

DRILL INFO

Issue 18, October 2014

**Dear members and friends of the drill,
10 years of "Save the Drill"!**

Who had thought that a small group of dedicated people would meet in the animal park in Nordhorn in beginning of 2004. From the "Action save the drill", founded in 1988 by the former animal keeper Roland Wolf, Hannover, "save the drill" developed on January 17, 2004. In August of the same year, the regional court of Osnabrück approved "save the drill" to be a nonprofit organization. At the beginning we have to overcome a lot of "growing pains" like many other organizations. The German law of association was carefully studied, and accordingly some mistakes were corrected by amendment and reorganization of the status. Also, the management needed some time to become a team. Therefore, in the first years some committee members changed, and in 2010 also Roland Wolf left to assign for new tasks. For a few years the committee has remained very consistent, which positively affects teamwork. During this time amicable friendships with the project leaders in Cameroon and Nigeria grew. Based on personal contact and visits, a trustful relationship was created. Meanwhile, our number of members has reached



100 plus three zoo / animal parks in Germany. We also have members from Switzerland, Netherlands and even a member from Spain and the US, respectively. Fortunately, from each zoo in Germany keeping drills, a minimum of one keeper is a member.

Together it was possible to support conservation work for the drills in Nigeria and Cameroon during all years. Frequently it was feasible to help in minor or major situations with spontaneous financial support. Since the start of "save the drill", in sum more than 35,000 Euros were transferred for the Pandrillus project. Moreover, several donations in kind were sent via personal engagement to Africa.

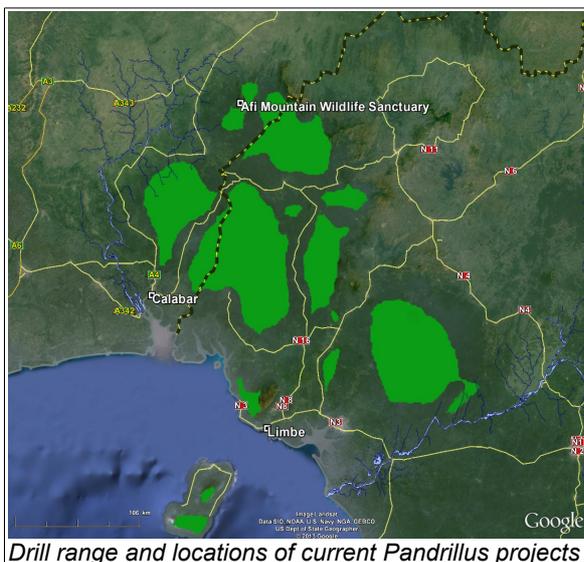
With kind regards,

Your editorial team

Pandrillus or: *How it gets started – a brief review*

25 years ago, Liza Gadsby and Peter Jenkins, an American couple, travelled to Africa initially to investigate chimpanzees. At the market in Calabar, the capital city of the federal state Cross River, they were confronted by chance with a very young orphaned female drill offered at the pet market. The two biologists saved this young female, who became the starting point to try to save the drills. As a result, Liza and Peter remain with the drills in Nigeria even today. In 1991 they founded a conservation station, the Drill Ranch, where the above mentioned female drill still lives today. In close collaboration with local authorities, Liza and Peter also founded the Limbe Wildlife Center in the south of Cameroon in 1993, and in 1996 the Drill Ranch in the Afi Mountains of Nigeria.

They named the organisation “Pandrilus”, derived from the words “drill” and “pan”, the Greek prefix for “all, in sum”. So all drills are meant, including those living in their natural environment as well as those living in human care. In recent years, more and more confiscated and orphaned animals were registered and adjusted to breeding groups in the conservation stations in Nigeria and Cameroon. None of the animals was ever bought, to prevent supporting the market trade. At the same time, cooperation with the local authorities was increasing. Today, Peter is employed by the government of Cross River to take legal actions against poachers and habitat destruction in nature reserve of drills. Around 1980 the drill was listed as extinct in Nigeria. Merely a small remnant population in the forests of northern Cameroon was known. Until today, drills are shot for so-called “bushmeat”, sold at local as well as at international markets. Even females with dependent offspring are hunted by poachers. The young animals, so-called “bushmeat orphans”, are offered on the pet market. Often these individuals are injured or / and malnourished, however, they are heavily traumatized. Thereby, the private keeping of primates is in both countries, Nigeria and Cameroon, illegal. More and more often animals in private keeping are confiscated and handed over to Pandrilus.



