

CURRICULUM VITAE

March 2012

Lluís Brotons Alabau

1. - GENERAL

Surname and name: BROTONS, Lluís

Place and date of birth: Barcelona, 18/07/1971

DNI: 46577008-F

Nationality: Spanish

Civil status: Married with three sons (Jan, Martí and Lluç, born 2001, 2003 and 2010)

Languages: Catalan, Spanish, English, French, Finnish (basic level)

Current working address: Senior researcher: Biodiversity department, Forest Technology Centre of Catalonia, Pujada del Seminari, s/n, 25280, Solsona (Spain).

Associate researcher: Centre of Ecological Research and Forestry Applications (CREAF), UAB, Bellaterra (Spain)

Main research topic: Biodiversity responses to global change in agro-forestry systems

Global change is a combination of rapid environmental changes at the global scale involving significant threats to human society and ecological systems. Understanding and predicting the impacts of the different components of global change such as climate or land use change and the interactions between them on ecological communities is currently one of the major challenges to science.

The approach taken by Dr. Lluís Brotons and his research group to cover this need in terrestrial agro-forestry systems is based on the integration of different approaches ranging from ecology, statistical, landscape and species distribution modelling to remote sensing science. Unravelling the causes of past changes in biodiversity patterns under environmental change (land abandonment, landscape fragmentation, climate change, agricultural intensification and perturbation of the disturbance regimes such as fires) allows the critical and adequate calibration and development of models of future ecosystem response to further change.

Dr. Lluís Brotons (40) has published more than 130 articles, 86 of which in journals of the Science Citation Index (SCI), including high ranking general biology and ecology journals such as Nature, Nature Climate Change, American Naturalist, Oikos, Oecologia, Biological Conservation, Global Change Biology and Landscape Ecology amongst others.

Dr. Brotons has conducted research in leading institutions in Spain, Finland, Canada and France and has been involved in 41 competitive research projects, being the leading researcher in 10 of them (including both national and EU international competitive calls). Furthermore, he has been directly involved in 15 contracts in which the transfer of technology and feedback to society has been the main objective. Finally, he has been supervisor of 5 completed PhD theses and is currently supervising 4 PhD students.

Research keywords: Global change, biodiversity, landscape ecology, species distribution modelling, multifunctional forest management, behavioural ecology, spatial heterogeneity and disturbance dynamics, Mediterranean systems.

Blog: <http://biodiversitylandscapeecologylab.blogspot.com>

2. - STUDIES

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- Basic University Degree: *Llicenciatura en Ciències Biològiques per la Universitat de Barcelona*. Spain. 1995.
- First Postgraduate Degree: *Doctor en Biologia*. Universitat de Barcelona. Spain. Thesis: **Winter ecology of tits (Paridae) in boreal and subalpine forests: social organisation and the role of food hoarding**. Supervised by: Dr. Markku Orell (University of Oulu, Finland) and Dr. Jacint Nadal (Universitat de Barcelona). 2000.

3. - POSITIONS

- Associate researcher in the group of Prof. Jacint Nadal, Departament de Biologia Animal, Universitat de Barcelona. 03/02/2000-30/10/2000.
- Postdoctoral researcher in the group of Prof. Mikko Mönkkönen, Department of Biology, University of Oulu (Finland). 01/11/2000-31/09/2001.
- Postdoctoral researcher in the group of Prof. Jean Louis Martin, Centre d'Ecologie Fonctionnelle et Evolutive, CNRS (France). 01/10/2001-31/12/2004.
- "Ramon y Cajal" junior research position at the Biodiversity Department of the Forest Technology Center of Catalonia (CTFC, Spain). 01/01/2005-31/12/2009.
- Senior researcher position at the Biodiversity Department of the Forest Technology Center of Catalonia (CTFC, Spain). 01/01/2010-present.
- Associate research position at the Catalan Ornithological Institute (ICO) (Spain). 01/01/2006-present (in addition to the senior research position at the CTFC).
- Associate research position at the Center for Ecological Research and Forestry Applications (CREAF), Bellaterra, (Spain). 01/01/2011-present (in addition to the senior research position at the CTFC).

4. - AWARDS AND FELLOWSHIPS RECEIVED

- ERASMUS fellowship awarded by the European Community and the Universitat de Barcelona. Graduation studies stay: 01/09/1994-20/06/1995.
- CIRIT fellowship "*beca pre-doctoral de personal investigador*". Awarded by the "Direcció general de recerca", Catalan Autonomous Government. Pre-doctoral research: 01/01/1996-31/12/1999.

