

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Eighteenth meeting of the Conference of the Parties
Colombo (Sri Lanka), 23 May – 3 June 2019

Species specific matters

Maintenance of the Appendices

STANDARD NOMENCLATURE

1. This document has been prepared by the Plants and Animals Committees in collaboration with the CITES Secretariat.*

Introduction

2. Resolution Conf. 11.1 (Rev. CoP17) on the *Establishment of Committees* tasks the Animals and Plants Committees, through their respective Nomenclature Specialists, to deal with nomenclatural issues as specified in its Annex 2, para 1 b), in implementation of Resolution Conf. 12.11 (Rev. CoP17) on Standard Nomenclature.
3. In addition, at the 17th meeting of the Conference of the Parties a number of Decisions which concerned matters relating to nomenclature were directed to the Plants Committee, the Animals Committee, the Secretariat and/or the Parties. These are Decisions 17.167 – 17.168 Identification (timber); Decisions 17.203 – 17.208. Malagasy ebonies (*Diospyros* spp.) and palisanders and rosewoods (*Dalbergia* spp.); Decisions 17.306 17.308: Nomenclature (Identification of CITES-listed corals in trade); Decisions 17.309 – 17.310. Nomenclature (Use of time-specific versions of online databases as standard nomenclature references); Decisions 17.311 – 17.312. Nomenclature (Bird family and order names); Decision 17.313. Nomenclature [African lion (*Panthera leo*)]; and Decisions 17.314 – 17.317. Nomenclature (Cactaceae checklist).

Flora

Status of Checklists and Standard References

4. Three new references and one supplement are recommended for adoption for flora at this meeting of the Conference of the Parties. In addition, two general references are recommended for deletion. We are extremely grateful to all the institutions that provided resources and the specialists who freely offered their time and expertise to ensure that CITES Parties have access to the tools that they need to adequately implement the Convention for flora. It is increasingly the case that institutions, due to declining budgets and limited specialist staff, seek financial recompense for any staff time spent on such issues. Parties are encouraged to support their scientists and institutions work in this area. The lack of an appropriate and stable standard taxonomy can severely impact the effective implementation of CITES listings.
5. *Caesalpinia echinata*

Brazil informed the Plants Committee at PC23 of the taxonomic revision of the genus *Caesalpinia*. One result of this work was the creation of a new monospecific genus *Paubrasilia*. Taking into account this

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revision it is recommended that *Paubrasilia echinata* (Lam.) E. Gagnon, H.C. Lima & G.P. Lewis published in Gagnon, E., Bruneau, A., Hughes, C.E., de Queiroz, L. P. & Lewis, G.P. (2016). *A new generic system for the pantropical Caesalpinia group (Leguminosae)* be adopted as the accepted name for this taxon currently listed as *Caesalpinia echinata* and the above reference as the standard reference.

6. Cactus Checklist (Decisions 17.314-17.317)

The most substantive update at CoP17 was the adoption of the CITES Cactaceae Checklist (3rd Edition) (CCC3). Given the number of new taxa and the impact of molecular studies on this group since the last edition of the Checklist in 1999, any move forward would be a significant challenge. With a completely revised checklist on the table, CoP17 adopted decisions to monitor its use and impact. Decisions 17.314-317 relate to the use of the checklist and asks Parties to report to the Secretariat on any issues that may arise on its use; the Secretariat to liaise with UNEP-WCMC on the utility of the Checklist and report to the PC on the feedback it receives from Parties and UNEP-WCMC.

The responses to these requests were included in information documents to PC24 (PC24 Inf. 9 and Inf. 15). To address the issues raised by the monitoring process, the Plants Committee recommended that CCC3 be the subject of a limited update by the preparation of a supplement for CoP18. To facilitate this process the PC agreed that the Nomenclature Specialist of the Plants Committee liaise with a small group of relevant experts to work to ensure that this supplement be acceptable to the Parties. This work has taken place in association with the editor of CCC3 and it is recommended that *A Supplement to the CITES Cactaceae Checklist Third Edition 2016*. (Hunt, D. 2018) be adopted as a supplement to the third edition of the *Cactaceae Checklist* adopted at CoP17. In addition, the expert group noted a number of issues that would benefit from the wider view of the Parties or needed further work.

