## Delphinology Part 2 with Dr. Justin Gregg Ologies Podcast April 26, 2023

Oh hey, it's still the extra power bank you always forget to charge and bring with you, which I did this week on a trip, Alie Ward. And this is Part 2 of dolphins. Two things. Number one, start with Part 1 to get all the basics and all the science scandals. There's some evolutionary mind-blowers; there's blowhole sex. Start with Part 1, do not cheat yourself. Then come back to this part because it gets weirder. It gets weirder. Part 2 is weirder. Welcome.

If you don't already love this ologist, you will, we all do. Again, they got their PhD in dolphin cognition and communication, and they've authored two books on dolphins plus a new one, *If Nietzsche Were A Narwhal: What Animal Intelligence Reveals About Human Stupidity.* Those books are linked in the show notes. Also linked in the show notes is Patreon where you can join for as little as a dollar a month, you can submit questions before the interviews. That's Patreon.com/Ologies. We also have merch at OlogiesMerch.com; get yourself a swimsuit if you need one. Thank you to everyone also who rates, subscribes, and makes us #1 on the Science charts. Also, you just won us another Webby this week so, thank you. And if you've ever left a review, I've read it with my eyes, and to prove it, I read a fresh one such as from someone named Annoyed Vocalist, who said:

This show is something special. Alie Ward is a sassy late-night version of Ms. Frizzle and Ologies is the party bus on which you will wake up hungover from an intellectual bender.

Thank you for that. All aboard. So, let's get it started, shall we?

Okay, we're going to get back to Nova Scotia with our guest who was... in Nova Scotia as we recorded this to chat about sensory deprivation, enlisted military dolphins, should you ever pay money to cuddle a dolphin, dolphins on drugs, all kinds of drugs, vengeful marine mammals, aquatic horniness, dolphin doulas, and more with researcher, author, and your new favorite land mammal and legendary delphinologist, Dr. Justin Gregg.

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**Alie:** Oh, my god. I have so many questions. Can I ask them?

**Justin:** Yes please, oh gosh. I bet there's an LSD question in there, I hope.

Alie: Let me check, let me find and confirm. Hold on... Yep, four of them. [Justin laughs] Four people asked about– Let's get straight to it. Addie McBaddie, Adam Lee Allan-Spencer, Lise Bakker, Addie McBaddie's words: What is your take on the 1961 study with dolphins on LSD to see if they'll form a more human language? First-time question-asker, Adam Lee Allan-Spencer: I'd like to know more about the LSD experiments on dolphins. I think we all would. What do you know?

**Justin:** Well, that was back to our old friend, John Lilly. At some point while the experiment was going on trying to teach Peter to speak English, he also was like, "Hey, what happens if you give a dolphin LSD?" And so, he just injected dolphins with LSD to see if he could stimulate something, I'm not sure, interspecies communication. And I believe he also—Because he's the inventor of the, you know the isolation tank that you go into and it's dark and you're floating in water?

**Aside:** So, one might call it a sensory deprivation tank because the water is your exact body temperature, you can't even feel it. There's no sound, there's no light, just chill time with your racing thoughts, or no thoughts, hopefully. But some folks do not like the sensory deprivation term

so you can also call this cozy water coffin an isolation tank, or a float tank, or a float pod, or a float cabin, or a floatation tank, or a sensory attenuation tank. Whatever. It's none of my business.

Now, you can buy one for \$32,000, or you can find a deal on some sessions. And once I read that they filter the water between people I was like, "Sign me up, this seems fun." But I've never done it. But anyway, there was a film in 1980 starring William Hurt that was based on John C. Lilly's research into these tanks. And apparently, renowned theoretical physicist, Richard Feynman dug them; legend has it that floating in the dark helped John Lennon conquer heroin addiction; and as a friend to Timothy Leary, John C Lilly was known to just drop pharmaceutical-grade acid in the float tank and just plumb the depths of his own mind.

Now, if you'd like to hear more about this in his own words, you can check out John C. Lilly's published academic work titled, *Programming and Metaprogramming in the Human Biocomputer*, or his more conversational memoir titled, *Tanks for the Memories*, which you *know* he came up with in the tank on drugs and was like, "Brilliant, I did it."

**Justin:** That's his shtick. And so, he would take LSD, he'd inject dolphins with LSD, and then he would hope there'd be some sort of communication or something. So, that was a thing he did and that was one of the things that people didn't like, like his collaborators. Carl Sagan was a friend of Lilly because Lilly, at the time, NASA was interested in, "If aliens come down how do we learn to speak with aliens?" And so, they were throwing money at him because they were like, "If you can learn to speak with dolphins then we can use that to speak with aliens." So like, he was pals with Drake ["I'd be there though." "Not you."] you know, from the Drake equation. So yeah, they were all like... they were in this thing called The Order of the Dolphin, Carl Sagan and Lilly.

Alie: What?

**Justin:** Yeah, it was a whole thing.

**Aside:** It *was* a whole thing, and it was a secret meeting in 1961. It was also attended by a guy named Frank Drake who, during that conference, wrote the Drake equation which is an argument of probabilities that estimates the number of possible active intelligent civilizations in the Milky Way. He wrote it during that conference.

Also, during this meeting, they got word that one attendee, a biochemist Melvin Calvin won the Nobel Prize in chemistry for his work in photosynthesis. You've probably memorized the Calvin cycle, that was him. So, they found out, they drank a case of champagne, they talked turkey about Martians, they listened to John C Lilly describe giant dolphin brains, and they called themselves The Order of the Dolphin, and then they officially rebranded to the Search for Extraterrestrial Intelligence, or SETI. Yep, SETI, started as The Order of the Dolphin. What a weekend. What a good reason to put up an out-of-office reply, you know?

**Justin:** But when he started giving LSD to the dolphins, they were all like, [suspicious tone] "Wait a second here," and so that sort of started his path into, sort of, hippie counterculture.

Alie: Did people stop being friends with him? Did he get, like, vintage canceled at some point?

**Justin:** Yeah, that's exactly it. I think he got vintage canceled by mainstream science. His writing was very popular with people, like regular nonscientists, but the more he wrote about dolphins being like aliens and whatnot, the more the scientific mainstream community didn't want to hear about it. And that actually messed up the field for a long time. So, like if in the '70s you were like, "I want to study dolphins," people were like, "You're a weirdo hippie." It wasn't cool to study dolphins for a long time because there was some damage from the PR, essentially.

**Alie:** Well, what happened to the dolphins on LSD?

**Justin:** I think nothing. I think he was disappointed that nothing seemed to be going on, no discernible difference.

**Alie:** Really? I could see concerns where if they have to breathe consciously too, if you are tripping your dolphin balls off, I don't even know if dolphins– I'm sure dolphins have balls. They're probably internal?

