
Personal data

Name Rui Miguel Pires Bento da Silva Elias

Address CE3C – Centre for Ecology, Evolution and Environmental Changes/Azorean Biodiversity Group and Faculdade de Ciências Agrárias e do Ambiente, Universidade dos Açores, Departamento de Ciências Agrárias, 9700-042 Angra do Heroísmo

Telephone (+351) 295 402 200

Fax (+351) 295 402 205

E-mail rui.mp.elias@uac.pt

Webpage: <http://ce3c.ciencias.ulisboa.pt/member/ruielias>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=7006549169>

ORCID: <https://orcid.org/0000-0003-2397-2438>

Google Scholar: <https://scholar.google.pt/citations?user=6AtJRN8AAAAJ&hl=en&oi=sra>

Ciência ID: <https://www.cienciavita.pt/B816-7471-C4B4>

Birthdate 24/01/1973

Birthplace Lisbon, Portugal

Education

- 2007, Ph.D. Plant Ecology, Azores University, Portugal.
 - 2001, M.Sc. Island Ecology and Evolution, Azores University, Portugal.
 - 1997, B.Sc. Biology, Azores University, Portugal.
-

Career

- Auxiliary Professor at the Azores University
 - Curator of the Azores University *Herbarium*
 - Co-coordinator (for vascular plants) of the *Azorean Biodiversity Portal* (<http://azoresbioportal.uac.pt/>) and *ATLANTIS 3.1* database (<http://www.atlantis.angra.uac.pt/atlantis/common/index.jsf>)
 - Director of the BSc in Environmental Engineering and Management (2007-2012)
 - Senior Researcher of the CE3C – Centre for Ecology, Evolution and Environmental Changes/Azorean Biodiversity Group and Azores University.
 - Member of the Scientific Coordination Commission of the Azorean Biodiversity Group
 - Member of the IUCN SSC Macaronesian Islands Plant Specialist Group.
-

Current teaching in BSc and MSc courses

Present course units

- Ecology and Ecosystem management (B.Sc.)
- Wetland Ecology and Management (B.Sc.)
- Forest and Forest Resources (B.Sc.)
- Wetland Management and Conservation (M.Sc.)

Past course units

- Biology I (B.Sc.)

- Environmental Impact Assessment (B.Sc.)
- Natural History (B.Sc.)
- Environmental Impact Studies (M.Sc.)

Research interests

- Plant population and community ecology;
- Vegetation dynamics;
- Functional ecology;
- Biogeography;
- Conservation biology;
- Impact and control of invasive species;
- Impact of climate change on biodiversity.

Main research projects

- 2012-2015: Coordinator of the project, DRCTC M2.1.2/I/005/2011, "*Implications of climate change for Azorean Biodiversity-IMPACTBIO*", financed by the Azorean Government's Regional Fund for Scientific Research;
- 2012-2015: Researcher in the project DRCT M2.1.2/I/027/2011 - *ATLANTIS-MAR: Mapping coastal and marine biodiversity of the Azores*, financed by the Azorean Government's Regional Fund for Scientific Research.
- 2012-2015: Researcher in the project FCT/NETBIOME/0003 - *ISLAND-BIODIV: Understanding biodiversity dynamics in tropical and subtropical islands in an aid to science based conservation action*, financed by the European Union's Consortium NetBiome Era-Net (Networking tropical and subtropical biodiversity research in Outermost regions and territories of Europe in support of sustainable development).
- 2012-2015: Researcher in the project M2.1.2/F/04/2011/NET - MOVECLIM: MONTane VEgetation as listening posts for CLIMate change, financed by the European Union's Consortium NetBiome Era-Net (Networking tropical and subtropical biodiversity research in Outermost regions and territories of Europe in support of sustainable development).;
- 2016-2019: Researcher in the project ACORES-01-0145-FEDER-000007, *eAZFlora - Electronic Flora of the Azores for Smartphones and Tablets*, financed by the Azorean Government's Regional Fund for Scientific Research.
- 2016-2019: Researcher in the project ACORES-01-0145-FEDER-000014, *FOREST-ECO2 - Towards an Ecological and Economic valorization of the Azorean Forest*, financed by the Azorean Government's Regional Fund for Scientific Research.
- 2016-2019: Researcher in the project AÇORES-0-0145-FEDER-000037, *PROAAcXXIs - Projecções das alterações climáticas nos Açores para o século XXI: implicações hidrológicas de interesse económico e ambiental*, financed by the Azorean Government's Regional Fund for Scientific Research.

