WORLD FLORA ONLINE – 13th Council Meeting

Summary Report on the 13th meeting of the WFO Council held on 1st July, 2020.

The timings for the Council meeting were as follows:

·   7.00am in St Louis, Missouri, USA
·   8.00am in New York, USA
·   1.00pm in Edinburgh and Kew, U.K.
·   2.00pm in Paris, Geneva and much of Europe
·   3.00pm in Istanbul, Turkey and St Petersburg, Russia
·   8.00pm in Beijing, China
·   10.00pm in Canberra, Australia

The Agenda will include updates and reports from the Taxonomic and Technical Working Groups, an update on the status of the WFO Portal, discussion of recommendations, a review of action points from the last meeting and AOB. The meeting will be scheduled to last for two hours. Please let us know if there are further agenda items that you would like considered for inclusion in the agenda. The meeting was two hours in duration and held virtually. This summary report provides an account of the meeting and the Action Items agreed. The meeting was attended by 40 participants representing many of the 42 organisations and institutions that are members of the WFO Consortium.

The meeting was opened by the co-chairs, Peter Wyse Jackson and Pierre-André Loizeau who welcomed the participants. Several new members were welcomed: The Singapore Botanic Garden, represented at the meeting by Dr David Middleton and the Leon Levy Native Plant Preserve and Bahamas National Trust, represented by Dr Ethan H. Fried. Apologies were received from Maïté Delmas (Paris) and David Mabberley (Flora Malesiana). An update report on the WFO Portal was provided by William Ulate from Virtual Meeting, July, 2020. He noted that the WFO had incorporated 379,624 descriptions related to c.150,000 species. It was hoped that more database could be received, processed and incorporated into the WFO Portal over the coming months.

Progress made on the development of the Botanista software was provided by Pierre-André Loizeau and Raoul Palese. Reports from the Technical and Taxonomic Working Groups were provided by Chuck Miller (Tech WG Report) and Mark Watson and Alan Elliott (Tax WG Report). The recommendations of these two Working Groups were reviewed and adopted (as contained in the reports of their previous meetings held in June, 2020).

It was agreed to hold the next 14th meeting of the WFO Council virtually in September, 2020. It was understood that the next in-person meeting of the Council, due to be held in Meise, Belgium, would be postponed until after the pandemic when international travel became possible again.

A list of the Action Items prepared following the July 1 Zoom call follows.

#	TASKS	WHO?	WHEN?	COMMENTS
1	**Presentations on WFO.** Take advantage of the meetings we attend to promote the WFO. Presentations to be uploaded to WFO Presentations folder in ownCloud.	All	Standing Item	Recent and next presentations: None
2	**Update current signatories.** Secretariat to maintain an archive of hard copies of any formal agreements with WFO. List of Consortium members on the WFO website to be updated.	Dr Wyse Jackson	Standing Item	New signatories: • Singapore Botanic Gardens • Bahamas National Trust
3	**Update Facebook page.** Keep updating FB page with news and current information. Included in the Communications Strategy	Comms Working Group	Ongoing	Richelle Wiehe (MBG) will update FB, send photographs and news items to her.
5	**Videos.** Links to videos by partner institutions to be included on WFO Website.	All	Ongoing	Anyone with videos in their institution relevant to WFO, please send to the William Ulate & Alan Elliott.
6	**Enhance Production Portal with Descriptive Data.** Production portal should be enhanced with descriptive data content as advised by Taxonomic WG/Council. Send a tweet as content is loaded to Production.	William	Ongoing task. When ready, William Ulate will touch base with the intermediary contacts of the Content providers for the next digital resources to bring into the WFO Portal, as determined by the Taxonomic WG in order to increase the diversity of content and geographic coverage.	See Tax WG report for revised priority list for harvesting. Initial harvesting of content for names matched in first name-matching process prioritized for as many datasets as possible (rather than resolving the residual un-matched names). • Tax WG to define criteria for assessing Content

