ZIMS – Is it really the best thing since sliced bread?

As keepers we are always being told by our registrars and record keepers that ZIMS is the greatest computer program ever and that it has improved the way zoos are run and managed so much, but how much does this program actually help keepers on a day to day basis? At Twycross Zoo we have been operating the ZIMS program since late 2010, with the keepers being involved in the inputting of the daily information in just the same way we would have used diaries in the past. Because of this, we have discovered that there are a number of ways in which this program can help the keepers with their day routines and animal management issues, and I have detailed some of these on this poster.

Twycross Zoo
The World Primate Centre

By Tony Dobbs
Team Leader - Primates,
Twycross Zoo

Enclosure Planting

ZIMS allows us to record what plant species we have growing in our enclosures. This information can be very useful when designing new enclosures as you already have a record of which plants do well with which species and which are simply going to become glorified browse if planted.

We also have the ability to record when plants were added to an enclosure and when they were removed. This is particularly useful when considering potted plants that are placed in heated exhibits such as callitrichid or larger reptile exhibits. These plants often need to be replaced or rotated to keep them looking at their best so knowing exact dates of when plants went into an enclosure and also how long plants have survived in the past before needing some TLC is very useful.

Plants

Actions

Add Date	Removal Date	Plant Taxonomy	Count	Reason
29/05/2013	-	Ficus maclellandii "alii"	1	Aesthetic Enhancement, Naturalization, Visitor Enhancement
29/05/2013	-	Howeia forsteriana	1	Aesthetic Enhancement, Naturalization, Visitor Enhancement
29/05/2013	-	Monstera deliciosa	1	Aesthetic Enhancement, Naturalization, Visitor Enhancement
28/08/2013	-	Spathiphyllum cochlearispathum	2	Aesthetic Enhancement, Naturalization, Visitor Enhancement
29/05/2013	-	Vriesea splendens	6	Aesthetic Enhancement, Naturalization, Visitor Enhancement

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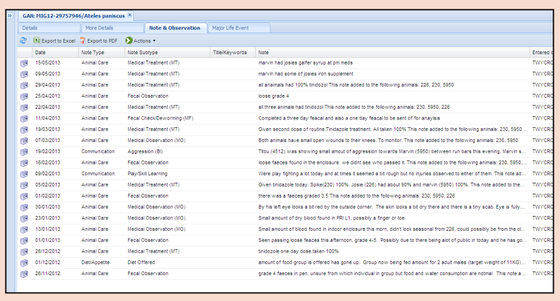
Health and Welfare

How many times have keepers reported that an animal has an occasional cough or something only to then have to trawl back through diaries because the vet team have asked just how frequent are the coughs? Due to the formatting of "Note Type" it is very quick and easy to search through daily observations and find this sort of information. In a similar manner it is simple to monitor the frequency of breeding activities or indicators and thus predict births etc. If observations of aggressive behaviours are recorded and then searched for in this way keepers can easily see if the frequency of these bouts is changing and thus make decisions accordingly based on fact rather than speculation.



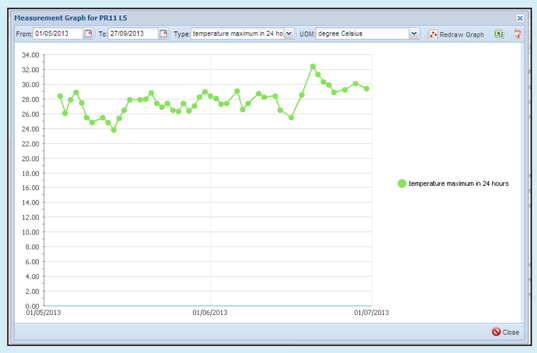
Environmental Parameters

Recording temperature and humidity levels within enclosures is nothing new, keepers have been doing this for years. However ZIMS has the ability to store all this information and then, with a few simple clicks of the mouse, produce graphs or export this information to other sources. With this sort of information available it becomes possible to spot trends in what is happening with the environmental parameters and thus predict the time when the heating needs to be fully functioning or when it is the best time to switch off the mister units for servicing etc. It is also very easy to look back over the information and see what was happening with the parameters when a particular event happened, for example did an increase in environmental temperature contribute to a bout of aggression or a drop in humidity lead to a loss of coat condition.

Environmental Measurements

View Measurement Graph Actions

Date	Measurement	Measurement Value	Measured By
24/06/2013	temperature	23.2 degree Celsius	-
24/06/2013	temperature minimum in 24 hours	21.6 degree Celsius	-
24/06/2013	temperature maximum in 24 hours	28.9 degree Celsius	-
24/06/2013	humidity maximum in 24 hours	72 percent	-
24/06/2013	humidity minimum in 24 hours	36 percent	-
23/06/2013	humidity	53 percent	-
23/06/2013	temperature	27.8 degree Celsius	-
23/06/2013	temperature maximum in 24 hours	29.9 degree Celsius	-
23/06/2013	temperature minimum in 24 hours	23.2 degree Celsius	-
23/06/2013	humidity minimum in 24 hours	34 percent	-
23/06/2013	humidity maximum in 24 hours	55 percent	-
22/06/2013	humidity	50 percent	-
22/06/2013	temperature	28.6 degree Celsius	-
22/06/2013	temperature minimum in 24 hours	28.3 degree Celsius	-
22/06/2013	temperature maximum in 24 hours	30.3 degree Celsius	-
22/06/2013	humidity maximum in 24 hours	70 percent	-



