

4th International Zoo and Aquarium Symposium 'Global Freshwater Fish Conservation: linking *in situ* and *ex situ* actions

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Over 40 freshwater fish experts from 21 countries converged in Chester, United Kingdom for the 4th International Zoo and Aquarium Symposium 'Global Freshwater Fish Conservation: linking *in situ* and *ex situ* actions' which was held from the 3rd until the 7th of November 2010, in conjunction with the Annual Meeting of the IUCN SSC Freshwater Fish Specialist Group (FFSG). The conference was jointly organized by the IUCN, Species Survival Commission (SSC), Wetlands International (WI), Freshwater Fish Specialist Group of IUCN (IUCN-FFSG), Chester Zoo, Zoological Society of London (ZSL), European Union of Aquarium Curators and the World Association of Zoos and Aquariums (WAZA). The meeting was held at the Crowne Plaza Hotel in the heart of Chester – a historic city founded by the Romans in the year AD79.

The meeting began on the 4th of November with a welcome address by the Lord Mayor of Chester followed by an introductory message by Prof. Gordon McGregor Reid, the Chair of the IUCN Freshwater Fish Specialist Group. The opening day had 12 presentations focusing on two major themes – 1) the status of freshwater fishes in various regions of the world and 2) priorities for freshwater fishes in the aquariums of various regions. Status reports of freshwater fishes in areas including Europe (Jorg Freyhof from Leibniz Institute of Freshwater Ecology, Germany), North America (Michele Thieme from WWF-USA), Mesoamerica (Topiltzin Contreras-MacBeath from Mexico), South America (Roberto Reis, PUC-RS, Brazil), Southern Africa (Paul Skelton from SAIAB, South Africa), Australia (Mark Lintermans from University of Canberra, Australia), Pacific Islands (Nicolas Tubbs from Wetland International) and Southern Asia (Remadevi from ZSI, India) provided insights into the issues and challenges facing conservation of endemic and threatened freshwater fishes in the respective regions.

Presentations on the priorities for freshwater fish in aquariums saw experts from ZSL (Heather Koldewey), Toronto Zoo (Cynthia Lee), Fundacion Temaiken Buenos Aires (Mauro Tambella) and Mahurangi Institute, Auckland (David Cooper) discussed about the various captive breeding programs for threatened freshwater fishes being conducted at their organizations. These include programs



for European and Middle East Killi Fishes, Australian short fin eel, Lake Victoria cichlids and various Amazonian ornamental fishes.

The first day ended with a discussion on the possibility of a new book to be published by Wiley-Blackwell on freshwater fish conservation.

There were 11 presentations on day 2 under the theme 'tools and methods for conservation priority setting'. These included a talk by Will Darwall of the IUCN Freshwater Biodiversity Program, Cambridge on the IUCN Red List and the progress achieved in freshwater biodiversity assessments globally; Helen Meredith on the Edge of Existence (EDGE) program of the Zoological Society of London and its relevance to freshwater fishes; Gene Helfman of University of Georgia on the working of the IUCN Red List committee on freshwater fishes; Michelle Lindley on the ARKIVE initiative; Michelle Thieme of WWF-USA on free flowing rivers and their role in priority setting for freshwater fish; Ian Harrison of Conservation International on the freshwater fish conservation initiatives of his organization; Zeb Hogan of University of Nevada on large migratory fishes and the role of FFSG in the United Nations Convention on Migratory species; Richard Gibson of Chester Zoo on the Amphibian Ark project and its potential relevance to freshwater fish conservation; Brian Zimmerman of ZSL on regional collection planning for aquariums and its role in freshwater fish conservation; William Van Lint of EAZA on the managed breeding programs for aquarium fish within their organization; Alex Cliffe of ZSL on management

techniques for freshwater fish at the London Zoo; Andrew Routh of ZSL on the implications of Mycobacteriosis in captive fish and their management; David Rawson of LIRANS Institute, University of Bedfordshire on the use of cryobanks for freshwater fish conservation and Simon Stuart, the Chair of the IUCN Species Survival Commission (SSC) on the highlights of the Nagoya summit of the CBD.

