



**CONVENTION ON
MIGRATORY
SPECIES**

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TAXONOMY AND NOMENCLATURE

(Prepared by the Scientific Council and the Secretariat)

Summary:

Resolution 12.27 instructs the Scientific Council to review, at its last meeting before each meeting of the Conference of Parties, the updated online versions of the standard references for birds and fishes with respect to the species listed in the Appendices and make recommendations as to whether the name of any listed species should be updated.

This document presents the results of the comparisons of the taxonomy and nomenclature currently used for bird and fish taxa listed in CMS Appendices with the relevant standard references, and makes suggestions on the alignment of CMS Appendices with the standard references for the respective taxa.

In addition, a new taxonomic reference for marine mammals is suggested, as reflected in the revision of Resolution 12.27 proposed for adoption.

[The document also recommends Decisions.](#)

TAXONOMY AND NOMENCLATURE

Background

1. Resolution 12.27 *Taxonomy and Nomenclature* instructs the Scientific Council to review, at its last meeting before each meeting of the Conference of Parties, the online versions of the fish and bird references for the species listed in the Appendices, and to make recommendations as to whether the name of any listed species should be updated.
2. In fulfilling this task, a comparison of the taxonomy and nomenclature currently used for bird and fish taxa listed in CMS Appendices with the relevant standard references was undertaken by COP-appointed Councillors for Fish and Birds, with assistance from the Secretariat. The following sections summarize the results of the comparisons.

Review of online references for birds

3. Resolution 12.27 designates the following as the standard reference for birds:
 - For non-passerine species: Del Hoyo, J. & Collar, N.J. (2014). *Handbook of the Birds of the World and BirdLife International Illustrated Checklist of the Birds of the World. Volume 1: Non-passerines*. Lynx Edicions, Barcelona;
 - For passerine species: Del Hoyo, J. & Collar, N.J. (2016). *Handbook of the Birds of the World and BirdLife International Illustrated Checklist of the Birds of the World. Volume 2: Passerines*. Lynx Edicions, Barcelona;
4. As of 19 April 2023, the online version of this standard reference for the species listed in the CMS Appendices is the *Handbook of the Birds of the World and BirdLife Taxonomic Checklist v7*, available at: <http://datazone.birdlife.org/species/taxonomy>.
5. A comparison of the taxonomy and nomenclature used for bird taxa currently listed in the CMS Appendices with the online reference for birds determined that the genus *Antigone* spp. (currently listed in Appendix II as *Antigone* spp.) is now included in the genus *Grus* (listed in Appendix II as *Grus* spp). All species previously contained in *Antigone* are now assigned to the genus *Grus*. The species previously contained in *Antigone* are Brolga (*Grus rubicunda*), Sandhill Crane (*Grus canadensis*), Sarus Crane (*Grus antigone*) and White-naped Crane (*Grus vipio*). The latter is currently also listed in Appendix I as *Antigone vipio*.
6. Consequently, *Grus* now contains: Sandhill Crane (*Grus canadensis*), White-naped Crane (*Grus vipio*), Sarus Crane (*Grus antigone*), Brolga (*Grus rubicunda*), Red-crowned Crane (*Grus japonensis*), Whooping Crane (*Grus americana*), Common Crane (*Grus grus*), Hooded Crane (*Grus monacha*) and Black-necked Crane (*Grus nigricollis*), as per the online version of the taxonomic reference.
7. The family Eulacestomidae, currently listed in Appendix II as E. spp., is now recognized in the online reference under the name Eulacestomatidae.

Recommendations for bird taxonomy and nomenclature

8. *Antigone vipio* is listed in CMS Appendix I but is now treated as *Grus vipio*, as per the current online version of the taxonomic reference. Updating the relevant entry in Appendix I from *Antigone vipio* to *Grus vipio* is recommended. This update would reflect the taxonomy that is widely accepted in the scientific community. It would also align the

Appendices with the online version of the taxonomic reference.

