

Peatlands

International

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In memoriam: András Tóth 1927-2016



Greetings from the 15th International Peat Congress

15 - 19 August 2016

Kuching, Malaysia

ipc2016.com

Photos: IPC2016



Editorial

The International Peat Congress was this year held, for the first time in IPS's almost 50-year history, in the southern hemisphere. About 1000 participants from near and far joined the event, with the majority coming from Malaysia and Indonesia, though we were also able to greet guests from over 30 other countries. More than 400 papers were submitted and the organizing committee had their hands full assigning each presentation to one of five parallel sessions. This was a very professional event with superb venues (do we really need wi-fi if we can meet our colleagues face-to-face...), excellent food, a large exhibition and a rich cultural programme in the evenings. Dr. Lulie Melling and her team spared no expense or effort in making this a truly fantastic Congress!

However, there were also some critical voices heard during and following the conference. Many participants felt that, especially during the opening and closing sessions and in the presentations of some keynote speakers, the transition of peatlands to agricultural uses, namely oil palm plantations, was overemphasized by comparison to the environmental and social values of the pristine forests. This was further exacerbated by some very one-sided news reports in the Malaysian and Indonesian press, which highlighted the economic importance of palm oil for Malaysia in a way that was hard to comprehend for many of



our members. It seems that some of the reporters did not attend any more of the event than two or three of the opening speeches – otherwise they would have noticed all the presentations on tropical peat swamp forest biodiversity, climate

Peatlands International is the global magazine of the International Peatland Society (IPS). It provides the more than 1,400 corporate and individual members of the Society with up-to-date information on peat and peatland matters, reports and photos of conferences and workshops, background reports and publication reviews.

To serve all of our members, we provide always a good balance between economic, social and environmental points of view. To receive Peatlands International in your email every three months, visit www.peatlands.org/join-us and sign up as a member.

change mitigation, peatland restoration and many other similar matters. Even large companies have invested money in restoring or conserving some of their concession areas, and have participated in wildlife research. As stated in the past, the IPS sees it as its task to bring different opinions together, to discuss facts and to see the science behind the debate. Further training and implementation in this regard will be necessary for future IPS events.

Participants also praised the Congress's interesting excursions, which brought us to the Semenggoh Wildlife Centre, the Bako National Park, the Sarawak Biodiversity Centre and the Sarawak Tropical Peat Research Institute, as well as to sago and oil palm plantations. Especially for those who had not been to Asia before, this day out offered a quick impression of living conditions and climate in tropical Asia. It is indeed very important to include all three values – environmental, economic and societal – in the discussion of responsible peatland management in temperate and tropical regions.

Last but not least, the week in Kuching once again offered us the opportunity to spend time with co-workers and colleagues, to hold face-to-face

meetings and to learn new things. Perhaps, also, we were able to generate some new ideas during these numerous sessions simply by working away from our laptops.

We would like to warmly thank all Congress participants, especially Lulie Melling and her team, outgoing President Björn Hånell, outgoing Scientific Advisory Board Chair Jack Rieley, all local guides, the hotel and registration desk staff, and all others in the IPS who have contributed to this milestone event.

For the next time, we will hopefully see one another in Scotland at the end of May 2017. IPS will this time concentrate on environmental matters, with many restoration items on the programme. We cannot promise that the famous Loch Ness monster will attend but, in any case, we hope that many of you can join us in Aberdeen.

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For the online versions of our articles and more background information, go to Peatlands International's own website and blog at www.peatlandsinternational.wordpress.com and type ->

password: **ipsmember16**

This will give all IPS members reading access during Nov 2016 - April 2017

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See also www.peatlands.org/join-us for the new membership form!

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Welcoming remarks by the new IPS President

Gerald Schmilewski, Germany; at the General Assembly of the IPS in Kuching

Sunset in Kuching.

Dear honoured guests, dear colleagues, dear friends,

On being asked to offer some welcoming remarks, I have come up with a short address with one focal point. No, it's not climate change, growing media, the after-use of peatlands and the like. It's you – the members and future members of the IPS, in particular, young experts with an interest in peat and peatlands.

