

DR. LUZ BOYERO

CURRICULUM VITAE

Contact details

Work address: Universidad del Pais Vasco (UPV/EHU), Facultad de Ciencia y Tecnología,
Barrio Sarriena s/n, 48940 Leioa, Vizcaya, Spain

Phone: +34 946 018 031

Email: luz.boyero@ehu.es

Websites: www.ehu.es/streamecology/luzboyero.html, www.ikerbasque.net/es/luz-boyero

Scopus Author ID: 6602083170

ORCID: 0000-0001-7366-9299

Current research position

Research Professor (Ikerbasque), University of the Basque Country, Spain (since 2013).

Research interests

Biodiversity effects on ecosystem function; latitudinal gradients of diversity; climate change effects on ecosystems and communities; stream ecosystems; plant litter decomposition; trophic cascades; behavioural ecology; invasive species.

Academic qualifications

1. **PhD in Biology**, Autonomous University of Madrid, Spain (2002). Thesis ('Structure and Dynamics of Benthic Macroinvertebrate Communities in Stream Ecosystems: Spatial Scales and Heterogeneity') received the award 'Best PhD thesis of Limnology in Spain and Portugal 2002-2003', Iberian Association of Limnology (2003).
2. **BSc in Biology**, Autonomous University of Madrid, Spain (1997).

Past research positions

1. **Adjunct Principal Research Fellow**, James Cook University, Australia (2009-2018).
2. **Research Associate**, Doñana Biological Station-CSIC, Spain (2013-14).
3. **Senior Research Fellow** (Ramón y Cajal Program), Doñana Biological Station-CSIC, Spain (2009-13).
4. **Senior Research Fellow**, James Cook University, Australia (2008-9).
5. **Research Associate**, Smithsonian Tropical Research Institute, Panama (2006-9).
6. **Postdoctoral Research Fellow**, James Cook University, Australia (2003-7).
7. **Predocctoral Research Fellow**, National Museum for Natural Sciences-CSIC, Spain (1998-2002).

Career breaks

1. Maternity leave (December 2010-May 2011).
2. Maternity leave (June 2013-November 2013).

Editor and reviewer

1. **Associate Editor**, *Limnology* (since 2017).
2. **Associate Editor**, *Hydrobiologia* (2012-16).
3. **Associate Editor**, *Biotropica* (2007-10).
4. **Invited Editor**, *Journal of the North American Benthological Society* (2009).
5. **Faculty Member**, F1000Prime Faculty, Marine & Freshwater Ecology section (since 2018).
6. **Reviewer** (47 journals, 80 manuscripts): *Acta Oecologica*, *Annals of the Entomological Society of America*, *Aquatic Ecology*, *Aquatic Microbial Ecology*, *Aquatic Insects*, *Aquatic Sciences*, *Austral Ecology*, *Behavioral Ecology*, *Behavioral Ecology and Sociobiology*, *Biodiversity and Conservation*, *Biological Conservation*, *Biology Letters*, *Biota Neotropica*, *Biotropica*, *Ecography*, *Ecohydrology*, *Ecohydrology and Hydrobiology*, *Ecological Monographs*, *Ecology*, *Ecology and Evolution*, *Ecosystems*, *Environmental Monitoring and Assessment*, *Freshwater Biology*, *Freshwater Science*, *Functional Ecology*, *Fundamental and Applied Limnology*, *Fungal Ecology*, *Global Change Biology*, *Global Ecology and Biogeography*, *Hydrobiologia*, *Insect Conservation and Diversity*, *International Journal of Limnology*, *International Journal of Tropical Biology and Conservation*, *International Review of Hydrobiology*, *Journal of the American Water Resources Association*, *Journal of Biogeography*, *Journal of Plankton Research*, *Journal of Tropical Ecology*, *Knowledge and Management of Aquatic Ecosystems*, *Marine and Freshwater Research*, *Naturwissenschaften*, *Oecologia*, *PeerJ*, *PLOS ONE*, *Science of the Total Environment*, *Scientific Reports* (Nature Publishing Group), and *Wetlands Ecology and Management*.
7. **Reviewer for national funding agencies** of Spain (ANEP), Australia (ARC), Belgium (FNRS), Chile (FONDECYT), Czech Republic (GACR), Romania (ANCS), South Africa (NRS), and for Monash University in Malaysia.

Teaching

1. Master in 'Biodiversity, Functioning and Management of Ecosystems' at UPV/EHU, subject 'Land-water interactions: repercussions for the ecological state of streams, lakes and wetlands' (2018-current)

Research projects as PI

1. Functional consequences of biodiversity loss caused by emerging diseases in freshwater ecosystems (BioLoss), Spanish Ministry for Science, Innovation and Universities, €114,950 (2019-2021).
2. How will the biodiversity crisis affect vital stream ecosystem functions? (Biofunction) Spanish Ministry for Economy and Competitiveness, €96,800 (2015-2018).
3. Combined effects of climate change and other stressors on stream ecosystem structure and function (CLICHES), Spanish Ministry for Science and Innovation, €83,490 (2011-13).
4. Are biodiversity effects on ecosystem function similar across latitudes? A test with a stream heterotrophic system, James Cook University, AU\$13,000 (2008).
5. Biodiversity, ecosystem function and temperature in Australian tropical streams, James Cook University, AU\$1,500 (2007).

