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THE TAXONOMY AND NOMENCLATURE OF BIRDS LISTED ON THE CMS APPENDICES: SUPPLEMENTARY INFORMATION

Summary:

Pursuant to Resolution 10.13, this document compares three options for bird nomenclatural references and analyses their implications for the CMS Appendices and CITES Annexes. The document has been prepared by the COP-appointed Councillor for Birds, Leon Bennun.

The document serves as background information to the draft Resolution on the Taxonomy and Nomenclature of Birds Listed on the Appendices of CMS, contained in UNEP/CMS/COP11/Doc.23.1.6. It was presented and endorsed at the 18th Meeting of the Scientific Council (ScC18) held in Bonn, 1-3 July 2014.

THE TAXONOMY AND NOMENCLATURE OF BIRDS LISTED ON THE CMS APPENDICES: SUPPLEMENTARY INFORMATION

(Prepared by Leon Bennun, COP-appointed Councillor for Birds)

This is a supplementary paper to UNEP/CMS/COP11/Doc.23.1.6: *The taxonomy and nomenclature of birds listed on the CMS Appendices* and should also be read together with UNEP/CMS/ScC18/Inf.9.1: *Report of the Ad-Hoc Meeting on Harmonization of Bird Taxonomy (Formia, Italy, 8 October 2013)*

Comparison of standard nomenclatural references

1. The Formia Meeting discussed three standard references for avian nomenclature mentioned as possibilities for adoption (in whole or in part) by CMS:

a. The Howard and Moore Complete Checklist of the Birds of the World, 4th edition, edited by E. C. Dickinson and J.V. Remsen, Jr. (2013 and in press) (see http://www.avespress.com/books/new-book/);
b. The Handbook of the Birds of the World/BirdLife International Illustrated Checklist of the Birds of the World, edited by J. del Hoyo, N.J. Collar, D.A. Christie, A. Elliot and L.D.C. Fishpool, published in an illustrated checklist and online by Lynx Edicions in August 2014 (non-passerines), with passerines due in 2016. (see http://www.lynxeds.com/product/hbw-and-birdlife-international-illustrated-checklist-birds-world#brochure); and
c. The International Ornithological Congress World Bird List (formerly IOC World Bird Names), edited by F. Gill and D. Donsker, and published online (www.worldbirdnames.org).

2. Table 1 compares the main features of these three checklists that are relevant to CMS. The discussion at the Formia Meeting, informed by this table, is reported in UNEP/CMS/ScC18/Inf.9.1, paras 25-35.

Analysis of nomenclatural implications

3. The Formia Meeting proposed an initial analysis of the nomenclatural implications for the CMS Appendices and CITES Annexes of the new HBW/BirdLife International Illustrated Checklist of the Birds of the World. This preliminary analysis was undertaken by BirdLife International and was confined to the non-passerine bird species, covered in vol. 1 of the checklist. The nomenclatural list for passerine species (order Passeriformes, around half of all bird species, to be covered in vol. 2) is still in preparation.

4. The preliminary results are shown in Table 2 and can be summarized as follows: for the CMS Appendices, around 4 per cent of the 167 named species would be affected by splits (one or more additional species being recognized) or lumps (two or more existing species being merged) in the HBW/BirdLife International checklist. For CITES, the corresponding figure would be 7 per cent of the 196 named species. In the CMS family of instruments, 2 per cent of the 256 species listed in the Africa-Eurasia Migratory Waterbird Agreement (AEWA) and 1 per cent of species listed by the Raptors Memorandum of Understanding would be similarly affected. Most changes would be owing to splits rather than to lumps. No changes

would be expected in the species lists of the Agreement on Conservation of Albatrosses and Petrels (ACAP).

5. For CMS, an additional 11 and for CITES an additional 86 species would be affected by splits or lumps in groups that are listed in Appendices at a taxonomic level higher than species (genus, family or order). In practice, such changes would not necessitate any revision of the Appendices as these listings are already inclusive of all species (barring named exceptions) in the higher taxon.

