui Ba: only stick insects: 23 new species undescribed, Phuoc binh, 13 new species, Nui Cha, difficult to reach the wet forest, 18 new species! Endemism of each park: Bidoup, 100%, Phuoc Binh 90% endemism, only one species common with Nui Cha: just over 60 km: more than 60 species of phasmids.

Bidoup Nui ba: just a few km<sup>2</sup> is explored!! Every day new species! Endemism per mountain! Genus of cicada only recorded in S Malaysia, now in Vietnam. One specimen → new species!

Patrick Grootaert retired, is in Hong Kong to collect. Sampling in mangroves with malaise traps.

Group photo

LUNCH

## Results international scientists

### Thierry Bourgoin (MNHN Paris)

Plant hoppers. Last year's collaboration on Vietnamese fauna, opportunity to meet Thai. Why biodiversity conservation matters in Vietnam with the case of plant hoppers. VN is large hotspot in SE Asia. Several eco-regions, 14 in VN!! North-South. 6<sup>th</sup> most biodiversity rich in world, 10% of plants endemic, many animals!! 164 terrestrial protected areas! 30 NP, 58 nature reserves!

Plant hoppers (Hemiptera, 5<sup>th</sup> group, 100.000 species in world. Fulgoromorpha, 30 families, 14000 species. Dominated by interaction with host plants. Several groups are devastating pests, e.g. brown plant hopper on rice and others. Pest in Korea, invaded from China last 10-5 years and recent in US. We know not much about it. This species has only 4 instars (all other have 5 instars). N China, -25°C until Vietnam, tropical, 2 subspecies, pest on vine.

Plant hoppers in Vietnam: 255 species! Compared to neighbouring countries <100, except China, 677 species. Knowledge is not accurate, families are even missing! Peaks of descriptions of species by individual entomologists. Half of species before 1978. Other half last 40 years, so it is nothing.

Which biotopes? E.g. limestone karst in Mekong delta in S VN. Lots of caves, with roots coming from the roofs, and on these roofs are plant hoppers totally in the dark! No eyes, short wings, adapted. Interesting species with wax glands on the wings. Problem? The hill is exploited for the production of cement. Now the hill has disappeared. We lose totally the biodiversity from these caves! New species of Bennini in special biotope, evergreen forest, big rocks. Dark rivulets under the rocks, totally under investigated with roots of trees and plant hoppers.

Conclusion: why: lots of key biodiversity areas, several hundreds. Insects not taken into account in the establishment of hotspots. Poorly known, 255 species known. Very dependent on taxonomic experts! Insects very restricted distribution. Micro-endemism patterns.

Q1 (CA): CA: 53 species described, references to be shared? FLO database, accessible! You can use the knowledge of neighbour countries to go faster. Two collecting trips in CA, quite a lot of plant hoppers, new species and new genera, student she applied for GTI in Brussels.

#### Adeline Soulier-Perkins (MNHN, Paris)

One peculiar case: Lophopids! The more you learn, the more you know nothing, tropical regions on all continents. 41 genera, 10 genera in VN! Pest on e.g. sugar cane etc.;..Genus *Paracorethrura*: first alive picture from Jérôme, 2 cm long. 1998: genus: 1 species, 1 specime! Now, 20 specimens. All females found! Questions! In collections: specimes with same patterns, except colour, are all males! But sexual dimorphism in Lophopid is rare. Molecular work was then done cytochrome oxydase. No success, collection specimens not good condition. Collect specimens in the field, DNA extraction. In fact these are two species, 23% DNA difference. Collecting is difficult and should be diverse, beating, watching, Malaise trap, climbing in the trees! Inventory needs to be continued.

Q1 (IT): parthenogenesis known? No data, do not think so, all other species males and females. Few cases, cicada: huge quantity in hot spring, sand in river, hundreds of specimens, collect to cook them, specimens collected only males rich in minerals, salts.

Thierry: unpublished occurrence of m and f in F. Guyana, 3 months collecting life traps 2 families. Surprise: bi-partition of occurrence according to the sex. First male, then female or inverse, short time of overlapping.