6. Biodiversity effects on ecosystem function. A test with a consumer guild across latitudes, National Geographic Society Committee for Research and Exploration, US\$20,000 (2006-7).
7. How species diversity influences ecosystem function: a test using stream detritivores, James Cook University, AU\$6,000 (2004).

Research projects as co-investigator or collaborator

1. Implementation of indicators to determine effects of pesticides and heavy metals on freshwater ecosystem health in agricultural catchments and human populations, Panamanian Ministry for Economy and Finance (Panama; ref. 019910.001), PI: Aydeé Cornejo, US\$311,000 (2019-2022).
2. Multiple stressors in freshwater streams: global warming and forest plantations, FONDECYT (Chile), PI: Francisco J. Correa Araneda, €142,400 (2018-2020).
3. Effects of pesticides on leaf litter breakdown in tropical streams, SENACYT (Panama; ref. APY-GC-2018B-052), PI: Aydeé Cornejo, US\$10,000 (2018-2019).
4. Basque Country Research Group funding (ref. GV-IT951/16), Basque Government, PI: Jesús Pozo (2016-2018) and Arturo Elosegi (2019-2021), €610,000 (2016-2021).
5. Aquariparia/Pró-águas: Qualidade de água em bacias hidrográficas no cerrado, uma ponte da ciência à sociedade (Brazil), PI: Jose F. Gonçalves Jr, €232,000 (2016-2019).
6. Managing the effects of multiple stressors on aquatic ecosystems under water scarcity (GLOBAQUA), European Union FP7-ENV-2013-two-stage, PI: Arturo Elosegi, €347,831 (2014-2019).
7. Invasion of stream ecosystems by the red swamp crayfish: mechanisms responsible for the invasion success, and consequences at eco-evolutionary and socio-economic levels, Junta de Andalucía, €189,894 (2014-2017) – *I was PI of the funded proposal, but transferred it to another researcher due to incompatibility with my position in a non-Andalusian institution.*
8. Assessing and predicting effects on water quantity and quality in Iberian rivers caused by global change (SCARCE), Spanish Ministry for Science and Innovation, PI: Arturo Elosegi, €273,000 (2010-2014).
9. Structure and dynamics of macroinvertebrate meta-communities in temporal wetlands and the role of the invasive species *Trichocorixa verticalis*, Junta de Andalucía, PI: Andrew J. Green, €119,396 (2011-2013).
10. Assessment of pollution in Panamanian fresh waters, Panamanian Ministry for Economy and Finance, PI: Aydeé Cornejo, US\$150,000 (2012).
11. Monitoring of water quality and biodiversity in the influence area of the Cerro Petaquilla mining project (Panama), ANCON Panama, PI: Aydeé Cornejo, US\$10,000 ANCON (2010).
12. Inventory of the aquatic insect fauna of Cerro Petaquilla (Panama), Petaquilla Minerals, PI: Aydeé Cornejo, US\$22,000 (2007-2008).
13. Inventory of the flora and fauna in the Changuinola river watershed (Gavilán Project), AES Panama, P.I. Eldredge Bermingham (Director of the Smithsonian Tropical Research Institute), US\$1,333,000 (2006-2008). *I was scientific coordinator of this project in 2006-2007.*
14. Potential impacts of climate change: gradients of temporality and ecological processes in montane freshwater ecosystems, Spanish Ministry for Education and Science, PI: Pedro A. Rincón, €39,689 (2006-2007).
15. Ecological patterns of macroinvertebrates in streams of the Altos de Campana National Park (Panama), SENACYT, PI: Aydeé Cornejo, US\$50,000 (2006-2007).
16. Conservation issues in protected natural areas: impact and control of introduced fish in the Peñalara Natural Park (Madrid), Comunidad de Madrid, PI: Pedro A. Rincón, €40,740 (2005-2006).

17. Environmental analysis of ecological impact of the M-501 highway expansion (Madrid), Comunidad de Madrid, PI: Montserrat Gomendio, €132,177 (2002).
18. Inventory of the flora and fauna of Coiba Island (Panama), Spanish Agency for International Cooperation, PI: Santiago Crastoviejo, €120,000 (1998).

Other funding

1. **Funding obtained outside competitive grants**, Ikerbasque start-up funds (€15,000, 2014-2017), Doñana Biological Station-CSIC (€20,000, 2011-2012), Ramón y Cajal start-up funds (€15,000, 2009-2011).
2. **Declined**, How will the biodiversity crisis affect vital ecosystem functions? Australian Research Council, AU\$747,517 (2013-2017) –declined due to incompatibility with research position in Spain.

