

The Importance of Training for Enhancing the Animal Welfare for the Birds of Prey at Landgoed Hoenderdaell, The Netherlands

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Abstract

The main goal of animal trainers and caretakers should be to make sure the welfare of the animals under their care is as great as possible. Training is an important tool to accomplish this. Training provides physical and mental stimulus and often makes taking care of the animals a lot easier. For the birds of prey at Landgoed Hoenderdaell, which are used in educational demonstrations, training has made sure that the animals can be housed in a more natural way than before. They were housed in the traditional falkery way. Which means perched on blocks. Now they are housed in large aviaries, without the use of jesses. The birds have gained a lot of freedom to move around and make their own decisions. But we still can use them as ambassador birds. In this presentation we show you how we have accomplished this change through training. And how the welfare of our birds has been improved.

Introduction: Why changing?

At Landgoed Hoenderdaell in Anna Paulowna (The Netherlands) there was always a birds of prey show. It was a show which used the traditional falconry methods for training the birds. This meant handling the birds on the glove to desensitize them, so they would get used to all things surrounding them. For some birds this went very well, but some birds really didn't like it. Flying the bird was trained by luring them with food. Assessing the willingness of the bird to fly was done by weight management. If the birds weight was too high, there would be no flying and no food. Weighing was done by picking the bird up at their jesses and putting them on the scale. In this method there is no choice for the animal. In between flying, the birds were housed on perches.



But public opinion is changing. Different bird groups together presented a leaflet in which they explained about why this kind of bird shows shouldn't exist anymore. The main objectives were:

- Birds are performing in an unnatural way; the birds perform tricks, nocturnal birds have to fly during daytime; birds can't display their natural behaviour because they are mostly tethered to a perch.
- There is a chance for bastardisation of fauna; birds can escape and in most of these shows hybrids are used.
- Most of the shows are for entertainment purposes only and lack good education.

The main objective of Landgoed Hoenderdaell is ensuring a good welfare of their animals. And this old bird show, didn't fit in this objective anymore. So a new plan was made for the birds and the show. A new exhibit with all birds in large, natural aviaries; a demonstration area which is covered by a net and an educational demonstration based on natural behaviours. This resulted in the next exhibit:



The largest aviary is 50*60*7 m (approx. 164*196*23 ft) and the smallest is 3*6*7 m (approx. 9.8*19.6*6.5 ft). The birds that participate in the demonstration can enter the demonstration area directly from their aviary through a hatch or a door.

Positive reinforcement training

But housing the birds in aviaries that big and still wanting them to participate in the demonstration requires a new way of training. Since the bird can go out of reach of a trainer, the trainers have to be fun and the birds have to be willing to participate. Instead of just accepting a human because there is food, the birds now really have to trust us and come to us because they want to. Not just for the food. Positive reinforcement training helps with making a positive relationship with your animal. Positive reinforcement training has been used with marine mammals for a long time, but with birds of prey it is relatively new. We were convinced that this would also work with our animals. So we started to use a whistle as a bridge and take small approximations to reach our training goals.

Our first objective was to teach the birds that they could come to us and the scale voluntarily. For our new birds this wasn't a problem. They were still young and were put in larger aviaries from the start. We could train them with positive reinforcement from the beginning.

Relationship building

For the existing collection on the other hand, this was something new. Some birds had to get used to us all over again. Birds of prey are normally scared of people and will go away when they see us. Jerom our European Eagle owl (*Bubo bubo*) hadn't been trained for a while. He was put in an aviary to mould. So when we started to train him again, he really had to get used to us again. We started by putting him in a small aviary (3*6*2 m (9.8*19.6*6.5 ft)) and approached him gently. When he didn't go away we used the whistle and left him food. When we were able to come close enough so he could take the food from the hand, we waited until he looked at us to reward him with food and go away. For the next step he had to bent towards the food to get the reward. And then he had to move towards us to get a reward. Within a week he would come to us over the length of the whole aviary to get the food. [Here is a movie](#) of Jerom coming to us and the scales voluntarily.

Jackpot

For our new demonstration we wanted the birds to fly without seeing the food. So we had to learn them that food would come even if they didn't see it. This was done by showing them less and less food, and if they would come reward them with large pieces of food. Now most of the birds come to us on que and we can reward them in a variable way. Using a bridge and a jackpot system allows us to train more different behaviours.

Weighing

So after that we would start the voluntarily weighing of the birds. All birds had been weighed before, and some would do it voluntarily straight away. Jack our Buzzard Eagle (*Geranoaetus melanoleucus*), had never shown any fear of the scales. But now he had the choice, he suddenly showed signs of fear. So we really had to take small approximations to start weighing him voluntarily. [Here is a movie](#) of the start of the scale training with Jack. Our Snowy owls (*Bubo scandiacus*) which always looked scared when weighing them, didn't mind at all when they were given the choice. They just didn't like being held by their jesses.