Let me start off with a statement that former IPS President Donal Clarke made several years ago, which outgoing IPS President Björn Hånell helped put into practice these past four years: "The essential work of the IPS is to provide opportunities for scientists, regulators,

administrators, peatland managers and users of peat and peatlands to meet, exchange information and review the latest developments relevant to the subject areas of the IPS Commissions."

In my view, this International Peat Congress is the best way in which to provide these opportunities, and I would like to warmly thank the organizers of this soon-to-end IPC2016. May I also thank the many people who have been busy in the background, and of whom we might not even be aware, for this magnificent event!

Being a member of the German National Committee of the IPS for almost 30 years, and having chaired the Horticultural Peat Working Group from 1995 to 2006, as well as the IPS

Commission II on the 'Industrial Utilization of Peat and Peatlands' for the last 10 years, I am overwhelmed by the support I have received during my candidacy to become IPS President. And now, standing here in front of you, I am honoured to be the IPS President for the next four years, serving the IPS and its members to my full capacity.

However, the aspiration to support, serve and help lead an NGO, like the IPS,



At the Sarawak Biodiversity Centre. All photos: Susann Warnecke

can only be translated into action with the support of its members. Of course, a society like ours is there as an overarching umbrella for its members. Let me humbly paraphrase, however, the passionate words of the Lebanese American writer Kahlil Gibran with regard to our Society:

“Don't just ask what your Society can do for you, ask what you can do for your Society to make it stronger.”

The foundation of the IPS is set by its members who, through their National Committees, and through their commitment to the various decision-making groups, Commissions and working groups, shape and structure the IPS.

The IPS has an outgoing Executive Board, which drove things forward. From this week on, some members of the Executive Board have been re-elected, while others are joining as new members. Until this week, the IPS has had 10 commissions,

each covering specific aspects of peat and peatlands. From here on, the IPS will only have three commissions – you might call them mega-commissions:

- Peatlands and the Environment
- Peatlands and the Economy
- Peatlands and Society

I would like to applaud all of the experts involved in the Executive Board, the Commissions and the working groups for their past and ongoing commitments to carry out the important tasks of the IPS.



Kuching Waterfront.



National Representatives and other participants of the National Committee Round Table.



Congress Dinner.



Dancing and singing.

In recent years, the IPS has had a straightforward debate about where the society is heading in the next four years. This debate was based on the needs of the IPS and its members. The outcome of this discussion is the IPS Strategic Plan 2016 – 2020 (www.peatlands.org/about-us).

Sustainable development is often compartmentalized as an environmental issue, although it is intended to encompass all three pillars of sustainability and sustainable development, namely, the economy, the environment and society. The interdependence of

these three pillars is quite evident in a statement formulated during the UN Conference on Environment and Development in Rio in 1992:

“Protection of the environment is only feasible if politics consider economic and social aspects at the same time. If any pillar is weak then the whole system of Sustainable Development is not sustainable.”

With their focus on peatlands, the three new commissions will reflect the interdependence of the three pillars of sustainable development

by having linked expert groups on the commissions dealing with specific issues of interest, with focus on climate change, biodiversity, horticulture and restoration, as laid down in the IPS Strategic Plan. Looking at these foci, you will realize that the subjects we are dealing with today are quite different from what was discussed in 1968, when the IPS was founded.



The helpful and friendly Congress staff.

This fact might also be reflected in the new name of our Society. The ancient Greeks believed that everything was made of the four elements of EARTH, WATER, AIR and FIRE. These are also the elements that our international society must cope with.

I can assure you that the IPS Strategic Plan is ambitious and full of action plans. From my own experience, I am very much aware that the bulk of work for the Executive Board, the Commissions or those organizing events (like this one) and conducting specific IPS projects is huge. This is done on a voluntary basis by IPS members. Therefore, human and financial resources will be the only limits to whatever changes and actions we deem appropriate.

I would like to end my remarks by quoting a famous singer-songwriter, whom you will have heard of:

“Come gather round people
 wherever you roam
 And admit that the waters around
 you have grown
 And accept it that soon you’ll be
 drenched to the bone.
 If your time to you is worth saving
 Then you’d better start swimming



The excursions were very popular.



