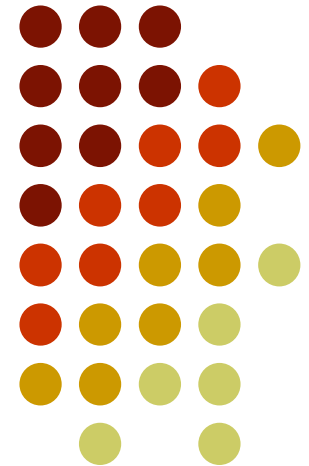


# The bearded vulture EEP and adopted strategies for Alps, Central Massif, Andalusia and Corsica



EGS Archiv



**HANS FREY, FORMER EEP  
COORDINATOR**  
**ALEX LLOPIS DELL, EEP  
COORDINATOR, VCF BEARDED  
VULTURE PROGRAMME MANAGER**



# SYNOPSIS of EEP and RELATED PROJECTS

Begin of **Bearded Vulture**  
**Reintroduction Project in the Alps**

**1<sup>st</sup> release Alpine Project**

**Vulture Conservation Foundation**  
created for coordinate the Alpine

**1<sup>st</sup> fledgling in the wild** after 100  
years of its disappearance in the Alps

**1<sup>st</sup> release Andalusia Project**

**1<sup>st</sup> release Grands Causses Project**

**1<sup>st</sup> fledgling in the wild** after 32  
years of its disappearance in Andalusia

**1<sup>st</sup> release Corsica Project**

**285 released chicks in 4 projects**

**Alps:** 50 breeding pairs  
204 wild Fledglings

1978

1986

1992

1996

1997

2005

2006

2010

2015

2016/17

*Richard Faust Center*

headquarters of the breeding program

**EEPs** creation

**EAZA** creation

*Centro de Cría Guadalentín*

headquarters of the  
**Andalusia Reintroduction Project**

*Centre de Fauna Valcaient*

responsible for the  
**Pyrenean genetic reserve**

EEP captive stock: **161 birds**  
37 Zoos & 5 breeding centres



# BACKGROUND

## International captive breeding programme

- 1978 guidelines established during an International meeting celebrated in Morges (CH)

### Origin of birds for reintroduction projects

- Bearded vultures that were already in captivity (in the 70ies around 40 birds distributed in European zoos)
- wild birds, injured and not suitable for release

**Goal: stop the importation of wild birds**





# BACKGROUND

## International captive breeding programme

### Objectives:

- Create a captive stock as genetic reserve
- Save the European autochthonous endangered populations (Pyrenean, Corsica)
- Put attention to natural behaviour development. All chicks natural reared.

- Produce appropriate juveniles for the reintroduction projects able to survive and reproduce

Klaus Robin©

Quality before Quantity





# EEP BACKGROUND

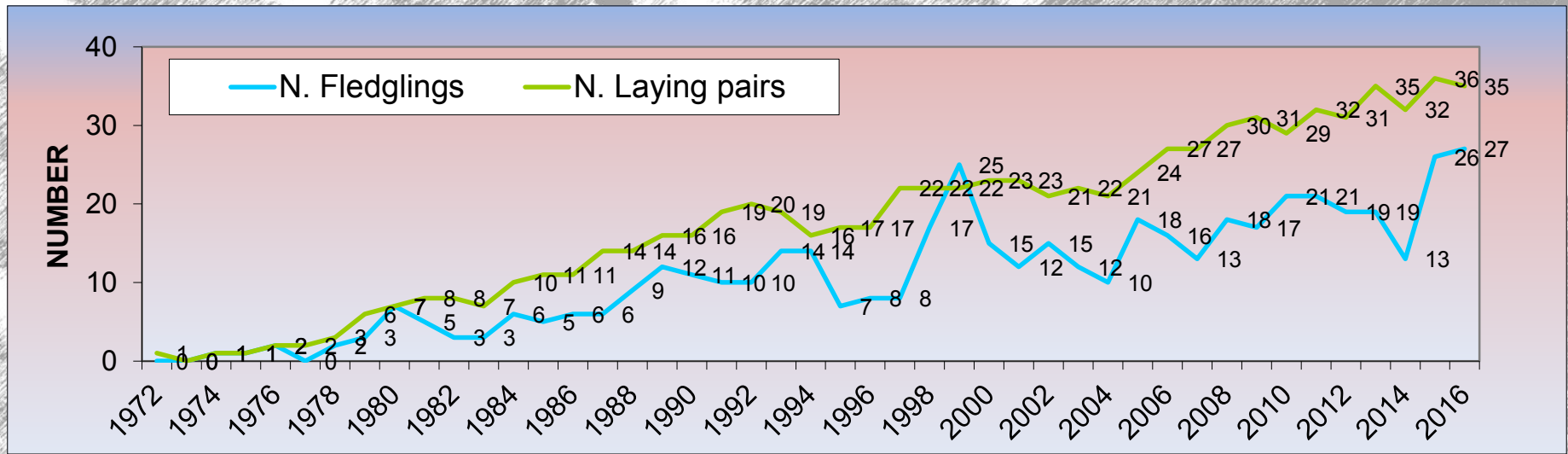
## Pair formation by Bearded Vultures is complicated and dangerous:

### 1. Breeding centres, BC (34 mainly european zoos and 3 private partners)

- house already established pairs
- breed the maximum number of offspring
- Divulgarion of our bearded vulture conservation work to the society

### 2. Specialized breeding centres, SBC (3 large and 2 small centres)

- establish new pairs
- house new founders (injured birds from the wild) and problematic birds
- adopt chicks
- pair bonding with human imprinted birds to use them as foster bird
- create a genetic reserve





# Final OBJECTIVES

## Conservation in situ



Establish a wild population independent of human intervention,  
re-establish the historical gene flow between North Africa and Asia



# HACKING

## The Thechnique of Reintroduction



**Nestlings are released at the age of 90 days in a man-prepared cave in their natural environment**

- At that age nestlings are able to eat and prepare food alone
- They are strong enough to defend themselves against other birds of prey or foxes
- They show more or less the “natural” way of fledging and the same behavior as their conspecific wild fledglings
- Philopatric behavior is inborn. They return as soon as they reach their sexual maturity and build a local subpopulation



# Structure of the breeding network

## ➤ **BREEDING CENTRES: (5)**

**3 large ones** (keeping 15 to 30 birds on average)

- Richard Faust Bartgeier Zuchtzentrum (former Vienna Breeding Unit), Austria
- Centro cria de Guadalentin, Spain
- Centre de Fauna Vallcalent, Spain

**2 small breeding centres**, (between 2 and 4 pairs)

- Asters, France
- Tierpark Goldau, Switzerland

## ➤ **ZOOS AND PRIVATE PARTNERS (37)**

- about 34 mainly european zoos
- 3 private partners







# Results Bearded Vulture EEP

as from 1978 in all **512** successfully raised juveniles:

☞ 223 in Zoos/private collections

☞ 289 Breeding Centers:

159	Richard Faust Zentrum
68	Centro cria de Guadalentin
28	Centre de Fauna Vallcalent
15	Asters
19	Tierpark Goldau

288 juveniles used for in situ projects:

•	Alps	216
•	Andalucia	50
•	Grands Causses	15
•	Corsica	4
•	<b>Sardinia</b> (not in force)	3





