

# Joanna Kolasinski, PhD

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## Positions and Experiences

- April 2013 - present**    **Post-doctoral researcher:** "Projection of the Deepwater Horizon spill in deep sediments and the water column in the water column using isotopic tracers". Tulane University (May-December 2013) and University of South Florida, College of Marine Science (January 2014-present).
- 11/2012**    **Expert, International Atomic Energy Agency:** "Application of Stable Isotopes and Trace Elements as Tracers of Biogeochemical Change in the Marine Environment" training course (40 participants, Asia and Pacific countries). Colombo, Sri Lanka, 21-30th November 2012.
- 2011 - 2012**    **Post-doctoral researcher,** (Agulhas Somali Current Large Marine Ecosystem programme (ASCLME)), IsoEnvironmental Lab., Rhodes University (South-Africa): "Productivity, diversity and biomass of the south-western Indian Ocean Mozambique Channel ecosystem: investigating the role of mesoscale eddies in promoting the pelagic production".  
**Responsibilities:** primary production (experimentation design and sample analyses), collaboration implementation, report, workshop and publication preparation.
- 01-02/2010**    **Associate researcher,** GEOSCIENCES, University of Reunion (France).  
Leader of the project "Distribution, partitioning and fluxes of carbon and nitrogen in shoreline communities in an oligotrophic setting: quantifying the importance of terrestrial production (Les Glorieuses Island, Eparses Islands, SW Indian Ocean)."  
**Responsibilities:** fieldwork, sample collection and analysis.
- 2008 - 2009**    **Teaching assistant,** University of Reunion (France).  
**Responsibilities:** Genetic (62 hours, BSc), Microbiology (36 hours, BSc), Tropical Ecology (20 hours, MSc), Molecular Biology (16 hours, BSc)

## Education

- 12/2009**     **PhD, Marine Ecology**, University of Reunion (France), ECOMAR Laboratory  
Speciality: Stable isotope ecology  
« *Assessment of benthic foodweb in an urbanized coral reef environment, Reunion Island, Indian Ocean* »  
**Direction:** Dr Patrick Frouin, Prof. Henrich Bruggemann  
**Referees:** Pr Brian Fry, Pr Matthieu Lecorre, Dr Karyne Rogers, Dr Laurent Chavaud
- 2005**        **MSc, Ecotoxicology, (2<sup>nd</sup> year)**, University of Metz (France)  
Speciality: Pollution biomarkers in aquatic organisms  
Thesis: « *Impact of holothurians (Echinodermata) foraging activity on microphytobenthic communities and toxicity biomarker (AChE and EROD activities) evaluation in a tropical coral reef (Reunion Island, Indian Ocean)* »
- 2004**        **MSc, Populations and Ecosystems (1<sup>st</sup> year)**, University of Quebec at Rimouski (Quebec, Canada)  
Speciality: Molecular biology  
Thesis: « *Identification of discriminatory molecular tools (COI) and genetic variability in the genus *Gammarus* (Crustacea, Amphipoda) from the St-Lawrence estuarine coast (Quebec, Canada)* »
- 2003**        **BSc «Organisms and Populations Biology»**, University of Reunion (France)

## Scientific competencies

- **Isotope mass spectrometry:** preparation and analysis of samples for C, N, S stable isotopes analysis: sediment and water particulate organic matter, animal and vegetal tissues (muscle, liver, blood, feather), artificially enriched C and N samples. Samples preparation for compound-specific stable isotopes analysis (i.e. nitrates).
- **Ion beam analysis:** sample preparation for trace elements determination (Cu, Fe, Zn,...) in 3MV accelerator.
- **Spectrophotometry, fluorimetry:** chlorophyll/phaeopigments (sediment, water column), toxicological enzymatic activities (EROD, AChE).
- **Molecular ecology:** gel electrophoresis, polymerization chain reaction (PCR).
- **Fieldwork:** benthos/fish surveys and sampling (air-lift system, speargun & nets, sediment cores...), oceanographic cruises (nutrients, phytoplankton, zooplankton)
- **Taxonomy:** coral reef marine invertebrates, macroalgae (partial)
- **Statistics/Software:** Statistica, Primer, R, ANCREPRO, Ocean DataView
- **Journal referee** for *Marine Ecology Progress Series, Rapid Communication in Mass Spectrometry, Limnology and Oceanography, Aquatic Ecology, Aquaculture, Marine and Freshwater Research, International Journal of Marine Science*

