**PROVISIONAL SYMPOSIUM FORMAT**

**Monday, 18 July:** 16.00 to 21.00. Registration of symposium delegates, 5th floor Pontio building. Optional dinner in town or University Halls.

**Tuesday, 19 July**

9:00-9:30  
Opening address: President, FSBI, Univ. Rep. and Gary Carvalho, Symp. Convenor

**Oral Session 1: Gary Carvalho, moderator**

9:30-10:30  
**Jack Jones Memorial lecture**
Waples, Robin: Tiny estimates of the Ne/N ratio in marine fish—are they real?

10:30-10:45  
Gaggiotti, Oscar: Genetic variation in dendritic metapopulations: The effect of variance in deme contribution under asymmetric gene flow

10:45-11:00  
Ferchaud, Anne-Laure: Making sense of the relationships between Ne, Nb and Nc towards defining conservation thresholds in Atlantic salmon (*Salmo salar*)

11:00-11:30  
**Tea / Coffee**

11:30-11:45  
Evanno, Guillaume: Moderate effect of river fragmentation but strong influence of gene flow between ecotypes on the genetic diversity of Brook Lamprey populations

11:45-12:00  
Graham, Carly: Population Structure and Management Implications for Lake Whitefish in Lake Huron: a Genomics Perspective

12:00-12:15  
Launey, Sophie: Influence of seascape and migratory patterns on coastal brown trout genetic structure (*Salmo trutta*)

12:15-12:30  
Ruzzante, Daniel: Connectivity and genetic diversity in four sympatric species inhabiting a dendritic system

12:30-12:45  
Ling, Nicholas: Using genetics to revise the systematics of Dune Lakes galaxiids and date the origins of the New Zealand Dune Lakes

12:45-13:00  
TBA: AFS Student talk

13:00-14:00  
**Lunch: Pontio**

**Scientific Advisory Committee:**
Gary Carvalho (Convenor, UK)
Paul Shaw (Deputy-Convenor, UK)
Stefano Mariani (UK)
Lorenz Hauser (USA)
Kerry Naish (USA)
Jann Martinsohn (Italy)

**Local Organising Committee**
Gary Carvalho
Ian McCarthy
Nigel Milner
Helen Hughes
Jane Smith (Symposium Secretary)
Tuesday, 19 July

Oral Session 2: Lorenz Hauser, moderator

14:05-14:45
Invited speaker
Ovenden, Jennifer: Fisheries stock assessment by numbers as well as by weight and size and sex

14:45-15:00
Tysklind, Niklas: Integration of genetic and population dynamics analysis of sea trout populations around the Celtic and Irish Seas

15:00-15:15
Garza, John Carlos: Genetic Analysis of Hatchery Steelhead from the Central Valley Reveals Patterns of Reproduction and Migration

15:15-15:30
Sinclair-Waters, Marion: Using genomic analysis to measure differentiation, estimate population size, and enhance management of a resident population of Atlantic cod in southern Labrador, Canada

15:30-15:45
Gilbert-Horvath, Elizabeth: Temporal genetic monitoring of coho salmon (Oncorhynchus kisutch) in California: population structure and estimation of effective population size

15:45-16:15
Tea / Coffee

16:15-16:30
Morissette, Olivier: Assessing the impacts of supplementation stocking on individual growth in lake trout (Salvelinus namaycush)

16:30-16:45
Waters, Charles: Comparative analysis of adaptive evolution across two different management scenarios in supportive breeding

16:45-17:00
Létourneau, Justine: Stocking history and environmental factors effects on the genetic integrity of Brook trout (Salvelinus fontinalis) wild population

17:00-17:15
Pritchard, Victoria: Investigating hybridization dynamics between a wild Atlantic salmon population and aquaculture escapees

17:15-17:30
Wringe, Brendan: Comparison and evaluation of the efficacy of various high-density whole-genome Atlantic salmon (Salmo salar) SNP arrays to quantify the level of hybridization between escaped farmed and wild salmon in eastern Canada

17:30-17:45
Break

Flash talk session 1: Ian McCarthy, moderator

17:45-17:48
Salisbury, Sarah: Using landscape genetics to form a portrait of a sucker in a subarctic dendritic metapopulation

17:48-17:51
Coulson, Mark: Retrospective analysis of the genetic impact of farm escaped Atlantic salmon into the River Polla, Scotland

17:51-17:54
Östergren, Johan: Archival genetic analysis suggests genetic change in Swedish Baltic salmon – natural immigration or effects of large scale supplemental stocking programs?