Q2 different life cycles

Thierry, 1 M species described, 100.000 bar coded. Host plants defined for tiny proportion.

#### Eric Guilbert (MNHN, Paris)

The Tingidae of Vietnam. Lacebugs Heteroptera, phytophagous, not really abundant, under leaves. 2500 species. Solitary, some are gregarious. First in VN: 1906, until 1956 nothing, then in total 42 species in VN. Each new location is a new species collected. In central Vietnam almost nothing collected till now! Most around Ha Noi and Saigon. Guilbert 27 species recorded on musea specimens. Collecting in canopy by tree climbing in Cuc Phuong. 2 weeks: 16 species collected, 2 new records for VN, 2 new species to science. Half of VN species are endemic. International Associated laboratory between FR and VN, funded last 4 years. 10.000 euro per year. They are only 4 mm and pale in colour and move very slowly, difficult to see!

Q1 Thai: not in high mountains, because no sampling was done.

Q2 (IT): also in the soil in Europe, R: suspected to feed on roots.

Coffee break

### Luca Bartolozzi ("La Specola" Natural History Museum, University of Florence, Italy)

Our goal is the same, to discover and to teach, no competition. Cooperation started In 2010, first MoU for 3 years and new MoUs of 3 years. Present one until 2018. In the field of entomology and biodiversity. Fields: exchange of people, add geology, botany, exchange of specimens with laws and regulations, workshops, publications, ...

7 expeditions 2010-2016. Many national parks, forest reserves. 16 sites. Always very good collaboration with local authorities, work at day and night. Specialist of 2 beetle families. Photographer of museum made nice archive. Important to create reference collections. Observing living: f-defensive behaviour with hind legs extra-long size. Increase public awareness. Exhibition in Italy about the biodiversity of VN. To share knowledge through courses to students, and in Europe, different grants...like DEST. A proposal: archive: create guide for the public on insects.

### Sokha Kheam, Royal University of Pnom Phen

So far since 4 years and collaboration with Jerome and videos were made. Cambodian Entomology Initiative CEI supported by USAID and NSF on leaf and treehoppers: training and education, through development of bioindicators and agriculture pest controls. Also Illinois, RBINS, Thailand and Singapore.

Goals of CEI: improve capacity, establish national collection, identification of insect fauna, DNA still to be developed. Undergraduate students went to different locations across the country. Collection: 70.000 specimens, but not all are identified. Also training and outreach, exhibitions. Research till now more on mosquitoes, vectors. Collaboration needed, e.g. expert from Singapore on bees etc...

They have strategy for 10 years: 15 entomologists, national collection, education, Asean networks etc....web site, facebook page

VIDEO Clip with Jerome, very good!

Q1 Constant: national collection? Min. of education.

### Presentation by Thai

Expeditions in Cambodia. In 2017, 3 more national parks. Study on Cicadidae. First species in 1889. 1985: 64 species recorded. Now 140 species in VN. Materials collected on 71 localities. Very much linked to creation of protected areas, very nice! Checked specimens in BE, FR, US, NL. 24 species endemic to VN, but it is relative as long as the species were not found in other countries. Some errors induced by the term 'Indochina', which sometimes only refers to Laos for example.

Q1: Eric: collecting all? Yes all. All specimens are in IEBR.

Q2: Hanoi not only one. Material is in IEBR and museum, same campus, belonging to Vietnam academy.

### Tools for SPI, by Marie-Lucie

Start thinking about tomorrow on the basis on the results of research. DGD asks about SPI, not just science to science, we are paid to help develop and alleviate poverty, help Vietnamese stakeholders to make the good decisions. You have already good ideas. (very good intro by ML).



Gap between scientists and policy makers, to build a bridge. SPI: linking up to communicate, exchange info etc...

Formal structures such as IPCC, IPBES or informal. Stakeholder dialogue at beginning of process. Here at the end!

Discussing a project is an SPI, workshops etc...consider all layers of population, indigenous people, field trip...Too often potential for communication not realized!

To do: to produce a tool to strengthen SPI, policy brief. For non-specialized public.