This included the issue of alternate names and other terms used in CCC3 and how best they be dealt with for CITES purposes. The expert group considered a variation on a table prepared by UNEP-WCMC who address these issues when updating Species+. This proposal is outlined below.

Row	Symbol/classification of taxon in CCC3 (see page 17 of checklist)	Recommended CITES Interpretation
1	?	Treat as accepted name
2	[indeterminate]	Treat as synonym of taxonomic parent
3	Alternative name	Treat as synonym
4	Provisionally accepted name	Treat as accepted name
5	Inadmissible names – made up of:	
6	Invalid or illegitimate (I symbol)	If linked to accepted name = Synonym?
7	Misapplied (M symbol)	Synonym?
8	Recommended for Rejection (R symbol)	Treat as provisionally accepted?

It is recommended that the interpretations outlined for rows 1- 4 be adopted for CITES use on an interim basis to CoP19. The issue of inadmissible names (row 5-8) is more complex with the editor of CCC3 noting that “any valid translation into applicable names is not possible”. For these names when encountered in CITES use, the preferred option should be considered on a case by case basis by the Nomenclature Specialist of the Plants Committee. The Plants Committee should consider the overall use of terms outlined in the Table in its work programme following CoP18.

There are case of taxa without an accepted name, these taxa are “used” by some traders and can be found on some older CITES permits but are not scientifically valid. In such cases a CITES Authority should only accept these names in an application for artificially propagated specimens and if they are satisfied that the

specimen was originally acquired under this name – noting that this name is not scientifically valid. Preferably, all such names in the checklist should be annotated to this effect.

In preparing the supplement the group considered the issue of names of taxa that were included in previous editions of the Cactus Checklist and not included in CCC3. For any of these names that have not been addressed in the supplement this issue should be considered in the work programme of the Plants Committee post CoP18.

The inclusion of *Aztekium valdezii* in *Aztekium ritteri*. The CoP17 adoption of CCC3 resulted in the Appendix II taxon *A. valdezii* (included under the family listing Cactaceae) included as a synonym of the Appendix I taxon *A. ritteri*. The CITES Secretariat has advised that this change should have been accompanied by a formal amendment proposal as the legal scope of Appendix I was expanded by this change. To correct this, *A. valdezii* has been amended to provisionally accepted in the supplement and the Plants Committee in its post CoP18 work programme, in co-operation with the CCC3 editor and the range State (Mexico) will carry out a comprehensive review and, as needed, an Appendix I listing proposal will be prepared.

The use of trinomials in CCC3 was also reviewed. The group did not have time to consider this issue in depth and it is recommended that the use of trinomials in flora checklists in general be considered by the Plants Committee in its post CoP18 work programme.

To ensure continuing monitoring of the Checklist PC24 requested that the Secretariat in consultation with the Chair of the Plants Committee, as appropriate, amend and refresh Decisions 17.314 -317 which refer to monitoring the use of the Cactus Checklist, to allow this process to continue up to CoP19. These decisions are outlined in Annex 2.

Overall, the use of a small advisory group to assist the Nomenclature Specialist was found to be effective and worked well. The use of such a small group when addressing other complex Nomenclature issues should be considered by the Plants Committee in the future.

7. *Dalbergia* and *Diospyros* – populations of Madagascar (Decision 17.206, *Dalbergia* spp. Decision 17.167)

CoP17 adopted standard references for these groups. Decision 17.206 paragraph b) tasks the Plants Committee to continue supporting the preparation a standard reference for Madagascan populations of these genera. These checklists were adopted to support Parties in their implementation of these listings. They were clearly seen to be “works in progress” with this in mind PC 24 reviewed their status. The Plants Committee noted that a formal revision of the checklists would not be possible in time for CoP18. To assist Parties in evaluating new names the Plants Committee recommended that the Secretariat issue a Notification to inform the Parties that updates of new names will be regularly made available on the online database “*Catalogue of the Vascular Plants of Madagascar*” (<http://www.tropicos.org/Project/Madagascar>).

