



**João Alexandre Cabral** is a biologist, with PhD specialization in ecology, Associate Professor of the Department of Biology and Environment, University of Trás-os-Montes e Alto Douro (UTAD). He founded the Laboratory of Applied Ecology in 2001, integrated into the Centre for the Research and Technology of Agroenvironmental and Biological Sciences, CITAB, a R&D Unit from UTAD. He has expertise in ecological modelling, ecological monitoring and analysis of ecosystem's integrity, with the coordination of more than 100 projects focused on long-term ecological monitoring and forecasting of infrastructural impacts on inland vertebrate communities, and author of more than one hundred international scientific articles published, mainly in international refereed journals (indexed in the SCOPUS database), 21 book chapters, 2 books, 2 patents and more than 200 communications on these scopes. He is currently the Site Co-Manager for environmental monitoring of the Long Term Ecological Research (LTER) site for the Sabor River basin (<https://deims.org/45722713-80e3-4387-a47b-82c97a6ef62b>) within the European network of LTER sites. He successfully supervised 46 undergraduate courses, 31 Masters, 5 PhD and 2 post-PhD.

## Selected Publications

### Books and Book Chapters

1. Lopes R. J., **Cabral J. A.**, Múrias T., Pacheco C. & Marques J. C. (2002) Status and habitat use of waders in the Mondego estuary. In: Pardal M. A., Marques J. C. & Graça M. A. S. (Eds.), Aquatic Ecology of the Mondego River Basin. Global Importance of Local Experience. Chapter 2.9: 219-230, Imprensa da Universidade de Coimbra, Coimbra. ISBN: 972-8704-04-6
2. **Cabral J. A.**, Mieiro C. L. & Marques J. C. (2002) Role assessment of an exotic fish in rice fields of the lower Mondego River Valley: Life history, population dynamics, production and diet of eastern mosquitofish, *Gambusia holbrookii* (Pisces, Poeciliidae). In: Pardal M. A., Marques J. C. & Graça M. A. S. (Eds.), Aquatic Ecology of the Mondego River Basin. Global Importance of Local Experience. Chapter 4.3: 363-380, Imprensa da Universidade de Coimbra, Coimbra. ISBN: 972-8704-04-6
3. Múrias T., **Cabral J. A.**, Lopes R. J. & Marques J. C. (2002) Effects of eutrophication on waders (Aves, Charadrii) in the Mondego estuary: A multi-level approach. In: Pardal M. A., Marques J. C. & Graça M. A. S. (Eds.), Aquatic Ecology of the Mondego River Basin. Global Importance of Local Experience. Chapter 5.3: 527-540, Imprensa da Universidade de Coimbra, Coimbra. ISBN: 972-8704-04-6
4. **Cabral J. A.**, Cabecinha E., Santos M., Travassos P. & Silva-Santos P. (2008) Simulating the ecological status of changed ecosystems by holistic applications of a new Stochastic-Dynamic Methodology (StDM). In: Alonso M. S. and Rubio I. M. (Eds), Ecological Management: New Research. Chapter 4: 123-141, Nova Science Publishers, Inc., New York. ISBN: 978-1-60456-786-1.

5. Travassos P., Santos M. & **Cabral J. A.** (2010) Avifauna. In: Crespí, A. L., Castro A., Martins A. R., Travassos P. and Santos M. (Eds), Flora and Avifauna of the Municipality of Moimenta da Beira, Chapter II: 339-358, Câmara Municipal de Moimenta da Beira. ISBN: 978-972-95145-6-2
6. Silva-Santos P., Lopes R. J., Múrias T., Medeiros J., Cardoso P., Dolbeth M., Pardal M. A. & **Cabral J. A.** (2011) The Use of Stochastic Models as a Management Tool in a Shallow Temperate Estuary of South Europe (Mondego, Portugal). In: Robert S. Pirog (Ed), Seagrass: Ecology, Uses and Threats. Chapter 5: 157-176, Nova Science Publishers, Inc., New York. ISBN: 978-1-61761-987-8.
7. Alves P., Vieira C., Hespanhol H., Grosso-Silva J. M., **Cabral J. A.**, Vale-Gonçalves H., Barros P., Travassos P., Carvalho D., Silva C., Gomes C., Bastos R., Santos R. & Santos M. (2011) Forests and the conservation of nature and biodiversity in northern Portugal (169-204). In: Tereso JP, Pradinho Honrado J, Pinto AT, Rego FC (Eds), Forests of Northern Portugal: History, Ecology and Management Challenges. InBio - Biodiversity and Evolutionary Biology Research Network. Harbor. (e-book). ISBN: 978-989-97418-1-2. 436 pp.
8. Cabecinha E., **Cabral J. A.** & Hughes S. J. (2013) An Outline of Modeling Tool Applications in Freshwater Ecosystem and Resource Management. In: Benjamin Veress and Jozsi Szigethy (Eds), Horizons in Earth Science Research. Chapter 9, 77-104. Nova Science Publishers, Inc., New York. ISBN: 978-1-62257-955-6.
9. Torres L., Aranha J., Salvaçao J., Martins A., Raimundo F., Gonçalves F., Carlos C., Sousa S., Crespí A.L., Monzón A., Marques G., Gomes C., Travassos P., Barros P., Carvalho D., Santos M. and **Cabral J. A.** (2013). Maximization of vineyard ecosystem services. Field Guide to Quinta das Carvalhas. Martins, M.; Torres, L. and Crespí, A.(Ed). Minho, Vila Real. ISBN:978-989-97969-2-8.
10. Barros P. & **Cabral J. A.** (2014) *Pipistrellus pipistrellus* (Schreber, 1774). In: Atlas of Bats of Mainland Portugal. Publisher: Institute for the Conservation of Nature and Forests, pp.39-40. Lisbon. 76 pp + Annexes. ISBN: 978-9-72775-226-3.
11. Santos M., Barros P., Bastos R., Vale-Gonçalves H., Lourenço V., Travassos P., Carvalho D., Gomes C., Morinha F. & **Cabral J. A.** (2014) Compensating the impact of large reservoirs in amphibian communities: a case study. In: Martin P. Lombardi (Ed), Amphibians: Anatomy, Ecological Significance and Conservation Strategies. Chapter 1, 1-26. Nova Science Publishers, Inc., New York. ISBN: 978-1-63321-434-7.
12. Cajaiba R. J., Périco E., **Cabral J. A.** & Santos M. (2015) Assessing the Potential Role of Ground Beetles (Coleoptera) as Ecological Indicators in Tropical Ecosystems: A Review. In: Camilla Stack (Ed), Beetles: Biodiversity, Ecology and Role in the Environment. Chapter 3, 51-84 Nova Science Publishers, Inc., New York. ISBN: 978-1-63463-380-2.
13. Santos M., Bastos R., Vicente J., Berger U., Filho B. S. S., Rodrigues H., Alonso J., Guerra C., Martins J., Honrado J. & **Cabral J. A.** (2015) Anticipating invasions and managing impacts: a review of recent spatio-temporal modeling approaches. In: João Canning-Clode (Ed), Biological Invasions in Aquatic and Terrestrial Systems: Biogeography, Ecological Impacts, Predictions and Management. Chapter 17, 389-410. From Gruyter Open Ltd, Warsaw/Berlin. ISBN: 978-3-11-043865-9.
14. Paupério, J., Vale-Gonçalves, H. M., **Cabral, J. A.**, Mira, A. & Bencatel, J., 2017. Insectivores (Eulipotyphla). In: Bencatel, J., Álvares, F., Moura, A.E. & Barbosa, A.M. (eds.), Atlas de Mamíferos de Portugal, pp. 39-59. 1st edition. University of Évora, Portugal: 256 pp. ISBN: 978-989-8550-46-0.

