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Proposal for a DNA Parentage-based Export Protocol

CCBFA and its clubs nationally wish to work with government to stamp out the illegal bird trade. DNA parentage testing is now viable and should form the scientific backbone of ensuring only captive bred birds are traded across our borders.

Changes to the *Environmental Protection and Biosecurity Act 1999* (EPBC Act)¹ as detailed in Supplement B are recommended to implement this proposal and to meet Australia's obligations as a signatory to the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES)².

CCBFA current stance supported by all clubs is as follows.

CCBFA supports and encourages a simplified export system for birds known to be aviary bred. Essentially captive bred birds, whether native or exotic, should be treated in the same manner as dogs, cats, and other routinely exported (and imported) species (except for threatened species within captive breeding programs). This is THE way to deter smuggling, as there is not and will not ever be sufficient sustainable funding to enforce border controls. The only proviso is to include safeguards to ensure captive numbers within Australia for each exported species remain sustainable.

Aim

1. To ensure all CITES listed birds (see Supplement A – CITES listed avian species in Australia) exported from Australia are captive bred as required for Australia to meet its obligations as a signatory to CITES, in particular CITES Article VII(5)³.
2. To remove incentives for smuggling and poaching of all Australian native and exotic avian species held in aviculture through the design of a robust, accessible, and economically viable export (and import) system for captive bred birds.

Background Notes

1. The compulsory *National Exotic Bird Registration Scheme* (NEBRS) closed in 2002 and was replaced with a voluntary scheme known as the *Exotic Bird Record-Keeping Scheme* (EBRS)⁴ or EBRKS in some references. Both the mandatory NEBRS scheme and the current EBRS scheme utilises Movement Transaction Records (MTRs) in an attempt to prove parentage back to legally

¹ Environmental Protection and Biosecurity Act 1999
http://classic.austlii.edu.au/au/legis/cth/consol_act/epabca1999588

² CITES <https://cites.org/eng/disc/text.php>

³ CITES Article VII <https://cites.org/eng/disc/text.php#VII>

⁴ Compliance and record keeping guide for ownership of exotic birds in Australia
<https://www.environment.gov.au/system/files/resources/7b158178-166e-4d39-8630-26af806a9ddd/files/compliance-record-keeping-guide-ownership-exotic-birds-australia.pdf>

sourced birds. Neither scheme used or uses DNA to either prove parentage or as unique identifiers.

2. The NEBRS and EBRS schemes are flawed and there was and is widespread concern of significant fraudulent activity.
 - a. Both NEBRS and the current EBRS schemes attempted to manage the issues using the technologies available at the time. DNA testing techniques are now far more refined and reliable including in a legal sense.
 - b. During the creation of the NEBRS, many species were added to the *Inventory of Exotic (non-native) Bird Species*⁵ known to be in Australia that were not actually in the country. Many of these species are now present in Australia. In effect NEBRS enabled these species to be laundered into Australian aviculture.
 - c. The data entered on Movement Transaction Records (MTRs) relies on the honesty of the individual completing the MTR. If the birds, often as eggs, have been smuggled into the country or poached from the wild and the MTR claims they have been captive bred in Australia neither the NEBRS or EBRS was or is able to detect the deception.
 - d. EBRS is a voluntary scheme and is not well supported. There is widespread, albeit hearsay, that a good number of MTRs are fraudulent being used to legitimise illegally (both smuggled and poached) obtained birds and improve their marketability.
3. Restrictions on exports (and imports) to “zoos” and for other non-commercial purposes as legislated in EPBC Act *Division 5--Concepts relating to permit criteria* will continue to encourage smuggling and poaching. A robust, accessible and economically viable export (and import) system is required – this is THE way to deter smuggling and poaching of birds.

DNA Parentage Protocol

DNA parentage testing utilises a suite of markers which can provide a high probability that a bird is the offspring of two parents. It can quantify differences in the DNA of purported parents and their purported offspring. A marker not present in either parent’s DNA that is present in the offspring DNA proves conclusively that the bird is NOT the offspring of either parent.

All birds (parents and offspring) sampled as part of this export protocol require a visual or microchip identifier. This could be a ring, a missing toenail or some other feature that generally allows an individual bird to be distinguished efficiently from other birds. These identifiers are to simplify matching DNA samples to individual birds. These identifiers can be copied or cloned so are not reliable unique identifiers in their own right.

1. DNA sampling as part of the export application process
 - a. DNA sampling takes place in the exporter’s aviaries where the birds intended for export (export birds) are normally housed.
 - b. A trusted observer (approved by Government) must be present during DNA sampling.

⁵ 2007 Inventory of Exotic (non-native) Bird Species known to be in Australia
<http://www.environment.gov.au/biodiversity/wildlife-trade/publications/2007-inventory-exotic-non-native-bird-species-known-in-australia>

- c. DNA sampling is based on small blood samples which can be simply taken with no risk to the bird.
- d. Two blood samples are taken from the parent of each export bird.
- e. Two blood samples are taken from each export bird.
- f. The visual (or microchip) identifier of each bird is recorded with every blood sample.
- g. The trusted observer verifies they witnessed the blood sampling of all birds and that all blood samples are recorded with the correct visual (or microchip) identifier.
- h. The trusted observer to be a Justice of the Peace, or some other trusted person or notary whose identity and honesty is beyond reproach. Conditions required to be a trusted observer pre-approved by the Department.
- i. The trusted observer role is required to ensure all birds from which blood samples are collected are indeed located within the exporter's aviaries. This ensures blood samples from birds in the wild are not collected.
- j. It is acknowledged that both parents and offspring may have been taken from the wild (or smuggled into the country). The signed export application form to include a declaration that all parent birds have been obtained legally and all offspring have been bred in captivity.
- k. Note that other strategies for verifying captive bred F2, F3 and beyond generations are cumbersome and provide no more surety than the declaration described here.
- l. CITES does not require F2, F3 captive bred assurance when the species "has been demonstrated to be capable of reliably producing second-generation offspring in a controlled environment"⁶ which is precisely the reason parrots and passerines in aviculture are in aviculture.

