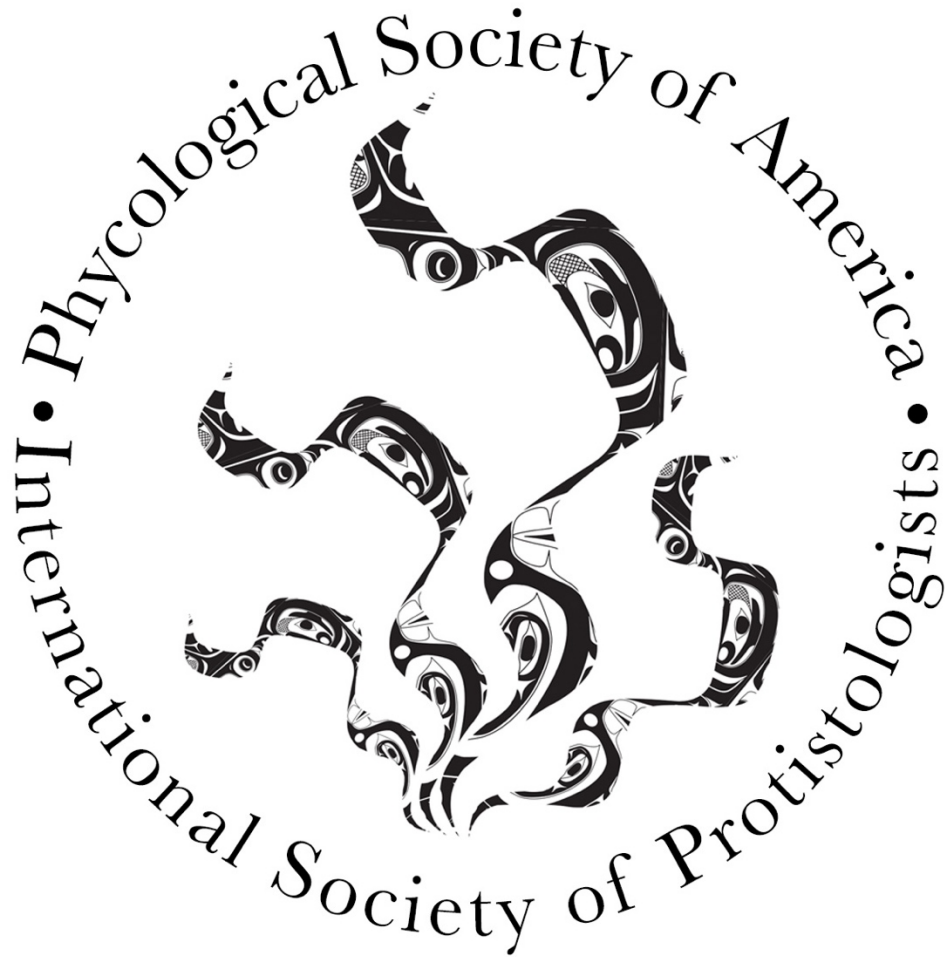


The 5th joint meeting of the
Phycological Society of America &
International Society of Protistologists



July 29th–August 2nd, 2018
University of British Columbia
Vancouver, British Columbia, Canada



The Phycological Society of America (PSA) was founded in 1946 to promote research and teaching in all fields of Phycology. The society publishes the *Journal of Phycology* and the *Phycological Newsletter*. Annual meetings are held, often jointly with other national or international societies of mutual member interest. PSA awards include the **Bold Award** for the best student paper at the annual meeting, the **Lewin Award** for the best student poster at the annual meeting, the **Provasoli Award** for outstanding papers published in the *Journal of Phycology*, The **PSA Award of Excellence** (given to an eminent phycologist to recognize career excellence) and the **Prescott Award** for the best Phycology book published within the previous two years. The society provides financial aid to graduate student members through **Croasdale Fellowships** for enrollment in phycology courses, **Hoshaw Travel Awards** for travel to the annual meeting and **Grants-In-Aid** for supporting research. To join PSA, contact the membership director or visit the website: www.psaalgae.org



ISoP started as the Society of Protozoologists in 1947 and became the International Society of Protozoologists in 2005. ISoP is an association of scientists devoted to research on single-celled eukaryotes, or protists. Annual meetings are held, often jointly with other national or international societies of mutual member interest. In addition, many of the Society's affiliated sections hold meetings. The Society has published *The Journal of Eukaryotic Microbiology* since 1954. ISoP's awards include the **Hutner Achievement Award** given to a Society member within 15 years of their PhD who has made outstanding contributions in some area(s) of protistology, the **Holz-Conner Travel Award** to help students and young investigators attend the annual Society meeting, the **Jahn-Bovee Presentation Award** to the student(s) who make the best presentation(s) at the annual Society meeting, the **Trager Award** for Outstanding Paper of the Year; and the **Corliss Systematics Award** for outstanding paper in ciliate systematics. To join and learn more about ISoP visit <https://protistologists.org/>.

LOCAL ORGANIZERS FOR THE 2018 JOINT PSA/ISOP MEETING:

Patrick T. Martone, University of British Columbia (PSA)
Laura Wegener-Parfrey, University of British Columbia (ISOP)
Patrick Keeling, University of British Columbia (ISOP)
Bridgette Clarkston, University of British Columbia (PSA)

PSA PROGRAM DIRECTOR FOR 2018:

Amy Carlile, University of New Haven

ISOP PROGRAM COMMITTEE CHAIR 2018:

Avelina Espinosa, Roger Williams University

PSA OFFICERS AND EXECUTIVE COMMITTEE

President	Alison Sherwood, Department of Botany, University of Hawai'i at Manoa
Past President	Tim Nelson, Department of Biology, Seattle Pacific University
Vice-President/ President Elect	Kirsten Müller, Department of Biology, University of Waterloo
International Vice- President	Joe Zuccarello, School of Biological Sciences, Victoria University of Wellington
Secretary	Patrick T. Martone, Department of Botany, University of British Columbia
Treasurer	Eric W. Linton, Department of Biology, Central Michigan University
Program Director	Amy Carlile, Department of Biology, University of New Haven
Membership Director	Maggie Amsler, Department of Biology, University of Alabama at Birmingham
Chair, Board of Trustees	Morgan L. Vis, Department of Environmental and Plant Biology, Ohio University
Fund Manager of the Endowment	Steve Murray, Yorba Linda, CA
Managing Editor, Journal of Phycology	Michael H. Graham, Moss Landing Marine Laboratories
Communications Director	Jeff Morris, Department of Biology, University of Alabama at Birmingham
Student Member Representative(s)	Arley Muth, University of Texas Marine Science Institute,

PSA BOARD OF TRUSTEES

Chair, Board of Trustees	Morgan L. Vis, Department of Environmental and Plant Biology, Ohio University
Fund Manager, PSA Endowment	Steve Murray, Yorba Linda, CA
Member, selected by the EC	Chuck Amsler, University of Alabama
Member, selected by the EC	Michelle Wood, University of Oregon
Member, selected by the EC	Juliet Brodie, Natural History Museum, London
President, <i>ex officio</i>, non- voting	Alison Sherwood, Department of Botany, University of Hawai'i at Manoa
Vice- President/President- elect, <i>ex officio</i>, non- voting	Kirsten Müller, Department of Biology, University of Waterloo
International Vice- President/President- elect, <i>ex officio</i>, non- voting	Joe Zuccarello, School of Biological Sciences, Victoria University of Wellington
Treasurer	Eric W. Linton, Department of Biology, Central Michigan University

ISOP OFFICERS

President	David Bass Department of Life Sciences, The Natural History Museum, London
Past President	John R. Dolan, Laboratoire d'Océanographie de Villefranche, Station Zoologique
President Elect	Chris Lane, Department of Biological Sciences, University of Rhode Island
Vice-President	Anna Karnkowska, Department of Molecular Phylogenetics and Evolution, University of Warsaw
Secretary	Tomás Pánek, Department of Biology and Ecology, University Ostrava
Treasurer	Denis Lynn, Department of Zoology, University of British Columbia
Membership Secretary	Gaytha A. Langlois, Science & Technology Department, Bryant University
Editor in Chief, Journal of Eukaryotic Microbiology	Roberto Docampo, Department of Cellular Biology, University of Georgia
Information Officer	Javier Del Campo, University of British Columbia
Community Manager	Lukás Novák, Charles University
Member At Large	William Bourland, Department of Biological Sciences, Boise State University
Member At Large	Daniel Lahr, Department of Zoology, University of São Paulo
Member At Large	Laura Wegener Parfrey, Departments of Botany and Zoology, University of British Columbia
Member At Large	Matt Brown, Department of Biological Sciences, Mississippi State University
Member At Large	Joel B. Dacks, Department of Cell Biology, University of Alberta
Student Representative	Yana Eglit, Department of Biology, Dalhousie University

MEETING ACKNOWLEDGEMENTS

It takes a village to host a conference. More people deserve thanks for making this conference possible than can be called out individually. Here we highlight a few supporters whose *kelp* was invaluable:

Avelina Espinosa, ISOP Program Committee Chair and **Amy Carlile**, PSA Program Director — oversaw the many pieces of the program.

Dale Casamatta, previous PSA Program Director — unflappable and able to answer a million questions.

All of the symposium organizers: **Laura Eme**, **Courtney Stairs**, **Maria Cristina Angelici**, **Alison Sherwood**, **Patrick Keeling** and **Patrick Martone**.

Tom Mumford, **Paul Gabrielson**, **Louis Druehl** and **Tao Eastman** for hosting the field trips.

Dolly Garza, **Liam Coleman**, **Matt Whalen**, **Linda Jennings**, **Alastair Simpson**, **Luciana Santoferrara** and **Ivan Cepicka** for hosting the workshops.

Morgan Vis for coordinating the excellent auction items.

Gwaai Edenshaw — designer of the meeting logo (<http://gwaai.com>).

The many graduate student and post-doc volunteers who made this meeting possible.

Isabel Ferens, UBC Botany Dept. Administrative Support — our organizational guru.

John Ng, UBC Botany Dept. IT — website and IT support.

The University of British Columbia staff.

PRESIDENTIAL REMARKS

PSA Presidential Message

Welcome to the joint Phycological Society of America (PSA) – International Society of Protistology (ISOP) annual meeting in beautiful Vancouver, British Columbia! This is also the 72nd annual meeting of PSA. We have four days of workshops, talks, posters, and symposia scheduled, along with receptions, field trips, student socials, and the meeting banquet. Many thanks to our PSA local organizers, Patrick T. Martone and Bridgette Clarkston, and PSA Program Director Amy Carlile, for helping to put together such a fabulous program. This year we have symposia that honor the rich phycological history of the Pacific Northwest, bring us up to date on the ecology of kelp forests, and honor our late colleague, Dr. Milton Sommerfeld, through an exploration of the field of applied phycology. We will also be joining our ISOP friends for symposia on the origins and early evolution of eukaryotes, and protist responses to environmental stress within the context of climate change.

Come say hello at the PSA Headquarters' Room or the Registration Desk. If you have any questions, concerns, or suggestions while at the meeting, please let us know (asherwoo@hawaii.edu).

Have an enjoyable and productive meeting!

Alison Sherwood
2018 PSA President

ISOP Presidential Message

Stay tuned! ISOP presidential message will be included soon.



Editor's Choice Articles: Showcasing the Best of *JPhycol*

- Characterization of *Gambierdiscus lapillus* sp. nov. (Gonyaulacales, Dinophyceae): a new toxic dinoflagellate from the Great Barrier Reef (Australia)
- Overexpression of a diacylglycerol acyltransferase gene in *Phaeodactylum tricoratum* directs carbon towards lipid biosynthesis
- The variable routes of rafting: stranding dynamics of floating bull kelp *Durvillaea antarctica* (Fucales, Phaeophyceae) on beaches in the SE Pacific

Check out what your colleagues are reading!

Introducing the New and Improved Homepage for *JPhycol*



We are excited to bring to you the next generation of the Wiley content platform that will make *JPhycol* content come alive with a more dynamic and streamlined user experience.

- Flexible journal homepage layouts
- RSS feeds to feature PSA news
- Automatically Updated Article lists: most cited, most read, and recently published
- Enhanced topic pages
- Taxonomy support
- Dynamic and "living" virtual issues
- Recommended articles
- Video Integration
- Responsive design

Take *JPhycol* on the Go



Experience an entirely new browsing and reading experience through the *JPhycol* mobile app:

- Convenient access to articles **anytime, anywhere**
- **Quick navigation** to any section of the app
- Immediate access to **new content**
- Choose **keywords** for tailored content alerts
- **Downloadable** issues for online reading or sharing important articles
- Enhanced **search** across downloaded content
- Sync your favorite app content across devices via **iCloud**
- **Notifications** when new content is added

Go to bit.ly/journalofphycology to download the app on iTunes!



