

# WOAM NEWSLETTER

No. 47

September 2010

ICOM-CC WORKING GROUP

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## 1. FROM THE COORDINATOR

Dear Colleagues

We had a great week in Greenville. Emily Williams, Sarah Watkins-Kenney and their team did a wonderful job to make us all feel comfortable during the week. The conference went smoothly, the social events were great and the conference tours were interesting and well arranged. Thanks again! A revised programme and all abstracts of papers and posters are still available at the conference website: <http://www.woam2010.com/index.htm>

As usual, we plan to publish all the contributions in the WOAM proceedings, so those of you who were not able to attend the meeting, you still have a chance of being kept up to date. We hope to have the proceedings published by the end of 2010.

During the Greenville conference we also had our business meeting – with a lot of good discussions. Emma Hocker wrote the minutes

shortly after and they are included in this WOAM newsletter.

A lot of participants took a lot of pictures during the week. These photos will soon be available for you all to see (more info on p. 4).

To those of you who attended the Greenville meeting; thanks again for your involvement and discussions. To those of you who were not able to attend; a new WOAM meeting is coming up in 2013 – probably in Istanbul!

Best regards

*Kristiane*

[kristiane.straetkvern@natmus.dk](mailto:kristiane.straetkvern@natmus.dk)

Deadline for contributions to Newsletter no 48 is January 15<sup>th</sup> 2011.

## 2. REPORT FROM GREENVILLE

### Minutes of the Working Group Meeting, WOAM 2010, Friday 28 May 2010

Moderator: Kristiane Strætkvern, Secretary: Emma Hocker

#### Report from the Coordinator 2007-2010

*Proceedings from the 10th ICOM-CC WOAM:*

Publishing of the proceedings was delayed as the deadline was missed for submitting the final proofs and consequently the publication missed its place in the printing queue. Copies are still available via Kristiane, price 60€. The proceeds go towards costs for the next conference.

*Report from ICOM-CC Triennial Conference, New Delhi, September 2008*

Ca. 10-15 members of the WOAM group attended, submitting three papers and one poster. All articles are available in the Preprints from the Conference.

*Meeting of ICOM-CC Working Group Coordinators and Directory Board, Rome, 21-24 October 2009*

The meeting focused on the updated website for ICOM-CC, in operation since September 2008 (see <http://www.icom-cc.org/> and ICOM-CC Working Group Newsletter No. 45). Documents will be accessible for a limited period, with downloadable versions of the newsletters and preprints available. Documents saved in the restricted section will become an archive. It was decided to have open access to the WG forum pages for both members and non-members, with slightly limited information access for non-members. This two-level system will continue for at least one triennial period.

#### *WOAM newsletters*

A number of newsletters have been added to the site since the last meeting in Amsterdam. News is kept current thanks to contributions from regional assistant coordinators.

*The 11th WOAM Conference in Greenville, NC, 24-29 May 2010.*

The group continues to be very active in sharing new information and activities. The Greenville conference was attended by ca 80 participants from 15 different countries. Of the 43 presentations and 13 posters, 12 papers were

submitted for peer-review. The deadline for editorial work has been set for October.

The question of peer review and publications was discussed. Many academic institutions require their staff to publish in recognized journals, but the WOAM proceedings are not considered a recognized journal. Therefore there is no incentive for some participants to publish here. At the same time, it was recognized that all submitted presentations should be made available and that including the post-presentation comments in the final publication allows some "peer correction" even if the paper was not peer-reviewed. Alternative publishers and forums were discussed, such as devoting a special issue of a recognized journal to WOAM papers, or even creating our own conservation journal. After much discussion, a majority vote was taken to continue to allow the opportunity for academic peer-reviewed papers in future WOAM proceedings, essentially no change to previous policy.

A discussion then ensued concerning the availability of information, copyright issues, etc.. There is pressure on some journals to digitize their contributions after three years to allow wider access to information. Newer members noted the difficulty in finding copies of past WOAM proceedings, and it was discussed whether these past publications might be digitalized and made available to members via the ICOM-CC website. A decision was made to inventory stocks of past proceedings, try to sell as many hard copies as possible before digitizing them and making them available to members to download or via CD. The only requirements from ICOM are that publications contain the ICOM-CC logo and that copies of the publication are sent to the Rome and Paris headquarters. Additionally it was suggested that copies of proceedings be sent to all programs providing conservation education.

