



# Species

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## 2023 Report of the IUCN Species Survival Commission and Secretariat









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**T-017** Establish biological monitoring programmes to determine population trends for threatened firefly species by working with citizen science groups, volunteers, and local and state agencies.

Status: On track

**T-020** Disseminate to other countries firefly tourism guidelines developed in Thailand, Malaysia, Taiwan, and Mexico to encourage sustainable natural resource use.

Status: On track

Result description: In 2023 our Firefly SG members continued to be highly active contributors to biodiversity knowledge, publishing over 16 peer-reviewed articles and talks on firefly species descriptions. Members also wrote numerous articles and presented scientific talks on the status of fireflies in Brazil, Malaysia, Mexico, Europe, the Philippines, and the US. In addition, our paper 'Illuminating Firefly Diversity: Trends, Threats and Conservation Strategies' was published as an Open Access Review.

**PLAN  
Planning**

T-010 **Conservation Plans/Strategies for Fireflies in Southeast Asia.** (KSR 8)

Number of conservation plans/strategies developed: 0

Result description: We have submitted assessments (not yet published) for these vulnerable species and are continuing discussions with CPSG/Mandai Nature in Singapore and the Forestry Research Institute of Malaysia. We are currently looking for funding to support a regional workshop. We are also developing questionnaires for firefly experts in Malaysia to determine the status of protection and ongoing conservation work.

T-011 **Identify and describe data for Conservation Plans/Strategies for Fireflies in the United States and Mid-Atlantic States.** (KSR 8)

Number of conservation plans/strategies developed: 1

Result description: In collaboration with the Xerces Society, surveys continued during 2023 for ~13 high-priority data-deficient and threatened fireflies in three US regions: Mid-Atlantic, Southeast, and Western. Regular virtual meetings have been held to exchange information and answer questions, and occurrence data for these and other US fireflies is being reported to Xerces' newly launched [Firefly Atlas](#).

T-012 **Identify and describe data for Conservation Plans/Strategies for Fireflies in the United States and Mexico.** (KSR 8)

Number of species conservation plans/strategies developed: 0

Result description: Our Mexican team members have published articles and given talks outlining guidelines for more sustainable firefly tourism and we sent a letter of concern to the Secretary of Tourism for the state of Tlaxcala, Mexico about the need for more carefully regulated tourism in Nanacamilpa to protect firefly populations.

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ACT

**Conservation actions**

T-014 **Ad as c P s u t a t t F e s t**  
**Resea c I t t j e f M a a s i a (FRIM) P**  
**t e i 6- e a j e d t d P a i P a c P s e -**  
**a i P a P P I t t a P d t u i s I d e I t e s f**  
**c P e e s t a P t a P e e i e s I 12-14**  
**I e s t e s. (KSR 11)**

Number of communities benefited from sustainable use programs: 0

Result description: This work contributes to WCC-2020 Resolution 78 'Conservation, restoration, and sustainable management of mangrove ecosystem', and is ongoing. We have used the A2P planning process to complete assessments for congregating mangrove fireflies, and we are working with CPSG-Southeast Asia and hoping to secure funding to host a planning workshop at FRIM.

T-016 **P e a e n t e e P t i P d t e s**  
**a d d e s s I t t a j d i e s a P d / e e e I t t**  
**t e a s f e s e c i e s u a i P s s.**  
**(KSR 10)**

Number of intervention letters addressing major drivers/emerging threats of species or population loss: 2

Result description: In China, we sent a letter of concern about the impact on local firefly populations of a planned expressway expansion near Guangzhou, China. In response, the planning department of Huangpu District, Guangzhou required

the construction organisation to conduct an in-depth investigation of local firefly habitats. In collaboration with the IUCN

ecology of Mexican fireflies, their major threats, conservation strategies and good practices in firefly ecotourism; (3) Xerces sponsored the development and offered an online species identification course for US fireflies taught by FSG member Dr Oliver Keller; (4) The Xerces Society gave a field-based workshop on Arizona fireflies for land managers, conservation professionals, and associated community scientists participating in the Firefly Atlas. The workshop provided participants with the necessary tools and knowledge to survey suitable habitats for the SW synchronous firefly, which is categorized as Threatened on the IUCN Red List; (5) In July 2023, many FSG members participated in a webinar hosted by EMPRI (Bengaluru India) to share technical information about firefly diversity, ecology, and conservation issues; (6) We consulted with private landowners in several US states (Arkansas, Connecticut, Georgia) to establish Firefly Sanctuaries to protect areas with high firefly diversity.

T-020

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**COMMUNICATE  
Communication**

T-021 C i e a i s t f e e a p t d c l e p t s  
a p d a e t e l b i c a a i a b e (e. g. p  
t e F i e i e s t e p a i p a N e t e b s t e).  
(KSR 12)

Number of documents: 50

Result description: FSG members engage in numerous activities to educate and advocate for species conservation, including scientific publications, popular articles, lectures and presentations. We also give numerous media interviews to print, TV, radio, and online journalists; this year our activities received media coverage in Mexico, India, Spain, Belgium, Canada, and the US (see attached spreadsheet 2023 Firefly SG Member Activities).

T-022 W t IUCN C u p i c a i p s,  
p a i p a a p d i t e p a i p a e d i a t l b i  
c i s e t e a e p e d e s e c i e s, c p s e a i p  
a d i p s a p d j c e s. (KSR 12)

Number of media articles mentioning IUCN  
Species theme: 40

Result description: During 2023 FSG members provided ~40 media interviews on firefly conservation for print, radio, and film. This work included: members Tania Lopez-Palafox and Cisteil X Pérez-Hernández who worked with journalists to highlight ecotourism-related conservation problems confronting Mexican fireflies; Anchana Thancharoen, whose work on firefly restoration in Thailand was featured in a Thai TV special; Avalon Owens, whose work on how light pollution affects the reproductive success of US fireflies was featured in NBC, PBS, and CBS news; Sriram Mirali, whose photograph of fireflies in India won the 2023 Natural History

Museum of London's Wildlife Photographer of the Year Award; Co-Chair Dr Wan F.A.

Jusoh gave a TED talk on new firefly species discovery at TEDWomen 2023 in Atlanta:

W.M.C.D Wijekoon gave several talks and interviews about threats and conservation of Sri Lankan fireflies. We also continue

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