<http://bit.ly/journalofphy>



WILEY

SCHEDULE AT A GLANCE: MAIN EVENTS

THURSDAY, JULY 26, 2018

BAMFIELD FIELD TRIP (Thurs–Sunday) ****Registration required****

BOTANICAL BEACH FIELD TRIP (Thurs–Saturday) ****Registration required****

SATURDAY, JULY 28, 2018

1400-1700 PSA BOARD OF TRUSTEES MEETING (Biodiversity Research Centre, room 224)

SUNDAY, JULY 29, 2018

0900–1700 PSA EXECUTIVE MEETING (Biodiversity Research Centre, room 303)

1000–1400 ISOP EXECUTIVE MEETING (Ponderosa Commons Oak House, room 1002)

1000–1330 WORKSHOP “*TRADITIONAL USES OF SEAWEEDS*” (BioDiv 224)

1000–1430 WORKSHOP “*INTRODUCTION TO R*” (Ponderosa Commons Oak House, room 1001)

1400–1600 WORKSHOP “*PROTIST TAXONOMY – NAVIGATING THE NOMENCLATORIAL CODE, SPECIES, AND PRACTICAL CONSIDERATIONS*”
(Ponderosa Commons Oak House, room 1002)

1800–2000 WELCOME RECEPTION (Jack Poole Hall, Alumni Centre)

MONDAY, JULY 30, 2018

0810-0830 OPENING REMARKS by PSA & ISOP Presidents (Great Hall South)

0830-0930 PLENARY TALK by Fabrice Not (Great Hall South)

0930-1000 COFFEE BREAK

1000-1200 SYMPOSIUM “*PSA STUDENT BOLD AWARD SYMPOSIUM*” (Great Hall South)

1000-1200 SYMPOSIUM “*ISOP PAST PRESIDENT’S ADDRESS SYMPOSIUM*” (Great Hall North)

1200-1330 LUNCH

1200-1300 INTERNATIONAL PHYCOLOGICAL SOCIETY BOARD LUNCH (2306)

1330-1515 CONTRIBUTED PAPERS (Great Hall North, Great Hall South, 2301, 2306)

1515-1545 COFFEE BREAK

1545-1630 LIGHTNING TALKS (Great Hall North)

1630-1800 POSTER SESSION (Great Hall South)

1800-1900 PSA & ISOP BUSINESS MEETINGS (PSA: Great Hall North; ISOP: 2306)

2000–? TRIVIA NIGHT (Koerner’s pub)

TUESDAY, JULY 31, 2018

0830-0930 PLENARY TALK by Nancy Turner (Great Hall South)

0930-1015 COFFEE BREAK

1020-1200 SYMPOSIUM “*MACROALGAL LEGACY OF THE PACIFIC NORTHWEST (PSA PRESIDENTIAL)*” (Great Hall South)

1020-1200 SYMPOSIUM “*HOST-ASSOCIATED MICROBIAL COMMUNITIES AND THEIR EVOLUTION*”
(Great Hall North)

1200-1300 LUNCH

1200-1300 JOURNAL OF PHYCOLOGY EDITORIAL LUNCH (The Gallery, 4th floor Nest)

1300-1400 INFORMATION SESSIONS

1400-1545 CONTRIBUTED PAPERS (Great Hall North, Great Hall South, 2301, 2306, 2311)

1545-1615 COFFEE BREAK

1615-1815 CONTRIBUTED PAPERS (Great Hall North, Great Hall South, 2301, 2306, 2311)

2000 STUDENT OUTING (Koerner’s Pub)

SCHEDULE AT A GLANCE: MAIN EVENTS *continued*

WEDNESDAY, AUGUST 1, 2018

- 0830-0930 PLENARY TALK by Tom Richards (Great Hall South)
0930-1015 COFFEE BREAK
1020-1200 SYMPOSIUM “*FROM PHARM TO TABLE: FRONTIERS IN APPLIED PHYCOLOGY (PROFESSOR MILTON SOMMERFELD MEMORIAL SYMPOSIUM)*” (Great Hall South)
1020-1200 SYMPOSIUM “*PROTIST RESPONSES TO ENVIRONMENTAL STRESS: RESILIENCE TO CLIMATIC CHANGES?*” (Great Hall North)

1200-1300 LUNCH

1300-1445 CONTRIBUTED PAPERS (Great Hall North, Great Hall South, 2301, 2306)
1445-1515 COFFEE BREAK
1515-1545 LIGHTNING TALKS (Great Hall North)
1515-1645 POSTER SESSION (Great Hall South)

1800-1900 BANQUET (cocktail hour; Museum of Anthropology)
1900-2230 BANQUET (dinner; Museum of Anthropology)

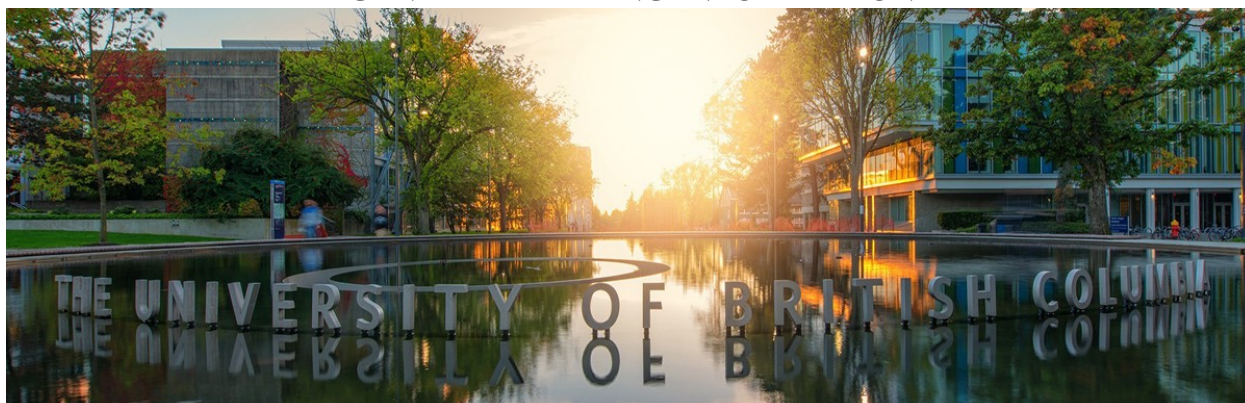
THURSDAY, AUGUST 2, 2018

- 0830-0930 PLENARY TALK by Thomas Wernberg (Great Hall South)
0930-1015 COFFEE BREAK
1020-1200 SYMPOSIUM “*KELP FORESTS IN FLUX*” (Great Hall South)
1020-1200 SYMPOSIUM “*ORIGINS AND EARLY EVOLUTION OF EUKARYOTES*” (Great Hall North)

1200-1330 LUNCH

1330-1515 CONTRIBUTED PAPERS (Great Hall North, Great Hall South, 2301, 2306)
1515-1545 COFFEE BREAK
1545-1730 CONTRIBUTED PAPERS (Great Hall North, Great Hall South, 2301, 2306)

GENERAL MEETING INFORMATION



See the meeting website for more information, including lots of attractions around Vancouver:
<http://psa-isop2018.botany.ubc.ca>

The Meeting Venue

The meeting will be held at the University of British Columbia's Vancouver campus, located at the western tip of the Point Grey Peninsula in the city of Vancouver in British Columbia, Canada. More than 400 hectares in size, the stunning campus is surrounded by forest on three sides and ocean on the fourth, and is just a 30 minute bus ride to Vancouver's downtown core. The campus has been located on this site for most of its [100-year history](#); a location that is the traditional territory of the [Musqueam people](#). You can take a virtual tour of the campus here: <https://you.ubc.ca/tours-info-sessions/virtual-tour/>

Most conference events will take place in the AMS Nest building in the centre of campus. The banquet will be held at the [UBC Museum of Anthropology](#). Parking is plentiful in one of the numerous paid facilities and can be found here: <https://parking.ubc.ca>

Housing Options

On-campus housing at UBC is available for participants at one of three places: Ponderosa Commons, Totem Original Houses or the West Coast suites. More information can be found here: <http://psa-isop2018.botany.ubc.ca/accommodations/>. Housing is available for the entire meeting duration, with the official program starting the evening of Sunday the 29th and ending the afternoon of Thursday, Aug. 2nd. Workshops are held on Sunday the 29th and field trips begin on Thursday the 26th.

Getting to Campus

The address for the AMS Nest building is 6133 University Blvd, Vancouver, BC, Canada, V6T 1Z1. If you plan to drive, you can use an online map to decide the best route from your location. If you plan to fly, the nearest airport is the Vancouver International Airport, a 25–45 minute drive to UBC (traffic depending) or 50–75 minute trip by public transit (a combination of skytrain and bus). Use an online map or the Translink website (www.translink.ca or <https://m.translink.ca> for mobile devices) to plan your route.

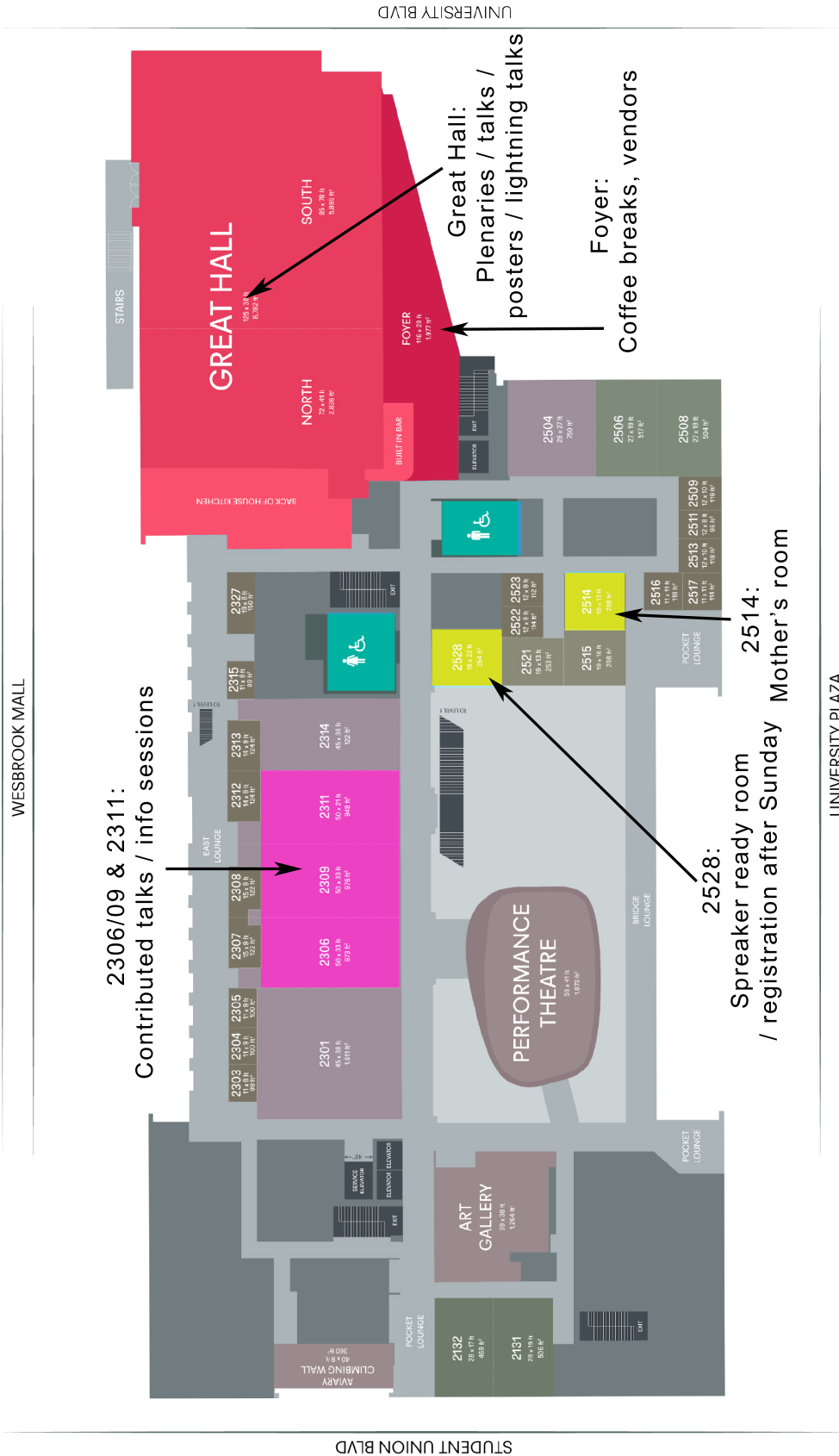
UNIVERSITY OF BRITISH COLUMBIA CAMPUS MAP

Conference Venue Address:

AMS Nest, 6133 University Boulevard, Vancouver, B.C., Canada V6T 1Z1



CONFERENCE VENUE MAP: UBC Nest, 2nd Floor



FULL SCHEDULE OF EVENTS

SUNDAY, JULY 29, 2018

BUSINESS MEETINGS

0900–1700 PSA EXECUTIVE MEETING 303, BIODIVERSITY RESEARCH CENTRE

1000–1400 ISOP EXECUTIVE MEETING 1002, PONDEROSA COMMONS OAK HOUSE

WORKSHOPS **Registration required, email Bridgette Clarkston, bridgette.clarkston@botany.ubc.ca, for info**

1000–1330 WORKSHOP 224, BIODIVERSITY RESEARCH CENTRE
“TRADITIONAL USES OF SEaweEDS” with Dr. Dolly Garza (U Alaska Fairbanks, retired)

1000–1430 WORKSHOP 1001, PONDEROSA COMMONS OAK HOUSE
“INTRODUCTION TO R” with Liam Coleman (UBC) & Matt Whalen (UBC)

1400–1600 WORKSHOP 1002, PONDEROSA COMMONS OAK HOUSE
“PROTIST TAXONOMY – NAVIGATING THE NOMENCLATURAL CODE, SPECIES, AND PRACTICAL CONSIDERATIONS”

- Panelists: Alistair Simpson (Dalhousie U), Luciana Santoferrara (U of Connecticut) & Ivan Cepicka (Charles U)

2018 PSA/ISOP MEETING WELCOME RECEPTION

1800–2000 JACK POOLE HALL, ALUMNI CENTRE

MONDAY, JULY 30, 2018

0810-0830	OPENING REMARKS (PSA & ISOP PRESIDENTS)	
0830-0930	PLENARY TALK	GREAT HALL SOUTH
	<i>Fabrice Not, CNRS, Station Biologique de Roscoff</i> <i>“PHOTOSYNTHESIS IN THE OCEAN”</i>	
0930-1000	COFFEE BREAK (with light breakfast)	
1000-1200	SYMPOSIUM	GREAT HALL SOUTH
	<i>“PSA STUDENT BOLD AWARD SYMPOSIUM”</i>	
1000-1200	SYMPOSIUM	GREAT HALL NORTH
	<i>“ISOP PAST PRESIDENT’S ADDRESS SYMPOSIUM”</i>	
1200-1330	LUNCH (buffet)	FOYER OUTSIDE GREAT HALL
1330-1515	CONTRIBUTED PAPERS (Great Hall North, Great Hall South, 2301, 2306)	
1515-1545	COFFEE BREAK (no snacks)	
1545-1630	LIGHTNING TALKS	GREAT HALL SOUTH
1630-1800	POSTER SESSION (light snacks and cash bar)	GREAT HALL NORTH
1800-1900	PSA BUSINESS MEETING	GREAT HALL NORTH
1800-1900	ISOP BUSINESS MEETING	2306
2000	TRIVIA NIGHT	KOERNER’S PUB

