

Vectors and Vector-borne diseases of the Eastern Mediterranean and Middle-East (EMME)

Jodey Peyton and the RIS-Ký team

18 – 20 April 2018

@RiskYAliens <https://www.facebook.com/groups/RISKYCYPRUS>

www.ris-ky.info



**Akrotiri Environmental
Education Centre**
Κέντρο Περιβαλλοντικής Εκπαίδευσης Ακρωτηρίου



University of Cyprus
Department of Biological
Sciences



Joint Services Health Unit

Introducing our Darwin Plus Project

Project Title:	Assessment of current and future Invasive Alien Species in Cyprus
Start Date:	1 st April 2017
End Date:	31 st March 2019
Duration of project:	24 months
Partners:	JSHU and UCY



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WP1: Horizon scanning

Consensus methods to derive prioritised list of species with the potential to arrive, establish and threaten biodiversity, ecosystems and human well-being within the next ten years.

Human health impact	Definition	Example
1. No impact on human health	No known adverse effects on human health	<i>Penaeus aztecus</i> the Northern Brown Shrimp
2. Nuisance	Inflicting negative effects on human well-being	Noise by <i>Rhinella marina</i> cane toads, fear of snakes even if harmless
3. Disease transmission e.g. mosquito vectors	Vectoring pathogens that can cause diseases	Yellow fever, Zika virus, dengue, chikungunya, caused by mosquito vectors <i>Aedes aegypti</i> and <i>Aedes albopictus</i>
4. Poisoning/toxicity/allergy/injury	Humans exposed to IAS may experience direct negative effects through bites, stings, allergens, harm, affliction	Alien plants with allergenic pollen Invasive Hymenoptera such as the Asian Hornet, <i>Vespa velutina</i> Lionfish <i>Pterois miles</i> , catfish <i>Plotosus lineatus</i>
5. Others e.g. Interactions with other IAS (add comments)	IAS facilitating negative impacts	Indian house crow, <i>Corvus splendens</i> as a host species, and mosquitoes which have a role in transmission of WNV

WP2: Surveillance of species distributions

- Mapping abundance and distribution of native and IAS species on the SBAs:
 - Port Jackson Willow *Acacia saligna*
 - *Casuarina* spp.
 - *Eucalyptus* spp.
 - Eastern Mosquitofish *Gambusia holbrooki*
 - Mediterranean Killifish *Aphanius fasciatus* (native)
 - **Mosquitoes** with particular attention on appearance of species of concern *Aedes albopictus* and *Aedes aegypti*
 - Lionfish *Pterois miles*
 - Toadfish *Lagocephalus* spp.
 - Rabbitfish *Siganus* spp.
 - Cornetfish *Fistularia commersonii*.
- Vegetation and habitat mapping on SBAs in Cyprus
- Mobilisation of CylAS database – soon to be published on ris-ky.info website

