



AnNex
Animal Research Nexus



UNIVERSITY OF
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A liquid zoo in a dead zoo

Oxford Museum of Natural History. December 2017

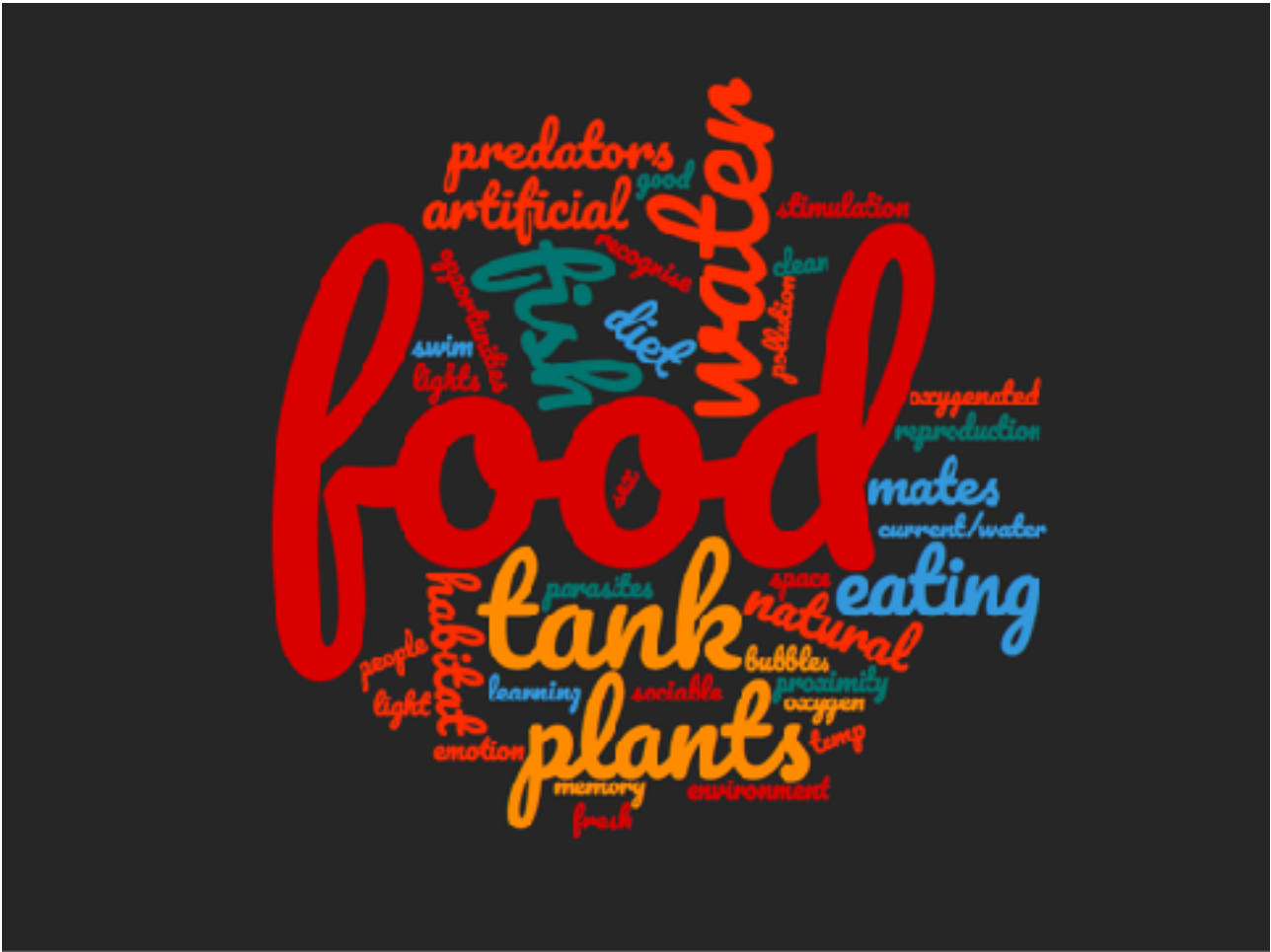


W
wellcome



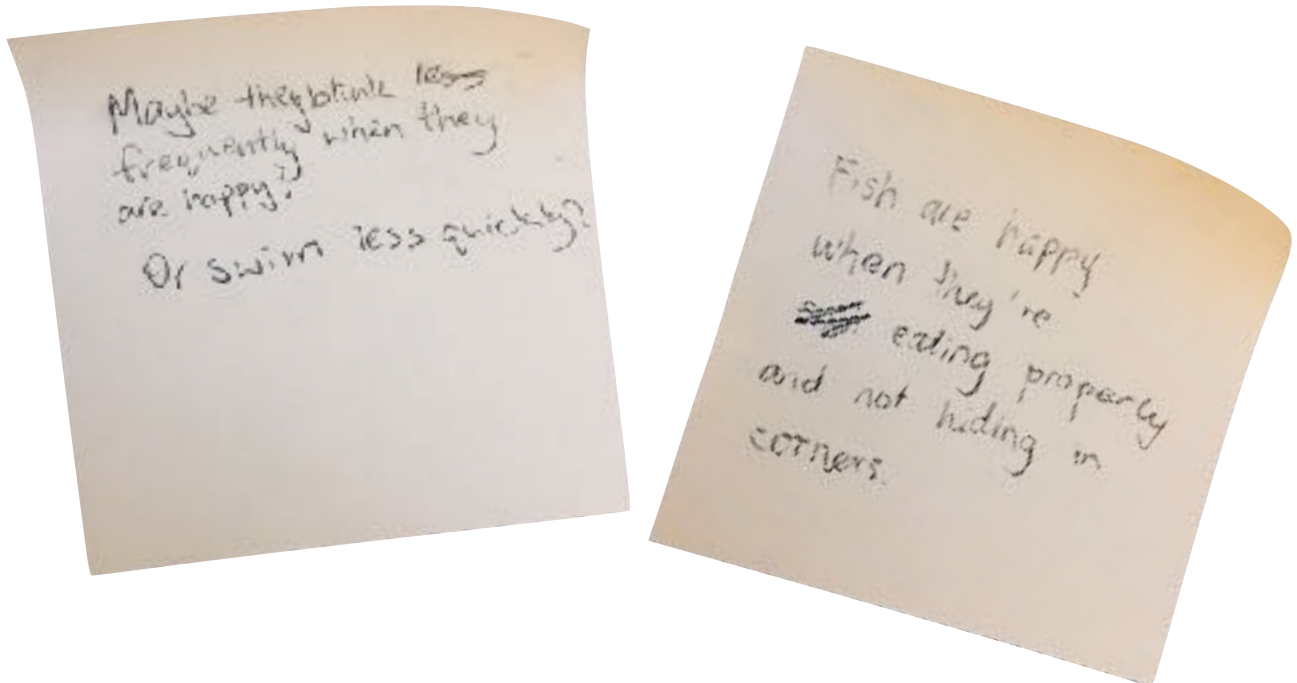
Fish footage was projected onto the walls around the Museum of Natural History accompanied by aquarium sound effects. This mini immersive “liquid zoo” acted as an open invitation for people to think about and with the fish. We asked two main questions; **What makes me happy?** and **How would you know?** Thoughts and responses were captured on post-its and used to drive further conversations around fish sentience, welfare and other human interactions with fish.