- CIRIT travel grant awarded by the “*Direcció general de recerca*”, Catalan Autonomous Government. Pre-doctoral research in the group of Prof. Markku Orell (University of Oulu, Finland). 15/09/1996-15/12/1996.
- CIRIT travel grant awarded by the “*Direcció general de recerca*”, Catalan Autonomous Government. Pre-doctoral research in the group of Prof. Markku Orell (University of Oulu, Finland). 01/02/1998-30/04/1998.
- Travel grant from “Association for the Study of Animal Behaviour” (United Kingdom) to assist the “XXVI International Ethological Conference”, in Bangalore, India. 1999.
- CIRIT travel grant awarded by the “*Direcció general de recerca*”, Catalan Autonomous Government. Pre-doctoral research in the group of Dr. André Desrochers, *Dept. de Foresterie et Geomatique, Université de Laval, Quebec, Canada*. 15/09/1999-15/12/1999.
- Ramon Areces post-doctoral research fellowship awarded by the private “*Fundación Ramon Areces*”. Post-doctoral research: 01/11/2000-30/09/2002.
- Post-doctoral fellowship awarded by the *Centre National de la Recherche Scientifique* (France). Post-doctoral research: 01/10/2002-31/12/2002.
- Marie Curie outgoing fellowship awarded by the 6th European Community framework programme. Post-doctoral research: 01/01/2003-31/12/2004.
- CIRIT travel grant awarded by the “*Direcció general de recerca*”, Catalan Autonomous Government. Research stay in the group of Dr. Andre Fall, Simon Fraser University, Canada. 25/06/2007-05/09/2007.
- Travel grant awarded by the LAPBIAT-2 facility in Finland. Research stay at the Kilpisjärvi field research station, University of Helsinki, Finland. 1/07/2008-10/07/2008.
- Travel grant awarded by the “*Direcció general de recerca*”, Catalan Autonomous Government. Research stay in the group of Dr. Christian Messier and Dra. Jean Elith, at Université de Québec a Montreal (Canada) and University of Melbourne (Australia). 29/06/2011-29/11/2011

5. - PROJECT GRANTS

Until March 2012, I have been engaged in a total of 41 projects, including 26 competitive national (Cicyt projects) and international projects (FP6 and FP7 calls) and 15 contracts or agreements involving the transfer of my research to the public and private sectors. It is worth mentioning the involvement of our team (Dr. Brotons coordinates one of the seven work-packages) in the **network of excellence** CONSOLIDER-MONTES on global change impacts on woodlands granted by the Spanish government and involving more than 70 research teams from all over the country.

5.1 - Grants in national and international competitive calls

1. Life history strategies and population dynamics in northern populations of passerine birds”. Funded by the Academy of Finland (65.000 €). Main researcher: Dr. Markku Orell (University of Oulu). 01/11/1994-31/12/1998.

2. Population structure of the Coal tit (*Parus ater*) in the Cadí-Moixeró Natural Parc. Funded by Cadí-Moixeró Natural Parc and CIRIT (Catalan Autonomous Government) (5.000 €). Main researcher Lluís Brotons (Universitat de Barcelona). 01/01/1997-30/12/1999.
3. “Efectos de una central térmica (Cercs) sobre su entorno. Monitorización con páridos, insectívoros (*Crocidura russula*) y quiropteros (*Pipistrellus pipistrellus*)”. Funded by DGICYT (Ministerio de Educación y Ciencia) (19.000 €). Main researcher: Prof. Jacint Nadal (Universitat de Barcelona). 15/12/1997-31/12/2000.
4. Avian Behavioural ecology in fragmented habitats. Funded by “*Conseil de Recherches en Sciences Naturelles et Génie du Canada*” (80.000 €). Main researcher: Prof. André Desrochers (Université du Laval). 01/04/1999-31/03/2003.
5. Fragmentation, isolation and vegetation structure in Mediterranean forest ecosystem: effects on the avifauna. Funded by CIRIT (Catalan Autonomous Government) (3.000 €). Main researchers: Dr. Lluís Brotons and Sergi Herrando. 01/01/2000-31/12/2000.
6. Populations in fragmented forest landscapes: global perspectives, theoretical aspects and practical implications. Funded by the Finnish Maj and Toj Nessling Foundation (30.000 €). Main researcher: Prof. Mikko Mönkkönen (University of Oulu). 01/01/1997-31/03/2001.
7. Mediterranean systems in a changing world. Funded by the Centre National de la Recherche Scientifique (CNRS) (20.000 €). Main researcher: Prof. Sandra Lavorel (CEFE-CNRS). 01/01/2000-31/12/2005.
8. Fragmentation, complementations and functioning of protected areas for species conservation : the Crau example. Funded by the “*Ministère de l’Aménagement du Territoire de la France*” (75.000 €). Main researchers: Dr. Thierry Dutoit (Université de Marseille) & Axel Wolff. 01/01/2000-31/12/2004.
9. Bird distribution in Mediterranean habitat mosaics in a context of global change. Funded by the 6th European Community framework programme (120.000 €). Main researchers: Dr. Lluís Brotons and Prof. Jean Louis Martin (CEFE-CNRS). 01/01/2003-31/12/2004.
10. “Développement d’instruments pour la gestion integral des paysages forestiers et établissement d’un réseau transfrontalier de parcelles expérimentales et de monitoring”. Funded by the “*Comunidad de trabajo de los Pirineos*” (EU, INTERREG IIIA) (38.000 €). Main researchers: Prof. Jean Louis Martin. 01/01/2003-31/12/2005.
11. “Modélisation predictive de la biodiversité et conservation: influence de la gestion forestière et du changement du paysage sur les oiseaux”. Funded by the “*Comunidad de trabajo de los Pirineos, EU*” (5.500 €). Main researchers: Prof. Jean Louis Martin & Dr. Lluís Brotons. 01/01/2004-31/12/2004.
12. International symposium on ecology and conservation of steppe-land birds. Funded by INIA-AC04-039 (5.000 €). Main researcher: Dr. Lluís Brotons. 01/10/2004-31/12/2004.
13. Determinants of species distribution in dynamic landscapes: Mediterranean bird communities and fire disturbance. Funded by the 6th European Community

framework programme (MERC-CT-2004-012866) (40.000 €). Main researcher: Dr. Lluís Brotons. 01/09/2005-31/08/2008.

