

# Zebra Danio Care, Feeding, Breeding

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## 1. Introduction To Zebra Danio Care

According to Wikipedia there are 27 different types of danios. (<https://en.wikipedia.org/wiki/Danio>) For the sake of simplicity, this article will discuss zebra danios, which are also called zebrafish.

It's likely you either just bought some zebra danios or you're going to buy some.

Good choice! They are playful, active and enjoy interacting with the other zebra danios. They won't harm your other fish. That they are not shy is an appropriate description.

Zebra Danios and zebrafish are the terms used to describe this fish. The scientific name is *Danio Rerio*.

[Tap here to download a PDF of this page.](#)

[Tap here to download a PDF of 8 beautiful Danios to look for your local fish store.](#)

## 2. Species Overview – Quick Start Guide

### Names

Zebra Danio, Zebrafish Scientific name: **Danio Rerio** (Reference: [Wikipedia](#), [Zebrafish](#))

### Description

The common zebrafish that you would find in a pet store would be black with grey or white stripes. A healthy male attempting to attract a mate will have yellow / gold highlights in addition to the dark stripes. Females stay the same colors of black and white.

There are a few variations of this fish (common variety) including long fin type, leopard (They have spots instead of stripes). They could be a different danio species rather than a variety), and albinos.

As far as a description of their personality: They are a gentle, very active fish just looking to eat and mate.

### Ease of care

Easy to care for. Like all fish, they want a clean tank, room to swim, and good food.

### How to keep your zebrafish really healthy

The following has worked for me. Massive weekly water changes of at least 90%. Honestly, if I had the time and energy, I would do 90% water changes every day. Over-filter. I have two [Fluval 207 canister filters](#) (price check link) on one 30 gallon tank. Last, add a high quality UV sterilizer to the tank. I have two [Aqua UV 15 watt Advantage 2000+ Hang On UV Sterilizer](#) (price check link) They reduce pathogens, parasites, and algae.

### Active during the day or night?

This fish is “diurnal” and is therefore awake and active during the day.

### Feeding danios

Zebrafish are omnivores. From my experience, they are not at all picky. Throw whatever fish food is on hand in their tank and they’ll eat it.

A general idea of food types to consider would be:

Flake food

Frozen foods like brine shrimp and bloodworms

Freeze-dried foods like mosquito larvae bits

Vegetable flakes and tablets

Cooked or canned store bought vegetables like squash, spinach, lima beans, etc.

If you'd like more ideas, here is an article that might help: [25 freshwater fish food types your fish will love](#)

## **What other fish can I keep with my zebrafish (community fish)?**

All other peaceful fish that wouldn't be big enough to eat your Zebra Danios.

Apparently, ZD fish can be nippers, but I've never seen that.

**Note: Here are 20 different fish you could keep with your danios:** guppies, mollies, tetras, goldfish, Chinese mountain stream loach, bristlenose plecostomus fish, tiger barbs, angelfish, discus, swordtails, neon tetras, corydoras, small gourami fish, white cloud minnows, cardinal tetras, rasboras, gobies, hatchet fish, galaxy rasboras and of course other zebra danios.

You will also need to consider water parameters. For example, despite Danios enjoying a wide range of water conditions, it would be unwise to place African Cichlids in the tank with your danios. One fish or the other will experience stress because the pH would be incorrect for them.

## **Size and Lifespan:**

Danios grow to 1 or 2 inches (I have seen none larger than this). Well cared for Zebra Danios in an aquarium live 2 or 3 years. Extremely well cared for they might live to be 5 years old.

## **My suggested tank size**

Other fish keepers would have you believe that a ten gallon tank is the right size for keeping zebra fish. Nope. Not in my opinion. Let's get real. Danios are schooling fish. For me, I would buy at least 10. Actually, 20 or more would be perfect. Place your little school in a lightly stocked, planted 55 gallon aquarium. That is a healthy, beautiful set up for zebra danios.

## **Water conditions for the zebra danio**

Neutral pH and temperatures from 61 to 93 degree F (16.1 to 33.8 C). This is quite a wide range. Zebra Danios would work well with cold-water fish like goldfish and Chinese Mountain Stream Loaches. This article has more information about the parameters for Zebra Fish Care: [National Library of Medicine, "Zebrafish: Housing and husbandry recommendations," Peter Aleström, Livia D'Angelo, Paul J Midtlyng, Daniel F Schorderet, Stefan Schulte-Merker, Frederic Sohm, and Susan Warner](#)

## Type of reproduction (breeding)

Danios are egg laying fish.

