



IMCG Bulletin: January 2015



Word from the Chair

www.imcg.net

Dear mire friends

I trust you all had a good start to the year. It always surprises me how busy January becomes so soon after the holiday period! Many of you must have been involved in preparations for World Wetlands Day that took place on 2 February. The theme for this year is “**Wetlands for Our Future**”.

Ramsar Secretary General, Dr Christopher Briggs stated that “This year’s theme “Wetlands for our Future” draws attention to the urgent need for actions that will slow, stop, and reverse wetland degradation. Latest estimates indicate that 64% of wetlands have been lost in the last century. We must reverse that trend so as to secure the future of our wetlands and our futures as we cannot achieve sustainable development without healthy wetlands. This year we are therefore targeting teens and young people as they are the future, have a growing interest in environmental issues and a strong belief in their own ability to make a difference”

The IMCG supports events related to World Wetlands Day that will promote the wise use of wetlands, encourage restoration and stop their continued degradation. We therefore encourage you to share with us activities and events so that we can support this wonderful initiative from Ramsar. The theme “Wetlands for our Future” should also remind us to invest in awareness raising, training and capacity building amongst the world’s youth: our youth! Let’s get them enthusiastic about mires and peatlands!!

The IMCG network is only as strong as its members are active. We are keen to learn more about **World Wetlands Day** related activities in your district, country or region! Contributions for the IMCG Bulletin can be sent by 25 February 2015 to Piet-Louis Grundling - peatland@mweb.co.za.

Mires and Peat

New articles in *Mires and Peat*

Mires and Peat is the open-access peer reviewed journal of IMCG and the International Peat Society (IPS). Find it online at <http://mires-and-peat.net/> and in the *Thomson Master Journal List*. The new articles published in January and February will be:

Special Volume 15 (Mountain Peatlands)

- Enhanced sensitivity of a mountain bog to climate change as a delayed effect of road construction (P. von Sengbusch)
- Fen mires with cushion plants in Bale Mountains, Ethiopia (B.W. Dullo, A.P. Grootjans, J.G.M. Roelofs, A.F. Senbeta and C. Fritz)

Volume 16

- Everglades peats: using historical and recent data to estimate predrainage and current volumes, masses and carbon contents (S.M. Hohner and T.W. Dreschel)
- Biosorption of mercury from aqueous solutions using highly characterised peats (A.M. Rizzuti, F.L. Ellis, L.W. Cosme and A.D. Cohen).



Send your next manuscript on any topic relating to mires, peatlands and peat to o.m.bragg@dundee.ac.uk now for:

- friendly editorial management by eminent peatland specialists (O.M. Bragg, R.S. Clymo, S.N.P. Glatzel, P.M. Jones, J.O. Rieley);
- minimal publication delays (average turnaround time from submission to publication is currently less than 230 days); and
- free global exposure of your work in this ISI journal: Mires and Peat.

News from our regions

Oceania

New Zealand Ramsar Symposium 2015

Bev Clarkson (Clarksonb@landcareresearch.co.nz)

A Ramsar Symposium, hosted by the Department of Conservation Arawai Kakariki Restoration Programme and the National Wetland Trust of New Zealand, is being held in Hamilton on 17-19 March 2015. Presentations, workshops and field trips will showcase New Zealand's Ramsar sites, and cover aspects such as wetland management, monitoring, policy, and education, and understanding the Ramsar resolutions. For more details see:

http://www.wetlandtrust.org.nz/Cache/Pictures/2548576/Ramsar_Symposium_-_Draft_Programme.pdf?ts=635584734945297546

Australian seed biology research and long-term seed conservation

Lydia Guja (Lydia.Guja@environment.gov.au)

Alpine *Sphagnum* bogs and associated fens (ASBAF) are a Nationally-protected endangered wetland community in the Australian Alps. However, the germination requirements of many ASBAF seeds are unknown and therefore limit plant-based conservation and restoration options.

A research program has been developed at the Centre for Australian National Biodiversity Research to investigate the germination and dormancy cycling of ASBAF seeds and their persistence in soil seed-banks. Field plots have been established at Ginini Flats in the Australian Capital Territory, the largest sub-alpine bog complex in Australia. Freshly collected seeds of 13 ASBAF species have been buried in the plots and are retrieved periodically to monitor changes in seed survival and germination responses. A preliminary analysis of germination throughout one year of burial has revealed interesting patterns of seasonal dormancy and germination cycling. Data from even one year have revealed useful information with implications for management. As the experiment continues even more definitive outcomes will become available.

