



The International Mire Conservation Group (IMCG) is an international network of specialists having a particular interest in mire and peatland conservation. The network encompasses a wide spectrum of expertise and interests, from research scientists to consultants, government agency specialists to peatland site managers. It operates largely through e-mail and newsletters, and holds regular workshops and symposia. For more information: consult the IMCG Website: <http://ibs.uel.ac.uk/imcg/>

IMCG has an elected Main Board of 15 people from various parts of the world, that has to take decisions between congresses. Of these 15 an elected 5 constitute the IMCG Executive Committee that handles day to day affairs. The Executive Committee consists of an elected Chairman (Ton Damman), a secretary general, treasurer, and 2 additional members.

Editorial

A lot has happened with IMCG in the past few months. The Biennial Meeting in August of this year in Quebec marked the transition of the International Mire Conservation Group from a loose network of people with an interest in mire conservation to a more firmly organised club with a constitution. In Quebec, the election of the IMCG Main Board resulted in a group of enthusiastic people covering all parts of the world. These people may serve as regional focal points for IMCG members and this Newsletter features a short introduction to all of them.

In October, the Executive Committee, consisting of the Chairman, the Secretary General, the Treasurer and two additional members, was elected. This group of five will be responsible for the day to day management of IMCG. Their first meeting will have the character of a modern virtual e-mail meeting and will take place during the first two weeks of December. With all this, the IMCG Secretariat has moved from London to Greifswald. In name of the IMCG, we from Greifswald thank the London team for their hard work during the last years.

Besides information on the IMCG Conference and poster session held in Quebec, which successfully showcased many research and conservational projects of IMCG and its members, this issue of the IMCG Newsletter also gives progress reports on ongoing IMCG projects and details on future IMCG events. A new recurring feature is the column of our Chairman Ton Damman.

The now official constitution demands that, to have a vote in IMCG policy, people must be member. In the near future you may expect a circular asking you whether you wish to become an official member of IMCG.

Please inform us on anything happening and all relevant books published to report on them in the Newsletter. The deadline for the next IMCG Newsletter is 1 March 2001. Also for information, address-updates, or other things, contact us at the IMCG Secretariat. In the meantime, keep an eye on the IMCG web-site: <http://ibs.uel.ac.uk/imcg/>

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A Word from our Chairman



Ton Damman

A view from the prairie

As I sit here in the Great Plains of North America, about equidistant from the boreal mires to the north and the peatlands of the east and west coast, I am reflecting on all that has happened with the IMCG during the last few months. We have

changed from an informal group of mire enthusiasts to a society with a constitution. The international wetlands meeting in Québec last August has provided exposure to IMCG as never before. Last, but not least, we have lost the enthusiastic and untiring leadership of Richard Lindsay, who guided the IMCG ever since its beginning 16 years ago. Over the years the IMCG has also slowly changed from an organization primarily focused on European mire conservation to one that is more truly international. A glance at the membership of the Main Board clearly confirms this.

The Executive Committee was finally elected on October 23. So it is only a week ago that I became its Chair. Too little time has passed since that for me to reminisce about our accomplishments in this Newsletter. Let me just say that I and the other Executive Committee members plan to take advantage of these changes. It is clear that Richard's chairmanship will be a tough act to follow, but I will try to provide enthusiastic leadership in running the affairs of the IMCG.

I will use this column this time to contemplate about some aspects of mire conservation.

In western Europe, few mires have been left undisturbed and you really have to travel to Scandinavia or Scotland to find mires in a pristine condition. Even there, drainage and afforestation have changed many peatlands permanently. I was born in The Netherlands, in a country where only small remnants of once extensive peatlands are left, and none of them is still actively growing. My interest in peatlands was kindled while I spent a year on a fellowship at the University of Lund in Sweden in 1956. After I completed my studies at the University of Wageningen in The Netherlands, I left an overpopulated country for the wide open spaces of Canada, where I worked as a research scientist with the Canadian Government. Here during my research and travels in the boreal and subarctic regions of Canada, I tramped through numerous mires, many sprawling over hundreds of square miles. I liked the remoteness of these landscapes and their fascinating surface patterns. At that time my research involved forest ecological problems, and I admired the peatlands mostly as a naturalist. This changed in 1967 when I moved to the University of Connecticut and started a research program on mires that has continued until this day. Initially much of this work

was carried out in Canada and parts of the USA adjacent to the Canadian border, but later also in many other parts of the northern and southern hemisphere.

In contrast to Europe, mires in North America have not been used so intensively and over such a long period of time. In fact peatlands cover such extensive areas in the boreal and hemiboreal zones that it can create the impression that there is no need to be concerned about draining or mining a few. Looking at the area as a whole this may be true. However, peatland exploitation has been geographically very uneven with most of it concentrated in areas that are relatively easily accessible. In North America this is to about 200 miles north of the US-Canadian border, where 90% of Canada's population lives.

The use of peatlands has changed over the years. Peat mining progressed relatively slowly when peat was extracted by cutting and digging. Harvesting techniques using machines resembling large vacuum cleaners remove only a thin layer each year, but they require huge surface areas for a company to produce sufficient horticultural peat moss to survive. About a decade ago the interest of pharmaceutical companies in the absorptive quality of Sphagnum for use in bandages and sanitary napkins created a new demand for Sphagnum peat. Since only the upper foot or so has the proper qualities for this purpose, this use again requires large areas and affects also mostly ombrotrophic peat. Although only the surface peat is used, this process nevertheless changes the peatland forever. More recently, peatlands are also being used for cranberry cultivation. This is claiming peatlands in southern Canada at an alarming rate ever since environmental regulations in the USA made it difficult to expand cranberry cultivation south of the Canadian border.

So we are faced with the uncomfortable situation that, although there are still large areas of pristine peatlands in North America, all this development is concentrated in a zone a few hundred miles wide along the US-Canadian border. In this area good examples of the major peatland types can still be found, but this may not be so much longer. Why is this such an important issue?

All of these uses of peat moss will lead to increased carbon losses and reduced carbon sequestration, especially in the case of cranberry fields. But this applies to mire exploitation anywhere, and this is not the major issue here because, at present, it concerns only a small part of the total peatland surface. The major problem is that the exploitation is focused mostly on ombrogenous peatlands in a relatively limited region. Therefore, locally many of these peatlands are being disturbed. At present we still have a choice in these areas. The opportunity still exists to guide exploitation towards peatlands of lesser ecological value.

Ombrogenous peatlands show very clear geographical trends in their surface morphology and vegetation because their development is controlled primarily by climatic conditions. We should try to preserve good examples of such peatlands along climatic gradients before we lose the diversity of mires in these areas. Most of this concerns mires at low elevation in the raised bog zone, especially in the eastern USA and Canada. This is the more important because few intact mires remain in the southern raised bog zones of Europe or eastern Asia. In these areas too little is left, and here it is too late to obtain a realistic impression of how peatlands respond to these climatic gradients. We should make sure that

there is at least one part of the world where the hydrology, vegetation and developmental processes of these mires can still be studied. To achieve this we need to identify representative mires and work for their preservation. This is where the IMCG and its members can provide a major service. We should get to work on this now before we lose the diversity of mires in the southern raised bog zone, as has happened elsewhere.

I have to stop here. I promised to help with the bison roundup on the Nature Conservancy's Konza Prairie. Oh well, mires may be much more fascinating and dynamic than grasslands, but the prairie does offer some excitement occasionally.

Minutes IMCG Biennial Congress, Quebec, August 2000

Quebec City; 6th August 2000, Chaired by Richard Lindsay; minutes taken by Olivia Bragg.

[Note: headings correspond to published Agenda items except that items 5 and 6 are transposed to reflect the order in which they were dealt with by the meeting. Items 8, 11 and 15 were non-existent or advertised as coffee breaks.]

1. Welcome

Richard Lindsay thanked members for coming to Quebec and for attending the Congress. The Agenda items would deal with two matters: establishment of IMCG as a legal organisation, and the activities of IMCG.

2. IMCG – what it is and how it operates

Richard Lindsay outlined the history of IMCG. It was founded in Austria in 1984 at a meeting organised by Michael Steiner. Its objectives were to provide mutual support and encouragement for mire conservation experts and programmes in individual countries, and to promote mire conservation issues at the international scale. The principal activity of the group was to hold a Field Symposium every two years in a host country, touring mires in that country, and forming a group view of their conservation value. Symposia had been held in: Austria (1984), Scotland (1986), Sweden (1988), Ireland (1990), Switzerland (1992), Norway (1994), Japan (1996), Latvia (1998) and Canada (2000). [Note: most meetings also included a Congress and Conference].

3. Chairman's review – 16 years of IMCG

The group's activities had been instrumental in promoting major mire conservation programmes in most of the countries visited, and had been especially significant in influencing the issue of afforestation of blanket mires in the Scottish Flow Country. [Note: a full review will appear separately in the next Newsletter]. There were tangible legacies of which IMCG should be proud. Now the group was entering a broader arena involving opportunities, through partnerships, to have an impact on mire conservation at global scale. Richard Lindsay's 15 years as Chairman had been exciting and enjoyable, and he would now stand down feeling confident that IMCG

would continue to have an impact on mire conservation issues. We should be proud of what we have achieved, and look forward to what we shall achieve.

4. Membership and Constitutional Questionnaire – results

Richard Lindsay explained that the group had so far existed as an informal network. Recently, proposals for a formal constitution establishing a legal status and governing body for IMCG had been circulated by e-mail and newsletter, and a Constitutional Questionnaire was included. 40 people had responded to the questionnaire. 39 of these agreed that IMCG should become a legal organisation. 4 people felt that the Executive Committee should be elected by the membership as a whole rather than by the Main Board. However, the majority decision was that the membership should select the Main Board and that the Main Board should then elect the Executive Committee, as described in the current revised Constitution.

5. Presentation and adoption of Constitution

On the basis of the e-mail response and with the agreement of those present at the Congress, the latest revised Constitution as posted on the IMCG web site and distributed at the Congress was adopted. For internal purposes, IMCG became an official body from this point, although it would not be formally constituted until the official papers were lodged with the relevant authorities in France.

6. Membership forms – additional membership and fee

The Constitution stated that IMCG members would have voting rights in election of the Main Board. Since there was previously no official membership, this was decided by offering membership to those people who responded to the Constitutional Questionnaire. 38 people had chosen to be Members and 2 had chosen to be Supporters (without voting rights). Those present at the Congress who now wished to become Members were invited to complete

membership forms. No membership fee had yet been fixed but any charge was likely to be set on a sliding scale depending upon individuals' ability to pay. Applications for membership would be accepted with the provision that they could be withdrawn if the individual did not wish to pay any fee eventually decided. Each person who then returned a form appropriately completed was accepted as an official Member with voting rights.