Drill range and locations of current Pandrilus projects

Today 520 drills are housed in the conservation stations in Nigeria and Cameroon. Many people have found jobs in these stations. They are employed by Pandrilus as keepers, drivers, gardeners or veterinarians.

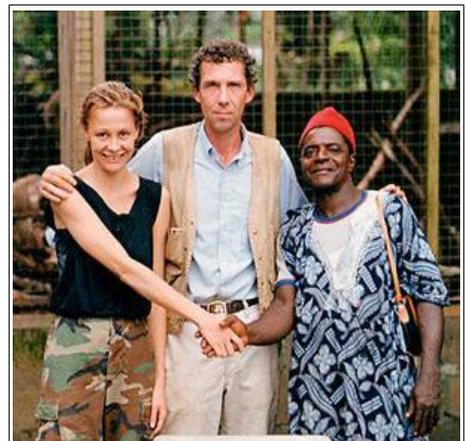
Only around 3,000 drills are assumed to exist in their natural environment (distributed in small areas in the south of Nigeria and Cameroon as well as on Bioko Island). That's why Pandrilus is not only

giving the animals a detailed veterinary check; they also arrange big breeding groups as comparable to the drill living in the wild. After, they will form huge groups at the Afi Mountain Drill Sanctuary in Nigeria.

The ultimate intention is to release these drills into their natural habitat.

Visiting the drills of Nigeria

The committee of „save the drill“ was invited several times in recent years by Pandrilus to visit the drills and the ongoing projects in Nigeria. Since the establishment of the association we had transferred more than 22,000 Euros to Nigeria. Furthermore, we organized the transport of many donations in kind. Of particular notes are the work clothes donated by Hanover Zoo, which are now gladly worn by the keepers in West Africa. Merely organizing the transport of these clothes cost a



1992: Liza Gadsby and Peter Jenkins together with David Iferi coming from the village Edondon (Image: by Tunde Morakinyo)

total of four years of intensive effort, but at the end it was possible to transport 850 kg of clothes via different transport companies for free to Africa (see Drill Info No. 15).



The entrance to the Drill Ranch in Calabar

Well, ten years after foundation of the association it was time to get an idea of the situation on site. For a long time I was hesitating. Nigeria is not only known to be one of the most corrupt countries, but also known as one of the most dangerous countries in Africa. So it was no question, I would not travel alone – like I have already done e.g., visiting the drills in the Limbe Wildlife Center in Cameroon. Surprisingly at the end of last year, Tom ten Tusscher, keeper at animal park Nordhorn and member of “save the drill”, asked me if we could travel together. A fast decision was made and flights via London to Nigeria were booked. A problem was obtaining a valid tourist visa, without it would be impossible to enter Nigeria. Therefore, we needed an invitation from Nigeria, references, vaccinations,

a stay- and a work permit from Liza Gadsby, and additionally we had to pay several fees. I had to be in person for an interview in the Nigerian embassy in Berlin. Tom, having a Dutch citizenship, had to travel twice to the embassy in Den Haag. Finally, everything worked out and we started to visit the drills in Nigeria on March 15th this year.

After arriving in the capital city Abuja it was not a problem at all to find the gate for national flights like at European airports. We flew one hour south to Calabar. Peter Jenkins picked us up at the airport, and brought us through the dense traffic of the city to the Drill Ranch. Unfortunately, it turned out that Liza was not in Nigeria for a long time – a severe disease was holding her in the US, where she hoped to find medical help. We were cordially received by Peter, and he was right from the beginning telling stories about the land, the politics, his life in Nigeria and especially about the Drill Ranch in Calabar.