The question of income management was discussed. Cliff Cook gave a brief history of how finances were arranged for the first conference in Ottawa in 1981. Sarah Watkins-Kenney reported on how the current conference was managed through East Carolina University's Continuing Studies Program, which takes a 20% cut but manages all the finances. Any balance is

made available to the organizers of the next conference.

A volunteer group was designated to examine the issues raised during discussion, such as copyright, publishing and income. The group consists of Susan Braovac ([susan.braovac@khm.uio.no](mailto:susan.braovac@khm.uio.no)), as contact person and: Howard Wellman ([wellmanconservation@comcast.net](mailto:wellmanconservation@comcast.net)), Sarah Watkins-Kenney ([watkinskenney@ecu.edu](mailto:watkinskenney@ecu.edu)) and Carlos Cabrera Tejedor ([carlos.cabrera.tjedor@gmail.com](mailto:carlos.cabrera.tjedor@gmail.com)).

### Tasks for the period 2010-2011

*ICOM-CC Lisbon, 19-23 September 2011: Cultural Heritage/Cultural Identity – The Role of Conservation*

Six abstracts from the WOAM group were submitted to this conference with the theme of cultural heritage/cultural identity.

- 1) (\*) Negative effects of aqueous rinsing of archaeological textiles.
- 2) An investigation of archaeological waterlogged skin from peat bogs.
- 3) (\*) In situ and laboratory assessments of the state of preservation of a vessel.
- 4) (\*) Characterization and conservation of a wood and iron gun carriage from the 17th century.
- 5) Examination of Mannitol as impregnation agent for heavily degraded waterlogged wood in combination with freeze-drying.
- 6) (\*) The recovery process and conservation of polychrome wood from an archaeological context.

(\*): *These contributions have been provisionally accepted as papers by the editorial group (Kristiane, August 2010)*

### Deadlines:

June 30, 2010: The authors are notified of provisional selection.

Nov 12, 2010: deadline for authors to post full papers

March 22, 2011: Coordinators inform authors of final selection

It has been decided that no coordinators are to sit on the editorial committees and that the presentations will be shorter in order to accept more papers. Finally, there will be no printed copies, instead a CD-Rom and booklet with extended abstracts will be made available.

### Working Group Program 2010-2013 (in reality 2011-2014)

The following focus activities and contact persons for the next three years were proposed:

Activity	Contact
In situ preservation	Michel Vorenhout
New materials for conservation of organic materials	Hartmut Kutzke
Alum in wood, re-conservation, etc	Susan Braovac
Acids (sulfur and iron) in organic materials	Vicki Richards
Pre-conservation storage	Sarah Watkins-Kenney
Categorization of materials, degree of degradation analyses	Ian Godfrey, Katerina Malea, David Gregory
Post conservation display, storage	Emily Williams
Review of the wood and methods from 1987 (stored in Trondheim)	Elizabeth Peacock (+ student), Ingrid Wiesner. After the meeting, Knud Botfeldt has joined the group
Challenges in conservation	Kristiane Strætkvern
Case studies	All

### WG Organization and Nomination of Coordinator

Academic peer review of manuscripts for the WOAM 2010 proceedings will be carried out by Vicki Richards, David Gregory, Khoi Tran, Gordon Turner-Walker, Kristiane Straetkvern, Tara Grant and Emily Williams. Emily and Kristiane are chief editors.

Volunteers for an Advisory Group to report on regional activities include Emma Hocker (Northern Europe), Cliff Cook (North America), Vicki Richards (Australasia), Khoi Tran (Southern Europe) and Jim Spriggs (UK).

Election of Coordinator: In 2011, Kristiane steps down after six years (two periods of 3 years is maximum term allowed). The group approved the suggestion of Tara Grant as the

new Coordinator, with Khoi Tran and Emma Hocker as Assistant Coordinators. The nomination will be made at the ICOM-CC Triennial conference in Lisbon in September 2011.

The Coordinator is responsible for editing the WOAM newsletter (input is encouraged from the advisory group and all members); distributing information from the Directory Board, WOAM members and other working groups; revising contact information and membership issues, planning WG meetings (including compiling the program, collecting manuscripts, coordinating editorial work for proceedings) and finally to establish broader contacts.

