CONCLUSIONS AND SUGGESTIONS AFTER EEP-VCF STAFF VISIT AT THE ACADEMIE DE FAUCONNERIE DU PUY DU FOU

After the breeding results in 2014 with the pair housed at the Academie de Fauconnerie du Puy du Fou (AFPF) and the encounter between the Director of the Academie and VCF Bearded Vulture Programme Manager during the French Zoos Assotiation (AfdPZ) annual meeting, it was accorded between AFPF and EEP/VCF to invite Alex Llopis to visit the Academie and have a look at the Bearded Vulture pair and his installation.

Introduction:

In Mai 2009, Academie de Fauconnerie du Puy du Fou received an adult wild female from Almaty zoo, BG651. In 2010 the female was paired with the adult male BG148 born in 1991 from the EEP. In 2012 was decided to change male, because all 7 eggs obtained during two breeding seasons where infertile. In 2014, with the new male, BG212, 4 eggs were laid: again all infertile. Furthermore no matting attempts could be observed during the last breeding season.

Thanks the new VCF published guidelines for housing Bearded Vultures in captivity, the Academie de Fauconnerie du Puy du Fou decided to improve the housing conditions of their pair by building a new avairy in an open area during the winter 2014/15.

So that’s why the AFPF request the advice in situ from an expert for analyse the behaviour of the pair and discuss where and how to build a new Bearded Vulture aviary.

During the 13th whole day and 14th morning of November, I had the opportunity to monitories the pair - the relation between the pair and how they use the aviary-, visit the location where the new aviary should be build, and exchange knowledge with the staff in relation vulture behaviour, infrastructure of aviaries and their sense, artificial incubation and rearing, etc. with pictures presentation.

Almost the whole breeding season the Academie de Fauconnerie du Puy du Fou is closed for the visitors, giving the birds the tranquillity needed during this period.

The actual Bearded Vulture aviary:

Is a huge avairy built in the middle of a forest with several trees (almost firs) as environmental enrichment (picture 1). Wooden pillars (12-14cm diameter) from different sizes are installed as steps for climbing up to the nest (picture 2).

Picture 1-2: Bearded Vulture aviary located middle of a forest with several firs inside. Pillars from different sizes are installed for climbing up to the nest.

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The nest is located in the north corner of the cage just under the roof, and a wooden plank (20 x 5cm thick) limits the nest (picture 3).

![Picture 3: A thin wooden plank limits the nest.](image)

Only one board has been installed from the nest edge to the second wooden pillar as a perch. The board has the thickness and is wide enough to be sufficient rigid to prevent them from bending during copulation on the perch (picture 4).

![Picture 4: One wooden plank has been installed from the nest edge to the second pillar.](image)

**Pair monitoring:**

In the morning both birds were sitting very close at the edge of the nest. After preening itself, they spend almost the full day walking or sitting on the wooden plank (picture 4). There it could be observed frequently preening each other their feathers, during long periods. Mostly the female searched the male and started to preen him (picture 5).

![Picture 5: Mostly the female (left) started preening the male (right).](image)
Only a few times could be observed the birds (mostly separately) on the grown searching for food and climbing up to the nest using the wooden pillars. As soon it starts to be dark both went to the nest and stayed on the wooden plank. Here, 3 times could be observed the male trying mating the female. By all three mating attempts as soon the male jumped on the back of the female, she lost her balance falling both birds in the nest.

Bearded Vultures as cliff breeders, the perches need to be adapted to suit the anatomy of their feet. The nest edge (wooden plank) as well the wooden pillars are too small for maintaining their balance on it. They must be big enough for giving the possibility to stretch completely their talons. We could observe in both places that the talons were completely closed for maintaining their balance (picture 6-7) completely against as they usually do. Only at the board perch the birds can copulate without losing their balance.

![Picture 6-7: The surface of the edge of the nest and the pillars are too small for maintain the anatomical position of their talons.](image)

On the 14th morning immediately an additional wooden plank widthwise has been installed over the edge for giving a wide and flat surface.

**Conclusions:**

The pair harmonizes well. Both are looking mutually. Mostly the female initiate preening the male and he tried matting the female.

The aviary is not adapted for holding Bearded Vultures: very closed with trees, no adequate perches and steps.

The proposal from the Academie de Fauconnerie du Puy du Fou to build a new aviary in an open area is completely justified.

**Considerations for building a new Bearded Vulture aviary and location**

- The AFPF proposed to build the new aviary in an open area where the birds can have access to the sun the whole day (picture 8). Bearded Vultures are very sensitive to humidity (risk of aspegillosis), and need especially during the breeding season (winter) the most possible hours of solar radiation.
- The dimension of the aviary will be 15 x 8 x 4.5m height, being not necessary to install a middle pillar.
- The position of the aviary will be east-west. For giving the birds/chick the most hours of solar radiation we recommended to install the nest at the north corner.
The public will have visual access from the west side, where a road is passing 3m far from the front and 1m below the level of the aviary. This will give the effect that the aviary is 5.5m height, and increase the secure distance.

The structure (material, mesh size, etc.) and aviary facilities (perches, steps, feeding place, drinking bowl, mud bath, etc.) will be built like is described in the guidelines for housing Bearded Vulture in captivity.

The installation of a video-monitoring system in the nest helps by monitoring the incubation behaviour, hatching and rearing process, etc. The option to follow it via web, gives the EEP-coordinators, the possibility to advise the responsible team of the species.