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MANAGING EGGS IN ZIMS

Contact Species360 Support

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Entities and Accession Modes

ZIMS has three options for egg entities:

- Egg A single identifiable egg. It can be part of a clutch but it must be identifiable • in some way either by a marking or a location such as a specific location in an incubator.
- Group of Eggs Multiple eggs, often laid in a clutch, that can be counted but are not individually identifiable. The same conclusion may not happen to all the eggs in a Group. Some may hatch, some may die and some may be disposed.
- Egg Mass Many eggs, usually too numerous to count. Often held together by a gelatinous substance such as frog eggs or in a substrate such as beetle eggs in a container. The same conclusion may not happen to all the eggs in an Egg Mass. Some may hatch, some may die and some may be disposed.

The Modes of accession for Egg and Group of Eggs are:



- From Another Institution
- Collected From Wild
- Rescued
- Appeared
- From Lay

The Modes of accession for Egg Mass are:

- From Another Institution
- Collected From Wild
- From Lay

Accessioning a Single Egg

From Another Institution – This accession Mode will behave exactly like receiving an animal from another institution. If a ZIMS institution sends you the egg, it will appear in your By My Institution Pendings list. If a non-ZIMS facility sends you the egg you will need to record a new accession from Start > Accession > Egg > From Another Institution.

Collected From Wild, Rescued and Appeared – You will create a new accession just like you would for an individual animal.

From Lay – There are two ways to accession an egg From Lay. You can go to Start > Accession > Egg > From Lay. A time saving way to accession an egg From Lay is to go into the dam's record. You will find this option under Details tab > Actions > Egg Laid From This Animal. This option is available only for species that lay eggs and only for animals with sex of female, undetermined or indeterminate. It is not an option under the record for a male. The advantage to this accession method is that the dam, the taxonomy and the dam's enclosure will prefill.

For any of the accession Modes you are not required to record a Local ID. If you do not, you may wish to record an Egg ID (a physical identifier) to make sure you are in the correct record later.

The entity in the Basic Info screen will be "Egg".

Creating a Clutch

If you are accessioning multiple single eggs that are part of a clutch, you can create a clutch and assign the eggs to it. Clutches are driven by Taxonomy, Parentage and Clutch Start Date.

• You can add a new clutch from Animals > left search box > Animal Clutch/Litter Search > Search > Add New.



• You can also create a clutch during the accessioning process by selecting Add New Clutch/Litter ID, found to the right of the Clutch/Litter ID field. During an accession, if you assign an egg to a Clutch, the Parent and Taxonomy Info will prefill, saving you data entry time.

Hatch of a Single Egg

To hatch a single egg:

- Go to My Transactions > Add Transaction > Record Event > Hatch Event for an Accessioned Single Egg.
- If you did not record a Local ID for the egg you will be required to record one with the hatch event.
- Once a hatch event is saved, the entity in the Basic Info screen will now be "Individual".
- My Transactions will display a "Hatch Event (Egg)".
- The Ownership and Physical Status will remain as they were for the egg.

Death of a Single Egg

To record a death of a single egg:

- Go to My Transactions > Add Transaction > Disposition > Death / Disposal.
- The Egg Result could be anything except for Infertile, Undetermined or Indeterminate. Select the result that best describes the circumstances. For Dead Embryo you can select how far along the development was.
- The Fertility Status should be Fertile.
- Egg Disposition is what you did with the egg shell after the death was discovered.
- Manner of Death and Relevant Death Information will auto-fill into the Necropsy module if you are using ZIMS Medical.
- The entity in Basic Info will remain as an "Egg".
- If you did not assign a Local ID to the egg but you want to now you will not have the opportunity to assign one on this screen. You will need to edit the From Lay transaction if you want to add a Local ID.

Should the hatchling die soon after hatch, you should record the hatch event first and then record a death. Otherwise it appears that the embryo never made it out of the egg.

Disposal of a Single Egg

Disposal is used to capture what you did with an infertile egg, an egg whose fertility was not known, or a fertile egg you did not wish to incubate. To record a disposal of a single egg:



- Go to My Transactions > Add Transaction > Disposition > Death/Disposal. Disposal is only an option for an Egg.
- The Egg Result could be Broken, Infertile, Not Incubated, Predator Impact, Undetermined or Indeterminate. All other options reference an embryo that died.
- The Egg Disposition captures what you did with the egg itself.
- Submitted for necropsy should not be checked.
- The entity in Basic Info will remain as an "Egg".
- If you did not assign a Local ID to the egg but you want to now you will not have the opportunity to assign one on this screen. You will need to edit the From Lay transaction if you want to add a Local ID.

