

ABSTRACT BOOK

**27TH INTERNATIONAL
CONGRESS FOR
CONSERVATION BIOLOGY**

**4TH EUROPEAN CONGRESS
FOR CONSERVATION
BIOLOGY**



**ICCB
ECCB
2015**

**MISSION
BIODIVERSITY:
CHOOSING
NEW PATHS FOR
CONSERVATION**

**MONTPELLIER,
FRANCE
2-6 AUGUST 2015**



Society for Conservation Biology



The Society for Conservation Biology (SCB), a global society of conservation students and professionals, held in August 2015 in Montpellier, France its 27th International Congress for Conservation Biology, jointly hosted with the 4th European Congress for Conservation Biology. SCB celebrated its 30th birthday with its largest conference ever, comprised of 2063 attendees, 782 poster presentations and 943 oral presentations organized in 74 contributed sessions and 73 symposia sessions.

The theme of the conference “Mission Biodiversity: Choosing new paths for conservation” represented a response to the fact that the traditional methods for conserving biodiversity need to adapt and change to match the ever-changing nature and needs of today’s world. It emphasized that the same rapid and ongoing biophysical and societal changes our world is facing also affect

conservation science and practice.

We are asking very different questions than what we asked years ago, and using different methods to get the data we need to answer these questions. Increasingly, we work with people from different disciplines such as political science, computer science, economics, and social science, among others. We investigate different challenges that range from new pathogens and invasive species to new drivers of habitat loss such as oil palm production in West Africa to tangled socio-political issues such as the growing illegal trade of species and their parts on the internet. We are developing new methods and tools to address these challenges with on-the-ground conservation, such as using drones and new remote-sensing technology for monitoring and conservation enforcement or citizen science projects for collecting data and engaging the public. Unsurprisingly, one of the most common words in abstracts presented at ICCB-ECCB abstracts was “change.” The ICCB-ECCB 2015 theme and its scientific content, summarized in this Abstract Book, document these changes and our need to keep up with, and even anticipate them for better conservation science and practice.

ICCB-ECCB 2015 featured several presentations, workshops and training courses that provided solutions to prevent or mitigate anthropogenic threats, and celebrated several exemplary success stories through the mini-plenaries from the Society's Distinguished Service and Early Career Conservationist awardees. ICCB-ECCB 2015 also featured an open debate starring Peter Kareiva and Clive Spash on Conservation Biology today; and how its fundamental principles and values are changing over time.

We would like to thank all participants, organizers and sponsors of ICCB-ECCB 2015 for their excellent work at the conference, and we look forward to many more conservation success stories in the coming years.

—Piero Visconti, Marit Wilkerson,
Edward Game and Raphael Mathevet



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For any queries on regards to this book of abstracts please contact Nathan Spillman nspillman@conbio.org



Society for Conservation Biology

ABOUT THE SOCIETY FOR CONSERVATION BIOLOGY

SCB is a global community of conservation professionals with members working in more than 100 countries who are dedicated to advancing the science and practice of conserving Earth's biological diversity. The Society's membership comprises a wide range of people interested in the conservation and study of biological diversity: resource managers, educators, government and private conservation workers, and students.

SCB publishes the flagship peer-reviewed journal of the field, *Conservation Biology*, and the cutting-edge online journal, *Conservation Letters*. The Society provides many benefits to its community, including local, regional, and global networking, an active conservation-policy program, and free online access to publications for members in developing countries. SCB also administers a postdoctoral program, the David H. Smith Conservation Research Fellowship Program, sponsored by the Cedar Tree Foundation.

Dominique PELLETIER, IFREMER ; Abigail POWELL, IFREMER ; Pierre LABOUE, Consultant

Reef fish spawning aggregations reflect the diversity of reproductive strategies of coral reef organisms. Groups of conspecific fishes are gathered for the purpose of spawning. These aggregations occur at a specific times and locations and are often the target of intensive fisheries. To protect and manage spawning aggregations, it is desirable to locate sites, identify the species that form aggregations and the periodicity with which species form them. We focused our study on a multi-species aggregation site that experiences low levels of exploitation, the Kouare channel, located in the New Caledonia's south lagoon. Conventional underwater visual census methods and diver operated stereo-video transects (Stereo DOV) were combined with four remote underwater video systems to provide very high replicated observations in low light conditions, up to 40m depth and strong current. Globally, 33 species of coral reef fishes have been identified forming spawning aggregations, including commercially important and emblematic species in New Caledonia (*P.leopardus*, *L.nebulosus*, *C.undulatus*). Seasonal and daily patterns in spawning activity and aggregations were analyzed with regard to topographic complexity, coral cover and temperature. Significant spatial differences between species were detected plotting the aggregations on a bathymetric 3D map. For example, *E.cyanopodus* only spawned on the outer slope between 25 and 40m deep whereas *S.globiceps* only spawned on promontories between 5 and 8m deep. Differences between temporal patterns were defined by the frequency with which the spawning aggregation occurs and the length of time the aggregation persists. The time of day varied between species from dawn to dusk. Among the species observed during the survey, 6 species were identified as priority species for conservation. Data collected during the survey will be used in a population dynamics model (ISIS Fish) that is designed to assess different management scenarios.

SYMPOSIUM 91. ISSUES FOR IMPACT EVALUATION DESIGN OF FSC CERTIFICATION OF NATURAL FOREST MANAGEMENT

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FSC natural forest management certification has been implemented for >20 years. FSC's goal is to provide a system through which responsible forest management is recognized by consumers and others. Our team works on the design of an empirical theory-based impact evaluation (IE) of the biophysical, social, economic, and policy impacts of this

intervention in Brazil, Peru and Indonesia. The range of expected outcomes, and the scales at which impacts ensue, forced us to use inter and trans-disciplinary approaches to define the IE scope and goals. While this research is still ongoing, our goal is to share lessons learned in tackling the complexity of the social-ecological systems where the FSC intervention occurs. We present ideas that see evaluation as a knowledge-generating process as well as a goal in itself. Thus, we introduce the rationale for a multi-stakeholder platform to assure the IE design would be built upon discussions with a range of social actors on the value of this knowledge-generation research to improve their conservation practice. We introduce a conceptual framework that lays out the foundation for the IE work, tightly linked to relevant concepts for conservation biologists such as adaptive management and systems thinking. We discuss results of preparatory studies that provide information used as a backbone for the IE design and that attempts, from the different angles where conservation trade-offs occur, to provide a roadmap for the IE. Studies include a descriptive analysis of auditing and accreditation activities aimed at providing transparency and accountability to the audit component behind certification. We developed country-based studies of political economy factors that underlie historical issues regarding forested lands use and analyze these issues across countries. We ground on these quantitative and qualitative studies hypotheses on how forest management decisions in general and FSC certification in particular, have occurred

INCORPORATING THE EFFECTS OF MULTIPLE FUTURE THREATS ON DECLINING MAMMALSTO IDENTIFY SPATIAL PRIORITIES FOR PRIVATE LAND CONSERVATION INCENTIVES

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Climate change is predicted to alter the distributions of many species as their environments become unsuitable under future climatic conditions. Uncertainty in expected future climate scenarios plus the likely effects of additional threats complicate efforts to plan for the conservation of threatened species. It is therefore important to incorporate multiple threats when planning for species conservation under climate change to avoid costly errors in prioritising limited conservation funding. We explore future scenarios of climatic conditions, and incorporate the threat of urbanisation, to plan for the persistence of species of conservation interest in a case study located in south-western Australia, a global biodiversity hotspot. We use species distribution modelling to understand how climate change might affect the geographical ranges of

