Report of the World Flora Online 15th Council meeting

The 15th World Flora Online Council meeting was held on 17th November, 2020. Meeting times were 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 meeting was held virtually using Zoom and was two hours in duration.

Minutes of the Meeting
The participants were welcomed by the Council's co-chairs, Peter Wyse Jackson and Pierre-André Loizeau. It was noted that the Botanical Survey of India (BSI) has recently signed the World Flora Online MOU and becomes our latest member of the WFO Consortium. The meeting also welcomed Dr Patrick Herendeen who was attending the Council for the first time, as an observer, representing the International Association of Plant Taxonomy.

Apologies were received from several Council members that are unable to attend the meeting: David Middleton (Singapore), Valida Alizade (Azerbaijan), Sandy Knapp (London), Alan Paton (Kew), Marianne Le Roux (SANBI) and Erik Smets (Naturalis).

The Agenda of the meeting was as follows:
1.   Welcome   Peter Wyse Jackson and Pierre-André Loizeau
2.   Adoption of the Report from the 14th meeting of the WFO Council (held virtual on 29th September, 2020).
3.   Update on the WFO Portal   William Ulate
4   Report from the Taxonomic Working Group   Mark Watson and Alan Elliott
     • Discussion and adoption of recommendations from the Taxonomic Working Group
5.   Report from the Technical Working Group   Chuck Miller
     • Discussion and adoption of recommendations from the Technical Working Group
6.   Botalista Developments   Pierre-André Loizeau and Raoul Palese
7.   Review of action items from the last meeting
     (other than those that will have been covered in the Working Group reports)
8.   Any Other Business

It was noted that an extensive paper on the World Flora Online was due to be published in the journal Taxon before 20th November and would be open-access and widely circulated.   Its lead author Thomas Borsch was congratulated for his work and leadership in guiding the paper to completion.

The Minutes of the last virtual meeting of the Council (September, 2020) were reviewed and adopted.

An update on the WFO Portal progress was provided by William Ulate. This was followed by Working Group Reports:

- Progress with the establishment and development of Taxonomic Expert Groups (TENs) and the proposed new 'About' the WFO web pages - by Alan Elliott
- Report from the Taxonomic Working Group - by Mark Watson
- Report from the Technical Working Group - by Chuck Miller

A series of recommendations were made by the two working groups and presented to the Council. All of these recommendations were endorsed by the Council and are therefore accepted as Decision. Details of each recommendation are provided below.

The following recommendations were adopted by the Council as proposed by the Taxonomic and Technical Working Groups:

Taxonomic Working Group:
Recommendation 1: Council to approve the Bruniaceae TEN as proposed by the Taxonomic WG.
Recommendation 2: Council to approve the list of 'Other Sources' of Content to be included in the portfolio of those being managed by the WFO Gatekeeper (approaches to be made through the WFO Consortium Partner focal points or named individuals).

Technical Working Group:
Recommendation 1: Council to request Naturalis to authorize the Flora Malesiana text content now in the EDIT platform to be ingested into the WFO Portal until the full Linnaeus NG-based dataset becomes available in 2022 and will then replace the EDIT text.
Recommendation 2: Modify TPL to add a disclaimer to all Taxon Pages similar to TPL 1.0 to 1.1 disclaimer.
Recommendation 3: Investigate modification of TPL and WFO Portals to lower Google Search result standings for TPL below WFO.

- Report on Botalista

A report on the status of the Botalista software was presented by Pierre-André Loizeau and Raoul Palese. Pierre-André Loizeau noted that he would be retiring from his position as director of the Conservatoire et Jardin Botaniques, Geneva, during the spring of 2022 and this presented some uncertainty for the future of the Botalista software. He said that he was unsure whether the use of Botalista software for the World Flora Online could continue to be supported by that institution. He also expressed the opinion that it was unlikely that Geneva would be able to achieve all that had been hoped for in the development of this software and recommended that the priority should be to develop the portion of the software that could be used by Taxonomic Expert Networks (TENs) for the management of the taxonomic backbone of plants in their area of expertise. He suggested that it was unlikely that the hoped-for use of the software for the ingestion of data more broadly into the WFO portal would be become possible. He also drew attention to the need for additional financial resources to be found to support Botalista development.

The co-chair, Peter Wyse Jackson, proposed the formation of a special task group to review future priorities and development of the Botalista software and requested the following members of Council to participate in the group: Pierre-André Loizeau, Raoul Palese, Chuck Miller, Walter Berendsohn, Mark Watson, Alan Elliott, Lauren Raz and Eduardo Dalcin. This was agreed. The group will meet and report back to the Council. PWJ also suggested that this would be an important topic to be considered during a forthcoming post-2020 Strategic Plan for the next phase of the World Flora Online. The Strategic Plan preparation would be an important component of the next face-to-face Council meeting due to be held in Meise, Belgium on a date yet to be decided.