### Next WOAM conference

Bids were made for the location of the next WOAM conference. Fremantle, Australia was proposed by Ian Godfrey, but distance of travel and the need to attain a critical mass of participants were cited as potential drawbacks. Bonn, proposed by Axel Peiss was a strong contender, but the greatest interest was shown in the bid by Istanbul University proposed by Ufuk Kocabas, with the attraction of the extraordinary site of the Yenikapi shipwrecks. More information will follow once details are finalized.

7 June 2010  
Emma Hocker

### Pictures from the conference!

If you wish to share your best pictures from our WOAM conference in Greenville with the other colleagues, **please send them to Nicole Ebinger-Rist (Nicole.ebinger-rist@rps.bwl.de)**. She has kindly offered to upload them to a website we can all access - some pictures have already been uploaded.

**The WOAM photographs are available at the website:**

<http://www.denkmalpflege-bw.de/index.php?id=906>

The picture below is from the pre conference trip to lake Phelps where a group of 15 colleagues tried to localize pre historic dugout canoes *in-situ* (Photo: Dilys Johns).



### 2012 International Year of Maritime Heritage

At the end of the WOAM conference, Tim Runyan from the Office of National Marine Sanctuaries, National Oceanic and Atmospheric Administration visited to inform about the initiative: "2012 - International Year of Maritime Heritage". In order to recognize the historic role the ocean has played in shaping our world, 2012 should be designated the International Year of Maritime Heritage. This designation can serve as a global focal point for a wide array of constituent groups, governments, institutions, and communities to create awareness about our shared maritime past. 2012 is the year of some notable events in maritime history. These include the 100<sup>th</sup> anniversary of the sinking of the Titanic, the 600<sup>th</sup> anniversary of the voyages of Zheng He, the War of 1812, 500<sup>th</sup> anniversary of Ponce de Leon's arrival in Florida, and others. The WOAM group supported the initiative.

Contact: Tim.Runyan@noaa.gov.

### 3. COLLEAGUE'S CORNER

Inga Vogel:

#### Diploma thesis on investigations of swelling of dried out and waterlogged wood

In co-operation with the University of Applied Sciences Berlin, Department of Conservation, and the Institute of Wood Technology Dresden a Diploma thesis was

conducted (entitled: Untersuchungen zur Quellung von Vollholzsegmenten am Beispiel mesolithischer Einbäume).

This thesis deals with the options to treat archaeological wet wood damaged by uncontrolled drying. The intent is the development and examination of an appropriate procedure to restore the dimensions and the shape of heavily collapsed and distorted objects.

For this purpose, various methods of wood swelling were considered and modified as well as carried out on genuine specimens in different conditions. The results are evaluated in terms of specific criteria, especially achieved volume reconstruction and its reproducibility. Another aspect is the definition of limits of the considered methods, such as the degree of substance losses due to the treatment or the reversibility of the swelling agent.

It was shown, that a treatment with 40% aqueous ethylenediamine solution at 40°C achieves the reconstruction of collapsed objects. The duration depends on the size of the object.

The achieved volume is equivalent to the original wet volume before drying. After the treatment, it is possible to assemble fragmented objects. Moreover, the original arrangement of the cell structure is recovered, thus allowing a microscopic identification of the botanical species.

The swelling solution accumulates in the wood, but can be exchanged with water in a multistep process, yielding waterlogged conditions. After several weeks of soaking neutral pH values were achieved. Thereafter, in aqueous extracts of wood no ethylenediamine residues were detected with GC-MS.

However, remains of the swelling agent in the wood could not be excluded to date. It is likely that the ethylenediamine bonds to the carboxyl groups of the wood and therefore cannot be verified. In addition, the formation of Schiff bases by reaction with the carbonyl groups is conceivable.

It is planned to develop the method further to ensure the long-term stability of treated objects.

August 2010

Contact: [IngaVogel@gmx.de](mailto:IngaVogel@gmx.de)

Anthony Crawshaw:

### **Is there a 'cheap and cheerful' Chloride meter available?**

Requirement. As part of routine monitoring of desalination solutions it would be useful to have a rapid and simple test for chloride levels.

