

## John Reynolds, on returning to Canada after a long stay in Britain reports here on his study of the salmon in the Great Bear Rainforest, British Columbia.

When I moved from the University of East Anglia to Vancouver's Simon Fraser University in 2005, I embarked on a large-scale study of Pacific salmon and their ecosystems. This project is aimed at understanding linkages between marine, freshwater and terrestrial ecosystems, with implications for conservation. It is by far the largest such study ever undertaken, encompassing up to 80 watersheds for some of our questions. It also provides an excuse to immerse myself in the beauty and isolation of British Columbia's coastal rainforest.

Most ecologists who study fish are comfortable working in either marine

or freshwater habitats, but salmon make a mockery of our attempts to pigeon-hole species because their life cycles span both the sea and freshwater. Furthermore, five species of Pacific salmon die after spawning, and their bodies provide a major source of nutrients such as nitrogen and phosphorus, which are in short supply in temperate coastal ecosystems. So I pushed outside of my comfort zone into the terrestrial world, where I have been studying the impacts of salmon-derived nutrients on a wide variety of plants and animals.

The Great Bear Rainforest covers approximately 64,000 km<sup>2</sup> and runs

along the mainland coast of B.C. from northern Vancouver Island to the Alaskan Border. It includes ancient forests that have never been logged, though only about 30% of the region is currently protected. As a glutton for punishment, I chose the most remote part of the region, on the Central Coast, where there are no roads and all travel is by boat. I began working with people from the Heiltsuk First Nation, who are based in Bella Bella on a small island, and established my field base in a former cannery on an adjacent island. Each summer and autumn, I send 10-14

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*A grizzly bear ambling along an estuary.*

*Photo: Andrew Wright.*

## John Reynolds, on returning to Canada – *continued*

graduate students, postdocs and field assistants to live there, making day-trips by boats out to our salmon streams. An additional benefit of our work is that we have been able to double the number of salmon streams that are enumerated each autumn, in coordination with our Heiltsuk neighbours and staff from the federal Department of Fisheries and Oceans.

These areas include the last fully intact coastal ecosystems south of Alaska. There is no hunting of large carnivores, which is important because grizzly bears, black bears, and wolves are keystone species. In some streams, bears can kill over 50% of the adult salmon at spawning time, and wolves, which are very adept at fishing for salmon, can leave an estuary strewn with carcasses. These predators typically eat less than half of each fish; wolves usually only eat the brains. This leaves massive amounts of biomass, nearly all of which was derived from the sea, strewn along streambanks and estuaries.

We use stable isotopes to detect salmon-derived nutrients in plants and animals. For example,  $^{15}\text{N}$  levels in the aptly-named salmonberry, false azalea and lanky moss are strongly correlated with the number of salmon that spawn in each stream. My postdoc, Morgan Hocking and I are now analyzing data from plant community structure along 50 of our streams, ranging from mosses and liverworts to trees three stories tall, to link species composition with  $^{15}\text{N}$  signatures and salmon abundance.

We have also found higher  $^{15}\text{N}$  levels in juvenile coho salmon that live in streams that host large numbers of chum and pink salmon. One of my graduate students, Michelle Nelson, is studying how this nitrogen finds its way from the carcasses of two species of salmon into the tissues of a third, and the resulting impacts of this on coho growth and survival. Aquatic invertebrates are an obvious route, and Jennifer Linton has been studying relationships between salmon and the community structure of stream insects. Joel Harding is examining impacts of salmon-

derived nutrients on benthic invertebrates and eelgrass in estuaries, while Rachel Field is examining impacts on the community structure of birds in both spring and fall. Two species of sculpins are major predators of salmon eggs in the streams, and Noel Swain has been studying their ecology across a range of watersheds, including comparisons between sites above and below waterfalls, which block salmon.

the results into full food web models. But it's becoming clear that cross-habitat nutrient subsidies from salmon, mediated by large carnivores, has the potential to play a major role in adjacent terrestrial communities.

These findings are important for salmon conservation and management, because there is concern about the impacts of the loss of nutrients stemming from declines in many



Left to right, Joel Harding, Jennifer Linton, Heather Recker, and John Reynolds enjoying a rare day of sunshine in the Great Bear Rainforest. Photo: Jennifer Linton.

