

ZIMS for Studbooks Data Quality Codes

Description

As a studbook user, you can see a list of animals that have data quality errors along with details of those errors so that you may correct the problems in order to have better data in your studbook.

Error Codes:

[High](#)

[Medium](#)

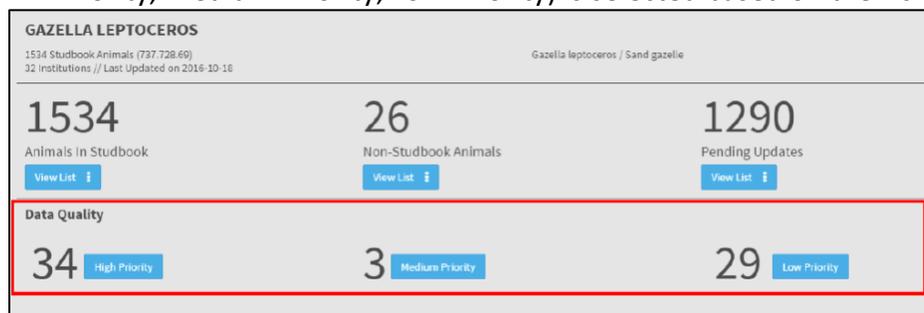
[Low](#)

[Poplink & SPARKS](#)

Navigation:

There are two ways to navigate to a list of animals with data quality errors, from the dashboard or from the left-hand navigation while in the animal list

- On Dashboard, the number of animals with High, Medium, or Low data quality errors will be shown with a button appropriately labelled for each
 - Clicking on each button leads to a list of the animals with their errors shown
 - The list is narrowed down to animals that have the severity of error chosen, but all errors for that animal are shown regardless of severity
 - When user comes to this list from Dashboard, the appropriate filter button (High Priority, Medium Priority, Low Priority) is selected based on their choice

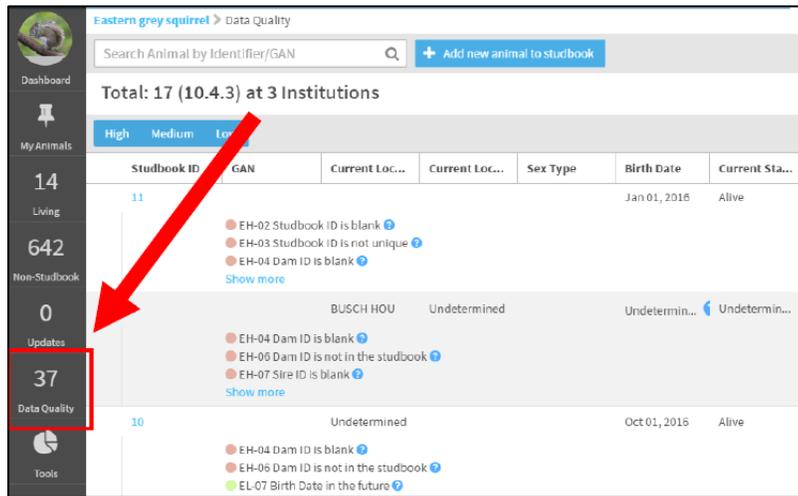


- From left-hand navigation, the number of animals with data quality errors should be shown (the number is total number of animals with any level of error (high, medium, low)
 - This shows a list of animals that have ANY severity of error with all their errors shown
 - When navigating to list from left-hand navigation, no filter buttons are selected as all errors are shown, but user can select button to narrow down list to errors of certain priority

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- For the animal list, the errors are shown underneath each animal.
 - Each has a code plus a small description
 - Errors are designated High (EH), Medium (EM), and Low (EL)
 - Each error also has a ? that displays more info upon hover over
 - If there are more than three errors, the list will show the option to display "more" - when user selects "more" the rest of the errors will be displayed in the list



Editing Data and Data Quality Updates:

- The data quality check should be run after certain parts of an animal are updated. The following is the list of actions that will cause DQ to be recalculated:
 - Change parent info
 - Add New Sex Record
 - Edit Sex Record
 - Delete Sex Record
 - Add Reproduction Record
 - Edit Reproduction Record
 - Delete Reproduction Record
 - Add Rearing Record
 - Edit Rearing Record
 - Delete Rearing Record
 - Add New Death Record
 - Edit Death Record
 - Delete Death Record
 - Add New Go LTF
 - Edit Go LTF
 - Delete Go LTF
 - Add New Release to Wild
 - Edit Release to Wild
 - Delete Release to Wild

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- Add New Recapture
- Edit Recapture
- Delete Recapture
- Add New Return from LTF
- Edit Recapture
- Delete Recapture
- Add Transfer
- Edit Transfer
- Delete Transfer
- Add Identifier
- Edit identifier
- Delete identifier
- Add New Animal to Studbook
- Delete Animal in Studbook

Error Codes

The following is the list of errors that are being checked. Error has a description of how the error is determined (if needed) and also the text that is displayed to the user when ? is hovered over.

