

# 13<sup>th</sup> International Conference on Copepoda

## CONFERENCE SCHEDULE



# Symposia

Topic	Location	Papers	Start Time	End Time
<b>Monday, July 17, 2017</b>				
Response of Copepods to Climate Change - Patterns and Mechanisms	Cabrillo Marine Aquarium John M. Olguin Auditorium	1-4	9:30am	12:00pm
Planktonic Copepods - Diversity and Structuring Role in Ecosystems	Cabrillo Marine Aquarium John M. Olguin Auditorium	5-8	1:00pm	3:00pm
<b>Tuesday, July 18, 2017</b>				
Symbiotic Copepods - A Tribute to the Life and Career of George Benz	DoubleTree by Hilton Madeo Room (1 <sup>st</sup> floor)	9-12	8:00am	10:00am
Freshwater Copepods - A Tribute to Janet W. Reid	DoubleTree by Hilton Madeo Room (1 <sup>st</sup> floor)	19-24	1:00pm	3:00pm
<b>Friday, July 21, 2017</b>				
Molecular Phylogeny and Evolution - Pace and Processes	DoubleTree by Hilton Madeo Room (1 <sup>st</sup> floor)	53-56	8:00am	10:00am

# **Welcome Reception**

**Sunday: July 16, 2017**

## **DoubleTree by Hilton**

2:00pm-5:00pm      Registration (Catalina Room)

5:00pm-7:00pm      Welcome Reception (Courtyard)

# Scientific Program

## Monday: July 17, 2017

### Cabrillo Marine Aquarium, John M. Olguin Auditorium

- 8:00-8:30 Registration  
8:30-9:30 Opening Ceremony  
Julianne Kalman Passarelli, 13<sup>th</sup> ICOC Local Secretary  
Mike Schaadt, Director, Cabrillo Marine Aquarium  
Eduardo Suárez-Morales, WAC President

### Symposium: Response of Copepods to Climate Change - Patterns and Mechanisms

Organizer: **Hans G. Dam**, University of Connecticut, USA

- 9:30 Introduction: **Hans G. Dam**, University of Connecticut, USA
- 1 9:50 **Relative influence of the Pacific Decadal Oscillation and coastal upwelling on productivity of plankton in the Oregon upwelling zone: 21 years of biweekly observations**  
**William T. Peterson**<sup>1</sup>, Jennifer Fisher<sup>2</sup>  
<sup>1</sup>NOAA-Fisheries, USA; <sup>2</sup>Oregon State University, USA
- 2 10:15 **Ocean acidification. What does it matter to copepods?**  
**Peter Thor**  
Norwegian Polar Institute, Norway
- 10:40-11:10 BREAK (Courtyard)

- 3 11:10 **Using the intertidal copepod *Tigriopus californicus* as a model for studying the evolution of stress tolerance**

**Christopher S. Willett**

University of North Carolina, USA

- 4 11:35 **The climate influence on the non-stationary dynamics of pelagic copepods**

**Juan-Carlos Molinero**

GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany

12:00-1:00 LUNCH

**Symposium: Planktonic Copepods - Diversity and Structuring Role in Ecosystems (A Tribute to Janet Bradford-Grieve)**

Organizer: **Mark D. Ohman**, Scripps Institution of Oceanography, USA

1:00 Introduction: **Mark D. Ohman**, Scripps Institution of Oceanography, USA

- 5 1:20 **Planktonic copepod diversity: Integrating morphological and molecular approaches**

**Erica Goetze**, Stephanie Matthews, Matthew Iacchei

University of Hawaii at Manoa, USA

- 6 1:45 **The diversity of marine Calanoida: Patterns and trends**

**Geoff Boxshall**<sup>1</sup>, Iole di Capua<sup>2</sup>

<sup>1</sup>Natural History Museum, London, UK; <sup>2</sup>Stazione Zoologica Naples, Italy

- 7 2:10 **Bradfordian calanoids – amazing dwellers in the benthopelagic realm**

**Elena L. Markhaseva**<sup>1</sup>, Silke Laakmann<sup>2</sup>, Jasmin Renz<sup>3</sup>

<sup>1</sup>Russian Academy of Sciences, Russia; <sup>2</sup>German Center for Marine Biodiversity Research, Wilhelmshaven, Germany; <sup>3</sup>German Center for Marine Biodiversity Research, Hamburg, Germany

8      2:35    **Planktonic copepods as sentinels of a changing ocean**

**Mark D. Ohman**

          Scripps Institution of Oceanography, USA

3:00-3:30    BREAK (Courtyard)

3:30-4:30    Group Photo (LOCATION: Outer Cabrillo Beach)

4:30-5:30    Executive Council Meeting, *invite only*  
              (Virginia Reid Moore Marine Research Library, 2<sup>nd</sup> floor)

4:30-6:00    Free time (Aquarium Gift Shop open! 20% discount for ICOC)

6:00-9:00    WELCOME DINNER at Cabrillo Marine Aquarium

# Tuesday: July 18, 2017

DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)

## Symposium: Symbiotic Copepods - A Tribute to the Life and Career of George Benz

Organizer: Rony Huys, The Natural History Museum, London, UK

- 9      8:00    **The copepods were good to him: A portrait of the copepodologist Prof. George William Benz (1 Jan 1954 – 9 Feb 2015)**  
**Stephen A. Bullard**  
Auburn University, USA
- 10     8:30    **Switching from invertebrate to vertebrate hosts: A recurrent phenomenon in cyclopoid copepods**  
**Rony Huys**<sup>1</sup>, Daisuke Uyeno<sup>2</sup>  
<sup>1</sup>The Natural History Museum, London, UK; <sup>2</sup>Kagoshima University, Japan
- 11     9:00    **Planktonic phases of symbiotic copepods**  
**Susumu Ohtsuka**  
Hiroshima University, Japan
- 12     9:30    **How genomic advances serve to elucidate the lives of parasitic copepods and illuminate copepodologists**  
**James Bron**<sup>1</sup>, Stewart Johnson<sup>2</sup>, Ben Koop<sup>3</sup>, Rasmus Skern-Mauritzen<sup>4</sup>  
<sup>1</sup>University of Stirling, UK; <sup>2</sup>Fisheries and Oceans Canada, Canada;  
<sup>3</sup>University of Victoria, Canada; <sup>4</sup>Institute of Marine Research, Norway

10:00-10:30 BREAK (Madeo Plaza)

**DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)**

**Oral Session I: Climate Change**

Chairperson: **Kimo Morris**, Santa Ana College, USA

- 13    10:30 **The marine pelagic copepod *Acartia hudsonica* in a Greenhouse World**  
Xuejia He<sup>1</sup>, Lydia Norton<sup>2</sup>, Michael Finiguerra<sup>2</sup>, Hannes Baumann<sup>2</sup>, **Hans G. Dam**<sup>2</sup>  
<sup>1</sup>Jinan University, China; <sup>2</sup>University of Connecticut, USA
- 14    10:45 **Annual variation of nutritional condition and production in *Eodiaptomus japonicus* during the last four decades in Lake Biwa (Japan)**  
**Xin Liu**<sup>1</sup>, Gaël Dur<sup>2</sup>, Emi Doi<sup>1</sup>, Shinsuke Oomae<sup>3</sup>, Takashi Morita<sup>3</sup>, Yoichiro Sakai<sup>4</sup>, Syuhei Ban<sup>1</sup>  
<sup>1</sup>The University of Shiga Prefecture, Japan; <sup>2</sup>Shizuoka University, Japan; <sup>3</sup>Shiga Prefectural Fisheries Department of Ecology Studies, Japan; <sup>4</sup>Lake Biwa Environmental Research Institute, Japan
- 15\*    11:00 **The remarkable thermal generalist performance curve of *Acartia tonsa*: Implications for survival in a warming climate**  
**Matthew C. Sasaki**, Hans G. Dam  
University of Connecticut, USA
- 16    11:15 **A flexible life strategy makes the Arctic copepod *Calanus glacialis* resilient to climate change**  
**Janne E. Søreide**<sup>1</sup>, Maja Hatlebakk<sup>1</sup>, Martin Graeve<sup>2</sup>, Barbara Niehoff<sup>2</sup>, Ksenia Kosobokova<sup>3</sup>, Malin Daase<sup>4</sup>  
<sup>1</sup>The University Centre in Svalbard, Norway; <sup>2</sup>Alfred Wegener Institute for Polar and Marine Research, Germany; <sup>3</sup>P.P. Shirshov Institute of Oceanology, Russia; <sup>4</sup>UiT The Arctic University of Norway, Norway



- 17 11:30 **Evidence of fast adaption to ocean acidification in a pelagic copepod**  
**Peter Thor**<sup>1</sup>, Pierre De Wit<sup>2</sup>, Sam Dupont<sup>3</sup>  
<sup>1</sup>Norwegian Polar Institute, Norway; <sup>2</sup>Dept. of Marine Sciences, University of Gothenburg, Sweden; <sup>3</sup>Dept. of Biological and Environmental Sciences, University of Gothenburg, Sweden
- 18\* 11:45 **Seasonal variations in enzyme activity of co-existing *Calanus glacialis* and *Calanus finmarchicus* in an Arctic fjord**  
**Maja Hatlebakk**<sup>1,2</sup>, Janne E. Søreide<sup>1</sup>, Barbara Niehoff<sup>3</sup>  
<sup>1</sup>University Centre in Svalbard, Norway; <sup>2</sup>Nord University, Norway; <sup>3</sup>Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research, Germany

12:00-1:00 LUNCH (Madeo Ballroom – 2<sup>nd</sup> floor)

**DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)**

**Symposium: Freshwater Copepods - A Tribute to Janet W. Reid**

Organizer: **Eduardo Suárez-Morales**, El Colegio de la Frontera Sur (ECOSUR), Mexico

- 19 1:00 **Taxonomy of American freshwater copepods, a lifetime challenge**  
**Eduardo Suárez-Morales**, Rebeca Gasca  
 El Colegio de la Frontera Sur (ECOSUR), Mexico
- 20 1:20 **A morphological analysis of the phylogeny of *Cyclops*: Do the non-European species matter?**  
**Maria Holynska**  
 Museum and Institute of Zoology, Poland
- 21 1:40 **How diverse are bromeliad copepods and ostracods in the tropical forest of the Yucatan Peninsula?**  
**Nancy F. Mercado-Salas**, Sahar Khodami, Pedro Martínez Arbizu  
 German Center for Marine Biodiversity Research, Wilhelmshaven, Germany

22 2:00 **Using conservation concern of copepod species for groundwater habitat prioritization**  
**Diana M. P. Galassi**, Simone Fattorini  
University of L'Aquila, Italy

23 2:20 **The diversity of South American Diaptomidae**  
**Gilmar Perbiche Neves**  
Universidade Federal de São Carlos, Brazil

24 2:40 **A tribute to Janet W. Reid, an exemplary copepodologist**  
Chad Walter<sup>1</sup>, **Grace Wyngaard**<sup>2</sup>  
<sup>1</sup>Smithsonian Institution, USA; <sup>2</sup>James Madison University, USA

3:00-3:30 BREAK (Madeo Plaza)

**DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)**

### **Oral Session II: Ecology and Behavior**

Chairperson: **Bruno Passarelli**, UCLA and Saddleback College, USA

25 3:30 **What evidence supports a claim to show interspecific or intraspecific competition in planktonic copepods?**  
**Wim Kimmerer**, Karen Kayfetz, Toni Ignoffo, Anne Slaughter  
Romberg Tiburon Center – San Francisco State University, USA

26 3:45 **Spatial differences in benthic copepod community compositions around hydrothermal vents in three adjacent seamounts in NW Pacific**  
**Motohiro Shimanaga**<sup>1</sup>, Reina Senokuchi<sup>1</sup>, Futa Nakasugi<sup>1</sup>, Hiromi Kayama Watanabe<sup>2</sup>, Hidetaka Nomaki<sup>2</sup>, Tomo Kitahashi<sup>2</sup>, Daisuke Uyeno<sup>3</sup>  
<sup>1</sup>Kumamoto University, Japan; <sup>2</sup>Japan Agency for Marine-Earth Science and Technology, Japan; <sup>3</sup>Kagoshima University, Japan

- 27 4:00 **Coastal copepod community in İskenderun Bay (NE Mediterranean Sea): Seasonal and interannual distribution linked to environmental conditions**  
Tuba Terbiyik Kurt<sup>1</sup>, Sevim Polat<sup>1</sup>, Funda Üstün<sup>2</sup>, Gürkan Akbulut<sup>1</sup>  
<sup>1</sup>Çukurova University, Turkey; <sup>2</sup>Sinop University, Turkey
- 28 4:15 **Deep-sea macrofaunal copepods from the Clarion-Clipperton Fracture Zone, East Pacific Ocean**  
Jia Wen Samantha Tong, Chee Kong Chim, Cheah Hoay Chuar, Pei San Helen Wong  
National University of Singapore, Singapore
- 29 4:30 **Diversity of copepods in the Pechora delta: Morphological abnormalities of harpacticoids and new records of *Eurytemora* species**  
Elena Fefilova<sup>1</sup>, Olga Kononova<sup>1</sup>, Elena Kochanova<sup>1</sup>, Natalia Sukhikh<sup>2</sup>  
<sup>1</sup>Institute of Biology of Komi Scientific Centre of Ural Branch of Russian Academy of Sciences, Russia; <sup>2</sup>Zoological Institute of Russian Academy of Sciences, Russia
- 30 4:45 **Environmental drivers of copepod assemblages in a southern floodplain (Mississippi, USA)**  
Dagmar Frisch  
University of Birmingham, UK
- 31 5:00 **Copepod behavior in phytoplankton thin layers**  
Rubens M. Lopes<sup>1</sup>, Adrian J. Bunker<sup>1</sup>, Cassia G. Goçalo<sup>1</sup>, J. Rudi Strickler<sup>2</sup>  
<sup>1</sup>University of São Paulo, Brazil; <sup>2</sup>University of Wisconsin - Milwaukee, USA

- 32 5:15 **Behavioral observations of an undescribed hyperbenthic misophrioid copepod, with supplementary data on DNA sequences**  
**Susumu Ohtsuka**<sup>1</sup>, Hayato Tanaka<sup>2</sup>, Yusuke Kondo<sup>1</sup>, Katsushi Hirano<sup>1</sup>,  
Damia Jaume<sup>3</sup>, Geoffrey A. Boxshall<sup>4</sup>  
<sup>1</sup>Hiroshima University, Japan; <sup>2</sup>University of Tokyo, Japan; <sup>3</sup>Instituto Mediterráneo de Estudios Avanzados, Spain; <sup>4</sup>The Natural History Museum, London, UK

