



Universidad  
Internacional  
de Andalucía

# I INTERNATIONAL WORKSHOP ON THE INVASIVE SEAWEED

## RUGULOPTERYX OKAMURAE

Sede Tecnológica de Málaga  
Universidad Internacional de Andalucía  
7-10<sup>th</sup> April 2025



Co-organizing and co-financing:



Universidad  
Internacional  
de Andalucía



Cátedra UNIA-UICN  
de Conservación de la Naturaleza

Collaborating institutions:



GOBIERNO  
DE ESPAÑA

VICEPRESIDENCIA  
TERCERA DEL GOBIERNO  
MINISTERIO  
PARA LA TRANSICIÓN ECOLÓGICA  
Y EL RETO DEMOGRÁFICO



Agència Catalana  
de l'Aigua





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2. Restaurant L'Experience, Plaza del Obispo 4 <https://maps.app.goo.gl/UdGF9fKoX8iSj7i97>

**IMPORTANT NOTE:**

The programme includes the names of the presenting authors only. As a professional courtesy, you are kindly requested not to take photographs of the presentations and posters. If you are interested in data presented, please contact the presenter directly. We also would like to remind everybody to switch off their mobile devices during the presentations.

## WORKSHOP PROGRAMME

### Monday, April 7<sup>th</sup>

- 8:30-9:00 Participants reception.
- 9:00-9:20 **Welcome and workshop presentation.**  
JOSÉ IGNACIO GARCÍA PÉREZ, Rector de la Universidad Internacional de Andalucía.  
DANIEL VENTURA RIZO, Consejero de Medio Ambiente de Melilla.  
MARÍA ALTAMIRANO JESCHKE, Organizer of the Workshop, Director of the Chair UNIA-UICN of Nature Conservation.

### Session 1. What do we know on distribution and biology of *Rugulopteryx okamurae*? Convenors: MARÍA ALTAMIRANO (Universidad de Málaga), JULIO DE LA ROSA (Universidad de Granada)

- 09:20-09:40 **O1. A tide of change: exploring the distribution, impacts, and management challenges of *Rugulopteryx okamurae* in Azores.** JOÃO FARIA (speaker) - Universidade dos Açores, Portugal.
- 09:40-10:00 **O2. 12 Years of *Rugulopteryx* invasion: assessing ecological impacts along the French coast.** THIERRY THIBAUT (speaker) - Aix-Marseille Université, Institut Méditerranéen d'Océanologie, France.
- 10:00-10:20 **O3. Expansion of the invasive alga *Rugulopteryx okamurae* on the Moroccan coast.** FATIMA EL AAMRI (speaker) - National Institute of Fisheries Research, Morocco.
- 10:20-10:40 **O4. *Rugulopteryx okamurae* invasion in Sicily: state of the art and future research perspectives.** AGOSTINO TOMASELLO (speaker) - University of Palermo, Italy.
- 10:40-11:00 **O5. Impact of *Rugulopteryx okamurae* on a *Posidonia oceanica* meadow and its associated flora in Southern Spain (Granada).** JESÚS ROSAS-GUERRERO – Universidad de Málaga, Spain.
- 11:00-11:20 **O6. An ecological approach to *Rugulopteryx okamurae* invasion: a series of studies on competitive mechanisms, habitat transformation, and cascading effects in benthic ecosystems.** MARTA FLORIDO – Universidad de Sevilla, Spain.
- 11:20-11:40 **Coffee break**
- 11:40-12:00 **O7. Recent detection and spread of the invasive brown algae *Rugulopteryx okamurae* in Galicia.** ANTÓN VÁZQUEZ-ARIAS, PILAR DÍAZ-TAPIA – Universidad de Santiago de Compostela, Spain.
- 12:00-12:20 **O8. Urea as a key nitrogen source for the invasion of the southern coast of Portugal by the brown seaweed *Rugulopteryx okamurae* (Dictyotales, Phaeophyceae).** JAVIER JIMÉNEZ-HERRERO, RUI SANTOS – University of Algarve, Portugal.
- 12:20-12:40 **O9. Understanding the invasion of the macroalga *Rugulopteryx okamurae* (Ochrophyta) in the northern Alboran Sea through the use of biogeographic models.** LUCRECIA SOUVIRON-PRIEGO – Universidad de Málaga, Spain.
- 12:40-13:00 **O10. Investigating the expansion of *Rugulopteryx okamurae* on the western Basque coast: Implications for rocky benthic subtidal communities.** ALBERTO SANTOLARIA - University of the Basque Country, Spain.
- 13:00-13:20 **O11. *Rugulopteryx okamurae* in the Southern Adriatic Sea: two years of invasion and current dynamics.** ANTONELLA BOTTALICO, A. MINCUZZI - University of Bari Aldo Moro, Italy.
- 13:20-13:40 **O12. Spread of *Rugulopteryx okamurae* in Portugal (NE Atlantic).** ESTER SERRAO - University of Algarve, Portugal.
- 13:40-14:00 **O13. Insights into the vegetative and reproductive performance of *Rugulopteryx okamurae* on a *Posidonia oceanica* meadow in Southern Spain.** MARÍA ALTAMIRANO (speaker) - Universidad de Málaga, Spain.