Errors designated High (EH):

- EH-03 Studbook ID is not unique.
 - Check within studbook to see if studbook ID is unique. If international studbook, check International studbook number, if regional studbook, check Regional Studbook Number combination of Regional Association + ID (ex. EAZA 131)
- EH-04 Dam ID is blank.
- EH-05 Dam ID is not a female.
 - Check that the correct dam is recorded. Verify the recorded dam's sex.
- EH-06 Dam ID is not in the studbook.
 - Research the parentage of the specimen. If the dam is already in the studbook, use the dam's correct Studbook ID as the Dam ID. If the dam is not in the studbook, create a new specimen record for the dam and use that Studbook ID as the Dam ID.
- EH-07 Sire ID is blank.
 - Research parentage and enter a Sire ID. If the dam is unknown, enter Undetermined or Indeterminate.
- EH-08 Sire ID is not a male.
 - Check that the correct sire is recorded. Verify the recorded sire's sex.
- EH-09 Sire ID is not in the studbook.
 - Research the parentage of the specimen. If the sire is already in the studbook, use the sire's correct Studbook ID as the Sire ID. If the sire is not in the studbook, create a new specimen record for the sire and use that Studbook ID as the Sire ID.
- EH-10 Birth Date is blank.

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- Research this specimen's history and enter the birth date and estimate.
- EH-11 Birth Date is invalid.
 - Research this specimen's history and correct the birth date and estimate.
- EH-12 Sex record is missing.
 - Enter sex information for this specimen.
- EH-13 Sex type is blank.
 - Research and enter the specimen's sex type.
- EH-15 Sex Date is blank.
 - Research and enter the specimen's sex date and estimate. The sex date is the date the specimen was identified as a given sex (e.g. its birth date if it was sexed at birth).
- EH-16 Sex Date is invalid.
 - Research this specimen's history and correct the Sex Date and Estimate. The Sex Date is the date the specimen was identified as a given sex (e.g. its birth date if it was sexed at birth).
- EH-17 This specimen has no transactions.
 - This specimen has no transaction records. Research the specimen's history and enter a first transaction for this specimen. First transaction must be an origin transaction.
- EH-18 Transaction term is blank.
 - Enter the correct transaction term for this transaction.
- EH-20 Transaction Date is blank.
 - Research this specimen's history and enter the transaction date and estimate.
- EH-21 Transaction Date is invalid.
 - Research this specimen's history and correct the transaction date and estimate.
- EH-22 Birth location conflicts with dam's location.
 - The dam's location does not match the offspring's location on the offspring's birth date. Verify that the offspring's dam, birth date, and birth location are all entered correctly. Check the dam's transfer records and locations. Note that this validation check is only run for captive-born origin individuals.
- EH-23 Dam's status is not Living on birth date.
 - Verify that the correct dam has been identified. Make sure that event dates are entered correctly for the dam and offspring. Note that this validation check is only run for captive-born origin individuals.
- EH-24 Sire's status is not Living on estimated conception date.
 - Verify that the correct sire has been identified. Make sure that event dates are entered correctly for the sire and offspring. Note that this error will be displayed if offspring were produced via artificial insemination using sperm from a dead sire. Note that this validation check is only run for captive-born origin individuals.
- EH-25 Sire and Dam locations differ on estimated conception date.
 - Make sure that the correct sire and dam are recorded. Check locations and event dates for sire and dam. Verify that the offspring's birth date is entered correctly. Note that this error will be displayed if offspring were produced via artificial insemination using

sperm from sire at another location. Note that this validation check is only run for captive born origin individuals.