Registration desk on the first morning.



The IPS stand in the exhibition hall.

or you'll sink like a stone
 For the times, they are a
 changing." (Bob Dylan)

Thank you for supporting the
 IPS wherever you can and for
 your kind attention!

Gerald
 Schmilewski

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New IPS Executive Board 2016 - 2018

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After working for more than 10 years for multinational corporations (Accenture, ASM Lithography and Unilever) Guus van Berckel joined Griendtsveen AG in 1992 as Managing Director. Griendtsveen is a mid-sized, family-owned multinational company which is mainly active in peat excavation, growing media and peat-based fuel production and trade.

The roots of Griendtsveen go back to 1853, when Guus van Berckel's great-grandfather started a large-scale peat excavation in the south of the Netherlands. He is married, lives in the Netherlands, works mainly in Germany and has five grown-up children.

2nd Vice President

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Dr. Samu Valpola is currently Head of the Peat Resources Unit of the Geological Survey of Finland. The Peat Resources Unit is responsible for the mapping and surveying of the peat resources in Finland and produces annual data on peat resources and various peatlands from an area of approximately 25,000 hectares, using traditional coring, modern GIS tools and remote sensing data. This mapping and inventory forms the basis for a vast database which allows the unit to promote the responsible peatland management of the substantial national peat and peatland resources in Finland. Currently, this database includes approximately 17,000 sites covering some 2 million hectares of Finnish peatlands.

Research background:

- Geologist in peatland investigations and data processing; case studies in environmental geology; case studies in geo-energy production
- Research scientist in several lake sediment research projects at the Universities of Helsinki and Turku and the Geological Survey of Finland
- Teaching experience in the Department of Geology, University of Turku

Other professional activities include over more than 25 positions of trust during last 15 years, e.g.:

- Member of the International Peatland Society Executive Board 2012-2016
- Permanent expert member of the Finnish National Ramsar working group since 2016
- Several memberships of working groups in the Finnish Ministry of Employment and Economy and the Ministry of Environment since 2012.



The newly elected Executive Board after the Annual Assembly in Kuching. Left to right: Paul Short, Jack Rieley, Guus van Berckel, Gerald Schmilewski, Samu Valpola, Donal Clarke, Claes Rülcker and Moritz Böcking. Photo: Susann Warnecke

Ordinary Members

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Since 2011, Moritz Böcking has held the position of Managing Director of Klasmann-Deilmann GmbH, with headquarters in Geeste, Germany. Klasmann-Deilmann is a leading producer of growing media, supplying customers in over 70 countries. Prior to joining Klasmann-Deilmann, Böcking worked in the Renewable Energy Sector where he served as Director of Bioenergy. He developed and financed various biomass projects at an international level.

Between 1995 and 2006, Böcking worked for an independent oil trading company. There he held various positions in the development of mineral oil storage terminals and in the retail sector. He worked in Argentina for two years, and has also worked on oil infrastructure projects in the US and in South America. Moritz Böcking holds a diploma

in business administration from the University of Bamberg, Germany.

Goals:

- Supporting the exchange of different views on the usage of peat and peatlands and on the use of peat-based substrates in the horticulture sector with science-based information
- Supporting innovative land use projects that address the rising need for food supply in the world as well as the issue of climate change

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Donal Clarke is a graduate of University College Dublin and an alumnus of the Harvard University Business School. He spent 12 years in the Irish diplomatic service, serving in Rome, Geneva and London. He was the first Registrar of what is now Dublin City University, and joined Bord na Móna as Secretary in 1987. He managed Bord na Móna's

business in France and returned to Dublin as Head of Corporate Affairs. He was involved in writing the Wise Use book (2002) and in editing the Strategy for Responsible Peatland Management, SRPM (2010). His book on the history of Bord na Móna and the Irish peat industry was published in 2010.

