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Pre-Conference Workshops

Saturday, 7-November

Seminar Unit

Planning and Funding DNA Barcoding Projects

Organized by: The [Global Taxonomy Initiative, Convention on Biological Diversity \(GTI/CBD\)](#); The [Consortium for the Barcode of Life \(CBOL\)](#) & The [International Barcode of Life Project \(iBOL\)](#)

- 9:30am** Welcome; David Schindel, CBOL ([video](#))
- Introduction of sponsors,
 - [Preview of the Third International Barcode of Life Conference](#),
 - Goals of the workshop
- 9:45am** [The Global Taxonomy Initiative of the CBD: Goals and Program of Work](#);
Junko Shimura, GTI/CBD ([video](#))
- 10:15am** [Overview: DNA barcoding, CBOL, Project Planning in Developing Countries](#);
D. Schindel, CBOL ([video](#))
- 11:30am** BioNET and CBOL Activities in East Africa; Beatrice Khayota, National Museums of Kenya
- Noon** Results of Pre-workshop Questionnaire: Potential for barcoding projects in countries represented by workshop participants; D. Schindel
- 12:15pm** Plenary discussion: Plans and expectations for afternoon session
- Types of projects and support from basic research to capacity-building
 - How to plan a barcoding project
 - How to write a grant proposal
- 2:00pm** [Barcoding projects in the International Barcode of Life Project \(iBOL\)](#);
Robert Hanner, BIO, University of Guelph, Canada
- 2:45pm** What makes an effective barcoding grant proposal? Mock review of two proposals.
- 4:00pm** [CBOL-BIONET-EAFRINET Partnership Contributing to GTI Implementation in EASTERN AFRICA](#);
B. Khayota, National Museums of Kenya; J. Shimura, [Overview of the GEF for CBOL](#)
- 4:30pm** Plenary discussion of potential projects identified by workshop participants
- 5:15pm** Summary of Workshop
- 6:00pm** Workshop adjourns, departure to hotels.

Pre-Conference Workshops

Saturday, 7-Nov (9am- 12 Noon)

Video Conference Room

Plant Working Group Meeting: GRASS-BOL

Open meeting aimed at outlining priorities, identifying project participants and funding sources for major project on grass barcoding [Organized by Hugh Cross Andy Lowe, Sean Graham].

9:00-9:20am [Introduction and overview of objectives and timelines of GrassBoL.](#) [**Andy Lowe**]

9:20-9:40am Overview of current taxonomic and phylogenetic status of grass family (Poaceae) and relatives (order Poales). [**Sean Graham, Hugh Cross**]

9:40-10:00am Review of recent results for DNA barcoding of grasses. [**Hugh Cross**]

10:00-10:30am Open discussion of alternative local barcodes and current grass genomic advances contributing to DNA barcoding of family. [Moderators: **Sean Graham, Hugh Cross**]

11:00-12:00 Open discussion covering: organization of GrassBoL, addressing regional and taxonomic coverage of grass DNA barcoding; identifying both regional and international funding prospects. [Moderators: **Andy Lowe, Sean Graham**]

This is an open meeting and all interested participants are encouraged to come.

Saturday, 7-Nov (1:30 – 5.00 pm)

Video Conference Room

Plant Working Group Meeting: TREE-BOL

1:30-3:15pm Open meeting with update presentations on TreeBoL progress.

3:45-5:00pm Business meeting for regional chairs only [Organizer: Damon Little]

Pre-Conference Workshops

Sunday, 8-November

Botanical Garden Auditorium

Short Course on DNA Barcoding Protocols

9:00-9:15: **Introduction to barcoding.** (Amy Driskell) ([video](#))

- What is the 'barcoding pipeline'?
- What data and object need to be tracked through the pipeline?
- What possible beginning and end points exist?

9:15-9:25: Barcode data standard (David Schindel) ([video](#))

Part 1: Specimen Acquisition and Handling

9:25-9:30: Introduction to the issues (Chris Meyer)

9:30-10:00: Museum Harvesting (Rodolphe Rougerie & Alex Borisenko) ([video](#)) ([video](#))

- Data quality: e.g. photographs, georeferences
- Destructive sampling
- Museum matters: vouchering, recataloging, archiving

10:00-10:30: Field Collection (Sally Adamowicz and Chris Meyer) ([video](#))

- Legal issues: permitting, exporting
- Logistics
- Data quality and acquisition
- Changes to collection and preservation methods

11:00-11:10: Current Campaigns and Goals (David Schindel) ([video](#))

11:10-12:30: Parallel groups for discussion and Q&A:

- Protists and fungi (TBD)
- Plants (Michelle Van Der Bank)
- Marine invertebrates (Chris Meyer)
- Terrestrial invertebrates (Rodolphe Rougerie) ([video](#))
- Vertebrates (Alex Borisenko & Robert Hanner)

Part 2: Laboratory Methods and Data Management

2:00-2:45: DNA Extraction (Dario Lijtmaer & Pablo Tubaro) ([video](#))

- Equipment
- Taxon- and target-specific methods
- Contamination
- Testing and quality control
- Storage and shipment of DNA extracts

2:45 -3:30: PCR amplification (Oris Sanjur) ([video](#))

- Equipment, methods and reagents
- Taxon- and target-specific methods
- Contamination
- Testing and quality control

4:00 – 4:30: Information Management and data quality (Amy Driskell) ([video](#))

- Tracking progress through laboratory pipeline
- Keeping all required products together
- Consistent data assessment
- Analysis-lab feed-back loop

Pre-Conference Workshops

Sunday, 8-November

Seminar Unit (9am–6pm)

General Plant Working Group Meeting

[Organizer **Pete Hollingsworth**; P.Hollingsworth@rbge.org.uk]

[The aim of the meeting](#) is to share information to develop and enhance the plant barcoding infrastructure.

A) PLANT BARCODING CURRENT STATUS

- 9:00- 10:00** Update and discussion on the CBOL recommend plant barcode [*this decision should be available from CBOL by the time of the conference*]
- 10:00-10:30** Inventory of ongoing plant barcoding projects, scale of activity/funding and contact details (a template will be prepared for participants to fill in before the meeting). Short presentations will be given on major barcoding campaigns that involve input from multiple laboratories (e.g. Tree-BoL, Grass-BoL; [Mexican plants barcoding project](#))

B) DEVELOPING THE PLANT BARCODING INFRA-STRUCTURE

11:00-5:00

Improving the community resource for [plant barcoding](#):

DNA Bank best practice (including discussion on [storage](#) and extraction protocols)

Core barcode, including discussions on:

- PCR and sequencing protocols for core-barcoding loci.
- Summary of [amplification](#) /sequencing successes/failures, target groups for further protocol development
- Development of mini-barcodes

Supplementary loci, including discussions on:

- Review of supplementary plastid barcodes
- [Review of ITS for barcoding \(video\)](#)
- Development of guidelines for the use of supplementary loci
- Opportunities for accessing additional nuclear loci

Bioinformatics, including discussions on:

- Overview of available systems for plant barcoding ([video](#))
- Requirements of the plant barcode informatics work flow (quality checks, handling of data) ([video](#))
- [Data analysis issues associated with use of two linked loci in DNA barcode \(video\)](#)
- Data analysis issues associated with the use of supplementary barcodes, including unlinked barcodes.

C) DELIVERING iBOL TARGETS

5:00-6:00 Discussion on iBoL priorities for plants.

