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MIGRATORY
SPECIES**

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Agenda Item 29.3

TAXONOMY AND NOMENCLATURE

(Prepared by the Secretariat)

Summary:

This document proposes changes to taxonomy and nomenclature of species listed in Appendix I and II, in line with Resolution 12.27 *Taxonomy and Nomenclature*. It also proposes amendments to Resolution 12.27 and a draft Decision 15.AA.

The document was revised based on recent taxonomical changes to the standard reference for fish. These changes are reflected in paragraph 19-24 and 28 c) as well as in Annex 1 and Annex 3 of this document.

TAXONOMY AND NOMENCLATURE

Background

1. Resolution 12.27 (Rev.COP14) *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, bird and marine mammal 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. Activity A2 of the CMS-CITES Joint Programme of work for 2021-2025, as endorsed by the 52nd meeting of the CMS Standing Committee and the 73rd meeting of the Standing Committee of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) requests the Secretariats to “Pursue efforts to harmonize as much as possible the nomenclature in the Appendices of the two Conventions, with the long-term aim of complete alignment across all taxa.”
3. A comparison of the taxonomy and nomenclature currently used for bird, fish and marine mammal taxa listed in CMS Appendices with the relevant standard references was undertaken by the COP-appointed Councillor for Birds and the Secretariat. The following sections summarize the results of the comparisons. Annex 3 provides a synthesis of all proposed taxonomic and nomenclature changes.
4. The standard reference for terrestrial mammals was established by Resolution 12.27 (Rev.COP14); it has not been updated for many years and is out of date for many groups of species. It is therefore proposed that the Scientific Council and COP15 consider updating the standard reference, as explained in the section on ‘Terrestrial mammals’ below, and reflected in the draft amendment to Resolution 12.27(Rev.COP14) as contained in Annex 1 and draft Decision 15.AA contained in Annex 2.

Terrestrial mammals

5. Resolution 12.27 (Rev.COP14) designates the following as the standard reference for 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.
6. For all species under Felidae ssp., the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) uses the following as a standard reference:
 - Kitchener, A.C., Breitenmoser-Würsten, C.H., Eizirik, E., Gentry, A., Werdelin, L., Wilting, A., Yamaguchi, N., Abramov, A.V., Christiansen, P., Driscoll, C. et al. (2017). *A revised taxonomy of the Felidae. The final report of the Cat Classification Task Force of the IUCN/SSC Cat Specialist Group*. *Cat News Special Issue* 11, 80 pp.
7. In order to harmonize the taxonomy and nomenclature with that of CITES, it is recommended that CMS changes the standard reference for species in the family Felidae to Kitchener et al. (2017). This also aligns with the recommendation by COP14 in UNEP/CMS/COP14/Doc.31.4.1/Add.1: “The Scientific Council recommends using Kitchener et al. (2017) as the taxonomic reference for Eurasian Lynx (*Lynx lynx*) and its subspecies, as already adopted by CITES through Resolution 12.11 (Rev. COP19)”. Draft amendments to the Annex to Resolution 12.27 (Rev.COP14) *Taxonomy and Nomenclature* reflecting this change, are contained in Annex 1 to this document.

Adjustments to nomenclature that would result from the adoption of the proposed amendment to the standard reference for species in the family Felidae are detailed below (as well as in Annex 3 to this document):

