

# Facebook, internet and citizens can improve taxonomy and faunistics

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## *Lanternflies of Cambodia* (Hemiptera: Fulgoridae)



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# What is known from Cambodia compared to neighbouring countries?

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## Lanternflies (Fulgoridae)

- Cambodia: 5 species
- Thailand: 17 species
- Vietnam: 29 species

# Why is Cambodian fauna so poorly documented?

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Khmer rouge period: 1975-1979



- About 2,000,000 people dead
- About 6,000,000 landmines



# Species of Lanternflies recorded from Cambodia

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## Lanternflies knowledge 1863-2010



1863: *Pyrops coelestinus*  
Type location



1863: *Pyrops ducalis*  
Type location



1885: *Pyrops candalaria*

# Species of Lanternflies recorded from Cambodia

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## Lanternflies knowledge 2010-2016



2010: *Penthicides  
atomaria*

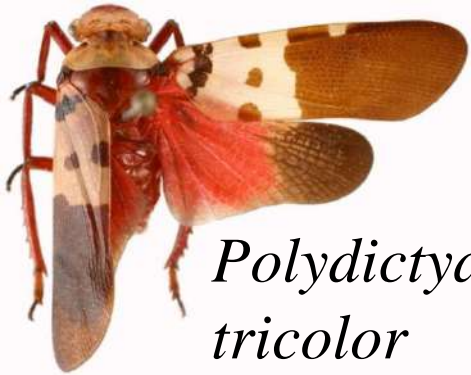


2010: *Penthicides  
pulchella*

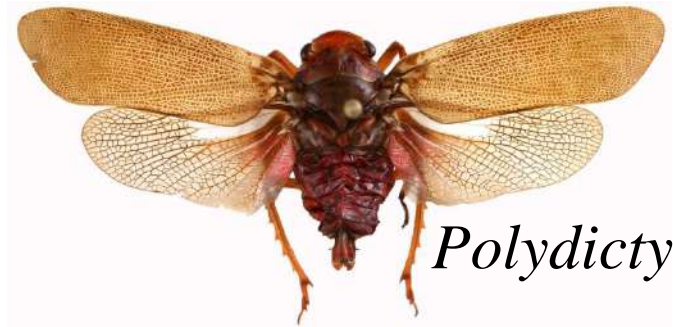
# Species of Lanternflies recorded from Cambodia (collection specimens)

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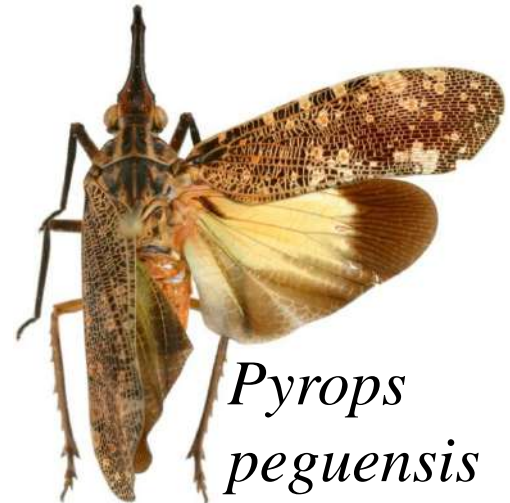
Collecting trip 2003 – GTI project



*Polydictya tricolor*



*Polydictya* sp.



*Pyrops peguensis*



# Species of Lanternflies recorded from Cambodia (collection specimens)

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Collecting trip 2015



*Aphaena* sp.



