



Vancouver Board of Parks and Recreation

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A review of the Vancouver Aquarium's current operations pertaining to cetaceans with comparison to other aquariums



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A review of the Vancouver Aquarium's current operations pertaining to cetaceans with comparison to other aquariums

Scope of Review

- Overview of aquariums around the world
- Review legislation and trends
- Comparison of a subset of North American aquariums to the Vancouver Aquarium
 - Accreditation
 - Annual visitors
 - Stranding and response
 - Veterinary care
 - Research

Ethics and morals of keeping captive cetaceans are not addressed



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General profile of aquariums around the world

Methodology

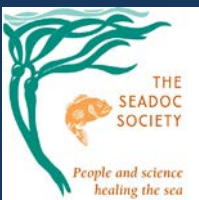
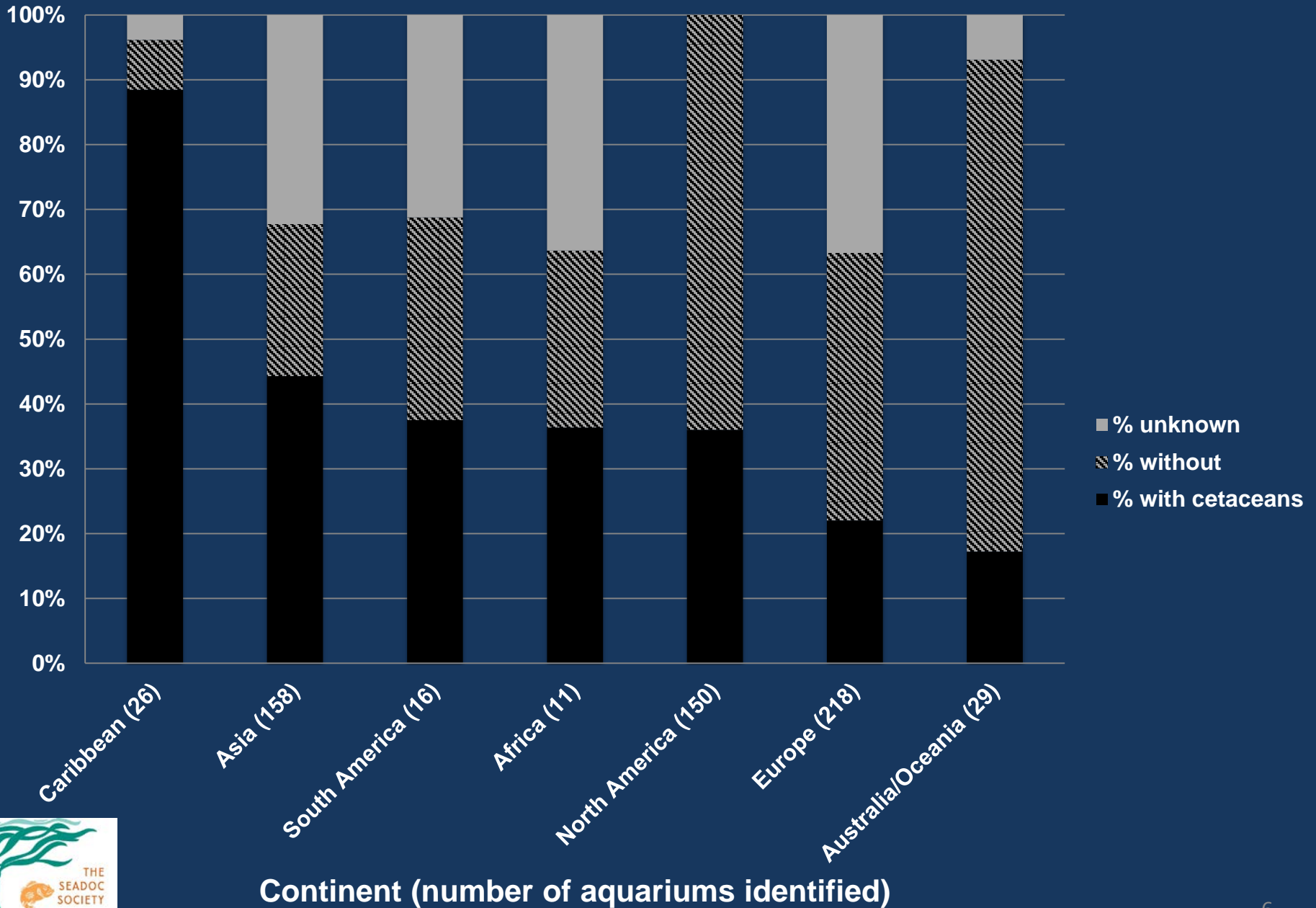
- Research Analyst from the City of Vancouver
- Additional electronic research