## **Publications**

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- Kohler S.A., Connan M., **Kolasinski J.**, McQuaid C.D., Cherel Y., Jaquemet S. 2014. Minimal sex-related trophic segregation in a sexually dimorphic shorebird, the African Black Oystercatcher (*Haematopus moquini*) revealed by stable isotope analyses. *Austral Ecology* doi:10.1111/aec.12117
- Pendergraft M.A., Dincer Z., Sericano J.L., Wade T., **Kolasinski, J.** and Rosenheim B.E. 2013. Linking ramped pyrolysis isotope data to oil content through PAH analysis. *Environmental Research Letters* 8 044038 doi:10.1088/1748-9326/8/4/044038
- Nahon S., Richoux N., **Kolasinski J.**, Desmalades M., Ferrier Pages C., Lecellier G., Planes S., Berteaux Lecellier V. Spatial and temporal variations in stable carbon ( $\delta^{13}\text{C}$ ) and nitrogen ( $\delta^{15}\text{N}$ ) isotopic composition of symbiotic scleractinian corals. 2013. *Plos One* doi: 10.1371/journal.pone.0081247
- Mablouké C., **Kolasinski J.**, Potier M., Cuvillier A., Bigot L., Frouin P., Jaquemet S. 2013. Feeding habits and food partitioning between three commercial fish associated to artificial reefs in a tropical coastal environment. *African Journal of Marine Science*, 35(3):323-334.
- **Kolasinski J.**, Jaquemet S., Kaehler S. 2012. Distribution and sources of particulate organic matter in a dipole of mesoscale eddies in the Mozambique Channel (south-western Indian Ocean): insight from C and N stable isotopes. *Journal of Marine System*, 96:122-131. doi:10.1016/j.jmarsys.2012.02.015
- **Kolasinski J.**, Rogers K., Cuet P., Barry B. & Frouin P. 2011. Sources of particulate organic matter at the ecosystem scale in a tropical coral reef: a stable isotope and trace element approach. *Marine Ecology Progress Series*, 443:77-93.
- **Kolasinski J.**, Taddei D., Cuet P. & Frouin P. 2010. AChE and EROD activities in two echinoderms, *Holothuria leucospilota* and *Holothuria atra* (Holothuroidea), in a coral reef (Reunion Island, South-western Indian Ocean). *Journal of Environmental and Health Science, Part A: Toxic/Hazardous Substances and Environmental Engineering*, 45:1-10.
- **Kolasinski J.**, Frouin P., Sallon A., Rogers K., Bruggemann H.J. & Potier M. 2009. Feeding ecology and ontogenetic dietary shift of yellowstripe goatfish *Mulloidichthys flavolineatus* (Mullidae) at Reunion Island, SW Indian Ocean. *Marine Ecology Progress Series*, 386:181-195.
- **Kolasinski J.**, Rogers K. & Frouin P. 2008. Effects of acidification on carbon and stable isotopes of benthic macrofauna from a tropical coral reef. *Rapid Communication in Mass Spectrometry*, 22:2955-2960.

### ***Submitted publications***

- Taddei D., Cuet P. **Kolasinski J.**, Clavier J. & Frouin P. Benthic fluxes of inorganic carbon in coral fringing reef sediments (Reunion Island). *Journal of Sea Research*. In revision

### ***Publications in preparation***

- **Kolasinski J.**, Nahon S., Rogers K., Frouin P., Fry B. Benthic trophic network in a tropical coral reef (Reunion Island, SW Indian Ocean): An assessment based on stable carbon and nitrogen isotopes analysis.