7. *Election of Main Board*

Nineteen people had already offered via e-mail to serve on the Main Board. The Main Board was limited by the Constitution to 15 people so that an election was necessary. E-mail voting had already been conducted amongst existing official Members. The results had been collated by Richard Lindsay (who was not standing for election to the Main Board) and were held in confidence by him to be added to the votes cast during the Congress. Each Member present at the Congress who had not yet voted was given a voting slip and invited to vote in a secret ballot. These votes, plus those already received by e-mail, were collated by Asbjorn Moen and Michael Succow acting as official tellers. Neither of the tellers was standing for Main Board election.

9. *Announcement of Board*

The result of the election was clear, with no ties. Those elected to serve on the Main Board for the period 2000-2002 were: Tom Damman, Kath Dickinson, Piet Louis Grundling, Ron Hofstetter, Rodolpho Iturraspe, Hans Joosten, Philippe Julve, Elena Lapshina, Xian Min Meng, Tatiana Minaeva, Faisal Parish, Jan Sliva, Michael Steiner, Barry Warner and Leslaw Wolejko.

10. *Election of Executive*

As required by the Constitution, the Main Board should now decide who would be the 5 members of the Executive Committee. It was hoped that the Executive Committee could be announced within one month.

12. *IMCG links and delegates – WI, EHF, IUCN, STRP*

Wetlands International (WI): There was a proposal that IMCG should be established as a specialist group for Wetlands International. This would require a representative to attend WI Specialist Group meetings. Part expenses would be paid by WI.

European Habitats Forum (EHF): EHF represents all NGOs working in Europe, and can influence the thinking of DGXI (Environment Directorate of the European Commission). IMCG representation was currently provided by Richard Lindsay (who would be unable to continue in this role) and by Philippe Julve (in conjunction with his position on the scientific steering committee of the European Commission Habitats Directive Advisory Group).

IUCN: IMCG had been invited to join, and a decision on this would be needed.

Ramsar Scientific and Technical Review Panel (STRP): Richard Lindsay and Andreas Grunig

currently served as Observer and Co-chair of the STRP Peat Committee. It was suggested that the Main Board should co-opt Andreas Grunig to continue in this role.

It was agreed that these and related issues would most appropriately be dealt with by the Main Board at its first meeting, which was scheduled for 07.00 on 10th August.

13. *IMCG support functions – newsletter, web site etc.*

Members at the University of Greifswald had been making a very good job of producing the IMCG Newsletter. Hans Joosten requested articles and constructive comments for improving the Newsletter. The web site was currently managed by volunteers at the University of East London, but it was unlikely that this function could be maintained for much longer. Therefore, it was possible that a new base would be needed for the web site. The cost of this was largely in time and ideally the job would be taken on by an organisation that already had a web manager who could include maintenance of the IMCG web site in his/her programme of work. Suggestions and offers were invited.

14. *IMCG funding – discussion*

At present, people working on behalf of IMCG were expected to cover their own costs or to find them through their individual employment, and the expense of working for IMCG was an issue for a number of Members. This was not a good way to support the activities of IMCG. Therefore, discussion was invited to find ways to support the activities of the Main Board.

It was considered unlikely that organisations such as IUCN, STRP and Wetlands International would be able to pay full expenses for IMCG representatives attending their meetings. The possibility of obtaining donations from benefactors was suggested.

16. *Conference resolutions*

The IMCG symposium in Japan had produced 20 resolutions.

There was some discussion on the procedure for adoption of resolutions by the IMCG Congress.

Some members had attended the IMCG Field Symposium in British Columbia during the 8-10 days immediately before the Quebec conference. This was organised by Barry Warner and hosted by the BC Forest Service. Three days were spent on the mainland coast visiting a range of sites from tidal wetlands to montane mires. The group then moved to the Queen Charlotte Islands where the programme included sites ranging from tidal flats and lowland riparian forest to alpine mires at 1010 metres a.s.l. Will McKenzie of the BC Forest Service said that the Symposium had been very successful in „showcasing“ the BC mires to international scientists and to local people. There had been good press coverage, which had already resulted in a Provincial Government grant of 20,000 Canadian dollars to support ecological research. One resolution had

resulted from the BC Field Symposium. Olivia Bragg read this to the meeting, and it was approved by acclamation.

Some further resolutions were planned and it was agreed that these would be developed for presentation at the IMCG conference on 8th August and considered for adoption on 10th August.

17. Conference proceedings – discussion

Barry Warner may be able to secure Canadian funds for publishing (but not for editing) the Proceedings of the IMCG conference to be held in Quebec City on 7th-8th August. It was agreed that Barry should continue to investigate possibilities for this.

18. Conference proceedings – Japan 1996

Japanese funding had now been secured to support publication of the proceedings of this conference. There were no plans to publish the proceedings of the meeting in Latvia.

16. Projects – review of existing needs and commitments

Mire classification project: It was intended to test the various classification schemes in the field, and to address regionality issues. There was a need to make a definite plan and timetable for the various activities. It was proposed that the web site should be used as a forum for reporting and discussion of results.

European mires book: Discussion was deferred to the IMCG Conference on 7th-8th August.

The latest Mire Terminology Lexicon was now available on the IMCG web site.

20. Projects – review of future proposals

There were proposals to hold a workshop in Estonia; a Regionality Workshop; and to produce a species list for the European Habitats Directive Annex I (P. Julve/Habitats Forum).

Sake van der Schaaf suggested that IMCG might offer advice on nature conservation, and that this might begin by compiling an accessible database of the expertise within IMCG and of Members'

willingness and ability to offer unpaid advisory work. However, it was known that the Ramsar Bureau was already compiling a directory of wetland experts so that anybody wishing to provide this type of service might consider contacting the Ramsar Bureau direct. Ramsar also had a small project fund that had already been accessed by Mara Pakalne. Projects could be developed in collaboration with a Ramsar Contracting Party.

Hans Joosten reported a heavy demand for mire education material, and suggested that IMCG should begin to stimulate exchange of educational materials. Richard Lindsay intimated that the Ramsar Deputy Secretary General now had responsibility for Ramsar's Outreach Programme which aimed to promote wetland education, and that discussion with him might be profitable.

21. Agreement on next venues – 2002 and 2004

Jean-Marc Hervio invited IMCG to hold its next biennial meeting in France in mid-July 2002. The programme would involve a tour of mire sites in central and eastern France, beginning and ending in Paris. It would offer an overview of the variety of mires in France. An organising committee had already been established. There was a review of mire systems in France in the IMCG newsletter. This offer was accepted with pleasure by the Congress.

An invitation for the group to visit South Africa in July 2004 was then issued by Piet Louis Grundling. This offer was also enthusiastically accepted.

22. Any Other Business

A vote of thanks was proposed to the retiring Working Group for all their hard work. Barry Warner proposed a specific vote of thanks to Richard Lindsay as retiring Chairman, for all his work in founding and running IMCG and in chairing its meetings for 15 years.

There being no other business, the Congress was officially closed.



INTERNATIONAL MIRE
CONSERVATION GROUP

Minutes IMCG Main Board Meeting, Quebec, August 2000

10th August 2000, Quebec City. Present (for all or part of the time): Ton Damman, Piet-Louis Grundling, Ron Hofstetter, Hans Joosten, Elena Lapshina, Tatiana Minaeva, Jan Sliva, Barry Warner, Leslaw Wolejko. Minutes taken by Richard Lindsay.

1. Agenda

Agreed that all decisions are preliminary, requiring ratification by whole Main Board (as this Main Board meeting is not convoked according to the rules in the constitution and 30% of MB Members not present).

Selection of Executive Committee (IMCG-EC)

2.1 Criteria for IMCG-EC membership discussed.

Proposed that the IMCG-EC needs non-global membership because IMCG has no travel funds. If all located in one part of the globe, IMCG-EC members would have reduced costs for meetings.

2.2 Functions of IMCG-EC members:

Chairman: leads and represents IMCG

Secretary: ensures actions are carried out

Treasurer: responsible for management of funds

Other 2: provide direct support and input to IMCG-EC activities

2.3 Willingness to stand

A round-table review identified certain MB members willing to stand for particular posts. However, with 30% of MB not present, nothing decisive came from this review. Consequently it was agreed that R. Lindsay would circulate a spreadsheet to all MB members, asking for their willingness to stand for election.

2.4 IMCG-EC election

It was agreed that R. Lindsay would send round a voting form to all MB members, based on the table of "willingness to stand" obtained under [2.3] from MB members.

2.5 Discussion ensued about whether the Constitution could be changed to allow for wider involvement and candidature for the election of Chairman.

It was agreed that the future IMCG-EC should reconsider the procedure of chairman election and – if desirable – take adequate steps to reopen the discussion on this subject within IMCG.

3. Mechanisms for establishment

It was agreed that the Articles of Association for the IMCG should be registered with the appropriate authorities in order to confirm IMCG's legal status. It was, however, agreed that this action should await confirmation from Philippe Julve that he is willing to act as the nominated person to lodge the articles with the French authorities.

4. Wise-Use Guidelines

H. Joosten advised that an opportunity to be involved in the latest round of WUG discussions was available immediately after the MB Meeting, in the IPS Round Table Discussion 80. Subsequently, there would be a

need for MB (and IMCG Members generally) to make further inputs to this document.

The MB agreed that the discussion document could be put on the web to ensure as wide a discussion group as possible. It also agreed specifically to involve Society of Wetland Scientists (SWS) in the discussions.

The timetable proposed is that within 3 months a draft would be put to the IPS/IMCG Executive, seeking their approval for it to go for wider discussion. The document is not yet ready for consideration by the Ramsar mechanisms.

5. Global Environment Facility (GEF) Carbon Balance Project

H. Joosten reported that IMCG had been invited to join as partners in a project being established with GEF funding by Faisal Parish and John Kusler. The project would look at the implications of the world peatland resource for the global carbon balance. It was not yet entirely clear what IMCG's involvement would be. It is a large sum of money focused on peatlands, and IMCG should be involved in ensuring that it is spent as wisely and effectively as possible.

J. Sliva and T. Minaeva expressed a wish, supported by others, to have issues of both the practical nature of IMCG's involvement, and of the associated financial arrangements clarified, before proceeding further with this commitment.

MB agreed that H. Joosten, T. Minaeva and J. Sliva should review progress and developments before making firm decision.

6. Co-opting Main Board Members

H. Joosten pointed out that the Constitution states reasonably clearly that co-option to the Main Board is only possible to fill vacant positions. It does not allow for additional appointments to the MB.

MB agreed that IMCG Members could be given responsibility for particular tasks without needing to be MB members. There was, however, a suggestion that the Constitution might be reviewed in order to provide wording which allows for continuity of experience.

MB agreed that it could appoint Honorary Members. Agreed to elect Richard Lindsay, Hugo Sjörs and Viktor Masing as its first Honorary Members.

7. Membership Fee

It was agreed that there were complex issues to resolve here: bank currency charges, the small total amount likely from membership, differentials in ability to pay in different parts of the world.

It was therefore agreed that the membership Fee would be waived for the next 2 years - i.e. membership would be free - but that donations would be accepted and welcomed. Responsibility for these donations would lie with the Treasurer. Responsibility for raising large donations would lie with H. Diemont, who was agreed as IMCG Fund-

Raiser for the next 12 months, his position to be reviewed by the IMCG-EC after that time.