The Plants Committee recommended at PC24 that a standard reference for *Dalbergia* spp. is the first priority for production and adoption by CITES. This follows the requirements of Decision 17.167 - and PC24 also considered the resources required to produce such a list. PC24 agreed that the currently available regional and national species-level taxonomic treatments of *Dalbergia* are variable in quality, and the definition and limits of species are not uniformly clear or reliable. In Madagascar, a recent preliminary appraisal has suggested that only about half of the 48 currently recognized species are well circumscribed and readily recognizable, highlighting the need for a detailed assessment. Parallel assessments are needed elsewhere (Central and South America, Africa, SE Asia) based on careful examination of published sources and herbarium material, along with currently available information from other sources (molecular data, wood anatomy, etc.) in order to produce an annotated checklist that will indicate which species are well delimited and which will require careful study to re-evaluate and clarify their limits and to assess their conservation status.

PC24 recommended that an annotated Checklist for *Dalbergia* spp. be prepared for adoption by a meeting of the Conference of the Parties (preferably CoP19). The production of a science based, practical checklist, suitable for use by CITES Parties, for this globally distributed genus will require substantive research, building on the experience and expertise gained from the work on the Madagascar *Dalbergia* checklist. To develop such a list in a globally collaborative project, at most recent estimates would cost in the region of \$500,000.

To move this initiative forward PC24 invited the Secretariat, in liaison with the Chair of the Plants Committee, to draft decisions for CoP18, highlighting the urgent need for the *Dalbergia* spp. checklist to allow adequate

implementation of the listing and seeking donor funds to support the preparation and production of the checklist. These decisions are outlined in Annex 2.

8. Taxus

The current standard reference for names of species of *Taxus* is the *World Checklist and Bibliography of Conifers* (A. Farjon, 2001). PC24 recommended that it should reviews this reference, post CoP18, with a view to determining whether this list remains valid or if an update or replacement is required.

9. Orchid Checklists

PC24 tasked the Nomenclature Specialist and the Secretariat to liaise with UK Scientific Authority for plants and UNEP-WCMC to explore options for the production of updated standard references for genera of Orchids. As a result of this activity a new standard reference for Appendix I Orchids is being put to CoP18 for adoption. It is hoped that Govaerts *et alia*, (2018). *CITES Appendix I Orchid Checklist*. Royal Botanic Gardens, Kew, Surrey, and UNEP- WCMC, Cambridge will be the first of a new series of new and updated orchid checklists.

10. *Platymiscium pleiostachyum*

PC24 recommended that Bente B. Klitgaard (2005). (*Platymiscium* (Leguminosae: Dalbergieae); *biogeography, systematics, morphology, taxonomy and uses*. Kew Bulletin. Vol. 60, No. 3 (2005), pp. 321 – 400) be adopted as the standard reference for *Platymiscium pleiostachyum*.

11. General References

PC24 recommended that the current standard generic references (Mabberley, 1997, reprinted with corrections 1998 and Willis 1973) be deleted from the list of standard references, and thereafter that relevant decisions will be made on a case by case basis. If possible, copies of Mabberley (1997, reprinted with corrections 1998) and Willis (1973) should be archived in the Secretariat for historical reference.

12. *Aloe* and *Pachypodium*

PC24 recommended that the CITES *Aloe* and *Pachypodium* Checklist be updated in time to be adopted at the 19th meeting of the Conference and urged Parties and potential donors to support this work.

South Africa provided a list of revised nomenclature for *Aloe* spp. in document PC22 Doc. 21.3 (Tbilisi, 2015). As a matter of practice, when a standard reference exists, UNEP-WCMC does not add new species to Species+/the CITES Checklist unless the Parties adopt a revised standard reference (See PC24. Inf. 15). In the interim, South Africa has been working with the Nomenclature Specialist and the Plants Committee to review and include revised nomenclature as synonyms in Species+.