Currently we generally use an Ion Selective Electrode (ISE) for chloride. The electrode is made by Nico and our machine is a Radiometer PHM240 combined pH and ISE meter. For chloride measurements the machine needs regular calibration with standard solutions and is a bit fussy about operator technique. For measurements on water desalination solutions we add 10%, by volume, of an Ionic Strength Adjustment Buffer (ISAB). The ISAB is an approximately 2M solution of analytical grade Potassium Nitrate in de-ionised water, which serves to ensure that the conductivity of the test solution is high, a requirement for reproducible results. We also add 10% of ISAB to the calibration solutions, so that the dilution of the test solution by the ISAB can be ignored.

For basic desalination solutions we first neutralise the solution with 6M nitric acid, monitoring the pH with the pH probe (the reason for using nitric acid is that the resulting sodium nitrate will contribute to the ISAB). We then add ISAB and proceed as normal. The reason for the neutralisation step is that the response of the chloride meter depends on the other ions present in the solution – the ideal would be to make up calibration solutions with the same concentrations of other ions present. Unfortunately the sodium hydroxide solutions slowly pick up carbon dioxide from the atmosphere, turning themselves into sodium carbonate solutions, so that we do not know the precise composition of the solution at any one time. A problem with the acid neutralisation step is that there is some dilution of the test solution by the added acid. This dilution could be corrected for if you noted the volume of nitric acid used, but generally we don't bother



as it will be about the same for any one desalination solution and we are looking for trends in the chloride levels. The errors due to dilution will be worse if you use more dilute nitric acid.

Another possible problem with the ISE is that the results vary with temperature and we haven't been able to get a definite answer from Radiometer about whether our instrument has temperature compensation built in for ISE measurements (it has for pH measurements).

An alternative approach for water desalination solutions would be to use a conductivity meter, which is much simpler to operate. There are several problems with this use of conductivity, e.g. the temperature variation of conductivity readings and the response of the meter to salts other than chloride. For sodium hydroxide solutions the use of a conductivity meter is virtually impossible, due to the greater conductivity of the base swamping that from the lesser amount of chloride ions. In addition the hydroxide will slowly turn into carbonate, which has a lower conductivity than hydroxide. Thus, the conductivity of a 2% solution of sodium hydroxide at 23°C was about  $6.0 \times 10^4$  mho, whilst that of the same strength sodium carbonate was  $3.1 \times 10^4$  mho; adding 500 ppm of potassium chloride to the latter only changed the conductivity to  $3.2 \times 10^4$  mho.

Literature. A quick search on the internet yielded a useful comparison of chloride determination methods for conservation. This comparison is published in BROMECC 4, the newsletter of the ICOM metals group, and is by Emily Williams and Howard Wellman, amongst others.

A related discussion features in a publication by the Society for Historical Archaeology at [http://www.sha.org/research\\_resources/conservation\\_fags/process.cfm#H](http://www.sha.org/research_resources/conservation_fags/process.cfm#H). These comparisons discussed a number of other methods and found that all had disadvantages, e.g. the use of purchased reagents, some of which were poisonous. One apparently simple method was the Jenway chloride meter, which worked by

releasing silver ions into the test solution, whilst measuring the conductivity. Once all the chloride ions had reacted with silver ions the conductivity ceased to change and the machine calculated the chloride level from the silver used. Unfortunately this method would also be sensitive to any other ions that reacted with silver and needed neutral solutions, along with careful handling of the machine. Using an ion chromatography machine, e.g. those made by Dionex, is another possibility but they and their consumables are not cheap. Although the "Rolls Royce" solution, ion chromatography could probably only be justified if you had a large throughput of samples.

Conclusion. The main conclusion of the earlier comparison was that there was no clear winner among the methods compared, so one might as well stick with whatever one was using. I have been unable to find any other methods on the internet and agree with the findings of the earlier comparison. In other words, using the ISE we have is probably the "least worst" method for basic solutions. For water solutions we could try using conductivity, noting the temperature of the measurement. A temperature correction could then be applied before plotting the results from conductivity measurements. I would expect that tables exist showing the change of conductivity of sodium chloride solutions with temperature. If such tables can't be found we could easily draw up our own. Portable conductivity meters cost from 100 GB Pounds to 500 GB Pounds, the more expensive ones having built-in temperature correction. Some meters use separate electrodes, whilst others are all one piece, like an oversize pen. The one-piece meters will have to be completely replaced if the electrodes fail.

