

ANNEX 3

**FULL NOMINATIONS OF CANDIDATES FOR THE POSITION OF THE COP-APPOINTED
COUNCILLORS FOR THE SUBJECT AREA OF CLIMATE CHANGE**

NB: The full nominations are presented in the original languages, as they were submitted.

**NOMINATIONS COMPLÈTES DES CANDIDATS AU POSTE DE CONSEILLER NOMMÉ
PAR LA COP POUR LE DOMAINE DU CHANGEMENT CLIMATIQUE**

*Note : Les nominations complètes sont présentées dans les langues originales, telles
qu'elles ont été soumises.*

**PROPUESTAS COMPLETAS DE CANDIDATOS PARA EL CARGO DE
CONSEJERO DESIGNADO POR LA COMISIÓN PARA EL ÁREA TEMÁTICA DEL
CAMBIO CLIMÁTICO**

Nota: Las candidaturas completas se presentan en los idiomas originales, tal como fueron
presentadas.

NOMINATION OF MR. ZAHANGIR ALOM FOR THE ROLE OF
COP-APPOINTED COUNCILLOR – CLIMATE CHANGE

(submitted by the Government of Bangladesh)

Original: English

Government of the People's Republic of Bangladesh Ministry of Environment,
Forest & Climate Change
Forest-2 Section www.moef.gov.bd

No 1 2.00.0000.067.29.004.13-32

Dated: 28.02.2023

Subject : Nomination to attend the meeting "COP-Appointed Councillors subject areas of aquatic mammals and Climate Change

Reference: E-mail from CMS Secretariat, Dated: 20.12.2022.

The undersigned is directed to inform you that the following person has been nominated as COP-appointed councillors subject areas of aquatic mammals and Climate Change:

Name	Designation	Email & Mobile
MD. ZAHANGIR ALOM, PhD	Country Representative Wildlife Conservation Society - Bangladesh Program (WCS-BD)	Email: zalom@wcs.org +88 01713 228800; +8801712 287283

2. A curriculum vitae of the nominated councillor is attached herewith.
3. This is for your kind information and necessary action.


(Dipak Kumar Chakraborty)

Deputy Secretary

Telephone: 55101026

E mail: forest2moef@mail.com

Office in-Charge

Convention on Migratory Species (CMS)

UN Environment

United Nations Campus in Bonn

Platz der Vereinten Nationen 1.53113 Bonn Germany.

Copy for information (Not in order of seniority):

1. Foreign Secretary (Senior Secretary), Ministry of Foreign Affairs, Dhaka.
2. Additional Secretary (Admin), Ministry of Environment, Forest & Climate Change.
3. Chief Conservator of Forests (Current Charge), Bangladesh Forest Department, Dhaka.
4. Private Secretary to the Hon'ble Minister, Ministry of Environment, Forest & Climate Change.
5. Private Secretary to the Hon'ble Deputy Minister, Ministry of Environment, Forest & Climate Change, Dhaka.
6. Private Secretary to the Secretary, Ministry of Environment, Forest & Climate Change, Dhaka.
7. Md.Zahangir Alom, PhD, Country Representative, Wildlife Conservation Society Bangladesh)
8. Office Copy.

Original: English

CURRICULUM VITAE
OF
MD. ZAHANGIR ALOM *PhD*
Cell: +88 01713 228800; 01712 287283
Email: zalom@wcs.org



CAREER OBJECTIVES

To be a team-player, quietly contribute in the team, deliver high impact, I choose to be in and rejoice in the achievement of the team.

EDUCATION

Name of Degree	Result	Passing Year	Board/Institute
PhD in Zoology	Awarded	2015	Jahangirnagar University, Dhaka, Bangladesh
M.Sc. in Zoology (Wildlife ecology, management and conservation biology)	First class 5 th	2002	Jahangirnagar University
B.Sc. (Hon's) in Zoology	Second class	2001	Jahangirnagar University
H.S.C. (Science)	First Division	1997	Dhaka Board, Bangladesh
S.S.C. (Science)	First Division	1995	Dhaka Board, Bangladesh

JOB EXPERIENCES (LONG TERM)

- Working as *Country Representative & Senior Terrestrial Conservation Program Manager* in the Wildlife Conservation Society Bangladesh, since July 2018.
- Worked as a *Senior Researcher & Project Manager (Combating Wildlife Trafficking, SMART and Sundarbans)* in Wildlife Conservation Society Bangladesh, July 2013 - June 2018.
- Worked as *Coordinator & Researcher* in the Wildlife Conservation Society (WCS) Bangladesh, October 2007 - June 2013.
- Worked as *Project coordinator & Field Researcher* in the Project Sundarbans Tiger (Tiger density, relative abundance and human tiger conflicts), Bangladesh, assisted by Zoological Society of London and Save The Tiger Fund (National Fish and Wildlife Foundation) USA, March 2005- February 2007.

JOB EXPERIENCES (SHORT TERM)

- Worked as a *Trainer* for basic training on the use of SMART in the marine and aquatic environment in Cambodia held during 27 February - 04 March 2017, organized by Fauna & Flora International (FFI), Cambodia.
- Worked as a *Co-trainer* for SMART patrolling training to seven SMART field units from Yala, Bandala, Lunugamwehera, Kumana, Udawalawa and Galoya Valley national parks of Sri Lanka in

Yala National Park New Buthawa Circuit Bungalow and Udawalawa National Park Head Quarter in October 2017, organized Department of Wildlife Conservation, Sri Lanka.

- Provided training to 40+ staff of Bangladesh Forest Department working in Sundarbans on Training of Trainer (ToT) for SMART patrolling during May 2016– April 2017.
- Provided basic SMART patrolling training to 300+ staff of Bangladesh Forest Department working in Sundarbans during June 2016 to April 2017.
- Worked as an *Assessor* for IUCN Bangladesh. 2015. Red List of Bangladesh Volume 2: Mammals. IUCN, International Union for Conservation of Nature, Bangladesh Country Office, Dhaka, Bangladesh, pp. xvi+232.
- Worked for Bangladesh Bird Club for *Sorting and Identifying Bird Photographs and Videos in 2007*.
- Worked as *Field Supervisor* in a video documentary project on Sundarbans, Bangladesh, assist by Bangladesh Environment Lawyers Association (BELA) for 10 days in April 2006.
- Volunteer in *Bird Census* in Protected Areas of Bangladesh during 2005-2007 (part time), conducted by *Nishorga* Support Projects of IRG/USAID; *Water Fowl Census 2007 and 2016* in Bangladesh; and *Sorting and identifying bird photographs and videos footages* of Bangladesh Bird Club for in 2007.

PROJECT LEADER / MANAGER (LAST SEVEN YEARS) ○

Demand reduction for threatened freshwater turtles and tortoises in Bangladesh (July 2022 – March 2026), UK DEFRA Illegal Wildlife Trade Challenge Fund.

- Protecting tigers in the Bangladesh Sundarbans through strengthened SMART patrols and better detection and understanding of wildlife crime - Phase II (May 2022 – April 2025), US Fish and Wildlife Services.
- Protecting tigers in the Bangladesh Sundarbans through strengthened SMART patrols and improved understanding of wildlife crimes – Phase I (October 2018 – September 2020), US Fish and Wildlife Services.
- Scaling up Enforcement Capacity and Cooperation to Combat Wildlife Trafficking Networks in South Asia (October 2018-March 2023) Funded by US Department of State Bureau of International Narcotics and Law Enforcement Affairs (INL).
- Working with the Government of Bangladesh to strengthen their compliance with CITES CoP17 decisions (September 2017- August 2019) funded by USFWS.
- Strengthening the capacity of the Government of Bangladesh and local communities to sustainably conduct SMART wildlife enforcement patrols and practical ecological monitoring in the Sundarbans (July 2020 – April 2022), a sub-project of *the Support to the Management of the Sundarbans Reserved Forest Project* (SMP-II), which is funded by *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ).
- Getting SMART about saving among the world’s most endangered and iconic wildlife in the Sundarbans mangrove forest, Bangladesh (September 2016 - August 2018), a subproject (September 2016 - August 2018) of *the Management of the Sundarbans Mangrove Forests for Biodiversity Conservation and Increased Adaptation to Climate Change Project* (SMP-I) implemented by *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ).

ACADEMIC RESEARCH

- Alom, Z. 2014. **Ecological and human use characteristics of freshwater dependent cetacean habitat in the Eastern Sundarbans Reserved Forest of Bangladesh.** *Ph.D. Thesis*. Department of Zoology, Faculty of Biological Sciences, Jahangirnagar University, Dhaka, Bangladesh. XV+137pp.
- Alom, Z. 2006. **Study on amphibian fauna of Jahangirnagar University Campus: Species Diversity, Habitat preference and Food habit.** *M.Sc. Dissertation*, Department of Zoology, Faculty of Biological Sciences, Jahangirnagar University, Dhaka, Bangladesh.

- Alom, Z. 2004. An ecological Study on physical features, biodiversity and socio-economic condition of southeastern part of Bangladesh. *B. Sc. Honour's Report*. Department of Zoology, Faculty of Biological Sciences, Jahangirnagar University, Dhaka, Bangladesh.

LEAD AUTHOR- HANDBOOKS, REPORTS AND TOOLS

- *Handbook for Law Enforcement Officers on Combating Illegal Wildlife Trade*. 2020. Forest Department, Ministry of Environment, Forest and Climate Change, Bangladesh and Wildlife Conservation Society, Bangladesh.
- *Species Identification Guide to Commonly Traded Wildlife, Their Body Parts & Products in Bangladesh*. 2020. Forest Department, Ministry of Environment, Forest and Climate Change, Bangladesh and Wildlife Conservation Society, Bangladesh.
- *Handbook for SMART patrol in the Sundarbans Mangrove Forest of Bangladesh*, 2017. Bangladesh Forest Department, Wildlife Conservation Society and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).
- *Handbook for Enforcing CITES Regulations and National Laws to Combat Illegal Wildlife Trade in Bangladesh*, 2018. Wildlife Conservation Society Bangladesh, Wildlife Crime Control Unit, Bangladesh Forest Department, Ministry of Environment, Forests and Climate Change.
- *Integrated management plan for the three wildlife sanctuaries for freshwater dolphins in the Eastern Sundarbans Reserved Forest*. 2015. Forest Department and Wildlife Conservation Society Bangladesh, Bangladesh.
- *Research on freshwater dolphin ecology and human activities in the three Wildlife Sanctuaries for Freshwater Dolphins in the Eastern Sundarbans mangrove forest, Bangladesh*. 2014. Wildlife Conservation Society's Bangladesh Cetacean Diversity Project, Khulna, Bangladesh.
- *Socio-economic conditions, sustainable resource use, and alternative livelihoods in three Wildlife Sanctuaries for Freshwater Dolphins in the Eastern Sundarbans mangrove forest, Bangladesh*. 2014. Background document prepared by the Wildlife Conservation Society's Bangladesh Cetacean Diversity Project, Khulna, Bangladesh.
- *Educational outreach, training and consultations in the three Wildlife Sanctuaries for Freshwater Dolphins in the Eastern Sundarbans, Bangladesh*. 2014. Wildlife Conservation Society's Bangladesh Cetacean Diversity Project, Khulna, Bangladesh.
- *Background Document for Developing a Management Plan for Three Wildlife Sanctuaries to Protect Freshwater Dolphins in the Eastern Sundarbans Reserved Forest*. 2011. Wildlife Conservation Society's Bangladesh Cetacean Diversity Project, Khulna, Bangladesh.

PUBLICATIONS (PAPERS, ARTICLES AND BOOK CHAPTERS)

- Alom, Z. 2015. *Platanista gangetica*, *Orcaella brevirostris*, *Sousa chinensis*, *Tursiops aduncus*, *Stenella attenuate*, *Balaenoptera edeni*, *Stenella longirostris*, *Steno bredanensis*, *Pseudorca crassidens*, *Physeter microcephalus*. In: IUCN Bangladesh. *Red List of Bangladesh Volume 2: Mammals*. IUCN, International Union for Conservation of Nature, Bangladesh Country Office, Dhaka, Bangladesh, pp. 107, 118-119, 153-155, 193-197.
- Alom, Z., Mansur, R.M. & Smith, B.D. 2014. Identification and ecological characteristics of freshwater dolphin "hotspots" in the Sundarbans, Bangladesh. In: *Proceedings of the International Symposium on River Biodiversity: GBM River System, Ecosystems for Life, A Bangladesh-India Initiative*. Sinha, Prof. R. K. and Ahmed, Prof. Benazir (eds.). IUCN, International Union for Conservation of Nature and Natural Resources, 360 pp.
- Alom, Z. 2013. Waterways of the Sundarbans: Home to Freshwater Cetaceans. In: *Sundarbans: Rediscovering Sundarbans, The Mangrove Beauty of Bangladesh*. Reza Khan (ed.). Nymphaea Publication, Dhaka. pp16-19.
- Alom, Z. & Mowgli, R.M. 2013. Fishing Gears and Livelihoods of Fringe Communities in the Sundarbans. In: *Sundarbans: Rediscovering Sundarbans, The Mangrove Beauty of Bangladesh*. Reza Khan (ed.). Nymphaea Publication, Dhaka. pp16-19.

- Mansur, R.M., Alom, Z. & Smith, B.D. 2014. Monitoring the mortality of freshwater cetaceans in the Sundarbans, Bangladesh: progress, challenges, and potential. *In: Proceedings of the International Symposium on River Biodiversity: GBM River System, Ecosystems for Life, A Bangladesh-India Initiative.* Sinha, Prof. R. K. and Ahmed, Prof. Benazir (eds.). IUCN, International Union for Conservation of Nature and Natural Resources, 360 pp.
- Smith, B.D., Ahmed, B., Alom, Z. Ahmed, I.U., Mowgli, R.M. & Mansur, E.F. 2010. Review of the conservation status and protected areas for Ganges River dolphins *Platanista gangetica* and Irrawaddy dolphins *Orcaella brevirostris* in the River system of Bangladesh” in the final workshop report for Establishing protected areas for Asian freshwater cetaceans. Kreb, D., Reeves, R.R., Thomas, P.O., Braulik, G.T. and Smith, B.D. (eds.). Yayasan Konservasi RASI, Samarinda, Indonesia, 19-24 October 2009, pp 96-106.
- Several *Photographs* in the book “The Bangladesh Sundarbans”, by Enayetullah Khan, published by Wildlife Trust of Bangladesh (WTB), Dhaka, Bangladesh in 2011.
- Several photographs in IUCN Bangladesh. 2015. *Red List of Bangladesh Volume 2: Mammals.* IUCN, International Union for Conservation of Nature, Bangladesh Country Office, Dhaka, Bangladesh, pp. xvi+232.
- Several *Articles and Photographs* in several **Daily Newspapers, Magazines** of Bangladesh.
- Several *Photographs* in a commemorative publication on SAARC Car Rally 2007 titled **Bangladesh on Wheels.**
- *Photography Exhibition* titled **Migratory Birds of Bangladesh** on 12 May 2007 at TSC, Dhaka University, Bangladesh.

PROFESSIONAL TRAININGS

- Completed the Collaborative Institutional Training Initiative (CITI) Program Course: *Social & Behavioral Research - Basic/Refresher (Curriculum Group), Researchers (Learner Group), Stage 1 – Basic Course*, on 12 August, 2017 <www.citiprogram.org/verify/?w58559673-c767-49d4-95f7f0f746ae620d-24151696>.
- Completed the Collaborative Institutional Training Initiative (CITI) Program Course: *Information Privacy Security (IPS) (Curriculum Group), Social & Behavioral Research (Learner Group), Stage 1 – Basic Course*, on 14 August, 2017 < www.citiprogram.org/verify/?wc1530a69-c81a-48ad-aa53f2d38e8ccd1b-24193272>.
- Received extensive training on *Spatial Monitoring and Reporting Tool (SMART)* software management, patrolling, data collection, analysis and reporting, under the Leadership of Dr Antony J Lynam, Training Lead, Capacity Council, SMART Partnership.
- Completed a two-day training on IUCN Red List Assessment Process, held on 20-21 April, 2014 in Dhaka, Bangladesh.
- Completed a 30 hours basic GIS course from the Urban and Regional Planning Discipline in Khulna University.

INTERNATIONAL TRAININGS AND WORKSHOPS

- Participated in the CITES post COP-19 shark and ray workshop of WCS in New York, USA, held on 30 January – 01 February 2023.
- *Third International Conference on Marine Mammals of South East Asia (SEAMAM III)*, as a *Workshop Leader* for community-based conservation and education, held on 4-10 March 2013, Langkawi Island, Malaysia.
- Participated in the *International Workshop on Establishing Protected Areas for Asian Freshwater Cetaceans* held in Samarinda, East Kalimantan, Indonesia from 19 to 25 October 2009.
- Participated in the *Training Workshop on Capacity Building to Conserve the Otters of Bangladesh*, held on 7-12 October 2014 in Sundarbans, Organized Wildlife Branch, Department of Zoology, Jahangirnagar University and International Otter Survival Fund.

- Participated in the workshop on *conservation of the Mekong River Irrawaddy dolphin*, as a *Contributor*, held from 16 to 18 January, 2017, organized by WWF – Cambodia and the Fisheries Administration of Cambodia, and for ongoing support in the conservation of dolphins in the Mekong River.
- Participated in the *Third International Conference on Marine Mammals of South East Asia (SEAMAM III)*, as a *Workshop Leader* for community-based conservation and education, held on 410 March 2013, Langkawi Island, Malaysia.

COMPUTER PROFICIENCY ETC.

- Geographic Information System (GIS), Mapsource, Base Camp; SPSS, Computer fundamentals, Windows, MS Word, MS Excel, PowerPoint, E-mail and Internet, Adobe Photoshop, Adobe Illustrator.

COUNTRIES VISITED

- United States of America
- Thailand
- Cambodia
- Sri Lanka
- Malaysia
- Indonesia
- India

FOREIGN LANGUAGE PROFICIENCY

- **English** : Good Reading, Writing and speaking abilities.
- **Hindi** : Fair Speaking abilities.
- **Arabic** : Fair Reading / writing abilities.

ORGANIZATIONAL INVOLVEMENTS

- Member of SMART Partnership, SMART Taskforce and SMART Marine Taskforce.
- International Trainers for SMART patrolling and software use under SMART partnership.
- *Life member (670)*, **Zoological Society of Bangladesh, Dhaka.**
- Founder *President* of **NATURE** Study and Conservation Club, Jahangirnagar University, Savar, Dhaka-1342.
- Former *Central Advisor* (2007-20017), *Vice President* (2005), and *Assistant General Secretary and Pres & Publication Secretary* (2004), Central Committee of **BADHAN** (a voluntary blood donors' organization), Dhaka, Bangladesh.

HOBBIES & INTERESTS

Wildlife research and conservation, bird watching, wildlife & nature photography, exploratory tour, writing popular articles, reading books, etc.

PERSONAL PROFILE

Name : Md. Zahangir Alom
Parent's name : Alhaj Md. Jalal Uddin and Alhaj Zayeda Khatun
Parent's Occupation : Father-Farmer, Mother-House Wife
Permanent address : Village- Balurchar, P.O- Rani Shimul P.S-
 Sribardi, District- Sherpur
Mailing address : House- 312, Road- 03, Sonadanga R/A 2nd Phase, Khulna

Nationality : Bangladeshi (by birth)
Religion : Islam
Date of birth : 26 February, 1981
Marital status : Married
Blood group : O positive (O+)
Height : 1.63 meter
Passport no. : E 0415986
National ID number : 193 434 7905
Contact no(s) : +88 01713228800, 01712287283
E-mail : zalom@wcs.org
Skype : zahangir.wcs

Md. Mofizul Kabir *PhD*
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Bangladesh
Cell: +880 1715 128 714
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mofizulkabir@yahoo.com

REFERENCES

Brian D. Smith

Marine Wildlife Bycatch Reduction Initiative, Global Bycatch Program
Wildlife Conservation Society
Marine Technical Advisor: WCS
Bangladesh
Asia Coordinator: IUCN SSC
Cetacean Specialist Group
Tel: (US) 707-826-0381
Cell: (BD) +880 1931 784 999
Skype: Orcaella
Email: bsmith@wcs.org

Antony J. Lynam *PhD*

Conservation Technology Field Solutions
Center for Global Conservation
Wildlife Conservation Society
President: Society for Conservation Biology
Training Lead: Capacity Council, SMART
Partnership
Member: IUCN World Commission on Protected Areas 2021-2025, and IUCN Cat Specialist Group 2021-2024
Tel: (WhatsApp, TH) +66-818233606
Skype: wcs.org_tlynam
E-mail: tlynam@wcs.org

SIGNATURE



Dated: 24 February 2023

NOMINATION OF MS. TRISHA BROOKE ATWOOD FOR THE ROLE OF
COP-APPOINTED COUNCILLOR – CLIMATE CHANGE

(submitted by IFAW – International Fund for Animal Welfare)

From: Collis, Matthew <mcollis@ifaw.org>

Sent: Friday, 29 September 2023 12:55

To: Dagmar Zikova <dagmar.zikova@un.org>; CMS Secretariat <cms.secretariat@cms.int>

Cc: Bell, Catherine <cbell@ifaw.org>; Slee, Barbara <bslee@ifaw.org>

Subject: COP-appointed councillor for climate change

Importance: High

You don't often get email from mcollis@ifaw.org. [Learn why this is important](#)

Dear Dagmar,

Since the Scientific Council meeting in July where it was decided to reopen nominations for the COP-appointed scientific councillor on climate change, IFAW has been on the lookout for viable candidates to assist in this process. In recent weeks we have had a number of interactions with Trisha Atwood regarding climate/species issues, and we mentioned this vacancy to her and she expressed an interest.

Since then, we have been liaising with a number of parties to see if any would be interested in nominating her but so far without any luck. As the deadline is looming, we thought we would nonetheless share her details here in case the Secretariat has any interest in seeing her nominated and can do anything more in the time left.

As you will see from her attached CV and online bio here: <https://qcnr.usu.edu/directory/wats/faculty/atwood-trisha>, she has impeccable credentials on climate and wildlife work. It includes a number of blue carbon projects, and she is also a co-author on the recent paper on 'trophic re-wilding' which captured the benefits a wide range of species, including CMS ones, play in elevating the amount of carbon their ecosystems can capture, which is exactly the kind of arguments I think CMS could be making about its contribution to climate change work: <https://www.nature.com/articles/s41558-023-01631-6>. She also mentioned she is currently involved in a project looking at the climate benefits of migratory cranes on wetlands, so she clearly has knowledge across a variety of taxa.

We took the liberty of asking her to draft a nomination letter and letter of commitment which are attached in case there is anything that can be done at this late stage.

Kind regards,

Matt

Matthew Collis

Deputy Vice President

Policy

Pronouns: he/him

c/o IFAW UK
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mcollis@ifaw.org

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[@MattCollisIFAW](#)

ifaw

Fast Company 2023 awardee, World's Most Innovative Non-profits

Justification for the nomination of Dr. Trisha B Atwood for COP-appointed Councillor for Climate Change

Dear Secretary,

I am writing to enthusiastically nominate Dr. Trisha Atwood as the COP-appointed Councillor for Climate Change for the Convention on Migratory Species (CMS). Dr. Atwood is an Associate Professor of Aquatic Ecology and Global Change at Utah State University in the United States of America. In November 2023, she will also join the National Geographic Society's Pristine Seas program as a climate mitigation specialist. Dr. Atwood's expertise, dedication, and passion for addressing the critical issue of climate change in aquatic ecosystems and its impact on migratory species make her an exceptional candidate for this role.

Dr. Atwood's research program merges community and ecosystem ecology to understand the influence of global change on aquatic species and ecosystems. Her work investigates how anthropogenic-mediated changes in animal behavior, populations, or community structure affect ecosystem functions and services, particularly those related to climate mitigation. She emphasizes the active role of animals in climate change, highlighting their potential to influence climate feedback.

Dr. Atwood's research encompasses a wide range of migratory species, including birds, marine fishes (including sharks), marine mammals, marine reptiles, insects, and beavers, inhabiting diverse ecosystems such as terrestrial systems, coral reefs, open oceans, mangroves, salt marshes, seagrasses, and freshwater systems. Her international and collaborative approach is evident in her publications and reports, which involve over 200 co-authors from more than 100 institutions across 50 countries.

Trisha Atwood's qualifications and contributions in the field of climate change and wildlife/fisheries conservation and management are extensive. She was a recipient of the National Academies of Sciences, Engineering, and Medicine Gulf Program Early Career Research Fellowship. She has served on several international committees and panels related to climate change and has a burgeoning publication record with 54 peer-reviewed papers, many published in top journals. Additionally, she has contributed to reports for UNESCO and served as an expert reviewer for the IPCC-Ocean & Cryosphere in a Changing Climate Report and The High-Level Panel for a Sustainable Ocean Economy Report. Her ability to communicate complex scientific concepts effectively has led to features in popular science magazines, international newspapers, documentary films, and national radio programs.

Trisha Atwood's vision for addressing climate change aligns seamlessly with the objectives of the Convention on Migratory Species. Her insights into the need for international cooperation, sustainable development, and the protection of critical habitats are precisely what is required to advance CMS's mission in an era of unprecedented environmental challenges.

In conclusion, I have no doubt that Trisha Atwood's exceptional qualifications, dedication, and passion for climate change and migratory species conservation and management make her the ideal candidate to represent the CMS as the COP-appointed Councillor for Climate Change. I kindly request the Convention on Migratory Species to consider Trisha Atwood's nomination with the utmost attention and seriousness it deserves.

Sincerely,

Dr. Trisha B Atwood

5210 Old Main Hill

Logan, UT, 84341

Email: Trisha.atwood@usu.edu

Phone: 435-799-5065

Dear Secretary,

I am writing to express my sincere gratitude for considering my nomination for the COP-appointed Councillor for Climate Change for the Convention on Migratory Species (CMS). It is an honor to have been nominated for this crucial role.

I am fully aware of the significance and responsibilities associated with this position, and I want to confirm my wholehearted commitment to serve if elected.

Thank you,

A handwritten signature in blue ink that reads "Trisha B. Atwood". The signature is written in a cursive style and is contained within a thin blue rectangular border.

