Captivity
How Many?

≈ 3000 bottlenose dolphins
250 pilot whale
120 killer whale
100 beluga
800 harbour porpoise
150 striped dolphin
common dolphin, false killer whale, river dolphin
# Survival Rates

<table>
<thead>
<tr>
<th>Species</th>
<th>Since 1963</th>
<th>April 1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific White-sided dolphins</td>
<td>110</td>
<td>22</td>
</tr>
<tr>
<td>Short finned pilot whales</td>
<td>76</td>
<td>2</td>
</tr>
<tr>
<td>Beluga</td>
<td>67</td>
<td>29</td>
</tr>
<tr>
<td>Orca</td>
<td>77</td>
<td>16</td>
</tr>
<tr>
<td>Psuedo Orca</td>
<td>33</td>
<td>8</td>
</tr>
</tbody>
</table>
History

1860: 2 Beluga in US

1913: 5 Bottlenose dolphins – NY Museum

1938: Bottlenose dolphins in Florida

1956: Amazon river dolphin in Texas

1961: Killer whale in California

1965: Risso’s and bottlenose dolphin (Japan)

1966: First dolphin exported to Europe

End of 1960’s 286 bottlenose dolphins in US
CITES


- Control of the commercial transport of plants and animals

3 categories:

**Appendix I**: Endangered species – commercial trade prohibited – Import & Export

**Appendix II**: Commercial trade regulated – Import Only

**Appendix III**: Trade of protected species regulated by individual states
Cetaceans are protected under Appendix I and II.
CITES Rules regarding the mainentence of marine mammals in captivity

Consent for the mainentence of marine mammals in captivity is soley for: **education, research and reproduction.**

1. **EDUCATION**

   The person in charge of education must be educated to degree level;

   An educational brochure regarding cetacean biology & conservation in their natural environment must be produced;

   Practical demonstrations based on dolphin’s natural behavior;

   Pools with viewing galleries or television circuit for the diving vision & vocalisations transmitted to the visitors;

   Staff prepared on cetaceans biology, eco-ethology, conservation and maintenance in captivity;
2. **RESEARCH**

Use of the biological & post-mortem samples;

Collaboration with veterinaries & research Institutes;

A programme which gives more information about natural populations (knowledge & management).

3. **REPRODUCTION**

Collect data about pre & post-reproduction behavior;

Research on cetacean physiology, mating activity, anatomy & genetics;

Participating in a reproduction programme.
# Animal Prices

<table>
<thead>
<tr>
<th>Price</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$150,000</td>
<td>non-trained killer whale</td>
</tr>
<tr>
<td>$275,000</td>
<td>trained killer whale</td>
</tr>
<tr>
<td>$1,000,000</td>
<td>reproductive killer whale</td>
</tr>
<tr>
<td>$20,000</td>
<td>non-trained bottlenose dolphin</td>
</tr>
<tr>
<td>$40,000</td>
<td>trained bottlenose dolphin</td>
</tr>
<tr>
<td>$400 → 100,000</td>
<td>trained dolphins for SWDT</td>
</tr>
</tbody>
</table>
Capture Techniques

Shallow water
- Seine Net
- Drive hunt
- ‘Cold Water Cowboys’

Deep Water
- Hoopnet
- Tail Grabber
- Harpoon
Capture
Acclimatisation & Transportation

Human contact
Space Restriction
Consumption of dead fish
Sensory deprivation
Min 30 days Acclimatisation
Transport (orca max 68 hours)
Military Captivity
RE-INTRODUCTION TO THE WILD

Required only for endangered species

Reintroduction must take place into the same stock

Age of the animal must be assessed

Reproductive state must be assessed

Health must be assessed

Loss of instinctive behavior

Alternatives:
relocation within captivity,
permanent captivity,
euthanasia
Minimum volume of 1600 m$^3$ for groups of 5
Minimum area of 400 m$^2$ for groups of 5
Not less than a 3.5m & a minimum of 4.5m depth for at least the half of the pool area
Non toxic, non porous, waterproof and non sound absorbing materials
‘Sufficient’ ventilation of fresh air
‘Sufficient’ lighting
‘Sufficient’ water circulation – no more than 500 fecal coliform colonies per litre of water
Temperature between 10 - 28 °C
pH between 7.4 - 8.5
Segregation of species
Bottlenose dolphins
(*Tursiops truncatus*)