- a) *Uncia uncia* to *Panthera uncia*
- b) *Felis manul* to *Otocolobus manul*

8. While *Camelus bactrianus*, listed under Appendix I, is recognized in the standard reference, the International Commission on Zoological Nomenclature (ICZN) ruled in 2003 that the name for the wild form, *Camelus ferus*, be recognized, despite being predated by the domestic form of the name, *C. bactrianus*. This ruling supports the use of *C. ferus* for the wild Bactrian camel when it is considered taxonomically distinct from the domestic form. This change is accepted in the Mammal Diversity Database (2025; Version 2.3) by the American Society of Mammalogists.
9. Likewise, the standard reference recognizes *Bos grunniens*, listed under Appendix I, while the ICZN ruled in 2003 that the name for the wild form, *Poephagus mutus* (now placed in the genus *Bos*), be recognized, despite being predated by the domestic form of the name, *Bos grunniens*. This ruling supports the use of *Bos mutus* for the wild yak when it is considered taxonomically distinct from the domestic form. This change is accepted in the Mammal Diversity Database (2025; Version 2.3) by the American Society of Mammalogists.
10. The taxonomy and nomenclature of terrestrial mammals have evolved considerably since the publication of Wilson & Reeder (2005). Given the specific taxonomic and nomenclature issues identified for *Camelus bactrianus* and *Bos grunniens* in paragraphs 8 and 9, the substantive changes in the taxonomy and nomenclature of bat species since 2005, and the listing of four taxa on the CMS Appendices (*Equus africanus*, *Equus ferus przewalskii*, *Lama guanicoe* and *Ovis vignei*) that do not directly correspond to the CMS standard reference for terrestrial mammals, it is recommended that possible alternatives for a new standard reference for some or all of the terrestrial mammals is explored in the next intersessional period. A draft Decision 15.AA(a) requesting the Scientific Council to consider this matter is contained in Annex 2.

Marine mammals

11. Resolution 12.27 (Rev. COP14) designates the following as the standard reference for marine mammals:
 - Committee on Taxonomy. *List of marine mammal species and subspecies*. Society for Marine Mammalogy, www.marinemammalscience.org, (continuously updated)
12. An update of marine mammal taxonomy was published in July 2025, available at <https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/>. A comparison of the taxonomy and nomenclature used for marine mammal taxa currently listed in the CMS Appendices determined that some adjustments are required to stay in line with the taxonomic reference, as detailed in Annex 3.

13. Parties are recommended to consider the following changes to the taxonomy and nomenclature of marine mammals listed in the CMS Appendices (also detailed in Annex 3):

Taxonomy

- a) *Balaenoptera edeni* to *Balaenoptera edeni*, *Balaenoptera ricei*

Nomenclature

- b) *Lagenorhynchus obscurus* to *Aethalodelphis obscurus*
c) *Lagenorhynchus australis* to *Cephalorhynchus australis*
d) *Lagenorhynchus acutus* to *Leucopleurus acutus*

Birds

14. Resolution 12.27 (Rev.COP14), paragraphs 2 and 3, refer to the online versions of the standard references for fish, birds and marine mammals used for listing new species and for updating the names of listed species. However, unlike the standard references for marine mammals and fish (listed in the Annex to the Resolution) which are continuously updated, Resolution 12.27 (Rev.COP14) designates the following as the standard reference for birds:

- a) 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;
- b) 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;

15. Differing interpretations of Resolution 12.27(Rev.COP14) as it is currently written has led to some confusion. Noting that online updated versions of the Handbook of the Birds of the World (HBW) and BirdLife Checklist have been used to update species names in CMS Appendices and on species lists (such as in Annexes to Resolutions 14.19 and 14.20), a change of the standard references is therefore considered necessary. The HBW-BirdLife online Checklist is proposed as a replacement for the current standard reference for birds. Amendments to this effect are proposed to Resolution 12.27 (Rev.COP14), as contained in Annex 1. The most up-to-date version of this Checklist is Version 10.0, available at <https://datazone.birdlife.org/about-our-science/taxonomy>.¹

16. A comparison of the taxonomy and nomenclature used for bird taxa currently listed in the CMS Appendices determined that the adoption of this standard reference will lead to the following amendments to the Appendices:

- a) Accipitridae will be split into Accipitridae and Elanidae;
- b) The newly designated family, Lamprolidae, will be included on Appendix II, as three species previously classified within the Rhipiduridae and one species formerly placed in the Monarchidae have been reassigned to this new family;

¹ Given that Version 10.0 was only published on 10 October 2025, Version 9.0 has been used as the reference for preparing documents for COP15, including documents UNEP/CMS/COP15/Doc29.1 and UNEP/CMS/COP15/Doc29.4.

- c) Sylviidae (formerly in Muscicapidae) will be split into Sylviidae and Paradoxornithidae;
 - d) Leiotrichidae (formerly in Muscicapidae) will be split into Leiotrichidae and Alcippeidae.
17. A unified checklist of birds of the world is currently being developed by BirdLife International and the Cornell Lab of Ornithology (AviList²) and will be finalized in the next couple of years. Draft Decision 15.AA(b) requests the Scientific Council to review the CMS standard reference for birds once the AviList is completed and make any recommendations for its adoption as the standard reference.