MONDAY, JUL 30 1000-1200 † eligible for PSA Student Bold Award		
Time	GREAT HALL SOUTH <i>PSA Student Bold Award Symposium</i> Chair: Spalding, H.	GREAT HALL NORTH <i>ISOP Past President's Address Symposium</i> Chair: Snyder, D.
1000	† Cho, C. EXPLORING ALGAL-FUNGAL SYMBIOSIS FROM <i>APOPHLAEA LYALLII</i> GENOME	Dolan, J. PROTISTS OF THE MESOPELAGIC AND A BIT ON THE LONG PATH TO THE DEEP SEA
1015	† Wen, X. HOW A RED ALGA <i>HETEROSIPHONIA JAPONICA</i> ACQUIRES A SYSTEMIC RESISTANCE AGAINST OOMYCETE PATHOGEN	
1030	† Starko, S. A COMPREHENSIVE KELP PHYLOGENY SHEDS LIGHT ON THE EVOLUTION OF AN ECOSYSTEM	
1045	† Romero, R. A MOLECULAR ASSESSMENT OF <i>ULVA</i> DIVERSITY IN CENTRAL SAN FRANCISCO BAY, CA, U.S.A.	
1100	† Wolf, D.I. MULTI-MARKER METABARCODING ASSESSMENT OF BIODIVERSITY WITHIN STREAM BIOFILM COMMUNITIES ALONG AN ACID MINE DRAINAGE RECOVERY GRADIENT	Biard, T. THE UNSUSPECTED ROLE OF LARGE PROTISTS (RHIZARIA) IN THE SILICA AND CARBON CYCLES
1115	† Omari, H. SPATIOTEMPORAL VARIATIONS OF MICRO-ORGANISMAL ASSEMBLAGES WITHIN BIOLOGICAL SOIL CRUSTS AT THE JORNADA RANGELAND, NM	
1130	† Chavoshi, R. THE EFFECTS OF DILUTED BITUMEN ON THE DEVELOPMENTAL STAGES OF THE INTERTIDAL BROWN ALGA, ROCKWEED (<i>FUCUS DISTICHUS</i>)	Massana, R. PUSHING THE LIMITS OF 18S RDNA VARIANTS: A TEMPORAL AND SPATIAL STUDY ON MARINE HETEROTROPHIC FLAGELLATES
1145	† Twist, B.A. DISCOVERIES AND CHALLENGES: INTERPRETING DIVERSITY AND DISTRIBUTION OF CORALLINE ALGAE IN SOUTHERN NEW ZEALAND	

MONDAY, JUL 30 1330-1515

Time	GREAT HALL SOUTH	GREAT HALL NORTH	2301	2306
	<i>Taxonomy and evolution of algae 1: A new hope</i> Chair: McCourt, R.	<i>Diversity and distribution of marine protists</i> Chair: Okamoto, N.	<i>Sex and life history</i> Chair: Krueger-Hadfield, S.	<i>Evolution of plastids and algae</i> Chair: Hehenberger, E.
1330	Lee, J. M. MITOCHONDRIAL AND PLASTID GENOME EVOLUTION OF CORALLINE RED ALGAE	Reñé, A. METABARCODING OF BENTHIC DINOFLAGELLATES: COMMUNITY COMPOSITION AND DYNAMICS FROM TWO CONTRASTING COASTAL AREAS (NW MEDITERRANEAN SEA AND GERMAN WADDEN SEA)	Spiegel, F.W. CONSIDERING SEX IN THE EUKARYOTE LIFE CYCLE; IMPLICATIONS FOR IDEAS ABOUT EVOLUTION OF SEX.	Moreira, D. SELMA, THE PROTEIN TRANSLOCATION MACHINERY OF SECONDARY RED PLASTIDS HAS MULTIPLE EVOLUTIONARY ORIGINS
1345	Sutherland, J.E. PRASIOALES OF NEW ZEALAND AND SURROUNDING REGIONS	Richter, D.J. THE MOST TRANSCRIPTIONALLY ACTIVE EUKARYOTIC PLANKTON IN THE SURFACE OCEANS: WHO IS DOING WHAT, AND WHERE?	Ryan, W.H. ONE DIPLOID TO RULE THEM ALL? PHASE-SPECIFIC RESPONSES TO ENVIRONMENTAL VARIATION IN A RED ALGA	Yurchenko, T. ORGANELLAR PHYLOGENOMICS PERSPECTIVE ON THE EVOLUTION OF EUSTIGMATOPHYTE ALGAE
1400	Jeong, S. DNA SEQUENCING AND MORPHOLOGY SUPPORT SEGREGATION OF A NEW GENUS <i>PHYMATOLITHOPSIS</i> (HAPALIDIACEAE, RHODOPHYTA) FROM <i>PHYMATOLITHON</i>	Lentendu, G. LATITUDINAL DIVERSITY GRADIENT OF PROTISTAN PLANKTON IN THE ATLANTIC OCEAN	Choi, J. PLASTID GENOME EVOLUTION IN THE ISOGAMOUS BROWN ALGAE	Hehenberger, E. INVESTIGATION OF NOVEL FREE-LIVING RELATIVES OF MARINE ALVEOLATES (MALVS)
1415	Kim, D. S. FLIP-FLOP ORGANIZATION IN CHLOROPLAST GENOME OF <i>CAPSOSIPHON FULVESCENS</i> (ULVOPHYCEAE, CHLOROPHYTA)	Mathur, V. GLOBAL DIVERSITY AND DISTRIBUTION OF CLOSE RELATIVES OF APICOMPLEXAN PARASITES	Al-Marayati, M. SPATIAL PATTERNS OF GENETIC STRUCTURE IN <i>MASTOCARPUS STELLATUS</i> (RHODOPHYTA)	Diaz-Tapia, P. PHYLOGENOMICS AND THE EVOLUTIONARY HISTORY OF THE FAMILY RHODOMELACEAE
1430	Lagourgue, L. INFERRING TRAIT EVOLUTION FROM PHYLOGENY TO BETTER UNDERSTAND SPECIES DIVERSIFICATION AND SUPPORT TAXONOMIC REVISION OF UDOTEACEAE (BRYOPSIDALES, CHLOROPHYTA)	Okamoto, N. MARINE DIPLONEMIDS OF CALIFORNIA	Shim, E. ISOLATION OF SEX-SPECIFIC IMPORTIN-ALPHA-LIKE GENES IN THE RED ALGA <i>BOSTRYCHIA MORITZIANA</i>	Strassert, J. THE ORIGIN AND SPREAD OF RED ALGAL PLASTIDS
1445	Camus, C. NEW INSIGHTS INTO THE PHYLOGENY OF SCYTOSIPHONACEAE (PHAEOPHYCEAE) IN THE SOUTHEASTERN PACIFIC COAST	Lukeš, J. DIPLONEMIDS—EXTREMELY DIVERSE MARINE PROTISTS CAN BE GENETICALLY MODIFIED	Melton, J.T. TRANSCRIPTOME DATA OF <i>COCHLIPODIUM PENTATRIFURCATUM</i> (DISCOSEA, AMOEBOZOA) UNCOVER THE SEXUAL NATURE OF FUSED CELLS	Yamada, N THE SHORT MOTILE PERIOD ADVANCED THE TERTIARY PLASTIDS FROM ENDOSYMBIONTS
1500	McCourt, R.M. PHYLOGENY OF CHARACEAE WITH PARTICULAR REFERENCE TO TRIBE CHAREAE (CHAROPHYCEAE, CHARALES, CHARACEAE) BASED ON THREE PLASTID GENE SEQUENCES	Hadariová, L. LIPIDOMIC ANALYSIS OF THE <i>EUGLENA GRACILIS</i> CELLS, THE ORGANELLAR FRACTIONS AND THE BLEACHED MUTANTS	Kim, J. THE LIFE CYCLE OF <i>HETEROSIGMA AKASHIWO</i> (RAPHIIDOPHYCEAE) DISCOVERED BY IN SITU AND IN VITRO OBSERVATION	Gruber, A. INTERPLAY AND POSSIBLE INTERACTION OF MITOCHONDRIA AND NUCLEI IN A BICOSOECID

TUESDAY, JULY 31, 2018

0830-0930	PLENARY TALK	GREAT HALL SOUTH
	Nancy Turner, University of Victoria	
	<i>“FROM FISHING TO FEASTING: THE CULTURAL IMPORTANCE OF MARINE ALGAE AND MARINE PLANTS FOR NORTHWEST COAST INDIGENOUS PEOPLES”</i>	
0930-1015	COFFEE BREAK (with light breakfast)	
1020-1200	SYMPOSIUM	GREAT HALL SOUTH
	<i>“MACROALGAL LEGACY OF THE PACIFIC NORTHWEST (PSA PRESIDENTIAL)”</i>	
1020-1200	SYMPOSIUM	GREAT HALL NORTH
	<i>“HOST-ASSOCIATED MICROBIAL COMMUNITIES AND THEIR EVOLUTION”</i>	
1200-1300	LUNCH (buffet)	FOYER OUTSIDE GREAT HALL
1200-1300	J OF PHYCOLOGY EDITORIAL LUNCH	GALLERY (NEST, 4TH FLOOR)
1300-1400	INFORMATION SESSIONS	
	• NAGOYA PROTOCOL	GREAT HALL SOUTH
	<i>Discussion about new regulations coming in that pertain to sample collection and transport across international boundaries.</i>	
	• UNIEUK	GREAT HALL NORTH
	• WILEY PUBLISHING INFORMATION FOR AUTHORS	2306
1400-1545	CONTRIBUTED PAPERS (Great Hall North, Great Hall South, 2301, 2306, 2311)	
1545-1615	COFFEE BREAK (light snacks)	
1615-1815	CONTRIBUTED PAPERS (Great Hall North, Great Hall South, 2301, 2306, 2311)	
2000	STUDENT OUTING	KOERNER’S PUB

TUESDAY, JUL 31 1020-1200		
Time	GREAT HALL SOUTH <i>Macroalgal legacy of the Pacific Northwest (PSA Presidential) Symposium</i> Chair: Sherwood, A.	GREAT HALL NORTH <i>Host-Associated Microbial Communities and their Evolution Symposium</i> Chair: Keeling, P.
1020	Hansen, G.I. THE REMARKABLE JOSEPHINE TILDEN AND THE MINNESOTA SEASIDE STATION	Lane, C.E. A TUNICATE, FOUR HUNDRED APICOMPLEXANS AND THREE BACTERIA: AN INTERDEPENDENT MUTUALISTIC COMMUNITY
1045	Druehl, L. ONE STUDENT-OF-SEAWEED'S JOURNEY WITH FREQUENT DEPARTURES FROM RELEVANCE FROM WEST BEACH, WHIDBEY ISLAND TO BAMFIELD AND OCTOGENARIAN-SHIP: SCAGELEAN ADVENTURES AND A MARINE STATION	Beinart, R. METABOLIC FUNCTIONING OF A CILIATE-METHANOGEN SYMBIOSIS FROM ANOXIC HABITATS
1110	Hawkes, M.W. HEROES IN THE SEAWEED AND OTHER EVENTS IN THE PHYCOLOGICAL EXPLORATION OF VANCOUVER'S ISLAND AND BEYOND.	Gile, G. EVOLUTION OF TERMITE HINDGUT PROTISTS: NEW PERSPECTIVES FROM 18S AMPLICON SEQUENCING
1135	Lindstrom, S.C. RAMBLINGS OF AN ITINERANT PHYCOLOGIST IN A POST-GLACIAL LANDSCAPE	Kolisko, M. PHYLOGENY AND EVOLUTION <i>PIRIDIUM SOCIABILE</i> A NEW PARASITIC LINEAGE CLOSELY RELATED TO APICOMPLEXA

TUESDAY JUL 31 1400-1545					
Time	GREAT HALL SOUTH <i>Insights from novel genomic tools</i> Chair: Filloramo, G.	GREAT HALL NORTH <i>Ecology – Community interactions</i> Chair: Schoenrock, K.	2301 <i>Protist behaviour and ecological strategies</i> Chair: Brown, M.	2306 <i>Cell biology and comparative evolution</i> Chair: Robertson, D.	2311 <i>Applied phycology – macroalgae</i> Chair: Green-Gavrielidis, L.
1400	Park, S.I. A GENOMIC APPROACH TO THE THERMOACIDOPHILIC ENVIRONMENTAL ADAPTATION OF CYANIDIALES (RHODOPYTA)	Ang, P. LOCAL HABITAT HETEROGENEITY CONTRIBUTED TO THE PERSISTENCE OF <i>SARGASSUM SILIQUASTRUM</i> POPULATIONS AGAINST SEA URCHIN GRAZING	Gong, Y. IDENTIFICATION AND FEEDING CHARACTERISTICS OF THE MIXOTROPHIC FLAGELLATE <i>POTERIOCHROMONAS MALHAMENSIS</i>	Irwin, N. A NUCLEUS WITHOUT A NUCLEAR PORE COMPLEX? RECONSTRUCTING NUCLEAR MACHINERY IN NUCLEOMORPH-CONTAINING ALGAE	Choi, H.G. OPTIMAL GROWTH CONDITIONS FOR ERECT AND STOLON THALLI OF THE EDIBLE <i>CAULERPA OKAMURAE</i> IN KOREA
1415	Colp, M.J. DEVELOPMENT OF AN EXPERIMENTAL MODEL FOR STUDYING LATERAL GENE TRANSFER IN EUKARYOTES	Schmid, M.J. FROM SINGLE SPECIES TO ECOSYSTEM RESPONSE: IMPACT OF CLIMATE CHANGE ON PRODUCTION AND TROPHIC TRANSFER OF ESSENTIAL FATTY ACIDS IN THE COASTAL FOOD WEB	Brown, M.W. BACTERIA INFLUENCE THE MULTICELLULAR DEVELOPMENT IN THE AMOEBA <i>COPROMYXA PROTEA</i>	Cordeiro, C.D. HOW INOSITOL PHOSPHATES REGULATE PHOSPHATE HOMEOSTASIS IN UNICELLULAR EUKARYOTES	Shin, S. EFFECTS OF STOCKING DENSITY ON BIOREMEDIATION CAPACITY OF <i>GRACILARIA VERMICULOPHYLLA</i> IN BIOFLOC EFFLUENT

