

Archived Newsletters – Plain Text Version

Email Jonathan: whatafishknows@hotmail.com

EDITION 9 (April 2016)

Manta Ray smarts and Porcupine Fish virtues

Topping the news this month for *What A Fish Knows* is an invitation from the *New York Times* to write an opinion editorial about fishes. That is no guarantee, but I'm determined to give them something they'll want to print.

In fish news...

Are Giant Manta rays self-aware? Check out the [evidence](#) and you be the judge.

Fishes in Puget Sound are [testing positive](#) for cocaine, and antidepressants. Our drug dependence leads to many pills and meds washing down sinks and toilets and finding their way to fish habitats, where they disrupt the lives of fishes.

Analysis of [toadfish vocalizations](#) finds that their hoots and grunts contain hidden layers of information.

Seventy guests have already signed up for the *What a Fish Knows* launch party, June 2 in Germantown, Maryland. If you live anywhere near Washington, DC and you didn't receive an evite, let me know I'll we'll add you to the list.

Video of the month: [Porcupine fish](#) keeps vigil as comrade is rescued from discarded fishing net by a kindhearted snorkeler using the heel of a broken bottle.

Jonathan Balcombe, PhD
Events and other info: www.jonathanbalcombe.com
Join me on [Facebook](#)

"What A Fish Knows," from Scientific American/Farrar, Straus and Giroux.
June 2016. Currently available for [pre-order](#) on Amazon for a \$10 discount!

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EDITION 8 (March 2016)

What A Fish Knows goes Japanese

Topping the news this month for *What A Fish Knows* is news of a Japanese edition now in production. With Chinese and Korean foreign translations already in the pipeline, this book is poised to make a significant impact in Asia.

Pre-publication copies (galleys) of the book have been going out to luminaries in hopes of some endorsements that will go on the jacket of the finished print edition. So far, five glowing reviews have come back. We're still hoping for something from and His Holiness the Dalai Lama, and from Ellen DeGeneres, who reprises the voice of Dory in the forthcoming *Finding Nemo* sequel: *Finding Dory* (if you know Ellen, please put in a good word for me).

If you live in the Washington, DC area and you didn't receive an invitation to a book launch party I'm organizing for June 2, please reply and I'll add you to the list.

In fish news, a [new study](#) finds that the rate that fish are captured by predators can double when boats are motoring nearby. Also, [sharks](#) appear to use smell to navigate their way home.

It's still months ahead of release, but copies of [What a Fish Knows](#) are being pre-ordered on a daily basis at Amazon.com.

EDITION 8 (Feb 4 2016)

What A Fish Knows has been going through several rounds of edits. Pre-publication copies ("galleys") will soon be going out to notable people (including authors, a couple of Hollywood names, and a Nobel Prize-winner) for possible endorsements next week. If you think someone of note should receive a copy, please let me know!

EXCERPT TO APPEAR IN SCIENTIFIC AMERICAN

The book got a big PR boost this month as *Scientific American* magazine announced plans to publish an excerpt on tool-use by fishes in its June print and online editions. The magazine will also run a full-page color advertisement. Total circulation: nearly ten million. I can almost hear the fishes clapping their approval.

FISH STORY

A colleague of mine, Ben Callison, describes an encounter he had with a fiercely territorial barracuda during a night dive on the island of Lovango Cay in the US Virgin Islands:

It was a solo, shallow dive from shore and I was returning to a boat dock. As I approached the dock I was panning my light back and forth and as I brought it back to center I found myself face-to-face with a large barracuda who was visibly not

pleased to see me. He was about six inches from my face, his large silvery eyes locked on mine. My only course of action was to back up, which luckily is a skill I had learned in my technical diving courses. As I retreated, the barracuda inched forward, keeping a constant distance from my face. I made two 90-degree turns, thinking he might calm down but he was still right there, escorting me out of his territory. I must have finally reached the edge of his territory because he stopped suddenly and watched me drift further away. It was a chilling feeling being stared down by an aquatic predator. I hastily exited the water and didn't return.

What I find most revealing about Ben's encounter is the way the barracuda treated him as another being. Had Ben merely been an unwelcome object, the aggressive fish might have approached his leg or his torso. But the fish focused his attention on Ben's face.

FAUX FISH

Could plant-based be the future of fish cuisine?

<http://www.npr.org/sections/thesalt/2015/01/23/379124798/will-environmentalists-fall-for-faux-fish-made-from-plants>

[*What a Fish Knows*](#) is available for pre-order on Amazon.com

EDITION 7 (Jan 4, 2016)

Some birds fish. Do some fishes bird?