- 14:00-16:00 **Lunch at restaurant L'Experience.** [Plaza del Obispo 4.](#)
- 16:00-17:30 **ROUND TABLE. How the scientific knowledge can be used for managing *Rugulopteryx okamurae*.** THIERRY THIBAUT (Aix-Marseille Université, Institut Méditerranéen d'Océanologie, France), ESTER SERRAO (University of Algarve, Portugal), AGOSTINO TOMASELLO (University of Palermo, Italy), FATIMA EL AAMRI (National Institute of Fisheries Research, Morocco). Convenor: MARÍA ALTAMIRANO.
- 17:30-18:30 **POSTERS SESSION.**
- 21:00 **Welcome coctel.** Sede Tecnológica de Málaga, UNIA.

## Tuesday, April 8<sup>th</sup>

### Session 2. Potential impact mitigating uses for *Rugulopteryx okamurae*.

Convenor: RAQUEL CARMONA (Universidad de Málaga)

- 09:00-09:20 **O14. Bioactive natural products from the alga *Rugulopteryx okamurae*.** EVA ZUBÍA (speaker) – Universidad de Cádiz, Spain.
- 09:20-09:40 **O15. Valorization of *Rugulopteryx okamurae* biomass: biorefinery and circular economy.** FÉLIX L. FIGUEROA (speaker) – Universidad de Málaga, IBYDA, Spain.
- 09:40-10:00 **O16. Valorizing *Rugulopteryx okamurae* biomass: applications in viticulture.** ENMA CANTOS-VILLAR - IFAPA, Junta de Andalucía, Spain.
- 10:00-10:20 **O17. *Rugulopteryx okamurae* biomass: a potential resource for agricultural applications.** JUAN JOSÉ CÓRDOBA-GRANADOS - IFAPA, Junta de Andalucía, Spain.
- 10:20-10:40 **O18. A modelling tool for policymakers to analyse the economic impacts of beach cleaning: an example of the invasive algae *Rugulopteryx okamurae*.** CÉSAR BORDEHORE – University of Alicante, Spain.
- 10:40-11:00 **O19. Characterisation of the invasive alga *Rugulopteryx okamurae*: impact on marine water contamination and biodegradation dynamics.** CRISTINA FURIÓ – AIMPLAS, Spain.
- 11:00-11:30 **Coffee break**
- 11:30-13:00 **ROUND TABLE. Biomass valorization of *Rugulopteryx okamurae* for mitigating its impacts.** ELVIRA GARCÍA-BELLIDO (speaker) (Ministerio para la Transición Ecológica y el Reto Demográfico, Spain), EVA ZUBÍA (Universidad de Cádiz, Spain), ISMAEL HACHERO (IFAPA, Junta de Andalucía, Spain), FÉLIX L. FIGUEROA (Universidad de Málaga, IBYDA, Spain). Convenor: MARÍA ALTAMIRANO.
- 13:30-15:30 **Lunch at restaurant L'Experience.** [Plaza del Obispo 4.](#)
- 15:30-17:00 **ROUND TABLE. Identifying common management objectives of administrations and how to achieve their coordination in relation with *Rugulopteryx okamurae* invasion.** ELVIRA GARCÍA-BELLIDO (Ministerio para la Transición Ecológica y el Reto Demográfico, Spain), MARIONA DE TORRES (Agència Catalana de l'Aigua, Generalitat de Catalunya, Spain), JAVIER MARTÍNEZ (OBIMASA, Ceuta, Spain), CHIARA MAGLIOZZI (European Commission, Joint Research Centre, EASIN). Convenor: MARÍA ALTAMIRANO.