5:30-6:00 Free time

6:00-9:00 DINNER at Cabrillo Marine Aquarium

# Wednesday: July 19, 2017

MID-CONFERENCE TOUR

*City of Los Angeles highlights*

Maxilliped Lecture by Eduardo Suárez-Morales, WAC President

7:30am      Pick-up at DoubleTree by Hilton San Pedro

9:00pm      Drop-off at DoubleTree by Hilton San Pedro

# Thursday: July 20, 2017

DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)

## Oral Session III: Parasitism and Symbiotic Copepods

Chairperson: **Danny Tang**, Orange County Sanitation District, USA

- 33 8:00 **Copepods...What else are they good for?**  
**Ralph G. Appy**  
Cabrillo Marine Aquarium, USA
- 34 8:15 **The *Paeon* conundrum**  
**Susan M. Dippenaar**  
University of Limpopo, South Africa
- 35\* 8:30 **Functional morphology of the cephalothoracic sucker of *Caligus***  
**Taiki Fuji**<sup>1</sup>, Susumu Ohtsuka<sup>1</sup>, Yusuke Kondo<sup>1</sup>, Tomonori Kaji<sup>2</sup>, Satoshi Tasumi<sup>3</sup>  
<sup>1</sup>Hiroshima University, Japan; <sup>2</sup>University of Alberta, Canada; <sup>3</sup>The University of Tokyo, Japan
- 36 8:45 **A new asterocherid genus (Copepoda; Siphonostomatoida) associated with *Callyspongia* and reassessment of six species of *Asterocheres***  
Roberta Canário<sup>1,2</sup>, Carlos Eduardo Falavigna Da Rocha<sup>2</sup>, Elizabeth G. Neves<sup>1</sup>, **Rodrigo Johnsson**<sup>1</sup>  
<sup>1</sup>Universidade Federal da Bahia, Brazil; <sup>2</sup>Universidade de São Paulo, Brazil
- 37\* 9:00 **Ecological studies on *Panaetis yamagutii* that infect the buccal cavity of horned turban, *Turbo cornutus***  
Hayato Uchiumi<sup>1</sup>, **Yusuke Kondo**<sup>1,2</sup>, Susumu Ohtsuka<sup>1</sup>  
<sup>1</sup>Graduate School of Biosphere Science, Hiroshima University, Japan; <sup>2</sup>Global Career Design Center, Hiroshima University, Japan

- 38\* 9:15 **Biogeographic patterns and diversity of copepods living in symbiosis with *Galaxea* (Scleractinia) in the Indo-Pacific**  
**Sofya Mudrova**<sup>1</sup>, Mikhail Nikitin<sup>2</sup>, Michael L. Berumen<sup>1</sup>, Viatcheslav Ivanenko<sup>3</sup>  
<sup>1</sup>King Abdullah University of Science and Technology, Saudi Arabia; <sup>2</sup>Faculty of Bioengineering and Bioinformatics, Lomonosov Moscow State University, Russia; <sup>3</sup>Department of Invertebrate Zoology, Lomonosov Moscow State University, Russia
- 39\* 9:30 ***Neoalbionella* sp. from the skin of the deepwater gulper shark (*Centrophorus granulosus*) in the Gulf of Mexico, including comparisons to congeners**  
**Carlos F. Ruiz**<sup>1</sup>, William B. Driggers III<sup>2</sup>, Cova R. Arias<sup>3</sup>, Stephen A. Bullard<sup>1</sup>  
<sup>1</sup>Aquatic Parasitology Laboratory, Auburn University, USA; <sup>2</sup>National Marine Fisheries Service, USA; <sup>3</sup>Aquatic Microbiology Laboratory, Auburn University, USA
- 40\* 9:45 **Can stable isotopes indicate the geographical origins of sea lice?**  
**Emma Taccardi**<sup>1,2</sup>, Carrie Byron<sup>3</sup>, Ian Bricknell<sup>1,2</sup>  
<sup>1</sup>School of Marine Sciences, University of Maine, USA; <sup>2</sup>Aquaculture Research Institute, University of Maine, USA; <sup>3</sup>University of New England, USA

10:00-10:30 BREAK (Madeo Plaza)

**DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)**

**Oral Session IV: Aquaculture and Zooplankton**

Chairperson: **Mike Schaadt**, Cabrillo Marine Aquarium, USA

- 41 10:30 **Mass culture of harpacticoid copepods for increasing capacity of coral grouper (*Epinephelus corallicola*) larviculture**  
**Supawadee Chullasorn**<sup>1</sup>, Kriengsak Phadetphai<sup>2</sup>, Supaporn Tangsitthiwat<sup>2</sup>, Pradchek Klangsin<sup>1</sup>, Chatchawan Phadungphon<sup>2</sup>, Narongsak Sesuksakul<sup>2</sup>  
<sup>1</sup>Ramkhamhaeng University, Thailand; <sup>2</sup>Trat Coastal Fisheries Research and Development Center, Thailand
- 42 10:45 **Growing copepods for advancing scientists**  
**Kiersten Darrow**  
Cabrillo Marine Aquarium, USA
- 43 11:00 **Local southern California marine life on exhibit at the Cabrillo Marine Aquarium: Capture, care, and copepods**  
**Lindsey Williamson**, Chris Okamoto, Jeff Landesman, Mako Fukuwa, Tom Tran, Darryl Deleske, Carin Latino  
Cabrillo Marine Aquarium, USA
- 44 11:15 **Pontellid copepods from Australian waters**  
**Julian Uribe-Palomino**, Frank Coman, Mark Tonks, Anita Slotwinski, Claire Davies, Felicity McEnulty, Wayne Rochester, Ruth Eriksen, Margaret Miller, Steven Edgar, Anthony Richardson  
CSIRO Oceans and Atmosphere, Australia
- 45 11:30 **First records of the calanoid copepod *Senecella siberica* from large Norilsk lakes (the Pyasina river basin, Central Siberia)**  
**Olga Dubovskaya**<sup>1,2</sup>  
<sup>1</sup>Russian Academy of Sciences, Russia; <sup>2</sup>Siberian Federal University, Russia



- 46\* 11:45 **Distribution and species composition of zooplankton in the eastern Marmara Sea in February**  
**Ezgi Emiř Turkeri**, Melek İřinibilir Okya  
Istanbul University, Turkey

12:00-1:00 LUNCH (Madeo Ballroom – 2<sup>nd</sup> floor)

**DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)**

**Oral Session IV: Aquaculture and Zooplankton (continued)**

Chairperson: **Mike Schaadt**, Cabrillo Marine Aquarium, USA

- 47 1:00 **Acclimatization succession of the non-indigenous cyclopoid copepod *Oithona davisae* in Hamsilos Bay, southern Turkey**  
**Funda Üstün**<sup>1</sup>, Tuba Terbıyık Kurt<sup>2</sup>, Zeynep Bozdođan řere<sup>1</sup>  
<sup>1</sup>Sinop University, Turkey; <sup>2</sup>Çukurova University, Turkey
- 48 1:15 **Distribution of zooplankton near the Monterey Bay upwelling front: Rethinking the concept of zooplankton as inactive “drifters”**  
**Kimo Morris**  
Santa Ana College, USA
- 49 1:30 **The role of myelin in niche separation in calanoid copepods**  
**Petra H. Lenz**, Daniel K. Hartline  
University of Hawaii at Manoa, USA
- 50 1:45 **Lessons from the free living marine copepods found throughout the Australian Plankton Survey**  
**Julian Uribe-Palomino**, Frank Coman, Mark Tonks, Anita Slotwinski, Claire Davies, Felicity McEnnulty, Wayne Rochester, Ruth Eriksen, Margaret Miller, Steven Edgar, Anthony Richardson  
CSIRO Oceans and Atmosphere, Australia