- EH-26 Dam's status is not Living on estimated lay date.
 - Verify that the correct dam has been identified. Make sure that event dates are entered correctly for the dam and offspring. Note that this validation check is only run for captive-born origin individuals.
- EH-27 Dam Studbook ID is the same as this offspring studbook ID.
 - Each animal in your studbook must have a unique identifier. The Dam studbook ID cannot be the same as the offspring studbook ID.
- EH-28 Dam birth/hatch date is later than offspring's birth/hatch date.
 - The dam was not yet born/hatched by the date of the offspring's birth/hatch. Please make sure correct dam is selected, or check that the birth dates are correct for both the dam and the offspring.
- EH-29 Sire Studbook ID is the same as this offspring studbook ID.
 - Each animal in your studbook must have a unique identifier. The Sire studbook ID cannot be the same as the offspring studbook ID.
- EH-30 Sire birth/hatch date is later than offspring's birth/hatch date.
 - The sire was not yet born/hatched by the date of the offspring's birth/hatch. Please make sure correct sire is selected, or check that the birth dates are correct for both the sire and the offspring.
- EH-31 Multiple origin transactions
 - More than one birth/hatch transaction has been entered for this animal. Studbook animal can only have one birth/hatch transaction.
- EH-32 Studbook animal is a DRAFT.
 - Studbook animal has Draft# in the studbook and no international, regional studbook number, or temporary SB ID
- EH-33 Taxonomy record is blank
 - Research and enter the animal's taxonomy information
- EH -34 Taxonomy date is blank
 - Research and enter the animal's date and estimate. The taxonomy date is the date the animal was identified as a given taxonomy (e.g. its birth date if its taxonomy was defined at birth).
- EH-35 Taxonomy record does not match taxonomy defined by system
 - Taxonomy defined is not a taxonomy defined by the studbook. Investigate this animal's taxonomy.

Errors designated Medium (EM):

- EM-01 Local ID is not unique.
 - Combination of Institution/local ID must be unique per studbook. Determine if any of these specimens are duplicate records. If they are different specimens, verify the Local IDs. If they are the same specimen, consolidate the information into one record.

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Include a note in the specimen's record explaining the Studbook ID change. Verify the parental ID for the specimen's offspring.

- EM-02 Hatch/Birth Type is blank.
 - Research and enter the specimen's hatch/birth type.
- EM-04 Hatch/Birth Type incompatible with first Location.
 - If the birth location is known, the hatch/birth type should not be unknown.
- EM-05 Hatch/Birth Type incompatible with parental ID.
 - If the hatch/birth type is Captive, parents should not be Wild.
- EM-06 Rearing is blank.
 - Research and enter the specimen's rearing type.
- EM-08 Birth/Hatch Date in basic studbook animal information is different than the birth/hatch date for the recorded birth transaction.
 - Review the dates and estimates and make sure they are exactly the same.
- EM-11 Contraception Status is blank.
 - Research and enter the specimen's reproductive status.
- EM-13 Contraception Date is blank.
 - Research this specimen's history and enter the reproductive date and estimate.
- EM-15 Location is blank.
 - One or more of the transactions for this animal has a blank location. If the location is unknown, please enter Undetermined or Indeterminate.
- EM-16 First transaction is not birth or hatch.
 - The first transaction must be a birth or hatch.
- EM-17 Invalid transaction after Go Lost to Follow-Up or Release transaction.
 - A specimen that has Go Lost to Follow-Up must have a Return From Lost to Follow-up prior to any subsequent event. Release must have Recapture prior to any subsequent event.
- EM-18 Transaction after death.
 - No transactions should occur after death. Make sure all transactions and dates are entered correctly.
- EM-19 Interbirth interval is less than gestation period.
 - This check is only performed for live-bearing species. Review this specimen's offspring and verify that the dam is correct. Check that each offspring's birth date is correct.
- EM-20: Dam ID inconsistent with specimen origin.
 - Dam is Undetermined, Indeterminate, UNK, or UNK# and the animal is Wild Born OR Dam is Wild, WILD, or WILD# and the animal is Captive Born/Hatched. The Dam ID should be consistent with the birth type of the offspring.
- EM-21: Sire ID inconsistent with specimen origin.
 - Sire is Undetermined, Indeterminate, UNK, or UNK# and the animal is Wild Born OR Sire is Wild, WILD, or WILD# and the animal is Captive Born/Hatched. The Sire ID should be consistent with the birth type of the offspring.
- EM-22 No acquisition transaction after wild or unknown birth

- Wild birth transaction exists with no Wild Capture following it or undetermined birth exists with no transfer following it.

