

Two workshops will take place on Wednesday.

Workshop on Otolith Shape Analysis (whole day)

One of the most rapidly developing applications for otolith techniques is shape analysis, often used for population discrimination as well as for species identification.

To ensure that images and analyses can be shared and compared, it is advantageous to have an exchange of methods and to develop a network of researchers who can comment on developing techniques.

The workshop aims to update participants on available tools in the study of fish otolith shape, with emphasis on image acquisition and shape analysis. It will also provide examples of different image analysis protocols and compare the techniques used for different species.

The workshop invites contributions, both oral and poster presentations, on all of the topics above. The planned schedule will mix theoretical and practical topics in each session, to facilitate demonstrations of the principles and maximize the time available for demonstrations.

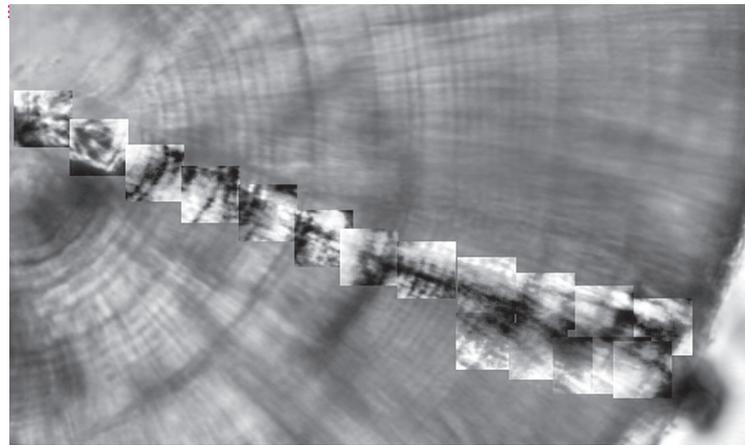
Please indicate your interest on the symposium website.

Workshop on Age Validation (whole day)

The workshop aims to update participants on available tools in validation of age, as well as other interpretations made from calcified structures of marine organisms. It will also provide examples of their use for selected species. In particular, the workshop will examine more closely some of the main challenges identified below.

- Validation of presumably old-age species, e.g. red snapper and orange roughy
- Possible biases in validation studies, e.g. persistent reduced growth rate of tagged fish
- Precision of ageing methodologies used for validation, such as amino acid racemization, radiochemical analyses, and bomb radiocarbon analyses
- Web-based resources to help implement validated methods (WebGR, ICES Sharepoint, etc.)
- Comparisons of validating techniques, such as chemical vs. daily increments
- Statistical methodology for evaluation of readings relative to validated sets
- Validation of stock separation by comparing shape analyses and genetics

Please indicate your interest on the symposium website.



ICES
CIEM

International Council for
the Exploration of the Sea
Conseil International pour
l'Exploration de la Mer

5th International Otolith Symposium

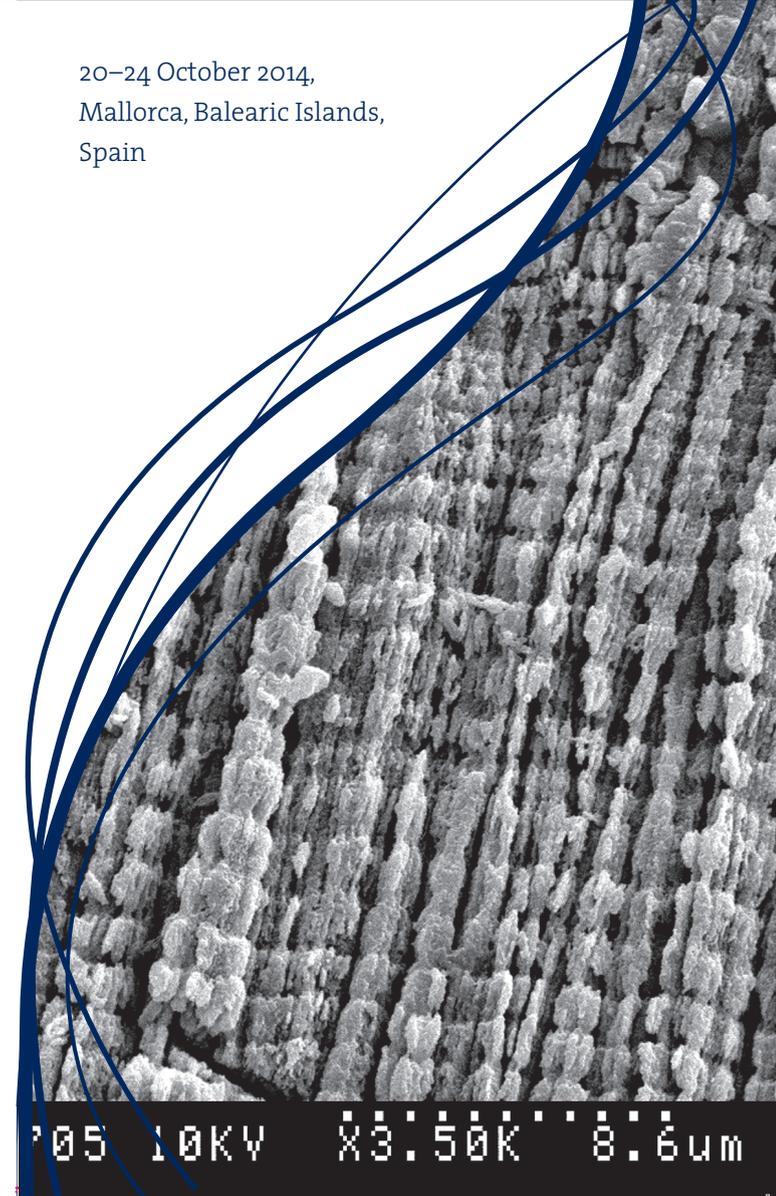
20–24 October 2014,
Mallorca, Balearic Islands,
Spain