Self-sufficient, simple words, simple matters, short, attractive, key idea. Pictures instead of long texts.

What can we do together? **Light policy brief**. HOW: answers to questions: key message, results? Visuals? Recommendations, what to change, how in perfect world; see article Godfrey et al, 2010.

End at 16 (tired from jet lag).

## Discussion

Q1 (IT) which stakeholders? R: all directors of parks asked, 17 responded positively, Min. of Tourism (no), nat. env. (yes), VAST, VNMM

Q2 ideas, recommendations adapted to public, director of parks, ministries, more a meta view

Lessons learned for Cambodia

People for pests?

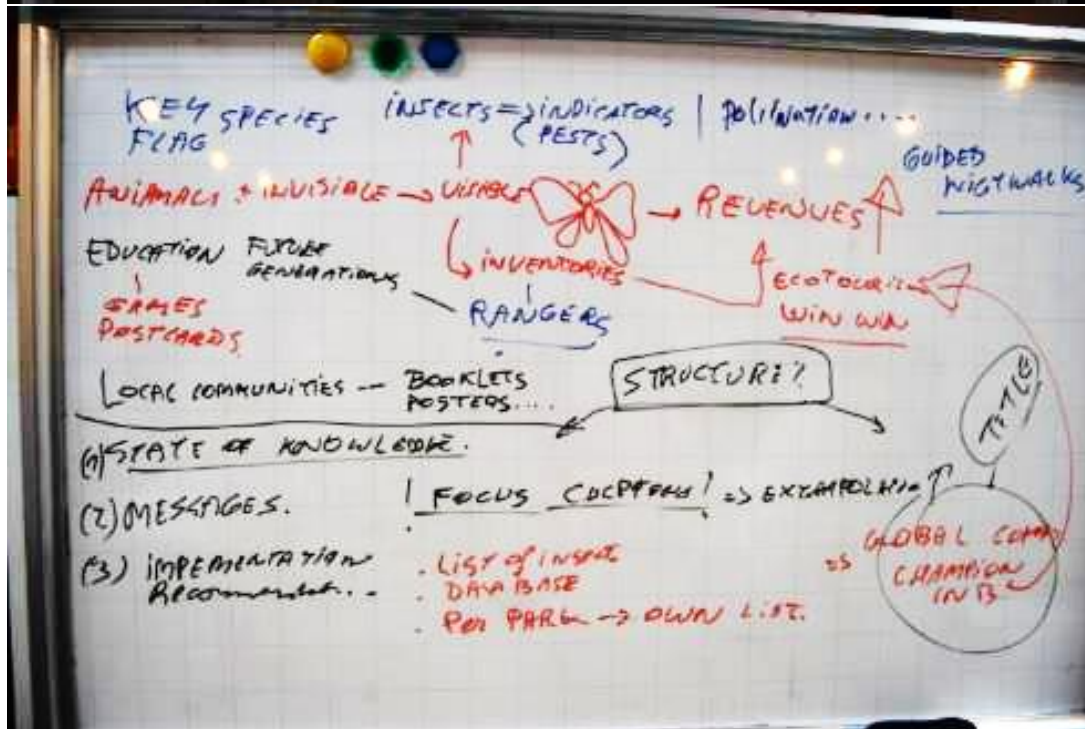
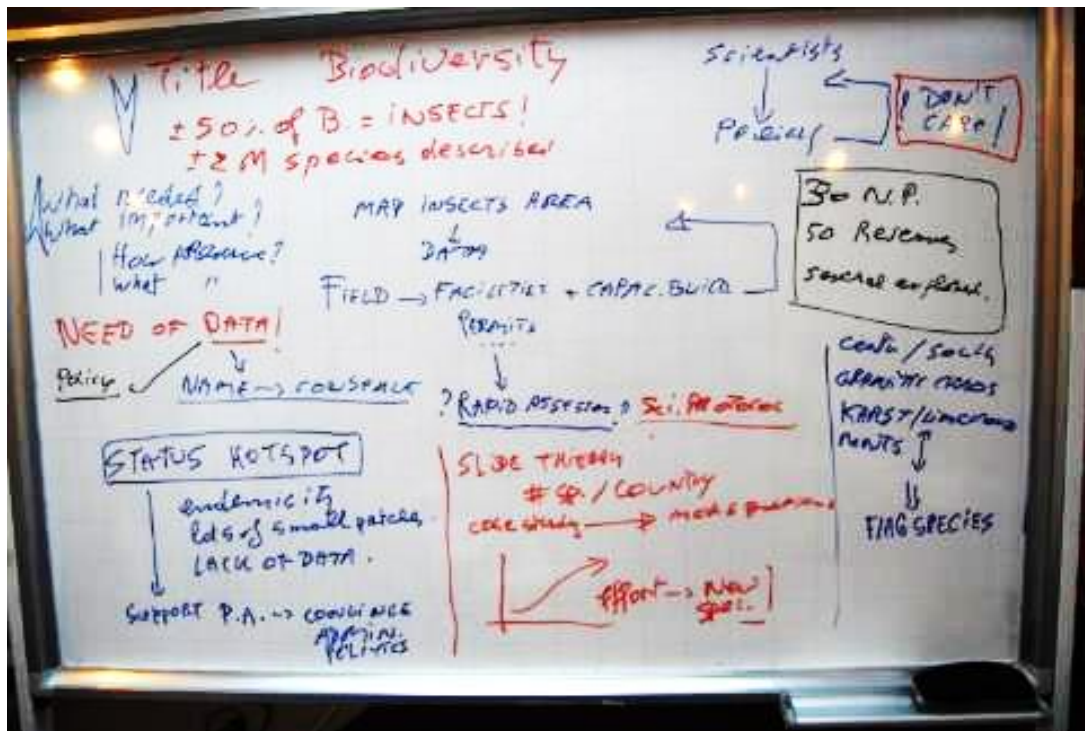
Translating from ecology to economy to move politics