- 2019-2021: Researcher in the project *ACORES-01-0145-FEDER-000072, AZORESBIOPORTAL – PORBIOTA*, financed by the Azorean Government's Regional Fund for Scientific Research.
- 2019-2021: Researcher in the project *LIFE17 IPE/PT/000010, Regional strategy for the prevention and control of invasive alien species* (within the scope of the *LIFE IP AZORES NATURA*)
- 2019-2022: Co-Coordinator of the project *ACORES-01-0145-FEDER-000082, PASTURCLIM- Impact of climate change on pasture productivity and nutritional composition in the Azores*, financed by the Azorean Government's Regional Fund for Scientific Research.

Selected publications

Papers

- Dias, E., R. B. Elias & V. Nunes (2004). Vegetation mapping and nature conservation: a case study in Terceira Island (Azores). *Biodiversity and Conservation*, 13: 1519-1539. DOI: 10.1023/B:BIOC.0000021326.50170.66
- Elias, R. B. & E. Dias (2004). Primary succession on lava domes on Terceira (Azores). *Journal of Vegetation Science*, 15: 331-338. DOI: 10.1111/j.1654-1103.2004.tb02269.x
- Elias, R. B. & E. Dias (2009). Gap dynamics and regeneration strategies in *Juniperus-Laurus* forests of the Azores Islands. *Plant Ecology* 200: 179-189. DOI: 10.1007/s11258-008-9442-x
- Elias, R. B. & E. Dias (2009). Cyclic patch dynamics in a Macaronesian island forest. *Community Ecology* 10(1): 25-34. DOI: 10.1556/ComEc.10.2009.1.4
- Elias, R. B. & E. Dias. 2009. The effects of landslides on the mountain vegetation of Flores Island, Azores. *Journal of Vegetation Science* 20: 706-717. DOI: 10.1111/j.1654-1103.2009.01070.x
- Rumeu, B., M. Nogales, R. B. Elias, D. P. Padilla, T. Resendes, A. F. Rodríguez & E. Dias (2009). Contrasting phenology and female cone characteristics of the two Macaronesian island endemic cedars (*Juniperus cedrus* and *J. brevifolia*). *European Journal of Forest Research* 128: 567-574. DOI: 10.1007/s10342-009-0304-4
- Rumeu, B., R. B. Elias, D. P. Padilla, C. Melo & M. Nogales (2011). Differential seed dispersal systems of endemic junipers in two oceanic Macaronesian archipelagos: the influence of biogeographic and biological characteristics. *Plant Ecology* 212: 911-921. DOI: 10.1007/s11258-010-9875-x
- Elias, R. B., E. Dias & F. Pereira (2011). Disturbance, regeneration and the spatial pattern of tree species in Azorean mountain forests. *Community Ecology* 12(1): 23-30. DOI: 10.1556/ComEc.12.2011.1.4
- Silva, L., R. B. Elias, M. Moura, H. Meimberg & E. Dias (2011). Genetic variability and differentiation among populations of the Azorean endemic gymnosperm *Juniperus brevifolia*: Baseline information for a conservation and restoration perspective. *Biochemical Genetics* 49: 715-734. DOI: 10.1007/s10528-011-9445-5