Naturally, we couldn't resist some experiments. In the fall of 2007 Morgan Hocking and I placed salmon carcasses along the banks of 11 streams to examine impacts on key plant species. One of these streams had a large waterfall blocking the passage of fish. So we found ourselves desperately trying to avoid winning a Darwin award for getting killed by a grizzly bear while lugging 50 kg of dead salmon up a steeply wooded bank beside the stream.

The data from all of these studies as well as parallel work being undertaken by two more graduate students, Doug Braun and Jan Verspoor, inland along the Fraser River, have washed over us like a tidal wave. We're all desperately trying to get on top of all laboratory and statistical analyses to integrate

salmon populations around the Pacific Rim. For example, Canada's Wild Salmon policy commits the federal government to managing salmon for their values to ecosystems, yet the policy acknowledges a limited ability to quantify such benefits, which is the first step toward setting targets. I hope that our research, in addition to contributing towards a better understanding of cross-ecosystem subsidies for population dynamics and community structure, will also help bring a sharper focus to the need to conserve salmon populations for their role in watershed ecology both in the water and on land.

# EDITORIAL

By coincidence the headline article is from the city of the moment – Vancouver. As I write the winter Olympics are underway and the city is much in the news. Vancouver is a favourite place for me as I have spent two sabbaticals at the University of British Columbia Fisheries Centre, but John Reynolds, the author of the main article, is at Simon Fraser University. John is well known to British FSBI members as he and his wife Isabelle Côté were at the University of East Anglia for twelve years out of 15 years in the UK. Isabelle was a Council member and John is an FSBI medalist. The contrast in research environments between East Anglia and the remote coastal rain forest of northern British Columbia could not be greater and John's contribution to the newsletter will perhaps stimulate young fish biologists to follow in John's footsteps and spend some time researching in remote regions threatened by human activity

The news of a third medal to be awarded by the Society is exciting and it is particularly appropriate that it is to be named after David LeCren. For people of my generation, David was a leading figure in the fisheries establishment and was well known to Jack Jones, the founding President of the FSBI. LeCren

attended the so-called 'Coarse Fish Conferences' that Jones ran in the late 1960s at the University of Liverpool and which were precursors of the FSBI. David has strong family connections in New Zealand and I believe he has more living relatives there than in the UK!

If a fourth medal is thought appropriate in the future it ought to be named after Sidney Holt, the collaborator with Ray Beverton at Lowestoft in the post war period in the development of the theory of fishing (*On the dynamics of exploited fish populations*). Sidney is still going strong and working on fishery issues and is often left out of the picture in examinations of the history of fishery science, perhaps because he was far less of an establishment figure than was Ray. Also he has lived outside the UK for most of his post Lowestoft days.

Although this edition will reach most members too late to remind them about medal nominations, I hope that there is a good set of submissions this year.

**Paul Hart**

**Leicester, 15th February 2010**

**Next deadline: 1st May 2010**

## FSBI medals

Each year the FSBI awards two medals, the FSBI medal for young scientists and the Beverton medal, which goes to an older scientist for life long contribution to the discipline. Because there are so many different kinds of contribution to fish biology and/or fisheries science, FSBI Council have decided to inaugurate a third medal. This is the Le Cren medal, named after the distinguished fish ecologist and conservationist David Le Cren and designed to honour scientists who, in addition to a distinguished research career, have made significant contributions in more applied fields. Nominations (which can be for scientists from Universities, Government Institutions or other relevant bodies) are therefore invited for the following medals for 2010:

*The FSBI medal:* awarded annually to a young scientist who has made exceptional advances in the study of fish biology and/or fisheries science and whose work will shape the future of our discipline, in recognition of their achievements and promise. Nominees must be under 40 years of age on 28 February of the year in which the medal is awarded. The medal recipient will be invited to write a formal review paper for the journal, to highlight their award.

*The Beverton medal and the Le Cren medals:* Both these medals are awarded annually to a distinguished scientist who has made an outstanding lifelong contribution to the study of fish biology and/or fisheries science. Their purpose is to recognize distinction in the field of fish biology and fisheries science, but

also to raise the profile of the discipline and the society in the wider scientific community

*The Beverton medal* focuses on ground-breaking research.

*The Le Cren medal* focuses on conservation, training or public understanding of the discipline.

Nominations should be in the form of a 1 page summary of how the nominee meets the criteria for the relevant medal and either a CV or a link to an informative website. The Medal Committee will draw up a short list of candidates and may request additional information for the nominators. Please either post your nomination at the following web address [mgl@paston.co.uk](mailto:mgl@paston.co.uk) or email it to FAH, by 29.2 2010.