- 51 2:00 ***Temora longicornis* are able to follow a pheromone trail laid out by a female: A mathematical model**

Peter Hinow<sup>1</sup>, **J. Rudi Strickler**<sup>2,3</sup>, William Langhoff<sup>1</sup>, Jeannette Yen<sup>4</sup>

<sup>1</sup>Department of Mathematical Sciences, University of Wisconsin – Milwaukee, USA; <sup>2</sup>Department of Biological Sciences, University of Wisconsin - Milwaukee, USA; <sup>3</sup>University of Texas at Austin, USA; <sup>4</sup>Georgia Institute of Technology, USA

- 52\* 2:15 **Is there any pattern of diel vertical migration of microzooplankton in the equatorial Atlantic?**

**Érika Correia**<sup>1</sup>, Pedro Melo<sup>2</sup>, Sigrid Neumann-Leitão<sup>1</sup>

<sup>1</sup>Laboratory of Zooplankton, Federal University of Pernambuco, Brazil;

<sup>2</sup>Laboratory of Phytoplankton, Federal University of Pernambuco, Brazil

**DoubleTree by Hilton, Madeo Ballroom (2<sup>nd</sup> floor)**

2:30-5:30 **Poster Session** (See Page 23 for more information)

5:30-6:00 Free time

6:00-9:00 DINNER at Cabrillo Marine Aquarium

# Friday: July 21, 2017

DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)

## Symposium: Molecular Phylogeny and Evolution - Pace and Processes

Organizer: **Leocadio Blanco-Bercial**, The Bermuda Institute of Ocean Sciences, Bermuda

- 53\* 8:00 **Molecular phylogeny and revision of copepod orders (Crustacea; Copepoda)**  
**Sahar Khodami**<sup>1</sup>, J. Vaun McArthur<sup>2</sup>, Leocadio Blanco-Bercial<sup>3</sup>, Pedro Martinez Arbizu<sup>1</sup>  
<sup>1</sup>German Center for Marine Biodiversity Research, Wilhelmshaven, Germany; <sup>2</sup>Savannah River Ecology Laboratory, USA; <sup>3</sup>Bermuda Institute of Ocean Sciences, Bermuda
- 54\* 8:30 **Towards a synthetic tree of the Copepoda**  
**James P. Bernot**<sup>1</sup>, Keith A. Crandall<sup>1</sup>, Geoff A. Boxshall<sup>2</sup>  
<sup>1</sup>George Washington University, USA; <sup>2</sup>Natural History Museum, London, UK
- 55 9:00 **Global patterns of phylogeography of marine planktonic Copepoda**  
**Astrid Cornils**  
Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung, Germany
- 56 9:30 **Gene family evolution in the Copepoda**  
**Carol Eunmi Lee**<sup>1</sup>, Seong-il Eyun<sup>2</sup>, Sean Chun-Chang Chen<sup>3</sup>, Woei-Fuh Wang<sup>4</sup>  
<sup>1</sup>University of Wisconsin, USA; <sup>2</sup>University of Nebraska, USA; <sup>3</sup>National Taiwan University, Taiwan; <sup>4</sup>Academia Sinica, Taiwan

10:00-10:30 BREAK (Madeo Plaza)

**DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)**

**Oral Session V: Molecular Ecology and Population Genetics**

Chairperson: **Susan Dippenaar**, University of Limpopo, South Africa

- 57 10:30 **Metabarcoding planktonic copepods: Evaluating taxonomic resolution and OTU identification using 18S rRNA V4 and V9 regions for NW Atlantic and Pan-Arctic samples**

**Ann Bucklin**<sup>1</sup>, Jennifer Questel<sup>1</sup>, Hayley DeHart<sup>1</sup>, Kate DiVito<sup>2</sup>, Bo Reese<sup>3</sup>

<sup>1</sup>Department of Marine Sciences, University of Connecticut, USA;

<sup>2</sup>Department of Molecular and Cell Biology, University of Connecticut, USA;

<sup>3</sup>Center for Genome Innovation, University of Connecticut, USA

- 58 10:45 **Rapid identification of copepod species (Copepoda; Harpacticoida) using MALDI-TOF MS**

Sven Rossel, **Pedro Martinez Arbizu**

German Center for Marine Biodiversity Research, Wilhelmshaven, Germany

- 59 11:00 **Phylogeography of an estuarine copepod, *Acartia tonsa* (Copepoda; Calanoida) from the Texas Gulf of Mexico**

Nicole Figueroa, **Diego Figueroa**, David Hicks

University of Texas Rio Grande Valley, USA

- 60\* 11:15 **Morphological and genetic diversity of *Canthocamptus staphylinus* (Copepoda; Harpacticoida)**

**Elena Kochanova**<sup>1</sup>, Elena Fefilova<sup>1</sup>, Natalia Sukhikh<sup>2</sup>

<sup>1</sup>Institute of Biology of Komi Scientific Centre of Ural Branch of Russian

Academy of Sciences, Russia; <sup>2</sup>Zoological Institute of Russian Academy of Sciences, Russia

- 61 11:30 **Pan-Arctic phylogeography and connectivity of species of *Pseudocalanus* (Copepoda; Calanoida)**  
**Jennifer M. Questel**<sup>1</sup>, Ole N.S. Aarbakke<sup>2</sup>, Leocadio Blanco-Bercial<sup>3</sup>,  
Russell R. Hopcroft<sup>4</sup>, Fredrika Norrbin<sup>2</sup>, Claudia Halsband<sup>5</sup>, Agata  
Weydmann<sup>6,7</sup>, Ann Bucklin<sup>1</sup>  
<sup>1</sup>University of Connecticut, USA; <sup>2</sup>University of Tromsø, Norway;  
<sup>3</sup>Bermuda Institute of Ocean Sciences, Bermuda; <sup>4</sup>University of Alaska  
Fairbanks, USA; <sup>5</sup>Fram Centre, Norway; <sup>6</sup>Polish Academy of Sciences,  
Poland; <sup>7</sup>University of Gdańsk, Poland

- 62\* 11:45 **Gene expression profile in the developmental stages of the  
epipelagic copepod *Oithona nana* (Crustacea; Cyclopoida)**  
**Kevin Sugier**<sup>1,2,3,4</sup>, Emanuelle Petit<sup>3,1,2,4</sup>, Benoit Vacherie<sup>3,1,2,4</sup>, Julie  
Poulain<sup>3,1,2,4</sup>, Karine Labadie<sup>3,1,2,4</sup>, Jean-Louis Jamet<sup>5</sup>, Patrick  
Wincker<sup>3,1,2,4</sup>, Mohammed-Amin Madoui<sup>3,1,2,4</sup>  
<sup>1</sup>Université d'Evry, France; <sup>2</sup>CNRS, France; <sup>3</sup>CEA, Genoscope, France;  
<sup>4</sup>Université Paris-Saclay, France; <sup>5</sup>Université de Toulon, France