6. BirdLife International anticipates that the extent of taxonomic change (especially the proportion of splits) will be higher for passerine birds (HBW/BirdLife checklist to be published in 2016) than for the non-passerines. However, the effects of these changes on CMS and CITES appendices are likely to be small, as there are many fewer passerines than non-passerines on the Appendices for both Conventions. Passerines constitute only around 14 per cent of the named bird species in the CMS Appendices and 10 per cent in the CITES appendices. AEWA and the Raptors MoU do not list passerine species.

7. Details of the non-passerine species involved for the CMS Family are given in Table 3.

Table 1: Comparison of the main relevant features of three standard avian nomenclatural references

	Howard & Moore 4th edition	HBW/BirdLife International	Intl Ornithological Congress (IOC)
	http://www.avespress.com/books/new-book/	http://www.lynxeds.com/product/hbw-and-birdlife-international-illustrated-checklist-birds-world#brochure http://www.birdlife.org/datazone/info/taxonomy	www.worldbirdnames.org
Produced by?	Aves Press / Trust for Avian Systematics	BirdLife International in partnership with Lynx Edicions (publishers of Handbook of Birds of the World, HBW)	IOC
Primary aim/target	Academic research. "To serve the academic community and those who write scientific papers, providing a work that can be cited in the knowledge that it can be checked."	Conservation. To provide an up-to-date list of the world's bird species assessed according to an explicit, transparent and defensible species delimitation methodology, applied consistently across all regions.[1]	Improved communication among ornithologists. "To facilitate worldwide communication in ornithology and conservation based on up-to-date taxonomy of the world's birds and recommended English names."
Who makes the taxonomic decisions?	Twelve regional consultants - ornithologists with wide experience of particular regions (not necessarily taxonomic specialists). Independent Editorial Advisory Committee for Eastern Hemisphere.	BirdLife Taxonomic Working Group (small group with extensive ornithological/taxonomic experience) and acoustic advisors, and Editors, HBW	"A volunteer project with global participation by birders and professional ornithologists." Panel of 17 advisors, ornithologists with wide experience of particular regions (not necessarily taxonomic specialists)
Printed version?	Yes - vol 1 (non-passerines) published 2013, vol. 2 due 2014	Yes – vol. 1 (non-passerines) published 2014, vol 2 due 2016	No
Cost of printed version	c. US$ 90 for vol. 1	€ 185 for vol. 1	No printed version
Electronic (internet) version?	No (except updates)	Yes, species list (and associated factsheets) free to access	Yes, free to access
Date-stamped internet versions?	No	Yes, species list free to access	No
Updates	Expected to be regular updates as e-journal papers. Not definitive (next published list may not adopt proposals). Access available to purchasers of the printed book.	Updated annually. Previous editions available and date-stamped. BirdLife has volunteered to provide data-stamped versions as required by MEAs referring to the list.	Continuous - listed in update diary.

[1] Although sub-species can be assessed for the IUCN Red List, in practice BirdLife (the IUCN Red List Authority for birds) can make a comprehensive assessment only at the species level. This is the main rationale for BirdLife seeking to apply a consistent and transparent species delimitation standard worldwide.