2. Verification of DNA parentage

- a. DNA parentage tests are performed using one set of DNA blood samples by a laboratory contracted to perform the tests by the Wildlife Trade Office of the federal government Department of Agriculture, Water and Environment.
- b. DNA parentage tests are charged to exporters on a user pays cost recovery basis.
- c. Trusted observer credentials are verified.
- d. Good and proper type background checks of exporter performed.
- e. If all is positive then a certificate to comply with CITES Article VII(5) is issued stating Australia is satisfied the birds are captive bred.
- f. Export permit issued under Australian Law.

⁶ CITES 2 b) ii) C. 2. <https://cites.org/eng/res/10/10-16C15.php>

3. At the border

- a. Export birds are presented to border control staff who take, or witness the taking of, two DNA blood samples from each bird.
- b. The visual (or microchip) identifier is clearly noted alongside each DNA blood sample.
- c. Shipment leaves Australia.
- d. During the next week or so the border collected DNA samples are tested against the DNA samples collected at the exporter's aviaries (1 above) to ensure the birds exported are the exact individuals on the application.
- e. Prosecution of non-matching DNA to be severe.

Many thanks to all who contributed to the compilation of this document.

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Supplement A – CITES listed avian species in Australia

1. All parrots (apart from the 4 very common captive species below), are listed on CITES Appendix I or CITES Appendix II⁷.
 - a. Budgerigar *Melopsittacus undulatus*, Cockatiel *Nymphicus hollandicus*, Peach-faced Lovebird *Agapornis roseicollis* and Indian Ringneck *Psittacula krameri* are the only parrots NOT listed on any of the CITES appendices. All are extremely common aviary and pet birds globally.
2. There are four species of passerines common in Australian aviculture that are listed on CITES.
 - a. The Red Siskin *Carduelis cucullata* is a passerine on Appendix I. Australia is actively involved in the recovery of this species led by the Smithsonian⁸. The expertise of Australian aviculturists is keenly sought to refine husbandry as part of the project⁹.
 - b. The southern or white-rumped subspecies of the Black-throated Finch *Poephila cincta cincta* is a native species listed on Appendix II. In aviculture this subspecies is known as the Parson Finch and is very common and well established in aviculture globally including Australia. Aviculture is involved in the recovery of this threatened species via a range of initiatives, most recently the “Help find the Black-throated finch in NSW and surrounds” project¹⁰.
 - c. The Java Sparrow *Lonchura oryzivora* listed on Appendix II is a free breeding and very common aviary bird globally including within Australia.
 - d. The European Goldfinch *Carduelis carduelis* was recently listed on Appendix III by the Ukraine. Goldfinches are common in aviculture and there is a large and secure feral population in Australia.
 - e. The Green Strawberry *Amandava formosa* is on Appendix II. There are still some in Australia.
3. Some other CITES listed species are present in small numbers within private collections, and within zoological and wildlife parks.
4. Requiring registration of all CITES listed birds nationally will not work to the positive benefit of wild populations of listed species. It will be a huge disincentive leading to less people keeping these birds and there will almost certainly be massive non-compliance. Both these outcomes are at cross purposes to the intent of CITES and our EPBC Act.

⁷ CITES Appendices <https://cites.org/eng/app/appendices.php>

⁸ Red Siskin Initiative <https://www.redsiskin.org/>

⁹ Red Siskin husbandry video during a Smithsonian visit to Australia <https://youtu.be/ktRf4liHw2w>

¹⁰ Help find the Black-throated finch in NSW and surrounds <https://www.facebook.com/blackthroatedfinchproject>

Supplement B - Changes to the Environmental Protection and Biosecurity Act 1999 (EPBC Act)¹¹.

1. Changes to the EPBC Act are needed to implement Australia's obligations under CITES with regard to captive bred birds.
2. CCBFA supports simplifying regulated international trade in captive bred birds, particularly to deter smuggling. There are anomalies in our EPBC Act that do not reflect CITES and that are currently incentivising smuggling.
3. CITES Article VII¹² (4) states captive bred Appendix I species for commercial export are to be treated as Appendix II species, therefore Article IV applies. Article IV regulates trade in Appendix II species, it requires captive proof from the exporter, however there are no import requirements (from CITES).
4. CITES Article VII (5). This clause makes it clear that captive bred animals require no CITES documentation apart from a captive bred assurance from the Management Authority of the State of export.
5. Resolution Conf. 10.16 (Rev.) further expands on this notion.
<https://www.cites.org/eng/res/10/10-16C15.php>
6. Australia has not implemented Article VII (4) or (5) so far as we can tell. We believe as a signatory, we are obliged to do so. We suggest a subsection, say "303FKA Import of captive bred CITES listed species" to correct this omission and if accepted solve the problem.
7. CCBFA offers its expertise to assist drafting a proposed subsection 303FKA to resolve the issue.
8. Note the above advice has been provided to government as part of the recent EPBC Act review and directly to Hon Sussan Ley MP, Minister for the Environment as recently as 23/2/2021. A copy of the letter to the Minister is here - <https://www.ccbfa.org.au/wp-content/uploads/2021/02/ccbfa-minister-letter-230221.pdf>

¹¹ Environmental Protection and Biosecurity Act 1999
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