Supervision of postgraduate students

1. PhD theses:

- 1.1. Naiara López (UPV/EHU): How does biodiversity loss affect key stream ecosystem function: an experimental approach (to be defended in 2021).
- 1.2. Aydeé Cornejo (University of Panama): Effects of pesticides on litter breakdown in tropical streams: comparison with temperate streams, interactions with other stressors, and the role of invertebrate diversity (to be defended in 2020).
- 1.3. Francisco J. Oficialdegui (University of Sevilla): Invasion of fluvial ecosystems by the red swamp crayfish, *Procambarus clarkii*: mechanisms responsible for the invasion success and ecological consequences (2019).
- 1.4. Alan M. Tonin (University of Brasilia): Organic matter dynamics and decomposition in riparian ecosystems: spatial and temporal patterns (2017).
- 1.5. Cristina Coccia (University of Sevilla): Factors influencing macroinvertebrate metacommunity structure, colonization and invasions in temporary ponds in Doñana (SW Spain) (2015).

2. MSc theses:

- 2.1. Unai Apodaka (UPV/EHU): How phylogenetic diversity influences litter decomposition (2018).

3. Honours theses:

- 3.1. Regina Camacho (James Cook University): Stream leaf litter processing in two tropical regions: comparing shredder communities and their efficiency (2006)
- 3.2. Mikis Bastian (James Cook University): The influence of diversity on ecosystem processes: shredder and leaf species interactions in a stream ecosystem (2005)

4. Diploma degree:

- 4.1. Kaylene Allan (James Cook University): Chemical communication in competitive interactions among tropical stream detritivores (2005).

Scientific meetings

1. **President of Scientific Committee** (1), V Latin American Congress of Macroinvertebrates and Aquatic Ecosystems (Panama, 2020),
2. **Member of Scientific Committee** (1), 18th Conference of the Iberian Association of Limnology (Tortosa, 2016).

3. **Member of Organizing Committee** (2), V Latin American Congress of Macroinvertebrates and Aquatic (Panama, 2020), 8th Conference on Plant Litter Processing in Freshwaters (Bilbao, 2017).
4. **Organizer of Special Session**, 54th North American Benthological Society Annual Meeting (Anchorage, 2006).
5. **Plenary talks** (3), Annual Meeting of the Limnological Society of Chile (Pucón, 2019), Congress on Tropical Aquatic Ecosystems in the Anthropocene - AQUATROP (Quito, 2018), 18th Conference of the Iberian Association of Limnology (Tortosa, 2016). Declined plenary talks (2), VII Argentinian Congress of Limnology (Tucumán, 2016), 9th Conference of the Nordic Benthological Society (Oulu, 2014).
6. **Other invited talks/seminars** (2): Chiriqui Autonomous University, Panama (2019), Estación Biológica de Doñana EBD-CSIC (2007).
7. **Award** to 'Best poster communication', 11th Conference of the Iberian Association of Limnology (2002).
8. **Oral and poster communications** (40 and 19, respectively) to the following scientific meetings: XIX Conference of the Iberian Association of Limnology (2018), 8th Conference on Plant Litter Processing in Freshwaters (2017), XIV MEDECOS & XIII AEET Meeting (2017), 33rd SIL (International Society of Limnology) Congress (2016), International Congress of the Spanish Society of Ethology and Evolutionary Ecology (2016), Severo Ochoa Advisory Board Meeting, EBD-CSIC (2016), XXI Symposium of the International Association of Astacology (2016), International Symposium on Conservation of European Native Freshwater Crayfish (2015), International and Spanish Symposiums on Conservation of European Native Freshwater Crayfish (2014), 17th Conference of the Iberian Association of Limnology (2014), 7th European Conference on Biological Invasions (2012), I Latin American Congress of Aquatic Macroinvertebrates (2012), Symposium for European Freshwater Sciences (2011), GWSP Conference of the Global Catchment Initiative (2010), Freshwater Macroinvertebrates of Mesoamerica Special Meeting (2010), 56th North American Benthological Society Annual Meeting (2008), 5th International Meeting on Plant Litter Processing in Freshwaters (2008), IV Argentine Congress of Limnology (2008), XII National Congress for Science and Technology (2008), Joint Meeting of the Australian Society for Limnology and the New Zealand Freshwater Sciences Society (2007), 54th North American Benthological Society Annual Meeting (2006), Electronic Conference for Landscape Scale Biodiversity Assessment (2005), 4th International Meeting on Plant Litter Processing in Freshwaters (2005), Australian Society for Limnology 44th National Congress (2005), VII Portuguese-Spanish and XI Spanish Meeting of Herpetology (2002), IX National and VI Latin American Meeting of Ethology (2002), VII Catalan Meeting of Herpetology (2002), 11th Conference of the Iberian Association of Limnology (2002), and 48th Annual Meeting of the North American Benthological Society (2000).

International experience

1. **Long-term positions** (2), Smithsonian Tropical Research Institute, Panama (2006-9), James Cook University, Australia (2003-9).
2. **Short-term stays** (3), Smithsonian Tropical Research Institute, Panama (2002), La Selva Biological Station-OTS, Costa Rica (2001), University of Western Ontario, Canada (1999), and Monash University (Malaysia).
3. **Leader of international research network** (GLoBE) composed of +50 teams from +30 countries (2006-current).
4. **Participant in international research networks** (4), CONDEX, GLOFUN, CELLDEX, International Eucalypt Project (2014-2018).