**Iustin:** Giant internal balls, yes. [*Alie laughs*] They're very large. [*chuckles*]

**Alie:** Well, they mate with a lot of people so that means that they need a lot of sperms, right?

**Justin:** Right. The sperm will wash out the sperm of the other previous males. It's a whole thing, yeah.

Alie: So, it's just firehosing.

**Justin:** That's exactly... That's why... like, I think right whales that have the largest testicles on the planet and they're just, like, a third of the body weight of the animal, some insane number. And it just literally firehoses out all of the sperm from previous mating attempts, that's what it's for. ["It's just a... lot to take in."] So weird.

**Alie:** Luckily there's a lot of water to wash things off, I guess. But okay, so LSD didn't find out much.

**Justin:** No. It seemed not to do anything. But you're right. I mean, what if it did? They're tripping and they went underwater, and they thought they were at the surface, and they opened their blowhole and died.

**Alie:** Right! Well, on that note, so many people Deli Dames, Lydia Armstrong, Racheal Davis, Melissa Hart wanted to know, in Racheal Davis's words: Would love to hear a deep dive (I don't think there was a pun intended) on how they communicate. Is the idea that they have telepathy flimflam? So, telepathy. Can they communicate? Do they have ESP? Melissa Hart read Madeleine L'Engle's young adult novel, *A Ring of Endless Light*, where the angsty teenage protagonist communicates telepathically with dolphins. Melissa Hart said: That's false, right? Do they have ESP?

Justin: No.

Alie: [laughs] Okay.

**Justin:** It's just like regular ESP; there's no evidence for this in any way whatsoever. There are weird ways that they communicate but it's not psychic. And again, that goes right back to these '60s experiments when they were trying to establish psychic connections to dolphins. So, no. Flimflam.

Alie: Good to know. A bunch of people...

**Aside:** Who I will say via my own mammalian mouth sounds. Madison Campbell, Brandi Lion, Nathan-Andrew Leaflight, Mallory Nettleton, Laura M Smith, Nita Chen, Beth Sauter, BeckyTheSassySeagrassScientist, Lise Bakker, Slayer, Deli Dames, Lydia Armstrong, Racheal Davis, Melissa Hart, Lani Bouwer, Megan Dawe, Katherine, Spencer James Parks, Louis via Elizabeth Edwards, Sydonie S, Jess Feltner, Charlie, and Beck who asked: Is anyone working on translating their language? I would like to speak with them. So y'all, all of you...

**Alie:** Want to know, in Stacy Wicks's, first-time question-asker's, words: How close are we to being able to translate dolphin speak as seen on *seaQuest*? I'm not sure if you've seen *seaQuest*.

**Justin:** Oh yes... Darwin. [robotic dolphin sounds and bubbling water]

**Alie:** Can that happen?

**Justin:** It is a goal for some researchers, and it's been a *long* goal for many researchers. The idea being, yes, dolphin communication is actually pretty complicated. They make a lot of different sounds. The

question is, do they function like words? Are they talking about complicated topics? So, there have been attempts over and over again to translate that, you know, mechanically, or using information theory, or using the AI stuff that's now happening. And I think people like me are quite skeptical because I just don't think there's anything to translate. Other people are more hopeful that there is stuff in there.

And I was just reading *How to Speak Whale*, Tom Mustill's book, it's really interesting. He's very hopeful, it's a great book, but he's very hopeful that this new AI specifically... There's a new research group out there studying sperm whales I think and then putting all these tags on them and listening to them. They think if you throw enough data into an AI, it will be able to yank out language-like stuff. I personally do not think that that's the case because I don't think sperm whales or dolphins need language to still be very smart, complicated animals, I just think we really want them to have language. We're not giving it up, we just... I get it, I get it, I get it. And I'd love to be proven wrong. I just don't think it's going to happen.

Aside: Also, if you're wondering how dolphins generate those clicks and those whistles, turns out they have some nasal air sacks and they've got a couple of sets of lips just inside their blowhole, one pair being monkey lips or phonic lips... I didn't name them, someone in the 1800s did. And the phonic lips are derived from the artists formerly known as nostrils. And those clicks beam straight through that fatty melon organ, that majestic forehead which, yes, looks like a giant brain but it's just a thing called a melon (their giant brains are behind it). But delphinological sources report that these marine mammals can make up to four sounds at the same time. Do they even have ears to appreciate that? Yeah, they do. Teeny tiny ones.

And one of my greatest professional sorrows, I'm going to tell you right now, is that in 2018 I recorded a whole episode on whale ear wax for you and I'm not allowed to release it because of an NDA. It hurts me.

But anyway, with up to a trillion possible noises and word-type sounds dolphins can make, we can't use our own big dry ears or computers to fully understand them yet. So, patrons Megan Dawe and Jacqueline Church wanted to know: Could dolphins make sentences like dogs on those large word pads?

**Alie:** What about using assisted communication devices, or using some sort of press-a-button-with-a-flipper and say "give me that fish and not that one"?

Justin: Yes, and that's what I think is most exciting about dolphins. When they started doing those experiments, so this is after Lilly's stuff all dried up, and then you had Lou Herman out at Kewalo Basin in Hawaii doing these amazing experiments with these dolphins where they gave them artificial symbol systems. So, they would use whistles or hand gestures to represent words and concepts, and they tested the dolphins' ability to comprehend those, and they were geniuses. Like, on par with great apes. They could follow sentences with five or six words in them, giving them really complicated instructions that would change the instructions based on the word order, like syntax, and they could understand that, which is really mind-blowing and one of the reasons why I wanted to study them. I'm like, "Well, that's very language-like so how much do they understand, how sophisticated is their cognition when it comes to language?"

Alie: What were they communicating during those experiments?

**Justin:** Well, those are only one way. So, it was humans telling dolphins to do stuff. Those are the best experiments with the clearest results. But as soon as you start getting them to press buttons and stuff, there's always this one thing that seems to crop up which is: Dolphins don't give a shit. [*Alie laughs*] They don't seem interested in communicating with people. We know that they can learn

this stuff, but when you put one of these giant keyboards, like I had a colleague with a giant keyboard underwater, they just... Nah, they're just not into it.

**Alie:** Do you ever feel like Amy Adams from *Arrival*?

Justin: That's how a lot of people studying communication would maybe frame themselves, I think. Like, "Maybe we'll crack the code, we'll be the ones to figure it out!" That's how I started my career, I was like, "I'm going to be one of these people that helps crack the code." And then the more I study, the more I realized, well, it doesn't seem like they have a code that needs cracking, there's no secret system, and also, they don't really need it. They're so complicated in what they're doing without having to use language as the underlying explanation for their behavior. My whole career now is like "Look, animals are sophisticated in their own right, they do not have to be humanlike to be interesting, let's celebrate dolphins for what they are, which is not humans, not doing human language stuff."