Fish

18. Resolution 12.27 (Rev.COP14) *Taxonomy and Nomenclature* designates the online version of Fricke, R., Eschmeyer, W. N. & R. van der Laan (eds) (2023). *ESCHMEYER'S CATALOG OF FISHES: GENERA, SPECIES, REFERENCES* as the standard reference for fish. The Catalog (continuously updated) is available at: <https://www.calacademy.org/scientists/projects/eschmeyers-catalog-of-fishes>
19. For each fish species currently listed in the CMS Appendices, an excerpt was downloaded on 19 August 2025 from Fricke, R., Eschmeyer, W. N. & R. van der Laan (eds) (2025), in line with paragraph 2 of Resolution 12.27 (Rev.COP14). The excerpts are made available in UNEP/CMS/COP15/Inf.29.3 and were used as the basis for taxonomic and nomenclatural changes proposed in the first version of this document, published on 26 October 2025.
20. However, an IUCN expert workshop held during the 10th International Symposium on Sturgeon (China, October 2025), concluded that the sturgeon taxonomy revision proposed by Brownstein & Near (2025)³ and reflected in the online version of the *Eschmeyer's Catalog of Fishes* was not supported by wider scientific consensus and should not be adopted. The current version of the Catalog, updated after the publication of the first version of this document, has meanwhile reverted to the previously applied taxonomy for CMS-listed sturgeons.
21. COP15 may consider adopting new taxonomy and nomenclature for fishes in line with the excerpt from Fricke, R., Eschmeyer, W. N. & R. van der Laan (eds) (2025), downloaded on 19 August 2025, for all fishes, except for sturgeons (Acipenseriformes), for which COP 15 may consider maintaining the current standard reference, based on the previously downloaded version of Fricke, R., Eschmeyer, W. N. & R. van der Laan (eds) (2023), as downloaded on 12 May 2023 (UNEP/CMS/COP14/Inf.31.1). This is in line with Resolution 12.27 (Rev.COP14), which, in paragraph 4, calls for a conservative approach to nomenclatural updates, pending scientific confirmation.
22. 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, outlined below.

² <https://www.avilist.org/>

³ Brownstein, C. D. and T. J. Near (2025): Toward a phylogenetic taxonomy of sturgeons (Acipenseriformes: Acipenseridae). *Bulletin of the Peabody Museum of Natural History* v. 66 (no. 1): 3-23.

Actinopterygii

23. The first version of this document noted that the changes in the online reference would have led to the following changes to the taxonomy and nomenclature of Acipenseriformes listed in the CMS Appendices:
- a) *Huso dauricus* to *Sinosturio dauricus*
 - b) *Acipenser baerii* to *Huso baerii*
 - c) *Acipenser fulvescens* to *Huso fulvescens*
 - d) *Acipenser gueldenstaedtii* to *Huso gueldenstaedtii*
 - e) *Acipenser medirostris* to *Sinosturio medirostris*
 - f) *Acipenser mikadoi* to *Sinosturio mikadoi*
 - g) *Acipenser naccarii* to *Huso naccarii*
 - h) *Acipenser nudiventris* to *Huso nudiventris*
 - i) *Acipenser persicus* to *Huso persicus*
 - j) *Acipenser ruthenus* to *Huso ruthenus*
 - k) *Acipenser schrenckii* to *Sinosturio schrenckii*
 - l) *Acipenser sinensis* to *Sinosturio sinensis*
 - m) *Acipenser stellatus* to *Huso stellatus*
24. In light of the latest developments described in paragraph 20 above, COP15 may consider not making these changes to the standard reference of Acipenseriformes and maintaining the currently applicable standard reference, Fricke, R., Eschmeyer, W. N. & R. van der Laan (eds) (2023). *ESCHMEYER'S CATALOG OF FISHES: GENERA, SPECIES, REFERENCES*, as downloaded on 12 May 2023 (UNEP/CMS/COP14/Inf.31.1).