14. Hierarchical incorporation of climate and land cover data into the modelling of species distribution changes in contrasting biogeographical regions of Europe. Funded by the Lapland Biosphere-Atmosphere Facility (LAPBIAT, Finland) (1.630 €). Main researcher: Nicolas Titeux (Lipmann Institute, Luxembourg).
15. Distribution dynamics of bird distribution in Mediterranean mosaic landscapes affected by large forest fires (DINDIS). Funded by the “*Ministerio de Educación y Ciencia*” (CGL2005-00031/BOS) (86.000 €). Main researcher: Dr. Lluís Brotons. 31/12/2005-31/12/2008.
16. Proyecto estratégico sobre restauración y gestión forestal (PSE-Forestal). Funded by the “*Ministerio de Educación y Ciencia*” (PSE 310000-2008-1) (285.000 €, CTFC: 65.000 €). Main researcher: Ricardo Alía (INIA), Dr. Lluís Brotons acting as CTFC coordinator. 1/01/2008-31/12/2010.
17. Spanish woodlands and global change: threats and opportunities (MONTES). Funded by the “*Ministerio de Educación y Ciencia*” (CONSOLIDER CSD2008-00040) (4.000.000 €, CTFC: 275.000 €). Main researcher: Dr. Javier Retana, Dr. Lluís Brotons acting as coordinator of CTFC and work package 5. 1/01/2009-31/12/2012.
18. Integration of perturbation dynamics in the spatial prediction of biodiversity in Mediterranean ecosystems (BIOPRED). Funded by the “*Ministerio de Educación y Ciencia*” (CGL2008-06608/BOS) (115.400 €). Main researcher: Dr. Lluís Brotons. 1/1/2009-31/12/2011.
19. Securing the conservation of biodiversity across administrative levels and spatial, temporal and ecological scales (SCALES). Large-scale project, FP7, EU. Main researcher: Klaus Henle (UFZ, Germany), Dr. Lluís Brotons coordinator of the EBCC-CTFC team. 1/4/2009 – 31/4/2012.
20. El papel de las trayectorias históricas en los cambios de usos del suelo sobre la biodiversidad en el parque nacional de Aigüestortes i llac de Sant Maurici (TREBIO). Funded by the “Organismo Autónomo Parques Nacionales (Ministerio de Medio Ambiente Rural y Marino)” (63.310 €). Main researcher: Dr. Lluís Brotons. 1/1/2011-31/12/2013.
21. Steppe-land birds, agriculture practices and economic viability: towards the conservation of threatened species in humanised landscapes (STEPPE-AHEAD). Funded by the “Fundación General CSIC” (213.969 €). Main researcher: Lluís Brotons. 30/3/2011-31/3/2014.
22. Cambio global, migración altitudinal y colonización de hábitats degradados en montañas Mediterráneas (MIGRAME). Funded by “Proyectos de Excelencia” program by the “Junta de Andalucía” (186.280 €). Main researcher: Regino Zamora (Universidad de Granada). 1/1/2011- 31/12/2013.
23. Infraestructura tecnológica de almacenamiento de datos para el CTFC. Funded by the “Ministerio de Ciencia e Innovación” (CTFC10-4E-1255), (91.650 €). Main researcher: Dr. Lluís Brotons. 1/1/2012-31/12/2012.

24. Training program in Forest Complexity Modeling (FCM). CREATE Programme-Research Council of Canada. Main researcher: Dr. Christian Messier (UQAM, Canada), Dr. Lluís Brotons (collaborator), (1.650.000 \$). 1/1/2011-31/12/2016.
25. Europea Network on Farmland Heterogeneity, Biodiversity and Ecosystem Services (FARMLAND). ERA-NET Biodiversa project, FP7, EU (PRI-PIMBDV-2011-0880). Main researcher: Dr. Jean-Louis Martin (CNRS, France), Dr. Lluís Brotons (Team leader), (900.000 €, CTFC 97.000€). 1/3/2012-31/3/2015.
26. Assessing the impact on biodiversity of uncertain and novel future landscapes under different drivers of global change in a Mediterranean region (BIONOVEL). Funded by the “Ministerio de Economía y de Competitividad” (CGL2011-29539), (163.350 €). Main researcher: Dr. Lluís Brotons. 1/1/2012-31/12/2014.