12:00-1:00 LUNCH (Madeo Ballroom – 2<sup>nd</sup> floor)

**DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)**

**Oral Session V: Molecular Ecology and Population Genetics (continued)**

Chairperson: **Susan Dippenaar**, University of Limpopo, South Africa

- 63 1:00 **Programmed DNA elimination of genes in *Mesocyclops edax***  
**Grace Wyngaard**<sup>1,2</sup>, Maxim Zagoskin<sup>2</sup>, Rachel Mueller<sup>3</sup>, Cheng Sun<sup>4</sup>  
<sup>1</sup>James Madison University, USA; <sup>2</sup>University of Colorado School of  
Medicine, USA; <sup>3</sup>Colorado State University, USA; <sup>4</sup>Chinese Academy of  
Agricultural Sciences, China
- 64 1:15 **Programmed DNA elimination removes both genes and transposable  
elements in freshwater copepods**  
**Maxim Zagoskin**<sup>1</sup>, Andrey Grishanin<sup>2</sup>, Richard Davis<sup>1</sup>, Grace Wyngaard<sup>3</sup>  
<sup>1</sup>University of Colorado School of Medicine, USA; <sup>2</sup>Russian Academy of  
Sciences, Russia; <sup>3</sup>James Madison University, USA

- 65 1:30 **Molecular phylogeny of Aegisthidae (Copepoda; Harpacticoida) reveals quick morphological adaptation to deep-sea and pelagic habitats**  
Sahar Khodami, Nancy Fabiola Mercado Salas, **Pedro Martinez Arbizu**  
German Center for Marine Biodiversity Research, Wilhelmshaven,  
Germany
- 66\* 1:45 **New insight on the population structure of *Calanus finmarchicus* in the North Atlantic using next-generation sequencing technologies**  
**Marvin Choquet**<sup>1</sup>, Irina Smolina<sup>1</sup>, Janne Søreide<sup>2</sup>, Galice Hoarau<sup>1</sup>  
<sup>1</sup>Nord University, Norway; <sup>2</sup>The University Centre in Svalbard, Norway
- 67 2:00 **Transcriptomic changes in *Neocalanus flemingeri* from diapause emergence to egg production**  
**Vittoria Roncalli**<sup>1</sup>, Matthew C. Cieslak<sup>1</sup>, Stephanie Matthews<sup>1</sup>, Cheryl Clarke<sup>2</sup>, Russell R. Hopcroft<sup>2</sup>, Petra H. Lenz<sup>1</sup>  
<sup>1</sup>University of Hawaii at Manoa, USA; <sup>2</sup>University of Alaska, USA

**DoubleTree by Hilton, Madeo Room (1<sup>st</sup> floor)**

- 2:15-3:30 World Association of Copepodologists Society Meeting
- 3:30-4:00 Free time
- 4:00 Depart for Farewell Dinner
- 6:00-9:00 FAREWELL DINNER  
Natural History Museum of Los Angeles County

# Poster Session

DoubleTree by Hilton, Madeo Ballroom (2<sup>nd</sup> floor)

Thursday: July 20, 2017 from 2:30pm-5:30pm

Participants with even-numbered abstracts present from 2:30pm to 4:00pm

Participants with odd-numbered abstracts present from 4:00pm to 5:30pm

68\* **A new Nannopodidae (Copepoda; Harpacticoida) from Argentinean waters**

**Michele Sciberras**<sup>1,2</sup>, Verónica N. Bulnes<sup>1,2</sup>, Néstor J. Cazzaniga<sup>2</sup>

<sup>1</sup>IMBIOSUR, Argentina; <sup>2</sup>Universidad Nacional del Sur, Argentina

69\* **Phylogenetic analysis of harpacticoid copepod *Tigriopus* in Thailand**

**Kuansiri Seelpinyo**, Supawadee Chullasorn, Supanee Hirunkanokpun

Ramkhamhaeng University, Thailand

70 **The role of copepod nauplii in marine planktonic ecosystems**

**Michelle Jungbluth**<sup>1,2</sup>, Erica Goetze<sup>2</sup>

<sup>1</sup>San Francisco State University, USA; <sup>2</sup>University of Hawaii at Manoa, USA

71 **Seasonal distribution of copepods in four permanent saline lakes of the Low Sahara (Northeast of Algeria)**

Ghouzala Gouasmia<sup>1,2</sup>, **Mounia Amarouayache**<sup>1</sup>

<sup>1</sup>Badji Mokhtar University, Algeria; <sup>2</sup>Messaadia Mohamed Cherif University, Algeria

72 **Long-term trend in crustacean zooplankton biomass over four decades in Lake Biwa**

**Syuhei Ban**<sup>1</sup>, Xin Liu<sup>1</sup>, Gaël Dur<sup>2</sup>, Emi Doi<sup>1</sup>, Yoichiro Sakai<sup>3</sup>, Shinsuke Oomae<sup>4</sup>, Takashi Morita<sup>4</sup>

<sup>1</sup>University of Shiga Prefecture, Japan; <sup>2</sup>Shizuoka University, Japan; <sup>3</sup>Lake Biwa Environmental Research Institute, Japan; <sup>4</sup>Fisheries Experiment Station of Shiga Prefecture, Japan

- 73 **Oncident - an interactive identification key for Oncaeidae (Copepoda; Cyclopoida)**  
**Ruth Böttger-Schnack**, Dietrich Schnack  
GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany
- 74 **Metagenetic analysis of prey choice and selectivity of the copepod *Calanus finmarchicus* in the Gulf of Maine (NW Atlantic)**  
Heidi Yeh<sup>1</sup>, **Ann Bucklin**<sup>1</sup>, Jennifer Questel<sup>1</sup>, Bo Reese<sup>2</sup>  
<sup>1</sup>Department of Marine Sciences, University of Connecticut, USA; <sup>2</sup>Center for Genome Innovation, University of Connecticut, USA
- 75\* **Copepod nycthemeral and spatial changes at the Rocas Atoll Biological Reserve (Equatorial South Atlantic)**  
**Renata Campelo**<sup>1</sup>, Catarina Marcolin<sup>2</sup>, Kaio Farias<sup>2</sup>, Nathalia Silva<sup>3</sup>, Mauro de Melo<sup>4</sup>, Sigrid Neumann<sup>3</sup>, Luís Ernesto<sup>1</sup>  
<sup>1</sup>Federal University of Ceara, Brazil; <sup>2</sup>Federal University of Southern Bahia, Brazil; <sup>3</sup>Federal University of Pernambuco, Brazil; <sup>4</sup>Federal Rural University of Pernambuco, Brazil
- 76 **Heat shock response and metabolic stress in the tropical estuarine copepod *Pseudodiaptomus annandalei* converge at its upper thermal optimum**  
Joyce Low<sup>1</sup>, **Li Lee Chew**<sup>1,2</sup>, Ching Ching Ng<sup>1</sup>, Hao Chin Goh<sup>1</sup>, Pascal Lehette<sup>1</sup>, Ving Ching Chong<sup>1</sup>  
<sup>1</sup>University of Malaya, Malaysia; <sup>2</sup>UCSI University, Malaysia
- 77\* **Three-dimensional distribution of copepod species in a cyclonic eddy in the Gulf of California**  
**Javier Cruz-Hernández**<sup>1</sup>, Laura Sánchez-Velasco<sup>1</sup>, Emilio Beier<sup>2</sup>, Ricardo Palomares-García<sup>1</sup>, V.M. Godínez-Sandoval<sup>3</sup>  
<sup>1</sup>Centro Interdisciplinario de Ciencias Marinas-IPN (CICIMAR), Mexico; <sup>2</sup>Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Mexico; <sup>3</sup>Departamento de Oceanografía Física, CICESE, Mexico