Trisha B Atwood

5210 Old Main Hill
Logan, UT, 84341
Email: trisha.atwood@usu.edu
Phone: 435-799-5065



DR. TRISHA BROOKE ATWOOD

Curriculum Vitae

Department of Watershed Sciences and The Ecology Center,
Utah State University, United States of America

E-mail: trisha.atwood@usu.edu

Phone: +001 435 799 5065

website: <https://trishaatwood.weebly.com/>

Languages: English

Citizenship: United States of America

RESEARCH INTERESTS

the role of animals in climate mitigation; aquatic conservation; the response of aquatic ecosystems to global change; effects of disturbance on aquatic carbon cycling; biotic interactions in aquatic food webs; cycling and storage of carbon in aquatic ecosystems

EDUCATION

- 2009-2013 Ph.D. Forestry, University of British Columbia, Vancouver, B.C., Canada. Thesis Title: *Effects of predators on CO₂ dynamics of freshwater ecosystems.*
- 2007–2009 M.Sc. Tropical Conservation Biology and Environmental Science, University of Hawaii-Hilo, Hilo, HI, USA. Thesis Title: *Importance of terrestrially-derived organic matter to a tropical estuarine food web.*
- 2002–2007 B.A. Marine Science, University of Hawaii-Hilo, Hilo, HI, USA. Thesis Title: *Impacts of an invasive N-fixing tree on a Hawaiian stream food web.*

RESEARCH APPOINTMENTS

- Nov. 2023-present Climate Mitigation Scientist, Pristine Seas, National Geographic Society
- 2021-present Associate Professor, Department of Watershed Sciences and the Ecology Center, Utah State University, Logan, Utah, USA
- 2015-2021 Assistant Professor, Department of Watershed Sciences and the Ecology Center, Utah State University, Logan, Utah, USA
- 2013-2014 Coastal Carbon Cluster Postdoctoral Fellow, Global Change Institute, University of Queensland, St. Lucia, Australia

SUCCESSFUL GRANTS, AWARDS, AND OTHER FUNDING

(Total funding \$3,036,683)

- 2022 NSF Polar Programs Supplement: Understanding the effects of above- and belowground linkages on carbon cycling in subarctic coastal wetlands. Lead PI: **Trisha B Atwood**; Co-PI's: Karen Beard, Bonnie Waring. \$146,048
- 2022 National Philanthropic Trust: Developing a road map for future research on trawling impacts on benthic carbon. Lead PI: **Trisha B Atwood**; Co-PI: Sarah Null, Tim DeVries, Anastasia Romanou. \$266,149.11

- 2020 NSF Polar Programs: Understanding the effects of above- and belowground linkages on carbon cycling in subarctic coastal wetlands. Lead PI: **Trisha B Atwood**; Co-PI's: Karen Beard, Bonnie Waring. \$1,402,244
- 2020 National Geographic Society-Pristine Seas: Bottom trawling and carbon release: scale of the problem and solutions. PI: **Trisha B Atwood**. \$42,489
- 2019 The National Academies of Sciences, Engineering, and Medicine: Gulf Research Program Early Career Fellowship. PI: **Trisha B Atwood**. \$76,000
- 2019 Ecology Center Working Group Grant. PI: **Trisha B Atwood**. \$10,000
- 2019 Department of Natural Resources: Utah Forest, Fire, State Lands. The fate of heavy metal sequestered by wetland plants in the Great Salt Lake. Lead PI: Edd Hammill; Co-PI: **Trisha B Atwood**, Janice Brahney, Karin Kettenring. \$49,747
- 2019 National Geographic Society-Pristine Seas: Integrating blue carbon into marine protected planning. PI: **Trisha B Atwood**. \$7,500
- 2018 National Geographic Society-Pristine Seas: Integrating blue carbon into marine protected planning. PI: **Trisha B Atwood**. \$10,366
- 2018 Department of Natural Resources: Utah Forest, Fire, State Lands. Mapping wetland habitats and ecosystem functions in the Great Salt Lake. Lead PI: **Trisha B Atwood**; Co-PI: Karin Kettenring, Edd Hammill. \$39,857
- 2018 Utah State Extension Grant: Assessing, mapping and educating managers and the public about Great Salt Lake wetland ecosystem services. Lead PI: **Trisha B Atwood**; Co-PI: Karin Kettenring, Mark Larese-Casanova. \$29,000
- 2017 USU Research Catalyst Seed Grant. Assessing the effects of climate change on the net metabolism and carbon cycling of Arctic lakes. Lead PI: Soren Brothers; CO-PI: **Trisha B Atwood**, Janice Brahney, Phaedra Budy. \$20,000
- 2017 USU Research Catalyst Seed Grant. Trophic cascades shape blue carbon hotspots in seagrass ecosystems. Lead PI: **Trisha B Atwood**. \$19,923
- 2017 US Department of Agriculture, Forest Service. *Can beavers increase carbon storage in federally managed lands?* Lead PI: **Trisha B Atwood**; Co-PI: Brett Roper. \$9,986
- 2016 US Department of Agriculture, Forest Service. *Can beavers increase carbon storage in federally managed lands?* Lead PI: **Trisha B Atwood**; Co-PI: Brett Roper. \$17,494
- 2015 Utah Reclamation Mitigation and Conservation Commission Grant. *Comprehensive Study and Recommendations for Instream Flow Requirements on Sixth Water Creek and Diamond Fork River*. Lead PI: Peter Wilcock; Co-PI: **Trisha B. Atwood**, Patrick Belmont, Edd Hammill, Jereme Gaeta. \$500,000
- 2014 Global Change Institute Seed Grant. *The effects of predators on carbon storage in an algal dominated landscape*. Lead PI: **Trisha B Atwood**; Co-CIs: Catherine Lovelock, Alastair Harborne, Peter Macreadie, Elizabeth Madin. \$10,000 AUD
- 2014 Global Change Institute Seed Grant. *Developing genomic tools for the identification of organic carbon sources in coastal carbon deposits*. Lead PI: Ruth

- Reef; Co-PI's: **Trisha B Atwood**, Megan Saunders. \$10,000 AUD
- 2014 Deakin University working group grant. *Can marine predators take the bite out of climate change?* Lead PIs: **Trisha B. Atwood** & Peter Macreadie; Co-PI: Euan Ritchie. \$7,600 AUD
- 2014 Australia Department of Education Endeavour Postdoctoral Research Fellowship. *Feeding preference and bioerosion rates of sea urchins on the Great Barrier Reef.* Lead PI: **Trisha B Atwood**. \$30,500 AUD
- 2009-2013 Four-Year-Fellowship: University of British Columbia. *Effects of predators on CO₂ cycling in freshwater ecosystems.* Lead PI: **Trisha B Atwood**. \$88,380 CAD
- 2007-2009 University of Hawaii at Hilo EPSCoR Analytical Laboratory Graduate Scholar. *Effects of hydrological forcing on estuarine food webs.* Lead PI: **Trisha B Atwood**. \$64,000

SUCCESSFUL UNIVERSITY INFRASTRUCTURE GRANTS

Utah State University Millville Experimental Pond Research Facility. Project cost \$100,000

PUBLICATIONS

‡ Undergraduate or graduate student advisee

† Postdoctoral Fellow advisee

** Authors contributed equally

† Altmetric attention score in the top 5%

IF: Journal impact factor

53. †Adkins, J., Hammill, E., ‡Abdulwahab, U.A., ‡Draper, J.P., ‡Wolf, J.M., ‡McClure, C.M., ‡Gonzalez Ortiz, A.A., ‡Chavez, E.A., **Atwood, T.B.** 2023. Environmental variables drive spatial patterns of trophic diversity in mammals. *Ecology Letters* <https://doi.org/10.1111/ele.14306>. IF: 11.274
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51. †Schmitz, O. J., Sylven, M., **Atwood, T. B.**, Bakker, E. S., Berzaghi, F., Brodie, J. F., Cromsigt, J. P. G. M., Davies, A. B., Leroux, S. J., Schepers, F. J., Smith, F. A., Stark, S., Svenning, J. C., Tilker, A., Ylänne, H. 2023. Animating the carbon cycle through trophic rewilding could provide highly effective natural climate solutions. *Nature Climate Change* 13: 324-333 IF: 28.862
50. Malerba, M., Duarte de Paula Costa, M., Friess, D. A., Schuster, L., Young, M. A., Lagomasino, D., Serrano, O., Hickey, S. M., York, P. H., Rasheed, M., Lefcheck, J. S., Radford, B., **Atwood, T. B.**, Ierodiconou, D., Macreadie, P. 2023. Remote

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48. Sala, E., Mayorga, J., Bradley, D., Cabral, R., **Atwood, T.B.**, Auber, A., Cheung, W., Costello, C., Ferretti, F., Friedlander, A. M., Gaines, S., Garilao, C., Goodell, W., Halpern, B.S., [†]Hinson, A., Kaschner, K., Kesner-Reyes, K., Leprieur, F., McGowan, J., Morgan, L. E., Mouillot, D., Possingham, H. P., Rechberger, K. D., Worm, B., Lubchenco, J. 2022. Reply to: A path forward for analysing the impacts of marine protected areas. *Nature* 607: E3-E4. <https://doi.org/10.1038/s41586-022-04776-0>. IF: 69.504.
47. Hammill, E., Pendleton, M., Brahney, J., Kettenring, K.M., Atwood, **T. B.** 2022. Metal concentrations in wetland plant tissues influences transfer to terrestrial food webs. *Ecotoxicology* 31: 836-845. IF 2.935
46. Céréghino, R., Trzcinski, M. K., MacDonald, A. A., M., Marino, N. A. C., Mercado, D. A., Leroy, C., Corbara, B., Romero, G. Q., Farjalla, V. F., Barberis, I. M., Dézerald, O., Hammill, E., **Atwood, T. B.**, Piccoli, G. C. O., Ospina Bautista, F., Carrias, J., Leal, J. S., Montero, G., Antikeira, P. A. P., Freire, R., Realpe, E., Amundrud, S. L., Omena, P. M., Campos, A. B. A., Srivastava, D. S. 2022. Functional redundancy dampens precipitation change impacts on species-rich invertebrate communities across the Neotropics. *Functional Ecology* 36: 1559-1572. IF: 6.28
45. [‡]Draper, J. P., Young, J. M., Beckman, N. G., Schupp, E. **Atwood, T. B.** 2022. Frugivory and seed dispersal by carnivorans. *Frontiers in Ecology and Evolution* <https://doi.org/10.3389/fevo.2022.864864>. IF: 4.493
44. [‡]Foley, K. M., Beard, K. H., Atwood, T. B., Waring, B. G. 2022. Herbivory changes soil microbial communities and greenhouse gas fluxes in a high-latitude wetland. *Microbial Ecology* 83: 127-136. IF: 4.192
43. Bianchi, T. S., Aller, R. C., **Atwood, T. B.**, Brown, C. J., Buatois, L. A., Levin, L. A., Levinton, J. S., Middelburg, J. J., Morrison, E. S., Regnier, P., Shields, M. R., Snelgrove, P. V. R., Sotka, E. E., Stanley, R. R. E. 2021. What global biogeochemical consequences will marine animal–sediment interactions have during climate change? *Elementa Science of the Anthropocene* 9: 00180. <https://doi.org/10.1525/elementa.2020.00180>. IF: 3.518
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39. †****Atwood, T. B.**,**†Valentine, S. A., Hammill, E., McCauley, D. J., Madin, E. M. P., Beard, K. H., Pierce, W. 2020. Herbivores at the highest risk of extinction among mammals, birds, and reptiles. *Science Advances* 6: eabb8458, doi: 10.1126/sciadv.abb8458. IF:13.116
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34. Srivastava, D. S., Cereghino, R., Trzcinski, M. K., MacDonald, A. M., Marino, N. A. C., Mercado, D. A., Leroy, C., Corbara, B., Romero, G. Q., Farjalla, V. F., Barberis, I. M., Dezerald, O., Hammill, E., **Atwood, T. B.**, Piccoli, G. C. O., Ospina Bautista, F., Carrias, J. Leal, J. S., Montero, G., Antiquiera, P. A. P., Freire, R., Realpe, E., Amundrud, S. L., de Omena, P.M., Campos, A. B. A. 2020. Ecological response to altered rainfall differs across the Neotropics. *Ecology* <https://doi.org/10.1002/ecy.2984>. IF: 4.7
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32. †Washko, S, Roper, B. **Atwood, T. B.** 2020. Beavers alter stream macroinvertebrate communities in northeastern Utah. *Freshwater Biology* 65:579-591 IF 3.835

31. †Serrano, O., Lovelock, C., Duarte, C. M., **Atwood, T. B.**, Canto, R., Phinn, S., Ariane Arias-Ortiz, A., Baldock, J., Carnell, P., Donaldson, P., Esteban, A., Ewers-Lewis, C., Eyre, B., Hayes, M., Kelleway, J. J., Kendrick, G. A., Lafratta, A., Lavery, P. S., Macreadie, P. I., Marbà, N., Masque, P., Mateo, M. A., McMahon, K., Mount, R., Ralph, P., Roelfsema, C., Rozaimi, M., Ruhon, R., Salinas, C., Samper-Villarreal, J. Sanderman, J., Sanders, C., Santos, I., Sharples, C., Trevathan-Tackett, S. M., Steven, A. 2019. Blue carbon hotspots in Australia: Toward the conservation of coastal vegetated habitats through the implementation of carbon trading schemes. *Nature Communications* 10: 4313, <https://doi.org/10.1038/s41467-019-12176-8>. IF: 12.121; *Nature Communications Top 50 Earth and Planetary Sciences Articles*
30. †Macreadie, P. I., Anton, A., Raven, J., Beaumont, N., Connolly, R., Friess, D., Kelleway, J., Kennedy, H., Kuwae, T., Lavery, P., Lovelock, C., Smale, D., Apostolaki, E., **Atwood, T.B.**, Baldock, J., Bianchi, T., Chmura, G., Eyre, B., Fourqurean, J., Hall-Spencer, J., Huxham, M., Hendriks, I., Krause-Jensen, D., Laffoley, D., Luisetti, T., Marba, N., Masqué, P., McGlathery, K., Megonigal, P., Murdiyarso, D., Russell, B., Santos, R., Serrano, O., Silliman, B., Watanabe, K., Duarte, C. 2019. The future of blue carbon science. *Nature Communications* 10: 3998, <https://doi.org/10.1038/s41467-019-11693-w>. IF: 12.121; *Nature Communications Top 50 Earth and Planetary Sciences Articles*
29. Macreadie, P. I. **Atwood, T. B.**, Seymour, Schmitz Fontes, J. R., J. Sanderman, J., Nielsen, D. A., Connolly, R. A. 2019. Vulnerability of seagrass blue carbon to microbial attack following exposure to warming and oxygen. *Science of the Total Environment* 686: 264-275. IF: 6.551
28. Brodersen, K. E., Trevathan-Tackett, S. M., Nielsen, D. A., Connolly, R. M., Lovelock, C. E., **Atwood, T. B.**, Macreadie, P. I. 2019. Oxygen consumption and sulphate reduction in vegetated coastal habitats: Effects of physical disturbance. *Frontiers in Marine Science* 6:14 <https://doi.org/10.3389/fmars.2019.00014>. IF: 3.661
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25. †Hammerschlag, N., Schmitz, O. J., Flecker, A., Lafferty, K., Sih, A., **Atwood, T. B.**, Gallagher, A. J., Irschick, D. J., Skubel, R., Cooke, S. J. 2019. Ecosystem function and service of aquatic predators in the Anthropocene. *Trends in Ecology and Evolution* 34: 369-383. IF: 14.764
24. †Schmitz, O. J., Wilmers, C. C., Leroux, S. J., Doughty, C. E., **Atwood, T. B.**, Galetti, M., Davies, A. B., Goetz, S. J. 2018. Animals and the zoogeochemistry of the carbon cycle. *Science* 362: eaar3213, doi: 10.1126/science.aa3213. IF: 41.845
23. †Epperly, J., †Witt, A., †Haight J., †Washko, S., **Atwood, T. B.**, Brahney, J., Brothers, S., Hammill, E. 2018. The case for integrated watershed management: relationships

- between borders, management agencies, and the likelihood of impairment. *Plos One* 13: e0204149, <https://doi.org/10.1371/journal.pone.0204149>. IF: 2.740
22. Hammill, E., Hawkins, C. P., Greig, H. S., Kratina, P., Shurin, J. B., **Atwood, T. B.** 2018. Landscape heterogeneity strengthens the relationship between β -diversity and ecosystem function. *Ecology* 99: 2467-2475. IF 4.7
 21. **Atwood, T. B.**, Hammill, E. 2018. The importance of marine predators in the provisioning of ecosystem services in coastal plant communities. *Frontiers in Plant Science* 9: 1289, <https://doi.org/10.3389/fpls.2018.01289>. IF 4.402
 20. †****Atwood, T. B.**, **Madin, E. Harborne, A., Hammill, E., Luiz, O.J., *Ollivier, Q., Roelfsema, C., Macreadie, P. I., Lovelock, C. E. 2018. Predators shape sedimentary carbon storage in a coral reef ecosystem. *Frontiers in Ecology and Evolution* 6:110, <https://doi.org/10.3389/fevo.2018.00110>. IF 4.493
 19. ‡Ollivier, Q. R., Hammill, E., Booth, D. J., †Hinchliffe, C., Madin, E. M. P., Harborne, A. R., Lovelock, C. E., Macreadie, P.I., **Atwood, T. B.** 2018. Benthic meiofaunal community response to the cascading effects of herbivory within an algal halo system of the Great Barrier Reef. *Plos One* 13: e0193932, <https://doi.org/10.1371/journal.pone.0193932>. IF 2.740
 18. †Hammill, E., Johnson, E., **Atwood, T. B.**, Harianto, J., †Hinchliffe, C., Calosi, P. Byrne, M. 2018. Ocean acidification alters zooplankton communities and increases top-down pressure of a cubozoan predator. *Global Change Biology* 24: e128-e138. IF 8.555
 17. Ferrari, R., Figueira, W. F., Boube, T., Adam, A., Kobelkowsky-Vidrio, T., Doo, S. S., **Atwood, T. B.**, Byrne, M. 2017. Quantifying annual coral growth and erosion from 3D models. *Scientific Report* 7:16737, doi:10.1038/s41598-017-16408-z. IF 3.998
 16. †**Atwood, T. B.**, Connolly, R. M., Almahasheer, H., Carnell, P., Duarte, C. M., Ewers, C, Irigoien, X., Kelleway, J., Lavery, P. S., Macreadie, P. I., Serrano, O., Sanders, C., Santos, I., Steven, A., Lovelock, C. E. 2017. Global patterns in mangrove soil carbon stocks and losses. *Nature Climate Change* 7: 523-528. IF 20.893
 15. †Lovelock, C. E., **Atwood, T. B.**, Baldock, J., Duarte, C. M., Hickey, S. Lavery, P. S., Macreadie, P. I., Masque, P., Ricart, A., Serrano, O., Steven, A. 2017. Assessing the risk of CO₂ emissions from blue carbon ecosystems. *Frontiers in Ecology and the Environment* 15: 257-265. IF: 9.295
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 13. †Macreadie, P. I., †Ollivier Q., Kelleway J. J., Serrano O., Carnell, P., Ewers, C., **Atwood, T. B.**, Sanderman, J., Baldock, J., Connolly, R.M., Duarte, C.M., Steven, A., Lovelock, C.E. 2017. Carbon sequestration by Australian tidal marshes. *Scientific Reports*,7: 44071, doi: 10.1038/srep44071. IF 3.998

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11. **Reef, R., ****Atwood, T. B.**, Samper-Villarreal, J., Adame, M.F., Sampayo, E., Lovelock, C. E. 2017. Using eDNA to determine the source of organic carbon in seagrass meadows. *Limnology and Oceanography* 62:1254-1265. IF: 3.778
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9. **Atwood, T.B.**, Hammill, E., Kratina, P., Greig, H. S., Shurin, J. S., Richardson, J. S. 2015. Warming alters food web-driven changes in the CO₂ flux of experimental pond ecosystems. *Biology Letters* 11: doi:20150785. IF: 3.323
8. Hammill, E., **Atwood, T. B.**, Srivastava, D. S. 2015. Predation threat has greater community and ecosystem effects than predator consumption. *Ecosystems* 18: 857-866. IF: 4.207
7. Hammill, E., **Atwood, T. B.**, ‡Corvalan P., Srivastava, D. S. 2015. Behavioral responses to predation may explain shifts in community structure. *Freshwater Biology* 60: 125-135. IF: 3.835
6. **Atwood, T. B.**, Hammill, E., Richardson, J. S. 2014. Trophic-level dependent effects on CO₂ emissions from experimental stream ecosystems. *Global Change Biology* 20: 3386-3396. IF: 8.555
5. **Atwood, T. B.**, Hammill, E., Srivastava D. S., Richardson J. S. 2014. Competitive displacement alters top-down effects on carbon dioxide concentrations in a freshwater ecosystem. *Oecologia* 35: 353-361. IF: 2.654
4. †**Atwood, T.B.**, Hammill, E., Greig, H. S., Kratina, P., Shurin, J. S., Srivastava, D. S., Richardson, J. S. 2013. Predator-induced reduction of freshwater carbon dioxide emissions. *Nature Geoscience* 6: 191-194. IF: 13.56; *F1000 Prime most viewed ecology paper July 2013*
3. **Atwood, T. B.**, Wiegner, T. N., MacKenzie, R. A. 2012. Effects of hydrological forcing on a tropical estuarine food web. *Oikos* 121: 277-289. IF: 3.37
2. **Atwood, T. B.**, Richardson J. S. 2012. Trophic interactions between insects and stream associated amphibians in steep, cobble-bottom streams of the pacific coast of North America. *Insects* 3: 432-441. IF: 2.220
1. **Atwood, T. B.**, Wiegner, T. N., Turner, J. P., MacKenzie R. A. 2010. Potential effects of an invasive N-fixing tree on a Hawaiian stream food web. *Pacific Science* 64: 367-379. IF 0.861

OTHER PUBLICATIONS

UNESCO. 2021. UNESCO Marine World Heritage: Custodians of the globe's blue carbon assets. Paris, France

Costello, C. Fries, L., Gaines, S., Kelley, A., **Atwood, T.**, Barange, M., Chopin, T., Froehlich, H. E., Hilborn, R., Lubchenco, J., Quaas, M., Sanchirico, J., Schwaab, E., Tyedmers, P. 2020. Blue climate initiative: Transformational opportunities in ocean-based food & nutrition.

Atwood, T.B., Douglas, A., Pendleton, M., Hammill, E., Kettenring, K.M. 2020. Mapping wetland habitats and ecosystem functions in the Great Salt Lake. Final report to Utah Division of Forestry, Fire & State Lands for 2019 Great Salt Lake Technical Team Grant. <https://ffsl.utah.gov/state-lands/great-salt-lake-research-grants/>

Serrano, O., Duarte, C. M., Lovelock, C., Lavery, P. **Atwood, T. B.** 2019. Australia's hidden opportunity to cut carbon emissions, and make money in the process. *The Conversation*. community.esa.org/messagelist.htm?igid=35455.

Wilcock, P., **Atwood, T.B.**, Belmont, Epperly, J., Gaeta, J., Hammill, E., Jones, J., Murphy, B., Stout, J. 2019. Comprehensive study and recommendations for instream flow requirements on Sixth Water Creek and Diamond Fork River final report. <https://cuwcd.com/assets/documents/diamondfork/reports/FinalReport.pdf>

Macreadie, P. I., Ritchie, E. G., Hays, G. C., Connolly, R. M., **Atwood, T. B.** 2015. Ocean predators can help reset our planet's thermostat. *The Conversation*. <https://theconversation.com/ocean-predators-can-help-reset-our-planets-thermostat47937>

Atwood, T. B., Alongi, D., Connolly, R. M., Duarte, C., Ralph, P., Steven, A., Lovelock, C. 2014. CSIRO carbon cluster. *Wetlands Australia* 25, 77-78.

Atwood, T. B. Effects of predators on freshwater CO₂ emissions. *Branchlines* 24: 12-13. A University of British Columbia publication.

INVITED PLENARIES & KEYNOTE LECTURES

- 2021 **Atwood, T. B.** Fixing the marine carbon cycle: A look at anthropogenic changes to marine carbon stocks. Plenary. Gordon Research Conference Ocean Global Change Biology, Waterville Valley, NH, USA. –Canceled due to COVID-19–
- 2018 **Atwood, T. B.** The zoogeochemistry of the carbon cycle. Linking community and ecosystem dynamics using ecological networks working group. Keynote. Sponsored by Vrije Universiteit Amsterdam & The University of Groningen. Schiermonnikoog, The Netherlands
- 2018 **Atwood, T. B.** How altered animal communities change the functioning of ecosystems, and possibly our climate. Plenary. Netherlands Annual Ecology Meeting. Lunteren, The Netherlands.
- 2018 **Atwood, T. B.**, Knock-on effects: How predator-prey interactions influence carbon cycling. Gordon Research Conference Predator-Prey. Plenary. Ventura, CA, USA.

INVITED PRESENTATIONS (SELECTED)

- 2022 **Atwood, T. B.**, Managing and protecting carbon stored in marine sediments: A challenge for marine conservation. University of Hawaii at Hilo TCBES Graduate Seminar Series.
- 2022 **Atwood, T. B.**, Bottom trawling impacts on marine sedimentary carbon. Oak Foundation E-Conference on Trawling
- 2021 **Atwood, T. B.** Restoring trophic interactions as a climate mitigation strategy. National Academies of Sciences, Engineering, and Medicine meeting on “A Research Strategy for Ocean-based Carbon Dioxide Removal and Sequestration.”

- 2021 **Atwood, T. B.** Trawling's impact on marine sedimentary carbon. National Academies of Sciences, Engineering, and Medicine meeting on "A Research Strategy for Ocean-based Carbon Dioxide Removal and Sequestration."
- 2017 **Atwood, T. B.**, Manipulating trophic interactions to quantify carbon dynamics in marine and freshwater ecosystems, Ecological Society of America Symposium Speaker: Animating the Carbon Cycle, Portland, OR, USA.
- 2014 **Atwood, T. B.**, Global Change, trophic down-grading, and altered carbon cycles. Ecology Center Seminars, Utah State University, Logan, UT, USA.
- 2014 **Atwood, T. B.** What the flux is going on? How predators influence CO₂ fluxes of aquatic ecosystems. Trends in Environmental Research Series, University of Technology, Sydney, Australia.
- 2013 **Atwood, T. B.** How predators alter CO₂ emission of freshwater ecosystems. Biodiversity Internal Seminar Series, University of British Columbia, Canada
- 2013 **Atwood, T. B.**, Hammill, E., Srivastava D. S., and J. S. Richardson. Predator-predator intimidation alters top-down effects on CO₂ emissions from an experimental bromeliad ecosystem. Insect Behaviour and Biodiversity Symposium Speaker. Entomological Society of Canada. Edmonton, AB, Canada.

CONFERENCE PRESENTATIONS & POSTERS (SELECTED)

- 2016 **Atwood, T. B.**, Madin, E. Harborne, A., Hammill, E., Luiz, O.J., Ollivier, Q., Roelfsema, C., Macreadie, P. I., Lovelock, C. E. Predators shape sedimentary carbon storage in a coral reef ecosystem. Gordon Predator-Prey Conference, Ventura, CA, USA.
- 2014 **Atwood, T. B.**, Connolly, R. M., Duarte C. M., Lovelock, C. E. Global patterns in mangrove soil organic carbon stocks and sequestration rates. Australian Marine Science Association, Canberra, ACT, Australia.
- 2012 **Atwood, T. B.**, Hammill, E., Srivastava D. S., and J. S. Richardson. Predator diversity and functional traits influence community structure and ecosystem processes. Ecological Society of America, Seattle, WA, USA.
Hammill, E. H., **Atwood, T. B.**, and D. S. Srivastava. Trait-mediated effects of predators at the community and ecosystem level. Ecological Society of America, Seattle, WA, USA.
- 2011 **Atwood, T. B.**, and J. S. Richardson. Stream CO₂ dynamics influenced by functionally dominant consumers: species identity and trophic position matter. North American Benthological Society, Providence, RI, USA.
- 2010 **Atwood, T. B.**, Kang, M., Kominoski, and J. S., Richardson. Are fractionation 'constants' constant? The influence of coniferous versus deciduous plant litter on isotopic fractionation of C and N in a common stream detritivore. North American Benthological Society, Santa Fe, NM, USA.
- 2009 **Atwood, T. B.**, Wiegner, T. N., Turner, J. P., and R. A. MacKenzie. Importance of terrestrially-derived organic matter to a tropical estuarine food web. American Society of Limnology and Oceanography, Nice, France.
- 2008 **Atwood, T. B.**, Wiegner, T. N., Turner, J. P., and R. A. MacKenzie. Effects of an invasive N-fixing tree on a Hawaiian stream food web. 5th International

Conference on Applications of Stable Isotope Techniques to Ecological Studies,
Honolulu, HI, USA.