5.2 - R+D contracts with the private and the public sector

1. Tremp Natural sciences museum project. Contracted by the “Consell comarcal del Pallars Jussà (20.000 €). Main researcher: Prof. Marius Serra (Patrimoni UB, Universitat de Barcelona). 01/01/1999-31/12/1999.
2. Identification of ecological connexions and analysis of their functionality for vertebrates. Contracted by the private foundation “Castellet del Foix” (36.000 €). Main researchers: Dr. Carme Rosell (Minuartia S.A.) and Lluís Brotons. 01/04/2000-31/12/2001.
3. Biological diversity in Catalanian forests: monitoring programme and proposal of indicators. Contracted by “Centre de la Propietat Forestal (public enterprise) (18.000 €). Main researchers: Dr. Roser Campeny (Minuartia S.A.) & Dr. Lluís Brotons. 01/01/2001-31/12/2001.
4. Territorial Information system of free areas of the Barcelona province (SITXELL). Contracted by the “Diputació de Barcelona” (65.000 €). Main researcher: Carles Castell (Diputació de Barcelona). 01/01/2002-31/12/2007.
5. Catalan Breeding bird Atlas 1999-2002. Contracted by the “*Departament de Medi Ambient*” (Catalan Autonomous Government) and the private “*Fundació Territori i Paisatge*” (120.000 €). Main researchers: Vittorio Pedrocchi, Joan Estada, Lluís Brotons and Sergi Herrando (Institut Català d’Ornitologia). 01/01/1998-31/12/2004.
6. BIOSILVA project: conservation of fauna, forest management and territory planning. Agreement with the “*Departament de Medi Ambient*” (Catalan Autonomous Government (115.000 €). Main researchers: Dr. Jordi Comprodon (Forest Technology Center of Catalonia). 01/01/2005-31/12/2006.
7. “Projecte de conservació d’hàbitat estèpics a Catalunya”. Agreement with REGSEGA (public enterprise) (500.000 €). Main researcher: Gerard Bota (Forest Technology Centre of Catalonia). 01/01/2005-31/12/2006.
8. Catalan Ornithological Cartographic Server (SCOC). Agreement with the Catalan Ornithological Institute (ICO) (10.000 €). Main researcher: Dr. Lluís Brotons & Gabriel Gargallo (ICO). 01/01/2006-31/12/2006. www.ornitologia.org/scoc

9. Identification of critical areas for the conservation of landscape connectivity of threatened forest birds in Catalonia. Contract with the private “*Fundació Territori i Paisatge*” (15.000 €). Main researcher: Dr. Santiago Saura (Universitat de Lleida). 01/01/2006-31/12/2006.
10. Winter bird atlas of Catalonia. Contracted by the “*Departament de Medi Ambient*” (Catalan Autonomous Government) and the private “*Fundació Territori i Paisatge*” (350.000 €). Main researchers: Lluís Brotons, Sergi Herrando & Joan Estrada (ICO). 01/01/2006-31/12/2010.
11. Development of farmland bio-indicators from bird monitoring data. Contract with the private “*Fundació Territori i Paisatge*” (12.000 €). Main researcher: Lluís Brotons & Gerard Bota. 01/01/2008-31/12/2008.
12. Important bird areas for sea birds in Spain (LIFE04NAT/ES/000049): Data base management and development of predictive distribution models based on species-environmental relationships. Contract with the private “*SEO-Birdlife*” (20.500 €). Main researcher: Dr. Lluís Brotons. 01/04/2008-31/8/2008.
13. Cartography of species of special conservation concern in Catalonia: applications of habitat modelling. Contracted by the “*Departament de Medi Ambient*” (Catalan Autonomous Government) (159,367 €). Main researcher: Lluís Brotons. 01/01/2007-31/12/2010.
14. Biodiversity conservation and monitoring plan of protected areas in Catalonia. Contracted by the “*Departament de Medi Ambient*” (Catalan Autonomous Government) (140,367 €). Main researcher: Lluís Brotons. 01/03/2009-31/12/2010.
15. (CAMBIARE) Comunicando los impactos del cambio global mediante nuevas tecnologías geoespaciales : una aplicación con los anfibios y réptiles en España. Contracted by Fundación Biodiversidad. (29.000 €). Main researchers: Lluís Brotons & Dani Villero. 1/10/2009-30/09/2010.

6. – PUBLICATIONS (including works “in press” but not those “in preparation” or “under review”)

Until March 2012, I have published 131 scientific articles, including 86 articles in SCI-indexed journals (including high ranking general biology and ecology journals such as **Nature**, **Nature Climate Change**, **American Naturalist**, **Oikos**, **Oecologia**, **Biological Conservation**, **Global Change Biology** and **Landscape Ecology** amongst others), 2 co-edited books, 45 books chapters and other articles in non-SCI refereed journals. My current **H index** is 20, with 10 articles cited more than 20 times and a total of more than 1400 cites including one article being a **highly cited paper** ISI Web of Science essential Science indicators (Brotons et al. 2004, Ecography, with 196 citations). This paper is also included in the research front species distribution modelling and climate change.

6.1 – Papers in international journals included in the SCI

1. **Brotons, L.** 1997. Changes in foraging behaviour of the Coal Tit *Parus ater* due to snow cover. *Ardea*, 85, 249-257.