17:54-17:57
Verspoor, Eric: Microscale phylogeographic divergence of Atlantic salmon populations in a zone of post-LGM secondary contact between European and North American lineages

17:57-18:00
Baillie, Shauna: Genetic and phenotypic variation along an ecological gradient in lake trout Salvelinus namaycush

18:00-18:03
Rahn, Anna K.: Population structure indicates local adaptation in three-spined sticklebacks of North Uist, but not in one of their parasites

18:03-18:06
Costa, Fillipe: Assembling and auditing a global DNA barcode reference library for European marine fishes
Tuesday, 19 July Flash-talk session 1 (cont)

18:06-18:09  Hosegood, Jane: Introducing genetic tools for the conservation of mobulid rays: developing a global genetic ID kit

18:09-18:12  Stott, Wendylee: Applications of genetic methods to determine species identity for fisheries management

18:12-18:15  Hook, Samantha Alison: Does genetic diversity predict IUCN status and how do other life history factors influence this

18:15-18:30  Flash-Talk: Speaker question and discussion session

18:30-19:45  Poster Session 1

Agostino, Leone: MedBlueSGen: A population genetic study on Mediterranean blue shark for stock identification and conservation through restriction-site associated DNA genotyping by sequencing methods (ddRAD)

Baillie, Shauna: Genetic and phenotypic variation along an ecological gradient in lake trout Salvelinus namaycush

Collares-Pereira, M.J.: REX3 transposons and intraspecific diversity in Iberian cyprinid fish

Costa, Fillipe: Assembling and auditing a global DNA barcode reference library for European marine fishes

Coulson, Mark: Retrospective analysis of the genetic impact of farm escaped Atlantic salmon into the River Polla, Scotland

Gray, Sienna: Transcriptome wide analyses reveal differential gene expression in wild, farmed and hybrid Atlantic salmon

Harvey, Alison: A common garden design reveals population-specific variability in potential impacts of hybridisation between strains of farmed and wild Atlantic salmon, Salmo salar L.

Hook, Samantha Alison: Does genetic diversity predict IUCN status and how do other life history factors influence this

Hosegood, Jane: Introducing genetic tools for the conservation of mobulid rays: developing a global genetic ID kit

Jeffery, Nicholas: Evidence of introgression between European green crabs (Carcinus maenas) between northern and southern populations in the northwest Atlantic using restriction site associated (RAD) sequencing

Leitwein, Maeva: Management and conservation of introgressed brown trout by dd-RAD sequencing

Östergren, Johan: Archival genetic analysis suggests genetic change in Swedish Baltic salmon – natural immigration or effects of large scale supplemental stocking programs?

Rahn, Anna K.: Population structure indicates local adaptation in three-spined sticklebacks of North Uist, but not in one of their parasites

Ryu, Jung-Hwa: DNA barcoding dramatically increases species diversity in Korea

Salisbury, Sarah: Using landscape genetics to form a portrait of a sucker in a subarctic dendritic metapopulation

Santos, Luciano N.: Genetic divergence among invasive and native populations of the yellow Peacock cichlid Cichla kelberi (Perciformes, Cichlidae)

Stott, Wendylee: Applications of genetic methods to determine species identity for fisheries management
Tuesday, 19 July Poster session 1 (cont)

Turan, Cemal: Microsatellite and MtDNA sequence analysis of turbot *Scophthalmus maximus* populations from the Black and Marmara Seas

Verspoor, Eric: Microscale phylogeographic divergence of Atlantic salmon populations in a zone of post-LGM secondary contact between European and North American lineages

Villacorta-Rath, Cecilia: Size-at-settlement and its relationship to population of origin in the Southern Rock Lobster, *Jasus edwardsii*

19:30 Civic / welcome reception
Wed 20th July

**Oral Session 3: Kerry Naish, moderator**

9:05-9:45  **Plenary speaker**
Bernatchez, Louis: Population genomics for conservation and management of aquatic resources: are the promises being filled?