Mobulidae

25. Fricke, R., Eschmeyer, W. N. & R. van der Laan (eds) (2025) refer to Bucalir et al. (2025)⁴ as the scientific reference for the changes in *Mobula birostris* taxonomy and nomenclature. This integrative taxonomy study has identified a previously unrecognized species of *Mobula* in the Atlantic Ocean. This cryptic species, distinguished by unique morphological traits and genetic markers, is closely related to *Mobula birostris* and *Mobula alfredi*. The discovery has implications for species-level conservation measures.
26. These changes in the online reference would lead to the following changes to the taxonomy and nomenclature of Mobulidae listed in the CMS Appendices:
- a) *Mobula birostris* to *Mobula birostris*, *Mobula yarae*

Recommendations for fish taxonomy and nomenclature

27. Parties are invited to consider whether the changes to fish taxonomy as outlined in Annex 3 should be applied to the CMS Appendices.

⁴ Bucalir, N., Hinojosa-Alvarez, S., Marshall, A.D. et al. An integrative taxonomy investigation unravels a cryptic species of *Mobula* Rafinesque, 1810 (Mobulidae, Myliobatiformes), from the Atlantic Ocean. *Environ Biol Fish* (2025). <https://doi.org/10.1007/s10641-025-01727-2>

Recommended actions:

28. The COP is recommended to:

- a) adopt the draft amendments to the Annex to Resolution 12.27 (Rev.COP14) *Taxonomy and Nomenclature* contained in Annex 1 of this document;
- b) adopt the draft Decision 15.AA contained in Annex 2 of this document;
- c) adopt the changes to taxonomy and nomenclature of species listed in Appendix I and II as contained in Annex 3 of this document, noting that that the reference date for the marine mammals standard reference is July 2025, the date for the fish standard reference is 19 August 2025 (except for Acipenseriformes, for which the 12 May 2023 version remains the standard reference), and that the currently applicable version of the standard reference for bird taxonomy is *Handbook of the Birds of the World and BirdLife International Digital Checklist of the Birds of the World*. Version 10.0 (October 2025).

ANNEX 1

PROPOSED AMENDMENTS TO RESOLUTION 12.27 (Rev.COP14)

TAXONOMY AND NOMENCLATURE

NB: Proposed new text is underlined. Text to be deleted is ~~crossed out~~.

Annex to Resolution 12.27 (Rev.COP14)

LIST OF STANDARD REFERENCES ADOPTED BY THE CONFERENCE OF THE PARTIES

Mammals

Marine mammals:

Committee on Taxonomy. *List of marine mammal species and subspecies*. Society for Marine Mammalogy, www.marinemammalscience.org, (continuously updated);

Terrestrial mammals (except Felidae spp.):

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;

Felidae spp.:

Kitchener A. C., Breitenmoser-Würsten Ch., Eizirik E., Gentry A., Werdelin L., Wilting A., Yamaguchi N., Abramov A. V., Christiansen P., Driscoll C., Duckworth J. W., Johnson W., Luo S.-J., Meijaard E., O'donoghue P., Sanderson J., Seymour K., Bruford M., Groves C., Hoffmann M., Nowell K., Timmons Z. and Tobe S. (2017): A revised taxonomy of the Felidae. The final report of the Cat Classification Task Force of the IUCN/SSC Cat Specialist Group. Cat News Special Issue 11, 80 pp.

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;~~

HBW and BirdLife International. *Handbook of the Birds of the World and BirdLife International digital checklist of the birds of the world*. Available at <https://datazone.birdlife.org/about-our-science/taxonomy> (updated annually).

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 (except Acipenseriformes)

Fricke, R., Eschmeyer, W. N. & R. van der Laan (eds) 2023~~2025~~. ESCHMEYER'S CATALOG OF FISHES: GENERA, SPECIES, REFERENCES ~~California Academy of Sciences~~ (<http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>). Electronic version (downloaded on 19 August 2025 and available in UNEP/CMS/COP15/Inf.29.3-continuously updated).

Acipenseriformes

Fricke, R., Eschmeyer, W. N. & R. van der Laan (eds) 2023. ESCHMEYER'S CATALOG OF FISHES: GENERA, SPECIES, REFERENCES (<http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>). Electronic version (downloaded on 12 May 2023 and available in UNEP/CMS/COP14/Inf.31.1).