2. **Brotons, L.**, Magrans, M., Ferrus, L., & Nadal, J. 1998. Direct and indirect effects of pollution on the foraging behaviour of forest passerines during the breeding season. *Canadian Journal of Zoology-Revue Canadienne de Zoologie*, 76, 556-565.
3. **Brotons, L.** & Haftorn, S. 1999. Geographic variation of the storing behaviour in the Coal tit *Parus ater*: role of winter residency and environmental conditions. *Ibis*, 141, 587-595.
4. **Brotons, L.** 2000. Winter spacing and non-breeding social system of the Coal Tit *Parus ater* in a subalpine forest. *Ibis*, 142, 657-667.
5. **Brotons, L.** 2000. Individual food-hoarding decisions in a nonterritorial coal tit population: the role of social context. *Animal Behaviour*, 60, 395-402.
6. **Brotons, L.** 2000. Winter territoriality and irruptive behavior in the paridae. *Auk*, 117, 807-811.
7. **Brotons, L.**, Orell, M., Lahti, K., & Koivula, K. 2000. Age-related microhabitat segregation in willow tit *Parus montanus* winter flocks. *Ethology*, 106, 993-1005.
8. Broggi, J. & **Brotons, L.** 2001. Coal Tit fat-storing patterns during the non-breeding season: the role of residence status. *Journal of Avian Biology*, 32, 333-337.
9. **Brotons, L.**, Desrochers, A., & Turcotte, Y. 2001. Food hoarding behaviour of black-capped chickadees (*Parus atricapillus*) in relation to forest edges. *Oikos*, 95, 511-519.
10. **Brotons, L.** & Herrando, S. 2001. Reduced bird occurrence in pine forest fragments associated with road proximity in a Mediterranean agricultural area. *Landscape and Urban Planning*, 57, 77-89.
11. **Brotons, L.** & Herrando, S. 2001. Factors affecting bird communities in fragments of secondary pine forests in the north-western Mediterranean basin. *Acta Oecologica-International Journal of Ecology*, 22, 21-31.
12. Herrando, S. & **Brotons, L.** 2001. Fluctuating asymmetry in Sardinian Warblers *Sylvia melanocephala* inhabiting two shrublands affected by fire. *Bird Study*, 48, 180-187.
13. Herrando, S., del Amo, R., **Brotons, L.**, & Llacuna, S. 2001. Factors influencing post-fire dynamics of Sardinian and Dartford Warblers in Mediterranean shrublands. *Ornis Fennica*, 78, 168-174.
14. Herrando, S. & **Brotons, L.** 2002. Forest bird diversity in Mediterranean areas affected by wildfires: a multi-scale approach. *Ecography*, 25, 161-172.
15. Herrando, S., **Brotons, L.**, Del Amo, R., & Llacuna, S. 2002. Bird community succession after fire in a dry Mediterranean shrubland. *Ardea*, 90, 303-310.
16. Herrando, S., **Brotons, L.**, & Llacuna, S. 2002. Does fire increase the seasonal variability of bird communities? A case in Mediterranean shrublands. *Revue D Ecologie-La Terre Et La Vie*, 57, 151-163.
17. **Brotons, L.** & Broggi, J. 2003. Influence of morphology on winter residence and recruitment in juvenile coal tits (*Parus ater*) after the post-fledging period. *Ecoscience*, 10, 273-282.
18. **Brotons, L.** & Herrando, S. 2003. Effect of increased food abundance near forest edges on flocking patterns of Coal Tit *Parus ater* winter groups in mountain coniferous forests. *Bird Study*, 50, 106-111.

19. **Brotons, L.**, Monkkonen, M., Huhta, E., Nikula, A., & Rajasarkka, A. 2003. Effects of landscape structure and forest reserve location on old-growth forest bird species in Northern Finland. *Landscape Ecology*, 18, 377-393.
20. **Brotons, L.**, Monkkonen, M., & Martin, J.L. 2003. Are fragments islands? Landscape context and density-area relationships in boreal forest birds. *American Naturalist*, 162, 343-357.
21. Herrando, S., **Brotons, L.**, & Llacuna, S. 2003. Does fire increase the spatial heterogeneity of bird communities in Mediterranean landscapes? *Ibis*, 145, 307-317.
22. Siffczyk, C., **Brotons, L.**, Kangas, K., & Orell, M. 2003. Home range size of willow tits: a response to winter habitat loss. *Oecologia*, 136, 635-642.
23. **Brotons, L.**, Herrando, S., & Martin, J.L. 2004. Bird assemblages in forest fragments within Mediterranean mosaics created by wild fires. *Landscape Ecology*, 19, 663-675.
24. **Brotons, L.**, Manosa, S., & Estrada, J. 2004. Modelling the effects of irrigation schemes on the distribution of steppe birds in Mediterranean farmland. *Biodiversity and Conservation*, 13, 1039-1058.
25. **Brotons, L.**, Thuiller, W., Araujo, M.B., & Hirzel, A.H. 2004. Presence-absence versus presence-only modelling methods for predicting bird habitat suitability. *Ecography*, 27, 437-448.
26. Thuiller, W., Araujo, M.B., Pearson, R.G., Whittaker, R.J., **Brotons, L.**, & Lavorel, S. 2004. Biodiversity conservation - Uncertainty in predictions of extinction risk. *Nature*, 430 doi:10.1038/nature02716.
27. Thuiller, W., **Brotons, L.**, Araujo, M.B., & Lavorel, S. 2004. Effects of restricting environmental range of data to project current and future species distributions. *Ecography*, 27, 165-172.
28. **Brotons, L.**, Pons, P., & Herrando, S. 2005. Colonization of dynamic Mediterranean landscapes: where do birds come from after fire? *Journal of Biogeography*, 32, 789-798.
29. **Brotons, L.**, Wolff, A., Paulus, G., & Martin, J.L. 2005. Effect of adjacent agricultural habitat on the distribution of passerines in natural grasslands. *Biological Conservation*, 124, 407-414.
30. Gordo, O., **Brotons, L.**, Ferrer, X., & Comas, P. 2005. Do changes in climate patterns in wintering areas affect the timing of the spring arrival of trans-Saharan migrant birds? *Global Change Biology*, 11, 12-21.
31. Camprodon, J. & **Brotons, L.** 2006. Effects of undergrowth clearing on the bird communities of the Northwestern Mediterranean Coppice Holm oak forests. *Forest Ecology and Management*, 221, 72-82.
32. Pearson, R.G., Thuiller, W., Araujo, M.B., Martinez-Meyer, E., **Brotons, L.**, McClean, C., Miles, L., Segurado, P., Dawson, T.P., & Lees, D.C. 2006. Model-based uncertainty in species range prediction. *Journal of Biogeography*, 33, 1704-1711.
33. Sierdsema, H., **Brotons, L.**, Newson, S., Jiguet, F., & Gregory, R. 2006. The next step in population alerts: Assessing changes in distribution and abundance from count survey data. *Journal of Ornithology*, 147, 30-30.

