

# 2015 FFSG Annual Report





## OUR VISION

Freshwater fishes sustained in their natural environments.

## OUR MISSION

To achieve conservation and sustainable use of freshwater fishes and their habitats through:

- generating and disseminating sound scientific knowledge;
- creating widespread awareness of their values, and;
- influencing decision-making processes at all levels.

## Contents

Message from the Global Chair	3
Highlights from FFSG Regions	4
FFSG Projects	13
IUCN Red List Authority	19
Communications	20
Administration	22
Funding	24
Future Plans	25
FFSG Officials	26

FRONT COVER: Mexico Fish Ark project. Photo: Colin Grist, Chester Zoo.

LEFT IMAGE: Chambri Lakes  
*burgi* © Dean Impson

# Message from the Global Chair

Normally we aim to distribute the FFSG Annual report within about 6 months of the close of the year. For the 2015 Annual Report this was a challenge. We were caught between the SSC Leader's Meeting that occurred in 2015, and preparing for the World Conservation Congress in 2016. We also had many plans for projects, and administrative duties that needed to be dealt with – because we are an enthused and active group that keeps the Secretariat busy! As always, I am grateful to you all for your enthusiasm.

I will keep this introductory message short, because I will have an opportunity to give you a more up-to-date summary of our activities and objectives in the 2016 Annual Report, which will be working on in the next few weeks.

I would encourage you all to take a look at the FFSG Newsletter 'Saving Freshwater Fishes and Habitats' Issue 10 (December 2015) which gave a good summary of some of the objectives of the SSC Freshwater Conservation Subcommittee, as outlined at the SSC Leaders Meeting held in Abu Dhabi in 2015:

<http://www.iucnffsg.org/resources/ffsg-newsletter/>

Several of those objectives are closely tied to the work we describe in this Annual Report. As we move forwards in our global role, it will be important for us to ensure that we seek opportunities for strong collaboration with our partners working on freshwater issues in SSC. While at the SSC Leaders Meeting we had productive discussions with several other groups, including the Invasive Species Specialist Group, the Invertebrate Conservation Subcommittee, the IUCN Policy Subcommittee, the Conservation Planning Subcommittee, and representatives from the Convention on Migratory Species. Members of FFSG are also members, and leaders, in wetland and freshwater themed groups of the Commission on Ecosystem Management, and the World Commission on Protected Areas. In short, we have excellent opportunities for synergy with our IUCN colleagues, and I look forward to reporting on this further in the 2016 Annual Report and in upcoming newsletters for FFSG.

2015 was an excellent year in terms of important scientific publications from FFSG members – as shown by those listed in this report, which represent just a subset of our total individual publications. I already know that 2016 was an equally good year for our scientific output; and I know that there are plans afoot for preparation of some important collaborative publications and special issues in 2017.

In summary, 2015 was a good year for us – and I feel that we have an exciting time ahead of us. Once again, thank you to you all for making our group as strong as it is!

**Dr Richard Snieder**



A handwritten signature in blue ink, appearing to read 'Richard Snieder', written over a light blue background.

Global Chair, Freshwater Fish Specialist Group

# Highlights from the FFSG Regions

## FFSG Steering Committee

In 2015 Dr. Paul Skelton (South African Institute of Aquatic Biology), long term Steering Committee member of FFSG and Regional Chair for Southern Africa stepped down from his official positions with FFSG (see also page 12) in order to enjoy his retirement and to concentrate on fish biology without the formalities. Paul has been a dedicated supporter of FFSG for several years and influential in our development. We thank him for his tireless support for FFSG regionally, and at the level of the Steering Committee.



*FFSG Steering Committee member Paul Skelton (center, in white FFSG t-shirt) with colleagues.*

In mid 2015 Dr. Rich Vari (National Museum of Natural History, USA) also announced he would be stepping down from the Steering Committee in preparation for his retirement. It was with great sadness that we learned that Rich passed away in January 2016 after a battle with cancer. Rich was one of the early members of FFSG who contributed a great deal of thought, wisdom, and good humour to the development of the group. His passing is a great personal loss to many of us, and an enormous loss to ichthyology.



*Rich in Brazil at the Iguazu Falls, Parana River (photograph courtesy of Ann Vari).*

An obituary for Rich was written by former FFSG Global Chair Gordon McGregor Reid and published in the *Journal of Fish Biology* 28 October, 2016, doi: 10.1111/jfb.13192

## Updates to Boundaries and Definitions of FFSG regions

After our FFSG meeting in Cuernavaca, Mexico in 2014 the Steering Committee agreed to revise some of the boundaries of the regions that we recognize and for which we appoint Regional Chairs. The changes that were made include:

- Definition of a **new Western Palearctic Zone**
- Definition of a **new Eastern Palearctic Zone**
- Merging of the **Southwest Asia region** into the **Western Palearctic Zone**
- Division of the **Southeast Asia region** into the **Mainland and Peninsular Southeast Asian Region**; the **Sundaland/Philippines region**; and the **New Guinea region**
- Division of the Oceania region into the **Australia and New Zealand region**; and the **Pacific region**
- Modification of the boundary of the **North Africa region** (with some of it now being included as the Western Palearctic Zone).

More details on the geography of the different FFSG regions, and summaries on news from 2015, follow below.

# Highlights from the FFSG Regions

## Western Palearctic Zone

A new **Western Palearctic Zone** was defined in order to give a better biogeographically based definition for several regions that have previously been politically defined or have not been represented by a Regional Chair.

The Western Palearctic Zone includes:

- European countries and Belarus, Estonia, Latvia, Lithuania, Moldova, Ukraine, and Russia as far east as the Ural Mountains
- parts of North Africa (Western Sahara, Morocco, Algeria, Tunisia)
- Arabian Peninsula (Syria, Lebanon, Israel, Jordan, Saudi Arabia, Yemen, Oman)
- Iran, Iraq
- Caucasus region

Dr. Jörg Freyhof has agreed to be Regional Chair for the Western Palearctic Zone, since he was already the Regional Chair for Europe and he has been closely involved with freshwater fish assessments and other freshwater work in the relevant parts of northern Africa and the Arabian Peninsula. Dr. Fared Krupp, who was the Regional Advisor for Southwest Asia but stood down in 2014, will continue to be an important advisor for FFSG. Jörg Freyhof will seek colleagues who can assist him in coordinating activities in the sub-regions, particularly the Caucasus.

Jörg Freyhof provides the following report on **activities of regional members for Europe, North Africa and the Middle East**.

This region of the world, spanning from Morocco and Portugal east to the Urals, Iran and Arabia is inhabited by about 1200 species of freshwater fishes including facultative and obligatory diadromous species. In 2015, 24 new species have been described, mostly from Iran, the Balkans and Morocco. We are not yet aware which species might have gone extinct in 2015, after the extinction (in the wild) of *Aphanius farsicus* from Iran likely happened in 2014 (see p.8) and *Scardinius racowitzi* from Romania which went extinct in the wild in 2013 (and about 40 others in the years before). There are many conservation activities occurring in the region, but with very few of them associated with FFSG members. This is due to the fact that conservation is mostly financed and conducted at

the local scale and often disconnected to activities at higher geographical scales. Many conservation activities dedicated to freshwater fishes are linked to captive breeding and stocking, and only a minority are focused on fighting the reasons for species extinction in the region.

After discussions about how to handle memberships in IUCN FFSG (see page 22), we set up an informal mailing list for FFSG partners from Europe, North Africa and the Middle East. That mailing list is open to everybody who wishes to be informed about information coming from the IUCN FFSG network and spread information and news through the IUCN FFSG network. There are slightly more than 100 colleagues registered in the mailing list from most countries of the region

Contact Regional Chair: Jörg Freyhof; j.freyhof@igb-berlin.de

United Kingdom: Fish conservation work by FFSG members and colleagues for 2015 has again focused on the UK's rarer coldwater fish species. This has comprised extensive surveys of population status within the Lake District National Park, including assessment of the potential impacts of reservoir operations on Arctic charr, and the continuing recolonisation of Bassenthwaite Lake by vendace (*Coregonus albula*).

Contact: Ian J Winfield iwj@ceh.ac.uk

Portugal: Under the scope of the "Ex-situ Conservation program", conducted uninterruptedly since 2008, more than 14.000 juveniles of seven threatened freshwater fish species native to Portugal were released (*Squalius torgalensis*, *Squalius aradensis*, *Iberochodrostoma almaçai*, *Iberochondrostoma lusitanicum*, *Achondrostoma occidentale*, *Squalius pyrenaicus* and *Squalius alburnoides*) to restock their original populations. More info is available at: [www.exsitu.quercus.pt](http://www.exsitu.quercus.pt).