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Jack Rieley is an internationally recognised botanist and peatland ecologist with an honours degree in the former from the University of Glasgow and a Ph.D. in the latter from the University of Durham. He is an Honorary Professor of Geography at the University of Nottingham UK, and Secretary of the United Kingdom Peat Society. He has a special interest in tropical peatland, especially in Southeast Asia where as a Director of the Kalimantan Tropical Peat Swamp Forest Research Project he carried out research on the biodiversity, ecology and natural resource functions of this ecosystem and impacts upon it over a 20 year period.

He has published much ecological information on tropical peatlands in more than 100 scientific papers, reports and book chapters including an article in Nature in 2002 on the 'Amount of Carbon Released from Peatland Fires in Indonesia in 1997' that has become a benchmark publication in this field.

Currently, he is advising the Horticulture Industry Sustainability Initiative (HISI) on responsible use of peat in English horticulture especially consequences of Government policy (DEFRA) on the future of the industry. He was a member of the Scientific Committee of the 15th International Peat Congress that was held in Kuching, Sarawak in August 2016 and represents the IPS on the Ramsar Convention Scientific and Technical Review Panel.

On the IPS Executive Board he will give advice to the Scientific Advisory Board and take a special interest in international peatland affairs,

in particular how international conventions, agencies, programmes and initiatives impact upon responsible management of peatlands and peat.

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Paul Short is President at Canadian Sphagnum Peat Moss Association in St. Albert, Alberta, Canada. CSPMA is an association of peat moss producers and related enterprises devoted to promoting the responsible management of Canadian peatlands and the sustainability of the industry. We provide support and advocacy for our members and leadership in environmental and social stewardship and economic well-being related to the use of Canadian peatland resources.

Formed in 1988 to promote the horticultural benefits of peat and responsible peatland management, the Canadian Sphagnum Peat Moss Association is comprised of 14 peat moss producers representing 96 percent of Canada's total production. The association has a strict environmental policy that regulates the way peat bogs are harvested and restored.

Our nation's peatlands (113 million hectares) represents 25 percent of the world's peatlands. Our production of horticultural peat leads all other peat producing nations. Responsible management, including protection, conservation, and where appropriate, development of this valuable resource is critically important to our industrial interests as well as the overall interest of Canadians.

In 2014, the first Industry Social Responsibility (ISR) report was released. The goal of this ISR report is to provide a benchmark for sustainable accounting of the industry's governance, social, environmental and economic impacts.

Full contact details: www.peatlands.org/about-us.



When it comes to growth, we focus on our responsibility

We don't ourselves set the standards we are measured by. Our benchmark is sustainability across all of the company's activities. At Klasmann-Deilmann, we integrate economy, ecology and social action into a holistic strategy.



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New IPS Commission Chairs and Scientific Advisory Board

Peatlands and Society

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We need a view of peatlands which is balanced between economic activity, the environment and social interests. The new Commission for Peatlands and Society can and will play an important role in the future of IPS. Socio-economic studies will be crucial to ensure the wise use of peat and peatlands.

The main goal of IPS is the a wise use of both peat and peatlands. Peatlands play an important role in forming natural and social heritage; for too long, the social and cultural aspects of peatlands have played a minor part in peat research in many parts of the world. Asia is an exception, where research regarding peatlands and society is in . We need to know how people in the world depend on peat for their lives and livelihoods.

Involvement of experts

My mission as Chair of the Commission for Peatlands and Society is to involve a large number of experts and, in partnership with them and with members of IPS, determine the gaps in our knowledge and carry out research that will play a major role in the responsible use of peat and peatlands. The communication of this knowledge and experience to stakeholders around the world

remains a challenge. The collaboration between the three commissions is vitally important to ensure the success of this mission. We also need to bring young people into IPS; social networking and social media are important tools for reaching new target groups.

The need for education

A further important goal is to reach the general public, who often have little knowledge of peat. We need to hand on our knowledge of peat to younger generations; nature parks and museums can play an important role in this respect.