34. **Brotons, L.**, Sierdsema, H., Newson, S., Jiguet, F., & Gregory, R. 2006. Spatial modeling of large-scale bird monitoring data: Towards pan-European quantitative distribution maps. *Journal of Ornithology*, 147, 29-29.
35. Sirami, C., **Brotons, L.**, & Martin, J.L. 2007. Vegetation and songbird response to land abandonment: from landscape to census plot. *Diversity and Distributions*, 13, 42-52.
36. Gil-Tena, A., Saura, S., & **Brotons, L.** 2007. Effects of forest composition and structure on bird species richness in a Mediterranean context: implications for forest ecosystem management. *Forest Ecology and Management*, 242, 470-476.
37. Rodríguez, J.P., **Brotons, L.**, Bustamante, J., & Seoane, J. 2007. The application of predictive modelling of species distribution to biodiversity conservation. *Diversity & Distributions*, 13:243-251.
38. Carnicer, J., **Brotons, L.**, Sol, D., & Jordano, P. 2007. Community based processes behind species richness gradients: contrasting abundance-extinction dynamics and sampling effects in low- and high productivity areas. *Global Ecology & Biogeography*, 16: 709-719.
39. **Brotons, L.**, Herrando, S., & Pla, M. 2007. Updating bird species distributions at large spatial scales: applications of habitat modelling to data from long-term monitoring programs. *Diversity & Distributions*, 13:276-288.
40. Vallecillo, S., **Brotons, L.** & Herrado, S. 2008. Assessing the response of open-habitat bird species to landscape changes in Mediterranean mosaics. *Biodiversity & Conservation*, 17: 103-109.
41. Carnicer, J., **Brotons, L.**, Sol, D., Caceres, M. & Jordano, P. 2008. Random sampling, abundance-extinction, dynamics and niche-filtering immigration constraints explain the generation of species richness gradients. *Global Ecology & Biogeography*, 17:352-362.
42. Sirami, C., **Brotons, L.**, Burfield, I., Fonderflyck, J. & Martin, J.L. 2008. Is land abandonment having an impact on biodiversity? A meta-analytical approach to bird distribution changes in the north-western Mediterranean. *Biological conservation*, 141:450-459.
43. Giralt, D., **Brotons, L.** & Valera, F. 2008. The role of natural habitats in agricultural systems for bird conservation: the case of the threatened Lesser Grey Shrike. *Biodiversity & Conservation*, DOI 10.1007/s10531-008-9349-9.
44. Gonzalo-Turpin, H., Sirami, C., **Brotons, L.**, Gonzalo, L., & Martin, J.L. 2008. Teasing out biological effects and sampling artefacts when using occupancy rates in monitoring programs. *Journal of Field Ornithology*, 79:159-169.
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6.2 – Books and other publications (book chapters and non-SCI indexed articles)

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21. Herrando, S. & **Brotons, L.** 2005. Post-fire dynamics in Mediterranean shrublands: are bird communities structured by arthropod availability? *Revista Catalana d'Ornitologia*, 21, 1-10.
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35. Herrando, S. & **Brotons, L.** 2008. When to count: a case study in the Mediterranean Basin. In: Voríšek P., Klvarová A., Wotton S., Gregory R. D. (editors). A best practice guide for wild bird monitoring schemes. JAVA. Tzebor, Czech Republic.
36. Herrando, S. Brotons, L., Estrada, J & Guallar, 2008. Atlas de las aves de Cataluña en invierno 2006-2009. Quercus 274: 12.
37. **Brotons, L.** & Herrando, S. 2008. Bird monitoring and spatial modelling of species distribution: an example from the Catalan common bird monitoring scheme. In: Voríšek P., Klvarová A., Wotton S., Gregory R. D. (editors). A best practice guide for wild bird monitoring schemes. JAVA. Tzebor, Czech Republic.
38. Zbinden, N, Kéry, M., Keller, V., **Brotons, L.**, Herrando, S. & Schmid, H. 2009. Species richness of breeding birds along the altitudinal gradient - an analysis of atlas databases from Switzerland and Catalonia (NE Spain). In: Eva M Spehn & Christian Körner (eds) Data mining for global trends in mountain biodiversity. CRC Press/Taylor and Francis. Boca Raton.
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44. Herrando, S., **Brotons, L.** Estrada, J., Guallar, S., & Anton, M. 2011. Atlas dels ocells de Catalunya a l'Hivern 2006-2009. Lynx, ICO (Institut Català d'Ornitologia). Bellaterra.
45. **Brotons, L.**; Pla, M.; Villero, D.; Ruíz-Olmo, J. y Camps, D . 2011. CARTOBIO: Cartografía de especies de conservación prioritaria de Catalunya. Aplicaciones de la