Other funding issues:

7.1 Depending on the election of Treasurer, the Treasurer may conveniently be involved with funding issues for the next IMCG Biennial Symposium in France. If not, it will be important for the Treasurer to ensure that strong links are established with the organisers of the French Symposium.

7.2 It was agreed that any future involvement with projects - for example the proposed Wetlands International projects - should require IMCG to charge an overhead to cover its administrative workload, over and above any direct charge for costs or paid services.

8. *Responsibilities for tasks*

Several ongoing tasks need formal responsibility accepted for their future action:

8.1 IMCG Web-Site: Barry Warner agreed to establish whether his university could take over as host for the IMCG web-site. If this is not feasible, then the University of Kiel will be approached as a possibility.

8.2 The IMCG Mailing/Membership List should go to the new Secretariat, and will thus depend on the outcome of the IMCG-EC elections.

8.3 The University of Greifswald agreed to continue producing the IMCG Newsletter.

9. *Any other business*

There being no other business, the meeting was closed.

IMCG Conference, Quebec, August 2000

by Jan Sliva

The 9th International IMCG Conference was held as part of the Quebec 2000 Millennium Wetland Event. On Monday 7 and Tuesday 8 August a total of 22 oral presentations were held and during the whole Quebec event 22 posters were presented in a designated IMCG section of the Exhibition hall of the Congress Centre.

In the Monday afternoon session eight talks were held under the heading of "general studies":

- Richard Lindsay in his introductory talk presented the activities and programmes of IMCG in past, present, and near future.
- Jan Sliva and Leslaw Wolejko gave an overview of the present status of the IMCG global mire classification initiative.
- Ron Hofstetter then presented his progressive views on a universal mire and wetland terminology. The positive reaction of the public to his proposals encourages to continue on the chosen path and to pave the way for the Universal Mire Lexicon.
- Richard Lindsay on behalf of a joint Brazilian / British group (C. Thompson, R. Lindsay, F. Hochleitner, B. Teixeira and F.C. Popolo) gave an illustration of a software package to analyse the surface patterning of peatlands, a tool in describing this still under appreciated type of biodiversity of mire systems.
- Following, John Couwenberg (with Hans Joosten) presented the latest on the hydrogenetic mire classification. Part of the global classification enterprise, this classification system is based on the hydrologic backgrounds of the peat formation process.
- Donal Clarke and Hans Joosten informed their public on the development of the Wise Use Guidelines for Peatlands, a joint project of IMCG and IPS.

- Standing in for Lebrecht Jeschke, Hans Joosten then talked about the IMCG European Mire Book project. Besides a presentation of the structure of the book, attention was given to still missing chapters and data.

- "Development of mire education programs" was the title of a presentation by Catharine O'Connell. Based on her Irish experience (IPCC), she showed a broad spectrum of possibilities of (peatland) conservation education.

The Tuesday morning session was conceived under the heading of regional accounts. A total of six presentations were made:

- Asbjorn Moen started off with an introduction illustrating regionality in mire systems and how to deal with that.
- Gerry Marneweck and Piet-Louis Grundling gave us "A brief overview of the mires of Africa, south of the Zambezi River".
- Then Yongxing Yang took us to China and talked about "Mire conservation in China - the latest research progress and current viewpoints".
- He was followed by Tatiana Minaeva and Andrej Sirin, who informed on the "Status and information background for peatland conservation in Russia".
- From the host country of the next IMCG Biennial meeting, Jean-Marc Hervio, Philippe Julve, and Virginie Vergne talked about "France: the lesson of domestic partnership (mire conservation in France)".
- Closing off was Michael Succow, who presented some (actually a lot of) beautiful slides on large protected area initiatives in former Soviet states and Mongolia.

The Tuesday afternoon session focussed on research projects and local studies by IMCG affiliates. These were: W.H. Diemont et al.: The future use of peatlands; H. Zingstra: Central European Peatland

Project; J. Paal: Estonian wetland inventory; W. Bleuten, S.V. Vasiliev and E.D.Lapshina: The scientific relevance of the greatest raised bog in the world: Vasuganskoe Bog (West Siberia); A.T. Grundling, G. Marneweck, P-L. Grundling: An integrated approach towards protecting the wetlands of the Steenkamp sberg Plateau, South Africa; R. Heikkilä, T. Lindholm, O.Kuznetsov: A multi-level analysis of Kauhaneva mire, western Finland; C. MacAlister: Surface water flow in mire hydrology and its functional links to ecology; V.Vergne and N.J.Whitehouse: The archive of the peat bogs: their value to conservation and a resource in need of protection.

The 9th IMCG Conference was organised and moderated by Jan Sliva and Richard Lindsay. All

three sessions were well attended and interesting discussions developed on the presented material. The public not only got presentations of a high scientific standard, the structure of the event ensured it to be a true showcase of IMCG and its worldwide scope and diverse actions and involvement. We thank everybody who contributed in any way to the success of the Conference.

Barry Warner and Jan Sliva have offered to edit a volume with Conference proceedings. At the moment financial support to publish such a volume are being investigated by Barry Warner. Anyone interested in abstracts of the presentations (and posters), in more information, or contact addresses of the authors should contact Jan Sliva:

sliva@pollux.weihenstephan.de.

Pleased to meet you: the IMCG Board...

As not everybody will be equally familiar with our new IMCG board members, we asked them to write a short piece to introduce themselves.

Ton Damman, IMCG chairman

I was born in Utrecht, The Netherlands, in 1932, hold Ingenieurs Degrees in Tropical and Temperate Forestry from the Agricultural University in Wageningen, The Netherlands, where I specialized in Vegetation Science and Soil Science, and a Ph.D. in Botany (Plant Ecology) from the University of Michigan, Ann Arbor, USA. From 1956 until 1967 I carried out ecological and phytogeographical studies in the boreal forest while being employed as a Research Scientist at the Newfoundland Forest Research Laboratory of the Canadian Federal Government. At that time most of my field work was carried out in Newfoundland and Labrador. I left Canada in 1967 for a faculty position at the University of Connecticut, USA, where I was Professor (Plant Ecology) in the Department of Ecology and Evolutionary Biology. I retired from this position in 1997 and moved to Kansas State University.

My interest in peatlands was kindled in 1956 while I was on a Fellowship in Lund, Sweden. I tramped through numerous mires while working in Canada, but they did not become the focus of my research until I moved to Connecticut. Initially, this research was focused mainly on the vegetation patterns of eastern North American bogs. Later this expanded to include also studies on the biogeochemistry and development of peatlands. This research brought me to many other parts of the world, especially Scandinavia, Tasmania, New Zealand, the subantarctic islands, and Japan. Although I am now living in the dry interior of the USA, I continue my research on peat bogs.

I have been involved in peatland preservation efforts in Canada and the USA as a member of the Committee on the Conservation of Terrestrial

Communities of the Canadian International Biological Program, as an advisor to the Nature Conservancy, and as a scientific expert in various conservation efforts.

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Hans Joosten, secretary general of IMCG

Born: 15-3-1955; grown up with 40% of the Dutch bog remnants within 5 km of his parents'house. Happily living with wife and two daughters (14 and 12 years) next to a (restored) Baltic Sea transgression mire. Studied geobotany, socio-economic history, aquatic ecology (Nijmegen University), and palaeoecology (Utrecht University). Earned his dr.-degree on landscape ecology and nature conservation of bogs. Worked as teacher, scientist, and policy maker at the Open University, the National Forest Service, the Ministry of Agriculture, and Utrecht University and as private consultant (all based in the Netherlands). Since 1996 senior scientist at Greifswald University (Germany), where he manages the working group on mire (palaeo)ecology within the study programme „Landscape Ecology and Nature Conservation“. Interested in everything related to peat and peatlands.

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Philippe Julve, treasurer of IMCG

I am a private consultant and also work as associate professor in the State University Lille, Catholic University Lille, and the Agricultural Institute Lille (France), teaching Ecology, Botany, and Geography. I deal with mire conservation and mire research in France (national programmes for scientific studies

and evaluation of sites). Main research fields : flora and vegetation of France, flora and vegetation of Holarctic Mires.

I am responsible for the flora and vegetation subgroup of the IMCG global mire classification work and have compiled the holarctic mire plant species list. Work on this list is still in progress. The latest version can be found on my webpage.

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Tatiana Minayeva, IMCG executive committee member

Born April 20, 1963 in Moscow, Russia. Married, two children (born in 1984 and 1993). Studied biology at the Moscow State University, PhD in mire vegetation 1994, Komarov Botanical Institute, Russian Academy of Sciences.

Since April 2000, I have been working for WWF RPO as Project leader and since August 1988 I have been part of the research staff of the Central Forest Biosphere Nature Reserve.

Area of interests: Nature conservation value of ecosystems, strategy of sustainable land use in the European part of Russia, wetlands diversity, wetlands regeneration and restoration, growth of peatlands, paleoecology and plant ecology, peatland forestry.

Member of Moscow Society for Nature Sciences, member of Russian Botanical Society, member of International Vegetation Science Society (IAVS), member of International Peat Society (IPS), member of German Peat Society, member of Society of Wetland Scientists (SWS) and since 1997 involved in the International Mire Conservation Group (IMCG)

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Jan Sliva, IMCG executive committee member

Born: 07. 10. 1957; nationality: Czech; married (with the best woman in the world), two step-sons and two pretty grand-children (the next mire-research generation); shoe-size: 42; eyes: blue-greenish-greyish; sex: male; profession: senior scientist (Wissenschaftlicher Assistent C1) am Lehrstuhl für Vegetationsökologie Technical University Munich.

I studied landscape ecology and landscape planning in Czechia and have been active in mire ecology and restoration science at the TUM since 1990. I have been involved with IMCG since about 1995.

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Kath Dickinson

I am currently a Senior Lecturer in the Botany Department, University of Otago, South Island, New Zealand and also Director of the Ecology degree offered at this university. I am principally a plant ecologist with much of my research focused on conservation management. My research experience covers temperate to tropical environments and from coastal to alpine habitats including peatlands. I am also very interested in biodiversity assessment and in particular plant-invertebrate relationships in non-forest ecosystems.

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Piet-Louis Grundling

(alias Peat-Land Greenling)

I was born on 30 May 1966 in Dennilton a small village in South Africa. Got trapped by Althea, a lovely wife and are blessed with two beautiful and sometime naughty daughters Reneè, (4 years old and an keen mire trotter) and Amy (2 years old and calling me "Mamma"). I graduated as a geologist at the University of Pretoria, and aquired a taste for peat as a student. I am at present completing my Magister Sc. at the Rand Afrikaans University (Johannesburg). At present I am self employed (Ihlaposhi Enviro Services) and am involved in peatland research, mainly inventories & characterisation (unfortunately only when there is funds available.....). I am also involved with the Working for Water Programme of the Department of Water Affairs and Tourism as a manager/advisor on peatland and wetland rehabilitation

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Ron Hofstetter

Born 25 January, 1939 in Kitchener, Ontario, Canada, happily married to Margaret Clarke since 27 August, 1964. Education: M.Sc. in biology at the McMaster University, Ontario in 1964: "Some aspects of ammonia fixation by peat", then PhD in botany at the University of Minnesota, Minneapolis in 1969: "Floristic and ecological studies of wetlands in Minnesota". Besides teaching at the University of Miami, I have been active in scientific consultancy and other technical wetland advisory work.