9. For Appendix II, *Antigone* was not equivalent to *Grus*, but was a subset of it. *Grus* spp. is already listed in Appendix II as a higher taxon. The deletion of the entry for *Antigone* spp. in Appendix II is recommended, in order to reflect the taxonomy that is widely accepted in the scientific community. It would also ensure alignment with the online version of the taxonomic reference. All species currently covered by *Antigone* spp., *Grus antigone*, *Grus canadensis*, *Grus rubicunda* and *Grus vipio* are still treated as *Grus* spp.
10. Footnote 56 of Appendix II continues to apply to *Leucogeranus leucogeranus*, *Bugeranus carunculatus* and *Anthropoides* spp.
11. It is further recommended to change the entry of Eulacestomidae spp. in Appendix II to Eulacestomatidae spp. This change is a purely synonymical one, and therefore alignment with the current online version of the taxonomic reference seems appropriate.

Review of online reference for fish

12. Resolution 12.27 *Taxonomy and Nomenclature* designates the online version of the *Catalog of Fishes: Genera, Species, References*, [Fricke, R., Eschmeyer, W. N. & R. van der Laan \(eds\) 2023. ESCHMEYER'S CATALOG OF FISHES: GENERA, SPECIES, REFERENCES. Eschmeyer, W.N., R. Fricke and R. van der Laan \(eds\). California Academy of Sciences \(continuously updated\)](https://www.calacademy.org/scientists/projects/eschmeyers-catalog-of-fishes), as the standard reference for fish. The Catalog is available at: <https://www.calacademy.org/scientists/projects/eschmeyers-catalog-of-fishes>
13. For each fish species currently listed in the CMS Appendices, an excerpt was downloaded on 12 May 2023 from the Catalog. The excerpts are made available in [UNEP/CMS/COP14/Inf.31.1](https://www.unep.org/cms/cop14/inf.31.1).
14. A comparison of the taxonomy and nomenclature used for fish species currently listed in the CMS Appendices with the online reference revealed the following differences.

Table 1: Comparison of fish taxonomy and nomenclature in CMS Appendices and the standard reference used by CMS for fish

Current name in CMS Appendices	Species name(s) in Eschmeyer et al. (online 12 May 2023)
Actinopterygii	
<i>Acipenser baerii baicalensis</i>	<i>Acipenser baerii</i>
Chondrichthyes	
Mobulidae	
<i>Manta alfredi</i>	<i>Mobula alfredi</i>
<i>Manta birostris</i>	<i>Mobula birostris</i>
<i>Mobula eregoodootenkee</i>	<i>Mobula eregoodoo</i>
<i>Mobula japonica</i>	<i>Mobula mobular</i>
<i>Mobula rochebrunei</i>	<i>Mobula hypostoma</i>
Squalidae	

Current name in CMS Appendices	Species name(s) in Eschmeyer et al. (online 12 May 2023)
<i>Squalus acanthias</i> (northern hemisphere population)	<i>Squalus acanthias</i> and <i>Squalus suckleyi</i> (the North Pacific subpopulation is now considered a separate species, <i>Squalus suckleyi</i> (Girard, 1854). ¹

a) *Acipenser baerii baicalensis*

15. *Acipenser baerii baicalensis* was listed in Appendix II in 1999. Eschmeyer does not recognize the subspecies *baicalensis* and refers to *Acipenser baerii*, instead.

b) *Mobulidae*

16. Eschmeyer et al. refer to White and Last (2016)² as the scientific reference for the changes in Mobulid taxonomy and nomenclature:

- *Manta alfredi* and *Manta birostris* were both included in the genus *Mobula* and referred to as *Mobula alfredi* and *Mobula birostris* respectively.
- *Mobula eregoodootenkee* was renamed and now referred to as *Mobula eregoodoo*.
- *Mobula japonica* was merged with *Mobula mobular*, and
- *Mobula rochebrunei* was merged with *Mobula hypostoma*.

17. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) also lists the family Mobulidae in its Appendices using the same nomenclature as CMS.

c) *Squalus acanthias*

18. The North Pacific Spiny Dogfish, *Squalus suckleyi* (Girard, 1854), has a complex taxonomic history. Initially considered a separate species from the Spiny Dogfish (*Squalus acanthias*), it was later classified as the same species despite differing life history parameters, meristics, morphometrics and molecular data. Recent studies reveal its distinctiveness from other *S. acanthias* forms (Ebert et al., 2010).

Recommendations for fish taxonomy and nomenclature

19. Parties are recommended to refer to the taxon *Acipenser baerii baicalensis* as *Acipenser baerii* (regional population of the Lake Baikal and its tributaries) and reflect this in Appendix II accordingly to be consistent with Eschmeyer.
20. Considering that most scientists have confirmed the new taxonomy for the Mobulidae family, and that the CITES Animals Committee is currently reviewing whether adjustments should be made accordingly to the CITES Appendices, it is advised that the updated taxonomy and nomenclature be used, as referenced in Eschmeyer and as shown in Table 1.
21. Parties are recommended to accept the splitting of *S. acanthias* into *S. acanthias* and *S. suckleyi* and to reflect this in Appendix II to be consistent with Eschmeyer.

¹ Ebert, D.A., White, W.T., Goldman, K.J., Compagno, L.J., Daly-Engel, T.S., and Ward, R.D. 2010. Resurrection and redescription of *Squalus suckleyi* (Girard, 1854) from the North Pacific, with comments on the *Squalus acanthias* subgroup (Squaliformes: Squalidae). *Zootaxa* 2612: 22-40.

² White, W. T. and P. R. Last 2016 [ref. 35016] 30. Eagle Rays. Family Myliobatidae; 31. Pelagic Eagle Rays. Family Aetobatidae; 33. Devilrays. Family Mobulidae. In: Last et al. (eds.). 2016. Rays of the World [ref. 34990]. 706-725, 726-731, 741-749.

Proposal for a New Taxonomic Reference for Marine Mammals

22. As detailed in the Annex to Resolution 12.27, for marine mammals, CMS uses the following standard reference, as recommended by the 15th meeting of the Scientific Council:

Perrin W.F., Wursig B. and Thewissen J.G.M. (Editors), (2009), Encyclopedia of Marine Mammals, Second edition. Academic Press as the standard nomenclatural reference for Marine Mammals

23. Due to the length of time since publication of this reference, the taxonomy and nomenclature used in the CMS Appendices is no longer in line with scientific consensus. A third edition of the Encyclopedia was published in 2017, and is already outdated to some extent. A fourth edition is envisaged but may only be published after COP15.
24. Table 2 shows discrepancies between CMS, CITES and some commonly used references.
25. To ensure the accuracy of CMS taxonomy and nomenclature, and following consultations with ~~the Council several COP-appointed Councillors~~ and the former COP-appointed Councillor for Aquatic Mammals, Giuseppe Notarbartolo di Sciara (see also Annex 1 to this document), the use of the following online resource as the standard reference for marine mammals is proposed:

Society for Marine Mammalogy, Committee on Taxonomy, List of marine mammal species and subspecies, www.marinemammalscience.org

26. Furthermore, in line with the practice for birds and fish, the Scientific Council should be asked to review, at its last meeting before each meeting of the Conference of Parties, the latest version of the online marine mammal reference for the species listed in the CMS Appendices and make recommendations as to whether the name of any listed species should be updated.
27. Changes that would result from the proposed update of the taxonomic reference for marine mammals are indicated under 'comments' in Table 2. Taxa for which no direct correlation between identified species or subspecies and regional listings could be established were not included in the table.

Table 2: Discrepancies between CMS, CITES, the IUCN Red List (IUCN) and the taxonomy agreed by the Society for Marine Mammalogy (SMM; recommended to be adopted as the taxonomic reference for CMS). Species or subspecies relevant for CMS listings indicated in bold.