modelización del hábitat. En: Hernández, L. y Parreño, J. M. (Eds.), *Tecnologías de la Información Geográfica para el Desarrollo Territorial*. Servicio de Publicaciones y Difusión Científica de la ULPGC. ISBN: 978-84-96971-53-0. Las Palmas de Gran Canaria.

6.3 – Communications to congresses and research workshops

Until March 2012, I have presented 101 communications to national and international congresses and research workshops. 19 of these communications correspond to invited contributions (including workshops organised by DIVERSITAS and different European FP projects as invited expert)..

In addition, I have been invited to give talks to a number of research institutions:

- Centre de Recerca Ecològica i Aplicacions Forestals (CREAF, Spain), 2000
- Centre d'Ecologie Fonctionnelle et Evolutive (France), 2001
- University of Bern (Switzerland), 2002
- Universitat de Girona (Spain), 2004, 2008
- Postdam Institute for Climate Impact Research (Germany), 2004
- Universidad Internacional de Andalucía (UNIA, Baeza, Spain), 2005
- Muséum Naturelle d'Histoire Naturelle de Paris (France), 2006
- British Trust for Ornithology (United Kingdom), 2006
- Université libre de Bruxelles (Belgium), 2007
- University of Athens (Greece), 2009
- University of Montpellier (France), 2010
- University of Melbourne (Australia), 2011
- Arthur Rylah Institute (Australia), 2011

7. – MANAGEMENT ACTIVITES

7.1 – Research responsibilities

- Head of the “Biodiversity and Landscape Ecology Lab” Unit at the Forest Ecology Centre of Catalonia. 01/01/2006-
- Representative of the Forest Technology Centre of Catalonia to the GDRE (France-Spain). European research group, “Mediterranean and mountain ecosystems in a changing world”. 2005-2008
- Coordinator of the multidisciplinary research group “Multifunctional management of Mediterranean forest ecosystems in a context of global change”. GRE (*Grups de recerca emergents i consolidats de la Generalitat de Catalunya*, 2005SGR 00357). 01/01/2005-31/12/2008 and 1/1/2009-31/12/13.

- Member of the executive board of the EBCC “European Bird Census Council”. 20/04/2007-.
- Member of the Catalan Ornithological Institute Executive committee. Responsible for research issues. 01/01/2007-
- Coordinator of the “Spatial modelling working group” within the EBCC (European Bird Census Council” (www.ebcc.info). 01/04/2005-
- Representative of the Forest Technology Centre of Catalonia to the PHOENIX project centre (European Forest Institute regional project centre on post-Fire management). 2006-
- Board member of the excellence project from the Spanish research council, CONSOLIDER-MONTES project.

7.2 – Organisation of conferences and research workshops

- Congress: *A landscape perspective on Mediterranean vertebrate ecology*. Montpellier, France. 25-26 March 2004. 100 participants.
- Congress: *Ecology and conservation of steppe-land birds*. Lleida, Spain. 3-7 December 2004. 350 participants.
- Research workshop: *Spatial modelling of large scale bird-monitoring data: towards pan-European quantitative bird distribution maps*. Solsona, Spain. 8-10 April, 2005. 35 participants.
- Meeting: *Programes de seguiment de la biodiversitat a Catalunya: aplicacions pràctiques*. Barcelona, Spain. 21-22 November 2006. 350 participants.
- Research workshop: *Dynamic spatial modelling of species distribution*. Solsona, Spain. 11-14 May, 2010. 10 participants.
- Research workshop: *Meta-modeling in landscape ecology*. Montreal, Canada, 25-29 August, 2011. 11 participants.