My research in recent years has focused on developing management and monitoring programs for natural communities of southern Florida (Everglades). To this end, one line of field research is examining the patterns exhibited by invasive non-indigenous plants, especially *Melaleuca*, in natural

communities. Another is assessing the ecological role fire plays in natural communities.

Long-term parallel interest is in identifying the various ecological factors that affect the genesis, spatial arrangement and character of plant communities in fresh-water wetlands at the landscape level.

My main activity for IMCG in recent years has been in chairing the subgroup on mire terminology. I am developing a universally applicable wetland terminology (the IMCG Universal Mire Lexicon) and a classification of wetlands that reveals shared patterns of genesis and relative importance of sets of controlling factors.

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Rodolfo Javier Iturraspe

Age: 45, engineer in water resources, specialized in hydrology, climate, and environment; special interest: hydrology of mountain basins of Tierra del Fuego, mire hydrology.

Jobs/Activities: mainly at the Centro Austral de Investigaciones Científicas (CADIC) - CONICET Ushuaia, Argentina. Laboratory of Hydrology. Besides that also associate professor at the Universidad Nacional de la Patagonia, Facultad de Ingeniería and active in the Departamento de Recursos Hídricos of the Subsecretaría de Recursos Naturales, Gobierno de la Provincia de Tierra del Fuego.

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Elena Lapshina

Born November 25, 1958 in Tomsk, Russia. Education: M.Sc. (Diploma) Tomsk State Univ. in Biology: „Spatial structure of pine forest biogeocoenosis“, supervised by Dr. Yu. Lvov. In 1987, Ph.D. in Botany at the Tomsk State University: „Landscape structure and dynamics of the peatlands in the Ob river flood-plain (Southern part of Tomsk Region)".

From 1980 to 1988, scientific researcher at the Laboratory of Biogeocoenology (Department of Ecology), and from 1988 to 1990, senior teacher at the Department of Botany, both at Tomsk State University. From 1990-1991, I held a post-doctoral position at the Botanical Institute of the Kiel University in Germany, supervised by Prof. K. Dierssen (DAAD Scholarship Programme).

Since 1992, I have worked as Associated Professor at the Department of Botany of Tomsk State University and as Head of the Laboratory of Biogeocoenology at the Research Institute of Biology and Biophysics at Tomsk State University.

My main scientific interests have been in studying the forest and mire vegetation affected by climatic changes and environmental conditions in Western Siberia.

Member of the Russian Botanical Society since 1982, Member of International Phytosociological Society (Reinhold Tuexen-Gesellschaft) and of the International Association for Vegetation Science (IAVS) since 1991.

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Xianmin Meng

Presently working at the Laboratory for wetland process and environments, Changchun Institute of Geography of the Chinese Academy of Sciences, I have been active in the field of peatland development and management in China for 15 years. After working at the Macaulay Land Use Institute, UK as a visiting scholar in 1993-1994, Wetlands International-China Programme employed me as a senior technical officer for two years. After that I came to the Changchun Institute of Geography to continue my research on peatland conservation and management.

Under heavy pressure from population and fast economic growth, the peatland conservationist's voice is still very weak in China. Although conservation can benefit from economical development, we do not wish to first damage and then repair our environment. My interest also concerns the relation between peat accumulation and stores and the global carbon cycle. China is a peat-rich country that plays a significant role in the global carbon store and has diversified peatland types.

I want to make a call for cooperation in research on China's peatlands and their conservation.

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Leslaw Wolejko

Born 2nd August 1956 in Szczecin, Poland.
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Szczecin, 1980, PhD in Agriculture, Agric. Univ of
Szczecin, 1990: "Comparison of spring ecosystems
developing in natural conditions and under human
impact". Habilitation in biology in progress (at

Gdansk Univ. :) "Ecological and phytosociological
dynamics of ground-water supplied ecosystems in
NW Poland".

Scientific visits: Agricultural Univ. Wageningen -
RIN Leersum, 1983 (three months); Graduate School
of Environmental Science, Hokkaido Univ., Sapporo,
Japan (2 years).

Member of: Polish Botanical Society, IAVS, IMCG,
GfQ (Society for Spring Ecology and Protection).

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If you know of anyone who would also like to receive the newsletter, of anyone who wonders why he or she is not receiving the newsletter anymore, of anyone who has moved and has since not received the newsletter, then let them please contact the secretariat with up-to-date address-information. Also if you have the slightest doubt the secretariat does not have your most up-to-date address, telephone- or fax-number, e-mail address, or anything else contact them.

In honour of accomplishments: IMCG honorary members

At the IMCG Board meeting in Quebec in August 2000, the idea arose to honour some of the most prominent people in international mire conservation. With a round of applause Viktor Masing, Hugo Sjörs, and Richard Lindsay were greeted as the first honorary members of the International Mire Conservation Group. Below we present some illustrative biographical notes on our honorary members Viktor Masing and Hugo Sjörs.

The planned inclusion of a full review of 16 years of IMCG would certainly have made clear what was accomplished by former IMCG Chairman Richard Lindsay. A pity the review did not make it before the deadline due to other obligations by the author. We hope to be able to include it in the next IMCG Newsletter. Anyway, it should be clear to everybody that although no picture of Richard is found on the following pages, we certainly do honour him.

Viktor Masing, honorary member of IMCG

by Jaanus Paal

Viktor Masing was born on April 11, 1925 in Tartu, Estonia. He got his secondary school education in Poeglaste Gümnaasium, where his father was teacher in physics. As a schoolboy he got acquainted with ornithologist Johannes Lepiksaar, whose modern ideas in ecology and ethology were very attractive and began regular observations on bird nesting habits in parks of Tartu.

The war disrupted his studies for two years. But he had the luck to survive the war without being wounded.

Good knowledge of Russian and German languages gave him chance to escape executions in Russian and German prisoners' camps. He returned home in autumn 1945 already and continued

studies in the secondary school.

After graduation of Tartu University in 1961, qualified as zoologist and biology teacher, he was not allowed to continue his teacher's career. He found a job in Faculties of Forestry and Amelioration of the Estonian Agricultural Academy and could work on his first scientific degree about Estonian bogs.

Since 1956 Viktor Masing has been working at the Department of Plant Taxonomy and Ecology of Tartu University as senior lecturer (1956-1959), assistant professor (1959-1970) and professor (1970-1983). He took his Doctor of Biology degree in 1969. At present he is a Professor Emeritus of Tartu University.

Viktor Masing lectured on botany, biogeography, telmatology (mire science), forest ecology and plant resources. He supervised students' summer work and excursions. He organized field trips through climatic zones to the Chibinae Mountains, North Urals, Ukrainian steppe, West Siberia and Lake Baikal. He also took part in two Arctic and three Far-East expeditions.

Viktor Masing has written textbooks, travel books and five books for children. Altogether, he is author of about 630 scientific and popular publications. According to the colleague Professor Hans Trass counts, from Masing's papers published in 1939-1994, 84 are dedicated to the history of science, 63 to telmatology, 52 to nature conservation, 50 to botany and plant ecology, 49 to vegetation science, 48 to synecology and geocology. „On this basis we could describe Masing as a science historian, nature conservationist and telmatologist. If we were to use frequency of citation as the criterion for ranking his different fields of activity then the following order ensues: 1. Telmatology, 2. Biocoenology /esp. on consortia), 3. Vegetation science“ (Trass, 1995: 9).

In the framework of the International Biological Programme he was the chairman of a regional Telma project and compiled, with his coauthor Marina Botch, a list of mires meriting conservation in the U.S.S.R. In the Man and Biosphere programme he investigated urban ecosystems; he also took part in the Project on Wetlands dynamics led by Bernard Patten.

In the period of 1969-1981 he made his contribution to the Estonian Encyclopaedia as member of staff, main editor of children's encyclopaedia and Ecological Dictionary.

Viktor Masing has got the following awards: Estonian State Award 1977 and 1982, Literature Award 1985, Estonian Order of Coat of Arms 1996, Medal of Tartu University 1996, E. Kumari Nature Conservation Award 1992, Award of Open Estonian Fund 1997.

Since 1993 Viktor Masing is Member of the Estonian Academy of Sciences (biogeography). Moreover, he

Photo: Rudolf Stamer



is member of six scientific societies in Baltic Region, among them Honorary Member of Estonian Naturalists' Society (1985) and Finnish Biological Society „Vanamo“ (1976). Since 1999 he is the Honorary Citizen of Tartu.

This text was compiled using:

Masing, V. 1999. Footsteps in mosses and in sand. Vanemuise Seltsi kirjastus, Tartu. 136 pp. (In Estonian, summary in English).
Trass, H. 1995. Professor Viktor Masing – nature encyclopaedist, ecologist and biogeographer. – In: Aaviksoo, K., Kull, K., Paal, J., Trass, H. (eds.) Consortium Masingii. A Festschrift for Viktor Masing. Tartu University, Tartu, pp. 7-12.

Hugo Sjörs, honorary member of IMCG

by Håkan Rydin

Hugo Sjörs's doctoral dissertation "Myrvegetation i Bergslagen" published in 1948 is a milestone in mire ecology and a fundament for modern discussions on mire conservation. It may come to a surprise for many younger peatland ecologists that this book, published in Swedish, quickly became widely recognised in countries with long tradition in mire

photo: Hans Joosten



research e.g. Great Britain and Canada.

A reflection of the quality of his dissertation is that it was done with such accuracy and resolution that it has now been possible to re-investigate his main study site. Hugo himself has actively taken part in this re-analysis after 50 years,

which is a truly unique achievement (Gunnarsson, Rydin & Sjörs 2000).

Mire ecology has in Sweden (as in the other Nordic countries) a long tradition, and Hugo's contributions represent a merger between the older classificatory literature and a modern functional ecology. In doing so, he replaced the rigid description of plant communities by the view of plant composition of the mires as determined by a few major gradients, or "directions of variation" (water table represented by the series hummock - lawn - carpet - mud bottom, and the gradient representing mire expanse - mire margins, and water chemistry in the rich fen - poor fen - bog gradient). That these factors were important for species composition was of course not unknown to earlier ecologists, but Hugo provided clear descriptions and nomenclature for their use; definitions that still hold.

Hugo's sense for details is well known. He described a new species of peat moss - *Sphagnum subfulvum* in

1944. Such achievements must be considered as remarkable for an ecologist!

Impressive is that despite his interest for details he has led the development of plant geography during the last 50 years. He recently updated his clear treatment of the zonation in Europe into nemoral - boreo-nemoral - boreal - alpine (Sjörs 1999).