Husbandry training

When the birds came to us and to the scales voluntarily we could start with other husbandry behaviours. Checking the wings and the feet for injury. And checking their chest for a general condition check. All this was easy when tethered. Because they couldn't grab us with their claws or fly away. But now had to be trained all over again in very small approximations.

Door training

Another big training issue was entering the demonstration area. The birds had to fly through a door or a hatch to participate in the demonstration. In the old way we would carry them to the demonstration area and release them. Now they have a choice and they have to fly through openings quit small. In this case we saw big differences between the different species. Some birds didn't mind the small openings at all, which is probably a species thing. The Harris Hawks (*Parabuteao unicinctus*) are known for flying trough small openings and they didn't have any problems with the hatch or the door.

Our Hooded vulture (*Necrosyrtes monachuson*) on the other hand was already coming out of an aviary in the old show, but in the new situation he was really scared of the door. We had to take very small steps to train this new door. And every change to the demonstration area was a setback. And in the beginning we had lots of changes to the demonstration area, since the construction wasn't



finished yet when we had to start our training. Our black and red kites (*Milvus migrans* and *Milvus milvus*) had the same problem. They were flying through the door into the demonstration area quite well, until they build the stage. That was such a big difference we had to start the training all over.

But when they flew out of their aviaries we also had to get them back in. We used large rewards in their aviaries and small ones in the demonstration area. This worked most of the time, but sometimes the bird refused to go back. This caused some problems. Because once a bird of prey is out, we can't fly any other bird, because they might hurt each other. For some birds we started using a sound cue to let them know it was time to go back. This made it more obvious for the bird what was expected of him. For others opening the door or the hatch was enough to let them know a big reward was waiting for them inside.

Audience training

The last training challenge was the audience. Since we can't hold them anymore, they tend to fly away when scared. So getting them used to the audience also had to be done with small steps. And keep rewarding them for every step towards the stage. Luckily for us the old birds were already used to guests so that didn't become a big problem. Although some new birds still don't really like to fly to close to big groups. But by rewarding them when they do, it gets better.

Station training

In the old situation all birds were housed separately. But now we had more birds in the same aviary. Even though these birds are more or less social they will steal each other's food. So we introduced stations. Every bird had to go to their own station to get rewarded. At first we had to train this with one trainer for every bird. But now we can reward all birds in an aviary by ourselves. To make sure everyone knows which bird has to go to which station we colour coded the birds and their stations.



Training the volunteers

And most of us probably think: how difficult is it to see the difference between your animals, if you work with them you know them? For most professional trainers it is no problem at all. But at Hoenderdaell we also work with volunteers. People who have the best intentions but do not have

any experience with training. And they just work one day a week. So next to training a lot of birds (55 to be precise) with positive reinforcement, we also had to train our volunteers. They were used to walking around with the bird tethered to the glove and calling the bird over by showing food and using a whistle as an attention signal. To help them we organised a theoretical course in the evenings. In this course we told them what PRT is, how things were going to change and what the advantages of the new training will be. Also we guide them during the day. Explain them things, show them things and evaluate their training. This is still a work in progress. Because training never stops.

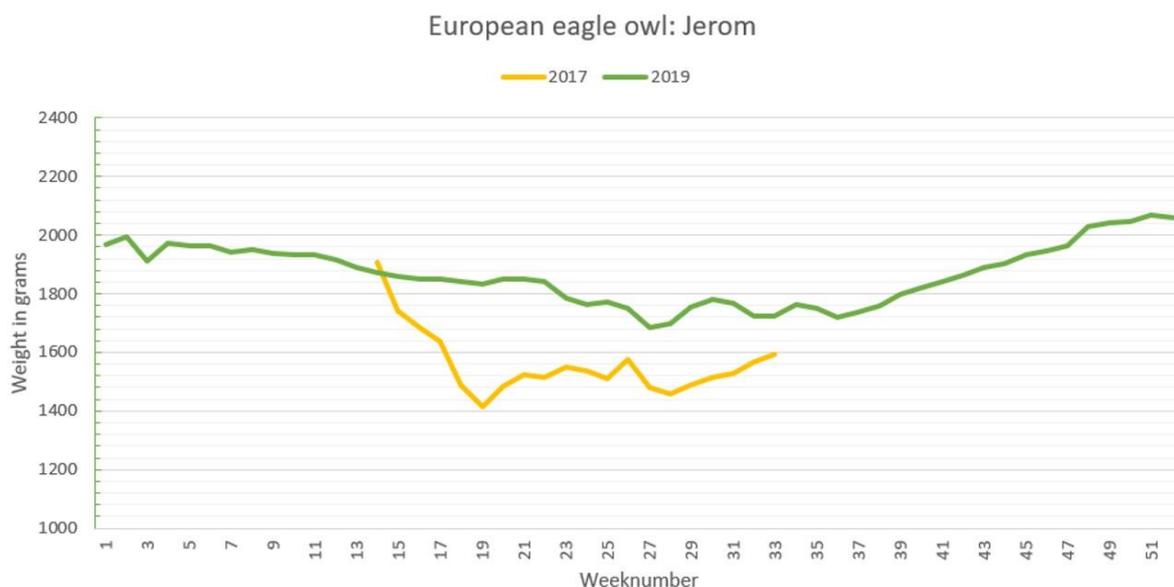
Advantages of the new way

Over the last two years we saw some big advantages with the new way of training and with the new facility.

