







# COLD-WATER CORALS IN AQUARIA

MAINTENANCE AND EXPERIMENTATION





### **SATURDAY & SUNDAY, JUNE 3-4**

John McIntyre Conference Centre - Pollock Halls Estate Edinburgh, United Kingdom

**HYBRID FORMAT** 

9:00-9.10 **WELCOME NOTE** 

Marina Carreiro Silva

9:10-11:00 AQUARIA SET-UP CONDITIONS FOR EXPERIMENTATION

Marina Carreiro-Silva. Cold-water corals in aquaria Existing facilities worldwide · General overview

António Godinho

Transferring corals from the field to the lab  $\cdot$  Maintenance of different coral taxa  $\cdot$  Fragmentation and preparation of nubbins

Alfredo Veiga. Best practices on basic system requirements for maintaining CWCs

Open/closed water systems · Refrigeration · Water renewal · Artificial seawater · Seawater filtration · Aquaria materials and sizes

Bruce Shillito. Pressurized aquaria for experimentation with CWCs

11:00-11:15 Coffee break

11:15-12:45 **EXPERIMENTS UNDER CHANGING OCEAN CONDITIONS** 

Sebastian Hennige, Kristina Beck

Setting up experimental conditions for multiple stressor experiments with cold-water corals

## EXPERIMENTS UNDER CHANGING OCEAN CONDITIONS

Sam Dupont

Multiple stressor experiments · local variability · how to resolve potential interactions experimentally (lab and field) to allow proper modelling

12:45-13:15



13:15-14:45

## MEASURING GROWTH AND METABOLIC RESPONSES

Andrea Gori, Meri Bilan

Measuring growth for octocorals, scleractinian and black corals: standard and emerging techniques · Measuring respiration and excretion: from minimal requirements to high tech

14:45-15:00



Coffee break

15:00-16:30

#### REPRODUCTION AND EARLY LIFE STAGES

Ann Larsson, Rhian Waller

Sex determination · Coral maintenance and collecting spawned gametes · Fertilisation experiments · Larval rearing · Colouring larvae for experiments · Embryo and larvae experiments · Histological studies pre and post · TEM/SEM applications

DAY 2

Sunday, June 4

9:00-10:30

#### FEEDING AND METABOLISM

Covadonga Orejas, Maria Rakka. Feeding experiments with coldwater corals: Antarctic, Mediterranean and Atlantic experiences

Experiments with natural food, sounds good, where are the problems? Different chamber types · Experiments with gorgonians and black corals · Experiments with scleractinians

#### FEEDING AND METABOLISM

Sandra Maier. The fate of food: Using stable isotope tracers to track resource flows in corals and coral ecosystems

Tracing the food, what are stable isotope (SI) tracers? · What are SI tracers used for, where can food be traced? · How can they be applied in feeding experiments and in situ · How do we prepare food substrates enriched in 13C and/or 15N · How much food do we need to detect the tracer in an organism: Back-of-the envelope calculations · Practical considerations before, during, and after experiment · Critical

assessment of methodology

10:30-10:45



Coffee break

10:45-11:45

#### IN SITU APPROACHES TO STUDY CORAL **ECOPHYSIOLOGY**

Nadine Le Bris. Insights to the temporal dynamics of scleractinian assemblages and potential climatic drivers of changes

Species distribution and habitat heterogeneity over depth horizons. 3D structure and functional trait estimation · In situ experimental approches of growth and behavioural monitoring

12:00-17:00

#### VISIT TO SAINT ABBS MARINE STATION

Practical examples on manipulation of carbonate chemistry, temperature and oxygen

Saint Abbs Marine station is located at Saint Abbs, 1h drive from the workshop location. Bus is provided by the organization. Packed lunch will be provided before departure