- 78\* **Combined effects of warming and acidification on life-history traits of *Acartia tonsa***  
**James A. deMayo**<sup>1</sup>, Gihong Park<sup>1</sup>, Lydia Norton<sup>1</sup>, Wesley Huffman<sup>1</sup>, Michael Finiguerra<sup>2</sup>, Hannes Baumann<sup>1</sup>, Hans Dam<sup>1</sup>  
<sup>1</sup>Department of Marine Sciences, University of Connecticut, USA; <sup>2</sup>Department of Ecology and Evolutionary Biology, University of Connecticut, USA
- 79 **Groundwater copepods in the Frasassi cave chemoautotrophic ecosystem**  
**Barbara Fiasca**<sup>1</sup>, Diana Maria Paola Galassi<sup>1</sup>, Tiziana Di Lorenzo<sup>2</sup>, Alessandro Montanari<sup>3</sup>, Silvano Porfirio<sup>1</sup>, Simone Fattorini<sup>1</sup>  
<sup>1</sup>University of L'Aquila, Italy; <sup>2</sup>Institute of Ecosystem Study, Italy; <sup>3</sup>Geological Observatory of Coldigioco, Italy
- 80 **Parasitic Copepoda of fishes in a tropical estuary of northeastern Brazil**  
**Francinete Fonseca**<sup>1</sup>, Renata Campelo<sup>2</sup>  
<sup>1</sup>Federal Rural University of Pernambuco, Brazil; <sup>2</sup>Federal University of Ceara, Brazil
- 81\* **Description of the adult male of *Caligus klawei* (Copepoda; Caligidae) parasitic on Northern Anchovy (*Engraulis mordax*) in southern California, USA, with the discovery of the chalimus stages of this copepod**  
**Mason Gamble**<sup>1</sup>, Julianne Kalman Passarelli<sup>2</sup>  
<sup>1</sup>University of California, Los Angeles, USA; <sup>2</sup>Cabrillo Marine Aquarium, USA
- 82\* ***Pennella balaenoptera* (Siphonostomatoida; Pennellidae): The biology of a mesoparasitic copepod on whales**  
**Diane Alps**<sup>1,2</sup>, Julianne Kalman Passarelli<sup>2</sup>, Erin Falcone<sup>3</sup>  
<sup>1</sup>California Whales and Wildlife, USA; <sup>2</sup>Cabrillo Marine Aquarium, USA; <sup>3</sup>Marine Ecology and Telemetry Research, USA
- 83 **A new species of *Lepeophtheirus* (Copepoda; Caligidae) infecting three kelpfish species (Clinidae) from southern California**  
**Julianne Kalman Passarelli**<sup>1</sup>, Danny Tang<sup>2</sup>  
<sup>1</sup>Cabrillo Marine Aquarium, USA; <sup>2</sup>Orange County Sanitation District, USA

- 84\* **Taxonomy and ecology of *Clausidium vancouverense* associated with two callianassid ghost shrimp taxa from the eastern Pacific**  
**Max D. Murray**<sup>1</sup>, Bruno Passarelli<sup>1,2</sup>, Julianne Kalman Passarelli<sup>3</sup>  
<sup>1</sup>University of California, Los Angeles, USA; <sup>2</sup>Saddleback College, USA; <sup>3</sup>Cabrillo Marine Aquarium, USA
- 85\* **Metazoan parasites of California grunion, *Leuresthes tenuis*, in southern California**  
**Bruno Passarelli**  
University of California, Los Angeles and Saddleback College, USA
- 86\* **Prevalence and intensity of porcellidiid copepods associated with blueband hermit crab (*Pagurus samuelis*) at three southern California locations**  
**Jade Morris**<sup>1</sup>, Julianne Kalman Passarelli<sup>2</sup>  
<sup>1</sup>John A. Rowland High School, USA; <sup>2</sup>Cabrillo Marine Aquarium, USA
- 87 **Discovery of a new species of *Moraria* (Copepoda; Harpacticoida; Canthocamptidae) in groundwaters of Germany**  
**Santiago Gavia**<sup>1</sup>, Danielle Defaye<sup>2</sup>  
<sup>1</sup>University of Vienna & Technisches Büro für Biologie, Austria; <sup>2</sup>Muséum national d'Histoire Naturelle, France
- 88 **Spatial variation of density, biomass, and taxonomic composition of harpacticoid copepods in Central Gulf of California**  
Karen Díaz<sup>1</sup>, **Samuel Gómez**<sup>2</sup>  
<sup>1</sup>Universidad Nacional Autónoma de México, Posgrado en Ciencias del Mar y Limnología, México; <sup>2</sup>Universidad Nacional Autónoma de México, México
- 89 **A new species of *Chondracanthus* (Poecilostomatoida; Chondracanthidae) parasitic on deep-sea *Dibranchius spongiosa* (Lophiiformes; Ogocephalidae) from the Eastern Central Pacific**  
**Samuel Gómez**<sup>1</sup>, Hugo Aguirre<sup>2</sup>, Francisco Neptalí Morales-Serna<sup>3</sup>  
<sup>1</sup>Universidad Nacional Autónoma de México, México; <sup>2</sup>Instituto Nacional de Pesca, Centro Regional de Investigación Pesquera, México; <sup>3</sup>CONACyT, México

- 90\* **An annotated checklist of Cyclopidae (Crustacea; Copepoda) of Algeria**  
**Souad Ghaouaci**<sup>1</sup>, Mounia Amarouayache<sup>1</sup>, Ghouzala Gouasmia<sup>2</sup>, Maria Hołyńska<sup>3</sup>  
<sup>1</sup>Badji Mokhtar University, Algeria; <sup>2</sup>Souk Ahras University, Algeria; <sup>3</sup>Museum and Institute of Zoology, Poland
- 91\* **Recent taxonomic accounts of Philippine inland calanoid copepods: A re-description of *Pseudodiaptomus brehmi* and a new record of *Phyllodiaptomus***  
**Shea Kathleen P. Guinto**<sup>1</sup>, Justine Val Jade B. Lacaba<sup>2</sup>, John Kenneth V. Cuballes<sup>2</sup>, Aezrille A. Ignacio<sup>2</sup>, T. Chad Walter<sup>4</sup>, Rey Donne S. Papa<sup>2,3</sup>  
<sup>1</sup>The Graduate School, University of Santo Tomas, Philippines; <sup>2</sup>Department of Biological Sciences, University of Santo Tomas, Philippines; <sup>3</sup>Research Center for Natural and Applied Sciences, University of Santo Tomas, Philippines; <sup>4</sup>Smithsonian Institution, USA
- 92\* **Copepod body-size response to change in temperature in tropical oceanic waters**  
**José Manuel Gutierrez-Salcedo**<sup>1</sup>, María del Pilar Martínez<sup>2</sup>  
<sup>1</sup>Universidad Nacional de Colombia sede Caribe, Colombia; <sup>2</sup>Instituto de Investigaciones Marinas y Costeras – Invemar, Colombia
- 93\* **Trophic interactions between bacteria and Bradfordian families**  
**Katsushi Hirano**<sup>1</sup>, Susumu Ohtsuka<sup>2</sup>, Kentaro Takada<sup>3</sup>, Hideto Fukushima<sup>4</sup>, Toshihiro Nakai<sup>5</sup>  
<sup>1</sup>Faculty of Applied Biological Science, Hiroshima University, Japan; <sup>2</sup>Takehara Marine Science Station, Hiroshima University, Japan; <sup>3</sup>The University of Tokyo, Japan; <sup>4</sup>Nihon University, Japan; <sup>5</sup>Laboratory of Fish Pathology, Hiroshima University, Japan
- 94 **Feeding on ciliates by copepod adults and nauplii using fluorescence microscopy**  
**Toni Ignoffo**, Claire Hoffman, Kelly Flanders, Wim Kimmerer  
 San Francisco State University, USA