Errors designated Low (EL):

- EL-01 Studbook ID is temporary.
 - Assign a permanent Studbook ID before studbook publication or population planning.
- EL-02 Dam ID is MULT.
 - These Dam IDs should be entered as MULT# e.g. MULT1. If two specimens have the same possible dams, they should have the same MULT# for the Dam ID.
- EL-03 No parental ID assumptions recorded for Dam.
 - Dam is recorded as MULT# but there is no list of animals associated with that MULT.
- EL-04 Sire ID is MULT.
 - These Sire IDs should be entered as MULT# e.g. MULT1. If two specimens have the same possible sires, they should have the same MULT# for the Sire ID.
- EL-05 No parental ID assumptions recorded for Sire.
 - Sire is recorded as MULT# but there is no list of animals associated with that MULT.
- EL-06 Hatch/Birth Type incompatible with first transaction.
 - If the specimen was collected from the wild its birth type should be entered as Wild Born. If the specimen was Captive Born, it should have a captive birth/hatch. If the specimen has an unknown birth type, it should not have a wild birth/hatch, captive birth/hatch, or wild capture.
- EL-07 Birth Date in the future.
 - Research this specimen's history and correct the birth date and Estimate.
- EL-09 Sex Date in the future.
 - Research this specimen's history and correct the sex date and estimate.
- EL-11 Contraception Date in the future.
 - Research this specimen's history and correct the reproductive date and estimate.
- EL-12 Contraception Date is invalid.
 - ????
- EL-13 Transaction Date in the future.
 - Research this specimen's history and correct the transaction date and estimate.
- EL-14 Transaction Date is invalid.
 - Research this specimen's history and correct the transaction date and estimate.
- EL-15 Incompatible rearing record.
 - Hatch/Birth Type is Undetermined/Indeterminate but Rearing Type has been entered as being known. If nothing is known about the origin of the animal, then the rearing should also be unknown.

[PopLink and SPARKS legacy errors NOT included or SPARKS errors covered by PopLink error that was already included](#)

PopLink

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- EH-01 Currentness date is more than one year old.
 - This will be covered by showing currentness date on dashboard with various colors depending on the age of the date.
- EH-14 Sex type is invalid.
- EH-19 Transaction Code is invalid.
- EM-03 Hatch/Birth Type is invalid.
- EM-07 Rearing is invalid.
- EM-12 Reproductive Status is invalid.
 - For all 5 immediately above this, if the code/type is invalid, it will not be able to be mapped during migration and will be caught on a separate list during the migration. Once in ZIMS, there is no way to have invalid entries as they are all dropdowns.
- EH-11 Birth Date is invalid.
- EH-16 Sex Date is invalid.
- EH-21 Transaction Date is invalid.
- EM-14 Reproductive Date is invalid.
- EL-12 Reproductive Date is invalid.
- EL-14 Transaction Date is invalid.
 - For all 6 immediately above this, ZIMS will not allow invalid dates so these checks are not needed. Migration will not be able to migrate invalid dates and will have to be handled appropriately.
- EM-09 First transaction is before birth date.
 - In ZIMS, there is no difference between this and EM-16 so it is covered by that.

SPARKS

- ERROR M-01: Empty Studbook ID
- ERROR M-02: Duplicate Studbook ID
 - Covered by EH-03
- ERROR M-03: Illegal ASCII Character in Studbook ID
- Error M-04: Inappropriate ASCII Character in Studbook ID
- Error M-05: Illegal Justification of Studbook ID
- Error M-06: Improper or Inappropriate Studbook ID
 - M-03, M-04, M-05, M-06: Not being added as it should be covered in list of temporary numbers as any ID with non-numeric characters will be in that list.
- ERROR M-07: Master Record Orphan
 - Covered by EH-17
- ERROR M-08: Invalid First Event
 - Covered by EM-16
- ERROR M-09: Illegal Sex Code
- ERROR M-10: Illegal Rearing Code
- ERROR M-14: Illegal Hatch I Birth Type Code
- ERROR M-18: Illegal Hatch I Birth Date Estimate Character
- ERROR T-17: Invalid Transaction Code