## Gender differences

Telling the differences between male and female is pretty easy. A healthy male zebra danio that is vying for the attention of the female is light yellow or golden. If the fish isn't that color, "she's" a female ZD.

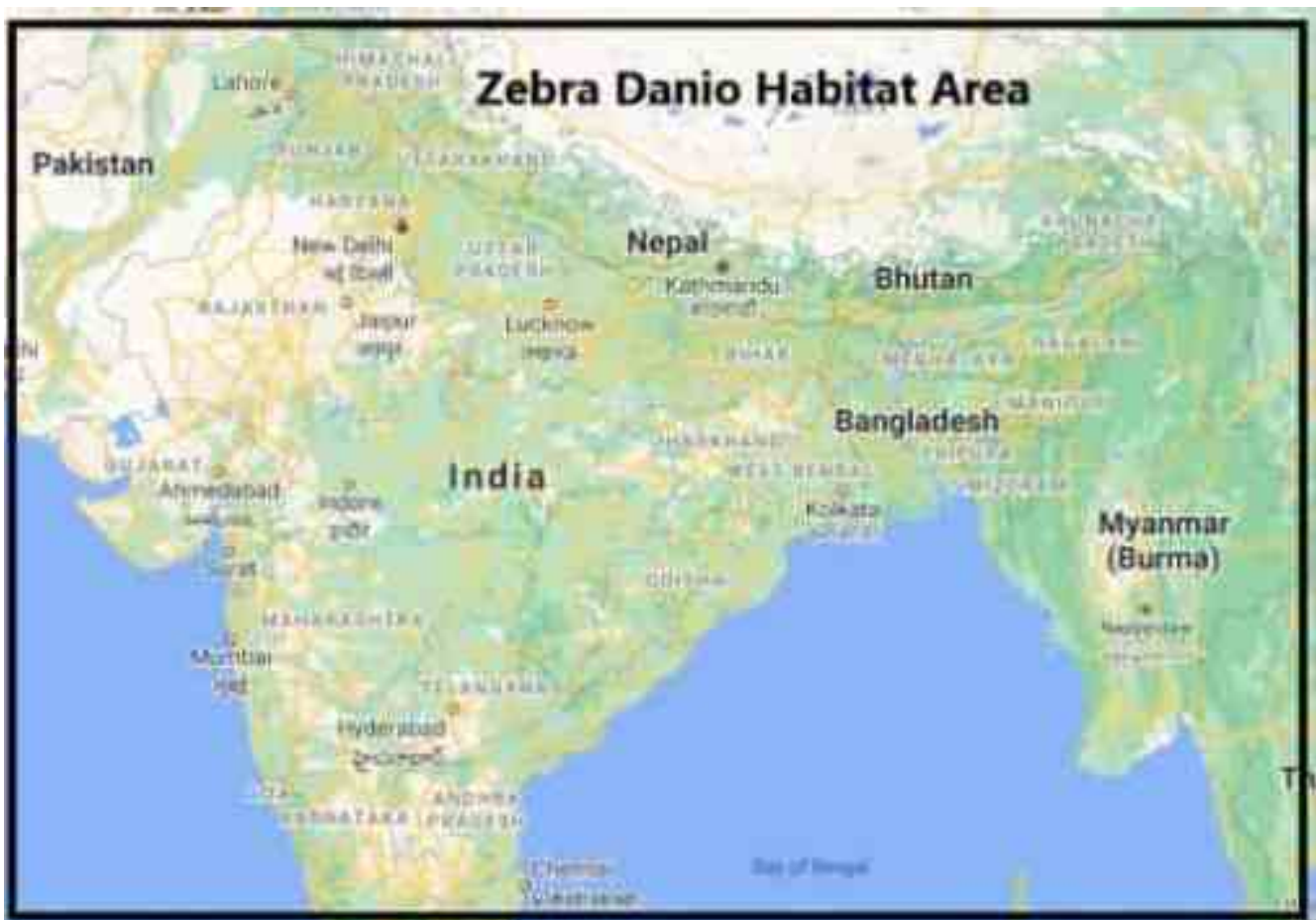
## Origins

Zebrafish originates in East India, Bangladesh and Myanmar (tropical and some sub-tropical) areas. Please see map, included.