### Session 3. Socioeconomic impacts of *Rugulopteryx okamurae*.

Convenor: MARIANELLA ZANOLLA (Universidad de Málaga)

- 17:00-17:20 **O20. The management of *Rugulopteryx okamurae* in Ceuta.** JAVIER MARTÍNEZ (speaker) -Consejería de Fomento, Medio Ambiente y Servicios Urbanos, Ceuta, Spain.

- 17:20-17:40 **O21. The socio-economic impact of *Rugulopteryx okamurae* on artisanal fisheries.** CARMEN DÍAZ (speaker) - Federación Nacional de Pesca Artesanal, Spain.
- 17:40-18:00 **O22. High contribution of *Rugulopteryx okamurae* to beach wrack CO<sub>2</sub> emissions.** IVÁN FRANCO – University of Cádiz, Spain.
- 18:00-18:20 **O23. Responses of epifaunal assemblages associated with a native macroalgae to *Rugulopteryx okamurae* invasion.** ALEJANDRO BERNAL - IFAPA, Junta de Andalucía, Spain, Marine and Environmental Sciences Centre–Regional Agency for the Development of Research, Madeira, Portugal.

## Wednesday, April 9<sup>th</sup>

### Session 4. Management and control of *Rugulopteryx okamurae*.

Convenor: MARÍA ALTAMIRANO (Universidad de Málaga)

- 09:00-09:20 **O24. Improve IAS management: aligning policies and EASIN role.** CHIARA MAGLIOZZI (speaker) - European Commission, Joint Research Centre, EASIN.
- 09:20-09:40 **O25. Surveillance of invasive species in the coast of Catalonia: recent findings of *Rugulopteryx okamurae*.** MARIONA DE TORRES (speaker) - Agència Catalana de l'Aigua, Generalitat de Catalunya, Spain.
- 09:40-10:00 **O26. Tools to support the prevention, surveillance and management of invasive alien species in the marine environment.** KATIE COSTELLO (speaker) - Invasive Alien Species, Biodiversity Assessment and Knowledge Team, IUCN, UK.
- 10:00-10:20 **O27. Towards a management plan for the *Rugulopteryx okamurae* invasion in Sicily.** GIANCARLO BELLISSIMO (speaker) - Agenzia Regionale per la Protezione dell'Ambiente della Sicilia, Italy.
- 10:20-10:40 **O28. Assessing the role of native herbivores on the invasive algae *Rugulopteryx okamurae*.** ISMAEL HACHERO (speaker) – IFAPA, Junta de Andalucía, Spain.
- 10:40-11:00 **O29. Management and early detection strategies for the silence expansion of the seaweed *Rugulopteryx okamurae* in the Canary Islands.** MARC MARTÍN - Gestión y Planeamiento Territorial y Medioambiental S.A, Islas Canarias, Spain; OLGA AYZA - Consejería de Transición Ecológica y Energía, Gobierno de Canarias, Islas Canarias, Spain.
- 11:00-11:20 **O30. Proposal to evaluate the impact of *Rugulopteryx okamurae* in the Canary Islands.** DANIEL ÁLVAREZ-CANALI – Universidad de La Laguna, Spain.
- 11:20-11:40 **Coffee break**
- 11:40-13:10 **ROUND TABLE. Can we control the invasion of *Rugulopteryx okamurae*?** JULIO DE LA ROSA (Universidad de Granada, Spain), HELENA MORENO (Ministerio para la Transición Ecológica y el Reto Demográfico, Spain), KATIE COSTELLO (Invasive Alien Species, Biodiversity Assessment and Knowledge Team, IUCN, UK), CHIARA MAGLIOZZI (European Commission, Joint Research Centre, EASIN). Convenor: MARÍA ALTAMIRANO.
- 13:10-13:30 **Workshop conclusions and closing.**
- 14:00 **Lunch at restaurant L'Experience.** [Plaza del Obispo 4.](#)

