



# **2021 Less Wrong Darwin Game**

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# The 2021 Less Wrong Darwin Game

It's fall and that means it's time for another Less Wrong Darwin Game. This year, you'll be designing up to ten species that will compete for food including (sometimes) eating each other.

[Click here to participate](#) [Entries are now closed.] You have one week from September 23 to design your species. Submit them by September 30th or earlier.

Each player starts with a population of organisms. Each round each of your organisms will be randomly paired with another organism. At this point, one of two things will happen:

- If one organism can eat the other organism then it will do so.
- If nobody gets eaten then both organisms get an opportunity to forage for plants.

After everyone has eaten, each organism will attempt to reproduce. The more an organism eats you eat the most descendants an organism can leave.

## Food

Each round your organisms lose 20% of their energy to metabolism resulting (on average) in a 20% decrease in population. You must eat food to counteract metabolism. There are two sources of food: plants and other animals.

## Predation

There are two phases to combat. In the first phase organisms size each other up to figure out which is the predator and which is prey. There are two ways for an organism to become the predator.

1. **Venom.** If one organism has venom but the other does not have antivenom then the organism with venom is the predator. (Antivenom is a prerequisite to venom.)
2. **Weapons.** Weapons represent claws, teeth and tusks. If either organism's weapons value exceeds the prey's weapons + armor then the organism with the higher weapons value will become the predator.

Venom takes priority over weapons. Once a predator-prey relationship is established (*if* a predator-prey relationship is established) the prey will get a chance to escape. If the prey's speed equals or exceeds the predator's then nobody gets eaten.

Venom, weapons and antivenom all make your organism bigger, which slows down reproduction.

Adaptation	Size	Notes
Venom	6	Requires Antivenom
Antivenom	1	
Weapons	$x n$	$n \geq 0$

<b>Adaptation</b>	<b>Size</b>	<b>Notes</b>
Armor	$\frac{1}{n}$	$n \geq 0$
Speed	$\times n$	$n \geq 0$

Omnivores prioritize meat over plants, when they can get it even if foraging for plants would be more metabolically efficient<sup>[1]</sup>.

Predation has an efficiency of 0.95<sup>[2]</sup>. That means 95% of the prey's energy can be used by the predator.

Only organisms of different species eat each other. Cannibalism is disabled.

## Foraging for Plants

There are various kinds of plant food available. In order to eat each food you'll need the proper digestive system.

<b>Food</b>	<b>Nutritional Value</b>	<b>Size</b>
Leaves	7	5
Grass	6	3
Seeds	5	1

Whether your organism can digest a particular plant food is a binary value. No organism is better at digesting leaves than any other organism.

There is a tradeoff. The ability to eat leaves/grass/seeds makes your organism bigger which slows down reproduction. Also, there is a finite supply of leaves/grass/seeds. The more other organisms are foraging from a plant source, the less advantageous it is for you to forage for it yourself.

## Simple Ecosystems

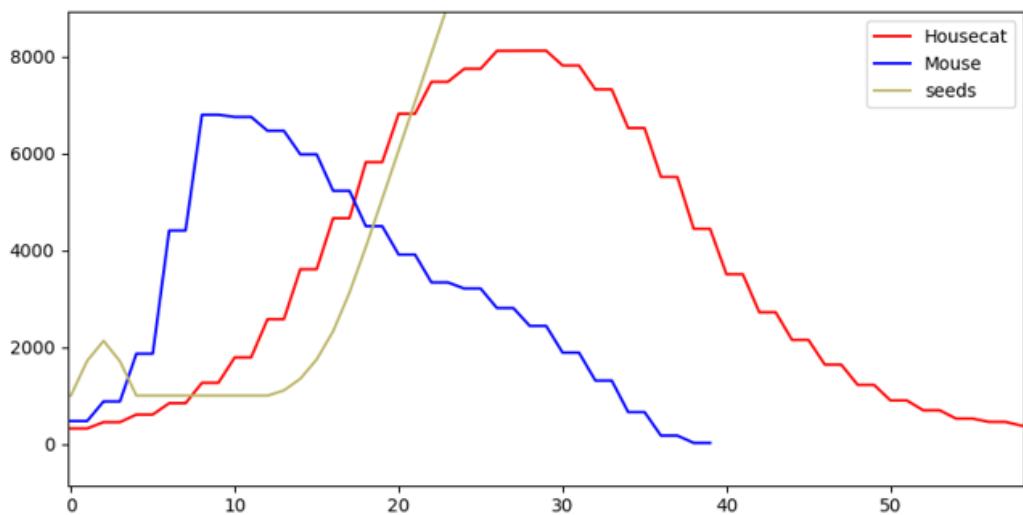
Consider an ecosystem with three kinds of plant food available: seeds, leaves and grass. 1,000 units of each plant food are produced per round.

### Example 1

This all may sound a little confusing but it makes sense once we use some real examples. Let's start with two species: housecats and mice.

<b>Species</b>	<b>Weapons</b>	<b>Speed</b>	<b>Eats Seeds?</b>
Housecat	1	2	No
Mouse	0	1	Yes

At first, both populations grow. The mice reproduce faster than the cats. Then the cats catch up and eat all of the mice. Having exhausted their food supply, the cat population starves to extinction.

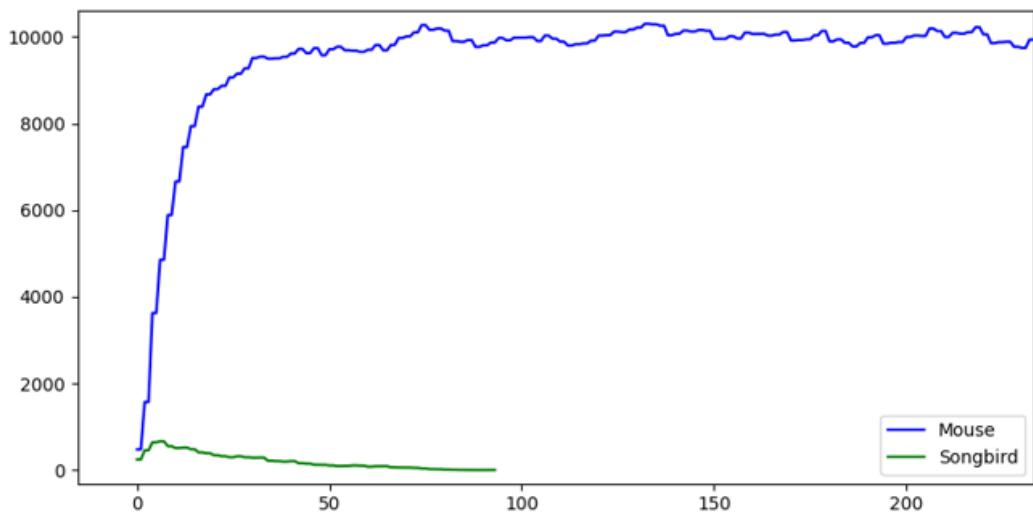


## Example 2

What happens if we add songbirds? Songbirds fly. They are fast enough to evade cats. But speed costs energy which makes it more expensive for songbirds to breed than for mice to breed. Mice outcompete songbirds in a world without cats.

### **Species Weapons Speed Eats Seeds?**

Mouse	0	1	Yes
Songbird	0	3	Yes



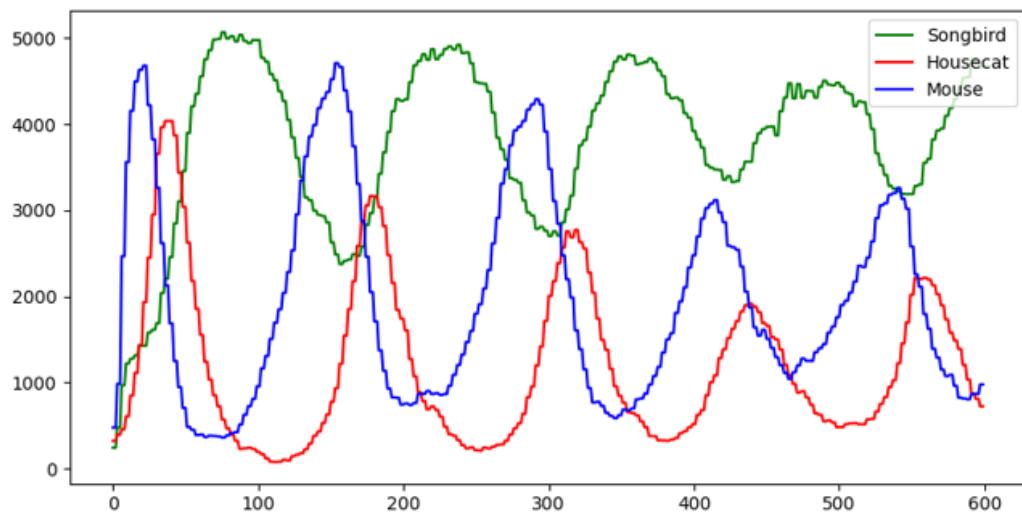
We can establish a periodic equilibrium by reintroducing cats. If the mouse population rises too much the cat population rises to eat them, decreasing the mouse population.

But there is a limit to how high the cat population can get because the cat population is matched randomly with other organisms and those other organism are often songbirds.

- The mouse population is kept in check by the cat population.
- The cat population is kept in check by the bird population.
- The bird population is kept in check by the mouse population.

#### **Species Weapons Speed Eats Seeds?**

Housecat 1	2	No
Mouse 0	1	Yes
Songbird 0	3	Yes

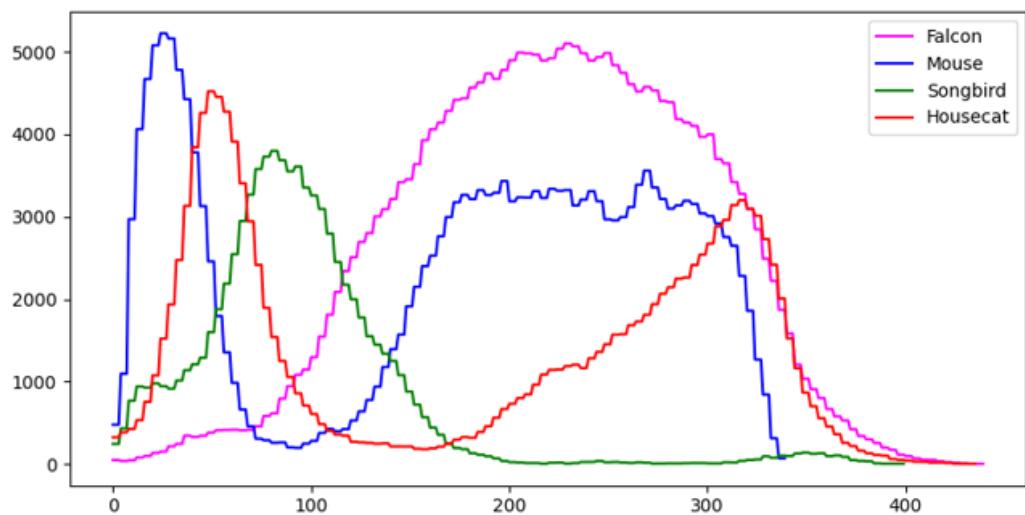


## **Example 3**

What happens if we add a falcon so fast it can catch both mice and songbirds? The falcons and housecats eat all of their prey. Our previous equilibrium has been broken. The ecosystem collapses. Everyone dies.