15. Paupério, J., Vale-Gonçalves, H. M., **Cabral, J. A.**, Mira, A. & Bencatel, J., 2017. Rodents (Rodentia). In: Bencatel, J., Álvares, F., Moura, A. E. & Barbosa, A. M. (eds.), *Atlas of Mammals of Portugal*, pp. 113-143. 1st edition. University of Évora, Portugal: 256 pp. ISBN: 978-989-8550-46-0.
16. Vicente R. J., Vaz A. S., Alagador D. A., Honrado J. P., **Cabral J. A.**, Bastos R., Gonçalves J., Buchadas A., Marchante E., Guerra C., Henriques R., Alonso J. M., Marchante H., Canning-Clode J., Capinha C., Nourisson C., Monteiro A., Araújo M. B., Santos M. (2018) Risk forecasting and assessment. In: Vicente R. J., Queiroz A. I., Marchante E., Honrado J. P. and Silva L (eds.), *Biological Invasions in Portugal: History, Diversity and Management*, pp. 229-260. Edições Arte e Ciência, Museum of Natural History and Science, University of Porto: 335 pp. ISBN: 978-989-99518-8-4.
17. Vicente J. R., Vaz A. S., Queiroz A. I., Buchadas A. R., Guisan A., Kueffer C., Marchante E., Marchante H., **Cabral J. A.**, Nesper M., Broennimann O., Godoy O., Alves P., Castro -Díez P., Henriques R., Honrado J. P. (2019) Alien plant species: environmental risks in agricultural and agro-forest landscapes under climate change. In: Castro P., Azul A. M., Filho W. L. and Azeiteiro U. M. (eds.), *Climate Change-Resilient Agriculture and Agroforestry - Ecosystem Services and Sustainability*, pp. 215-234. Springer, Switzerland: 520 pp. ISBN 978-3-319-75003-3.
18. Paupério, J., Vale-Gonçalves, H. M., **Cabral, J. A.**, Mira, A. & Bencatel, J., (2019) Insectivores (Eulipotyphla). In: Bencatel J., Sabino-Marques H., Álvares, F., Moura, A. E. & Barbosa, A. M. (eds.), *Atlas of Mammals of Portugal*, pp. 43-63. 2nd edition. University of Évora, Portugal: 271 pp. ISBN: 978-989-8550-80-4. <https://atlasmamiferosportugal.wordpress.com/>
19. Paupério, J., Vale-Gonçalves, H. M., **Cabral, J. A.**, Mira, A. & Bencatel, J., (2019) Rodents (Rodentia). In: Bencatel, J., Sabino-Marques H., Álvares, F., Moura, A. E. & Barbosa, A. M. (eds.), *Atlas of Mammals of Portugal*, pp. 116-149. 2nd edition. University of Évora, Portugal: 271 pp. ISBN: 978-989-8550-80-4. <https://atlasmamiferosportugal.wordpress.com/>
20. Santos MS, Lopes LE, Bastos R, Ferreira D, Cajaiba RL, Hughes SJ, Ferreira PA, Morinha F, Bastos E, Cardoso MN, Vale-Gonçalves H, Faria AS, Vicente J, Honrado J, Santos R, Nunes - Pereira M, Vieira ML & **Cabral JA** (2021). "3.2 - Informed management of natural systems at the landscape scale: I: Concepts and Methodologies". In: Carvalho Ribeiro S.M., Boscolo D., Guiomar N., Firmino A., Ciocheti G. (eds.), *Landscape Ecology in the Luso-Brazilian context*, pp. 263-280 APEP – Portuguese Landscape Ecology Association. IALE-BR – International Association of Landscape Ecology of Brazil. Apris Editora, Brazil: 427 pp. ISBN: 978-65-250-0254-5.
21. Santos MS, Lopes LE, Bastos R, Ferreira D, Cajaiba RL, Hughes SJ, Ferreira PA, Morinha F, Bastos E, Cardoso MN, Vale-Gonçalves H, Faria AS, Vicente J, Honrado J, Santos R, Nunes - Pereira M, Vieira ML & **Cabral JA** (2021). "4.13 - Informed management of natural systems at the landscape scale. II: applications and case studies". In: Carvalho Ribeiro S.M., Boscolo D., Guiomar N., Firmino A., Ciocheti G. (eds.), *Landscape Ecology in the Luso-Brazilian context*, pp. 333-374. APEP – Portuguese Landscape Ecology Association. IALE-BR – International Association of Landscape Ecology of Brazil. Apris Editora, Brazil: 463 pp. ISBN: 978-65-250-0280-4.
22. **Cabral J.A.**, Travassos P., Jesus J., Simões J. S. (2021) Habitats and Biodiversity in the Almonda Basin. Torres Novas City Council, Gráfica Almondina, Torres Novas: 175 pp. ISBN: 978-989-54598-3-4.
23. Mathias ML (coord.), Fonseca C, Rodrigues L, Grilo C, Lopes-Fernandes M, Palmeirim JM, Santos-Reis M, Alves PC, **Cabral JA**, Ferreira M, Mira A, Eira C, Negrões N, Paupério J, Pita R, Rainho A, Rosalino LM, Tapisso JT & Vingada J (eds.) (2023): Red Book of Mammals of Continental Portugal. FCiências.ID, ICNF, Lisbon.