Summary of productivity and impact

1. **Publications:** 83 (77 in indexed journals; 50 in Q1).
2. **Lead author** in 42% of publications, second or last author in 43%.
3. **Impact** (Scopus): 1782 citations, h-index: 23.

Publications: indexed articles (77)

1. Díaz A, Maturana C, BOYERO L, de los Ríos P, Tonin AM, Correa-Araneda F. 2019. Spatial distribution of freshwater crustaceans in Antarctic and Subantarctic lakes. *Scientific Reports* (in press).
2. Bosch J, Bielby J, Martin-Beyer B, Rincón P, Correa-Araneda F, BOYERO L. 2019. Eradication of introduced fish allows successful recovery of a stream-dwelling amphibian. *Plos One* 14: e0216204.
3. Fernández-Loras A, BOYERO L, Correa-Araneda F, Tejedo M, Hettyey A, Bosch J 2019. Infection with *Batrachochytrium dendrobatidis* lowers heat tolerance of tadpole hosts and cannot be cleared by brief exposure to CTmax. *Plos One* 14: e0216090.
4. Oficialdegui FJ, Sanchez MI, Clavero M, Green AJ, BOYERO L, Kawai T, Klose K, Michot TC, Lejeusne C 2019. Unravelling the global invasion routes of a worldwide invader, the red swamp crayfish, *Procambarus clarkii*. *Freshwater Biology* (in press).
5. Seena S, Bärlocher F, Sobral O, Gessner MO, Dudgeon D, McKie BG, Chauvet E, BOYERO L, Veró Ferreira V, Frainer A, Bruder A, Matthaei CD, Fenoglio S, Sridhar KR, Albariño RJ, Douglas MM, Encalada AC, Garcia E, Ghatge SD, Giling DP, Gonçalves V, Iwata T, Landeira-Dabarca A, McMaster D, Medeiros AO, Naggea J, s Pozo J, Raposeiro PM, Swan CM, Tenkiano NSD, Yule CM, Graça MAS, 2019. Biodiversity of leaf litter fungi in streams along a latitudinal gradient. *Science of the Total Environment* 661: 306-315.
6. Tiegs SD, Costello D, Isken M, Woodward G, McIntyre P, Gessner MO, Chauvet E, Griffiths N, Flecker AS, Acuña V, Albariño R, Allen DC, Alonso C, Andino P, Arango C, Aroviita J, Barbosa MVM, Barmuta LA, Baxter CV, Bell TDC, Bellinger B, BOYERO L, Brown LE, Bruder A, Bruesewitz DA, Burdon F, Callisto M, Camacho A, Canhoto C, Capps KA, Castillo MM, Clapcott J, Colas F, Colón-Gaud C, Cornut J, Crespo-Pérez V, Cross WF, Culp J, Danger M, Dangles O, de Eyto E, Derry AA, Díaz Villanueva V, Douglas MM, Elosegi A, Encalada AC, Entekhabi S, Espinosa R, Ethaiya D, Ferreira V, Ferriol C, Flanagan KM, Fleituch T, Frainer A, Friberg N, Frost PC, Garcia EA, García L, García Soto PE, Ghatge S, Giling DP, Gilmer A, Gonçalves JF Jr, Gonzales RK, Graça MAS, Grace M, Grossart HP, Guerold F, Gulis V, Hepp LU, Higgins S, Hishi T, Huddard J, Hudson J, Imberger S, Iñiguez-Armijos C, Iwata T, Janetski DJ, Jennings E, Kandikere S, Kirkwood AE, Koning AA, Kosten S, Kuehn KA, Laudon H, Leavitt PR, Lemes da Silva AL, Leroux S, LeRoy CJ, Lisi PJ, MacKenzie R, Marcarelli AM, Masese FO, McKie BG, Medeiros A, Meissaner K, Milisa M, Mishra S, Miyake Y, Moerke A, Mombrikotb S, Mooney R, Moulton T, Muotka T, Negishi J, Neres-Lima V, Nieminen ML, Nimpesch J, Ondruch J, Paavola R, Pardo I, Patrick CJ, Peeters ETHM, Pozo J, Pringle CM, Prussian A, Quenta E, Quesada A, Reid B, Richardson JS, Rigosi A, Rincón J, Risnoveanu G, Robinson CT, Rodríguez-Gallego L, Royer TV, Rusak JA, Santamans AC, Selmečzy GB, Follstad Shah JJ, Simiyu G, Skuja A, Smykla J, Sridhar KR, Sponseller R, Stoler A, Swan CM, Szlag D, Teixeira-de Mello F, Tonkin JD, Uusheimo S, Veach AM, Vilbaste S, Vought LBM, Wang CP, Webster JR, Wilson PB, Woelfl S, Xenopoulos MA, Yates AG, Yoshimura C, Yule CM, Zhang Y & Zwart JA. 2019. Global ecosystem functioning gauged through crowdsourcing. *Science Advances* 5: eaav0486.