TEACHING

- 2017-Present Introduction to Coral Reefs-Field Course in Australia's Great Barrier Reef (WATS 3450), Utah State University
- 2016-Present General Ecology (WATS/BIOL 2220), Utah State University
- 2019-2021 Oceanography (WATS 3000), Utah State University
- 2017-2017 Aquatic Ecosystems: Trends and Future Prospects (WATS 6900), Utah State University

STUDENTS & POSTDOCS SUPERVISED

- 2023-present Lindsay Miller, MSc, Supervisor, Utah State University, USA
- 2021-present Emily Chavez (NSF CAS Graduate Fellow), MSc, Supervisor, Utah State University, USA
- 2021-present Ryan Choi, Project Manager, Utah State University, USA
- 2020-present Jaron Adkins, Postdoctoral Fellow, Utah State University
- 2021-2023 Adrian Ortiz (NSF CAS Graduate Fellow), MSc, Supervisor, Utah State University, USA
- 2020-2021 Audra Hinson, Postdoctoral Fellow, Utah State University, USA
- 2018-2021 John Draper, PhD, Supervisor, Utah State University
- 2017-2019 Maya Pendleton, MSc, Supervisor, Utah State University, USA
- 2016-2018 Susan Washko (NSF Graduate Fellow), MSc, Supervisor, Utah State University, USA
- 2016-2018 Shaley Valentine, MSc, Supervisor, Utah State University, USA
- 2016-2018 Josh Epperly, MSc, Co-Supervisor, Utah State University, USA
- 2014-2015 Charlie Hinchliffe, Honours, Co-supervisor, University of Technology, Sydney, Australia
- 2014-2015 Quinn Olivier, Honours, Co-supervisor, University of Technology, Sydney, Australia

PROFESSIONAL DEVELOPMENT

- 2016 Alan Alda Center for Communicating Science Improvisation for Scientists Workshop
- 2016 Alan Alda Center for Communicating Science Distilling Your Message Workshop
- 2015 Write Winning Grant Proposals Workshop

AWARDS AND HONORS

- 2022 WATS Publication of the Year
- 2019-2020 Quinney College of Natural Resources Undergraduate Research Mentor of the Year

- 2018-2019 Department of Watershed Sciences' nominee for The Quinney College of Natural Resources Faculty Researcher of the Year
- 2012 University of British Columbia Travel Award- \$400 CAD
- 2013 Walter W. Jeffrey Memorial Scholarship in Water Sciences- \$175 CAD
- 2009-2013 University of British Columbia International Tuition Award- \$12,000 CAD
- 2009-2013 University of British Columbia 4-Year Fellowship- \$75,000 CAD

PROFESSIONAL SERVICES

Advisory board member: CO2.com by TIME (2022-present), Blue Marine Foundation- Convex Seascape Survey (2022-present)

Expert invited referee: Intergovernmental Panel on Climate Change (IPCC)-Ocean & Cryosphere in a Changing Climate, High Level Panel For a Sustainable Ocean Economy Report: The Ocean as a Solution for Climate Change: 5 Opportunities for Action, National Academies of Sciences: A Research Strategy for Ocean-based Carbon Dioxide Removal and Sequestration

Journal Editorial Board: *Biogeosciences*

Journal referee: *Nature, Nature Climate Change, Ecology Letters, Proceedings of the National Academy of Sciences of the United States, Ecosystems, Limnology and Oceanography, Marine Biology, Marine and Freshwater Research, Oikos, Oecologia, PLoS One, Estuaries and Coasts, Pacific Science*

Grant panels: National Science Foundation

Award Panels Expert evaluator for the \$1 million Ocean Innovation Prize sponsored by the United Nations Decade of Ocean Science for Sustainable Development, The Blue Climate Initiative, and the Sustainable.

Grant referee: RESTORE Act- Louisiana Center of Excellence; German Research Council

University service: Tenure Committee Member (E. Stuber, A. Morales), Ecology Center Director Search Committee (2023), Watershed Sciences/USGS Fish Biologist/Physiology Faculty Search Committee (2023), Watershed Sciences Fish Ecology/Fisheries Management Faculty Search Committee (2019), Undergraduate Research and Creative Opportunity proposal reviewer (2019), Ecology Center Seminar Faculty Adviser (2019, 2020), Honors admissions committee (2017, 2018, 2019), Watershed Sciences Honors Advisor (2017-2020), Watershed Sciences Graduate Curriculum Committee (2016), Watershed Sciences Graduate Fellowship Committee (2017)

PROFESSIONAL AFFILIATIONS

Ecological Society of America, American Geophysical Union

COMMUNITY AND POLICY ENGAGEMENT

Public talks: National Academies of Sciences: A Research Strategy for Ocean-based Carbon Dioxide Removal and Sequestration" report. (2021)

Sharks, guardians of our oceans, Utah State Science Unwrapped Lecture Series (2017)

Wearing your science on your sleeve: A look at tattooed scientists, Utah State Science and Sensibility Lecture Series (2017).

Documentaries: Science Cast on *The Pristine Coast*. Juggernaut Pictures. Vancouver Film Festival 2014. <http://juggernautpictures.ca/films/the-pristinecoast/> and <http://www.viff.org/festival/films/f14044-the-pristine-coast>

Primary education: Science Cast on *Our World of Wildlife*'s "EXPEDITION: Interdependent Relationships in the Great Barrier Reef," a K-5 virtual field trip educational program (<https://www.ourworldofwildlife.com/great-barrier-reef/>);

Spotlight Researcher with *Natural Inquirer*, a middle school science education journal by the USDA. <http://www.naturalinquirer.org/Dr.-Trisha-Atwoodscientist-424.html>

Radio Shows: NPR Science Friday (2023)
<https://www.sciencefriday.com/segments/restoring-worlds-animals-carbon-storage/>

iHeart Radio's Rod Arquette Show (2020)
<https://knrs.iheart.com/featured/rod-arquette/content/2020-08-14-rod-arquette-show-daily-rundown-friday-august-14-2020/>

Utah Public Radio-Undisciplined (2019)
<https://www.upr.org/post/undisciplined-aquatic-ecologist-and-biological-engineer>

Panels: 2021: I served as an invited member of UNEP's International Expert Meeting on mangrove restoration to discuss major barriers for enacting a plan of action for restoring mangroves in the Niger Delta that have been impacted by hydrocarbon pollution.

2021: I served as a panelist for the United Nations Environment Programme Forests Project open broadcast webinar on policy opportunities for harnessing the value of oceanic blue carbon.
(<https://www.youtube.com/watch?v=cf7pLLr3h50>)

NOMINATION OF MR. MIGUEL FERRER BAENA FOR THE ROLE OF
COP-APPOINTED COUNCILLOR – CLIMATE CHANGE

(submitted by the Government of Spain)

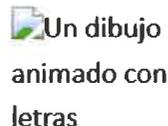
Dear colleagues of the CMS Secretariat, dear Dagmar,

I am sending you this mail in relation with the CMS notification 2022/023: "Nomination of Candidates for the COP-Appointed Councillor for the Subject Area of Climate Change".

As spanish focal point for CMS I would like to suggest the election of Prof. Miguel Ferrer Baena as COP-Appointed Councillor for the Subject Area of Climate Change, to be considered in the next COP-14 on February 2024.

Please consider the attached documents and profile, which justifies Prof. Ferrer to be an excellent candidate for assessing the CMS family in the important topic of Climate Change and migratory animals.

Yours sincerely,

 **Fernando Magdaleno Mas**
Deputy Director for Terrestrial and Marine Biodiversity
Directorate for Biodiversity, Forests and Desertification
Ministry for the Ecological Transition and the Demographic Challenge
Plaza San Juan de la Cruz, 10
28071 Madrid (Spain)
Tel.: +34 915976056

JUSTIFICATION OF THE CANDIDACY OF M. FERRER

Miguel Ferrer Baena has a degree in Biology (1986) and a PhD in Ecology (1990) from the University of Seville. He is a Research Professor of the Higher Research Council (CSIC) at the Doñana Biological Station, of which he was director from 1996 to 2000. He is Director at large of the Raptor Research Foundation (USA) since 1998 and president of the Migres Foundation since 2003, devote to study bird migration and climate change in Gibraltar Strait. He is an associate researcher at Hawk Mountain Sanctuary (USA) and adjunct professor at Boise State University (USA), external advisor for the University of Edinburgh (UK) and visiting professor at Oregon State University (USA). He is a member of the Council of Europe's Expert Group on Biodiversity and Global Change since 2001, as well as an Expert Reviewer of the IPCC since 2012. From 2012 to 2018 he was Institutional Coordinator of the CSIC in Andalusia and Extremadura. He is the Spanish representative in renewable energies and the environment of the International Energy Agency (IEA).

He is a specialist in vertebrate ecology and behavior, conservation biology of birds of prey, especially the imperial eagle, bird migration and global change. He presents three main lines: dynamics of small populations, conservation of endangered species, and analysis of the impacts caused by human infrastructures. He is the most cited ornithologist in Spain and is among the 25 most referenced ecologists in the country (<https://indice-h.webcindario.com/>), with more than 9,600 citations and an h index of 54 (<https://scholar.google.es/citations/>). He has been included since 2007 in the 1st percentile of the most cited researchers in the world in the specialty of Ecology / Environment according to ISI Web.

He has published 14 books in Spanish and English (some translated into Iranian) and more than 200 scientific articles in the most important journals in the world (Ecology, J Appl Ecol, Biol Conserv, Conserv Biol, Science, etc.). He teaches postgraduate courses at numerous European universities and has given more than 150 lectures in Europe and the United States. Evaluator of scientific projects for Denmark, Norway, Canada, Switzerland, Holland, Brazil, South Africa, France, Belgium, Germany, Portugal, Italy among others, he is also editor of 4 international scientific journals. He is a member of the scientific advisory board of the International University of Andalusia. He has received more than 35 national and international awards and recognitions, among which we highlight the Andalusian Environment Award 1999 for research work on the Aznalcóllar toxic spill, Special Distinction from the Government of Andalusia 2004 for the development of research work applied to the conservation of threatened species and the 2005 Frank and Frederick Hamestron Award, awarded by the Raptor Research Foundation, Inc. USA, for excellence in scientific research and conservation of birds of prey. He has received the Watson Raptor Science Price in 2013, 2015 and 2017 for different publications. In 2017 he also received the "Tom J. Cade" award from the Raptor Research Foundation, Inc. for his work in raptor conservation and reintroduction projects, and the Fondena Award presented by His Majesty the King of Spain. in 2017.

Willingness to accept appointment if selected

If my candidacy will be considered I will be delight to accept as far as I believe that these initiatives would help in understanding the complexity of migratory species conservation in the real world.

Sincerely

Miguel Ferrer

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1. PERSONAL INFORMATION

Surname: Ferrer Baena
Name: Miguel Angel
Identity card: 28 853 185-F
Date of Birth: 07/03/1962
Birthplace: Sevilla
Home Address: C/ Manuel de Falla, 2, Urb. Mampela - Palomares del Rio
City: Sevilla
Country: Spain
District code: 41928
Tel.: + 34 95 576 40 22

2. ACADEMIC INFORMATION

Degree	University	Date
Biological Sciences	University of Sevilla, Spain	1986

Doctorate	Center	Date
Biological Sciences University of Sevilla Spain	Doñana Biological Station A public Research Institute belonging to Spanish National Research Council - CSIC	1990

3. CURRENT BUSINESS SITUATION

Category: Dr. - Research Professor
Agency: Spanish National Research Council - CSIC
Center: Doñana Biological Station
Department: Conservation of Biodiversity and Applied Biology (Applied Ecology Group)
Address: Avda Americo Vespucio, s / n - Isla de la Cartuja
41092 Sevilla Spain
Phone: 954 466700

4. SCIENTIFIC OR PROFESSIONAL ACTIVITIES

(Position, Institution and Dates)

- Fellow-student. Doñana Biological Station, Dr. Javier Castroviejo.
March 1982-June 1986.
- Teacher Training Workshops. Doñana Biological Station, Dr. Javier Castroviejo.
June 1986-July 1988.
- Fellow Student (Contract-scholarship). Doñana Biological Station, Dr. Fernando Hiraldo.
July 1988-July 1990.
- Postdoctoral Fellow (CSIC). Doñana Biological Station, Dr. Fernando Hiraldo.
January 1991-November 1992.
- Researcher (CSIC). Doñana Biological Station
December 1992-September 1993
- Research Associate (CSIC) Doñana Biological Station
September 1993-July 2008
- Head of Department of Applied Biology (EBD)
September 1994-February 1996.
- Director of the Doñana Biological Station
February 1996-June 2000
- Researcher in the Doñana Biological Station
July 2008 - April 2009
- Professor of Research at (CSIC) Doñana Biological Station
May 2009 – currently
- Delegate of the Spanish Council CSIC in Andalusia
February 2012-March 2018

5. PUBLICATIONS

5.1 Original research papers published in scientific journals included in SCI.

1. FERRER, M., GARCIA-RODRIGUEZ, T., CARRILLO, J.C. & J. CASTROVIEJO. 1987. Hematocrit and blood chemistry values in captive raptors (*Gyps fulvus*, *Buteo buteo*, *Milvus migrans*, *Aquila heliaca*). *Comparative Biochemistry and Physiology* 87A (4): 1123-1127. Q1
2. GARCIA-RODRIGUEZ, T., FERRER, M., CARRILLO, J.C. & J. CASTROVIEJO. 1987. Metabolic responses of *Buteo buteo* to long-term fasting and refeeding. *Comparative Biochemistry and Physiology* 87A(2): 381-386. Q1
3. GARCIA-RODRIGUEZ, T., FERRER, M., RECIO, F. & J. CASTROVIEJO. 1987. Circadian rhythms of determined blood chemistry values in Buzzards and Eagle Owls. *Comparative Biochemistry and Physiology* 88A(4): 663-669. Q1
4. FERRER, M. & J. CALDERON. 1990. The Spanish imperial Eagle *Aquila adalberti* C. L. Brehm 1861 in Doñana National Park (South West Spain): A study of population dynamics. *Biological Conservation* 51: 151-161. Q1

5. FERRER, M., GARCIA, L. & R. CADENAS. 1990. Long-term changes in nest defense intensity of the Spanish imperial Eagle, *Aquila adalberti*. *Ardea* 78: 395-398. Q2
6. FERRER, M. 1990. Hematological studies in birds. *The Condor* 92: 1085-1086. Q1
7. FERRER, M. 1990. Nest defense by male and female Spanish imperial Eagles. *Journal of Raptor Research* 24(4): 77-79. Q2
8. FERRER, M., DE LA RIVA, M., & J. CASTROVIEJO. 1991. Electrocution of raptors on power lines in southwestern Spain. *Journal of Field Ornithology* 62(2): 181-190. Q1
9. VIÑUELA, J., FERRER, M. & F. RECIO. 1991. Age-related variations in plasma levels of alkaline phosphatase, calcium and inorganic phosphorus in chicks of two species of raptors. *Comparative Biochemistry and Physiology* 99A (1/2): 49-54. Q1
10. FERRER, M. & F. HIRALDO. 1991. Evaluation of management techniques for the Spanish imperial eagle. *Wildlife Society Bulletin* 19: 436-442. Q3
11. FERRER, M. 1992. Natal dispersal in relation to nutritional condition in Spanish imperial eagles. *Ornis Scandinavica* 23(1): 104-106 (**now Journal of Avian Biology**). Q1
12. FERRER, M. & F. HIRALDO. 1992. Man-induced sex-biased mortality in the Spanish imperial eagle. *Biological Conservation* 60: 57-60. Q1
13. FERRER, M. 1992. Regulation of the period of postfledging dependence in the Spanish imperial Eagle *Aquila adalberti*. *Ibis* 134: 128-133. Q1
14. FERRER, M. & C. DE LE COURT. 1992. Sex identification in the Spanish imperial Eagle. *Journal of Field Ornithology* 63(3): 359-364. Q1
15. FERRER, M. & J. J. NEGRO. 1992. Tendidos eléctricos y conservación de aves en España. *Ardeola* 39(2): 23-27. Q1
16. FERRER, M. 1993. Reduction in hunting success and settlement strategies in young Spanish imperial eagles. *Animal Behaviour* 45: 406-408. Q1
17. FERRER, M. 1993. Ontogeny of dispersal distances in young Spanish imperial eagles. *Behavioral Ecology and Sociobiology* 32: 259-263. Q1
18. FERRER, M. 1993. Juvenile dispersal behavior and natal philopatry in a long-lived raptor, the Spanish imperial Eagle *Aquila adalberti*. *Ibis* 135: 132-138. Q1
19. AGUILERA, E., J. MORENO & M. FERRER. 1993. Blood chemistry values in three *Pygoscelis penguins*. *Comparative Biochemistry and Physiology* 105A (3): 471-473. Q1
20. FERRER, M. 1993. Natural adoption of fledglings by Spanish Imperial Eagles *Aquila adalberti*. *Journal für Ornithologie* 134: 335-337. (**now Journal of Ornithology**) Q2

21. FERRER, M. 1993. Wind-influenced juvenile dispersal of Spanish Imperial Eagles. *Ornis Scandinavica* 24(4): 330-333 (**now Journal of Avian Biology**). Q1
22. AMAT, J.A., VIÑUELA, J. & M. FERRER. 1993. Sexing Chinstrap Penguins (*Pygoscelis antarctica*) by morphological measurements. *Colonial Waterbird* 16(2): 213-215. (**now Waterbirds**) Q3
23. FERRER, M. 1993. Blood chemistry studies in birds: Some applications to ecological problems. *Comparative Biochemistry and Physiology* 1: 1031-1044. Q1
24. FERRER, M., AMAT, J.A. & J. VIÑUELA. 1994. Daily variations of blood chemistry values in the chinstrap penguin (*Pygoscelis antarctica*) during the Antarctic summer. *Comparative Biochemistry and Physiology* 107A(1): 81-84. Q1
25. FERRER, M. 1994. Nutritional condition of Spanish imperial Eagle nestlings *Aquila adalberti*. *Bird Study* 41: 120-123. Q2
26. VIÑUELA, J., AMAT, J.A. & M. FERRER. 1995. Nest defence of nesting Chinstrap penguins (*Pygoscelis antarctica*) against intruders. *Ethology* 99: 323-331. Q2
27. FERRER, M. & F. HIRALDO 1995. Human-associated Staphylococcal infection in Spanish imperial Eagles. *Journal of Wildlife Diseases* 31(4): 534-536. Q2
28. NEGRO, J.J. & M. FERRER. 1995. Mitigating measures to reduce electrocution of birds in power lines: a comment on Bevanger's review. *Ibis* 137: 423-424. Q1
29. FERRER, M & J.A. DONAZAR 1996. Density-dependent fecundity by habitat heterogeneity in an increasing population of Spanish imperial Eagles. *Ecology* 77(1): 69-74. Q1
30. VIÑUELA, J., MORENO, J., CARRASCAL, L.M., SANZ, J.J., AMAT, J.A., FERRER, M., BELLIURE, J. & J.J. CUERVO. 1996. The effect of hatching date on parental care, chick growth and chick mortality in the Chinstrap penguin *Pygoscelis antarctica*. *Journal of Zoology* 240: 51-58. Q2
31. VIÑUELA, J. & M. FERRER. 1997. Regulation of growth in red kites and imperial eagles. *Wilson Bulletin* 109(1): 92-101. Q3
32. DOBADO-BERRIOS, P.M. & M. FERRER. 1997. Age-related changes of plasma alkaline phosphatase and inorganic phosphorus, and late ossification of the cranial roof in the Spanish imperial Eagle (*Aquila adalberti* C.L. Brehm, 1861). *Physiological Zoology* 70(4): 421-427. Q1
33. FERRER, M. & M. HARTE. 1997. Habitat selection by immature Spanish imperial eagles during the dispersal period. *Journal of Applied Ecology* 34: 1359-1364. Q1
34. JANSSE, G.F.E. & M. FERRER. 1998. Rate of bird collision with power lines: effects of conductor-marking and static wire-marking. *Journal of Field Ornithology* 69(1): 8-17. Q1
35. FERRER, M. & P. DOBADO-BERRIOS. 1998. Factors affecting plasma chemistry values of the Spanish imperial Eagle, *Aquila adalberti*. *Comparative Biochemistry and Physiology A* 120: 209-217. Q1

36. MORENO, J., VIÑUELA, J., BELLIURE, J. & M. FERRER. 1998. Effect of brood size on growth in the Chinstrap Penguin: a field experiment. *Journal of Field Ornithology* 69(2): 269-275. Q1
37. BELLIURE, J., CARRASCAL, L.M., MINGUEZ, E. & M. FERRER. 1999. Limited effects of egg size on chick growth in the chinstrap Penguin *Pygoscelis antarctica*. *Polar Biology* 21: 80-83. Q2
38. JANSS, G.F.E. & M. FERRER. 1999. Mitigation of raptor electrocution on steel power poles. *Wildlife Society Bulletin* 27(2): 263-273. Q3
39. JANSS, G.F.E., LAZO, A. & M. FERRER. 1999. Use of raptor models to reduce avian collisions with powerlines. *Journal of Raptor Research* 33(2): 154-159. Q2
40. GRIMALT, J.O., FERRER, M. & E. MACPHERSON. 1999. The mine tailing accident in Aznalcollar. *The Science of the Total Environment* 242: 3-11. Q1
41. HERNANDEZ, L.M., GOMARA, B., FERNANDEZ, M., JIMENEZ, B., GONZALEZ, M.J., BAOS, R., HIRALDO, F., FERRER, M., BENITO, V., SUÑER, M.A., DEVESA, V., MUÑOZ, O. & R. MONTORO. 1999. Accumulation of heavy metals and As in wetland birds in the area around Doñana National Park affected by the Aznalcollar toxic spill. *The Science of the Total Environment* 242: 293-308. Q1
42. BENITO, V., DEVESA, V., MUÑOZ, O., SUÑER, M.A., MONTORO, R., BAOS, R., HIRALDO, F., FERRER, M., FERNANDEZ, M. & M.J. GONZALEZ. 1999. Trace elements in blood collected from birds feeding in the area around Doñana National Park affected by the toxic spill from Aznalcóllar mine. *The Science of the Total Environment* 242: 309-323. Q1
43. FERRER, M. 1999. Raptor in-hand identification guide, a commentary. *Journal of Raptor Research* 33: 237-238. Q2
44. SUAREZ, S., BALBONTIN, J. & M. FERRER. 2000. Nesting habitat selection by booted eagles *Hieraaetus pennatus* and implications for management. *Journal of Applied Ecology* 37: 215-223. Q1
45. JANSS, G.F.E., & M. FERRER. 2000. Common crane and great bustard collision with power lines: collision rate and risk exposure. *Wildlife Society Bulletin* 28(3): 675-680. Q2
46. MINGUEZ, E., BELLIURE, J. Y M. FERRER. 2001. Bill size in relation to position in the colony in the Chinstrap Penguin. *Waterbirds* 24(1): 34-38. Q3
47. ALONSO-ALVAREZ, C., & M. FERRER. 2001. A biochemical study of fasting, Sub-feeding, and recovery processes in yellow-legged gulls. *Physiological and Biochemical Zoology* 74(5): 703-713. Q1
48. BALBONTIN, J., FERRER, M. & E. CASADO. 2001. Sex determination in Booted Eagles (*Hieraaetus pennatus*) using molecular procedures and discriminant function analysis. *Journal of Raptor Research* 35(1): 20-23. Q2
49. G. JANSS & M. FERRER. 2001. Avian electrocution mortality in relation to pole design and adjacent habitat in Spain. *Bird Conservation International* 11: 3-12. Q2
50. McPHERSON, E., FERRER, M. & J. GRIMALT. 2001. The accident of Aznalcollar Mine. *Scientific American* 301: 24-35. Q2

51. ALONSO-ALVAREZ, C., VELANDO, A., FERRER, M. & J.A.R. VEIRA. 2002. Changes in plasma biochemistry and body mass during incubation in the Yellow-legged Gull. *Waterbirds* 25(2): 253-258. Q3
52. BALBONTIN, J. & M. FERRER. 2002. Plasma chemistry reference values in free-living Bonelli's Eagle (*Hieraetus fasciatus*) nestlings. *Journal of Raptor Research* 36(3): 231-235. Q2
53. ALONSO-ALVAREZ, C., FERRER, M., FIGUEROLA, J., VEIRA, J.A.R., ESTEPA, J. & L.M. TORRES. 2002. The effect of testosterone manipulation on the body condition of captive male yellow-legged gulls. *Comparative Biochemistry and Physiology A* 131: 293-303. Q1
54. CASADO, E., BALBONTIN, J. & M. FERRER. 2002. Plasma chemistry in Booted Eagles (*Hieraetus pennatus*) during breeding season. *Comparative Biochemistry and Physiology A* 131: 233-241. Q1
55. ALONSO-ALVAREZ, C., FERRER, M. & A. VELANDO. 2002. The plasmatic index of body condition in Yellow-legged Gulls *Larus cachinnans*: A food-controlled experiment *Ibis* 144: 147-149. Q1
56. BISSON, I. A., FERRER, M. & D. M. BIRD. 2002. Factors influencing nest-site selection by Spanish Imperial Eagles. *Journal of Field Ornithology* 73(3): 298-302. Q1
57. GOMARA, B., FERNÁNDEZ, M. A., BAOS, R., HERRERO, L., JIMÉNEZ, B., ABAD, E., HIRALDO, F., FERRER, M., RIVERA, J., GONZALEZ, M. J. 2002. Presence of organochlorine pollutants (PCDDs, PCDFs, PCBs, and DDTs) in eggs of predatory birds from Doñana National Park, Spain. *Organohalogen Compounds* 58: 441-445.
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5.3.4 NATIONAL BOOK CHAPTERS

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3. FERRER, M. 1997. El mecànic de la biosfera. pp 95-120. En: Converses Transversals: Aproximació a la Recerca, l'Economia i la Política Bioambiental. Edt. Xavier arnella. Beta Editorial. Barcelona (**In Catalan**).
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5. CASADO, E. & M. FERRER. 1999. Viabilidad de la reintroducción de águilas pescadoras en costas, embalses y estuarios de Andalucía. En: Investigación y Desarrollo Medioambiental en Andalucía. Pp 83-94. Consejería de Medio Ambiente, Junta de Andalucía, Sevilla.
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9. FERRER, M. 2005. Proyectos demostradores y proyectos coordinados: la recuperación del águila imperial ibérica. En: Al borde de la extinción: integrando ciencia, política y sociedad en la recuperación de especies amenazadas. Ignacio Jiménez Pérez, Miguel Delibes de Castro y Astrid Vargas, coordinadores
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11. FERRER, M. 2008. El águila imperial. En: Las Aves en Andalucía: Una Visión Dibujada. Fundación Gypaetus-Fundación Migres. Sevilla.
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15. DE LUCAS, M., FERRER, M. 2010. Capítulo "Las energías renovables y el medio ambiente en Andalucía", libro "Energías Renovables: Paisaje y Territorio". Agencia Andaluza de la Energía, REE, Fondo Europeo de Desarrollo Regional – Unión Europea.
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17. FERRER, M., MADERO, A. 2011. Capítulo "Águila Imperial Ibérica, *Aquila adalberti*", libro "El libro de las Rapaces". Editado por Marcos Lacasa.
18. FERRER, M. 2016. Doñana, el pensamiento ecologista y la biología de la conservación. En FERRER, M. Editor. 2016. Doñana 50 años de investigaciones científicas. Anejos Arbor, Editorial CSIC
19. MARTÍN, B.; TORRALVO, C.A.; ONRUBIA, A. & FERRER, M. 2019. Invernada del Águila Pescadora en España. Tamaño y distribución de la población 2016-2017. Evolución de la población invernante y migradora. Pp. 22-31, en, M. Siverio, F. Siverio, B. Rodríguez y J. C. del Moral (eds.): El águila pescadora en España y Portugal: población invernante 2016-2017, reproductora en 2018 y método de censo. Monografía 48. SEO/BirdLife. Madrid.