Not only have Hugo's books and papers been the fundament for conservationists; he has himself actively engaged in national and international issues. He has been active to demonstrate the large conservation values in mires threatened by e.g. the use of peat as a fossil fuel.

A selection of books and mire publications by Hugo Sjörs:

1944. *Sphagnum subfulvum* n. sp. and its relations to *S. flavicomans* (Card.) Warnst. and *S. plumulosum* Röhl p.p. Sv. Bot. Tidskr. 38: 403-427.
1948. *Myrvegetation i Bergslagen*. Acta Phytogeogr. Suec., 21: 1-340.
1950. On the relation between vegetation and electrolytes in north Swedish mire waters. Oikos 2: 241-258.
1959. Bogs and fens in the Hudson Bay lowland. Arctic 12: 1-19.
1961. Surface patterns in boreal peatland. Endeavour 20: 217-224.
1963. Bogs and fens on Attawapiskat River, northern Ontario. National Mus. Canada Bull. 186: 45-133.
1967. Nordisk växtgeografi (2nd ed). Stockholm. 240 pp.
1971. Ekologisk botanik. Stockholm. 296 pp.
1980. An arrangement of changes along gradients, with examples from successions in boreal peatland. Vegetatio 43: 1-4.
1980. Peat on Earth: multiple use or conservation. Ambio 9: 303-308.
1982. The zonation of northern peatlands and their importance for the carbon balance of the atmosphere. Int. J. Ecol. Environmental Sci. 7: 11-14.
1983. Mires of Sweden. In: Gore, A.J.P. (ed.) Mires: Swamp, Bog, Fen and Moor. Ecosystems of the World 4 B. pp 69-94.
1985. A comparison between mires of southern Alaska and Fennoscandia. Aquilo Ser. Bot., 21, 89-94.
1985. Peatland and its environment as a living ecological entity. Proc. Int. Peat Soc. Symp. pp 21-24.
1990. Divergent successions in mire, a comparative study. Aquilo Ser. Bot. 28: 67-77.
1993. *Sphagnum* - a mossy story. Advances in Bryology 5: 1-7.
1999. The background: Geology, climate and zonation. In: Rydin, H., Snoeijs, P. & Diekmann, M. (eds) Swedish Plant Geography. Acta Phytogeogr. Suec. 84: 5-14.
1999. Rydin, H., Sjörs, H. & Löfroth, M. Mires. In: Rydin, H., Snoeijs, P. & Diekmann, M. (eds) Swedish Plant Geography. Acta Phytogeogr. Suec. 84: 91-112.
2000. Gunnarsson, U., Sjörs, H. & Rydin, H. Diversity and pH changes after 50 years on the boreal mire Skattlösbergs Stormosse, Central Swedish uplands. J. Veg. Sci. 11: 277-286.

Wetland world – a world to discover

by Michael Trepel

This is the motto of the 5th official world wetland day, which is celebrated on 2. February each year. The World Wetland Day has been launched in 1997 by the Ramsar Convention to raise awareness for wetlands, their conservation and restoration both in the public community as well as around national and regional environmental authorities. In 2001, the wetland community will also celebrate the 30th anniversary of the Ramsar Convention on wetlands signed on 2. February 1971. While the Ramsar Convention in the beginning focused mainly on the conservation of internationally important wetland areas for (migrating) birds, it has recently adopted its focus to a broader view on wetland functions and values. During the last conferences of the contracting parties, the convention draw more attention on mires and peatlands. The participants of the Brisbane conference in March 1996 considered that peat-dominated wetland systems are important wetland types hitherto underrepresented in the work of the convention. During the 7th meeting of the conference of the contracting parties, the conference adopted a global action plan for the wise use and management of peatlands. This action plan is a hot topic inside imcg and has been reviewed in the IMCG Newsletter 2000/02.

However, the action plan is presently discussed mainly inside the mire and wetland world as their secret gift. Often, national and regional environmental authorities do not know that these kind of plans do exist. Therefore, the World Wetland Day 2001 is an excellent opportunity

- to inform environmental authorities about international activities in mire and peatland conservation,

- to discuss the implementation of the action plan in national and regional wetland policy (A starting point for a good discussion could be to ask some of the six questions originally suggested by Lindsay (1995) in order to analyse the national or regional status of mires and peatlands e.g. i) What is the status of the global peatland and mire resource? ii) How is this resource properly characterised ecologically and economically? iii) How and why are peatlands currently used? iv) Why should we use peatlands and mires sustainably? v) How should peatlands and mires be conserved and managed wisely? vi) What monitoring tools would we need to learn whether we are succeeding?)

- to invite local media to a field trip into a mire and get in touch with the spirit,

- or to do something else to promote mire and peatland conservation and restoration.

These are just a few examples of how you can celebrate the co-operation between peatland and mire conservation initiatives with the 30th anniversary of the Ramsar Convention. If you need more ideas you can have a look at the official Ramsar web site, the office will also produce flyers, stickers, posters and other stuff to get ready with media work.

If you follow the links above, you will get more information about the Ramsar Convention, World Wetland Day incentives and Ramsar activities on mires and peatlands:

World Wetland Day 2001:

<http://www.ramsar.org/>

Global Action Plan for Peatlands:

http://www.ramsar.org/key_rec_7.01e.htm

Brisbane Recomm.: Conservation of Peatlands:

http://www.ramsar.org/key_rec_6.1.htm



INTERNATIONAL MIRE
CONSERVATION GROUP

Strategic Action Plan for Peatland Conservation in the Russian Federation

International Workshop, 23-25 January, Moscow, Russia

This workshop is organised by Wetlands International, in cooperation with IMCG, IPS, and the Darwin Initiative and is sponsored by the Dutch Ministry of Agriculture.

The workshop aims to promote the conservation and sustainable use of peatland biodiversity in the Russian Federation by addressing the issues of the development threats to peatlands, opportunities of inter-sectoral cooperation, status of peatland inventory, monitoring, training, information exchange and peatland conservation activities, and by developing a national action plan. The national plan will influence the development of regional plans for peatland conservation.

Objectives are:

- to familiarize the stakeholders and other relevant GOs and NGOs with the results of a review of information available on peatlands and their conservation;
- to define priorities for improving informational

- background for peatland conservation;
- to identify major interest groups and discuss the possibility to develop a management agreement between stakeholders that will clearly define their functions, rights and responsibilities and include conflict management mechanisms;
- to develop a draft strategic peatlands action plan;
- to establish a steering group to finalise the preparation of the action plan.

About 60 participants ranging from international experts to delegates from various administrative regions of the Russian Federation will attend.

For more information contact:

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International Field Symposium and Excursion: West Siberian Peatlands and Carbon Cycle: past and present

20-24 August 2001, Noyabrsk, Russia

The vast and almost unpopulated West Siberian Plain consists mostly of undisturbed, undrained, peat accumulating ecosystems and makes an excellent reference for evaluating relationships between climate (temperature, precipitation) and peat formation. The West Siberian Plain includes vast open and forested oligotrophic bogs and mesotrophic open and forested peat swamps and fens, located on flat waterdevides and river valleys. In the Northern part of the West Siberian Plain (Noyabrsk region) palsa mires with large pingos and many lakes are present on discontinuous permafrost. The West Siberian plain stretches further North from the Polar Circle into the permafrost Tundra zone.

Fully undisturbed facies of peat forming ecosystems varying from ombrotrophic to eutrophic environments can be studied in the West Siberian plain in complete gradients. The total area of active peat ecosystems of West Siberia covers about 10⁶ km², which is about 20% of the world's peat area. Peat layers there are estimated to contain 51 Gt of Carbon. Current research revealed a wide variation of peat accumulation rate during Holocene. Spatial Carbon sequestration rates depend on latitude, vegetation type and hydrology.

The aim of the symposium, that is also sponsored by IMCG, is to encourage the communication between peat scientists specialized in biology, soil science,

geography and hydrology in order to enhance the knowledge about the role of peat ecosystems on the global climate, the urge for peatland conservation and for parameterization of peat accumulation modeling.

Main goals and topics:

- Origin and history of boreal peatlands.
- Methods and results of the estimation of the actual carbon pool and its accumulation in wetlands.
- The importance of West Siberian wetland for the global carbon cycle.
- Anthropogenic impact on peatlands

Field excursions will be included in the symposium schedule (2½ day of duration).

We invite you to the Siberian town – Noyabrsk, founded in 1982. It is situated in the middle part of the West Siberian Plain (63°11'N, 75°22'E) on a watershed of the Ob and Pur rivers near the Tetu-Mamontotyai Lake.

Noyabrsk can be reached by airplane, train (slow) and by car (difficult). Noyabrsk is a regional center of oil and gas industry. It has an art museum, nature museum, hotels and banks. The population of the town in 1999 was 98.5 thousands people.

Noyabrsk is surrounded by lichen and green-mosses forests with pine, birch, larch and spruce. More than 50% of area around the town is covered with pristine wetlands. Their main types are lichen-sphagnum

palsa bogs with permafrost and patterned bog on unfrozen peat. The central parts of bogs have many lakes of different sizes. Paludificated forests cover periphery belts of bogs.

The Institute of Soil Science and Agrochemistry (Novosibirsk) carries out research here on the productivity of bog vegetation at different sites. This investigation is included in the project "Ecological monitoring of environment of Noyabrsk territory".

In 1999 researchers from the Institute of Soil Science and Agrochemistry, Utrecht University, Tomsk University and Geography Institute (Moscow) gathered new data on the age, depth, botanical and chemical composition of peat, vegetation productivity

of bogs and activity of decomposing micro-communities in peat soils in the Noyabrsk region.

We invite you to look at the experimental and monitoring sites of our researches and to discuss research results and methodology connected with the paludification process and global carbon cycle.

For more information contact:

Mr. S. V. Vasiliev

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Fax: (3832) 22-76-52.

sv@issa.nsc.ru

<http://www.issa.nsc.ru/wspcc/index.html>

Communication and registration via email and Internet is preferred.

Global Wise Use Guidelines for Mires and Peatlands

by Hans Joosten

In a meeting in Surwold, Germany, in November 1997, one of the actions agreed between the International Mire Conservation Group (IMCG) and the International Peat Society (IPS) was the joint development of Guidelines for the "Wise Use" of mires and peatlands. Since then, the compilation and drafting has been carried out by Donal Clarke and Hans Joosten, with the help of many IPS and IMCG members.

In May 1999 the concept of the Guidelines was outlined at the 13th Global Biodiversity Forum in San José, Costa Rica. At a meeting in Freising (Germany) in November 1999 participants from the IMCG, IPS, SWS, Ramsar, and Wetlands International progressed the development of the Guidelines. It was agreed at the Freising meeting that the Guidelines should consist of a brief, clear executive summary in layman's language, supported by a more extended and referenced background document. The Guidelines were further discussed in March 2000 at an IMCG meeting in Lagow in Poland and at a meeting of IPS and IMCG representatives in Stockholm, Sweden, in May 2000. During the Wetlands Millennium Event in Québec, Canada, in August 2000 an IMCG Symposium and an IPS Round Table were held at which participants from a number of organisations were briefed on progress in drafting the document and feedback was provided to the two drafters.