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			The Taxonomic Working Group will define the criteria (scientific credibility, completeness, substantial contribution, currency, etc.), similar to those used for assessing TENs, to judge the authorization of potential Content Providers during the next meeting	Providers at the next meeting • Fl. Trop. East Africa (Kew, TBC) – Done, descriptions divided, need to be combined • IUCN Conservation Status – Pending new Version. • Improve Metadata for Images from Solanaceae & Flora of China - Pending Continue to load remaining and new datasets: • Solanaceae Source – New reharvest pending • eFlora of China - Done • NYBG – Flora of NE US – Still pending 35,000 descriptions • POWOP data on Flora of West Tropical Africa – Done, descriptions divided, need to be combined • Fl. Trop. East Africa (Kew, TBC) – Done, descriptions divided, need to be combined • IUCN Conservation Status - Done • Images from Solanaceae & Flora of China - Pending • Flora de Colombia (monographs) - Done • Catalogo de las Plantas de Colombia –26K names - Name matching in progress (4K unmatched) • Australian Floras – Names for vascular flora received and matched. No descriptive data received yet. Contact? • Flora of Nepal – No data received. • Illustrated Flora of Turkey – New version in 2020 • Illustrated Treatments for Korea: No response

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				• Fl. Helvetica – Name matching in progress. Waiting for descriptions • Flora do Brazil – more descriptions present – Provider lacks resources • eMonocot descriptions (Kew, TBC) – Got PalmWeb descriptions, pending • eFlora of North America – Done. New FNA data (James Macklin)? • Flora of Central Africa (Meise) – Names matched, waiting for descriptions • African Plants Database – (distributions, ecology, biology) 200K names, 78K taxa – Approval needed • eFloramaghreb.org - 6400 taxa – Approval needed
7	**Create a Harvester administration/operations guide.** The development of a Harvester administration/operation guide should be carried out immediately through testing and collaboration.	William	Ongoing	New updates should be included. Created documentation for "Name-Matching" process and made code and SQL Stored Procedures available for Geneva in Github (private MBG-CBI repository)
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.	Technical Working Group	Ongoing	Priority Use Cases were assessed against the portal by the Tax WG during the St Louis meeting and report passed to the Tech WG for comment
10	**Implement Botalista software.** Work together to further develop Botalista as collaborative tool for expert networks to contribute backbone data.	Pierre-André and Raoul	November 2020	Project delayed. Raoul would test the ingestion to Botalista of the

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				full version of the taxonomical backbone. Interrelated subject areas: 1. Name matching tool (for backbone and content provider seeing name quality control and eventually WFO-IDs) 2. Backbone editing tool (for TEN using Botalista) 3. Backbone ingestion workflow tools • For external TEN • For Botalista TEN 4. TEN Management Tool • Structured communication workflows between Botalista processes, data providers, and TEN Manager Priority: Name matching tool Needs intense communication between Geneva, St. Louis and backbone contributors St. Louis made local Name Matching application's Code and SQL Stored Procedures available for Geneva in Github (private MBG-CBI repository)
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.	TEN Manager	Standing Item Merged with #13	Continuing activity as we build the list of actual and potential list of TENs Update and publish the Family coverage/gap analysis

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12	**Provide standards for genus and species of angiosperms and gymnosperms. Address suprafamily classification.**	TEN Manager	Aug 2020	Now complete for all groups, except Pteridophytes which are to be updated to PPG I
13	**Taxonomic Expert Networks (TENs).** 1) 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. 2) Make a survey of existing global taxonomic networks and the systems used and ask if they are willing to participate in WFO [#11] 3) Update and publish the Order/Family coverage/gap analysis on About Pages of WFO website [#11, #52, #74] 4) Engage with WCSP Reviewers for potential TENs [#53] 5) Explore links with Yuri Roskov and COL GSDs as potential WFO TENS [#56] 6) Build on the offer of a Fern TEN to involve wider community opinions [#57]	TEN Manager	Standing Item	Several tasks merged into this task with cross references given. 1) 4 TENs approved by Council July 2020: Cycadaceae, Annonaceae, Poaceae, Fagaceae. 2) ongoing 3) Gap analysis for plant families to be updated for higher classifications and for pteridophytes and bryophytes for September 2020. Made available online with potential contacts removed (but kept in internal version) 4) ongoing 5) ongoing 6) ongoing
15	**Develop markup Tools for a Toolkit.** Consolidate the Markup Tools being used; develop them to integrate them into a toolkit. - SANBI has developed Markup tools and are available for others to use. Available from GitHub:	Technical Working Group	Deferred at St Louis	No current update, not priority for 2020, but continue for future