A great many birds—including kingfishers, pelicans, gannets, shearwaters, albatrosses, and cormorants—catch fishes for a living. Do the tables ever get turned?

Yes. On France's River Tarn, for instance, large catfishes have been filmed [ambushing](#), and sometimes catching, pigeons who come to the water's edge to drink.

A more dramatic example of "avivory" (bird-eating) by fishes was [filmed in 2014](#) in a freshwater reservoir in South Africa. As three barn swallows skim over the water surface, a large fish traveling at great speed leaps up and catches one of the unsuspecting birds from behind. It's a remarkable piece of skill, athleticism, and timing by the fish. Birds are not on the standard menu for these fishes, so their avivory suggests levels of awareness and planning usually denied to a fish.

I describe the tigerfish predation in more detail in a commentary just published in the new journal [Animal Sentience](#), whose inaugural contents feature a target article and over 30 commentaries on fish pain.

EDITION 6 (Dec 7, 2015)

What a Fish Knows, masquerading fish faces

Dear friends,

I've been putting together the photos for an 8-page color insert that will grace What a Fish Knows. One of my favorites is two images of the same damselfish's face—one taken under ultraviolet light, a portion of the light spectrum invisible to us. The UV photo reveals patterns of spots and arcs on the damselfish's face that remind me of a fingerprint. Choice tests show that damselfishes identify other members of their own species by these unique patterns. They probably also use them to recognize individuals. Because damselfish predators are unable to see these patterns, the damselfish's face recognition system operates covertly without compromising the camouflage that helps them avoid being detected by their finned foes. It's like being the only one to know who's behind that alluring mask at the masquerade ball.

<http://www.livescience.com/9853-fish-uv-light-distinguish-faces.html>

EDITION 5 (Nov 5, 2015)

Dear friends,

My book manuscript is finished! Writing it has been an arduous process, sometimes emotionally taxing, but always worth it. I want to share one of many stories I have woven into the book.

One of my correspondents once spent a summer post-doc in a university biology department. There was a freshwater tank near her office, and it held a young smallmouth bass. When the students left for the summer, there was nobody left to feed the fish, so she volunteered to help. After a few weeks, Rosamonde noticed that the fish would swim eagerly to the glass and up to the surface whenever she approached. Thinking that perhaps the fish recognized her, she mentioned it to one of the fishery professors, who assured her that fishes can't recognize people. When fall arrived and the hallways filled with students, she noticed that the lonely bass responded every time she came near the tank, even when she was 10 feet away and surrounded by others. She sometimes watched him secretly from down the hall, and never saw him respond this way to the presence of others. The bass could always pick her out of a crowd.

As I discuss in chapter 9 of *What A Fish Knows*, scientific studies show that fishes recognize one another, including members of other species.

Here's a video of a Green Moray Eel interacting with a trusted diver at an aquarium.
<https://www.youtube.com/watch?v=3H1ipbS3q6s>

EDITION 4 (end Sept 2015)

Dear friends,

"...our perception of fishes as cold, scaly automatons is slowly changing." That's the conclusion of Professor David Bellwood, a biologist at James Cook University and co-author of a new study showing cooperative vigilance in four species of **rabbitfishes** on the Great Barrier Reef. These colorful fishes form pairs, and during foraging bouts one of the pair keeps watch while the other pokes around in the coral for food. They switch off regularly and the level of vigilance is proportional to the vulnerability of the partner. Being on look-out reduces foraging time, but it's compensated by safer and more thorough foraging periods. It is one of the best known examples of reciprocal altruism yet recorded.

Here's a brief article with a photo of the behavior:
http://www-public.jcu.edu.au/news/JCU_149967

And here's the original article with link to a couple of movies near the bottom.
<http://www.nature.com/articles/srep14556>

Please join me on my Facebook author page:
<https://www.facebook.com/pages/Jonathan-Balcombe/432366800146753?fref=ts>

EDITION 3 (end Aug 2015)

Dear friends,

Did you know that several divers around the world have been honing techniques for removing fishing hooks from shark's mouths? One of these is renowned ocean explorer and dive instructor **Cristina Zenato** (www.cristinazenato.com). The sharks seem to know she means to help them and they eventually approach her. By gently stroking their muscular bodies, Zenato can send sharks into a blissed-out stupor. In this hyper-relaxed state, they are easier to handle while she works the hook free. To date, Cristina has removed hooks from hundreds of sharks.