7. Landeira-Dabarca A, Pérez J, Graça MAS, BOYERO L. 2019. Joint effects of temperature and litter quality on detritivore-mediated breakdown in streams. *Aquatic Sciences* (<https://doi.org/10.1007/s00027-018-0598-8>).
8. Ferreira V, BOYERO L, Calvo C, Correa-Araneda F, Figueroa R, Gonçalves JF Jr., Goyenola G, Graca, MAS, Hepp L, Kariuki S, López-Rodríguez A, Mazzeo N, M'Erimba C, Monroy S, Peil A, Pozo J, Rezende R, Teixeira-de-Mello F. 2019. A global assessment of the effects of eucalyptus plantations on stream ecosystem functioning. *Ecosystems* 22: 629-642.
9. Wootton A, Pearson RG, BOYERO L. 2019. Patterns of flow, leaf litter and shredder abundance in a tropical stream. *Hydrobiologia* 826: 353-365.
10. Tonin AM, Pozo J, Monroy S, Basaguren A, Pérez J, Gonçalves JF Jr, Pearson RG, Cardinale BJ, BOYERO L. 2018. Interactions between large and small detritivores influence how biodiversity impacts litter decomposition. *Journal of Animal Ecology* 87:1465-1474.
11. López-Rojo N, Martínez A, Pérez J, Basaguren A, Pozo J, BOYERO L. 2018. Leaf traits drive plant diversity effects on litter decomposition and FPOM production in streams. *PLoS ONE* 13: e0198243.
12. BOYERO L, Pearson RG. 2017. Global-scale coordinated networks as a tool for exploring the functioning of stream ecosystems. *Limnetica* 36: 557-565.
13. BOYERO L, Graça MAS, Tonin AM, Pérez J, Swafford A, Ferreira V, Landeira-Dabarca A, Alexandrou M, Gessner MO, McKie BG, Albariño RJ, Barmuta LA, Callisto M, Chará J, Chauvet E, Colón-Gaud C, Dudgeon D, Encalada AC, Figueroa R, Flecker AS, Fleituch T, Frainer A, Gonçalves JF Jr, Helson JE, Iwata T, Mathooko J, M'Erimba C, Pringle CM, Ramírez A, Swan CM, Yule CM, Pearson RG. 2017. Riparian plant litter quality increases with latitude. *Scientific Reports* 7: 10562.
14. Tonin AM, Gonçalves JF Jr, Bambi P, Couceiro SRM, Feitoza LAM, Fontana LE, Hamada N, Hepp LU, Kowalczyk VGL, Leite GFM, Lemes-Silva AL, Lisboa LK, Loureiro RC, Martins RT, Medeiros AO, Morais PB, Moretto Y, Oliveira PAO, Pereira EB, Pérez J, Petrucio MM, Reis DF, Rezende R, Roque N, Santos LEP, Sieglösch AE, Tonello G, BOYERO L. 2017. Plant litter dynamics in the forest-stream interface: precipitation is a major control across tropical biomes. *Scientific Reports* 7: 10799.
15. Correa-Araneda F, Basaguren A, Abdala-Díaz RT, Tonin AM, BOYERO L. 2017. Resource-allocation tradeoffs in caddisflies facing multiple stressors. *Ecology and Evolution* 7: 5103-5110.
16. Von Schiller D, Acuña V, Aristi I, Arroita M, Basaguren A, Bellin A, BOYERO L, Butturini A, Ginebreda A, Kalogianni E, Larrañaga A, Majone B, Martínez A, Monroy S, Muñoz I, Paunović M, Pereda O, Petrovic M, Pozo J, Rodríguez-Mozaz S, Rivas D, Sabater S, Sabater F, Skoulikidis N, Solagaistua L, Vardakas L, Elozeigi A. 2017. The GLOBAQUA toolbox to measure river ecosystem functioning. *Science of the Total Environment* 596-597: 465-480.
17. Tonin AM*, BOYERO L*, Monroy S, Basaguren A, Pérez J, Pearson RG, Cardinale BJ, Gonçalves JF Jr, Pozo J (*these authors contributed equally to this work). 2017. Stream nitrogen concentration, but not plant N-fixing capacity, modulates litter diversity effects on decomposition. *Functional Ecology* 31: 1471-1481.
18. Polo-Cavia N, BOYERO L, Martín-Beyer B, Barmuta LA, Bosch J. 2017. Joint effects of rising temperature and the presence of introduced predatory fish on montane amphibian populations. *Animal Conservation* 20: 128-134.
19. Ferreira V, Castela J, Rosa P, BOYERO L, Graça MAS. 2016. Aquatic hyphomycetes, benthic macroinvertebrates and leaf litter decomposition in streams naturally differing in riparian vegetation. *Aquatic Ecology* 50: 711-725.
20. BOYERO L, Pearson RG, Hui C, Gessner MO, Pérez J, Alexandrou MA, Graça MAS, Cardinale BJ, Albariño RJ, Arunachalam M, Barmuta LA, Boulton AJ, Bruder A, Callisto M, Chauvet E, Death RG, Dudgeon D, Encalada AC, Ferreira V, Figueroa R, Flecker AS, Gonçalves J. 2016.