To complement this research, conservation seed collections are being made for long-term storage at the National Seed Bank of the Australian National Botanic Gardens. Recent analysis of the National Seed Bank's entire collection of ASBAF species identified 473 accessions secured in storage and these represent 54% of the species that occur (frequently and occasionally) in ASBAFs. Future seed collecting efforts will continue to target genetically diverse material from bog and fen localities to secure ASBAF germplasm and supplement existing conservation, management, restoration and research.



To read more about alpine seed and seedling ecology research in Australia download the report of a recent symposium from the Projects> Australian Alpine Research section at <http://www.anbg.gov.au/gardens/living/seedbank/>.

South Africa

Althea Grundling (althea@arc.agric.za)

A new national peatland database

Peatlands, although not common in South Africa, occur in the eastern and southern parts of the country. They are under threat from agriculture, mining and infrastructure and consequently impacted by clearing, draining, poorly managed grazing, excessive groundwater abstraction and alien invasive plant infestation. It is important for us to understand the spatial distribution of peatlands in South Africa in order to understand the key processes forming peatlands, but also to understand their contribution to the South African wetland ecological infrastructure. Currently, there are ± 519 records in the 2001 national peatland database. However, only 40 sites include detailed profile information. Nine peatlands in KwaZulu-Natal have C^{14} ages recorded at various depths. The ages vary from 130 to $\pm 45\,000$ years BP. From the wetland and humic soil categories in the Agricultural Research Council-Institute for Soil, Climate and Water's (ARC-ISCW) soil profile database an additional 23 sites could be added to the national peatland database as peatlands. The criteria used for sites to be included is: $>15\%$ C; if only 10 to 15 % C, then profile depth should be at least 300 mm. Contributions to help update the national peatland database with information of known peatland sites are welcomed. This additional peatland information will help to 1) verify the 2014 Peatland Eco-Region Model; 2) update the current national peatland database. Both aims form part of the Water Research Commission Project (K5/2346). This project will not only support the current wetland inventory of the South African National Biodiversity Institute, wetland rehabilitation initiatives of Working for Wetlands, Department of Environmental Affairs' obligations towards the Ramsar Convention, but also contribute to future wetland research.

Canada

Simon Thibault (simon.thibault@roche.ca)

Over the territory of the Province of Quebec, in Canada, wetlands cover about 170,000 km², i.e. about 10% of the total province area. Peatlands represent the vast majority. Even though the human presence has significantly impacted peatlands located along the St-Lawrence River, in the southern part of Quebec, home to about 80% of Quebec's population, large and relatively pristine peatlands are still common in the boreal zone, along the north shore of the St-Lawrence Gulf and up north. Mining developments and large hydro-power projects are the most important type of projects threatening these northern peatlands, especially with the relatively recent intensification of natural resources development that came along with Québec's *Plan Nord*.

In compliance with the *Environment Quality Act*, each and every infrastructure or project impacting a pond, a marsh, a swamp or a peatland needs to first be authorized by the Québec Department of Sustainable Development, Environment and the Fight to Climate Change (MDDELCC). Over the last decades, internal guidelines were used to ensure that any losses of wetlands (in terms of area) would first be avoided, then minimized and, if the two previous steps could not be applied – which was in most cases – all losses would be compensated following a compensation ratio established by the ecological value of the peatland. However, no legal framework was adopted to support such approach, leading to several legal battles between project proponents and the MDDELCC. Some of the court decisions that came out of those battles had significant negative effects on the MDDELCC's approach.



In May 2012, the Government of Quebec adopted *An Act respecting Compensation Measures for the Carrying out of Projects Affecting Wetlands or Bodies of Water* which makes the compensation of wetland losses a new legal requirement and thus disables any past or future legal battles to that regard. Compensation measures for wetland losses have to be specifically designed in such a way that it enables “the restoration, the creation, the protection or the ecological enhancement of a wetland or a piece of land near a wetland.”