9:45-10:00  Andersson, Anastasia: Tracking cryptic, sympatric populations and release-establishment dynamics in brown trout (*Salmo trutta*) over time in tiny mountain lakes using SNP data

10:00-10:15  Gagnaire, Pierre-Alexandre: Polygenic adaptation to variable coastal environments in the gilthead sea bream (*Sparus aurata*), linking selected variants with adaptive phenotypes and fitness

10:15-10:30  Fairweather, Robert: Transatlantic trends in population connectivity and adaptive diversity in Atlantic cod

10:30-11:00  **Tea / Coffee**

11:00-11:15  Stanley, Ryan: Comparative analysis of multi-species genetic clines reveals cryptic climate associated adaptation in the northwest Atlantic

11:15-11:30  Fuentes-Pardo, Angela P.: Genetic differentiation associated with reproductive seasonality of herring populations across the North Atlantic

11:30-11:45  Helyar, Sarah: Repeated local adaptation to extreme low salinities in isolated fjord herring.

11:45-12:00  **FSBI: AGM**

12:00-13:00  **FSBI: AGM**

13:00-14:00  **Lunch: Pontio**

**Oral session 4: Paul Shaw, moderator**

14:05-14:45  **Invited speaker**
Bekkevold, Dorte: Fish in time and space: using molecular markers to track populations

14:45-15:00  Horne, John: Genomic megalomania: searching for the upper limits of assignment power in Atlantic Salmon with a 220K SNP array

15:00-15:15  Delerue-Ricard, Sophie: Where does this fish come from? Tracing sole juveniles arriving at the Belgian nursery using genomics and otolith shape.

15:15-15:30  Hillen, Jasmien: Tracing natural populations and farm escapees in European sea bass

15:30-16:00  **Tea / Coffee**

16:00-16:15  Johansen, Torild: Developing high-throughput SNP panels for genetic stock identification in exploited species

16:15-16:30  Christiansen, Henrik: Riding the current - population genomics of demersal Antarctic fish

16:30-16:45  Coscia, Ilaria: Exploring connectivity and adaptation in deep sea fishes

16:45-17:00  Drinan, Daniel: Population structure of Pacific halibut reveals low level differentiation

17:00-17:15  Barasa, E. James: Local adaptations and evolutionary changes in two sympatric clariid catfishes in the Yala swamp: evidence from Mitochondrial DNA sequences

17:15-17:30  **Break**
Wed 20th July

Flash talk session 2: Ian McCarthy, moderator

17:30-17:33  Charrier, Grégory: Relative role of phylogeographical history, modern demography and selective forces on the population genetic structure of the European flounder (*Platichthys flesus*) over its distribution range

17:33-17:36  Florin, Ann-Britt: Using genetics to identify management units of European flounder in the Baltic Sea

17:36-17:39  Roodt-Wilding, Rouvay: A tale of two seamounts: yellowtail (*Seriola lalandi*) population connectivity around southern Africa

17:39-17:42  Jansson, Eeva: Cleaner fish — largely utilized, poorly known

17:42-17:45  Johansen, Torild: Regulation of coastal fisheries in a MP fjord based on genetic monitoring; a success story?

17:45-17:48  Rodriguez-Ezpeleta, Naiara: Inferring natal homing through population genomics: implications for Atlantic mackerel and bluefin tuna stock management

17:48-17:51  Carrier, Anne: Genetic structure of Muskellunge (*Esox masquinongy*) in the St. Lawrence River and the inland waters of Quebec (Canada): an overview of trophy fisheries and 47 years of stocking and management implications

17:51-17:54  Gubili, Chrysoula: Genetic and migratory evidence for sympatric spawning of tropical Pacific eels.