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	github.com/rudivs/SpeciesMarkupAddIn			
16	**Communicate 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 a keynote or at least a Symposium on WFO. - Communications Committee will define Communication plan as a bigger topic. - 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. - Launch of our communications strategy to raise awareness when we have a portal that people could use. Communicate key advances and specific strategy. - Demonstrate a joint Consortium web site to promote fundraising. -For a Strategy define Who they are? What to tell them? How to tell them? Who's going to tell them? And when are they going to be told?	Comms WG. (Eduardo Dalcin, Barbara Thiers, John Parnell)	In Work Draft Web Strategy created. – The Communications Working Group should work in a Communications Strategy that identifies the target audiences (TENs, General Public, Taxonomic Community and others) and bring as a discussion point in Dublin. • Draft Web Strategy created. - Istanbul • ResearchGate WFO project was set up. Done - Istanbul. • FAQs have been added to About portal. Done - Istanbul.	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. For the Communication Strategy, define what WFO is doing in the next 6 months to be able to know what to communicate. We need to define what audience we want to attend first and use appropriate platforms to reach them. Peter Wyse Jackson may send a message to the Council asking for names of specialists who could collaborate on a Communication Plan, once we know what we want to communicate. Install a Content Management System (CMS) on Google Cloud (WordPress). Defer to next meeting the recommendation to adopt a CMS for the About page (see #73). Make the About web page (currently in HTML) easier to update by multiple partners (migrating to a CMS, see #73).

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				Reassess About page content. Put together some guidelines about an Acknowledgements section and submit them to the Council for acceptance in principle (see #73)
18	**Save the Dates.** Save the dates for the 14th, 15th and 16th meetings	Dr Wyse Jackson	14th Meeting – Online, September 2020 15th Meeting – Online October 2020 16th Meeting –Online - December 2020)	Post the report of the previous Council Meeting on the WFO website Physical meetings at Meise and Canberra deferred
19	**Create a list of institutions relevant to promote WFO and interact with.**	Comms WG/All	Ongoing	Create a list of who we should approach to make the point of the importance of WFO and market our initiative. Send suggestions and contacts to Barbara Thiers. Handle in context of the Communications Strategy (see #16).
29	**DOIs for datasets and downloads.** Evaluate using GBIF-generated DOIs for WFO contributed datasets and downloads (related to #68 and #75)	Technical Working Group	Ongoing	Requires code change Creation of metadata for downloads for DOI. Evaluate the adding DOIs to uploaded datasets and downloaded reports.
30	**WFO Darwin Core extensions.** **WFO Terms not included in Darwin Core standard:** 1. **localID:** Record identifier used by the data contributor. E.g.	Technical Working Group	Deferred at St Louis	Write a white paper on Darwin Core extensions needed for WFO