Still, one problem remains: there is no clear definition of the ecological value of peatlands (on which the compensation approach is based) and the proposed criteria are essentially set for Southern Québec and do not easily apply to northern environments, especially peatlands. Moreover, delineation and classification criteria for peatlands are very wide, therefore leading to several misinterpretations, especially in northern environments. In July 2014, the MDDELCC issued a new guide for the identification and delineation of wetlands in Southern Quebec. Even though this Guide significantly contributes to a better identification and classification of wetlands, including peatlands, in the area where most commercial and residential projects occur, i.e. along the St-Lawrence River, between Montreal and Quebec, it does not provide with complementary information or criteria to be used in northern environments. This is a risky approach since MDDELCC’s analysts based in the northernmost areas of the Province, where large industrial projects take place, have to use the same documents as their colleagues working down south. This will again lead to misinterpretations, misclassifications and, in the end, ineffective assessment, avoidance and mitigation of the impacts of industrial development on peatlands.

There is clearly a need for the elaboration of criteria for the identification, delineation and classification (as per their ecological value) of northern peatlands in Quebec. The MDDELCC should use the existing legal framework entitling project proponents to compensate for peatland losses and to fund scientific research aiming at defining such criteria and increasing our knowledge of those ecosystems. Some mining companies have already proposed the implementation of committee formed of scientists, representatives of the MDDELCC, environmental NGOs, as well local and regional stakeholders, including First Nations, to scope what approach such future scientific works should take. Let’s hope the Government of Quebec will soon acknowledge the importance of specifically assessing the impacts of the North’s industrial development on peatlands so that they will be mostly avoided, and if not, at least adequately mitigated.

United Kingdom

Roger Meade (roger.meade@lineone.net)

***Molinia caerulea* on upland peat in the UK: history, dependencies and the role of intervention in achieving conservation goals.**

Peat covers much of the flat or gently sloping uplands of the UK, forming blanket mire that can host a number of vegetation types. The type favoured by conservationists, and considered to be associated with the greatest rate of peat formation, involves *Eriophorum* species, ericaceous shrubs and *Sphagnum* mosses. In practice, this is lacking over large areas of upland where it might be expected, its place being taken by very dominant *Molinia caerulea*. Conservation bodies expend much effort in trying to replace *Molinia* with more desirable species and conservation objectives are set with this in mind.



Molinia at Redbrook (Photo: Alan Stopher)



Mowing of Molinia on a trial site at Close moss (Photo: Rob Henry)

A conference will be held to examine the place of *Molinia caerulea* in UK plant communities, factors affecting its growth and experiments looking at ways of adding greater diversity where appropriate. The aim is to gain a clearer understanding, through discussion, of what types of conservation objective should be applied and how to achieve them. The conference will take place in Huddersfield, West Yorkshire, UK, 14-16 September 2015 and will contain two days of presentations and discussion followed by a field trip on Day 3 to look at diversification experiments set up in dominant *Molinia* on the Marsden Moor Estate.

For further details contact roger.meade@lineone.net

Russia

Symposium Mires of Northern Europe: Biodiversity, dynamics, management in Petrozavodsk

A symposium with this title will take place in Petrozavodsk, Republic of Karelia, Russian Federation, 2-5 September 2015. For more information download the [first information letter](#) and consult (also for other events) the IMCG website: <http://www.imcg.net/pages/events.php>

News from all over

Ramsar Secretariat

Applications: 2015 Conservation Leadership Programme Awards

We would like to bring to your attention that applications for the 2015 Conservation Leadership Programme (CLP) [Conservation Team Awards](#) are now open. CLP aims to advance biodiversity conservation globally by building the leadership capabilities of early-career conservation professionals working in high-priority places with limited capacity to address conservation issues. This partnership initiative, including BirdLife International, Fauna & Flora International and the Wildlife Conservation Society, has been helping young conservationists across the world to achieve their goals for 30 years.



The programme works toward its aims by offering awards, training and mentoring support. CLP offers three levels of Conservation Awards:

[Future Conservationist Awards](#): Approximately 18 awards of up to \$12,500 each

[Conservation Follow-up Awards](#): Approximately 2 awards of up to \$20,000 each (available only to previous CLP Future Conservationist Award winners)

[Conservation Leadership Awards](#): 1 award of \$40,000 (available only to previous CLP Follow-up Award winners)

The application deadline for full proposals is **23 February 2015** for ALL applications. Those applying for Conservation Follow-up and Conservation Leadership Awards must submit a Logical Framework and the Final Report of their previous CLP project as part of their application materials. Awards will be announced in April 2015. Visit the CLP website (www.conservationleadershipprogramme.org) for detailed eligibility criteria, guidelines and application form.