The Drill Ranch is situated in the middle of the city, in a remote spacious dwelling house with a big surrounding. In the back is a 300 square meter enclosure, which is

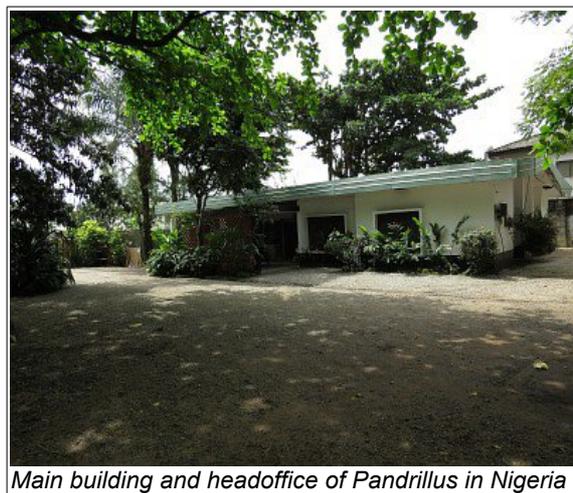


"Education group" in Calabar

home to a group of 62 drills. The ground of this enclosure is covered with bark mulch, and is regularly re-filled. It is also structured with many high connected climbing opportunities and platforms as well as ropes for climbing. Besides a veterinary department, there are changing and shower rooms for the employees, a small storage room for food, a fire place to cook vegetables for the animals as well a workshop room. To store e.g., spare parts, fences or stakes, a place in the back of the area exists (a huge place, but never large enough). In this place the diesel generators are placed, which exist primarily for emergency supply for the drill fences and the large antenna mast, guaranteeing the required radio traffic. The walls of the two guest rooms are covered with documents about each animal, the groups size and structure, which have been collected since the establishment of the Ranch.

Liza and Peter's office is equipped with modern technology, internet, printer and professional short wave radio, because it is the official place of business of Pandrillus.

Visitors are always welcomed at the Drill Ranch. Even when visitors are unannounced, there is always a time to talk about drill history, threat, damage of the drill environment, and "bushmeat problems". Therefore, this drill group is called the "education group". The animals cannot be released into the wild because they are well-habituated to human presence. They live in a big social breeding group, and help to provide information and education for the resident population, like drills in zoos in Europe.



Main building and headoffice of Pandrillus in Nigeria

On-site four quarantine stations exist for new arriving animals. After an intense health checkup, the new arriving animals are kept in small groups of 3-14 individuals for about three months, and will then be part of a bigger group. The costs for renovation of the quarantine cages were covered by save the drill this year.

We spent five additional interesting days in Calabar.



New quarantine enclosure financed by save the drill

Together with Joanna, the head of nutrition for the animals at Drill Ranch, we went to the local market. Such an amazing event should be done together with a local person. Everywhere Joanna is known as "monkey woman". We were warmly introduced to everyone and asked several times to take pictures: "snap me, snap me". What a friendly and hearty impression of Nigeria! But still, travel advisories from the State Department are out because of the religious and political conflict and crises, and / or the obvious difference between black and white people as well as poor and rich people, which often ends in bloody disputes. At the moment in all media outlets, brutal strikes and kidnappings in the north of Nigeria of the Islam radical group "Boko Haram" are reported. But we always were surrounded by friendly and helpful people who were often having fun with us. These happy and intense days will be not forgotten for a long time for Tom and me.

Four times a week, large amounts of food are bought at the market for the drills. Joanna inspected huge baskets filled with mangos, pineapples and papayas as well as fruits I was not able to identify. Intense discussions about the prices are followed by an order and purchased products are stored at a certain place, where they will be picked up later by employees of the Drill Ranch by car. Thus, local people are involved in the project and about 25 employees have a regular salary from Pandrillus in Calabar.

In this way conservation protects and builds jobs in the area.

Every morning Peter Jenkins and his employees of the "task force" having a meeting in front of the house to discuss the daily procedures. The men are armed and equipped on a high level. The whole nature reserve is mapped: more than 300 points are marked on a map and are reached regularly by Peter's patrols. Therefore, changes in the environment can be directly reported to Peter, who can send a team to the mentioned GPS data points.

At least Tom and I went off to the "bush" – the Afi Mountains.

Next to the nature reserve „Afi Mountain forest reserve", the natural drill environment, is a second Drill Ranch.

After a six-hour drive over 270 km with a four wheel vehicle (the only way to drive) over roads getting worse, the driver of Pandrillus and we arrived at the Drill Ranch beside the rainforest.

At the moment, a total of 412 drills are kept in five groups. Also, some animals from Calabar find a new home here after quarantine. The biggest group includes 175 individuals, the smallest 16 animals. These animals should be released back into the Afi Mountains, which were visible in the back.

