THE EURASIAN BLACK VULTURE AND ITS EEP
CHALLENGES IN CAPTIVE BREEDING AND REINTRODUCTIONS

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Aegypius monachus,
Eurasian Black Vulture

CONSERVATION ACTIONS

- 1987 European Endangered species Programme initiated by Black Vulture Conservation Foundation (BVCF) and European Association of Zoos and Aquaria (EAZA)
  - operated autonomously by EAZA
  - zoos constitute vast majority of participants
  - zoos elect species committee
  - EEP managed at Planckendael Animal Park by studbook coordinator Marleen Huyghe
  - co coordinator E. Tewes, scientific advisor K. Wolfram

(I) conservation ex situ
(maintenance of self-sustaining, genetically diverse captive population in European zoos and institutes)

(II) re-establishment in situ
(generation of "surplus" captive-born young to be released into historical natural habitats)

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present situation

EEP: THE CHALLENGE OF EBV CAPTIVE BREEDING

**BREEDING BIOLOGY**
- long lifespan, monogamous
- late sexual maturity
- long reproductive cycles
- profound bi-parental investment

**ex situ**
**wild-born captive & captive-born captive**
(Wolfram et al., in prep.)
1980 - 2012, 503 eggs, 72 breeding males, 77 breeding females, 86 breeding pairs

**HATCHING SUCCESS**
32.4%

**BREEDING SUCCESS**
21.7% (> 30 d)

**in situ**
**wild-born wild**

**HATCHING SUCCESS**
79% (Skartsi et al., 2008)
152 eggs, 1994-2005, Greece
90% (Hiraldo, 1983)
103 eggs, 1973-1977, secluded Spain

**BREEDING SUCCESS**
69% (Skartsi et al., 2008)
193 eggs, 1994-2005, Greece
75% (Moran-Lopez et al., 2006)
520 eggs, 2000, Spain
90% (Hiraldo, 1983)
103 eggs, 1973-1977, secluded Spain

**reintroduced**
**wild-born wild & captive-born wild**

**HATCHING SUCCESS**
67% (LPO, 2010/11)
153 eggs, 1996-2010, Grands Causses

**BREEDING SUCCESS**
59% (LPO, 2010/11)
153 eggs, 1996-2010, Grands Causses
DRAFT ACTION PLAN EBV EEP
(2013-2016)

CURRENT ACTIONS

FUTURE ACTIONS
DRAFT ACTION PLAN EBV EEP
(2013-2016)

CURRENT ACTIONS
- identification of PROBLEM PAIRS (2012)
- LONG-TERM unsuccessful (past 5 years or more)
- large AGE differences, old AGE of partner(s)
- recommendations for NEW PAIRS (2012)
- follow-up pair bonding BEHAVIOR
- sex bias (MALE DEFICIT, 9 - 19 years
- recommendation for suspension REINTRODUCTIONS

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FUTURE ACTIONS

INSTITUTE LEVEL

HUSBANDRY conditions
(checklist, questionnaire, personal visits by expert?)

breeding failure due to DISTURBANCE

pair BOND quality

participants with scarce COMMUNICATION

SPECIAL FOCUS

suitability of captive NESTS

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SEX BIAS (MALE DEFICIT, 9 - 19 years)

recommendation for suspension REINTRODUCTIONS

FUTURE ACTIONS

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- pair BOND quality
- participants with scarce COMMUNICATION
- suitability of captive NESTS

EEP LEVEL

- improve COMMUNICATION
- revision and distribution husbandry GUIDELINES
- INTRODUCTION letter for new members
- GENETIC sampling and sexing
- solve contract issues with NON-EAZA PARTIES

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- EEP-BVCF/VCF INTERFACE
  - improve in situ follow-up of EEP-born REINTRODUCED EBVs
  - improve contacts to revalidation CENTERS, help with IMPORT of males
  - examine need/feasibility for BREEDING CENTERS

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Figure 4: Signature of population contraction in the *A. meinlach* captive population. Reproductive (colored; male: blue, female: rose) and non-reproductive phases (grey) are indicated, as well as number of unsexed individuals. Dashed lines represent average number of individuals per age class of 5 years in either sex. Grey background indicates distribution pattern expected for an expanding population, deviation from which argues for population decline.

A: Longevity in the EEP studbook population in the period of 1950-2011 (total records analyzed: males n = 70, females n = 72, unknown sex n = 11), high early chick mortality within the first 30 days excluded.

B: Composition of the living EEP studbook population at time of analysis (males n = 84, females n = 100, unknown sex n = 6) depicted as conventional age pyramid. Patterned bars represent wild-caught (male n = 61, female n = 74), blank bars represent captive-born individuals. For age classes 10 to 14 years and 15 to 19 years a significant male deficit is evident.
present situation

EEP: THE CHALLENGE OF EBV CAPTIVE BREEDING

Aegypius monachus captive breeding

ex situ wild-born captive & captive-born captive

Captive-born young **required** to sustain captive population at current size over the next 25 years **exceeds** number of actually **produced** young. Situation worsens by giving young for release!

**Recommendation:**

Reintroductions from EEP to be **suspended** until demographic trends stabilized

**Graphs:**

- Births required to meet both EEP objectives vs. actual births
- Projection EEP population dynamics

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**How can all sides support each other**

**EBV EEP**
- **Provide captive-born young** for releases
- *In general:* all young following 3rd offspring of a pair could be release candidates
- *Possible additional release candidates* before 4th young: to be decided on individual basis for each breeding pair/young each year

**GREFA**
- Provide older adult males for EEP captive breeding

**LPO**
- Improve communication on captive-born released birds
- Provide samples of released birds for EEP scientific work

... and exchange of expertise