

## GUGLIELMO LETTERIO Research Fellow

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## **Biographical Sketch**

Degree Natural Sciences 1968, University of Messina, Italy. Full Professor of Ecology, Faculty of Science of the University of Messina, 1990-2016. Associate Professor, Faculty of Science University of Messina Italy, 1984-1990. Teaching of Systematic Zoology (1978-1984) and Fundamental Ecology (1985-2015) for the degree in Biological Science, Faculty of Science Messina Italy. He performed the duties of general secretary in the following NATO Advanced Study courses: Erice (TP, Sicily-November 1977) on "Spatial patters in plankton communities"; Lipari (Messina, Sicily 12-24 October 1980) on "Physiological ecology of Phytoplankton"; Bombannes (Bordeaux, France 12-20 May 1982) on "Flows of energy and materials in marine ecosystems: theory and practice"; S. Miniato (Florence, 1-7 October 1985) on "Physiological Ecology of photosynthetic pycoplankton in the Ocean". Italian delegate of the CCAMLAR Scientific Committee Hobart (Tasmania) 1990-2000? Director of the Department of Animal Biology and Marine Ecology, University of Messina (1997-2000). Coordinator of the PhD on "Environmental Sciences: Marine Environment and Resources" (1992-1998). He was a Member of the CoNISMa Board and head of the Local Research Unit (URL) of Messina of the National Inter-University Consortium for Marine Sciences (CoNISMa 1997-2016). From July 24 to August 29, 1980 he participated to the BIO-MEL Eastern Canadian Arctic Cruise by N/R Hudson (T.Platt and A.R. Longhurst, scientific coordinators) and in the following PNRA expeditions he has played the role of chief scientist: III (1987-88), V (1989-90), X (1994-95), XIII (1997-98), XV (1999-2000), XX Italian Antarctic Expeditions (13 October 2004 - 15 January 2005) and at the I (February 20 - March 5 1991) and II (March 20 - April 4 1995) Oceanographic Expeditions in the Straits of Magellan. In the last 30 years on PNRA Antarctic research (1987-2016), he has Principal Investigator (PI) of 8 scientific projects (Polar Queen 87-88, Cariboo 89-90, ROSSMIZE 94-95, PIPEX 1997, PIED 1999, SEAROWS 2004-2005, SICAF 2012, CEFA 2015-2016 and Zooplankton Operative Unit Leader of 3 scientific projects (VLT 2004, ECOFISH 2006, ITALICA 1995-96). He has been Scientific Leader of the O.U. zooplankton and micronekton in the following European projects: VECTOR, RITMARE, COCONET, MARINE STRATEGY. From 1968 to today, his research activity has been continuously focused on issues related to the marine zooplankton and micronekton ecology: (a) spatio-temporal distribution in the Mediterranean, Antarctic Ocean, Strait of Magellan and coastal and transitional environments (b) pelagic food chain, with particular reference to the role of euphausiids and mesopelagic fish in the Deep Scattering Layer (c) role of the zooplankton in the carbon cycle. His results are documented by over 200 rewieved national and international publications, of which 56 ISI paper (H index 16 for a total of 665 citations based on SCOPUS profile, June 2018; H index 21 for a total 1362 citations based on Google-Scholar profile, June 2018). He also co-editor of four Springer-Verlag Books: Ross Sea Ecology 2000; Atlas of Marine Zooplankton Strait of Magellan I Copepods (1995) and II

Amphipods, Mysids, Euphausiids, Ostracods, Chaetognaths, Springer Verlag (1996); Mediterranean Ecosystems Structures and Processes (2001) and a Special Issue on Magellan Cruises, Polar Biology (2011).

General objectives of the Scientific Association to the SZN are to give particular emphasis (a) to the ecology and bio-molecular studies of the meso- and bathypelagic organisms in collaboration with the research group of Dr Adrianna Ianora, (b) to the phyto-zooplankton trofodynamic processes involving the Ross Sea and Terra Nova Bay key species, within the collaboration of the Dr Mariella Saggiomo team and (c) to the systematics of the deep organisms, also in the light of the new bio-molecular methodologies with the research group coordinated by Dr Francesco Patti.

## **Representative Recent Publications**

- 1. Minutoli R., Brugnano C., Granata A.,. Zagami, L. Guglielmo (2017). Zooplankton electron transport system activity and biomass in the western Ross Sea (Antarctica) during austral summer 2014. Biol.Polar 40: 1197-1209.
- 2. Guglielmo L., Minutoli R., Bergamasco A., Zagami G., Granata A., Brugnano C., F. Boero (2017). The Strait of Messina: a key area for Pelagia noctiluca (Cnidaria, Scyphozoa). In: Jellyfish ecology, distribution, patterns, and human interactions. G.L. Mariottini (Ed.), Nova Publishers, New York, 71-90
- 3. Battaglia P., Andaloro F., Esposito V., Granata A., Guglielmo L., Guglielmo R., Musolino S., Romeo T., G. Zagami (2016). Diet and trophic ecology of the lanternfish Electrona risso (Cocco 1829) in the Strait of Messina (Central Mediterranean Sea) and potential resource utilization from the Deep Scattering Layer (DSL). Journal of Marine Systems 159: 100–108.
- 4. Purcell J.E., Milisenda G., Rizzo A. Carrion S.A., Zampardi S., Airoldi S., Zagami G., Guglielmo L., Boero F., Thomas K., Doyle T.K., S.Piraino (2015). Digestion and predation rates of zooplankton by the pleustonic hydrozoan Velella velella and widespread blooms in 2013 and 2014. J. Plank.Res 37: 1056-1067.
- **5.** Guglielmo L., Arena G., Brugnano C., Guglielmo R., Granata A., Minutoli R., Sitran R., Zagami G., A. Bergamasco (2015). MicroNESS: an innovative opening–closing multinet for under packice zooplankton sampling. Polar Biol.38: 2035-2046.
- 6. Guglielmo R., Gambi M. C., Granata A., Guglielmo L., Minutoli R. (2014). Composition, abundance and distribution of holoplanktonic polychaetes within the Strait of Magellan (southern America) in austral summer. Polar Biol 37: 999–1015.
- 7. Milisenda G., Rosa S., Fuentes V.L., Boero F., Guglielmo L., Purcell J.E., S. Piraino (2014). Jellyfish as Prey: Frequency of Predation and SelectivForaging of Boops boops (Vertebrata, Actinopterygii) on the Mauve Stinger Pelagia noctiluca (Cnidaria,Scyphozoa). PLoS ONE 9 (4): e94600
- **8.** Rosa S., Pansera M., Granata A., L. Guglielmo (2013). Interannual variability, growth, reproduction and feeding of Pelagia noctiluca (Cnidaria: Scyphozoa) in the Straits of Messina (Central Mediterranean Sea):Linkages with temperature and diet. Journal of Marine Systems 111–112: 97–107.