*Saiva  
gemmata*



*Pyrops  
viridirostris*



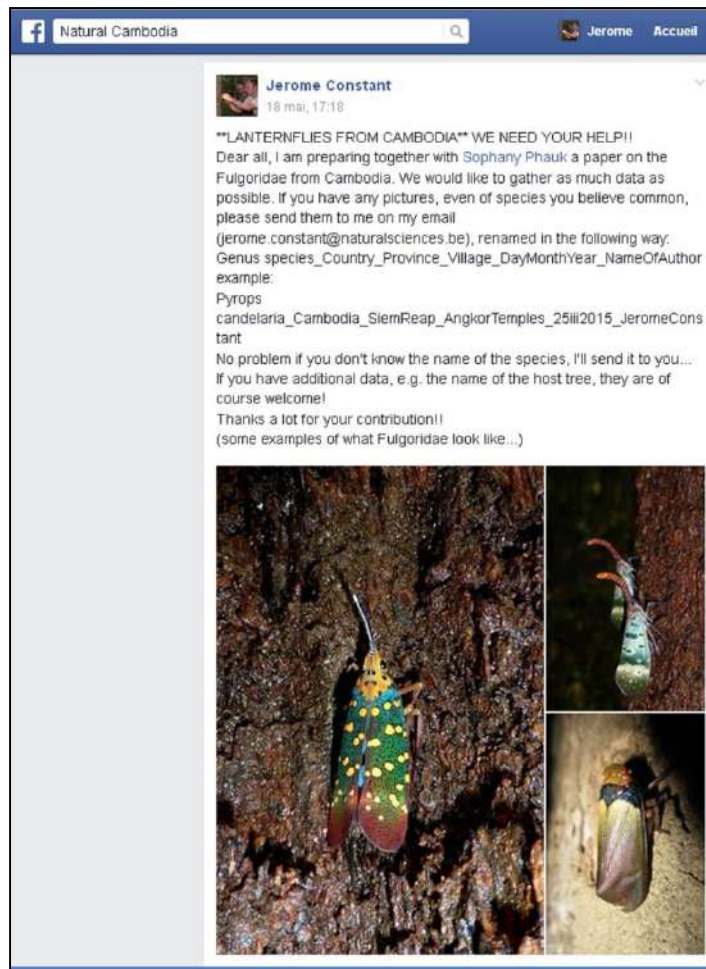
*Dichoptera* sp.