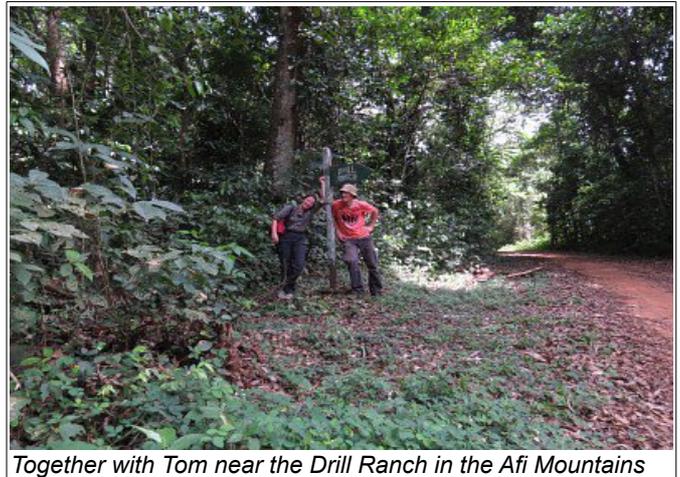
The drills are fed twice a day, but the main food is available in the enclosure and consists of leaves, fruits, roots and small vertebrates. Only experienced keepers who have worked there for a long time enter the drill enclosures. For example, the keeper Emmanuel has worked for Pandrillus in the Afi region for 20 years and has since the beginning been responsible for the biggest group, "group 1".

Four additional groups exist, with up to 87 animals in enclosures between 1-7 hectares in size. All enclosures are secured with solar-powered electrical fences.

Our home for the night was two cabins, large wooden huts of stilts with a few over the largest drill enclosure. The accommodations can be booked by tourists visiting the ranch, and the money flows directly into the Pandrillus project.

There is no electricity, no working mobile phones, and no Internet. The next village is Buanchor, which is 5 km away.

The only contact to the world outside is radiotelephony to Calabar, when it is working, which depends on the weather. There is no fridge and also no running water available. Drinking water needs to be filtered. An open shower exists, with water delivered from a barrel on the roof. When the shower is used, a plate on a bamboo wall has to be turned. The toilette (a two-holer) offers an inimitable view in the tropical rainforest.



Together with Tom near the Drill Ranch in the Afi Mountains



View from the cabins to the big drill enclosures in the Afis

Unfortunately it was not possible to spot any birds, because the trees were too dense and too high. But we have seen galagos (small nocturnal prosimian), reptiles, squirrels, bats and a lot of insects, especially army ants were visible (or felt).

One evening Peter Jenkins arrived really late from his patrol at the ranch, and in the night I was roused by loud yelling, indicating that I should hurry because Peter would arrive with a pangolin. In fact, during a break in a bar a local person arrived and handed over a pangolin and a giant squirrel - without any comment. Peter is known in this area and from time to time people voluntarily offer him captured animals, which were caught as pets or for the bushmeat market. Peter, as an

employee of the government, can confiscate animals, as he often does, and then the owner is faced with jail time or to a large fine. The pangolin was extremely dehydrated and consumed a half beaker of water with his long tongue. Thereafter, we sat down a some meters away and after a half hour the pangolin released himself: he just walked slowly into the bush and disappeared without a trace into the night.

We kept the juvenile giant squirrel for a couple of days feeding it with milk. In the meantime the news reached me from Nigeria that they were also able to release the squirrel.

We also took a trip into the trees called canopy walk. Walking on a bridge about 48 meters above

ground between the giant tropical trees the views were breathtaking.

But also the destroyed regions of the forest came into view: For two years now there are only 3 platforms left in the trees for the canopy walk. The other 3 platforms were destroyed. So the tourist attraction is limited.

In summer of 2012, while it was raining heavily, there was a great landslide in Afi Mountains. It was caused by deforestation for new farms and illegal logging of the tropical rainforest.

This landslide also destroyed parts of the Drill ranch. The sanctuary of group 6 was damaged so heavily by the rain that it isn't possible to keep the animals in there anymore. Big stones and fallen trees are covering the sanctuary and most of the remaining trees are dead so that they also might fall and be a risk for the drills. The natural food of the drills containing leaves, insects and small reptiles is rare in this bald area and there is no covering or shelter left after the destruction for the individuals of the group.

So the reintroduction of the drills into the Afi Mountains was postponed because the money is needed now for the restoration of the Ranch.

Because of the heavy rains lasting several days stones, heavy rocks and trees were swept along with the mud into the valley destroying farms and houses. There's still only the rooftop of the little school building in Buanchor peaking out.