- Chauvin A., Cuet P., Lechevrel S., Maitrejean M., Mangion P., **Kolasinski J.**, Guillaume M.M.M., Bruggemann H. Spatio-temporal variations of light-harvesting capacity of the coral *Acropora muricata* under nitrogen-enriched groundwater discharge.
- **Kolasinski J.**, Ternon, J.F., Hill J., Lehmann M., Kaehler S. Primary production patterns across a dipole of mesoscale eddies in the Mozambique Channel (south-western Indian Ocean): insight from *in situ* experimentation using artificially enriched C and N stable isotopes.
- **Kolasinski J.**, Bigot L., Bourmaud M.F., Nicolini E., Join J.L. Distribution, partitioning and fluxes of carbon and nitrogen in shoreline communities in an oligotrophic setting: quantifying the importance of terrestrial production (Glorioso Islands, SW Indian Ocean).

## Conference Presentations

- Rosenheim B and **Kolasinski J.** 2014 (oral). Did the Deepwater Horizon oil spill leave a trace ? *Meeting of the Consortium for Advanced Research on Transport of Hydrocarbon in the Environment, Hollywood, USA.*
- **Kolasinski J.** and Rosenheim B 2013 (oral). Projection of the Deepwater Horizon spill in the water column and deep sediments: an update on the Progress in recognizing characteristics of and change caused by hydrocarbons in the environment. *Meeting of the Consortium for Advanced Research on Transport of Hydrocarbon in the Environment, Miami, USA.*
- Frouin P., Bigot L., Coclet C., Muylaert M., Gelin P., Broche B., **Kolasinski J.** 2013 Ecosystem assessment using soft-bottom communities : lessons from coral reefs in Reunion. *The 8<sup>th</sup> Scientific Symposium of the Western Indian Ocean Marine Science Assosiation (WIOMSA), Maputo, Mozambique.*
- Rosenheim B and **Kolasinski J.** 2013 (oral). Projection of the Deepwater Horizon spill in the water column and deep sediments: Progress in recognizing characteristics of and change caused by hydrocarbons in the environment. *Meeting of the Consortium for Advanced Research on Transport of Hydrocarbon in the Environment, Miami, USA.*
- Nahon S., Richoux N., **Kolasinski J.**, Desmalades M., Berteaux Lecellier V., Planes S. 2012 (poster). Effect of environmental parameters on scleractinian corals' nutrition: a stable isotope study in French Polynesia Islands. *The 7<sup>th</sup> International Conference on Applications of Stable Isotope Techniques to Ecological Studies, Brest, France.*
- **Kolasinski J.**, Bigot L., Rogers K., Frouin P. 2012 (oral). Impact of natural and anthropogenic perturbations on the benthic compartment functioning. *The 12<sup>th</sup> Internationnal Coral Reef Symposium, Cairns, Australia.*
- **Kolasinski J.**, Ternon J.F., Jaquemet S., Hill J., Kaehler S. 2011 (oral). Biogeochemical process governing primary production in oceanographic mesoscale features (Mozambique Channel, Indian Ocean). *The 7<sup>th</sup> Scientific Symposium of the Western Indian Ocean Marine Science Assosiation (WIOMSA), Mombasa, Kenya.*
- Mablouké C., Potin G., Potier M., **Kolasinski J.**, Bigot L., Frouin P., Jaquemet S. 2011 (oral). Using stable isotopes to elucidate the effect of artificial reefs on the feeding habit of coastal fish : A case study from Reunion Island. *The 7<sup>th</sup> Scientific Symposium of the Western Indian Ocean Marine Science Assosiation (WIOMSA), Mombasa, Kenya.*
- **Kolasinski J.**, Bigot L., Bourmaud C.A.F., Nicolini E., Chabanet P. 2011 (poster). Sources and transfer of organic matter in macrobenthic communities from Glorioso Islands (Mozambique Channel). *The 7<sup>th</sup> Scientific Symposium of the Western Indian Ocean Marine Science Assosiation (WIOMSA), Mombasa, Kenya.*
- Mablouké C., Cuvillier A., Jaquemet S., **Kolasinski J.**, Bigot L., Frouin P. & Potier M. 2011 (oral). Use of <sup>13</sup>C/<sup>12</sup>C and <sup>15</sup>N/<sup>14</sup>N isotopes ratios to characterize trophic webs associated to artificial reefs: a case study from Reunion Island. *49th Estuarine and Coastal Sciences Association (ECSA) Internationnal Conference et le 14th South African Marine Science Symposium (SAMSS) Grahamstown, South Africa.*