17:54-17:57  Richter, Kristine Korzow: Archaeological fishing: Molecular methods of identifying archaeological fish to inform modern management practices

17:57-18:00  Yu, Hyo-Jae: Genetic structure of *Hyporhamphus sajori* (Pisces, Hemiramphidae) from Korea and Japan

18:00-18:15  Flash-talk: Discussion

18:15-19:15  Poster session 2

Bracken, Fiona: Exploration of an interdisciplinary methodological tool to assess the status of low density species in aquatic systems

Carrier, Anne: Genetic structure of Muskellunge (*Esox masquinongy*) in the St. Lawrence River and the inland waters of Quebec (Canada): an overview of trophy fisheries and 47 years of stocking and management implications

Charrier, Grégory: Relative role of phylogeographical history, modern demography and selective forces on the population genetic structure of the European flounder (*Platichthys flesus*) over its distribution range

Chat, Joelle: Sea trout migrations and management practices

Chemoiwa, Emily J.: Phylogenetic study of the endangered Ripon barbel, *Barbus altanialis* (Boulenger, 1900) (Cyprinidae) in Lake Victoria catchment based on mitochondrial DNA sequences

Gubili, Chrysoula : Genetic and migratory evidence for sympatric spawning of tropical Pacific eels

Coelho, Maria Manuela: Adaptive potential of Iberian cyprinids under climate change scenarios

Doyle, Alice: Linking population structure, mixing and maturation schedules in Atlantic cod

Florin, Ann-Britt: Using genetics to identify management units of European flounder in the Baltic Sea
**Wed 20th July  Poster session 2 (cont)**

Hargrove, John: Reconstructing the invasion history of largemouth bass in South Africa

Jansson, Eeva: Cleaner fish – largely utilized, poorly known

Johansen, Torild: Regulation of coastal fisheries in a MP fjord based on genetic monitoring; a success story?

Kumar, Annam Pavan: Complete mitochondrial genome of selected mahseer species with phylogeny considerations

Richter, Kristine Korzow: Archaeological fishing: Molecular methods of identifying archaeological fish to inform modern management practices

Riddell, Brian: Combining genomic tools & acoustic tagging to measure the health of Pacific salmon, including risks from open net-pen salmon farming in Southern BC, Canada

Rodriguez-Ezpeleta, Naiara: Inferring natal homing through population genomics: implications for Atlantic mackerel and bluefin tuna stock management

Roodt-Wilding, Rouvay: A tale of two seamounts: yellowtail (*Seriola lalandi*) population connectivity around southern Africa

Turan, Cemal; Doğdu, Servet A.: Environmental DNA for detection of endangered grouper species (*Ephinephesus* spp.)

Yu, Hyo-Jae: Genetic structure of *Hyporhamphus sajori* (Pisces, Hemiramphidae) from Korea and Japan

**19:45-0:00  BBQ**
Thursday 21st July

**Oral session 5: Stefano Mariani, moderator**

9:05-9:45 **Invited speaker**

Primmer, Craig: Understanding the genetic architecture of complex traits in free-living species: is the glass half empty or half full?

9:45-10:00 Brieuc, Marine: Evolution of resistance to infectious hematopoietic necrosis virus across populations of steelhead trout: Evidence for shared pathways?

10:00-10:15 Lepais, Olivier: Population genomics of early male parr maturation in Atlantic salmon natural populations

10:15-10:30 Lighten, Jackie: Supertypes challenge the paradoxical dogma of immune evolution and explain trans-species polymorphism: The guppy as an immunogenomic model

10:30-10:45 Shum, Peter: Postgenomic signatures of diversification in Atlantic beaked redfish, *Sebastes mentella*, along a depth gradient

10:45-11:00 Teffer, Amy: Pacific salmon and their parasites under multiple stressors

11:00-11:30 Tea / Coffee

11:30-11:45 Feutry, Pierre: Estimating the abundance and connectivity of an endangered species when you can’t catch, sample, or even see an adult.

