



Layout of the Workshop

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International Seabed Authority



Goals of the workshop:

- To provide expert advice and training opportunities to contractors and their scientists to facilitate fulfilment of obligations regarding environmental data collection.
- To provide an opportunity for contractors to report on the status of the environmental baseline studies, incl. experiences and problems encountered, e.g., during representative sampling, taxonomical identification and permanent storage. This report should include the total amount of macrofaunal data, samples and voucher specimens collected and stored over the years.
- To create of a set of recommendations for future deep-sea macrofauna studies that can be agreed upon by all workshop participants to guide the work of contractors and secretariat.
- To provide information to the Legal and Technical Committee that will help it to understand any challenges contractors may face.



General structure of the workshop:

Monday: Welcome and opening

Presentations by invited taxonomic experts – first part

Tuesday: Presentations by invited taxonomic experts – second part

Presentations by contractors to report on problems and needs

Wednesday – Friday: Assessment of biological material on a one-to-one basis (experts and contractors) to enable exchanges of knowledge and experiences about taxonomic issues from surveying and handling to standard taxonomic identification

Friday: Introduction of genomic tools for the use in taxonomy and biogeography as a plenary working session on appropriate molecular methods

Saturday: Plenary discussions of three major topics

Agenda: <http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Agenda.pdf>

Presentations of taxonomical experts:



Gordon L J Paterson

Department of Life Sciences, Natural History Museum, London SW7 5BD, UK

The Known Unknowns...

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Paterson.pdf>



Presentations of taxonomical experts:

Lénaïck Menot

Ifremer, REM-EEP-LEP



The ecological context for the study of biodiversity of the macrofauna of the CCFZ

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Menot.pdf>

Presentations of taxonomical experts:



Magdalena Błażewicz-Paszkowycz

University of Łódź, Poland

CRUSTACEA, PERACARIDA, TANAIDACEA

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Blazewicz.pdf>

Presentations of taxonomical experts:

Charlotte Havermans

Operational Directorate Natural Environment, Royal Belgian Institute of Natural Sciences, Rue Vautier 29, 1000 Brussels, Belgium



The taxonomy and biogeography of macrofaunal amphipod crustaceans, with a focus on the abyssal Pacific fauna relevant to the CCFZ: What can DNA tell us?

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Havermans.pdf>

Presentations of taxonomical experts:

Tammy Horton

National Oceanography Centre, Southampton, UK



The taxonomy & biogeography of macrofaunal amphipod crustaceans, with focus on the abyssal Pacific fauna relevant to the CCFZ

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Horton1.pdf>

Presentations of taxonomical experts:

Stefanie Kaiser

Senckenberg am Meer, Dept. German Centre for Marine Biodiversity Research,
Südstrand 44, 26382 Wilhelmshaven, Germany



Taxonomy and biogeography of macro-faunal isopods of the Pacific abyssal fauna relevant to the CCFZ

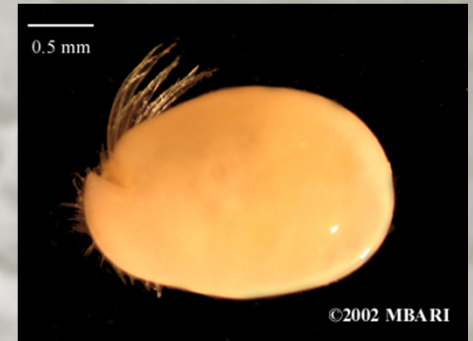
Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Kaiser.pdf>

Presentations of taxonomical experts:

Ivana Karanovic

Hanyang University, Department of Life Science, College of Natural Sciences, Seoul 133-791, Korea & University of Tasmania, IMAS, Hobart, TAS, 7001, Australia



The taxonomy and biogeography of macrofaunal ostracod crustaceans, with focus on the abyssal benthic Pacific fauna relevant to the CCFZ

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Karanovic.pdf>

Presentations of taxonomical experts:

Paul Valentich-Scott

Santa Barbara Museum of Natural History, 2559 Puesta del Sol, Santa Barbara,
CA 93105 USA



Abyssal Pacific Mollusca, with particular emphasis on the Clarion-Clipperton Fracture Zone

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Scott.pdf>



Presentations of taxonomical experts:

Dennis P. Gordon

National Institute of Water & Atmospheric Research, Wellington, New Zealand



*Taxonomy and biogeography of macrofaunal
Bryozoa, with a focus on the abyssal benthic
fauna relevant to the CCFZ*

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Gordon.pdf>

Presentations of taxonomical experts:

Helena Wiklund

Department of Life Sciences, Natural History Museum, London SW7 5BD, UK



The taxonomy and biogeography of macrofaunal annelids, with focus on the abyssal benthic Pacific fauna relevant to the CCFZ

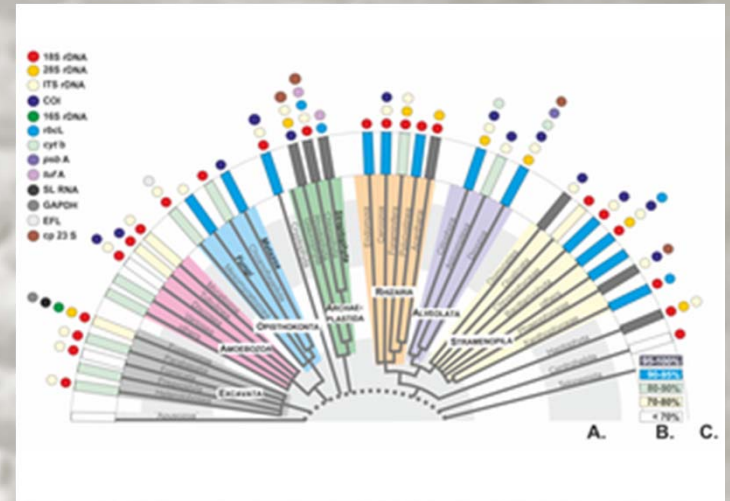
Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Wiklund1.pdf>