	Howard & Moore 4th edition	HBW/BirdLife International	Intl Ornithological Congress (IOC)
Taxonomic approach/species concept	Conservative treatment based on review of published technical literature. Does not use genetic distance to assign taxonomic rank.	Uses a set of criteria by which species rank can be consistently assessed (Tobias et al. 2010)[2]. These involve weighting morphological and acoustic differences as compared with the nearest presumed relative, and are particularly intended to help make decisions involving allopatric taxa. Differences are described and quantitative scores are provided for all taxa assessed. Aims to be (a) proactive in researches (making its own independent evaluations of the evidence) and (b) explicit in accounting for decisions. Genetic information is considered but does not use genetic distance to assign taxonomic rank.	No explicit approach outlined.
Geographic consistency in species delimitation?	Moderate. Recognizes different information base for W versus E Hemisphere, hence different thresholds for species delimitation.	Strong. Explicit aim of the approach.	Low. Likely to be significant variation between regions.
Synonymy with other standard lists	Not included	Synonymy developed but not yet available online	Extensive synonymy available online
Sub-species	Sub-species and outline ranges listed. Treatment based largely on HBW	Sub-species and outline ranges listed. Treatment builds on HBW	Sub-species and outline ranges listed based on Howard & Moore 2003 edition
Additional documentation/information	Taxonomic decisions referenced	Taxonomic decisions referenced. Web checklist linked to species factsheets with extensive documentation, including range maps. Printed version includes range maps & HBW illustrations.	Some taxonomic decisions referenced.
Current policy application	Previous version (3rd Edition) adopted as nomenclature for CITES	Basis for bird assessments on IUCN Red List and for Red List Index used by CBD, UN Millennium Development Goals etc. The IUCN Red List is used, *inter alia*, for definition of Key Biodiversity Areas in the new IUCN global standard, including existing Important Bird and Biodiversity Areas (IBAs). The Red List nomenclature is the basis for population thresholds (compiled by Wetlands International in *Waterbird Population Estimates*) used in Ramsar site listing under criterion 6, and has been adopted by AEWA (via Waterbird Population Estimates) and the Raptors MoU.	None known.

[2] Tobias, JA, Seddon, N., Spottiswoode, CN, Pilgrim, JD, Fishpool, LDC & Collar, NJ (2010). Quantitative criteria for species delimitation. *Ibis* 152: 724–746.

Table 2: Summary of potential changes in CMS and CITES Appendices if new HBW/BirdLife checklist nomenclature was adopted, for non-passerine birds

	Non-passerines		**Non-passerine species affected by changes in new HBW/BirdLife list**				*Passerines*	
			Listed at species level		*Listed at generic level or above*			
	Named species	**Named genus/family/ order**	**Lumped**	**Split**	*Lumped*	*Split*	*Named species*	*Named genus/family/ order*
CMS								
Appendix I	66	0	0	1	*0*	*0*	*16*	*0*
Appendix II	101	8	1	5	*1*	*10*	*12*	*1*
Total	**167**	**8**	**1**	**6**	***1***	***10***	***28***	***1***
CITES								
Appendix I	145	0	3	4	*0*	*1*	*9*	*0*
Appendix II	27	15	0	5	*9*	*76*	*10*	*0*
Appendix III	24	0	0	1	*0*	*0*	*2*	*0*
Total	**196**	**15**	**3**	**10**	***9***	***77***	***21***	***0***

Table 3: Details of potential changes to bird species listings in the appendices of CMS, AEWA and the Raptors MoU, through adopting the new HBW/BirdLife International Checklist nomenclature. For AEWA, 'marginally relevant' changes have effect only outside the AEWA region.