This incidence is the reason for new illegal farms and even more deforestation. So the last refugium of the drills is more fragmented and the hunters and poachers have an easier access to the woods. But the public authorities are strongly working against this. Peter Jenkins and his Task Force is well organized and is trying to protect the area against illegal farmers and poachers (<http://www.atfcr.org>).



Over 3 years after the weather disaster: devastated land in the Afis



Devastation inside the drill enclosures

We were able to witness these missions while driving back to Calabar with Peter.

For harvesting fruits the area has to be slashed and burned. It was devastating to see the home of the drill being destroyed.

The renaturation of these areas will take many years in which they are no secure region for the animals to live in. They create big forest aisles which separate the drill groups and avert the genetic exchange of the populations. Also big areas are cleared by the government for private usage right next to the protected zones. So the ignorance of the people and also their

age-long traditions are the reasons for this situation. It is also difficult for them to accept that the government - with Peter's help (a white American!) - forbids the agriculture, hunting and poaching.

Education and integration of the general public are the most important tasks and the inalienable basis of wildlife conservation in Nigeria.

Since two years now the food for the drills at the ranch in Afi mountains cannot be bought in the village Buanchor because due to the environmental destruction the people only have enough food for themselves.

Many roads are impassable and the staff has to drive to the village Olum to buy more expensive food which is about 10km farther away. So the cost of food is increased also by the risen petrol prices.

In the last year save the drill was able to help spontaneously with a 3.500€ donation from the Wilhelma Zoo Stuttgart to pay the risen food-costs.

The total amount we sent to Nigeria in the last year was an overall 10.000€.

The situation for the drills has become more threatening again but the people at the Ranch, the keepers and the “management people” are highly motivated and keep on going. They do a great job and they are optimistic that the drills can be released into the Afi Mountains one day and secure the survival of their whole population.

Kathrin Paulsen

Credits

We'd like to give sincere thanks to Mr. Gerhard Kriegel at the Julius Berger company in Abuja. Through his hospitality we had a secure stay on the company's ground on our journey back home. He also gave us a small insight of the life of the many Europeans who work and live in Nigeria. He organized an appointment at the Nigerian Field Society for us. After we were welcomed by Emma Shercliff we could held a lecture about save the drill.

Also, Tom and I were specially impressed by visiting a Nigerian theater play taking place outside. It was a modern play about the inner conflict of the people of Nigeria living with tradition and modern values. It also gave us a glimpse of the everyday life in Abuja.

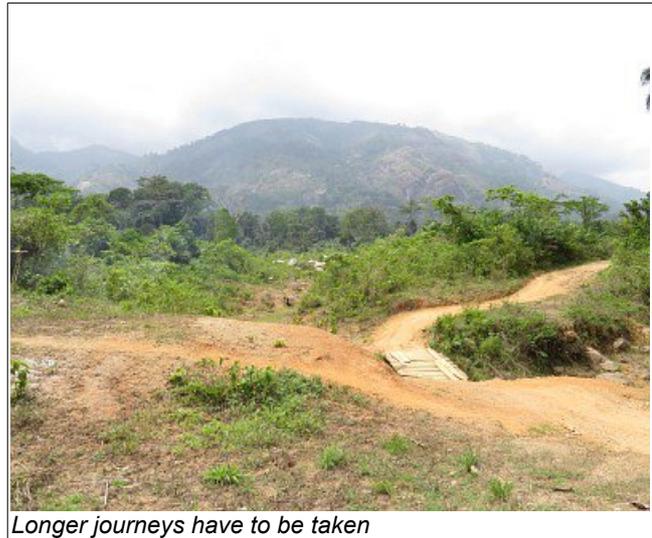
Kathrin Paulsen, Tom ter Tusscher

News from Cameroon

Again in this year we were able to pay the whole costs of the Aframomum harvest for the drills.

The Limbe Wildlife Center (LWC) is able to employ 36 former hunters in this “hunting reducing project”. They drive to the edge of Mount Cameroon to harvest this feeding plant effectively for the animals at Limbe three times a week. In this way they have a regular income for themselves and their families and they no longer have to go hunting. Also some women got the possibility to grow vegetables for the animals on small fields and sell them to LWC.

In the beginning of this year Dr. Ainare Idoiaga, the project manager of Limbe Wildlife Center asked save the drill if we could pay for a new separation compound for the drills.