I would welcome any comments on the above, particularly if anybody has a wonder chloride meter!

July 2010

Contact: [acrawshaw@yorkarchaeology.co.uk](mailto:acrawshaw@yorkarchaeology.co.uk)

## 4. CONFERENCES AND COURSES

### 4<sup>th</sup> symposium on Preserving Archaeological Remains in situ (PARIS4)

May 23<sup>rd</sup> – 26<sup>th</sup> 2011

#### The National Museum of Denmark, Copenhagen

International legislation, such as the Valetta treaty, calls for the “conservation and maintenance of the archaeological heritage, preferably in situ”. Since 1996 research into in situ preservation has been presented at a series of international conferences: Preserving Archaeological Remains in situ (PARIS). The fourth of these conferences will be held in Copenhagen at the National Museum of Denmark in May 2011.

After fifteen years of research and practical application the time is ripe to evaluate the efficacy of in situ preservation as a means of managing the cultural resource. The key aim of the conference is to present and discuss the latest knowledge, focusing on long term studies of degradation and monitoring of archaeological sites preserved in situ in urban, rural and marine environments.

One of the strengths of the previous PARIS conferences has been in their multidisciplinary nature bringing together scientists, heritage managers and policy makers. Building on this, the aim of the conference is to cover the following themes:

- 1. Degradation of archaeological remains.** Can we quantify degradation rates and what rates are acceptable?
- 2. Monitoring and mitigation case studies** – with special focus on long term projects. How, and how long, should sites be monitored?
- 3. Protocols, standards and legislation for monitoring and management.** Is it realistic to make multinational standards when the sites and national legislations are so variable?
- 4. Preserving Archaeological Remains in situ.** Can we document the effectiveness of in situ preservation after nearly 2 decades of research?

All sessions will be lead by two chairmen: one practitioner and one administrator, who will both evaluate and comment upon the presentations. The presentations are planned to be published as a special edition of the journal *Conservation and Management of Archaeological Sites*.

The deadline for proposal of contributions was the 1<sup>st</sup> of September 2010. Oral and poster presentations will be selected by a scientific committee on the basis of relevance to the themes, scientific quality and ability to reach a mixed audience.

More information and a conference flyer is available at: [www.natmus.dk/paris4](http://www.natmus.dk/paris4)

Henning Matthiesen & David Gregory  
Senior researchers, in situ preservation  
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**4th INTERNATIONAL CONFERENCE OF COST ACTION IE0601**  
**Interaction between Wood Science and Conservation of Cultural Heritage**  
Izmir, Turkey, 20-22 October 2010

*The Conference will be hosted by Dokuz Eylul University Faculty of Architecture  
(Organiser: Dr. M.Tanac Zeren- Dr.O.Yilmaz Karaman)*

**About the Action**

**COST Action IE0601 "Wood Science for Conservation of Cultural Heritage"** aims to improve the conservation (including study, preventive conservation and restoration) of European Wooden Cultural Heritage Objects (WCHOs), by fostering targeted research and multidisciplinary interaction between researchers in various fields of wood science, conservators of wooden artworks, other scientists from related fields. Further information about the Action and its objectives can be found on [www.woodculther.org](http://www.woodculther.org).

**Conference Theme**

*For the past three years, this COST Action has covered a diverse range of wood science applications to understanding, diagnosing, preserving and treating wooden cultural objects.*

This conference will attempt to reach conclusions, highlight the achievements, identify gaps and discuss future research. We invite papers that will emphasize the main theme of the Action – the interaction between wood science and conservation, and papers presenting results of recent research concerning study and conservation of wooden cultural heritage objects. We encourage surveys of long-term developments in research areas relevant to the Action, showing remaining challenges and research perspectives.