Other Issues

13. Housekeeping Issues

A number of "housekeeping issues" were addressed by the Plants Committee during this period, *inter alia*, including updates and amendments of Species+, these are not included in detail but can be found in the reports of the Nomenclature Working Group approved by the Plants Committee at PC23 and PC24. However, one outstanding issue to include in this report is the Plants Committee recommendation that the names *Nardostachys jatamansi* (D.Don) DC. and *Nardostachys chinensis* Batalin be included in Species+ and the UNEP-WCMC Checklist of CITES Species as synonyms of *Nardostachys grandiflora* DC and this be formally noted in the nomenclature report to CoP.

Typographical errors were noted in the scientific names of "*Aquilaria audate*" and "*Gyrinops audate*." The Plants Committee recommended that the Checklist of CITES Species be amended to remove the names *Gyrinops audate* (Glig) Domke (with synonym *Aquilaria audate* (Oken) Merr) and be replaced with *Gyrinops caudata* (Gilg) Domke with a synonym *Aquilaria caudata* (PC24 Sum. 4 (Rev. 1); PC24 Com. 8 (Rev. by Sec.))

The Plants Committee recommended that UNEP-WCMC, if possible, include the names of the 4 genera regulated by CITES under the listing of the *Didiereaceae* family (*Alluaudia*, *Alluaudiopsis*,

Decarya and *Didierea*), in Species +, and in the Checklist of CITES Species annotated to clearly show that they are the only genera regulated by CITES under this listing, and further disseminate this information to Parties as appropriate.

The Plants Committee invited the Secretariat, if possible, to place weblinks to all the CITES standard references for plants on their website.

14. Updating Nomenclature between meetings of the Conference of the Parties

The Plants Committee considered this issue and how written guidance could best be prepared on what is possible and to ensure the standard application of the process over time. They welcomed the document PC24. Inf. 15 and encouraged UNEP-WCMC and the Secretariat to further disseminate the information included in this document on data management relating to plant nomenclature within the CITES Checklist and Species +.

15. List of standard references for flora

Recommendations based on paragraphs 4 to 12, above, calling for the amendment of the Annex to Resolution Conf. 12.11 (Rev. CoP17) on *Standard Nomenclature* are included in Annex 1 to this document. Tables indicating the impact of resultant changes, and any changes required in the Appendices are outlined in Annex 3.

Proposed work plan

16. The major task for the coming period will be to review the requirements for the provision of new and/or updated standard references for taxa currently listed on the Appendices or for those listed at CoP18. Prime among these will be to move beyond preliminary checklists for *Diospyros* spp. (populations of Madagascar) and *Dalbergia* spp. (populations of Madagascar). In particular a standard reference for *Dalbergia* spp. is the first priority for production and adoption by CITES. For further details see paragraph 7. An updated *Aloe* and *Pachypodium* Checklist is also needed (see paragraph 12) and the standard reference for *Taxus* species will also be reviewed with a view to a possible update.
17. As outlined in paragraph 9, a new initiative with at its core, co-operation between the UK Scientific Authority for plants and UNEP-WCMC has resulted in the presentation for adoption of a new checklist for Appendix I Orchids at this CoP. It is hoped that this fruitful co-operation will continue, and the Plants Committee will look to prioritise genera for update and provision of new standard references for the Appendix II Orchid family listing.
18. The work on the production of *A Supplement to the CITES Cactaceae Checklist Third Edition 2016*. (Hunt, D. 2018) has identified a number of issues that need further consideration (see paragraph 6). These include the use of terms in CCC3 and how best these be interpreted in CITES, taxa without an accepted name, the need for a full list of taxa included in previous editions of the Cactus Checklist but not included in CCC3 and how best to treat these, a review of *Aztekium valdezii* and the use of trinomials in plant checklists. Other issues may also arise including some outstanding points from the Periodic Review process. The Plants Committee may also wish to consider timelines of the possible production of a fourth edition of the Cactus Checklist.