- Biotic and abiotic variables influencing plant litter breakdown in streams: a global study. *Proceedings of the Royal Society B* 283: 20152664.
21. Coccia C, Vanschoenwinkel B, Brendonck L, BOYERO L, Green AJ. 2016. Newly created ponds complement natural water bodies for restoration of macroinvertebrate assemblages. *Freshwater Biology* 61: 1640-1654.
 22. Coccia C, Fry B, Ramírez F, BOYERO L, Bunn S, Díaz-Salgado C, Walton M, Le Vay L, Green A. 2016. Niche partitioning between invasive and native corixids (Hemiptera: Corixidae) in south-west Spain. *Aquatic Sciences* 78: 779-791.
 23. BOYERO L, Pearson RG, Swan CM, Hui C, Albariño RJ, Arunachalam M, Callisto M, Chará J, Chará-Serna AM, Chauvet E, Cornejo A, Dudgeon D, Encalada AE, Ferreira V, Gessner MO, Gonçalves JF Jr, Graça MAS, Helson JE, Mathooko JM, McKie BG, Moretti MS, Yule C. 2015. Latitudinal gradient of nestedness and its potential drivers in stream detritivores. *Ecography* 38: 949-955.
 24. Sánchez MI, Coccia C, Valdecasas AG, BOYERO L, Green AJ. 2015. Parasitism by water mites in native and exotic Corixidae. Are mites limiting the invasion of the water boatman *Trichocorixa verticalis* (Fieber, 1851)? *Journal of Insect Conservation* 19: 433-447.
 25. Pearson RG, Connolly NM, BOYERO L. 2015. Ecology of streams in a biogeographic isolate – the Queensland Wet Tropics, Australia. *Freshwater Science* 34: 797-819.
 26. BOYERO L, Pearson RG, Gessner MO, Dudgeon D, Ramírez A, Yule CM, Callisto M, Pringle CM, Encalada AC, Arunachalam M, Mathooko J, Helson JE, Rincón J, Bruder A, Cornejo A, Flecker AS, Mathuriau C, M'Erimba C, Gonçalves JF Jr, Moretti M, Jinggut T. 2015. Leaf litter breakdown in tropical streams: is variability the norm? *Freshwater Science* 34: 759-769.
 27. Graça MAS, Ferreira V, Canhoto C, Encalada AC, Guerrero-Bolaño F, Wantzen KM, BOYERO L. 2015. A conceptual model of litter breakdown in low order streams. *International Review of Hydrobiology* 100: 1-12.
 28. Correa-Araneda F, BOYERO L, Figueroa R, Sánchez C, Abdala R, Ruiz-García A, Graça MAS. 2015. Joint effects of climate warming and exotic litter (*Eucalyptus globulus* Labill.) on stream detritivore fitness and litter breakdown. *Aquatic Sciences* 77: 197-205.
 29. Coccia C, BOYERO L, Green AJ. 2014. Can differential predation of native and alien corixids explain the success of *Trichocorixa verticalis verticalis* in the Iberian Peninsula? *Hydrobiologia* 734: 115-123.
 30. BOYERO L, Cardinale BJ, Bastian M, Pearson RG. 2014. Biotic vs. abiotic control of decomposition: a comparison of the effects of simulated extinctions and changes in temperature. *PLoS ONE* 9: e87426.
 31. Coccia C, Calosi P, BOYERO L, Green AJ, Bilton DT. 2013. Does ecophysiology determine invasion success? A comparison between the invasive boatman *Trichocorixa verticalis verticalis* and the native *Sigara lateralis* (Hemiptera, Corixidae) in South-West Spain. *PLoS ONE* 8: e63105.
 32. Guareschi S, Coccia C, Sánchez-Fernández D, Carbonell JA, Velasco J, BOYERO L, Green AJ, Millán A. 2013. How far could the alien boatman *Trichocorixa verticalis verticalis* spread? Global estimation of its current and future potential distribution. *PLoS ONE* 8: e59757.
 33. Jinggut T, Yule CM, BOYERO L. 2012. Stream ecosystem integrity is impaired by logging and shifting agriculture in a global megadiversity center (Sarawak, Borneo). *Science of the Total Environment* 437: 83-90.
 34. BOYERO L, Pearson RG, Dudgeon D, Ferreira V, Boulton AJ, Chauvet E, Yule CM, Albariño RJ, Ramírez A, Helson JE, Callisto M, Arunachalam M, Chará J, Rigueroa R, Mathooko JN, Gonçalves JF Jr, Moretti MS, Chará-Serna AM, Davies JN, Encalada AC, Lamothe S, Buria LM, Castela J, Cornejo A, Li AOY, M'Erimba C, Villanueva VD, Zúñiga MC, Swan CM, Barmuta L. 2012. Global patterns of stream detritivore species richness: implications for biodiversity loss in changing climates. *Global Ecology and Biogeography* 21: 134-141.