The presentations on day 2 were followed by a workshop on planning and implementation of *ex-situ* programs for freshwater fish led by Brian Zimmerman of ZSL and a focus group discussion on freshwater fishes for the global aquarium trade led by Scott Dowd of the New England Aquarium, Boston and Rajeev Raghavan of Conservation Research Group, St. Albert's College, Kochi. The workshop on planning and implementation of captive breeding and reintroduction programs for threatened freshwater fishes provided an opportunity for the participants to break up into regional groups and prepare a list of species that they thought would be probable candidates from their regions for such *ex-situ* programs. The focus group discussion on fish for the aquarium pet trade deliberated on several issues such as certification for ornamental fish and the possible role of IUCN FFSG, the possibility of a working group on ornamental fishes within the FFSG and the role of public aquariums in sustainable trade in ornamentals.

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The first half of Day 3 comprised of two workshops on the importance of biosecurity in live collections which was led by Andrew Routh of ZSL and how to avoid domestication in management of live collections led by Richard Gibson of Chester Zoo. The second half of day 3 had presentations from diverse fields such as ex-situ conservation strategies for threatened European freshwater fishes by Jorg Freyhof of Leibniz Institute of Freshwater Ecology, Berlin; Lake Victoria species survival plan which detailed the partnership of North American Zoos and Aquariums with the East African partners by Cynthia Lee of Toronto Zoo; the popular 'buy a fish- save a tree' campaign and the ornamental fisheries of the Rio Negro basin of Amazonia by Scott Dowd of the New England Aquarium, Boston; issues of freshwater fish conservation in Australia's Murray Darling river basin by Arkellah Hall; management of the endangered Macquarie Perch in upland reservoirs of south eastern Australia by Mark Lintermans of University of Canberra; challenges and opportunities for freshwater fish conservation in the Pacific Islands by Nicolas Tubbs of WI; captive breeding and re introduction programs for the Devario pathirana in Sri Lanka by Renuka Bandaranayake from Colombo Zoo and Aquarium; opportunities for public participation for freshwater fish conservation in the Western Ghats by Rema Devi of ZSI, Chennai, India; vulnerability of threatened freshwater fishes to the aquarium pet trade by Rajeev Raghavan of Durrell Institute of Conservation and Ecology, University of Kent, UK and finally the management of

Mekong giant catfish populations by Chavalith Vidthayanon from Nakhon Ratchasima University, Thailand.

Day 4 began with a workshop on collection and storage of specimens for cryopreservation by David Rawson of the LIRANS Institute, University of Bedfordshire. This was followed by a comprehensive presentation on the current options and challenges for genetic management of ex-situ populations of freshwater fish for conservation by Kristin Leus of Copenhagen Zoo and the CBSG/EAZA and by Scott Dowd of the New England Aquarium, Boston on Home fish keeping and public aquaria and the ex-situ-in-situ opportunities for the aquarium industry. The afternoon session comprised of a workshop on population management relevant for live collection and re introduction of freshwater fishes which was coordinated by Heather Koldewey of ZSL and Kristin Leus of CBSG/EAZA. The plenary session was led by Ian Harrison of CI, Heather Koldewey of ZSL and Richard Gibson of Chester Zoo.

Some of the important outcomes of the conference were the formation of a working group within the FFSG on sustainable ornamental fisheries, plan for a freshwater biodiversity census on the lines of the census of marine life, programs for in-situ and ex-situ conservation of the most important species at risks in the various regions of the world, and a book on global freshwater fish conservation among others.

World Environment Day 5 June 2011

2011 has been declared by the United Nations as the International Year of Forests. World Environment Day this year will reinforce this global concern with the official tagline - Forests: Nature at Your Service which underscores the many essential life-sustaining values that forests provide and the intrinsic link between our quality of life and the health of forest ecosystems.

For all seven billion of us, our present and our future depend on conserving and restoring the world's forests. On WED, let us resolve to do much more to ensure that we continue to enjoy the important services that forests provide, in our generation and the next.

We are working on some materials for World Environment Day, featuring on saving Biodiversity. **We will have special materials for WED but will also use some previously published materials which focus on species.**

This year India is HOST for UNDP World Environment Day so it is all the more important you celebrate.

We need to ascertain the interest you might have in conducting a programme on World Environment day with our materials. These will consist of an A3 poster with the colourful WED logo on it and some information on the back, a folder about forests and other WED facts, and a decoration with WED theme that you can wear by folding it and putting one half in your shirt pocket.

Please send us an email at once informing if you would like our WED materials and the size of your group. We can send up to 50 copies for a programme. To get an idea of the kind of material we will make see the UNEP Website : <http://www.unep.org/wed/.docx>. You can get fresh ideas for your programmes also at the site.

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