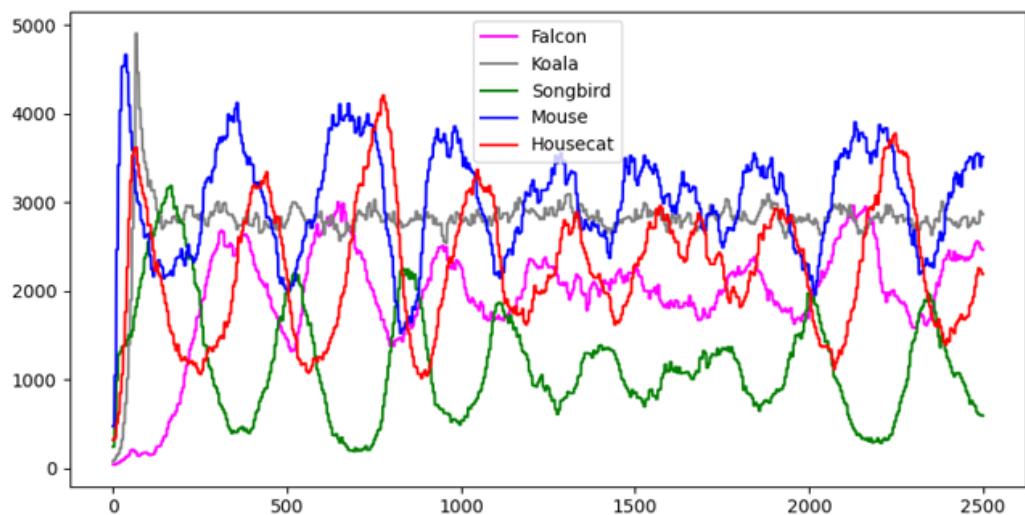
#### **Species Weapons Speed Eats Seeds?**

Falcon 1	20 <sup>[3]</sup>	No
Housecat 1	2	No
Mouse 0	1	Yes
Songbird 0	3	Yes



To restabilize things we need more prey. Let's add koalas. Koalas eat leaves. I made them venomous to protect them from predators.

<b>Species</b>	<b>Weapons</b>	<b>Speed</b>	<b>Eats Seeds?</b>	<b>Eats leaves?</b>	<b>Venom/Antivenom?</b>
Falcon	1	20	No	No	No
Housecat	1	2	No	No	No
Mouse	0	1	Yes	No	No
Songbird	0	3	Yes	No	No
Koala	0	0	No	Yes	Venom



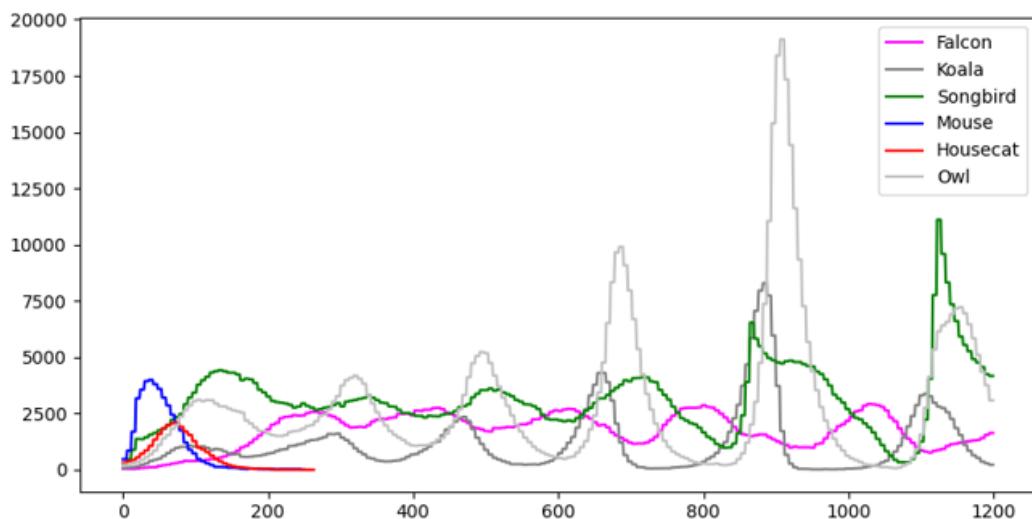
The venomous koalas eat a food source (leaves) disconnected from the rest of the food chain which relies on seeds. Nothing preys on them because they are venomous and

no other animals have antivenom. They koals are effectively disconnected from the rest of the ecosystem. They just get in the way of predation by the falcons and the housecats which helps stabilize the seed-based food web.

## Example 4

A world where nothing preys on nor competes with koalas is boring. Let's add owls. Owls really do prey on koalas.

Species	Weapons	Speed	Eats Seeds?	Eats leaves?	Venom/Antivenom?
Falcon	1	20	No	No	No
Housecat	1	2	No	No	No
Mouse	0	1	Yes	No	No
Songbird	0	3	Yes	No	No
Koala	0	0	No	Yes	Venom
Owl	1	2	No	No	Antivenom

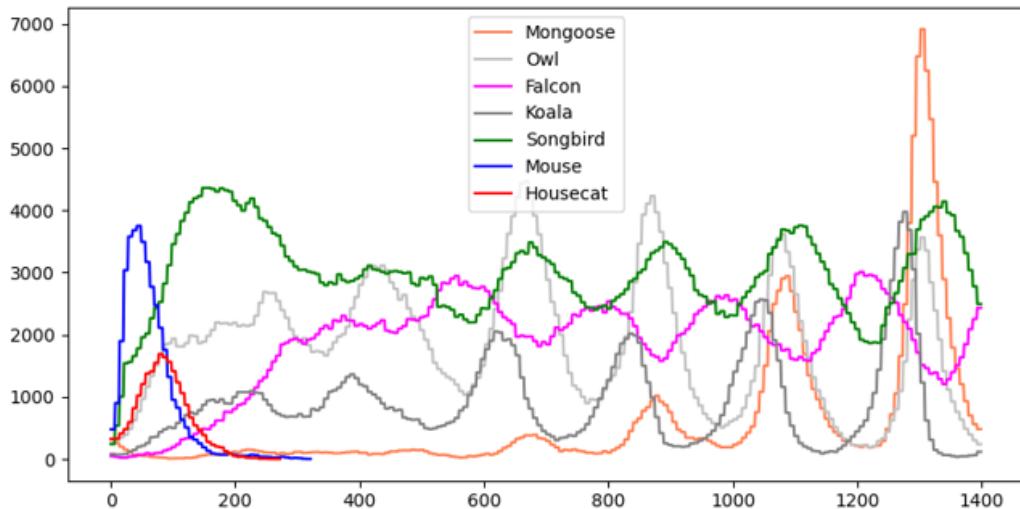


Introducing owls gets us exciting population spikes and crashes but it wipes out the mice and housecats.

The problem is owls have too much of an advantage over housecats. Owls and housecats are almost identical. The only difference is antivenom, which is cheap. Koalas are a major food source because only owls prey on them. To give housecats a chance we need something else to prey on koalas.

Species	Weapons	Speed	Eats Seeds?	Eats leaves?	Venom/Antivenom?
Falcon	1	20	No	No	No
Housecat	1	2	No	No	No
Mouse	0	1	Yes	No	No
Songbird	0	3	Yes	No	No

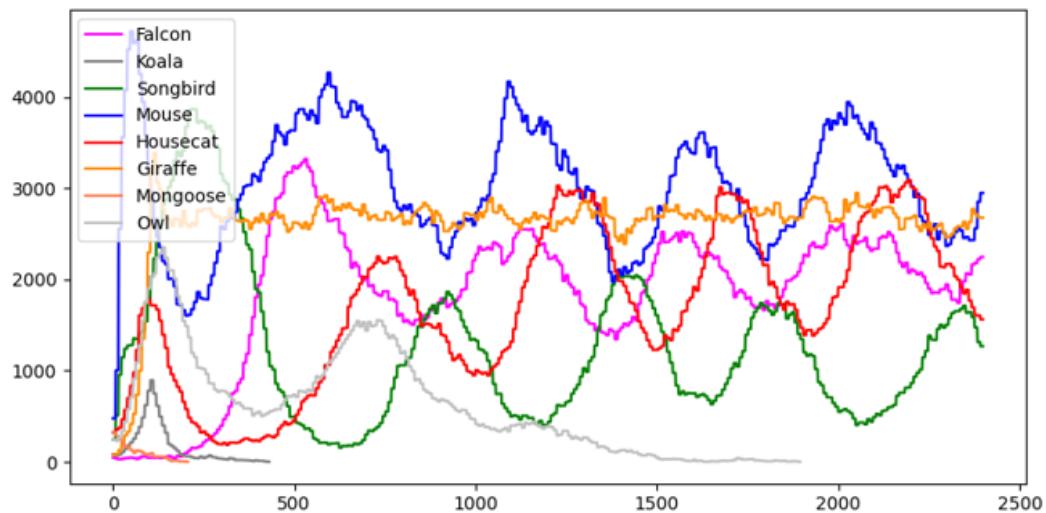
Species	Weapons	Speed	Eats Seeds?	Eats leaves?	Venom/Antivenom?
Koala	0	0	No	Yes	Venom
Owl	1	2	No	No	Antivenom
Mongoose	1	1	No	No	Antivenom



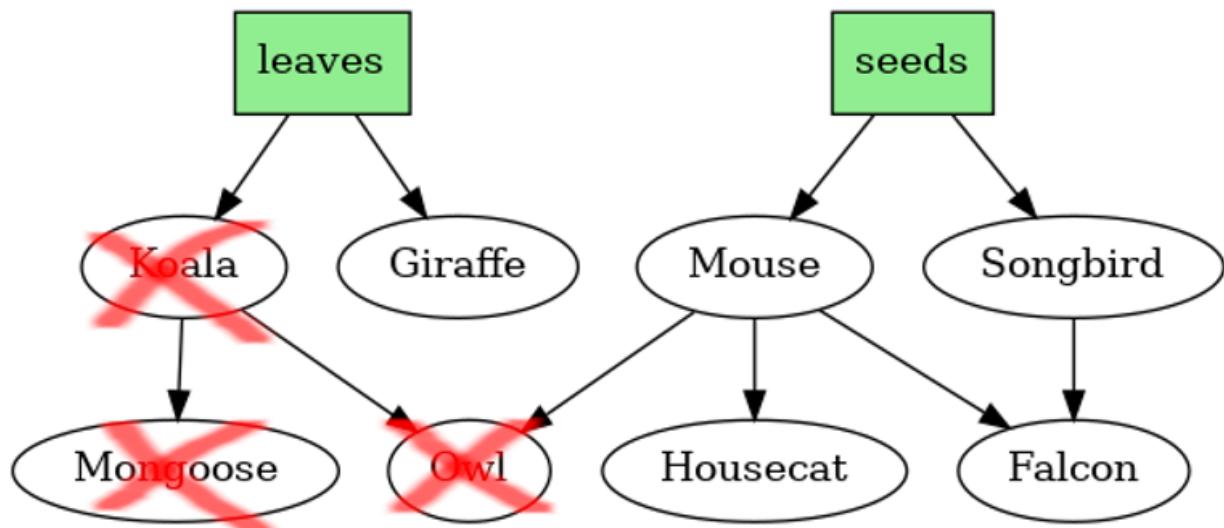
The mongooses do keep the owls in check. I'm starting to think housecats might be a lost cause. Whatever the case, we need a stabilizing animal which thrives when mongooses are present and declines when there are too many koalas. (This is just the songbirds we introduced in the beginning except for leaves/koalas/owls instead of seeds/mice/housecats.)