Brains tell you nothing about an animal's intelligence. It seems like it should. Humans have relatively big brains, and so do dolphins. But once all the scientists compile like, "Okay, a tool using-species should be a larger-brained species," well guess what? Ants use tools or whatever. Any example of an intelligent thing from a big-brained animal, you can find in some small-brained, smooth-brained animal. So, there's strangely no correlation between intelligence and brains.

**Aside:** So, as you are berating yourself for forgetting your cousin's boyfriend's name, despite meeting him at a barbecue two months ago, just remember, dolphins aren't necessarily smarter than you, but they can recognize their friends through whistles and the taste of their pee. I'm sorry, what? According to a 2022 study titled, "Cross-modal perception of identity by sound and taste in bottlenose dolphins," researchers messed around and found that playing a dolphin's friend or family member's signature whistle ["Heyyy."] paired with a gustatory stimulus, meaning the taste of that friend's urine, made the dolphin be like, [Through bubbles "Hey Richie, Richie! Where are you, dude?"] much more than just the whistle or the pee alone.

And if you're like, "Why did you make me learn if dolphins can recognize other individuals by the smell of their pee?" Blame patron Laura M Smith who asked: Is it true that they can recognize other individuals by the smell of their pee? And remember, not smell, *taste*. Speaking of recognition. Do dolphins know how cute they are?

**Alie:** What about the mirror test?

**Justin:** Yes, they're one of the few species that passes the mirror self-recognition test. So, there are lots of versions of this test but the idea is, if you put a mark on an animal somewhere that it doesn't know about and put them in front of a mirror, if they use the mirror to inspect the mark in any way, like if they twist and turn their head, or if you're a chimpanzee, you touch the mark, then you know that they know that the reflection is actually them. So, they have a concept of self-awareness that at least involves mirrors. And dolphins have passed this on multiple occasions. There's a relatively recent study even more elegantly done that proves yeah, they can totally pass that test.

**Alie:** Okay, what about accents? Michaela A Gabriel, Nathan-Andrew Leaflight, Katherine, Dakota Harriman, Brook Brennan, Evan Villavicencio, Erin Burbridge, and Vincent Hill, in Erin's words: Do different dolphin pods have different dialects? Do they have regional accents? Vincent wants to know.

**Justin:** In killer whales and orca, absolutely. And that's one of the hallmarks of the species is that they live in these family group pods, and those family groups, over the years, will develop sounds that are specific to that family group so you can easily tell the difference between one family group versus

another based on their clicks and whistle sounds. And that's sort of evolving over time. So, that's a great example of culture in an animal species.

Bottlenose dolphins, not so much, because they don't split along those same lines. And so, regionally, you might say this dolphin group might sound different to that but it's nowhere near as clear as killer whales. They absolutely have—and the official term is dialects. They have different dialects.

Alie: Some monkeys have this as well, right?

**Justin:** Yeah, there are other species that will have regional or family-specific ways of speaking, birds as well. But you know what I mean. You can tell the different populations based on differences in shared signals.

Alie: What about play? A bunch of people want to know...

**Aside:** Looking at you, patrons Allison Arkush, Ashley Oki, Rozelyn Hesby, Shannon Ryan, Angela Clark, Emma Garschagen, and...

**Alie:** Alex Morales says: I recently heard that adolescent dolphins behave like teenagers. They go through phases of the "cool" new thing to do together. JR Roloff wants to know: Why do spinner dolphins spin? And so do Julia Vollmer and Sophia A. So, what are they doing when they're, in Abby's words, jumping so high out of the water? Are they having fun?

**Justin:** It seems like it. A lot of the times when a dolphin is jumping out of the water, it is for fun. Spinner dolphins are a weird case. We actually think the spinning is a communicative signal sometimes, so it actually is more than just fun, although fun might be the reason too. But that might be used for long-distance communication if one dolphin sees another one off in the distance spinning around, maybe.

But most of the time if you see dolphins doing things that seem playful, guess what? It's totally playful. They're a very playful animal species. They love games of keep away, they love... Like, they'll grab our items and carry them around and just generally do stuff that we would associate with fun. Indeed, you do find that younger dolphins are more playful for sure, and they get reprimanded by their moms. If you get a young dolphin that's juvenile that comes out and tries to play with a human the mom will be, like, angry. [Alie laughs]

Alie: They're like, [soft childish voice] "He's my friend though! I touched him with a flipper."

**Justin:** Do you know what moms will do to discipline a dolphin? This is interesting. So, a young juvenile is over, it's doing something it shouldn't. The mom will take it and pin it to the seafloor and hold it down for a little bit because that's scary if you're a dolphin and you need to breathe. [*Alie gasps*] So, that's the way a mom will discipline. And they will do that to humans that are annoying them as well.

So, there's only been one recorded incidence of a wild dolphin killing a human and that was in Brazil with this lone sociable dolphin that used to come up to the beach and people would pet it or whatever, which is weird in its own right. But there were some drunk dudes, and they were trying to put out a cigarette or something in the dolphin's blowhole.

Alie: No!

**Justin:** And the dolphin got real angry and that's the only example of a dolphin killing people. But I mean, they were being terrible. Like, what the heck?

Alie: Yes! And that was documented and verified?

**Justin:** I believe so. [*laughs*] I'm pretty sure I read that somewhere, on the internet, therefore it's true.

**Aside:** Justin was kidding, and he said it's been documented. So, I dug around, and let me take you back to December 1994. *Friends* was a brand-new television situation comedy and Mariah Carey's "All I Want for Christmas is You" had just dropped. Meanwhile, in Caraguatatuba, Brazil, a couple of drunk guys on a beach were trying to tie stuff to a dolphin's tail but they fucked with the wrong dolphin.

So, Tiao, named for the location of Sebastiao, was a male dolphin who popped up around March of that year, 1994. He was friendly with female swimmers. Side note, scientists say female humans have similar pheromones to lady dolphins. But as more and more people heard about him and they flocked to meet this affable lad, some of those people were dicks, and had dicks. Folks would try to grab the bottlenose dolphin's pectoral fins for some kind of oceanic pony ride and even try to pour beer down his throat and maybe Tiao was like, "No. I would literally rather taste my mom's urine."

