

UPDATED DATA ENTRY STANDARD FOR HYBRIDS AND INTERGRADES

Topic originally discussed on pp. 53-54 of *Standards for Data Entry and Maintenance of North American Zoo and Aquarium Animal Records Databases*, 1998

12 August 2004

CMS/ARKS4 allows more flexibility in entering hybrids and intergrades than did ARKS3, and it allows hybrid selection at a higher taxonomic level. Because of this greater flexibility, hybrid offspring should no longer be entered using the dam's taxonomic name: offspring should be entered by the taxonomic name common to both parents.

For example, the offspring of an Angolan roan antelope *Hippotragus equinus cottoni* and an East African roan antelope *Hippotragus equinus langheldi* is now entered as *Hippotragus equinus* – the name common to both parents. The offspring of a grey wolf *Canis lupus* and a red wolf *Canis rufus* is entered as simply *Canis* – the genus name common to both. This is true even when the family name is the level common to both parents: the offspring of Ross' goose *Anser rossii* and barnacle goose *Branta leucopsis* would be recorded as Anatidae.

When the parents are of different taxonomic levels, the taxonomic name of the higher-level parent is selected, following the principle that “Offspring can be identified only as precisely as the least precisely identified parent.” (*Animal Records-Keeping*, Miller and Block, 1992, p. V-53.) In other words, the offspring of a generic tiger *Panthera tigris* and an Amur tiger *Panthera tigris altaica* is recorded as *Panthera tigris*.

Hybrid level is the level at which the parents' taxonomic names differ. ARKS4 provides an additional option not available in ARKS3 (unknown), but since the intention is to specifically flag the record as a hybrid, the ‘not a hybrid’ and ‘unknown’ options are not appropriate when the parent taxonomic names are known. **Note:** the highest level of hybrid currently available in ARKS4 is ‘Species hybrid’; select this option for hybrids at the species level or for hybrids at a higher level.

Thus, in the examples above, the roan antelope and tiger offspring are both sub-species hybrids because the parents are different subspecies, the wolf is a species hybrid (parents are different species), and the goose should be entered as a species hybrid (the highest option available).

Records of hybrids should be reviewed and corrected as part of general data cleanup, especially those records entered in earlier versions of ARKS. If the sire's taxon is known, specimens for correction can be found by running a specimen report, setting search criteria to the dam's taxonomic name and adding the ‘any identifier’ option set to ‘contain’ the sire's partial taxonomic name.

See following pages for data entry procedures.

Data entry procedures

When entering a new specimen

- using the “Add a specimen” feature
 - Enter the new ID number
 - Enter the proper taxonomic name for the offspring (as discussed above)
 - Select the proper hybrid level from the <Hybrid> drop-down menu (as discussed above)
 - Enter or verify all other information on this screen, and click "OK". You will get a message indicating that “The specimen’s taxonomic name doesn’t not match that of the sire” or “.... the dam”, and the program will provide the parent names; click “OK”.
 - Enter or verify all other information on the second (acquisition) screen; click “OK”
 - Add two identifiers on the [Identifiers] tab
 - select ‘Sire taxon’ from the <Type> drop-down menu, and provide the sire’s scientific name
 - repeat for the dam’s scientific name, using the 'Dam taxon' option
 - Save
- when using the “Add offspring from” feature
 - Enter the new ID number
 - Edit the taxonomic name so that it is appropriate for the offspring (as discussed above)
 - Select the proper hybrid level from the <Hybrid> drop-down menu (as discussed above)
 - Enter or verify all other information on this screen, and click "OK". You will get a message indicating that “The specimen’s taxonomic name doesn’t not match that of the sire” or “.... the dam”, and the program will provide the parent names; click “OK”
 - Enter or verify all other information on the second (acquisition) screen; click “OK”
 - Add two identifiers on the [Identifiers] tab
 - select ‘Sire taxon’ from the <Type> drop-down menu, and provide the sire’s scientific name
 - repeat for the dam’s scientific name, using the 'Dam taxon' option
 - Save
- using the “Add a group” feature
 - **Note:** the <Hybrid> field on the [Specimen] tab is not available (is dimmed) for groups
 - Enter the new ID number
 - Enter the proper taxonomic name for the offspring (as discussed above)
 - Enter or verify all other information on this screen and click “OK” at the bottom

Data entry (continued)

- If necessary, complete the [Visits] tab with the appropriate information; Save
- Add two identifiers on the [Identifiers] tab
 - select 'Sire taxon' from the <Type> drop-down menu, and provide the sire's scientific name
 - repeat for the dam's scientific name, using the 'Dam taxon' option
- Save

When editing an existing specimen

- On the [Specimen] tab, edit the taxonomic name to reflect the name proper for the offspring (as discussed above)
- For individual accessions only: edit the <Hybrid> field to reflect the appropriate level (as discussed above); save
- Add two identifiers on the [Identifiers] tab
 - select 'Sire taxon' from the <Type> drop-down menu, and provide the sire's scientific name
 - repeat for the dam's scientific name, using the 'Dam taxon' option
- Save

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