24. Carvalho JPF (coord.), Travassos P, Sampaio G, Santos M, **Cabral JA** (eds.) (2023): Oak Forest and Silviculture Close to Nature. Bosques Project - Carvalhal. University of Trás-os-Montes and Alto Douro, Vila Real. ISBN: 978-989-704-524-0.

### International Scientific Articles

1. Múrias T., **Cabral J. A.**, Marques J. C. & Goss-Custard J. D. (1996) Short-term effects of intertidal macroalgal blooms on the macrohabitat selection and feeding behaviour of wading birds in the Mondego estuary (West Portugal). *Estuarine, Coastal and Shelf Science* 43, 677-688. [doi: 10.1006/ecss.1996.0096].
2. Múrias T., **Cabral J. A.**, Lopes R. & Marques J. C. (1997) Low-water use of the Mondego estuary (West Portugal) by waders (Charadrii). *Ardeola* 44 (1), 79-91.
3. **Cabral J. A.**, Mieiro C. L. & Marques J. C. (1998) Environmental and biological factors influence the relationship between a predator fish, *Gambusia holbrooki*, and its main prey in rice fields of the Lower Mondego River Valley (Portugal). *Hydrobiologia* 382, 41-51. [doi: 10.1023/A:1003480920168]
4. **Cabral J. A.**, Pardal M. A., Lopes R. J., Múrias T. & Marques J. C. (1999) The impact of macroalgal blooms on the use of the intertidal area and feeding behaviour of waders (Charadrii) in the Mondego estuary (West Portugal). *Acta Oecologica* 20 (4), 417-427. [doi: 10.1016/S1146-609X(99)00126-5]
5. **Cabral J. A.**, Ávila S. & Marques J. C. (1999) Acute and sublethal effects of a non-ionic surfactant, *Genapol OXD-080*, on mosquitofish *Gambusia holbrooki* (Girard). *Ecotoxicology* 8 (4), 245-252. [doi: 10.1023/A:1008975013964]
6. **Cabral J. A.** & Marques J. C. (1999) Life history, population dynamics and production of eastern mosquitofish, *Gambusia holbrooki* (Pisces, Poeciliidae), in rice fields of the Lower Mondego River Valley, West Portugal. *Acta Oecologica* 20 (6), 607-620. [doi: 10.1016/S1146-609X(99)00102-2]
7. Cano E., Jimenez A., **Cabral J. A.** & Ocete M. E. (1999) Acute toxicity of malathion and the new surfactant "genapol OXD 080" on species of rice basins. *Bulletin of Environmental Contamination and Toxicology* 63 (1), 133-138. [doi: 10.1007/s001289900958]
8. **Cabral J. A.**, Marques J. C. & Nielsen S. N. (2001) Modeling mosquitofish (*Gambusia holbrooki*) responses to *Genapol OXD-080*, a non-ionic surfactant, in rice fields. *Ecological Engineering* 16 (4), 537-544. [doi: 10.1016/S0925-8574(00)00116-6]
9. Mieiro C. L., **Cabral J. A.** & Marques J. C. (2001) Predation pressure of introduced mosquitofish (*Gambusia holbrooki*, Girard) on native zooplankton community. A case study from representative habitats in the lower Mondego river valley (Portugal). *Limnetica* 20 (2), 279-292.
10. Múrias T., **Cabral J. A.**, Lopes R., Marques J.C. & Goss-Custard J.D. (2002) Use of traditional salines by waders in the Mondego estuary (Portugal): a conservation perspective. *Ardeola* 49 (2), 223-240.
11. Santos M. & **Cabral J. A.** (2004) Development of a stochastic dynamic model for ecological indicators' prediction in changed Mediterranean agroecosystems of north-eastern Portugal. *Ecological Indicators* 3 (4), 285-303. [doi: 10.1016/j.ecolind.2003.11.007]
12. Cabecinha E., Cortes R. & **Cabral J. A.** (2004) Performance of a stochastic-dynamic modelling methodology for running waters ecological assessment. *Ecological Modelling* 175 (3), 303-317. [doi: 10.1016/j.ecolmodel.2003.10.021]