- 95\* **Comparison of mitochondrial and nuclear genetic variation of common *Acartia* species in the San Francisco Estuary**  
**KeChaunte Johnson**, David Franklin, Carrie Craig, Frank Cipriano, Eric Routman, Ann Holmes, C. Sarah Cohen  
San Francisco State University, USA
- 96\* **Lake Taal's marine and brackishwater harpacticoid copepods point to its marine origins**  
**Kristine Idda Pontillas**<sup>1</sup>, Rey Donne Papa<sup>1,2,3</sup>  
<sup>1</sup>The Graduate School, University of Santo Tomas, Philippines; <sup>2</sup>Department of Biological Sciences, University of Santo Tomas, Philippines; <sup>3</sup>Research Center for Natural and Applied Sciences, University of Santo Tomas, Philippines
- 97 **Differences in copepod abundance due to diminished habitat connectivity**  
**Alain Rosas**, Molly Burdick-Whipp, Christine Whitcraft, Chris Lowe  
California State University Long Beach, USA
- 98 **An inventory of harpacticoid (Crustacea; Copepoda) species from brackish and freshwater habitats in Fennoscandia**  
**Inta Dimante-Deimantovica**<sup>1</sup>, Jouko Sarvala<sup>2</sup>, Elena S. Chertoprud<sup>3,4</sup>, Elena Fefilova<sup>5</sup>, Thomas Correll Jensen<sup>1</sup>, Bjørn Walseng<sup>1</sup>  
<sup>1</sup>The Norwegian Institute for Nature Research, Norway; <sup>2</sup>University of Turku, Finland; <sup>3</sup>Moscow State University, Russia; <sup>4</sup>Severtsov Institute of Ecology & Evolution, Russia; <sup>5</sup>Institute of Biology of the Komi Scientific Centre of the Ural Branch of the Russian Academy of Sciences, Russia
- 99 **Harpacticoida (Copepoda) from neritic zone of the Sea of Okhotsk: Are meiobenthic copepods diverse in the plankton?**  
Elena S. Chertoprud<sup>1,2,3</sup>, Svetlana E. Frenkel<sup>2</sup>, Agniya M. Sokolova<sup>3</sup>, **Inta Dimante-Deimantovica**<sup>4</sup>  
<sup>1</sup>Moscow State University, Russia; <sup>2</sup>Russian Federal Research Institute of Fisheries and Oceanography, Russia; <sup>3</sup>Severtsov Institute of Ecology & Evolution, Russia; <sup>4</sup>The Norwegian Institute for Nature Research, Norway

- 100 **Composition of Harpacticoida (Copepoda) species from the Laptev Sea in comparison with fauna of adjacent Arctic Seas**  
Elena S. Chertoprud<sup>1,2</sup>, Ekaterina Abramova<sup>3</sup>, Lesya Garlitska<sup>4</sup>, Inta Dimante-Deimantovica<sup>5</sup>  
<sup>1</sup>Moscow State University, Russia; <sup>2</sup>Severtsov Institute of Ecology & Evolution, Russia; <sup>3</sup>Lena Delta State Reserve, Russia; <sup>4</sup>P.P. Shirshov Institute of Oceanology, Russia; <sup>5</sup>The Norwegian Institute for Nature Research, Norway
- 101 **Deep-sea harpacticoid families expand the scope of impacts of the Deepwater Horizon oil spill**  
Hyun Woo Bang<sup>1</sup>, Jeffrey G. Baguley<sup>2</sup>, Heejin Moon<sup>1</sup>  
<sup>1</sup>Mokwon University, Korea; <sup>2</sup>University of Nevada Reno, USA
- 102 ***Eucyclops serrulatus* (Crustacea; Copepoda; Cyclopidae) in the type locality, Russia**  
Natalia Sukhikh<sup>1</sup>, Elena Kochanova<sup>2</sup>, Victor Alekseev<sup>1</sup>  
<sup>1</sup>Zoological Institute of Russian Academy of Sciences, Russia; <sup>2</sup>Institute of Biology of Komi Scientific Centre of Ural Branch of Russian Academy of Sciences, Russia
- 103 **Life in sympatry: Coexistence of native *Eurytemora affinis* and invasive *Eurytemora carolleae* in the Gulf of Finland (Baltic Sea)**  
Natalia Sukhikh<sup>1</sup>, Vincent Castric<sup>2</sup>, Anissa Souissi<sup>3</sup>, Sami Souissi<sup>3</sup>, Elena Kochanova<sup>4</sup>, Victor Alekseev<sup>1</sup>  
<sup>1</sup>Zoological Institute of Russian Academy of Sciences, Russia; <sup>2</sup>CNRS-Université de Lille - Sciences et Technologies, France; <sup>3</sup>Université Lille, France; <sup>4</sup>Institute of Biology of Komi Scientific Centre of Ural Branch of Russian Academy of Sciences, Russia

- 104\* **Morphometric study on the feeding appendages of planktonic calanoid copepods: Relationship with feeding modes, habitat depths, and stable isotopes**  
**Sota Komeda**<sup>1</sup>, Hiroaki Tamura<sup>1</sup>, Yoshiyuki Abe<sup>1</sup>, Maki Noguchi Aita<sup>2</sup>, Fujio Hyodo<sup>3</sup>, Susumu Ohtsuka<sup>4</sup>, Russell R. Hopcroft<sup>5</sup>, Atsushi Yamaguchi<sup>1</sup>  
<sup>1</sup>Hokkaido University, Japan; <sup>2</sup>Japan Agency for Marine-Earth Science and Technology, Japan; <sup>3</sup>Okayama University, Japan; <sup>4</sup>Hiroshima University, Japan; <sup>5</sup>University of Alaska Fairbanks, USA
- 105\* **Seasonal changes in population structure of three dominant planktonic copepods collected by sediment traps moored in the western Arctic Ocean**  
Koki Tokuhira<sup>1</sup>, **Sota Komeda**<sup>1</sup>, Yoshiyuki Abe<sup>1</sup>, Kohei Matsuno<sup>2</sup>, Jonaotaro Onodera<sup>3</sup>, Naomi Harada<sup>3</sup>, Toru Hirawake<sup>1</sup>, Atsushi Yamaguchi<sup>1</sup>  
<sup>1</sup>Hokkaido University, Japan; <sup>2</sup>Australian Antarctic Division, Australia; <sup>3</sup>Japan Agency for Marine-Earth Science and Technology, Japan
- 106 **A new species of the genus *Harpacticus* (Copepoda; Harpacticoida) from a tidal pool on the King George Island, Antarctica**  
**Seunghan Lee**<sup>1</sup>, Kanghyun Lee<sup>1</sup>, Wonchoel Lee<sup>2</sup>  
<sup>1</sup>Marine Act Co., Korea; <sup>2</sup>Hanyang University, Korea
- 107 **Two new species of *Emertonia* and a checklist of marine harpacticoids in Korean waters**  
Jinwook Back<sup>1</sup>, **Seunghan Lee**<sup>2</sup>, Wonchoel Lee<sup>3</sup>  
<sup>1</sup>National Marine Biodiversity Institute of Korea, Korea; <sup>2</sup>Marine Act Co., Korea; <sup>3</sup>Hanyang University, Korea
- 108 **Diaptomidae: A model organism for adaptation to UV-irradiance and climate change in aquatic ecosystem**  
**Shaikhom Inaotombi Singh**, Debajit Sarma  
Laboratory of Environmental Biology, ICAR-Directorate of Coldwater Fisheries Research, Bhimtal, India