The wise use of mires and peatlands requires an optimal balance between utilisation and conservation. The Guidelines aim to assist all those who influence mire and peatland management in identifying,

analysing, and resolving possible conflicts, in order to plan, design, and implement the best management option for any mire or peatland. The Guidelines are intended to be applicable to all forms of management or development, from single-sector developments to multiple use projects.

A first complete draft was prepared in November 2000 and sent to the relevant authorities of IPS and IMCG for comment. The document provides

- background information on the extent, types, functions and uses of mires and peatlands,
- an underlying rationale for the development of guidelines, and
- a proposed set of guidelines for the Wise Use of mires and peatlands.

The Wise Use Guidelines are based on rational argument and are rooted in widely accepted premises, including international Conventions and agreed United Nations statements and resolutions.

On Saturday 2 December 2000 IPS (Executive Board) and IMCG (part of the Executive Committee and some additional members) will meet in London separately to comment the draft. On Sunday 3 December, the organisations will jointly discuss the aims, structure, and content of the document, and make arrangements for further contributions and revisions. They will agree how the revised document will be circulated for further comment to relevant people in IMCG, IPS, and other organisations, and decide on publication of the document.

For more information: Hans Joosten

joosten@uni-greifswald.de

Update on the Darwin Initiative Peatland Biodiversity Programme

by Olivia Bragg

The PBP programme was described in the IMCG Newsletter of January 2000

The third, the largest, and the final Scottish training course of the Darwin Initiative Peatland Biodiversity Programme (PBP) took place in August 2000. There were 26 delegates representing 11 countries. Before 31 January 2001 there will be a follow-up workshop in each of these countries - namely Belarus, Bulgaria, Czech Republic, Estonia, Latvia, Poland, Romania, Russia, Slovakia, Slovenia and Ukraine. The PBP Web site gives details of dates and organisers.

The statistics for the project's auditors now show that the total number of delegates who have completed the course in Scotland is 57 and that PBP funding has been granted for 24 workshops in 13 CEE countries. The real achievements of this year include attracting our first visitors from 3 countries and the fact that each of the other countries wished to send representatives for a second or even a third time. It is also encouraging to see the development in focus of workshop topics during the Programme - the 1998 delegates had to establish country networks, identify needs and work out approaches to peatland conservation; by 1999 some problems of specific

sites and regions were being tackled; whilst topics for 2000 include development of two educational programmes, a trans-boundary mire conservation initiative, and a national strategy for the conservation of Russian peatlands.

The next stage of the Programme is to evaluate what has been achieved, and to identify any need for further activities of the Peatland Biodiversity Consortium (holder of the Darwin Initiative grant). There will be questionnaire surveys, and there are tentative plans for a joint meeting with Wetlands International (CEPP project) in April 2001, at which progress during the currency of PBP will be reviewed. There will be a PBP publication based on the content of the Scottish training course and intended as a source book for peatland conservation training elsewhere; and synopses of all completed workshops will appear soon on the Web site.

For more information, contact:

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Tel: + (0)1382 345116 ; Fax and messages: + (0)1382 344434 ;

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<http://www.stir.ac.uk/envsci/darwin/darwinindex.htm>



INTERNATIONAL MIRE
CONSERVATION GROUP

The IMCG European Mires Book: A progress report

by Hans Joosten & John Couwenberg

Since the last newsletter, the activities of the European Mires Book project have been focused on the IMCG conference in Quebec, August 2000, and its aftermath. Although not all country contributions had yet been submitted (nor are they at this moment...!), we were able to present a first Europe-wide overview by complementing the missing information with the early 1990s IMCG inventory, the new information from the Wetlands Central Europe Peatland Project (in which IMCG is participating), and our own literature research.

The picture shows the general condition of the mires in Europe. Although the majority of the mire area in the world is still in a largely pristine condition, the majority of Europe's former 0,5 million km² of mires has been severely damaged. Its long history, high population pressure (peat extraction!), and climatic suitability for agriculture and forestry have resulted in a complete stop of peat accumulation on some 60 % of the original European mire area.

The European experience shows smartingly, that an abundance of mires is no guarantee for their long-term survival. The Netherlands, once consisting for more than one third of mires (15,000 km²), has virtually lost the complete resource during two millenia of human impact. Finland has destroyed most of its 96,000 km² large mire area, largely by drainage for forestry since the 1950's. Ireland, where mires once covered 17 % (= 14,000 km²) of the country, has lost 93 % of its raised bog and 82 % of its blanket bog mire resource. The mires of Polesia in Belarus and Ukrain, one of the largest mire areas of

the former Soviet Union, have largely been drained in the 1970's and 1980's. Within Europe, only Norway, Sweden, Romania, and Russia still have 50% or more of their original mire area left.

The largest losses are observable in Western and Southern Europe. The western countries, which had often extensive mire areas, have a long history in peat extraction and peatland reclamation. In the southern countries, water availability made the mires very attractive for agriculture. In northern and northeastern countries, low population pressure and climate have saved many mires from destruction. The countries of Central Europe show an intermediate position. The immense losses in the countries of Western and Southern Europe have strongly increased the international biodiversity importance of the mires in that area.

Since Quebec, progress on the editorial front has been slow, due to the organisational reform of IMCG and the time we had to devote in field work. The latter "excuse" we shared with several country contributors, who either had no time to finish their chapter because of the field season, or who wanted to use the field season to collect up-to-date information.

Now that the winter has almost come, we will reactivate our activities in editing and discussing the received manuscripts with the authors, in organizing the introductory and integrative parts, and – last but not least – chasing the authors who have not submitted their manuscript yet, in order to finish this project in the course of 2001.

Remaining mire area in Europe.

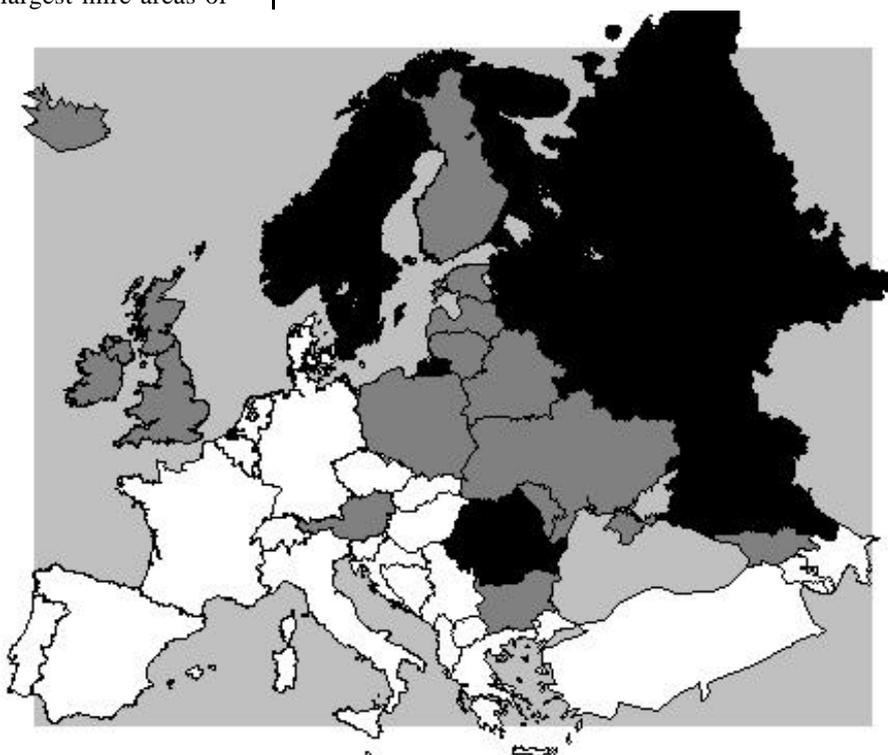
For each country the extension of the current mire area is shown expressed as fraction of the original mire area.

Mires are peatlands with active peat accumulation, i.e. "living".

black: >50 %

grey shade: 10 – 50 %

white: <10 %



Regional News

Workshop "Wetlands Conservation in the Caucasus"

by *Karen Jenderedjian*

A Regional workshop on "Wetlands Conservation in the Caucasus" was organised by the Georgian Centre for the Conservation of Wildlife and the Caucasus Environmental NGO Network. On September 1, about 30 participants from Armenia, Azerbaijan and Georgia, UNDP, USAID, Ramsar Bureau, BirdLife International and Wetlands International arrived in Kobuleti, a beautiful Black Sea coastal resort in Ajaria (western Georgia).

In the morning session of the next day, experts from the three Caucasus countries presented ongoing projects in wetland conservation and restoration, waterbird conservation, integrated water resource management, and management of shared catchments and rivers. The evening session was devoted to country-by-country reports on progress with the implementation of current Ramsar priorities.

On September 3, participants debated transboundary issues of water resources and wetland management, conservation and restoration. On the same day participants had an opportunity to visit one of two existing Georgian Ramsar Sites, the Ispani mire (ca 513 ha) with a unique vegetation situated almost in the town of Kobuleti.

September 4 was departure day, although on the way back home some participants were lucky to visit the Javakheti Plateau and have a look at the high altitude steppe lake Khanchali (425 ha remaining after drainage works in the 1960s), surrounded by intensively used grasslands.

The workshop on "Wetlands Conservation in the Caucasus" was the first international meeting in a region currently experiencing many political, socio-economical, and ecological difficulties. Participants felt that more time is needed to develop concrete transboundary activities. There were no doubts that this workshop was a very valuable initiative that should be repeated.

The workshop was organized with financial and logistic support from the United States Agency for International Development's (USAID) project for Environmental Information Systems and Networking (EISN).

The organizers succeeded in bringing together wetland experts from Caucasus countries for a well organized workshop and even frequent electricity cutoff in the session hall (and in whole Georgia!) could not darken the common positive impression.

Second National Training Course on Wetland Management in Armenia

by *Karen Jenderedjian*

The Second Armenian Wetland Management Course was organised by the non-governmental organization

"Professional and Entrepreneurial Orientation Union" (briefly "Orientation") with mental support of the Department of Flora and Fauna Conservation and Special Protected Natural Areas of the Ministry of Nature Protection. The course was a key part of the project "Improvement of the Management of Wetlands in Sevan National Park", approved by the Ramsar Bureau and funded by the Swiss Agency for Development and Cooperation.

The two week long Course (9-21 October 2000) aimed on training of the staff of the Sevan National Park (150,100 ha, of which 125,000 ha open water). The output of the Course is a "Draft Management Plan of Lake Gilli" developed by the 12 participants. The high-mountain (1916 m a. s. l.) system of the Lake Gilli wetlands (100 ha of 1000 ha remaining after large drainage works in the 1950s) include open water, emergent aquatic vegetation, and peatlands. A project "Restoration of Lake Gilli" funded by the GEF is currently being prepared.