Giraffes eat leaves just like koalas but they are nonvenomous. I gave giraffes armor instead of weapons because if they had weapons they might eat small animals instead of leaves.

Species	Weapons	Armor	Speed	Eats Seeds?	Eats leaves?	Venom/Antivenom?
Falcon	1	0	20	No	No	No
Housecat	1	0	2	No	No	No
Mouse	0	0	1	Yes	No	No
Songbird	0	0	3	Yes	No	No
Koala	0	0	0	No	Yes	Venom
Giraffe	0	2	6	No	Yes	No
Owl	1	0	2	No	No	Antivenom
Mongoose	1	0	1	No	No	Antivenom



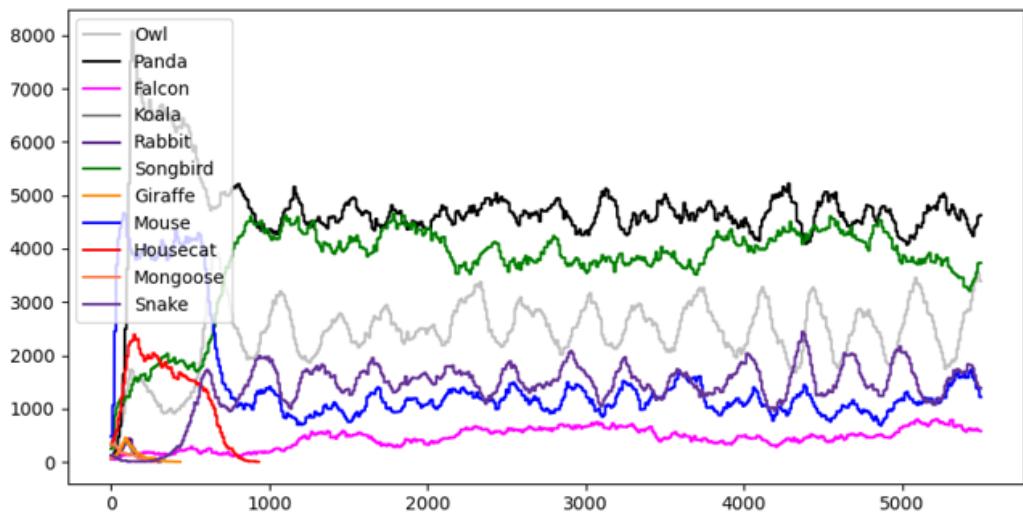
Adding giraffes got us mice and housecats back but we lost koalas along with the owls and mongooses that prey on koalas.



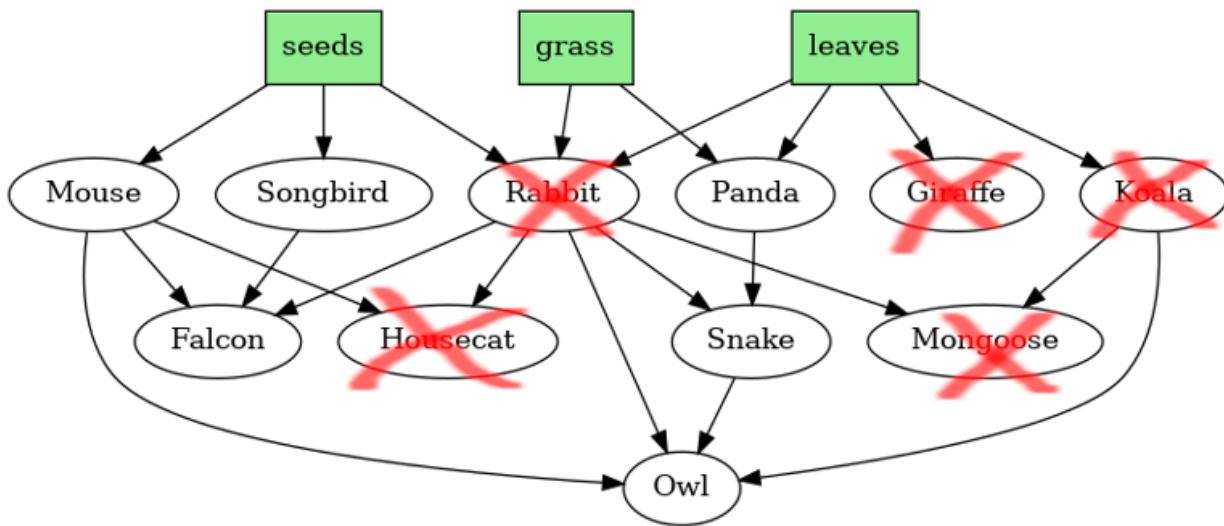
## Example 5

Our herbivores only eat seeds and leaves. All the grass is going to waste. Lets add some grass eaters to our menagerie.

Species	Weapons	Armor	Speed	Eats Seeds?	Eats leaves?	Eats Grass?	Venom/Antivenom?
Rabbit	0	0	0	Yes	Yes	Yes	No
Panda	0	2	0	No	Yes	Yes	No
Snake	0	0	1	No	No	No	Venom



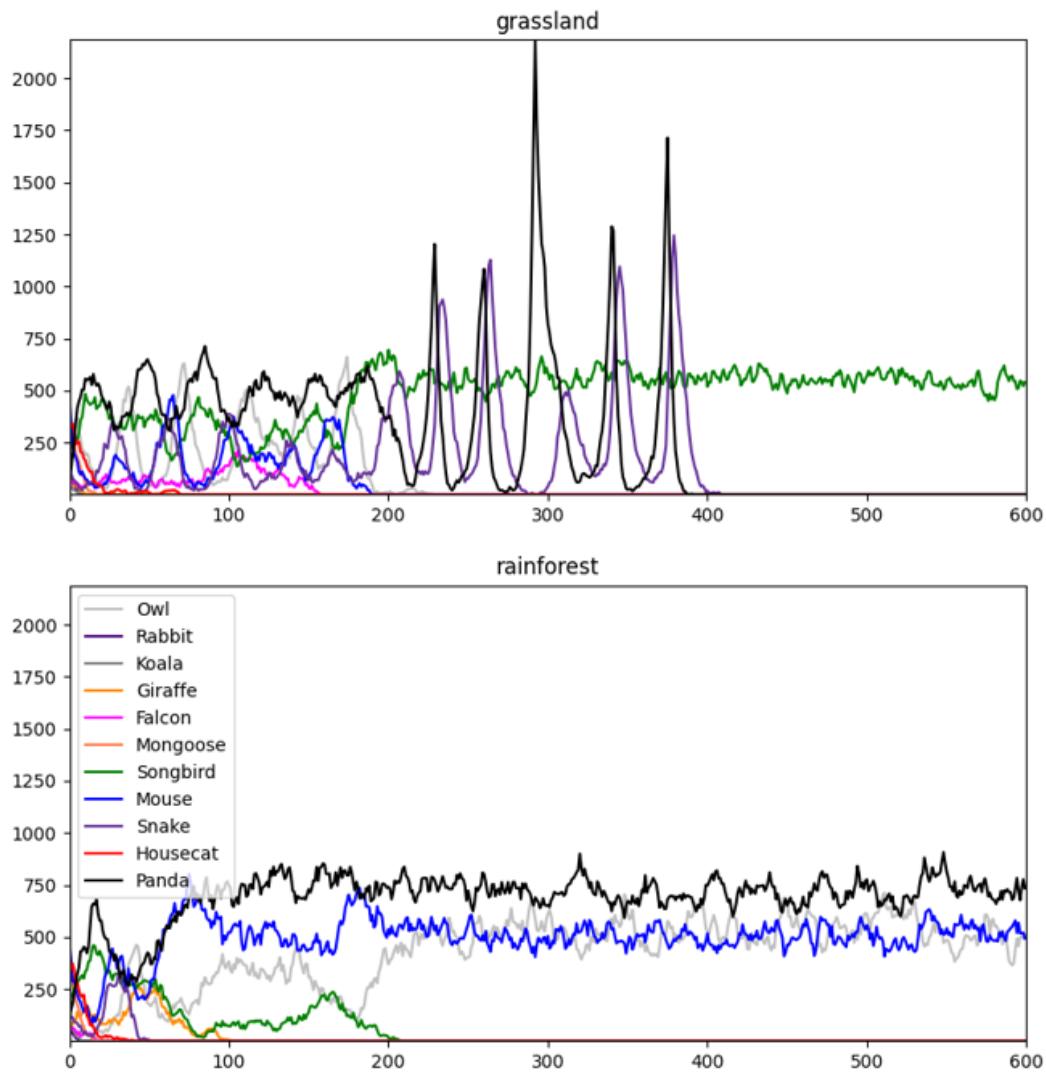
Our new ecosystem has no more diversity than the previous one. (Only six species survive to equilibrium.) But we have achieved something new. The new ecosystem sustains a food chain three trophic levels deep. Owls eat snakes eat pandas.



## Multi-Biome Ecosystems

Let's compare two biomes.