Presentations of taxonomical experts:

Thomas Dahlgren

Uni Research, Bergen, Norway



Advances in molecular methodologies and the application and interpretation of molecular methodologies for macrofauna classification – Their relevance to environment assessment and monitoring

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Dahlgren.pdf>

Presentations of taxonomical experts:



Helena Wiklund

Department of Life Sciences, Natural History Museum, London SW7 5BD, UK

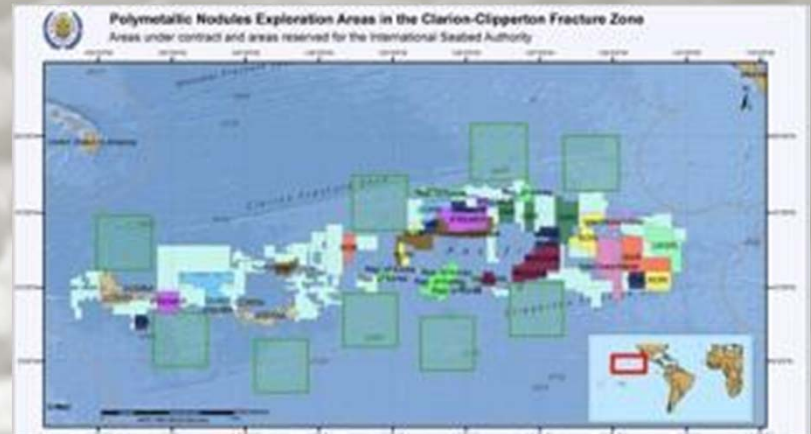
Developing molecular pipelines to provide samples for barcoding and other analyses

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Wiklund2.pdf>



Presentations of taxonomical experts:



Annika Janssen

DZMB, German Centre for Marine Biodiversity Research, Wilhelmshaven, Germany

The pros and cons of DNA barcoding: preliminary results from recent cruises to the CCFZ

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Janssen.pdf>

Presentations of taxonomical experts:

Tammy Horton

National Oceanography Centre, Southampton, UK



The Value of Collections – Lessons from the Oil & Gas Industry

Abstract:

<http://www.isa.org.jm/files/documents/EN/Workshops/2014b/Abs/Horton2.pdf>



Presentations of Contractors:

- ❖ Interoceanmetal Joint Organization (IOM)
- ❖ Yuzmorgeologiya
- ❖ Government of the Republic of Korea
- ❖ China Ocean Mineral Resources Research and Development Association (COMRA)
- ❖ Deep Ocean Resources Development Co. Ltd. (DORD)
- ❖ Institut française de Recherche pour l'exploitation de la mer (IFREMER)
- ❖ Ministry of Earth Sciences for the Republic of India
- ❖ Federal Institute for Geosciences and Natural Resources of the Federal Republic of Germany (BGR)
- ❖ Nauru Ocean Resources Inc. (NORI)
- ❖ Tonga Offshore Mining Ltd (TOML)
- ❖ Global Sea Mineral Resources NV
- ❖ UK Seabed Resources Ltd. (UKSRL)
- ❖ Japan Oil, Gas and Metals National Corporation (JOGMEC)



ISA would like to hear from Contractors:

Status of environmental baseline studies

- 1. With regard to the 'Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area' (ISBA/19/LTC/8) what problems, if any, have you encountered in delivering to the Authority quality-controlled data for each element listed in the Guidance document?**
- 2. For Pioneer Contractors approaching contract extension applications please provide a brief summary showing i) work completed, ii) under analysis, iii) still to be collected, for each element listed in the Guidance document.**
- 3. In relation to the Guidance document please list the elements for which data will have been delivered to the Authority by July 2015.**
- 4. In relation to data reported and submitted to the Authority what procedures have been applied to ensure and verify data quality?**



ISA would like to hear from Contractors:

Status of macrofaunal baseline studies

1. How many samples in total have been collected for macrofaunal studies in your contract area?
2. Of these samples how many have been analysed?
3. What data have been submitted to the Authority for the samples analysed?
4. What problems have you encountered in analysing the samples, and how might these be overcome?
5. Where are the samples and voucher specimens for each species archived and what is the process and ease of access for other researchers?
6. What are the major problems you foresee in using macrofaunal baseline data in the future monitoring of environmental impacts by deep-sea mining?
7. How might standardisation of taxonomy across Contractors be best achieved?
8. What recommendations would you make of 'Best Practice' in macrofaunal baseline studies in relation to i) baseline survey sampling design, and ii) sampling methods?
9. Do you believe that collaboration among Contractors would help to facilitate taxonomical studies and the establishment of faunal baselines in the future?



Plenary discussions of three major topics:

- Conception and design of a database of references, samples and images of the macrofaunal taxa for the CCFZ region
- Prospective publication of the ISA workshop results on developing approaches and standards for the taxonomic analyses of deep-sea macrofauna
- Agreed recommendations of the participants of the ISA workshop for deep-sea macrofauna standardization taxonomy and classification