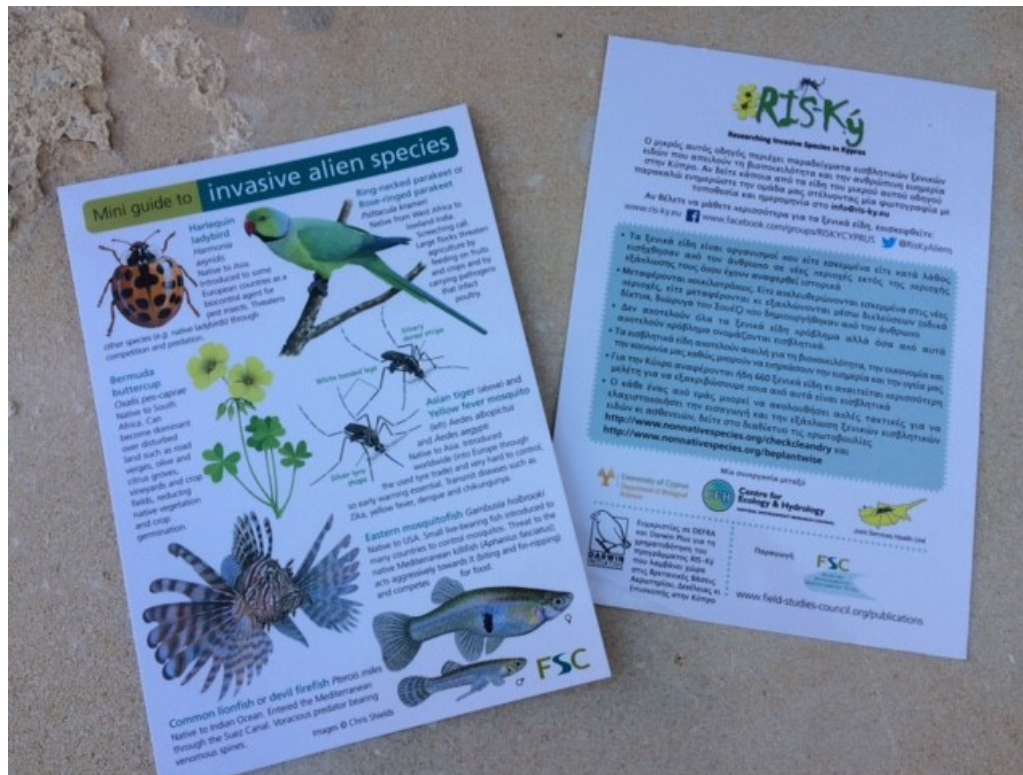


WP3: Biosecurity and capacity building

- Capacity building workshop August 2017- biological recording in Cyprus
 - MS to be completed
- Biosecurity training on mosquito control and management - provided through questionnaires and leaflets – more later
- PoMS-Ký – associated online recording system – looking at interactions between IAS and pollinating insects
 - Working with AEEIC to incorporate FIT counts into education programme
- UCY working with SBA divers to establish monitoring transects – surveys carried out alongside structured UCY surveys
- Bilingual mini-guides produced to highlight challenges around some Cypriot IAS
- BES Outreach grant submitted - 3 children's story books on non-native mosquito spp.
- Working with AEEIC to incorporate mosquito awareness and management into education programme



WP3: Biosecurity and capacity building



Future work



WP2: Surveillance of species distributions

- Baseline data - continued IAS surveys in freshwater, marine and terrestrial habitats
- Distribution maps for invasive alien plants

WP3: Biosecurity and capacity building

- Continued outreach education programmes with AEEIC on IAS
- Increasing volunteer engagement in surveys
- Publication on perspectives on monitoring and recording of IAS
- Publication on this workshop regarding the Code of Practice

Application for new Darwin 2019-2021

- Pest Risk Assessments, impacts and interactions of IAS with native species, public engagement and citizen science

Focus for the workshop

- Brief overview of non-native species ecology
 - Current challenges for vector ecology - climate change, resistance, re-emergence of malaria, alien pathogens
 - Implications for vector surveillance and management
 - Discussion on a Code of Practice for mosquito management in EMME wetlands
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- Insect vectors of disease:
 - Mosquitoes, Midges, Sand-flies
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- Overarching outcomes:
 - Code of Practice
 - Consider approaches to EMME vector management

Thank you for attending!

Please contact us if you want to know more about our work on IAS or come and talk to us today.

We hope you enjoy the next few days!



Practicalities

- No fire drills expected today – assemble in the car park if alarm sounds
- Make sure you have made your **lunch selection** for each day (list at Registration Desk - **URGENT**)
- Make sure you tick your name if you are joining us for dinner at the Fish Market Restaurant, Limassol Marina **tonight** (2000 onwards)
 - We will pay for the meal, water and one drink
- We will add a PDF of your presentations to the website – please let us know **if you are not** happy to share your presentation – e-mail: joyt@ceh.ac.uk