13. Lopes R. J., Múrias T., **Cabral J. A.** & Marques J. C. (2005) A ten year study of variation, trends and seasonality of shorebird community in the Mondego estuary, Portugal. *Waterbirds* 28 (1): 8-18. [doi: 10.1675/1524-4695(2005)028[0008:ATYSOV]2.0.CO;2]
14. Múrias T., **Cabral J. A.**, Lopes R. J., Pardal M. A., Marques J. C. & Goss-Custard J. D. (2005) Competition for feeding in waders: a case study in an estuary of south temperate Europe (Mondego, Portugal). *Hydrobiologia* 544: 155-166. [doi: 10.1007/s10750-005-0541-6]
15. Silva-Santos P., Pardal M. A., Lopes R. J., Múrias T. & **Cabral J. A.** (2006) A Stochastic Dynamic Methodology (SDM) to the modelling of trophic interactions, with a focus on estuarine eutrophication scenarios. *Ecological Indicators* 6: 394-408. [doi: 10.1016/j.ecolind.2005.05.001]
16. Lopes R. J., Pardal M. A., Múrias T., **Cabral J. A.** & Marques J. C. (2006) Influence of macroalgal mats on abundance and distribution of dunlin *Calidris alpina* in estuaries: A long term approach. *Marine Ecology Progress Series* 323: 11-20. [doi: 10.3354/meps323011]
17. **Cabral J. A.**, Rocha A., Santos M. & Crespi A. L. (2007) A stochastic dynamic methodology (SDM) to facilitate handling simple passerine indicators in the scope of the agri-environmental measures problematics. *Ecological Indicators* 7: 34-47. [doi: 10.1016/j.ecolind.2005.09.004]
18. Santos M., Vaz C., Travassos P. & **Cabral J. A.** (2007) Simulating the impact of socio-economic trends on threatened Iberian wolf populations (*Canis lupus signatus*) in North-eastern Portugal. *Ecological Indicators* 7: 649-664. [doi: 10.1016/j.ecolind.2006.07.004]
19. Cabecinha E., Silva-Santos P., Cortes R. & **Cabral J. A.** (2007) Applying a stochastic-dynamic methodology (StDM) to facilitate ecological monitoring of running waters, using selected trophic and taxonomic metrics as state variables. *Ecological Modelling* 207: 109-127. [doi: 10.1016/j.ecolmodel.2007.04.009]
20. Silva-Santos P., Pardal M. A., Lopes R. J., Múrias T. & **Cabral J. A.** (2008) Testing the Stochastic Dynamic Methodology (StDM) as a management tool in a shallow temperate estuary of south Europe (Mondego, Portugal). *Ecological Modelling* 210: 377-402. [doi: 10.1016/j.ecolmodel.2007.09.005]
21. Santos M., Travassos P., Repas M. & **Cabral J. A.** (2009) Modelling the performance of bird surveys in non-standard weather conditions: general applications with special reference to mountain ecosystems. *Ecological Indicators* 9 (1): 41-51. [doi: 10.1016/j.ecolind.2008.01.008]
22. Cabecinha E., Cortes R., **Cabral J. A.**, Ferreira T., Lourenço M. & Pardal M. A. (2009) Multi-scale approach using phytoplankton as a first step towards the definition of reservoirs ecological status. *Ecological Indicators* 9 (2): 240-255. [doi: 10.1016/j.ecolind.2008.04.006]
23. Cabecinha E., Cortes R., Pardal M. A. & **Cabral J. A.** (2009) A Stochastic Dynamic Methodology (StDM) for reservoir water quality management: Validation of a multi-scale approach in a south Europe basin (Douro, Portugal). *Ecological Indicators* 9 (2): 329-345. [doi: 10.1016/j.ecolind.2008.05.010]
24. Cabecinha E., Van den Brink P. J., **Cabral J. A.**, Cortes R., Lourenço M. & Pardal M. A. (2009) Ecological relationships between phytoplankton communities and different spatial scales in European reservoirs: implications at catchment level monitoring programmes. *Hydrobiologia* 628, 27-45. [doi: 10.1007/s10750-009-9731-y]
25. Cabecinha E., Lourenço M., Moura J. P., Pardal M. A. & **Cabral J. A.** (2009) A multi-scale approach to modelling spatial and dynamic ecological patterns for reservoir's water quality management. *Ecological Modelling* 220, 2559-2569. [doi:10.1016/j.ecolmodel.2009.06.011].

26. Santos M., Bastos R., Travassos P., Bessa R., Repas M. & **Cabral J. A.** (2010) Predicting the trends of vertebrate species richness as a response to wind farms installation in mountain ecosystems of northwest Portugal. *Ecological Indicators* 10, 192-205. [doi:10.1016/j.ecolind.2009.04.014].
27. Silva-Santos P., Valentim H., Luís A., Queirós L., Travassos P. & **Cabral J. A.** (2010) A Stochastic Dynamic Methodology (StDM) to simulate the effects of fire on vegetation and bird communities in *Pinus pinaster* stands. *Ecological Indicators* 10, 206-211. [doi:10.1016/j.ecolind.2009.04.015].
28. Silva J. P., Santos M., Queirós L., Leitão D., Moreira F., Pinto M., Leqoc M. & **Cabral J. A.** (2010) Estimating the influence of overhead transmission power lines and landscape context on the density of little bustard *Tetrax tetrax* breeding populations. *Ecological Modelling* 221, 1954-1963. [doi: 10.1016/j.ecolmodel.2010.03.027].
29. Santos M., Freitas R., Crespí A., Hughes S. & **Cabral J. A.** (2011) Predicting trends of invasive plants richness using local socio-economic data: An application in North Portugal. *Environmental Research* 111, 960-966. [doi:10.1016/j.envres.2011.03.014].
30. Santos M. & **Cabral J. A.** (2011) Simulating the effects of anthropogenic disturbances in landscape patches: an application in North Portugal. *Applied Ecology and Environmental Research* 9(2): 101-122.
31. Bastos R., Santos M., Ramos J., Vicente J., Guerra C., Alonso J., Honrado J., Ceia R., Timóteo S. & **Cabral J. A.** (2012) Testing a novel spatially-explicit dynamic modelling approach in the scope of the laurel forest management for the endangered Azores bullfinch (*Pyrrhula murina*) conservation. *Biological Conservation* 147(1): 243–254. [doi: 10.1016/j.biocon.2012.01.009]
32. Morinha F., **Cabral J. A.** & Bastos E. (2012) Molecular sexing of birds: a comparative review of PCR-based methods. *Theriogenology* 78: 703-714. [doi: 10.1016/j.theriogenology.2012.04.015]
33. Hughes S. J., Cabecinha E., Santos J. C., Andrade C. M., Lopes D. M., Trindade H. M. F., **Cabral J. A.**, Santos M. G., Lourenço J. M., Aranha J. T., Sanches L. F., Morais M. M., Mendonça M. S., Oliveira P. C., Cortes R. M. V. (2012) A predictive modelling tool for assessing climate, land use and hydrological change on reservoir quality. *Area* 44 (4): 432-442. [doi: 10.1111/j.1475-4762.2012.01114.x]
34. Fernandes C., **Cabral J. A.**, Crespí A. L., Hughes S. J. & Santos M. (2013) Converting simple vegetation surveys in functional dynamics. *Acta Oecologica* 48: 37-46. [doi: 10.1016/j.actao.2013.01.011]
35. Carvalho D., Horta P., Raposeira H., Santos M., Luís A. & **Cabral J. A.** (2013) How do hydrological and climatic conditions influence the diversity and behavioural trends of water birds in small Mediterranean reservoirs? A community-level modelling approach. *Ecological Modelling* 257: 80-87. [doi: 10.1016/j.ecolmodel.2013.02.012]
36. Santos M., Bastos R. & **Cabral J. A.** (2013) Converting conventional ecological datasets in dynamic and dynamic spatially-explicit simulations: current advances and future applications of the Stochastic Dynamic Methodology (StDM). *Ecological Modelling* 258: 91-100. [doi: 10.1016/j.ecolmodel.2013.02.028]
37. Morinha F., Travassos P., Seixas F., Santos N., Sargo R., Sousa L., Magalhães P., **Cabral J. A.** & Bastos E. (2013) High-resolution melting analysis for bird sexing: a successful approach to molecular gender identification using different biological samples. *Molecular Ecology Resources* 13: 473-483. [doi: 10.1111/1755-0998.12081]