## In the wild

The zebra danios fish species are found in slow-moving waters or stagnant ponds. Oddly enough, they can be found in flooded rice fields. Like most fish, they like hiding places especially plants (that's why you put live plants in their tank).

Natural habitat of this fish is shrinking. This actually hasn't affected the fish too much as danios are tolerant of humans. ([https://animaldiversity.org/accounts/Danio\\_rerio/](https://animaldiversity.org/accounts/Danio_rerio/) )







### **Long fin danio**

**Available for your aquarium. Tap image for price.**

**Tidbits of interesting information about Zebrafish, but not important to keeping the fish.**

Because of their use by scientists, there is an enormous amount of information available about this fish. Much, much more than I can reference in this article.

For example, there is an every-other month magazine exclusively about Zebra Fish: **[Zebrafish Journal](#)**, Editor-in-Chief: **[Stephen C. Ekker, PhD](#)**

### **Zebra fish have episodic memory.**

What this means that they remember objects and locations in their environment. Episodic memory helps them to remember where to find food and where predators might be. This type of memory is thought to be an indicator of consciousness or self awareness.

**Reference:** This PDF goes into detail about this (scientifically dense information): *[Cell.com, Current Biology, Signaling Pathways Regulating Zebrafish Lateral Line Development. Written by Eva Y Ma and David W. Raible.](#)*

### **Maturity and Reproduction**

Zebra Danios become sexually mature in 90 days after hatching. Male zebra danios must be present for the females to ovulate (eggs won't develop in the female if no male is around).

Females can lay eggs at the incredible rate about 300 eggs each spawning. They can do this every day when extremely well fed and cared for, but every two or three days is more normal.

At hatching, all fry are female, with males developing at about day 7.

**Reference:** [Wikipedia, Zebrafish](#)

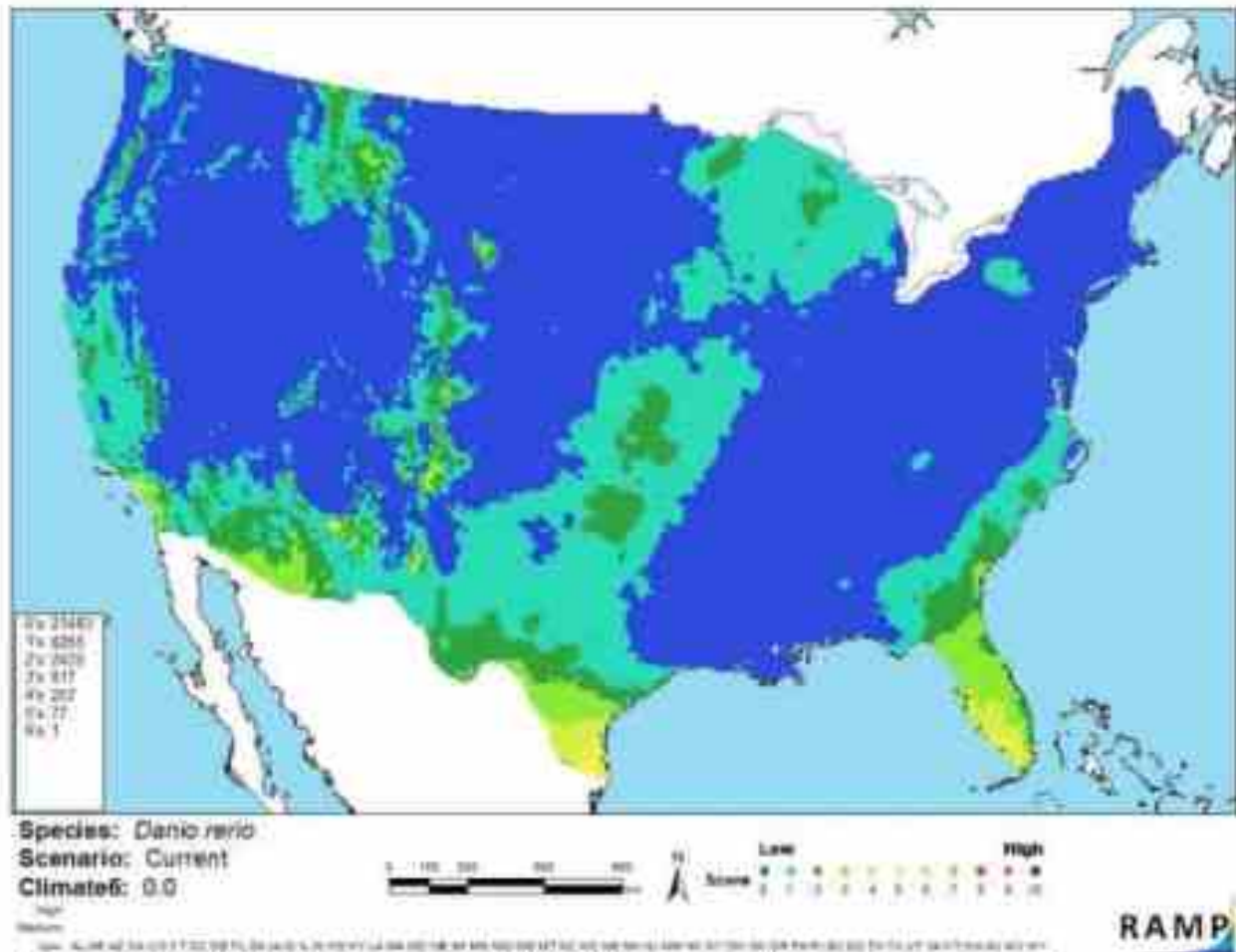
### **Are they an invasive species in the US?**

