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

ICCB ECCB 2015

ABSTRACT BOOK

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.

DISENTANGLING THE RATIONALE OF DEFORESTATION TO UNDERSTAND BETTER THE PARTIAL EFFECTIVENESS OF PROTECTED AREAS. A CASE STUDY FOR MADAGASCAR'S EASTERN RAINFOREST CORRIDOR (2001-12)

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Madagascar's notoriously high level of biodiversity is currently threaten by deforestation. Protected Areas (hereafter "PAs") remain until now the central instrument to protect it whilst little is known about their environmental effectiveness in the country. With a matching approach in a quasi-natural experiment setting, we demonstrate for the entire island's rainforest that PAs' additionality has been limited from 2001 to 2012. PAs have made it possible for deforestation to be stabilized in a trend and has restricted the upsurge of deforestation resulting from the country's late political instability. Nonetheless, post-matching analyzes reveal that PAs have only contained some of the causes of deforestation. Effectively stopping the latter will require further ambitious policies to trigger the necessary agricultural transition for the country.

THE GENETIC DIVERSITY AND SPATIAL GENETIC STRUCTURE OF THE FERULA COMMUNIS COMPLEX (APIACEAE) IN THE TYRRHENIAN AREA.

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The giant fennel is a circum-Mediterranean complex characterized by a great morphological variability and comprising several species and subspecies. The focus of our work is on the taxa inhabiting the Tyrrhenian islands and coasts, namely Ferula arrigonii Bocchieri, a Corso-Sardinian endemic located in a few coastal sites and on small islands, F. tunetana Pomel ex Batt., endemic to Tunisia, and the widespread F. communis s.l. AFLP markers and a population genetic approach were used to investigate these taxa, with the following main aims: i) gaining insight into the patterns of molecular variation of the F. communis complex in the Tyrrhenian area and verifying how they are related with geographic boundaries and the current taxonomic treatments; ii) assessing the species-wide spatial genetic structure and diversity of the previously unstudied endemic F. arrigonii and provide suggestions for its conservation; and iii) comparing levels of genetic diversity between F. arrigonii and its widespread congener F. communis. Results indicate that the F. communis complex constitutes a relatively heterogeneous group whose genetic structure is organized in multiple hierarchical levels and is only partially coherent with the geographic provenance of the populations, previous findings and current taxonomic treatments. All the investigated populations are characterized by high levels of genetic diversity, with no significant differences between F. communis and F. arrigonii. Three genetically distinct groups were detected within this latter taxon, although with considerable overlap between populations. Our data therefore suggests that in situ actions are not urgently needed for this species, and that a geographic criterion aimed at conserving it in its whole distributional range should be adopted when planning germplasm collections for long-term ex situ conservation.

CONSERVATION OF GENTIANA LUTEA L. (GENTIANACEAE) IN SARDINIA THROUGH A MULTIDISCIPLINARY APPROACH.

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Gentiana lutea L. s.l. (Gentianaceae) is an orophyte plant which occurs in Southern European mountains. It has a long-standing history of human exploitation, mainly for liqueurs preparation and in the pharmaceutical industry and it is currently listed in the EU Habitat Directive 92/43/EEC Annex V. Its distribution range in Sardinia consists of only a few groups of individuals limited to small areas of the Gennargentu massif (Central-Eastern part of the island). A conservation project is being carried out at the CCB (Centre for the Conservation of Biodiversity) with the aims of assessing the conservation status of this taxon and actively plan and carry out subsequent ex situ and in situ conservation measures, with a particular focus on its possible reintroduction in areas where it has gone extinct. A multidisciplinary approach is being undertaken, which involves the following activities: i) assessment of the