Longer journeys have to be taken



New enclosures for the drills in the Limbe Wildlife Center in Cameroon

The drill group has reached more than 100 individuals. Therefore the possibility of separation is needed not only for individual medical treatment but also to separate some of the twelve adult males for security reasons before a human can enter the enclosure (e.g. for repairs).

The extra cages are also essential when new drills are introduced slowly to the group. The new drills can be kept in sight of the group and get in contact with only individually chosen drills.

save the drill was able to pay the bill for both projects through a very generous donation by the Zooverein Wuppertal (5600€!). Sincere thanks for that!

Science Corner

The habitat of many threatened animals is becoming increasingly fragmented. Habitat fragmentation causes genetic isolation and can lead to an eventual split into subspecies. Information about this splitting process is important to effectively protect animals living in human dominated habitats. The drill (*Mandrillus leucophaeus*) is one of the most spectacular and most threatened primates in Africa. Little is known about its distribution, population status and efforts to protect this species.

Bethan J. Morgan and her colleagues conducted a systematic survey of the drill population in Cameroon. The results of this survey were published in the beginning of 2013 in „International Journal of Primatology“ titled „The distribution, status, and conservation outlook of the drill (*Mandrillus leucophaeus*) in Cameroon“.

Within Cameroon, the drill was once distributed from the south of the savannah zones to the rivers „Sanaga“ and „Mbam river“ in the east. This area was subdivided into 52 small sections. Over seven years data were collected to learn more about distribution, status and protection of the drills. Hunters were interviewed, drills were counted and the landscape was analysed. Of the 52



Drill range

subdivisions, drill presence was observed in only 24. Individuals were only detected in the forest, never close to villages or farmland. Based on interviews and observations, the authors assumed that the northern extent of the drill range is the northern part of the “Takamanda national park”. This park has a boundary with Nigeria and is part of a biosphere corridor, which also includes the “Okwangwo –Sector” of the Cross – River national park, the “Afi Mountain Wildlife Sanctuary” and the “Mbe Mountains Community Wildlife Sanctuary”. The eastern extent of the drill distribution is the „Ndokbou“ region and the southern extent is hard to define. Originally, the southern extent of their range was considered the „Douala-Edéa Reservoirs“, which is adjacent to the gulf of Guinea, however evidence of their presence was not detected in the area. Interviews of the hunters were

contradictory. While some reported that drills still exist, other said they have not seen drills for decades. If they still inhabit the area, it must only be in small numbers, isolated from the nearest drill population which is 100 km away in “Ebo” separated by plantations, human villages and roads.

The drill range in Cameroon is 46.00km², but with many unsuitable areas (see figure 1), caused by roads, villages, farmland and more recently by banana- and palm oil plantations. For the drills these are insurmountable barriers isolating the remaining populations from each other.

Presumably the drill population has decreased by around 50% in the last 30 years resulting from hunting pressure and habitat destruction. This not only impacts the drills, it also affects the other primates of Cameroon, e.g., Preuss's monkey, red-eared guenon, and Preuss's red colobus.

A previous save the drill newsletter discussed a historical dramatic population decline and subsequent recovery (Ting et al. 2012; Drillinfo 16), which offers hope for their current struggles.

However, human impact and habitat isolation present significant challenges to their recovery.

If drills are to be saved it is absolutely necessary to conserve and protect the remaining forest, corridors are essential for the dispersal of drills and other species. It is also important to update the maps to determine the locations of farms and plantations. The authors suggest that these map updates will also assist in land management and development, especially with regard to logging and other destructive practices, which can be openly discussed in public.

Dr. Verena Behringer

We thank the following people for their donation:

Mrs. Sabine Jähnke, Mrs Birgit Eggers, Mr. Walter Riedel, German association of zookeepers, Mrs. Barbara Klotz

We are happy to welcome our new members:

Mr. Florian Mersch, Mr. Fabian Krause, Mrs. Franziska Molde

News in brief about the drills:

Frankfurt: on June 30, the 8 year old „Kumasi“ gave birth to a female offspring.

Saarbrücken: on March 10, the 16 years old Antonia gave also birth to a female offspring

Osnabrück: on June 12, 3 female drills arrived from Saarbrücken

Thanks for the translation to Maureen Mc Carthy and Jack Lester!

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