Pre-Conference Workshops

Monday, 9-November

Seminar Unit

BOLD Short Course

Introductory session: This session is targeted as novice users but is a good refresher for infrequent users of BOLD.

9:00am	Introduction and overview of general concepts BOLD, data structures and policies (video)	Sujeewan Ratnasingham
9:30am	Data storage and management using the BOLD platform (video 1) (video 2) (video 3)	Megan Milton
10:00am	Introduction to BOLD analysis tools.	Sujeewan Ratnasingham
10:20am	Project management and data sharing (video)	Rodolphe Rougerie
11:00am	Publishing data through BOLD and shared resources (video 1) (video 2) (video 3) (video 4)	Taika von Königslöw
11:20am	Hands-on training	

Advanced session: This session is targeted at users who have already have experience using BOLD to manage barcode data. It's highly recommended that individuals attending this session also attend the introductory session as a refresher.

BOLD Tools:

2:00pm	Welcome and introduction	Sujeewan Ratnasingham
2:20pm	Managing data quality in barcode workflows (video 1) (video 2) (video 3)	Evgeny Zakharov
2:40pm	Data interpretation using BOLD analytics	Sarah Adamowicz
3:00pm	Managing multi-gene projects	Alex Smith
3:10pm	Integrating GIS tools	Alex Smith
4:00pm	Hands-on training	

3rd Party Tools:

4:30pm	Overview of data exchange formats and web services for use with external tools	Riadul Mannan
4:40pm	Diagnostica: applications for barcode data	Taika von Königslöw
4:50pm	Visualizing amino acid variation in DNA barcodes	Justin Schonfeld
5:00pm	BOLI Data portal	Neil Sarkar
5:15pm	Closing remarks	Sujeewan Ratnasingham

Pre-Conference Workshops

Monday, 9-November

Seminar unit

Uses of Barcoding and Genetic Markers for the Handling and Detection of Invasive Species

8:30 - 9:00 Registration
9:00 - 9:10 Welcome and introductions
9:10 - 9:30 [Introduction](#)
Dr. Junko Shimura

1st session:

9:30am Aquatic invasive species
Roberto Mendoza, UANL, Mexico
9:50am [Identifying cryptic invasive ants in the Malagasy region](#)
Brian Fisher, CAS, USA
9:50am [Arundo donax and Phragmites australis in Mexico](#)
Erica Aguirre Planter, UNAM, Mexico
10:10am [DNA barcoding reveals cryptic invasive seaweeds in Canadian Coastal waters](#)
Gary Saunders, University of New Brunswick, Canada
10:30am Barcoding migratory waterbirds as indicators of avian flu in Mexico
Gary García, UNAM, México

2nd session:

11:10am [DNA Barcoding of pest insects of importance to Australia](#)
Andrew Mitchell, Australia
11:30am [Detecting freshwater invasive leech species through the use of genetic bar codes](#)
Alejandro Ocegüera-Figueroa & Mark E. Siddall, AMNH, USA
11:50am [Barcoding freshwater fish](#)
Martha Valdez, Ecosur, Mexico
12:10pm ["An example of barcode detection of an invasive: Daphnia lumholtzi, and the potential use of the barcodes in aquatic environments"](#)
Dr. Manuel Elías, ECOSUR, México
12:30- 1:00pm Conclusions and end of meeting

Pre-Conference Workshops

Monday, 9-November

Botanical Garden – Auditorium

Barcoding of Life: Society and Technology Dynamics - Global and National Perspectives

Barcoding of Life: Society and Technology Dynamics - Global and National Perspectives

A symposium organized by the Canadian International Development Research Centre (IDRC)

- 2:00pm** Welcome, introduction of sponsor, and description of the goals of the workshop
- 2:15pm** CBD, the Global Taxonomy Initiative, and DNA barcoding in Developing Countries, **Junko Shimura**, CBD Secretariat, Montreal
- 2:30pm** [“The Convention on Biological Diversity Access and Benefit Sharing Principles in the Context of Barcoded Genetic Information: The Case of iBOL”](#), **Manuel Ruiz Muller**, Director of the Program of International Affairs and Biodiversity of the Peruvian Society for Environmental Law
- 3:00pm** “DNA Barcoding: Society and technology dynamics in the Indian context”, **Dr. Haribabu Ejnavarzala**, Professor of Sociology, University of Hyderabad, India.
- 4:00pm** “iBOL as an Enabler of ABS and ABS as an Enabler of iBOL” **Joseph Henry Vogel**, University of Puerto Rico-Río Piedras ([video](#))
- 4:30pm** Consortium for the Barcode of Life (CBOL) activities in developing regions and with CBD **David Schindel**, Consortium for the Barcode of Life, Smithsonian Institution, USA
- 4:45pm** [The International Barcode of Life Project \(iBOL\) and its relations to developing countries](#) **Paul Hebert**, Biodiversity Institute of Ontario, University of Guelph, Canada ([video](#))
- 5:00pm** Questions and discussion by audience
- 5:45pm** Symposium ends
- 6:00pm** Conference registrants depart by bus for opening reception

Plenary Speakers & Technical Session Summaries

Tuesday, 10-November

Session 1: Welcome and Introduction

- 9:00-9:20 UNAM Official
CONACYT official
- 9:20-9:25 **Ahmed Djoghlaif**, Convention on Biological Diversity
Videotaped Welcome
- 9:25-9:45 KEYNOTE SPEAKER: **Antonio Lazcano** (UNAM)
[“Natural history, microbes and sequences: back to the organism?”](#)
([video](#))
- 9:45-10:30 Panel discussion: Progress since Second International Conference
Scott Miller, CBOL/Smithsonian (Moderator)
Paul Hebert, [“iBOL: Making Every Species Count”](#)
Tila Maria Pérez Ortiz, [“MexBOL”](#) ([video](#))
Pete Hollingsworth, [“DNA barcoding & the CBOL plant working group”](#)
([video](#))

Session 2: Planning Meso-American barcoding activities: Lessons learned from 2004-2009

- 11:00-12:00 Panel Discussion 2A: Strategies for Large Barcoding Initiatives ([video](#))
Patricia Escalante, UNAM (Moderator)
Sarah Adamowicz, BIO, University of Guelph, [“Polar DNA Barcoding at Churchill, Manitoba, Canada”](#) ([video](#))
Karen James, Natural History Museum London, [“Project BarkCode”](#) ([video](#))
Mike Wilkinson, Aberystwyth University, [“Compiling and exploiting a national plant barcode for Wales”](#)
- 12:00-12:45 Panel Discussion 2B: How has the Barcoding Paradigm improved Taxonomic Practices? ([video](#))
Atilano Contreras, UNAM (Moderator)
Andy Polaszek, Natural History Museum London, [“Codes and Barcodes: towards integrative, dynamic taxonomy”](#) ([video](#))
Vazrick Nazari, BIO, University of Guelph, [“How has the Barcoding Paradigm improved Taxonomic Practices?”](#) ([video](#))
Dan Janzen, University of Pennsylvania, [“How has the barcoding paradigm improved taxonomic practices?”](#) ([video](#))

Parallel Technical Session A – 2:00-4:00

Plant Working Group	Auditorium A
Barcoding Pathogens, Vectors and Parasites	Auditorium B
Fish-BOL	Seminar Room A/B
Barcoding Species for Quarantine/Plant Protection	Seminar Room C
Marine Species	Seminar Room D
All Birds Barcoding Initiative and Vertebrates	Seminar Room E