Icoma, economic pests, to attract money: only 4 instars, why only on some *elanthus*? US lots of millions ! in US.

Ppt to flier to disseminate

## Tuesday, 04 April 2017

We start with a mind mapping of the title, key messages and recommendations for a policy brief, starting from concrete scientific evidence provided by case studies on insect biodiversity in Vietnam.



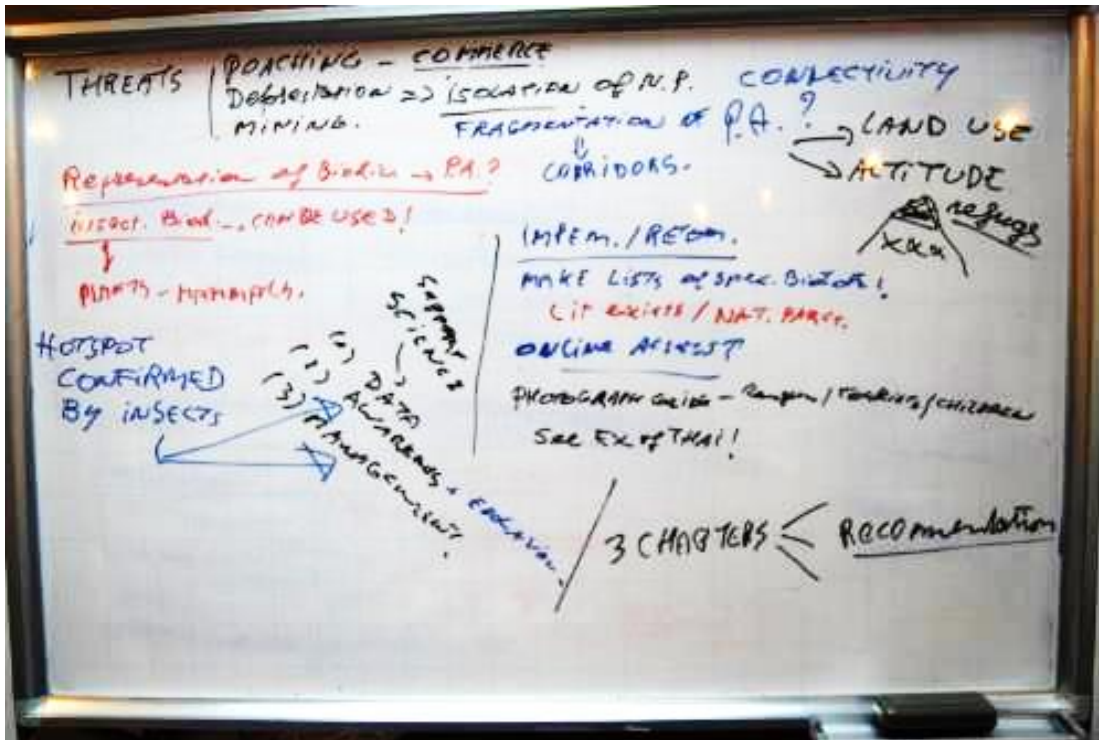


Fig. 3. Mind mapping to prepare the policy brief on the entomo-biodiversity of Vietnam.

From this we distil a structure in 3 chapters, each with facts and figures and recommendations:

1. Data supported by science, need to support science
2. Awareness and education
3. Management-policies

10 AM, coffee break and checking out of the hotel

12:30: LUNCH break

14-16:30: continuation

The idea is to prepare the ppt, print the hand outs in colour and translate them in Vietnamese in order to do the restitution to the stakeholders (administration of national parks) tomorrow.

17:00-20:30: travel to CUC PHUONG N. P. , Cuc Phuong Hotel

Night: preparation of presentations

**Wednesday, 5 April**

Most with simultaneous translation, except otherwise mentioned.

- Presentation of all participants
- Presentation by Luc
- Presentation by Marie-Lucie

- Video CEBioS
- Coffee break, group photo
- IUCN framework by Luc
- 10 years collaboration RBINS-VNM by Jérôme, gave 6 symposia in IEBR and VNV. 27 weeks of work, >25 papers, 18 new species, 10 new genera, etc..., build digital collection of the types from Vietnam which are preserved abroad. Pictures of the specimens and the original labels, are plans for the future for the centre for insect diversity and systematics.
- LUNCH
- Presentation by Thai about VNMN (in Vietnamese)
- Sokha Kheam (Cambodian Entomology Initiative CEI. Work since 4 years, with USAID. CEI established in 2005. Also support by Illinois, RBINS, Fac. Of forestry, Kasetsart University in Thailand, Nat. Un. of Singapore. Capacity, national collection, insect fauna species, agricultural pests & local community. Small collection is present. Also outreach programme with Jérôme, students, exhibitions to high school students, public awareness. 70.000 specimens collected and waiting for identification, 70 sites collected, > 10 students each month on techniques, training. They need collaboration! [www.cambodianentomology.org](http://www.cambodianentomology.org) , [insectpeer@gmail.com](mailto:insectpeer@gmail.com) .