Financing nature conservation in Central and Eastern Europe

In the light of the EU enlargement process ECNC and TERRA Environmental Policy Centre have published a report on financing nature conservation.

The environment is amongst the most complicated issues to be dealt with during the process of enlargement of the European Union. Nature conservation is part of the environment package, and thus accession countries have to treat it as a priority area.

Over the past years a series of targeted activities were implemented to facilitate the accession process regarding nature conservation. During this process participants from nature conservation authorities in Central and Eastern Europe (CEE) frequently expressed a keen interest in information about the possible EU financial programmes and instruments related to nature conservation, which are available to them at present and after joining the EU. In response to this demand ECNC has carried out the project 'Providing information on financing nature conservation in CEE accession countries with the new opportunities in EU financial instruments'.

The manual resulting from this project was prepared in close cooperation between ECNC and TERRA Environmental Policy Centre (Spain). It provides up to date information to EU accession countries on the possibilities of EU funding for nature conservation purposes with focus on LIFE, SAPARD, ISPA, enlarged PHARE and INTERREG. At the same time the manual helps candidate countries to prepare for the implementation of EU-instruments. Practical examples demonstrate how nature conservation can be integrated in other economic sectors such as agriculture or tourism. The draft of the manual served as a background document for a workshop held in

June, which welcomed representatives of ten accession countries and created the opportunity to discuss the details of the new financial instruments in an interactive way. According to the participants this workshop was very useful, practical and eye opening. The entire text of the manual - including the annexes with useful information - is accessible from the ECNC web site (www.ecnc.nl). ECNC was happy to welcome financial support for this publication from the Dutch Ministry of Agriculture, Nature Management and Fisheries and from the Dutch Ministry of Foreign Affairs (MATRA Fund/Programme International Nature Management).

Research Project in the Okavango Delta, Botswana

by Jan Sliva

With over 68.000 km², the Okavango Delta is the world's largest RAMSAR site. It has an area of 5.000 to 8.000 km² of permanent swamps with up to 4 m thick layers of *Cyperus papyrus* peat. The highly diverse seasonal swamps account for 12.000 to 15.000 km². The project „Elements in conflict – effects of antropogenic fires on the vegetation of the Okavango Delta in Botswana“, sponsored by the German Stifterverband, aims to investigate the trends in antropogenic fires during the last decades and their effect on the vegetation. A GIS based study of satellite images of the past 18 years in combination with a study of trends in human activities is to reveal the postulated increase in the frequency of antropogenic fires. Vegetation plots will be selected along a gradient of fire frequency and compared with respect to species composition and diversity, impact indicators and indication, and vegetation structure. The project will be implemented through two master's thesis. One at the Technical University of Munich (satellite images) and one at the Harry Oppenheimer Okavango Research Centre (HOORC), University of Botswana (vegetation research). Further scientific cooperation is planned, e.g. on a broad ecological research on the effects of fire in the delta and on stratigraphic and palaeoecological research of the *Cyperus papyrus* peat.

One thing is certain: the beauty, uniqueness, and freedom of the delta are fascinating and impressive. Their conservation is certainly of importance and we hope to support that by aimed scientific research.

News from Ireland

Airport Development Could Destroy Important Peatland in Conamara

A Bord Pleanála oral hearing was held in Galway to consider a proposed airport development on an area of bogland at Cloon, approximately six miles North of Clifden. The site where the airport is to be located is within an open area of wild bogland, known to be an important wildlife area. The IPCC stated that,

although they fully supported the people of the islands in their call for an air service to the mainland, the site at Cloon is not suitable. The IPCC hope that An Bord Pleanála will see that an airport is an unsuitable development for this remote wild peatland area and overturn the decision by the Galway County Council to grant planning permission to this development.

Save a sod of the old bog

The Irish Peatland Conservation Council are inviting people to play their part in saving Irish bogs for their heritage value. Environmental enthusiasts who would like to aid the effort to prevent the bogs of Ireland from disappearing are being invited to buy a symbolic share in an acre of threatened peatland. Full details of the scheme are printed in an information leaflet available from IPCC.

IPCC's Irish Fen Inventory

A large scale inventory of fen sites in Ireland revealed the total area of fen habitat in the Republic of Ireland to be 19,287ha in 326 sites. In Northern Ireland there are 55 fen sites of conservation importance. A total of 129 new conservation worthy fen sites were identified, including 30 sites in Northern Ireland. Irish fens are primarily threatened by reclamation, drainage and infilling and there has been a 79% loss of fen habitat in the Republic of Ireland. Only 3,659ha of fen is protected in the Republic of Ireland. In Northern Ireland 44 fen sites are protected as ASSI's. Fen habitats are fragmented in Ireland: 80% of the fens are less than 100ha in extent.

A report will be drawn up and published by December of this year. This report will include information on the origin, occurrence and ecology of fens in Ireland, conservation value of fens, classification of fens and an inventory of conservation worthy fen sites in Ireland. All of the information will be incorporated into IPCC's new Peatland Conservation Plan which is being compiled in 2001.

For more information on Irish Peatlands and their conservation, contact the Irish Peatland Conservation Council, 119 Capel Street, Dublin 1 Ireland
 Fax: +353-1-8722397; Tel.: +353-1-8722384
bogs@ipcc.ie or info@ipcc.ie (new e-mail!)
<http://www.ipcc.ie> (new URL!)

EU enlargement and environment

The European Parliament has called on the candidate countries to give very high priority to incorporate EU environmental law into their national legislation. The Parliament said that aid for environmental purposes to the applicant countries should be doubled by 2006, that EU financial instruments such as Phare, ISPA (Instrument for Structural Policies for Pre-Accession) and SAPARD (Support for Agriculture and Rural

Development) should be interlinked and should offer stronger support for sustainable development; and that the 5 million Euro limit for ISPA funding should be removed in order to give small, innovative projects a chance according to the Parliament.

Companies based in the EU should comply with EU environmental standards when operating and/or investing in the applicant countries and the European Commission is asked to negotiate such an 'environmental code of conduct' with UNICE. It was emphasised that all EU pre-accession aid should be compatible with the EU approach of integrating environmental considerations into other policies and to this end the Parliament requests the Commission to make and publish environmental impact assessments of all EU-financed pre-accession projects and plans prior to putting these funds in operation.

The Parliament, recognising that environmental conservation depends not only on laws and regulations but certainly also on the existence of NGOs organised locally, regionally, nationally and at European and international levels, as well as on a high level of concern, awareness and knowledge on the part of the general public, experts and politicians, called to increase awareness and understanding in the applicant countries of the importance of nature conservation in general and Natura 2000 in particular. Greater public participation and the involvement of

environmental NGOs in the accession process is encouraged.

Biodiversity of the candidate countries is a priceless asset which on the accession of the candidate countries will become part of the irreplaceable heritage of the European Union. Therefore, the candidate countries are urged to ensure that Natura 2000 sites are identified before accession, and to devise a system whereby the annexes of the two relevant directives are amended at the earliest possible opportunity to take into account species and habitat types which are not represented in the EU15. Under no circumstances should EU accession lead to a reduction in the total size of protected areas in the accession countries.

The Parliament further urges all involved parties to recognise that nature protection is not achievable solely through the identification and protection of designated areas, but must also be based on general policies which stimulate sustainable economic activity in the countryside (including recreational pursuits), encourage environmentally friendly forestry and agricultural practices, reduce overall levels of air- and water-based pollution, preserve soil quality and other natural resources, and discourage forms of economic activity which lead to the destruction of valuable habitats (such as the draining of wetlands).

New and recent Journals/Newsletters/Books/Reports

Proceedings of the International Peat Symposium on Chemical, Physical and Biological Processes in Peat Soils, Jokoinen, Finland, 23 – 27 August 1999. In Suo, Mires and peat 51: 69 – 212.

15 papers from the aboved mentioned Symposium on biochemical processes in peatlands, chemical and physical properties of peats, ground penetrating radar, effects of peat extraction, forestry, and drainage on peat hydraulic properties and hydrology, modelling of peat accumulation, estimates of peatland carbon stores, use of peat for purification, evaluation of nature reserves, actinomycete communities and ectomycorrhizae. Abstracts of this sublime journal available at:

http://honeybee.helsinki.fi/mmeko/suo_lehti/suo.htm

Gunnarsson, Urban (2000) Vegetation changes on Swedish mires: Effects of raised temperature and increased nitrogen and sulphur influx. Uppsala: Acta Universitatis Upsaliensis.

Since the start of the industrialisation, the deposition of nitrogen and sulphur and the atmospheric concentrations of greenhouse gases have increased.

The main objectives of this study were to find how these changes in climate and deposition can change the vegetation of mire ecosystems and the growth of Sphagnum species. Two main approaches were applied: re-investigation of two mires previously investigated 40-50 years ago and experiment manipulations.

The plant species diversity had decreased on one of the two re-investigated mires (Skattlösbergs Stormosse; central Sweden), but the total number of species was unchanged on the other (Åkhultmyren; southern Sweden). On Skattlösbergs Stormosse, an acidification was found in the high pH areas, coinciding with reduction in rich fen species. At Åkhultmyren, there was a similar reduction in pH, but the changes in the plant composition also indicated increased nutrient levels and a drier mire surface. There were large changes in species composition on Åkhultmyren. For instance *Scheuchzeria palustris* had disappeared from the investigated area. Further, the cover of Scots pine (*Pinus sylvestris*) had increased, which can be explained by a changed ground-water table regime. Monitoring of pines growing on a bog over a ten-year period showed that pines growing higher above the ground-war table had higher survival than lower-growing pines.

Experimental addition of nitrogen during 3-4 years reduced Sphagnum growth in bogs and poor fens representing a wide range of ambient nitrogen deposition. A changed interspecific competitive relation was found between *S. lindbergii* and *S. balticum* when increasing nitrogen influx, but the competitive relations between two hummock-growing species pairs did not change in a three-year nitrogen fertilization study. Sulphur addition did not affect the production or length increment in *S. balticum*. An increased temperature reduced Sphagnum growth, but there were no indications of altered competitive relationships between hummock and hollow inhabiting Sphagnum species in a four-year experiment.

Full text of 25 page thesis summary (pdf):
<http://w3.uu.se/fulltext/91-554-4792-9.pdf>

Sundberg, Sebastian (2000) The ecological significance of sexual reproduction in peat mosses (Sphagnum). Uppsala: Acta Universitatis Upsaliensis

Peat mosses (Sphagnum) are widely distributed and are a major component of mire vegetation and peat throughout the boreal and temperate regions. Most boreal Sphagnum species regularly produce sporophytes, but the ecological role of the spore has been questioned. This study shows that the spores can form a spore bank and have the ability to germinate and contribute to moss establishment whenever suitable conditions occur. The results suggest that spore production is important for explaining the wide distribution and omnipresence of Sphagnum in nutrient-poor wetlands. The results further imply that initial recruitment from spores predominates in Sphagnum after disturbance or formation of suitable habitats.