38. Bastos R., Santos M. & **Cabral J. A.** (2013) A new stochastic dynamic tool to improve the accuracy of mortality estimates for bats killed at wind farms. Ecological Indicators 34: 428-440. [doi:[10.1016/j.ecolind.2013.06.003](https://doi.org/10.1016/j.ecolind.2013.06.003)]
39. Morinha F., Travassos P., Carvalho D., Magalhães P., **Cabral J. A.** & Bastos E. (2014) DNA sampling from body swabs of terrestrial slugs (Gastropoda: Pulmonata): a simple and non-invasive method for molecular genetics approaches. Journal of Molluscan Studies 80: 99-101. [doi:[10.1093/mollus/eyt045](https://doi.org/10.1093/mollus/eyt045)]
40. Morinha F., Travassos P., Seixas F., Martins A., Bastos R., Carvalho D., Magalhães P., Santos M., Bastos E. & **Cabral J. A.** (2014) Differential mortality of birds killed at wind farms in Northern Portugal. Bird Study 61: 255-259. [doi: [10.1080/00063657.2014.883357](https://doi.org/10.1080/00063657.2014.883357)]
41. Paiva-Cardoso M. N., Morinha F., Barros P., Vale-Gonçalves H., Coelho A. C., Fernandes L., Travassos P., Faria A. S., Bastos E., Santos M. & **Cabral J. A.** (2014) First isolation of *Pseudogymnoascus destructans* in bats from Portugal. European Journal of Wildlife Research 60 (4): 645-649. [doi: [10.1007/s10344-014-0831-2](https://doi.org/10.1007/s10344-014-0831-2)]
42. Morinha F., Clemente C., **Cabral J. A.**, Lewicka M. M., Travassos P., Carvalho D., Dávila J. A., Santos M., Blanco G. & Bastos E. (2016) Next-generation sequencing and comparative analysis of *Pyrrhocorax pyrrhocorax* and *Pyrrhocorax graculus* (Passeriformes: Corvidae) mitochondrial genomes. Mitochondrial DNA 27 (3): 2278-2281. [doi: [10.3109/19401736.2014.984179](https://doi.org/10.3109/19401736.2014.984179)]
43. Vale-Gonçalves H., **Cabral J. A.**, Faria M. C., Nunes-Pereira M., Faria A. S., Veloso O., Luisa-Vieira M. & Paiva-Cardoso M. N. (2015) Prevalence of *Leptospira* antibodies in wild boars (*Sus scrofa*) from Northern Portugal: risk factor analysis. Epidemiology and Infection: 2126-2130. [doi: [10.1017/S0950268814003331](https://doi.org/10.1017/S0950268814003331)]
44. Vale-Gonçalves H. & **Cabral J. A.** (2014) New records on the distribution of three rodent species in NE Portugal from barn owl (*Tyto alba*) diet analysis. Galemys 26: 100-104. [doi: [10.7325/Galemys.2014.N3](https://doi.org/10.7325/Galemys.2014.N3)]
45. Barros P., Braz L., Vale-Gonçalves &, **Cabral J. A.** (2014) First records of *Nyctalus noctula* social calls in Portugal. Vespertilio 17: 37–44. ISSN 1213-6123
46. Faria A. S., Paiva-Cardoso M. N., Nunes M. S., Carreira T., Vale-Gonçalves H., Veloso O., Coelho C., **Cabral J. A.**, Vieira-Pinto M., Vieira M. L. (2015) First detection of *Borrelia burgdorferi* sensu lato DNA in serum of the wild boar (*Sus scrofa*) in northern Portugal by nested-PCR targeting the *Fab* gene. EcoHealth 12: 183-187. [doi: [10.1007/s10393-014-0973-4](https://doi.org/10.1007/s10393-014-0973-4)]
47. Gonzalez D., **Cabral J. A.**, Torres L. & Santos M. (2015) A cohort-based modelling approach for managing olive moth *Prays oleae* (Bernard, 1788) populations in olive orchards. Ecological Modelling 296: 46-56. [doi: [10.1016/j.ecolmodel.2014.10.012](https://doi.org/10.1016/j.ecolmodel.2014.10.012)]
48. Vale-Gonçalves H., Barros P., Braz L. & **Cabral J. A.** (2015) The contribution of the Barn Owl (*Tyto alba*) feeding ecology to confirm bat species occurrence in north Portugal. Barbastella 8(1): 1-5. [doi:[10.14709/barbJ.8.1.2015.05](https://doi.org/10.14709/barbJ.8.1.2015.05)].
49. Ferreira D., Freixo C., **Cabral J. A.** Santos R. & Santos M. (2015) Do habitat characteristics determine mortality risk for bats at wind farms? Modelling susceptible species circadian rhythms and anticipating possible mortality events. Ecological Informatics 28: 7-18. [doi:[10.1016/j.ecoinf.2015.04.001](https://doi.org/10.1016/j.ecoinf.2015.04.001)]
50. Bastos R., Pinhanços A., Santos M., Fernandes R., Vicente J., Morinha F., Honrado J., Travassos P., Barros P. & **Cabral J. A.** (2016) Evaluating the regional cumulative impact of wind farms on birds: How can spatially explicit dynamic modelling improve impact assessments and monitoring?. Journal of Applied Ecology 53: 1330–1340. [doi: [10.1111/1365-2664.12451](https://doi.org/10.1111/1365-2664.12451)]