TUESDAY JUL 31 1400-1545 CONTINUED					
Time	GREAT HALL SOUTH <i>Insights from novel genomic tools</i>	GREAT HALL NORTH <i>Ecology – Community interactions</i>	2301 <i>Protist behaviour and ecological strategies</i>	2306 <i>Cell biology and comparative evolution</i>	2311 <i>Applied phycology – macroalgae</i>
1430	Filloramo, G.V. AN EXPLORATION OF LONG TERMINAL REPEAT RETROTRANSPOSON ACTIVITY IN THE MARINE DIATOM PHAEODACTYLUM TRICORNUTUM USING FINE-SCALE GENOMIC INVESTIGATION	Kim, J.H. ECOLOGICAL APPROACHES FOR COMMUNITY SHIFT FROM BARRENS TO MARINE FOREST AND THE OPTIMAL DENSITY OF SEA URCHINS FOR SUSTAINABLE MAINTENANCE	Gavelis, G.S. METATRANSCRIPTOMICS AND THE ECOLOGY OF <i>NEMATODINIUM ARMATUM</i> (DINOFLAGELLATA, WARNOWIACEAE)	Wideman, J.G. THE DARK LECA RISES	Naseri, A. ENZYME-ASSISTED EXTRACTION AND CHARACTERIZATION OF PROTEIN FROM <i>PALMARIA PALMATA</i> (DULSE)
1445	Sprecher, B.N. DEVELOPING A GENE TRANSFER SYSTEM FOR DINOFLAGELLATES	Nguyen, H.T. PHOTOSYNTHETIC PHYSIOLOGY OF CORALLINE ALGAE ACROSS DEPTH/LIGHT GRADIENTS AND BETWEEN CRUSTOSE AND ARTICULATED GROUPS IN A KELP FOREST IN SOUTHERN NEW ZEALAND	Deeg, C.M. PARASITES OF HETEROTROPHIC PROTISTS: GIANT VIRUSES AND TINY BACTERIA AT THE EDGE OF LIFE	Herman, E.K. MEMBRANE TRAFFICKING SYSTEM SCULPTING IN HAPTOPHYTES AND ITS ROLE IN SCALE FORMATION AND CALCIFICATION	Green-Gavrielidis, L. OPTIMIZING SITE SELECTION FOR KELP OYSTER CULTIVATION SYSTEMS IN RHODE ISLAND
1500	Onsbring, H. SINGLE-CELL RNA SEQUENCING OF ENVIRONMENTAL PROTISTS TO EXPAND THE EUKARYOTIC TREE OF LIFE	Grattepanche, J. ASSESSING BOTTOM-UP AND TOP-DOWN CONTROLS USING MICROCOSM AND 'OMICS	Nishigami, Y. SLIDING BEHAVIOR OF <i>TETRAHYMENA PYRIFORMIS</i> NEAR A WALL	Robertson, D.L. THE CRAZY AND MIXED-UP MOLECULAR EVOLUTION OF THE FORMALDEHYDE DEHYDROGENASE GENE FAMILY	Stekoll, M.S. SEAWEED MARICULTURE RESEARCH AND COMMERCIAL PROGRESS IN ALASKA
1515	Lin, S. DEVELOPING FUNCTIONAL GENETIC TOOLS FOR DINOFLAGELLATES : PROGRESS AND LESSONS	Schoenrock, K.M. WITH A LITTLE KELP FROM MY FRIENDS: BEASTS THAT UTILISE IRISH KELP FORESTS AND THE MULTIFACETED WAY THAT KELPS STRUCTURE THESE EMERALD SEAS	Taylor, A.R. PHAGOCYTOSIS IMPLIES DYNAMIC NUTRITIONAL STRATEGIES IN DIPLOID CALCIFYING COCCOLITHOPHORES	Dacks, J.B. STUDY OF THE CONTRACTILE VACUOLE USING <i>DICTYOSTELIUM DISCOIDEUM</i> AS A MODEL	Garbary, D.J. EPIDERMAL SHEDDING OF BIOMASS FROM VEGETATIVE AXES AND RECEPTACLE SURFACES IN <i>ASCOPHYLLUM NODOSUM</i> (PHAEOPHYCEAE)
1530	Han, J. INSPIRATION FROM RED ALGAL LECTINS FOR THE ACTIVE EXPRESSION OF RECOMBINANT LECTINS	Klinger, T. DETERMINANTS OF COMMUNITY STRUCTURE ON A HIGH-LATITUDE ROCKY SHORE	Moeller, H.V. THE <i>MESODINIUM</i> GENUS AS A MODEL FOR SECONDARY ENDOSYMBIOSIS?	Koester, J.A. SINGLE-DOMAIN NA ⁺ AND CA ²⁺ CHANNELS UNDERLIE MEMBRANE EXCITABILITY IN PHYTOPLANKTON	

TUESDAY JUL 31		1615-1800		† eligible for PSA Student Bold Award	
Time	GREAT HALL SOUTH	GREAT HALL NORTH	2301	2306	2311
	Genomics opportunities session and discussion Chair: Gile, G.	Disturbance and climate change Chair: Clark, J.	Biogeography of seaweeds Chair: Brodie, J.	Taxonomy and evolution of algae 2 Chair: Ashworth, M.	Ecology of protists Chair: Richardson, T.
1615	Brief introductory talks followed by open discussion: Lane, C. OPPORTUNITIES FOR PROTIST RESEARCH FUNDING FROM	Quigley, C. THE MICROBIOME OF <i>FUCUS</i> SPP., A SUITE OF ECOSYSTEM ENGINEERS	Nelson, W.A. MESOPHOTIC MACROALGAE REVEALED: NEW DISCOVERIES IN THE NEW ZEALAND ARCHIPELAGO	Theriot, E.C. EVIDENCE FOR RECENT SPECIATION AND DISPERSAL IN THE LACUSTRINE DIATOM STEPHANODISCUS (EHRENB.)	Kim, M. GROWTH AND CHLOROPLAST REPLACEMENT OF THE BENTHIC MIXOTROPHIC CILIATE <i>MESODINIUM COATSI</i>
1630	THE NATIONAL SCIENCE FOUNDATION. Archibald, J.M. 10KP: A PHYLODIVERSE GENOME SEQUENCING PLAN Grigoriev, I.	Elsmore, K.E. POTENTIAL FOR KELP FORESTS TO ATTENUATE COASTAL WAVE STRESS	Hansen, G.I. SUBTIDAL SEAWEEDS AND SEAGRASSES IN 3 OREGON MARINE RESERVES	Samanta, B. A CONSENSUS SECONDARY STRUCTURE OF ITS2 FOR THE ORDER CYMATOSIRALES (BACILLARIOPHYTA) AND REAPPRAISAL OF THE ORDER BASED ON DNA, MORPHOLOGY, AND REPRODUCTION	Schomaker, R.A. THE HIDDEN SECRETS OF CRYPTOPHYTE ALGAE III. GENE EXPRESSION OF <i>RHODOMONAS SALINA</i> IN RESPONSE TO VARYING SPECTRAL IRRADIANCE
1645	ALGAL GENOMICS FOR ENERGY AND ENVIRONMENT	Clark, J.S. THE LEGACY OF THE BLOB: ONGOING EFFECTS OF THE PACIFIC WARM WATER ANOMALY ON THE TRADITIONALLY HARVESTED ALGA, <i>PYROPIA ABBOTTIAE</i>	†Bringloe, T.T. ON THE ORIGINS OF NORTH AMERICAN ARCTIC MARINE MACROALGAE SINCE THE LAST GLACIAL MAXIMUM AND EVIDENCE FOR ARCTIC PERIGLACIAL REFUGIA	Gierke, L.G. A SEASCAPE GENETICS APPROACH TO STUDY GENETIC DIFFERENTIATION IN BULL KELP	Heidenreich, K.M. THE HIDDEN SECRETS OF CRYPTOPHYTE ALGAE II: GROWTH RATES OF MARINE CRYPTOPHYTES UNDER VARYING SPECTRAL IRRADIANCE
1700		Buschmann, A.H. ASSESSING THE IMPORTANCE OF MORPHOLOGICAL VARIABILITY ON THE PRODUCTIVITY OF <i>MACROCYSTIS PYRIFERA</i> : LABORATORY AND FIELD EXPERIMENTS	Brooks, C.M. THE KELP CONVEYOR HYPOTHESIS: EXPLORING LONG-DISTANCE GENETIC CONNECTIVITY OF RED ALGAE IN THE NORTHEAST PACIFIC	Hoffpauir, N. ELUCIDATING THE ENDOLITHIC ARCHITECTURE OF RHODOLITH-FORMING CORALLINE ALGAE	Smith, L.J. A COMPARATIVE ANALYSIS OF TWO TINTINNIDS: ADDRESSING THE SPECIES PROBLEM WITH “OMICS”

TUESDAY JUL 31 1615-1800 CONTINUED					
Time	GREAT HALL SOUTH	GREAT HALL NORTH	2301	2306	2311
		<i>Disturbance and climate change</i>	<i>Biogeography of seaweeds</i>	<i>Taxonomy and evolution of algae 2</i>	<i>Ecology of protists</i>
1715	<i>Genomics opportunities discussion continued</i>	Kim, J.H. CARBON CONCENTRATING MECHANISMS (CCMS) OF DRAGON KELP, <i>EUALARIA FISTULOSA</i> (PHAEOPHYCEAE) ALONG THE DEPTH: IMPLICATION FOR A HIGH CO ₂ WORLD	Schiltroth, B. EFFECTS OF WARM OCEAN TEMPERATURES ON BULL KELP FORESTS IN THE SALISH SEA	Burki, F. BACK TO THE FUTURE: USING THE RDNA OPERON FROM ENVIRONMENTAL SAMPLES TO RESOLVE THE EUKARYOTE TREE OF LIFE AND DISCOVER NOVEL LINEAGES	Somasundaram, S. GENETIC AND MOLECULAR MECHANISMS TO COPE WITH OXIDATIVE STRESS IN FRESHWATER CILIATES
1730		Liggan, L.M. DOCUMENTING POPULATION DYNAMICS OF A TRADITIONALLY HARVESTED SEAWEED: DEVELOPMENT OF LONG-TERM MONITORING SURVEYS	Brodie, J. SEAWEED DIVERSITY OF THE SOUTH ATLANTIC ISLANDS: DISCOVERY OF NOVEL FLORAS?	Ashworth, M.P. ON THE SHOULDERS OF GIANTS: WHAT EPIZOIC DIATOMS ARE TEACHING US ABOUT DIATOM EVOLUTION	Kahlich, C. SHATTERED GLASS; THE SPECIALIZED PREDATOR <i>PHRYGANELLA PARADOXA</i> (ARCELLINIDA, AMOEBOZOA) RUPTURES FRUSTULES OF DIATOMS BY FORCE
1745		Vandermeulen, H. BAY-SCALE ASSESSMENT OF MARINE MACROPHYTES WITH VIDEO, SIDESCAN AND ECHOSOUNDER	Cheang, C. AN UPDATE ON THE PHYCOGEOGRAPHICAL RECORDS OF HONG KONG	de Oliveira, M.C. ORGANELLAR GENOMES ARCHITECTURE AND EVOLUTION IN GRACILARIACEAE	Richardson, T.L. THE HIDDEN SECRETS OF CRYPTOPHYTE ALGAE I: AN EXPLORATION OF PHYLOGENETIC AND FUNCTIONAL DIVERSITY IN LIGHT CAPTURE ABILITY
1800		Graf, L. GENOME SEQUENCING AND POPULATION GENOMIC ANALYSES OF <i>UNDARIA PINNATIFIDA</i> : INSIGHTS ON THE IMPACT OF DOMESTICATION ON INVASIVENESS	Alberto, F. POPULATION GENETICS OF THE BULL KELP <i>NEREOCYSTIS LEUTKEANA</i>	Lhee, D. EVOLUTIONARY DYNAMICS OF THE CHROMATOPHORE GENOME IN THREE <i>PAULINELLA</i> SPECIES	Tretili, S.C. AN INDIVIDUAL LOOK AT THE OXYMONAD <i>STREBLOMASTIX STRIX</i> AND ITS BACTERIAL SYMBIONTS USING SINGLE CELL GENOMICS

WEDNESDAY, AUGUST 1, 2018

0830-0930 **PLENARY TALK** **GREAT HALL SOUTH**

Tom Richards, *University of Exeter*

“THREE PERSPECTIVES ON GENE TRANSFER IN THE EUKARYOTES”

0930-1015 **COFFEE BREAK** (with light breakfast)

1020-1200 **SYMPOSIUM** **GREAT HALL SOUTH**

“FROM PHARM TO TABLE: FRONTIERS IN APPLIED PHYCOLOGY (PROFESSOR MILTON SOMMERFELD MEMORIAL SYMPOSIUM)”

1020-1200 **SYMPOSIUM** **GREAT HALL NORTH**

“PROTIST RESPONSES TO ENVIRONMENTAL STRESS: RESILIENCE TO CLIMATIC CHANGES?”