35. BOYERO L, Barmuta LA, Ratnarajah L, Schmidt K, Pearson RG. 2012. Effects of exotic riparian vegetation on leaf breakdown by shredders: a tropical–temperate comparison. *Freshwater Science* 31: 296-303.
36. BOYERO L, Rincón PA, Bosch J. 2012. Contrasting behavioural responses of grazing mayflies and detritivorous caddisflies to predatory fish. *Marine and Freshwater Research* 63: 9-16.
37. Hui C, Boonzaier C, BOYERO L. 2012. Estimating changes in species abundance from occupancy and aggregation. *Basic and Applied Ecology* 13: 169-177.
38. Chará-Serna AM, Chará JD, Zúñiga MC, Pearson RG, BOYERO L. 2012. Diets of leaf litter-associated invertebrates in three tropical streams. *International Journal of Limnology* 48: 139-144.
39. BOYERO L, Pearson RG, Gessner MO, Barmuta L, Ferreira V, Graça MAS, Dudgeon D, Boulton AJ, Callisto M, Chauvet E, Helson JE, Bruder A, Albariño RJ, Yule CM, Arunachalam M, Davies JN, Figueroa R, Flecker AS, Ramírez A, Death RG, Iwata T, Mathooko JM, Mathuriau C, Gonçalves JF Jr, Moretti MS, Jingtut T, Lamothe S, M'Erimba C, Ratnarajah L, Schindler MH, Castela J, Buria LM, Cornejo A, Villanueva VD, West DC. 2011. A global experiment suggests climate warming will not accelerate decomposition in streams but might reduce carbon sequestration. *Ecology Letters* 14: 289-294.
40. BOYERO L, Pearson RG, Dudgeon D, Graça MAS, Gessner MO, Albariño RJ, Ferreira V, Yule CM, Boulton AJ, Arunachalam M, Callisto M, Chauvet E, Ramírez A, Chará J, Moretti MS, Gonçalves JF Jr., Helson JE, Chará-Serna AM, Encalada AC, Davies JN, Lamothe S, Cornejo A, Li AOY, Buria LM, Villanueva VD, Zúñiga MC, Pringle CM, 2011. Global distribution of a key trophic guild contrasts with common latitudinal diversity patterns. *Ecology* 92: 1839-1848.
41. BOYERO L. 2011. Expression of a behaviourally mediated morphology in response to different predators. *Ecological Research* 26: 1065-1070.
42. Yule C, BOYERO L, Marchant R. 2010. Effects of sediment pollution on food webs in a tropical river (Borneo, Indonesia). *Marine and Freshwater Research* 61: 204-213.
43. Coughlan J, Pearson RG, BOYERO L. 2010. Crayfish process leaf litter in tropical streams even when shredding insects are common. *Marine and Freshwater Research* 61: 541-548.
44. Sánchez-Argüello R, Cornejo A, Pearson RG, BOYERO L. 2010. Spatial and temporal variation of stream communities in a human-affected tropical watershed. *International Journal of Limnology* 46: 149-156.
45. BOYERO L, Ramirez A, Dudgeon D, Pearson RG. 2009. Are tropical streams really different? *Journal of the North American Benthological Society* 28: 397-403.
46. Yule CM, Leong MY, Ratnarajah L, Schmidt K, Wong HM, Pearson RG, BOYERO L. 2009. Shredders in Malaysia: abundance and richness are greater in cool upland tropical streams. *Journal of the North American Benthological Society* 28: 404-415.
47. Pearson RG, BOYERO L. 2009. Gradients in regional diversity of freshwater taxa. *Journal of the North American Benthological Society* 28: 504-514.
48. Camacho R, BOYERO L, Cornejo A, Ibáñez A, Pearson RG. 2009. Local variation in shredder distribution can explain their oversight in tropical streams. *Biotropica* 41: 625-632.
49. Allan K, BOYERO L, Pearson RG. 2009. Chemical communication in competitive interactions among tropical stream detritivores. *Tropical Zoology* 22: 195-204.
50. BOYERO L, Rincón PA, Pearson RG. 2008. Effects of a predatory fish on a tropical detritus-based food web. *Ecological Research* 23: 649-655.
51. Bastian M, Pearson RG, BOYERO L. 2008. Effects of diversity loss on ecosystem function across trophic levels and ecosystems: a test in a detritus-based tropical food web. *Austral Ecology* 33: 301-306.
52. BOYERO L, Pearson RG, Bastian M. 2007. How biological diversity influences ecosystem function: a test with a tropical stream detritivore guild. *Ecological Research* 22: 551-558.