The first National Genetic Atlas of native cyprinids was published and the data gathered (more than 3600 cytochrome b gene sequences from 188 populations of 16 species) are currently being analyzed to describe the main drivers shaping the contemporary patterns of genetic diversity. Implications for conservation in a context of climate change and highly disturbed habitats will also be delivered shortly. More info is available at: [www.fishatlas.net](http://www.fishatlas.net).

Contact: Carla Sousa Santos csousasantos@gmail.com

# Highlights from the FFSG Regions

**Italy:** As for many Mediterranean countries, Italy hosts a highly endemic freshwater fish fauna including many threatened species. There are many activities in fish conservation currently going on, and just few can be named here:

- Conservation of Sardinian trout (*Salmo cettii*) in the Foresta di Monte Arcosu SCI
- Life + "ConFluPo". Po river defragmentation for the conservation of *Acipenser naccarii* and all the other species of the Po river included in the Annex II of the Habitat Directive. Project and supervising of the works of the fish passage at the Po river dam at Isola Serafini.
- Conservation of *Thymallus aeliani* in the Sesia river
- Adaptation of *Huso huso* in semi-natural ponds (fitness for survival) at the Ticino River Park for the future reintroduction in the Ticino river
- Eel fish passes in Sardinia: including supervising of the works, monitoring
- Preparing a 'Life' project related to the conservation of *Salmo carpio* (to be submitted in 2016)
- Conservation of *Rutilus pigus* in the Ticino River Park

Contact: cesare.puzzi@graia.eu

**Western Mediterranean:** The IUCN Centre for Mediterranean Cooperations organised a workshop on Freshwater Key Biodiversity Areas (KBAs) of the North-Western Mediterranean sub-region (Italy, France, Spain, Portugal). This workshop was jointly held with the IUCN Freshwater Biodiversity Unit (FBU), based in Cambridge, and gathered about 20 freshwater biodiversity experts from European scientific institutions, and governmental and non-governmental agencies including a number of FFSG people acting as experts. The workshop was held at the National Museum of Natural History in Madrid (Spain), from November 17th to 20th, 2015.

For more details see:

[https://www.iucn.org/about/union/secretariat/offices/iucn\\_med/communication/news/?22161/Identification-of-Freshwater-Key-Biodiversity-Areas-in-North-Western-Mediterranean](https://www.iucn.org/about/union/secretariat/offices/iucn_med/communication/news/?22161/Identification-of-Freshwater-Key-Biodiversity-Areas-in-North-Western-Mediterranean)

Contact: Catherine Numa Catherine.numa@iucn.org

**Balkans:** The countries of the Balkan region hold a large part of Europe's threatened biodiversity and are massively under pressure from hydropower development. There are many activities in the region. See <http://www.balkanrivers.net/en/news> for news and updates. FFSG was involved in the study on the distribution of the huchen *Hucho hucho* (<http://www.balkanrivers.net/en/news/study-confirms-heart-huchen-beats-balkans>) in the Balkans. Freshwater biodiversity experts from the FFSG and also from the IUCN Salmonid Specialist Group continuously support the activities of Balkan Rivers and take part in activities.

Contact: Ulrich Eichelmann [ulrich.eichelmann@riverwatch.eu](mailto:ulrich.eichelmann@riverwatch.eu)

**Romania:** Despite the fact that Romania is a member of the European Community, Romanian rivers are massively destructed by the development of hydropower and European directives are constantly violated. A team from the Romanian Television made two episodes of the emission "Nature and adventure" about the desperate situation of huchen *Hucho hucho* in Romania. They are available (in Romanian) at:

<http://www.tvrplus.ro/editie-natura-si-aventura-344333>  
<http://www.tvrplus.ro/editie-natura-si-aventura-402636>

The two episodes conclude that huchen recently disappeared from its former main habitat in Romania, the river Bistrita, and a small population is still struggling to survive in the river Mures. The films do not cover the situation of huchen in the other river in Romania where a population still survives, the river Tisa, on the border with Ukraine. There the situation worsened dramatically in 2015, because the river course was subjected to a totally devastating river regulation, financed from the Cohesion Fund, despite the fact that the Tisa valley is a Natura 2000 site (ROSCI0251).

The same team filmed an episode with Calin Dejeu on Raul Alb, a small river identified by the "Coalition for Environment" as the last undisturbed river in the Romanian Carpathians, but was denied access to the most spectacular river stretch by the owner of the hydropower company, despite the fact that there is only public forest. In the episode only a branch of the river can be seen. The episode can be viewed at:

<http://www.tvrplus.ro/editie-natura-si-aventura-341266>

The river Raul Alb is about to be destroyed despite the presence of protected areas and the massive public support for its protection:

<http://www.thepetitionsite.com/936/056/545/help-saving-the-last-undisturbed-river-in-romanian-carpathians/>

# Highlights from the FFSG Regions

Not even the status of UNESCO heritage, newly gained by the Geopark in which Raul Alb lies, could convince the Romanian authorities to spare this river.

Contact: Calin Dejeu [ncaldejeu@yahoo.co.uk](mailto:ncaldejeu@yahoo.co.uk)

Turkey: Turkey has an overwhelmingly diverse and highly threatened freshwater fish fauna. However, the conservation and fisheries community is largely unaware of this treasure and conservation activities are still very limited to ex-situ breeding and stocking of commercially attractive species. The most prominent exceptions are activities around *Aphanius transgrediens*, that suffer a high risk of extinction due to competition with *Gambusia holbrooki* within its tiny distribution area. Colleagues in Turkey have been carrying out a conservation project including in-situ and ex-situ breeding programs, conservation genetics and environmental education since 2013 with a small grant provided by the Rufford Foundation ([http://www.rufford.org/projects/baran\\_yo%C4%9Furt%C3%A7uo%C4%9Flu\\_0](http://www.rufford.org/projects/baran_yo%C4%9Furt%C3%A7uo%C4%9Flu_0)).

After the first successful attempts, which have mainly focused on determining population statuses of two cohabiting species (*A. transgrediens* and *G. holbrooki*), a second stage of the project was started with a new small grant funded by the Rufford Foundation. The objective was to construct a small, *Gambusia*-free pond in one of the suitable springs in the area, for maintaining a subpopulation of *A. transgrediens* for re-introduction. However, maintaining the health of the pond is a big challenge without regular education and management. So, ex-situ breeding seems much easier and immediately useful; accordingly, a few pairs of *A. transgrediens* were transported to the FFBEL (Freshwater Fish Biology & Ecology Laboratory) in Hacettepe University for breeding trials.

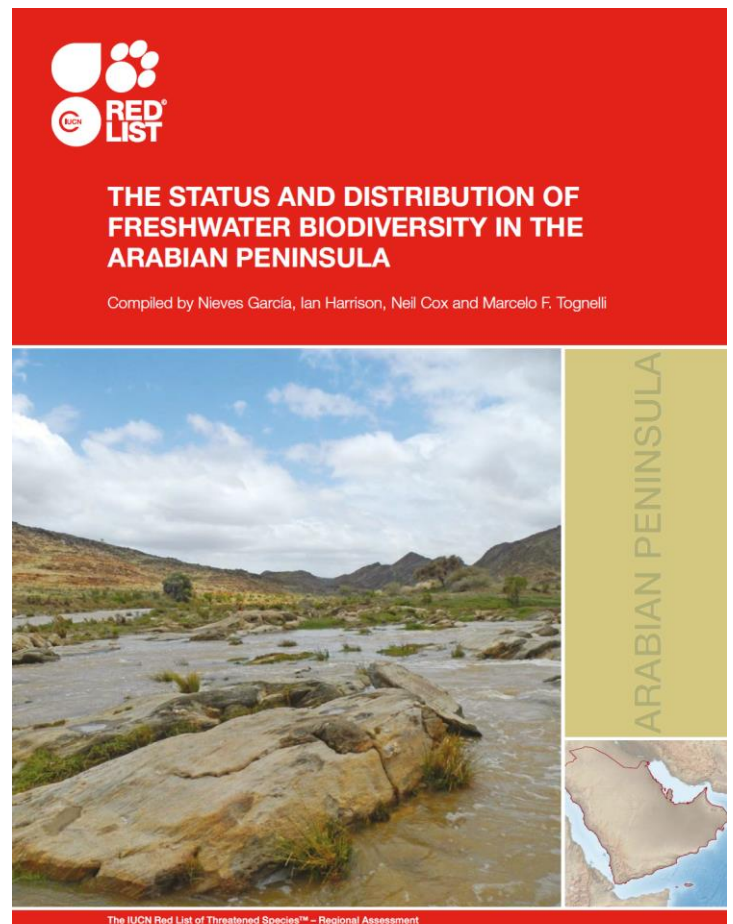
Contact: Baran Yoğurtçuoğlu [yokbaran@gmail.com](mailto:yokbaran@gmail.com) and F. Guler Ekmekçi [fgekmecki@gmail.com](mailto:fgekmecki@gmail.com)

Arabia: A report on the Status and Distribution of Freshwater Biodiversity in the Arabian Peninsula was published in July 2015, marking the completion of a program of assessments kindly supported by the Environment Agency of Abu Dhabi. The report includes assessment of freshwater fishes, which included input from FFSG members. The review workshop for these assessments was kindly hosted by colleagues at the Senckenberg Research Institute and Museum of Nature, Frankfurt, Germany.