- **Kolasinski J.**, Rogers K., Leung J.K.L. & Frouin P. **2009** (oral). Food web structure of the benthic communities at the La Saline reef (Reunion Island): a stable isotope analysis. *The 6<sup>th</sup> Scientific Symposium of the Western Indian Ocean Marine Science Assosiation (WIOMSA), Reunion Island, France.*
- Jaquemet S., Guyomard D., Pinault M., Bigot L., Bourmaud M.F., Evariste E., Frouin P., **Kolasinski J.**, Quod J.P., Tessier E. **2009** (poster). Artificial reefs as a tool to supply artisanal fisheries in Reunion Island: Implementation and scientific evaluation. *The 6<sup>th</sup> Scientific Symposium of the Western Indian Ocean Marine Science Assosiation (WIOMSA), Reunion Island, France.*
- **Kolasinski J.**, Rogers K. & Frouin P. **2008** (oral). Detecting anthropogenic contamination in coral reefs using stable isotopes of holothurians. *The 6<sup>th</sup> International Conference on Applications of Stable Isotope Techniques to Ecological Studies, Honolulu, Hawaii, USA.*
- Frouin P., **Kolasinski J.**, Potier M., Rogers K. & Sallon A. **2008** (poster). Dietary investigations of Yellowstripe goatfish (*Mulloidichthys flavolineatus*) using stable isotopes. *The 6<sup>th</sup> International Conference on Applications of Stable Isotope Techniques to Ecological Studies, Honolulu, Hawaii, USA.*
- **Kolasinski J.**, Rogers K. & Frouin P. **2008** (poster). Using isotopes in tropical macrofauna: is sample acidification required? *The 6<sup>th</sup> International Conference on Applications of Stable Isotope Techniques to Ecological Studies, Honolulu, Hawaii, USA.*
- **Kolasinski J.** & Frouin P. **2007** (oral). Toxicity biomarkers responses in holothurians (Reunion Island, Indian Ocean). *The 5<sup>th</sup> Scientific Symposium of the Western Indian Ocean Marine Science Assosiation (WIOMSA), Durban, South Africa.*
- Frouin P., Conand C., Burgos A., Hollinger C. & **Kolasinski J.** 2007 (poster). Spatial patterns of holothurian populations in a shallow reefs in Reunion Island. *The 5<sup>th</sup> Scientific Symposium of the Western Indian Ocean Marine Science Assosiation (WIOMSA), Durban, South Africa.*

## Current collaborative studies

- *Tracing the transfer of terrestrial elements to the marine environment and evaluation of land uses impacts in a high volcanic island (Reunion Island).* Cuet P., Frouin P., Kolasinski J., Nicolini E., Rogers K.
- *Biodiversity of seagrass beds in the SW Indian Ocean (Mayotte, Reunion, Madagascar).* Frouin P., Bigot L., de la Torre Castro M., Chabannet P., Kolasinski J., Taddei D., Pothin K.
- *Evaluation of artificial reefs as tools for marine habitat rehabilitation (benthic colonization and fish production).* Jaquemet S., Guyomard D., Pinault M., Bigot L., Bourmaud M.F., Frouin P., Kolasinski J., Quod J.P., Tessier E.

## Teaching activity

- 2013 Tulane University (USA):** Introductory Oceanography, Animals of the benthic Environments
- 2012 International Atomic Energy Agency:** Coastal ecosystems, Continental shelf ecosystems, Global Change and Coastal Tracers, Experimental design in Coastal Ecosystems, Practical Issues with Stable Isotopes Analyses, Field work (lagoon, costal cruise) and laboratory demonstrations
- 2008-2009 Université de La Réunion (France):** Tropical Ecology, Molecular Biology, Genetic, Microbiology (teaching assistant, 96 h)