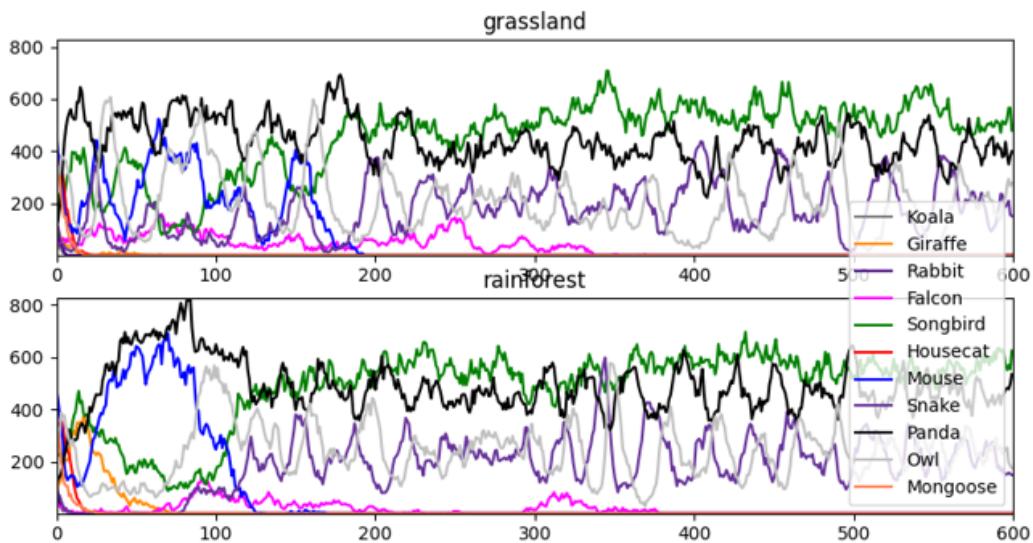
Name	Seed	Leaf	Grass
Grassland	100	10	200
Rainforest	100	200	10



Note that I set the overall plant production lower. This results in smaller populations which are more likely to be made extinct by random fluctuations. In the grassland, everything dies but songbirds. Leaves and grass go uneaten. In the rainforest we get a 3-species equilibrium of owls, pandas and mice.

## Example 1

Suppose we give each animal a small chance (proportional to its speed) of wandering to a random biome. Our two biomes are now connected.

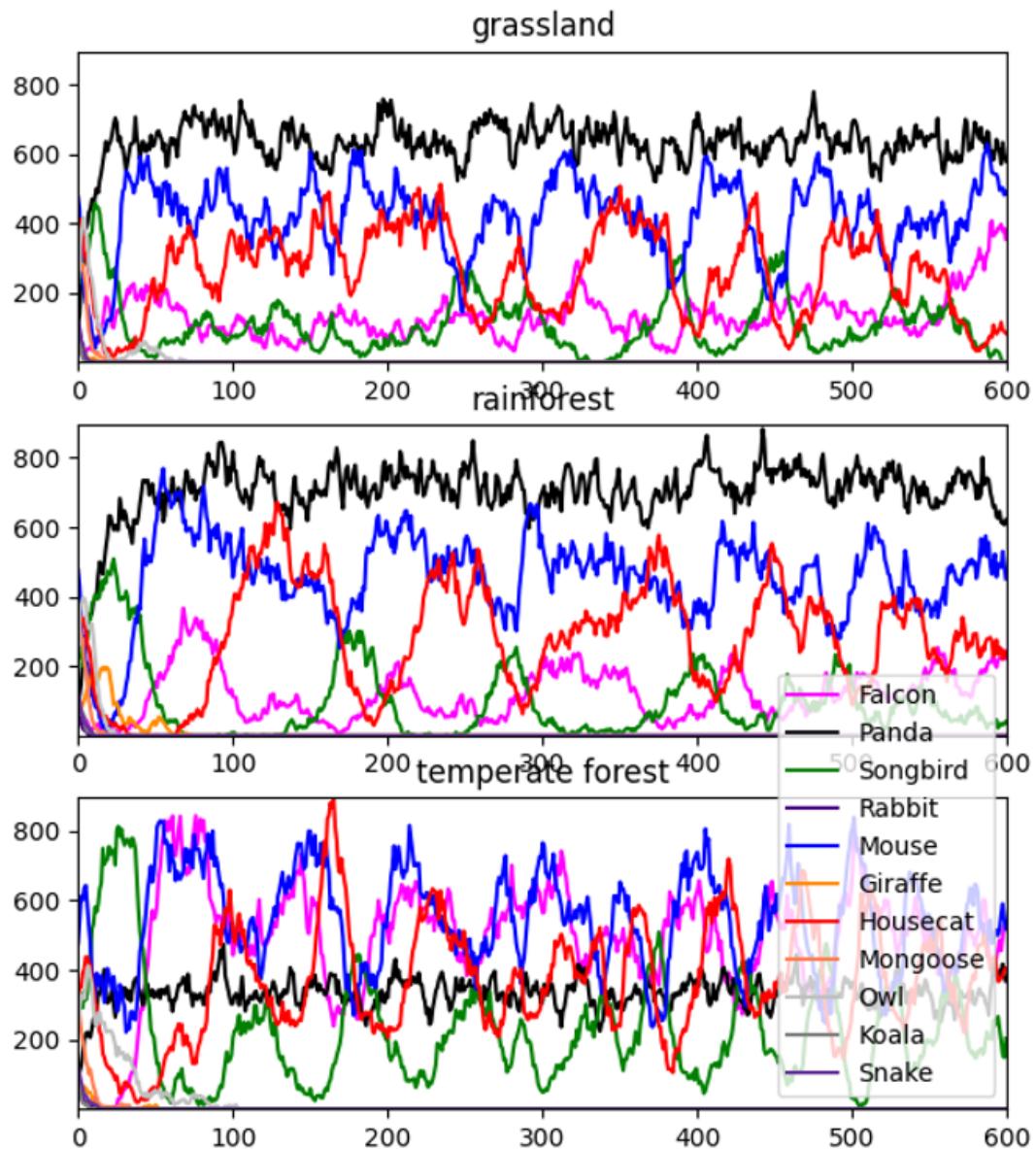


This increases biodiversity in each particular ecosystem. However, it does not increase overall biodiversity.

## Example 2

What if we add an additional biome?

Name	Seed	Leaf	Grass
Grassland	100	10	200
Rainforest	100	200	10
Temperate Forest	200	10	100



Housecats and falcons are back but we lost owls and snakes.

## Surviving the environment

The world is a dangerous place. It's not just starvation and other animals that can kill you. You can only survive in the Ocean/Benthic if you breathe water. You can only

survive on land if you breathe air. Both air and water breathers can survive on the Rivers and Coasts.

You do not have to manually set whether your organism breathes air or water. This will be inferred from your spawning location. You cannot start in a river or on a coast.

# Temperature

You need heat tolerance to survive in the desert. You need cold tolerance to survive in the tundra.

## Temperature Adaptation Size

Heat Tolerance	2 <sup>[4]</sup>
Cold Tolerance	2 <sup>[4:1]</sup>

Heat and cold tolerance are not useful for aquatic organisms.

# The actual game settings

The actual game is more complicated than my examples. There are more biomes and more plant foods available. I will not be entering my own animals into the game. Only player animals will be included.

<b>Food</b>	<b>Nutritional Value</b>	<b>Size</b>
Carrion	10	6
Leaves	7	5
Grass	6	3
Seeds	5	1
Detritus	4	3
Coconuts	3	4
Algae	2	2
Lichen	1	1 [5]

# Biomes

Name	Carriion	Leaves	Grass	Seeds	Detritus	Coconuts	Algae	Lichen
Human Garbage Dump	100	100	100	100	100	100	100	100

Edit: I recognize, after posting this, that "Grassland" produces less grass than the Rainforest. Too late now; players have already submitted organisms.

## Questions and Answers

### How do I win?

Your species survives.

### Can I coordinate with other players?

There is no rule against it.

### Can I betray the other players who think I'm coordinating with them?

There is no rule against it.

### I'm worried my species will do poorly and I'll be publicly shamed.

Use a pseudonym. I will only link to social media if you do well.

### How many species can I enter?

Up to 10. I am relying on the honor system. Please do not abuse it.

### If multiple participants enter species with the same name, will you differentiate the names so that they can prey on each other?

Yes.

### Can I use multiple entry slots to spawn the same species in multiple biomes?

Sort of. I will differentiate the names. You will have two separate species with identical stats but different starting conditions.

## Do I have to be a Less Wrong user to participate?

You do not have to be affiliated with Less Wrong. Anyone is welcome to participate. Invite your friends to play!

## I found a bug in your code.

Please post a comment or private message me.

Edit: Multicore discovered some major bugs in the code I used for examples. The real game may be very different.

## I like your work and would like to support you.

You are under no obligation whatsoever to send donations. My primary objective is to make a fun, educational game for lots of people.

That said, I do like money. You can Venmo me @Lsusr

## What can I win?

Honor and glory. I will link to the winners' social media accounts. (Unless it is something I consider dangerous or object to on moral grounds.)

## Example source code

You can try out different strategies with the source code below. It is run with [hy](#). You can install hy with `pip $ pip3 install hy`. You will need matplotlib too. Install it with `$ pip3 install matplotlib`.

[Source code available on GitLab](#)

## How do I participate?

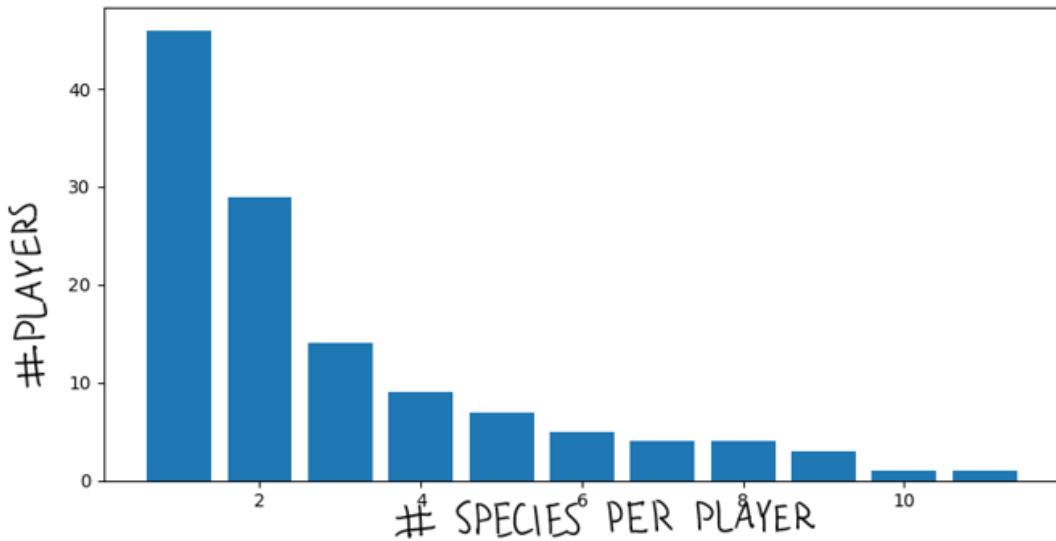
~~Design your species here.~~ [Entries are now closed.] You have one week from September 23 to design your species. Submit them by September 30th or earlier.

