



Summary Report on the World Flora Online Council Meeting *Hosted by BGBM, Berlin, Germany*

The seventh meeting of the World Flora Online Council was held at the Berlin-Dahlem Botanical Garden and Botanical Museum from 30–31 March 2017, preceded by Taxonomic and Technical Working Group meetings from 27–29 March 2017. Over the four days, 29 individuals participated, representing 9 institutions, organisations or projects.

The following is a summary report of the meeting and decisions adopted.

The minutes of the previous Council Meeting in Pretoria were amended to add the omitted recommendation adopted by the Council that the eMonocot code could be amended as needed for the use by the WFO project.

MEMBERSHIP

Dr Wyse Jackson indicated there had been no new MIOU signatory members joining the WFO Consortium since the meeting in Pretoria.

Several institutions have expressed an interest to join: BRIT, the Botanical Research Institute of Texas, the Korean National Arboretum and the Jerusalem University Botanic Garden. There are also a number of observers, including the Botanical Survey of India, who haven't signed the MOU but we will continue to implement the decision taken at an early stage to ensure that notifications are also sent to those groups who haven't yet formalized their membership.

RECOMMENDATIONS ADOPTED

The following recommendations were adopted by the WFO Council:

COUNCIL

1. Maintain an archive of hard copies of the Agreements between Data Providers and the World Flora Online stored at and by the Secretariat.

TECHNICAL AND TAXONOMIC WORKING GROUPS

2. Filter Hybrid formulae from the current Taxonomic Backbone.
3. Change the Nomenclatural Code from current ICBN to ICN in DB.
4. Identifiers for scientific names in WFO will be changed to be 'WFO- \langle unique integer \rangle '. Thus removing letters G, F and O, which were included in the original generation of WFO IDs for

Genus, Family and Order names. How the numbering is organised will be up to the MO tech team.

5. Assign the following text to the Description for “Organizations” (Families) in the WFO Portal for those families derived from The Plant List (TPL):

Nomenclatural and classification information used for the initial data ingestion into the World Flora Online taxonomic backbone was provided by The Plant List Version 1.1 (September 2013). The data resources used to build The Plant List were contributed by: African Plants Database (Conservatory and Botanical Gardens of the City of Geneva and South African National Biodiversity Institute); GrassBase; The Global Compositae Checklist (International Compositae Alliance); The International Legume Database and Information Service; The International Organisation for Plant Information; International Plant Names Index (Royal Botanic Gardens, Kew, Harvard University Herbaria, and Australian National Herbarium); The iPlants Project (Royal Botanical Gardens, Kew, Missouri Botanical Garden, and New York Botanical Garden); Missouri Botanical Garden (Bryophyte Checklist, Checklist of Bolivia, Flora of China Checklist, Checklist of Ecuador, Flora Mesoamericana, Checklist of Panama, Checklist of Peru); Royal Botanic Garden Edinburgh (Rosaceae), and World Checklist of Selected Plant Families. See “www.theplantlist.org/1.1/about/#collaborators” for further details.

New Organisations providing data will provide their own accreditation statement that will replace the TPL text, which can include a URL linking to a more detailed accreditation statement on the providers’ website.

6. Accept the draft Data Contributor Guides for backbone data and content data with the following changes:
 - Make sure there is a footnote in the Documentation to explain what the term ‘Organisation’ means.
 - Check wordsmithing before distributing draft Guides to first providers to test and improve them.
 - Put someone in charge of finishing the document for providers.
7. Change WFO main portal (production) address to www.worldfloraonline.org
8. Change WFO info portal address to about.worldfloraonline.org
9. Add new emails to the WFO Lists of members of the 3 Working Groups and the Council.
10. Develop further the existing Standard Agreement to share with Taxonomic Networks, Institutions or Individuals who consider sharing data with the WFO Consortium as a formal document for those who are not obliged to use their own and need some formal documentation. Include a leading part to the document saying that we want to encourage access to the information as openly as possible to avoid that providers put more restrictions than was originally intended.