Fauna

Recommended adoption of checklists and nomenclatural standard references for animal species newly included in the Appendices at CoP17

19. With the adoption of proposals at CoP17, several species and genera were added to the CITES Appendices which are not covered by the nomenclatural standard references as currently adopted in the Annex of Resolution Conf. 12.11 (Rev. CoP17)]. Appropriate checklists and standard references were selected from the existing published literature or prepared from extracts of databases, taking care to ensure that these documents are consistent with the scope and content of the CoP17 Proposals. The database extracts were circulated as part of the documentation for the 29th meeting of the Animals Committee (Annexes 2 to 5 of Document AC29 Doc.35), and recommended for adoption. These recommended standard references are presented in Annex 1 of the present document. As their adoption would provide a standard reference foundation under the currently-used nomenclature in the Appendices

and Species+ database, their adoption will not lead to changes in the Appendices or Species+ database and they are therefore not included in Annex 4.

20. It was noted in Document AC29 Doc.35 para 15 that it had not been possible to identify a suitable nomenclatural standard reference for species of the Cuban tree snail genus *Polymita*. This situation continues, and identifying a suitable standard reference remains a task to be continued after CoP18.

Recommended adoption of checklists and nomenclatural standard references for animal species previously included in the Appendices

Nomenclature of wild sheep of the genus *Ovis*

21. The nomenclatural situation of sheep of the genus *Ovis* after the adoption of Wilson and Reeder (2005)¹ as standard reference for the genus *Ovis* at CoP17 was summarized in Document AC29 Doc. 35, paragraphs 11-14, and was further discussed at the 29th and 30th meetings of the Animals Committee. On balance, it was concluded that at present, there does not appear to exist a single comprehensive taxonomic revision of the genus *Ovis* that could be adopted as a nomenclatural standard reference to put this topic to rest in CITES. Moreover, the species *Ovis ammon* and *Ovis aries* were recommended for review under the Periodic Review of Species in the Appendices process (See AC29 Com.7), and any findings within this process may have bearing on the issue. However, given that the nomenclatural situation created by the adoption of Wilson & Reeder (2005) has proved troublesome, the Animals Committee at its 30th meeting recommended that Parties at CoP18 consider the adoption of the revised taxonomy of the genus *Ovis* in its subchapter in the *Handbook of Mammals* (Valdez & Weinberg, 2011, in Wilson & Mittermeier, Eds., 2011; ISBN 978-84-96553-77-4) as Nomenclatural Standard Reference for the genus *Ovis*, with the proviso that the population of *Ovis* in Cyprus, currently referred to as *Ovis aries ophion* and placed in Appendix I, be retained in Appendix I as '*Ovis gmelini* (population of Cyprus)', and that the previously recognized names be retained in the CITES Checklist as synonyms, as appropriate. The detailed impacts of adopting this proposed nomenclatural standard reference are presented in Annex 4 of this document.

Nomenclature of Seahorses (*Hippocampus* spp.)