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	Tropicos ID, Flora of S Africa ID, EDIT ID 2. **Alternate Taxon/Name IDs:** E.g. Catalogue of Life ID 3. **taxonomicStatusReference:** Accepted or Synonym status by/according to publication. E.g. Accepted according to GrassBase 4. **sourceCitation (of the name record):** Not namePublishedIn or bibliographicCitation. E.g. Solanaceae Source is source of the Backbone name record. 5. **VerbatimSpecimenList:** Currently using Specimens extension. 6. **VerbatimDistribution:** Using "Distribution" Description Type in Descriptions.txt file 7. **Protologue:** Using Description Type of Original Publication in Descrriptions.txt file 8. **nomenclaturalNote**			Formally request Darwin Core extensions from TDWG for WFO
31	**Send formal request to GBIF for WFO-tailored versions of IPT and DwCA Validator, involving SANBI and Flora do Brasil**	Technical Working Group	Deferred at July 2020	Botalista replaces tailored version of DwCA Validator. Tailored IPT still needed for taxonomic and descriptive data.
33	**Resolve insufficient resources to support:** a) Software development staffing. b) Institution to maintain OwnCloud	WFO Council	Deferred to next meeting	a) Missouri is committed to providing William's role, but we have an issue with software development staffing b) Defer decision to next meeting.
35	**Implement the following tasks** (not high-priority): • Reveal hidden fields (e.g. Basionym) • Enable alternate classifications	William	When possible. Requires code change. Merged with #48	To achieve with limited resources, whenever possible 1. Deferred at St Louis 2. Deferred at St Louis

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38	**Formalize relation with IAPT**	WFO Council	Defer to next meeting.	IAPT is a Member of WFO. Patrick S. Herendeen, new IAPT chair, was interested, according to Michelle Price and collaboration was examined during their last meeting in October.
39	**Catalogue of Life/GBIF**	Pierre-André Loizeau	Ongoing	Pierre-André Loizeau is the WFO representative on CoL Advisory Board GBIF will conduct a comparison between WFO taxonomy and CoL (see #85).
42	**New Names.** Implement a mechanism to deal with new names coming from Content Providers or IPNI and updating the Taxonomic Backbone, as recommended by the Taxonomic Working Group. A 'new name' is an Effectively Published name not already in the Taxonomic Backbone. Content Providers only provide one name, their accepted name of the taxon for which they are providing content	Technical Working Group	The Technical WG suggests we need to be deferred due to limitations of eMonocot ingestion process St Louis status: • IPNI IDs in progress. Name Matching done, awaiting corrections. • New IPNI names will be loaded with Status of Unchecked. • New TEN names will be loaded with Status of Accepted, Synonym or Ambiguous	Create a feedback mechanism as needed to alert TENs when a new name is incorporated in the pre-harvesting Taxonomic Backbone (eventually Botalista). Make an agreement with IPNI to receive their annual updates of new names and new combinations. Treat new names from IPNI as if coming from a non-TEN Content Provider Export new names in the backbone in a data format appropriate for the TENs to incorporate into their own system.
44	**Duplicates.** There were 17.7k name duplications in the Taxonomic Backbone due to TPL artifacts	Taxonomic Working Group	In progress	Significant de-duplication has been done. Remaining duplicate names will be reviewed following the update of the Taxonomic Backbone with WCVP
47	**Nomenclatural Registration.**	Pierre-André Loizeau	Ongoing	Expression of interest to become a Registration Centre made.

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				Further work pending future developments in other Registration Centres
48	**Make modifications to the Portal** 1. Add Acknowledgements section to About page – Defer to St. Louis 4. Add URL Link to External Links higher taxon names to Angiosperm Phylogeny Website (orders and above) and explore similar link for Bryophyte higher ranks. 16. Add responsive GUI (size auto adjustable, upgrade to Bootstrap 4) (code change) low priority 17. Assess if order of Descriptions can be prioritized (for display). 18. Assess how to provide page hit statistics by data provider. 26 Add 'Accepted species' number to statistics bar 27 On Taxon Page revise wording as follows [with underlined words hyperlinked/popup to definitions/glossary]: • Accepted: 'This name is reported by <TEN Name> as an <u>accepted</u> name' • Synonym 'This name is reported by <TEN Name> as a <u>synonym</u> of <ACCEPTED NAME>' • Ambiguous 'This name is reported by <TEN Name> as <u>ambiguous</u>' • Unchecked 'This name is currently <u>unchecked</u> and awaiting taxonomic scrutiny' Merged from #35	Technical Working Group	Ongoing	NB Code changes required 1. No Acknowledgements received. Change Objectives tab to Acknowledgements (see #16) 4. APG done. Bryophytes ongoing 14. Deferred 16. Not started. 17. Pending 26. <mark>Done</mark> 27. Ongoing 28. Deferred at St. Louis 29. Deferred at St. Louis 30. Pending