- 
1. This seemingly-irrational behavior has precedent among human beings due to sexual competition. Jared Diamond writes about why in his book *Why Is Sex Fun?: The Evolution of Human Sexuality*. [←](#)
  2. Changed from 0.80. [←](#)

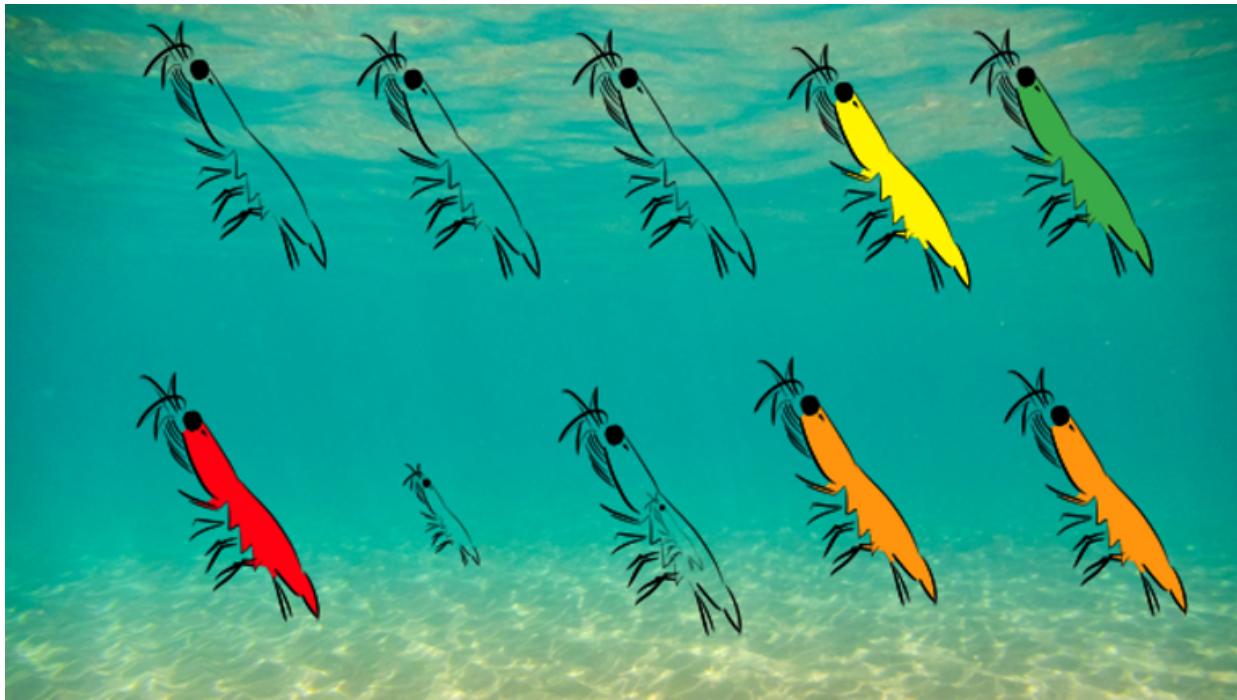
3. In the real game, weapons, armor and speed will all be limited to 10. ↵
4. Reduced from 5. ↵ ↵
5. Changed from 3. ↵

# 2021 Darwin Game - Contestants

123 players submitted a total of 556 species. Most players submitted just 1 species. One player submitted 11. (I disqualified his<sup>[1]</sup> 11<sup>th</sup> submission.) 555 species qualified for entry. I expected more players would submit 10 species compared to 8 or 9 in order to max out their submissions but that didn't happen.



The most popular name was Krill, which three separate people submitted. This does not count Yellow Krill, Green Krill, Red Krill, Nano-krill, Fornicacious Krill, Orange-Krill and Orange Krill.



Other duplicate names included Armadillo, Bear, Desert Tortoise, Forest Tribble, Kraken, Trash Panda and Flesh-Eating Clam.



Is Flesh-Eating Clam a meme or something?

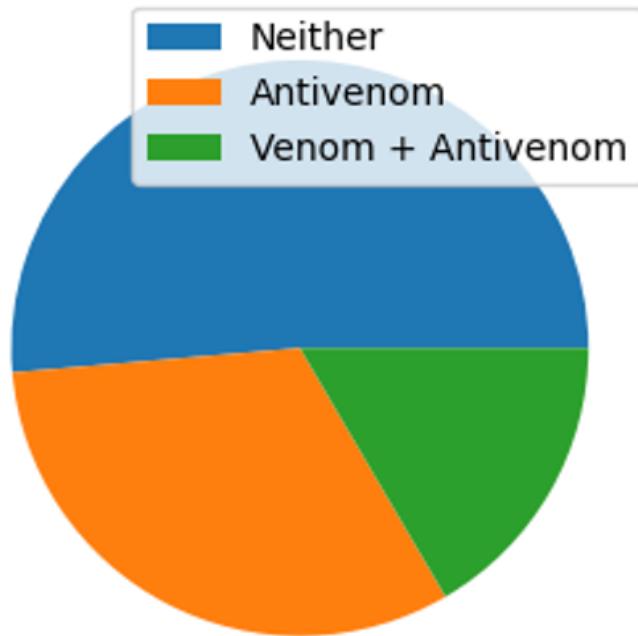
A couple species were placed in the Tundra/Desert without the necessary temperature adaptations. I modified them so they wouldn't instantly die. Other people gave cold/heat adaptations to water-breathing species, which are useless. I left those unaltered.

Speaking of useless adaptations, Weapons + Armor is only useful up to 10. If your Weapons + Armor exceeds 10 the extra armor is useless. 40 submissions (7%) had Weapons + Armor more than 10. I think the idea here was to create big exciting powerful monsters. This is the realm of Dragons, Forest Dragons, Basilisks, Sandworms, White-Whales, Tundrus Rex, Humans, All-eating Leviathans and the so-called "Ultimate Lifeform". I expect<sup>[2]</sup> none of them will survive to the end.

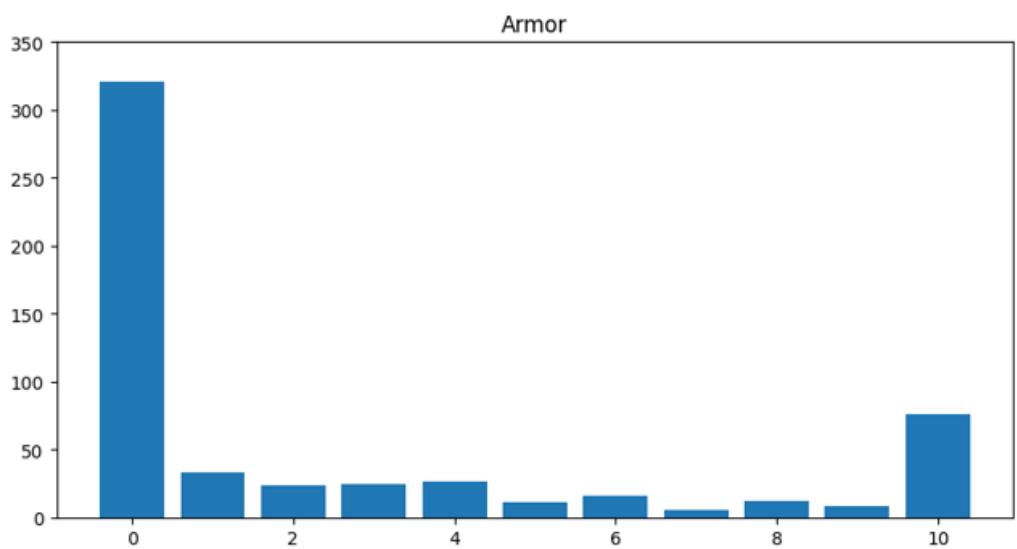
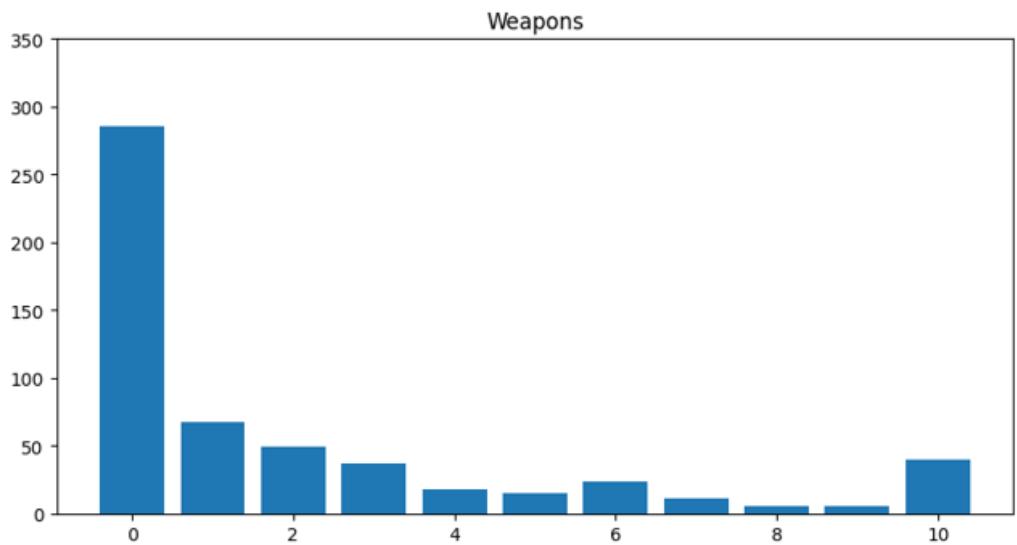
I tried to render a food web but it didn't work because there were 54,867 connections. I let graphviz run for ten hours before putting it out of its misery.

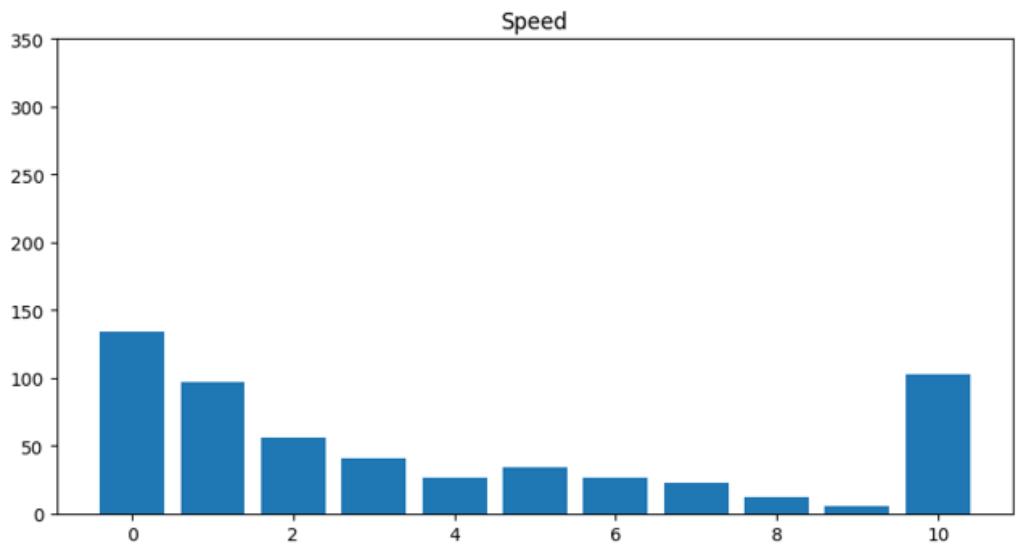
## Stats

One sixth of the entries were venomous. One third had antivenom.

