



# GLOBAL RESOURCES (ANIMAL MANAGEMENT/HUSBANDRY)

## Contact support@Species360.org

The Global Resources (Animal Management/Husbandry) are found under Start > Global Resources > Animal Management/Husbandry)



#### Topics

- Species Holdings
- <u>Age Distribution</u>
- Weight Comparison
- TAG Export
- **Population Overview**
- Global Studbook Search
- Survival, Reproduction and Growth Reports
- Favourite Search Filters

#### **Species Holdings**

Species holdings is a global current holding report for a selected taxon.



In addition to being found under Global Resources, Species Holdings is available as a desktop icon.



n Species Holding	A	
Taxonomy         Search Taxonomy         Show subtaxa separately         Show subtaxa separately         Species Holdings shows what each institution says and the sender has not yet entered their part of the to Overall, this should have a very small effect on the sp	• Global Contine All animals in ZIMS of s it has, at the moment the ansaction, then at this mo ecces holdings numbers.	nent Country Association My Institution 5 database will be included. Run report the user asks ZIMS. So if an institution has reported acquiring an animal from another (receiver-initiated), moment both sender and receiver say they have an animal, so it temporarily shows at both institutions.
Taxonomy tree view	~	5 📧 🦹
<ul> <li>Run report for the selected taxonomy</li> <li>Animalia/Animals</li> <li>Invertebrata / Invertebrates</li> <li>Chordata / Chordates</li> <li>Cephalochordata / Cephalochordates</li> <li>Vertebrata / Vertebrates</li> <li>Pisces / Fish</li> <li>Amphibia / Amphibians</li> <li>Reptilia / Reptiles</li> <li>Aves / Birds</li> <li>Mammalia / Mammals</li> </ul>	➢ Reset tree	

1.Enter the desired Taxonomy. If you don't want to show subtaxa separately uncheck the box.

2.Select the scope that you desire.

- 3.Read the disclaimer to help you understand the counts displayed.
- 4. Select to Run Report.
- 5. You can select to run the report from the Taxonomic Tree.

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»												
	Species holding report for: Macropus parma / Parma wallaby											
	All 64 Institutions, 4 Regions 107 143 42 0 10 13 70 385 📿											
	Species: Macropus parma / Parma wallaby											
	All 64 Institutions 4 Regions 107 143 42 0 10 13 70 385											
	All 04 Institutions, 4 Regions	107	145	42	•	10	15 70	385				
	Institution	Male	Female	Other	Birth (last 12 months)	Group M.	Group F.	Group O.	Total			
	■ Region: Asia 3 Institutions, Male:	2, Female	: 9, Other: 6	3						_		
្រា	KOBE PARK / Kobe Oji Zoo	<u>1</u>	<u>1</u>	1	0	0	0	0	3			
	SINGAPORE / Singapore Zoological	0	1	0	0	0	0	0	1			
4	TOKYOTAMA / Tama Zoological Park	1	7	<u>5</u>	0	0	0	0	13			
	🖃 Region: Australia (Oceania) 8 Institutions, Male: 18, Female: 30, Other: 9											
	BUNDABERG / Alexandra Park Zoo	1	Z	0	0	0	0	0	8			
	CALGA AWW / Australian Walkabout	0	1	0	0	5	5	2	13			
	DOONSIDE / Featherdale Wildlife P	4	₫ 5	0	0	1	2	<u>7</u>	20			
	GOSFORD / Australian Reptile Park	<u>5</u>	<u>6</u>	0	0	0	0	0	11			
	HEALESVIL / Healesville Sanctuary	0	2	0	0	0	0	0	2			
	OAKVALE / Oakvale Wildlife Park	1	0	0	0	0	0	0	1			
	WELLINGTN / Wellington Zoo Trust	0	1	0	0	0	0	0	1	-		
	4									•		

1.You can export the report to Excel or pdf.

2.The total count of institutions and regions included in the report is at the top.



3.The various regions are indicated with the count included.