Plenary Speakers & Technical Session Summaries

Parallel Technical Session B – 4:00-6:00

Plant Working Group	Auditorium A
Barcoding Pathogens, Vectors and Parasites	Auditorium B
Fish-BOL	Seminar Room A/B
Barcoding Species for Quarantine/Plant Protection	Seminar Room C
Marine Species	Seminar Room D
All Birds Barcoding Initiative and Vertebrates	Seminar Room E

Wednesday, 11-November

Session 3: Case Studies:

Impact of barcode data in research areas beyond taxonomy

9:00-9:20	Dario Lijtmaer, MACN, Argentina, “ Barcoding large Sets of Birds Allows Insights Into Patterns Of Evolution, Biogeography And Speciation ” (video)
9:20-9:40	C.J. Geraci, Smithsonian
9:40-10:00	Alex Smith, BIO, University of Guelph, “ Integrating Community Ecology & DNA Barcoding ”
10:00-10:20	Eske Willersley, University of Copenhagen, “ Hunting the Molecular Past ” (video)
10:20-10:40	Open discussion

Session 4: Informatics and Data Analysis

11:10-11:30	Neil Sarkar, University of Vermont, “ Barcode Analytics: Wherefrom, Wherenow, & Whereto? ” (video)
11:30-11:50	Sujeewan Ratnasingham, BIO, University of Guelph (vidMeleo)
11:50-12:10	Joaquín Giménez, IBUNAM, “ UNIBIO ” (video)
12:10-12:30	Kasper Munch, Univ. California Berkeley, “ Statistical Discovery of Un-sampled Populations or Species ” (video)
12:30-12:45	Open discussion (video)

Parallel Technical Session C – 2:00-4:00

Plant Working Group	Auditorium A
Data Analysis Working Group	Auditorium B
Fish-BOL	Seminar Room A
Large-Scale Initiatives	Seminar Room B
Fungi, Algae, Protists & New Groups	Seminar Room C
Insects/Terrestrial Arthropods	Seminar Room D
BeeBOL Symposium	Seminar Room E

Parallel Technical Session D – 4:00-6:00

Barcoding Databases, Protocols and Education	Auditorium A
Data Analysis Working Group	Auditorium B
Fish-BOL	Seminar Room A
Barcoding the Trees of Africa	Seminar Room B
Fungi, Algae, Protists & New Groups	Seminar Room C
Insects/Terrestrial Arthropods	Seminar Room D
BeeBOL Symposium	Seminar Room E

Plenary Speakers & Technical Session Summaries

Thursday, 12-November

Session 5: Case studies of Applications

- 9:00-9:20 Phaedra Doukakis, Stony Brook University
- 9:20-9:40 George Amato, American Museum of Natural History, “[DNA Barcoding Initiative for Conservation](#)” (video)
- 9:40-10:00 Daniel Masiga, ICIPE, Nairobi, “[Analysis of mitochondrial cytochromes reveal key sources of tsetse fly bloodmeals in East Africa](#)” (video)
- 10:00-10:20 Jeremy deWaard, University of British Columbia (video)
- 10:20-10:40 Bernard Sweeney, Stroud Water Center, “[Water quality analysis with macroinvertebrate barcoding](#)” (video)

Session 6: Barcoding and Next Generation Sequencing Technologies

- 11:10-11:30 Mehrdad Hajibabaei, BIO, University of Guelph, “[Next-generation biodiversity analysis](#)”
- 11:30-11:50 Tom Bruns, Univ. California Berkeley, “[The Promise and Challenge of Environmental Sequences -an Example from the Fungi](#)” (video)
- 11:50-12:10 Shadi Shokralla, Biodiversity Institute of Ontario
- 12:10-12:30 Michael Rhodes, Applied Biosystems, California, USA, “[Barcodes and Life Technologies™](#)” (video)
- 12:30-12:45 Open discussion

Parallel Technical Session E– 2:00-4:00

Meso-American Symposium
Canadian Network Business Meeting

Auditorium A/B
Seminar Room A/B

Parallel Technical Session F– 4:00-6:00

Meso-American Symposium

Auditorium A/B

Technical Sessions

Tuesday, 10-November

Session A

Plant Working Group (Chair: Sean Graham)		Auditorium A
2:00-2:15	Aron Fazekas , <i>University of Guelph</i> Patterns of plant species diversity below ground as revealed by DNA barcoding	
2:15-2:30	Andrew Lowe , <i>University of Adelaide</i> Seeing the forest from the trees: Australian tree diversity	
2:30-2:45	Victoria Sosa , <i>Instituto de Ecología, A.C.</i> An evaluation of multilocus DNA barcodes in five Mexican plant groups	
2:45-3:00	Harold Schneider , <i>Natural History Museum, London</i> Utility of plastid "barcodes" to identify plant species	
3:00-3:15	J.Y. Song , <i>Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences, Beijing, China</i> Use of The ITS2 Region as a Universal Barcode to Identify Medicinal Plants	
3:15-3:30	Fernando Nicolalde-Morejón , <i>Instituto de Ecología, A.C.</i> DNA barcoding in the Mexican cycads: a character attribute organization system (CAOS) approach	
3:30-4:00	Coffee Break	

Pathogens, Disease Vectors & Parasites (Chair: Virginia León Règagnon)		Auditorium B
2:00-2:15	Scott Monks , <i>U. Autónoma del Estado de Hidalgo</i> Potholes in the road to DNA barcodes for parasites	
2:15-2:30	Gabriela Parra-Olea , <i>IBUNAM</i> Genetic studies of chytridiomycosis, an emerging infectious disease of amphibians	
2:30-2:45	Alejandro Ocegüera-Figueroa , <i>American Museum of Natural History</i> Use of DNA barcoding to detect invasive species and solve taxonomic problems	
2:45-3:00	Mateus Pepinelli , <i>Universidade de São Paulo</i> DNA barcoding highlights issues with morphology-based taxonomy of Neotropical black flies (Diptera: Simuliidae)	
3:00-3:15	Narendran Pradeep Kumar , <i>Vector Control Research Centre Field Station (ICMR)</i> DNA barcoding of mosquitoes in India	
3:15-3:30	Yvonne-Marie Linton , <i>Natural History Museum, London</i> Mosquito Barcoding Initiative(MBI): announcing the first data release paper	
3:30-4:00	Coffee Break	

Technical Sessions

Tuesday, 10-November

Session A, continued

FISH-BOL		Seminar Room A/B
2:00-2:15	Richard Mayden , <i>Saint Louis University</i> DNA Barcoding and North American freshwater fishes	
2:15-2:30	Luiz Henrique Pereira , <i>Universida de Estadual Paulista (UNESP) – Botucatu, São Paulo, Brazil</i> DNA barcode and the hidden diversity in the neotropical freshwater fishes	
2:30-2:45	Erik García-Machado , <i>Centro de Investigaciones Marinas, Universidad de la Habana</i> DNA barcoding of Cuban freshwater fishes: evidence for cryptic species and taxonomic conflicts	
2:45-3:00	Daniel Carvalho , <i>Universidade Federal de Minas Gerais</i> DNA barcode of the fish species from the São Francisco river basin, Brazil	
3:00-3:15	Claudio Oliveira , <i>Universidade Estadual Paulista (UNESP) – Botucatu, São Paulo, Brazil</i> Barcoding freshwater fishes from Upper Parana Basin	
3:15-3:30	Jefferson Henriques , <i>Universidade Estadual Paulista - UNESP</i> Molecular Identification of Fishes From Ribeira de Iguape Basin –São Paulo State –Brazil	
3:30-4:00	Coffee Break	