The Action Items from the last meeting were noted but not reviewed in detail, due to lack of time.

Lauren Raz gave an update on collaboration between the Catalogue of Life and the World Flora Online.

There being no further matters to be considered by the Council, the meeting adjourned.

The next meeting of the Council will be held on Tuesday 16th March, 2021.

Attendance

Rasim Murat Aydinkal	Nezahat Gökyiğit Botanik Bahcesi, Istanbul, Turkey
Olaf Banki	Species2000/Catalogue of Life, Leiden, Netherlands
Maria Regina Barbosa	for L. Maia, Instituto Nacional de Ciência e Tecnologia (INCT) Virtual Herbarium, Brazil
Walter Berendsohn	Botanic Garden and Botanical Museum Berlin-Dahlem, Berlin, Germany
John Brinda	Missouri Botanical Garden, St. Louis, USA
Eduardo Dalcin	Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Brazil
Maïté Delmas	Muséum National d'Histoire Naturelle, Paris, France
Alan Elliott	Royal Botanic Garden Edinburgh, Edinburgh, UK
Dalila Espirito Santo	European Consortium of Botanic Gardens, Lisbon, Portugal
Peter Fritsch	Botanical Research Institute of Texas, Fort Worth, Texas, USA
Adil Güner	Nezahat Gökyiğit Botanik Bahcesi, Istanbul, Turkey
Thomas Haevermans	Muséum National d'Histoire Naturelle, Paris, France
Patrick Herendeen	International Association for Plant Taxonomy
Nye Hughes	Consultant, Royal Botanic Garden Edinburgh
Xiaohua JIN	Institute of Botany, Chinese Academy of Sciences, Beijing, China & GBIF
Geoffrey Levin	Flora of North America Association, Illinois, USA
Bing LIU	Institute of Botany, Chinese Academy of Sciences, Beijing, China
Pierre-André Loizeau	Conservatoire et Jardin Botaniques, Geneva, Switzerland
Ashiho A. Mao	Botanical Survey of India Salt Lake City, Kolkata, India
Karol Marhold	Institute of Botany, Slovak Academy of Sciences, Bratislava, Slovakia
Chuck Miller	Missouri Botanical Garden, St. Louis, USA
James Miller	Missouri Botanical Garden, St. Louis, USA
Joe Miller	Global Biodiversity Information Facility, Copenhagen, Denmark
Raoul Palese	Conservatoire et Jardin Botaniques, Geneva, Switzerland
John Parnell	Botany Department of Trinity College Dublin, Dublin, Ireland
Colin Pendry	Royal Botanic Garden Edinburgh, Edinburgh, UK
Lauren Raz	Universidad Nacional de Colombia, Bogotá, Colombia

Marc Sosef	Meise Botanic Garden, Meise, Belgium			
Wayt Thomas	New York Botanical Garden, New York, USA			
Rob Turner	Royal Botanic Gardens, Kew, London, UK			
William Ulate	Missouri Botanical Garden, St. Louis, USA			
Visotheary Ung	Muséum National d'Histoire Naturelle, Paris, France			
Warren Wagner	Smithsonian National Museum of Natural History, Washington, DC, USA			
Mark Watson	Royal Botanic Garden Edinburgh, Edinburgh, UK			
Richelle Weihe	Missouri Botanical Garden, St. Louis, USA			
Anthony Whalen	Australian Biological Resources Study, Canberra, Australia			
Peter Wyse Jackson	Missouri Botanical Garden, St. Louis, USA			

Annex 1. Action Items

WORLD FLORA ONLINE –ACTION ITEMS FROM COUNCIL MEETING - ZOOM NOV 2020
(fully completed or merged tasks are shaded grey pending deletion at next meeting of Council)

#	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.	Peter Wyse Jackson	Standing Item	New signatories since last meeting of Council: • Botanical Survey of India
3	**Update Facebook page.** Keep updating FB page with news and current information.	Comms Working Group	Ongoing	Richelle Wiehe (MBG) will update FB, send images and news items to her.
5	**Videos.** Links to videos by partner institutions to be included on WFO Website.	All	Ongoing	Anyone with videos 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 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). • Fl. Trop. East Africa & Fl. Trop. West Africa (Kew) –