I am now working on the last section of the book, the one that deals with the human-fish relationship. It is perhaps the most difficult part of the book to write because it involves wading into some dark waters. Topics include commercial fishing, bycatch, aquaculture, recreational fishing, and shark finning. I am also exploring more positive topics including fish rescues, marine sanctuaries, people who remove hooks from sharks, and many other emerging efforts to protect fishes.

Attached, an early peak at my publisher's preliminary cover design. They are having trouble locating the photographer so if you know the source, please let me know! And while you're at it, feel free to suggest other fish photos you think would suit the cover of this book.

If you know any current or former commercial fishermen, please send them my way as I would like to be able to reveal some of that industry from an insider's perspective. jonathan@jonathanbalcombe.com.

Lastly, please join me on my Facebook author page:
<https://www.facebook.com/pages/Jonathan-Balcombe/432366800146753?fref=ts>

Best fishes!
Jonathan

EDITION 2 (late July 2015)

Dear Friends,

Did you know that **guppies have penises**? They are called "**gonopodia**" (singular: gonopodium). In some fish, the gonopodium is a fifth of their body length (I'll let you do that math). Males swing it about when they are around females, who are typically choosy about who they mate with. (Yes, size does matter when you're a fish.)

I have received some more good stories recently, but I could still use some more. If you or someone you know has any personal experiences with fishes that you/they would like to share, please send as a Word attachment to jonathan@jonathanbalcombe.com.

I am especially interested in stories that can be related to how fish sense their environments, their sex lives, their emotions, and parenting.

Please join me on my Facebook author page:
<https://www.facebook.com/pages/Jonathan-Balcombe/432366800146753?fref=ts>

Best fishes!
Jonathan

EDITION 1 June 2015 [**mudskippers**]

5/17/15

Dear Friends,

I'm currently on a leave of absence from my "normal" job to work full-time on my book about fishes, due out mid-2016. I'm really excited to share the book with you. In the meantime, I will be sharing facts about fishes with you throughout this journey. I hope you enjoy reading them.

Fact: the mudskipper spends much of its time out of water and can "walk" on its fins. When staking out their mating territories, males may build mud walls to 1-2 inches high by carrying mouthfuls of mud and depositing it along boundary lines. These walls smooth relations by making invisible otherwise very close-by rivals. Now I need your help. Readers love stories. I have some great ones, but I need more to make this book shine. If you or someone you know has any personal experiences with fishes you'd like to share, please do. Happy, tragic, poignant, funny—I welcome anything!

Please send your stories as a Word attachment to:

jonathan@jonathanbalcombe.com.

Based on the latest scientific research, *What a Fish Knows* offers an eye-opening tour of the social, mental, and emotional lives of fishes. Who knew fish use tools, appreciate music, fall for the same optical illusions we do, and engage in both cooperative hunting and some very kinky sex? Jonathan Balcombe's book is popular science writing at its best. It will spin your head around.

—Hal Herzog, author of *Some We Love, Some We Hate, Some We Eat: Why It's So Hard To Think Straight About Animals*

What a Fish Knows is the best book on fish I have ever read. Sprinkled throughout with engrossing anecdotes and humor, Jonathan Balcombe's inspiring treatise takes the reader on a fascinating and deeply moving journey into the lives of fish, showing them to be sentient individuals with personalities, minds, and relationships, not primitive, dimwitted, and unfeeling creatures who feel no pain when chased, caught, and killed. Balcombe's eloquent, persuasive, highly readable tour de force has a single, luminous message: fish deserve more respect, care, and protection.

—Chris Palmer, author of *Shooting in the Wild and Confessions of a Wildlife Filmmaker*

I thought I knew a lot about fish. Then I read *What a Fish Knows*. And now I know a lot about fish! Stunning in the way it reveals so many astonishing things about the fish who populate planet Earth in their trillions, this book is sure to "deepen" your

appreciation for our fin-bearing co-voyagers, the bright strangers whose world we share.

—**Carl Safina, author of *Beyond Words; What Animals Think and Feel***

Fishes are greatly misunderstood and grievously maligned. Now, in *What a Fish Knows*, Jonathan Balcombe uses the latest science to provide a comprehensive picture of just who fishes are. You will learn that fishes have distinct personalities, experience a wide range of emotions, form intricate social relationships, and are wonderful parents. Indeed, this forward-looking and long overdue book is an integral part of reconnecting with the fascinating animals with whom we share our magnificent planet.

—**Marc Bekoff, University of Colorado, author of *The Emotional Lives of Animals and Rewilding Our Hearts: Building Pathways of Compassion and Coexistence***