20. MORANDINI, V. BAGUENAS, G. FERRER, M. 2018. El Quebrantahuesos: como hacer reintroducciones eficientes. En FERRER, M. (Editor). Recuperando Biodiversidad: la contribucion del CSIC para evitar la extincion de especies amenazadas. Anejos Arbor, Editorial CSIC. 310 pp.
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22. FERRER, M. MORANDINI, V. 2019. La recuperaci3n del guila Imperial. En FERRER, M. (Editor). Recuperando Biodiversidad: la contribucion del CSIC para evitar la extincion de especies amenazadas. Anejos Arbor, Editorial CSIC. 310 pp.
23. FERRER, M. 2020. Aznalcollar: veinte aos aprendiendo. Pp 29-42. En P. Madej3n y T. Maraon. Recuperaci3n de suelos y provision de servicios ecosist3micos en el corredor verde del Guadiamar.

6. PROJECTS AND PROGRAMS, CONTRACTS OR AGREEMENTS. INVOLVED OR DIRECTED

(Funding agency, the Institute or Center of implementation, name of the principal investigator of the program, contract or convention, title, year and month of onset and completion of these.)

Funding agency: CAICYT

Performance center: National Museum of Natural Sciences, Spain; Doana Biological Station; Institute of Economic Geography; School of Industrial Engineering of Sevilla

Main researcher: Dr. Fernando Hiraldo

Title: Population ecology of homeotherm vertebrate predators in Doana National Park.

Duration: 1985-1987

Funding agency: ICONA

Performance center: National Museum of Natural Science. Doana Biological Station.

Main researcher: Dr. Fernando Hiraldo

Title: Use of the Iberian imperial eagle space.

Duration: May 1987-December 1988

Funding agency: CICYT

Performance center: National Museum of Natural Sciences, Doana Biological Station, Institute of Economic Geography and School of Industrial Engineering of Sevilla.

Main researcher: Dr. Fernando Hiraldo

Title: Ecology of vertebrate predators in Doana and other Mediterranean ecosystems.

Duration: 1988-1990

Funding agency: Red El3ctrica de Espaa e Hidroel3ctrica Espaola.

Performance center: National Museum of Natural Sciences, Doana Biological Station

Main researcher: Dr. Juan C. Alonso

Title: Incidence of transmission lines of electricity in the wild.

Duration: January 1989-December 1990

Funding agency: Agencia de Medio Ambiente de la Junta de Andaluca.

Performance center: Doana Biological Station.

Main researcher: Dr. Miguel Ferrer

Title: Integrated Development Plan of the Natural Park of Aracena and Picos de Aroche, Sierra Norte de Sevilla and Hornachuelos.

Duration: January 1990-December 1991

Funding agency: Compañía Sevillana de Electricidad y Agencia de Medio Ambiente de la Junta de Andalucía.
Performance center: Doñana Biological Station.
Main researcher: Dr. Miguel Ferrer
Title: Reducing deaths by electrocution of the Iberian imperial eagle.
Duration: January 1990-December 1990

Funding agency: Agencia de Medio Ambiente, Junta de Andalucía
Performance center: Doñana Biological Station.
Main researcher: Dr. Miguel Ferrer
Title: Feasibility of Reintroduction of Imperial Eagle in the Natural Park of Sierra Norte de Sevilla.
Duration: January 1990-December 1990

Funding agency: National Plan for Antarctic Research
Performance center: National Museum of Natural Science, Doñana Biological Station.
Main researcher: Dr. Juan Moreno
Title: Reproductive strategies of Antarctic penguins.
Duration: November 1990-March 1991

Funding agency: Compañía Sevillana de Electricidad, Iberdrola and Red Eléctrica de España (Research and Development Programs Electrotechnical, Ocide, Ministry of Industry).
Performance center: Doñana Biological Station.
Main researcher: Dr. Fernando Hiraldo
Title: Analysis of Impact of Power Lines on the Avifauna of Natural Protected Areas.
Duration: January 1991-May 1995

Funding agency: ICON
Performance center: Doñana Biological Station.
Main researcher: Dr. Fernando Hiraldo
Title: Studies of Renewal Processes in the Imperial eagle populations.
Duration: January 1991-November 1993

Funding agency: National Plan for Antarctic Research.
Performance center: National Museum of Natural Science, Doñana Biological Station.
Main researcher: Dr. Juan Moreno
Title: Reproductive strategies of Antarctic penguins.
Duration: November 1991-March 1994

Funding agency: DGICYT
Performance center: Doñana Biological Station.
Main researcher: Dr. J. A. Donazar
Title: Identification of factors influencing the decline of lesser kestrel populations.
Duration: August 1991-August 1994

Funding agency: Agencia de Medio Ambiente, Junta de Andalucía
Performance center: Doñana Biological Station.
Main researcher: Dr. Fernando Hiraldo
Title: Causes of mortality, population dynamics and demographic patterns of Lesser Kestrel population in the valley of the Guadalquivir.
Duration: July 1992-December 1993

Funding agency: Compañía Sevillana de Electricidad
Performance center: Doñana Biological Station.
Main researcher: Dr. Miguel Ferrer
Title: Analysis of the impact of birds on power lines and substations transport.
Duration: December 1993-April 1994

Funding agency: Red Eléctrica de España
Performance center: Doñana Biological Station.
Main researcher: Dr. Miguel Ferrer
Title: Analysis of the effectiveness of the platforms in the poles of the power line Almaraz-Guadame transport to avoid nesting storks on trouble spots.
Duration: January 1993-March 1994

Funding agency: ICON
Performance center: Doñana Biological Station.
Main researcher: Dr. Miguel Ferrer
Title: Study on the factors that determine the productivity of Imperial Eagles in Doñana.
Duration: November 1993-November 1995

Funding agency: DGICYT
Performance center: Doñana Biological Station.
Main researcher: Dr. Jose Antonio Donazar
Title: Adaptive Significance of the scattering process in birds.
Duration: 1994-1997

Funding agency: National Plan for Antarctic Research.
Performance center: National Museum of C. Natural Doñana Biological Station.
Main researcher: Dr. Juan Moreno
Title: Reproductive strategies of Antarctic penguins.
Duration: November 1994-March 1997

Funding agency: Studies and Projects CLAVE
Performance center: Doñana Biological Station.
Main researcher: Dr. Miguel Ferrer
Title: Study of Correction of bird mortality by power lines in five natural parks of Andalusia.
Duration: December 1994-October 1995

Funding agency: Red Eléctrica de España
Performance center: Doñana Biological Station.
Main researcher: Dr. Miguel Ferrer
Title: Study of signaling future 400 kV line Pinar-Strait.
Duration: August 1994-September 1995

Funding agency: Ecotènia Sociedad Cooperativa
Performance center: Doñana Biological Station.
Main researcher: Dr. Miguel Ferrer
Title: Study of the behavior of birds at wind farms in Tarifa.
Duration: June 1994-October 1995

Funding agency: Iberdrola
Performance center: Doñana Biological Station.
Main researcher: Dr. Miguel Ferrer
Title: Reducing deaths by electrocution of the imperial eagle in the southwest of Madrid.
Duration: October 1994-October 1996

Funding agency: Compañía Sevillana de Electricidad
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Technology support for design of new support distribution
Duration: December 1994-December 1995

Funding agency: Iberdrola
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Study on A 132 kV line Cáceres-Trujillo (IBERDROLA) for the observation of the effectiveness of anti-collision measures installed
Duration: 1995

Funding agency: Iberdrola
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Technological Support for the analysis of impacts of various power lines on birds in certain areas not protected
Duration: 1995 - 1996

Funding agency: Ecotecnia Sociedad Cooperativa
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Effect on the fauna of the installation of wind farm Malpica (La Coruña)
Duration: June 1995-October 1997

Funding agency: Junta de Andalucía
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Drafting the recovery plan of the imperial eagle in Andalusia
Duration: September 1995-November 1996

Funding agency: Junta de Andalucía
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Organization of farm use in the Natural Park Alcornocales
Duration: November 1995-April 1996

Funding agency: Ecotecnia Sociedad Cooperativa
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Contract for the performance of technology support in the form of scientific advice for the design, location and suitability of wind farms
Duration: May 1996 - March 1998

Funding agency: Ecotecnia Sociedad Cooperativa
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Assessment and correction of the impact on the avifauna of the wind farm to be built in the Teixeta Pradell, Barcelona
Duration: January 1997 - November 1997

Funding agency: Desarrollos Eólicos, S.A.
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Assessing the potential impact on birds and vegetation in the Wind Plan of Vejer de la Frontera (Cádiz)
Duration: March 1997 - August 1998

Funding agency: Consejería de Medio Ambiente
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Feasibility of the introduction of the Osprey on coasts, estuaries and wetlands of Andalusia.

Duration: March 1997 - 1999

Funding agency: Junta de Andalucía
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Trends in the population of Bonelli's eagle in Andalusia
Duration: November 1997-April 2000

Funding agency: Glaxo-Wellcome
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Recovery plan for the Iberian imperial eagle
Duration: November 1998-2002

Funding agency: Ministry of Environment
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Monitoring the effect on living pollution Aznalcollar mining accident
Duration: June 1998-December 2001

Funding agency: Junta de Andalucía
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Analysis of pre-migration areas of sedimentation in the Strait of Gibraltar
Duration: January 1999-November 2000

Funding agency: Endesa Cogeneración y Renovables
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Effect of wind turbines on birds
Duration: January 1999-January 2002

Funding agency: Endesa, Cogeneración y Renovables, S.a., Aerogeneradores del Sur, S.A., Microcentrales de Andalucía, S.A., Wigep Andalucía, S.A., Wind Ibérica España, S.A., Peesa y Alabe la Ahumada, S.A.
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Analysis of the presence and behavior of birds flying sailboats and assessment of its risk of collision in Spanish wind farms
Duration: December 1999 - December 2002

Funding agency: Consejería de Obras Públicas de Andalucía, GIASA
Performance Center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Research and monitoring of actions to be taken on sensitive species, included in the proposed compensatory measures for the A-381 Jerez-Los Barrios. (Agreement and First Addendum)
Duration: July 1999 - December 2006

Funding agency: Consejería de Obras Públicas de Andalucía, GIASA
Performance Center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Research and monitoring of actions to be taken on sensitive species, included in the proposed compensatory measures for the A-381 Jerez-Los Barrios. 2 nd Addendum to "study and monitoring of quality habitat and otters and sonification research and habitat quality of the rabbits."
Duration: November 2002-March 2004

Funding agency: Consejería de Obras Públicas de Andalucía, GIASA

Performance Center: Doñana Biological Station

Main researcher: Dr. Miguel Ferrer

Title: Research and monitoring of actions to be taken on sensitive species, included in the proposed compensatory measures for the A-381 Jerez-Los Barrios. 3 rd Addendum "Expansion of budget sonación curriculum and quality of habitat and population, the deer in the Natural Park of the Acorns."

Duration: November 2002-March 2004

Funding agency: Consejería de Obras Públicas de Andalucía, GIASA

Performance Center: Doñana Biological Station

Principal Investigator: Dr. Miguel Ferrer

Title: Research and monitoring of actions to be taken on sensitive species, included in the proposed compensatory measures for the A-381 Jerez-Los Barrios. 4 th Addendum.

Duration: April 2004 - December 2007

Funding agency: Consejería de Obras Públicas de Andalucía, GIASA

Performance Center: Doñana Biological Station

Main researcher: Dr. Miguel Ferrer

Title: Research and monitoring of actions to be taken on sensitive species, included in the proposed compensatory measures for the A-381 Jerez-Los Barrios. 5 th Addendum

Duration: December 2006-November 2010

Funding agency: Junta de Andalucía

Performance center: Doñana Biological Station

Main researcher: Dr. Miguel Ferrer

Title: Areas of juvenile dispersal of imperial eagle and the Bonelli's eagle, important for the stability of the population

Duration: June 2000-June 2002

Funding Agency: EGMASA

Performance center: Doñana Biological Station

Main researcher: Dr. Miguel Ferrer

Title: Reintroduction of Ospreys in the Province of Cadiz

Duration: May 2002 – May 2003

Funding agency: National Antarctic Program

Performance center: Shelter Gabriel de Castilla, Deception Island, Antarctica.

Main researcher: Dr. Manuel Soler

Title: Effect of predation on the reproductive strategy of Antarctic penguins

Duration: January 2002-January 2004

Funding agency: GIASA

Performance center: Doñana Biological Station

Main researcher: Dr. Miguel Ferrer

Title: Monitoring of the Reintroduction of imperial eagles and ospreys in Cadiz

Duration: January 2002-January 2010

Funding agency: EMASESA

Performance center: Doñana Biological Station

Main researcher: Dr. Miguel Ferrer

Title: Study of the effect of reservoir Gergal in bird communities

Duration: November 2002-November 2003

Funding agency: EGMASA

Performance center: Doñana Biological Station

Main researcher: Dr. Miguel Ferrer

Title: Reintroduction of the osprey (*Pandion haliaetus*) in the natural landscape of the marshes of the Odiel (Huelva) and scientific monitoring.
Duration: June 2004-May 2007

Funding agency: Red Eléctrica de España, S.A.
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Reducing the risk of collision in steppe birds.
Duration: March 2004-March 2006

Funding agency: Red Eléctrica de España, S.A.
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Analysis of the effectiveness and life of signaling anti-collision "salvapájaros" in lines of electricity transmission.
Duration: March 2004-March 2009

Funding agency: EGMASA
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Reintroduction of the Osprey in the Natural Park Marismas del Odiel
Duration: 2005

Funding agency: Red Eléctrica de España, S.A.
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Analysis of the incidence of transmission lines in the avifauna of pseudo cereal steppes in Andalusia and sustainable habitat management measures to reduce the impact
Duration: June 2005 - December 2006

Funding agency: Consejería de Medio Ambiente, Junta de Andalucía y Endesa Distribución
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Development and verification of effectiveness of devices and systems support anti-electrocution of birds on power distribution
Duration: October 2005 - October 2007

Funding agency: Red Eléctrica de España, S.A.
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Environmental Assessment in the location of towers within the corridor selected line Lada-Velilla
Duration: October 2005 -

Funding agency: FAPAS
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Analysis of the feasibility of reintroducing the bald eagle and osprey in Asturias
Duration: December 2005-September 2008

Funding agency: Consejería de Medio Ambiente, Junta de Andalucía
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Scientific monitoring of the population of Imperial Eagles in Doñana.
Duration: January 2006-January 2009

Funding agency: Junta de Andalucía, Consejería de Innovación, Ciencia y Empresa (Project Excellence)

Performance center: Doñana Biological Station
Main researcher: D. Anibal Ollero Baturone
Title: SADCON; Autonomous distributed systems for ocnservación the natural environment.
Duration: May 2006 - May 2009

Funding agency: EGMASA
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Osprey Reintroduction of Andalusia
Duration: March 2007-December 2008

Funding agency: Consejería de Medio Ambiente, Junta de Andalucía
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Evaluation of the use of prey bird communities as biodiversity indicators in Andalusia and monitoring systems approach simplified the evolution of terrestrial biodiversity in large areas.
Duration: April 2008-April 2010

Funding agency: Consejería de Medio Ambiente – Junta de Andalucía
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Study on the impact of roads on the funa: predictive modeling, corrective measures and evaluating their effectiveness.
Duration: April 2008 to April 2011

Funding agency: Fundación Migres
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Development of Scientific Management tasks related to a study of flight mechanics and Griffon Vulture Short-toed Eagle in the region of the Strait of Gibraltar (Cádiz)
Duration: May 2008-May 2011

Funding agency: Red Eléctrica de España, S.A.
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Test of measures to minimize the possible impact on the pseudo-steppe birds of electricity transmission lines.
Duration: March 2008 to March 2012

Funding agency: Consejería de Medio Ambiente - EGMASA
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Scientific exploitation of mortality data in wind farms.
Duration: April 2009 to July 2009

Funding agency: ACCIONA
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer
Title: Study of the behavior of pairs of the Iberian imperial eagle (*Aquila adalberti*) in relation to the presence of wind farms
Duration: septiembre 2010 to May 2011

Funding agency: Consejería de Medio Ambiente – Junta de Andalucía
Performance center: Doñana Biological Station
Main researcher: Dr. Miguel Ferrer

Title: Scientific monitoring of the demographic recovery of the Iberian imperial eagle population in the Doñana Natural Area.

Duration: December 2010 to December 2011

Organismo Financiador: Red Eléctrica de España

Centro de Ejecución: Estación Biológica de Doñana

Investigador Principal: Dr. Miguel Ferrer

Título: Identificación de líneas de transporte de energía como stepping-stones para la fauna

Duración: diciembre 2015 a diciembre 2016

Funding agency: Red Electrica de España

Performance center: Doñana Biological Station

Main researcher: Dr. Miguel Ferrer

Title: the use of transmission lines as steeping-stones for the fauna.

Duration: December 2015 to December 2016

9. STAYS IN FOREIGN CENTERS

(Center City, Country, Year, Time, Theme and Key)

Key: D = Ph. D student, P = Postdoctoral, I = guest, S = staff, O = Other

- National Park Ortoachy

Hungary

1992

two weeks

Removing blood samples from European imperial eagle, Eastern Imperial Eagle, for genetic and biochemical analysis. (P)

- University of Urbino

Italy

1996

two weeks

Preparation of a research proposal. (I)

- University of Florence

Italy

1997

20 days

Preparation of a European Masters in Conservation Biology. (I)

- University of Urbino

Italy

1998

3 weeks

Research project on dynamics of small populations. (I)

- University of Florence

Italy

2003

two weeks

Sexual selection and population structure. (I)

- Monte Pollino National Park

Italy

2004
two weeks
Proposal for a reintroduction of griffon vultures. (I)

-Hawk Mountain Sanctuary
USA
2007
14 days
Work meeting to develop Movebank project. (I)

-Hawk Mountain Sanctuary
USA
2009
20 days
Evaluation of Acopian Research Center operation. (I)

-Boise State University
USA
2010
3 weeks
Preparing a Wind Farm research project. (I)

-Hawk Mountain Sanctuary
USA
2010
2 weeks
Giving advice and cooperating with internal training for students. (I)

-Boise State University
USA
2011
2 weeks
Evaluating master works. (I)

- University of Edimburgh
UK
2012
two weeks
Selecting candidates for a Phd contract. (I)

- University of Edimburgh
UK
2013
One week
Evaluating reports of the Scottish Natural Heritage. (I)

- Oregon State University, Corvallis
USA
2018
Two months
Collaborating in the Spotted Owl Conservation project. (I)

- Oregon State University, Corvallis
USA

2019
Four months
Collaborating in the Spotted Owl Conservation project. (I)

- Oregon State University, Corvallis
USA
2020
Five months
Collaborating in the Spotted Owl Conservation project. (I)

10. STAYS IN NATIONAL CENTERS

(Center City, Country, Year, Time, Theme and Key)

Key: D = Ph. D student, P = Postdoctoral, I = Invited, C = Contracted, O = Other.

- Refugio Gabriel de Castilla
Deception Island, South Shetland, Antarctica
1990-91
45 days
Studies of reproductive biology of penguins
P
- Instituto Andaluz de Geología Mediterránea
Granada
1992
12 months
Learning of stochastic simulation techniques generation of amorphous crystals and its application to
The population biology
P
- Refugio Gabriel de Castilla
Deception Island, South Shetland, Antarctica
1993-94
60 days
Studies of reproductive biology of penguins
O
- Refugio Gabriel de Castilla
Deception Island, South Shetland, Antarctica
1995-96
45 days
Studies of reproductive biology of penguins
O

11. CONGRESS, FORUMS, WORKSHOPS (invited)

(Invited lectures, international conference room chairs, chair or secretary of the organizing committee)

1. FERRER, M. & J.J. BLACK. 1992. Power lines and conservation of birds in Spain. "Invited lecture. Spanish Ornithological Conference XIV. SEO-ADENEX. Mérida.

2. FERRER, M. & F. HIRALDO. 1992. Management techniques in endangered bird populations. "Invited lecture. Spanish Ornithological Conference XIV. SEO-icon. Mérida.
3. FERRER, M. 1994. Avifauna and power lines: situation in Spain. "Invited lecture. Power Lines and the Environment. AMBE-Institut Européen d'Ecologie. Metz, France.
4. FERRER, M. 1994. Presidency international meeting "First Symposium on Power Lines and Environment". Red Eléctrica of Spain. Madrid.
5. FERRER, M. 1996. Presidency international meeting "II Symposium on Power Lines and Environment". Red Eléctrica of Spain. Madrid.
6. FERRER, M. 1996. Analysis of impacts of power lines in the avifauna of protected natural areas. -Invited Conference-II Symposium on Power Lines and the Environment. Red Eléctrica of Spain. Madrid.
7. JANSSEN, M., FERRER, M. and MONTOYA, F. 1996. Behavioral study of birds in a wind farm area (Cádiz). "II Jornadas sobre Líneas Eléctricas y Medio Ambiente". Red Eléctrica de España. Madrid.
8. FERRER, M. 1996. Iberian Imperial Eagle Conservation: Status and Prospects. Guest-VI-Conference Workshops Vedem, Faculty of Veterinary Medicine, University of Murcia.
9. FERRER, M. 1996. Agriculture and Environment. Round-Table. Technical Workshop on Wetland Regeneration "La Janda". Agriculture and Environment: Status and prospects of rural Development. Consejería de Medio Ambiente, Junta de Andalucía. Vejer de la Frontera, Cádiz.
10. JANSSEN, G. & M. FERRER 1996. Impact of power lines on birds. "Invited lecture. Second International Conference on Raptors. Raptor Research Foundation. Urbino, Italy.
11. FERRER, M. & G. JANSSEN 1996. Procedure to select power poles which causes electrocutions bird. "Invited lecture. Second International Conference on Raptors. Raptor Reserch Foundation. Urbino, Italy.
12. FERRER, M. 1996. Scientific Committee member. Second International Conference on Raptors. Raptor Reserch Foundation. Urbino, Italy.
13. FERRER, M. 1998. Doñana: ecological aspects. Particularities to be taken in account for preventive and corrective actions. "Invited lecture. Wetlands of Importance as Waterfowl Habitat. Madrid. Spain.
14. FERRER, M. 1998. Doñana mine accident: ecological aspects. Invited conference. International Congress on Bioremedations of Polluted Soils. European Science Foundation-CSIC. Sevilla.
15. FERRER, M. 1999. Nivells of metalls pesants vertebrats fauna in the Doñana National Park i al seu environment. "Invited lecture". Aznalcóllar: un exemple d'mediambientel Interdisciplinary students. Els Juliolis of the University of Barcelona.
16. FERRER, M. 1999. Effect of heavy metals in the Doñana National Park and its surroundings. "Invited lecture. Universidad Autonoma de Madrid.
17. FERRER, M. 2000. The monitoring of birds, a conservation tool. Monitoring of large prey species: the Imperial Eagle. Spanish Ornithological Conference XV. I Jornadas Ibéricas of ornithology. El Rocio, Huelva. SEO. Invited speaker.
18. FERRER, M. 2001. Threatened birds of prey in the world. IV Eurasian Congress on Raptors. Chairman of the Organizing Committee. Raptor Research Foundation-CSIC. Sevilla.
19. FERRER, M. 2001. Effect of Aznacollar mining accident three years later. Invited conference. CEBAS, CSIC, Murcia.

20. FERRER, M. 2001. Conservation of wild animals in danger of extinction. Sociopolitical problems that affect the process. "Invited lecture". Course Management Threatened Animals. Universidad Internacional Menendez Pelayo (UIMP), Valencia.
21. FERRER, M. 2001. Courses in science and technology journalism. Scientific information and crisis communication. Study models. The toxic spill of Aznalcollar as a paradigm. Implications and social and institutional consequences of the communication process. Invited lecture. Universidad Carlos III-Spanish Association of Scientific Journalism. Madrid.
22. FERRER, M. 2001. Past and future of the Iberian imperial eagle. Invited lecture. II Workshop for the conservation of the imperial eagle, SEO-Birdlife, Cáceres.
23. FERRER, M. 2001. Effect of wind farms on bird life. Invited lecture. XX Anniversary Ecotecnia. Barcelona
24. FERRER, M. 2001. Lecture at the University of Urbino, Italy. Estimates of extinction and management plan for highly endangered species: the case of the imperial eagle.
25. FERRER, M. 2001. International Congress of Birds of Prey in Seville. Raptor Research Foundation-CSIC. Inaugural lecture "Threatened Raptors of the World: The Past and the Future of the Spanish Imperial Eagle.
26. FERRER, M. 2002. Italian National Congress on Birds of Prey, Venice. Inaugural lecture. The Spanish Imperial Eagle population: a real-extinction prone species.
27. FERRER, M. 2002. Lecture at the Museum of Natural Sciences, CSIC Madrid. The uncertain future of the imperial eagle. Cycle conference "Biodiversity Crisis" CSIC-BBVA.
28. FERRER, M. 2002. Lecture in Sabadell, Casa de Cultura. The Spanish imperial eagle past and future. AEDENAT.
29. FERRER, M. 2002. Lecture. The biodiversity crisis: the man and other endangered species. Invited lecture. Science Week, CSIC, Murcia.
30. FERRER, M. 2002. The reintroduction project of the Imperial Eagle. I Congress Iberian Wildlife Conservation. Castello Branco, Portugal. Invited lecture
31. FERRER, M. 2002. The proposed reintroduction of the osprey. I Congress Iberian Wildlife Conservation. Castello Branco, Portugal. Invited lecture
32. FERRER, M. 2002 Birds and power lines. I Congress Iberian Wildlife Conservation. Castello Branco, Portugal. Invited lecture
33. FERRER, M. 2003. Reintroduction of the osprey in Cadiz. Invited lecture. Conference on Reintroduction of large raptors in Andalucia. Vejer de la Frontera. Cadiz
34. FERRER, M. 2003. Conflict resolution: Birds, power lines and windmills. Species Conservation Conference and Spaces. Invited Lecture. Murcia.
35. FERRER, M. 2003. Animals and men: the astonished gaze of the eagle. Invited lecture. University of Alicante and Caja de Ahorros del Mediterraneo. Alicante.
36. FERRER, M. 2003. Cooperation in conservation. Invited Lecture. IV Course for Hunting and Conservation. IREC-CSIC-UCLM Fair Pavilion. Ciudad Real.
37. FERRER, M. 2003. The recovery process of the imperial eagle. Invited Lecture. Generalitat Valenciana. Valencia.