The report is available from:

[http://www.iucn.org/about/work/programmes/species/our\\_work/about\\_freshwater/resources\\_freshwater/](http://www.iucn.org/about/work/programmes/species/our_work/about_freshwater/resources_freshwater/)

Contact: Jörg Freyhof; [j.freyhof@igb-berlin.de](mailto:j.freyhof@igb-berlin.de)



# Highlights from the FFSG Regions

**Iran:** *Aphanius farsicus* went extinct in the wild between 2013 and 2015. A population was known to be extant in 2013 but no longer in 2015. Investigations in spring 2013 showed the species existed in very low numbers in one locality in Maharlu Lake basin. A rescue mission started immediately, and part of the wild population was collected for successful stocking and propagating programs. While it is not a major problem to produce this species in numbers, the possibilities to reintroduce it into nature are still unexplored due to the effects of drought and instability of natural water bodies in the Maharlu basin. All but one of the natural water bodies in these basins have dried out, and alternative habitats need to be found in the area. Additional captive populations from two places in Europe where the species had previously vanished will be brought back to Iran.

A conservation strategy will be developed for the species, and investigations will be made into the feasibility of translocation – moving fish to the special reserve where they will have greater protection. To achieve this, local communities will be engaged in the conservation program. Actions to protect the fishes will help show how these fishes are associated with the daily lives of the communities, which offers a good entry point to understanding the importance of conservation. Working closely with local communities and NGOs, conducting field work and interview surveys on fish diversity, and sharing opinions and information about the fishes, could help conserve this endemic tooth-carp having their future generations.

Contact: [hresmaeili@shirazu.ac.ir](mailto:hresmaeili@shirazu.ac.ir)

## Eastern Palearctic Zone

The new **Eastern Palearctic Zone** extends east from the Ural Mountains and covers those regions that were previously included in the Northern Asia region that was previously chaired by Dr. Nina Bogutskaya. Dr. Bogutskaya stepped down as Chair in 2015 because she had moved from Russia to Slovenia, and Dr. Dmitry Lajus has accepted the role of Regional Chair for the Eastern Palearctic Zone. Dr. Lajus is an Associate Professor at Saint Petersburg State University, in the Department of Ichthyology and Hydrobiology.

## Central Asia Region

The **Central Asia Region** (including Turkmenistan, Uzbekistan, Kazakhstan, Tadjikistan, Krygyzstan, some of Afghanistan) was formed in 2014 and is chaired by Dr. Bakhtiyor Karimov and Dr. Bakhtiyar Kamilov (Uzbekistan Academy of Sciences).

## South Asia Region

There are no changes in the geography of this region, which includes India, Pakistan, Sri Lanka, Bangladesh, Nepal, Bhutan and parts of Afghanistan and Myanmar. The region is co-chaired by Dr. Rajeev Raghavan and Dr. Vishwanath Waikhom. In June the EK Janaki Ammal National Award for Animal Taxonomy was presented to co-Chair Dr. Vishwanath Waikhom, for his contribution to freshwater fish taxonomy of the Eastern Himalaya.

The South Asia Office of the IUCN SSC/WI FFSG partnered with Kerala University of Fisheries and Ocean Studies (KUFOS), Kochi, India to organize a National Workshop on 'Integrative Taxonomy of Freshwater Fishes' from 2nd to 4th December 2015. Around 50 participants from across India attended the three-day workshop learning about the scope and need for using integrative approaches to freshwater fish taxonomy and systematics.



*National Workshop on 'Integrative Taxonomy of Freshwater Fishes, Kerala*

## China region

There has been no change to the definition of this region co-chaired by Dr. Junxing Yang.



# Highlights from the FFSG Regions

## Japan region

There has been no change in the definition of this region, chaired by Dr. Katsutoshi Watanabe. In early 2015 Dr. Watanabe and several colleagues, including staff from Conservation International's Japan office, noted that the species *Parabotia curtus* was severely threatened by the proposed construction of a football stadium by Kyoto Prefecture and the city of Kameoka City, adjacent to one of three remaining habitats of this species. While the species was listed as Data Deficient in the IUCN Red List, this assessment was several years out-of-date and inaccurate. The species had been included in the Japan Red List as Critically Endangered (CR) and was used as a 'trigger species' to define a potential freshwater Key Biodiversity Area. A plan was made to urgently update the international status of *P. curtus* in the global Red List, so that it was more accurate, and the FFSG Secretariat wrote a letter in support of the concerns of their colleagues in Japan, urging the decision-makers to think very carefully about any infrastructure development close to a region that evidently qualifies as a key biodiversity area. The species account in the Red List was updated in October 2015 to Critically Endangered. This work made national network media, highlighting the fact that a proposed football stadium would destroy the species' habitat. The matter was discussed by the national government and the construction plan for the stadium was halted and an alternate location is being investigated.

Watanabe, K., Abe, T., Iwata, A., Shimizu, T. & Hosoya, K. 2015. *Parabotia curtus*. The IUCN Red List of Threatened Species 2015: e.T11661A83606443. <http://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T11661A83606443.en>

## Mainland and Peninsular Southeast Asian Region

The new **Mainland and Peninsular Southeast Asian Region** includes West Malaysia, Thailand, the Lower Mekong basin countries of Laos, Cambodia and Vietnam, and parts of Myanmar (lower Irrawaddy to Salween Basins; other parts of Myanmar are covered by the South Asia region). This region, which was formerly part of the southeast Asia region, has been chaired by Dr. Chavalit Vidthayanon. In March 2015 we were pleased to welcome Dr. Amirrudin Ahmad as a co-Chair for the **Mainland and Peninsular Southeast Asian Region**. Dr. Ahmad is a senior lecturer at the University of Malaysia-Terengganu and his expertise of peninsular southeast Asia is an important addition to the overall capacity of FFSG.

## Sundaland/Philippines

The new **Sundaland/Philippines** region includes the large islands of Borneo, Java and Sumatra as well as their surrounding islands, and the Philippines. We welcome Dr. Tan Heok Hui, based at Lee Kong Chian Natural History Museum (National University of Singapore) as the new Chair. Dr. Heok Hui helped create the guidelines for photographing fishes that are posted on our Global Freshwater Fish BioBlitz website.

The work place where Dr. Heok Hui is based moved into new facilities in April 2015 – the Lee Kong Chian Natural History Museum (see website for more details: <http://lkcnhm.nus.edu.sg/>). The Lee Kong Chian Natural History Museum carries over the role of the Raffles Museum of Biodiversity Research (and its predecessor institutions), which included the historical collection in the Zoological Reference Collection (mainly for birds and mammals of Southeast Asia). The modern collection also has one of the best representatives of freshwater fishes of Southeast Asia, based within Asia. The new facilities include two floors of public exhibition space devoted to Southeast Asian fauna and flora plus outdoor thematic gardens; three levels of collection space (two wet and one dry). There is limited research space for visiting scientists and students. The Lee Kong Chian Natural History Museum has four research publication outputs, i.e. Raffles Bulletin of Zoology (international journal, scientific citation index [SCI]: 1.024), Nature in Singapore (local journal), Singapore Biodiversity Records (local journal) and Lee Kong Chian Natural History Museum e-books.

In his new role of Regional Chair Dr. Heok Hui has already started planning for developing assessments in the Sunda region. With generous financial support from Wildlife Reserves Singapore, he is organizing an assessment training workshop in Singapore, in February 2016.