And as a result, between March and November 1994, Tiao had put 28 people in the hospital, and by December, he'd fucking had it. And when these two guys on the beach started messing with his tail fluke, Tiao rammed them both repeatedly in the chest with his rostrum, inflicting fatal internal injuries on a guy named Joao Paulo Moreira and breaking the rib of survivor Wilson Pedroso, who I just spent well over an hour looking up on Facebook and Instagram to be like, "Does his bio say, 'Dolphin attack survivor. Be nice to dolphins'?" And all I found was a government official in São Paolo with the same name and appropriate age. Like, he could have been drunk on a beach back when metallic pants were cool. But alas, if it's him, he's put his dolphin-harassing past behind him.

But as for Tiao, I know you're like, "What happened to the dolphin," right? He was never charged with any crime, and he came back to the bay a few times but then either took off with a traveling pod and probably talked shit about humans forever, understandably. Or one of our species may have hunted him down secretly, nobody knows. So, let this be a lesson: do not taunt a dolphin. Plus, it could cost you a lot of money. The Marine Mammal Protection Act of 1972 means that could cost you up to 100 Gs to haze a dolphin or get within 50 yards of them. So, what is the *Ologies* lesson about marine mammals, kiddos? Pretend they have a restraining order against you. Yes, very good. Otherwise, they may actually make you the star of your own Greek tragedy.

**Alie:** Well, good for them. I mean, dolphin vengeance, do it. It's vigilante but I mean... Emma Garschagen and Signe S, and Cate Muenker want to know: What's with the boat obsession? Cate wants to know: I've always wondered, why do dolphins chase boats?

**Justin:** Yep, if you've been on a boat, you've probably seen a dolphin chasing after your boat and that's because the dolphin will create a pressure wave at the bow of the boat which is literally pushing the water along so the dolphin can sit right in that pocket and be pushed along without having to swim. So, it's just fun; it's like surfing. And the back of the boat is the same thing. It's churning up all this water and it creates these waves, and they'll stay in that slipstream and come out of it like they're surfing. So, it's just fun.

**Alie:** Oh my god. Okay, what about... Cnidarian Knight wants to know: How large can pods get? I've seen videos of hundreds across the water column.

**Justin:** Yeah, it's species-specific. Like spinner dolphins, common dolphins, sometimes they come together in groups of thousands, usually when they're traveling. So, they've all got someplace to go for some reason, like they're headed out to the hunting grounds; they'll do that. [*Alie laughs*] Other species, not so much. You don't see... Bottlenose dolphins are not doing big group stuff.

**Alie:** I love the idea of a commuter train full of dolphins. [*laughs*]

**Justin:** That's totally what it is. They're stampedes, they're called. I love it. It's so cool.

**Alie:** Zoe Jane, Paige Price, and Emma Garschagen want to know about assisted birth. Zoe Jane says: Dolphin doulas! Let's talk about the magical intuitive world of dolphins supporting labor and birth. Is that true? Are they like, "Push! Push!"?

**Justin:** I've had so many questions over the years from expectant moms who are asking me to help them find a dolphin to help them give birth.

Alie: No.

Justin: Yeah. [Alie laughs] I don't know how this entered into the zeitgeist but it's there. So, the idea is that if you go out into the ocean, the dolphins will come up to you and they will [skeptical tone] help you with the birth. I don't know what that help would mean. I guess, hang around you... something. So, people are like, "How do I do that?" And I'm like, "Okay don't. Don't do that." Because if you are on the boat trying to give birth in the middle of the ocean, you're nowhere near proper medical care and there's no ambulance. It can be dangerous. Also, you know what's in... When you're giving birth, a lot of stuff comes out of you; some of it is blood or, like, placenta or whatnot. And do you know what likes blood and placenta to eat? Sharks. Do you know what's in the ocean? Sharks. So like, I wouldn't want to put a newborn and placenta... you're chumming the waters, essentially. [Alie laughs] Like, that's not a good idea.

But some people want to give birth in a shallow pool for some reason and hope a dolphin comes. Like, okay, I've heard that that's happened, that's probably fine. But I don't know why they think dolphins care about helping humans give birth. They do help each other, sure. A mom will help push a newborn up and the other dolphins will gather around, that's fine. But we're not dolphins.

**Alie:** I'm sure there is someone who accepts Bitcoin to put you in a pool with dolphins while you're giving birth, right?

Justin: You can find any service anywhere on the planet. This is what I know. So, yes.

**Alie:** Very accurate.

**Aside:** So, while you could seek out an institute on the Big Island for this kind of delivery in an idyllic setting, let's consider that there's not a lot of solid evidence or even liquid evidence, that this is good for you or even safe, biologically. Also, from what I understand, the residents of Hawaii don't want anyone there. They're like, "Don't come here, goopin' up the beaches with your placenta and then flying back to Ohio. Don't."

Now, if you're wriggling waxy newborn gets eaten by a dolphin because you've had one of these births, you can actually blame a Russian gentleman named Igor Charkovsky who started this trend by suggesting that his pregnant clients take a dip in the Black Sea and make nice with the mammals there. And I was looking into it, I was like, "Who is this Igor guy?" And looking into him further, I found a 1996 newspaper clipping with the headline, "Controversial birth guru charged with sex assault," and that explained that the former gym teacher who became a self-professed father of sea births wasn't Neptune in a lab coat, but he was just a good old-fashioned predatory creep.

So, scratch dolphin birth off the bucket list; you're good. Spend the money on a float tank and a fistful of acid tabs... [softly] don't do that. But as long as we're back on drugs, a few folks had a question about stoned dolphins. And I'm looking at you Great Dane Lady who asked: Do dolphins really enjoy drugs? You were not the only one who needed to know.

**Alie:** People want to know, Angela Clark, Olga, Marianne Thomas, Matt Thompson, RM, [phonetic] and Steven Shelley want to know: What are they doing with puffer fish? Marianne Thomas says: I heard they use puffer fish to get high, is this true??

**Justin:** Okay, so there was this, I think BBC show, called *Spy in the Pod* and it had this whole little segment where it was like dolphins playing with a puffer fish. And the puffer fish is all blown up and they're, like, dragging it around. And you look at the dolphin and its eyes are half closed; it looks totally stoned. And they're like, "Oh man, that dolphin is high on the toxin from the puffer fish," and then that just became a thing that everyone knew on the internet. ["When attacked, puffer fish release a neurotoxin. In high doses, it can kill. But in small doses, it has a narcotic effect. It seems to be affecting the dolphins."]