- Playing the Cambodian video.  
Q1: how many students? Right now, 10 students, 4 is part time, te others volunteering for eg field work. Also Master degree on pest control.
- Trinh Dang Mau: rotifer diversity in Hue province, Vietnam. Cooperation with Hendrik Segers. (only in English). 120 species new to Vietnam and 4 species new to science.

Q1 research in N and S Vietnam or only in central. Nothing described else.

Q2 biodiversity for rotifers in VN? Hotspot? In VN >240 species. Thailand: almost 400, Cambodia 133 species, Laos, 80.

Coffee break

[Presentation of evening programme by Thai](#)

[Presentation of policy brief by Jérôme](#)

### **Discussion with the stakeholders, national park directors**

[Dir. of Cuc Phuong N.P.](#) : I am very thankful as host for this event. I consider this congress extremely important. We already agree VN is hotspot diversity, but knowledge of biodiversity still limited. E.g. Cuc NP since establishment of scientists study biodiversity of plants. And in our experience we know that Cuc Phuong is rich in insect diversity, the need to have tools and methods to inventory all of them. We realize limitations, the training in insect taxonomy in Cuc Phuong, already some collaboration in foreign institutes, we expect more; every time new species Cuc Phuong published, we are happy also for potential new species, also more opportunity for more collaboration in the future. I think the conclusion in your presentation is really impressive and influences government thinking. I totally agree more inputs not only NP or N R but also minister and government to explore more entomology. We hope that all of you scientists especially from Belgium support and cooperation with us, first with Cuc Phuong and other parks. Have you visited the museum? I know our collection here is very modest. But I assure you the collection is the best amongst NP in VN. I have visited other insect collections, I know our study of insects very limited and many gaps in knowledge. I think after this congress Cuc Phuong NP will spend more efforts o

study of insects and we can give you the support we need. Thanks you all for sharing knowledge and more opportunities to .