## New Guinea region

This is another new region (formerly part of the southeast Asia region), for which a Chair needs to be appointed.

## Australia and New Zealand region

This region, formerly part of the Oceania region, is chaired by Dr. Mark Lintermans. During 2015 there has been considerable discussion about updating and completing the Red List assessments for this region, especially due to the attention being focused on some of the more iconic species such as the

# Highlights from the FFSG Regions

Murray River cod, *Maccullochella peelii*, where conservation programs have been implemented over the last few years but where the Red List assessment has not been updated. With the collaboration of colleagues in Australia we hope to address these data gaps in the near future.

## Pacific region

This is a new region (formerly part of the Oceania region), for which a Chair needs to be appointed.

## North America

There has been no change in the definition of this region, chaired by Stephen Walsh; however we are still looking for a co-Chair to assist Stephen. From March to October 2015 the National Geographic Museum in Washington DC hosted an exhibit on *Monster Fish: In search of the Last River Giants*. The exhibit draws heavily on the work of Dr. Zeb Hogan, FFSG Steering Committee member and Special Advisor on Migratory Species; and Zeb gave a lecture at the opening of the exhibit. This ambitious exhibit required painstaking preparation of accurate models of the fishes, as shown in this video clip:

<http://tinyurl.com/zmw9817>



*The giant carp, Catlocarpio siamensis; one of the life size models in the Monster Fish exhibit. Photo: Carly Silverman.*

After October 2015 the *Monster Fish* exhibit moved to the Terry Lee Wells Nevada Discovery Museum, where it runs until April, 2016.

In February, FFSG member Steven Cooke (Carleton University) received the E.W.R. Steacie Fellowship awarded by the Natural Sciences and Engineering Research Council of Canada. The award, for \$250,000, supports Dr. Cooke's work on stress experiences of fishes during migration.

IUCN's Freshwater Biodiversity Unit has continued to work with NatureServe to update the Red List assessments for freshwater fishes in North America.

## Mesoamerica region

There has been no change in the definition of this region, chaired by Topis Contreras MacBeath.

## South America region

There has been no change in the definition of this region, chaired by Roberto Reis. The Tropical Andes Freshwater Biodiversity Assessment is under way. In May 2015 the IUCN-CI Biodiversity Assessment Unit and the Freshwater Biodiversity Unit organized a workshop in Bogotá, Colombia to refine and validate freshwater Key Biodiversity Areas (KBAs) for the Tropical Andes of Bolivia, Peru, Ecuador and Colombia. The workshop was coordinated together with the Instituto Alexander von Humboldt of Colombia and held at the Pontificia Universidad Javeriana. The workshop was attended by 20 people, including 16 experts and four facilitators. They used the Red List assessments and maps for 661 freshwater fishes endemic to the region. The data is currently being analyzed and synthesized and a report is anticipated to be published during the first half of 2016. The project is funded through a MacArthur Foundation grant. For more information on this project, please contact Marcelo Tognelli at [marcelo.tognelli@iucn.org](mailto:marcelo.tognelli@iucn.org).

Unfortunately 2015 was also a dark year for the conservation of aquatic biodiversity in Brazil. The nation-wide assessment that Brazil finished in December 2014 for over 12,000 species, including 3,122 freshwater fishes, was published as a Federal Decree which officially protects all threatened species. In a political response made by the industrial fisheries sector, however, the ordinance that specifically deals with threatened

# Highlights from the FFSG Regions

aquatic animals was entirely revoked in 2015, leaving all fishes, freshwater and marine, totally unprotected. This is an enormous setback for the conservation of Brazil's aquatic fauna, and the Ministry of Environment is working to reverse the situation. This problem was highlighted in a letter to *Science*, by Brazilian scientists and officials of the Ministry of Environment (Di Dario *et al.*, 2015). To make matters worse, in October 2015 a joint act of the Ministries of Agriculture and the Environment suspended the seasonal fishing closures that protect the spawning fish of several commercially and ecologically important species. Without spawning closures, fishing is allowed during the annual spawning migration of all freshwater species from six major hydrographic basins, including the Amazon, as well as during the reproductive season of several marine fishes and invertebrates. This decision was made in an effort to cut costs; an unknown percentage of approximately one million fishers were illegally receiving unemployment benefits during the closure season. After enormous pressure from different sectors of the society, including another letter to *Science* (Pinheiro *et al.*, 2015), the fishing closure began to be observed and the unemployment benefits paid to the fishers.

Di Dário, F., Alves, C.B.M., Boos, H., Frédou, F.L., Lessa, R.P.T., Mincarone, M.M., Pinheiro, M.A.A., Polaz, C.N.M., Reis, R.E., Rocha, L.A., Santana, F.M., Santos, R.A., Santos, S.B., Vianna, M. & Vieira, F. (2015). A better way forward for Brazil's fisheries. *Science* **347** (6226), 1079.

Pinheiro, H.T., Di Dario, F., Gerhardinger, L.C., Melo, M.R.S., Moura, R.L., Reis, R.E., Vieira, F., Zuanon J. & Rocha, L.A. (2015). Brazilian aquatic biodiversity in peril. *Science* **350** (6264), 1043-1044.

## Wetlands International (Latin America)

Wetlands International (WI) is one of the partners with IUCN-SSC that supports the FFSG. WI's specific activities within FFSG are focused on the work done by their Latin America staff, coordinated by FFSG Steering Committee member Claudio Baigún. They have developed different activities related to improving fishing practices as a way for preserving fish biodiversity in large rivers and adaptation to climate changes.

Some of the projects were:

- Guidelines and concepts for the adaptation of fluvial fisheries to climate change in the La Plata River basin, published during 2015 and presented at the 12th Ramsar Convention in Uruguay.
- Specific studies developed in the Parana delta creeks, to understand the abundance and distribution of small fishes.
- Guidelines developed for the use of fishers' ecological knowledge as part of a fisheries ecosystem approach, applied to small-scale fisheries in South America. This also included a project about use of fishers' ecological knowledge to improve fisheries management guidelines, to protect target species. This was presented at the *XXI Encontro Brasileiro de Ictiologia*, Recife, Brazil (February 1-6, 2015).

Migratory fish conservation was also a main focus of WI's work, including a workshop, inspired by World Fish Migration Day 2014, that occurred in Reconquista City (Argentina), where a large amount of sport and recreational fishers, and local and national governmental agency authorities participated. The workshop focused on the relevance of migratory species as key ecological component of large rivers and a relevant source of livelihoods for fishers and other stakeholders



Claudio Baigún, Coordinator of Fish and Fisheries Conservation Program of Wetlands International explaining the need to conserve healthy migratory fish populations.

Claudio Baigún also contributed to the Fish Passage conference in Netherlands (see World Fish Migration Day; page 14), giving presentations on:

- Making visible the invisible: Impact of low-height dams in lowland rivers.
- Conciliating fish ecology and river fragmentation in South American large rivers: Are fish passages appropriate tools?

# Highlights from the FFSG Regions

## **Northern Africa region**

With the formation of the Western Palearctic Zone, the borders of the **Northern Africa region**, chaired by Dr. Abebe Getahun, are slightly modified. This region now includes Mauretania, parts of Mali, Libya, Egypt, Sudan, South Sudan, Ethiopia, Eritrea, and Somalia.

## **West Africa region**

There has been no change in the definition of this region, chaired by Mamaa Entsua-Mensah.

## **East and Central Africa region**

There has been no change in the definition of these regions, chaired by Jos Snoeks. IUCN's Freshwater Biodiversity Unit has been working on data for the Lake Victoria catchment: updating Red List reassessments, revising and fine-tuning freshwater Key Biodiversity Areas, studying livelihoods values of species, and assessing climate vulnerability traits of species.

## **Southern Africa**

In 2015 Dr. Paul Skelton, long term Regional Chair for Southern Africa stepped down from his post in order to enjoy retirement. We welcomed Dr. Olaf Weyl (South African Institute for Aquatic Biodiversity, SAIAB) as the new regional Chair. Olaf and SAIAB have been especially helpful to FFSG in 2015, offering assistance as we searched for a new host for our web site (see page 20), and Olaf's intern Ann Wu took on the role of co-editor of the FFSG Newsletter for issues 9 and 10.