38. FERRER, M. 2003. Biology: a profession committed to society. Portrait of J.A. Valverde. Invited Lecture. Professional Association of Biologists. Sevilla.
39. FERRER, M. 2003. The animated home. Invited lecture. Egmasa, Sevilla.
40. FERRER, M. 2004. The mine tail accident of Aznalcollar. Barcelona University. Invited lecture.
41. FERRER, M. 2004. The uncertain future of the imperial eagle. Lecture Series CSIC-FBBVA. The Biodiversity Crisis. Bilbao. Invited lecture.
42. FERRER, M. 2004. The Spanish Imperial Eagle: relict or endangered species? Invited lecture. University of Florence, Florence, Italy.
43. FERRER, M. 2004. Experience of Science. Round table in the "Week of Science". CSIC-Cartuja 93. Sevilla.
44. FERRER, M. 2004. Reclaiming Biodiversity: reintroduction of imperial eagles and ospreys. "Science Week", IRNA-CSIC, Sevilla. Invited lecture.
45. FERRER, M. 2004. Session chair, National Congress of Roads, Consejería de Obras Públicas, Junta de Andalucía. Sevilla.
46. FERRER, M. 2005. Recovering biodiversity: Spanish imperial eagle and osprey reintroductions programs. Fundacion BBVA, Bilbao. Invited lecture.
47. FERRER, M. 2005. Roundtable: Environmental Science Communication. European Congress of Students of Environmental Sciences. Sevilla.
48. FERRER, M. 2005. Roundtable: The Ecological Disaster Aznalcollar 1998-2004. Universidad Pablo de Olavide. Sevilla.
49. FERRER, M. 2005. Invited lecture. Reproductive systems, juvenile dispersal and structured populations. University of Urbino. Italy.
50. FERRER, M. 2005. Invited lecture. Management and reintroductions: tools for biodiversity conservation. University of Urbino. Italy
51. FERRER, M. 2005. Invited lecture. Is development compatible with conservation? Maraton Scientist, National Museum of Natural Sciences, Madrid.
52. FERRER, M. 2005. Experience of Science. Round table in the "Week of Science". CSIC-Cartuja 93. Sevilla.
53. FERRER, M. 2005. The uncertain future of the imperial eagle. Lecture Series CSIC-FBBVA. The Biodiversity Crisis. Valencia. Invited lecture.
54. FERRER, M. 2006. Scientific bases for definition of compensatory measures. First Jornandes countervailing linear infrastructure: they are and how managed. Fundación Doñana 21, REE and ENDESA. Sevilla. Invited lecture.
55. FERRER, M. 2006. Reintroduction projects of Spanish imperial eagles and Ospreys: recovering biodiversity. University of Seville in Seville. Invited lecture.
56. FERRER, M. 2006. Historicism and Structuralism in Biology. Depart. Aesthetic and Contemporary Thought. Faculty of Philosophy, University of Seville in Seville. Invited lecture.
57. FERRER, M. 2006. The imperial eagle. Oxygen Foundation, Caja de Ahorros Burgos. Invited lecture. Burgos.

58. FERRER, M. 2006. Roundtable. Linear Infrastructure and Compensatory Measures. National Environmental Congress. Madrid.
59. FERRER, M. 2006. Roundtable. Custody of land: a new tool for environmental management. International Congress on Biodiversity. Granada.
60. FERRER, M. 2007. Bird migration and global change. Council of Europe, Strasburg, France. Invited speaker
61. FERRER, M. 2007. Insular management and land stewardship. First conference on Custodial Management and Planning. Gypaetus Foundation. Invited speaker
62. FERRER, M. 2007. Density-dependence and habitat heterogeneity. European Ornithologists Union Meeting in Vienna from 24 to 29 August 2007. Invited speaker
63. FERRER, M. 2007. The biodiversity crisis: the man and other endangered species. Congress of Philosophy. Aletheia. Vigo Association. Invited speaker
64. FERRER, M. 2007. Presidency of the First International Congress on Bird Migration and Global Change. Algeciras.
65. FERRER, M. 2007. Insular management and land stewardship. II Conference on Management and Custodial the Territory. Andanatura Foundation, Antequera. Invited lecture.
66. FERRER, M. 2007. Technical Workshop on coordination between the public and private initiative to conserve natural heritage Valencia. Private management in the conservation of nature. Victoria Foundation Laporta Carbonell. Alcoy, Alicante.
67. FERRER, M. 2008. Adattamenti della migrazione degli Uccelli in Europe in climatici mutamenti relates ai. Invited lecture. Universita degli Sudi di Urbino. Italy.
68. FERRER, M. 2008. The management of threatened species: the case of the imperial eagle. Invited lecture. Comunale Centro di Pesaro, Italy.
69. FERRER, M. 2008. Simulation models to predict the impact of wind facilities. Invited lecture. Generalitat Valenciana. Valencia.
70. FERRER, M. 2008. Migrating birds and global change. Invited lecture. Universidad Autonoma de Madrid, El Pais. Miraflores, Madrid.
71. FERRER, M. 2008. Bird migration and global change. Invited lecture. Parco Nazionale di Gargano, Italy.
72. FERRER, M. 2008. Biodiversity and global change. Invited lecture. Alicante
73. FERRER, M. 2008. The captive breeding center, the imperial eagle. Invited lecture. Universidad Internacional de Andalucía.
74. FERRER, M. 2008. Bird Migration and Global Change: A report for the Expert Group on Biodiversity and Climate Change, Council of Europe, Sevilla, 13-14 March. Invited lecture
75. FERRER, M: 2008. Bird Migration and Climatic Change. Zaragoza, July. Invited Lecture
76. FERRER, M. 2008. Active management of the Osprey in Spain: the reintroduction program in Andalusia. Rutland Waters.UK. Invited speaker.
77. FERRER, M. 2009. El nacimiento del ecoestado. Casa encendida. Madrid. Invited lecture

78. FERRER, M. 2009. Custodial Forum 4th Meeting of the Territory. Foundation Felix Rodriguez de la Fuente and Xarxa land stewardship. Mayo, Madrid. Invited speaker
79. FERRER, M. 2009. Roundtable presentation "Environmental Impacts of Wind Energy" Conference on Renewable Energy in Extremadura. June, Cáceres, Extremadura. Invited speaker
80. FERRER, M. 2009. Raptor Research Foundation Annual Conference. Chairman. September, Scotland, England
81. FERRER, M. 2009. Third Annual Conference of the Eagle Conservation Alliance. ACE. Identifying species and conservation priorities together with most efficient problem solving strategies. How can ACE help? October, Ainsa, Ordesa National Park, Aragon. Invited speaker.
82. FERRER, M. 2009. Seminar SEO BirdLife. Do we choose good sites for wind farms? Octubre, Madrid. Spain. Invite lecture.
83. FERRER, M. 2009. Invited speaker. 1st National Congress on Reintroduction. November, Jerez, Spain.
84. FERRER, M. 2009. 1st Day of information on renewable energy. Present and future of offshore wind power. Invited speaker. "Wind farms and birds: how to predict and avoid impacts." November, University of Cadiz, Spain
85. FERRER, M. 2010. Bird migration and global change. Council of Europe, Reykjavik, Iceland. Invited speaker.
86. FERRER, M. 2010. 2nd Conference Bird Migration and Global Change. Chairman. March, Algeciras, Spain.
87. FERRER, M. 2010. Popular science lectures Caja de Burgos. Biodiversity and Global Change. November 2010, Burgos. Invited lecture
88. FERRER, M. 2010. Loss of biodiversity and global change. X National Congress of Environment - CONAMA, November 20 to 26, Palacio Municipal de Congresos de Madrid, Spain. Invited speaker
89. FERRER, M. 2011. Biodiversidad y cambio global. Fundacion Santander, Santander. Invited lecture.
90. FERRER, M. 2011. Climate change adaptation. Convención Cambio Climático. Sevilla, Spain. Invited speaker
91. FERRER, M. 2011. From the conservation of nature to management of life. Valencia, Invited lecture.
92. FERRER, M. 2012. What is the conservation of biodiversity? University of Seville, Spain. Invited lecture.
93. FERRER, M. 2012. 1er Iberian meeting of wind energy and fauna. Chairman. Jerez, Cádiz.
94. FERRER, M. 2012. Curso de Verano de la Universidad de Málaga "El papel de lo privado en la gestión de lo público" con la ponencia "Investigación". 23 de julio de 2012, Marbella, Málaga. Invited speaker.
95. FERRER, M. 2012. Wind Wildlife Research Meeting IX, November 27-30, 2012 in Denver, USA. Invited as a member of the scientific committee. Denver. Colorado, USA.
96. FERRER, M. 2012. Reintroductions, a new tool for a changing world. Baeza UNIA. Invited lecture
97. FERRER, M. 2013. Wind farms and birds: The state of the art 2013. Watson Bird Foundation, Edimburg, Scotland. Invited lecture

98. FERRER, M. 2013. Flyways-Satellite tracking Osprey Migration as a global education and conservation tool. International Seminar. Invited speaker. Linking Migration Studies and Education. The Work of Migres Foundation in Spain. February 3th-6th, Kfar Blum, Israel.
99. FERRER, M. 2013. Hacia una minería sostenible. Congreso de Minería Metalica. AMINER. Sevilla. Invited speaker
100. FERRER, M. 2013. Doñana y la producción de fresas: Una visión desde el CSIC. Congreso de cultivo de la fresa. IFAPAS. Huelva. Invited lecture
101. FERRER, M., MORANDINI, V. 2013. Seminario: El águila Imperial Ibérica en Doñana. -Espacio Natural de Doñana – Centro de visitantes “El Acebuche”. Invited lecture
102. FERRER, M. 2013. Population management and reintroductions in the Spanish Imperial Eagle. Boise State University, Boise, Idaho, USA. Invited lecture
103. FERRER, M. 2013. Birds and wind farms. Instituto de Microelectronica CSIC, Sevilla. Invited lecture
104. FERRER, M. 2013. Biodiversidad y empresas privadas: del conflicto a la colaboración. Fundación CSIC, Madrid. Invited lecture.
105. FERRER, M. 2013. La conservación de la naturaleza en el siglo XXI. Hostal de los Reyes Católicos. Santiago de Compostela, 7 de noviembre CSIC. Invited lecture
- 106.
107. FERRER, M. 2014. Birds, power lines and wind farms. Santiago de Chile, Chile. Servicio de Agricultura y Ganadería. Gobierno de Chile. Invited lecture.
108. FERRER, M. 2014. 50 años de apuesta por conservar Doñana. Baeza UNIA. Invited lecture
109. FERRER, M. 2014. Seguimiento científico del águila imperial en Doñana. Acebuche, Parque Nacional de Doñana. Invited lecture
110. FERRER, M. 2015. Birds and power lines. International conference on bird conservation. Budapest, Hungary. Invited speaker
111. FERRER, M. 2015. Aves y tendidos eléctricos. Situación actual. Endesa, Sevilla. Invited lecture.
112. FERRER, M. 2015. Aves y Parques eólicos. Instituto de Química Orgánica CSIC, Madrid. Invited lecture
113. FERRER, M. 2015. El centro internacional de migración de aves CIMA. Tarifa, Cádiz. Invited lecture
114. FERRER, M. 2015. La importancia de los proyectos de reintroducción. Universidad de Sevilla, Invited lecture
115. FERRER, M. 2016. Wind farms impacts. Puerto Mont, Chile. Ministerio de Energía. Invited lecture
116. FERRER, M. 2016. Wind farms impacts. Concepción, Chile. Ministerio de Energía. Invited lecture
117. FERRER, M. 2016. The Spanish imperial eagles. “Derek Racklife Memorial Lecture”, Scottish Raptor Working Group. Scotland. Invited lecture
118. FERRER, M. 2016. Tendidos eléctricos: del conflicto a la solución. Invited speaker. UICN meeting. CIMA, Tarifa.

119. FERRER, M. 2016. 50 years of raptor researches in Spain. Invited speaker. Raptor Research Foundation annual meeting. Cape May, NJ.
120. FERRER, M. 2016. Reintroducciones. Red Electrica de Espana, CIMA, Tarifa. Invited lecture
121. FERRER, M. 2017. Birds and Wind Farms: the state of the art in Spain 2017. Invited lecture. Scottish Natural Heritage and Watson Bird Foundation. Botanical Garden, Edimburg, Scotland.
122. FERRER, M. 2017. Viabilidad de la reintroduccion del aguila pescadora en Valencia. Gandia, Generalitat Valenciana. Invited lecture
123. FERRER, M. 2018. La reintroduccion del aguila pescadora en Valencia. Gandia, Generalitat Valenciana. Invited lecture.
124. FERRER, M. 2018. Veinte años desde Aznalcollar: lecciones aprendidas. Instituto de Recursos Naturales de Andalucia CSIC, Sevilla. Invited speaker
125. FERRER, M. 2018. Human beings and Nature. Reina Sofia Foundation, Madrid. Invited speaker
126. FERRER, M. 2018. 3rd International congress on Bird Migration and Global Change. President of scientific committee. Tarifa, Spain.
127. FERRER, M. 2018. Science and decision makers. Escuela de Roma CSIC. Roma. Invited speaker
128. FERRER, M. 2018. Conservation of migratory birds. 3rd International congress on Bird Migration and Global Change. Tarifa, Spain. Invited speaker
129. FERRER, M. 2018. Plan estrategico Sevilla 2030. Sostenibilidad y medio ambiente. Paraninfo Universidad de Sevilla. Invited speaker
130. FERRER, M. 2018. Ecologia aplicada en el CSIC. Colegio Mayor Hernando Colon, Sevilla. Invited speaker
131. FERRER, M. 2019. El Aguila imperial iberica. LPN – Liga para a Protecção da Natureza, Castro Verde, Portugal Invited speaker.
132. FERRER, M. 2019. Wetlands: management and conservation. Oregon State University. Corvallis, USA. Invited lecture.
133. FERRER, M. 2019. Seguimiento científico de la recuperación del aguila imperial en Doñana. Jornadas Parque Nacionales; 50 aniversario del Parque Nacional de Doñana. Matalascañas, Huelva. Invited speaker
134. FERRER, M. 2020. The Spanish Imperial Eagle: Recovering One of the Rarest Eagles in the World. Department of Fisheries and Wildlife, OSU. Invited lecture.
135. FERRER, M. 2020. Can birds and turbines share the wind? Ecology, Evolution, and Conservation Biology Seminar Series. Oregon State University. Invited lecture.
136. FERRER, M. 2020. Avifauna y tendidos eléctricos. Congreso Nacional de Medio Ambiente (CONAMA). Madrid 2 de Junio. Invited speaker.
137. FERRER, M. 2020. Medio ambiente y renovables. Congreso Nacional de Medio Ambiente (CONAMA). Madrid 2 de Junio. Invited speaker.
138. FERRER, M. 2021. Reintroductions as a tool for conservation of migratory raptors. Raptors MOU Fourth Meeting of the Technical Advisory Group (13-15 December 2021) Convention on Migratory Species Office - Abu Dhabi United Nations Environment Programme. Invited lecture.

139. FERRER, M. 2021. El papel de la ciencia en los procesos decisionales en ámbito político y legislativo. *Ciclo Ciencia, Política y Diplomacia*. Institutos Cervantes de Milán, Roma, Nápoles y Palermo, con el asesoramiento científico de la Asociación de Investigadores Españoles en la República Italiana (ASIERI). Escuela de Roma, instituto Cervantes. Invited lecture.
140. FERRER, M. 2021. Biodiversidad. El próximo gran reto ambiental de la electricidad. Jornada de la DG de RRII y Regulación, ENDESA. Invited lecture.
141. FERRER, M. 2021. Avifauna y tendidos eléctricos. Congreso Nacional de Medio Ambiente (CONAMA). Madrid 2 de junio. Invited speaker.
142. FERRER, M. 2021. Medio ambiente y renovables. Congreso Nacional de Medio Ambiente (CONAMA). Madrid 2 de junio. Invited speaker.
143. FERRER, M. 2022. Descarbonización y transición energética". XI Congreso Nacional de Evaluación de Impacto Ambiental (CONEIA). Round Table.
144. FERRER, M. 2022. Renovables en entornos Rurales y reindustrialización. *La transición energética como motor de desarrollo del SUR*. Grupo Jolly, 22 febrero, Sevilla. Round Table.
145. FERRER, M. 2022. Transporting Biodiversity Using Transmission Power Lines as Stepping-Stones? *Nature networks – how can the grid help to reconstruct fragmented ecosystems?* Renewables Grid Initiative Manfred-von-Richthofen-Straße 4 | 12101 Berlin | Germany
146. FERRER, M. 2022. Update of Rüppell's vulture situation and trends in Iberia. *1st meeting of the working group on the Rüppell's vulture in the Mediterranean*. UICN-Med Centro de Cooperacion del Mediterraneo
147. FERRER, M. 2022. Avifauna y parques eólicos. Congreso Nacional de Medio Ambiente (CONAMA). Madrid. Invited speaker.
148. FERRER, M. 2022. Reintroductions and reinforcements of endangered bird species. Cadiz. Fundación Migres – organizer
149. FERRER, M. 2023. La Energía en Andalucía: Retos y oportunidades de la transición energética. Club Español de la Energía, 13 abril, Sevilla. Round Table

12. Scientific-technical activity

(Lines of research or development)

- Applied Ecology
- Ecology and behavior of vertebrates
- Conservation Biology
- Population dynamics
- Physiology
- Reproductive biology in Antarctic environments
- Reduced impact on the generation, transmission and distribution of energy and construction of roads

13. THESIS SUPERVISED

(Title, doctoral student, university, year, etc.).

13.1 Bachelor Thesis

1. Habitat selection by immature Spanish Imperial Eagles during the dispersal period. Mariska Harte. Universidad Agrícola de Wageningen, Holanda. 1995. Excellent.
2. Habitat selection and productivity in the Spanish imperial eagle population of Doñana National Park. Isabelle Bisson, Faculty of Agricultural and Environmental Sciences, McGill University, Quebec, Canada. 1996. Excellent.
3. Brood reduction by habitat heterogeneity: a mechanism of population regulation in raptors. Julien Lamelin. Universidad de Paris, Francia. 2003. Excellent
4. L'Aquila Imperiale Iberica: Il Progetto di Reintroduzione nella provincia di Cadiz. Guisseppa Saba. Universidad de Florencia. 2004. Excellent.
5. Powerlines and Birds: Drivers of Pylon Use by White Storks (*Ciconia ciconia*). Evan M. Burdett. School of Biological Sciences, University of East Anglia, Norwich, UK. 2020. Excellent.

13.2 Doctoral Thesis

1. Birds and power lines: a field of tension. Guyonne E.F. Janss, University of Utrecht. Netherlands. Excellent Cum Laude 2001.
2. Ecophysiology and breeding behavior in yellow-legged gull. Carlos Alonso, University of Vigo. Excellent Cum Laude 2000.
3. Bonelli's eagle juvenile dispersal. Javier Balbontin, University of Seville. Excellent Cum Laude 2004.
4. Birds and wind farms: effects and interactions. Manuela de Lucas (co-director G. Janss), Universidad Autonoma de Madrid. Excellent Cum Laude 2007.
5. Golden Eagles juvenile dispersal. Alvaro Soutullo. (co-director V. Urios). University of Valencia. Excellent Cum Laude 2008.
6. Dynamics of a growing population of Booted Eagle (*Hieraetus pennatus*) in the Doñana National Park: habitat heterogeneity and individual adjustment. Eva Casado, University of Seville. Excellent Cum Laude 2009.
7. Effects of electric lines on the conservation of a threatened species Coscoroba Swan. Cecilia Calabuig (co A. Green), University of Seville. Excellent Cum Laude 2010.
8. Colonizing population dynamics. Virginia Morandini (codirected by Ian Newton), Universidad de Sevilla. Excellent Cum Laude 2017.
9. Effects of heavy metal contamination in living beings. Esperanza Gil, Universidad de Sevilla. Fecha de inicio: 2015

14. OTHER ACTIVITIES OF INTEREST RELEVANT SCIENTIFIC, TECHNICAL or ACADEMIC

(Year, activity, etc.).

Participation in the following conferences:

14.1 INTERNATIONAL CONFERENCES

1. FERRER, M., DE LA RIVA, M. & J. CASTROVIEJO. 1986. Impacto de la electrocución en líneas eléctricas aéreas sobre las poblaciones de rapaces de Doñana. -Comunicación-. IV Conferencia Internacional sobre Rapinas Mediterrânicas. Evora, Portugal.
2. GARCIA-RODRIGUEZ, T., FERRER, M. & J. CASTROVIEJO. 1986. Hematología de rapaces. -Comunicación-. IV Conferencia Internacional sobre Rapinas Mediterrânicas. Evora, Portugal.
3. FERRER, M., GARCIA-RODRIGUEZ, T. & J. CASTROVIEJO. 1986. El centro de recuperación de rapaces de Doñana. -Comunicación-. IV Conferencia Internacional sobre Rapinas Mediterrânicas. Evora, Portugal.
4. FERRER, M., CALDERON, J. & J. CASTROVIEJO. 1986. Reproducción y dinámica de Aquila adalberti en Doñana. -Comunicación-. IV Conferencia Internacional sobre Rapinas Mediterrânicas. Evora, Portugal.
5. CASTROVIEJO, J., FERRER, M., ATENCIA, C. & S. MORENO. 1986. Estatus y distribución de Gyps fulvus en Andalucía. -Comunicación-. IV Conferencia Internacional sobre Rapinas Mediterrânicas. Evora, Portugal.
6. FERRER, M. & J. CASTROVIEJO. 1988. Preliminary results of a juvenile dispersal study on the Spanish imperial Eagle from the Doñana National Park (SW Spain). -Comunicación-. 1988 Meeting of the American Ornithologists' Union. Fayetteville, Arkansas, USA.
7. ALDAMA, J.J., FERRER, M., BELTRAN, J.F., FERRERAS, P., DELIBES, M. & F. HIRALDO. 1989. Investigación y conservación de dos especies amenazadas en el Parque Nacional de Doñana: Lince Ibérico y águila imperial. -Panel-. I Simposium Internacional sobre Diversidad Biológica. Madrid.
8. DONAZAR, J.A., FERRER, M. & F. HIRALDO. 1991. Optimization of conservation efforts in large raptors: problems of low and high population densities. -Comunicación-. 5th Annual Meeting of Society for Conservation Biology. University of Wisconsin, Madison. USA.
9. CADENAS, R., MAÑEZ, M. & M. FERRER. 1992. The electric power lines in Doñana National Park, Spain. -Comunicación-. International Conference on Avian Interactions with Utility Structures. Electric Power Research Institute, Miami, USA.
10. AGUILAR, J., FERRER, M., VIÑUELA, J., CARRASCAL, L.M. & J. MORENO. 1993. Nest defence by Chinstrap Penguins Pygoscelis antarctica. XXIII International Ethological Conference. Marbella, España.
11. FERRER, M., JANSS G.F.E. AND SÁNCHEZ, J. 1993. Collision et electrocution chez les oiseaux en Espagne. Pp. 131-133 in Meriaux, J.L. y Trouvilliez, J. Actes du colloque international Lignes électriques et environnement. 6-8 junio 1996 en Metz. Insitut Européen d'Ecologie.
12. FERRER, M. 1994. Edad de la primera reproducción y viabilidad de poblaciones de rapaces. VI Congreso de Rapaces Mediterrâneas. Palma de Mallorca.

13. BISSON, I. & M. FERRER 1995. Reproductive success of young and adult Spanish imperial Eagles in the Doñana National Park. *Holarctic Birds of Prey*, Badajoz.
14. CEREROLS, N., MARTINEZ, A. & M. FERRER. 1996. Bird impact study on the 10 MW wind farm of La Peña (Tarifa). EWEA Special Topic Conference on "Integration of wind power plants in the environment and electric systems". Roma, Italia.
15. CEREROLS, N., MARTINEZ, A. & M. FERRER. 1996. Bird impact study on the 10 MW wind farm of La Peña (Tarifa). European Union wind energy Conference and exhibition. Svenska Mässan Congress. Göteborg, Sweden.
16. ALONSO-ALVAREZ, C., FERRER, M., FIGUEROLA, J., VEIRA, J.A.R. & M. BERTELLOTTI. 2000 High testosterone levels did not produce effects on immune system or body condition in yellow-legged gulls. VIII Congreso Nacional y V Latinoamericano de Etología. Granada. Spain.
17. M. DE LUCAS, JANSS, G. AND FERRER, M. 2001. Comparative study of the bird behaviour in a wind farm and two adjacent areas in Tarifa (Spain), 4TH Eurasian Congress on Raptors, Raptor Research Foundation and Estación Biológica de Doñana. Sevilla, 2001
18. PENTERIANI, V., GALLARDO, M. & M. FERRER. 2002. Results of a long-term study on an eagle owl population. I Italian Symposium on Birds of Prey and Owls (*comunicación oral*).
19. M. DE LUCAS, JANSS, G. Y FERRER, M. Impacto de los parques eólicos en las poblaciones de rapaces, 1^{er} Encontro Ibérico de Recuperaçao de Fauna Selvagem, NEPA y Quercus. Castelo Branco, 2002.
20. PENTERIANI, V. & M. FERRER. 2003. Patterns autorganizzati in popolazioni animali: il caso dell'aquila imperiale. XII Convegno Nazionale di Ornitología. Italia
21. PENTERIANI, V. & M. FERRER. 2003. Animal population as decentralised systems: the case of the Spanish imperial Eagle. 6th World Conference on Birds of Prey and Owls. Hungría
22. M. DE LUCAS, JANSS, G. AND FERRER, M. 2003. Spanish wind farms and birds of prey. Preliminary results. 6TH World Conference on Birds of Prey and Owls, World Working Group on Birds of Prey and Owls. Budapest, 2003.
23. PEÑARRUBIA, S., URIOS, V. & M. FERRER. 29 noviembre 2003 – 1 diciembre 2003. Comportamiento dispersivo de juveniles de águila real (*Aquila crysaetos*) durante su primer invierno en la Península ibérica. IV Congreso de Ornitología de SPEA (Sociedade Portuguesa para o Estudo das Aves) y II Jornadas ibéricas de Ornitología. Aveiro (Portugal) (*comunicación en panel*).
24. MURIEL, R., CASADO, E., FERRER, M. 2007 Parco Regionale della Maremma. Ponencia "Active management of the Osprey in mainland Spain: the reintroduction program in Andalusia". *International Meeting on Western-Palaearctic Osprey* 1-2 diciembre. Alberese, Grosseto. Italy.
25. CASADO, E., MURIEL, R., FERRER, M. 2008 Lincoln Park Zoo Poster "Active conservation of Spanish Imperial eagle (*Aquila adalberti*) and Osprey (*Pandion haliaetus*) in Andalucía (Spain). Reintroduction and restocking programs": Applying Science to Conservation. *First International Wildlife Reintroduction Conference* 15-16 abril Chicago. USA.

26. MURIEL, R., CASADO, E., FERRER, M. 2008. Zoological Society of London: Poster "The reintroduction of the Osprey (*Pandion haliaetus*) in Andalusia (Spain)". *Avian Reintroduction Biology: current issues for science and management*. 8-9 mayo, London. UK.
27. MURIEL, R., FERRER, M., CASADO, E. 2008 Zoological Society of London. Poster "Active conservation of the Spanish Imperial Eagle (*Aquila adalberti*) in Andalusia (Spain): the reintroduction program in Cádiz and the restocking program in Doñana National Park". *Avian Reintroduction Biology: current issues for science and management*. 8-9 mayo. London. UK.
28. M. DE LUCAS Y M. FERRER 2009 "La energía eólica y su relación con las aves". Telemetría convencional e de satélite na avaliacao do impacto de infraestruturas sobre a avifauna. Évora, Portugal.
29. FERRER, M. 2010. State of the art in Spain 2010. Wind Wildlife Research Meeting VIII, 19 - 21 october 2010 - Lakewood Colorado USA
30. MUÑOZ, A.R., FERRER, M., DE LUCAS, M. & E. CASADO. 2011. Raptor mortality in wind farms of southern Spain: mitigation measures on a major migration bottleneck area. In: May R and Bevanger K. eds. Proceedings conference on wind energy and wildlife impacts. Trondheim, Norway: Norwegian Institute for Nature Research.
31. MORANDINI V., FERRER M. AND NEWTON I. 2014. Floater interference reflects territory quality in the Spanish Imperial Eagle: a test of a density-dependent mechanism. –Oral Communication-. Raptor Research Foundation 2014 Conference. Corpus Christi, Texas- USA.
32. MORANDINI V., DE LUCAS M., CALABIUG C., FERRER M. 2015. Avian mortality in windfarms: The State of the Art in Spain. –Oral communication-. Conference on Wind energy and Wildlife impacts (CWW2015). Berlin, Germany.
33. MORANDINI V., MURIEL R., FERRER M. 2015. Ontogeny of juvenile dispersal distances in the Spanish imperial eagle: a test of the competitive displacement hypothesis. - Oral communication-BOU Birds in time and space: Avian tracking and remote sensing (BOU2015). Leicester, UK.
34. MORANDINI V., FERRER M. 2016. Physiological conditions of parent and offspring Black-browed Albatrosses. –Oral communication-. 6th International Albatross and Petrel Conference. Barcelona, Spain.
35. MORANDINI V., FERRER, M. 2016. Juvenile Dispersal Patterns: Spanish Imperial Eagle. –Oral communication-. Raptor Research Foundation Annual Meeting, Cape May, NJ.
36. MORANDINI V., FERRER, M. 2017. Density-dependent parameters of reintroduced populations: age of first breeding and the overestimation of extinction risks. –Oral communication-. Raptor Research Foundation Annual Meeting, Salt Lake City, Utah.
37. FERRER, M. MORANDINI, V. 2017. Reintroducing endangered raptors: a case study of supplementary feeding and removal of nestlings from wild populations–Oral communication-. Raptor Research Foundation Annual Meeting, Salt Lake City, Utah.
38. FERRER, M. 2019. El Aguila imperial iberica–Oral communication-. LPN – Liga para a Protecção da Natureza, Castro Verde, Portugal.