22. The nomenclature of Seahorses (*Hippocampus* spp.) has been dynamic for many years, and consequently has been a topic of discussion in CITES, including at CoP17 [see document CoP17 Doc.81.2 (Rev.1)]. Following CoP17, a total of 14 standard references concerning the genus *Hippocampus* are contained in the Annex of Resolution Conf. 12.11 (Rev. CoP17) on Standard nomenclature, which in some cases contradict each other. A detailed, peer-reviewed global checklist of Seahorses was published by LOURIE, POLLON and FOSTER (2016) after the document deadline for CoP17, and was discussed at AC29. This Checklist differs from the combined information contained in the 14 adopted standard references, specifically in the synonymisation of a suite of mainly recently-described species. In addition, inconsistencies between range countries recorded in the work by LOURIE et al. (2016), the CITES Checklist of Species and Species+ database, and national distribution records of Australia and possibly other range State Parties, would need further clarification. Nevertheless, the adoption of this Checklist as an updated standard reference would bring CITES nomenclature closer towards broadly-supported taxonomic understanding, and allow the elimination of the great majority of current standard references concerning the genus *Hippocampus*. Consequently, the Animals Committee at its 29th meeting recommended that Parties evaluate the merits and complications arising from adopting this Checklist. No concerns were submitted or expressed in response, and thus the Animals Committee recommends the adoption of LOURIE, POLLON and FOSTER (2016) as checklist and nomenclatural standard reference for the species of the genus *Hippocampus*. The detailed impacts of adopting this checklist as nomenclatural standard reference are presented in Annex 4 of this document. It is noted that additional descriptions of *Hippocampus* species, published after the publication of this Checklist, may warrant adoption as supplementary standard references; these are presented in Annex 6.

Other animal species in the Appendices

23. Taxonomic research on CITES-listed and other species continues at an increasingly rapid pace in the biological community, and the nomenclatural effects of this research are extensive. Many of these changes (though a complete compilation is humanly impossible within available resources) were listed in

¹ Full citations of publications mentioned in this document can be found in Annex 1.

Annex 6 of Document AC29 Doc.35 and Annex 2 of Document AC30 Doc.32, and are combined with further cases in Annex 6 of the present document.

24. Owing to the very large number of possible nomenclatural changes and the limited time available between and at its meetings, the Animals Committee has been unable to formulate specific recommendations for the adoption, rejection or shelving of nomenclatural changes proposed in the published biological literature and listed in Annex 6. It is intended that consultations within the Animals Committee will continue following the submission of this document, and that the Parties will be informed of the results of its deliberations well ahead of the 18th meeting of the Conference of the Parties.

Use of time-specific versions of online databases as standard nomenclature references (Decisions 17.309 – 17.310)

25. Decision 17.309 Directed the Secretariat to a) reach out to copyright-holders of relevant online-databases that might serve as standard nomenclature references and explore the possible use of time-specific versions for CITES services; for example, relevant databases include but are not limited to WoRMS, Fish Base, ESCHMEYER& FRICKE's Catalog of Fishes, and Amphibian Species of the World; and b) report the results of its consultations to the Animals Committee. Decision 17.310 directed the Animals Committee to a) evaluate the results of the Secretariat's consultation; and b) develop recommendations on the use of time-specific online-databases as standard nomenclature references for decision at the 18th meeting of the Conference of the Parties.
26. In addition to the positive responses reflected in document AC30 Doc.32, the Secretariat provided a further oral update that they had received a positive reply from the Team maintaining the World Register of Marine Species, which confirmed that it would be possible to obtain a time-specific version of their database, and advised to set up a Memorandum of Understanding between the CITES Secretariat and WoRMS for that purpose.
27. With regard to Decisions 17.309 – 17.310 on the use of time-specific versions of online databases as standard nomenclature references, the Animals Committee at its 30th meeting decided that, while there had been several positive responses by dataholders, the implementation of the decisions was not finalized, and recommended that these Decisions be renewed for the next intersessional period (see AC30 Com.3 (Rev. by Sec.). Draft Decisions 18.II – 18.JJ to this effect will be found in Annex 2.

Identification of CITES-listed corals in trade (Decisions 17.306 17.308)