53. Bastian M, BOYERO L, Jackes B, Pearson RG. 2007. Leaf litter diversity and shredder preferences in an Australian tropical rain-forest stream. *Journal of Tropical Ecology* 23: 219-229.
54. BOYERO L, Rincón PA, Bosch J, 2006. Case selection by a limnephilid caddisfly [*Potamophylax latipennis* (Curtis)] in response to different predators. *Behavioral Ecology and Sociobiology* 59: 364-372.
55. BOYERO L, Pearson RG, 2006. Intraspecific interference in a tropical stream shredder guild. *Marine and Freshwater Research* 57: 201-206.
56. BOYERO L, Pearson RG, Camacho R. 2006. Leaf breakdown in tropical streams: the role of different species in ecosystem functioning. *Fundamental and Applied Limnology* 166: 453-466.
57. Bosch J, Rincón PA, BOYERO L, Martínez-Solano I, 2006. Effects of introduced salmonids in a montane population of Iberian frogs. *Conservation Biology* 20: 180-189.
58. Bosch J, BOYERO L. 2006. Female Iberian midwife toads (*Alytes cisternasii*) use call order to reach particular males in dense choruses. *Journal of Ethology* 24: 291-295.
59. BOYERO L, Valladolid M, Arauzo M, 2005. Dynamics of invertebrate benthic communities and drift in a regulated river of central Spain. *International Review of Hydrobiology* 90: 392-411.
60. BOYERO L. 2005. Multiscale variation in the functional composition of stream macroinvertebrate communities. *Limnetica* 24: 245-250.
61. Cheshire K, BOYERO L, Pearson RG, 2005. Food webs in tropical Australian streams: shredders are not scarce. *Freshwater Biology* 50: 748-769.
62. BOYERO L, Bosch J, 2004. Multiscale spatial variation of stone recolonization by macroinvertebrates in a Costa Rican stream. *Journal of Tropical Ecology* 20: 85-95.
63. BOYERO L, Bosch J, 2004. The effect of riffle-scale environmental variability on macroinvertebrate assemblages in a tropical stream. *Hydrobiologia* 524: 125-132.
64. BOYERO L, Barnard PC, 2004. A *Potamophylax* larva (Trichoptera: Limnephilidae) using other caddisfly cases to construct its own case. *Journal of Natural History* 38: 1297-1301.
65. Bosch J, BOYERO L, Martínez-Solano I, 2004. Spatial scales for the management of amphibian populations. *Biodiversity and Conservation* 13: 409-420.
66. Bosch J, BOYERO L, 2004. Reproductive stage and phonotactic preferences of female midwife toads (*Alytes cisternasii*). *Behavioral Ecology and Sociobiology* 55: 251-256.
67. BOYERO L, 2003. The quantification of local substrate heterogeneity in streams and its significance for macroinvertebrate assemblages. *Hydrobiologia* 499: 161-168.
68. BOYERO L, 2003. The effect of substrate texture on colonization by stream macroinvertebrates. *International Journal of Limnology* 39: 211-218.
69. BOYERO L, 2003. Multiscale patterns of spatial variation in stream macroinvertebrate communities. *Ecological Research* 18: 365-379.
70. Bosch J, BOYERO L, 2003. Precopulatory behaviour and the evolutionary relationships of Discoglossidae. *Journal of Zoological Systematics and Evolutionary Research* 41: 141-151.
71. Bosch J, BOYERO L, 2003. Double stimulation of the inner ear organs of an anuran species (*Alytes cisternasii*) with simple tonal advertisement calls. *Journal of Zoology* 260: 347-351.
72. Bosch J, Márquez R, BOYERO L, 2003. Behavioural patterns, preference, and motivation of female midwife toads during phonotaxis tests. *Journal of Ethology* 21: 61-66.
73. BOYERO L, DeLope JL, 2002. Short-term recolonization of stones in a tropical island stream. *Marine and Freshwater Research* 53: 993-998.
74. BOYERO L, 2002. Insect biodiversity in freshwater ecosystems: is there any latitudinal gradient? *Marine and Freshwater Research* 53: 753-755.

75. BOYERO L, Bosch J, 2002. Spatial and temporal variation of macroinvertebrate drift in tropical streams. *Biotropica* 34: 567-574.
76. BOYERO L, Bailey RC, 2001. Organization of macroinvertebrate communities at a hierarchy of spatial scales in a tropical stream. *Hydrobiologia* 464: 219-225.
77. BOYERO L, 2000. Towards a global stream ecology. *Trends in Ecology and Evolution* 15: 390-391.

Publications: scholarly book chapters and other publications (6)

78. BOYERO L, Pearson RG, Albariño R, Callisto M, Correa-Araneda F, Encalada AC, Moretti M, Ramírez A, Sparkman A, Swan CM, Yule CM, Graça MAS (in press) Identifying litter-consuming invertebrates in streams. In *Methods to Study Plant Litter Decomposition, 2nd Edition* (Eds. Graça MAS, Barlocher F, Gessner MO)
79. Boulton AJ, BOYERO L, Covich AP, Dobson MK, Lake PS, Pearson RG. 2008. Are tropical streams ecologically different from temperate streams? In *Tropical Stream Ecology* (Ed. Dudgeon D), Academic Press, San Diego: 257-284.
80. Connolly N, Christidis F, McKie B, BOYERO L, Pearson RG. 2008. Diversity of invertebrates in Wet Tropics streams: patterns and processes. In *Living in a Dynamic Tropical Forest Landscape* (Eds. Stork N, Turton S), Rainforest CRC, James Cook University, Australia: 161-177.
81. Sánchez-Argüello R, Cornejo A, BOYERO L, Santos-Murgas A. 2010. Evaluación de la calidad del agua en la cuenca del río Capira, Panamá. *Tecnociencia* 12: 57-70.
82. BOYERO L. 2005. Latitudinal gradients in biodiversity. *Ecology.Info* 32 (www.ecology.info).
83. Bosch J, BOYERO L, Matlock R. 2002. La Selva, un modelo de investigación y ecoturismo. *Quercus* 191: 43-47