51. Morinha F., Travassos P., **Cabral J. A.**, Martins S., Cruz E., Alvura N., Nunes P. & Bastos E. (2015) (R)evolution in the molecular sexing of ratite birds: identification and high-resolution melting analysis of new candidate sex-linked markers. *Avian Biology Research* 8(3):145-159. [doi:10.3184/175815515X14380769320720].
52. Barros P., Vale-Gonçalves H. M., Paupério J., **Cabral J. A.** & Rosa G. (2016) Confirmation of European snow vole *Chionomys nivalis* (Mammalia: Rodentia: Cricetidae) occurrence in Portugal. *Italian Journal of Zoology* 83 (1): 139-145. [doi: 10.1080/11250003.2015.1103320].
53. Santos M., Bessa R., **Cabral J. A.**, Pacheco F. A., Leitão D., Moreira F., Pinto M., Lecoq M., & Silva J. P. (2016) Impacts of land use and infrastructural changes on threatened little bustard (*Tetrax tetrax*) breeding populations: quantitative assessments using a recently developed spatially explicit dynamic modelling framework. *Bird Conservation International* 26 (4): 418-435. [doi:10.1017/S0959270915000258].
54. Bastos R., Monteiro A. T., Carvalho D., Gomes C., Travassos P., Honrado J., Santos M. & **Cabral J. A.** (2016) Integrating land cover structure and functioning to predict biodiversity patterns: A hierarchical modelling framework designed for ecosystem management. *Landscape Ecology* 31:701–710. [doi: 10.1007/s10980-015-0302-5]
55. Cajaiba R. L., **Cabral J. A.** & Santos M. (2016) A minimal invasive method to forecast the effects of anthropogenic disturbance on tropical cave beetle (Coleoptera) communities. *Neotropical Entomology* 45(2): 139-147. [doi: 10.1007/s13744-015-0349-7]
56. Bastos R., D'Amen M., Vicente J., Santos M., Yu H., Eitelberg D., Gonçalves J., Civantos E., Honrado J. & **Cabral J. A.** (2016) A multi-scale looping approach to predict spatially dynamic patterns of functional species richness in changing landscapes. *Ecological Indicators* 64: 92-104. [doi: [10.1016/j.ecolind.2015.12.025](https://doi.org/10.1016/j.ecolind.2015.12.025)]
57. Vicente J., Alagador D., Guerra C., Alonso J., Kueffer C., Vaz A. S., Fernandes R. F., **Cabral J. A.**, Araújo M. B., Fernandes R. & Honrado J. (2016) Cost-effective monitoring of biological invasions under global change: A model-based framework. *Journal of Applied Ecology* 53: 1317–1329. [doi: 10.1111/1365-2664.12631].
58. Santos M., Ferreira D., Bastos R., Vicente J., Honrado J., Kueffer C., Kull C., Berger U. & **Cabral J.A.** (2016) Linking landscape futures with biodiversity conservation strategies in northwest Iberia - a simulation study combining surrogates with a spatio-temporal modelling approach. *Ecological Informatics* 33: 85-100. [doi:[10.1016/j.ecoinf.2016.04.008](https://doi.org/10.1016/j.ecoinf.2016.04.008)]
59. Hughes S. J., **Cabral J. A.**, Bastos R., Cortes R. V., Vicente J., Eitelberg D., Yu H., Honrado J. & Santos M. (2016) A stochastic dynamic model to assess land use change scenarios on the ecological status of fluvial water bodies under the Water Framework Directive. *Science of the Total Environment* 565: 427-439. [doi:[10.1016/j.scitotenv.2016.04.153](https://doi.org/10.1016/j.scitotenv.2016.04.153)]
60. Mulatu T., Bastos R., Santos M., Sousa J. P., Silva P. M. & **Cabral J.A.** (2016) Do the passerine traits' dynamic patterns indicate the ecological status of agro-forestry ecosystems? A modelling approach for "Montado" management assessments. *Global Ecology and Conservation* 8: 154-169. [doi: 10.1016/j.gecco.2016.09.001].
61. Santos M., Bastos R., Ferreira D., Santos A., Barros P., Travassos P., Carvalho D., Gomes C., Vale-Gonçalves H. M., Braz L., Morinha F., Paiva-Cardoso M. N., Hughes S. J. & **Cabral J. A.** (2017) A spatial explicit agent based model approach to evaluate the performance of different monitoring options for mortality estimates in the scope of onshore windfarm impact assessments. *Ecological Indicators* 73: 254–263. [doi: [10.1016/j.ecolind.2016.09.044](https://doi.org/10.1016/j.ecolind.2016.09.044)]

62. Arosa M.L., Bastos R., **Cabral J.A.**, Freitas H., Costa S.R., Santos M. (2017) Long-term sustainability of cork oak agro-forests in the Iberian Peninsula: a model-based approach aimed at supporting the best management options for the montado conservation. *Ecological Modelling* 343: 68–79. [doi: [10.1016/j.ecolmodel.2016.10.008](https://doi.org/10.1016/j.ecolmodel.2016.10.008)]
63. Cajaiba R. L., Périco E., Dalzochio M. S., Silva W. B., Bastos R., **Cabral J. A.** & Santos M. (2017) Does the composition of Scarabaeidae (Coleoptera) communities reflect the extent of land use changes in the Brazilian Amazon? *Ecological Indicators* 74: 285–294. [doi: [10.1016/j.ecolind.2016.11.018](https://doi.org/10.1016/j.ecolind.2016.11.018)]
64. Barbosa S., Paupério J., Herman JS., Ferreira C., Pita R., Vale-Gonçalves H., **Cabral JA**, Garrido-García JA, Soriguer RC, Beja P., Mira A., Alves PC, Searle JB (2017) Endemic species may have complex histories: within-refugium phylogeography of an endangered Iberian vole. *Molecular Ecology* 26: 951–967. [doi: [10.1111/mec.13994](https://doi.org/10.1111/mec.13994)]
65. Silva C., **Cabral J. A.**, Hughes S. & Santos M. (2017) A modelling framework to predict bat activity patterns on wind farms: an outline of possible applications on mountain ridges of north Portugal. *Science of the Total Environment* 581–582: 337–349. [doi: [10.1016/j.scitotenv.2016.12.135](https://doi.org/10.1016/j.scitotenv.2016.12.135)]
66. Morinha F., Dávila J. A., Bastos E., **Cabral J. A.**, Frías Ó., González J. L., Travassos P., Carvalho D., Laiolo P., Milá B. & Blanco G. (2017) Extreme genetic structure in a social bird species despite high dispersal capacity. *Molecular Ecology* 26: 2812–2825 [doi:[10.1111/mec.14069](https://doi.org/10.1111/mec.14069)]
67. Buchadas A., Vaz A. S., Honrado J. P., Alagador D., Bastos R., **Cabral J. A.**, Santos M. & Vicente J. R. (2017) Dynamic models in research and management of biological invasions. *Journal of Environmental Management* 196: 594–606. [doi: [10.1016/j.jenvman.2017.03.060](https://doi.org/10.1016/j.jenvman.2017.03.060)]
68. Morinha F., Bastos R., Carvalho D., Travassos P., Santos M., Blanco G., Bastos E. & **Cabral J. A.** (2017) A spatially-explicit dynamic modelling framework to assess habitat suitability for endangered species: the case of Red-billed Chough under land use change scenarios in Portugal. *Biological Conservation* 210: 96–106. [doi: [10.1016/j.bioco.2017.04.013](https://doi.org/10.1016/j.bioco.2017.04.013)]
69. Barros P., Ribeiro C. & **Cabral J. A.** (2017) Winter activity of bats in Mediterranean peri-urban deciduous forests. *Acta Chiropterologica* 19(2): 367–377. [doi: [10.3161/15081109ACC2017.19.2.013](https://doi.org/10.3161/15081109ACC2017.19.2.013)].
70. Santos M., Silva S., Bastos R., Carvalho D. & **Cabral J. A.** (2018) How good are the ecological assumptions and predictions made in the past? Insights from a dynamic modelling approach applied to changing landscapes. *Ecological Indicators* 90: 226–230. [doi: [10.1016/j.ecolind.2018.03.023](https://doi.org/10.1016/j.ecolind.2018.03.023)]
71. Cajaiba R. L., Périco E., Silva W. B., Vieira T. B., Dalzochio M. S., Bastos R., **Cabral J. A.**, Santos M. (2018) How informative is the response of Ground Beetles' (Coleoptera: Carabidae) assemblages to anthropogenic land use changes? Insights for ecological status assessments from a case study in the Neotropics. *Science of the Total Environment* 636: 1219–1227. [doi: [10.1016/j.scitotenv.2018.04.392](https://doi.org/10.1016/j.scitotenv.2018.04.392)]
72. Bastos R., D'Amen M., Marcos B., Santos M., Braz L., Vicente J., Honrado J., Gonçalves J., Monteiro A. & **Cabral J. A.** (2018) Towards functional biodiversity predictions: A hierarchical modelling framework from primary productivity to biomass of upper trophic levels. *Landscape Ecology* 33: 2221–2237. [doi: [10.1007/s10980-018-0735-8](https://doi.org/10.1007/s10980-018-0735-8)]
73. Vicente J.R., Kueffer C., Richardson D. M., Vaz A.S., **Cabral J.A.**, Hui C., Araújo M.B., Ingolf Kühn I., Kull C., Verburg P., Marchante E. & Honrado J.P. (2019) Different environmental drivers of alien tree invasion affect different life-stages and operate at different spatial scales. *Forest Ecology and Management* 433: 263–275. [doi: [10.1016/j.foreco.2018.10.065](https://doi.org/10.1016/j.foreco.2018.10.065)]