- 109 **Seasonal variation of pelagic copepods in Cabo Pulmo National Park, Baja California Sur, Mexico**  
**Juan Ramón Beltrán-Castro**, Sergio Hernández-Trujillo  
Instituto Politécnico Nacional, México
- 110\* **Behavioral changes in copepod swimming relative to sub-lethal metal exposures**  
**Carolina Fonseca Maciel**, Rubens M. Lopes  
University of São Paulo, Brazil
- 111 **Decadal variations of *Calanus helgolandicus* in the marine protected area of Mljet Island, South Adriatic Sea**  
**Juan Carlos Molinero**<sup>1</sup>, Marijana Miloslavić<sup>2</sup>, Delphine Bonnet<sup>3</sup>, Ulrich Sommer<sup>1</sup>, Davor Lučić<sup>2</sup>  
<sup>1</sup>GEOMAR Helmholtz Center for Ocean Research, Germany; <sup>2</sup>University of Dubrovnik, Croatia; <sup>3</sup>Université de Montpellier, France
- 112 **First report and description of *Neoergasilus japonicus* from some freshwater fishes in Thailand**  
**Worawit Maneepitaksanti**<sup>1</sup>, Worakrit Worananthakij<sup>2</sup>  
<sup>1</sup>Chiang Mai University, Thailand; <sup>2</sup>King Mongkut's Institute of Technology Ladkrabang, Thailand
- 113 **Parasitic copepod *Ergasilus sieboldi* (Copepoda; Ergasilidae) of marble goby (*Oxyeleotris mamorata*) from Thailand**  
**Worakrit Worananthakij**<sup>1</sup>, Worawit Maneepitaksanti<sup>2</sup>  
<sup>1</sup>King Mongkut's Institute of Technology Ladkrabang, Thailand; <sup>2</sup>Chiang Mai University, Thailand
- 114 **A new species of *Setacheres* (Copepoda; Siphonostomatoida; Asterocheridae) associated with *Ircinia felix* (Porifera; Dictyoceratida) from Brazil**  
Camila C. Borges, Elizabeth G. Neves, **Rodrigo Johnsson**  
Universidade Federal da Bahia, Brazil

- 115 **A new species of *Asterocheres* (Copepoda; Siphonostomatoida) associated with a common sponge *Desmapsamma anchorata* from Todos-os-Santos bay, Bahia, Brazil**  
Gustavo Resende Ribeiro, Elizabeth G. Neves, Rodrigo Johnsson  
Universidade Federal da Bahia, Brazil
- 116 **A new species of *Porcelloides* (Copepoda; Harpacticoida; Porcellidiidae) associated with marine algae *Padina* sp. from the tropical southwestern Atlantic**  
Antonio Adriano Sousa-Silva, Elizabeth G. Neves, Rodrigo Johnsson  
Universidade Federal da Bahia, Brazil
- 117 **A new species of *Dilatatiocauda* (Copepoda; Harpacticoida; Porcellidiidae) associated with the sponge *Cinachyrella alloclata* from northeastern Brazil**  
Antonio Adriano Sousa-Silva, Elizabeth G. Neves, Rodrigo Johnsson  
Universidade Federal da Bahia, Brazil
- 118 **The multigenerational effects of ocean acidification on development, reproduction, ingestion rate, and ATPase activity of *Tigriopus japonicus***  
Fei Li<sup>1</sup>, S.G. Cheung<sup>2</sup>, Yan Sun<sup>1</sup>, Yu Zang<sup>1</sup>, Fanghong Mu<sup>1</sup>  
<sup>1</sup>Ocean University of China, China; <sup>2</sup>City University of Hong Kong, China
- 119 **Tantulocarida on planktonic copepods: First records from the deep sea of the Kurile-Kamchatka trench**  
Alexandra Petrunina<sup>1</sup>, Pedro Martinez Arbizu<sup>2</sup>  
<sup>1</sup>Moscow State University, Russia; <sup>2</sup>German Center for Marine Biodiversity Research, Wilhelmshaven, Germany
- 120\* **Fine-scale vertical community structure of zooplankton at a mesophotic reef and adjacent shelf break in the Gulf of Mexico**  
Samantha Silvestri, Diego Figueroa  
The University of Texas Rio Grande Valley, USA



- 121 **A potentially new species of *Acartia* (Copepoda; Calanoida; Acartiidae) from the Trat River Estuary, the Gulf of Thailand**  
**Khwanruan Srinui**<sup>1</sup>, Wansuk Senanan<sup>2</sup>  
<sup>1</sup>Institute of Marine Science, Burapha University, Thailand; <sup>2</sup>Faculty of Science, Burapha University, Thailand
- 122\* **Distribution of zooplankton in Istanbul Strait**  
**Berrin Turkeri**  
Istanbul University, Turkey
- 123 **Copepods (Crustacea) parasitic on polychaetes (Annelida) collected during the Japanese Antarctic expeditions in the 1980s**  
**Daisuke Uyeno**<sup>1</sup>, Megumu Tsujimoto<sup>2</sup>  
<sup>1</sup>Kagoshima University, Japan; <sup>2</sup>National Institute of Polar Research, Japan
- 124\* **First record of the family Peltiididae (Copepoda; Harpacticoida) from the Gulf of Mexico, with the description of a new species of *Peltidium***  
**Carlos Varela**<sup>1</sup>, Samuel Gómez<sup>2</sup>  
<sup>1</sup>Florida International University, USA; <sup>2</sup>Universidad Nacional Autonoma de México, México
- 125\* **Common generalists and rare specialists: Niche variation among common and rare freshwater calanoid copepods**  
**Rachel Abbott Wilkins**, Nelson Hairston, Jr.  
Cornell University, USA
- 126 **Abundance of harpacticoid copepods in coral communities in the Gulf of Thailand**  
**Thamasak Yeemin**, Makamas Sutthacheep, Sittiporn Pengsakun, Wanlaya Klinthong, Watchara Samsuvan, Watcharachai Donsomjit, Montaphat Thummasan  
Ramkhamhaeng University, Thailand

- 127\* **Two new species of the genus *Sarsamphiascus* (Copepoda; Harpacticoida; Miraciidae) from subtidal sandy sediments**  
**Jisu Yeom**, Wonchoel Lee  
Hanyang University, Korea
- 128 **Beta diversity patterns reveal effects of environmental, climatic, and geographical filters on freshwater Copepoda and Cladocera**  
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