

CONCLUSIONS AND SUGGESTIONS AFTER EEP-VCF STAFF VISIT AT THE PARCO NATURA VIVA

Following the proposal from Parco Natura Viva (PNV) to change one of their Bearded vultures birds, supposing an erroneous sex determination because they didn't reproduce yet, it was accorded between PNV and EEP/VCF to invite Alex Llopis to visit the Parc and have a look at the Bearded vulture pair and his installation.

Introduction:

At the beginning from March 2006, PNV received a young BV pair born in 2005 from the EEP. The male BG 451, with ascendancy 25% Crete and 75% Asia, is a descendent from a breeding pair host at the Richard Faust Center (Austria). The female BG469, with 100% Asia ascendancy, is a descendent from a former breeding pair hosted at the Nurmberg Zoo (Germany).

During the whole day from 26 of November, I had the opportunity to monitor the pair around 4 hours (2.5 during the morning and 1.5 at the afternoon) and have a look at their aviary. Principally I was accompanied by Mr. Camillo Sandri, General Curator, and Mr. Giuseppe, bird keeper. During the midday and evening I had the opportunity to meet additionally staff from the PNV, exchanging knowledge with them in relation vulture behaviour, infrastructure of aviaries and their sense, artificial incubation and rearing, etc. with pictures presentation. Also I visit other vulture aviaries and exposed several proposals how to improve their accommodations.

The Bearded vulture aviary:

Is a huge aviary with three defined parts. At the left a cliff with two caves (a smaller one in the lower part and a big one in the middle part -about 2 m high-) and at the top a ledge with the backside closed with mesh and branches and with a transparent PVC roof. At the right a small nest platform with the same kind of roof, closed to the black stork aviary. In the middle, a small waterfall with three troughs (the last one is very deep and with a step banks). The entire aviary is full with vegetation and only a small green corridor exists between the trough and the visitors' observation point. The observation point is wood made with a roof and several windows where the public can have a look at the birds.



Left side

middle part

right side



Pair monitoring:

During the first observation hour as well the last ½ hour in the afternoon, I had the opportunity to realize the monitoring together with the keeper Mr. Giuseppe. It was very useful; because I had detailed information how the pair is managed from the Parc staff. Every day the pair receives food (chicken is a high part of their diet) and it's offered inside in the middle of the aviary, being necessary to entry daily. To get better information of their relation, I **offered a little piece of clean sheep wool** brought from my center (the rest of the wool was given to Giuseppe as a sample). During the talk I was informed that left nest must be empty. At the same time, **all the behaviours observed** during the monitoring of the pair were **detailed explained to Giuseppe**.

From the first sight, I could distinguish very well both birds, especially on their body and bill size. So, the smaller one was classified as the "male" and the bigger as the "female". During the 4 observation hours, the normal roost place of the male was on the cliff ledge and the female in the right nest. Both ate in their favourite place. Nevertheless,



twice flew the female to the ledge and 5 times the male directly to the nest being the female roosting in there. During these 5 visits the male rested in there for long periods (the longest 1/5 hour) and several times only 0.5-1 m from the female, both cleaned their own feathers and no aggressive behaviour was observed. Although the female shows dominant behaviour, three times I had the opportunity to hear the male screaming for mating (one time at the afternoon together with Giuseppe). When he screams approaching to the female, then she raise her head and neck feathers, and the male flew away to the ledge. Never was observed physical aggressive behaviour from the female against the male.

During all the monitoring period, none time was observed one of the birds walking on the ground. Nevertheless, at midday, when we take lunch at the canteen, one of the birds has descended to the ground and transported the piece of wool in the cliff.

Meeting with the Parco Natura Viva staff:

During lunch time with Camillo, Giuseppe and Katia (nursery responsible), I used it for transmit my first impressions and expose the conclusions and suggestions for improve the well behalf of the birds in this nice big aviary. Also we had a long talk over the behaviour of the birds, artificial incubation and rearing of chicks and how to improve the breeding success by other vultures. All that, was graphically accompanied with pictures for better understanding.

After this 2 hours lunch meeting, Camillo asked me to have a look at the griffon vulture breeding pair aviary, because the last years they failed.

At the evening we had a second short meeting with Camillo in the office where I presented definitively my conclusions and I could exchange with them pictures for memorize my suggestions.