BACKBONE DATA QUALITY ISSUES RESOLUTIONS

11. ICN compliant hybrid names (e.g. *Asplenium* × *aprutianum* Lovis) to be given WFO IDs in addition to the use of the same name when not used as a hybrid (*Asplenium aprutianum* Lovis). The following will be accepted from providers:
 - ×*aprutianum*
 - × *aprutianum*
 - x *aprutianum*

These will all be stored/displayed as '*xaprutianum*' in WFO.

12. Do not accept hybrid formulae (e.g. *Asplenium septum* × *viridis*)
13. Unless correctable, the following records will not be accepted:
 - Species/infraspecific scientific names marked as a synonym of a genus
 - Generic scientific names marked as a synonym of a family
14. Do not accept obscure ranks (e.g. grex)
15. Do not accept Cultivars

DRAFT TAXON PAPER

Thomas Borsch presented a paper being written for TAXON that outlines the approach and the editorial workflow that is followed as a community buy-in and agreed to act as the coordinator editor for the paper. A wide authorship will be used including those who have contributed to the article before circulating it. Those members will be included who were part of the Taxonomic Working Group in the past years and have contributed to the discussions over time. The Taxonomic Working Group planned to edit the paper by Friday of the week of the meeting, open for comments in two weeks' time, polish the article with comments and distribute a draft.

ELECTION OF CHAIRS

The chairs of the Council and Working Groups were elected:

- WFO Council Chairs – Peter Wyse Jackson and Pierre-André Loizeau
- Taxonomic Working Group Chairs – Mark Watson, Wayt Thomas, Thomas Borsch, and Thomas Haevermans
- Technical Working Group Chairs – Chuck Miller and Walter Berendsohn
- Communications Working Group Chairs – Barbara Thiers, Eduardo Dalcin, and John Parnell

NEXT MEETINGS

Visotheary Ung presented on behalf of Maité Delmas and Thomas Haevermans about the next meeting in Paris on Nov. 13-17.

For the next meeting after Paris, we were invited to Colombia at the beginning of 2018. Dr Wyse Jackson will follow up on this offer and follow up a potential proposal to meet in Russia later in 2018.

THANKS TO THE HOSTS

Dr Wyse Jackson on behalf of Pierre-André and himself expressed the Council's sincere and grateful thanks to the Berlin-Dahlem Botanical Garden and Botanical Museum, and in particular to Thomas Borsch, Walter and Eva and to all your support staff. We have very much appreciated your hospitality and the organization that you have done for this meeting. He pointed out that we have made significant progress and we are very pleased and should be proud of the advances that have been made and wouldn't have been possible without the hard work and close cooperation between everyone, both during this meeting and leading up to it. He reminded the meeting that we have a very important period coming up towards the launch of the Portal at the IBC and a lot of work to fit in a few months. We should be very optimistic about the future and indeed about the progress made up to now. Pierre-

André Loizeau also thanked everyone for their important job done. Thomas Borsch thanked all who attended the meeting.

ACTION ITEMS

The following action items were carried forward:

#	TASKS	WHO?	WHEN?	COMMENTS
1.	<p>Presentations on WFO. Take advantage of the meetings we attend to promote the WFO.</p>	All	<p><i>Continuously .</i></p> <p><i>Upload to cloud WFO Presentations folder.</i></p>	<p>- Chuck gave a technical talk about WFO IDs at TDWG2016.</p> <p>- Dr Wyse Jackson mentioned that he would discuss the WFO during his talk as keynote speaker at IBC (Done). It was considered that good enough presentations are available.</p>
2.	<p>Update current signatories. Update the list of Consortium members on the website.</p> <p><i>Maintain an archive of hard copies of the Agreements between Data Providers and the World Flora Online stored at the Secretariat.</i></p>		<p><i>As new members join.</i></p>	<p>- All current signatures are updated in the Website. All signed MOU documents are held by the Secretariat.</p>
3.	<p>Update Facebook page. Keep updating FB page with news and current information.</p> <p><i>- Included in the Communications Strategy</i></p>	<p>Communic. Committee</p>		<p>Need login information. Social Media coordinator still needed.</p>
4.	<p>Create WFO Pamphlet. Create a pamphlet for WFO, taking the one from CETAF as an example.</p> <p><i>- Pamphlet should be something simple and brief to inform our community about the Consortium to put in our own institutions.</i></p> <p><i>- Once pamphlet is created make sure every institution has hundreds of copies.</i></p>	<p>Communic. Committee</p>		<p>- General Content for a Pamphlet was mocked up during the Pretoria Meeting. Will wait until end of May to know exactly what's going to be available by the time of the launch at IBC.</p>