Common name	App. I listing	App. II listing	Global or regional?	Current name in CMS Appendices	CITES	IUCN	SMM	Comments
South American Sea Lion		1979		<i>Otaria flavescens</i>	n/a	<i>Otaria byronia</i>	<i>Otaria byronia</i>	Adjustment of nomenclature proposed
Grey Seal		1985	only Baltic Sea populations	<i>Halichoerus grypus</i>	n/a	<i>Halichoerus grypus</i> 2 subspecies: H. g. grypus <i>H. g. macrorynchus</i>	<i>Halichoerus grypus</i> 2 subspecies: H. g. grypus <i>H. g. atlantica</i>	<i>H. g. grypus</i> (Baltic Grey Seal) understood to be identical with regional listing <i>Appendix II could be adjusted</i>
Commerson's Dolphin		1991	South American population	<i>Cephalorhynchus commersonii</i>	<i>Cephalorhynchus commersonii</i>	<i>Cephalorhynchus commersonii</i>	2 subspecies: C. c. commersonii <i>C. c. kerguelensis</i>	<i>C. c. commersonii</i> understood to be identical with regional listing <i>Appendix II could be adjusted</i>
Indo-Pacific Humpback Dolphin, Chinese White Dolphin		1991		<i>Sousa chinensis</i>	Split into three species: Sousa plumbea Sousa chinensis Sousa sahalensis	Split into three species: Sousa plumbea Sousa chinensis Sousa sahalensis	Split into three species: Sousa plumbea Sousa chinensis Sousa sahalensis	<i>Sousa chinensis</i> was split into three species: S. plumbea (Indian Ocean Humpback Dolphin) S. chinensis (Indo-Pacific Humpback Dolphin) S. sahalensis (Australian Humpback Dolphin) <i>Adjustment of Appendix II to include all three species is proposed</i>

Common name	App. I listing	App. II listing	Global or regional?	Current name in CMS Appendices	CITES	IUCN	SMM	Comments
Common Bottlenose Dolphin		1991	North Sea, Baltic Sea, Mediterranean and Black Sea populations in App II	<i>Tursiops truncatus</i>	<i>Tursiops truncatus</i>	<i>Tursiops truncatus</i> <u>3 subspecies:</u> <i>T. t. ponticus</i> <i>T. t. gephyreus</i> <i>T. t. truncatus</i>	<i>Tursiops truncatus</i> <u>3 subspecies:</u> <i>T. t. ponticus</i> <i>T. t. gephyreus</i> <i>T. t. truncatus</i>	<i>T. t. ponticus</i> is already listed in Appendix I – see below No adjustment to Appendix II listing proposed, but COP14 listing proposal for inclusion of <i>T. t. gephyreus</i> in Appendix I
Black Sea Common Bottlenose Dolphin	2009			<i>Tursiops truncatus ponticus</i>	n/a	See above	See above	See above
Ganges River Dolphin	2002	1991		<i>Platanista gangetica gangetica</i>	<i>Platanista gangetica</i>	<i>Platanista gangetica</i>	<i>Platanista gangetica</i>	Formerly listed as <i>Platanista gangetica</i> . When two subspecies (<i>P. g. gangetica</i> and <i>P. g. minor</i>) were recognized, the listing was adjusted. Now two species are recognized: <i>P. gangetica</i> and <i>P. minor</i> <i>Adjustment of nomenclature proposed</i>

Recommendation for marine mammal taxonomy and nomenclature

27-28. Parties are recommended to change the standard reference for marine mammals to the online reference, the *Society for Marine Mammalogy, Committee on Taxonomy, List of marine mammal species and subspecies*, www.marinemammalscience.org.

28-29. Parties are recommended to consider the following changes to the taxonomy and nomenclature of marine mammals listed in the CMS Appendices:

a) Nomenclature

- *Otaria flavescens* to *Otaria byronia*
- *Platanista gangetica gangetica* to *Platanista gangetica*

b) Taxonomy

- *Halichoerus grypus* (only Baltic Sea populations) to *Halichoerus grypus grypus*
- *Cephalorhynchus commersonii* (South American population) to *Cephalorhynchus commersonii commersonii*
- *Sousa chinensis* to *Sousa plumbea*, *Sousa chinensis*, *Sousa sahalensis*

Proposal for broader consideration of the Catalogue of Life³

30. The Scientific Council also took note of the Catalogue of Life (<https://www.catalogueoflife.org/>) and recommended that its potential future utility as a taxonomic and nomenclatural source for all CMS species be reviewed by the Scientific Council with a view to developing a proposal for its adoption being prepared for consideration by the COP.