Conclusions and suggestions:

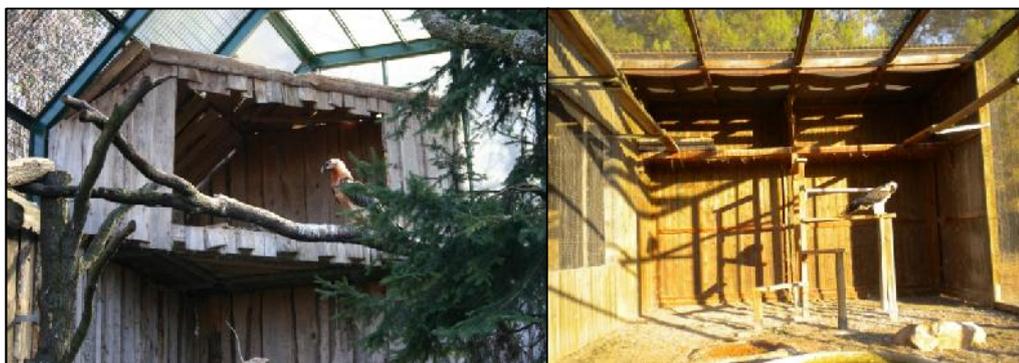
All the conclusions as well suggestions were directly transmitted to the PNV staff. Nevertheless, following I present the suggestions to keep them in mind. As the breeding season has just started and depend on which proposals could be **completely counterproductive** yet for their development, I divide in those suggestions which must be done immediately and those it should be done when the breeding season has finished.

Priorities proposals (must be done/not done immediately):

- After observing a size difference between the birds and the male screaming for mating, it was decided **not disturb them** and **postpone their catching** and **extraction** of blood/feather sample, for clarify their sex, at next **spring**, only if during this breeding season their behaviour doesn't clarify if it's or not a pair.
- Immediately (Wednesday 27th) **rebuild the right nest**, fulfilling with **pine bark and cover it with sheep wool/camel hair and branches** as I showed the PNV staff in pictures.
- **Immediately stop entering in the cage for feeding**. We must remember their cage = their territory. Like in the wild, if you approach their territory the pair feels threatened and leaves the nest. Feed the birds from the front through the mesh.
- **Reduce at maximum chicken in their diet**. Broilers are low food quality (rear in only 40 days: bad meat and bone quality) and risk of transmission of avian diseases.
- **Daily offer piece of sheep wool and one branch**. Each day add the material –wool or/and branch- what had been transported.

Additional proposals (after breeding season):

- Build in the right side corner a **new platform/cave with a nest** (2.5-3 m width x 1.5 m deep and 1.2 m high) and protect the view from the neighbour black stork aviary building e.g. a **wooden wall** with the same altitude size like the nest cave (1.2-1.5 m) in the sidewall.



- The cave in the middle of the cliff is too big. Better **build a second nest on the top from the cliff**, removing the mesh with the branches. Is the higher part of the aviary and far away from the visitors observing point. The birds will feel more secure there.

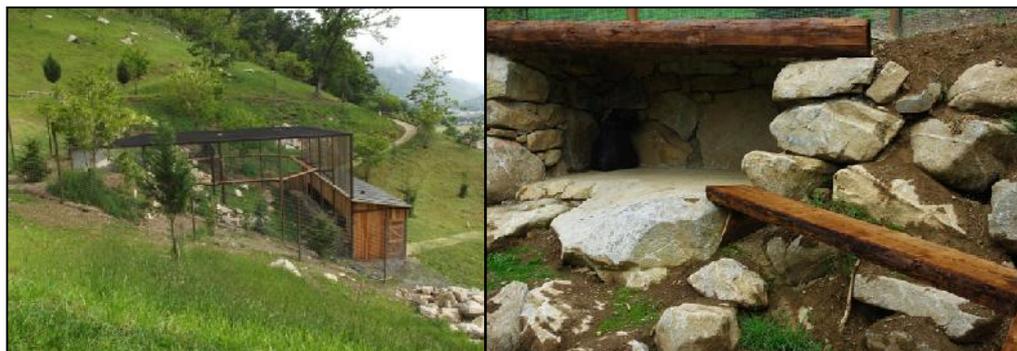


- **Remove all the vegetation** inside the aviary, specially the dry branches in the middle and in front of the right nest. In this way the ground surface will increase and give more landing opportunities. These are obstacles that by other facilities have already caused the loss of several individuals.

- None of the three water troughs are adequate for bathing. The first two ones have no deepness and the last one is so big and with such a step banks, that the birds have no possibility to take a bath. The best solution is **adequate the second water trough** for bath. By the water runoff make it 35-40 cm deep and at the water entry do it with a smooth entry.
- The green surface between the **big trough** and the wall is very narrow, with not enough landing place. A good solution could be **filling it with earth** and remove all the stones increasing considerably the green surface.



- The aviary is very big bad the birds cannot use all his potential. They have only two roost places on the top: the right nest and the ledge over the cliff. The **installation of perches around the cage** (minimum 20cm width and 5 cm thick), give them the possibility to move around the cage without getting off the ground, especially when the nest must be controlled by the keepers.



Additional suggestions for other species aviaries:

- The **nest site** must be always at the farther place from the entry to the aviary, **never over the entry**. In this way the breeding bird will feel calmer.
- Installation of **perches around the cage**.
- **Completely closed aviaries, are stressful** for the birds, because they cannot see what it's happening behind the wall and by unexpected noises can react altered and provoke the loose of the clutch or chick (test was performed opening only the door form the cage when the bird was above the door in the nest and he reacts chocked flying against the wall). The solution is to give the birds vision from where the staff approaches to the cage.



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