Some facts about me

Member of IPS for 12 years; CEO of the Swedish Peat Research Foundation (five years), which is also the National Committee of IPS in Sweden; Communication Manager for the Swedish Peat Producers Association (10 years); Congress General of the International Peat Congress in Stockholm (2012). I am currently working as a communication manager at the Swedish Energy Research Centre. Education in cultural and social aspects at the University of Linköping, Sweden. With my combination of education in communication,





The new SAB at its first meeting in Hamburg on 12 October. Left to right Susann Warnecke, Gerald Schmilewski, Marie Kofod-Hansen, Samu Valpola, Guus van Berckel and Bernd Hofer. Photo: Hotel Courtyard by Marriott Hamburg Airport

mass media and graphic design I hope to function effectively as Commission Chair for IPS and its members.

Guus van Berckel is also the first Vice President of the IPS (see his profile on page 8).

Peatlands and Economy

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As the new Chair of the Commission for Peatlands and the Economy, I will try to make contact with all the relevant specialists and scientists within the IPS and will set up a number of expert groups on relevant topics. Naturally, I will try to continue the successful work of former relevant commissions and working groups as far as possible. The main goals of my commission and the related expert groups will be:

1. The acquisition and assessment of knowledge and information regarding the economic aspects of peatlands; and
2. The exchange and dissemination of this knowledge and information within the Society.

Peatlands and Environment

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Background

- Studied Geography with Geology and Botany at the University of Münster, Germany
- Graduated in 1988 with Dipl. Geograph
- Born in 1960; married with three children

Professional Focus

Geology/stratigraphy, bog vegetation, bog hydrology, climate studies, digital deposit management, surveying/3D modelling

Work Experience

- 1988 founded the consultancy Hofer & Pautz GbR. Co-owner and managing director of the company since this time
- Focus on wetlands / mires / peatlands / bogs
- Germany / Baltics / Scandinavia / Russia / Ukraine/ Turkey / North and South America

Memberships

- NABU Lower Saxony, Germany
- German, Lithuanian, and Latvian Peat Producers' Associations
- Scientific Advisory Board of the DGMT (German Association of Mires and Peat)
- Committee of Experts (Responsibly Produced Peat)

I see my function as Chair of the Commission for Peatland and the Environment as a coordinator or service provider for the scientists that are interested in working for the International Peatland Society. My first task will be combining and/or developing new expert groups. I therefore ask the previous commissions and working groups and their members for support.

The optimal composition of the Commission will be a combination of both experienced and young scientists from all the peatland regions of the world. The chairmanship of the Commission Peatlands and Environment is a major challenge, due to the wide range of issues and the task of ensuring that these receive sufficient recognition in scientific discussion with the Commissions for Economy and Society in the IPS.

As Chair of the Commission, I will actively help initiate, support and acquire funding for substantial interdisciplinary projects that address current and future challenges related to peatlands in an international context. Such interdisciplinary interaction and collaboration is the core competence and mainspring of our society.

Let's work together to expand and spread our knowledge!

All Commission Chairs are members of the Scientific Advisory Board, which is chaired by Samu Valpola, Second Vice President of the IPS. For more information, please visit www.peatlands.org/about-us or contact the Commission Chairs.

IPS ANNUAL CONVENTION 2017

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C-Peat worried about peatland fires in Southeast-Asia

Many reports and commentaries concerning the recent fires in Indonesia, including here (www.nature.com/nature/journal/v527/n7578/full/527305a.html), have been published over the last twelve months.

El Niño conditions, bringing drier weather to this part of Southeast Asia, in combination with extensive draining of peatlands, resulted in a tinder box that started burning in mid-August of 2015 and continued even as the world's nations gathered at COP21



A deforested and drained peatland in Malaysian Borneo, with oil palm planted in the background. These degraded environments become highly susceptible to fire, unless the water table is managed very carefully.



A snapshot of a thin-section of a slide under the light microscopic, prepared from a core extracted from a tropical peatland in Malaysian Borneo. Samples from such cores provide information on thousands of years of environmental change.

in Paris to discuss tools for sustainable forest management (www.cop21.gouv.fr/en).

