Xth International Conference on Marine Bioinvasions

16-18 October 2018

ABSTRACT BOOK

(a final/full version will be posted after the conference)

Xth INTERNATIONAL CONFERENCE ON MARINE BIOINVASIONS

Puerto Madryn, Patagonia, Argentina, October 16th-18th, 2018

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Ale Bortolus (Coordinator) / Darío Podestá (Performer) / Yagui (Performer & Exibit Coordinator)

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PUERTO MADRYN - PATAGONIA - ARGENTINA

Welcome!!

Dear Attendee,

We are excited and honored to host the *Xth International Conference on Marine Bioinvasions* (ICMB-X) in Argentina, being the first Edition celebrated in Latin America.

The ICMB is a major international forum for expert scientists and policymakers to discuss the latest science and emerging issues for the understanding and management of Marine Bioinvasions.

The organization of the conference is undertaken solely by voluntary members. We especially celebrate the immense effort made by the LOC members throughout the organizing process while most of them were conducting their doctoral research. We also thank the Oficina de Vinculación Tecnológica (CCT CONICET – CENPAT), for kindly assisting the LOC in whatever was necessary.

We also celebrate the good number of Sponsors willing to support the study of the marine bioinvasions in Latin America and the World. They even made possible for us to supply 15 Early Career Awards for young researchers from 6 countries.

Scientists, managers, students and communicators from over 42 countries collaborated and sent their results to this ICMB-X Edition, where the leading-expositor authors will exchange their cutting-edge ideas in oral and poster presentations, and all framed by a formidable team of 7 prestigious Specially Invited and Keynote Speakers from 5 continents.

We wish you the best and hope you enjoy this unique and memorable event!

Co-chairs, Dr. Evangelina Schwindt, and Dr. Alejandro Bortolus

Art, Science & Society

People tend to think of marine bioinvasions as a problem exclusively restricted to the oceans, seas, and seashores. However, marine vectors have transgressed coastal-marine borders for centuries, reaching deep inland sites where they also cause serious impacts. In fact, exotic species contained in the goods onboard cargo vessels are periodically transported inland where they often became introduced and invasive. In South America, examples can be traced back to the late 19th Century when early pioneer botanist Carlos Berg detailed an impressive number of exotic species that, having arrived from Europe through the port of Buenos Aires, were later transported -mixed with the cargo/goods- along some 2000 km by land before they become introduced and widely spread across the southernmost end of Patagonia. Within this context, Yagui's art represents the perfect metaphor for us to socialize the problem of biological invasions: marine cargo ships grounded in the middle of arid continental landscapes.


@YaguiArt

Our local artists Yagui and Darío Podestá have voluntarily collaborated with the Local Organizing Committee of the ICMB-X from the very beginning. Yagui, for instance, didn´t think it twice when we asked him for one of his paintings (owned by a friend) to be used as the header of ICMB-X's social media accounts and website. Darío Podestá graciously shared with us his award-winning photographs to promote the event on the social networks.


@DarioPodestá

We joined efforts with Yagui and Darío to organize the first Art, Science, and Society event ever celebrated in an ICMB edition. Sponsored by Aluar and the APPM, the artists merge their skills having in mind the problems debated at the ICMB-X while both ICMB-X Co-Chairs, along with other volunteer local bioinvasion scientists, deliver open-access outreach talks directed to educate people of all ages and to create awareness about Marine Bioinvasions. This SciArt initiative is also present in the Conference Program given to all attendees, which includes precious original art souvenirs.

Visit the art exhibit and be amazed!

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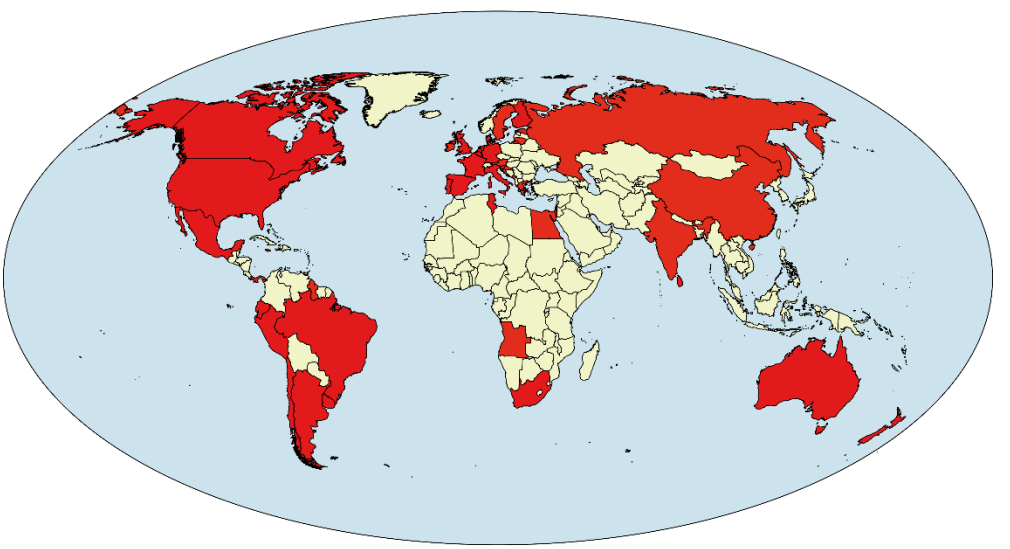

Antifouling activity of azulenoid sesquiterpenes from the antarctic gorgonian *Acanthogorgia laxa*

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Biofouling has been recognized as a widespread problem in the design and operation of waterborne structures, with high associated economic costs, for example in ship's hulls, oil platforms, pipes of cooling systems for power plants, and cages used for aquaculture. In the shipping industry, the economic effects of biofouling are the most dramatic, since fouled hulls produce additional frictional resistance which leads to an increase of up to 40% in fuel consumption. Additionally, shipping activities have been identified as the main source of species introductions in coastal habitats. A vast amount of literature has shown that marine invasive species commonly arrive, not only in the ballast water but also in ballast water sediments and biofouling communities. These are main vectors has led to high percentages of cryptogenic and exotic species in Mar del Plata harbour. Antifouling paints are the most effective method used to prevent fouling settlement. However, they are formulated with toxics which contaminate water and sediments. For these reason, there is a growing need for environmentally safe antifouling systems. In the search for new antifouling compounds, samples of the grey-blue gorgonian *Acanthogorgia laxa* were collected by bottom otter trawls (-343 m) on board the research vessel 'Puerto Deseado' (CONICET) in Antarctic waters (64°41.50S, 63°1.60W). Two azulenoid sesquiterpenes, Linderazulene (1) and Ketolactone (2) isolated from the *A. laxa* were assayed as potential antifoulants by incorporation in experimental soluble-matrix marine paints. Field tests were conducted at Mar del Plata harbour for 45 days. The results showed that compounds 1 and 2 displayed good antifouling potencies against a wide array of organisms. As always, the marine environment provides knowledge and inspiration for the development of additives for the control of biofouling. In the present work, it was demonstrated that azulenoids can be environmentally friendly natural additives for marine paints.

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