## **Madagascar**

In March 2015 we were pleased to welcome Dr. Paul Loiselle as a co-Chair for the Madagascar region for FFSG. Paul joined our existing Regional Chair, Dr. Melanie Stiassny, and brings over 50 years of experience working with Madagascan fishes. His professional distinctions include being the Emeritus Curator of Freshwater Fishes at the New York Aquarium, Senior Conservationist at the Wildlife Conservation Society, and Scientific Advisor to the Association of Zoos and Aquariums Freshwater Fish Taxa Advisory Group.

IUCN's Freshwater Biodiversity Unit started work on re-assessments of Madagascan freshwater fishes, for updating the IUCN Red List, and identification of freshwater Key Biodiversity Areas in Madagascar and other Indian Ocean Islands. This work will be conducted in collaboration with regional experts, including FFSG members.

# FFSG Projects

## Introduction

In 2015 the FFSG has focused on sustaining the projects we have developed from previous years, and on identifying areas of work that should be our focus for the upcoming Quadrennium (2017-2020). The FFSG Secretariat has also been continuing its efforts in fundraising, and establishing new regional representation.

## Global Freshwater Fish BioBlitz

The *Global Freshwater BioBlitz*, which enables conservation scientists and nature lovers to work together to map freshwater fishes and help conserve these unique species, was launched in 2014 and received 1650 observations in that year. It has continued successfully through 2015 with another 1090 observations, and as of February 2016 there are 783 species registered.

Thanks to the generous support of WWF-US, GEO BON, and the FFSG Global Chair, our Programme Officer, Alex Mauroner, was able to present FFSG's work on the *Global Freshwater Fish BioBlitz* at the Citizen Science Conference 2015, held in San Jose, California on February 11 and 12. Alex presented a poster on the *Global Freshwater Fish BioBlitz* during the poster session and conference reception. Alex also took part in a live bioblitz event in San Jose's Guadalupe River Park, organized by iNaturalist.org, in order to become more directly familiar with the software that is used for the *Global Freshwater Fish BioBlitz*. With over 650 scientists, educators, and practitioners present at the conference, this was an ideal opportunity to build recognition and connections for FFSG. This included discussion with potential future collaborators, such as EarthWatch Institute's Freshwater Watch, which is a global citizen science research project investigating the health of freshwater ecosystems (<https://freshwaterwatch.thewaterhub.org/>)



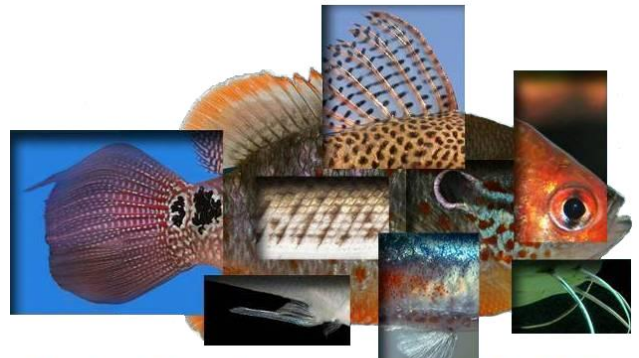
*Notropis bouchardi*. Photo: Topis Contreras MacBeath



*Garra dunsirei*. Photo: Johannes Pfeleiderer



*Pseudobarbus skeltoni*. Photo: Riaan Van der Walt



Global Freshwater Fish BioBlitz

# FFSG Projects

## World Fish Migration Day and Platform

FFSG was one of the collaborating partners on the first global World Fish Migration Day (WFMD), on 24 May 2014. That event was extremely successful with 273 events taking place across 53 countries, and over 1000 different organizations contributing (see the 2014 Annual report and the June 2014 FFSG Newsletter). In an effort to mobilize the success and support of the World Fish Migration Day, the organizers also established the World Fish Migration Foundation (<http://www.worldfishmigrationfoundation.com/>), and the World Fish Migration Platform (<http://www.worldfishmigrationplatform.com/>) in 2014. The FFSG is a member of the platform's partnership, in addition to Wanningen Water Consult, LINKit Consult, World Wildlife Fund, the Nature Conservancy, Waterschap AGV, and Hoogheemraadschap Hollands Noorderkwatier. The goal of the platform is to create awareness, share knowledge, and build solid networks on a global scale around the themes of fish migration and free-flowing rivers.

The work of the Platform in 2015 included the presentation of online webinars, and contribution to Fish Passage 2015 (<http://fishpassage.umass.edu/conference2015/>), an international conference on river connectivity best practices and innovations, in the Netherlands (see the December 2015 FFSG Newsletter). FFSG Steering Committee members Claudio Baigún and Zeb Hogan gave keynote addresses in the plenary sessions of the Conference.



Zeb Hogan at the Fish Passage Conference.

During 2015 FFSG worked with other members of the Platform in planning the 2016 World Fish Migration Day, on May 21, 2016. A summary of the outcomes of that day is presented in the October 2016 FFSG newsletter.

## Blueprint for Freshwater Life

Colleagues from FFSG and IUCN-SSC's Freshwater Conservation Subcommittee have, for some time, been planning a project, the *Blueprint for Freshwater Life* (previously titled the *Census of Freshwater Life*). The project idea was kicked off through meetings of IUCN-SSC's Freshwater Fish Specialist Group and Freshwater Conservation Subcommittee. The original plan for the project was modelled on the *Census of Marine Life*, highlighting new exploration and innovative technology, but developing this further, focusing strongly on the application of high quality data for addressing pressing issues of the science and conservation of freshwater life. The *Blueprint* will combine research, exploration, education, conservation planning, and diverse communications media to raise awareness of freshwater ecosystems and their species. The *Blueprint* concept was discussed at the IUCN-SSC Leaders' meeting in Abu Dhabi in September 2015, and in October 2015 Will Darwall (IUCN Freshwater Biodiversity Unit) presented the concept at a workshop on *The next generation of biodiversity research: theory, traits, and methods* last month, at the Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany. The concept was well received there and, via the Director Klement Tockner, IGB have offered to help support the administration of the project. IGB has important financial and human capacity to help. Klement Tockner also promoted the project to UNESCO, which is interested in supporting it.

## Home Aquarium Fish Subgroup

The Home Aquarium Fish Subgroup (HAFSG) was officially formed in 2014, chaired by Scott Dowd from the New England Aquarium in the US, and it has advanced significantly in 2015. The HAFSG was formed to promote sustainable management of the freshwater fish trade and to raise public awareness about freshwater fishes and their conservation. The subgroup works closely with Project Piaba, a project focused on supporting sustainable aquarium fisheries in the Amazon, and providing local people with a livelihood that can also help them protect the pristine riparian areas around the fishing grounds. In February 2015 Scott Dowd led an expedition of 40 international specialists to the home aquarium fishery of the Rio Negro in the Amazon (see March 2015 Newsletter).

# FFSG Projects

The expedition focused on gaining information on the methods of capture, transport and export of the aquarium fishes from the Rio Negro, and included examination of water quality, fish populations, and fish health. The expedition also included collaboration between US and Brazilian veterinarians studying aquatic pathology and viral disease screening. Representatives from a local fisherfolk collective also participated in the training and information sharing.



Project Piaba trip 2015. Photo: Radson Alves

In May 2015 Scott Dowd co-led sessions at the *Aquarama 2015 International Fish and Accessories Exhibition*, held in Singapore (see August 2015 Newsletter). *Aquarama* is the leading biennial international ornamental fish, aquatic plants, invertebrates and accessories trade exhibition in the world (<http://www.aquarama.com.sg>). The 2015 Conference included a specially convened public aquarium committee, launching a programme of sub-events aimed specifically at public aquarium personnel. This committee included HAFSG Chair Scott Dowd.



Scott Dowd speaking at the *Aquarama Meeting* Photo: Facilitators Network Singapore

The objective of the meetings was (i) to promote the development of a strategic framework for coordination of home aquarium fisheries to provide socio-economic benefits and environmental stewardship; and (ii) to formalize a collaborative plan to advance coordination between public aquariums, zoos, home aquarium industries, home aquarium hobbyists, and academic scientists so that they may work together to increase awareness and education about the conservation outcomes from home aquarium fisheries and production systems. An initial planned output from the group (including HAFSG members) will be a white paper describing case studies where home aquarium fisheries are currently resulting in socioeconomic and environmental benefits, where fisheries could be adapted to maximize benefits, and where there is a need for environmental stewardship that could be provided by community-based fisheries.