The consequences of these fires for society, the economy and the environment are still being quantified. The areal extent of last year's burning across Indonesia has been estimated to exceed 2.6 M ha (World Bank, www.worldbank.org/en/news/feature/2015/12/01/indonesias-fire-and-haze-crisis), with up to 90% of the subsequent haze resulting from peatland fires. Peat volume losses over such a large area are likely to represent, by analogy with the 1997 fires (Page et al., 2002), a globally-significant loss of stored carbon.

While we share the widespread dismay at these social, economic and environmental consequences, we wish also to point out the loss to science represented by the apparently relentless destruction of Indonesia's peatlands, a

Sixth International Meeting on the Biology of Sphagnum, Khanty-Mansiysk, Russia

During 1-11 August 2016, more than 35 Sphagnum enthusiasts from Russia, Germany, Estonia, the Czech Republic, Belarus, Lithuania, Ireland, Sweden, the Netherlands, Canada and Finland gathered for the Sixth International Meeting on the Biology of Sphagnum in Khanty-Mansiysk, Russia, organized by the International Association of Bryologists and the Yugra State University.

Two days of presentations and discussions were followed by more than one week of excursions. For those who couldn't get enough of mosses, the Saint Petersburg State University offered an

additional excursion before the meeting in Khanty-Mansiysk.

The Sphagnum experts shared their knowledge regarding the species distribution and biology in their home countries, experiences in bog restoration and the ways of cultivating mosses for commercial purposes (paludiculture).

On the excursions, the uniquely wide bogs of Western Siberia were explored, along with nutrient-poor and -rich bogs, as well as rainwater- and groundwater-fed and open and forested sites.



Group picture of the participants of the Sphagnum-Symposium during one of the excursions. Photo: Yulia Papanova

In the process, participants had the opportunity to study the full range of nature found in Western Siberia, particularly Sphagnum species.

Of the 32 Sphagnum species recorded in the area, 29 were found by the participants, including *Sphagnum riparium*, *S. obtusum*, *S. angustifolium*, *S. russowi*, *S. tenellum*, *S. wulfianum*, *S. warnstorfi*, *S. centrale* and *S. aongstoemi*.

Everybody agreed that this meeting was perfectly organized by Prof. Dr. Elena Lapshina and her team, as well as the supporting organizations of the International Association of Bryologists, the Yugra State University, the Saint Petersburg State University, the Russian Botanical Society and the National Research Tomsk State University. The next meeting will hopefully be held in Arctic Siberia or Ireland.

For more pictures, visit: www.flickr.com/photos/mukhrinostation.



Hummock of *S. fuscum* and other Sphagnum species. Photo: Jan Koebbing

Dr. Jan Felix Köbbing

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Moss lawn mainly dominated by *S. balticum*. Photo: Jan Koebbing

Taking it to the air

For Brandon University geography student Peter Brandt, summer really flew by

They've both heard all the jokes: Pete and Pete study peat. But Dr. Pete Whittington and student Peter Brandt say their work on peatlands restoration is no laughing matter. "When you harvest peat from a peatland, there's typically very little regrowth afterwards," says Dr. Whittington, an Assistant Professor in Geography at Brandon University (Manitoba, Canada) who has been studying peatlands and peatland regeneration for more than a decade.

This year, with funding from the Canadian Sphagnum Peat Moss Association (CSPMA) and its members

in collaboration with the Natural Sciences and Engineering Research Council of Canada (NSERC), and a Brandon University Research Committee award (co-awarded to fellow Geography professor Dr. Dion Wiseman), Dr. Whittington and Brandt studied peatlands in eastern Manitoba, trying to figure out how best to restore the wide swaths of land that are left after peat has been harvested.

A peatland's ability to retain and store huge masses of water makes them essential for understanding hydrology in their area, including for flood control. That's especially



A drone's-eye view helps researchers monitor the effectiveness of various patterns in peatland restoration. Photo: Pete Whittington

important in Manitoba, which is about 38 per cent peatland by area.

To study the peat and water makeup of peatlands, Brandt and Dr. Whittington took to the air. Their summer studies involved flying a drone over some peatland restorations in progress. For Brandt, a map-lover, it was an opportunity to get a map-eye view of peatlands in southeastern Manitoba, near Beausejour. But it wasn't all high-flying as the drone technology is still so new, the camera needs to be calibrated against actual on-the-ground, muddy-boots measurements — a process called "truing."