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				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 • NYBG – Flora of NE US – Still pending harvesting35,000 descriptions • Catalogo de las Plantas de Colombia –26K names - Name matching in progress (4K unmatched) Waiting for final review from Lauren. • Australian Floras – Names for vascular flora received and matched. Matched sample names from Australian endemics Families. Waiting for descriptive data from Anne Fuchs. • Flora of Nepal – No data received. • Illustrated Flora of Turkey – New version in 2020 • Illustrated Treatments for Korea - Pending • Fl. Helvetica – Name matching <mark>done</mark>. Descriptions in French and German received. German harvested, French pending. • Flora do Brazil – more descriptions present In Website– Provider lacks resources • eMonocot descriptions (Kew, TBC) –PalmWeb descriptions pending harvesting • New FNA data (contacted James Macklin and process of getting content has started) • Flora of Central Africa (Meise) Descriptions received - 7993 taxa – <mark>Done</mark> Harvested in Prod • African Plants Database – (distributions, ecology, biology) 200K names, 78K taxa. - Pending. • eFloramaghreb.org - 6400 taxa – Pending. • Leon Levy Nature Preserve Flora (Bahamas) - 646 taxa – Eight version Harvested in

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				Production. Ninth version received. • Irish Vernacular Names - 1069 taxa –Done. Harvested in Prod
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)
10	**Implement Botalista software.** Work together to further develop Botalista as collaborative tool for expert networks to contribute backbone data.	Pierre-André and Raoul	January 2021	Announced by Pierre-Andre Loizeau at November 2020 Council meeting: 1. Botalista will provide a taxonomy support tool on the Google Cloud for use by TENs by January. 2. All other functions planned for Botalista are unlikely to be completed.
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 3) Update and publish the Order/Family coverage/gap analysis on About Pages of WFO website 4) Engage with WCSP Reviewers for potential TENs 5) Explore links with Yuri Roskov and COL GSDs as potential WFO TENS 6) Build on the offer of a Fern TEN to involve wider community opinions 7) Correct family name Adoxaceae to Viburnaceae	TEN Manager	Standing Item	1) 1 TEN approved by Council November 2020: Bruniaceae 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). Ongoing. 4) Ongoing. 5) Ongoing. 6) Ongoing. PPG Interested in developing an inclusive Fern TEN 7) Done
15	**Develop markup Tools for a Toolkit.** Consolidate the Markup	Technical Working Group	Deferred at St Louis	No current update, not priority for 2020, but continue for future

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	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: 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? - Create a list of institutions relevant to promote WFO and interact with (previously #19)	Comms WG. (Eduardo Dalcin, Barbara Thiers, John Parnell)	Pending	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. • Draft Web Strategy created. – Istanbul • ResearchGate WFO project has been set up
18	**Save the Dates.** Save the date for the 16th meeting	Peter Wyse Jackson	16th Meeting – Online, 16 March 2021	Post the report of the previous Council Meeting on the WFO website Physical meetings at Meise and Canberra deferred
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 DOI Process Subgroup	Ongoing	Requires code change Creation of metadata for downloads for DOI. Evaluate the adding DOIs to uploaded datasets and downloaded reports.

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				Tech WG recommended in Sep 2020 formation of a DOI subgroup to assess the GBIF DOI process. Adopted by Council.
30	**WFO Darwin Core extensions. WFO Terms not included in Darwin Core standard:** 1. **localID:** Record identifier used by the data contributor. E.g. 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**	Technical Working Group	Deferred at St Louis	Write a white paper on Darwin Core extensions needed for WFO 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.
38	**Formalize relation with IAPT**	WFO Council	Deferred to next meeting.	IAPT is a Member of WFO. Patrick S. Herendeen, new IAPT chair, was interested, according to Michelle Price

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				and collaboration was examined during their last meeting in October. 2019
39	**Catalogue of Life/GBIF**	Pierre-André Loizeau	Ongoing	Pierre-André Loizeau is the WFO representative on CoL Advisory Board – will meet in December 2020

Lauren Raz and Ann Fuchs are members of CoL Global Team, which met in November 2020

CoL+ project nearing completion, CoL has been restructured

GBIF will conduct a comparison between WFO taxonomy and CoL (see #85). Ongoing – delayed due to delays in CoL+ project |
| 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 | • IPNI IDs <mark>done</mark>, awaiting reharvesting of Taxonomic Backbone.
• New IPNI names were 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 in 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 IPNI & WCVP