Recording Incubation and Fertility and Tracking Egg Weights

When you record the initial accession of the egg you have the option to record the Incubation and Fertility status although it is not mandatory. You can use the <u>batch</u> <u>functionality</u> to update the incubation and fertility status of multiple eggs at the same time.

For incubation weights, these will be recorded in the same location in ZIMS as the live weights – the difference is in the 'type' of weight – 1) egg/egg mass vs. 2) live weights.

	Set Target Weight R	ange 4			(I View Weight Graph	Actions -					
	Date	Measurement	Value	Add New Weight		3		(
Q	Jun 10, 2020	Egg/egg mass weight	45.30 gram	Date *	Jun 03, 2020	Estimate						
0	Jun 08, 2020	Egg/egg mass weight	45.73 gram	Measurement Time								
9	Jun 06, 2020	Egg/egg mass weight	46.13 gram	Measured By	Please Select	2 *						
Q	Jun 02, 2020	Egg/egg mass weight	47.00 gram	Measurement Type *	Live weight		~					
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3) Egg weights can be visualized in the Animal Graphing Tool to track changes over the incubation period. <u>Click here for more information on the graphing weights</u>.
4) If you need to set expected weight ranges for your monitored eggs, <u>you can set up target weight ranges</u>.

If an egg is recorded From Lay, the Fertility is probably not known at the time. To add or edit either Incubation or Fertility go to the Parent grid > Actions. You can edit both here. Any changes to the Fertility status are not tracked. You can see changes to the Incubation by selecting to View Incubation Change History.

Note Type

There are some Note Types and Sub Types that can help you gather details on your eggs.

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- Egg Laid
 - Type Reproduction
 - Sub Type Egg Lay
- Multiple Clutching
 - Type Reproduction
 - Sub Type Multiple Clutch
- Fertility
 - Type Development
 - Sub Type Fertility Information
- Incubation
 - Type Reproduction
 - Sub Type Incubation
- Pipping
 - Type Development
 - Sub Type Pipping
- Hatch
 - Type Animal Events
 - Sub Type Birth/Hatch Note
- Egg Death or Disposal
 - Type Transactions
 - Sub Type Egg Death/Disposal Details

Accessioning a Group of Eggs

A Group of Eggs is a number of eggs that you cannot individually identify or you chose to manage as a Group even though you can tell them apart. The number of eggs in the Group can be counted. All of the accession Modes for a Single Egg are available for a Group of Eggs. Usually a Group of Eggs is recorded as a simple count and not tracked by Life Stage or Sex. You do not have to record a Local ID when accessioning a Group of Eggs.

Hatch of a Group of Eggs

There are several ways to record hatching in a Group of Eggs. What method you select is driven by if you want to capture specific hatch dates for each egg or if you are happy with capturing an estimated hatch date for each egg.

All eggs that hatched did so on the same day:

• NOTE: If any eggs in the group died or were disposed and you want to capture that information you will need to record as a Partial Disposition from the Group prior to recording the Hatch Event. If you don't care about any eggs that did not hatch you do not need to do so.



- My Transactions > Add Transaction > Record Event > Hatch Event for an Accessioned Group of Eggs.
- Record the Date and a Local ID.
- Record the number of eggs that hatched (if you recorded any deaths or disposals previously, this should be the remaining count of eggs).
- My Transaction will display Hatch Event (Group of Eggs) with the census being the number that hatched.
- Entity in Basic Details will be Group of Animals.
- The Hatch Date for all will be the Date entered.

All eggs that hatched did not hatch on the same day:

- Follow the instructions above EXCEPT you need to check "All Eggs Did Not Hatch on the Same Day" checkbox.
- This will activate a Range date estimate. Record the date of the first hatch (Start Date) and the date of the last hatch (End Date).
- Entity in Basic Details will be Group of Animals.
- The Hatch Date for all will be the estimate Date Range.

Eggs hatched on different days and you want to record specific Hatch Date related to each egg:

- As eggs hatch, split them out of the group using a Partial Disposition > Split Individual From This Group.
- Follow the instructions for hatching a Single Egg as given above.
- You can record any dead or disposed eggs at any time during this scenario, you do not need to do so before recording the Split and Hatch Event.
- The entity in Basic Info for the Split record will be Egg until you record a Hatch Event. It will then be Individual.
- The Hatch Date will be what you recorded for the Hatch Event.
- NOTE: If your last transaction for the original record for the Group of Eggs is a Partial Transaction of Split or Death/Disposal you will need to remember to Close Out the group (Full Disposition > Death/Disposal/Close Out). If you do not, even though the census is 0.0.0, the group will continue to be found and represented in searches and reports.