DRAFT DECISION

CMS STANDARD REFERENCES

Directed to the Scientific Council

15.AA The Scientific Council is requested to:

- a) review the standard reference for terrestrial mammals as established by Resolution 12.27(Rev.COP14) and make any recommendations for its update to COP16;
- b) review the standard reference for birds as established by Resolution 12.27 (Rev. COP14) once the Avilist is completed as a unified checklist of the birds of the world, and make any recommendations for its adoption as the standard reference.

ANNEX 3

SUMMARY OF PROPOSED CHANGES IN NOMENCLATURE AND TAXONOMY FOR CMS-LISTED SPECIES

Table 1: Changes in scientific names of species resulting from changes in standard nomenclature

Higher grouping	Family	Appendix	Current name	Proposed name	Description of change	Comments
MAMMALIA						
CARNIVORA	Felidae	I	<i>Uncia uncia</i>	<i>Panthera uncia</i>	Genus change	
	Felidae	II	<i>Felis manul</i>	<i>Otocolobus manul</i>	Genus change	
CETACEA	Balaenopteridae	II	<i>Balaenoptera edeni</i>	<i>Balaenoptera edeni</i> and <i>Balaenoptera ricei</i>	Species split	CITES COP20 is recommended to adopt the same taxonomic change; <i>Balaenoptera ricei</i> is described as occurring in the Gulf of Mexico
	Delphinidae	II	<i>Lagenorhynchus obscurus</i>	<i>Aethalodelphis obscurus</i>	Genus change	Listed in CITES Appendix II as Cetacea spp.
	Delphinidae	II	<i>Lagenorhynchus australis</i>	<i>Cephalorhynchus australis</i>	Genus change	Listed in CITES Appendix II as Cetacea spp.
	Delphinidae	II	<i>Lagenorhynchus acutus</i>	<i>Leucopleurus acutus</i>	Genus change	North and Baltic Sea populations listed on App. II.; listed in CITES Appendix II as Cetacea spp.
AVES						
ACCIPITRIFORMES	Accipitridae	II	A. spp.	Accipitridae and Elanidae	Family split	Listed as family; none of the species of Accipitridae listed individually in Appendix I are affected by the family split

Higher grouping	Family	Appendix	Current name	Proposed name	Description of change	Comments
PASSERIFORMES	Rhipiduridae	II	R. spp.	Rhipiduridae and Lamprolidae	Family split	Listed as family; three species previously classified within the Rhipiduridae have been reassigned to the newly designated family, Lamprolidae
	Monarchidae	II	M. spp.	Monarchidae and Lamprolidae	Family split	Listed as family; one species formerly placed in the Monarchidae has been reassigned to the newly designated family, Lamprolidae
	Sylviidae	II	S. spp.	Sylviidae and Paradoxornithidae	Family split	Listed as family
	Leiotrichidae	II	L. spp.	Leiotrichidae and Alcippeidae	Family split	Listed as family
PISCES						
ELASMOBRANCHII	Mobulidae	I & II	<i>Mobula birostris</i>	<i>Mobula birostris</i> ; and <i>Mobula yarae</i>	Species split	CITES lists the species under <i>Mobula spp.</i> ⁵

⁵ *Mobula yarae* is found exclusively in the Atlantic Ocean. The species occurs from the "northeastern USA to southeastern Brazil, including the Gulf of Mexico, the Caribbean islands, the Amazon continental shelf and estuaries, and the oceanic systems of Saint Peter and Saint Paul and Fernando de Noronha archipelagos" (Bucair et al., 2025). **Range States** include the Bahamas, Brazil, Mexico and the United States of America.

Additional Range States and territories inferred based on species distribution map in describing paper: Antigua and Barbuda, Barbados, Belize, Cuba, Dominica, Dominican Republic, France (Guadeloupe, Martinique), Grenada, Haiti, Honduras, Jamaica, Netherlands (Aruba, Curaçao), Nicaragua, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, UK (Anguilla, British Virgin Islands, Cayman Islands, Montserrat, Turks and Caicos Islands), Venezuela.