11:45-12:00 Bakker, Judith: Multigene environmental DNA as a tool for marine biodiversity assessment and monitoring

12:00-12:15 Evans, Alice: Rapid assessment of freshwater biodiversity through metabarcoding of environmental DNA

12:15-12:30 Jonathan, Ready: Investigating Amazonian aquatic biodiversity using DNA barcoding and metabarcoding

12:30-12:45 Selly, Sarah-Louise C.: Development and application of genomic tools for the farming of Ballan wrasse (*Labrus bergylta*)

12:45-13:00 Ford, Antonia: Genomic characterization of wild tilapia genetic resources

13:00-14:00 Lunch: Pontio

**Oral session 6: Jann Martinsohn, moderator**

14:05-14:45 **Invited Speaker**

Casey, John: The role of genetics in fisheries management under the common fisheries policy

14:45-15:00 Barendse, Jaco: Ensuring the traceability of certified sustainable seafood through the supply chain: the role of DNA testing

15:00-15:15 de Almeida Pires, Maria Teresa: Controls applicable to fishery products under the catch certification scheme.

15:15-15:30 Hofherr, Johann: Genetic impact of aquaculture on native fish populations: a risk assessment

15:30-16:00 Tea / Coffee:

16:00-16:15 von der Heyden, Sophie: Genes and boundaries: taxonomic bias and the shifting balance of marine spatial planning

16:15-16:30 Bae, Seung Eun: Morphological and genetic variations of the flathead mullet, *Mugil cephalus* (Teleostei: Mugilidae) in Korea

16:30-16:45 Henriques, Romina: How seascape genetics can help solve a 25-year old dilemma: temporal and spatial structure of Cape hakes (*Merluccius* spp.)
Thursday 21st July Oral session 6 (cont)

16:45-17:00 Pazmino, Diana: Assessing population genetic structure of the Galápagos shark (*Carcharhinus galapagensis*) in the Galápagos Islands, novel tools for conservation

17:00-17:15 Pecoraro Carlo: First application of 2b-RAD genotyping technique to investigate the worldwide population structure of yellowfin tuna (*Thunnus albacares*).

17:15-17:30 *Flash talk session 3: Lorenz Hauser, moderator*

17:30-17:33 Bustamante, Carlos: Beyond the genes: application of phylogenomics to aid taxonomic revisions in Elasmobranch fishes

17:33-17:36 Pérez-Bielsa, Núria: Concordant and contrasting phylogeographic histories in the genus *Thunnus*.

17:36-17:39 Kim, Jin-Koo: Evidence of restricted secondary contact between the two lineages of *Ammodytes personatus* (Pisces, Ammodytidae) based on ecological and molecular traits.

17:39-17:42 Zelenina, Daria: Phylogenetics and comparative phylogeography of Pacific salmon


17:45-17:48 Hart, Anthony: Population genetics in a poorly developed policy context; the case of managing a rapidly evolving aquaculture/enhancement fishery in Western Australia

17:48-17:51 Pearse, Devon: Saving the Spandrels: adaptation and conservation of anadromous fishes in the age of genomics

17:51-17:54 Petrou, Eleni: Combating intraspecific DNA contamination for next-generation sequencing of Pacific herring (*Clupea pallasi*)

17:54-17:57 Turan, Cemal: Evaluation of molecular and phenotypic markers for phylogeographic analysis of Black Sea turbot *Scopthalmus maeoticus*.

17:57-18:00 Wong, Lillian: Putative Roles for Metallothionein and HSP70 Genes in Relation with Heavy Metal Accumulation and Parasitic Cymothoid in *Nemipterus furcosus*.

18:00-18:15 Flash-talk: discussion

18:15-19:15 *Poster session 3*


Bustamante, Carlos: Beyond the genes: application of phylogenomics to aid taxonomic revisions in Elasmobranch fishes.

Coelho, Maria Manuela: Downstream regulatory network of sex determination in a freshwater fish is less conserved than expected.