Barcoding Species for Quarantine/Plant Protection (Chair: Isabel González)		Seminar Room C
2:00-2:15	Introduction	
2:15-2:30	Andrew Mitchell , <i>NSW Department of Industry and Improvement</i> Mind the gap: DNA Barcodes & diagnostic standards	
2:30-2:45	Laura Boykin , <i>Bio-Protection Research Centre</i> Realizing the Scope for Barcodes in Biosecurity	
2:45-3:00	Wen Chen , <i>Carleton University</i> DNA Barcodes for the Profiling of Microbiota in Environmental Samples	
3:00-3:15	Adeniyi Akanni Jayeola , <i>University of Ibadan</i> Selecting priority trees for DNA Barcoding in Africa	
3:15-3:30	Rebecca Nakacwa , <i>National Agricultural Research Laboratories</i> Soil nematode diversity and community composition as a basis for biosafety assessment of transgenic banana in the field	
3:30-4:00	Coffee Break	

Marine Barcoding		Seminar Room D
2:00-2:15	Ann Bucklin , <i>University of Connecticut</i> DNA Barcoding of Marine Zooplankton: Current Status and Applications for Ecosystem Monitoring	
2:15-2:30	Leo Blanco-Bercial , <i>University of Connecticut</i> Global phylogeographies of the planktonic copepod <i>Clausocalanus</i> based on DNA barcodes	
2:30-2:45	Adriana Radulovici , <i>University of Quebec at Rimouski</i> Marine Crustaceans identified by DNA barcodes	
2:45-3:00	Paola Batta Lona , <i>University of Connecticut</i> DNA barcodes for species identification and population genetics analysis of Southern Ocean Krill	
3:00-3:15	Laetitia Plaisance , <i>Smithsonian Institution National Museum of Natural History</i> Standardized sampling and DNA Barcoding for Assessing Coral Reef Biodiversity	
3:30-4:00	Coffee Break	

Technical Sessions

Tuesday, 10-November

Session A, continued

All Bird Barcoding Initiative & Vertebrates		Seminar Room E
2:00-2:15	Mariana Lyra , <i>Universidad Estadual de Campinas</i> Barcoding anurans from Brazilian Atlantic forest	
2:15-2:30	Jing Che , <i>State Key Laboratory of Molecular Evolution and Genome Diversity</i> Barcoding amagid lizards in southern China and Vietnam	
2:30-2:45	Kevin Kerr , <i>BIO, University of Guelph</i> COI barcode resolution in eastern Palearctic birds	
2:45-3:00	Pilar Benites , <i>Museo Argentino de Ciencias Naturales</i> Neotropical birds barcoding: a joint initiative	
3:00-3:15	Leonardo Campagna , <i>Museo Argentino de Ciencias Naturales</i> COI flags a recent radiation in passerine birds	
3:15-3:30	Patricia Escalante , <i>Instituto de Biología Universidad Nacional Autónoma de México</i> Highlights of the Birds of Mexico (BOM) project	
3:30-4:00	Coffee Break	

Technical Sessions

Tuesday, 10-November

Session B

Plant Working Group (Chair: Gerardo Salazar) Auditorium A	
4:00-4:15	Mike Wilkinson , <i>Aberystwyth University</i> Compiling and exploiting a national barcode for Wales (video)
4:15-4:30	Wendy Clement , <i>Yale University</i> Barcoding the woody plant genus <i>Viburnum</i> (video)
4:30-4:45	Sribash Roy , <i>National Botanical Research Institute, Lucknow, Uttar Pradesh, India</i> Plant DNA barcoding and concept of a universal locus may not work in complex group: a case study with <i>Berberis</i>
4:45-5:00	David Gernandt , <i>Instituto de Biología, Universidad Nacional Autónoma de México, México DF, México</i> Genealogical nonmonophyly in <i>Pinus</i> and its relevance for DNA barcoding (video)
5:00-5:15	Diana Percy , <i>University of British Columbia</i> Plant barcoding in taxonomically complex groups: willows and grasses
5:15-5:30	Hugh Cross , <i>State Herbarium of South Australia</i> Into the Gluming: DNA Barcoding the Grasses of the World (video)

Pathogens, Disease Vectors & Parasites (Chair: Yvonne-Marie Linton) Auditorium B	
4:00-4:15	Gerardo Pérez Ponce de León , <i>IBUNAM</i> Molecular prospecting for cryptic species of parasites: are DNA barcodes useful? (video)
4:15-4:30	Sean Locke , <i>Concordia University</i> Barcoding advances freshwater fish parasitology
4:30-4:45	David Marcogliese , <i>Environment Canada</i> Do we need barcodes for the parasitic helminths?
4:45-5:00	Hugo Mejía Madrid , <i>CINVESTAV- Mérida</i> Nematode diseases: the plurality of DNA barcoding
5:00-5:15	Virginia León Règagnon , <i>IBUNAM</i> Barcodes- COI Sequences of helminths of wild vertebrates in Mexico (and their potential use as barcodes)
5:15-5:30	Daniel Brooks , <i>University of Toronto</i> The Biodiversity Crisis Meets the Emerging Disease Crisis: Basic Science Informing Genetic Bar-Coding (video)

FISH-BOL Seminar Room A/B	
4:00-4:15	G.D. Khedkar , <i>Dr. Babasaheb Ambedkar Marathwada University</i> DNA barcoding reveals a discontinuous genetic diversity pattern of fish in the Godavari river, India (video)
4:15-4:30	Rosalee Rasmussen , <i>Oregon State University</i> DNA barcoding of commercially important salmon and trout species in North America (video)
4:30-4:45	Dickens Odeny , <i>National Museums of Kenya</i> DNA barcoding: refining parataxonomy for fishery surveys
4:45-5:00	Nina Bogutskaya , <i>Zoological Institute, Russian Academy of Sciences</i> Barcoding of the freshwater fish fauna of Russia: a pilot project (video)
5:00-5:15	Julien April , <i>Université Laval</i> Barcoding freshwater fishes: extensive coverage and sub-specific identification (video)
5:15-5:30	Jonathan Banks , <i>Department of Biological Sciences, University of Waikato</i> Biosurveillance of fish and zooplankton in New Zealand lakes and reservoirs using DNA barcoding (video)

Technical Sessions

Tuesday, 10-November

Session B, continued

Barcoding Species for Quarantine/Plant Protection (Chair: Marc de Meyer)		Seminar Room C
4:00-4:15	Vazrick Nazari , <i>BIO, University of Guelph</i> Coleophora (Lepidoptera, Coleophoridae): enhanced species discovery and taxonomy through DNA barcoding (video)	
4:15-4:30	Antonio Hernández López , <i>Institut National de la recherche Agronomique (INRA)</i> Host tracking, cryptic adaptation? A barcode study of the parasitoid of the horse chestnut leafminer	
4:30-5:00 (Posters)	Badrul Bhuiya , <i>University of Chittagong</i> DNA barcoding of Agromyzid leaf miners and their parasitoids in Bangladesh	
	Nelson Ntonifor , <i>University of Buea</i> Arboreal ant species as bio-control agents of pests	
	Andrew Mitchell , <i>NSW Department of Industry and Investment</i> Comprehensive barcoding of Australian Heliothine moths	