8. – TEACHING EXPERIENCE

- Lecturer. *General zoology course*. Laboratories. 1st course of biology degree, University of Barcelona. Total 52 hours (5 credits). 1999.
- Lecturer of the course “*Winter ecology and behaviour of birds in sub-alpine forests: evolutive strategies and study techniques*”. Organised by the “Institució Catalana d’Història Natural”. Bagà, 6-7 February. Total 15 hours (1.5 credits). 1999.
- Invited lecturer to the masters “*Remote sensing and geographic information systems*”. Organised by the “Institut d’Estudis Espacials de Catalunya”. Total 1 hour. 2002.
- Invited lecturer to the course “*Estudi científic de les aus: exemples pràctics*”. Organised by the “Institut Català d’Ornitologia”. Total 2 hours. 2002.
- Invited lecturer to the “*Steppe Forward Programme*”, field course in applied ecology and experimental design organised by the Darwin Initiative and the National Mongolian University. Gobi desert and Ulaan Baator (Mongolia, August 20th- September 8th). Total 100 hours (10 credits). 2003.
- Invited lecturer to the PhD. course “*Disturbances in Mediterranean systems*”. Environmental programme from the University of Girona. Total 40 hours (4 credits). 2004, 2008.
- Invited lecturer to the postgraduate course “*Título Universitario de Especialista en Políticas de desarrollo rural y evaluación de medidas agroambientales*”, organised by the “*Facultad de Ciencias del Medio Ambiente, Universidad de Castilla la Mancha*”. Total 2 hours. 2005.
- Invited lecturer to the masters of the MEDFOREM project “*Innovative and integrated approaches, methods and tools for Mediterranean forest management*”. Total 3 hours. 2006.
- Invited lecturer to the master “*Gestió de fauna*”, promoted by the Universitat de Girona. Olot. Total 2 hours. 2008.
- Invited lecturer to the master promoted by the University of Lleida “*Trends of the forest sector in a global change context*”. Lecture: “*Multifunctional forest management: Global change and biodiversity*” Total 3 hours. 2008.
- Profesor invitado al Posgrado de la Universitat de Lleida “*Multifunctional forest land management*”, Dentro de la asignatura “*Trends of the forest sector in a global change context*”. Ponencia impartida “*Forestal, Global change and biodiversity*”. Solsona, junio. Total 3 horas. 2009.
- Organiser of the course “*Spatial modelling of biodiversity*”. Organised by the “Institució Catalana d’Història Natural”. Solsona, 15-20 February. Total 20 hours (2credits). 2011.

9. – OTHER RESEARCH ACTIVITIES

9.1 – Supervision of research fellows

- Heloise Turpin. *Diplome d'Ingenieur Agronome. Aspects méthodologiques des relevés d'avifaune: importance de la détectabilité des espèces.* Ecole Nationale Supérieure Agronomique. Toulouse, France. 2003.
- Clélia Sirami. *Diplome d'études approfondies, DEA. Structure de la végétation et distribution spatio-temporelle de l'avifaune des paysages méditerranéens: le cas du Pic St. Loup.* Ecole Nationale Supérieure Agronomique. Montpellier, France. 2003.
- Clélia Sirami. Ph.D.thesis. *Abandon de terres et avifaune: dynamiques spatiales et temporelles d'un paysage méditerranéen.* Ecole Nationale Supérieure Agronomique. Montpellier, France. 2006.
- Oscar Gordo. Ph.D. thesis. *Spatial and temporal patterns of timing of migration in a Mediterranean region.* Facultat de Biologia. Universitat de Barcelona (Spain). 2006.
- Assu Gil Tena. PhD thesis. *Factores determinantes de la riquesa, distribució i dinàmica de les aves forestals a escala de paisatge en Catalunya: implicacions per a la gestió forestal sostenible.* Universitat de Lleida. 2009.
- Sara Vallecillo Rodríguez. PhD thesis. *Los cambios en el paisaje y su efecto sobre la distribución de las especies: modelización y aplicación a la conservación de las aves de hábitats abiertos en paisajes mediterráneos.* Universitat de Lleida. 2009.
- Elena López-Zozaya. PhD thesis. *Dinámica de comunidades de aves en paisajes Mediterráneos afectados por grandes incendios forestals.* Universitat de Lleida. 2011.

9.2 – Editorial experience and refereeing activities

- Associate editor of Diversity and Distributions (2011-)
- Associate editor of Nature Conservation (2011-)
- Associate editor of the Ibis (2009-)
- Associate editor of The Open Conservation Biology Journal (2007-).
- Invited editor Diversity and Distributions (2007)
- Associate editor of the Catalan Journal of Ornithology (2005-2010).
- Referee of manuscripts from international journals:
 - Avian Science
 - Behavioural Processes
 - Biology Letters
 - Journal of Avian Biology
 - Journal of Field Ornithology
 - Canadian Journal of Forest Research
 - Journal of Biogeography

- Ecography
- Landscape Ecology
- Oikos
- The Condor
- Ornis Fennica
- Ibis
- Animal Behaviour
- Acta Oecologica
- Wilson Bulletin
- Ecology Letters
- Ecological Modelling
- Journal of Applied Ecology
- Conservation Biology
- Biological Conservation
- Ardeola
- Diversity and Distributions
- Animal Biodiversity and Conservation
- Forest Ecology and Management
- Biodiversity and Conservation
- Global Change biology

- Evaluation of competitive projects for the BBVA, conservation biology calls and Cicyt (Spanish research council). 2004, 2005, 2010, 2011.
- Member of Ph.D juries for the following universities in Finland, Spain, Australia and France:

- Universitat de Barcelona
- Universitat de Girona
- Université de Montpellier
- Universidad de la Laguna
- Universitat de Lleida
- Universidad Autónoma de Madrid
- Universitat Autònoma de Barcelona
- Universitat de València
- Universidad de Murcia.
- Université d'Orleans (France)
- Deakin University (Australia)
- University of Jyväskylä (Finland)