

Kathrin Paulsen

Assistant head keeper, primates, Hanover Zoo, Germany  
Chairwoman "Save the Drill Association"

The drill (*Mandrillus leucophaeus*) is one of the most endangered primates in Africa. They occur in Nigeria, Southwest Cameroon and on Bioko Island in groups of up to 30 – 80 or more members, consisting of several adult males, females, sub adults, juveniles and infants.

Today, there are only approx. 3000 individuals left in the wild and this population continues to be critically endangered.

Logging, establishment of plantations (especially palm oil) and hunting for 'bushmeat' are the main reasons for the threat of extinction to the drills.

Infants whose mothers are shot ('bushmeat orphans') are sold as pets.

Hunting, as well as keeping primates as pets is illegal in Cameroon and Nigeria.

For example in Cameroon: when these orphans are confiscated by the government they are brought to a rehabilitation and breeding center, the Limbe Wildlife Center. It is a rescue and rehabilitation place for nearly 230 apes and monkeys in 17 species.

More than 85 drills are housed there in a large colony. But some are separated – for quarantine, because of the integration progress or the need for daily treatments.

In zoos worldwide there are only approximately 90 individuals left - so it is very important to save each one to keep the population in zoos viable.

### **Training an adult drill male**

**or: "with a little help from my friends"**

We all train animals - every day!

They have to change enclosures, go from outside to inside or must to be separated for cleaning purposes. We can use food as a motivator but most of the time this is not necessary because the animals react well to clear rules and a daily routine.

What happens when it is immediately essential for a monkey to be trained to survive?  
When suddenly there is an outbreak of a disease that makes a daily injection or tests of urine necessary?

This happened some years ago at the Hannover Zoo with an adult male drill. He suffered from diabetes and lost 10 kilos in the space of just two weeks!

We had to train him to accept daily injections and of course we had to know the exact medication dose. Because of different reasons it was not possible to get blood every day, but testing also works with urine.

What was to be done?

Unfortunately, I'd never had experience with medical training before so I called my colleague Carsten Knott, a successful animal trainer from BDZ (the German Zookeeper Association). He gave me very helpful ideas and important pragmatic advice. Another contact was to colleagues at the San Diego Zoo - some years ago they trained and treated an adult male drill with diabetes for several years.

With all of this helpful information, I and my team of 7 colleagues were able to train him to accept the injection of insulin and to produce urine on demand twice a day. His treatment was successful and for more than six years he lived with that disease as the alpha male in a social group with some females and a lot of offspring.

In my function as chairwoman of the German association "Save the Drill", I spent two weeks at the breeding and rehabilitation "Limbe Wildlife Center" in Cameroon last year.

What do you think I saw there?

An adult male drill with diabetes, living alone for more than one year on a special diet. The keepers were able to inject him with insulin, first with the help of a pressure cage, later in a bigger one but it was not possible to put him back into the group because he was not able to give urine regularly on demand to determine the exact insulin dose.

Why not?

The animal was not trained, he just accepted the injection for a piece of banana.

So I trained that drill male to produce urine on demand.

Why was I successful?

The most important factor was that I had the time to do it!

I spent every day observing him closely, to determine his peeing routine and then started the step-by-step training process. After exactly two weeks he supplied urine on demand and the correct insulin dose could be calculated.

Today, that male lives separated but directly beside the group and has direct contact with at least three other drills every day.

I will show a short film about a workshop for my colleagues in Limbe, included in my presentation.

I would never have been able to train an animal without the "little" help from my colleagues.

I would also like to make it clear that every keeper can be a trainer – if we follow some basic rules and always put the individual animal in the focus of our efforts.

It is also very important to talk about it, to share our knowledge and to exchange our experiences.

It is so easy to help other keepers - like my colleagues helped me years before.