That means Brandt spent some of his days taking accurate soil-moisture measurements directly, to be compared only later to the must faster, more convenient ones obtained from the aerial camera.

Part of the research, supported with Dr. Wiseman's geomatics expertise, involved determining things like the best altitude, speed and other instruments and settings to use on the drone for the most accurate results in the future. Brandt will also be compiling the imagery to create a digital elevation map.

What he and Dr. Whittington are looking for overall is evidence, through moisture content, that the peatlands are beginning their regeneration. That's important for Manitoba, which is prone to both floods and droughts; anything that involves trapping or shedding water is

both interesting and economically important. But it's also important ecologically: over the long run, peatlands can play a role in combatting climate change as passive carbon sinks. While peat harvesting has been around in Manitoba since the 1940s, and provides important jobs in rural Manitoba, provincial regulations have recently tightened the rules around it, and there are new requirements to restore and rehabilitate the harvested peatlands.

"When you harvest a peatland, you put in drainage ditches and remove all the surface vegetation," explains Dr. Whittington. "You let it dry for a day or two and then drive a vacuum across the field to pick up a millimetre or so, and take



Although easier than it used to be, piloting the drone requires a new set of skills to take full advantage of its capabilities. Photo: Pete Whittington



Student Peter Brandt will double-check the drone data by comparing it to land-based measurements. Photo: Pete Whittington.

it to the processing plant to be bagged.” Restoration is a different matter. “Once a peatland’s natural mechanisms have been removed, getting them restored takes effort,” Dr. Whittington says.

Adding to the complications are regional differences.

One of the questions that Brandt and Dr. Whittington have been looking at is how Manitoba’s peatlands are different from those elsewhere. For example in Quebec, the climate is substantially wetter, it’s more humid, and it’s slightly cooler than Manitoba.

All of those variables make peatland restoration and rehabilitation a nation-wide puzzle; Brandt and Dr. Whittington are working with other researchers at the University of Waterloo and Université Laval to put all the pieces together.

Brandon University’s piece is hydrology: the moisture content. They have help; Dr. Whittington is also working with another BU student, Melanie Hawes, on the overall project.

Hawes, who is taking her Master of Science in Environmental & Life Sciences degree at BU, is looking with Dr. Whittington at the larger scale, site-wide hydrology of peatlands restoration, building on the information that Brandt will be gathering as well as previous discoveries about the best way to restore peatlands.

“The secret ingredient,” says Dr. Whittington, “is straw mulch, which reduces evaporation and drying of the newly re-introduced moss as it tries to get re-established.”

Ingredients are only part of any recipe. It’s how you put it together that matters.

Brandt spent the summer flying the research drone otop of different types of restoration-in-progress peatlands. Along with plant reintroduction and straw mulch, the peatlands have been given different patterns of peat berms,

designed to retain water — but not too much — and encourage moss regrowth. Too little water, and the peatland drains entirely and dries out. Too much, and it's a slough instead.

Like Goldilocks' porridge, peatlands need to be just right. But one of the more promising patterns is more like Goldilocks' waffle. A criss-cross grid pattern can hold back water in dozens of squares, like maple syrup at brunch. The trick, as any brunch-goer knows, is getting each waffle square equally full without too many being dry or overflowing.

Another pattern under scrutiny is a zig-zag, lightning bolt pattern, which lets water trickle back and forth to get absorbed where needed before passing through. "We're trying to see what pattern of reconstructing the landscape is best," Dr. Whittington says.

For Brandt, it was also about continuing to learn through his summer job. "It's new skillsets, new tech, new software," he says. And it's learning that has a direct application for him in the near future.

Brandt graduated this past spring with his Bachelor of Science in Geography at BU and multiple scholarships. Now, he's heading to grad school to get a master's degree emphasizing geomatics and GIS — exactly the type of work he has spent the summer doing.

"It's a really great opportunity," he says. But it's also an opportunity for climate-friendly carbon absorption and for commercial peat applications. "This is collaborative research and development," Dr. Whittington says. "Universities try to solve problems."