# Release strategy for 2017 & 2018

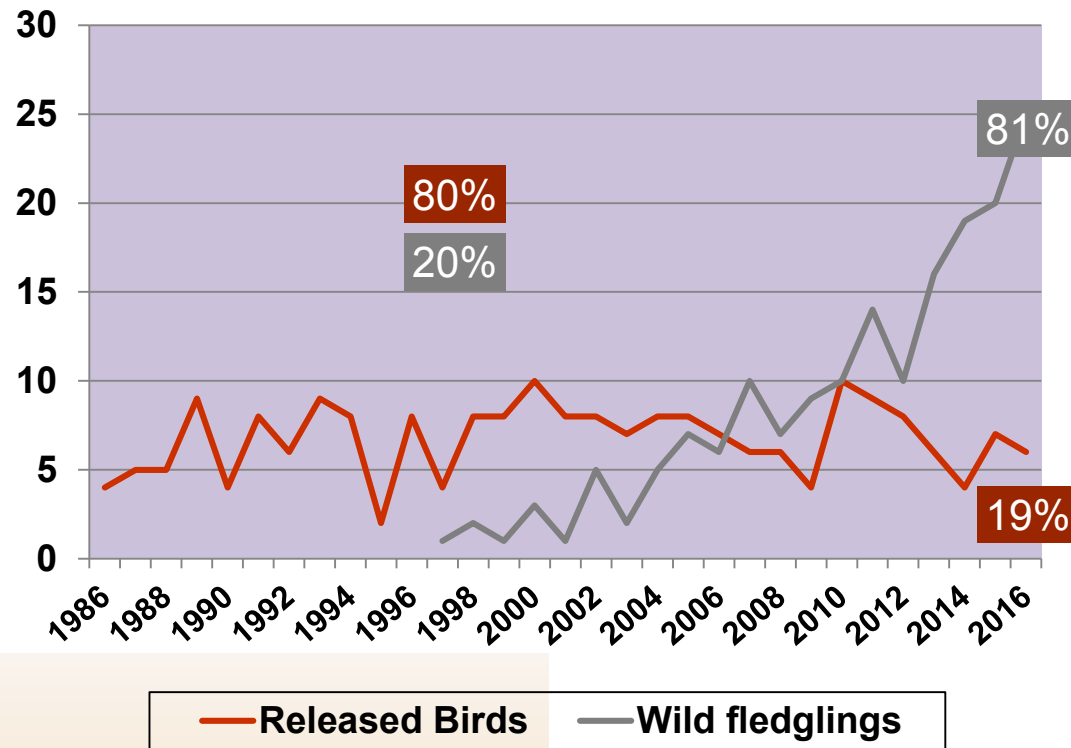
		2017				2018			
		B	N	G	E	B	N	G	E
TOTAL minimum production		<20	>20	>25	>30	<20	>20	>25	>30
EEP incorporation		?	≥5	≥5	≥6	?	≥1	≥3	≥4
TOTAL release birds		9	15	20	24	9	19	22	26
Alps	Central Switzerland	0	2	2	3	0	2	2	3
	Hohe Tauern	0	0	2	2	0	2	2	2
	Mercantour/Alpi Maritime	0	0	0	0	0	2	2	2
GypConnect	Grands Causses/Cevennes	2	3	4	4	2	3	4	4
	Baronnies/Vercors	2	2	2	4	2	2	2	4
Andalusia		3	4	5	6	3	4	5	6
Corsica		2	2	3	3	2	2	3	3
<i>Picos de Europa* (fail out!)</i>		0	2	2	2	0	2	2	2

B= bad year N= normal year (>20 nestlings) G= good year (>25 nestlings)  
 E= extraordinary year (>30 nestlings) \*birds available for other projects





# Alpine Reintroduction project



## Recent situation:

- 216 released birds 1986-2017
- 1<sup>st</sup> breeding success 1997
- about 50 territories
- 204 fledglings 1997-2017