4.The institution is a hyperlink into the institution details.

5.The animal counts are hyperlinks to results grids where you can open the global view of the record.

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## Age Distribution

The Age Distribution resource (often also called Age Pyramid) is a graphic display of the sexes and ages of the selected species. Age Distributions can often indicate if a species has future reproductive promise as the base (youngest animals) has more members than the top (oldest animals).

For animals to be included in the Age Distribution dataset, they must:

- Be alive animals.
  - Dead animals are NOT included.
  - Pre-births (eggs/fetuses) are NOT included.
- Be an Individual animal.
  - Animals held within Group records are NOT included.
- Be recorded as Physically Held at a ZIMS institution.
  - Animals with the status 'Pending Confirmation' are NOT included.
  - Animals owned by a ZIMS member but held by a non-ZIMS member are NOT included.
- Have a full birth date.
  - $\circ$   $\,$  Animals with an estimated or Undetermined/Indeterminate birth dates are NOT included.

🥒 Age Distribution 🎗
📀 Run Report   Favourite Search Filters 💌 🛞 🛃 🖑
NOTE: Recently entered data may not appear on reports for 180 seconds after it was entered.
Taxonomic Scope *
Gorilla gorilla/Western gorilla × P
✓ Include Taxonomy below selected level
Exclude Domestics, Breeds, and Varieties
Global O Continent O Country Association O My Institution
All animals in ZIMS database will be included.
Print Type
● A4 O Letter



1.Enter the Taxonomy desired. By default, Include Taxonomy Below Selected Level is checked.

2.You can select to exclude Domestics, Breeds and Varieties.

3.Select the scope you desire.



1.You can export the graph to various formats.

2.You can print the graph by selecting the icon.

3.The males display on the left.

4.The females display on the right.

5.Undetermined sexes are displayed in yellow and divided evenly between male and female.

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# Weight Comparison

The Weight Comparison Report allows you to graph weights of a single animal, single animal and global data or global data only. To compare weights of multiple local animals you would use the Animal Graphing Tool. See <u>Tools in Husbandry</u>.





For weights/animals to be included in the Weight Comparison dataset, they must:

- Be recorded as Live weights.
  - Dead weights are NOT included.
  - Egg weights are NOT included.
  - Provisionally entered weights are NOT included.
  - Estimated weights ARE included.
- Be taken from an Individual animal.
  - Weights recorded within Group records are NOT included.
- Have a full birth date.
  - Animals with Estimated or Undetermined/Indeterminate birth dates are NOT included.

🕑 Run Report 🔋 Favourite Search Filters 🔷 🛞 🚽 🖉
NOTE: Recently entered data may not appear on reports for 180 seconds after it was entered.
Report Type
Weight Units *
kilogram 🗸 🔽
Animal *
GAN: 25207382/Pongo pygmaeus pyg 🗴 🔎 📿
Report Start Date *
01/01/1800
Report End Date *
06/22/2020
Starting Age
0
Ending Age
200
Group By
Year Year
Print Type
● A4 O Letter

 We selected to graph a single animal
 Select the desired Weight Units
 Select the desired animal. It

does not have to be a Local animal.

4.We accepted the default Start and End Dates. These become more important when global data is selected as for a single animal the Start and End Dates will be the dates a weight was first recorded and last recorded. You can, however, record Start and End Dates if you want to view only weights taken during a portion of the weight records such as when the animal was at your institution.

5.Starting and Ending Age is also more important when global data is selected.

6.You can Group the graph by Year or Month.







You can export the graph to various formats, switch to interactive view (full screen graph) or print the graph.