Q1 (Luc) R: Ecotourism in your park: we have some activities related to tourists and some environmental factors, e.g. some activities tourists can go and explore, 2 types: on their own or with one of our scientists and explore. Identity of native culture. We have some minority here in rural communities, this evening some dances. Also organise homestay in community house, harvesting corn, other cultural activities. Kayaking. Sightseeing. Bird watching tours. Fauna activities and special flower, yellow camellia, tourist come for that . Foreign tourists, tourists: 80.000 visitors, 15%-20% of nr.

Q2 (Thierry): survey about proportion of people with interests for birds, flowers, vertebrates, fauna and flora interest. R: some come especially, but no exact numbers! Probably with entomology they could attract more people in the park.

Q3 (Erik): how are national parks connected? Common strategy or each parks independent, nationally? R.: in fact I can give you two: NGO is association for all NP and help in consulting and trends for tourisms etc. and officially dept. of forestry which govern all activities I thinks they set some standards without each park has to develop own activity?

Q4: it depends on state money? R: NO! to be more clear, you want to have some tourisms, you propose your plan to the authorities but the activities it is the park to decide.

#### Dir. of Cat Tien NP

I also like to thank you for invite me here. I found the congress interesting; After your talks I have some ideas in the future for own national parks. I think is very important you have to protect these areas and just from learning from insect biodiversity you have to protect the ecosystem to protect insect biodiversity. I agree I think after this conference we learn insects a bit better. Other generations to love insects, better protection for future generations. Yes as I said before, new idea, especially for ecotourism in our national park we are in the process of making more plans and strategies to get more school children for more activities in the NP. I also agree with Jerome about need to have more survey, extend our range of study n all locations. I also agree if we can have some formal collaboration, training of our staff to protect better biodiversity and our Nat. park ill support study as much as possible. If I have time, to come to my park

Q5: Luc threats in your park R: cutting is also rich biodiversity, 3 main: poaching, deforestation, invasive plants.

Q6: logging which purpose? R: 60 kg per people for furniture (1 M dong)

#### Prof. Ming

Thank you for invitation and conference very interesting. You manage to find so many new species. I know our NP has a very high biodiversity. We virtually have no data on insect biodiversity in our national park. It is the same case in every NP. Budget for insect study is low but after this conference we can go for some collaboration between you and us. I think some collaboration and we will support to the best of our abilities to produce more data on our insects. One of your talking points is how to use insects as bio indicators in our ecosystems.

#### Dir. of Con Dao N.P., island park (one of 3)

I am very grateful to be invited here today. I am also interested for more information about NP. Is one of three island NP, fauna and flora on land but also marine ecosystem. Compared to terrestrial ecosystems,

but for more marine ecosystem many offers from sponsors → sea turtles. We don't have much problems coming from land use, deforestation, poaching. However heavy burden to do job to protect marine ecosystems and our rangers are also conserving the sea. Not directly related to entomology, but more about NP some problems with overpopulation of monkeys, destroying some stuff in the village. One of problem, authorities don't provide sufficient expertise on a subspecies of monkey. Important for higher authorities and scientists to help park managers how to obey the law.

Q8 Thank you for coming here today. As a NP we have our main mission to monitor and conserve and research . We still have to obey the law for collecting specimens. Just 3 specimens for each species but the law is the law. Obviously some concern how many specimen to do your research. Scientists trying to collect more than supposed to. But please understand as a manager of NP some laws concern them, selling specimen, win win commitment. I just want to share experience for win win situation. Studying in different national parks.