But the thing with that is, the dolphin in the thing didn't have, it didn't have squinty, high eyeballs. If you shine a light on a dolphin, it will squint its eyes, and this was a dolphin in the sunlight. Okay, that's probably all that was, that's totally normal. And like, there's zero evidence that they can actually extract the poison from a puffer fish, no one's ever seen that. And even if they did extract it, there's zero evidence... I can't remember the name, it's like "tetradioxone' or something. [AI voice, "Tetrodotoxin] Whatever that poison is, we don't know if that has psychotropic properties for a dolphin, that's all just insane speculation. And so, there's like eight steps of speculation based off of this one video. So, I'd say, is it possible? Yes. Is it likely? No.

Alie: Good to know. Flimflam being busted.

**Aside:** I looked *so* deep into this, and I was so excited to unearth the 2014 paper, "Nature and narcotics: Dolphins use puffer fish toxin to achieve trance-like state," but then following the citation trail, I realized that all roads led back to that one incident from the 2013 BBC video called *Spy in the Pod.* So, that is a sum total of the research and observations on this. Although I did find the 2016 paper called, "Preliminary Report of Object Carrying Behavior by Provisioned Wild Australian Humpback Dolphins in Tin Can Bay, Queensland, Australia," which noted that while observing the humpback dolphins, "There was one instance where a live puffer fish was thrown at staff repeatedly," which if nothing else is evidence that transcending the sea and the land is the etiquette of puffer-puffer-pass.

**Alie:** Okay, this is something I should have asked you right up top. Emma Luck, who signed themselves: Sincerely, a tired killer whale researcher.

Justin: Cool.

**Alie:** Asked in all caps, not even an ask, a demand: PLEASE EXPLAIN TO EVERYONE THAT KILLER WHALES ARE BOTH WHALES AND DOLPHINS AND THAT ALL DOLPHINS ARE JUST TOOTHED WHALES.

Wait a minute, wait a minute. Dolphins are whales. No. Killer whales are dolphins. Help me out.

Justin: Yeah. Those words are all useless, I hate them all. I hate the word whale and dolphin. [Alie laughs] So, we call killer whales, whales, we also call them orcas. They're actually a dolphin species, right? And then you have pilot whales. Guess what? Also a dolphin. Melon-headed whale, also a dolphin. And you can also use the word 'dolphin' to apply to porpoises sometimes, and sometimes people use it to talk about the dolphin fish, which is a fish.

A whale is generally a big animal, [chuckles] so a pilot whale is a large dolphin, a killer whale is a large dolphin. Baleen whales are all pretty large. The ziphiids, these other toothed whales, they're also large. The word 'dolphin' usually refers to oceanic dolphins or river dolphins. There's no

definition that will always be true, it's just common names that we randomly give them based mostly on size.

**Alie:** Well, as a person who studies dolphins, and now that we know that orcas are dolphins, is it bad to call them killer whales? I read somewhere that it's like, "How dare you call them a killer whale?" Same with great white sharks, just call them a white shark because it's villainizing animals that are like, "I'm just out here eating fish, and sometimes I'll kill some seals, leave me alone about it." What are the scientific community's thoughts on that?

**Justin:** Yeah, you'll see that it'll change from year to year in the literature as to... the political and the social stuff will change the words that we use. A lot of people will not use 'killer whale' because they don't want to confuse people into thinking they're big, vicious, dangerous things. So, you'll see orca quite a bit in the literature. But I don't know what this year is all about. Maybe there's more orca than killer whale. It's just a personal preference in the same way people will talk about 'dolphins being in captivity' and sometimes they'll say 'dolphins in human care'. They'll use different language depending on what industry is involved in the publication.

**Alie:** That's good to know. I guess, speaking of killers, let's talk military uses. Allison Arkush, Jen Clinton, Kate Georgia, and Hester Dingle want to know: How are dolphins used for national defense? Or what other cool jobs do dolphins have? Are we like, "Hey, I dropped something."? You know that video of a beluga whale that goes and gets a phone?

Justin: Yes.

**Alie:** I don't know if that's the same beluga that was in a fjord that got lost that was wearing, like, a Russian bra, but who's out there working for who?

**Justin:** Yeah, well as soon as they figured out that dolphins are kind of smart and could echolocate, they're like, "Okay, how do we weaponize this?" Because that's the way of the world, right? And so, originally, the US Navy and the Soviets were training dolphins and seals to do military stuff, so that could be patrolling boats where they might signal if the enemy diver approaches, or looking and tagging mines, that kind of thing. Yeah, they have a lot of uses in construction and things like that. So, the military has been training and using them, not in anti-personnel, the US Navy has said they've never trained a dolphin to kill an enemy diver.

The Soviets, on the other hand, quite famously did try and use their dolphins to try and kill enemy divers. They had explosive darts, so we've been led to believe, on the dolphin. So, it could poke a diver and kill them with some poison. So, those are the dolphins in Sevastopol in Ukraine, Crimea now part of Russia, they were there for a long time in the Black Sea being trained to do this stuff. And then they were retired for a while and I think they were... just like, people would do Swim with Dolphin programs. And I think they've been re-enlisted. I believe that they've started up the program again. There's a very long history because they're trainable, smart, they can dive in a way that humans can't do; we can't replicate that with technology to the same extent. So yeah, we use them for military purposes like everything else.

**Aside:** Y'all, where do I start to fill you in on this? I'm just going to give you the broadest strokes I can. Okay, so the Navy has maintained marine mammal training centers off the California coast for over half a century. The US Navy Marine Mammal Program gets them out of the Gulf of Mexico and then takes them to San Diego, trains them to find underwater mines, to narc on enemies swimming around, and to pick up dropped objects. Oh, and also the dolphins guard nearly a quarter of the US nuclear warfare stockpiles... What?! Sea lions are also on the payroll, which is probably pretty fishy in a lot of ways. But apparently, sea lions have great underwater eyesight and "high professionalism." And I'm willing to guess that they're better at spreadsheets than I am.

And I asked Google if Navy Seals use navy seals, but it was like, "I don't know what you're saying." There's also many, many rumors that certain militaries have trained dolphins to hypodermically stab at underwater enemy divers with a needle giving them a blast of CO2 in their veins, killing them instantly. Everyone keeps very mum about that because loose monkey lips sink navy ships. But one animal activist named Rick O'Barry says that all marine mammals should be freed from captivity and alleges that the military binds the rostrum of dolphins shut when they're in the ocean so they'll come back to base to feed, which does not sound cool. But why does this guy care so much about enlisted dolphins?

Okay, remember in Part 1 when I mentioned the *Flipper* dolphin actress, who is a dolphin, named Kathy, who died possibly by suicide after filming wrapped and she was left without a lot of enrichment in captivity? Well, Rick O'Barry was her trainer and Kathy died in his arms. In fact, he trained all five dolphins that played Flipper, and it wasn't until Kathy's death that he came to the realization of the harm he may have done by promoting captive dolphin spectacles. So, you may have also seen him in the feature-length documentary *The Cove*.