31. International efforts to conserve species can be significantly hampered if there is confusion about taxonomy. Consequently, there has long been an ambition to harmonize the taxonomy and nomenclature of biodiversity-related multilateral environmental agreements.

32. Harmonization of nomenclature and taxonomy in lists of species used by the biodiversity-related conventions was first raised at the 6th Meeting of the Liaison Group of the Biodiversity-related Conventions (Bonn, May 2008) and subsequently included in the CITES/CMS List of Joint Activities adopted by the 34th Meeting of the CMS Standing Committee (Rome, November 2008).

33. In 2011, harmonization was supported by the Chairs of the Scientific Advisory Bodies of Biodiversity-related Conventions (4th meeting; CSAB, Gland, Switzerland, 13 February 2011) and included in the CMS-CITES Joint Work Programmes 2012-2014 adopted since then, including at the 38th meeting of the CMS Standing Committee (Bergen, November 2011), and was also included in the draft Joint Work Programme 2021-2025 which was adopted at the 52nd Meeting of the Standing Committee Online, 21 – 29 September in 2021 (UNEP/CMS/StC52/Outcome 4 CMS-CITES Joint Work Programme 2021-2025).⁴

34. Since 2017, the COP-appointed co-Counsellor for Birds has been working under the auspices of the International Union of Biological Sciences with taxonomists, including advisors to CITES, on taxonomyways to develop institutional mechanisms that will provide timely, high quality advice on taxonomy and nomenclature to CMS, CITES and

³ <https://www.catalogueoflife.org/>

⁴ <https://www.cms.int/en/document/cms-cites-joint-work-programme-2021-2025>

other Multilateral Environmental Agreements (MEAs).

35. After investigating multiple alternatives, he and his colleagues have identified that the Catalogue of Life provides the most comprehensive list of the world's species with a capacity to provide free access to a single list with the potential to deliver time-fixed extracts of a type that is potentially suitable for the MEAs.
36. At the same time, the specialists on botanical and zoological nomenclature to CITES have concluded in a report on the development of a standardized global checklist of species (CITES PC26 Doc. 42.3 / AC32 Doc. 45.3) that the Catalogue of Life warrants investigation as offering potential utility for standardization.
37. However, before Scientific Council ~~is in a position to~~can provide advice to the Parties on whether the Catalogue of Life is suitable for the MEAs, its capacity to deliver timely taxonomic and nomenclatural information needs to be reviewed.

Recommended Actions:

~~29-38.~~ The COP is recommended to:

- a) review the findings of the comparisons of the taxonomy and nomenclature used for bird, fish and marine mammal taxa currently listed in CMS Appendices with the relevant standard references;
- b) consider and adopt changes to the Appendices as recommended by the Scientific Council;
- ~~c)~~ adopt the draft amendments to Resolution 12.27 contained in Annex 2 of this document;
- ~~e)d)~~ adopt the draft Decision contained in Annex 4 of this document.-

ANNEX 1**RECOMMENDATION ON THE TAXONOMY OF AQUATIC MAMMALS**

(Submitted by Mark Peter Simmonds, COP-appointed Councillor for Marine Pollution and Giuseppe Notarbartolo di Sciara, former COP-appointed Councillor for Aquatic Mammals)

We write to recommend to the Scientific Council that for the taxonomy of aquatic mammals CMS should follow the official list prepared by the Society of Marine Mammalogy's Committee of Taxonomy.