The full report from the HAFSG meetings at *Aquarama* meetings is available from:

<https://files.acrobat.com/a/preview/05eb5e3c-dea4-45a5-87b7-1f889e5986eb>

In September 2015 the HAFSG was also represented at the Annual Conference of the Association of Zoos and Aquariums (AZA). The HAFSG collaborated on a display booth for the AZA's Freshwater Fish Taxon Advisory Group, which showcased the potential for conservation outcomes from the aquarium trade and hobby, and focusing on how zoos and aquariums can encourage the hobby and drive conservation through their exhibits.

## IUCN-SSC Leaders' Meeting, Abu Dhabi, United Arab Emirates

12–18 September, 2015

Several members of FFSG attended the SSC leaders' meeting:

Richard Sneider (FFSG Chair); Topis Contreras MacBeath (Mesoamerica Regional Chair); Will Darwall (IUCN Freshwater Biodiversity Unit); Matt Gollock (FFSG Steering Committee; Anguillid Eel Specialist Group Chair); Ian Harrison (Technical Officer); Kira Mileham (HAFSG Steering Committee); Taej Mundkur (FFSG Steering Committee);

# FFSG Projects

Harmony Patricio (FFSG Steering Committee); Pete Rand (FFSG Steering Committee; Salmonid Specialist Group Chair); Michele Thieme (FFSG Steering Committee; via skype); Tony Whitten (FFSG Steering Committee).

On September 12 & 13 many of the above attended the SSC Freshwater Conservation Sub-Committee meeting, chaired by Topis Contreras MacBeath. A full report of that meeting, with a discussion of some projects preliminarily identified as goals for the 2017-2020 Quadrennium (but requiring further discussion and review) is available on the Freshwater Conservation Subcommittee webpage on the IUCN Union Portal: <https://portals.iucn.org/union/group/656>.



FFSG Global Chair, Richard Sneider (lower right) discusses collaboration with zoos and aquariums, with Freshwater Conservation Subcommittee Photo by Topis Contreras MacBeath.

Sessions during the main meeting (September 15-18), with significant discussion of themes related to freshwater fishes, included:

- Convention on the Conservation of Migratory Species of Wild Animals
- Mitigating the impacts of invasive alien species in freshwater ecosystems
- Guidelines on recreational fishing as a conservation tool

A full report of the leaders' meeting, with reports from the plenary and parallel sessions is available at: <https://portals.iucn.org/union/group/6635>

## Publications

FFSG members contributed to a book, *Conservation of Freshwater Fishes* (Closs, G., Krkosek, M. & Olden, J., eds) that was published in 2016 but represented significant input from staff during 2015.

For details see:

<http://www.cambridge.org/us/academic/subjects/life-sciences/ecology-and-conservation/conservation-freshwater-fishes>

FFSG members authored numerous publications during 2015, a selection of which are noted below. (Note that this is not a comprehensive list; but is based only on selected, significant references sent to the FFSG Technical Officer by FFSG members. Some other publications are also noted elsewhere in this report).

Baigún, C. (2015). Guidelines for use of fishers' ecological knowledge in the context of the fisheries ecosystem approach applied to small-scale fisheries in South America. In *Fishers' knowledge and the ecosystem approach to fisheries: applications, experiences and lessons in Latin America* (Fischer, J., Jorgensen, J., Josupeit, H., Kalikoski, D. & Lucas, C.M., eds), pp. 63-83. FAO Fisheries and Aquaculture Technical Paper No. **591**. Rome: FAO.

Baigún, C.R.M. (2015). Lineamientos y conceptos para la adaptación de las pesquerías fluviales de la Cuenca del Plata al cambio climático. Fundación Humedales / Wetlands International. Buenos Aires, Argentina.

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- Ho, J.K.I., Plath, M., Low, B.W., Liew, J.H., Yi, Y., Ahmad, A., Tan, H.H., Yeo, D.C.J. & Klaus, S. (2015). Shoaling behaviour in the pygmy halfbeak *Dermogenys collettei* (Beloniformes: Zenarchopteridae): comparing populations from contrasting predation regimes. *Raffles Bulletin of Zoology* **63**, 237-245. [[http://lkcnm.nus.edu.sg/nus/images/data/raffles\\_bulletin\\_of\\_zoology/vol63/63rbz237-245.pdf](http://lkcnm.nus.edu.sg/nus/images/data/raffles_bulletin_of_zoology/vol63/63rbz237-245.pdf)]
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- Tan, H.H. & Zeng, Y. (2015). Motoro stingray in stream at Loring Banir. *Singapore Biodiversity Records* **2015**, 141 (25 September 2015).
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# IUCN Red List Authority



***The FFSG has continued to serve the IUCN SSC in the role of Red List Authority for freshwater fishes:***

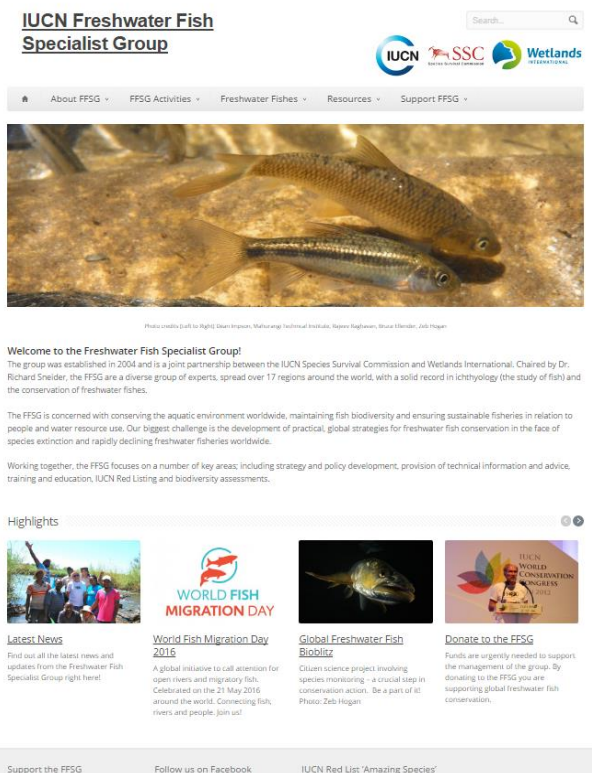
Jörg Freyhof (Regional Chair, Western Palearctic) and Rajeev Raghavan (Regional Co-Chair, Southern Asia) continue to share the responsibilities of the Red List Authority Coordinator position.

The RLAC works closely with the FFSG's Species Survival Commission Representative on the Red List Committee, Dr. Rajeev Raghavan.

In 2015 the main focus of the RLAC's was to secure the review of assessments of tropical Andes freshwater fishes (see page 10). They were assisted by Roberto Reis, Carla Pavanelli, Carla Polaz, and Ian Harrison.

# Communications

## FFSG website



The FFSG website ([www.iucnffsg.org](http://www.iucnffsg.org)) has been an important site for distributing information about our projects, and those of our collaborators. Early in 2015, Programme Officer Alex Mauroner continued working with many of the Regional Chairs to update the regional web pages. We also used the website to distribute information about the activities of the Home Aquarium Fish subgroup (see pages 14-15) and to distribute our Annual report and FFSG Newsletters.

The website had been kindly hosted on Chester Zoo's server through 2015 until September, when a security breach and cyber-attack meant that the website had to be taken off that server. As a priority, Ian Harrison gathered the archived files – most were retrievable but some were corrupted and we lost their recent updates. Ian also requested assistance from FFSG member institutions to act as a web host. The *South African Institute of Aquatic Biodiversity (SAIAB)* and *Project Piaba* offered to help and ultimately we selected *Project Piaba* because they had staff time immediately available to help, and we had a close connection with them via the Home Aquarium Fish Subgroup. However, *SAIAB* also provided a significant assistance in recovering files. The website was recovered and made available before the end of 2015, thanks to the work of of Deb Joyce (*Project Piaba*; see also page 24).

Repairs and updates to some files are still in progress, in 2016. Please continue to use the website, and please send any news items or project details to Ian Harrison, so they can be added to the website.

### 'Saving Freshwater Fishes and Habitats' Newsletter

The FFSG newsletter '*Saving Freshwater Fishes and Habitats*' has been a successful publication since its relaunch in 2012. The scope of the newsletter includes articles on taxonomy, genetics, policy, evolution, species distributions, management, husbandry and ecology. We welcome news from recent events (workshops, meetings, and conferences) and updates from conservation projects. Regular features include a message from the Global Chair, FFSG updates, news from around the world, an opinion article, and a noticeboard of upcoming events.