Flying weight

First of all we see an increase in flying weight. We think it has a lot to do with the birds having a choice and having more control over their environment. Also the closed arena helps, because we do not worry as much about a flying weight anymore.

A nice example is our European eagle owl that was (not really) flying at a weight of just over 1500 gr (3.3 lb) when we started working here. Now he flies in the show at 1750 gr (3.85 lb) in summer and in winter time he can go up to 1900 gr (4.19 lb) or even more.



Also our Rüppell's vulture (*Gyps rueppellii*) has a big increase in flying weight. From 5,6 kg (12.3 lb) in the old demonstration to 6,5 kg (14.3 lb) now. We actually have to make sure he doesn't get overweight. But in almost all birds we see an increase in weight. Even without the equipment which used to be included in the weight. The birds fluctuate their weight according to natural factors and not according to participation.

We use their motivation in training as a guide to decide if they can participate in the show or in training. And we use their motivation to decide how much they eat, and not only their weight.

Closed demonstration area

Another big difference is the closed demonstration area. A net is covering the demonstration area to prevent birds flying away and mixing with local fauna. At first we were a bit disappointed to not really free fly the birds anymore. But now we love it. Our birds have more freedom, because they are not really free. We can be more relaxed about motivation and weight. If they want to fly around a bit... we let them. If they don't want to go into their aviary... we let them.

The birds can also play with the wind and the circumstances in the arena. They have a choice where to go if they get scared (like from really big camera's or scary public). And we can catch some of these flying behaviours and put them on que if we want.



Different demonstration every day

Our demonstration still keeps growing and getting better. We never do the same show twice! Every day we put together all our variables: what bird was eager in the first (weighing) session, what bird wasn't, who are the volunteers today, what is the weather? Everything put together every day is different.

And yes this is an extra challenge to our professional staff, but it keeps life interesting. And it is also a challenge to our volunteers. You may call it staff enrichment.

But as a zoo with many frequent guests and working with a different crew off (less professional) volunteers every day it works! And our birds stay alert and motivated.

More behaviours to be trained

We used to only fly the birds from A to B, luring them with food. Now we train different natural hunting and foraging behaviours on que for our demonstration. But we also do target training, voluntary nail clipping, colour discrimination, sending the birds forward to different places and we even have started injection training with our hornbill. All this to mentally stimulate our birds and make life more easy for them.

More enrichment

We are also able to provide a lot more enrichment. Food enrichment (we don't really have to take care of an appropriate weight), training enrichment (not just for health checks or demonstrations) and environmental enrichment (free flying time in our arena for example).

Better welfare

Overall the biggest difference we see that our birds are happier and healthier. This is of course due to all of the above. Better housing circumstances, more enrichment, better weight and in general more control over their environment.

If we look at the points to assess animal welfare as defined by the welfare quality network (http://www.welfarequality.net/media/1084/wq_factsheet_10_07_eng2.pdf), we see a big difference in the welfare of the old situation and the new situation. Where the welfare would be assessed as bad to moderate in our old situation, now it would be assessed as good to very good.

Welfare criteria	Old	new
Animals should not suffer from prolonged hunger, i.e. they should have a sufficient and appropriate diet.	☹️	😊
Animals should not suffer from prolonged thirst, i.e. they should have a sufficient and accessible water supply.	😊	😊
Animals should have thermal comfort.	😊	😊
Animals should have enough space to be able to move around freely.	☹️	😊
Animals should have comfort around resting.	☹️	😊
Animals should be free of disease.	☹️	😊
Animals should be free of physical injuries.	☹️	😊
Animals should not suffer pain induced by inappropriate management, handling, or surgical procedures.	☹️	😊
Animals should be able to express normal social behaviors.	☹️	😊
Animals should be able to express natural behaviors such as foraging.	☹️	😊
Animals should be handled well in all situations.	☹️	😊
Negative emotions should be avoided, whereas positive emotions should be promoted.	☹️	😊

Where before there were problems with bumblefoot, aspergillosis and feather damage due to poor housing, now our birds look and do great. We see natural behaviours like nest building, courtship behaviour and play. Because of the higher weights our birds started moulting in the appropriate season (which is not always convenient for us because they can get cranky). In some birds we even see weight dropping in spring and gaining before winter (at their own que, we only facilitate their needs in food).

Conclusion

This kind of facility combining with an educational demonstration could not have been done without the implementation of positive reinforcement training. Due to this training the welfare of our animals has increased a lot.

Resources:

For a video of our presentation at IMATA see the link below:

<https://www.animal-training.eu/imata-presentation>

For more videos about training our birds look here:

<https://www.animal-training.eu/video-s/video-s-landgoed-hoenderdaell>

Landgoed Hoenderdaell website:

<https://www.landgoedhoenderdaell.nl/>

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