In 2015 CLP will only be accepting proposals for projects to be implemented in the following 22 countries: Algeria, Angola, Azerbaijan, Brazil, China, Egypt, Georgia, India, Indonesia, Iraq, Kuwait, Libya, Malaysia, Mexico, Mozambique, Oman, South Africa, Thailand, Trinidad and Tobago, Turkey, UAE and Vietnam. Email clp@birdlife.org for more information.

World Wetlands Day: Wetlands for Our Future

Participate beyond 2 February 2015 on the e-media:

- Visit [our YouTube channel](#) to watch a video message from our Secretary General
- Go to our website www.worldwetlandsday.org and make a pledge
- Enter our photo competition (open to those aged 15-24) at www.worldwetlandsday.org and help us spread the word
- Use twitter to share your pledge using #WetlandsForOurFuture and #WorldWetlandsDay
- Read the statement from Ramsar's Secretary General Dr Briggs [on our main website](#).

Indonesia

Indonesia ratifies ASEAN Agreement on Transboundary Haze Pollution

Indonesia has on 20 January 2015 deposited its Instrument of Ratification of the ASEAN Agreement on Transboundary Haze Pollution with the Secretary-General of ASEAN. The ratification of the Agreement was approved by Indonesia's Parliament through Law No. 26 Year 2014.

The Agreement is a legally binding environmental agreement to reduce haze pollution in Southeast Asia signed on 10 June 2002 in Kuala Lumpur, Malaysia by all ASEAN nations. The Agreement recognizes that transboundary haze pollution should be mitigated through concerted national efforts and international cooperation. The Agreement is the first regional arrangement in the world that binds a group of contiguous states to tackle transboundary haze pollution resulting from peatland and forest fires. With Indonesia's ratification, the Agreement has now been ratified by all ASEAN Member States.

The agreement is a reaction to the enormous peatland fires that hit Southeast Asia since 1996/97, mainly caused by peatland drainage and peat swamp clearing on the Indonesian islands of Sumatra and Kalimantan, and that particularly affected Malaysia and Singapore and to a lesser extent also Thailand and Brunei. Thick haze is currently a nearly annual occurrence, coinciding with the dry season, covers much of Southeast Asia for weeks and causes widespread human health problems.



Greenpeace publishes new pictures of peatland drainage and deforestation by APRIL

In 2014 Asia Pacific Resources International Ltd (APRIL) released its 'Sustainable Forest Management Plan'. The pulp & paper company asked critics to believe it was serious about the conservation of Indonesia's forests and peatlands. Over 2014 Greenpeace researchers have been monitoring APRIL's operations on Padang island, off the coast of Sumatra. The photos they took illustrate APRIL commitment to 'sustainable forest management':

<http://www.greenpeace.org.uk/blog/forests/pictures-aprils-unhappy-anniversary-20150130>

See also a reaction of APRIL under <http://aprildialog.com/2015/01/29/response-to-greenpeace-media-statement/>

Peatland conservation relevant papers

Collected by Hans Joosten. If you want to share papers, please send the title and URL to Hans at joosten@uni-greifswald.de

1. Pleistocene survival, regional genetic structure and interspecific gene flow among three northern peat-mosses: *Sphagnum inexpectatum*, *S. orientale* and *S. miyabeianum*:
<http://onlinelibrary.wiley.com/doi/10.1111/jbi.12399/abstract?campaign=woletoc>
2. County Kerry Wetland Survey 2014:
https://dl.dropboxusercontent.com/u/30956502/WSI_Downloads/KYWS_2014_FinalReport.pdf
3. Holocene peatland initiation in the Greater Everglades:
<http://onlinelibrary.wiley.com/doi/10.1002/2014JG002806/abstract?campaign=wolacceptedarticle>
4. Biomass harvest of invasive *Typha* promotes plant diversity in a Great Lakes coastal wetland:
<http://onlinelibrary.wiley.com/doi/10.1111/rec.12167/abstract?campaign=wolearlyview>
5. The application of oyster and seagrass models to evaluate alternative inflow scenarios related to Everglades restoration: <http://www.sciencedirect.com/science/article/pii/S0304380014005274>
6. Predicted areas of potential distributions of alpine wetlands under different scenarios in the Qinghai-Tibetan Plateau, China: <http://www.sciencedirect.com/science/article/pii/S0921818114002057>
7. Changes in active-layer thickness and near-surface permafrost between 2002 and 2012 in alpine ecosystems, Qinghai–Xizang (Tibet) Plateau, China:
<http://www.sciencedirect.com/science/article/pii/S0921818114001866>
8. Glacier volume and area change by 2050 in high mountain Asia:
<http://www.sciencedirect.com/science/article/pii/S0921818114001714>
9. A 19-year long energy budget of an upland peat bog, northern England:
<http://www.sciencedirect.com/science/article/pii/S002216941400924X>
10. A 5-year study of the impact of peatland revegetation upon DOC concentrations:
<http://www.sciencedirect.com/science/article/pii/S0022169414008993>
11. Using palaeoecology to support blanket peatland management:
<http://www.sciencedirect.com/science/article/pii/S1470160X14004865>
12. Biomass and quality changes of forages along land use and soil type gradients in the riparian zone of Lake Naivasha, Kenya: <http://www.sciencedirect.com/science/article/pii/S1470160X14005019>
13. Do moss bags containing devitalized *Sphagnum denticulatum* reflect heavy metal concentrations in bulk deposition?: <http://www.sciencedirect.com/science/article/pii/S1470160X14005238>
14. Testing the cause of the *Sphagnum austini* (Sull. ex Aust.) decline: Multiproxy evidence from a raised bog in Northern Ireland: <http://www.sciencedirect.com/science/article/pii/S0034666714001602>