Marine Barcoding		Seminar Room D
4:00-4:15	Francis Xavier Kidangan , <i>National Institute of Oceanography</i> Molecular systematic of prawns under the family Penaeidae of Indian coast (video)	
4:15-4:30	Tyler Zemplak , <i>Dalhousie University</i> The intelligent observer: investigating post-zygotic isolation with BOLD (video)	
4:30-4:45	Julien Lorion , <i>Museum National d'Histoire Naturelle</i> Marine invertebrates and the "barcode factory" at the Museum National d'Histoire Naturelle (video)	
4:45-5:00	A. Biju Kumar , <i>University of Kerala</i> Molecular taxonomy of putrefied Cetaceans- A case study (video)	

All Bird Barcoding Initiative & Vertebrates		Seminar Room E
4:00-4:15	Brendan Reid , <i>American Museum of Natural History</i> Distance-based and character-based approaches to barcoding turtles	
4:15-4:30	Elizabeth Clare , <i>BIO, University of Guelph</i> Genetic Identification of Prey Species in Guano: Spatial and Temporal Variation in Food Webs	
4:30-4:45	Cristina Miyaki , <i>Universidade de Sao Paulo</i> DNA barcodes against the illegal parrot trade	
4:45-5:00	Matthew Miller , <i>Smithsonian Tropical Research Institute</i> Barcoding the Birds of Panama	
5:00-5:15	Mark Stoeckle , <i>Rockefeller University</i> Visualizing Avian Diversity with Barcodes: Indicator vector approach to analysis and display of DNA sequences	

Technical Sessions

Wednesday, 11-November

Session C

Plant Working Group (Chair: David Gernandt)		Auditorium A
2:00-2:15	Santiago Madriñán , <i>Universidad de los Andes</i> ArBOL: A DNA barcoding initiative for neotropical plants (video)	
2:15-2:30	Rolando Bárcenas , <i>Universidad Autonoma de Queretaro</i> DNA barcodes could help to identify and conserve Mexican Cactaceae	
2:30-2:45	G. Salazar , <i>Instituto de Biología, UNAM, D. F., Mexico</i> DNA barcoding of Mexican oaks (video)	
2:45-3:00	Ramalingham Sathishkumar , <i>Bharathiar University</i> Conventional and novel DNA barcodes for <i>Apocyanaceae</i> (video)	
3:00-3:15	Chang Liu , <i>University of Hong Kong</i> The psbA-trnH Intergenic Spacer Locus Analyzer-a web application for DNA barcoding studies (video)	
3:15-3:30	Karen James , <i>Natural History Museum, London</i> Project BarkCode: engaging schools in UK Plant Barcoding (video)	
3:30-4:00	Coffee Break	

Insects/Terrestrial Arthropods: Utility & Alternative Approaches (Chair: Atilano Contreras-Ramos)		Auditorium B
2:00-2:15	Rodolphe Rougerie , <i>BIO, University of Guelph</i> DNA barcoding Lepidoptera: what beyond taxonomy? (video)	
2:15-2:30	Massimiliano Virgilio , <i>Royal Museum for Central Africa</i> Performance of DNA barcoding for insect identification (video)	
2:30-2:45	Julio Rivera , <i>Universidad Nacional Agraria</i> DNA barcoding and the phylogeography of the blackfly <i>Prosimulium trivisi</i> (Diptera: Simuliidae)	
2:45-3:00	Johannes Bergsten , <i>Swedish Museum of Natural History, Stockholm</i> , Geographical scale of sampling on DNA barcoding (video)	
3:00-3:15	Pedro M. Pedro , <i>BIO, University of Guelph</i> Degree of 28s rDNA divergence in Costa Rican barcoded Lepidoptera (video)	
3:15-3:30	Michael Raupach , <i>Zoologisches Forschungsmuseum Alexander Koenig</i> Molecular taxonomy of ground beetles (Insecta: Carabidae) in Central Europe: a multi-marker approach (video)	
3:30-4:00	Coffee Break	

Technical Sessions

Wednesday, 11-November

Session C, continued

FISH-BOL		Seminar Room A
2:00-2:15	Martha Valdez-Moreno , <i>El Colegio de la Frontera Sur</i> Advance with fish barcodes in Mexico	
2:15-2:30	Juan Díaz de Astarloa , <i>Departamento de Ciencias Marinas, Universidad Nacional de Mar del Plata</i> Barcoding Argentine marine fishes	
2:30-2:45	Wazir Lakra , <i>National Bureau of Fish Genetic Resources</i> DNA Barcoding the Indian Fishes (video)	
2:45-3:00	Agnes Dettai , <i>Museum National d'Histoire Naturelle</i> The CEAMARC survey: Barcodes as a multi level tool for new findings in Antarctic teleosts (video)	
3:00-3:15	Yuri Kartavtsev , <i>A.V. Zhirmunsky Institute of Marine Biology of the FEB RAS</i> Sequence divergence at CO-1 and Cyt-B mtDNA on different taxonomic levels and genetics of speciation and phylogenetics (video)	
3:15-3:30	Kwang-Tsao Shao , <i>Biodiversity Research Center, Academia Sinica</i> Accuracy of morphological identification of larval fishes (video)	
3:30-4:00	Coffee Break	

Large-Scale Initiatives		Seminar Room B
2:00-2:15	Cara Gibson , <i>The National Ecological Observatory Network (NEON)</i> The NEON Fundamental Sentinel Unit: Organismal measurements and DNA barcoding in a national network	
2:15-2:30	Jesus Mavarez , <i>Centro de Ecología, Instituto Venezolano de Investigaciones Científicas</i> GenoMaps: DNA Barcoding applied to a large-scale biodiversity monitoring initiative in South America	
2:30-2:45	Laura Epp , <i>National Center for Biosystematics (NCB), Natural History Museum, University of Oslo</i> BARFROST- A new project for reconstructing past ecosystems by barcoding DNA from permafrost	
2:45-3:00	Vincent Opyene , <i>Uganda Wildlife Authority</i> Application of DNA in bushmeat barcoding in prosecution of wildlife crimes in East Africa	
3:00-3:15	Neil Davies , <i>University of California, Berkeley</i> International Ecostations Journal: BioIP Management Solution	
3:15-3:30	Discussion	
3:30-4:00	Coffee Break	

Technical Sessions

Wednesday, 11-November

Session C, continued

Fungi, Algae, Protists & New Groups (Chair: Pedro Crous)		Seminar Room C
2:00-2:15	Wieland Meyer , <i>University of Sydney</i> Barcoding of pathogenic fungi- ITS region and its limitations (video)	
2:15-2:30	Roberto Garibay-Orijel , <i>Universidad Nacional Autonoma de Mexico (UNAM)</i> The framework to barcode neotropical ectomycorrhizal fungi	
2:30-2:45	Matteo Garbelotto , <i>University of California, Berkeley</i> Biocoding the fungi of Moorea (video)	
2:45-3:00	Agathe Vialle , <i>Centre d'Etude de la Forêt</i> DNA Barcoding of fungal species from poplar leaves (video)	
3:00-4:00	Coffee Break	