Now, really quick, let's go to Norway. What about that beluga whale, Hvaldimir, who showed up with a Russian camera harness in a Norwegian harbor, is he okay? Nnhh, not great. So, according to the nonprofit One Whale, he sustained a lot of propeller injuries and they're trying to get him and other cetaceans a fjord of their own so that Hvaldimir can finally be safe from the roving deli slicers of harbor traffic and live out his post-military retirement.

**Alie:** Speaking of warfare, Savannah Glenn, Jenn 'Squirrel' Alvarez, first-time question-asker Catzi Iztac, and Elder Zamora want to know, in Catzi's words: Do dolphins actually attack sharks?

**Justin:** Absolutely.

Alie: [gasps] Really?!

**Justin:** Yeah, they're constantly on the lookout for sharks and a lot of their behavior, like where they go at night and the mothers protecting the babies and staying in small groups, it's to protect from sharks. A neonate dolphin is just like a bite-sized shark snack, ["Delicious."] and so they are nervous. And if you look at a wild dolphin population, they are usually covered in shark scars. And if a dolphin suddenly doesn't show up one day, it's probably been eaten by a shark. So yes, they're nervous of them and there are many examples of dolphins, when being attacked, facing off against a shark. They usually, they will ram them really fast, hit the gills, that sort of thing, try and chase them away. But most of the time if a shark is around, they just leave.

**Alie:** Good to know. They're not out there necessarily hunting sharks, but they can fight back if they need to.

Justin: Yeah, that's it.

**Alie:** On that note, Greg Walloch wants to know: Are dolphins gay sharks? Cat Baklarz wants to know: Please talk about gay dolphins. I believe Greg is referencing a very famous line from *Glee* in which someone states ["Did you know that dolphins are just gay sharks?"]. Cat wants to know: Let's talk about gay dolphins. Are dolphins gay? Some of them?

**Justin:** So... it's an interesting question. there is in the animal kingdom, in general, an awful lot of same-sex sexual behavior, it is pretty normal. Doesn't matter what species, insects, dolphins, dogs, whatever, pretty standard stuff. Dolphins have a reputation for being extra gay, and that is because if you hang around with dolphins, you will notice pretty quickly... penises. [boing] Especially young male dolphins will whip them out all the time in a social context, and they're often together with other young male dolphins, and the penises are just out doing whatever. Sometimes they'll poke around

with it like the blowhole, but they don't go in, or whatever, into the anus, sometimes that will happen. This is standard stuff. Mounting each other, totally normal social behavior.

And you can't think of it in the same way you think of a human penis. You know, if you see somebody out in public with a penis running around doing stuff, that's weird and deviant. Normal for a dolphin. And that's because, I always think of it this way: dolphins don't have hands, they have these dumb, pectoral fins which just can slap, at best they can slap around and rub each other. A penis, however, is a little more mobile so it functions almost like a hand or a finger. So, if you had to high-five your friend, a penis is a potential thing that you can use. So, they use them in social contexts which doesn't always involve sex, which, you know... Is it a gay behavior? I don't know. Because they're just engaging in so much same-sex behavior just like every other species that, yeah, there's sort of... every dolphin is bi, let's say.

**Alie:** That's wonderful. I'm happy for the dolphins, to be honest.

Justin: Yes!

**Alie:** And you mentioned tool use. Curious Cat and Mushroom Morgan, on that note, wanted to know, Curious Cat asked: Do they really use eels as fleshlights? And Mushroom Morgan wants to know: Is it true that dolphins bite the heads off of fish and use them to... perform self-cunnilingus?

**Justin:** I think that there was an actual article where a dolphin was rubbing on a dead fish that I read. That is a thing, yeah.

**Aside:** Oh my god, my Google search history it's a real... [*sigh*] real mess, people. Wow, okay. Yes. John Hopkins University neuroscience professor David Linden detailed an account of a captive male bottlenose dolphin wrapping a live eel around its dick like a bacon-wrapped hot dog made of climaxing sea creatures, at least one of them was climaxing. And the eel was initially offered as food, but the dolphin was like, "I got a better idea hehehe," and was... it had to take a detour to dick town, and I'm sure he ate it afterward, which is, also gross now that I'm saying that out loud.

Now, patron Allison Holloway wrote in: I read a book when I was a teen that dolphins use jet streams to masturbate. So, maybe it's a similar situation? Which then made me search for this book so that I could find its author and ask, "Why?" But it was fruitless, and it led me down a dark, unforgettable path about a man who had an emotional and physical and intercourse-ical affair with a dolphin in where else but Florida in the 1970s. And he wrote about it in a memoir called, *Wet Goddess*.

Let's clear my cache and let's take a break to throw some money at people who deserve it, such as the Dolphin Communication Project, whose mission is to promote the scientific study of dolphins and inspire their conservation. Justin is a senior associate researcher with them, and the Dolphin Communication Project will be linked in the show notes so thanks sponsors for making that donation possible.

## [Ad Break]

Okay, I'm sorry, where were we? Okay, oh, still on dolphins jerkin' it. Which, okay, after some fact checking I remain changed again, I'm different than before, [deep breath] I'm worse off, I saw a gleeful male dolphin pushing a beheaded fish up against aquarium glass and making love to it. Fleshlights, not supposed to be made of actual flesh, let alone dead fish. None of us are here to judge, just to gag and to learn.

**Justin:** Look, dolphin penises, you can use them as a finger, but they're also innervated just like a human penis; rubbing on it feels good. So, okay, they rub penises on stuff, that makes sense.

Turns out that dolphin vaginas have a giant clitoris right at the opening. This is relatively– For some reason – gee, I can't imagine why – they didn't spend as much time looking at vaginas as they did penises. [*Alie laughs*] It took a female researcher to be like, "That giant, AA-battery-sized flesh tube? That's a clitoris, yo." So, they're very sensitive, just like humans. And so yeah, females rub on stuff too, because you know what? That's what sex parts are for in animals.

**Alie:** Oh god, thank god someone said it. That is wonderful and again, it makes me happy for the dolphins. I'm rooting for dolphins more than I thought I would. I thought this was going to be similar to the otter episode and I was going to look at dolphins with a certain amount of distrust. But on that note, so many people, I will list them in an aside...