- Rumeu, B., J. Caujapé-Castells, J. L. Blanco-Pastor, R. Jaén-Molina, Manuel Nogales, R. B. Elias & P. Vargas (2011). The Colonization History of *Juniperus brevifolia* (Cupressaceae) in the Azores Islands. *PLoS ONE* 6(11): e27697. DOI: 10.1371/journal.pone.0027697
- Elias, R. B. & E. Dias (2014). The recognition of infraspecific taxa in *Juniperus brevifolia* (Cupressaceae). *Phytotaxa* 188(5): 241-250. DOI: 10.11646/phytotaxa.188.5.1
- Steinbauer, M.J., Richard Field, John-Arvid Grytnes, Panayiotis Trigas, Claudine Ah-Peng, Fabio Attorre, H. John B. Birks, Paulo A.V. Borges, Pedro Cardoso, Chang-Hung Chou, Michele De Sanctis, Miguel M. de Sequeira, Maria C. Duarte, Rui B. Elias, José María Fernández-Palacios, Rosalina Gabriel, Roy E. Gereau, Rosemary G. Gillespie, Josef Greimler, David E.V. Harter, Tsurng-Juhn Huang, Severin D.H. Irl, Daniel Jeanmonod, Anke Jentsch, Alistair S. Jump, Christoph Kueffer, Sandra Nogué, Rüdiger Otto, Jonathan Price, Maria M. Romeiras, Dominique Strasberg, Tod Stuessy, Jens-Christian Svenning, Ole R. Vetaas, Carl Beierkuhnlein (2016). Topography-driven isolation, speciation and a global increase of endemism with elevation. *Global Ecology and Biogeography* 25: 1097–1107. DOI: 10.1111/geb.12469
- Vergílio, M., C. Fonseca, H. Calado, R. B. Elias, R. Gabriel, P. A. V. Borges, A. F. Martins, E. B. Azevedo & P. Cardoso (2016). Assessing the efficiency of protected areas to represent biodiversity: a small island case study. *Environmental Conservation* 43(4): 337-349. DOI: 10.1017/S037689291600014X
- Ferreira, M.T., Cardoso, P., Borges, P.A.V., Gabriel, R., Azevedo, E.B., Reis, F., Araújo, M.B. & Elias, R.B (2016). Effects of climate change on the distribution of indigenous species in oceanic islands (Azores). *Climatic Change* 138: 603–615. DOI: 10.1007/s10584-016-1754-6
- Elias, R.B., Gil, A., Silva, L., Fernández-Palacios, J.M., Azevedo, E.B. & Reis, F. (2016). Natural zonal vegetation of the Azores Islands: characterization and potential distribution. *Phytocoenologia* 46(2): 107-123. DOI: 10.1127/phyto/2016/0132
- L. Borges Silva, A. Teixeira, M. Alves, R.B. Elias & L. Silva (2017). Tree age determination in the widespread woody plant invader *Pittosporum undulatum*. *Forest Ecology and Management* 400: 457–467. DOI: 10.1016/j.foreco.2017.06.027
- Rull, V., S.E. Connor & R.B. Elias (2017). Potential natural vegetation and pre-anthropogenic pollen records on the Azores Islands in a Macaronesian context. *Journal of Biogeography* 44: 2437-2440. DOI: 10.1111/jbi.13083
- Silva, L. D., Azevedo, E. B., Elias, R. B. & Silva, L. (2017). Species Distribution Modeling: Comparison of Fixed and Mixed Effects Models Using INLA. *ISPRS International Journal of Geo-Information* 6(12), 391. DOI:10.3390/ijgi6120391
- Borges Silva, L., P. Lourenço, A. Teixeira, E.B. Azevedo, M. Alves, R.B. Elias & L. Silva (2018). Biomass valorization in the management of woody plant invaders: The case of *Pittosporum undulatum* in the Azores. *Biomass and Bioenergy* 109: 155-165. DOI: 10.1016/j.biombioe.2017.12.025
- Aparício, B.A., Cascalho, J., Cruz, M.J., Borges, P.A.V., Azevedo, E.B., Elias, R.B. & Ascensão, F. (2018). Assessing the landscape functional connectivity using movement maps: a case study