# President's Piece

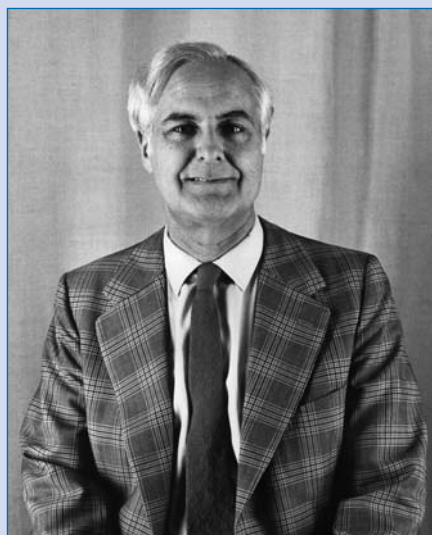
## January 2010

At its most recent meeting, held on December 11th 2009 in the Linnean Society, Burlington House, among other business, FSBI Council decided to inaugurate a new medal, the Le Cren Medal, to be awarded annually in honour of David Le Cren.

At present the society awards two medals each year, the FSBI medal and the Beverton medal. The FSBI medal is given to a young scientist (under 40) who has made exceptional advances in the study of fish biology and/or fisheries science. The list of recipients is truly impressive, including as it does Neil Metcalfe (behavioural and life history biology), John Reynolds (behavioural ecology and conservation), Simon Jennings (fisheries ecology and marine conservation), Etienne Baras (feeding and life history biology), Jens Krause (behavioural ecologist), Michel Kaiser (community ecology and conservation), Jason Link (fisheries and community ecology), Victoria Braithwaite (behavioural ecology and cognitive biology), David Sims (physiological ecology), Stephen Cooke (ecology and conservation physiology) and John Pinnegar (marine ecology and fisheries). Council has certainly been successful at identifying and celebrating the young scientists whose work is shaping our discipline.

The Beverton medal goes to a distinguished scientist at a later stage in their career who has made an outstanding lifelong contribution to fish biology and/or fisheries science. It is named after Ray Beverton, in recognition of his own outstanding research contribution to fish population ecology and fisheries science. I apologise for another list, but this as well is truly impressive, our Beverton medalists being: Ray Beverton, David Le Cren, Ed Houde, John Blaxter, Malcolm Elliott, Rosemary Lowe McConnell, Howard Bern, John Thorpe, Tony Pitcher, Andy Ferguson, John Sumpter, Anne Magurran, Richard

Mann, Paul Hart and Peter Maitland. Looking back on this list, here too the FSBI has used its Beverton medal extremely well to celebrate truly outstanding scientists.



*David LeCren at about the time he was Director of the Freshwater Biological Association's Windermere Laboratory. (Courtesy of the FBA)*

Because there are so many different kinds of outstanding contribution that people can make to fish biology and/or fisheries science, FSBI Council has often found it really difficult to decide among excellent nominations. For this reason we have decided to inaugurate another medal, again to be awarded to distinguished scientists who have made an outstanding lifelong contribution to all aspects of the study of fish biology and/or fisheries science, but with a focus on applied research, teaching and training, conservation and service to academic societies. David Le Cren has agreed to let us give his name to this medal and his curriculum vitae shows clearly why this is an excellent choice.

David Le Cren worked for most of his life for the Freshwater Biological Association, first of all in the 1940s at their Windermere laboratory, where he worked on the ecology of the fish populations in Lake Windermere, especially pike and perch. He moved to the River

Lab at Wareham, where he was responsible for establishing their programme of research, but eventually returned to Windermere as director of the FBA laboratory. David initiated a number of the long-term studies that we now recognize as essential for understanding and conserving fish populations. While at the river laboratory, through his position as Professor at the University of Reading, he helped in the teaching and training of many young fish biologists and ecologists. David played a prominent role in the International Biology Programme, established in the 1960s on a world-wide basis to facilitate large scale, international collaborative research programmes designed to describe and measure the functioning of ecosystems by energy flow. He was in charge of the programme on shallow freshwater lakes and (with Rosemary Lowe-McConnell) acted as the editor of the relevant volume of the influential multi-volume series that resulted from this programme (The Functioning of Freshwater Ecosystems. 1980. Cambridge University Press). David served as both Secretary and President of the British Ecological Society and as far as our own society is concerned, he was a founding member, a Council member on several occasions and served two terms of office as President (1978-1983 and 1992).