15. Moorökosysteme in Kirgistan: [http://www.succow-stiftung.de/tl_files/pdfs_downloads/Buecher%20und%20Broschueren/KIRMO Broschuere final%20kl_ein_de.pdf](http://www.succow-stiftung.de/tl_files/pdfs_downloads/Buecher%20und%20Broschueren/KIRMO_Broschuere_final%20kl_ein_de.pdf)
16. Coastal subsidence and relative sea level rise: http://iopscience.iop.org/1748-9326/9/9/091002/pdf/1748-9326_9_9_091002.pdf
17. Agricultural peatland restoration: effects of land-use change on greenhouse gas (CO₂ and CH₄) fluxes in the Sacramento-San Joaquin Delta:
<http://onlinelibrary.wiley.com/doi/10.1111/gcb.12745/abstract?campaign=woletoc>
18. Stoichiometry and temperature sensitivity of methanogenesis and CO₂ production from saturated polygonal tundra in Barrow, Alaska:
<http://onlinelibrary.wiley.com/doi/10.1111/gcb.12762/abstract?campaign=woletoc>
19. Carbon accumulation in a permafrost polygon peatland: steady long-term rates in spite of shifts between dry and wet conditions:
<http://onlinelibrary.wiley.com/doi/10.1111/gcb.12742/abstract?campaign=woletoc>
20. Climate change records between the mid- and late Holocene in a peat bog from Serra do Xistral (SW Europe) using plant macrofossils and peat humification analyses:
<http://www.sciencedirect.com/science/article/pii/S0031018214006002>
21. Ecosystem services from a degraded peatland of Central Kalimantan: implications for policy, planning, and management: <http://www.esajournals.org/doi/abs/10.1890/13-2014.1>
22. The relative importance of methanogenesis in the decomposition of organic matter in northern peatlands: <http://onlinelibrary.wiley.com/doi/10.1002/2014JG002797/pdf>
23. Vegetation exerts a greater control on litter decomposition than climate warming in peatlands:
<http://www.esajournals.org/doi/abs/10.1890/14-0292.1>
24. Moderate drop in water table increases peatland vulnerability to post-fire regime shift:
<http://www.nature.com/srep/2015/150127/srep08063/full/srep08063.html>
25. Hydrological controls on deep burning in a northern forested peatland:
<http://onlinelibrary.wiley.com/doi/10.1002/hyp.10440/abstract>
26. Coupled local facilitation and global hydrologic inhibition drive landscape geometry in a patterned peatland: <http://www.hydrol-earth-syst-sci-discuss.net/12/1247/2015/hessd-12-1247-2015.pdf>
27. Rapid response of hydrological loss of DOC to water table drawdown and warming in Zoige peatland: Results from a mesocosm experiment:
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0109861>
28. Towards developing a functional-based approach for constructed peatlands evaluation in the Alberta oil sands region, Canada: <http://link.springer.com/article/10.1007%2Fs13157-014-0623-1#page-1>

Please send your contribution to the **IMCG Bulletin** by the 25th of each month:
peatland@mweb.co.za