

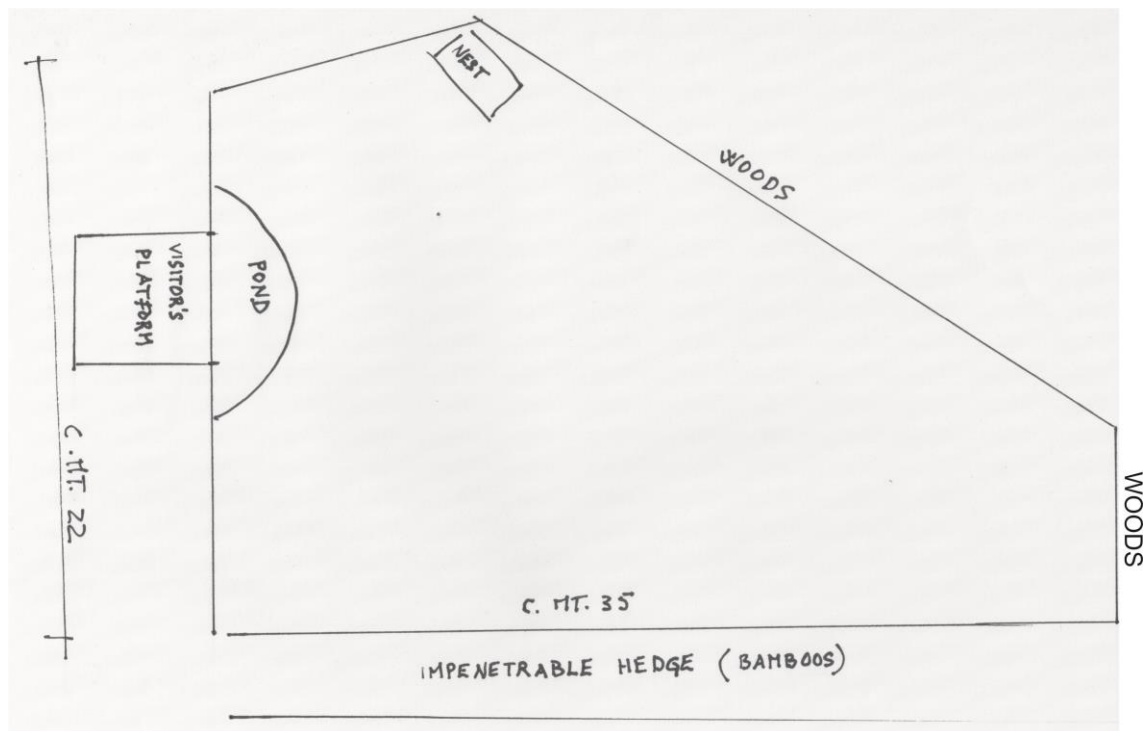
SUGGESTIONS HOW TO IMPROVE THE BEARDED VULTURE AVIARY AT OASI DI SANT' ALESSIO

Oasi di Sant' Alessio zoo in 2016 has signed the agreement with the VCF with the wish to participate and collaborate with the Bearded vulture EEP and its in situ conservation goals. The zoo is owner of an adult male captive born from 1988, with signs to be human imprinted. Nevertheless before rejecting this male as breeder and having a lack of males inside the EEP, it was accorded firstly to try pair bonding with one of the surplus females that exist inside the EEP. Mr. Harry Salamon -director of Oasi di Sant' Alessio- sent pictures and a plan of the aviary, with the wish to receive suggestion from the EEP coordinators how to improve and adequate the aviary for holding a bearded vulture pair.



The Bearded Vulture aviary:

The Bearded Vulture facility has a pentagonal form -being in the front wider than in the back-, is about 22m wide and 35m deep, having an optimal size for housing a breeding pair. A platform is installed for visitors in the front, having only here the public access for observing the birds. The rest of the walls are closed with vegetation, principally with woods. Further a water bath is located in the front just under the visitors' platform. Inside the aviary there is a nest platform located about 10m from the visitors.



Dr. Alex Llopis Dell, VCF Bearded Vulture Programme Manager

Centre de Fauna Vallcalent, Pda. Vallcalent 63, 25199 Lleida, Spain

Tel: 00 34 657 47 33 78 email: a.llopis@4vultures.org

The facility frame is made with wooden and all closed with mesh. Round wooden are installed as perches, crossing a few of them the aviary. The aviary has a natural ground, covered with grasses and bushes, and trees are planted as environmental enrichment.



Conclusions and suggestions:

Pair formation in Bearded Vultures can be complicated and dangerous. Threaten, percussions and fights can be often observed during pair bonding -particularly between adults-, and provoke that birds fly without control in the aviary, increasing probability of collision and injuries with any aviary facilities not adapted for the species. Frightened birds fly “blind”: they do not look where they are going, because they are looking in the direction from which the perceived danger is coming. Therefore is very important that aviary facilities are correctly installed and adequate for the species for reducing the probability of collision.