Clearly, during his career David Le Cren made an outstanding contribution to our discipline through his personal research, his interest in conservation, his support for young researchers and his service to learned societies, including the FSBI. Council is delighted that he has agreed to let us name this new medal after him and looks forward to seeing the nominations.

**Felicity Huntingford**  
Glasgow

# A fish on the trail of Genghis Khan

Rudi Gozlan outlines some work he is going to do in China this summer.

In the world of fish Topmouth gudgeon *Pseudorasbora parva*, a small cyprinid native to East China, has matched and gone beyond the great Mongol invasion, resulting in the vast range expansion covering much of Asia, Europe and now with a foothold in North Africa. The stealth invasion started in the 1950's with the end of the Chinese civil war (from around 1840 to 1949) which had restricted human population mobility and trade. At that time, there was an increasing need for developing new sources of animal protein and black carp, grass carp, silver carp and big head carp were rapidly introduced from East China especially from the middle and lower reaches of the Yangtze River basin to many other places including Yunnan, Qinghai, Gansu and Xinjiang. This species had been cultured traditionally in East China for a long time with specific culturing techniques. These carp introductions for aquaculture have been the beachhead of topmouth gudgeon's great escape.

Small in size (maximum length circa 9cm), highly fecund with batch spawning and nest guarding behaviour and highly tolerant to environmental changes, topmouth gudgeon has all the attributes of a successful invader. Its first introduction outside of China was in reservoirs and ponds around the black sea as part of a fish farming agreement between China and the former Eastern block. Following long distances and hitchhiking cross country with movements of carp, it rapidly escaped and colonised local waters, dominating communities in ponds and lakes. Recently identified as a healthy carrier of a deadly non-species specific eukaryotic parasite *Sphaerothecum destruens*, it now poses a threat to European fish diversity.

In summer 2010, an Anglo-Chinese expedition led by R.E. Gozlan will be going back to the origin of the invasion in remote parts of China, to find out more about the biological and evolutionary processes under-

pinning invasion. A group of scientists from Bournemouth University and the Chinese Academy of Science will collect topmouth gudgeon material from 33 locations (see Figure 1) covering 9 major catchments. Preserved material will be compared to material collected from populations established from the first introduction in each country within the non-native range ( $n=31$ ). Topmouth gudgeon has been introduced for several decades to countries with clear contrasting climatic conditions such as Poland, Italy and Algeria. This will provide a unique opportunity to study adaptation under contrasting climatic conditions. Populations will be compared for their life history traits and parasitic communities as well as their population genetic structure within native range but also across introduced range. In addition, live topmouth gudgeon will be brought back from China and various parts of

the non-native range to characterise the reaction norms of different populations along thermal gradients. Individual fitness, measured as the number of reproductive events, size of batches and larval growth will be measured for several contrasting populations under a range of controlled thermal challenges. This will allow the evolutionary and phenotypic shift that has occurred during topmouth gudgeon invasion to be measured.

Beyond the immediate scientific interest this expedition represents a cultural and historical journey where an innocent movement of fish from the East coast to the West part of China has rippled all the way to England 50 years later. In a follow up letter, I will report the reality of sampling in remote China and our capacity to adapt if not to evolve...(to be continued)



Figure 1 Map of China. a) Expedition trail is depicted by white dots across the various River basins. b) Chinese provinces. The two major rivers being Huang He (Yellow) River and Chang Jiang (Yangtze) River but China has over 50,000 rivers with an average catchment area of 100 square km each.

# Fisheries Related Conferences

*Courtesy of Dr Phil Hickley of Environment Agency*

## UK & IRELAND

23-24 March 2010

**Trout Stream Management in the Real World**  
Appleby, Cumbria  
Website  
<http://trust.edenrivertrust.org.uk/stream-workshop-2010-2.html>

25 March 2010

**APEM/IFM Fish Passage in Lowland Rivers**  
Oxford, England  
Contact [d.fraser@apemltd.co.uk](mailto:d.fraser@apemltd.co.uk)

12-15 April 2010

**Second Freshwater Biology Summit: Achieving ecological outcomes: aquatic ecological responses to catchment management**  
Windmere, Cumbria  
Website  
<http://www.fba.org.uk/index/events/summit.html>

