

CONCLUSIONS AND SUGGESTIONS AFTER EEP-VCF STAFF VISIT AT THE ZOOPARK DE BEAUVAL

After the building of a new aviary for the Bearded Vulture pair at the ZooParc de BEAUVAL and the encounter between the Science and Conservation Director of the zoo and VCF Bearded Vulture Programme Manager during the French Zoos Association (AfdPZ) annual meeting, it was accorded between ZooParc de BEAUVAL and EEP/VCF to invite Alex Llopis to visit the ZooParc de BEAUVAL and have a look at the Bearded Vulture pair and his installation.

Introduction:

End of November 2011, ZooParc de BEAUVAL received a one year old female BV born in Almaty zoo. On the 9th of January 2014, ZooParc de BEAUVAL received a young male, born in 2013, coming from Richard Faust Centre.

During the 12th November morning, I had the opportunity to visit the aviary, observe the pair, and exchange knowledge with the staff in relation vulture behaviour, infrastructure of aviaries and their sense, artificial incubation and rearing, etc. with pictures presentation.

The Bearded Vulture aviary:

The Bearded Vulture aviary is situated in one end of the zoo, giving the birds the necessary tranquillity for developing their reproduction cycle without significant discomfort. The cage has an optimal size for housing a breeding pair, big enough for giving the birds the necessary escape distance from the visitors and not too big preventing to obtain a dangerous flight speed. It's covered with a welded elastic wire mesh (mesh size 4 x 4cm). The aviary made of thin iron frame, has a half circular stone wall which include two nest-sites in each corner with a short roof: one cave facing north and the other east. The wall, about 3m height and with several stone ledges, gives the birds the possibility to climb up without problems and walk on its top along the roof cave's (picture 1). By necessity of a nest control, the ledges give the keepers the possibility to climb up to the nest without entering with hand ladders.



Picture 1: East view. The Bearded Vulture facility has a thin iron frame with two nest-sites in the stone wall.

In the middle of the aviary they are several big stones as roosting-feeding places. Furthermore there is a tree situated near the only one thin iron pillar in the middle of the cage as visual obstacle. Moreover, they are some wooden pillars which support several branches -with a diameter around 10-15cm - as perches. The branches are 2-3m from the fence (picture 2).

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Picture 2: South view. 10-15cm thick branches are installed 2-3m from the fence as perches.

Near the entry (on the north side of the aviary) a big drinking bowl has been installed. Its shallowness and smooth slope are optimal that the birds can drink and take a bath (picture 3). Just on the left side of the entry a stone plate is installed where food is placed (picture 4).



Picture 3-4: North view. Near the entry a drinking bowl and a feeding place are installed.

Pair monitoring:

During the whole visit, no signs of aggression could be observed between the pair. They spend almost the full visit time sitting on the stone wall, principally at its stone ledges (picture 5). Only one time it could be observed the young male flying against the north fence, falling on the floor below. The way how he flew against the fence -stretching its talons against the fence to prevent a collision with its head-, it shows that he had already done in advance. Furthermore it could be observed the female by walking once on branches. She walked always with open wings for maintain its balance.



Picture 5: Birds spend almost the visit time sitting on the ledges of the stone wall.

Diet and feeding of the birds:

Thanks the good coordination with the ZooParc de BEAUVAL staff I had the opportunity to be present during the feeding of the birds. The diet was composed by calf bones cut across, partridges and one day chickens.

The food was deposit directly at the feeding plate next to the entry.

Conclusions and suggestions:

All the conclusions as well suggestions were directly transmitted to the ZooParc de BEAUVAL staff. Nevertheless, the following suggestions are exposed to keep them in mind.

- Bearded Vultures as cliff breeders use small caves in the wild (90-120cm height), and well protected from bad climatology. Is well known that Bearded Vultures by wet nest normally abandon the clutch. It will be necessary to **enlarge both stone plates (min. 1m) which are used as roof** (artificial cement) for assuring that the nest will be always dry.
- For preventing breeding disturbances by walking over the cave roofs, it has been suggested to **build a third cave (artificial cement)** on the top of the stone wall, just below the aviary roof without space between the aviary and cave roofs. This will give the opportunity to build the cave **facing to the south**, ideal for the Bearded Vulture, because as winter-breeder will give the birds/chick the most hours of solar radiation.
- **We suggest removing the branches which are installed as perches.** Bearded Vultures as cliff breeders, the perches need to be adapted to suit the anatomy of their feet. For assuring to maintain its balance on it is recommended to install **flat perches, around 20cm wide, 4-5cm thick** and also need to be **rigid enough** to prevent them from bending during copulation on the perch. It is recommended to install a **holding arm perches system which avoids collisions** with it.



For preventing collisions by flying against the fence is recommended **to install perches around the aviary** (60cm away from the mesh and never higher than the nest). This gives them the possibility to move around the cage without getting on the ground, especially when the nest must be controlled by the keepers.



- Bearded Vultures develop the peculiar habit of bathing in mud rich in iron oxide. Although the reason for this behaviour is still unknown, they must be kept in captivity in good physical and psychological condition, offering them all available means of developing as many innate behavioural patterns as possible. Therefore it is recommended to **install a mud bath** where mud rich in iron oxide can be provided every 15 days (1m in diameter, and 10cm deep). The best location is **near the entry opposite side of the drinking bowl**. Use only mud **free of any toxic substances** (heavy metals or other organic contaminants).



- Obstacles like trees by other facilities have already caused the loss of several individuals because of collisions. One stuck a branch deathly into the chest. To prevent this kind of accidents we **recommend to remove the tree**.
- To avoid collisions with the thin iron pillar is recommended to **recover it with a thick wooden trunk** (min. 25cm thick). For a better visually it can be covered with a climber plant.
- Inside the EEP is recommended **not feed Bearded Vultures with death birds** because of potential transmission of bird diseases and by **one day chicks** additionally because of low food quality.



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