Ongoing |

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47	**Nomenclatural Registration.**	Pierre-André Loizeau	Ongoing	Expression of interest to become a Registration Centre made. Further work pending future developments in other Registration Centres
48	**Make modifications to the Portal** 1. Add Acknowledgements section to About page 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. 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' 28. Reveal hidden fields (e.g. Basionym) 29. Enable alternate classifications 30. 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	Ongoing	NB Code changes required 1. Project level acknowledgements to be incorporated into the new About Pages (see #73) 4. APG done. PPG1 done. Bryophytes done 16. Not started. Need developers. 17. Pending 18. Pending 27. Ongoing 28. Deferred at St. Louis 29. Deferred at St. Louis 30. Pending
58	**Assess adding the BGCI Threat Search database** as this includes national level and non-standard conservation assessments	William	Pending	

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	BGCI Global Tree Search country-level distribution data into mapping in WFO when this functionality is developed (merged from #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** (Related to #44 and #77)	William	WFO/IPNI matching done after WCVP update. Ongoing.	
66	**Negotiate with Kew to add a WFO link to IPNI name pages.**	WFO Council	Ongoing	
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	Ongoing.	
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 (**Related to #71 and #72)	Technical Working Group	Ongoing	Available in Data Download on Portal?
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** (Related to #70 and #72)	RBG Edinburgh	Deferred to next meeting of Council	The first version of a WFO Plant List should only be produced when the Backbone data is of comparable quality to WCVP (and Catalogue of Life) – early 2021 Being reimplemented as an API with GraphQL technology. Will be used to serve the Plant List in the new About Pages
72	**Develop prototype 'WFO Plant List' and Taxonomic Backbone viewer** (Related to #70 and #71)	Roger Hyam (Edinburgh)	Deferred to next meeting of Council	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

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				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. 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. Suggest the deletion of the FAQ on the About Pages referring to Citation of WFO.	About Pages Subgroup	To present at next Council	Peter Wyse Jackson to lead Task Group, including John Parnell, Alan Elliott, and others • CMS-driven website is being developed using new About Page layout design • Majority of Partner pages now with content – six remaining • Council members are requested to update information on their institutes • Virtual Machine has been set up on Google Cloud managed by RBGE. • New About Pages to be put to Council for adoption in March 2021
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 Ongoing
80	**Develop Criteria for judging authorisation of potential Content Providers**	Taxonomic Working Group	Pending	Criteria (scientific credibility, completeness, substantial contribution, currency, etc.), similar to those used for assessing TENs
81	**WFO to give percentages of what data have been uploaded from what is published for each source of Content**	Technical Working Group	Pending	Possibly Include in a Content stock take
84	**Contact Consortium Members to solicit additional Content datasets**	WFO Council Co-chairs	Ongoing	

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85	**Review results of the comparison of WFO Taxonomic Backbone with CoL** (Related to #39**)**	Taxonomic Working Group	Pending the completion of the comparison of the two datasets by GBIF/CoL	
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	Pending	
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. (**Related to #72)	Technical Working Group	Ongoing	Roger Hyam has joined the Tech WG. The software is being reimplemented as a JSON Web Service to facilitate use as the Taxonomy Browser
89	**Data sharing agreement with Compositae Alliance/WoRMS to be signed**	Council co-chairs	October 2020	Done
90	**Updating institute information on the new About Pages**	All Council Members	Mostly complete (see #72)	Council members are to communicate with the TEN Manager to provide information on their institutes for the new About Pages. TEN Manager to provide a guide to what is needed.
91	**Google Cloud servers** Credit for use of the Google Cloud will run out in 2021. Investigate options for additional sponsorship by Google and other options for hosting WFO servers	Council	Early in 2021	Colin Pendry working with a former Google staff member to gain contact within Google to a potential funding agent.
92	**WFO post 2020 strategic review and forward planning**	Council to lead	2021	Consider Garnett et al. (2020) '*Principles for creating a single authoritative list of the world's species*' Review the WFO Portal interface (previously #63) – Tax WG Review supressing display of Taxonomic Status for names above Species in the search results and Taxon Page and adding them to Taxon Pages (previously #77) – Tax WG
		#	TASKS	WHO?	WHEN?	COMMENTS

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93	**Conduct stock take of Content and approved providers**	WFO Gatekeeper and TEN Manager	Next Council meeting	
94	**Request Naturalis to authorize the Flora Malesiana text content now in the EDIT platform to be ingested into the WFO Portal until the full Linneaus NG-based dataset becomes available in 2022 and will then replace the EDIT text.**	WFO Council	2021	Using the available EDIT text enables WFO to include the available 10,500 Flora Malesiana descriptions while awaiting the new more complete version in 2022.
95	**Modify TPL to add a disclaimer to all Taxon Pages similar to TPL 1.0 to 1.1 disclaimer.**	Technical Working Group	2021	Requires TPL code change
96	**Investigate modification of TPL and WFO Portals to lower Google Search result standings for TPL below WFO.**	Technical Working Group	2021	Requires portal code changes