Run Report   Favourite Search Filters 💌 🚳 🖵 🕐
NOTE: Recently entered data may not annear on reports for 180 seconds af
Nort: Recently encoded and may not appear on reports for 100 seconds an
Report Type
Single Animal Only Single Animal & Global Data
Weight Units *
kilogram 👻
Animal *
GAN: 25207382/Pongo pygmaeus pyg 🗙 🔎
Sex Type
Male Select All
Continent
Search For Continent
Report Start Date *
01/01/1800
Report End Date *
06/22/2020
Starting Age
0
Ending Age
15
Group By
Year
Print Type
● A4 ○ Letter

1.We now selected to compare the weights for our single animal with the weights recorded for the species in the global database. There are two new fields. 2.Sex Type is a multiple select dropdown and allows you to filter the global weights by sex to compare like to like. This can be especially helpful when males and females have a large weight variation. 3.You can also select to filter global weights recorded in a specific Continent. 4.Starting and Ending Age now become important as ZIMS will return any global weights recorded up to the date of the last recorded weight. If there are weights recorded on your animal's taxa for up to 40 years of age but your animal is only 10 years old, there will be 30 years of data displayed that you do not

need.





This type of graph is called a Box and Whiskers graph. The Boxes contain the two quarters of the weights closest to the median. The Whiskers are the minimum and maximum of the other two quarters. The whiskers help us identify "outlier" values to try to have them corrected by the recording institutions. Outlier values are identified using the Tukey method. It calculates the interquartile range (IQR) of the data and defines an upper and lower threshold for identifying outliers beyond 1.5 times the IQR from the quartiles. Any data points falling outside these thresholds are considered outliers and can be removed for clearer representation of the dataset's distribution.

If the boxes are short, it means most of the values are very similar. If they are tall the values are more spread out.

When viewing a report where weights were not recorded you will see a 'dotted line'(yellow highlight above). Above we selected an age range from 0 to 15 years and there were no weights recorded before 1 or after 12 so the dotted line is ZIMS extrapolation of what the weights might be. If there is a long period where weights are not recorded in an animal's record the dotted line may appear within the solid blue line to represent ZIMS' best guess of what the weight would be in an attempt to connect the solid lines.

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🖻 Run Report 📔 Favourite Search Filters 🔤 🐼 🛃 🖓
NOTE: Recently entered data may not appear on reports for 180 seconds after it was entered.
Report Type
○ Single Animal Only ○ Single Animal & Global Data Only
Weight Units *
kilogram 👻
Taxonomic Scope *
Pongo pygmaeus pygmaeus/Northwes x P
✓ Include Taxonomy below selected level
Sex Type
Male Select All
Continent
Search For Continent
Report Start Date *
01/01/1800
Report End Date *
06/22/2020
Starting Age
0
Ending Age
40 3
Group By
Year 👻
Print Type
• A4 O Letter

1.We now want to view only Global data on the species.
2.The Animal field is now Taxonomic Scope.
3.We have increased the Ending Age to 40 to view weights recorded past the 15 years selected for our single animal comparison.





Note that the blue line for the single animal is not displayed and only the box and whiskers are shown.

## Example: Averages in global data can be misleading.

In this example, when we compare a single animal's weights with the global data, we see a a line for animal starts at about 17 kilograms, but this animal was 1.62 kg at birth:



At 1 year the line says the animal was about 115kg, but the animal's actual weight at that time was ~80kg at age of 1 year.

If we run the report for 'single animal' and not the 'global comparison', we see a chart of actual weights for the animal in focus:





#### Why is this global comparison average so confusing?

When running the Weight Comparison Report for a Single Animal & Global Data:

- The 'box and whiskers' part of the graph are generated from global data (excluding the focus animal)
- The blue line part of the graph is generated from the live weights of the focus animal.
- KEY POINT: each data point of the blue line is the average of all of the live weights for the focus animal within the time period of the data point (i.e. a month or a year)

While you might guess that users think these points are actually the animal's weight at that point in time (i.e. Age 0 yr, 1 yr, 2 yr, ... or Age 0 month, 1 month, 2 month, ...) – remember, these are NOT single weights, rather, these are an average of multiple weights.