CMS

Appendix	Common name	Scientific name	Change
	Named species		
II	African Woollyneck	*Ciconia microscelis*	Split from Asian Woollyneck *C. episcopus*
II	Australian Little Bittern	*Ixobrychus dubius*	Split from Common Little Bittern *I. minutus*
II	Indian Thick-knee	*Burhinus indicus*	Split from Eurasian Thick-knee *B. oedicnemus*
II	Arctic Herring Gull	*Larus smithsonianus*	Split from European Herring Gull *L. argentatus*
II	Australian Gull-billed Tern	*Gelochelidon macrotarsa*	Split from Common Gull-billed Tern *G. nilotica*
I	Asian Houbara	*Chlamydotis macqueenii*	Split from African Houbara *C.undulata*
	Species within generic or family listing		
II	American Comb Duck	*Sarkidiornis sylvicola*	Split from African Comb Duck *S. melanotos*
II	Andean Duck	*Oxyura ferruginea*	Split from Ruddy Duck *O. jamaicensis*
II	Madagascar Three-banded Plover	*Charadrius bifrontatus*	Split from African Three-banded Plover *C. tricollaris*
II	White-faced Plover	*Charadrius dealbatus*	Split from Kentish Plover *C. alexandrinus*
II	Snowy Plover	*Charadrius nivosus*	Split from Kentish Plover C. *alexandrinus*
II	Black-winged Stilt	*Himantopus himantopus*	Now includes White-headed Stilt "*H. leucocephalus*" & Black-necked Stilt "*H mexicanus*"
II	Wilson's Snipe	*Gallinago delicata*	Split from Common Snipe *G. gallinago*
II	Armenian Gull	*Larus armenicus*	Split from Yellow-legged Gull *L. michahellis*
II	Papuan Harrier	*Circus spilothorax*	Split from Eastern Marsh-harrier *C. spilonotus*

II	Northern Harrier	*Circus hudsonius*	Split from Hen Harrier *C. cyaneus*
II	Grey-lined Hawk	*Buteo nitidus*	Split from Grey Hawk *B. plagiatus*
II	Japanese Buzzard	*Buteo japonicus*	Split from Eurasian Buzzard *B. buteo*
II	Himalayan Buzzard	*Buteo refectus*	Split from Eurasian Buzzard *B. buteo*
II	Forest Buzzard	*Buteo trizonatus*	Split from Mountain Buzzard *B. orophilus*
II	Peregrine Falcon	*Falco peregrinus*	Now includes Barbary Falcon "*F. pelegrinoides*"

AEWA

Common name	**Scientific name**	**Change**
African Woollyneck	*Ciconia microscelis*	Split from Asian Woollyneck *C. episcopus*
Yellow-billed Egret	*Ardea brachyrhyncha*	Split from Intermediate Egret *A. intermedia* (which is also split from Plumed Egret *A. plumifera* of New Guinea to Australia)
Madagascar Three-banded Plover	*Charadrius bifrontatus*	Split from African Three-banded Plover *C. tricollaris*
White-faced Plover	*Charadrius dealbatus*	Split from Kentish Plover *C. alexandrinus* (which is also split from Snowy Plover *C. nivosus*)
Armenian Gull	*Larus armenicus*	Split from Yellow-legged Gull *L. michahellis*
Marginally relevant		
African Comb Duck	*Sarkidiornis melanotos*	Split from American Comb Duck *S. sylvicola*
Common Little Bittern	*Ixobrychus minutus*	Split from Australian *I. dubius*
Green-backed Heron	*Butorides striata*	Now includes "*B. virescens*" of N/Central America
Western Reef-egret	*Egretta gularis*	Now includes subspp *dimorpha* (formerly included in *E. garzetta*, & split by AEWA)

Western Water Rail	*Rallus aquaticus*	Split from E Asian *R. indicus*
Common Moorhen	*Gallinula chloropus*	Split from American *G. galeata*
Eurasian Oystercatcher	*Haematopus ostralegus*	Now includes "*H. finschi*" of New Zealand
Black-winged Stilt	*Himantopus himantopus*	Now includes "*H. leucocephalus*" of Indonesia to Australia & "*H mexicanus*" of New World
Common Snipe	*Gallinago gallinago*	Split from Wilson's Snipe *G. delicata*
European Herring Gull	*Larus argentatus*	Split from Arctic Herring Gull *L. smithsonianus*
Common Gull-billed Tern	*Gelochelidon nilotica*	Split from Australian Gull-billed Tern *G. macrotarsa*

Raptor MoU

Common name	**Scientific name**	**Change**
Peregrine Falcon	*Falco peregrinus*	Now includes Barbary Falcon "*F. pelegrinoides*"