Yes and no. Zebra Danios have been seen (unverified reports) in California, Florida, Connecticut, and New Mexico. Most likely they have been "set free" by hobbyists, although that could have been accidentally released by fish farms in Calif. and Florida.

So far, they don't appear to cause harm to native fish and plants, but no studies have been done.

Map below is a risk assessment for the potential of the Zebra Dano to become an invasive species. Yellow areas are the highest risk. Map is provided by the U.S. Fish and Wildlife Service – please visit link to PDF below.

**View this map as a high resolution image by tapping the picture.** Opens in a new tab or window.



**Figure 4.** Map of RAMP (Sanders et al. 2014) climate matches for *Danio rerio* in the contiguous United States based on source locations reported by GBIF Secretariat (2018). 0=Lowest match, 10=Highest match. Counts of climate match scores are tabulated on the left.

The “High”, “Medium”, and “Low” climate match categories are based on the following table:

Climate 6: Proportion of (Sum of Climate Scores 6-10) / (Sum of total Climate Scores)	Climate Match Category
0.000<X<0.005	Low
0.005<X<0.103	Medium
≥0.103	High

**Reference:** *U.S. Fish and Wildlife Service, January 2016, Zebra Danio Ecological Risk Screening Summary*

**Can’t get enough about Zebra Fish? Give these links a try:**

**Google search:** [Zebrafish+EDU](#)

**Google search:** [Zebrafish+Phd](#)

**Google seach:** [Zebrafish+Phd+pdf](#)

### 3. The Perfect Aquarium Setup for Zebra Danio Care

The ultimate landscaped aquarium setup for a zebra danio would be a lightly stocked 55 gallon or larger aquarium. Place a good amount of live plants and gentle water movement and your Danios will think they are in heaven.

**Note:** My top three plants for a danio tank are sword plants (all sizes), Java fern, and sagittaria.

As mentioned earlier, they are schooling fish and not very expensive, so for a beautiful aquarium I recommend buying at least 20 fish.

I've included a picture of my zebra danio tank either to the right or below this section. The piece of wood is driftwood that I am soaking so that it eventually sinks.

Regarding water conditions, the aquarium temperature can be as low as 61 degree F or as high as 93 degrees F (16.1 degrees C to 33.8 degrees C). Although very tolerant of wide PH ranges, Zebrafish prefer medium hard to soft water.

Like all fish, they don't like ammonia or chlorine. Therefore, only add the fish to a well-seasoned aquarium. Well-seasoned = allowing beneficial bacteria to grow so there is no ammonia or nitrite to harm the fish. Neutralize the chlorine and chloramine with a water conditioner. I have used "[API Stress Coat](#)" ([price check](#)) for decades and can recommend this product.

As far as setting a light period, honestly, I don't think this matters much. That said, the area where zebra danios are found in nature is not on totally the equator. This means there are some changes in the length of sunlight from summer to winter.

Zebra danios are very social with their own kind. You might not think that if you were to see them right after I turned on the lights. At first light, they fight, chase and mate all at the same time. No worries, this is typical behavior for Danios. A zebra danio by itself can't thrive.