Gallagher, Jean: Genetic Stock Structure of Dublin Bay Prawn, *Nephrops norvegicus*.
Thursday 21st July Poster session 3 (cont)

Gargan, Laura: Environmental DNA in Ecology: Potentials and Pitfalls

Guimaraes Sales, Naiara: DNA barcoding detects high genetic intraspecific divergence in neotropical fish species

Hart, Anthony: Population genetics in a poorly developed policy context; the case of managing a rapidly evolving aquaculture/enhancement fishery in Western Australia

Healey, Amy: Genetic diversity and population connectivity of Emperor fish in the South West Indian Ocean

Khanam, Taslima: Minimally invasive DNA sampling from fish mucus for standard genotyping and next generation sequencing

Kim, Jin-Koo: Evidence of restricted secondary contact between the two lineages of Ammodytes personatus (Pisces, Ammodytidae) based on ecological and molecular traits

Pearse, Devon: Saving the Spandrels: adaptation and conservation of anadromous fishes in the age of genomics

Pérez-Bielsa, Núria: Concordant and contrasting phylogeographic histories in the genus Thunnus

Petrou, Eleni: Combating intraspecific DNA contamination for next-generation sequencing of Pacific herring (Clupea pallasi)

Piccolo, John: Conservation genomics: coming to a salmon near you

Şalcıoğlu, Aslı: Phylogeography of Blotched picarel (Spicara maena) Along The Turkish Coastal Waters

Turan, Cemal: Evaluation of molecular and phenotypic markers for phylogeographic analysis of Black Sea turbot Scopthalmus maeoticus

Wilcox, Taylor: Understanding environmental DNA detection probabilities: A case study using a stream-dwelling char

Wong, Lillian: Putative Roles for Metallothionein and HSP70 Genes in Relation with Heavy Metal Accumulation and Parasitic Cymothoid in Nemipterus furcosus

Zelenina, Daria: Phylogenetics and comparative phylogeography of Pacific salmon

19:45 Symposium banquet
Friday 22nd July

**Oral session 6: Nigel Milner, Moderator**

9:05-9:45  **Invited Speaker**  
Meyer, Axel: Genomics of parallel adaptations in the repeated adaptive radiations of cichlid fishes

9:45-10:00  Tyers, Alexandra: Genome-wide analysis of the evolution of new species

10:00-10:15  Puebla, Oscar: Speciation and local adaptation in coral reef fishes (*Hypoplectrus* spp)

10:15-10:30  Derycke, Sofie: Comparison of genome wide SNP signatures within and between four *Ophthalmotilapia* species (Pisces, Cichlidae): speciation unveiled

10:30-10:45  Rougemont, Quentin: Inferring the demographic history underlying parallel genomic divergence among pairs of parasitic and non-parasitic lamprey ecotypes

10:45-11:00  Benvenuto, Chiara: The art of mating: alternative reproductive tactics and mating success in a nest-guarding fish

11:00-11:30  **Tea / Coffee**

11:30-11:45  Ferrari, Alice: On the evolution of Rajidae (subclass Elasmobranchii): cryptic and non-cryptic speciation investigated through Next-generation transcriptome assembly

11:45-12:00  Junge, Claudia: Of species, hybrids and populations: Assessing the units of management for carcharhinid sharks

12:00-12:15  Taylor, Martin: Mechanisms underpinning genome expansion in the Corydoradinae catfishes

12:15-12:30  Guimaraes Sales, Naiara: Introgression from non-native species unveils a hidden threat to the migratory neotropical fish *Prochilodus hartii*

12:30-12:45  Maes, Gregory: Genome-wide nucleotide polymorphisms reveal complex patterns of introgressive hybridization between *Carcharhinus tilstoni* and *Carcharhinus limbatus* blacktip sharks along the eastern coast of Australia

12:45-13:00  Puncher, Gregory: Unlocking the evolutionary history of the mighty bluefin tuna, *Thunnus thynnus*, using novel paleogenetic techniques and ancient tuna remains.

13:00-14:00  **Closing of Symposium: Gary Carvalho**