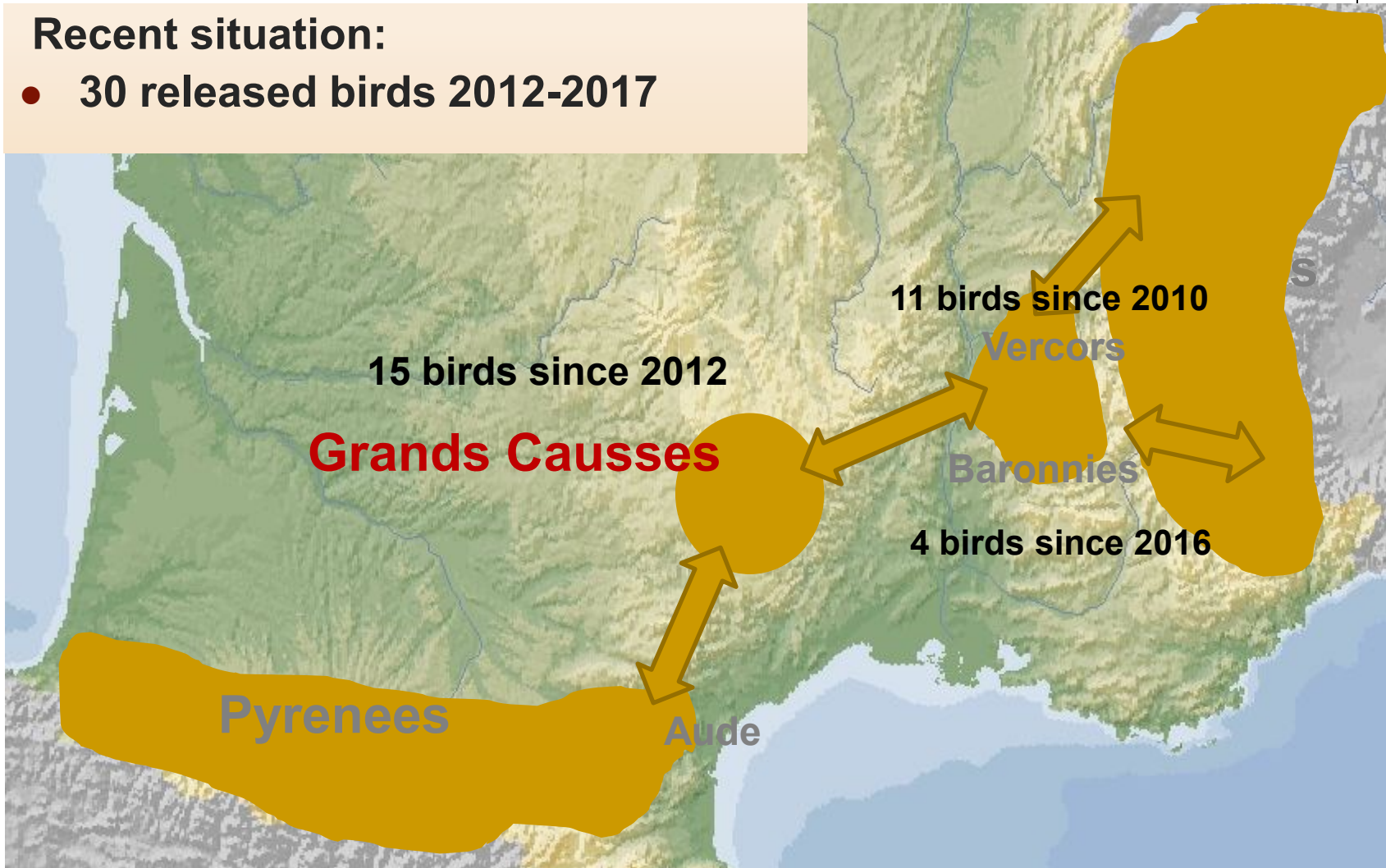
# Grands Causses Reintroduction Project

included in the LIFE project GypConnect = Corridor project  
(Grands Causses, Vercors, Baronnies)



Recent situation:

- 30 released birds 2012-2017



Bridge between Pyrenees (autochthonous) and Alpine population (reintroduced)





# Andalusia Reintroduction project

## Current situation:

- 50 released birds 2006-2017
  - 3 territories (2 breeding pairs)
  - **1<sup>st</sup> breeding success 2015 !!!**
- 2017 two fledglings  
2018 two incubating pairs