To translate their size into how large of an aquarium is needed is if a one inch fish needs one gallon of water then one zebrafish (a two-inch fish) will want two gallons of water.





**Almost perfect setup for a danio tank.** Only drawback is that this tank is a 30 gallon. Driftwood is still soaking and hasn't sunk to the bottom yet.

Tap picture to see full size original.



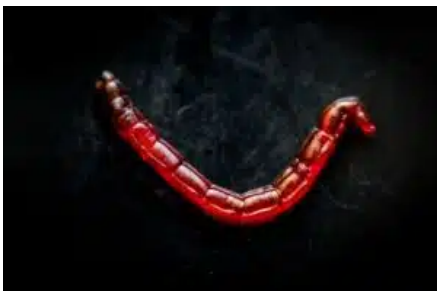
**Female zebrafish in my aquarium.**

Image has been edited for clarity.

## **4. What to feed Zebra Danios**

If the zebra danio hobbyist wants to feed danios on what they get in nature, then a diet of invertebrates and some plant material would be appropriate.

The invertebrates could be live or frozen brine shrimp, bloodworms, fruit flies, small daphnia, etc. In other words, just about any frozen or dried food you could get at your local fish store.



Bloodworm – not to scale of course.

Plant material would be anything you might feed a plecostomus, Spinach, zucchinis, peas, etc.

Once per day I feed my zebrafish food I've created. This homemade fish food includes zucchini, spinach, shrimp, clams, tuna and plain infant rice cereal. I blend this mix using a food processor. Then I add enough plain gelatin to keep the mix barely together after I add it to the aquarium.

I also feed my danios dried fish flake food and canned mosquito larvae (as close to live as you can get) just about daily as they are easy to use.



**Fish food blend I found that would be perfect for Zebra Danios:**

**8-Type Blend, Krill, Tubifex, Bloodworms, Mysis, Plankton, Red Shrimp GB-200**

**Tap for price check**

**Zebra Danio Tip: This fish is extremely active. Because of this, I've noticed that they stay fat and happy if fed at least three times a day.**

## 5. Breeding

Feeding zebrafish goes hand in hand with breeding. Happy, well-fed zebra danios will mate easily. Even though I haven't tried to breed them, I can see that they mate every morning in their regular aquarium.

Mating consists of the males attempting to corral a female zebra danio onto the spot the male has chosen as its spawning site. At the same time they try to chase other males away. This sounds simple, but it ends up being a huge frenzy.

If the males are successful in their attempts to mate, the female zebra danios will lay about 20 eggs at a time. The males then fertilize those eggs. Mating continues with the males chasing and corralling the females and mating.

This is a hugely active behavior, so if your breeding tank is small, I would put a lid on it as a safety precaution. Mating will go on for up to an hour right after sunrise.

Zebra fish only live 12 to 36 months, so they spend a lot of energy passing along their genes to the next generation of zebra danios. ([https://animaldiversity.org/accounts/Danio\\_rerio/](https://animaldiversity.org/accounts/Danio_rerio/))

So what does this mean to a hobbyist that wants to breed zebra danios? Well, here is what I would do if I wanted to own several hundred zebra danios.

First, set up a small breeding tank. I have a three gallon tank that would work, but a ten gallon aquarium should do. Cover the bottom with a very thin layer of gravel. You will need a bubbling airstone in the tank to provide O2.

Next, before placing the zebrafish in the breeding tank, take a week and "over-feed" your danios on as much live/frozen food as they will take. Personally, I would avoid dry foods.

Then place an even number of male (yellowish color) and females (black and white colors) danios in the breeding tank. Good luck catching them. They're fast little fish. You witness mating activity the very next morning. Remove the adults from the breeding tank after the eggs have been laid so the adults do not eat the eggs.

. ([https://animaldiversity.org/accounts/Danio\\_rerio/](https://animaldiversity.org/accounts/Danio_rerio/))

The eggs will hatch in two to three days. I would begin feeding the fry with baby brine shrimp, cooked egg yolk, and microworms.

From here, basic fish care is needed. When you have grown your several hundred zebra danios to juvenile size, you can probably give them to a local fish store in exchange for store credit. They will probably sell most of them as feeder fish. Try not to think about that as you walk out the door.