14-15 April 2010

**11<sup>th</sup> River Restoration Conference 2010**  
University of York, York  
Website  
[http://www.therrc.co.uk/rrc\\_conferences.php](http://www.therrc.co.uk/rrc_conferences.php)

19-23 April

**Freshwater Fish Conservation: linking ex situ and in situ actions**  
Chester, England, United Kingdom  
Website: [c.gibson@chesterzoo.org](mailto:c.gibson@chesterzoo.org)

26-30 July 2010

**Fisheries Society of the British Isles Annual Conference: Fish and Climate Change**  
Queen's University, Belfast, UK  
Contact [tricia@paceprojects.co.uk](mailto:tricia@paceprojects.co.uk)  
Website  
<http://www.fsbi.org.uk/2010/index.html>

23-26 August

**Making the Most of Fisheries Information. Underpinning Policy, Management and Science**  
Galway, Ireland  
Website: [www.conference.ie/Conferences/index.asp?Conference](http://www.conference.ie/Conferences/index.asp?Conference)

6-9 September 2010

**The Conservation and Management of Rivers: 20 Years On**  
University of York, UK  
Website: <http://www.jncc.gov.uk/page-4902>

5-6 October 2010

**The Census of Marine Life Symposium "A Decade of Discovery"**  
The Royal Society, London, United Kingdom  
Website: [www.coreocean.org/Dev2Go.web?anchor=coml\\_home\\_page](http://www.coreocean.org/Dev2Go.web?anchor=coml_home_page)

## EUROPE

11-17 April 2010

**International Conference on Coastal Conservation and Management in the Atlantic and Mediterranean**  
Estoril, Cascais, Portugal  
<http://icccm.dcea.fct.unl.pt/>

17-21 May 2010

**International Symposium on Advances in the Population Ecology of Stream Salmonids**  
Luarca, Asturias, Spain  
Contact [mlavandeira@telefonica.net](mailto:mlavandeira@telefonica.net)  
Website  
<http://www.symposiumsalmonids.com/>

22-23 May 2010 (to follow above)

**Workshop on Estimating fitness of salmonids in the wild: approaches for combining mark-recapture and genotype-based pedigree data**  
Luarca, Asturias, Spain  
Contact [mlavandeira@telefonica.net](mailto:mlavandeira@telefonica.net)  
Website  
<http://www.symposiumsalmonids.com/>

21 June-9 July 2010

**Fisheries Governance (Training Course)**  
Wageningen, The Netherlands  
Website:  
[www.cdic.wur.nl/UK/newsagenda/agenda/Fisheries\\_governance.htm](http://www.cdic.wur.nl/UK/newsagenda/agenda/Fisheries_governance.htm)

2-3 July 2010

**"FitFish - Swimming physiology of fish"**  
Barcelona, Spain  
Website: <http://www.ub.edu/fitfish2010>

5-9th July 2010

**The symposium is part of the 9th International Congress on the Biology of Fish: Fish Habitat - Understanding and Improving Connectivity and Suitability**  
Barcelona, Spain  
Website:  
<http://sibila.uab.es/9FishBiologyCongress>

13-16 July 2010

**IIFET 2010 "Economics of Fish Resources and Aquatic Ecosystems: Balancing Uses, Balancing Costs"**  
Montpellier, France  
Website: [www.colloque.ird.fr/iifet-2010/](http://www.colloque.ird.fr/iifet-2010/)

24 - 28 July 2010

**2nd International Sclerochronology Conference**  
Mainz, Germany,  
Webstie <http://www.scleroconferences.de>

8-11 September 2010

**Fish Sampling with Active Methods**  
Ceske Budejovice, Czech Republic  
Contact [fsam2010@hbu.cas.cz](mailto:fsam2010@hbu.cas.cz)  
Website <http://www.fsam2010.wz.cz/>

**International Council for the Exploration of the Sea (ICES) Annual Science Conference**  
20-24 September, Nantes, France  
Website [www.ices.dk/iceswork/indexasc.asp](http://www.ices.dk/iceswork/indexasc.asp)

5-8 October 2010

**Aquaculture Europe 2010 Annual Conference: "Seafarming Tomorrow"**  
Porto, Portugal  
Contact: [ae2010@aquaculture.cc](mailto:ae2010@aquaculture.cc)  
Website: <http://www.easonline.org>

