



Cuc Phuong NP,  
Vietnam  
July 2<sup>nd</sup> - 8<sup>th</sup>  
2019

16<sup>th</sup>

# INTERNATIONAL AUCHENORRHYNCHA CONGRESS

12<sup>th</sup> International Workshop on Leafhoppers  
and Planthoppers of Economic Significance



Program  
and  
Abstracts

Organized by:



Vietnam National Museum of Nature, VAST



National Foundation  
for Science & Technology Development

# 16<sup>th</sup> INTERNATIONAL AUCHENORRHYNCHA CONGRESS

12<sup>th</sup> International Workshop on Leafhoppers  
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## *Program and Abstracts*

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**16<sup>TH</sup> INTERNATIONAL AUCHENORRHYNCHA CONGRESS  
AND THE 12<sup>TH</sup> INTERNATIONAL WORKSHOP ON LEAFHOPPERS  
AND PLANTHOPPERS OF ECONOMIC SIGNIFICANCE (IAC 2019)  
IS BEING ORGANIZED BY THE FOLLOWING COMMITTEES:**

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Vietnam National Museum of Nature, Vietnam Academy of Science and Technology

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# PROGRAM

02-08/7/2019, Cuc Phuong, Viet Nam



	2 <sup>ND</sup> JULY	3 <sup>RD</sup> JULY	4 <sup>TH</sup> JULY	5 <sup>TH</sup> JULY	6 <sup>TH</sup> JULY	7 <sup>TH</sup> JULY	8 <sup>TH</sup> JULY
<b>TIME</b>	<b>VIETNAM ACADEMY OF SCIENCE AND TECHNOLOGY (VAST)</b> <i>18 Hoang Quoc Viet St, Cau Giay, Hanoi, Viet Nam</i>	<b>CUC PHUONG NATIONAL PARK</b> <i>Ninh Binh, Viet Nam</i>					
7:30		<i>Breakfast</i>	<i>Breakfast</i>	<i>Breakfast</i>	<i>Breakfast</i>	<i>Breakfast</i>	<i>Breakfast</i>
9:00	<b>Congress participant arrivals: the registration</b>	Oral session: Taxonomy, phylogeny, and biogeography	Collecting in Cuc Phuong National park	Oral session: Taxonomy, phylogeny, and biogeography	Oral session: Ecology, Behavior and bioacoustics	<b>Morning - Tr�ng An Scenic Landscape Complex</b>  <b>Afternoon - Bái Đ�nh Temple Spiritual and Cultural Complex</b>	Congress participant departures
10:30		<i>Coffee break</i>		<i>Coffee break</i>	<i>Coffee break</i>		
11:00		Oral session: Taxonomy, phylogeny, and biogeography	Collecting in Cuc Phuong National park	Oral session: Taxonomy, phylogeny, and biogeography	Oral session: Ecology, Behavior and bioacoustics		
12:30	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i> <i>(inside forest – Bong Center)</i>	<i>Lunch</i>	<i>Lunch</i>		



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<b>TIME</b>	<b>VIETNAM ACADEMY OF SCIENCE AND TECHNOLOGY (VAST)</b> <i>18 Hoang Quoc Viet St, Cau Giay, Hanoi, Viet Nam</i>	<b>CUC PHUONG NATIONAL PARK</b> <i>Ninh Binh, Viet Nam</i>					
14:30	<b>IAC opening</b> Congress participant arrivals: the registration (continued) until 15:00	Oral session: Taxonomy, phylogeny, and biogeography	Collecting in Cuc Phuong National park	Oral session: Taxonomy, phylogeny, and biogeography	Visit to Cuc Phuong National park ( <i>Turtle Conservation Center, Endangered Primate Rescue Center, Carnivore and Pangolin Conservation Program</i> )		
15:30	<b>Move to Cuc Phuong National Park</b>	<b>Coffee break</b>	<b>Coffee break</b>	<b>Coffee break</b>			
16:00-17:30			Collecting in Cuc Phuong National park	Poster presentation IAC board meeting	IAC closing remarks		
19:00	<b>Welcoming dinner</b>	<b>Dinner*</b>	<b>Dinner*</b>	<b>Dinner*</b>	<b>Dinner*</b>	<b>Farewell dinner</b>	
		<i>Light trapping</i>	<i>Light trapping</i>	<i>Light trapping</i>	<i>Light trapping</i>	<i>Dancing show</i>	



## **CULTIVATING THE TREE – A NEW INSIGHT INTO RELATIONSHIPS WITHIN FULGOROIDEA (HEMIPTERA, FULGOROMORPHA)**

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Fulgoroidea Latreille, 1807 is the largest and the only extant superfamily of hemipteran suborder Fulgoromorpha Evans, 1946. The other fulgoromorphan superfamilies, i.e. Coleoscytoidea Martynov, 1935 and Surijokocixioidea Shcherbakov, 2000 are extinct. Fulgoroidea fossil record reaches the early Jurassic times (Szwedo 2018, Bourgoïn 2019). Almost all fulgoroids are opophagous phytophages, feeding on phloem of most of the spermatophyte plant groups, but some are believed to be mycetophagous. Eto-ecology of these insects is connected to various degrees to their host plants, varying from monophagy to wide polyphagy, also egg laying and nymphal ecology is related to a wide range of habitats and range of host plant availability. Currently, the Fulgoroidea comprise 31 families, including 10 extinct, but status, range, definition, and taxonomic composition of many of them remain disputable.

Classification of Fulgoroidea, as well as relationship proposals for families comprised, are subject of constant change. Several proposals are based on molecular data, but numerous controversies remained (Urban & Cryan 2007, Song & Liang 2013). The existing morphology-based relationship reconstructions are currently of limited use because of the enormous number of new fossils influencing the shape of the trees. The informal division into ‘basal’ and ‘higher’ fulgoroids (Gnezdilov 2008) fails at the moment, as neither of these groups is clearly defined; separation of Cixiidae-like lineage (Bourgoïn & Szwedo 2008) and its content must be revised. Recently (Bartlett et al. 2014) added an ‘intermediate’

group to the divisions. Unfortunately no stable set of characters, morphological or molecular, required for inclusion into a particular group is available. Molecular trees need to be better calibrated with fossils, however the recent increase of new fossil material makes this aim more difficult, as newly described families, especially from the Cretaceous, are difficult to include into calibrations of phylogenies. Therefore the phylogeny of the Fulgoroidea must be rearranged to include new, rich fossil material. Here, we propose a morphology-based and molecular-data-influenced preliminary tree of relationships within Fulgoroidea.

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