1200-1300 **LUNCH** (buffet) **FOYER OUTSIDE GREAT HALL**

1300-1445 **CONTRIBUTED PAPERS** (Great Hall North, Great Hall South, 2301, 2306)

1445-1515 **COFFEE BREAK** (no snacks)

1515-1545 **LIGHTNING TALKS** **GREAT HALL NORTH**

1515-1645 **POSTER SESSION** (light snacks and cash bar) **GREAT HALL SOUTH**

1800-1900 **BANQUET** (cocktail hour) **MUSEUM OF ANTHROPOLOGY**

1900-2230 **BANQUET** (dinner) **MUSEUM OF ANTHROPOLOGY**

WEDNESDAY, AUG 1 1020-1200		
Time	GREAT HALL SOUTH <i>From Pharm to Table: Frontiers in Applied Phycology (Prof. Milton Sommerfeld Memorial Symposium)</i> Chair: Manning, S.	GREAT HALL NORTH <i>Protist responses to environmental stress – resilience to climatic changes? symposium</i> Chair: Angelici, M-C.
1020	Yarish, C. OPPORTUNITIES, CHALLENGES AND FUTURE DIRECTIONS OF OPEN WATER SEAWEED AQUACULTURE IN NORTHEAST AMERICA FOR ECOSYSTEM SERVICES, FOOD, FEEDS AND BIOFUELS	Angelici, M-C. PROTISTS RESPONSES TO CLIMATIC CHANGES FOCUSING ON WATERBORNE PATHOGENIC PROTOZOA
1045	Ewart, V. TURNING THE TIDE ON PROTEIN MISFOLDING DISEASES: CAN SEAWEEDS HELP?	Kosakyan, A. INSIGHTS TO TESTATE AMOEBAE RESPONSE TO ENVIRONMENTAL STRESS
1110	O’Leary, S. NRC’S ALGAL CARBON CONVERSION PROGRAM- CONVERTING CO ₂ AND OTHER INDUSTRIAL WASTE STREAMS INTO VALUABLE BIOPRODUCTS	Pucciarelli, S. RESILIENCE AND ADAPTATION TO EXTREME ENVIRONMENTS: THE SPECIAL CASE OF EUPLOTES FOCARDII, A STRICTLY PSYCHROPHILIC ANTARCTIC CILIATE.
1135	Prithiviraj, B. SEAWEEDS AS PLANT BIOSTIMULANTS: CHEMICAL COMPONENTS AND MECHANISMS OF ACTION	Karanis, P. PROTISTS RESPONSES TO CLIMATIC CHANGES FOCUSING ON WATERBORNE PATHOGENIC PROTOZOA

WEDNESDAY, AUG 1 1300-1445				
Time	GREAT HALL SOUTH <i>Eukaryotic genomes – transcription and introns</i> Chair: Rader, S.	GREAT HALL NORTH <i>Symbiosis – from parasites to beneficial</i> Chair: Husnik, F.	2301 <i>Cryptic species of seaweeds</i> Chair: Gabrielson, P.	2306 <i>Algal toxins and defense</i> Chair: Litaker, W.
1300	Žihala, D. RECURRENT UNCOUPLING OF THE MEANING OF THE UAG AND UAA CODONS IN EUKARYOTES	Stairs, C.W. DUAL RNASEQ TRANSCRIPTOMIC PROFILING OF THE FISH PATHOGEN <i>SPIRONUCLEUS SALMONICIDA</i> DURING OXIDATIVE STRESS AND INFECTION	Yang, M.Y. CRYPTIC SPECIES DIVERSITY OF OCHTODENES-PRODUCING <i>PORTIERIA</i> SPECIES (GIGARTINALES, RHODOPHYTA) FROM THE NORTHWEST PACIFIC	Mars Brisbin, M. DIFFERENTIAL GENE EXPRESSION ASSOCIATED WITH COLONY FORMATION IN THE BLOOM-FORMING HAPTOPHYTE <i>PHAEOCYSTIS GLOBOSA</i> (PRYMNESIOPHYCEAE)
1315	Wong, D.K. UNIQUE FEATURES OF PRE-MRNA SPLICING IN THE FREE-LIVING UNICELLULAR RED ALGA <i>PORPHYRIDIUM PURPUREUM</i>	Husnik, F. ORGANELLOGENESIS LESSONS FROM STUDYING EUKARYOTE-BACTERIA ENDOSYMBIOSES	Parente, M.I. A MOLECULAR SURVEY OF <i>RALFSIA SENSU STRICTO</i> (RALFSIALES, PHAEOPHYCEAE) IN BRITISH COLUMBIA UNCOVERS THREE NEW SPECIES	Akagha, S.C. <i>LAGOSINEMA TENUIS</i> GEN. ET SP. NOV. (PROCHLOROTRICHACEAE, CYANOBACTERIA): A NEW BRACKISH WATER GENUS FROM TROPICAL AFRICA

WEDNESDAY, AUG 1 1300-1445 CONTINUED				
Time	GREAT HALL SOUTH	GREAT HALL NORTH	2301	2306
	<i>Eukaryotic genomes – transcription and introns</i>	<i>Symbiosis – from parasites to beneficial</i>	<i>Cryptic species of seaweeds</i>	<i>Algal toxins and defense</i>
1330	Whelan, T.A. MICROSPORIDIAN INTRONS RETAINED AGAINST A BACKGROUND OF GENOME REDUCTION	Freese, J.M. MALBAC AND CISH: THE MOLECULAR INTERACTIONS OF THE RED ALGAL HOST-PARASITE RELATIONSHIP	Krayesky-Self, S.L. VARYING METHODS MUST BE EMPLOYED TO EFFECTIVELY EXPLORE ENDOLITHIC MICROHABITATS OF RHODOLITHS	Islam, S. TRANSCRIPTIONAL REGULATION OF PHOTOSYNTHETIC GENES LHCF2 AND LHCF15 IN RESPONSE TO HERBIVORY INDUCED ALDEHYDE IN THE DIATOM <i>PHAEODACTYLUM TRICORNUTUM</i>
1345	Nenarokova, A. BLASTOCRITHIDIA, THE TRYPANOSOMATID WITH ALL THREE STOP CODONS REASSIGNED	Ward, C.S. TOWARDS AN INTEGRATIVE UNDERSTANDING OF CHYTRID PARASITISM AND ITS DRIVERS IN MASS ALGAL CULTURE	Wade, R.M. IMPLICATIONS OF <i>PLAKOBRANCHUS</i> CF. <i>IANTHOBAPSUS</i> (GASTROPODA) FOR HERBIVORE ECOLOGY, ALGAL COMMUNITY STRUCTURE, AND INVASIVE SPECIES DETECTION	Litaker, R.W. CIGUATOXICITY AND MAITOTOXICITY OF REPRESENTATIVE <i>GAMBIERDISCUS</i> AND <i>FUKUYOIA</i> SPECIES
1400	Cahoon, A.B. LEADERLESS mRNAs ARE CIRCULARIZED IN <i>CHLAMYDOMONAS REINHARDTII</i> MITOCHONDRIA	Oborník, M. METABOLIC FATE OF UPTAKEN GLYCINE IN THE CHROMERID ALGA <i>CHROMERA VELIA</i>	Lee, H.W. MOLECULAR PHYLOGENY AND FEMALE REPRODUCTIVE STRUCTURE OF THE GENUS <i>PACHYMENIOPSIS</i> (HALYMENIACEAE, RHODOPHYTA) FROM THE NORTHWESTERN PACIFIC	Parrow, M.W. DIVISION TIME (TD) OF THE HAB DINOFLAGELLATE <i>KARLODINIUM VENEFICUM</i> FOR IN SITU GROWTH ESTIMATION IN BLOOMS
1415	Rader, S.D. TRANSCRIPTOMIC ANALYSIS OF STRESS RESPONSES IN <i>C. MEROLAE</i>	Kwong, W.K. A WIDESPREAD CORAL-ASSOCIATED APICOMPLEXAN WITH AN UNUSUAL PLASTID	Koh, Y. COMPARATIVE PHYLOGEOGRAPHY OF TWO COMMERCIAL RED ALGAE, <i>PYROPIA SUBORBICULATA</i> AND <i>PY. YEZOENSIS</i> (BANGIALES, RHODOPHYTA) FROM KOREA	Kim, G. HOST-CELL ENTRY OF AN OOMYCETE <i>OLPIDIOSIS PYROPIAE</i> IS MEDIATED BY A LIPID-RAFT ENDOCYTOSIS
1430	Novak, L.V. HOW TO LOSE A MITOCHONDRION: COMPARATIVE GENOMICS OF PREAXOSTYLA	Boscaro, V. MUTUALISM OR SERVITUDE? THE CILIATE <i>EUPLOTES</i> AND ITS CONSTANT SEARCH FOR OBLIGATE SYMBIONTS	Gabrielson, P.W. ASSESSMENT BY DNA SEQUENCING OF NONGENICULATE CORALLINE TYPE SPECIMENS (RHODOPHYTA) NAMED BY F. R. KJELLMAN	

THURSDAY, AUGUST 2, 2018

0830-0930 **PLENARY TALK** **GREAT HALL SOUTH**

Thomas Wernberg, *University of Western Australia*

*“FLATTENING OF GLOBAL KELP FORESTS: TALES OF TURF, TEMPERATURE AND TROPICAL
HERBIVORES”*

0930-1015 **COFFEE BREAK** (with light breakfast)

1020-1200 **SYMPOSIUM** **GREAT HALL SOUTH**

“KELP FORESTS IN FLUX”

1020-1200 **SYMPOSIUM** **GREAT HALL NORTH**

“ORIGINS AND EARLY EVOLUTION OF EUKARYOTES”

1200-1330 **LUNCH** (buffet) **FOYER OUTSIDE GREAT HALL**

1330-1515 **CONTRIBUTED PAPERS** (Great Hall North, Great Hall South, 2301, 2306)

1515-1545 **COFFEE BREAK** (light snacks)

1545-1730 **CONTRIBUTED PAPERS** (Great Hall North, Great Hall South, 2301, 2306)

THURSDAY, AUG 2 1020-1200		
Time	GREAT HALL SOUTH	GREAT HALL NORTH
	<i>Kelp forests in flux symposium</i> Chair: Martone, P.T.	<i>Origins and early evolution of eukaryotes symposium</i> Chair: Eme, L. and Stairs, C.
1020	Krumhansl, K. A. GLOBAL PATTERNS AND DRIVERS OF KELP FOREST CHANGE OVER THE PAST HALF-CENTURY	O'Malley, M. LECA CONCEPTS AND THEIR IMPLICATIONS FOR EVOLUTIONARY UNDERSTANDING
1045	Pfister, C.A. KELP FORESTS IN THE NORTHEAST PACIFIC: THEIR DYNAMICS AND FUNCTION IN A CHANGING CLIMATE	Wickstead, B RECONSTRUCTING THE CELL BIOLOGY OF LECA
1110	Edwards, M.S. CHANGES IN BENTHIC DIVERSITY AND ECOSYSTEM PRODUCTION FOLLOWING WIDESPREAD KELP LOSS IN THE ALEUTIAN ARCHIPELAGO	Buchler, N. CONSERVATION AND REWIRING OF THE EUKARYOTIC CELL CYCLE FROM LECA TO BASAL FUNGI
1135	Watson, J.C. DECADAL CHANGES IN LONG-LIVED KELP FORESTS REFLECT ENVIRONMENTAL AND HISTORICAL FACTORS	Lopez-Garcia, P EUKARYOGENESIS: PATTERNS AND PROCESSES

THURSDAY, AUG 2 1330-1515				
Time	GREAT HALL SOUTH	GREAT HALL NORTH	2301	2306
	<i>Evolution of eukaryotic lineages 1: the beginning</i> Chair: Nakov, T.	<i>Algal physiology and biomechanics</i> Chair: Peters, W.	<i>Protists as bioindicators of change</i> Chair: Langlois, G.	<i>Species delimitation in protists</i> Chair: Tekle, Y.
1330	Nakov, T. DIATOM DIVERSIFICATION THROUGH THE LENSE OF LARGE SEQUENCE, FOSSIL, TRAIT, AND DIVERSITY DATA: THE ROLES OF LIFE HISTORY STRATEGIES AND ENVIRONMENTAL GRADIENTS	Peters, W.S. ANOTHER RENAISSANCE FOR SWELLING WALLS?	Shalygin, S. CLIMATOLOGICAL AND ANTHROPOCENE EFFECTS ON SANDFLAT MICROALGAL COMMUNITIES OF LAGUNA MADRE, TX	Taerum, S.J. NEW MOLECULAR DATA FOR TERMITE-ASSOCIATED PARABASALIDS IN THE CLASS SPIROTRICHONYMPHEA
1345	Spiegel, F.W. COMPARATIVE ULTRASTRUCTURE OF PROTOSTELOID SPOROCARPY AMONG AMOEBOZOA	Lovett, B.B. UNRAVELING THE MOTILITY OF THE TERRESTRIAL CYANOBACTERIUM <i>MICROCOLEUS VAGINATUS</i>	Gast, R.J. MULTI-YEAR ASSESSMENT OF MARINE EUKARYOTIC PLANKTON DIVERSITY FROM AMPLICON AND IMAGE DATA	Kaur, H. SYNONYMY BETWEEN TWO SPECIES OF <i>STYLONYCHIA</i> : <i>STYLONYCHIA NOTOPHORA</i> STOKES, 1885 AND <i>STYLONYCHIA PUSTULATA</i> (MÜLLER, 1786) EHRENBERG, 1838