#### Dir. of Bach Ma N.P.

Thank you for inviting me, first conference I do on insects! All agree to study insects in all NP in VN. Impressed with Jerome's talks, especially slides differences of species over 60 km from each other. Especially we need more protected areas, meaning more species, and corridors between protected areas. Negotiate with policy makers to establish protected areas. Some request, when you publish new species, email us!

#### Dir. of Nui Chua N.P.

I thank for VMN and RBINS for inviting me today. Our dir. could not be here so I am forest rangers. Scientists discovered so many species, especially the stick insects; I would recommend, when publish new species, report to higher authorities and official basis to negotiate las to better protect!! I agree with opinions from other NP.

#### Vice-Director of VNMN

On behalf of VNMN co-organiser of this event, welcome and thank you for all scientists and also dir and vice directors of all national parks, especially Cuc Phong NP and Mr Ding, dir. In my opinion Cuc Phong one of the best high quality scientific staff . I also agree its information and opinions shared by the other NP. As for me I only offer some of my perspective as a scientist and a taxonomist. In VN we have very few taxonomists and it decreases. In VN we have some problems, a reduction govern want every institute we lose the staff, 10% until 2021, as far as strategy from government. In the past many taxonomists trained in USSR or western Europe but now close to extinction. Dr Thai is of a common case. Dept of biology produce some taxonomists. Most students go for bio-engineering instead... One of the problems about policy makers when providing policy on environmental science. I hope that partners and institutions maybe you can help us in foster these few people short course on taxonomic training is really good. Short course for our staff when you stay here for your research. We are really in short of young taxonomists and training. Deforestation is still happening in all NP and it is hard to avoid it. My opinion we need to collect more specimens and train more staff for taxonomy. NP support our efforts in research and studies and other best. I really appreciate help and support and hope continue receiving such great support from NP and NR.



Fig. 4. First part of workshop in Ha Noi. Reptilian encounter during night sampling in Cuc Phuong NP.

#### **6 April, Thursday**

- Visit of Cuc Phuong National Park
- Night: demonstration of light trap and active catching of insects

#### **7 April**

- Retour to Hanoi
- Meeting with Mr. Geert Vansintjan, Belgian embassy, and reporting of the mission
- Departure with Thai to airport

## 8 April, Saturday

- Arrival in Brussels, 7:40 AM

### Acknowledgements

I wish to thank Dr. Phạm Hồng Thái (VNMN) for the perfect organisation of the mission and the workshops. I also thank my colleagues Marie-Lucie, Jérôme and Joachim for the many rich moments talking about insect taxonomy and conservation in Vietnam and Cambodia, and their excellent contributions during the mission. It was also a real pleasure to interact with our colleagues from Paris and Italy, Luca, Adeline, Thierry and Eric.

I wish to thank all staff of VNMN, the Cambodian scientists, as well as all national parks directors for their enthusiastic participation to the workshop.

I also wish to thank Mr. Geert Vansintjan of the Belgian embassy for our rich discussion during the restitution of the workshop and his enthusiastic interest in our activities.

Luc Janssens de Bisthoven, 8-6-2017

Annexe 1: List of participants in the 1<sup>st</sup> part of the workshop in Hanoi (compiled by Marie-Lucie Susini Ondafe)

No	Name	Institution
1.	Dr. Luc Janssens de Bisthoven	CEBioS, Royal Belgian Institute of Natural Sciences, Belgium
2.	Dr. Marie-Lucie Susini Ondafe	CEBioS, Royal Belgian Institute of Natural Sciences, Belgium
3.	Jérôme Constant	Royal Belgian Institute of Natural Sciences, Belgium
4.	Joachim Bresseel	Royal Belgian Institute of Natural Sciences, Belgium
5.	Mr. Sokha Kheam	Researcher, Cambodian Entomology Initiatives, Royal University of Phnom Penh, Cambodia
6.	Dr. Sokchan Lorn	Senior researcher, Cambodian Entomology Initiatives, Royal University of Phnom Penh, Cambodia
7.	Dr. Luca Bartolozzi	Natural History Museum, Zoological Section, La Specola, Italy
8.	Dr. Adeline Soulier	Museum national d'histoire naturelle, Paris, France
9.	Dr. Thierry Bourgoïn	Museum national d'histoire naturelle, Paris, France
10.	Dr. Eric Guilbert	Museum national d'histoire naturelle, Paris, France
11.	Mr Trần Thế Liên	Head of Department Of Nature Conservation, Ministry of Agriculture
12.	Prof. Châu Văn Minh	President of VAST