The taxonomy of some of these animals is still a rapidly evolving field and this official list is the one consulted with by other expert bodies including the relevant IUCN Specialist Groups (cetaceans, pinnipeds, sirenians, etc.) when identifying taxonomic units to be assessed for the Red List.

The SMM list is revised at least annually and can be found here: [List of Marine Mammal Species and Subspecies - Society for Marine Mammalogy \(marinemammalscience.org\)](http://www.marinemammalscience.org)⁵

If there is agreement to this then this means that proposals for new listings of aquatic mammals could be compared with this list to ensure taxonomic conformity and some updates may need to be made to some of the species listed on the CMS appendices. A list of proposed changes should be made and submitted to the COP for endorsement there. We would be pleased to assist in this.

⁵ <https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/#list>

PROPOSED AMENDMENTS TO RESOLUTION 12.27

TAXONOMY AND NOMENCLATURE

Recalling that with Recommendations 6.1 and 9.4, and Resolutions 10.13⁶ and 11.19⁶, the Conference of the Parties adopted standard references to be recognized and used as the bases on which the CMS Appendices and amendments thereto should be prepared,

~~*Recalling* Resolution 10.13 on Standardized Nomenclature of Birds Listed on the CMS Appendices that requests the Chair of the Scientific Council to liaise with the Chairs of the Scientific Advisory Bodies of the Biodiversity-related Conventions, the secretariats of relevant MEAs and relevant international organizations, including IUCN, BirdLife International, Wetlands International and UNEP-WCMC, with the aim of evaluating the possible adoption of a single nomenclature and taxonomy for birds, and to inform the Scientific Council at its eighteenth meeting with a view to adopting an appropriate Resolution at COP11,~~

~~*Recalling* that with Resolution 3.1 (Geneva, 1991) regarding listing of species in the Appendices of the Convention, the Conference of the Parties agreed that any further additions to the Appendices of the Convention should be limited to species or lower taxa and that the migratory species covered by higher taxa listings already in Appendix II need only be identified when AGREEMENTS are being prepared,~~

Noting that biological taxonomy and nomenclature are dynamic,

Aware that international efforts to take coherent action to conserve and sustainably use biodiversity at the species level can be significantly hampered if there is no common understanding of which animals or plants are included under a particular species name and can present particular challenges for activities such as the implementation of conventions that have legal implications,

~~*Recognizing* that the 4th meeting of the Chairs of the Scientific Advisory Bodies of Biodiversity-related Conventions (CSAB, Gland, Switzerland, 13 February 2011) expressed its support for the idea of moving towards harmonization of nomenclature and taxonomy in lists of species used by the biodiversity-related conventions, and praised the harmonization process undertaken by CITES and CMS,~~

~~*Acknowledging* that in order to strengthen the global effort to meet the Aichi Biodiversity Targets of the Kunming-Montreal Global Biodiversity Framework reducing the rate of biodiversity loss by 2020, it would be sensible to try to ensure greater harmonization between biodiversity-related multilateral environmental agreements in the field of taxonomy and nomenclature,~~

~~*Further noting* that the case for such harmonization is made more compelling by the fact that of the 424¹³³ CMS Parties, only one is not also a member of CITES,~~

~~*Acknowledging* that the harmonization of nomenclature can lead to a more integrated process, reduction of duplication and greater sharing of information between biodiversity-related Multilateral Environmental Agreements (MEAs),~~

⁶ The Recommendations and Resolutions were repealed and consolidated into Resolution 12.27

~~Recalling that this objective was noted by the 6th Meeting of the Liaison Group of the Biodiversity-related Conventions (Bonn, May 2008), and was thereby included in the CITES/CMS List of Joint Activities adopted by the 34th Meeting of the CMS Standing Committee (Rome, November 2008); and the CMS-CITES Joint Work Programme 2012-2014 adopted at the 38th meeting of the CMS Standing Committee (Bergen, November 2011),~~

~~Further aware that a harmonization of bird taxonomy and nomenclature among MEAs and other partners, such as CMS, CITES, Ramsar, IUCN, BirdLife International, Wetlands International and UNEP-WCMC, can improve synergies benefitting migratory species' conservation and better implementation of CMS Family instruments,~~