1-19 November 2010

**Ecosystem Approach to Fisheries: monitoring, evaluation resource use and fisheries impact (Training Course)**  
Wageningen, The Netherlands  
Website: [www.cdic.wur.nl/UK/Courses/Overview+Courses+2010/](http://www.cdic.wur.nl/UK/Courses/Overview+Courses+2010/)

1-4 August 2011

**6th World Recreational Fishing Conference: Toward Resilient Recreational Fisheries**  
Berlin, Germany  
Website: <http://www.worldrecfish.org/>

## REST OF WORLD

12-13 April 2010

**International Symposium on Coastal Zones and Climate Change: Assessing the Impact and Developing Adaptation Strategies**  
Monash University, Victoria, Australia  
Website:  
[www.ihdp.unu.edu/article/823?menu=128](http://www.ihdp.unu.edu/article/823?menu=128)

26-29 April 2010

**Climate Change Effects on Fish and Fisheries: Forecasting, Assessing Ecosystem Responses, Evaluating Management Strategies.**  
Sendai, Japan.  
Website:  
[www.pices.int/meetings/international\\_symposia/2010/cc\\_effects\\_fish/default.aspx](http://www.pices.int/meetings/international_symposia/2010/cc_effects_fish/default.aspx)

9-12 May 2010

**8th International Sea Lice Conference**  
Victoria, BC, Canada  
Website <http://www.sealice2010.com/main.php?site=home>

16-20 May 2010

**Ecological and Evolutionary Ethology of Fishes Biennial Conference - EEEF 2010**  
Simon Fraser University, Vancouver, BC, Canada  
Website: [www.sfu.ca/biology/eeef/](http://www.sfu.ca/biology/eeef/)

17 -20 May 2010

**61st Annual Tuna Conference (NOAA/NMFS/IATTC)**  
Lake Arrowhead, California  
Website: [www.tunaconference.org/Home.htm](http://www.tunaconference.org/Home.htm)

# Travel Grant Report

**Al Reeve, Shark Project Scientist at Sultan Qaboos University, Sultanate of Oman writes about his shark experiences funded by an FSBI Travel Grant.**

In November of 2009 I was lucky enough to be awarded a travel bursary from the Fisheries Society of the British Isles to travel from the UK to work with the scientists at SARDI – Aquatic sciences (South Australian Research & Development Institute).

During my visit I was involved in a number of different projects from

sorting though Dusky, Bronze Whaler and Scalloped Hammerhead stomach and vertebrae samples, collecting Port Jackson Shark egg cases on SCUBA, long lining for sharks in the Gulf St Vincent and setting up of a VRAP (Vemco Radio Acoustic Positioning System) & VR2 acoustic monitoring array in the Neptune Islands for White Sharks.

My time spent volunteering in Australia was meant to last some months more however, partly as a result of these experiences, I was

interviewed and offered a job here at Sultan Qaboos University in Oman. I am now employed to investigate the diversity of sharks found around the Omani coast, identify important areas or habitats and study movements of some species through different tagging studies.

I am indebted to the Fisheries Society of the British Isles Travel Grant Scheme for helping to make this experience possible.

## Fisheries Related Conferences – Continued

### REST OF WORLD – Continued

26-28 May 2010

**ICFAS International Conference on Fisheries and Aquatic Sciences**

Tokyo, Japan

Website <http://www.waset.org/conferences/2010/tokyo/icfas/>

31 May - 3 June 2010

**34th Annual Larval Fish Conference**

Santa Fe, New Mexico, USA

Website [http://www.larvalfishcon.org/Conf\\_home.asp?ConferenceCode=34th](http://www.larvalfishcon.org/Conf_home.asp?ConferenceCode=34th)

9-12 June, 2010

**Global Conference on Aquaculture 2010**

Bangkok, Thailand

Contact [Aqua-Conference2010@fao.org](mailto:Aqua-Conference2010@fao.org)

6-11 June 2010

**Sharks International Conference 2010**

Cairns, Australia

Website:

[www.elasmo.org/sharksinternational.php](http://www.elasmo.org/sharksinternational.php)

6-18 June 2010

**Diseases of Warmwater Fish (Training Workshop)**

Ruskin and St. Augustine, Florida, USA

Website: <http://conference.ifas.ufl.edu/ame/wwf/index.html>

20-22 June 2010

**2nd International Symposium on the Conservation, Ecology and Management of Catfish**

St. Louis, Missouri, USA

Website: [www.catfish2010.org/](http://www.catfish2010.org/)