39. DÍAZ-DELGADO, R., FERRER, M., FLORENCIO, C., MURIEL, R., ALARCÓN, V.M., CÁCERES, J., PÉREZ, F.J. 2021. The application of drones for monitoring species populations: some examples on birds. 5th Natura 2000 monitoring workshop — 15th November 2021. Virtual presentation.
40. FERRER, M. 2022. Cómo y cuándo hacer un proyecto de reintroducción. En *Reintroductions and reinforcements of endangered bird species*. Cadiz. Fundación Migres
41. FERRER, M. 2022. Reintroducciones de futuro. En *Reintroductions and reinforcements of endangered bird species*. Cadiz. Fundación Migres
- 42.

14.2 NATIONAL CONGRESS

1. FERRER, M. & J. CASTROVIEJO. 1987. Consideraciones sobre la protección del águila imperial en Doñana: Productividad, dispersión juvenil y tendidos eléctricos. -Comunicación-. Primeras Jornadas Internacionales sobre Aves Rapaces. Madrid.
2. FERRER, M., NEGRO, J.J. & J. CASTROVIEJO. 1987. Resultados provisionales del estudio de la dispersión juvenil del águila imperial ibérica (*Aquila adalberti*) en el Parque Nacional de Doñana. -Panel-. IX Jornadas Ornitológicas Españolas. Madrid.
3. REGIDOR, S., SANTOS, C., NEGRO, J.J. & M. FERRER. 1987. Ensayo de modificaciones sobre un tendido eléctrico experimental en el Parque Nacional de Doñana. -Panel-. IX Jornadas Ornitológicas Españolas. Madrid.
4. NEGRO, J.J., FERRER, M., SANTOS, C. & S. REGIDOR. 1987. Eficacia de dos métodos para prevenir electrocuciones de aves en tendidos eléctricos. -Panel-. IX Jornadas Ornitológicas Españolas. Madrid.
5. FERRER, M., AGUILAR, J. & J. VIÑUELA. 1991. Estudios fisisocológicos del Pingüino de Barbijo *Pygoscelis antarctica* en Isla Decepción, Antártida. -Comunicación-. IV Simposium Español de Estudios Antárticos. Puerto de la Cruz, Tenerife.
6. GAONA, P., FERRER, M. & M. DELIBES. 1991. Aplicación del análisis de sensibilidad de un modelo matricial a la evaluación de estrategias para la conservación del águila. -Comunicación-. III Jornadas de la Asociación Española de Ecología Terrestre. León
7. FERRER, M. 1996, "Reintroducción del águila imperial en la Sierra de Aracena y Picos de Aroche", en: *X Jornadas del Patrimonio de la Sierra de Huelva*, Diputación Provincial, Ayuntamiento de Galaroza.
8. MINGUEZ, E., FERRER, M. & J. BELLIURE. 1996. La competencia por el territorio de nidificación en el pingüino barbijo *Pygoscelis antarctica*. -Poster- VI Simposio de Estudios Antárticos. Madrid.
9. FERRER, M. 1996. Análisis de impactos de líneas eléctricas sobre avifauna de espacios naturales protegidos. In: Red Eléctrica de España. Second Technical Sessions on Power Lines and the Environment. Madrid, Spain, pp. 197-206.
10. JANSS, G.F.E. & FERRER, M. 1996. Suceptibilidad de aves para la colisión con tendidos eléctricos. Segundas Jornadas sobre líneas eléctricas y el medio ambiente. Red Eléctrica de España. Madrid.

11. M. DE LUCAS, JANSS, G. Y FERRER, M. 2002. Impacto de los parques eólicos en las poblaciones de aves rapaces”, XVI Jornadas Ornitológicas, Sociedad Española de Ornitología (SEO/BirdLife). Salamanca.
12. M. DE LUCAS, JANSS, G. Y FERRER, M. 2002. Efecto de los parques eólicos sobre una población de aguilucho cenizo en Cádiz, Asociación Ecologista Ánade. Sevilla.
13. BALBONTÍN, J., FERRER, M. & V. PENTERIANI. 2002. Análisis de la situación actual y tendencia de la población de águila perdicera (*Hieraetus fasciatus*) en Andalucía. I Jornadas de Historia Natural de Cádiz (*comunicación oral*).
14. PEÑARRUBIA, S., URIOS, V. & M. FERRER. 3-7 Abril 2004. Comportamiento dispersivo de juveniles de águila real (*Aquila crysaetos*) durante su primer año en la Península ibérica”. XVII Congreso Español de Ornitología organizadas por SEO/Birdlife. Madrid (*comunicación en panel*).
15. CADAHÍA, L., URIOS, V., NEGRO, J.J., FERRER, M. & Á. SOUTULLO. 2004. Dispersión natal, establecimiento de parejas reproductoras y su efecto en la estructura genética de las poblaciones de águila-azor perdicera (*Hieraetus fasciatus*) y águila real (*Águila crysaetos*) en la Península ibérica. VII Jornadas de Investigación de San Alberto Magno. Universidad de Alicante.
16. M. DE LUCAS, M. FERRER. 2008. Modelos de simulación para prevenir el impacto de parques eólicos en aves, Parques eólicos en Extremadura, Adenex. Montánchez, Junio
17. MURIEL, R., FERRER, M., CASADO, E. FAPAS. 2008. Ponencia “Gestión activa del águila pescadora: el programa de reintroducción en Andalucía”. Jornadas de conservación de la biodiversidad: el águila pescadora en la Ría de Villaviciosa. Villaviciosa. Asturias.
18. M DE LUCAS, M. FERRER, G. JANSS Y L. BARRIOS. 2009. Estudios de impacto ambiental y mortalidad real en parques eólicos. V Congreso Nacional de Evaluación de Impacto Ambiental, Asociación Española de Evaluación de Impacto Ambiental. Córdoba.
19. GONZALEZ-BROCO, C.; MARTÍN, B.; TORRALVO, C.; ONRUBIA, A.; REYES, P. & FERRER, M. 2019. Alimentación suplementaria y cambio de uso del espacio en el entorno de parques eólicos en una rapaz amenazada, el alimoche. Abstracts IV Congreso de Biodiversidad y Conservación de la Naturaleza, Cádiz (España). 19 - 22 Septiembre, 2019.
20. TORRALVO, C.; RENDÓN-MARTOS, M.; GONZALEZ-BROCO, C.; ONRUBIA, A. & FERRER, M. 2019. De la extinción a la recuperación del águila pescadora en Andalucía. Abstracts IV Congreso de Biodiversidad y Conservación de la Naturaleza, Cádiz (España). 19 - 22 Septiembre, 2019.

14.3 NATIONAL and INTERNACIONAL FORUMS

1. FERRER, M. 2009. IV Meeting of the Forum state land stewardship (Island-Red). Fundación Félix Rodríguez de la Fuente, Madrid.
2. FERRER, M. 2009. Biodiversity Foundation. Objectives and tasks of the Platform of land stewardship.
3. FERRER, M. 2009. Scenario Design Doñana. Socioecosistemas Lab at UAM.

4. FERRER, M. 2009. Foundation for the Conservation of the Bearded. Office of the WWF, Madrid.
5. FERRER, M. 2009 Meeting: Twentieth Anniversary of the Natural Spaces Law in Andalucía. June, Málaga
6. FERRER, M. 2010 5th Meeting of the Group of Experts on Biodiversity and Climate Change. Bern Convention – Council of Europe. Iceland.
7. FERRER, M. 2010 Meeting of Expert Group "The critical factors for education for sustainable development and for environmental education at different levels of education and training". Directorate General for Education and Culture - European Commission, Brussels.
8. FERRER, M. 2010. International course on Ecological Consequences of Climate Change: integrating research approaches. Talk "Bird migration and climate change". Palacio de Doñana, Huelva, Spain
9. FERRER, M. 2011. II Symposium of Experts on Biodiversity. The Conservation Land Trust. Alicante.

14.4 COURSES GIVEN

1. FERRER, M. June 1990. "Birds and power lines. Species Recovery Centers. I Training Course for Environmental Protection Service of the Nature of the Civil Guard. Sevilla. 4h
2. FERRER, M. November 1990. "Birds and power lines. Species Recovery Centers. I Training Course for Environmental Protection Service of the Nature of the Civil Guard. Sevilla. 4h
3. FERRER, M. 1993. Recent advances in the prevention of bird deaths from electrocution in electricos. -lying turrets Invited lecture. First Course on Impact of Industrial Activities in the Environment. Official College of Industrial Engineers-ADENEX Badajoz. Mérida. 3h
4. FERRER, M. 1997. Conservation and management of threatened species (vertebrates). Training Course Cabinet CSIC. Madrid. 3h
5. FERRER, M. 1997. Piani di gestione della fauna nelle aree protette: ricerca e programmazione. Course Potsgrado Forest School. University of Urbino University of Florence. 8h
6. FERRER, M. 1998. Conservation biology. Postgraduate Course of the University of Florence. 8h
7. FERRER, M. 1999. Studio, ecologia e comportamento dei problemi rapaci in relazione a di conservazione. Course Potsgrado Forest School. University of Urbino. 12h
8. FERRER, M. 2000. The European legislazione sulla gestione della flora. A consultative process on wildlife management legislation. Course Potsgrado Forest School. University of Urbino. 12h
9. FERRER, M. 2001. Summer courses "Università nel Bosco" at the Universities of Urbino, Florence and Bologna. Fossombrone, Italy. 20 h course on modeling and projections of imperial eagle populations: the need for action. 20h
10. FERRER, M. 2001. Summer courses of Andalusian International University, La Rabida, Huelva. 14 h.
11. FERRER, M. 2002. Doctoral course at the Complutense University of Madrid. Past and Future of the Imperial Eagle. 2h
12. FERRER, M. 2002. Summer Gewel University (Sweden). Patterns of extinction in the Spanish Imperial Eagle. 3h

13. FERRER, M. 2002. Doctoral Course, University of Valencia. Management and conservation of threatened species: The Imperial Eagle. 4h
14. FERRER, M. 2003 Master in Conservazione e Gestione della Fauna Terrestre. University of Florence, Italy. 12h
15. FERRER, M. 2003 Information science and crisis communication. Study of Models. The toxic spill of Aznalcollar as a paradigm. Master of Journalism Científico. Universidad Carlos III-Spanish Association of Scientific Journalism. Madrid. 4h
16. FERRER, M. 2004 Trend of populations of birds of prey in Spain. Errores and successes in the conservation of birds of prey. (4 hours). Course of the Universidad Internacional de Andalucía, Sede Antonio Machado, Baeza. 4h
17. FERRER, M. 2004. Roundtable: The ecological disaster Aznalcollar 1998-2004. Sustainable Encounters: Communication, Science, Environment. Universidad Pablo de Olavide. Centro Cultural de Carmona. Sevilla. 4h
18. FERRER, M. 2004. Master in Environmental Management. FVMO, 4h.
19. FERRER, M. 2005. Doctoral Course University of Seville in Seville. 8h.
20. FERRER, M. 2005. Evolution of populations of birds of prey in Spain. 2 hours of lessons. Environmental Improvement Course. Ministry of Environment. Vadillo, Cazorla. 2h
21. FERRER, M. 2005. Doctoral Course, University of Valencia. Management and conservation of threatened species: The Imperial Eagle. 2h.
22. FERRER, M. 2006. Doctoral Course University of Seville in Sevilla. 8h.
23. FERRER, M. 2006. Trends in populations of birds of prey in Spain. Errors and successes in the conservation of birds of prey. (4 hours). Course of the Universidad Internacional de Andalucía, Sede Antonio Machado, Baeza 4h
24. FERRER, M. 2006. Islands and small population dynamic. Conservation Biology program. Nature Seychelles and Urbino University. Praslin (Seychelles). 8h
25. FERRER, M. 2007. Doctoral Course University of Seville in Sevilla. 8h.
26. FERRER, M. 2008. Summer courses of Andalusian International University. Baeza, Jaen. 14 h.
27. FERRER, M. 2009 X Master's Degree in Conservation and Management of Natural Environment, Global Change and Socio-Ecological Sustainability. Sede Iberoamericana Santa Maria de la Rabida, Universidad Internacional de Andalucía. 6h
28. FERRER, M. 2010. International course on Ecological Consequences of Climate Change: integrating research approaches. Talk "Bird migration and climate change". Palacio de Doñana, Huelva 2h
29. FERRER, M. 2010. Jornadas Año Internacional de la Biodiversidad 2010. Charla sobre Cambio climático y biodiversidad. Endesa. Barcelona. 2h
30. FERRER, M. 2010. Renewable Energy Course to Combat Climate Change. Talk about "Agents involved in the development of offshore wind." University of Jaén – Magtel – Oceana. 3h
31. FERRER, M. 2011. Master in "Gestione e Conservazione dell'Ambiente e della Fauna" Dipartimento di Biologia Evoluzionistica, Università di Firenze, Italy. 25 h

32. FERRER, M. 2011. Summer Courses, "The challenges of social responsibility of Defense. An international comparative analysis. "Talk: Defense and the Environment. University Menéndez y Pelayo. Santander, Spain. 2h
33. FERRER, M. 2013. Identificación de fuentes en periodismo ambiental. Cordoba, UNIA. 2h
34. FERRER, M. 2014. Summer courses of Menedez y Pelayo International University. Ecology applied to companies. 30h
35. FERRER, M. 2015. Master courses Pablo Olavides University, Seville, 8h
36. FERRER, M. 2017. The recovery of the endangered Spanish imperial eagle. External courses for The Imperial College, London. Doñana National Park. 2h
37. FERRER, M. 2017. Revisando los fundamentos de la Biología de la Conservación. Universidad de Verano de Gandía, Valencia. 4 h
38. FERRER, M. 2019. Wetlands: Management and Conservation. Oregon State University, Corvallis. 1h
39. FERRER, M. 2022. Recuperación y reintroducciones de aves de presa. Universidad Autónoma de Madrid, 3h.

15. MERITS

1. Included since 2007 in the percentile 1 of the most cited scientist in the world in the field of Ecology/*Environment* according ISI Web.
2. h index =43 according <https://indice-h.webcindario.com/>
3. One of the most influent Spanish researcher in *Ornithology* according <https://indice-h.webcindario.com/>
4. The position 27 of the Spanish researchers in *Ecology* according <https://indice-h.webcindario.com/>
5. h index= 53; i10 index=169; h index since 2017=28 according <https://scholar.google.com/citations>
6. h index = 49, according <https://www.researchgate.net/profile/>
7. Head of Raptor Recovery Center of Doñana Biological Reserve 1983-1985.
8. Editor and Scientific Advisor of the Management Plan of the Imperial Eagle in Doñana and its surroundings. 1990. AMA Andalusia, ICONA and CSIC.
9. Member of Management Team of the Imperial Eagle Management Plan in Doñana and its surroundings 1995. AMA Andalucía, ICONA and CSIC.
10. Editor and Scientific Advisor of the Management Plan of the Imperial Eagle in Spain. 1992. AMA Extremadura, Castilla-Leon AMA, AMA Castilla-La Mancha, Madrid AMA, AMA Andalucía, ICONA and CSIC.
11. Research coordinator in the Doñana National Park 1996-2000.
12. Member of the Governing Council of Andalucía Biology Laboratory 1996-2000.
13. Advisory Board Member of International Center for Environmental Studies and Conventions 1997-2000
14. Advisor- referee of projects for the National Agency of Evaluation and Planning from 1996.
15. Advisor- referee Auditor - assessor of projects for the Autonomous Community of Madrid since 1996.
16. Advisor- referee Auditor - assessor of projects for the Autonomous Community of Murcia since 2002.
17. Advisor for the Agencia para la Calidad del Sistema Universitario de Castilla y León. 2009
18. Member of the advisor board of the Dirección General de Medio Natural y Política Forestal del Ministerio de Medio Ambiente, Rural y Marino, Spanish Government 2011
19. Advisor for the Ministerio de Medio Ambiente y Medio Rural y Marino for the national strategies for the conservation of the Spanish imperial eagle since 2011.

20. Member of the Advisor scientific committee of environment for the UNIA (Universidad Internacional de Andalucía) since 2018.
21. Scientific advisor for the Proyecto Life Bonelli, - LIFE12/NAT/ES/00701, Gobierno de Navarra, Spain. 2014
22. Advisor- referee Auditor - assessor for Norway National Research Council since 2006.
23. Advisor- referee Auditor - assessor for the Natural Sciences and Engineering Research Council (NSERC) de Canada since 2006.
24. Advisor- referee for the Ministry of Education, Science and Technology (FONCYT) of Argentina since 2007.
25. Advisor- referee Auditor – assessor for the Foundation BBVA since 2008.
26. Advisor- referee for the Denmark National Environmental Research Institute since 2008.
27. Advisor- referee for the South Africa National Research Foundation (NRF) since 2009.
28. Advisor-referee for the Instituto Nacional de Pesquisas da Amazônia – INPA, Brazil, since 2012
29. Advisor-referee for the Fundação para a Ciência e a Tecnologia, Portugal since 2017
30. Member of the Board of the Comisión Nacional de Acreditación (CNA-Chile), to promote quality in the Universities of Chile since 2014
31. Advisor-referee for the French Polar Institute since 2018.
32. Advisor-referee for the Netherlands Organisation for Scientific Research (NWO) 2019.
33. The Swiss National Science Foundation 2020.
34. Advisor-referee for the Israel Science Foundation (ISF) since 2023.
35. Scientific Advisor of FAPAS since 2007.
36. Scientific Advisor of Quebrantahuesos Foundation since 2008.
37. Member of the Council of Experts Working Group "Terrestrial environment" Integrated into the Scientific Committee on Toxicity, Ecotoxicity and the Environment (CSTEE) of the European Commission since 2009.
38. Member of the Board of Doñana National Park since 1996.
39. Member of the Board of Fungesma Foundation since 1998.
40. Member of the Board of Gypaetus foundation since 2000
41. Member of the Board of Fundación Monte Mediterraneo, 2011
42. President of Migres Foundation since 2003
43. Representative of the CSIC in Hornachuelos Natural Park since 2005
44. President of the Insular Association (Network of land stewardship of Andalusia) since 2007.
45. Member of the Scientific Advisory Board of Acopian Center for Conservation Science Hawk Mountain Sanctuary, Pennsylvania, USA, 2009
46. Expert reviewer of IPCC Intergovernmental Panel on Climate Change, 2012, 2020, 2022
47. Member of the Jury of the International Environmental Journalism Awards organized by Casa Mediterraneo. Alicante, 2010
48. Member of the examination team for the following PhD:
 - Martina Carrete-Universidad de Murcia, Spain
 - Beatriz Martín-Universidad Complutense de Madrid, Spain
 - Carlos Palanca-Universidad Complutense de Madrid, Spain
 - Marcos Moleon- Universidad de Granada, Spain
 - Pascual López Lopéz-Universidad de Valencia, Spain
 - Airam Rodríguez–Universidad de Sevilla, Spain
 - Patrick S. Kolar- University of Boise, Idaho, USA
 - Mr RB van Eeden – University of Cape Town, South Africa.
 - Fabio Balotari-Chiebao-University of Turku, Finland
 - Mr René Brink – University of Cape Town, South Africa.
 - Victoria Thomson-Griffith University, Australia.
 - Sara Morollón- Universidad de Alicante

49. Referee for the following journals:

- Doñana Acta Vertebrata
- Ardeola
- Etología
- Boletín de la Real Sociedad de Historia Natural
- Aegyptus
- El Hornero
- Journal of Zoo and Aquarium Research
- Animal Biodiversity and Conservation
- Animal Behaviour
- The Auk
- Journal of Field Ornithology
- Journal of Raptor Research
- Biological Conservation
- Comparative Biochemistry and Physiology
- Functional Ecology
- Journal of Applied Ecology
- Ethology, Ecology and Evolution
- Ibis
- The Condor
- Journal of Animal Ecology
- Journal of Avian Biology
- The Science of the Total Environment
- Behavioral Ecology and Sociobiology
- Ecography
- Oryx
- Conservation Biology
- Animal Conservation
- Italian Journal of Zoology
- Ornis Fennica
- Open Zoological Journal
- Acta Zoologica Academiae Hung
- Journal of Veterinary Medical Science
- Plos One
- Polar Biology
- Journal of Wildlife Management
- Wildlife Monographs
- Ecology
- Ecology and Evolution
- Biodiversity and Conservation
- Australian Field Ornithology
- Endangered Species Research
- Ideas in Ecology and Evolution
- American Naturalist
- Population Ecology
- Tropical Conservation Science
- BMC Veterinary Research
- Ecological Indicators
- Diversity and Distributions
- Diversity
- Renewable and Sustainable Energy Reviews
- European Journal of Wildlife Research
- Frontiers in Ecology and Evolution
- Frontiers in Environmental Science
- Animals
- Birds

Awards and honors

1. Appointed in **1998**, "Director at large" Scientific Society "Raptor Research Foundation", USA.
2. CSIC distinction to scientist awarded by other institutions. **1998**.
3. Andalusia Environment Award **1999** to Doñana Biological Station, for the research on toxic dumping in Aznalcollar led by Miguel Ferrer.
4. Named as "Research Associate" at Hawk Mountain Sanctuary, USA. **2003**.
5. "Special Distinction" by the Andalusian Government **2004** for the development of research applied to conservation of endangered species in Andalucía.
6. Prize of the International Road Federation, the environmental category, to the A-381 Jerez-Los Barrios. **2004**. Researcher responsible for the design of compensatory environmental measures: Miguel Ferrer.
7. Frank and Frederick Hamestron Award **2005** of the Raptor Research Foundation USA, for an outstanding scientific contribution to raptor ecology and conservation.
8. CSIC distinction to scientist awarded by other institutions. **2005**.
9. Appointed in **2007** as a member of the Expert Group on Biodiversity and Climatic Change of the Council of Europe.
10. Project "Design new systems to avoid collisions of birds in transmission power lines" Main researcher: M. Ferrer. Selected as one of "the best ten ideas to save nature **2007**", by Red-Life.
11. Project INSULAS: Andalusian Net on Custody and Management of the Territory. Chaired by M. Ferrer. Selected as one of "the best ten ideas to save nature **2007**", by Red-Life.
12. Project "Devices to protect birds against the risk of electrocution with high tension power lines". Main Researcher: M. Ferrer. Endesa, Consejería de Medio Ambiente Andalusia Government, Migres Foundation. Selected as one of the "the best ten ideas to save nature **2009**" by Red-Life.
13. Project "Observatory Network for the analysis of climate change and bird migration EUROMIGRANS", for Migres Foundation chaired by M. Ferrer. Selected as one of the "the best ten ideas to save nature **2009** by Red-Life.
14. Adjunct Professor of Boise State University, since February **2011**.
15. Award **2011** Grefa Environmental Conservation.
16. Appointed in **2011**, "Director at large" Scientific Society "Raptor Research Foundation", USA.
17. CSIC distinction to scientist awarded by other institutions. **2012**.
18. "Godfather of the class 2008-2013" for Environmental Studies in the Pablo de Olavides University, Seville **2013**
19. Watson Raptor Science Prize **2013**, to the best paper published in Europe about raptor ecology.
20. CSIC distinction to scientist awarded by other institutions. **2014**.
21. Spanish representative for renewable energies in the International Energy Agency, **2014**.
22. Watson Raptor Science Prize runner up **2015**, to the best paper published in Europe about raptor ecology.

23. Andalusia Environment Award **2016** to Migres Foundation, for its contribution to the conservation of Andalusian natural values.
24. CSIC distinction to scientist awarded by other institutions. **2017**.
25. Watson Raptor Science Prize runner up **2017**, to the best paper published in Europe about raptor ecology.
26. Tom Cade Award **2017** of the Raptor Research Foundation USA, for outstanding scientific contribution to raptor reintroductions and conservation.
27. National Award FONDENA **2017** for the contribution to conservation of nature presented by the King of Spain, Juan Carlos I.
28. Named honorary president of the Iran's Birds and Power Lines Committee (IBPLC) in **2018**
29. Named Visiting Professor, Department of Fisheries and Wildlife of Oregon State University in **2018**
30. *Frontiers* Topic Editor in **2019**
31. Guest Associated Editor for *Frontiers in Ecology and Evolution* **2019**
32. Guest Associated Editor for *Frontiers in Environmental Science* **2020**
33. *Sustainability*, guest topic editor **2020**
34. *Diversity*, Editor-in-chief for the section Conservation Biology **2020**
35. Andalusia Environment Award **2020** to Autoridad Portuaria de Sevilla, for the research on dumps management to increase aquatic bird populations in the Guadalquivir River, led by Miguel Ferrer.
36. ISSN Golden Research Award **2020**, under the title "**International Best Researcher Award**", for the paper Ferrer, M., Morandini, V., Baumbush, R., Muriel, R., De Lucas, M., & Calabuig, C. 2020. Efficacy of different types of "bird flight diverter" in reducing bird mortality due to collision with transmission power lines. *Global Ecology and Conservation*, e01130.
37. Handling editor for the journal *Matters*, **2021**
38. Associated Editor for *Frontiers in Ecology and Evolution* **2021**
39. Associated Editor for *Frontiers in Environmental Science* **2021**
40. Named "member of recognized prestige" in the board of Gibraltar Strait Natural Park **2022**
41. Environmental Protection 'Good Practice of the Year' Award **2022**, Winner: 'Bio Transport' by Miguel Ferrer (CSIC-EBD). Renewables Grid Initiative, European Commission
42. Asia International Research Awards **2023** to Miguel Ferrer, Virginia Morandini, Ryan Baumbusch, Roberto Muriel, Manuela De Lucas, Cecilia Calabuig. You have won Asia's Outstanding Researcher Award for your excellence in, "*Efficacy of different types of "bird flight diverter" in reducing bird mortality due to collision with transmission power lines*".