- with endemic Azorean insects. *Journal of Insect Conservation*, 22: 257-265. DOI:10.1007/s10841-018-0059-7
- Borges, P.A.V., Cardoso, P., Kreft, H., Whittaker, R.J., Fattorini, S., Emerson, B.C., Gil, A., Gillespie, R.G., Matthews, T.J., Santos, A.M.C., Steinbauer, M.J., Thébaud, C., Ah-Peng, C., Amorim, I.R., Aranda, S.C., Arroz, A.M., Azevedo, J.M., Boieiro, M., Borda-De-Água, L., Carvalho, J.C., Elias, R.B., Fernández-Palacios, J.M., Florencio, M., González-Mancebo, J.M., Heaney, L.R., Hortal, J., Kueffer, C., Lequette, B., Martín-Esquivel, J.L., López, H., Lamelas-López, L., Marcelino, J., Nunes, R., Oromí, P., Patiño, J., Pérez, A.J., Rego, C., Ribeiro, S.P., Rigal, F., Rodrigues, P., Rominger, A.J., Santos-Reis, M., Schaefer, H., Sérgio, C., Serrano, A.R.M., Sim-Sim, M., Stephenson, P.J., Soares, A.O., Strasberg, D., Vanderporten, A., Vieira, V. & Gabriel, R. (2018). A Global Island Monitoring Scheme (GIMS) for the long-term coordinated survey and monitoring of forest biota across islands. *Biodiversity and Conservation*, 27: 2567–2586. DOI:10.1007/s10531-018-1553-7
 - Liang, X.-J., Hinsinger, D.D., Elias, R.B. & Strijk, J.S. (2019) The plastome sequence of *Laurus azorica* (Seub.) Franco, an endemic tree species of the Azores islands. *Mitochondrial DNA Part B-Resources*, 4(1): 363-365. DOI:10.1080/23802359.2018.1545536
 - Câmara, S.C., Dapkevicius, A., Riquelme, C., Elias, R.B., Silva, C.C.G., Malcata F.X. & Dapkevicius, M.L.N.E (2019). Potential of lactic acid bacteria from Pico cheese for starter culture development. *Food Science and Technology International*, 25(4): 303-317. DOI: 10.1177/1082013218823129
 - Pavão, D.C., Elias, R.B., & Silva, L. (2019). Comparison of discrete and continuum community models: Insights from numerical ecology and Bayesian methods applied to Azorean plant communities. *Ecological Modelling*, 402: 93–106. DOI: 10.1016/j.ecolmodel.2019.03.021
 - Ferreira M.T., Cardoso P., Borges P.A.V., Gabriel R., Azevedo E.B. & Elias R.B. (2019). Implications of climate change to the design of protected areas: The case study of small islands (Azores). *PLoS ONE* 14(6): e0218168. DOI: 10.1371/journal.pone.0218168
 - Silva, L.D., Azevedo, E.B., Reis, F.V., Elias, R.B. & Silva, L. (2019). Limitations of Species Distribution Models Based on Available Climate Change Data: A Case Study in the Azorean Forest. *Forests*, 10(7), 575. DOI: 10.3390/f10070575
 - Góis-Marques, C.A., Elias, R.B., Steinbauer, M., Nascimento, L., Fernández-Palacios, J.M., Menezes de Sequeira, M. & Madeira, J. (2019) The loss of a unique Palaeobotanical site in Terceira Island within the Azores UNESCO global Geopark (Portugal). *Geoheritage*, Online early. DOI:10.1007/s12371-019-00401-1
 - Elias, R.B., Brito, M.R., Pimentel, C.M.M., Nogueira, E.C. & Borges, P.A.V. (2019). Biota from the coastal wetlands of Praia da Vitória (Terceira, Azores, Portugal): Part 4 – Vascular plants. *Biodiversity Data Journal* 7: e38687. DOI: 10.3897/BDJ.7.e38687

Books and book chapters

- Dias, E., R. B. Elias, C. Melo & C. Mendes. 2007. Biologia e ecologia das florestas das ilhas - Açores. In: Silva J. S. (ed.), *Árvores e florestas de Portugal* – Vol. 6, pp. 51-80. Público,

Comunicação Social, SA/ Fundação Luso-Americana/ Liga para a Protecção da Natureza. ISBN: 978-989-619-103-0

- Fernández-Palacios, J.M., Arévalo, J.R., Balguerías, E., Barone, R., de Nascimento, L., Elias, R.B., Delgado, J.D., Fernández-Lugo, S., Méndez, J., Naranjo Cigala, A., Menezes de Sequeira, M. & Otto, R. (2017) *La Laurisilva. Canarias, Madeira y Azores*. Macaronesia Editorial, Santa Cruz de Tenerife, 420 pp. ISBN: 978-84-697-5454-2
- García Criado, M., Väre, H., Nieto, A., Bento Elias, R., Dyer, R., Ivanenko, Y., Ivanova, D., Lansdown, R., Molina, J.A., Rouhan, G., Rumsey, F., Troia, A., Vrba, J. and Christenhusz, M.J.M. (2017). *European Red List of Lycopods and Ferns*. Brussels, Belgium: IUCN. iv + 59pp. ISBN: 978-2-8317-1855-2
- Borges, P.A.V., Santos, A.M.C., Elias, R.B. & Gabriel, R. (2019). The Azores Archipelago: Biodiversity Erosion and Conservation Biogeography. Encyclopedia of the World's Biomes- Earth Systems and Environmental Sciences. *Reference Module in Earth Systems and Environmental Sciences* (ed. by E. Scott et al.), pp. 1-18. Elsevier, Amsterdam, Netherlands. DOI:10.1016/B978-0-12-409548-9.11949-9.

Orientations

- 16 MSc students
- 4 PhD students
- 1 Post-Doc researcher

Science diffusion

- Participation in 23 national and international scientific meetings;
- Co-organization of 5 international scientific meetings.