#	TASKS	WHO?	WHEN?	COMMENTS
	28. Reveal hidden fields (e.g. Basionym) 29. Enable alternate classifications Merged from #62 30. Advise on display options to have descriptive data on the Taxon Page with alternate views: order by content provider vs by description type.			
54	Data Ingestion Source' should be used to provide authors of individual accounts, giving the full bibliographic citation	William	1. Ongoing Merged with #55	
55	**Change Content Contributor Guidelines to add how to add Authors, Editors, or other attributions to Descriptive Data.** • Embed in Source reference Bibliographic Citation Merged from #54	Walter, William, Chuck	Ongoing	
56	**Explore links with COL GSDs as potential WFO TENS**	TEN Manager with Yuri Roskov	Ongoing Merged into #13	Some GSD custodians already contacted
58	**Assess adding the BGCI Threat Search database** as this includes national level and non-standard conservation assessments.	William	Pending	Related to #82 and #83
59	**Re-run IPNI-WFO Name Matching after the WCSP/IPNI Update** to improve the number of matching names from 68% and analyse the results. **Update Protologue information for matched names using IPNI data**	William	WFO/IPNI matching done after WCVP update.	Related to #44 and #77

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62	**Advise on display options to have descriptive data on the Taxon Page with alternate views: order by content provider vs by description type.**	Technical Working Group	Pending (requires code change) Merged with #48	
63	**Review the portal interface prior to and discuss at next Council meeting**	Taxonomic Working Group	Deferred to next meeting	
64	**Consider using an equal area map projection for Geographical Coverage on About page.**	Technical Working Group	Pending	Compromise projection used in the About Page demonstration
65	**Fix geo server in the Portal**	Technical Working Group	Done	
66	**Negotiate with Kew to add a WFO link to IPNI name pages.**	WFO Council	Ongoing	
67	**Add "Data" link to WFO About page where "Follow Us" is currently**	Technical Working Group	Done	
68	**Create a data paper of the WFO Backbone data with a DOI. Use this DOI for backbone download.** (related to #29)	Technical Working Group		
69	**Explore use of Frictionless Data for backbone data ingestion**	Technical Working Group	Pending more community adoption	Walter is interested.
70	**Assess addition of Annual Snapshot download – "WFO Plant List 2020" - without causing user confusion**	Technical Working Group		Available in Data Download? Related to #71 and #72
71	**Static versions of the Taxonomic Backbone should be produced, to be called 'WFO Plant List <YEAR>'. RBG Edinburgh to lead on developing a prototype for Meise**	RBG Edinburgh	To present at September Council	Related to #72 and #70 The first version of a WFO Plant List should only be produced when the Backbone data is of comparable quality to WCVP

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				(and Catalogue of Life) - end of 2020? Initial prototype demonstrated using new About Page layout design. To be further developed for September meeting

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72	**Develop prototype 'WFO Plant List' and Taxonomic Backbone viewer**	Roger Hyam (Edinburgh)	To present at September Council	Related to #70 and #71 These views to be included in a separate tab on the Portal (as is done for the About Pages), and RBG Edinburgh offers to develop and maintain this area of the Portal At Online Council July 2020: Approved the continued development of the WFO Plant List
73	**Redevelop the 'About Pages' on the WFO Portal** Develop FAQs for TENs for inclusion in the About pages (merged from #78). Provide TEN webpages, linked to the TEN table on About pages, to give more detailed information on TENs (e.g. membership) for those who do not have their own website. Order TEN table – to be included in About Pages redesign (merged from #79). Suggest the deletion of the FAQ on the About Pages referring to Citation of WFO (merged from #75)	About Pages Subgroup	To present at September Council	Peter Wyse Jackson to lead Task Group, including John Parnell, Alan Elliott, and others Chuck Miller to enable external editing of web About pages held on MO server. – <mark>Done. Provided copy of About pages to RBGE.</mark> Added at July 2020 Council • CMS-driven prototype demonstrated using new About Page layout design. To be further developed for September meeting • RBGE offered to maintain the About Pages subdomain and cover costs of the CMS, if adopted and hosted on WFO Google Cloud • Council extended the remit of the About Pages Task Group to look at the whole WFO website to inform the development of the About Pages. • Council approved continued development of the About Pages and thank RBG Edinburgh for their