A series of experiments showed that addition of phosphorus-containing substrates, such as fresh plant litter or moose dung, resulted in spore establishment on bare, moist peat. A field experiment indicated establishment rates of about 1% of sown, germinable spores on peat with added substrates. Plant litter on moist soil, without a closed cover of bryophytes, is an important safe site for the establishment of Sphagnum spores. The results fit the observed pattern of colonisation by Sphagnum beneath *Eriophorum vaginatum* tussocks in mires severely disturbed by peat extraction. Successful long-distance dispersal was indicated by the occurrence of several regionally new or rare Sphagnum species in disturbed mires.

Spore number per sporophyte ranged among Sphagnum species from 18 500 to 240 000, with a trade-off between spore number and spore size. Annual spore production was estimated at 15 million spores per square metre on two investigated mires. Sporophyte production showed a large interannual variation. Sporophyte production was positively related to the amount of precipitation the preceding summer. This was probably because a high water level promoted gametangium formation. Spore

dispersal occurred in July and August. The earlier timing of spore dispersal in the more drought-sensitive, hollow-inhabiting sphagna should reduce the risk of sporophytes drying out prematurely during summer droughts.

Spores kept refrigerated up to 13 years retained high germinability. A field experiment showed that Sphagnum can form a persistent spore bank, with a potential longevity of several decades.

Full text of 37 page thesis summary (pdf):
<http://w3.uu.se/fulltext/91-554-4847-X.pdf>

Raeymaekers, G., 2000. Conserving mires in the European Union. Actions co-financed by LIFE-Nature. Office for Official Publications of the European Communities, 90 p. ISBN 92-828-9169-0.

An overview of the use of the EU financial instrument LIFE-Nature since 1992 for mire conservation. In the period 1992 – 1998 66 projects were funded, with a EU contribution of approx. 25 – 35 million euro. 2/3 of the projects focused on restoration, which illustrated the general bad condition of the mires of the EU. Other projects focused on new ways to replace traditional farming practices. A small but important sub-set of projects focused on acquiring strategic and representative examples of habitat types that survive best without human intervention. Some 35,000 ha have been bought so far under LIFE-Nature. Most LIFE projects also had a strong component in dialogue and raising awareness. The report further presents a list of all mire projects with contact addresses and a selection of methodology manuals and handbooks produced under LIFE.

PDF-version (1,700 KB) freely downloadable from:
<http://europa.eu.int/comm/environment/pubs/nature.htm>

The Cutover and Cutaway Bogs Education Pack

A 120 page pack for transition year students in full colour focusing on the cutover and cutaway bogs of the Irish Midlands. If you are intending to undertake a project on cutover or cutaway boglands, this Education Pack has everything you need.

The Pack published by the Irish Peatland Conservation Council (IPCC) aims to get young people motivated about the bogs, in particular to help them to understand, appreciate and make decisions about the value of these sites to their future, and the future of their community. The pack was compiled with the help of 30 Midland-based teachers, land managers and researchers.

Over 150 colour photographs of cutover and cutaway bogs, which cover some 300,000ha in the midlands of Ireland. Twelve chapters on the wildlife, habitats, archaeology, socio-economic uses and after use of the cutover and cutaway bog resource. Step by step directions for three practical projects on cutover and

cutaway bogs for you to do with transition year students. 10 Work sheets. Photographic guide to the key species and habitats. Picture I. D. charts to over 100 plants and animals. Soil and peat types key. Glossary of 50 technical terms. Detailed practical information on 9 sites to visit. Checklists of birds, plants and animals.

Available from the Irish Peatland Conservation Council, 119 Capel Street, Dublin 1 for £13.50 including postage and packing. To coincide with the release of the pack, IPCC has launched a new web site on the cutover and cutaway bogs at www.ipcc.ie For further information please contact Catherine O'Connell, IPCC, 119 Capel Street, Dublin 1. Ireland bogs@ipcc.ie

Eesti Loodus 10/ 99 special issue on the Soomaa national park in Estonia, 18 EK.

This special issue features the Soomaa National Park in Estonia in which mires are a dominant landscape type. For more information on Eesti Loodus and this special issue contact:

Eesti Loodus Editorial Office, P.O. Box 110, Tartu 500002, Estonia.

Leito, Tiit, ed. (2000) Soomaa rahvuspark. Publ. by Eesti Loodusfoto.

A beautiful coffee table book with impressive pictures of the Soomaa National Park in Estonia showing aspects of all seasons, including the fifth season of yearly floods.

The Wetlands International Russia Programme, Wetlands in Russia. Wetlands International 2000. CD-Rom (in Russian and English).

Interactive CD-rom on the Wetlands International Russian Programme. With the 35 Russian Ramsar Sites, the Ramsar Shadowlist, important peatlands, awareness material and many more features. Requires Windows 98 or Windows NT. For more information contact the Wetlands International Russian Programme Office, WWF 232, PO Box 289, Weybridge, Surrey, KT 13 8WJ UK
ikamennova@wwf.ru or tminaevy@wwf.ru

Saamio, S. (1999) Carbon gas (CO₂, CH₄) exchange in a boreal oligotrophic mire – effects of raised CO₂ and NH₄NO₃ supply. University of Joensuu Publications in Science 56.

This thesis tries to identify the principle factors controlling microspatial variation in seasonal CH₄ efflux in a boreal oligotrophic mire and to qualify and quantify changes in the annual gas exchange under raised CO₂ and/or NH₄NO₃ supply in the same mire.

For more information, contact Sanna Saamio, Department of Biology, University of Joensuu, P.O. Box 111, 80101 Joensuu, Finland.

Trepel, M. & Opitz, S. (eds.) (2000) Guidelines for wetland Monitoring, Designing and Modelling. Ecosys – Beiträge zur Ökosystemforschung Bd. 8.

Presents work done in the framework of the Wetland Ecology and Technology (WET) project. The general guidelines and evaluation tools for wetland management and reconstruction presented in this volume consist of three parts: Monitoring and experimenting in wetland ecosystems, modelling of structural components and processes effective in wetland systems and designing reconstruction and management of wetland systems. For more information contact Michael Trepel
michael@ecology.uni-kiel.de

Olde Venterink, H., 2000. Nitrogen, phosphorous and potassium flows controlling plant productivity and species richness. Eutrophication and nature management in fens and meadows. PhD thesis, Utrecht University., 151 p.

Bundle of draft articles with synthesis on relation of nutrients and biomass production in herbaceous wetlands, the role of external sources (atmospheric deposition, flooding, groundwater flow) and soil processes on nutrient availability, the relation between nutrients, biomass production, species richness and the occurrence of threatened species, and the role of the kind of nutrient limitation on the latter.

Information: H.Oldeventerink@geog.uu.nl

Bootsma, M., 2000 Stress and recovery in wetland ecosystems. PhD thesis Univ. of Utrecht.

Bundle of (partly draft) articles with synthesis on the effects of stress factors and the potential of recovery and restoration in freshwater wetlands by comparing stressed landscapes in the Netherlands with fairly undisturbed landscapes in the Biebrza valley (Poland). Stress indicators, including hydrological, hydrochemical, and biotic variables, spatial patterns and habitats were identified. The recovery of wetlands after restoration activities was studied

It is concluded that curative restoration measures will remain necessary for the survival of threatened species and communities in the Netherlands as long as atmospheric N-deposition has not decreased. Furthermore, more attention has to be paid to hydrologic restoration.

Information: M.Bootsma@geog.uu.nl

UPCOMING EVENTS

Changing Wetlands: new developments in wetland science

11th - 13th September 2001, University of Sheffield, UK

This conference aims to bring together researchers from the many disciplines involved in wetlands research (e.g., ecology, hydrology, microbiology, biogeochemistry, meteorology) and to provide a forum for European scientists, in particular, to share and exchange ideas on recent developments in wetland science. Sponsors: The Mires Research Group (MRG - British Ecological Society), Society of Wetland Scientists (SWS), Sheffield Wetlands Research Centre (SWeRC).

The programme will include invited lectures, contributed sessions and workshops organised under the following broad themes:

I. Changes within wetlands

- (i) Biogeochemical processes
- (ii) Hydrological processes
- (iii) Population and community dynamics
- (iv) Restoration impacts

II. Interactions with the regional and global environment

- (i) Feedbacks with the atmosphere/hydrosphere.
- (ii) Land-use and landscapes.

The final programme will reflect the content of submitted abstracts, and we encourage oral and poster presentations on recent developments in any branch of wetlands science. Participation of postgraduate research students is particularly encouraged. The deadline for abstract submission is 23rd February 2001. Decisions on acceptance will be available by the end of March 2001. Selected papers will be published in special issues of up to three refereed journals, including *Wetland Ecology and Management*.

Two field trips are planned: (i) A four day trip to the blanket bogs of the Flow Country in Caithness and Sutherland (Scotland) and (ii) A two day trip to the fens of Broadland in East Anglia (England). Both areas contain extensive tracts of relatively undisturbed wetland, as well as good examples of human impacts and restoration. The trips will take place after the conference.

Further details:

Conference Secretary
 Changing Wetlands Conference
 Sheffield Wetlands Research Centre (SWeRC)
 Department of Geography
 University of Sheffield
 SHEFFIELD S10 2TN
 United Kingdom
 Fax.: +44 114 279 7912
 Email: wetlands@sheffield.ac.uk
<http://www.shef.ac.uk/~g/wetlands>

Symposium: Irish Raised Bogs- Conservation, Utilisation and After-Use

Ireland, 4 - 12 September 2001

A symposium consisting of an 8 day study tour (4-11 September 2001) and conference (12 September 2001).

The tour will showcase all aspects of the Irish midland peat resource including the network of conserved raised bogs, archaeological sites, and the after use of the raised bogs which have been extracted by hand and industrially.

The study tour will be followed by a day long conference.

The cost for participants to include information pack, accommodation, food and transport for study tour and conference will be IR£499 Euro 635 (approx. US \$ 600)

For more information:

Irish Peatland Conservation Council
 119 Capel Street
 Dublin 1
 Ireland
 Fax: +353-1-8722397
 Tel.: +353-1-8722384
bogs@ipcc.ie or info@ipcc.ie (new e-mail!)
<http://www.ipcc.ie> (new URL!)

Planta Europa conference on wild plant conservation: 'Developing a Plant Conservation Strategy for Europe'.

Pruhonice, Czech Republic 23rd- 28th June 2001

The conference will be your chance to contribute to the development of the European Plant Conservation Strategy. Topics for discussion will include:

- the Conservation of Plant Areas;
 - Species Conservation;
 - Law;
 - Sectoral Policy and
 - Capacity Building .
- Workshops will also be held on:
- Important Plant Areas;
 - the European Red List;
 - Microreserves;
 - Species Recovery;
 - Lower Plants and Fungi.

For more information contact:

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