28. Decision 17.306 directed the Secretariat to a) seek, if possible, a time-specific version of (i) the WoRMS database, and (ii) the new Corals of the World website by John VERON (currently in preparation) that serves the needs of a CITES nomenclature reference, and b) report its progress to the Animals Committee. Decision 17.307 directed the Parties to undertake an internal assessment of the WoRMS database with regard to consistency with their own internal coral nomenclature databases, and report their findings to the Secretariat for communication to the Animals Committee. And Decision 17.308 Directed the Animals Committee to a) consider the report of the Secretariat and the responses of the Parties and recommend a way forward to identify a standard nomenclature reference for CITES-listed corals; and b) update its list of coral taxa for which identification to genus level is acceptable, but which should be identified to species level where feasible, once a new standard nomenclature reference for CITES-listed coral species has been identified and provide the updated list to the Secretariat for dissemination.
29. The Secretariat issued Notification No. 2018/037 seeking the Parties' experiences with Coral nomenclature. The responses received by May 2018 were presented in Annex 1a and 1b of document AC30 Doc. 32. In their replies to No. 2018/037, the Parties reported a high level of consistency between the currently-used nomenclature of CITES-listed corals and the WoRMS database for corals.
30. The Animals Committee at its 30th meeting therefore decided to recommend adoption of the WoRMS database for corals, subject to a time-limited download becoming available and recommended that, if such a download does not become available in a timely manner for the 18th meeting of the Conference of the Parties (CoP18), that the Decisions 17.306-17.308 be continued into the next intersessional period.
31. At the time of writing of this document the Secretariat and nomenclature specialist (Fauna) have observed that despite positive engagement with the WoRMS database managers (see paragraph 26), it has not yet been possible to obtain a time-specific version of the WoRMS database. Consequently draft Decisions

18.KK-18.LL, to be found in Annex 2, were prepared to continue this work after CoP18. The Secretariat will provide an oral update at the current meeting of the Conference of the Parties.

Nomenclature of the African lion (*Panthera leo*) (Decision 17.313)

32. Decision 17.313 directs the Animals Committee to review the taxonomy and standard nomenclature of *Panthera leo* and report its recommendations to the 18th meeting of the Conference of the Parties.
33. The recent nomenclature situation of the Lion was described in Document AC 29 Doc. 35 paragraphs 2-5. At its 29th meeting, the Animals Committee considered the adoption of a new nomenclatural standard reference for *Panthera leo* (to supersede the current use of Wilson & Reeder 2005 as standard reference for species of Felidae including the lion). At its 30th meeting, the Animals Committee recommended the adoption of the Cat Specialist Group taxonomy (*Cat News #11*) of the International Union for Conservation of Nature (IUCN) as nomenclatural standard reference for the Family Felidae. This reduces the subspecies of *Panthera leo* to the nominal subspecies *P. leo leo* inhabiting Central and Western Africa as well as India, and *P. leo melanochaita* occurring in Eastern and Southern Africa. The detailed impacts of adopting this proposed nomenclatural standard reference are presented in Annex 4 of this document. Decision 17.313 is thus considered implemented.

Nomenclature of Bird family and order names (Decisions 17.311-17.312).

34. Decision 17.311 directed the Secretariat to: a) subject to the availability of funds, commission an analysis of the implications of adopting a new standard nomenclature reference for birds at the family and order level, taking into account the 3rd and 4th editions of The Howard & Moore complete checklist of the birds of the world, and the non-passerine and passerine volume of the HBW and BirdLife International illustrated checklist of the birds of the world as well as the Animals Committee discussion regarding a new nomenclature standard reference for birds at the genus and species levels; and b) report back the results to the Animals Committee; while Decision 17.312 directed the Animals Committee to a) evaluate the results of the analysis; and b) develop a recommendation for decision [by] at the 18th meeting of the Conference of the Parties.
35. The Secretariat secured the necessary funding in 2018 after the conclusion of AC30. The Secretariat and Animals Committee are deeply grateful for the support of Switzerland to undertake this study.
36. The Secretariat, with input from the Nomenclature Specialist (Fauna), put the consultancy out to tender and in due course selected Dr. Ronald Orenstein to implement this project. The consultant's report can be found in Annex 5. Decision 17.311 has therefore been implemented.
37. Tables 2 and 3 in Annex 5 list the changes that would be occasioned by the adoption of either the 4th editions of *The Howard & Moore complete checklist of the birds of the world* (H&M4), and the non-passerine and passerine volumes of *the HBW and BirdLife International illustrated checklist of the birds of the world* (HBW/BI), as compared to the current nomenclature for birds used in CITES based on the 1975 Moroney et al classification of birds at the order and family levels, the 3rd edition of the Howard & Moore bird checklist and its 4th Corrigenda, as well as 19 supplementary standard references.
38. A substantial suite of changes will result from the replacement of the Moroney et al. (1975) higher classification of birds with either of the Checklists under consideration; these changes mainly consist of the splitting and reorganization of several orders and families, as well as some name changes to particular higher taxon groups; while not identical between the two possible Checklists, the effective differences between them are modest, as documented in Table 2 of Annex 5.
39. As discussed on pages 12-16 of the consultant's report, no clear recommendation emerged to select between H&M4 or HBW/BI. The Howard & Moore 4th Edition is characterized by a more conservative attitude towards taxonomic changes, and would result in changes of the names of 308 of the approximately 1477 bird species currently recognized by CITES. The HBW and BI checklist is more inclined towards species splits, and would result in approximately 442 changes at species level. The great majority of these changes at species level are inherent in adoption of either Checklist. As well as its more 'splitting' taxonomic approach, the higher number of inherent changes in the HBW/BI Checklist also results from this book's more recent editorial closing date, and this higher number of initial changes may over time be offset by a lesser need to adopt supplementary standard references as the bird taxonomic community progresses its understanding of avian systematics. The HBW/BI Checklist has the additional advantages