For the tiger described in the example above, while the animal's birth weight was 1.62 KG, the report indicates 17 KG. The 17 KG number comes from averaging the 77 live weights taken for the animal during its first year of life (or while it was 0 years old). The lowest weight being 1.62 KG and the highest being 78 KG.

At 1 year of age the tiger was around 80 KG but the graph shows ~115 KG. The 115 KG number comes from averaging the 8 live weights taken for the animal while it was 1 years old. The lowest being 86.5 KG and the highest being 135.5 KG.

When the report is run for (group by) MONTH, it looks better because there are fewer numbers to be averaged per data point but they are still averaged and not a point in time (unless there was only 1 live weight for that month).

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## TAG Export

This resource offers current physical holdings of Species360 member institutions in a downloadable spreadsheet. It is intended to help support strategic collection planning, such as that done by various Association Taxon Advisory Groups (TAGs).







1.Before you run the report you should open up the Explanations and Assumptions document to help you interpret the results. It is also available <u>here</u> as a printable document.

2.Enter the taxonomy you desire. The taxonomy below is included by default.

3.If you wish to exclude domestics, breeds and varieties check this box.

4.Selecting to Export Only Taxa Held can save a lot of space as only the species that are held in the selected scope (see below) will display information.

5.Select your desired scope. If used by collection planning for a region you would probably select Association.

The report can only be exported to Raw Excel.

The following columns are produced in the Raw Data tab. Since it is in raw Excel these can easily be manipulated and sorted until you get the desired information in the desired format.

- Sort (a numbered order)
- Order
- Family
- Scientific Name
- Common Name
- Obsolete Taxonomy (a "Y" if obsolete)
- IUCN Status
- CITES listing





- Geographical Region (of the Holding Institution)
- Country (of the Holding Institution)
- World Associations (that manage the species)
- Regional Associations (that manage the species)
- Range (wild range)
- Rank (Species or Subspecies)
- Mnemonic (of the holding institution)
- Male
- Female
- Other
- Births
- Group Males
- Group Females
- Group Other
- Total Count

The following columns are produced in the IUCN Summary tab:

- IUCN Status
- Total # of Taxa
- % by Category
- # Taxa Held
- % of Collection Taxa
- # of Animals
- % of Collection Animals

If you want a visual of the holdings, select to View on Map from the navigation bar on the Report Filters screen.







1.Select your desired resolution.

2.Zoom in or out of the map using the + or -.

3.Hover over the bubbles to view the count.

4.Use the hamburger icon to print the chart or download the image.

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## **Population Overview**

This resource is intended to be a one-screen per taxon (species or subspecies levels only) overview of the state of the animal population, including key metrics on genetic and demographics, and indicators of the underlying data quality.







1.Read the Explanations and Assumptions prior to running the report. It is also available <u>here</u> as a printable document.

2.Enter the desired taxonomy at the species or sub-species level.

3.If you want the taxonomy below the selected level included check this box.

4.Check this box if you want to exclude domestics, breeds and varieties from the report. 5.Select the desired scope of the report.

The report can be Run or Exported to Raw Excel for data manipulation.







1.The filters selected display at the top.

2.The upper left graph plots 6 "basic vital rates" (births, deaths, acquisitions from non-Species360 member sources, dispositions to non-Species360 holders, acquisitions directly from the wild, releases directly to the wild) – each is a count of the events of that kind, by year. For individuals (not necessarily for groups), the net result of these basic rates should explain the observed changes in census at lower left, Note that acquisitions from the wild and releases to the wild may be undercounted, as those transactions may have been entered as to/from wildlife agencies, etc., rather than directly from/to the wild. Species360 current membership is used for the entire time period. Various events in groups may go unrecorded, so group data recorded vital rates may not total to the recorded changes in the census.

3.The lower left graph plots two variables – the living population size (individuals plus groups) on Species360 by year (census as of today's date each year), and the number of institutions physically holding the animals on those dates. Species360' current membership is used for the entire time period to hold the institutional-scope constant (not all current members may have entered data for 20 years ago, so some positive census trend might be caused by recent years being more comprehensive).