~~Recognizing that the Chairs of the Scientific Advisory Bodies of the Biodiversity-related Conventions (CSAB) have repeatedly expressed their support for the idea of moving towards harmonization of nomenclature and taxonomy in the lists of species that they use, and requested stronger cooperation among MEAs towards that goal,~~

~~Taking note of the report of the Ad Hoc Meeting on Harmonization of Bird Taxonomy which took place in Formia (Italy) on 8 October 2013 (UNEP/CMS/ScC18/Inf.9.1) and thanking the Chair of the Scientific Council for convening that meeting,~~

~~Taking note also of the report of the CITES Animals Committee that took place in Veracruz (Mexico) from 28 April to 3 May,~~

~~Stressing that notwithstanding the adoption, for practical reasons, of standard nomenclatural references at the species level, biological diversity at all taxonomic levels should be valued, conserved and used sustainably,~~

~~Taking note of the recommendations of the 15th Meeting of the CMS Scientific Council (Rome, 27-28 November 2008) concerning revision of the reference nomenclature for terrestrial and aquatic mammalian species listed in the CMS Appendices,~~

~~Noting the recommendation provided by the CMS Scientific Council at its 18th Meeting (Bonn, 1-3 July 2014), on a standard nomenclature reference for non-passerine birds,~~

~~Noting that regarding albatrosses and petrels, COP10 adopted the taxonomy used by ACAP as the Convention's standard nomenclatural reference, and that ACAP takes account of the most recent taxonomic information on species of albatrosses and petrels,~~

~~Acknowledging that the adoption of a new reference may imply cases of synonymy, species aggregation (lumping) and/or splitting of species, and that CMS has agreed rules as outlined below on how to act in such cases and their consequent reflection in the Appendices,~~

~~Noting the advice of the CMS Scientific Council at its 17th Meeting (Bergen, November 2011),~~

~~Emphasizing that stability over time in the taxonomy and nomenclature of species listed under CMS is essential to ensure legal security for the implementation of the Convention,~~

~~Recognizing that the taxonomy used in the Appendices to the Convention will be most useful to the Parties if standardized by nomenclatural references,~~

*The Conference of the Parties to the
Convention on the Conservation of Migratory Species of Wild Animals*

1. *Adopts* the list of standard references⁷ included in the Annex to be recognized and used as the basis on which the CMS Appendices and amendments thereto are prepared;
2. *Agrees* to refer to the online version of the standard fish, bird and marine mammal references of Eschmeyer, W. N., R. Fricke, and R. van der Laan (eds.), Catalog of Fishes: Genera, Species, References (<http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain>) ~~as reference for fish~~ at the time of listing new species on the Appendices of CMS and *instructs* the Secretariat to preserve a hard-copy excerpt from the relevant online reference as the standard reference for the newly listed species;
3. *Instructs* the Scientific Council to review the online versions of the fish, bird and marine mammal references for the species listed on the Appendices at its last meeting before each meeting of the Conference of Parties and make recommendations as to whether the name of any listed species should be updated;
4. *Agrees* to follow a conservative approach in the use of the online references to update names of listed species, waiting for a new taxonomy to be confirmed by the majority of scientists and other legal frameworks such as CITES before implementing any change;
5. *Agrees* to adopt the same approach for other taxonomic groups in the event that online versions of standard references will be adopted for those groups;
- ~~6. *Instructs* the Scientific Council to review the updated online version of the bird reference for the species listed on the Appendices at its last meeting before each meeting of the Conference of Parties and make recommendations as to whether the name of any listed species should be updated;~~
7. *Reaffirms* the rules adopted by the Convention for the treatment of cases of synonymy, species splitting and species aggregation (lumping) as a result of a change of standard nomenclatural reference, as follows:
 - Synonymy: corrections can be made automatically as there is no change of status for any listed population;
 - Splitting: when a listed taxon is split into two or more, each of the resulting taxa retains the listing status of the former aggregate taxon; and
 - Aggregation (lumping): if a taxon listed in either Appendix I or Appendix II of the Convention is merged with one or more unlisted taxa, under its name or that of one of the unlisted taxa, the entire aggregate taxon will be listed in the Appendix that included the originally listed, narrower taxon in all cases where the unlisted entity thus added has the same conservation status as, or a worse one than, that of the previously listed taxon. In all other cases, a taxonomic or geographical restriction will be introduced, pending consideration by the Scientific Council and the Conference of the Parties of extended listing proposals;
- ~~8. *Urges* other MEAs to adopt the same standard taxonomic reference for passerine birds;~~