**In Nature:**

- Live in Groups
- Live up to 50 years
- Range tens of km per day
- Aerial socialisation – 7% of overall activities
Bottlenose dolphins
(*Tursiops truncatus*)

In captivity:

Most commonly held species
2300 captured between 1972 and 1994
In Germany 120 died since 1960’s
High Intelligence – capacity for learning
Bottlenose dolphins in Captivity
CITES requisites for captive killer whales

Water

4 lt of urine and 1.4 kg of faeces everyday
filtration system
chlorine- eyes and skin inflammation
open pools

Pools

Two orcas:
3.7m deep & 14.6m long (USA)
12m deep (UK)

Pool acoustics

No parallel area
In nature:
Life Span – upto 80 yrs
Size – males 8-10m
Dive between 60 – 80 metres
Travel up to 160 km daily
Social animals - 10-15 animals in a pod
Different dialects for each pod
Killer whale (*Orcinus orca*)

In captivity:

Since 1961 – 134 captured
80% mortality
Length of survival in captivity - av. < 6yrs
Average age < 30 yrs
April 2001 – 49 orcas (26 wild, 23 captive born)
Birth in captivity – 38% survival rate
Orca Show
Sea World – Anheuser Busch

- Sea World: 22 orcas (44% of the tot. captive)
- Around 10 million people visit Sea World parks annually.
- One day ticket to Sea World costs 42 $
- 70% of its income derives from visitors attracted by the orca shows.
Sea World – New Ideas

Petting Pools
Swimming With Dolphins
Dolphin Assisted Therapy
### Cause of Death:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumonia</td>
<td>25%</td>
</tr>
<tr>
<td>Microbacterial infections</td>
<td>22%</td>
</tr>
<tr>
<td>Other bacterical infections</td>
<td>16%</td>
</tr>
<tr>
<td>Abscesses</td>
<td>9%</td>
</tr>
<tr>
<td>Unknown</td>
<td>28%</td>
</tr>
</tbody>
</table>

### Stress:

- Falling dorsal fin
- Separation
- Social isolation
- Bad nourishment
- Overcrowded pools

### Reproduction:

- Many births – few survivors
- Suckling
**Training:**
Game – food
Jumps, tail slaps, etc on request
Turnover trainers
Trainer’s knowledge

**Accidents:**
Bites, heading, drowning, death
(Possibly connected to the riding or to food deprivation)

**Science:**
Redoubt budget
Acoustics – echolocation
Reproduction, gestation, birth, suckling

**Ongoing Studies:**
Sea World: studies on the progesteron level
Vancouver Acquarium: studies on heat loss

**Potential and not right education**
Training Techniques
Ongoing research on aquarium dolphins:

- Biosonar
- Driftnet entanglement avoidance

However:

- Dolphins do not use biosonar in pools
- Driftnets are already illegal

STOP!!

NGO capacity building for the implementation of Natura 2000 priority actions
In the future:

No more parks like the present ones

Parc Cousteau in Paris & Monterey Bay Acquarium

Releases:

No, for animals born in captivity

Yes, if to their original pod or location
“I realised that these animals have a sensitivity level that we are not able to understand. Now it’s easy to see how our ignorance about nature could lead to tragedy.

Without any knowledge about the diseases we could have transmitted to them, we kept them in our arms, later we obliged them to get habituated to little and ugly pools. Without any knowledge about their sensitivity towards sounds, we thought they would not suffer living in a closed environment made with bricks.

At that time we did not know enough.

Today, after 30 years of experience on marine mammals in captivity, we know much more. Yet we still keep on capturing, isolating and displaying them and we do this for money.

It’s now time that these bad activities finish, stupid games that damage a superior mammal as the dolphin is and that let our own sense of humanity come out.”

Jacques Cousteau