NOMINATION OF MR. COLIN JAMES LIMPUS FOR THE ROLE OF
COP-APPOINTED COUNCILLOR – CLIMATE CHANGE

Application from Dr Colin James Limpus to CMS Secretariat for consideration for appointment as a COP appointed Scientific Councillor for Climate Change

Dr Colin James Limpus:

Mailing address: PO Box, 541 Capalaba, Qld 4157

Email: cjlimpus@hotmail.com

Mobile phone: Australia: 0401 169 980

Date of Birth: 11 September 1940

Academic history:

- **PhD:** University of Queensland (1985) (Marine Turtle Biology)
- **MSc:** University of Queensland (1976) (Sea Snake Toxicology)
- **Dip Ed:** University of Queensland (1963) (Majoring in Secondary Science)
- **BSc:** University of Queensland (1962) (Majoring in Nuclear & Atomic Physics)

Current employment:

- **Chief Scientific Officer**, Threatened Species Operations, Queensland Department of Environment and Science

Employment history:

- 1963-1966: Secondary school science teacher, Queensland Education Department
- 1967-1973: Lecturer, Kelvin Grove College of Teacher Education
- 1974-present: Marine biologist with Queensland Government conservation agencies.

Current university appointments:

- Adjunct Associate Professor, James Cook University School of Earth and Environmental Science.
- Adjunct Associate Professor, University of Queensland School of Veterinary Science.
- Adjunct Associate Professor, Griffith University

Civil awards and appointments:

- Order of Australia (2020)
- Public Service Medal (1993)
- UNEP Convention for Conservation of Migratory Species, Scientific Councillor (1995-2020)
- Member of IUCN SC Marine Turtle Specialist Group executive (1978 – 2000)
- Eureka Award finalist (2005) – Biodiversity Research
- EPA Employee Excellence Award (2006) – Technical/Professional Excellence
- International Sea Turtle Society Life-Time Achievement Award (2008)
- President, International Sea Turtle Society: 2009 & Board member: 2008- 2012.

CLIMATE CHANGE: impacts on Marine Turtle and Marine Mammal populations, 1978 to present.

- Co-author of multiple reviews of impact on climate change on marine turtle population.

- Pioneered studies on temperature dependent sex determination in marine turtles.
- Pioneered studies linking regional climate cycles (El Nino Southern Oscillation) to regulation of annual breeding rates of green turtles.
- Leadership in studies linking elevated mortality of marine turtles, dugong and inshore dolphins to extreme weather rainfall and flooding events.
- Leadership in field studies exploring impact of climate change (global warming, sea-level rise, extreme weather with flooding, cyclones, heatwave) on marine turtle breeding success.
- Analysis of a database collating half a century of marine turtle capture-mark-recapture data to test hypotheses that predict future performance of marine turtle population to climate change.
- Initiated studies to manipulate turtle nesting beach sand temperatures to counter localised global warming feminisation of hatchling sex ratios.

Research and Monitoring

The results from this research and monitoring provide advice to policy and management for these species by the Queensland and Australian Governments.

Reproductive ecology and population dynamics of long-lived vertebrates

1. Marine Turtles: 1968-present.

- 5 decades of mark-recapture of marine turtle nesting and foraging populations for demographic studies: growth (age to 1st breeding, growth rates), survivorship, recruitment, within and between breeding season, breeding frequency, fecundity (clutches per season, eggs per clutch), recruitment, population modelling; population level impacts of disease and anthropogenic mortality factors.
 - Pioneered methods for capture and study of wild, free ranging marine turtles in foraging grounds.
 - Developed the titanium turtle tag for long-term identification of wild, free ranging marine turtles.
 - Developed the application of ultrasonography and laparoscopy for examination of gonads for determining sex, maturity and breeding status of live turtles under field conditions. Training in laparoscopy received in 1982 at Queen Victoria Hospital, Melbourne under the tutorage of Dr Carl Wood's team that pioneered in-vitro fertilisation.
- Survey of distribution and abundance of marine turtle nesting populations of Queensland and the broader Australian Region.
- Migration studies describing the distribution of foraging adult turtles with respect to breeding, based on flipper tag recoveries and satellite telemetry.
- Population genetics studies.
- Marine turtle embryology.
- Marine turtle reproductive endocrinology

2. Crocodiles: 1976-1995. 20 year mark-recapture of freshwater Crocodile population along 50k of the Lynd River, Einasleigh Uplands, North Queensland: growth/age structure, reproduction, diet, movement.

- Developed tagging and capture methods for wild, free ranging crocodiles.
 - Developed the application of laparoscopy for determining sex, maturity and breeding status of live crocodiles under field conditions.
3. **Freshwater Turtles:** 1976-present
- Survey of distribution and population dynamics of freshwater turtles of Queensland.
 - Development and implementation of management plans for the conservation of threatened freshwater turtles in Queensland.
 - Developed tagging and capture methods for wild, free ranging freshwater turtles.
 - Developed the application of ultrasonography and laparoscopy for determining sex, maturity and breeding status of live freshwater turtles based on gonad examination.
4. **Dugong:** 1985-present. Developing methods for live capture, tagging and satellite telemetry of Dugong
- Satellite telemetry studies of dugong in eastern Australia to define habitat use, diving behaviour and movement patterns.

Sea snake toxicology and reproductive biology: 1967-present.

- Description of the fangs and venom glands of multiple species of Queensland sea snakes.
- Pharmacological studies of the effects of sea snake venom on fish, crustaceans and laboratory mammals and isolated tissue preparations.
- LD50 studies of venom from 4 species of Queensland sea snakes.

Fauna Surveys of the islands of the Great Barrier Reef: 1974-present.

With emphasis on:

- Sea bird breeding, terrestrial reptiles and native mammals on islands

Environmental education and teaching

1. **Developed and implemented within the Queensland Parks and Wildlife Service the establishment of a tourist education and ecotourism facility at Mon Repos Conservation Park (1979-present).**

This ecotourism facility caters for up to 30,000 tourists during a 5 month turtle breeding season and supports a cash flow exceeding A\$5,000,000 annually into the Bundaberg District economy.

2. **Organisation and implementation of community volunteer training and authorisation for marine turtle biology, monitoring and conservation.**
3. **Co-supervision of university post graduate studies since 1980 to present.**
Currently co-supervising 3 postgraduate PhD students.

I have authorship of several hundreds peer reviewed scientific publications, books, chapters in books, field reports, and chapters in conference proceedings.

This is a selection of the range of my publications that reflect my involvement in investigation of the impacts of climate change in threatened species and migratory threatened species in particular.

Chaloupka, M., Kamezaki, N., and Limpus, C. (2008). Is climate change affecting the population dynamics of the endangered Pacific loggerhead sea turtle. *Journal of Experimental Marine Biology and Ecology* 356, 136-143.

Chaloupka, M. Y. and Limpus, C. J. (2005). Estimates of sex- and age-class-specific survival probabilities for a southern Great Barrier Reef green sea turtle population. *Marine Biology* 146, 1251-1261.

Chaloupka, M. Y. and Limpus, C. J. (2002). Survival probability estimates for the endangered loggerhead sea turtle resident in southern Great Barrier Reef waters. *Marine Biology* 140, 267-277.

Chu, C. T., Booth, D. T., and Limpus, C. J. (2008). Estimating the sex ratio of loggerhead turtle hatchlings at Mon Repos rookery (Australia) from nest temperatures. *Australian Journal of Zoology* 56, 57-64.

Dobbs, K. A., Miller, J. D., Limpus, C., and Landry, A. M. (2010). Hawksbill turtle hatchling sex ratios and incubation and pivotal temperatures from Milman Island, Great Barrier Reef. *Marine Turtle Newsletter* 128, 12-16.

Fielder, D. P., Limpus, D. J., and Limpus, C. J. (2015). Reproduction and population ecology of the vulnerable western sawshelled turtle, *Myuchelys bellii*, in the Murray-Darling Basin, Australia. *Australian Journal of Zoology*.

Flint, J., Flint, M., Limpus, C. J., and Mills, P. C. (2017). The impact of environmental factors on marine turtle stranding rates. *PLOSone*. 12(8): e0182548.

Fuentes, M. M. P. B., Limpus, C. J., Hamann, M., and Dawson, J. (2010). Potential impacts of projected sea-level rise on sea turtle rookeries. *Aquatic Conservation: Marine and Freshwater Ecosystems* 20, 132-139.

Fuentes, M. M. P. B., Hamann, M., and Limpus, C. J. (2010). Past, current and future thermal profiles of green turtle nesting grounds: implications from climate change. *Journal of Experimental Marine Biology and Ecology*. 383:56-64.

Georges, A., Limpus, C., and Stoutjesdijk, R. (1994). Hatchling sex in the marine turtle *Caretta caretta* is determined by proportion of development at a temperature, not daily duration of exposure. *The Journal of Experimental Zoology* 270, 432-44.

Hamann, M., Limpus, C. J., and Read, M. A. (2008). Vulnerability of Marine Reptiles in the Great Barrier Reef to Climate Change. Ch.15. Johnson, J. E. and Marshall, P. A. *Climate Change and the Great Barrier Reef: a vulnerability assessment*. 466-496. 2008. Townsville, Great Barrier Reef Marine Park Authority.

Jensen, M. P., Euchi, T., FitzSimmons, N. N., McCarthy, M. A., Fuentes, M. M. P. B., Hamann, M., Limpus, C. J., Bell, I. P., and Read, M. A. (2022). Integrating climate change and management scenarios in population models to guide the conservation of marine turtles. *Bulletin of Marine Science*. 98(2):131-154.

Limpus, C. and Nicholls, N. ENSO regulation of Indo-Pacific green turtle populations. Hammer, G., Nicholls, N., and Mitchell, C. *Applications of Seasonal Climate Forecasting in Agricultural and Natural Ecosystems*. 399-408. 2000. Dordrecht, Kluwer Academic Publishers.

Limpus, C. J. 5. Impacts of climate change on marine turtles: a case study. UNEP/CMS Secretariat. *Migratory Species and Climate Change: Impacts of a Changing Environment on Wild Animals*. 34-39. 2006. Bonn, UNEP/CMS Convention on Migratory Species and DEFRA.

Limpus, C. J. Adapting to climate change: a case study of the flatback turtle, *Natator depressus*. Poloczanska, E. S., Hopday, A. J., and Richardson, A. J. In *Hot Water: preparing for climate change in Australia's coastal and marine systems*. 48-49. 2007. Hobart, CSIRO Marine and Atmospheric Research.

Limpus, C. J. A marine resource case study: climate change and sea level rise. Probable impacts on marine turtles. Hay, J. and Kaluwin, C. *Climate change and sea level rise in the south pacific region*. 157. 1993. Apia, South Pacific Regional Environment Programme.

Limpus, C. J., flakus, S., limpus, D. J., Tucker, A., and Priest, T. (1998). Lowered water level impact on freshwater turtles. Unpublished EHP report.

Limpus, C. J., Reed, P., and Miller, J. D. Islands and turtles. The influence of choice of nesting beach on sex ratio. Baker, J. T., Carter, R. M., Sammarco, P. W., and Stark, K. P. *Proceedings of Inaugral Great Barrier Reef Conference, Townsville, 28 Aug - 2 Sept 1983*. 397-402. 1983. Townsville, JCU Press.

Limpus, C. J., Reed, P. C., and Miller, J. D. Temperature dependent sex determination in Queensland sea turtles: intraspecific variation in *Caretta caretta*. Grigg, G., Shine, R., and Ehmann, H. *Biology of Australian Frogs and Reptiles*. 343-51. 1985. Sydney, Surrey Beatly and Sons.

Limpus, C. J. (2012). Assessment of the turtle conservation actions at Thameehla Island, Myanmar within the framework of the IOSEA Technical Support/Capacity-building Programme. Myanmar: Department of Fisheries.

Limpus, C. J., Miller, J. D., and Pfaller, J. B. (2020). Flooding induced mortality of Loggerhead sea turtle eggs. *Wildlife Research*. doi.org/10.1071/WR20080.

Limpus, C. J.; Anderson, D.; Ferguson, J.; Fien, L. Gatley. C.; Limpus, D. J., and McLaren, M. (2020). Queensland Turtle Conservation Project: Data report for marine turtle breeding on the Woongarra Coast, 2019-2020 breeding season. Brisbane: Queensland Department of Environment and Science.

Meager, J. J. and Limpus, C. J. (2014). Mortality of inshore marine mammals in eastern Australia is predicted by freshwater discharge and air temperature. *PLOS one* 9, e94849.

Miller, J. D. and Limpus, C. J. (1981). Incubation period and sexual differentiation in the Green turtle. Banks, C. B. and Martin, A. A. *Proceedings of the Melbourne Herpetological Symposium*. 66-73. Melbourne, Zoological Board of Victoria.

Poloczanska, E. S., Limpus, C. J., and Hays, G. C. (2009). Vulnerability of marine turtles to climate change. *Advances in Marine Biology* 56, 151-211.

Porter, E., Booth, D. T., Limpus, C. J., Staines, M. N., and Smith, C. E. (2021). Influence of short-term temperature drops on sex-determination in sea turtles. *JEZ-A Ecological and Iterative Physiology*. 2021:1-10.

Sim, E. L., Booth, D. T., and Limpus, C. J. (2014). Incubation temperature, morphology and performance in loggerhead (*Caretta caretta*) turtle hatchlings from Mon Repos, Queensland, Australia. *Biology Open*. 000:1-8.

Shimada, T., Limpus, C. J., Hamann, M., Bell, I., Esteban, N., Groom, R., and Hays, G. C. (2020). Fidelity to foraging sites after long migrations. *Journal of Animal Ecology*. 89(4):1008-1016.

Wibbels, T., Owens, D. W., Limpus, C. J., and Amoss, M. S. (1989). Field testing of a sexing technique for immature sea turtles. *National Oceanic and Atmospheric Administration Technical Memorandum National Marine Fisheries Service Southeast Fisheries Center* 226, 349-50.

Wood, A., Booth, D. T., and Limpus, C. J. (2014). Sun exposure, nest temperature and loggerhead turtle hatchlings: implications for beach shading management strategies at sea turtle rookeries. *Journal of Experimental Marine Biology and Ecology*. 451:105-114.

NOMINATION OF MR. ASGHAR MOBARAKI FOR THE ROLE OF
COP-APPOINTED COUNCILLOR – CLIMATE CHANGE

(submitted by the Government of Islamic Republic of Iran)

Von: irfocal <irfocal@yahoo.com>

Gesendet: Montag, 4. September 2023 08:10

An: CMS Secretariat <cms.secretariat@cms.int>

Cc: dagmar.zikova@un.org

Betreff: Nomination of Candidates for the COP-appointed Councillor for Climate Change

Dear CMS Secretariat

Referring to your notification of nominating of candidate for COP-appointed councilor for Climate Change, on behalf of Islamic Republic of Iran's National Focal Point, Mr. Asghar Mobaraki is nominated for this important position.

His C.V. is attached for your kind consideration and further action.

Best regards

Please acknowledge the receipt of this email.

Mohammad HASSANINEJAD PIRKOUHI

Director General

International Environment and Sustainable Development Affairs

Ministry of Foreign Affairs

Islamic Republic of IRAN

UNFF National Focal Point

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TEHRAN

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Personal Details

Name: Asghar

Surname: Mobaraki

Nationality: Iranian

Date of birth: 15 MAy 1968

Address: Department of Environment, P.O. Box 14155-7383, Pardisan Eco Park, wildlife conservation and management Bureau, Tehran, Iran

E-Mail: amobaraki@yahoo.com

Educational Carrier

High school Education: Emam Khomeini High School, Sarab, East Azarbaijan Province, Iran, Gained: Diploma

Higher Education:

- University of Tabriz, East Azarbaijan, From: 1988 to 1990, and, Karaj Azad University, Tehran, From: 1994 to 1996
Gained: Bs. in Plant Breeding and Agriculture
- Master of Environmental Science: "Biodiversity and Habitats", Islamic Azad University, science and technology branch, Tehran, Iran, 2007-2010
- Master course on "**Management, Access and Conservation of Species in Trade: the International Framework**" 2014, UNIA, Spain
- PhD, Environmental Science: Biodiversity conservation, Research and science branch, Islamic Azad University, Iran

Professions held:

- **Member of CITES Animal Committee**
- Employee of Department of Environment as an expert since 1993, working at the moment as Reptilian expert
- Director General for Natural History Museum and Genetic resources Bureau (Biodiversity) in DOE (2015-2017)
- Head for Reptilian and amphibian Group Biodiversity and wild life affairs bureau (2000-2015)
- Regional Vice Chairman for Crocodile specialist Group Chair in south Asia and Iran(SSC/IUCN/CSG)
- National Focal point for Indian Ocean and South-East Asia Sea Turtle Memorandum of Understanding (MOU-IOSEA)
- Member of Tortoise and Fresh water turtle(TFT) specialist Group
- Member of Marine turtle specialist Group (MTSG/SSC/IUCN)
- Member of IUCN/SSC Viper specialist Group
- Former Management Authority for CITES in Iran
- National Scientific authority for CITES in Iran

Training Courses

1: Bioproduction and Environmental Management in Semi-Enclosed Seas, April 2000 to June 2000, Hiroshima University and JAICA, Japan, awarded: Certificate from JICA and Hiroshima University.

2- I had a 2 months stay in Applied Ecology Research Group Genetics lab in Canberra university, Australia in 2008 with Dr. Nancy Fitzsimmons for Genetic works on Hawksbill sea turtles, Mugger Crocodiles and Euphrates soft shell Turtle.

3- IUCN Red List and Categories and Criteria, 2010, University of Sharjah, Sharjah, UAE

4- IUCN Redlist and assessing the conservation status of the species

5- IUCN; Facilitating Species Conservation Planning course

My research works and Projects

- 1) Research and study on crocodile population in Iran
- 2) Research and study on sea turtles of Iran in the Persian Gulf and Oman Sea area.
- 3) Limnological study of fresh water habitats
- 4) Research and study on Mesopotamian soft shell turtle (*Rafetus euphraticus*) in Iran
- 5) Research and Study on Iranian Lizards and snakes
- 6) Crocodile Breeding and farming
- 7) Population Genetic Studies in Support of Conservation and Management of Hawksbill Turtles in the Indian Ocean, University of Canberra, Project officer: Nancy Fitzsimmons, 2007-2008
- 8) Conservation, Satellite tracking and Monitoring of Marine Turtles in The Gulf Region, 2010- 2013, EWS-WWF and MRF,

List of publications:

Papers/reports and presentations

- 1) Mobaraki.Asgar, 1996, Trout species of Iran, quarterly journal of Department of Environment,
- 2) Mobaraki.Asgar, 1998, Sea Turtles, quarterly journal of DOE, No 26, 1999
- 3) Mobaraki. Asghar Introduction to Crocodiles, quarterly journal of DOE, spring,
- 4) Mobaraki. Asghar Mugger crocodile study in Iran, quarterly journal of DOE, No 34, 2001
- 5) Mobaraki. Asghar, 1999, Global strategy for the conservation of sea turtles, Translation, quarterly journal of DOE, No 27,
- 6) Mobaraki. Asghar, 2001, Biodiversity in the seas, quarterly journal of DOE, No 33,
- 7) Mobaraki.Asgar, 2002, Proceeding of 16th working meeting of the crocodile specialist group, Florida, USA, Mugger Crocodile study in Iran
- 8) Mobaraki. Asghar, IOSEA turtles web site, Hawksbill turtle nesting in Shidvar Island and, Green sea turtle nesting in Oman sea area
- 9) Mobaraki. Asghar, 2004, Hawksbill turtle nesting in Iran , Marine turtle newsletter, no 103,
- 10) Mobaraki. Asghar, 2004, Green sea turtle nesting on the Gulf of Oman Coastline of the I.R. Iran, No 104, Marine turtle newsletter,
- 11) Mobaraki. Asghar, 2004, Proceeding of 17th working meeting of SSC-IUCN Crocodile specialist group, Darwin, Australia, May Drought effects on Mugger crocodile population in Iran,
- 12) Mobaraki. Asghar "First Sea Turtle Tagging program in Iran", Marine Turtle Newsletter, No 110, October 2005

- 13) Mobaraki. Asghar, Elham abtin, 2007, Crocodile specialist group newsletter, Reports from Iran, "Movement Behavior of Muggers" Vol. 26 No 1, Jan-Mar
- 14) Mobaraki. Asghar, Elham. abtin, and A.Ali Hooseini, 2006, Crocodile specialist group newsletter, Reports from Iran, "First Record of Mugger Crocodile Hatchlings in Iran", Vol. 25 No 4, Oct-Dec
- 15) Mobaraki. Asghar, 2007, Sea Turtle Study and situation in Iran, International Conference on Science and Technology and Aquaculture, Fisheries and Oceanography, Kuwait, Feb 2007
- 16) Mobaraki. Asghar, 2006, Sea Turtle Study and situation in Iran, Marine Conservation Forum, WWF, EWS, Abu Dhabi, UAE, Sep 2006.
- 17) Mobaraki.Asghar, 2007, a short report on Mesopotamian soft shell Turtle *Rafetus euphraticus* from Iran, The Fifth Annual Symposium on the Conservation and Biology of Tortoises and Freshwater Turtles. Turtle Survival Alliance, Atlanta. USA.
- 18) Mobaraki. Asghar, Nancy Fitzsimmons, 2008, Studies on Sea Turtle and their situation in Iran, first Int. congress: Documenting, Analyzing and managing Biodiversity in Middle East, Aqaba, Jordan
- 19) Abtin.Elham, **Asghar Mobaraki**, A.A. Hosseini. A.M.Elmi, 2008, Mugger crocodile study and situation in Iran, first Int. congress: Documenting, Analyzing and managing Biodiversity in Middle East, Aqaba, Jordan
- 20) Mobaraki. Asghar, 2008, Mesopotamian soft shell Turtle(*Rafetus euphraticus*) study in Iran, first Int. congress: Documenting, Analyzing and managing Biodiversity in Middle East, Aqaba, Jordan, Symposia: Towards Regional biodiversity initiatives for the Tigris –Euphrates Basin
- 21) Mobaraki.Asghar, Elham .Abtin, and A.A.Hosseini, 2010, "Late hatching or low growth rate", Crocodile specialist group newsletter, Vol. 29. No 2,
- 22) Behrouzi rad.B, Elham Abtin, **Asghar Mobaraki**, 2010, "Mugger crocodile habitat suitability study",Crocodile specialist group newsletter, Vol.29. No 2
- 23) Mobaraki.Asghar, Nancy Fitzsimmons, and Michael Jensen,2010 " Reproduction and Genetic Study of Hawksbill Sea turtles in Iran" , 30th annual sea turtle symposium, Goa, India,
- 24) Mobaraki.Asghar, Elham Abtin, 2010, Mugger Crocodile (*Crocodylus palustris*) Study in Iran, wildlife Middle East, Vol 5, Issue 2, p6
- 25) Mobaraki.Asghar, Adel Mola, 2011, Mesopotamian soft shell Turtle (*Rafetus euphraticus*), strangest Turtle of the Middle East, wildlife Middle East, Vol 5, Issue 4, p6
- 26) Asghar Mobaraki, Elham Abtin, Hossein Mohammadi, Asharf ali Hosseiniand Khosro Afsari. 2013, Mugger crocodile (*Crocodylus palustris*) status and situation in Iran, proceeding of 22nd working meeting of Crocodile specialst group, Sri Lanka
- 27) Asghar Mobaraki and Elham Abtin , 2013, An introduction to reproductive study of the mugger crocodile (*Crocodylus palustris*) in Iran, proceeding of 22nd working meeting of Crocodile specialst group, Sri Lanka
- 28) Asghar Mobaraki, Nancy N. FitzSimmons and Elham Abtin, 2014, Mugger Crocodiles (*Crocodylus palustris*) in Iran: a preliminary genetic study, Crocodile specialist Group newsletter, VOLUME 33 No. 4 OCTOBER 2014 - DECEMBER 2014

- 29) Mobaraki, asghar., Elham Abtin. Haji Goli Kami and bahram , H. Kiabi, 2013, reproductive study of the mugger crocodile (*Crocodylus palustris*) in Iran, Zoolgy in the Middle East, Vol 59, No3.
- 30) Mobaraki A, Mohsen Amiri M, Alvandi R, Tehrani ME, Kia HZ, Khoshnamvand A, Bali A, Brown RK. 2013. A conservation reassessment of the Critically Endangered, Lorestan newt *Neuregus kaiseri* (Schmidt 1952) in Iran. *Amphibian and Reptile Conservation*
- 31) Elham Abtin, Göran Nilson, Asghar Mobaraki, Ashraf Ali Hosseini, , and Mousa Dehgannejhad 2014, A NEW SPECIES OF KRAIT, *Bungarus* (REPTILIA, ELAPIDAE, BUNGARINAE) AND THE FIRST RECORD OF THAT GENUS IN IRAN, Russian Journal of Herpetology Vol. 21, No. 4, 2014, pp. 243 – 250
- 32) Asghar Mobaraki, Nancy N. FitzSimmons and Elham Abtin, 2014, Mugger Crocodiles (*Crocodylus palustris*) in Iran: a preliminary genetic study, Crocodile specialist Group newsletter, VOLUME 33 No. 4 OCTOBER 2014 - DECEMBER 2014
- 33) Nicolas J. Pilcher , Marina Antonopoulou , Lisa Perry,..... **Asghar Mobaraki**,and Andrew Willson., 2014, Identification of Important Sea Turtle Areas (ITAs) for hawksbill turtles in the Arabian Region, Journal of Experimental Marine biology and Ecology, 640, 89-99
- 34) Nicolas J. Pilcher, Marina Antonopoulou , Lisa Perry,...., Robert Baldwin, Oliver J. Kerr , **Asghar Mobaraki** ,....and James Williams, 2014, Short-term behavioural responses to thermal stress by hawksbill turtles in the Arabian region, Journal of Experimental Marine biology and Ecology, 457, 190-198
- 35) Sarah M. Vargas, Michael P. Jensen, Simon Y. W. Ho, **Asghar Mobaraki**, Damien Broderick, Jeanne A. Mortimer, Scott D. Whiting, Jeff Miller, Robert I. T. Prince, Ian P. Bell, Xavier Hoenner, Colin J. Limpus, Fabrício R. Santos, and Nancy N. FitzSimmons, 2015, Phylogeography, Genetic Diversity, and Management Units of Hawksbill Turtles in the Indo-Pacific, Journal of Heredity, 1-15
- 36) Mobaraki, Asghar. 2017. Sustainable management and conservation of venomous snakes in Iran, Viper: The IUCN Viper Specialist Group Bulletin
- 37) Aghanajafizadeh, s., Mobaraki, A., 2018, Habitat Selection by Spiny-Tailed Lizard (*Uromastix aegyptia*) in Hengam Island, Iran, The Saudi Journal of Life Sciences (SJLS), DOI: 10.21276/haya.2018.3.5.1
- 38) Mobaraki. Asghar, Meysam, Gasemi, Haj Goli Kami and Faraham Ahmad zadeh, 2019. First record on Green sea turtle nesting in Sheedvar Island, Indian Ocean Turtle Newsletter, 30, 5-8
- 39) Mashkour, N., Karina Jones, K., Hipolito, V. T.,..... Mobaraki, A., Read, M., Ariel, E., 2020, Disease Risk Analysis in sea Turtles: a base line study to inform conservation efforts, bioRxiv, 46pp
- 40) João Carlos Campos, **Asghar Mobaraki**. Elham Abtin. Raquel Godinho and José Carlos Brito,. 2018. Preliminary assessment of genetic diversity and population connectivity of the Mugger Crocodile in Iran. *Amphibia-Reptilia*, DOI:10.1163/15685381-16-00173

- 41) Mobaraki, Asghar., Rastegar-Poyani, Eskandar., Kami, Haji Goli., Khorasani, Neamatollah., 2020., Population study of foraging Green sea turtles (*Chelonia mydas*) in the Northern Persian Gulf and Oman Sea, Iran, *Regional Studies in Marine Science* 39 (2020) 101433
- 42) Mobaraki Asghar., Erfani Malihe., Abtin, Elham., Estivenson Colin, 2021, Total length and head length relationship in Mugger Crocodiles *Crocodylus palustris* (Reptilia: Crocodylia: Crocodylidae) in Iran, *Journal of Threatened Taxa*, Vol. 13 | No. 8 | Pages: 19162–19164
- 43) Mobaraki. Asghar., Andrea, Phillot., Malihe. Erfani., Meysam. Ghasemi., Hossein. Jafarie., 2022, Inferred Impacts of Extreme Environments on Hawksbill Turtle (*Eretmochelys imbricata*) Body Size and Reproductive Output, *Chelonian Conservation and Biology*, 2022, 21(2): 000–000 doi:10.2744/CCB-1546.1

Books:

- 1) Mobaraki Asghar, S.A. Ayafat, 2008, *Crocodiles: Conservation and Framing*, Rooz-E- Now Publications, pp. 288 (In Farsi)
- 2) Yousefi. Siamak , Asghar Mobaraki, 2008, *Mugger Crocodile Study*, Modj – e-sabz Publications, pp 82 (In Farsi)
- 3) *Wild life of Iran*, 2010, Nashre.talaae, (Turtles and Crocodile sections were by me).
- 4) Abtin, Elham. **Asghar Mobaraki**, 2017. "Gandou": Marsh Crocodile in Iran.
- 5) Mobaraki. Asghar, Elham Abtin and Arezoo Ashrafizade., 2018. *Integrated wetland Management Toolkit* (translation to Farsi), Nashr-E-Talaie.

