



IMCC3 • 14-18 August, 2014 • Glasgow, Scotland  
International Marine Conservation Congress

[\[Back to Program Search\]](#)  
[\[Back to Schedule Listing\]](#)

### Poster Session

Room: Exhibit Hall 2014-08-15; 19:00 - 21:00

**NB: Unless specified otherwise, presentations are 15 minutes in length, and speed presentations are 5 mins in length.**

**P.1 Transborder cetacean monitoring using ferries as platforms of observation between Tunisia and Italy: winter results of an ACCOBAMS co-funded project.** *Pellegrino, G \**, *Ass Ketos; Aissi, M Bizerte Science Faculty; Arcangeli, A ISPRA-NAT; Kchouk, ME Ass Atutax; Moulins, A Fond. CIMA; Ruvolo, A Accademia del Leviatano; Tringali, ML Ass Ketos; Crosti, R, MATTM-ISPRA;*

**Abstract:** The region between Sicily and Tunisia is believed to be one of the potential wintering grounds for fin whale and is also considered a critical habitat for cetacean species due to several important anthropogenic pressures. In order to start a systematic cetacean monitoring of the area, a partnership of Tunisian and Italian research bodies, within the international network that monitors cetacean using ferries as platforms of observation, participated with success to the ACCOBAMS 2012 open call for "Monitoring, research, training and projects relating to the conservation of Cetaceans". Two ferry companies, Grimaldi Lines and CTN Ferries, were involved in the project. Collected data will allow to: assess cetacean presence and distribution in the surveyed region (sighting are shared on OBIS Sea Map), investigate fin whale migration patterns and contribute to assess the quantity of events of collision risks. Networking with the other partners that use the same monitoring protocol is an important added value that will allow a synoptic view of cetacean in the Western Mediterranean Sea Region. Main results, from the winter monitoring, are the scarce presence of cetacean in the area, especially when compared to the other transect of the network just north (between Civitavecchia and Barcelona) and the encouraging numbers of trained university students. Overall, the project goal is also to enact policies, between Tunisia and Italy, so to strengthen the cooperation and dialogue

**P.2 Abundance and distribution of fish eggs in the Colombian Pacific Ocean during September 2007.** *Lopez, RH \**, *Military University Nueva Granada; Pinto, GJ Military University Nueva Granada; Baldrich, A Universidad de los Lagos-Chile;*

**Abstract:** Evaluations of ichthyoplankton (fish eggs and larvae) are important in ecological studies and fisheries prospections, since help to define periods and breeding areas, and because such early stages are a key link within the trophic web of zooplankton and upper levels. For assessing the distribution and abundance of fish eggs in September 2007 along the Colombian Pacific Ocean (CPO), zooplankton was collected by oblique tows to 184 m mean depth with a 60-cm bongo sampler (294- and 520- $\mu$ m mesh). The abundances reached 53382/100m<sup>3</sup> in the first net and 631/100 m<sup>3</sup> in the second one. The largest aggregations in the neritic south area of the CPO can be associated with spawning of fish stocks, high productivity, and the proximity of mangrove swamps, which are spawning and nursery grounds. The highest abundances in ocean waters could be partially explained by transport and retention processes, as an effect of the complex system of currents in the CPO. Considering both nets, diel variation was not wide (day 2476/100 m<sup>3</sup> vs. night 2200/100 m<sup>3</sup>), suggesting continuous spawning, although many fish have higher spawning at night to avoid predators. Surface water temperature and salinity did not appear to play a significant role on distribution and abundance of eggs. This scenario can change, depending on the sampling month, fish species and the reproductive mode and location and extent of spawning grounds, and because fish spawning behavior is dictated by photoperiod (length of daylight).

**P.3 Marine Conservation at Dongsha Atoll in the South China Sea.** *Dai, CF \**, *National Taiwan University;*

**Abstract:** Dongsha (Pratas) Atoll, located at 20°35'N and 116°41'E, is an isolated atoll that covers an area of approximately 500 km<sup>2</sup> in the South China Sea. The atoll has been a major fishing ground of Chinese and Vietnamese fishing boats in the past few decades, and various fishing practices including gill nets, spearfishing, dynamite and cyanide fishing have been applied. The immense pressure of fishing along with sea temperature anomaly in 1998 caused dramatic degradation of the coral reef ecosystem. Approximately 90% of corals in the lagoon were killed and the reef substrate was replaced by filamentous and fleshy algae. To facilitate the recovery and conservation of this atoll, the government of Taiwan designated Dongsha Atoll as a marine national park in March 2004. Major efforts of scientific investigations and restoration practices started in 2005, and significant recovery of reef ecosystems and marine biodiversity have been envisaged since 2008. As in 2013, more than 300 species of reef-building corals and 700 species of fish have been reported. To promote international collaborations on marine conservation and scientific investigations in the South China Sea, Dongsha International Marine Station is established in 2014 with an aim to provide basic facilities to international scientific communities.

**P.4 Trace metals in the blood of little penguins (*Eudyptula minor*): a novel tool for assessing marine coastal pollution.** *Finger, Annett \**, *Victoria University, Melbourne, Australia; Dann, Peter Phillip Island Nature Park, Australia; Nugegoda, Dayanthi RMIT University, Melbourne, Australia; Scarpaci, Carol Victoria University, Melbourne, Australia;*

**Abstract:** To establish baseline measurements of trace metal burdens in little penguins (*Eudyptula minor*), three sites with varying levels of industrial contamination were selected: (1) an urban colony within Port Phillip Bay, Melbourne, Australia, recently exposed to major dredging activities, (2) a less industrial setting with partial foraging range overlap, and (3) an offshore colony, distant from potential anthropogenic pollution. We collected blood of free-ranging little penguins in three distinct sampling periods (breeding, moult and non-breeding) over three consecutive years (2011-2013). A total of 170 blood samples were analysed for the following metals: Al, As, B, Ca, Cd, Cr, Cu, Fe, Hg, Pb, Se, Sn and Zn. We found that the urban colony of little penguins carried significant higher mean concentrations of As, Hg and Pb at an average rate of four, three and two-fold, respectively, compared to penguins at sites 2 and 3. Furthermore, sampling period, gender and body weight showed correlations with trace metal concentrations in blood. Our results suggest a strong link between metal concentrations in the blood of little penguins and the level of industrialisation of their foraging zone. This research is the first comprehensive long-term study of trace metals in little penguins using a novel, non-destructive method. It establishes the effectiveness of using the little penguin as a bioindicator of coastal pollution in a changing environment.

**P.5 Vulnerability of *Modiolus* reefs to climate change: towards understanding the genetic basis of resilience.** *Mackenzie, Clara \**, *Heriot-Watt University;*

**Abstract:** Increases in global CO<sub>2</sub> concentrations are linked to physical changes in marine environments. Key structural or functional species such as the bivalve *Modiolus modiolus* may be affected by such changes, resulting in a decline in their extent and distribution, and therefore, reducing their value as ecosystem engineers which provide rich habitats for marine life. While recent work has shown that other marine species may possess the ability to acclimate (via phenotypic plasticity and standing genetic variation) to changing environmental conditions over time and hence have the potential to increase tolerances to environmental stress, it remains relatively unclear whether *Modiolus* can compensate. In order to identify and characterise populations of *M. modiolus* most likely to be vulnerable to climate change, this project aims to determine the current energetic demands and stress response of populations in the field to include those populations at the extreme southern limit of the range