Data Analysis Working Group (DAWG) (Chair: Neil Sarkar)		Seminar Room D
2:00-2:18	Melanie Lou , <i>McMaster University</i> Assigning sequences to species in the absence of a barcoding gap	
2:18-2:36	John Wilson , <i>BIO, University of Guelph</i> Assigning unknowns to higher taxa using DNA Barcodes: Effect of library completeness and assignment criteria	
2:36-2:54	Catherine Laredo , <i>l'institut national de la recherche agronomique (INRA)</i> Error rates of phylogenetic and supervised classification algorithms in DNA Barcoding	
2:54-3:12	Giovanni Felici , <i>Istituto di Analisi dei Sistemi ed Informatica Consiglio Nazionale delle Ricerche</i> The BLOG system: Logic data mining for compact explanatory species classification	
3:12-3:30	Pavel Kuksa , <i>Rutgers University</i> Alignment-free methods for DNA Barcode analysis	
3:30-4:00	Coffee Break	

BeeBol Symposium		Seminar Room E
2:00-2:05	Ricardo Ayala , <i>IBUNAM</i> Introduction	
2:05-2:20	Laurence Packer , <i>York University</i> "Barcoding" the bees of the world: progress, problems, prognosis (video)	
2:20-2:35	Jason Gibbs , <i>York University</i> DNA barcoding a nightmare taxon (video)	
2:35-2:50	Nelly Ndungu , <i>International Centre for Insect Physiology and Ecology</i> Morphometrics and DNA barcoding of stingless bees in Kenya	
2:50-3:05	Ricardo Ayala , <i>IBUNAM</i> The native bees of México and the DNA Barcode of Life project (video)	
3:05-3:20	Seán Brady , <i>Smithsonian Institution - NMNH</i> Applying DNA barcoding and morphology toward improving the taxonomy of the cleptoparasitic bee genus <i>Nomada</i> (video)	
3:20-3:35	Sheila Dumesh , <i>York University</i> Barcoding bees with emphasis on Canadian <i>Megachile</i>: implications, resolutions and new associations	
3:35-4:00	Coffee Break	

Technical Sessions

Wednesday, 11-November

Session D

Barcoding the Trees of Africa (Chair: Helida Oyieke)		Auditorium A
4:00-4:15	Olivier Maurin , <i>University of Johannesburg</i> Explaining tree and shrub regional diversity patterns in the Kruger National Park (South Africa) using DNA Barcoding data	
4:15-4:30	Michelle van der Bank , <i>University of Johannesburg</i> Strengthening Africa's capacity in DNA technologies for biodiversity research and sustainable use	
4:30-4:45	Yalemtseha Mekonnen Tadesse , <i>Addis Ababa University</i> Strengthening TreeBOL Africa initiative (video)	
4:45-5:00	Paul T. Lyam , <i>National Center for Genetic Resources and Biotechnology (Nacgrab)</i> Barcoding threatened plant species of West Africa– Nigeria as a case study (video)	
5:00-5:15	O.T. Ogundipe , <i>University of Lagos</i> Tree BOL Lagos: barcoding of trees in Lagos	

Insects/Terrestrial Arthropods: Biodiversity Studies		Auditorium B
(Chair: Alejandro Zaldívar-Riverón)		
4:00-4:15	Rodolphe Rougerie , <i>BIO, University of Guelph</i> DNA barcoding of archival Lepidoptera specimens (video)	
4:15-4:30	Xin Zhou , <i>BIO, University of Guelph</i> Trichoptera Barcode of Life: probing caddisfly diversity with DNA barcodes (video)	
4:30-4:45	Birthe Thormann , <i>Zoologisches Forschungsmuseum Alexander Koenig</i> Testing a short nuclear barcode for inferring staphylinid beetle diversity in an African rainforest (video)	
4:45-5:00	Brian Fisher , <i>California Academy of Sciences</i> Invisible Majority: Identifying cryptic invasives in the Malagasy region (video)	
5:00-5:15	Facundo Labarque , <i>Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"</i> Inferring biodiversity patterns and life-history traits in ray spiders (Araneae, Theridiosomatidae)	
5:15-5:30	Jonathan Clark , <i>Weber State University</i> DNA barcoding of shore flies from Great Salt Lake (video)	

FISH-BOL		Seminar Room A
4:00-4:15	Nicolas M. Hubert , <i>Ephe-Université de Perpignan</i> Identifying early stages of coral reef fishes through DNA barcoding: a test case with the families Acanthuridae and Holocentridae (video)	
4:15-4:30	Jonathan Deeds , <i>US Food and Drug Administration Center for Food Safety and Applied Nutrition</i> US FDA Validation of DNA Barcoding to promote Seafood Safety and Combat Economic Adulteration	
4:30-4:45	Dirk Steinke , <i>BIO, University of Guelph</i> One gene – all fishes? DNA barcoding and mitochondrial protein evolution in fishes (video)	
4:45-5:30	Open Discussion	

Technical Sessions

Wednesday, 11-November

Session D, continued

Barcoding Databases, Protocols and Education		Seminar Room B
4:00-4:15	Robert Hanner, <i>BIO, University of Guelph</i> Bio-pedagogy and DNA Barcoding: The Canadian National Market Survey	
4:15-4:30	Evgeny Zakharov, <i>BIO, University of Guelph</i> Quality assurance and crowd control in a high-throughput DNA barcoding facility	
4:30-4:45	Alex Borisenko, <i>BIO, University of Guelph</i> A template for field for field data collection to aid DNA barcoding (video)	
4:45-5:00	Juncai Ma, <i>Institute of Microbiology, Chinese Academy of Sciences</i> The Information System of DNA Barcode of Life in China (video)	
5:00-5:15	Natalia Ivanova, <i>BIO, University of Guelph</i> Protocols for dry DNA storage and shipment at room temperature (video)	
5:15-5:30	Thomas Knebelberger, <i>Zoologische Staatssammlung München</i> Beyond barcoding – Secure DNA storage (video)	

Fungi, Algae, Protists & New Groups (Chair: Line Le Gall)		Seminar Room C
4:00-4:15	Gary E. Saunders, <i>University of New Brunswick</i> Molecules versus morphologies – a contemporary floristic survey of Canadian seaweeds (video)	
4:15-4:30	David Porco, <i>BIO, University of Guelph</i> Barcoding invasives: a new tool for invasion monitoring in soil (video)	
4:30-4:45	Rina Ramírez, <i>Museum of Natural History, San Marcos University</i> Barcoding orthalicid land snails from Peru (video)	

Data Analysis Working Group (DAWG) (Chair: Neil Sarkar)		Seminar Room D
4:00-4:18	Mark Stoeckle, <i>Rockefeller University</i> Visualizing Large DNA Barcode Data Sets: Indicator vector approach to analysis and display of DNA sequences	
4:18-4:36	Taika von Königslöw, <i>BIO, University of Guelph</i> Diagnostica: A tool for identifying diagnostic DNA characters	
4:36-4:54	Raúl Jiménez-Rosenberg, <i>CONABIO</i> Linking DNA barcodes and biodiversity information: the Biodiversity Information System of Mexico	
4:54-5:12	Mihai Albu, <i>Concordia University</i> The DNA Barcode Linker: An efficient web tool for specimen identification	
5:12-5:30	Justin Schonfeld, <i>BIO, University of Guelph</i> A Tool for Visualizing Amino Acid Variation in the COI Barcode Region	