What makes me happy?



Overwhelmingly our participants suggested **food** was the key to fish happiness. Food should be in plentiful supply, easy to access and of high quality or “natural”. The immediate environment was also suggested as a happiness factor with water quality (temperature and **bubbles**/oxygenation) and **tank size** and **plants** being key factors. Participants thought that the ability to exhibit natural behaviour was also important with some thought given to the ability to reproduce and socialise. Some suggested that the peak of male fish happiness is when they are exhibiting mating displays for females, other suggested fish have no concept of community or social interaction and shoaling is purely an evolutionary safe guard against predators.

How would you know?



When asked how happiness in fish could be identified participants mostly suggested behavioural changes. It seemed easier for people to suggest behaviours which indicated sadness or depression in fish, rather than those that correlated directly to happiness. Many participants suggested that happiness was too extreme an emotional state for fish and that “fine” or “content” were the pinnacle of positive fish emotions.

Depressive behaviours included swimming at the bottom of the tank, being less active and acting unusually. A participant suggested that **“fish are harder to read, unlike dogs”** and that spending time with them, getting to know their “normal behaviours” is the only way to spot depression or sadness.

Participants that were or had been fish owners often spoke about observing a pet fish in a depressed state (inactivity, staying at the bottom of the tank) but did not report any attempts to treat or alleviate this emotional state - “it’s only a fish”.

Transcripts

What makes me happy?

Food	Environment	Behaviour	Community	Other
eating food	people	game fish have a memory, dont want to be caught again	being around other fish that are sociable	do i care? not sure i do!
a good diet	more important to fix their environment, not them, they will look after themselves	their brain isn't advanced enough to feel emotion	mates (sexual)	
food - they recognise the pot	clean water	opportunities to learn	not eating them	
happy when there is food coming	space	swimming	no predators	
good food	in a tank they cant be happy	reproduction	proximity to other fish - socially	
	fresh water		other fish	
food	suitable water conditions		appropriate tank mates	
food	oxygenated water			
accessible food supply	lack of predators			
food	space to swim			
eating	being in a natural habitat			
sufficient food	not wrecking their habitat			
natural food	less pollution			
food	round tanks are bad			
food	no artificial plants			
food	plants			
food	right size tank			
good diet	no bright lights			
	nice temp			

Food	Environment	Behaviour	Community	Other
	lots of plants (not artificial)			
	if they are in a tank they are not happy			
	reproduction			
	basic biology			
	water			
	bubbles			
	swimming			
	high oxygen			
	right amount of light			
	no parasites			
	stimulation by current/water			
	clean water			
	correct equipment			
	appropriate tank size			
	good selection of plants			

How would you know?

Food	Environment	Behaviour	Community	Other
not eat	normal development	because they swim lots	are shoals merely an evolutionary strategy?	do happy fish taste better?
	active	the exhibit natural behaviour	when they swim in groups and not alone	looks healthy
		they're not hurting themselves (hitting head on glass)	have no emotions as only gather in groups, not pairs, no emotional attachment	i am not sure

Food	Environment	Behaviour	Community	Other
		repetitive behaviour of non useful or unexplained behaviour - aka having fun	when males display for females they are happy	fish are hard to read...unlike dogs
		my goldfish used to ride the waves caused by this filter at the top of his tank, swimming against the bubbles and then be taken by the surf. if this pleasurable?		there is not a lot we can do to tell
		not happy - when they reach the border of the aquarium they do a quick movement and then turn to the side, like they are scared. limited space		not sure
		swimming around bottom of tank		not the same as us...but they have a level of satisfaction"limited sentience
		moving a lot		
		swim in a carefree manner		
		blink less frequently		
		swim less quickly		
		not hiding		
		fish are happy when they're eating properly and not hiding in corners		
		act unusually		
		breed a lot		

Food	Environment	Behaviour	Community	Other
		if you get to know usual behaviour you'd be sensitive to a change, works with dogs not sure about fish		
		saw electrical bits in electric eels when they were dreaming, dreaming about food, like food		
		doesn't hide all day		
		they swim lots, in a non depressed way		
		sad fish dont swim much		

Acknowledgements

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