**Key dates**

**28 June 2010** Registration starts

**04 October 2010** Deadline for submitting full papers of already accepted contributions

**Congress Fee and Accommodation**

**Congress Fee: 75€** (including coffee breaks, 2 lunches and transportation to/from DEUUniversity)

**Accommodation Options**

Izmir Palas Hotel (4\*) **55€** (Single room with breakfast)

Kordon Hotel (4\*) **75€** (Single room with breakfast)

*\*some reimbursements will be available (within COST rules), based on Scientific Committee's decisions about acceptance of contributions.*



## The ICOM-CC 16th Triennial Conference, Lisbon, September 19-23, 2011

### **Conference Theme: Cultural Heritage/Cultural Identity – The Role of Conservation.**

The conference theme aims to capture the recognition by communities or nations of the importance of affirming their cultural heritage in this era of globalisation, as they evolve through contact and exchange with other cultures. Considering this trend, the conference will explore and compare different approaches regarding conservation policies and methods, as well as scientific methods for studying materials and technologies, in order to improve our understanding of the role of conservation in valuing heritage and its relationship to other areas such as sociology, economy, and politics, which are vital in ensuring the sustainability of communities.

The ICOM-CC Triennial Conference in Lisbon will be an opportunity to share methods, studies and strategies to value individual cultural identities through heritage conservation by addressing topics such as:

- The relationships between cultural heritage and cultural identity
- National and international conservation policies
- The importance of interdisciplinarity in the preservation of cultural heritage
- The development of research and education in heritage conservation
- Standards, practices, and methodologies for heritage conservation.

Visit the conference website at: <http://www.icom-cc2011.org>

### **Announcement:**

#### **The Getty Conservation Institute (GCI) , The Conservation Guest Scholar Program**

The Conservation Guest Scholar Program at the Getty Conservation Institute (GCI) supports new ideas and perspectives in the field of conservation, with an emphasis on the visual arts (including sites, buildings, and objects) and the theoretical underpinnings of the field. The program provides an opportunity for professionals to pursue scholarly research in an interdisciplinary manner. Conservation Guest Scholars are in residence at the GCI for a period of three, six or nine months. These grants are for established conservators, scientists, and professionals who have attained distinction in conservation and allied fields.

Applications are being accepted from July - November 1, 2010 and are welcome from researchers of all nationalities.

For more information on the Conservation Guest Scholar program and a link to the online application, visit: <http://www.getty.edu/conservation/education/scholars/index.html>

The J. Paul Getty Museum and the Getty Research Institute (GRI) also offer residential grants. For more information on all residential grant programs, visit:

<http://www.getty.edu/foundation/funding/residential/index.html>

## 5. INVENTORY OF WOAM PROCEEDINGS

As discussed during the business meeting, we decided to make an inventory of the WOAM proceedings. For the moment, WOAM Proceedings no. 4 to 10 are available, no 4 to 9 can be purchased (incl. VAT and postage) for 50 Euros, no 10 from Amsterdam can be purchased for 60 Euros. See list of contacts below.

No	Conference	Year	In stock	Contact person and e-mail	Contact adress
4	Ottawa	1981	13	Tara Grant (tara.grant@pch.gc.ca)	CCI, Canadian Conservation Institute, 1030 Innes Road, Ottawa ON, K1A 0M5
5	Grenoble	1984	1		
6	York	1996	54		
7	Grenoble	1998	68		
8	Stockholm	2001	16		
8	Stockholm	2001	41	Frau Schwiers (info@dsm.museum)	Deutsches Schiffahrtsmuseum, Hans-Scharoun-Platz 1, D. 27568 Bremerhafen
9	Copenhagen	2004	184		
9	Copenhagen	2004	11	Kristiane Strætkvern (kristiane.straetkvern@natmus.dk)	The Cons. Dep., The National Museum of Denmark, I.C. Modewegsvej, Brede, DK-2800 Kgs. Lyngby
10	Amsterdam	2007	53		

## 6. ANNOUNCEMENTS

Dissertation for the Degree of Doctor of Philosophy 2010-10-18

Universtity of Göteborg, Vasaplasen room 10

Supervisor: Professor Emeritus Jan Rosvall, Ph.D.

External mentor: Professor Emeritus Ingvar Johansson

Opponent: Professor Norman Tennent,

**By: Birgitta Håfors, M.Sc.**

**CONSERVATION OF THE WOOD  
OF THE SWEDISH WARSHIP VASA OF A.D. 1628  
Evaluation of Polyethylene Glycol Conservation Programmes**

For further information see: [http://www.conservation.gu.se/kontakta\\_oss/personal/bigitta\\_hafors/](http://www.conservation.gu.se/kontakta_oss/personal/bigitta_hafors/)