Sorry about how blurry this image is, but it shows the distinctive color differences between males (yellow & black) and the females (black and white).

### **Quick answers to your questions about zebra danios:**

**Question:** *I've seen that zebra danios are used in science experiments. What's that all about?*

Answer: ZD are fairly sturdy fish not easy to kill. Their cells are similar enough to humans that so can easily be used to study cancers, heart disease (their hearts are self-repairing), medications, and the fish's ability to regrow body parts after damage.

**Damage to the spine:** [Brainfacts.org](http://Brainfacts.org), [Researching Regeneration Through the Zebrafish](#) (an easy to understand article about spine repair)

**Heart damage self-repair:** [Science Alert publication, Zebrafish Can Repair a Damaged Heart, And a New Study Reveals How](#). A commercial site (ads), but the article is easy to read.

**Spinal cord damage self-repair:** [National Library of Medicine, Zebrafish Spinal Cord Repair Is Accompanied by Transient Tissue Stiffening](#) Scientific, dense article, but the concept is amazing.

**Damage to the eye (retina):** [Stem Cell Reports publication, Neurotransmitter-Regulated Regeneration in the Zebrafish Retina](#)



There is more, but that is a quick overview of this amazing fish.

***Question: “What diseases do Zebra Danios get? What can I do to cure my sick fish?”***

Answer: They get the same diseases most freshwater aquarium fish can get. This includes:

Ick (cure: cleaner tank and any of the brand name fixes).

Bacterial based diseases (cure cleaner tank and a fish antibacterial medication or epsom salt dip)

Parasites (cure: cleaner tank and any of the brand name fixes)

There are many thousands of articles online to help you better understand fish disease.

***Question: “What fish are compatible with zebra danios?”***

Answer: Just about any gentle community fish that can't fit a danio in their mouths.

***Question: “Are zebra danios live bearers?”***

Answer: No zebra danios lay eggs.

***Question: What size tank should I have or get for zebra danios?”***

Answer: There are two parts to this answer. 1. Zebra danios are highly social among their own kind. They have to have others of their kind around. **Buying and keeping ten danios is a bare minimum.** Each zebra danio will grow to about two inches. You will need a minimum of two gallons of water in your aquarium for each fish. So **ten zebra danios need at least a 20-gallon aquarium.** My suggestion: 25 zebra danios in a lightly stocked planted 55 gallon aquarium would be perfect.

***Question: “Are zebra danios peaceful fish?”***

Answer: Yes and also very active.

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I've used divi for at least 4 years now and strongly recommend it.



## 8. References / Bibliography:

*Effects of Pond Aeration Methods and Post-Harvest Holding Treatments on Zebra Danio Growth and Survival* <https://ufdc.ufl.edu/UFE0045135/00001>

*Danio rerio*

*Rerio*

*(Also: Striped danio; Zebra)*

This is an extremely good, easy-to-understand article about zebra danios distilled from other scientific articles

[https://animaldiversity.org/accounts/Danio\\_rerio/](https://animaldiversity.org/accounts/Danio_rerio/)

*Zebrafish: The Underwater Lab Rat*

*Author: Benjamin Weaver*

This is a scientific type of article which elaborates on the changes of the zebrafish habitat by humans. The article especially concentrates on climate change and the zebra fish.

<https://adapt136.ucsc.edu/taxa/fish/zebrafish-the-underwater-lab-rat>

*Zebrafish as a Model Organism by Hannah Simmons, M.Sc., Lancaster University, UK*

*Zebrafish as used in medical research* <https://www.news-medical.net/life-sciences/Zebrafish-as-a-Model-Organism.aspx>

*Zebrafish – Wikipedia*

<https://en.wikipedia.org/wiki/Zebrafish>

*Danio – Wikipedia*

<https://en.wikipedia.org/wiki/Danio>

*Average Annual Precipitation for India*

<https://www.currentresults.com/Weather/India/average-yearly-precipitation.php>

*Google Maps*

<https://www.google.com/maps>

**The 20 Best Freshwater Aquarium Fish For Beginners (With Pictures)**



**The 5 most difficult to keep freshwater fish you can buy for your home aquarium**



***About the author:***

*I'm Don Glasgow. I've been keeping fish and aquarium plants for about 35 years. I've made slow but steady progress in gaining knowledge about creating lush, healthy planted aquariums. My goal with this information is to share the successes and failures I've had. You can reach me by email:*

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