4.The upper right graph is a smaller version of the Age Distribution (Pyramid) Report. Occasionally a data entry error generates an apparently very long-lived animal, stretching the vertical axis.

5.The lower right quadrant presents calculated metrics on the data available for the population – some measures provide demographic information, some genetic info, and some are indicators of the data quality on Species360 for this taxon. Due to potential missing institutional information (not in Species360) and historical data weaknesses, some of these calculated parameters may represent a lower bound. More Contributing Founders, for example, may be identified if more complete histories and pedigrees are filled in for today's living animal population. For details read the Explanations and Assumptions document.

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F	ïle Ho	ome Ins	ert Pag	e Layout	Formulas	Data	Review	View	♀ Tell me w	/hat you want
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2	06/23/202	1	0	0	0	0	0	0	0	
3	06/23/201	37	0	0	0	17	3	0	0	
4	06/23/201	55	4	0	0	30	3	0	0	
5	06/23/201	80	0	0	0	67	0	0	0	
6	06/23/201	77	7	0	0	69	0	0	0	
7	06/23/201	46	2	0	0	29	2	0	0	
8	06/23/201	38	6	0	0	30	4	0	0	
9	06/23/201	3	14	4	0	25	0	0	0	
10	06/23/201	33	4	2	0	27	6	0	0	
11	06/23/201	42	6	0	0	25	9	0	0	
12	06/23/201	24	0	0	0	17	0	0	0	
13	06/23/200	24	4	2	0	20	2	0	0	
14	06/23/200	18	0	5	0	27	2	0	0	
15	06/23/200	34	4	0	0	28	4	0	0	
16	06/23/200	23	3	3	0	29	0	0	0	
17	06/23/200	54	0	2	0	43	1	0	0	
18	06/23/200	25	9	19	0	31	4	0	0	
19	06/23/200	14	12	3	0	22	15	0	0	
20	06/23/200	11	2	0	0	29	0	0	0	
21	06/23/200	20	6	10	0	22	0	0	0	
22	06/23/200	16	2	3	0	29	4	0	0	
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The Raw Excel has the following tabs:

- General Species and Filters information
- Acquisitions (Births, Acquisitions from Non-Species360 members, Acquisitions from Species360 members outside population subset and From Wild) and Dispositions (Deaths, Disposition to Non-Species360 members, Dispositions to Species360 members outside population subset, and Release to Wild) by Year
- Total number of animals and total number of holding institution by Year
- Current Age Graph
- Data Quality
- Combined Totals by Year

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#### **Favourite Search Filters**

Favourite Search Filters are available for all resources except for Species Holdings. These filters allow you to save time by creating and saving frequently used filters.

<u>^</u>		
Age Distribution 🥨		
🕞 Run Report 📔 Favourite Search Filters 🔤 🛞 💂 🖗		
NOTE: Recently entered data may not appear on reports for 11, seconds after it was	entered.	
Taxonomic Scope *		
Acinonyx jubatus/Cheetah 👷 🔎		
Include Taxonomy below selected level		
Exclude Domestics, Breeds, and Varieties		
− ⊖ Global		
Continent *:		
Europe 👻		
Print Type		
	Favourite Search Filter	×
	Name *	Cheetahs in Europe
		🚽 Save 🍃 Save & Run

Complete your filters as desired, select the Save icon and name the filter. Selecting Save will save the filter, selecting Save & Run will save the filter and run the report.





🎻 Age Distribution 💱
🕑 Run Report Cheetahs in Europe 🔽 🚳 🕞 🖓
NOTE: Recently e Cheetahs in Europe
Taxonomic Scope
Acinonyx jubatus/Cheetah 🗙 🔎
✓ Include Taxonomy below selected level
Exclude Domestics, Breeds, and Varieties
☐ Global
Continent *:
Europe 🗸
Print Type

The filter will be available to select in the Favourite Search Filters box. Once selected the filters for the report will prefill.

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