And when talking about climate solutions that could pay off for the next few thousand years, well, that's no joke.

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In memoriam: András Tóth Eng. Agric., Dr. Hortic. 1927-2016

It is with deep sadness that we announce the death of a founding member of the International Peatland Society and the Hungarian National Committee of IPS (Hungarian Peat Society) Dr. András Tóth, who passed away peacefully after in the 89th year of his life. This is truly a great loss to our society and to IPS as a whole.

He was, from 1953 to 1987, project leader for several soil erosion and mineral nutrient leaching research projects focused on hilly regions and the leaf-manuring of crops in order to protect the water quality of Balaton Lake. His internationally well-known scientific and practical work as senior research fellow at Keszthely University of Agriculture was connected to the maintenance and utilization of peat lands and peat resources as well as, at Hévíz Spa in particular, the discovery and preparation for medicinal use of natural peloids.

He was, between 1968 and 1972, a Council member for IPS, between 1992 and 1996, the Vice President of IPS, between 1968 and 1972, the Main Secretary, and between 1996 and 2005, the President of the Hungarian Peat Society. In recognition of his tireless work across various scientific and professional affiliations, he was elected as an honorary member of IPS and honorary president of the Hungarian Peat Society. May he rest in peace.

The memorial was held in the main square of Keszthely church on 9th July, followed by the funeral at the new public cemetery.



Photo: private

Hungarian Peat Society

New IPS members - join us, too!

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22nd Conference of the Parties (COP 22)
12th COP to the Kyoto Protocol (CMP 12)
Bab Ighli, Marrakech, Morocco
7 - 18 November 2016
<http://unfccc.int/2860.php>

IPS Executive Board Meeting
Naaldwijk, the Netherlands
16 - 18 November 2016

IPS Finnish National Committee (Suoseura)
Autumn assembly and seminar
Helsinki, 22 November 2016
www.suoseura.fi

Business and Biodiversity Forum
Cancun, Mexico
2 - 3 December 2016 in
<http://cop13.mx/en/business-and-biodiversity-forum-2016>

Convention on Biological Diversity
13th Meeting of the Conference of the Parties
Cancun, Mexico
4 - 17 December 2016
www.cbd.int/cop

Ramsar STRP meeting (STRP20)
Gland, Switzerland
13 - 17 February 2017
www.ramsar.org

23rd PERG Symposium
Université Laval, Québec City
21 - 22 February 2017
www.gret-perg.ulaval.ca

2nd Peatland Symposium
University of Oulu
18 - 19 May 2017
harry.uosukainen@turveruukki.fi

Annual Convention 2017
Aberdeen, Scotland, Scotland
28 - 31 May 2017
www.peatlands.org

28 May: EB, SAB and Commissions
29 and 31 May: Symposium and workshop
“Responsible Management of Drained Peatlands”
30 May: Excursions
31 May: Annual Assembly

Fen Peatlands After Drainage – organic soils in
mountain areas
Kudowa Zdrój, Poland
10 - 14 July 2017
barbara.kalisz@uwm.edu.pl

ISHS-IPS Joint Symposium
Portland, Oregon, USA
20 - 25 August 2017
www.ishs.org

Society for Ecological Restoration (SER)
7th World Conference
Foz do Iguassu, Brazil
27 August - 1 September 2017
www.ser.org

Carbon Cycling in Boreal Peatlands and Climate
Change II – Hyytiälä revisited
Hyytiälä, Finland
25 - 29 September 2017
aino.korrensalo@uef.fi
harri.vasander@helsinki.fi

RRR2017
Renewable resources from wet and rewetted
peatlands & Sphagnum farming workshop
Greifswald & Lower Saxony, Germany
25 - 30 September 2017
www.paludiculture.uni-greifswald.de/en/projekte/rrr2017/index.php

52. Deutsche Torf- und Humustag
Bad Zwischenahn, Germany
28. September 2017
www.ivg.org

More at: www.peatlands.org/events



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Submission deadline: PI 3/2016: 30 November

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