that regular updates are and will be available online, that it includes illustrations of each species, and that it has been adopted by CMS and the EU as their nomenclatural standard for birds.

40. As noted by the consultant, adoption of one or the other possible bird Checklists will still necessitate the retention of some of the currently accepted standard references, as neither Checklist conforms to some specific cases where the Parties have debated bird nomenclature and arrived at a CITES-specific conclusion. This is particularly pertinent to proposed changes for parrots. After extensive deliberations, the CITES Parties decided to recognize the parrots *Poicephalus robustus* and *P. fuscicollis* as separate species resulting in the adoption of Coetzer et al. (2015), whereas both possible Checklists treat *fuscicollis* as a subspecies of *P. robustus*. Another case of great CITES significance is that the HBW/BI Checklist recognizes *Psittacus timneh* as a distinct species from *P. erithacus*, while H&M4 continues to consider *timneh* as a subspecies of *P. erithacus*. Possible ways forward could be the exclusion of the parrot section from any newly-adopted bird Checklist with the retention of the currently adopted nine supplementary standard references for Psittacines, the adoption of a separate comprehensive Psittacine standard reference, or a combination of these approaches.
41. In Table 1, the Consultant notes a number of nomenclature changes for CITES-listed birds proposed in the literature since the editorial close of either Checklist. These potential changes will be considered as part of the regular process of keeping CITES nomenclature up to date.
42. As the consultant's report was commissioned and became available well after the 30th meeting of the Animals Committee, and shortly before the submission date for CoP18 documents, insufficient time has been available for adequate consideration of the report's findings. The Nomenclature Specialist (Fauna) intends to consult within and beyond the Animals Committee after the CoP18 submission deadline and, as noted in paragraph 24, intends to provide additional information documentation closer to the 18th Meeting of the CoP to enable Parties to make a better-informed choice and avoid putting this matter off to further discussion at AC31 and AC32 followed by adoption at CoP19. This may enable conclusion of Decision 17.312 in the lead-up to CoP18, otherwise CoP18 may wish to task the Animals Committee in an updated version of Decision 18.312.

Recommendations of the Animals and Plants Committees

43. The Plants and Animals Committees recommend that the Conference of the Parties
 - a) adopt the proposed revisions to the Annex to Resolution Conf. 12.11 (Rev. CoP17) as presented in Annex 1 of this document,
 - b) adopt the draft decisions presented in Annex 2 of this document
 - c) take note of the ongoing nomenclatural evaluations described in paragraphs 24 and 42 of this report and further information provided before and during CoP18 to develop a way forward for these subjects.

COMMENTS OF THE SECRETARIAT