Technical Sessions

Wednesday, 11-November

Session D, continued

BeeBOL Symposium	Seminar Room E
4:00-4:15	Robert Paxton , <i>Queen's University Belfast</i> Barcoding reveals cryptic bumble bee species diversity (video)
4:15-4:30	Carmen Lucia Yurrita , <i>Universidad de San Carlos de Guatemala</i> The bee fauna of Guatemala and the importance of the participation in the Barcode of Life (video)
4:30-4:45	Nicholai de Silva , <i>York University</i> Biodiversity with DNA Barcodes and Morphology
4:45-5:00	Harrison Kibogo , <i>International Centre of Insect Physiology and Ecology</i> Molecular characterization of Honeybees (<i>Apis mellifera</i>) races from Kenya using barcoding markers
5:00-5:15	Jose Javier Quezada-Euan , <i>UNAM</i> Conserving pollinatorus in Mexico: DNA Barcodes to identify cryptic species in stingless bees (Hymenoptera:Meliponini)
5:15-5:30	Miriam Richards , <i>Brock University</i> Niche partitioning based on nesting biology in twig-nesting carpenter bees revealed by congruent variation in behavior, morphology, and DNA barcodes (video)
5:30-6:00	Open Discussion

Technical Sessions

Thursday, 12-November

Session E

Meso-American Symposium Auditorium A	
2:00-2:15	Manuel Elías-Gutiérrez , <i>ECOSUR Chetumal</i> MEXBOL, the Mexican commitment to DNA barcodes (video)
2:15-2:30	Patricia Escalante , <i>IBUNAM</i> Development of the academic node of MexBOL at the Institute of Biology of UNAM
2:30-2:45	Robert Bye , <i>IBUNAM Botanical Garden</i> Complementarity and challenges of DNA bar codes for taxonomic determination of useful plants – potential application to medicinal plants of Mexico (video)
2:45-3:00	Virginia León Règagnon , <i>IBUNAM Chamela</i> All Taxa Barcoding Initiative in Chamela-Cuixmala, México
3:00-3:15	Martha Valdéz-Moreno , <i>ECOSUR Chetumal</i> FISHBOL strategies in Mesoamerica (video)
3:15-3:30	Adolfo Gracia , <i>Brock University</i> Crustacean decapods of the Gulf of Mexico- superfamily Penaeoidea (video)
3:30-4:00	Coffee Break

Session F

Meso-American Symposium	
4:00-4:15	Joaquín Cifuentes , <i>Facultad de Ciencias UNAM</i> Complementing Macrofungi Campaigns: taxonomic and regional inventories and functional groups biodiversity studies (video)
4:15-4:30	Andrew Polaszek , <i>Natural History Museum, London</i> Barcoding megadiverse <i>Encarsia</i> parasitoids in Mexico (video)
4:30-4:45	Patricia Landaverde , <i>Universidad de San Carlos de Guatemala</i> Biodiversity of Guatemala and the importance of participating in the Barcode of Life (video)
4:45-5:00	Lucia Páiz-Medina , <i>Universidad Centroamericana</i> DNA Barcode of Midas Cichlidae species complex inhabiting lakes and lagoons of Nicaragua (video)
5:00-5:15	Daniel Janzen , <i>University of Pennsylvania</i> Barcoding a very complex tropical trophic food web (video)

Poster Presentations

Poster	Presenter	Institution	Title
A1	Claudia Bertrand	BIO, University of Guelph	Exploring shallow splits in Costa Rican barcoded Lepidoptera
A2	Torbjørn Ekrem	Norwegian University of Science and Technology	DNA barcoding demonstrates need for taxonomic revisions in the midge family Chironomidae (Diptera)
A3	Swapnil Gaikwad	Department of Zoology, Modern College	Barcoding butterflies and skippers from Western Ghats, India
A4	Marco Antonio Marinho	Centro de Biología Molecular e Engenharia Genética - CBMEG / Campinas State University - UNICAMP	Perspectives of ITS2 as DNA barcoding in blowflies
A5	Paul Hebert	BIO, University of Guelph	A tRNA based primer cocktail for mitochondrial CO1 barcoding of Hexapoda
A6	Paul Hebert	BIO, University of Guelph	DNA barcoding the Hemiptera
A7	Eugene Phillips-Rodríguez	Instituto Nacional de Biodiversidad	Morphological analysis of Antaeotricha species units that are differentiated by DNA barcoding
A8	Blanca Prado	El Colegio de la Frontera Sur (ECOSUR)	Identifying Mexican species of Lepidoptera using barcodes
A9	Yogesh Shouche	National Centre for Cell Science	DNA Barcoding to distinguish species of Indian Orthoptera
A10	Massimiliano Virgilio	Royal Museum for Central Africa	DNA barcoding and mini-barcoding for molecular identification of Diptera
B1	E. Escobar	Universidad Nacional Autónoma de México	Genetic homogeneity and connectivity among populations of species <i>Munidopsis geyeri</i> and <i>Alvinocaris muricola</i> of the Atlantic Equatorial belt
B2	Ann Bucklin	Woods Hole Oceanographic Institution	Species Identification in the Thaliacea
B3	Arely Martinez-Arce	El Colegio de la Frontera Sur (ECOSUR)	DNA barcoding of free-living marine nematodes using 28S rDNA gene
B4	G. D. Khedkar	Dr. Babasaheb Ambedkar Marathwada University	DNA barcoding marine fishes from Kakinada coast, (A.P.) India
B5	Lisa Nigro	University of Connecticut	DNA barcoding of marine planktonic ostracods: gold standard database for an 'invisible' group
B6	A. Rocha-Olivares	Centro de Investigación Científica y Educación Superior de Ensenada	Morphological and molecular approaches to assess marine nematode diversity: Implications for DNA barcoding
B7	Tamer Albayrak	Department of Biology, University of Mehmet Akif Esroy	Biodiversity of Turkey, DNA barcoding of the flora and bird fauna in Anatolia: Project overview
B8	S.K. Ghosh	Assam University	Mitochondrial genome: The biomarker for Indian Biodiversity
C1	Aslam Abubakker	Plant Molecular Biology Lab, Dept of Botany	Conserved blocks in catalytic domain of CKX gene: As a higher taxa marker.
C2	Nese Bilgin	Bogazici University	The Genetic diversity of the <i>Galanthus l.</i> species in Turkey
C3	J.Y. Song	Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences	Identification of plant species in the family Rutaceae with the use of DNA barcoding
C4	J.P. Han	Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences, Peking Union Medical College	Internal transcribed spacer 2 (ITS2) region is a universal barcode for gymnosperms
C5	Li-Yaung Kuo	Institute of Ecology and Evolutionary Biology, National Taiwan University	Searching for barcode regions/sectors applying for new generation sequencing technique: a case from fern genus <i>Deparia</i>
C6	Maria Kuzmina	BIO, University of Guelph	Using two-locus DNA barcodes to barcode a regional flora in Costa Rica (video)
C7	Teresa Mejia-Saules	Instituto de Ecología, A.C.	DNA Barcode for Mexican Bamboos (Poaceae: Bambusoideae)