### SAVING FRESHWATER FISHES AND HABITATS

Newsletter of the IUCN SSC/WI Freshwater Fish Specialist Group

Issue 10 • December 2015



Normally quarterly, we were restricted to three issues in 2015. This was partly due to a reduction in staff time available to work on the Newsletter, after May 2015 when we no longer had a Programme Officer. However, Olaf Weyl (Regional Chair for Southern Africa, and staff of the *South African Institute for Aquatic Biodiversity*) kindly offered the

# Communications

assistance of his intern (Ann Wu) who provided essential editorial assistance for the FFSG Newsletter. All Newsletters are available for download from the FFSG website at <http://www.iucnffsg.org/resources/ffsg-newsletter/>.

## **Facebook**

The FFSG Facebook page is at:

(<https://www.facebook.com/FreshwaterFishSpecialistGroup>)

This has been an essential addition to the FFSG website for sharing news and opinions quickly across a global audience. The page has continued to grow through 2015, with the number of people 'liking' the page increasing by 27% from 3109 to 3943 at the end of the year.

Please feel free to post comments to the Facebook page.

# Administration

Alex Mauroner served as our part-time Programme Officer from June 2014 until the end of May 2015, when we no longer had sufficient funds to support that position. The FFSG Secretariat is continuing to seek funding to re-instate a Programme Officer. We are extremely grateful to Alex for his hard work during 2014 and 2015. Besides taking care of routine activities, which included managing membership and seeking potential funds for the FFSG Secretariat and members, Alex oversaw the FFSG website and helped produce the quarterly newsletters. He also helped develop concept notes and proposals for several of the initiatives that FFSG has had as priorities for the last year.

Ian Harrison has served as the Technical Officer, supporting Richard Sneider in his role as Global Chair and, since May 2015, also filling the general administrative duties of the Programme Officer. Production of the FFSG Newsletter has also been assisted by Ann Wu, who is an intern for Olaf Weyl (FFSG regional Chair for Southern Africa) at the *South African Institute for Aquatic Biodiversity*. Ann assisted in editing and preparing the layout of the Newsletter from June to December 2015.

A priority for FFSG has been to find an organization that can take over the hosting role that was offered by Chester Zoo and the North of England Zoological Society until late 2013 when Gordon McGregor Reid retired from his positions of Director of the Zoo and Global Chair of FFSG. Alex Mauroner and Ian Harrison approached several zoos and aquariums during 2015, to explore the possibility of partnerships and hosting arrangements. There are several essential benefits of having a hosting organization. One of the main ones is that this partnership offers strong opportunities for collaboration between FFSG and its host in developing science, identifying conservation opportunities (e.g., *in situ* habitat and species conservation; and identifying priorities for *ex situ* conservation breeding programs), and presenting education and outreach materials and messages to the general public. There are also some specific logistic advantages: the hosting organization also hosts the FFSG website, which is a resource for shared messaging and promotion; and it usually acts as a host for holding bank accounts, for receipt of grants and donations to support projects for the conservation of freshwater fishes.

In 2015 **Project Piaba** kindly agreed to host the FFSG website (see page 20) as an interim measure, while FFSG looks for a longer-term host. Discussions for a more comprehensive hosting arrangement are still ongoing but it is expected that a

new arrangement will be found prior to IUCN's 2017-2020 Quadrennium.

## FFSG Membership

FFSG has had an open policy for membership; anyone could fill out an application via the FFSG website and the Secretariat reviewed the application to ensure that the prospective member had good reasons to apply for membership (i.e., they had a strong interest in freshwater fishes either directly through their work, or as an enthusiast in the public community). This process was discussed at the 2014 FFSG meeting in Mexico, with a recommendation for more control on membership (see notes from the meeting at <https://portals.iucn.org/union/node/11233/656>).

In 2015 FFSG reached 200 members, which had been recommended by SSC as an upper limit for a manageable size for a Specialist Group that can keep its members engaged with its activities. With this in mind, and to keep our numbers manageable from a logistical standpoint, some changes were proposed to taking on new members. Regional Chairs can suggest new members or interested parties can contact Regional Chairs for approval, and members will be selected based on expected specific collaborations, including projects with Regional Chairs or other regional members. This process makes it easier to manage the group as a whole, and to ensure that we have an active membership, and allows the Regional Chairs to monitor how many members they are working with in their region.

At the end of 2016 all Specialist Groups have to review their membership and re-invite their members to join the group for the next IUCN Quadrennium. FFSG will follow the model run by several of the other particularly active and productive Specialist Groups, and select our members based on how they may help advance our Strategic Plan for the next Quadrennium.

# Administration

## Anguillid Eel Specialist Group

In 2015 the Anguillid Eel Specialist Subgroup, which had been a part of FFSG, was formally assigned as its own Specialist Group – the Anguillid Eel Specialist Group (AESG), with Dr. Matt Gollock as Chair

<http://www.zsl.org/conservation/species/fish-and-invertebrates/eel-conservation/iucn-anguillid-eel-specialist-group>. The AESG and FFSG will continue to work together very closely, supporting each other. However, it is logical that the AESG functions as its own group; it deals with specific issues on policy, fishing regulation, etc. where it will be useful for the group to have the autonomy to make eel-specific decisions, and to make its own statements that do not have to be issued as an FFSG statement.



*AESG Chair Matt Gollock*

Matt Gollock provided the following report on the AESG's participation in a critical meeting on anguillid eel science and conservation.

“Due to the peculiarities of the life cycle of the anguillid eels they could arguably have a larger stakeholder group than many other species of fish, and as such, the importance of bringing scientists, fishers, extractive industries and policy-makers together becomes greater and greater, as our understanding of the species slowly grows. The IUCN AESG was key in initiating this process in Japan with an inaugural stakeholder workshop in 2014, and was represented at a similar landmark ‘state-of-the-art’ meeting in Portland, Maine on 23-25th October 2015. The Sargasso Sea Commission, the Marine & Environmental Law Institute of Dalhousie University,

Ocean Tracking Network, Social Sciences and Humanities Research Council of Canada, Center for Oceans and Coastal Law at the University of Maine School of Law, Ocean and Coastal Law Journal, and the Gulf of Maine Research Institute hosted the meeting which focused on the science and conservation of the American eel across its range.

Recruitment, populations and escapement of the American eel (listed as Endangered in 2014) have declined over the past 30-40 years as a result of the impacts of threats such as barriers to migration, changes in the oceanic environment, pollution, habitat loss and exploitation. Indeed, since the export ban of the European eel outside of the EU, exports of the American eel rose leading to increased scrutiny of the fisheries management. As such, presentations from Canadian and American stakeholders focused on the situation at present scientifically, socio-economically and legislatively. In addition speakers from CMS and the AESG (Alan Walker [CEFAS, UK] – European eel management; Matthew Gollock [ZSL, UK] – Global eel conservation) took a broader view of anguillid science and conservation. There was an overall feeling that participants had learned a great deal from each other, about the individual species, and anguillids more broadly, and that this was a notable first step towards future collaborations.

Presentations can be found at:

<http://www.sargassoseacommission.org/about-our-work/workshops/american-eel-workshop>.”

# Funding

## **Fundraising Strategy (FFSG/FBU)**

The main running costs of the FFSG for 2015 came from the salary of the Programme Officer and Technical Officer positions (both part time; and the Programme Officer was only from January to the end of May 2015). Support for these positions (\$42,210) was provided principally by FFSG's Global Chair, Richard Sneider, (funding administered via Conservation International) and with some support from the IUCN-SSC. Funding for the FFSG Secretariat (I. Harrison) to attend the SSC Leaders' meeting in Abu Dhabi was generously provided by the IUCN Species Survival Commission.

The costs of the FFSG website, that is hosted on the server for the *Project Piaba's* website, are kindly supported by *Project Piaba*. Deb Joyce (who is *Project Piaba* staff and part of the Steering Committee for the Home Aquarium Fish Subgroup) maintains the *Project Piaba/FFSG* sites with software updates and plugins to overcome any security issues and bugs. She has also implemented a "Securi" lock-down service that requires user internet connections to be "white-listed". This represents about \$361/year in time and fees to services.

Please note that the finances reported here only cover the FFSG Secretariat, website costs, and the SSC Leaders' Meeting. Any income and expenses from the FFSG regions, sub-groups and regional offices are not included in this annual report.