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5.	Videos. <i>It was recommended that we include the links to videos of institutions on Website.</i>			<i>- Anyone with videos in their institution relevant to WFO, please provide.</i>
6.	Enhance Production Portal with Descriptive Data. Production portal should be enhanced with descriptive data content as advised by the Data Content subgroup for the Nov. meeting. <i>Get descriptive data ready to – NY:Flora Neotropica – MO: Flora Mesoamericana, Flora of Nicaragua, Flora of China, Flora of Costa Rica, Part of Flora of Venezuelan Guayana, Flora of Panama and Novon and Annals.</i>	WU	<i>In Progress</i>	<i>Data from MBG and other institutions' Floras to be added as time allows.</i> <i>Taxonomic Group's list supersedes.</i>
7.	Create a Harvester administration/operations guide. The development of a Harvester administration/operation guide should be carried out immediately through testing and collaboration.	WU	<i>In Progress</i>	<i>First version of the Guide to Taxonomical Backbone Contributors distributed.</i>
8.	Test backbone changes and document. A Technical subgroup formed to test backbone changes, investigate author attribution storage, document DwCA elements and report at next meeting.	Tech. Group	<i>Test was Finalized.</i>	<i>Observations include in the Documentation of DwCA fields list in the Taxonomical Backbone Contributors' Guide.</i>
9.	Complete gap analysis of the portal use cases. Complete a full analysis of the portal use case gaps, including severity of the gap, difficulty to remediate, resources to mediate and a prioritization.	Mark, Chuck	<i>In Progress</i>	<i>-Subgroup began the first pass of the process, need to continue filling out the rest.</i>

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10.	Implement Botalista software. Work together to further develop Botalista as collaborative tool for expert networks to contribute backbone data.	Pierre-André and Raoul	In Progress	Worked on the requirements for a pre-ingestion system as extension to Botalista. Current Botalista software version implemented on the WFO Google Cloud Server: botalista.worldfloraonline.org (wfo/wfo). Pursuing private funding for further development.
11.	Make a Survey of existing global taxonomic networks. Make a Survey of existing global taxonomic networks and the systems used and ask if they are willing to be responsible to match names to treatments.	<i>Tax.WG</i>	<i>The Taxonomic Working Group made good progress on the Survey in Berlin but still need more input.</i> <i>In Progress</i>	List of specialists and specialist networks by Family created, but incomplete. Include formal to informal specialist groups. Include systems used to record data. Contacts to be made. Question of institutions and ongoing responsibility.
12.	Provide standards for genus and species of angiosperms and gymnosperms. Covered by the Taxonomic Working Group	<i>Tax. WG</i>		Tax WG to discuss. Indications on how to solve taxonomic problems?
13.	Identify specialists to review parts of the taxonomic backbone. When no networks exist, identify specialists to review parts of the taxonomic backbone and/or assess the quality of the treatment in the current WFO backbone.	<i>Tax. WG</i>	<i>In Progress</i>	<i>Underway.</i>
14.	Update guidelines for contributors. Guidelines for contributors available	<i>Mark Watson,</i>	<i>In Progress</i>	- <i>Contribution guidelines in work.</i> - <i>TBD as soon as possible to enable</i>