Poster Presentations

C8	Elisa Sukanuma	<i>New York Botanical Garden</i>	A DNA barcode flora of the northeastern United States and adjacent Canada
C9	George Thomas	<i>Rajiv Gandhi Centre for Biotechnology</i>	DNA barcoding of three genera of Indian Zingiberaceae
C10	H. Yao	<i>Institute of Medicinal Plant Development, CAMS, Peking Union Medical College</i>	Testing the feasibility of DNA barcoding in a large family, Fabaceae
C11	Hiroshi Yoshimaru	<i>Forestry and Forest Products Research Institute</i>	DNA barcoding on woody plants in Japan
C12	Muhammad Zuberi	<i>University of Rajshahi</i>	Barcoding jackfruits for documentation, domestication and conservation in Bangladesh
C13	L. Pasakinskiene	<i>Botanical Garden of Vilnius University</i>	Molecular marker approach in plant biodiversity and taxonomy studies at the botanical garden of Vilnius University
C15	Sergio Ticul Álvarez-Castañeda	<i>Centro de Investigaciones Biológicas del Noreste</i>	DNA Barcodes of topotypes mammals of Mexico I: Northwest Mexico
C16	Consuelo Lorenzo	<i>El Colegio de la Frontera Sur</i>	Analysis of the endemic and endangered species of <i>Heteromys</i> in Mexico
C17	Alejandro Zaldívar-Riverón	<i>Sutrisno Center for Plant Conservation Bogor Botanic Gardens - Indonesian Institute of Sciences</i>	Species diversity in a group of parasitoid wasps from the Chamela-Cuixmala biosphere reserve
C18	Francisco Vergara-Silva	<i>Instituto de Biología, UNAM, Mexico City, Mexico</i>	DNA barcoding, essentialism and instrumentalism: a reexamination
C19	Rosamond Coates	<i>Instituto de Biología, Universidad Nacional Autónoma de México, Estación de Biología Tropical Los Tuxtlas</i>	An all taxa barcode initiative for the biota of a biodiversity hotspot in Veracruz, Mexico
D1	B.J. Brito	<i>Instituto de Biología, UNAM, Mexico City, Mexico</i>	Identification of early life-history stages of Belizean apogon (Teleostei: Apogonidae) through DNA barcoding
D2	Tun-Yuan Cheng	<i>Biodiversity Research Center, Academia Sinica</i>	A new species of <i>Parapercis</i> (Teleostei: Pinguipedidae) in the waters off northeastern Taiwan based on morphological evidence and DNA barcoding
D3	Xavier Valencia	<i>Instituto de Biología, UNAM</i>	Comparative analysis of two species of <i>Profundulus</i> (Pisces: Profundulidae), using two genetic markers
D4	Jefferson Henriques	<i>Universidade Estadual Paulista - UNESP</i>	Barcoding freshwater fishes from coastal rivers, Brazil
D5	Prasana Kumar	<i>Division of DNA Barcoding, Marine Life</i>	DNA barcoding solves the taxonomic ambiguity persisted within Mugilidae
D6	Sami LAKKIS	<i>Section of Oceanography, Lebanese University</i>	Inheritance Study using ISSR technique, between three marine Fish species of Sparidae family from Syrian waters (East Mediterranean),
D7	Ciro Oyarzún	<i>Universidad de Concepción</i>	Phylogenetic relationships for South American pinkling genus <i>Genypterus</i>
D8	Ma. Josefa Pante	<i>University of the Philippines - Marine Science Institute</i>	Molecular identification of fish larvae of the Bicol Shelf, Philippines
D9	Irene Schiavetti	<i>Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta</i>	DNA barcode: Fish species identification in the IZS lab
D10	Shanmugam Achiraman	<i>Bharathidasan University</i>	Evaluation of environmental pollution and its impact on fishes in Cauvery River, Tamilnadu, India
D11	Svetlana N. Sharina	<i>A.V. Zhirmunsky Institute of Marine Biology of Far Eastern Branch of Russian Academy of Sciences</i>	Barcoding and phylogeny of flatfish from North-West Pacific and surrounding waters

Poster Presentations

D12	Sebastian Kvist	<i>Richard Gilder Graduate School, American Museum of Natural History</i>	Barcoding Bamboozled by Bacteria: Convergence to meatzoan mitochondrial primer targets by marine microbes
D13	Andrew Mitchell	<i>NSW Department of Industry and Investment</i>	DNA barcoding of leafhopper vector-pathogen relationships
D14	Arouna Ndassa	<i>University of Yaoundé I</i>	The <i>Bulinus truncatus/tropicus</i> and the barcoding method
D15	Christie Onyia	<i>National Biotechnology Development Agency</i>	Biodiversity, indigenous knowledge and the issue of biopiracy: The relevance of DNA barcoding and DNA
D16	Badrul Bhuiya	<i>University of Chittagong</i>	DNA barcoding of Agromyzid leaf miners and their parasitoids in Bangladesh
D17	Andrew Mitchell	<i>NSW Department of Industry and Investment</i>	Comprehensive barcoding of Australian Heliiothine moths (Lepidoptera:Noctuidae)
D18	Nelson Ntonifor	<i>University of Buea</i>	Arboreal ant species as bio-control agents of pests
D19	S.S. Gaikwad	<i>Modern College of Arts, Science and Commerce</i>	Barcoding true bug species of India
E1	Kanak Bala	<i>Agriculture and Agri-food Canada</i>	DNA Barcodes for the discovery and identification of new species of Pythium
E2	Jui-Lung Chao	<i>National Sun Yat-Sen University</i>	Barcodes of Scolopendromorpha centipedes of Taiwan
E3	Sergio Cohuo Durán	<i>El Colegio de la Frontera Sur (ECOSUR)</i>	Preliminary results on ostracod barcodes from Yucatan Peninsula
E4	Carlos Congrains	<i>Museum of Natural History, San Marcos University</i>	DNA barcoding for Peruvian <i>Megalobulimus</i> spp. (Mollusca; Gastropoda)
E5	Mehrdad Hajibabaei	<i>BIO, University of Guelph</i>	DNA barcoding of protists in culture collections
E6	M. Elías-Gutiérrez	<i>El Colegio de la Frontera Sur (ECOSUR)</i>	DNA barcoding reveals new freshwater zooplankton species
E7	Jnanendra Rath	<i>Department of Botany, Visva-bharati University</i>	DNA barcoding of Visva-Bharati Culture Collection of Algae
E8	Zirak Mobaraky Fatemeh	<i>University of Tehran</i>	Molecular Taxonomy of <i>Dendrobaena byblica</i> Species Complex in Iran
F1	Marc De Meyer	<i>Royal Museum for Central Africa</i>	DNA barcoding of European <i>Accipiter</i> and their African relatives
F2	Sanil George	<i>Rajiv Gandhi Centre for Biotechnology</i>	DNA barcoding of some amphibians of Western Ghats
F3	Valentina Islas	<i>University of St. Andrews</i>	Practical applications beyond taxonomy: Genetic tools to monitor captive dolphins in aquatic parks and delphinaria
F4	Yasin Bakis	<i>Abant Izzet Baysal University</i>	Resampling techniques for non-alignment based distance measure methods
F5	Peter Kamau	<i>International Centre for Insect Physiology and Ecology (ICIPE)</i>	Morphological characterisation and DNA barcoding of two congeneric <i>Gonometa</i> species in Mwingi (Kenya)
F6	Di Liu	<i>Institute of Microbiology, Chinese Academy of Sciences</i>	The mirror site of BOLD system in China
F7	Omid Mirshamsi Kakhki	<i>University of Tehran</i>	Phylogeny of <i>Mesobuthus eupeus</i> (C.L.Koch, 1839) in Iran using CO1 Sequences