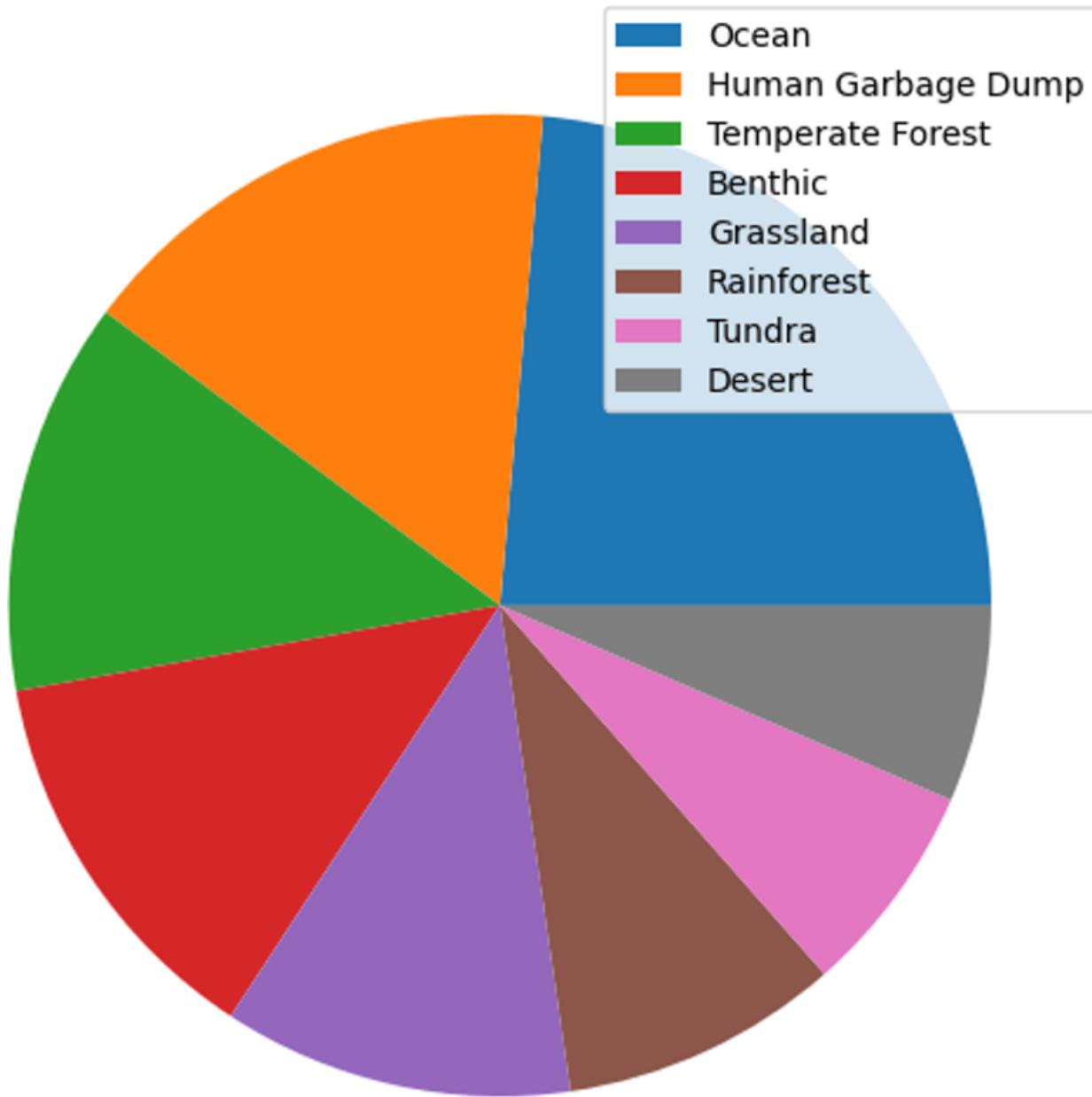


Unlike their number of entries, many players did choose to max out weapons, armor and speed.



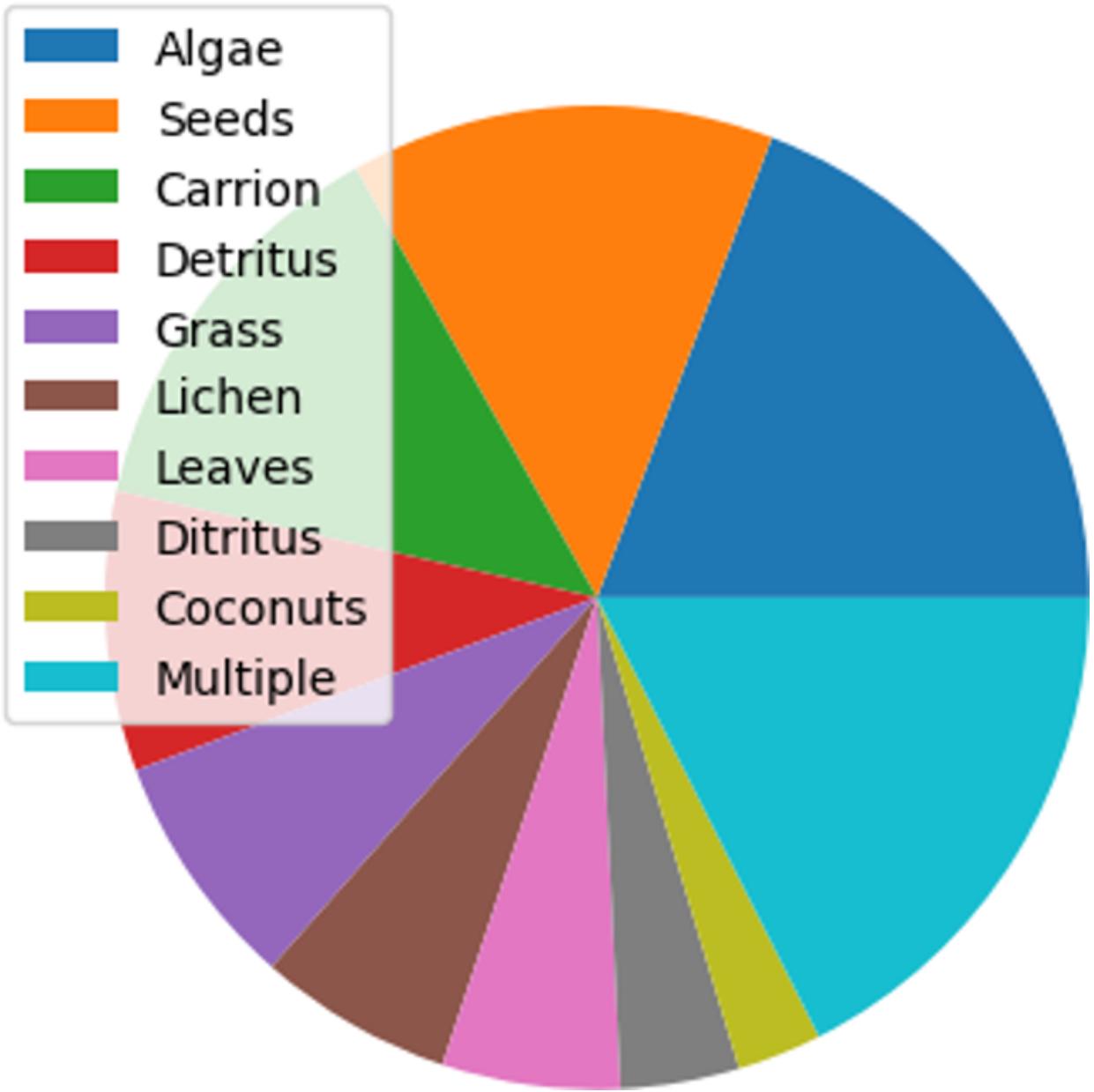


## Spawning Locations



It makes sense that the ocean is popular because of how much food it supports. I was surprised by how popular the human garbage dump was. The Desert and Tundra were the least popular, presumably due to the temperature hazards.

## Foraging



The most common foraging adaptations were algae, seeds and carrion.

- Algae is on top because there is the most algae.
- Seeds were popular because they offers lots of nutrition compared to the digestive adaptation.
- Carrion it is most nutritionally dense option.

## Forage or Hunt?

Half of all organisms were pure foragers. Of the rest, the majority had a foraging adaptation. Only a tiny minority were specialized hunters.



## Social Media

I promised link to the winners' social media accounts (if they want). Most went with Twitter. Some went with LinkedIn, Tumblr, personal websites and Less Wrong itself. Two picked Instagram.

NO AI SAFETY ON  
THE INSTAGRAMS,  
UNFORTUNATELY.

JUST  
CUTE  
ANIMALS.



- 
1. If you didn't submit "Algae Eater Eater" then this isn't you. [←](#)
  2. I'm writing these words before running the game. [←](#)

# 2021 Darwin Game - Tundra

Our Tundra is an inhospitable<sup>[1]</sup> environment. The only significant food available to herbivores is Lichen, which has a tiny nutritional value of 1. The Tundra is cold too. Staying warm requires the cold tolerance adaptation, which costs +2 size.