THURSDAY, AUG 2 1330-1515 CONTINUED

Time	GREAT HALL SOUTH	GREAT HALL NORTH	2301	2306
	<i>Evolution of eukaryotic lineages 1: the revenge</i>	<i>Algal physiology and biomechanics</i>	<i>Protists as bioindicators of change</i>	<i>Species delimitation in protists</i>
1400	Pánek, T. EVOLUTION OF ANAEROBIC LIFESTYLE IN HETEROLOBOSEA	Janot, K.G. CHEMICAL COMPOSITION OF CORALLINE CELL WALLS	Snyder, R.A. CILIAE MICROZOOPLANKTON FROM THE NORTHEASTERN GULF OF MEXICO	Spanbauer, T. L. PLASTID VARIATION IN CLOSELY RELATED DIATOMS
1415	Heiss, A.A. WHAT IS A MANTAMONAD?	Heiser, S. THE ANTARCTIC RED SEAWEED <i>PLOCAMIMUM</i> "CARTILAGINEUM" AND ITS WEALTH OF DEFENSIVE SECONDARY METABOLITES	Heger, T.J. PROTIST COMMUNITIES IN VINEYARD SOILS: WHAT DO THEY TELL US ABOUT SOIL QUALITY AND HEALTH?	Udalov, I.A. THE GENUS <i>PSEUDOPARAMOEBA</i> (AMOEBOZOA, DACTYLOPODIDA): MORPHOLOGY, MOLECULAR PHYLOGENY AND SPECIES DISTINCTION
1430	Ziatogursky, V. NEW FINDINGS IN THE DIVERSITY, TAXONOMY AND LIFE CYCLES OF CENTROHELID HELIOZOANS	Coleman, L.J. THE EFFECT OF TENSILE STRESS ON SPATIAL GROWTH PATTERNS IN THE KELP <i>NEREOCYSTIS LUETKEANA</i>	Langlois, G.A. MICROBIAL COMMUNITIES ON HERON ISLAND REEF	Medina Durán, J.H. TWO SPECIES OF EUGREGARINES PARASITES OF THE MEXICAN LUBBER GRASSHOPPER <i>TAENIOPODA CENTURIO</i> : NOTES ON ITS MORPHOLOGY AND PHYLOGENETIC POSITION
1445	Guillou, L. EVOLUTION OF MAJOR METABOLIC PATHWAYS OVER ALVEOLATA	Henley, W.J. PHYSIOLOGY OF <i>PICOCHLORUM OKLAHOMENSIS</i> IN CYCLOTURBIDOSTATS	Siano, R. PALEOECOLOGY OF MARINE PROTISTS: COMMUNITY DYNAMICS AND POPULATION ADAPTATIONS REVEALED BY ANCIENT-DNA METABARCODING AND PHYSIOLOGY OF REVIVED DINOFLAGELLATES	Abraham, J.S. TAXONOMIC DESCRIPTION AND MOLECULAR PHYLOGENY OF THREE SPECIES OF GENUS <i>EUPLOTES</i> : FIRST REPORT FROM DELHI, INDIA
1500	Tikhonenkov, D.V. NEWLY IDENTIFIED LINEAGE OF EUKARYOTES WITH FIVE DISCOVERED REPRESENTATIVES AND EARLY MITOCHONDRIAL GENOME REDUCTION			Tekle, Y.I. RESOLVING CRYPTIC SPECIES PROBLEMS IN AMOEBOID MICROBES USING LARGE TRANSCRIPTOMIC DATA

THURSDAY, AUG 2 1545-1730				
Time	GREAT HALL SOUTH	GREAT HALL NORTH	2301	2306
	<i>Evolution of eukaryotic lineages 2</i> Chair: Collier, J.	<i>Plastid genomes</i> Chair: Karnkowska, A.	<i>Diversity and ecology</i> Chair: Pietrasiak, N.	<i>Applied phycology – microalgae and biofuels</i> Chair: Manning, S.
1545	Warring, S.D. THE FIRST DRAFT GENOME FOR THE KATABLEPHARID <i>ROOMBLIA TRUNCATA</i>	Sibbald, S.J. A GENOMIC INVESTIGATION OF THE PLASTID-LACKING CRYPTOMONAD <i>GONIOMONAS AVONLEA</i> : INSIGHTS INTO THE EVOLUTION OF COMPLEX PLASTIDS AND CRYPTISTA	Richardson, E. H. PHYLOGENETIC ESTIMATION OF NOVEL PROTIST DIVERSITY IN RECLAMATION SITES OF NORTHERN ALBERTA	Olasehinde, T.A. CHOLINESTERASE INHIBITORY AND DISAGGREGATION EFFECTS OF TWO CHLORELLA SPECIES: NEUROPROTECTIVE POTENTIALS FOR THE MANAGEMENT OF ALZHEIMER'S DISEASE
1600	Yubuki, N. LATERAL GENE TRANSFERS IN THE SYMBIOTIC <i>OPALINA</i> – <i>BLASTOCYSTIS</i> LINEAGE OF STRAMENOPILES FACILITATED THE ADAPTATION TO GUT ENVIRONMENT	Ettahi, K. EXPRESSION PROFILING OF <i>PAULINELLA MICROPORA</i> UNDER ENVIRONMENTAL ADAPTATION WITH THE EXPOSURE TO HIGH-LIGHT CONDITION	Fredericq, S. EIGHT YEARS LATER: HAVE THE BENTHIC DEEPWATER ALGAE RETURNED TO THE NW GULF OF MEXICO? WHAT HAVE WE LEARNED?	Khalid, M. ALGONONICS: INTEGRATING NANODOTS TO ENHANCE ALGAL BIOFUELS DEVELOPMENT
1615	Lax, G. EXPLORING THE PHYLOGENETICS AND DEEP EVOLUTIONARY HISTORY OF EUGLENIDS WITH SINGLE-CELL TRANSCRIPTOMICS OF PHAGOTROPHIC TAXA	Záhonová, K. THE TRANSCRIPTOME OF <i>EUGLENA LONGA</i> REVEALS PECULIARITIES OF THE PLASTID BIOLOGY IN EUGLENOPHYTES	Weigel, B.L. EPIPHYTIC MICROBIAL COMMUNITIES AND NUTRIENT CYCLING ASSOCIATED WITH BLADES OF THE CANOPY-FORMING KELP, <i>NEREOCYSTIS LUETKEANA</i>	You, J. MICRO-ALGAL SWIMMING VELOCITIES SIGNAL GROWTH PHASE AND LIPID ACCUMULATION
1630	Yurchenko, V. ANURAN ORIGIN OF TRYPANOSOMES	Füßy, Z. COLOURLESS BUT NOT INVISIBLE: AN UNPRECEDENTED COMBINATION OF METABOLIC PATHWAYS IN THE CRYPTIC PLASTID OF <i>EUGLENA LONGA</i>	Pietrasiak, N. AND YOU SEE YOUR GYPSY – A STUDY OF TERRESTRIAL CYANOBACTERIAL COMMUNITIES FROM GYPSUM SOILS	Mohler Mitman, J.E. GROWTH, LIPID CONTENT, AND BIODIESEL POTENTIAL OF <i>CHROMULINA FREIBURGENSIS</i> , AN ACIDOPHYLIC CHRYSOPHYTE ISOLATED FROM BERKELEY PIT LAKE
1645	Alverson, A.J. TRANSCRIPTOMIC INSIGHTS INTO THE PHYLOGENY AND EVOLUTION OF DIATOMS	Verbruggen, H. EVOLUTION OF CHLOROPLAST GENOMES IN SIPHONOUS GREEN ALGAE (BRYOPSIDALES, CHLOROPHYTA)	Spalding, H.L. DISTINCT AND ABUNDANT MESOPHOTIC MACROALGAL ASSEMBLAGES IN THE HAWAIIAN ARCHIPELAGO	Levine, I.A. ALGAE FOUNDATION'S ALGAL-BASED STEM EDUCATION INITIATIVES FOR A SUSTAINABLE FUTURE AND THE DEVELOPMENT OF THE BIOECONOMY WORKFORCE

THURSDAY, AUG 2 1545-1730 CONTINUED

Time	GREAT HALL SOUTH <i>Evolution of eukaryotic lineages 2</i>	GREAT HALL NORTH <i>Plastid genomes</i>	2301 <i>Diversity and ecology</i>	2306 <i>Applied phycology – microalgae and biofuels</i>
1700	Collier, J.L. FUNCTIONAL GENOMICS OF LABYRINTHULOMY CETES, AN ECOLOGICALLY AND BIOTECHNOLOGICALLY RELEVANT GROUP OF BASAL STRAMENOPILES	Kamkowska, A. WHY DO WE NEED MORE ALGAL PLASTID GENOMES?	Eglit, Y. "PROTIST X" IS A PREDATORY ANAEROBE THAT REPRESENTS A NOVEL DEEP LINEAGE OF EUKARYOTES	Manning, S.R. DESIGNING DIATOMS: USING OMICS AND PHYLOGENETICS TO CHARACTERIZE THE OPTICAL PROPERTIES OF DIATOM FRUSTULES

LIGHTNING TALKS

MONDAY JULY 30 1545–1630

GREAT HALL NORTH

Lightning talks are quick as lightning: 3 minutes each, no extra time for questions

Hines, H.

EXPANDING BIOGEOGRAPHY OF TROPICAL FLAGSHIP CILIATES, A FLORIDA CASE STUDY

Cooney, E.

PROTEORHODOPSIN: WHAT IS THIS PHOTOACTIVE BACTERIAL PROTEIN DOING IN DINOFLAGELLATES?

Hind, K.

GENOME SIZE EVOLUTION IN CORALLINE ALGAE

Shazib, S.

SPECIES DELIMITATION AND DIVERSIFICATION PATTERN OF CILIATE *SPIROSTOMUM* CONGENERS USING MULTI GENE ANALYSIS

Singla, M.

THE LIFE CYCLE OF THE POLYMORPHIC AND MACROSCOPIC MARINE AMOEBA, *TRICHOSPHEIUM*

Ott, B.

USING WHOLE TRANSCRIPTOMICS TO EXAMINE A NEW POTENTIAL DINOFLAGELLATE SPECIES

Ashworth, M.

A STRIKING, UNDESCRIBED MARINE DIATOM FROM PALAU

Angelici, M–C.

CLIMATIC CHANGES IN ITALY: CONTROL & MITIGATION MEASURES

Obornik, M.

TREAT MITOCHONDRIA AND PLASTIDS AS BACTERIA!

Gruber, A.

SYMBIONT OR ORGANELLE? DISTINCTION BY HOST/SYMBIONT INTEGRATION LEVELS

Heiss, A.

WHAT IS THAT THING?

Starko, S.

HABITAT HETEROGENEITY AND SCALE-DEPENDENT BIODIVERSITY LOSS IN BARKLEY SOUND KELP BEDS

Keeling, P. A NEW SISTER-LINEAGE OF RED ALGAE: A BIFLAGELLATE PREDATOR WITH A NON-PHOTOSYNTHETIC PLASTID.

LIGHTNING TALKS

WEDNESDAY AUGUST 1 1515–1545

GREAT HALL NORTH

Lightning talks are quick as lightning: 3 minutes each, no extra time for questions

Minerovic, A.

DEVELOPING A DIATOM TAXONOMIC CERTIFICATION PROGRAM

Gretz, M.

GLYCOMICS AND THE DIATOM EXTRACELLULAR POLYMER CRISIS

Igai, K.

PARADOX OF THE OXYMONADS

Anto, J.

TAXONOMIC STUDY OF THE GENUS *DESMODESMUS* (CHLOROPHYCEAE)

Jaret, S.

THE EFFECTS OF A WARMING PERIOD ON TEMPERATE ARTICULATE CORALLINE ALGAE

Davis, K.

TEMPORAL DYNAMICS OF THE *FUCUS* MICROBIOME

Pucciarelli, S.

MSCA-RISE METABLE: AN EUROPEAN FUNDED PROJECT ON THE ANALYSES AND DISCOVERY OF NOVEL BIOCATALISTS FROM EXTREMOPHILIC CILIATES

Eglit, Y.

Q: A NOVEL PREDATORY FLAGELLATE WITH AN UNUSUAL "LID-LIKE" PREY CAPTURE BEHAVIOUR

Schoenrock, K.

SWEET AS...IRISH KELP. VARIATION IN CARBOHYDRATES ACROSS AGE AND SEASON IN *LAMINARIA HYPERBOREA*.

CONTRIBUTED POSTERS

Bold indicates presenting author

Poster dimensions: Landscape orientation, 36" high x 48" wide

Posters will be displayed in the Great Hall South by number

Even-numbered posters on display **Monday 1630-1800**

Odd-numbered posters on display **Wednesday 1515-1645**

Eligible for PSA Student Lewin award

Presenters: please put up your poster at the correct number during the Welcome Reception on Sunday or between sessions on Monday. Posters can remain up until Thursday afternoon

P01. MOLECULAR AND MORPHOLOGICAL CHARACTERIZATION OF MICROBIAL EUKARYOTE DIVERSITY AND COMMUNITY STRUCTURE FOR STREAM BIOMONITORING IN NEW JERSEY, USA
Minerovic, A. D., Potapova, M., Price, J. R., Sales, C. M.

P02. 'FLAGSHIP CILIATES' OF FRESHWATER PONDS AND SOILS FROM FLORIDA, USA
Hines, H. N., McCarthy, P. J., Esteban, G. F.

P03. CELL WALL MARKER ASSESSMENT OF NORTHERN EVERGLADES' DETRITAL FLOCCULENT LAYERS
Bellinger, B. J., McKenney, E. L., Gretz, M. R.

P04. SUBSTANTIAL GENOME SIZE VARIATION IN THE CHRYSOPHYTE GENUS *SYNURA* AND ITS EVOLUTIONARY CONSEQUENCES
Čertnerová, D., Škaloud, P.

P05. TRUE DIVERSITY AND PHYLOGENETIC RELATIONSHIPS OF OXYMONAD PROTISTS IN THE GUT OF THE TERMITE *RETICULITERMES SPERATUS*
Igai, K., Kitade, O., Ohkuma, M., Hongoh, Y.

P06. PROTEORHODOPSIN IN DINOFLAGELLATES
Cooney, E. C.

P07. NEW TOOLS FOR SELECTIVELY IMPROVING STRAINS OF SUGAR KELP FOR FOOD AND FUEL
Lindell, S. R., Bailey, D., **Augyte, S.**, Marty-Rivera, M., Jannink, J. L., Mao, X., Robbins, K. R., Schmutz, J., Smith, B., Wikfors, G. H., Pitchford, S., Fischell, E., **Yarish, C.**

P08. DETECTION OF ANCESTRAL POLYMORPHISM IN THE CILIATE GENUS *SPIROSTOMUM* (CILIOPHORA, POSTCILIODESMATOPHORA, HETEROTRICHEA)
Shazib, S., Vdacný, P., Shin, M.