Results

- 608 aquariums in 79 countries are open to the public worldwide
- Identified which had cetaceans or did not



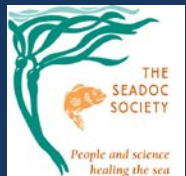
Numbers of aquariums around the world with and without cetaceans



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Review of cetacean-specific legislation worldwide

- Relied upon primary sources such as legislation and, only in rare cases, reputable national news sources
- Identified 7 countries, 1 US state, 1 US county
- Asia (n=1), Europe (n=4), North America (n=1 state, n=1 county), South & Central America (n=2)
- Numerous websites and reports found that list from 10 to 15 countries with legislation. We could not validate this many



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Review of cetacean-specific legislation worldwide

Problematic Examples:

Hungary

- no primary source found

Greece (Animal Welfare Law 4039/2012)

- Legislation prohibits animals in circuses

Bolivia

- Ban on circuses, not cetaceans

Solomon Islands

- Banned export in 2005, revoked in 2007



Countries with laws banning cetacean importation, capture, captivity, or display

Country	Imports banned	Live Capture banned	Captivity banned	Display banned	Date	Literature Cited
South Carolina, USA	no	no	no	yes	1976 (amended 2011)	South Carolina, 2002
Cyprus	yes	no	no	yes	1997	Cyprus, 1997
Hawaii (Maui County) USA	no	no	no	yes	2002	Maui, 2002
Costa Rica	no	yes	no	no	2005	Costa Rica, 2005
Chile	no	yes	yes	yes	2008	Chile, 2008
Croatia	no	no	yes	no	2009	Croatia, 2009
Slovenia	no	no	no	yes	2011	Slovenia, 2011
Switzerland	yes	no	no	no	2012	Switzerland, 2012
India	yes	yes	yes	yes	2013	India, 2013

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Accrediting or guiding agencies

- Canada's Accredited Zoos and Aquariums - Aquariums et Zoos Accrédités du Canada (CAZA-AZAC)
- Canadian Council on Animal Care (CCAC)
- Association of Zoos and Aquariums (AZA)
- Alliance of Marine Mammal Parks and Aquariums (AMMPA)
- World Association of Zoos and Aquariums (WAZA)
- US Department of Agriculture's Animal Plant and Health Inspection Service (USDA / APHIS)



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Comparing Vancouver to similarly sized aquariums in North America

34 zoos and aquariums compared to Vancouver

- 29 had $\geq 750,000$ visitors in 2013
- 3 with no data on visitors included because of similar size
- 1 lower outlier included (Gulf World, FL with 175,000 visitors)
- 1 upper outlier included (SeaWorld-all parks, > 20 Mill. Visitors)

9 institutions provided complete data requested

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Comparing Vancouver to similar sized aquariums in North America

Accreditation

- 91% (31/35) are AZA accredited
- 26% (9/35) are AAMPA accredited
- 100% (4/4) of Canadian facilities CAZA accredited

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Comparing Vancouver to similar sized aquariums in North America

Of the 35 institutions (including Vancouver), 12 of 35 (34%) maintain cetaceans in captivity

Facilities with cetaceans (n=12)

- 75% (9/12) are AZA accredited
- 58% (7/12) are AAMPA accredited

Facilities without cetaceans (n=23)

- 91% (21/23) are AZA accredited
- 9% (2/23) are AAMPA accredited



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Comparing Vancouver to similar sized aquariums in North America

Annual Visitors

Facilities with cetaceans (2 outliers excluded)

- 1.5 million visitors average in 2013

Facilities without cetaceans

- 1.3 million visitors average in 2013

Note: Aquariums (not zoos with aquariums) without cetaceans and over 1 million visitors include: New England Aquarium (1.3M), Aquarium of the Pacific (1.5M), and Monterey Bay Aquarium (1.9M)