# What if we use internet for collecting data?

## Call for collaboration on Facebook

- *Photos renamed to facilitate data extraction*

## Research on Flickr





# Results of Facebook – Internet research

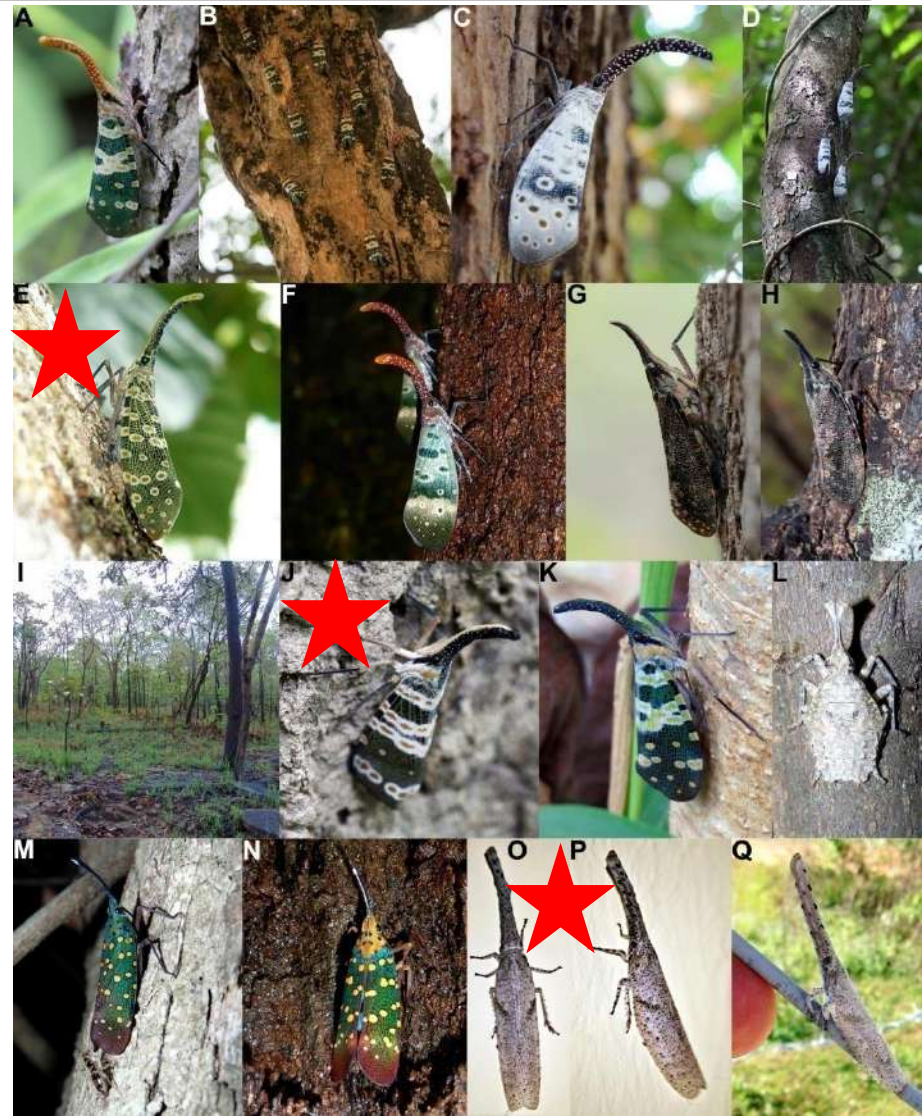
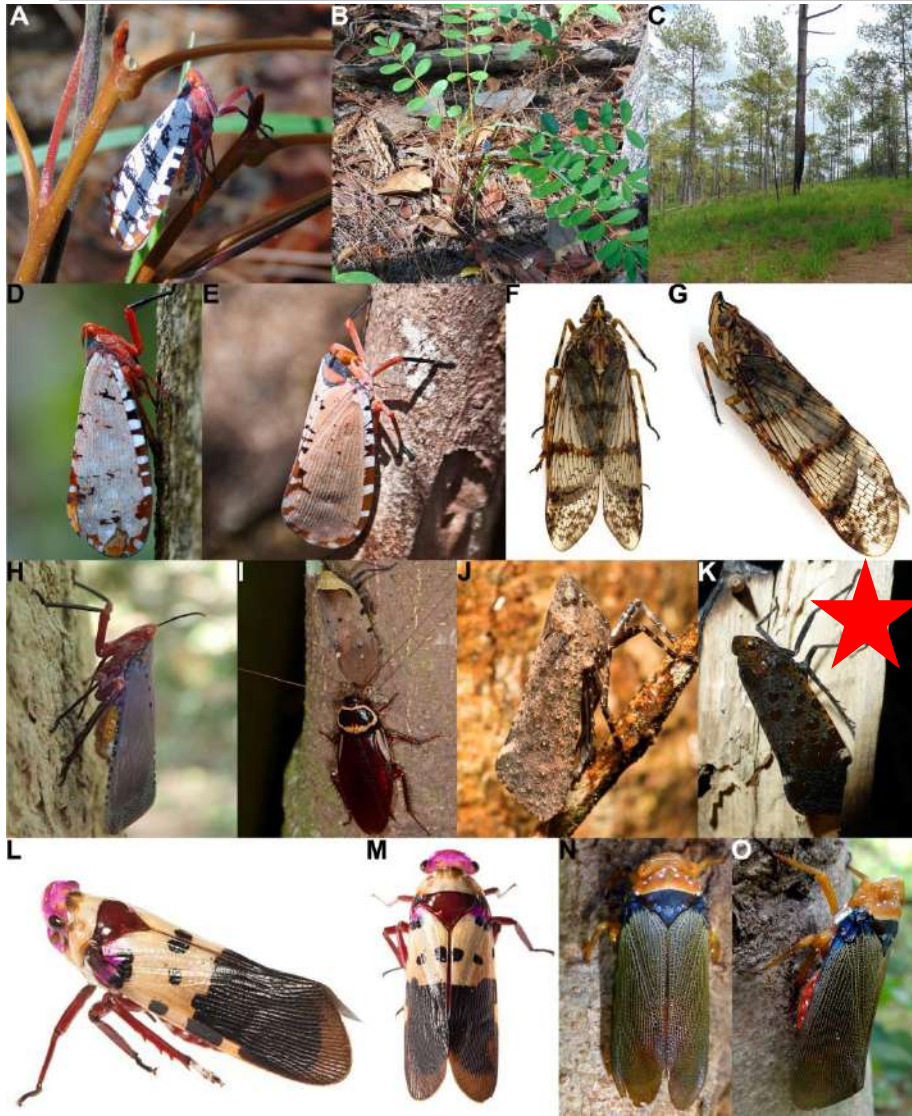
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- 18 persons collaborated (FB: 12)
- 38 original data in 59 photos
- 31 data from FB only
- 15 species documented
- data dating back to 2009
- 4 species known from CS only



# Results of Facebook – Internet research





# Benefits of citizens' involvement

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- Improvement of scientific knowledge
- Better documentation of distribution and phenology
- Motivation of the participants