Animal Training

Status History

Status Change Date	Status
28/05/2013	In Progress

Training Session List

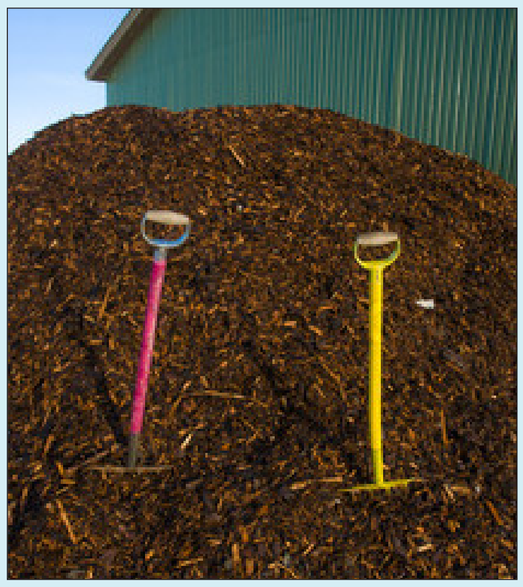
Date	Start Time	Rating	Aggression	Trained By	Details
25/09/2013	09:00	Excellent	No	Tony Dobbs	Followed target with no problems, happy to come into tunnel area with slide almost entirely closed. Did wander off around enclosure at one point but came straight back when called. Some negative interaction with Otto during session, Otto pulling on his back leg as Marvin tried to enter the tunnel.
13/08/2013	09:00	Excellent	No	Tony Dobbs	Due to being in new enclosure the goal was only to get him to come over and touch target whilst other animals were around.
					Came over and was touching target as requested but still very wary of the presence of other monkeys around him.
12/08/2013	10:15	Poor	No	Tony Dobbs	Still very nervous. Was looking over at trainer and appeared to want to come over but very wary of presence of other monkeys around him.
11/08/2013	11:45	Poor	No	Tony Dobbs	First session since moving to new enclosure with new enclosure mates. Animal very nervous, wouldn't approach or even acknowledge presence of trainer.
05/08/2013	12:45	Excellent	No	Tony Dobbs	Followed target into tunnel with no problems. Both slides fully closed with no issues, continued to train within tunnel throughout.
05/07/2013	09:00	Good	No	Tony Dobbs	Same as previous session.
					Josie (mother) kept trying to steal reward and this would cause Marvin to become distracted and wander off. He would return to the session as soon as Josie moved away and when Josie was not around he was following the target very well.
28/06/2013	09:00	Excellent	No	Tony Dobbs	Same as previous session, tunneling well but unable to close tunnel due to damaged external slide.
18/06/2013	15:45	Excellent	No	Tony Dobbs	Followed target very well, remained intunnel calmly whilst being trained. Unable to close external slide as runner is damaged and slide jams, contacted maintenance to get this rectified.
31/05/2013	15:45	Good	No	Tony Dobbs	Followed target well, went into tunnel and trainer was able to close both slides. Became a little agitated once shut in tunnel but still continued to touch target as requested.

One of the most recent things we have started to use ZIMS for is to record the progress of our animal training programmes. Most modern zoos will have multiple training programmes running within their collections and ZIMS allows for easy recording of these programmes. Details of the protocols and plans can be inputted and then a record of each training session can be added as they happen. This allows the trainers to easily see the progress they are making and to compare this with the pre-determined plan.

The biggest advantage of recording all this information on ZIMS is the fact that it can be made accessible to anyone or converted to a PDF format that can be emailed. This means when an animal changes collection a complete record of all its training and all the planned training can be passed on to the new keepers with a simple click of a mouse meaning there will be minimal disruption to the animal's training programme.

Substrates

By simply recording the substrates being used in an enclosure and how often they are being replaced it makes it very easy to predict and budget when replacement substrates are needed. The recording of the depth of substrate allows you to compare this with other factors such as environmental parameters. It can help answer questions such as does deeper substrate help maintain humidity levels, at what depth does the substrate restrict the under floor heating etc? In this way optimum environmental conditions can be determined and maintained.



Research

ZIMS makes carrying out research considerably simpler, whether it is keepers doing personal research or having to track down some information for a student or a studbook request. The program stores huge amounts of information regarding all the individual animals in our care, as well as the enclosures that they are housed in. This information isn't limited to the present day, but can also be historic and can often be linked with information from other collections. Want to know how many siblings a particular animal has and how many of them have bred; it's just a couple of clicks with a mouse. Interested in the size of the enclosures that a certain group has been housed in over the years; again it's simply a couple of clicks. The majority of the information you need is now all in one, easy accessible place, saving keepers huge amounts of time and frustration.

Dimensions

Actions

Date	Name	Value
09/12/2012	Enclosure Height	230 centimetre
09/12/2012	Enclosure Length	175 centimetre
09/12/2012	Enclosure Width	153 centimetre
19/02/2013	Outside Run Height (highest point)	329 centimetre
19/02/2013	Outside Run Height (lowest point)	235 centimetre
19/02/2013	Outside Run Length	680 centimetre
19/02/2013	Outside Run Width	356 centimetre
10/08/2013	Tunnel Height	38 centimetre
10/08/2013	Tunnel Length	93 centimetre
10/08/2013	Tunnel Width	38 centimetre

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