## Thursday, April 10<sup>th</sup>

- 8:00-18:00 **Field trip to invaded areas of *Rugulopteryx okamurae* at the Strait of Gibraltar.**

## POSTERS

- P1 **Monitoring alien algae in Asturias: a case of *Rugulopteryx okamurae*.** BEATRIZ GARCÍA-SÁNCHEZ - Centro de Experimentación Pesquera, Dirección General de Pesca de Asturias, Universidad de Oviedo, Spain.
- P2 ***Rugulopteryx okamurae* en la Ciudad Autónoma de Melilla.** JORGE HERNÁNDEZ-CANO - Consejería de Medio Ambiente y Naturaleza de la Ciudad Autónoma de Melilla, Spain; ANA CELIA ROMERO-ROMERO - Valoriza Servicios Medioambientales, Spain.
- P3 **Monitoring invasive macroalgae in southern Portugal: drivers and citizen science contribution.** JAVIER JIMÉNEZ-HERRERO, RUI SANTOS – University of Algarve, Portugal.
- P4 **Optimization of biotechnological treatments for the valorization of the biomass of the invasive alga *Rugulopteryx okamurae*.** A.M. GUILLÉN – University of Almería, Spain; F. LÓPEZ-FIGUEROA – University of Málaga (YBIDA), Spain.
- P5 **Valorization of *Rugulopteryx okamurae* for feeding European seabass (*Dicentrarchus labrax*) juveniles: effects on growth, muscle composition and gut functionality.** A.M. GUILLÉN – University of Almería, Spain; E. ZUBÍA – University of Cádiz, Spain; F.L. FIGUEROA – University of Málaga (YBIDA), Spain.
- P6 **Monitoring of the seaweed *Rugulopteryx okamurae* on the coast of the Alboran sea.** IGNACIO MOREU, F.L. FIGUEROA - University of Málaga (YBIDA), Spain.
- P7 **Chemical ecology of the invasive algae *Rugulopteryx okamurae*.** RACHID NMILA - Sorbonne University, París; Chouaib Doukkali University, Morocco; FATIMA EL AAMRI - Specialized Center for Marine Aquaculture Zootechnics and Engineering, Morocco; HALIMA RCHID - Chouaib Doukkali University, Morocco.
- P8 **Integrative distribution of *Rugulopteryx okamurae* for its assessment under the MSFD-D2.** LYDIA PNG-GONZALEZ - Instituto Español de Oceanografía, CSCI, Spain; ALEJANDRO BERNAL-IBÁÑEZ - IFAPA, Junta de Andalucía, Spain.
- P9 **Potential of the invasive seaweed *Rugulopteryx okamurae* in ruminant feeding and enteric methane mitigation.** HELDER NUNES – University of the Azores, Portugal.
- P10 **Easy Harvest: innovating macroalgae bloom.** FRANCISCO MACHADO, EMILIA KOTIRANTA – Easy Harvest, LDA, Portugal.