**Aside:** Bear with me and imagine how excited you'd be to hear your name. But Rachael Gardner, RM, Rachel Kendrick, Timothy Hwang, Dee Dickens Poetry, Ali Vessels, Marisa, Emmett Wald, Kendall Hargis, Delia Zaleski, Kelli Brockington, KaitSometimes, Mary of the Grapefruit, Hannah Feldman, Deli Dames, Lauren Legg, Lene Olszeth, Pavka34, Lindsey James, Aimee Martin, Sina Monk, Marissa, Al Hamm, Derrick Allen, Jocelyn Alcantara-Garcia, Dan, Allison Babberl, Rachel M, and Mark Hewlette need to know, in Ken Chambers' phrasing: Are dolphins actually assholes or is that just propaganda started by the sea lion mafia? Also, *Simpsons* watchers Dominique McDermott, Tegan, Dan, and Katie Hultman...

**Alie:** Want to know, in Natalie Snyder's, first-time question-asker's words, shares my thoughts and says: I feel very skeptical toward dolphins – ever since I grew up with *The Simpsons* episode where they took over the world and had a constant smile makes me not trust them. [*"It begins, the dolphins are upon us."*] Are they actually evil? A bunch of people want to know, are they assholes?

Justin: I think of this as the Nickelback effect. You had dolphins that everyone loved in the '60s and '70s, then the internet happened. And as soon as a lot of people love a thing, you just have this group that pops up and just hates on them, like Nickelback. Why do we all hate Nickelback? I don't know. People just pile on. [Alie laughs] So, you try to find a couple of examples of dolphins doing a mean thing, like "Ooh, their smile is creepy," and then you just hate on them. And so, I honestly think it's just a weird... there's nothing that–like otters, hate on otters! What they're doing is terrible! Dolphins don't do anything like that and yet, for some reason, we hate them.

**Alie:** Really? Oh, this makes me so happy. And on that note, Lindsey James, Kendall M, and a bunch of people who I'm going to list...

**Aside:** Nathan-Andrew Leaflight, Emmett Wald, and Katie Sharp asked the obvious, philosophical, and kind of guilty follow-up...

**Alie:** Are we anthropomorphizing them too much?

Justin: On average, probably, that's generally the case for most animals. If you're a scientist and you want to know what's really going on, you don't do that, you're trying not to anthropomorphize. But in everyday life, we can't help but do it. Especially because even though they look like a big fish, dolphins act like a chimpanzee or a crow, they act completely different from what a fish does. They're more humanlike, so we therefore start attributing all the human stuff we can to them. That's a totally normal human way of doing things. From a scientist's perspective, yes, don't anthropomorphize them too much, it's usually bad for them, that's usually the way of things. But from an everyday human perspective, I get it.

**Alie:** I think it's so interesting because I know that anthropomorphizing is bad to a degree but also on the other end of the spectrum is considering any animal to just be a thing like a rock that can be treated willy-nilly. So, I don't know. I don't have any answers, I have only questions here. But on that note, Nita Chen, Winnie's a Witch, and a bunch of folks...

**Aside:** Looking at you, friends Heath Allyn, Allie Paul, Beau Jarvis, Patricia Evans, Abby Grieb, Christi Leeson, Larissa, Becca Van Tassel, and AZM...

**Alie:** Want to know, in Nita's words: What is the most ecologically friendly way to observe dolphins without ruining or disrupting their habitat? And is it ethical to swim with a dolphin in a Swim with Dolphin package?

**Justin:** Complicated questions, those. Yes, the problem is when you have a dolphin-watching industry, if it's not tightly regulated, you have a lot of boats hanging around a local group of dolphins and that's generally bad for them. They get hit by rotating blades or they can't get their food. So generally, if there were no humans looking at dolphins, that would be good. If you are just on a boat by yourself and dolphins come up to you, great, love it, you can even try getting in the water and see what happens. It's not a problem. But if you're in one of these scenarios where there's like 30 boats and they're all going to see the dolphins, that... you might want to be like, okay I don't want to be involved in that.

Swim with Dolphin programs are all over the map in terms of whether they're good or bad. Sometimes you have a facility that's not accredited and it's just like some random guy is like, "I'm going to go get some dolphins and throw them in my pool and charge people." That's not great. Other facilities are quite nice, and they take care of their dolphins and they're very concerned.

But that is a personal decision about how you feel about captivity. And the science will tell you if you go looking, it's either the dolphins are suffering or the dolphins are fine. So, cherry-pick whatever you want, whatever you think, but definitely do some research and think about it.

**Aside:** So, it's really a personal choice, but we have presented a bunch of info that might make you see a Swimming with Dolphins encounter in a new light. And according to The Dolphin Project, a number of aquariums and Swim with Dolphins programs around the world purchase live dolphins caught in bloody drive hunts like those seen in *The Cove*. And remember, the Marine Mammal Protection Act forbids folks from getting too close anyway.

But as myself, as a resident of southern California, I have seen so many dolphin pods splashing and spinning offshore, and that was plenty close to make my heart just leap along with them from afar. Anytime you can see a dolphin, it's fine, you don't have to actually smell the dolphin.

Now, speaking of humanity's encroachment, some of y'all wanted a status check on dolphins in general, such as Shannon O'Grady, Crystal Wilson, Matt Ceccato, Char Harrison, Jessica Duran, Alexandra B, Janna Wisniewski, Frenck Hendrix, Laura Rosenbaum, Logan Dudley, Cat Baklarz, Kayla Pilcher, and Geetanjali Pendyala who asked: Are they all dying? Do we need to save them?

**Alie:** Any dolphins need saving?

**Justin:** There are some species like those river dolphins I was mentioning, they're usually in trouble because they live next to people. So, yes, they need some help. There's the vaquita, I think it's a porpoise species, there's only like 10 of them left, that's crazy. They're probably going extinct. The baiji, which was a Chinese river dolphin, that has gone extinct. There aren't any other species of oceanic dolphins that are really in trouble, they're usually doing pretty okay. But usually, the closer a species lives to land the more it's screwed.

**Alie:** Let's say you were going to dip into some dolphin fiction or nonfiction. Where do we start? Do we start with *The Cove*? What's good dolphin material? Never vintage *Flipper*, I'm sure.

**Justin:** I never was a *Flipper* fan. I'm a nerd so I like the *seaQuest* dolphin, the Darwin ridiculous... or the *Johnny Mnemonic*, remember when they had that crazy dolphin? ["Jones." Dolphin whistles. "It's a

fish." Machine noises. "It's a mammal."] But like, I swear there are no good depictions of dolphins on film in a fiction universe. Just forget it, don't bother. I don't know.

There are lots of great documentaries about dolphins, so just start looking around for BBC stuff or whatever. *The Cove* is just going to make you very sad. It's important to know about it but it's not light. I don't have any recommendations. Read a nonfiction book, a science book about dolphins, there's lots of those.

**Alie:** For example, yours.

Justin: I'm not going to promote my book. I feel bad.