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Cetacean stranding response and rehabilitation

Facilities with cetaceans

- 100% have cetacean stranding response

Facilities without cetaceans

- 40% have cetacean stranding response

Note: Aquariums without captive cetaceans are unable to provide long-term care for stranded cetaceans unless they have net pen or other facilities and likely could not or would not provide life-long housing for non-releasable cetaceans

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Veterinary Care

Facilities with cetaceans (excluding outliers)

- 1.75 full time veterinarians (average; n=4)

Facilities without cetaceans

- 2.6 full time veterinarians (average; n=5)

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Cetacean Research

Facilities with cetaceans

- Published on cetaceans more than those without
- Peer-reviewed publications ranged:
 - 6 Gulf World
 - 17+ Biodome de Montreal
 - ≈ 28 New England
 - 32 Vancouver
 - 84 Shedd
 - 150 SeaWorld

Facilities without cetaceans

- 3 reported Not Applicable to this question

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Peer-reviewed Cetacean Research at the Vancouver Aquarium

Research on captive cetaceans

- 20 peer-reviewed papers, including MS theses and PhD dissertations (1994 – 2014)
- 75% (15/20) have implications for free-ranging cetacean management and conservation

Research on free-ranging cetaceans

- 12 peer-reviewed papers, including MS theses and PhD dissertations (1996 – 2013)
- 25% relied on some data from captive cetaceans



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Cetacean species in captivity at the Vancouver Aquarium

Belugas



- 6 facilities in North American keep 79 animals
- Vancouver Aquarium has 9
 - 2 on site
 - 2 at Georgia Aquarium
 - 5 at SeaWorld Parks

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Cetacean species in captivity at the Vancouver Aquarium

Pacific white-sided dolphins



- 4 facilities in North American keep 18 animals
- Vancouver Aquarium has 2 rescued animals from Japan (entrapped in fishing nets)
- Other facilities:
 - Miami Seaquarium
 - SeaWorld (all locations)
 - Shedd Aquarium

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Cetacean species in captivity at the Vancouver Aquarium

Harbor Porpoise



Photo Credit: AVampireTear

- 1 facility in North America (Vancouver) keeps 2 animals that were stranded locally
- Other facilities:
 - 6 at Dolfinarium/SOS Dolfijn Harderwijk (Netherlands)
 - 3 at Fjord & Belt (Denmark)

Captive Cetaceans	Country	Individuals Housed on Site
Belugas		
Vancouver Aquarium Marine Science Centre	Canada	2*
Georgia Aquarium	USA	4*
Marineland	Canada	43
Mystic Aquarium	USA	4
SeaWorld, All Locations	USA	19*
Shedd Aquarium	USA	7
Total		79

Harbor Porpoises		
Vancouver Aquarium Marine Science Centre	Canada	2
Dolfinarium & SOS Dolifign Harewijk	Netherlands	6
Fjord & Belt	Denmark	3
Total		11

Pacific White-Sided Dolphins		
Vancouver Aquarium Marine Science Centre	Canada	2
Miami Seaquarium	USA	6
SeaWorld, All Locations	USA	6
Shedd Aquarium	USA	4
Total		18

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Cetacean breeding at the Vancouver Aquarium

- AZA Marine Mammal Taxon Advisory Group guides beluga breeding to maintain genetic diversity
- No breeding oversight for Pacific white-sided dolphins or harbor porpoises due to limited numbers in captivity in North America
- Have done some preliminary work on artificial insemination, but all breeding attempts have been done by pairing likely individuals
- Breeding loans oversee animals sent to other institutions and detail ownership of future offspring

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Consideration #1

Large-scale cetacean welfare study



- Standards for accreditation do not address ethics of captivity
- A large-scale, 3-year study is being completed on captive elephants in North America
- A similar North America wide cetacean study should be considered

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Consideration #2

Complete public disclosure of information



- Vancouver has shared all requested information freely
- Not all facilities have been this willing to share
- Requiring the Aquarium to share an annual “State of the Cetaceans” report will facilitate oversight and public dialogue and will set an industry precedent

Questions?