## Carrion Leaves Grass Seeds Detritus Coconuts Algae Lichen

1	1	1	1	1	0	0	300
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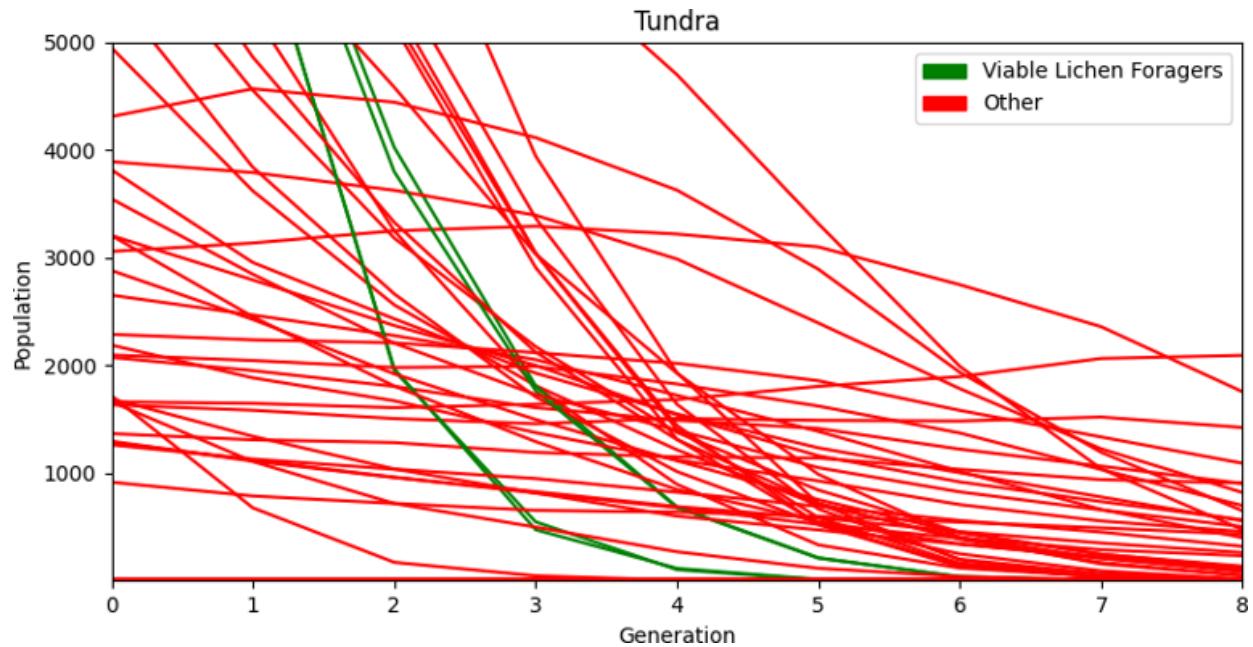
An organism must expend 20% of its energy just to survive. A herbivore foraging for lichen cannot have a size greater than 5 or else it will expend more energy in metabolism than it is possible to acquire from eating Lichen.

All organisms have base size 0.1. The cold adaptation (+2) plus the Lichen digestive tract (+1) costs a total of +3 size. A Tundra herbivore has a minimum size of 3.1. A herbivore with size 5.1 is untenable since it expends more energy (1.02) than is possible to obtain from Lichen (1.00).

Players submitted 39 species native to the Tundra. Only 4 of them were viable herbivores: Micropas, Arctic Slug, Northern Nibbler and "lichen" (not to be confused with the foragable "Lichen"). (Multicore's Arctic Fox was a carnivore.)

These species could support little in the way of weapons, armor and speed. They were defenseless. In the first 8 turns, all four of our viable foragers are eaten to extinction.

Goes Extinct In Generation	Species
5	Pristol
7	Micropas
7	Arctic Slug
8	Northern Nibbler
8	lichen



After the viable herbivores were eliminated, total ecological collapse was inevitable.

Goes Extinct in Generation	Species
9	Yonge_Cold
9	Boreakeet
9	Beck's Penguin
10	SmolFire
10	Arctic Ambusher
10	Zlorg
10	Arctic Fox
10	Orange-Krill
10	abominable_snowman
12	Antasvara
12	Unfortunately Large Cockroach
12	cg-mouse
13	Porostozero Malutki
13	1994 Mazda RX7
14	Raburetta
14	Pittsburgh-Penguins
15	Louse-lion

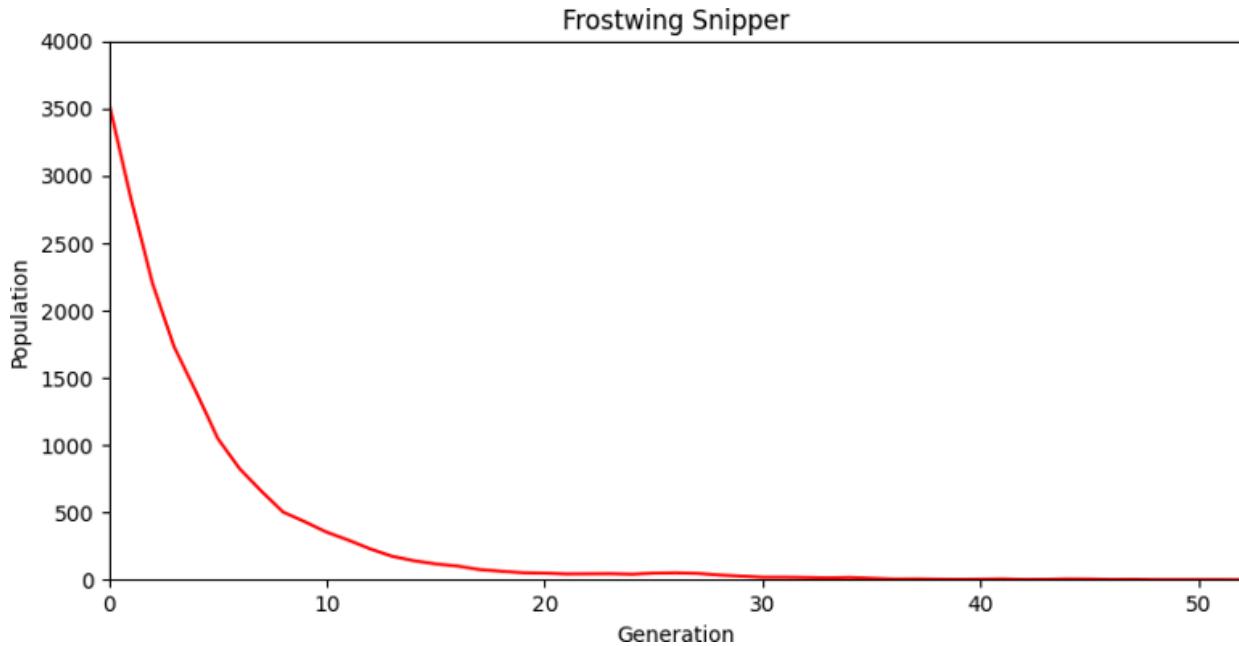
<b>Goes Extinct in Generation</b>	<b>Species</b>
15	Wolverine
16	Jtp
16	Wolves
17	Seals
19	Direwolf
24	Tsc
27	Tundrus Rex
29	Frankenstein
32	Broken Fetters
34	Alaskans
37	Dragon
37	Porostozer Mamuci
39	Rocks
41	Duckofants
43	White-Whales
50	tp511
52	Frostwing Snipper



## The Frostwing Snipper

An honorable mention goes to Nem's Frostwing Snipper, a Speed 10 species that could digest both Lichen and Seeds. The maximum speed made the Frostwing Snipper immune to predation which let it survive the initial carnage. The ability to digest seeds meant that the Frostwing Snipper did consume enough energy on average to more than replace itself.

However, "on average" is not enough. The Tundra's carrying capacity of Frostwing Snippers was too small. Random fluctuations eventually knocked the Frostwing Snipper into extinction.



## Winners

None



## Eratta

Simon [notes](#) that I used 50,000 instead of 1,000 for each species initial energy. Using the correct value of 1,000 doesn't really change anything except everyone dies faster and Matlsk's Porostozer Mamuci (which eats Carrion) takes the place of Frostwing Snipper.

### **Porostozer Mamuci**

Venom?	Yes
Weapons	1
Armor	10
Speed	10
Forager	Carrion, Lichen
Temperature Adaptatations	Heat, Cold

- 
1. The original Tundra was even more inhospitable than this. I made it easier thanks to early feedback from aphyer. [←](#)

# 2021 Darwin Game - Desert

Our Desert is an inhospitable environment. Carrion, while nutritious, is hard to digest and there's not a lot of it. Species must be adapted to the heat too.



**Carrion Leaves Grass Seeds Detritus Coconuts Algae Lichen**

100    0    1    1    1    0    0    0

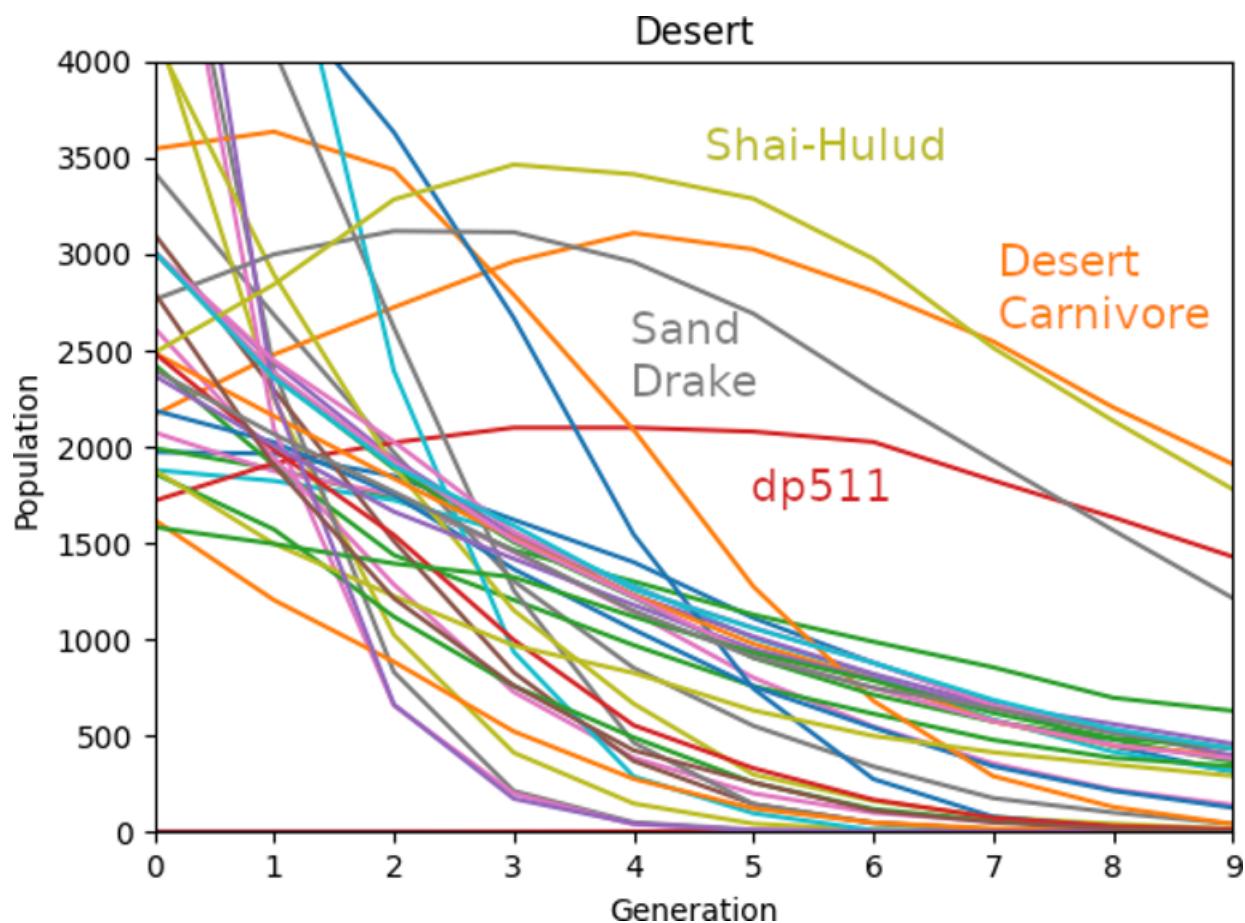
The most dangerous part of the desert is the predators. Two people submitted sandworms.

