

# IUCN SSC Firefly Specialist Group



2018 Report



Sara Lewis



Wong Choong Hay (Sonny)

## Co-Chairs

Sara Lewis (1)  
Wong Choong Hay (Sonny) (2)

## Red List Authority Coordinator

Vor Yiu (3)

## Location/Affiliation

(1) Department of Biology, Tufts University, Medford, Massachusetts, US  
(2) Conservation Division, Malaysian Nature Society, Kuala Lumpur, Malaysia  
(3) Hong Kong Entomological Society, Yuen Long, Hong Kong

## Number of members

22

## Social networks

Facebook:  
Fireflyers International, Silent Sparks  
Twitter:  
@silent\_sparks  
Website:  
fireflyersinternational.net



## Mission statement

Our mission is to compile existing knowledge for ~2000 lampyrid species worldwide on their geographic range, population size, and population trends, to identify major extinction threats and risk factors, to increase public knowledge concerning firefly diversity, ecology and behaviour, and to promote long-term conservation efforts.

## Projected impact for the 2017-2020 quadrennium

By the end of 2020, the Firefly Specialist Group (FSG) envisions: (1) compilation and publication of a global review of firefly extinction threats; (2) complete data compilation (extent of occurrence (EOO), area of occupancy (AOO), population size, risk factors) in preparation for Red List assessment for fireflies in certain regions (North America, others); (3) increased communication and educational initiatives through the newly announced World Firefly Day, the Selangor Declaration on firefly conservation, and awareness campaigns conducted in individual member countries.

## Targets for the 2017-2020 quadrennium

### Assess

Red List: (1) complete Red List assessments for a selection of 1-10 flagship species in one year; (2) complete global Red List assessments of 100-200 species for 2020; (3) develop and disseminate standardised methodologies for monitoring firefly species abundances.

Research activities: (1) develop a global distribution database for fireflies that includes relevant behavioural and life-history data, then use this information to inform Red List assessments; (2) determine whether the congregating mangrove fireflies in Malaysia and other South-east Asian countries could be used to establish Key Biodiversity Areas (KBAs); (3) develop a prioritised list of threats to firefly population persistence within different regions.

### Network

Membership: recruit members, appoint regional coordinators.

Synergy: provide guidance and work with local communities to protect threatened species and prevent their extinction.

### Communicate

Communication: (1) articulate and share guidelines to promote sustainable firefly ecotourism; (2) ignite public interest and garner local and regional support for firefly conservation and management; (3) develop a media to track FSG activities and keep members updated; (4) information on the FSG posted on the Fireflyers International Network (FIN) website: fireflyersinternational.net

Technical advice: disseminate technical information and advice about firefly conservation issues to interested parties.



Blue ghost fireflies (*Phausis reticulata*) trails  
 Photo: Spencer Black (Black Visuals)

**Activities and results 2018**

**Assess**

Red List

**i.** Standardised methodologies for monitoring firefly species abundances are being compiled. (KSR #12)

Research activities

**i.** Global distribution database for fireflies now completed for the ~170 North American firefly species; data compilation currently in progress for other regions. (KSR #1)

**ii.** Contacted Penny Langhammer and reviewed Ver 1.0 of the Guidelines for the Identification of Key Biodiversity Areas. (KSR #14, 22)

**iii.** Survey of global threats to firefly population persistence within different regions conducted, literature reviewed, manuscript submitted for publication. (KSR #26)

**Network**

Membership

**i.** We have recruited 22 members and have appointed regional coordinators for all regions where expertise exists.

Synergy

**i.** Formation in Malaysia of Firefly Komuniti network consisting of six communities and enterprises; more groups will be recognised to join this network. This will be a model for regional coordinators in other countries to set up their own networks. (KSR #15)

**Communicate**

Communication

**i.** Information-gathering from relevant regions to promote sustainable firefly ecotourism is in progress. (KSR #15)

**ii.** Group is actively posting on social media (Facebook: Fireflyers International, Silent Sparks; Twitter: @silent\_sparks); Co-Chair Wong provided training for 18 firefly ambassadors to lead community walks at Earth Hour 2019; training underway for World Firefly Day celebrations in Thailand, Malaysia, and the UK; radio interviews and public lectures given on firefly ecology and conservation in New York City and Boston, US; working with the US citizen science initiative, Firefly Watch. (KSR #28)

**iii.** Communication through email to date to track FSG activities and keep members updated. (KSR #28)

**iv.** Currently using the FIN website and Facebook group to post Specialist Group activities. (KSR #28)

Technical advice

**i.** In cooperation with The Xerces Society, Conservation Guidelines for Fireflies in the US and Canada is now in preparation. (KSR #26)



*Photuris mysticalampas*, a habitat specialist in Delaware, US  
 Photo: Radim Schreiber (fireflyexperience.org)

**Acknowledgements**

We thank The Xerces Society and Tufts Summer Scholars Program for supporting work on the North American firefly database, and Ben Pfeiffer, Lynn Faust, and Larry Buschmann for sharing their expertise. We are also grateful to the Malaysian Nature Society and Tufts University for administrative support.

**Summary of activities 2018**

Species Conservation Cycle ratio: 3/5

Assess	4	
Network	2	
Communicate	5	

Main KSRs addressed: 1, 12, 14, 15, 22, 26, 28

KSR: Key Species Result