P09. TAXONOMIC STUDY OF THE GENUS *DESMODESMUS* (CHLOROPHYCEAE)
Anto, J. R., Kim, J. I., Shin, W.

P10. PHYLOGENOMIC PLACEMENT OF A NEW ISOLATE OF *THECAMOEVIDA* (DISCOSEA, AMOEBOZOA) WITH A UNIQUE PERINUCLEAR MICROTUBULE ORGANIZING CENTER (MTOC)
Singla, M., Melton, J. T., Wood, F. C., Branch, J., Tekle, Y. I.

P11. KIN RECOGNITION IN PROTISTS AND OTHER MICROBES: AN ANALYTICAL COMPILATION
Paz-y-Mino-C, G., Espinosa, A.

P12. TWO NEW EPIPHYTIC SPECIES OF *CHAMPIA* (CHAMPIACEAE, RHODYMENIALES) FROM BERMUDA AND THE WESTERN ATLANTIC

Schneider, C. W., Griffith, M. K., Lane, C. E., Saunders, G. W.

P13. IMPLICATIONS FOR ADAPTIVE RADIATION OF HALOPHILIC EUKARYOTES

Park, J. S.

P14. CHARACTERIZING VOLTAGE-GATED SODIUM CHANNELS IN *KARENIA BREVIS* AND *OXYRRHIS MARINA*

Yates, P. S., Koester, J. A., Taylor, A. R.

P15. CALCEIN STAINING AS A TOOL TO INVESTIGATE COCCOLITHOPHORE CALCIFICATION

Fox, E. E., Meyer, E. M., Panasiak, N. E., Taylor, A. R.

P16. METAGENOMIC EVIDENCE FOR NON-PHOTOSYNTHETIC PROTISTS IN ALGAL MICROBIOMES

Graham, L. E.

P17. EXAMINATION OF THE SI REQUIREMENT FOR CALCIFICATION IN COCCOLITHOPHORES

Meyer, E. M., Taylor, A. R.

P18. HETEROTROPHIC BACTERIAL PRODUCTIVITY OF MACROALGAL BIOFILMS

Hall, J. R.

P19. TAXONOMY AND DESCRIPTION OF *CRYPTOMONAS* SP. (CRYPTOPHYCEAE, CRYPTOPHYTA), UNIQUE FRESHWATER CRYPTOMONAD

Nam, S. W.

P20. TAXONOMY AND DESCRIPTION OF FRESHWATER MICROALGA *MYCHONASTES* SP. JANGDONG160806F, NEW SPECIES CANDIDATE

Yang, H.

P21. TAXONOMY AND DESCRIPTION OF *MESODINIUM ANNULATUM* SP. NOV., A NEW MEMBER OF THE *M. RUBRUM*/*M. MAJOR* COMPLEX

Nam, S. W.

P22. STATUS OF BARREN GROUND AND COUNTERMEASURES IN KOREA WATERS

Oh, T. G.

P23. TEMPERATURE TOLERANCE OF THE SEA VEGETABLE CROP *ALARIA ESCULENTA*

Quigley, C. T., Brawley, S. H.

P24. INSIGHTS INTO THE CELL DEATH OF DINOFLAGELLATE *KARENIA BREVIS* TRIGGERED BY ENVIRONMENTAL STRESS

Gao, Y., Erdner, D.

P25. COMPARATIVE PLASTID GENOMICS OF SYNUROPHYCEAE: EVOLUTION VIA LATERAL GENE TRANSFER AND INVERTED REPEAT DYNAMICS

Kim, J., Shin, H.

P26. CHANGES IN ALGAL BIOMASS IN RELATION TO HARVESTING METHODS OF *GELIDIUM*

KIM, H. K.

P27. PROTOPLAST ISOLATION FROM SUSPENSION CULTURES OF *HECATONEMA TERMINALE* (ECTOCARPALES, PHAEOPHYCEAE) USING A SIMPLE MIX OF COMMERCIAL ENZYME
Avila-Peltroche, J. J., Won, B., Cho, T.

P28. ULTRA-MORPHOLOGY AND PHYLOGENY OF *PHYMATOLITHON PURPUREUM* AND *P. LAEVIGATUM* (HAPALIDIACEAE, RHODOPHYTA) BASED ON COMPARISON OF TYPE MATERIALS
Jeong, S., Won, B., Cho, T.

P29. *PHYMATOLITHON DOSUNGII* SP. NOV. *P. PROCUMBENS* SP. NOV. (HAPALIDIACEAE, RHODOPHYTA), TWO NEW CRUSTOSE CORALLINE ALGAE FROM KOREA
Jeong, S., Won, B., Cho, T.

P30. BIOCHEMICAL COMPOSITION AND TAXONOMIC DIVERSITY WITHIN CYANOBACTERIAL ORDER PLEUROCAPSALES
Shalygin, S., Huang, I., Zimba, P.

P31. THE INVASIVE RED ALGA *GRATELOUPIA TURUTURU* (HALYMENTIALES, RHODOPHYTA) REACHES MID-COAST MAINE: ARE CURRENT BIOSECURITY MEASURES ENOUGH?
Capistrant-Fossa, K., Brawley, S.H.

P32. GROWTH AND INGESTION RATES OF HETEROTROPHIC PROTISTS ON THE TOXIC DINOFLAGELLATE *OSTREOPSIS CF. OVATA*
Yoo, Y. D., Seong, K. A., Jeong, H. J., Yih, W., Rho, J. R.

P33. COMPARATIVE PLASTID GENOMICS OF SYNUROPHYCEAE: EVOLUTION VIA LATERAL GENE TRANSFER AND INVERTED REPEAT DYNAMICS
Shin, H., Kim, J., Škaloud, P., Jung, J., Yoon, H., Archibald, J. M., Shin, W.

P34. TAXONOMIC REVISION OF JAPANESE *SAUVAGEAUGLOIA* SPECIES (ECTOCARPALES S.L., PHAEOPHYCEAE)
Kawai, H., Hanyuda, T., Shibata, K., Kamiya, M., Peters, A. F.

P35. THE COMPLETE GENOME OF A NON-PHOTOSYNTHETIC DIATOM AND ITS PLASTIDAL SULFOLIPID BIOSYNTHESIS
Kamikawa, R., Oyama, K., Tanizawa, Y., Mochizuki, T., Nakayama, T., Tanifuji, G., Nakamura, Y., Kato, M., Miyashita, H.

P36. ARGININE-CULTURE INDUCES NITROGEN-STARVATION RESPONSES DURING PHOTOSYNTHETIC GROWTH IN *CHLAMYDOMONAS REINHARDTII*
Munz, J., Joo, S., Kariyawasam, T., Shelley, N., Xiong, Y., Hong, R. H., Sung, Y. J., Seo, S. B., Kim, J. Y., Sim, S. J., Jin, E., Lee, J. H.

P37. COMPARISONS OF TISSUE CARBON AND NITROGEN CONTENTS OF *SEAWEED* SPECIES GROWN IN INTEGRATED MULTI-TROPHIC AQUACULTURE (IMTA) AND ADJACENT SITES IN KOREA
Jang, S., Hailong, W., Park, M., Do, Y., Kim, Y., Kim, J.

P38. USING HERBARIUM SPECIMENS, INCLUDING MACROALGAE, TO ENHANCE LEARNING EXPERIENCES FOR FIRST-YEAR BIOLOGY STUDENTS
Clarkston, B. and Jennings, L.

P39. THE CHLOROPHYLL CYCLE AND ANTENNA PROTEINS IN SECONDARY CHLOROPLASTS OF *EUGLENA GRACILIS*
Kashiyama, Y., Maruyama, M., Shibata, S., Awai, K., Nakazawa, M., Ishikawa, T.

P40. CHLOROPHYLL CATABOLISM BY PELAGIC NANOFLAGELLATES/AMOEBAS FEEDING ON *PROCHLOROCOCCUS*

Matsuda, T., Yamamoto, H., Shihongi, A., Kayama, M., Hidaka, K., Setou, T., Ishikawa, A., Kinoshita, Y., Tamiaki, H., Kashiwama, Y.

P41. PHYLOGENETIC POSITION OF THE ENIGMATIC SCUTICOCILIATE *CONCHOPHTHIRUS* (SCUTICOCILIATIA, CONCHOPHTHIRIDAE)

Lynn, D. H., Strueder-Kypke, M., Antipa, G. A.

P42. LIGHT EFFECTS GROWTH OF A HETEROTROPHIC DINOFLAGELLATE THROUGH AN UNKNOWN MECHANISM

Ramsby, J. P., Parrow, M. W.

P43. MORPHOLOGY AND PHYLOGENETIC POSITION OF NEW CENTROHELID HELIOZOANS FROM RUSSIA AND MONGOLIA

Radaykina, L.V., Mylnikov, A.P., Burki, F., Tikhonenkov, D.V.

P44. BIODIVERSITY AND SYSTEMATIC POSITIONS OF SEVEN SCUTICOCILIATES FROM COASTAL WATERS IN SOUTH CHINA INCLUDING A NEW SPECIES: *URONEMA APOMARINUM* N. SP.

Liu, M., Li, L., Zhang, T., Fan, X., Yi, Z., Lin, X., Song, W.

P45. HOW CLIMATE CHANGE, CLONAL DIVERSITY AND PHENOTYPIC PLASTICITY OF *DAPHNIA MAGNA* AFFECTS THE COMMUNITY DYNAMICS IN FRESHWATER MICROBIAL FOOD WEBS

Liu, M., Montagnes, D.

P46. MORPHOLOGY AND PHYLOGENETIC SYSTEMATICS OF FOUR SAND-DWELLING BENTHIC DINOFLAGELLATES IN KOREAN COASTAL AREA

Lee, J., Kang, S.

P47. SELF-CLEAVING PEPTIDE FOR GENE EXPRESSION IN *LEISHMANIA*

Podešvová, L., Kraeva, N., Yurchenko, V.

P48. A NOVEL CRYPTIC SPECIES OF GREEN ALGAE FROM THE CALIFORNIA DESERT

Taylor, M., Pietrasiak, N., Fucikova, K.

P49. REVISION OF *AMOEBOPHRYA CERATII* KOEPPEN 1903 (DINOFLAGELLATA, SYNDINEA) AS AN INTRACYTOPLASMIC PARASITE OF THE DINOFLAGELLATE *CERATIUM TRIPOS*

Kim, S., Jardeleza, S. E., Park, M. G., Coats, D. W.

P50. INVESTIGATIONS OF NUTRIENT REMOVAL EFFICIENCY FROM COASTAL MUDFLAT RESPONSE TO LIGHT INTENSITY: A CASE STUDY IN THE DIATOM-DOMINATED INTERTIDAL MUDFLAT

Kim, S., Kim, J. H., Lee, S., Kim, I. N.

P51. SYNTHESIS OF FRESHWATER RED ALGAL DIVERSITY (RHODOPHYTA)

Vis, M. L., Necchi, O.

P52. SOME NEW MORPHOLOGICAL, GEOGRAPHIC AND PHYLOGENETIC DATA OF A MEXICAN POPULATION OF *EUPLOTOIDES OCTOCARINATUS* CARTER, 1972

Mayén-Estrada, R., Méndez-Sánchez, D., Hu, Z., Romero-Niembro, V. M.

P53. INDICATION OF A FOOD-CHAIN INTERACTION AMONG PROTISTS REPRESENTING FOUR TROPHIC LEVELS IN GWANGYANG BAY, MID-SOUTHERN COAST OF KOREA

Park, J. W., Kim, H. S., Yoo, Y. D., Seong, K. A., Oh, M. R., Jeong, H. J., Yih, W.

- P54.** A METATRANSCRIPTOMIC APPROACH TO ASSESS DIATOM COMMUNITY COMPOSITION AND PHYSIOLOGY IN THE NORTH ATLANTIC
Salomaki, E. D., Harke, M. J., Dyhrman, S. T., Rynearson, T. A., Jenkins, B. D.
- P55.** GENOME DUPLICATION HISTORY WITHIN AMOEBOZOA SUPERGROUP
Apulu, N. J., Brown, M. W., Spiegel, F. W.
- P56.** DIATOM POPULATION GROWTH RESPONSES IN A DEFINED CULTURE MEDIUM CONSTITUTED FROM IONIC PROPORTIONS OF A LOCAL WATERSHED VERSUS TYPICAL ENRICHMENT MEDIUM
Wee, J. L., Bucolo, P.
- P57.** NEW DIVERSITY OF THE CORALLINE GENUS *SPOROLITHON* (SPOROLITHALES, CORALLINOPHYCIDAE) FROM THE GULF OF EILAT, ISRAEL (GULF OF AQABA), RED SEA
Kittle III, R. P., Richards, J. L., Nguyen, A., Sauvage, T., Schmidt, W. E., Fredericq, S.
- P58.** EFFECT OF EPIBIONT CILIATES (CILIOPHORA: PERITRICHIA) ON METABOLIC RATE OF THE CRAYFISH *CAMBARELLUS MONTEZUMAE* (CRUSTACEA: DECAPODA)
Ramírez-Ballesteros, M. R., Mayén-Estrada, R. M., Cárdenas-Vázquez, R. C.
- P59.** DIVERSITY PATTERNS OF MICROBIAL EUKARYOTES FROM THE SEAGRASS EPIPHYTES OF *ZOSTERA MARINA* IN THE COAST OF BRITISH COLUMBIA (CANADA)
Segovia, B. T., Sanders, R. D., Parfrey, L. W.
- P60.** ON THE COMPOSITION OF THE CRYSTALLINE BODY AND REDDISH GLOBULE IN THE EUSTIGMATOPHYTE – *VACUOLIVIRIDE CRYSTALLIFERUM* NIES-2860
Pilátová, J., Mojzeš, P., Bažantová, P., Hurková, K., Schwarzerová, K.
- P61.** *IN SITU* SUBMERSIBLE OBSERVATIONS OF WESTERN ANTARCTIC PENINSULA DEEP SEA MACROALGAL DRIFT
Amsler, M. O., de Broyer, C., Bolstad, K., Masazumi, K., Iwasaki, H.
- # **P62.** THE ROLE OF LIGHT IN SEASONAL GROWTH PATTERNS OF *NEOAGARUM FIMBRIATUM*
Borden, L. A., Martone, P. T.
- P63.** COST-EFFECTIVE AND EFFICIENT WAYS TO IDENTIFY ENDOLITHIC COMMUNITY MEMBERS INSIDE RHODOLITHS
Kalifa, D., Schmidt, W. E., Fredericq, S., Krayesky-Self, S. L.
- P64.** GENE EXPRESSION PROFILES OF SODIUM EXPORT MECHANISMS IN *CHARA LONGIFOLIA* C. B. ROB. AND *CHARA AUSTRALIS* R. BR
Phipps, S. R.
- P65.** ARE THERE WIDELY DISTRIBUTED RED ALGAE?
Diaz-Tapia, P., Maggs, C. A., Macaya, E. C., Verbruggen, H.
- P66.** CHARACTERIZATION OF PHOTOTROPINS INVOLVED IN BLUE LIGHT-INDUCED PHOTOMOVEMENT OF *SPIROGYRA VARIANS*
Lee, J. W. and Kim, G. H.,
- P67.** INTER-ANNUAL VARIATION IN THE RELATIVE DOMINANCE OF PLANKTONIC FLAGELLATES AND DINOFLAGELLATES AT TMNP WATERS ADJOINING THE HEBEI SPIRIT OIL SPILL SITE
Seong, K. A., Yoo, Y. D., Myung, G., Oh, M. R., Park, J. W., Kim, H. S., Yih, W.