Important dates

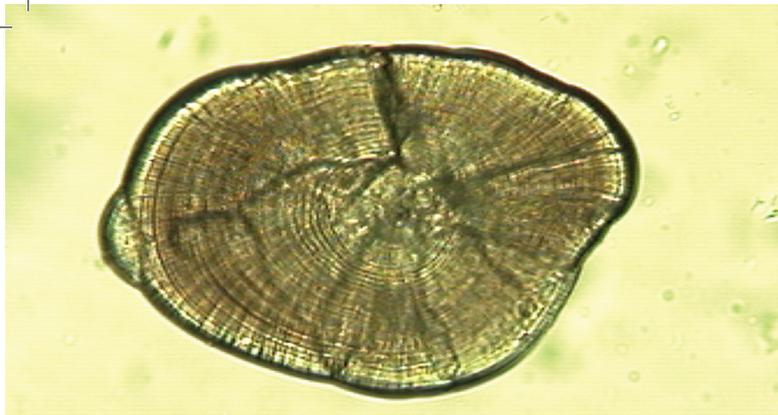
March 2013
January 2014
April 2014
5 May 2014
30 May 2014
1 June 2014
20–24 October 2014

Invited speakers confirmed
International delegates contacted
Abstract submission deadline
Abstract acceptance notification
Programme finished
Early registration deadline
Symposium

Host institution:	IMEDEA (UIB/CSIC), Spain
Dates:	20–24 October 2014,
Venue:	Mallorca, Balearic Islands, Spain
Conveners:	Beatriz Morales-Nin (Spain) and Audrey Geffen (Norway)
Local organizing committee:	Ignacio Catalán, Miquel Palmer (IMEDEA), and Enric Massutí (IEO Balears)
Technical support:	ICES Secretariat



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5th International Otolith Symposium 2014 (IOS2014)

Scope

Implementation of ecosystem-based approaches to marine management points to several shared objectives between conservation and fishery management that require better knowledge of the life history of the exploited resources, elucidation of the information encoded in the calcified tissues (otoliths, scales, bones, shells, and corals) of marine and freshwater organisms, and support for knowledge-based, sustainable ocean management and use.

Strategic objective

The aim of the symposium is the exploration of the use of calcified tissues as tools to support management and the formulation of a definition of indicators at environmental, community, population, and individual levels.

Expected results

- Enhanced practical understanding of the use of calcified tissues to implement marine ecosystem and fishery management
- Discussion of frameworks to define calcified, tissue-based indicators
- The sharing of experiences and good practices on the use of calcified tissues in different biological and ecosystem contexts

Background

Calcified tissues have been employed since the 19th century to gain knowledge of life traits, population structure, and environmental relationships of fish and molluscs. Breakthrough advances include the discovery by Pannella (1971) of the daily growth increments and the discovery by Radtke (1984) of otolith tracer approaches, resulting in an exponential growth of publications and four dedicated international symposia.

IOS2014 will be the fifth in a series of independent symposia convened since 1993, to encourage the exchange of information and expertise, and promote the development of new techniques and applications for otolith-based analysis in ecology, management, and conservation. This international forum is the centre for the exchange of information on developments in the field. New techniques of analysis, statistical treatment, and indeed new areas of application are all presented in this forum.

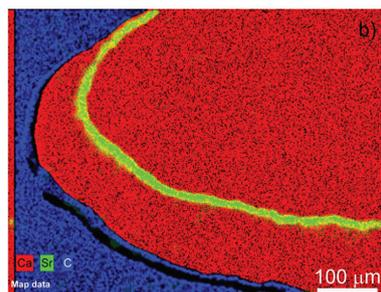
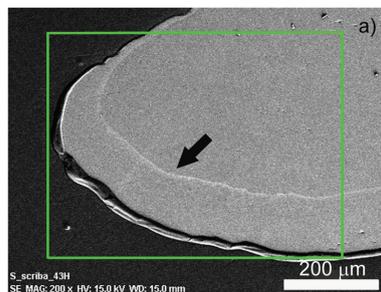
The IOS series started in Hilton Head (USA) in 1993, followed by IOS1998 in Bergen (Norway), IOS2004 Townsville (Australia), and the IOS2009 Symposium held in Monterey (USA). In general, attendance ranged between 250–350 participants. IOS2009 counted 268 registrants from 36 countries, despite the economic crisis.

Target audience

The symposium's geographic scope is global, bringing together scientists from different geographical areas and with a wide range of expertise. Many ICES expert groups are expected to be represented among the presenters. Two workshops specifically address topics important in ICES work (ICES Workshop on Age Validation and Workshop on Otolith Shape Analysis).

Format

The symposium, which runs from Monday to Friday, will combine plenary with oral presentations, poster presentations, and a plenary summing-up session. Wednesday is dedicated to workshops.



Morning and afternoon parallel sessions will be opened by invited speakers. Topics include:

- Environmental indicators
- Community indicators
- Population indicators
- Individual indicators
- Open session
- Poster and wine session
- Daily express poster presentations for each session
- Plenary closing session on advances and new insights for future applications

Publication

Selected papers will be published in *ICES Journal of Marine Science*. The conveners Beatriz Morales-Nin and Audrey Geffen will be guest editors, and it is anticipated that publication will take place within 15 months after the symposium.

Awards

The best student oral presentation and the best student poster will be awarded a small gift.

Fees

- €400 early registration (deadline 1 June 2014)
- €500 late registration
- €200 students
- €100 special rate for students from developing countries.