

International Conference on

AQUACULTURE & MARINE BIOLOGY

June 25-27, 2018 | Rome, Italy

Invasive gene pools of *Mytilus galloprovincialis* in the Alboran Sea

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Suspension cultures of the Mediterranean blue mussel *Mytilus galloprovincialis* is a long-lasting tradition in the Alboran Sea (SE Iberian Peninsula). The goal of this study was to characterize current seed batches used to enhance culture density in rafts and longlines in the Alboran Sea. Samples consisted on 100 individuals of *M. galloprovincialis* from three identified origins upon information afforded from aquaculturists of the Alboran Sea, i.e. a Mediterranean stock from Italy, an Atlantic stock from Galicia, and a local adult rocky sample from the Alboran Sea. DNA was extracted and purified with the method FENOSALT. Individuals were genotyped using a set of ten microsatellites which were used to disentangle the genetic contribution that commercial stocks imported to the Alboran Sea could have on the local population. The three seed stocks collected from Alboran aquaculture facilities showed high gene diversity in all microsatellites ($H_e > 0.800$) but the genetic divergence was significant in all pairwise comparisons, especially the Italian stock. Those results indicate that either inadvertently or deliberately

several mussel gene pools are being admixed in the Alboran Sea. Such admixture could bring about a desirable heterosis in mytiliculture but also environmental concerns and risks of genetic homogenization among naturally divergent gene pools of the Atlantic and the Mediterranean.



Biography

Adil Aghzar has completed the PhD at the age of 30 years from the University of Abdelmalek Essaidi, Tetouan, Morocco and from University of Vigo, Spain. He is an assistant professor of environmental engineering and aquaculture at the Superior School of Technology-Khenifra, University of Moulay Ismail, Morocco. He is an associate member of the research team "Marine Genetic Resources", Faculty of Biology, and University of Vigo. He has published 5 papers in SCI journals.

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