13.	Prof. Ninh Khắc Bản	Head of Department of International Co-operation of VAST
14.	Prof. Nguyễn Trung Minh	VNMN
15.	Dr. Phạm Hồng Thái	VNMN
16.	Prof. Vũ Văn Liên	VNMN
17.	Dr. Phan Kế Long	VNMN
18.	Ms Do Thi Hai	VNMN
19.	Ms Tran Huong Lien	VNMN
20.	Prof. Bui Minh Hong	Faculty of Biology, Hanoi National University of Education
21.	Luu Hoang Yen	Vietnam Forest Museum

Annexe 2: List of participants in the 2<sup>nd</sup> part of the workshop in Cuc Phuong National Park

No	Name	Institution
1.	Dr. Luc Janssens de Bisthoven	CEBioS, Royal Belgian Institute of Natural Sciences, Belgium
2.	Dr. Marie-Lucie Susini Ondafe	CEBioS, Royal Belgian Institute of Natural Sciences, Belgium
3.	Jérôme Constant	Royal Belgian Institute of Natural Sciences, Belgium
4.	Joachim Bresseel	Royal Belgian Institute of Natural Sciences, Belgium
5.	Mr. Sokha Kheam	Royal University of Phnom Penh
6.	Dr. Sokchan Lorn	Royal University of Phnom Penh
7.	Dr. Luca Bartolozzi	Natural History Museum Zoological Section La Specola, Italy
8.	Dr. Adeline Soulier	Museum national d'histoire naturelle, France
9.	Dr. Thierry Bourgoin	Museum national d'histoire naturelle, France
10.	Dr. Eric Guilbert	Museum national d'histoire naturelle, France
11.	Prof. Châu Văn Minh	President of Vietnam Academy of Science and Technology
12.	Prof. Ninh Khắc Bản	Head of Department of International Co-operation
13.	Prof. Nguyễn Trung Minh	Director of Vietnam National Museum of Nature
14.	Prof. Vũ Văn Liên	Vice Director of Vietnam National Museum of Nature
15.	Dr. Phan Kế Long	Vice Director of Vietnam National Museum of Nature
16.	Dr. Phạm Hồng Thái	Head of Department Specimen Collection Management
17.	Mr. Phạm Anh Cường	Director of the Biodiversity Conservation Agency, Ministry of Natural Resources and Environment

18.	Dr. Nguyễn Thành Vĩnh	Vice Director of the Biodiversity Conservation Agency, Ministry of Natural Resources and Environment
19.	Mr Trần Thế Liên	Head of Department Of Nature Conservation, Ministry of Agriculture
20.	Prof. Bui Minh Hong	Faculty of Biology, Hanoi National University of Education
21.	Luu Hoang Yen	Vietnam Forest Museum
22.	Ms Do Thi Hai	Vietnam National Museum of Nature
23.	Ms Tran Huong Lien	Vietnam National Museum of Nature
24.	Do Van Lap, Vice Director,	Cuc Phuong NP
25.	Nguyễn Đức Hậu, Vice Director,	Tam Dao NP
26.	Hoàng Hặc	Copia NR
27.	Director	Ngoc Son-Ngo Luong NR
28.	Vũ Thành Nam- Vice Director,	Bach Ma NP
29.	Lê Văn Hương, Director	Bidoup-Nui Ba NP
30.	Nguyễn Văn Diệm, Director	Cat Tien NP
31.	Trần Duy Lịch- Vice Director	Con Dao NP
32.	Trịnh Đăng Mậu	University of Da Nang
33.	Nguyễn Trọng Huỳnh	Nui Chua NP