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	(June 2014) need to be updated. - <i>Develop Guidelines for Contribution: Backbone and Content before IBC.</i>	<i>William</i>		<i>IBC Launch. - Put someone in charge of finishing documents for Providers.</i>
15.	Develop markup Tools for a Toolkit. Consolidate the Markup Tools being used; develop them to integrate them into a toolkit. - <i>SANBI has developed Markup tools and are available for others to use. Available from GitHub: github.com/rudivs/SpeciesMarkupAddIn</i>	<i>TechWG</i>	Ongoing Technical group will get this as related to their work.	<i>Walter mentioned an article published in TAXON with a huge schema to markup Flora Malesiana. Walter offered to reach out to Thomas D. Hamann to see if it's possible to contract him to simplify the tools he developed that he had done to develop a simpler standard for WFO to use by any partner.</i>
16.	Create document on web strategy based on CBD CHM work. Create a document on web strategy for the next meeting based on the work being done by the CBD CHM. Suggest ideas on materials like meetings where WFO should present (e.g. IBC) a keynote or at least a Symposium on WFO. - <i>Communications Working Group (Eduardo Dalcin, Barbara Thiers, John Parnell)</i> - <i>Communications Committee will define Communication plan and presence for the Botanical Congress as a bigger topic.</i> - <i>Put someone in charge of the Social Media. - Separate production of content from the website administration, tailor-make the strategy for each group in order to facilitate the prioritization.</i> - <i>Launch of our communications strategy to raise awareness when we have a portal that people could use.</i>	<i>Comm. WG.</i>	<i>In Work</i>	<i>Draft Web Strategy created. We have a clear path forward for the IBC Launch, we'll concentrate on that. After IBC, in the meeting in Paris, we can think what can be the next stages and evaluate what progress has been made. We need to have a clear strategy on how the WFO is integrated into all of the outcomes of CBD, which requires an understanding on how the CBD works and a lot of promotion of the WFO within the CBD Mechanisms.</i>

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	<p><i>Communicate key advances and specific strategy.</i></p> <ul style="list-style-type: none"> - <i>Put content in a blogging platform to be reused in FB or other platforms. Have a post so we don't create false expectations.</i> - <i>Eduardo Dalcin will provide a copy of the Communication Working Group report and William Ulate will modify it to include the action points indicated here.</i> - <i>Eduardo Dalcin will create a list for Comm. discussions so that they get recorded.</i> - <i>Eduardo Dalcin will create a repository of public documents to be made available through the website</i> - <i>Demonstrate a joint Consortium web site to promote fundraising.</i> 			
17.	<p>Prepare short paper for TAXON. Prepare a draft explaining the WFO taxonomic backbone approach, describing the acknowledgement structure and the available technological tools (for ingestion). - <i>Edit, polish and distribute to the group and external people who may have something to add.</i></p>	<i>Taxonomic Working Group</i>	<p><i>Finalized by Friday.</i></p> <p><i>Open for comments in 2 weeks.</i></p> <p><i>Submit within a month.</i></p>	<p><i>Dr. Thomas Borsch presented a draft paper in Berlin.</i></p> <p><i>Underway, as discussed in the Taxonomic Working Group report.</i></p>
18.	<p>Save the Dates. Save the dates for the 8th meetings:</p> <p>13-17 November, 2017 in Paris, France hosted by Muséum National d'Histoire Naturelle</p> <p>Follow up on the offer from Colombia</p>	<i>Peter Wyse Jackson</i>		

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	to host the next Meeting by the beginning of 2018.			
19.	Create a list of institutions relevant to promote WFO and interact with.	<i>Barbara Thiers will compile All: Send suggestions and contacts to Barbara</i>	<i>Some work done on this already.</i>	<i>Create a list on who we should approach to make the point of the importance of WFO and market our initiative.</i>
20.	Hybrid formulae are not included in WFO. They are indications of parentage and not scientific names for taxa.	<i>William Ulate</i>		<i>WU to filter Hybrid formulae from the current Taxonomic Backbone.</i>
21.	Names included in WFO will be governed by the International Code of Nomenclature for algae, fungi, and plants (ICN). Change the Nomenclatural Code from current ICBN to ICN in DB.	<i>William Ulate</i>		
21.	Identifiers for scientific names in WFO will be changed to be 'WFO- <unique10-digits integer>' . Remove letters G, F and O, which were included in the original generation of WFO IDs for Genus, Family and Order names.	<i>William Ulate</i>		<i>How the numbering is organised is up to MO tech team.</i>
22.	More specific accreditation should be included in the WFO Family 'Organisations'. Replace the descriptions for Organisations for Families in WFO backbone with the text approved by the Council.	<i>William</i>		