				support in funding this work
74	**Assess addition of Families list page with attributes for each**	Technical Working Group	Deferred at St Louis Merged with #13	Is this an alternate view of #52, a list of all TENs including the gap of all orders and families that do not have TENs? Or a separate list of just the Families?
75	**Check How to Cite on Download Page, Taxon Page and footer ribbon**	Taxonomic Working Group	Done, outstanding items moved to other tasks	St Louis Meeting results: **Taxon Page** • Cite this taxon page as 'WFO (2019): Taxus L. Published on the Internet; http://www.worldfloraonline.org/taxon/wfo-4000037650. Accessed on: <DATE>' • Can the scientific name be italicised in this citation? Pending **Data Download** • For current data: Cite this as 'WFO (2019): World Flora Online Taxonomic Backbone (20190513). Published on the Internet; http://www.worldfloraonline.org. Accessed on: [DATE]' – to include date automatically as in Taxon Page so it can be cut/paste by users • Include a header page with data downloads to give citation, license, attribution, etc. This would cover citation of archived versions without being explicit for each one on the website • Give DOIs whenever possible. Pending. (Related to #29) **FAQs**

				- Suggest the deletion of the FAQ on the About Pages referring to Citation of WFO. - Review when the About Pages are revised
76	**Update the Taxonomic Backbone with data from Kew's WCVP**	WCVP Update Task Group	In process	Procedure has been agreed by task group and test families are underway. Aiming to update the Taxonomic Backbone by end of 2020 so that the WFO Plant List will be at least as good as WCVP
77	**Cost/benefit of supressing the display of Taxonomic Status for names above Species in the search results and Taxon Page and adding them to the Taxon Pages**	Taxonomic Working Group	Deferred to next meeting	
78	**Develop FAQs for TENs for inclusion in the About pages**	TEN Manager	Merged with #73	
79	**Provide TEN webpages, linked to the TEN table on About pages, to give more detailed information on TENs (e.g. membership) for those who do not have their own website. Order TEN table – to be included in About Pages redesign**	About Pages Subgroup	Merged with #73	
80	**Develop Criteria for judging authorisation of potential Content Providers**	Taxonomic Working Group	Deferred to next meeting	
81	**WFO to give percentages of what data have been uploaded from what is published for each source of Content**	Technical Working Group	Pending	

82	**Life form display in the Portal is from BGCI's Global Tree Search, not from the Global Tree Assessment** (see #61)**– the WFO reference sources need to be updated to reflect this.** (related to #83)	Technical Working Group	Pending	
83	**Look into incorporating BGCI Global Tree Search country-level distribution data into mapping in WFO when this functionality is developed**.	Technical Working Group	Pending	Related to #82
84	**Contact Consortium Members to solicit additional Content datasets**	WFO Council Co-chairs	To have feedback to present at next meeting	
85	**Review results of the comparison of WFO Taxonomic Backbone with CoL**	Taxonomic Working Group	Once GBIF have completed the comparison of the two datasets	Related to #39
86	**Explore formalising WFO's relationship with IPNI with a written agreement covering the nature of the collaboration and the exchange of data**	WFO Council		
87	**Investigate repurposing the WFO Plant List software developed by RBG Edinburgh as the Taxonomic Browser for viewing the current Public Portal Backbone, replacing the Browse/Classification submenu.**	Technical Working Group		Related to #72
88	**About Pages to include examples of ways WFO provides accreditation of data providers**	About Pages Subgroup	To present at September Council	Explore accreditation and acknowledgement of supporters at different levels: project, partner, TEN