74. Ferreira D., Freixo C., **Cabral J. A.** & Santos M. (2019) Is wind energy increasing the impact of socio-ecological change on Mediterranean mountain ecosystems? Insights from a modelling study relating wind power boost options with a declining species. *Journal of Environmental Management* 238: 283-295. [doi: 10.1016/j.jenvman.2019.02.127].
75. Sá N. C., Marchante H., Marchante E., **Cabral J. A.**, Honrado J. P., Vicente J. R. (2019) Can citizen science data guide the surveillance of invasive plants? A model-based test with *Acacia* trees in Portugal. *Biological Invasions* 21: 2127–2141. [doi: 10.1007/s10530-019-01962-6]
76. Santos M., Carvalho D., Luis A., Bastos R., Hughes S. J. & **Cabral J. A.** (2019) Can recreational ecosystem services be inferred by integrating non-parametric scale estimators within a modelling framework? The birdwatching potential index as a case study. *Ecological Indicators* 103: 395–409. [doi: [10.1016/j.ecolind.2019.04.026](https://doi.org/10.1016/j.ecolind.2019.04.026)]
77. Mina R., Alves J., Silva A. A., Natal-da-Luz T., **Cabral J. A.**, Barros P., Topping C. J., Sousa J. P. (2019) Wing membrane and fur samples as reliable biological matrices to measure bioaccumulation of metals and metalloids in bats. *Environmental Pollution* 253: 199-206. [doi: [10.1016/j.envpol.2019.06.123](https://doi.org/10.1016/j.envpol.2019.06.123)]
78. Leote P.B., Cajaiba R.L., **Cabral J. A.**, Brescovit A.D. & Santos M. (2020) Are data-mining techniques useful for selecting ecological indicators in biodiverse regions? Bridges between Market Basket Analysis and Indicator Value Analysis from a case study in the Neotropics. *Ecological Indicators* 109, 105833. [doi: [10.1016/j.ecolind.2019.105833](https://doi.org/10.1016/j.ecolind.2019.105833)].
79. Santos M., Cajaiba R., Gonzalez D., Leote P., Ferreira D., Bastos R., Barreto W. & **Cabral J. A.** (2020) How accurate are estimates of flower visitation rates by pollinators? Lessons from a spatially explicit agent-based model. *Ecological Informatics* 57, 101077. [doi: [10.1016/j.ecoinf.2020.101077](https://doi.org/10.1016/j.ecoinf.2020.101077)]
80. Portela R., Vicente J. R., Roiola S. R. & **Cabral J. A.** (2020) A dynamic model-based framework to test the effectiveness of biocontrol targeting a new plant invader- the case of *Alternanthera philoxeroides* in the Iberian Peninsula. *Journal of Environmental Management* 264, 110349. [doi: 10.1016/j.jenvman.2020.110349]
81. Bastos R., Martins B., **Cabral J. A.**, Ceia F.R., Ramos J.A., Paiva V.H., Luís A. & Santos M. (2020) Oceans of stimuli: An individual-based model to assess the role of olfactory cues and local enhancement in seabirds' foraging behaviour. *Animal Cognition* 23(4): 629–642. [doi: 10.1007/s10071-020-01368-1]
82. Bakış A. P., Macovei I., Barros P., Gomes C., Carvalho D., **Cabral J. A.**, Travassos P., Torres L., Aranha J., Galatchi L., Santos M. (2021) Is biodiversity linked with farm management options in vineyard landscapes? A case study combining ecological indicators within a hybrid modelling framework. *Ecological Indicators* 121, 107012. [doi: 10.1016/j.ecolind.2020.107012]
83. Morais C., **Cabral J. A.** & Gonçalves B. (2021) Seasonal variation in the leaf physiology of co-occurring invasive (*Hakea sericea*) and native (*Pinus pinaster*) woody species in a Mediterranean-type ecosystem. *Forest Ecology and Management* 480, 118662. [doi: 10.1016/j.foreco.2020.118662]
84. Hall S. A., Bastos R., Vicente J.R., Holmes P. M., Gaertner M., Esler K. J. & **Cabral J. A.** (2021) A dynamic modelling tool to anticipate the effectiveness of invasive plant control and restoration recovery trajectories in South African Fynbos. *Restoration Ecology* 29 (3), e13324. [doi: 10.1111/rec.13324]
85. Barros P., Faria S., Pereira M., Santos J. A. & **Cabral J. A.** (2021) How winter prevailing conditions influence the bat activity patterns? Hints from a Mediterranean region. *Hystrix, the Italian Journal of Mammalogy* 32(1): 27-36. [doi: [10.4404/hystrix-00361-2020](https://doi.org/10.4404/hystrix-00361-2020)]