⁷ As of yet there has been no need for a standard taxonomic reference for insects or reptiles (except marine turtles).

and

9. ~~Repeals~~

- a) ~~Recommendation 6.1, Standardized Nomenclature for the CMS Appendices;~~
- b) ~~Recommendation, 9.4, Standardized Nomenclature for the CMS Appendices;~~
- c) ~~Resolution 10.13, Standardized Nomenclature of Birds Listed on the CMS Appendices; and~~
- d) ~~Resolution 11.19, The Taxonomy and Nomenclature of Birds Listed in the Appendices.~~

ANNEX 3

Annex to Resolution 12.27 [Rev.COP14]

LIST OF STANDARD REFERENCES [ADOPTED BY
THE CONFERENCE OF THE PARTIES]*Mammals*

Marine mammals:

Perrin W.F., Wursig B. and Thewissen J.G.M. (Editors), (2009), *Encyclopaedia of Marine Mammals*, Second edition. Academic Press as the standard nomenclatural reference for Marine Mammals as recommended by the 15th meeting of the Scientific Council; Committee on Taxonomy. *List of marine mammal species and subspecies*. Society for Marine Mammalogy, (continuously updated);

Terrestrial mammals:

Wilson, D. E. & Reeder, D. M. (ed.) (2005): *Mammal Species of the World. A Taxonomic and Geographic Reference*. Third edition, John Hopkins University Press as the standard nomenclatural reference for terrestrial mammals, as recommended by the 14th meeting of the Scientific Council;

Birds

Non-passerine species:

Del Hoyo, J. & Collar, N.J. (2014). *Handbook of the Birds of the World and BirdLife International Illustrated Checklist of the Birds of the World*. Volume 1: Non-passerines. Lynx Edicions, Barcelona;

Passerine species:

Del Hoyo, J. & Collar, N.J. (2016). *Handbook of the Birds of the World and BirdLife International Illustrated Checklist of the Birds of the World*. Volume 2: Passerines. Lynx Edicions, Barcelona;

Marine Turtles

Eckert, K.L., Bjorndal, K.A., Abreu-Grobois, F.A. and Donnelly, M. (Eds) (1999). *Research and management techniques for the conservation of sea turtles*. IUCN/SSC Marine Turtle Specialist Group Publication No. 4;

Fishes

~~Fricke, R., Eschmeyer, W. N. & R. van der Laan (eds) 2023. *ESCHMEYER'S CATALOG OF FISHES: GENERA, SPECIES, REFERENCES* Eschmeyer, W.N., R. Fricke and R. van der Laan (Eds). *Online version of the Catalog of Fishes: Genera, Species, References*. Eschmeyer, W.N., R. Fricke and R. van der Laan (eds). California Academy of Sciences (continuously updated).~~

ANNEX 4

DRAFT DECISIONS

TAXONOMY AND NOMENCLATURE

Directed to the Scientific Council

14.AA The Scientific Council shall, subject to the availability of external resources:

- a) review the utility of the Catalogue of Life as a potential source for all taxonomic and nomenclatural information for CMS, including evaluating the processes of updating nomenclature within the Catalogue of Life;
- b) liaise with taxonomic and/or nomenclatural advisors to other Multilateral National Environmental Agreements (MEAs) on the practical challenges of extracting species lists for MEAs by a particular date for use as standard references by these MEAs.