- Obstacles like perches or trees in the middle of the aviary 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 removing all trees**.
- Furthermore to prevent injuries caused by collisions and accidents by landing, **almost all vegetation inside the aviary** should be **removed**. There is the possible to remain 1-2 small bushes (max. 1m high).
- **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.



- And 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 are winter breeders using small caves (about 90cm height) located in cliffs and well protected from bad climatology. Cave with a huge enter are avoided. Additionally bearded vultures abandon their clutch if the nest becomes wet.

- By those aviaries where a cliff is not include we recommend to build at the end of the aviary a **wooden wall with “U” form** -giving the birds protection from bad weather from three sides.
- In this wooden-wall a **nest-platform** should be installed. It should be 1.3m deep and **divide in two** giving the subordinate bird possibility to protect itself in the event of bad weather.



- In the Nest-platform a **nest 1.3 x 1.3m should be built** in that corner where the sun shines during the morning and **exactly** as is described in the **guidelines** for housing BV in captivity.



- To prevent the nest from getting wet by stormy and windy weather, the roof should project out 1-1.5m above the nest platform.

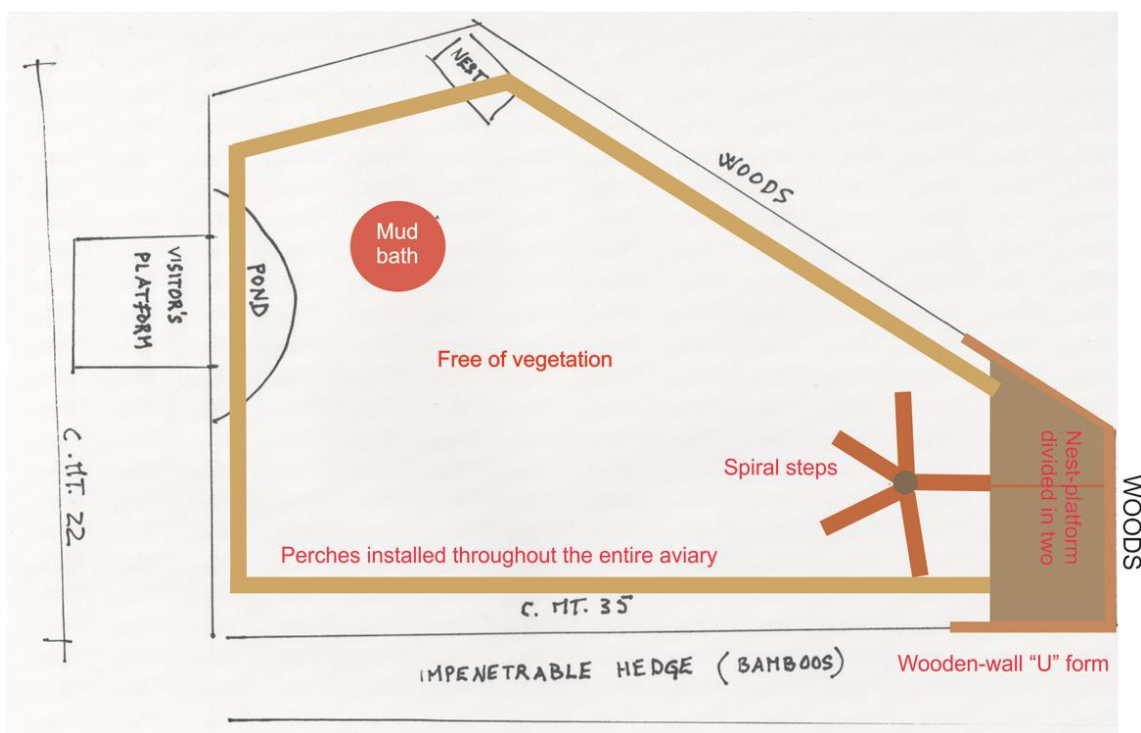
Bearded Vultures are soaring birds of prey and are impossible for many of them, especially females and older birds, to access perches through flapping flight. Steps make it much easier for the birds to transport material to the nest (an important behaviour during the breeding season that reinforces the pair bond) and to bring food to the perches, where it can be handled more easily than on the floor.

- Spiral steps (20cm wide, 4-5cm thick, 120-150cm long, and with a height of 45-50cm between them) are the best option to allow Bearded Vultures to access perches and nest platform.



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**. Use only mud **free of any toxic substances** (heavy metals or other organic contaminants).



Proposal how to adequate the aviary for housing a pair of bearded vultures.



Follow us : www.4vultures.org