Skills:

- Conducting all kinds of field research and conservation works on Marine turtles
- Working with reptilian species, research and conservation, including venomous snakes and large lizards
- Working on terrestrial and Aquatic habitats (including wetlands and freshwaters): study, data collection, conservation
- Working with IUCN issues including Redlisting, assessment, conservation planning...
- Dealing with CITES issues and all issues related to wildlife trade
- Defining and executing of conservation projects.
- Species conservation planning, including Climate change effects
- Working with CBD and related issues

NOMINATION OF MR. DES B.A THOMPSON FOR THE ROLE OF
COP-APPOINTED COUNCILLOR – CLIMATE CHANGE

(submitted by the Government of the United Kingdom of Great Britain and Northern Ireland)

From: Hudson-Jones, Rhiannon <Rhiannon.Hudson-Jones@defra.gov.uk>

Sent: Thursday, 28 September 2023 16:54

To: CMS Secretariat <cms.secretariat@cms.int>; Dagmar Zikova <dagmar.zikova@un.org>

Cc: Daisley, Caroline <Caroline.Daisley@defra.gov.uk>; James Williams [JNCC GOV] <james.williams@jncc.gov.uk>; Des Thompson <Des.Thompson@nature.scot>; colin.galbraith3@gmail.com

Subject: RE: CMS Notification 2023/020: Nomination of Candidates for the COP-appointed Councillor for Climate Change/Nomination des candidats: Conseiller nommé par la COP- Changement climatique/Nominación de candidatos: Consejero designado por la COP- Cambio Climá

Dear Dagmar and Secretariat colleagues,

Further to Notification 2023/020, the UK is pleased to nominate Professor Des Thompson for consideration at CoP14 as the next CMS COP-appointed Councillor for the subject area of Climate Change. Our letter of nomination and Professor Thompson's CV are as attached.

I would be grateful if you could please confirm receipt of this message.

With thanks and kind regards,

Rhiannon

UK CMS Focal Point

Rhiannon Hudson-Jones | Team Leader, CITES & CMS | International Biodiversity and Wildlife (IBW) |

International Biodiversity and Climate Directorate (IBC) | Department for Environment, Food and Rural Affairs

Email: rhiannon.hudson-jones@defra.gov.uk | Telephone 07584182312 | 2nd Floor, Horizon House, 1 Deanery Road, Bristol, BS1 5AH

My working pattern is Monday - Thursday. I work flexibly - please do not feel that you have to respond outside your own normal working hours.



Department
for Environment
Food & Rural Affairs

Seacole Building
2 Marsham Street
London
SW1P 4DF

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28 September 2023

Dear CMS Secretariat,

NOMINATION OF CANDIDATES FOR THE CMS COP-APPOINTED COUNCILLOR FOR THE SUBJECT AREA OF CLIMATE CHANGE: Professor Des B.A. Thompson FRSE

Following [Notification No 2023/020](#): *Nomination of Candidates for the COP-Appointed Councillor for the Subject Area of Climate Change*, the United Kingdom of Great Britain and Northern Ireland wish to nominate Professor Des Thompson as a CoP-Appointed Councillor for the subject of climate change.

Professor Thompson is a globally recognized scientist and adviser principally through his work on raptors, shorebirds and mountain environments – all acutely sensitive to climate change. He has extensive governance and leadership experience and is adept in blending scientific expertise with practical applications. He is highly experienced in the operations and governance of the CMS, chairing its Technical Advisory Group supporting the Raptor MoU, which successfully reported to the 3rd Meeting of Signatories (MoS3) in July 2023. Until earlier this year, he chaired the AEWA European Goose Management International Working Group. Most recently, he has been advising UNESCO on the nomination of the Flow Country¹ as a World Heritage Site, which if successful would be the first blanket bog site inscribed (his advice focuses on the migratory and resident bird assemblages). This follows on from his contribution to the UNFCCC COP26 in Glasgow on the adaptive management of the Flow Country to meet net zero emissions. In the face of the nature-climate crisis, he has recently advised governments and agencies in countries as far apart as Ireland and Japan².

Professor Thompson advises on both mitigation and adaptation responses to climate change. He is critical in judging the evidence base on plans underpinning these responses, and is a proponent of nature-based solutions. These not only tackle climate change impacts, but also fundamentally support overcoming the major challenges of biodiversity loss, food and water security, environmental resilience, and human health inadequacies. Nature-based solutions are critical to sustainable social and economic development. Within the CMS family he is a determined advocate of deploying the evidence base critically and

¹ <https://whc.unesco.org/en/tentativelists/5679/>

² https://www.jstage.jst.go.jp/article/jjzwm/25/1/25_9/article

effectively to manage the adverse effects of climate change on migratory species, which involves addressing the direct and indirect IPBES drivers³.

Professor Thompson is the Principal Adviser on Biodiversity and Science with the government nature agency NatureScot and most recently led the team working with Government to publish an ambitious strategic biodiversity framework⁴. This is framed within Scotland's ambition to reach net zero by 2045⁵. He works closely with colleagues in the UK Climate Change Committee⁶.

Professor Thompson and his employer, NatureScot, confirm his willingness and availability to support the work of the Convention on Migratory Species under the thematic area of Climate Change and his excitement at the possible opportunity of undertaking this prestigious role.

Yours sincerely,

Ms Rhiannon Hudson-Jones
UK CMS Focal Point

³ <https://www.ipbes.net/models-drivers-biodiversity-ecosystem-change>

⁴ <https://www.gov.scot/publications/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland/pages/2/>

⁵ <https://www.gov.scot/policies/climate-change/>

⁶ <https://www.theccc.org.uk/about/>

Professor Des B.A. Thompson PhD DSc FCIEEM FRSE

Principal Adviser on Biodiversity and Science, NatureScot, Scotland's nature agency

Address: NatureScot, Meadowbank House, 153 London Road, Edinburgh EH8 7AU

Des.Thompson@nature.scot Telephone: ++44 (0) 131 316 2630; Mobile: 07774 161251

- Extensive governance and leadership experience in the environmental and nature-climate crisis realms
- Award winning ecologist, adviser and writer
- Chair: CMS Raptor MoU TAG and AEWA EGMP
- Leader of Biodiversity Team developing the Post-COP15 '[Strategic Framework for Biodiversity](#)': Scottish Biodiversity Strategy 2045; Five-year Delivery Plan; and Proposals for a new Natural Environment Bill. Updating the [Climate Change Plan](#) for Scotland
- The Principal Adviser on all work connected with biodiversity and science across NatureScot.
- Speciality Chief Editor of *Frontiers in Bird Science: Bird Conservation and Management*

Professor Thompson is a globally recognized scientist and adviser principally through his work on raptors, shorebirds and mountain environments – all acutely sensitive to climate change. He has extensive governance and leadership experience and is adept in blending scientific expertise with practical applications. He is highly experienced in the operations and governance of the CMS, chairing its Technical Advisory Group supporting the Raptor MoU, which successfully reported to the 3rd Meeting of Signatories (MoS3) in July 2023. Until earlier this year, he chaired the AEWA European Goose Management International Working Group. Most recently, he has been advising UNESCO on the nomination of the Flow Country¹ as a World Heritage Site, which if successful would be the first blanket bog site inscribed (his advice focuses on the migratory and resident bird assemblages). This followed on from his contribution to the UNFCCC COP26 in Glasgow on the adaptive management of the Flow Country to meet net zero emissions. In the face of the nature-climate crisis, he has recently advised government and agencies in countries as far apart as Ireland and Japan².

Professor Thompson advises on both mitigation and adaptation responses to climate change. He is critical in judging the evidence base on plans underpinning these responses, and is a proponent of nature-based solutions. These not only tackle climate change impacts, but also fundamentally support overcoming the major challenges of biodiversity loss, food and water security, environmental resilience, and human health inadequacies. Nature-based solutions are critical to sustainable social and economic development. Within the CMS family he is a determined advocate of deploying the evidence base critically and effectively to manage the adverse effects of climate change on migratory species, which involves addressing the direct and indirect IPBES drivers³.

Professor Thompson has published more than fifteen books and several hundred papers. His books on shorebirds, notably *Tundra Plovers: the Eurasian, Pacific and American golden plovers and Grey Plover*, and *Gulls and Plovers: the ecology and behavior of mixed species feeding groups* are viewed as classics. He led the formation of his country's Raptor Monitoring Scheme, and the publication of *Raptors: a field guide for surveys and monitoring* (three editions and several reprints)

¹ <https://whc.unesco.org/en/tentativelists/5679/>

² https://www.jstage.jst.go.jp/article/jjzwm/25/1/25_9/article

³ <https://www.ipbes.net/models-drivers-biodiversity-ecosystem-change>

Professor Des B.A. Thompson PhD DSc FCIEEM FRSE

which has been adopted in several countries, and importantly underpins survey work in relation to on-shore renewable energy developments and other land uses.

Shorebirds and raptors are two bird assemblages especially sensitive to climate change, and much of Professor Thompson's work has involved horizon scanning, predictive assessments of changes, and identifying adaptive and mitigation management measures. Latest research is clarifying the direct and most important role of climate change effects on laying date, body condition, and offspring number of European birds⁴. Professor Thompson's work with government and agencies is concerned with advising on the relative importance of climate change in driving biodiversity loss, and assessing the magnitude of this. This has been critical in relation to his work on European Special Protection Areas concerning montane birds and raptors. For example, the research work he initiated on montane birds in the late 1980s continues on dotterel and other montane birds⁵.

He has extensive media experience commenting on the impacts of climate change in north Europe. In recent months he has lectured in Spain, Germany, and United Arab Emirates. His wider work on climate and other drivers of ecosystem change has featured in many papers, and in the books he co-edited on *Alpine Biodiversity in Europe*, and *Mountains of Northern Europe: conservation, management, nature and people*.

Professor Thompson is the Principal Adviser on Biodiversity and Science with the government nature agency NatureScot, and most recently led the team working with Government to publish an ambitious strategic biodiversity framework⁶. This is framed within Scotland's ambition to be net zero by 2045⁷. He works closely with colleagues in the UK Climate Change Committee⁸.

He is a Fellow of the Royal Society of Edinburgh, and of the Chartered Institute of Ecology and Environmental Management (and was awarded its Medal in 2019). In January 2024, Professor Thompson will take up a Leverhulme Emeritus Fellowship at the University of the Highlands and Islands to research the conservation ecology of North European shorebirds. This work will tease apart the impacts of climate change, land use and other drivers giving rise to this assemblage of birds being one of the most threatened globally.

Employment History

2011-17 **Principal Adviser on Biodiversity, SNH.**

2007-11 **Policy and Advice Manager, SNH, and Chairman of Joint Nature Conservation Committee UK Uplands Lead Co-ordination Network (ULCN)**

1997-07 **Principal Adviser (Uplands), SNH**

1992-97 **Head of Uplands and Peatlands Branch, Scottish Natural Heritage (SNH)**

1985-92 **Senior Mountains and Moorland Ecologist, Chief Scientist Directorate, Nature Conservancy Council**

1984-85 **University Research Fellow, Department of Zoology, University of Liverpool**

1983-84 **Demonstrator, Department of Psychology, University of Nottingham**

⁴ <https://www.pnas.org/doi/10.1073/pnas.2105416119> and <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10175715/>

⁵ <https://bou.org.uk/wp-content/uploads/2020/06/BOU2014-uplands-baxter-et-al.pdf>

⁶ <https://www.gov.scot/publications/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland/pages/2/>

⁷ <https://www.gov.scot/policies/climate-change/>

⁸ <https://www.theccc.org.uk/about/>

Professor Des B.A. Thompson PhD DSc FCIEEM FRSE

Professional appointments and activities

Royal Botanic Garden of Edinburgh (RBGE) [Scientific Advisory Committee member](#) (2022-)

Chair of the UN AEWA (Conservation of African-Eurasian Migratory Waterbirds) [European Goose Management International Working Group](#) (2021-23)

Appointed Specialist Adviser to [Ministerial Expert Group on Grouse Moor Management](#) chaired by Professor Alan Werritty (2017-19)

Chair of [UN \(Bonn\) Convention on Migratory Species TAG on the Conservation of Migratory Birds of Prey in Africa and Eurasia](#) (elected 2014, and re-elected chair in 2016, and 2023-26). UK Government's representative

Chair of the Board of Trustees of the [Field Studies Council, FSC](#) (elected 2014-2019); Vice-President (2019-). UK's leading charity provider of outdoor environmental education.

Chair of the Advisory Board of [SAGES](#) (Scottish Alliance for Geoscience, Environment and Society) - alliance of universities and research institutes (2017-)

Chair of [CIEEM](#) (Chartered Institute of Ecology and Environmental Management) **Disciplinary Boards**, dealing with complaints, and setting professional standards within the Chartered Institute (2013-)

Board member of Scottish Consortium of Rural Research ([SCRR](#)) (2017-)

[NERC Peer College member](#) and CASE Studentship Panel member (2008-)

Associate Editor: *Journal of Applied Ecology* (2005-20), *Ibis* (1998-2010), Topic Editor *Frontiers* (2021-2022), and Editorial Board member of **Cambridge University Press** for 'Ecology, Biodiversity and Conservation' book series (2018-2022). Chaired the Watson Raptor Science Prize Panel, awarding annual prize for best European scientific research paper on birds of prey (2011-2019)

Education

DSc (2007). University of Nottingham. Submission: '*Nature conservation and the ecology of the British uplands*'.

PhD (1984). University of Nottingham (Zoology Department). Thesis: 'Foraging economics in flocks of lapwings (*Vanellus vanellus*), golden plovers (*Pluvialis apricaria*) and black-headed gulls (*Larus ridibundus*)'.

BSc (Honours) 1st Class, Biology (1979). Paisley College (University of West Scotland).

External University examiner for more than 30 DSc, DPhil and PhD theses (UK, Ireland, Norway, Sweden, Finland, India, Pakistan)

PhD student co-supervision of 21 students awarded PhDs; one student currently co-supervised at Glasgow).

Honours and Awards

Listed in the inaugural [ENDS Power List](#) of the 100 UK environmental professionals who have made the greatest impact in the past two years (2022)

National Lottery Scottish Project of the Year winner (and UK National Lottery Project of the Year runner-up, 2022); CIEEM Tony Bradshaw Award for Outstanding Achievement, and Best Practice Stakeholder Engagement Award (2022); and **SL&E 'Helping it Happen Conservation Award** (2022) for South Scotland Golden Eagle Project (Board member)

Awarded [CIEEM Medal](#) 'In recognition of outstanding contribution to biodiversity conservation and

Professor Des B.A. Thompson PhD DSc FCIEEM FRSE

upland ecology' (2019)

Elected a **Fellow of the Royal Society of Edinburgh** (2015-); Regional outreach champion for the RSE; member of Commission of Inquiry on Forestry (2022-)

Awarded Senior Visiting Fellowship, Hatfield College, Durham University (2015), and subsequently made a Senior Research Fellow (2015-)

Awarded Honorary Professorship at the University of the Highlands and Islands (2013-); Visiting Professorship at Manchester Metropolitan University (2018-)

CIEEM Best Practice Award (2009) to Scottish Raptor Monitoring Scheme (Chair)

Elected to **CIEEM Fellowship** (2009-)

Presidents' Prize, Botanical Society of the British Isles and the Wild Flower Society, for co-authorship of book *An Illustrated Guide to British Upland Vegetation* (2004)

Postgraduate Research Prize, University of Nottingham (1983); British Ecological Society Anne Keymer Prize (1982); Science Faculty and Biology Department prizes (1979, Paisley College)

Conference organisation/expert witness: Led organisation of seven international conferences. Expert witness at seven Public Inquiries; give evidence to Westminster and Scottish Parliamentary Committees.

Media: Regular contributor to BBC TV and Radio; programmes include *BBC HARDtalk*, *Countryfile* and *Today*. Write for *The Guardian* and *The Herald*.

Publications

Books (* denotes short-listing/granting of awards)

*Burt, Tim and Thompson, Des (eds.) (2020). ***Curious about Nature. A Passion for Fieldwork.*** Cambridge University Press, Cambridge. Included in *New Statesman's* Book of the Year.

Gaywood, M.J., Boon, P.J., Thompson, D.B.A., and Strachan, I.M. (eds.) (2016). ***The Species Action Framework Handbook.*** Scottish Natural Heritage, Battleby, Perth. Pp. 387. <http://www.snh.org.uk/pdfs/publications/corporate/SAFHandbook2016.pdf>

*Thompson, D.B.A, Birks, H.H., and Birks, H.J.B. (Eds.). 2015). ***Nature's Conscience: the life and legacy of Derek Ratcliffe.*** Langford, Peterborough. Pp. 571. Short-listed for *British Birds-BTO Best Bird Book of 2015*. Included in *The Spectator's* and *New Statesman's* 'Books of the Year'

Marrs, S., Foster, S., Hendrie, C., Mackey, E.C. & Thompson, D.B.A. (Eds.) (2011). ***The Changing Nature of Scotland.*** TSO, Edinburgh. Pp. 528.

Thompson, Des, Etheridge, B. & Riley, H.T. (2010). ***Scotland's Birds of Prey.*** Colin Baxter Photography and Lomond Books, Edinburgh

Hardey, J., Crick, H.P., Wernham, C, Etheridge, B., Riley, H. T. & Thompson, D. B. A. 2006 (reprinted twice 2007; second edition 2009; third edition, 2013). ***Raptors: A Field Guide for Surveys and Monitoring.*** The Stationery Office, Edinburgh. Pp. 370.

Shaw, P. & Thompson, D.B.A. (Eds.) 2006 (reprinted 2007) ***The Nature of the Cairngorms: Diversity in a changing environment.*** The Stationery Office, Edinburgh. Pp. 444.

Thompson, D. B. A., Price, M. F. & Galbraith, C. A. (Eds.) 2005. ***Mountains of Northern Europe: conservation, management, nature and people.*** The Stationery Office, Edinburgh. Pp. 396.

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- *Averis, A. B., Averis, A. M., Birks, H. J. B., Horsfield, D., Thompson, D. B. A. & Yeo, M. 2004 (reprinted 2014). ***An Illustrated Guide to British Upland Vegetation***. Joint Nature Conservation Committee, Peterborough. Pp. 454. Awarded Presidents' Prize of Botanical Society of the British Isles and Wildflower Society.
- Nagy, L., Grabherr, G., Körner, C., & Thompson, D. B. A. (Eds.) 2003. ***Alpine Biodiversity in Europe***. Ecological Studies Series, Springer Verlag, Berlin. Pp. 477.
- Thompson, D. B. A., Redpath, S. M., Fielding, A. H., Marquiss, M. & Galbraith, C. A. (Eds.). 2003. ***Birds of Prey in a Changing Environment***. The Stationery Office, Edinburgh. Pp. 550.
- Thompson, D. B. A. & Byrkjedal, I. 2001. ***Shorebirds***. Colin Baxter Photography (UK) and Voyageur Press (US). Pp. 72.
- Byrkjedal, I. & Thompson, D. B. A. 1998. ***Tundra Plovers: the Eurasian, Pacific and American golden plovers and Grey Plover***. Poyser monograph. Academic Press, London; Princeton University Press, Princeton (U S). Pp. 442.
- Baxter, Colin & Thompson, Des. 1995 (reprinted 1995, 1996, 2000, 2002). ***Scotland - Land of mountains***. Colin Baxter Photography, Grantown. Pp. 128.
- Thompson, D. B. A., Hester, A. J. & Usher, M. B. (Eds.). 1995. ***Heaths and Moorland: cultural landscapes***. HMSO, Edinburgh. Pp. 400.
- Usher, M. B. & Thompson, D. B. A. (Eds.) 1988. ***Ecological Change in the Uplands***. Blackwell Scientific Publications, Oxford. Pp. 449.
- Barnard, C. J. & Thompson, D. B. A. 1985. ***Gulls and Plovers: the ecology and behaviour of mixed species feeding groups***. Croom Helm, London; Columbia University Press, USA. Pp. 302.

Papers, chapters etc.

- Thompson, Des. (2023). Adam Watson. *Oxford Dictionary of Nation Biography*. <https://www.oxforddnb.com/display/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-90000381532> pp. 6. Oxford University Press, Oxford.
- Frick, WF, Cooke, S.J, Dickson, I. *et al* (inc **Thompson, DBA**) (2022), 11. Creating a culture of evidence use. In: ***Transforming Conservation: A Practical Guide to Evidence and Decision Making*** (Ed. W.J. Sutherland). Cambridge, UK: Open Book Publishers, 2022, <https://doi.org/10.11647/OBP.0321>
- Amano, T, Bako, L, Best, M *et al* (inc. **Thompson, DBA**) (2022). 12. Transforming Practice. Checklists for delivering change. In: ***Transforming Conservation: A Practical Guide to Evidence and Decision Making*** (Ed. W.J. Sutherland). Cambridge, UK: Open Book Publishers, 2022, <https://doi.org/10.11647/OBP.0321>
- Crowle, A.J.W., Coupar, A.M., Glaves, D.J., Key, D., Noble, A.K., Ratcliffe, J.B., Rentoul, K.R., & Thompson, D.B.A. (in press). ***Guidelines for the Selection of Biological SSSIs. Part 2: Detailed Guidelines for Habitats and Species Groups***. Chapter 9 Upland Habitats. Joint Nature Conservation Committee, Peterborough
- Sutherland, W.J., Burke, E., Morrison-Bell, C., Clements, A., Martin, J., Mitchell, C., Monk, K.A., von Bieberstein, K.R., and Thompson, D.B.A. (in press). What are the forthcoming legislative issues of interest to ecologists and conservationists in 2023? ***The Niche***
- Ferrer, M., Poole, A., Newton, I., Dennis, R., Thompson, D., Muriel R., Jimenez, J. and Morandini, V. (2022). Endogamy risk and osprey translocations: a reply. ***Science e-letter***.

[.science.org/doi/10.1126/science.abo5970](https://doi.org/10.1126/science.abo5970)

Peniche G., Shaw D.J., Anderson N.E. & Meredith A.L., Thompson, D.B.A. *et al* (2022). Establishing haematological and biochemical reference intervals for free-ranging Scottish golden eagle nestlings (*Aquila chrysaetos*). *Eur J Wildl Res* 68, 43. <https://doi.org/10.1007/s10344-022-01586-7>

Sutherland, W.J., Burke, E., Morrison-Bell, C., Clements, A., Martin, J., Mitchell, C., Monk, K.A., von Bieberstein, K.R., and Thompson, D.B.A. (2022). What are the forthcoming legislative issues of interest to ecologists and conservationists in 2022? *The Niche* March 2022: 28-35

Thompson, Des. (2022). Foreword. In: *The Corncrake. An ecology of an enigma*. Rennie, Frank. Whittles, Caithness.

Alba, R., Kasoar, T., Chamberlain, D., Buchanan, G., Thompson, D B A and Pearce-Higgins, J.W. (2022), Drivers of change in mountain and upland bird populations in Europe. *Ibis*. <https://doi.org/10.1111/ibi.13043>

Ferrer, M., Newton, I. Thompson, D B A, Bildstein, K L., and Morandini, V. (eds) (2021) Modern Conservation: Critical Lessons from Birds of Prey. *Frontiers*. <https://www.frontiersin.org/research-topics/12978/modern-conservation-critical-lessons-from-birds-of-prey>

Thompson, DBA. (2020). Eggs and nature connected. In: *Fragile. Birds, Eggs and Habitats*. Colin Prior. Merrell, London. Pp. 11-15.

Thompson, D.B.A. and Douse, A.F. (2021). Understanding the sensitivity of seabird populations to development pressure. Editor's Choice, *Journal of Applied Ecology* 56 (9) <https://appliedecologistsblog.com/2019/09/02/editors-choice-569/>

Ewing, SR, Baxter, A, Wilson, JD, et al. Clinging on to alpine life: Investigating factors driving the uphill range contraction and population decline of a mountain breeding bird. *Glob Change Biol*. 2020; 26: 3771– 3787. <https://onlinelibrary.wiley.com/doi/10.1111/gcb.15064>

Sutherland, W.J., Burke, E., Morrison-Bell, C., Clements, A., Martin, J., Mitchell, C., Monk, K.A., von Bieberstein, K.R., and Thompson, D.B.A. (2020). What are the forthcoming legislative issues of interest to ecologists and conservationists in 2020? *The Niche* March 2020: 46-54.

Pollard C.R.J., Redpath S., Bussière L.F., Keane, A., Thompson, D.B.A., Young, J.C. and Bunnefeld, N. (2019). The impact of uncertainty on cooperation intent in a conservation conflict. *Journal of Applied Ecology*, 56:1278–1288. <https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2664.13361>

Sutherland, W.J., Burke, E., Morrison-Bell, C., Clements, A., Martin, J., Mitchell, C., Monk, K.A., von Bieberstein, K.R., and Thompson, D.B.A. (2019). What are the forthcoming legislative issues of interest to ecologists and conservationists in 2019? *The Niche* March 2019: 19-26.

Hubble, L and Thompson, D.B.A. (2019). Foreword. In: *Wildlife and The Law*. (2nd Edition). Stewart, A. Thirsty Books, Edinburgh. Pp.13-15.

Thompson, D.B.A. (2018). Targeted supplementary feeding supports reintroduction of endangered raptors. Editor's Choice, *Journal of Applied Ecology*. 55 (3). <https://appliedecologistsblog.com/2018/04/13/editors-choice-553/>

Thompson, D.B.A. (2018). Foreword. In: *Abernethy Forest: The History and Ecology of an Old Scottish Pinewood*. Summers, R.C. RSPB Centre for Conservation Science, Sandy. Pp.

Sutherland, W.J., Burke, E., Morrison-Bell, C., Clements, A., Martin, J., Mitchell, C., Monk, K.A., von Bieberstein, K.R., and Thompson, D.B.A. (2018). What are the forthcoming legislative issues of interest to ecologists and conservationists in 2018? *Bulletin British Ecological Society* 49: 50-57.

Professor Des B.A. Thompson PhD DSc FCIEEM FRSE

Robins L., Burt, T.P., Bracken, L.J., Boardman, J. and Thompson, D.B.A. (2017). Making water policy work in the United Kingdom: a case study of practical approaches to strengthening complex, multi-tiered systems of water governance. *Environmental Science and Policy*, 71:41-55.
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