# Future Plans

## 2017-2020 IUCN Quadrennium

Through 2016 the FFSG must look carefully at what should be the main goals of our Strategic Plan for the 2017-2020 Quadrennium, and the focus of our membership that can help us achieve those goals. We already have some projects in development, as discussed on pages 13-18 (FFSG Projects), and we have some additional projects in early planning stages (see below). Several members of the FFSG attended the IUCN World Conservation Congress at Hawaii in September, 2016. FFSG members hosted several workshops and Knowledge Café's at the Congress, and have participated in the development of some Motions to the Congress addressing freshwater subjects. These events are reported in the October 2016 newsletter and will be reported in the 2016 Annual Report.

## Blueprint for Freshwater Life

The *Blueprint for Freshwater Life* (page 14) will be an important project for FFSG and the SSC Freshwater Conservation Subcommittee. We will be working with the Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany, and UNESCO to promote this further, including discussions at the World Conservation Congress in Hawaii.

## Migratory fishes and dams

FFSG members have been working with an international group of collaborators to develop a review of the distribution freshwater fishes. This work would supplement information for species already included in the *IUCN Red List*, and would add information for species not yet included in the *Red List*. The information would also be supplied to the Convention on Migratory Species (CMS), to assist CMS in policy development for transboundary species, as defined by the Convention. A second phase of the work will be to compare the distribution of migration pathways with existing or proposed hydropower development, to identify areas of greatest risk. We expect that this work would be conducted in collaboration with colleagues at the Leibniz-Institute of Freshwater Ecology and Inland Fisheries in Berlin, who have already mapped areas of planned hydropower development.

## Freshwater Invasive Species

The IUCN-SSC Invasive Species Specialist Group, the SSC Freshwater Conservation Subcommittee, and the FFSG developed a concept note on *Invasive alien species in freshwater ecosystems: a review of collaborative project*

*opportunities for the Invasive Species Specialist Group and freshwater focused SSC Groups*. This concept note was discussed at a workshop at the IUCN-SSC leaders meeting in Abu Dhabi in September. The notes from that workshop are available on the Freshwater Conservation Subcommittee webpage on the IUCN Union Portal: <https://portals.iucn.org/union/group/656>

# FFSG Officials



**Dr Richard Sneider**  
**Global Chair 2013 - present**

Richard is the CEO of One World Apparel LLC and Unger Fabrik LLC. He is a member of the Chairman's Council of Conservation International, the Board at the Los Angeles Zoo, and the Board of the Humpty Dumpty Institute. Fascinated by nature, human societies, and their interaction, he has visited some of the most interesting and pristine places in the Americas, Africa, and Asia, and participated in biodiversity monitoring programs, often in areas not previously surveyed. He has been deeply involved in the world of aquaria for 35 years and designs, builds, and sustains freshwater eco-systems, as well as participated in freshwater fish field surveys in the Amazon, Mexico and Western Papua.

Richard took on the role of Global Chair in December 2013.



**Dr Ian Harrison**  
**Technical Officer**

Ian obtained his Ph.D. in systematic ichthyology at the University of Bristol, UK. He has conducted postdoctoral research on marine and freshwater fishes in universities and museums in France, Italy, Belgium, and the USA. He has conducted fieldwork in Europe, Central and South America, West and Western Central Africa, the Philippines, and the Central Pacific. Ian has assisted IUCN's Global Species Programme, coordinating activities for the Global Freshwater Biodiversity Assessment. He is also currently working for Conservation International and the University of Minnesota.

Ian joined the FFSG, as Technical Officer, at the end of 2013 to assist Dr Richard Sneider.



**Alex Mauroner**  
**Programme Officer**

Alex has a B.A. in Biology from Westminster College (MO, USA) and a PSM in Environmental Science from Oregon State University (USA). He's volunteered as a Research Assistant for a leatherback turtle conservation organization in Granada and served as an intern for the Alliance for Global Water Adaptation (AGWA) where he studied the freshwater aspects of climate adaptation. While gaining his Master's degree, he concentrated in Natural Resources, business, and communication.

Alex joined the FFSG in June 2014 as part-time Programme Officer to take over for Suzanne Turnock and worked with us until the end of May 2015. Alex still works for AGWA in a part-time capacity as a Research Assistant.

# FFSG Officials

## Sub Group Chair

Home Aquarium Fish Sub-Group Scott Dowd (New England Aquarium, USA)

## Regional Chairs 2015 - 2016

Western Palearctic	Dr Jörg Freyhof (Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany)
Eastern Palearctic	Dr. Dmitry Lajus (Department of Ichthyology and Hydrobiology, Saint Petersburg State University, Russia)
Central Asia	Dr. Bakhtiyor Karimov & Dr. Bakhtiyar Kamilov (Uzbekistan Academy of Sciences, Uzbekistan)
Southern Asia	Dr Rajeev Raghavan (Conservation Research Group, St. Albert's College, Kochi, India); Dr. Vishwanath Waikhom (Manipur University, India)
China	Professor Junxing Yang (Kunming Institute of Zoology, China)
Japan	Dr Katsutoshi Watanabe ( Department of Zoology, Kyoto University, Japan)
Mainland and Peninsular Southeast Asia	Dr Chavalit Vidthayanon (Environment Division, Mekong River Commission, Lao PDR); Dr. Amirrudin Ahmad (University of Malaysia-Terengganu)
Sundaland/Philippines	Dr. Tan Heok Hui (Lee Kong Chian Natural History Museum, National University of Singapore)
New Guinea	No current Regional Chair
Australia/ New Zealand	Dr Mark Lintermans (Applied Ecology, University of Canberra, Australia)
Pacific	No current Regional Chair
North America	Dr. Stephen Walsh (USGS, Gainesville, Florida, USA)
Mesoamerica	Professor Topiltzin Contreras MacBeath (University of Morelos, Mexico)
South America	Dr Roberto Reis (Catholic Pontifical University of Rio Grande do Sul, Brazil)
Northern Africa	Dr Abebe Getahun (Department of Zoological Sciences, Addis Ababa University, Ethiopia)
Western Africa	Dr Mamaa Entsua-Mensah (Council for Scientific and Industrial Research, Ghana)
Eastern and Central Africa	Dr Jos Snoeks (Biology Department, Royal Museum for Central Africa, Belgium)
Southern Africa	Dr. Olaf Weyl (South African Institute for Aquatic Biodiversity, South Africa)
Madagascar	Professor Melanie Stiassny (American Museum of Natural History, USA); Dr. Paul Loiselle (Wildlife Conservation Society)

## Special Advisors

Biodiversity	Michele Thieme (World Wildlife Fund, USA)
Communications	Professor Topis Contreras MacBeath (University of Morelos, Mexico)
Cryobiology	Professor Krishen Rana (University of Stirling, UK)
Development	Dr Tony Whitten (Fauna and Flora International, UK)
FishBase	Dr Rainer Froese (FishBase)
Freshwater representative to the IUCN SSC Red List Committee	Dr Rajeev Raghavan (Conservation Research Group, St. Albert's College, Kochi, India)
Fundraising	Dr Ian Harrison (FFSG and Conservation International, USA)
Gene banking	Professor David Rawson (University of Bedfordshire, UK)
Geographic databases	Kevin Smith (IUCN Freshwater Biodiversity Unit, UK)
Impacts of dams and canals on biodiversity	Dr Carmen Revenga (The Nature Conservancy, USA)
Migratory species	Dr Zeb Hogan (University of Nevada-Reno, USA) and Dr Claudio Baigún (Wetlands International, Argentina)
Re-introductions and <i>ex-situ</i> conservation	Dr Heather Koldewey (Zoological Society of London, UK)
Subterranean fishes	Graham Proudlove (University of Manchester, UK)
Sustainable Trade in Ornamental Fishes	Scott Dowd (New England Aquarium, USA)

## Steering Committee (affiliation included if not already listed above)

Claudio Baigún; David Cooper (Mahurangi Technical Institute, New Zealand); Harmony Patricio (Griffith University, Australia); Heather Koldewey; Ian Harrison; Jörg Freyhof; Mamaa Entsua-Mensah; Mark Lintermans; Matthew Gollock (Zoological Society of London); Melanie Stiassny; Michele Thieme; Nicolas Tubbs (RSPB, UK); Pete Rand (IUCN Salmon Specialist Group); Rajeev Raghavan; Roberto E. Reis; Tony Whitten; Topiltzin Contreras MacBeath; Taej Mundkur (Wetlands International, The Netherlands); William Darwall (IUCN Freshwater Biodiversity Unit, UK); Zeb Hogan



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