# Limits of the method

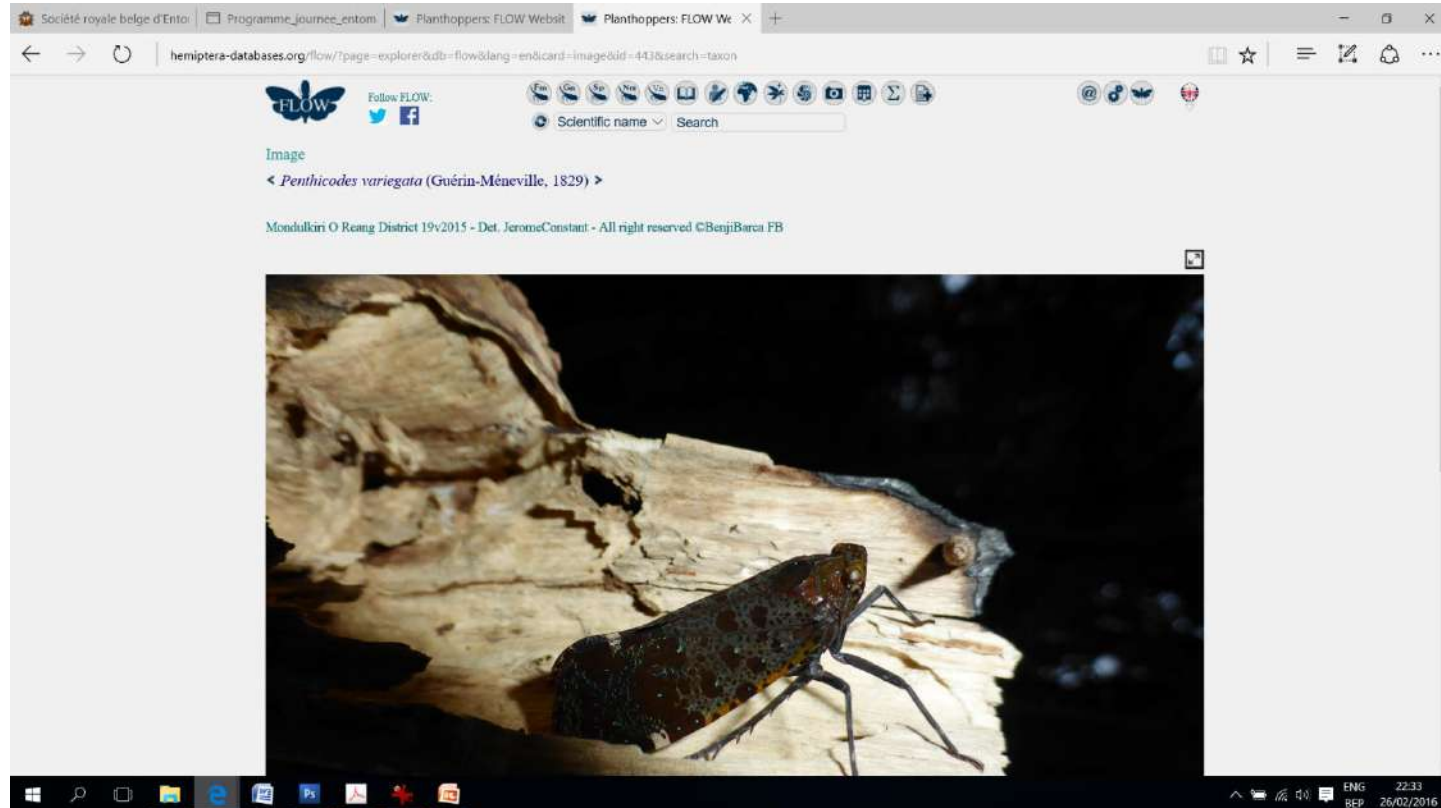
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- Only possible for species which can be identified on photographs
- Implication of a taxonomist from the beginning of the process – requires time
- Quality and speed of the feedback to the participants

# Long term availability of citizens' data

- Archiving on FLOW – Open Access



# Thank you for your attention!

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Publication

Jérôme CONSTANT, Sophany PHAUK & Thierry BOURGOIN, 2016.

**Belgian Journal of Entomology 37: 1-16.**



*Updating lanternflies biodiversity knowledge in Cambodia (Hemiptera: Fulgoromorpha: Fulgoridae) by optimizing field work surveys with citizen science involvement through Facebook networking and data access in FLOW website*