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23.	<p>Prepare WFO Portal for IBC. Change WFO main portal (production) address to www.worldfloraonline.org and WFO info portal address to about.worldfloraonline.org</p> <p>Change the UI according to the observations presented, eliminating unused menus and screens,</p>	<i>Chuck Miller</i>	<i>Before IBC Launch</i>	Put a link to these addresses appear in the <i>About Us</i> page
24.	<p>Add Emails to the WFO List. Get the emails added to the lists of members of the 3 Working Groups and the Council</p>	<i>Thomas Borsch, Wayt Thomas</i>		
25.	<p>Data Sharing Agreement. Develop further the existing Draft Sharing Agreement to share content with other Taxonomic Networks.</p> <p><i>Any Data Provider Agreement should be harmonized with the Terms of Use.</i></p> <p><i>Include current version of the Terms of Use in this Meeting Draft Report and request ideas on how to update both.</i></p> <p><i>Maintain an archive of hard copies of the Agreements between Data Providers and the World Flora Online stored at the Secretariat</i></p>	<i>Peter Wyse Jackson</i>	<i>Next Meeting</i>	<p><i>This applies for data not shared under CCO. There's a need to define what / how content with restrictions will be shared. The text on how to Cite the WFO should also be developed.</i></p> <p><i>Include a leading part to the document saying that we want to encourage access to the information as open as possible.</i></p>
26.	<p>Update the list of Floras from different providers.</p> <p><i>Send Wayt information on Floras and Treatments that are recent or modern from different parts of the World that are not covered by any other Flora.</i></p>	<i>Wayt Thomas</i>		<i>This will help determine the priorities of what to digitize in the future.</i>
27.	Advise users in the website how to			<i>Given the dynamic nature of</i>

#	TASKS	WHO?	WHEN?	COMMENTS
	cite the WFO content using an indication "as of <THIS DATE>"			<i>WFO and while we lack versioning of WFO in a preharvesting system.</i>

LIST OF ATTENDEES

(as self-introduced during the meeting)

1. Peter Wyse Jackson, President, Missouri Botanical Garden and co-chair, WFO Council
2. Walter Berendhson, Director, Department Research Biodiversity Informatics, Berlin-Dahlem Botanical Garden and Botanical Museum
3. William Ulate, World Flora Online Data Manager, Sr. Project Manager, Center for Biodiversity Informatics, IT Division, Missouri Botanical Garden
4. Nelson Zamora, Botanist, National Museum of Costa Rica
5. Melissa Tulig, Director, Biodiversity Information Management Specimen Digitization, New York Botanical Garden
6. Colin Pendry, Editor of the Flora of Nepal Project, Royal Botanic Garden Edinburgh
7. Mark Watson, Botanist, Co-Chair of the Technical Working Group, Botanic Garden Edinburgh
8. Dr. Dmitry Geltman, Acting Director, Komarov Botanical Institute of the Russian Academy of Science
9. Dr. Eva Häffner, Science Policy Coordinator, BGBM
10. Raoul Palese, Coordinator of Flora, Conservation and Information System Projects, Conservatoire et Jardin botaniques de la Ville de Genève
11. Rashad Salimov, Insititute of Botany, Arzebajan. Head of Education Department, Minsk.
12. Jim Miller, Senior Vice President of Science and Conservation, Missouri Botanical Garden
13. Chuck Miller, Vice-President of IT, CIO and Head of the Center for Biodiversity Informatics, MBG
14. Thomas Borsch, Director, Professor of Systematic Botany, BGBM
15. Wayt Thomas, Botanist, Co-Chair Taxonomical Working Group, NYBG
16. Barbara Thiers, WFO Outreach Committee, VP Science Director Herbarium, NYBG
17. Thomas Haevermans, co-chair Taxonomical Working Group, Botanist, MNHN, Paris
18. Vistotheory Ung, Management of Biodiversity projects, MNHN, Paris

Joined later:

19. Pierre-André Loizeau, Director, Conservatoire et Jardin botaniques de la Ville de Genève, co-chair WFO Council