- # P68.** AGE DISTRIBUTIONS AND MORPHOLOGIC VARIABILITY IN SUBTIDAL *ECKLONIA ARBOREA* (SOUTHERN SEA PALM) AROUND ISLA NATIVIDAD, BAJA CALIFORNIA SUR, MEXICO
Gossard, D. J.
- P69.** CONTROL OF ALGAL GROWTH ON GREENHOUSE SURFACES USING COMMERCIAL ALGAECIDES
Berthold, D. E., Elazar, A., Lefler, F., Marble, C., Laughinghouse, H. D.
- P70.** SOIL CRUST ALGAL COMMUNITIES OF WARREN PRAIRIE NATURAL AREA
Fawley, K. P., Baker, B., Fawley, M. W.
- P71.** A MOLECULAR ANALYSIS OF BACTERIAL COMMUNITIES ON THE EXTERNAL SURFACES OF MARINE SEAWEEDS
Amin, S. A., Müller, K. M.
- P72.** BAMBOO IS NOT JUST FOR PANDAS ANYMORE: AN EXAMINATION OF SOME NOVEL CYANOBACTERIAL EPIPHYTES FROM A BAMBOO GARDEN IN JACKSONVILLE, FL, USA
Tipley, D. J., Garvey, A. D., Rousse, J. D., Casamatta, D. A.
- P73.** OMEGA-7 PRODUCING ALKALIPHILIC DIATOM *FISTULIFERA ALCALINUS* SP. NOV FROM LAKE OKEECHOBEE, FLORIDA
Berthold, D. E., Gantar, M., Engene, N., Shetty, K. G., Jayachandran, K., Laughinghouse IV, H. D.
- # P74.** UNCOVERING CRYPTIC DIVERSITY OF PERIPHYTIC CYANOBACTERIA ISOLATED FROM ICHETUCKNEE SPRINGS, FL, USA
Garvey, A. D., Gansert, E. A., Casamatta, D. A.
- P75.** GROWTH AND BIOCHEMICAL RESPONSES OF TROPICAL AND SUBTROPICAL STRAINS OF *GRACILARIA DOMINGENSIS* (RHODOPHYTA) TO TEMPERATURE AND IRRADIANCE VARIATIONS
Castro, J. C., Yokoya, N. S.
- P76.** HABITAT HETEROGENEITY AND SCALE-DEPENDENT BIODIVERSITY LOSS IN BARKLEY SOUND KELP BEDS
Starko, S., Neufeld, C. J.
- P77.** ORGANELLAR PHYLOGENOMICS INFORM SYSTEMATICS IN THE GREEN ALGAL FAMILY HYDRODICTYACEAE (CHLOROPHYCEAE)
McManus, A. H., Fucíková, K., Lewis, P. O., Karol, K. G., Lewis, L. A.
- P78.** ENVIRONMENTAL-DNA METABARCODING TO ASSESS THE BIODIVERSITY OF AN INTERTIDAL SEAWEED COMMUNITY IN THE NORTH CENTRAL GULF OF MEXICO
Bombin, S., Lopez-Bautista, J.
- P79.** EXPANDING THE REPRESENTATION OF PHOTOSYNTHETIC STRAMENOPILES IN A PHYLOGENOMIC FRAMEWORK
Terpis, K. X., Bailey, J. C., Lane, C. E.
- P80.** PREFERENTIAL GRAZING AND SECRETION OF HYDROLYTIC ENZYME BY MARINE HETEROTROPHIC NANOFLAGELLATES
Mohapatra, B. R.

P81. CARBOHYDRATES, PROTEINS AND PHOTOSYNTHETIC PIGMENTS IN DIFFERENT REPRODUCTIVE STAGES OF *GIGARTINA SKOTTSBERGII* FROM ANTARCTIC AND SUBANTARCTIC REGIONS

Pasqualetti, C. B., Carvalho, M. M., Mansilla, A., Avila, M., Colepicolo, P., Yokoya, N. S.

P82. RECEPTACLE DEVELOPMENT IN *ASCOPHYLLUM*

Galway, M., Westhaver, L., Garbary, D.

P83. A MOLECULAR AND MORPHOLOGICAL IDENTIFICATION OF TWO NEW *COCHLIPODIUM* SPECIES WITH MICROTUBULE ORGANIZING CENTERS FROM THE SOUTHEASTERN UNITED STATES

Melton, J. T., Singla, M., Wood, F. C., Collins, S., Tekle, Y. I.

P84. MORPHOLOGY AND MORPHOGENESIS OF THE VEGETATIVE VALVE IN *BELLEROCHEA MALLEUS* (BRIGHTWELL) VAN HEURCK.

Porcher, E. M., Kaczmarska, I., Ehrman, J. M., Samanta, B.

P85. SPLICING COMPLEXES IN *C. MEROLAE*

Stark, M. R., Oeffinger, M., Rader, S. D.

P86. THE FISH PARASITE DINOFLAGELLATE *HAIADINIUM ICHTHYOPHILUM* WITH ITS UNUSUAL AND COMPLEX LIFE HISTORY, IS SISTER TAXON TO *PISCINOODINIUM*

Buckland-Nicks, J. A., Hehenberger, E., Keeling, P. J., Reimchen, T. E.

P87. CHEMICAL SIGNALING IN THE PHYCOSPHERE: GROWTH AND PIGMENTATION RESPONSES TO BACTERIAL SIGNALS AND PHYTOHORMONES

Hirsch, D., Leverett, B. D.

P88. THE IMPACT OF MICROALGAL EXTRACTS ON VIABILITY AND ANTIBIOTIC SENSITIVITY IN *STENOTROPHOMONAS MALTOPHILIA* BIOFILMS

Matulich, P. T., Leverett, B. D.

P89. NOVEL PHYCODNAVIRUS SEQUENCES DETECTED IN *CYMBOMONAS TETRAMITIFORMIS* GENOME ASSEMBLY

Walling, A. G., Kim, E.

P90. REINSTATEMENT OF HOOK-FORMING *ACROSORIUM* SPECIES (DELESSERIACEAE, RHODOPHYTA) BASED ON MOLECULAR PHYLOGENY AND MORPHOLOGY

Kang, J. C., Miller, K. A., Kim, M. S.

P91. CONVERGENT GENOME EVOLUTION IN BACTERIAL ENDOSYMBIONTS OF MARINE DIPLONEMIDS

George, E. E., Husnik, F., Prokopchuk, G., Tashyreva, D., Lukeš, J., Keeling, P. J.

P92. THE EVOLUTION OF MEIOTIC GENES IN THE INVASIVE RED ALGAL SPECIES, *BANGIA ATROPURPUREA* (RHODOPHYTA)

Poletto Borges, V., Amin, S., Doxey, A., Müller, K.

P93. ACCUMULATION OF TOTAL LIPIDS AND TRIACYLGLYCERIDES AS BIODIESEL PRECURSORS UPON CO-CULTURING A PHYCOSPHERIC BACTERIUM WITH INDIGENOUS *CHLORELLA VULGARIS*

Pintor, K. L., Vital, P. G., Meenam, M.

- P94.** THE UNIQUE PHYCOBILIPROTEIN LIGHT-HARVESTING ANTENNA OF CRYPTOPHYTE ALGAE: STRUCTURAL INSIGHTS INTO ITS EVOLUTION
Green, B. R., Teng, C. Y., Laos, A. J., Onodera, N., Hoef-Emden, K., Hiller, R. G., Archibald, J. M., Curmi, P. M.
- P95.** THE ULTIMATE ENVIRONMENTAL GRADIENT: PATTERNS IN ALGAL COMMUNITY STRUCTURE ACROSS THE INTERTIDAL/SUBTIDAL INTERFACE
Twist, B. A., Kluibenschedl, A., Pritchard, D., Desmond, M. J., D'Archino, R., Nelson, W. A., Hepburn, C. D.
- P96.** STRUCTURE OF TINTINNIDS COMMUNITIES IN THE EASTERN MEXICAN PACIFIC AND THE CALIFORNIA GULF
Rojas-Sánchez, D. Y., Santamaría-del-ángel, E.
- P97.** USING FLOW CYTOMETRY FOR KELP MEIOSPORE ISOLATION
Augyte, S., Yarish, C., Marty-Rivera, M., Pitchford, S., Wikfors, G., Lindell, S., Bailey, D.
- P98.** GENOME WIDE ASSOCIATION STUDIES FOR BREEDING *MACROCYSTIS PYRIFERA*
Alberto, F., Reed, D., Miller, R., Nuzhdin, S.
- P99.** A SLIDING WINDOW OF MULTIPLE PATERNITY? MATING SYSTEM VARIATION ACROSS ECOTYPES IN AN INVASIVE SEAWEED
Krueger-Hadfield, S. A.
- P100:** ENVIRONMENTAL-DNA METABARCODING TO ASSESS THE BIODIVERSITY OF AN INTERTIDAL SEAWEED COMMUNITY IN THE NORTH CENTRAL GULF OF MEXICO
Sergei Bombin & **Juan Lopez-Bautista**

RESTAURANT RECOMMENDATIONS & LOCAL AMENITIES

Dine-In Restaurants	Type of Food	Location	Phone number	Distance from Nest	Neighbourhood	Bus access from campus
The Gallery Lounge	Craft beer, pub food	Inside the Nest, top floor	604-827-5660	0!	UBC Campus	n/a
Mahony & Son's	Irish pub	5990 University Blvd (across road from Nest)	604-827-4444	< 5 min walk	UBC Campus	n/a
The Point Grill	Burgers, salads, sandwiches	Marine Drive Residence, 2205 Lower Mall	604.822.9503	10-15 min walk	UBC Campus	n/a
One More Sushi	Japanese	#222 (upstairs), 2155 Allison Rd	(604) 228-9773	15 min walk	University Village (East UBC campus)	n/a
BierCraft	Burgers, tapas, beer	3340 Shurm lane	604.559.2437	25 min walk, 10 min bus	Wesbrook Village (South UBC campus)	#41 (from bus bay #25 (bus bay 8), #33 (bus bay 9))
Virtuous Pie	Vegan Pizza Brunch, ice cream	3339 Shrum Lane	604 428 1060	25 min walk, 10 min bus	Wesbrook Village (South UBC campus)	#41 (from bus bay #25 (bus bay 8), #33 (bus bay 9))
The Eatery	Japanese	3431 W Broadway Rd	(604) 738-5298	17 min bus	Kitsilano	#14 (from UBC Bus Exchange Bay 11)
Fable	Canadian	1944 W 4th Avenue	(604) 732-1322	27 min bus	Kitsilano	#4 (from UBC Bus Exchange Bay 10)
Take-away Restaurants						
JamJar	Lebanese (Veg too)	6035 University Blvd	(604) 620-5320	< 5 min walk	UBC Campus	n/a
Nori	Bento & Udon	6055 University Blvd		< 5 min walk	UBC Campus	n/a
Pie R2	pizza by the slice	Inside the Nest, top floor		0!	UBC Campus	n/a
Other Food & Drink						
Rain or Shine Ice Cream	ice cream (local)	6001 University Blvd	604-620-2004	< 5 min walk	UBC Campus	n/a
Starbucks Coffee	coffee shop	6200 University Blvd (In UBC Bookstore)	604.822.0552	< 5 min walk	UBC Campus	n/a
Grocery, Pharmacy, Medical						
Grocery Fresh Market	grocery (small)	Inside the Nest, main level	(778) 654-4900	0!	UBC Campus	n/a
Save On Foods	grocery (large), pharmacy	5945 Berton Ave	(604) 221-5999	25 min walk, 10 min bus	Wesbrook Village (South UBC campus)	#41 (bus bay 7), #25 (bus bay 8), #33 (bus bay 9)
Shopper's Drug Mart	Pharmacy	5940 University Blvd	(604) 228-1533	< 5 min walk	UBC Campus	n/a
University Village Medical Dental Clinic	Walk-in clinic	Two locations: 2255 Alison Rd 5933 Birney Ave	604 222 2273 (for both)	15 min walk (Alison Rd) 25 min walk (Birney Ave)	University Village (Alison Rd) Wesbrook Village (Birney Ave)	For Birney Ave: #41 (bus bay 7), #25 (bus bay 8), #33 (bus bay 9)
UBC Hospital (closes 10pm)	Urgent Care Centre	2211 Wesbrook Mall	(604) 822-7121	10 min walk	UBC Campus	n/a