86. Pinto E., Bastos R., Luís A. & **Cabral J. A.** (2021) Localised control of opportunistic, overabundant species in protected areas: a retrospective modelling approach encompassing future scenarios. *Animal Conservation* 24(5): 798–809. [doi: 10.1111/acv.12682]
87. Morais C., Gonçalves B. & **Cabral J. A.** (2021) A dynamic modelling framework to evaluate the efficacy of control actions for a woody invasive plant, *Hakea sericea*. *Frontiers in Ecology and Evolution*, section Biogeography and Macroecology 9, 641686. [doi: [10.3389/fevo.2021.641686](https://doi.org/10.3389/fevo.2021.641686)]
88. Terêncio D.P.S., Varandas S.G.P., Fonseca A.R., Cortes R.M.V., Fernandes L.F., Pacheco F.A.L., Monteiro S.M., Martinho J., **Cabral J. A.**, Santos J. & Cabecinha E. (2021) Integrating Ecosystem Services into sustainable landscape management: a collaborative approach. *Science of the Total Environment* 794, 148538 [doi: 10.1016/j.scitotenv.2021.148538]
89. de la Cruz A., Bastos R., Silva E., **Cabral J. A.** & Santos M. (2022) What to expect from alternative management strategies to conserve seabirds? Hints from a dynamic modelling framework applied to an endangered population. *Animal Conservation* 25(3), 382–400. [doi: [10.1111/acv.12751](https://doi.org/10.1111/acv.12751)]
90. Grilo C. et al., **Cabral J. A.**, et al., Mathias M. L. (2022) MAMMALS IN PORTUGAL: A data set of terrestrial, volant, and marine mammal occurrences in Portugal (ECY21-0510). *Ecology*, e3654. [doi: [10.1002/ecy.3654](https://doi.org/10.1002/ecy.3654)]
91. Santos M., Cajaiba R. L., Bastos R., Gonzlez D., Bakış A. P., Ferreira D., Leote P., Silva W. P., **Cabral J. A.**, Gonçalves B., Mosquera-Losada M- R. (2022) Why do agroforestry systems enhance biodiversity? Evidence from Habitat Amount Hypothesis predictions. *Frontiers in Ecology and Evolution* 9, 630151. [doi: 10.3389/fevo.2021.630151]
92. Bastos R., Martins B., Paiva V.H., Ramos J.A., Pereira J., Ceia F.R., Gouveia C., Rodrigues I., Santos M. & **Cabral J. A.** (2022) Shearwaters' nest attendance patterns throughout the lunar cycle: Are oceanographic conditions decisive for timing of nest arrival? *Journal of Experimental Marine Biology and Ecology* [549](#), 151698. [doi: [10.1016/j.jembe.2022.151698](https://doi.org/10.1016/j.jembe.2022.151698)].
93. Faria S., Barros P., Bacelar E., Santos M., Carvalho D., Vale-Gonçalves H., Braz L., Travassos P. & **Cabral J. A.** (2022) A seasonal multi-level trophic approach for bats habitat suitability assessments in peri-urban deciduous forests. *European Journal of Wildlife Research* 68 (19): 1-12. [doi: [10.1007/s10344-022-01560-3](https://doi.org/10.1007/s10344-022-01560-3)].
94. Morais C., **Cabral J. A.** & Gonçalves B. (2022) Seasonal variation of selected biochemical traits in the leaves of co-occurring invasive and native plant species under Mediterranean conditions. *Plants* 11, 1171. [doi: 10.3390/plants11091171]
95. Fonseca A., Santos J. A., Mariza S., Santos M., Martinho J., Aranha J., Terêncio D., Cortes R., Houet T., Palka G., Mony C., González-Ferreras A., Silió-Calzada A., **Cabral J. A.**, Varandas S. & Cabecinha E. (2022) Tackling climate change impacts on biodiversity towards integrative conservation in Atlantic landscapes. *Global Ecology and Conservation*, e02216. [doi: 10.1016/j.gecco.2022.e02216]
96. Santos M., Moreira H., **Cabral J. A.**, Gabriel R., Teixeira A., Bastos R. & Aires A. (2022) Contribution of Home Gardens to Sustainable Development: Perspectives from A Supported Opinion Essay. *International Journal of Environmental Research and Public Health*, 19(20), 13715. [doi: 10.3390/ijerph192013715]

97. Chammem M., Seri H., Bastos R., Santos M., Vicente J.R., Khorchani T., **Cabral J. A.** (2023) Habitat selection and foraging preference of the critically endangered Addax (*Addax nasomaculatus*) in a fenced wildlife reserve within its historic range: insights for supporting effective reintroduction. *African Zoology* 57(3): 133–144. [doi: 10.1080/15627020.2022.2115859]
98. Santos M., Garcês C., Ferreira A., Carvalho D., Travasos P., Bastos R., Cunha A.; Cabecinha E.; Santos J., **Cabral J. A.** (2023) Side effects of European eco schemes and agri-environment-climate measures on endangered species conservation: clues from a case study in mountain vineyard landscapes. *Ecological Indicators* 148, 110155. [doi: 10.1016/j.ecolind.2023.110155]
99. Morais C., Ferreira H. **Cabral J. A.** & Gonçalves B. (2023) Differential tolerance of the woody invasive *Hakea sericea* to drought and terminal heat stress. *Tree Physiology* Volume 43 (1): 47-56. [doi: 10.1093/treephys/tpac099]
100. Cabecinha E., Pardal M. A., **Cabral J. A.**, Monteiro S. M., Cortes R., Saavedra M. J., Varandas S. & Van den Brink P. J. (2023) Assessing the ecological potential of reservoirs: a Principal Response Curve (PRC) analysis approach. *Hydrobiologia* (*published online*) [doi: 10.1007/s10750-023-05310-7]