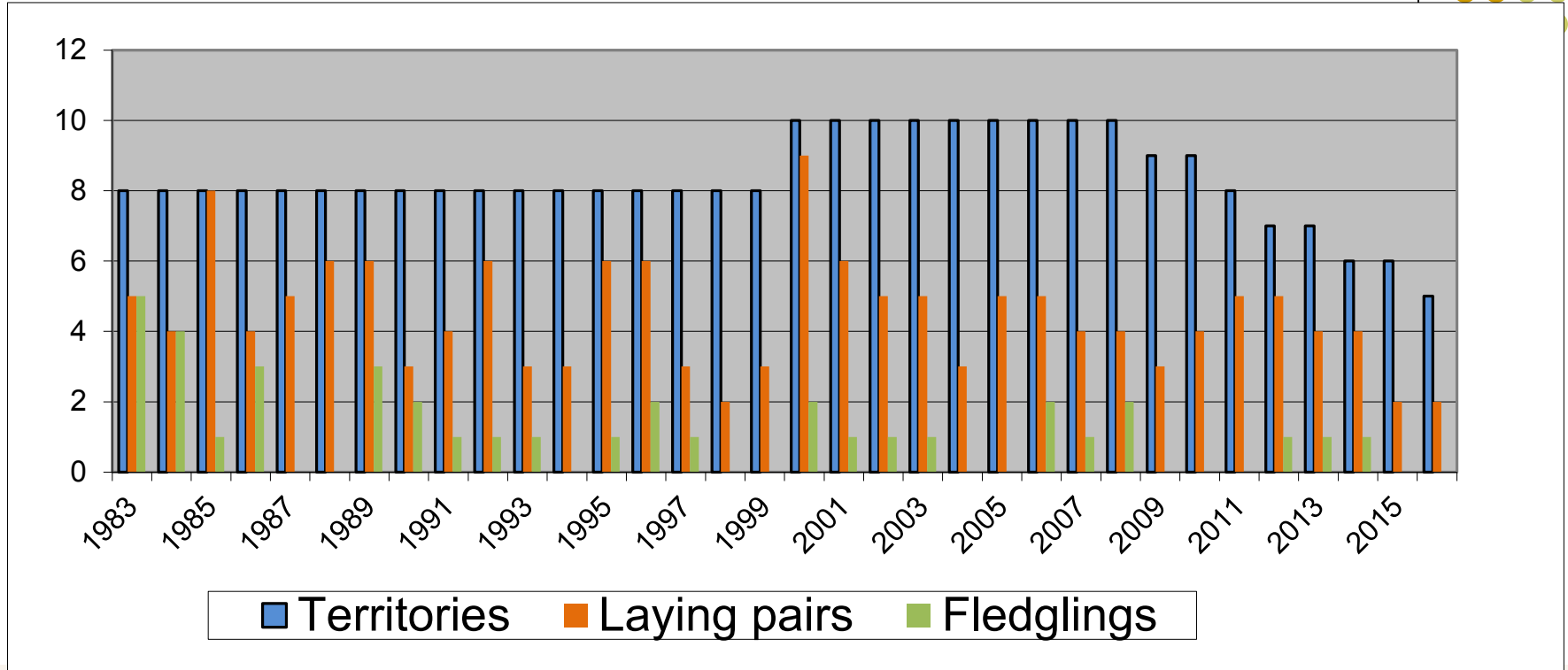




# Corsica Reinforcement project



**Dramatic population decline in less than a decade**



## Plausible reasons for population decline:

- **Low genetic variability (confirmed)**
- **Mortality due to anthropomorphic reasons (unknown)**
- **Lack of food resources (confirmed)**
- **Stochastic demographic events due to very low number of individuals**



# Corsica Reinforcement project



**An Emergency action plan** has been drafted by the Vulture Conservation Foundation together with the Parc Naturel Régional de la Corse:

- 1. Increase the food resources available to the bearded vultures in the short and long term.**
- 2. Restock the population with some individuals, in tandem with the increase in food resources, to increase genetic diversity and prevent stochastic effects.**
- 3. Save the genetics of the Corsican bearded vulture population in an ex situ program (within the EEP).**



# Corsica Reinforcement project



## Emergency action plan:

1. Increase the food resources available to the bearded vultures in the short and long term.

### Short term

- ❑ improve the management of the existing feeding sites along the lines of the protocol developed by the VCF
- ❑ establish larger feeding stations in accessible points by the road side for reducing interferences of other species (ravens, golden eagle and red kite)

### Long term

- ❑ upgrade the mouflon breeding station, increase number of animals available for release each year
- ❑ increase amount of goats and sheep on the highlands



# Corsica Reinforcement project



## Emergency action plan:

2. Restock the population with some individuals, in tandem with the increase in the food resources, to increase genetic diversity and prevent stochastic effects.
  - ❑ release chicks coming from the EEP through hacking
    - Action started in 2016: 2 nestlings have been released in Corsica
    - 2017 2 nestlings released





# Corsica Reinforcement project



## Emergency action plan:

3. Save the genetics of the Corsican bearded vulture population in an ex situ program (within the EEP).
  - ❑ Remove clutches from the wild and create a captive genetic reserve inside the EEP
    - Action started in 2016 by removing a single clutch from the wild



26/02/16 wild clutch from Asco pair removed



18/03/16 chick hatched in an incubator



14 days old chick transferred to Guadalentín for adoption



80 days old reared in Guadalentín, Andalusia



# ALL FOR THE BEARDED VULTURE!



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