Death of a Group of Eggs

If all the eggs are determined to be fertile and are found dead in shell:

- Record a Disposition > Full Disposition > Death / Disposal.
- Check the Death / Disposal radio button.
- The Date could be an estimate if all eggs did not die on the same day.
- The Egg Result should be anything but Infertile, Undetermined or Indeterminate.



- The Fertility Status should be Fertile.
- The Egg Disposition refers to what is done with the egg once the embryo is determined to have died.
- The Record Disposed Count should be the number of eggs in the group.
- This Full disposition will automatically Close Out the Group.
- NOTE: If an egg hatches and the hatchling dies very soon after, this should be recorded as a Hatch and then Death, not a Death of the egg. See Hatching a Group of Eggs above.

If some of the eggs are determined to be fertile and are found dead in shell:

- Record a Disposition > Partial Disposition > Death / Disposal / Close Out.
- The Egg Result should be anything but Infertile, Undetermined or Indeterminate.
- The Fertility Status should be Fertile.
- The Egg Disposition refers to what is done with the egg once the embryo is determined to have died.
- The Record Disposed Count should be the number of eggs found dead that day.
- NOTE: If your last transaction for the original record for the Group of Eggs is a Partial Transaction of Death/Disposal you will need to remember to Close Out the group (Full Disposition > Death/Disposal/Close Out). If you do not, even though the census is 0.0.0, the group will continue to be found and represented in searches and reports.

If an egg hatches and the hatchling dies very soon after, this should be recorded as a Hatch and then Death, not a Death of the egg. See Hatching a Group of Eggs above.

Disposal of a Group of Eggs

Disposal is used to capture what you did with infertile eggs, eggs whose fertility was not known, or fertile eggs you did not wish to incubate. For disposal of the entire Group of Eggs:

- Add Transaction > Disposition > Full Disposition > Death / Disposal / Close Out.
- Select Death/Disposal radio button.
- The Egg Result could be Broken, Infertile, Not Incubated, Predator Impact, Undetermined or Indeterminate. All other options reference an embryo that died.
- The Fertility Status should be Infertile, Undetermined or Indeterminate.
- The Egg Disposition is what was done to the egg.
- Submitted for Necropsy should not be checked.
- Because you are doing a Full Disposition, the Record Disposed Count should be the number of eggs in the Group.
- This will Close Out the Group of Eggs.
- The entity in Basic Info will remain "Group of Eggs".





For disposal of some of the Group of Eggs:

- Add Transaction > Partial Disposition > Death / Disposal.
- Select Death/Disposal radio button.
- The Egg Result could be Broken, Infertile, Not Incubated, Predator Impact, Undetermined or Indeterminate. All other options reference an embryo that died.
- The Fertility Status should be Infertile, Undetermined or Indeterminate.
- The Egg Disposition is what was done to the egg.
- Submitted for Necropsy should not be checked.
- Record the number of eggs disposed in Record Disposed Count.
- The entity in Basic Info will remain "Group of Eggs".
- If the last transaction is a Partial Disposition you will need to Close Out the Group of Eggs.

Splitting/Merging a Group of Eggs

Splitting a Group of Eggs was mentioned above under Hatching a Group of Eggs. Groups of Eggs may be Split for reasons other than hatching. You may pull some from a nest to artificially incubate. Or you may disposition some to another institution. To Split a Group of Eggs:

• Add Transaction > Disposition > Partial Disposition > Select Split Type

You can also Merge Groups of Eggs. If one Group is not being incubated, you could add the eggs to a nest being well-tended. Or you may return eggs being artificially incubated to the remaining eggs in the nest. To Merge a Group into a Group in focus:

• Add Transaction > Acquisition > Partial Acquisition > Select Merge Type

To Merge a Group in focus into a different Group:

• Add Transaction > Disposition > Full Disposition > Select Merge Type

Managing an Egg Mass

In general, follow the instructions for Group of Eggs above. Appeared and Rescued are not available as accession Modes for an Egg Mass.

Eggs in Reports

The following egg data can be added to the search results

- 1. Via column customization:
- Egg length and width
- Fertility status
- Assessment method



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- Incubation
- Egg result
- Rearing Type

2. Results with added columns can be exported to excel

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Eggs do not display in all the Reports related to animals. They do display in these Reports:

- Activity
- Enclosure
- Transaction remember to check the Pre-births box!
- Specimen
- Taxon remember to check the Pre-births box!
- Peak Holding remember to check the Pre-births box!
- Note Retrieval
- Wild Collection

They do not display in these Reports:

- Daily
- Enclosure Occupants Summary
- Inventory
- Loan





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