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- For 4 immediately above this, if the code/type is invalid, it will not be able to be mapped during migration and will be caught on a separate list during the migration. Once in ZIMS, there is no way to have invalid entries as they are all dropdowns.
- ERROR M-12: Incompatible Hatch I Birth Type
- Covered by EL-06
- ERROR M-13C: COARSE Empty Hatch I Birth Type
- Error M-13f: FINE Empty Hatch / Birth Type
- M-13 (both): Covered by EM-02
- ERROR M-15: Missing Master Hatch I Birth Date for a Captive Hatch I Birth
- Covered by EH-10
- ERROR M-16: Unknown Master Hatch I Birth Date for a Captive Hatch I Birth
- ERROR M-17: Hatch I Birth Date Conflict
- ERROR M-20: Empty Master Hatch I Birth Date w/o Estimate = 'U' for a Wild Capture
- M-16, M-17, and M-20 Covered by EM-08
- ERROR M-21: Hatch I Birth Date After Capture or First Event
- Covered by EM-09
- ERROR M-22: Hatch I Birth Date In Future
- Covered by EL-07
- ERROR D-01: Illegal ASCII Character in Dam Studbook ID
- Error D-02: Inappropriate ASCII Character in Dam Studbook ID
- Error D-03: Illegal Justification of Dam Studbook ID
- ERROR S-01: Illegal ASCII Character in Sire Studbook ID
- Error S-02: Inappropriate ASCII Character in Sire Studbook ID
- Error S-03: Illegal Justification of Sire Studbook ID
- D-01, D-02, D-03, S-01, S-02, and S03: will be covered by EH-06 as if there is a Dam or Sire with non-numeric characters, it will not be in studbook (or will be in as temp animal and in that case will be caught by that error).
- ERROR D-05: Dam Sex Error
- Covered by EH-05
- ERROR D-06: Dam ID Not Found In Studbook
- Covered by EH-06
- ERROR D-07: Unable to determine Dam location prior to Specimen hatch I birth
 - A) Unable to determine Dam location prior to offspring birth. Dam, "[Dam ID]", at an indeterminate location prior to birth, {Date}. B) Unable to determine Dam location prior to estimated laying date. Dam, n [Dam ID]", at an indeterminate location on earliest/latest estimated date of egg-laying, {Date} (, and on latest estimated date, {Date}).
 - Decided not to add this as we are already covering if dam location does not match specimen location, not sure we gain more out of this.
- ERROR D-10: Dam Death Conflict - Dam dead before offspring hatch I birth
- Covered by combination of EH-23 and EH-26
- ERROR D-13: Dam Location Conflict - Does Not Agree With Specimen Hatch I Birth

- Dam, "[Dam ID] ", not at [Location] prior to specimen hatch/birth on {Date}. Dam at [Location] on earliest/latest estimated date of egg-laying, {Date}.
 - For Live birth, this is covered by EH-22. We do not think it should be added for egg-layer.
 - Error D-12: No Parental ID Assumptions Recorded
 - For Dam
 - Covered by EL-03
 - ERROR S-05: Sire Sex Error
 - Covered by EH-08
 - ERROR S-06: Sire ID Not Found In Studbook
 - Covered by EH-09
 - Error S-12: No Parental ID Assumptions Recorded
 - For Sire
 - Covered by EL-05
 - ERROR T-03: Events After Death
 - Covered by EM-18
 - ERROR T-04: No Acquisition Event
 - Covered by EM-16
 - ERROR T-06: Transfer After Release
 - ERROR T-07: Multiple Conflicting Release
 - ERROR T-08: Embedded Lost-To-Follow-Up
 - T-06, T-07, T-08: covered by EM-17
 - ERROR T-10: Empty Transaction Date
 - Covered by EH-20
 - ERROR T-11C: COARSE Transaction Date Prior To Hatch / Birth Date
 - Error T-11f: FINE Transaction Date Prior To Hatch / Birth
 - Covered by EM-09
 - ERROR T-12C: COARSE Transaction Date in the Future
 - Error T-12f: FINE Transaction Date in the Future
 - Covered by EL-13
 - ERROR T-18: Missorted Transactions
 - ERROR T-XX: Internal Program Error in Interpreting Events Stream
 - T-18, T-XX: Not needed in ZIMS
 - Error T-02: First Event = Transfer
 - Covered by EM-16
 - Error T-05: Multiple Death Events
 - Covered by EM-18
 - ERROR F-01: Moves.dbf Record Orphan
 - ERROR F-02: Specials.dbf Record Orphan
 - ERROR F-03: UDF .dbf Record Orphan
 - F-01, F-02, F-03: Orphaned records will not be a problem in ZIMS, will get caught during migration

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