21-23 June 2010

**21st Meeting of the APEC Fisheries**

**Working Group**

June, Lima, Peru

Website: [www.apec.org/webapps/events\\_calendar/events\\_calendar\\_t.php](http://www.apec.org/webapps/events_calendar/events_calendar_t.php)

5 – 9 July 2010

**International Congress on the Biology of Fish**

Universitat Autònoma de Barcelona, Barcelona, Spain

Website: [www.fishbiologycongress.org/](http://www.fishbiologycongress.org/)

12-14 July 2010

**Australian Society for Fish Biology**

**Conference “Climate Change and Aquatic**

**Environment – Future for Fish and Fisheries”**

Melbourne, Victoria, Australia

Website: [www.asfb.org.au/](http://www.asfb.org.au/)

6-10 September

**3rd Global Fisheries Enforcement Training Workshop**

Maputo, Mozambique

Website: [www.gefetw.org](http://www.gefetw.org)

**140th Annual Meeting of the American Fisheries Society**

12-16, September, Pittsburgh, Pennsylvania, USA

Website <http://www.fisheries.org/afs10/>

28-30 September, 2010

**Conserving Wild Trout**

West Yellowstone, Montana

Website

<http://www.wildtroutsymposium.com/index.php>

October 2010 (tbc)

**World Reef Conference: “WRC 2010”**

Chicago, Illinois, USA

Website: [www.worldreefconference.com/](http://www.worldreefconference.com/)

14-19 October 2010

**9th Asian Fisheries and Aquaculture Forum**

Shanghai Ocean University, Shanghai, China

Website: [www.asianfisheriessociety.org/](http://www.asianfisheriessociety.org/)

14-19 October 2010

**4th International Symposium on Stock Enhancement and Sea Ranching**

Shanghai Ocean Fisheries University,

Shanghai, China

Website:

[www.stockenhancement.org/issesr.html](http://www.stockenhancement.org/issesr.html)

8-11 November 2010

**Ecosystems 2010: Global Progress on**

**Ecosystem-based Fisheries Management**

Anchorage, Alaska, USA

Website:

<http://seagrant.uaf.edu/conferences/2010/wakefield-ecosystems/index.php>

# NOTICES

## Election of FSBI Councillors 2010

Members of the FSBI are invited to submit nominations for Council for election at the AGM in July 2010. Include a brief statement of what your nominee will bring to Council, that they are willing to stand for election and a list of a few key publications, by 28th February 2010.

The Constitution directs that council is made up of the President, Treasurer and Secretary (the Officers), one elected councillor being Vice-President. In addition to the Members so elected, Council may invite as many "Guests of Council" (who must be full Members of the Society) as required.

At present Council consists of 3 officers and 11 councillors. In addition there are Guest Members who carry out responsibilities on behalf of Council and have important roles at council meetings including Editor of the Journal, Supplement Editor, News Letter Editor, Web Site Manager and Symposium Convenor. Further details in the FSBI web site <http://www.fsbi.org.uk/>

## Elected Councillors as at July 2009

	Domain	Expertise	Institution
Felicity Huntingford – President 2007/11	All	Behaviour/Aquaculture/Welfare	University
Gordon Copp – Treasurer 2005/9	Fresh	Species invasions, community ecology	Government agency
Brian Eddy – Secretary 2005/9	Fresh/Brackish	Physiology	University
Michel Kaiser – Vice-President 2007/11	Marine	Conservation/Community Ecology	University
Robert Britton – Students 2006/10	Fresh	Community ecology	University
Ian McCarthy – Students 2008/12	All	Physiology	University
Tara Marshall – Studentships 2009/13	Marine	Marine ecosystems and fisheries management	University
Maria Collares-Pereira Travel 2007/11	Brackish	Community ecology	University
Ingrid Ahnesjö – Travel 2008/12	Brackish	Behavioural ecology	University
Francis Neat – Travel 2009/13	Marine	behaviour, ecology and life history	Government agency
Holly Shields – Travel 2009/13	Fresh/Brackish	Response to temperature, cardiac function	University
Vladimir Kováč – Grants 2008/12	Fresh	Introduced species/conservation	University
Joanna Grabowska – Grants 2008/12	Fresh	Invasive freshwater fish species; biology of freshwater fish (life-history traits); fish assemblages in rivers	University
John Pinnegar – Grants 2009/13	Marine	Marine food webs, ecosystem modelling	Government agency

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