Alie: I am. I am.

**Aside:** Again, linked right in the show notes or available wherever you get books. *Are Dolphins Really Smart?: The Mammal Behind the Myth.* And *22 Fantastical Facts About Dolphins.* Plus, his brand-new book, *If Nietzsche Were A Narwhal: What Animal Intelligence Reveals About Human Stupidity.* More of Dr. Justin Gregg's wit and wisdom for your amusement, linked in the show notes.

**Alie:** I think you landed on the right career for yourself. I can't imagine dolphins having a better spokesperson.

**Justin:** Thanks. I hope I'm helping them. [laughs]

**Alie:** You're like a great press secretary for dolphins. [both laugh] Just like, fielding flimflam.

Justin: Yeah, they pay me in fish and eels. I'll take... Whatever they want to send my way, I'll take it.

Alie: A little flipper tap here and there. Good job!

**Justin:** Listen, I've still never been affectionately, gently touched by a dolphin. That's all I need to make my life so please, somebody just pectoral fin rub me, wherever.

Alie: Little tiny pat on the back.

**Justin:** Just a little tiny pat. With a flipper though, not with a penis. I just want to be clear about that. [Alie laughs]

Alie: Boundaries.

**Justin:** Boundaries. That's right.

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So, ask aquatic experts awkward questions because look at all that you just learned. And follow Justin Gregg on TikTok and Twitter and everywhere, the links are in the show notes. We love him. Also, he has chickens, so if you listened to the two-parter on chickens, it's going to be a real Venn diagram of interests here. And his books are obviously linked in the show notes; he's as wonderful a writer as he is a guest.

We are @Ologies on Twitter and Instagram. I'm @AlieWard on both. I'm on TikTok @Alie\_Ologies, I'm trying y'all, I'm trying. Smologies are shorter, kid-friendly episodes with no swears; they're available at the link in the show notes, AlieWard.com/Smologies. Thank you, Zeke Rodrigues Thomas and Mercedes Maitland for working on those. Ologies merch is available at OlogiesMerch.com, thank you, Susan Hale, for managing that and so much more, literally like everything for Ologies. Noel Dilworth does all the scheduling. Erin Talbert admins the Ologies Podcast Facebook group with assists from Boni Dutch and Shannon Feltus who is having a birthday, happy birthday Shannon. Emily White of The Wordary does professional transcripts. Kelly R. Dwyer makes our website and can make yours too. Nick Thorburn made the theme music. Assistant

editors are the wonderful Mark David Christenson and Jarrett Sleeper. And our lead editor is recent COVID survivor, thankfully, Mercedes Maitland of Maitland Audio.

And if you stick around to the end of the episode, I'm going to tell you a secret. And this week the secret is weird, okay? I got stranded in Texas, I was coming back from Huntsville, Alabama and we had an emergency landing over Waco, Texas because of a bonkers lightning storm that came out of nowhere. So anyway, I was on planes forever, turned out I couldn't get a flight out. I had to stay in Dallas for two days, technically Grapevine, Texas, which has a convention center called the Gaylord which is kind of like Disneyland and Vegas all in the biodome; it was a sight to behold.

Anyway, I was stranded there this week for a couple of days so I just kind of bummed around waiting for a flight that I could catch and there was a guy who was a notary who came down next to me, I was just working in the lobby, writing, researching dolphin masturbation, as one does, and this guy sat down next to me, an older gentleman. He appeared to be a notary and then another guy met him, and they started to sign some paperwork. And the guy who met up with him is like a younger guy, he looked sad or defeated, and I started to get really sad that maybe this guy was signing divorce papers at a Vegas-like hotel in Texas. And I was like, "Oh man, I hope this is a good thing he's signing."

Anyway, what did I do? I looked at the nametag he was wearing because he was at a conference and then I looked him up and I was very happy to see that he's got a wife and a baby on the way and I think he just flips houses, which is sad and problematic maybe in its own, I don't know how he does his business but I was like "Okay, this guy was probably just jetlagged or something." So anyway, that's me being a creep and I don't know, I was just like, I need to make sure this stranger isn't going through something. I don't know what I would have done, I didn't even have, like, a granola bar I could have offered him. Anyway, all's well that ends well. I'm back home. In all, I had 22 flight delays, two emergency landings, and three extra days in Texas, and then I came home, and I slept face-first on the couch for a couple days. Okay, berbye!

Transcribed by Aveline Malek at TheWordary.com

## Links to things we discussed:

The Simpsons S12E01 - "Killer Dolphins Attack Springfield"

Pufferfish clip: BBC's "Dolphins - Spy in the Pod"

Preliminary Report of Object Carrying Behavior by Provisioned Wild Australian Humpback Dolphins (Sousa sahulensis) in Tin Can Bay, Queensland, Australia

Tanks for the Memories: Floatation Tank Talks (Consciousness Classics)

<u>Kankudti, A. (2014, January). Nature and narcotics: Dolphins use puffer fish toxin to achieve trance-like state. Retrieved from</u>

Sorry to harsh your mellow, but dolphins aren't regularly getting high on pufferfish

The Cove - Official® Trailer [HD]

The nose of the sperm whale: overviews of functional design, structural homologies and evolution

Pouchet G. and Beauregard H. (1885) Note sur "l'organe des spermaceti". Comptes Rendus de la Socie te de Biologie Paris 8, 342–344.

Cross-modal perception of identity by sound and taste in bottlenose dolphins

A Phenomenon Discovered While Imaging Dolphin Echolocation Sounds

<u>Comparative Anatomy of the Nasal Cavity in the Common Dolphin Delphinus delphis L., Striped</u> Dolphin *Stenella coeruleoalba* M. and Pilot Whale *Globicephala melas* T.: A Developmental Study

Functional Morphology of the Nasal Complex in the Harbor Porpoise (*Phocoena phocoena L.*)

**HOW DO DOLPHINS COMMUNICATE?** 

5 surprising facts about dolphin sex from their love of eels to having bisexual tendencies

Evidence of a functional clitoris in dolphins

Dolphin Kills Swimmer Who Tried to Catch Ride

Final Rule to Prohibit Swimming With and Approaching Hawaiian Spinner Dolphins

"Altered States" trailer

The Order of the Dolphin: SETI's Secret Origin Story

JOHN C. LILLY: FATHER OF LSD IN THE SENSORY DEPRIVATION TANK

1994: Dolphin Kills Swimmer Who Tried to Catch Ride

The late founder of Hawaiian-based dolphin births, Star Newland of the Sirius Institute

Male dolphin makes love to a beheaded fish

How dolphins protect the US nuclear arsenal

Controversial birth guru charged with sex assault

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