Name	Venom	Weapons	Antivenom	Armor	Speed	Creator
Desert Carnivore	10	✓		0	10	Antihaas
dp511	✓	10	✓	0	10	horu
Sand Drake	6			0	10	Yull-Rete
Sandworm	10			7	8	Vanessa
Shai-Hulud <sup>[1]</sup>	10	✓		0	7	simon

Only 36 organisms were submitted to the Desert. 23 of them could digest Carrion. Carrion is very nutritious so all 23 were viable foragers.

## Generations 1 to 10

A few apex predators did well.



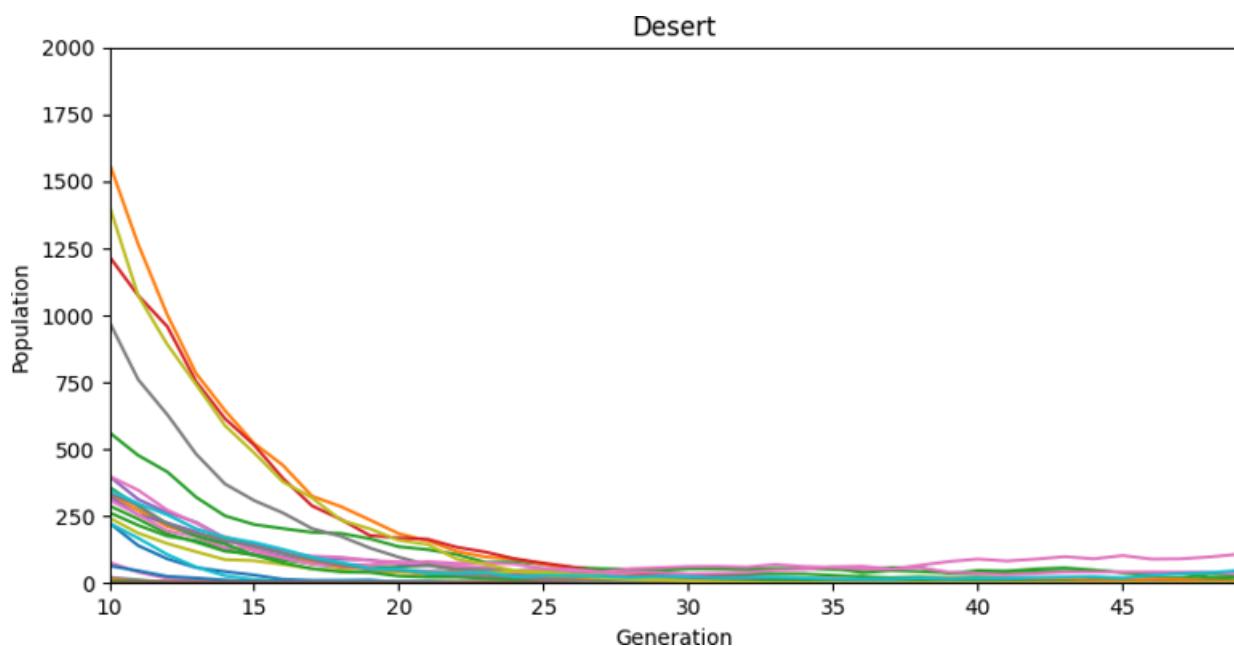
Goes Extinct in Generation	Species
6	Lesser Desert Rat
7	Cordova
8	Hyena
8	Desert-Ants
8	Desert-Foxes
8	Desert-Lizard
9	Yonge_Hot
10	Josep Raich

## Generations 11 to 50

The apex predators did so well they wiped out all the foragers without maxed out speed or defense. Having extinguished the easy prey, the apex predators proceeded to starve.

Goes Extinct in Generation	Species
11	Desert-Coyotes
11	Cockatrice
11	cg-wildcat
12	Venomous Snark

Goes Extinct in Generation	Species
12	Desert-Snakes
14	Bitey-the-scary
14	Smok
16	Titus
19	Desertio
20	Qanon
23	Wurm
26	Sandworm
33	Shai-Hulud
35	IDha-C293
38	Sand Drake
38	slow vulture
41	Desert Carnivore
45	Chocolattos
45	Dongles
46	dp511



## Generations 51+

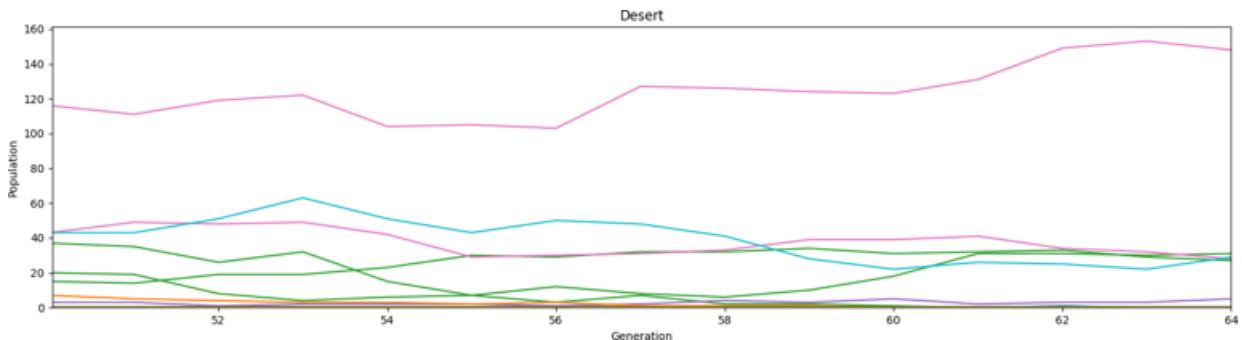
Name	Venom	Weapons	Antivenom	Armor	Speed	Eats Carrion?	Other	Creator
Desert Viper	✓	0	✓	0	10	✓		aphyer

Name	Venom	Weapons	Antivenom	Armor	Speed	Eats Carrion?	Other	Creator
dsc511	0	✓		10	0	✓	Eats Leaves, Grass, Seeds, Detritus, Coconuts, Algae, Lichen	horu
Booyahs	2			0	10	✓		CK
Rock Beetle	0	✓		10	0	✓		Taleuntum
Desert Tortoise1	0	✓		10	0	✓		Multicore
Desert Tortoise2	0	✓		10	0	✓		Yull-Rete
Armadillo v2	0	✓		10	0	✓		Henny
Sol Invictus	0	✓		10	0	✓		simon

Most of these species are identical. They're carrion foragers with maxed-out defense (including antivenom) and nothing else. Everyone who isn't a maximally-efficient invincible forager dies by generation 61.

### Goes Extinct in Generation Species

55	dsc511
60	Booyahs
61	Desert Viper



It's a random walk among equals from here.

## Winners

Species	Player	Social Media
Armadillo v2	Henny	None
Desert Tortoise1	Multicore	None

<b>Species</b>	<b>Player</b>	<b>Social Media</b>
Desert Tortoise2	Yull-Rete	None
Rock Beetle	Taleuntum	None
Sol Invictus	simon	None

## Eratta

Simon [notes](#) that I used the wrong starting energy value of 50,000 instead of 1,000. Basically the same thing happens (except faster) when I use the correct energy value.

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1. "Shai-Hulud" is what the Fremen call sandworms. [←](#)

# 2021 Darwin Game - Ocean

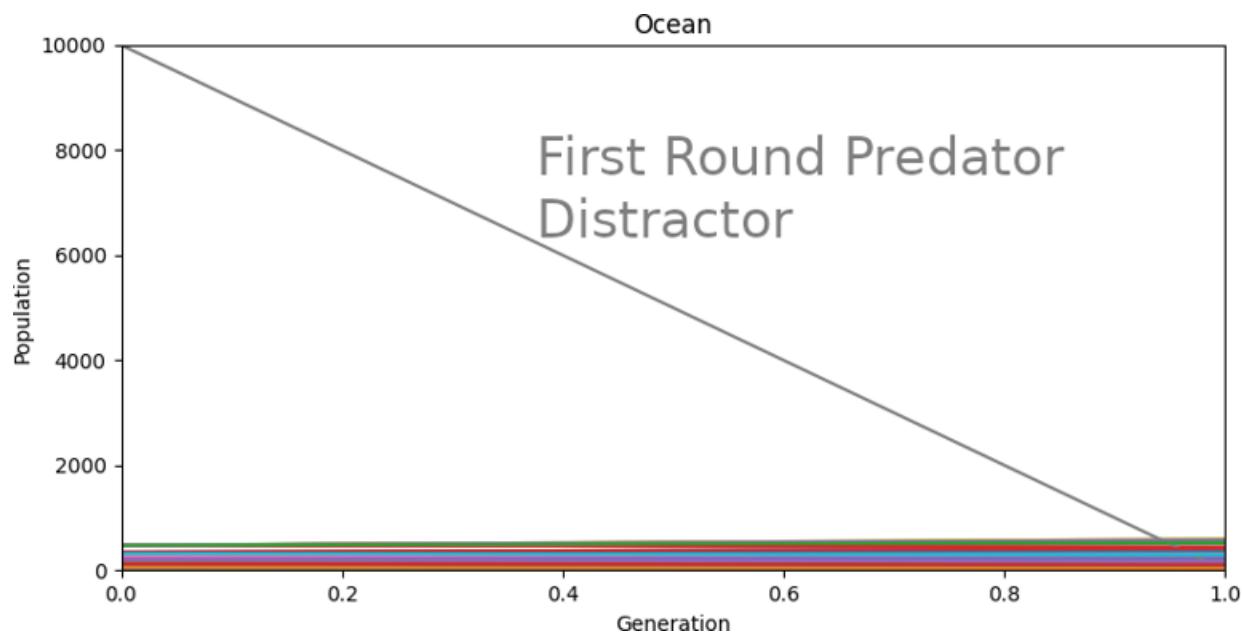
The Ocean has lots of algae, a little carrion and a little detritus. It was the most popular biome, with 131 native species.



Name	Carrion	Leaves	Grass	Seeds	Detritus	Coconuts	Algae	Lichen
Ocean	10	0	0	0	10	0	10,000	0

To thrive in this game as a forager you must survive the initial predators. One way to do this is to breed faster than they can eat you. Another way is to use armor or another defense.

Random guy in NY took a third route. He created the First Round Predator Distractor, a cheap species with almost zero nutrition and exactly zero chance of survival that kept the predators in check for a single round.



**Goes Extinct in Generation**  
1

**Species**  
First Round Predator Distractor

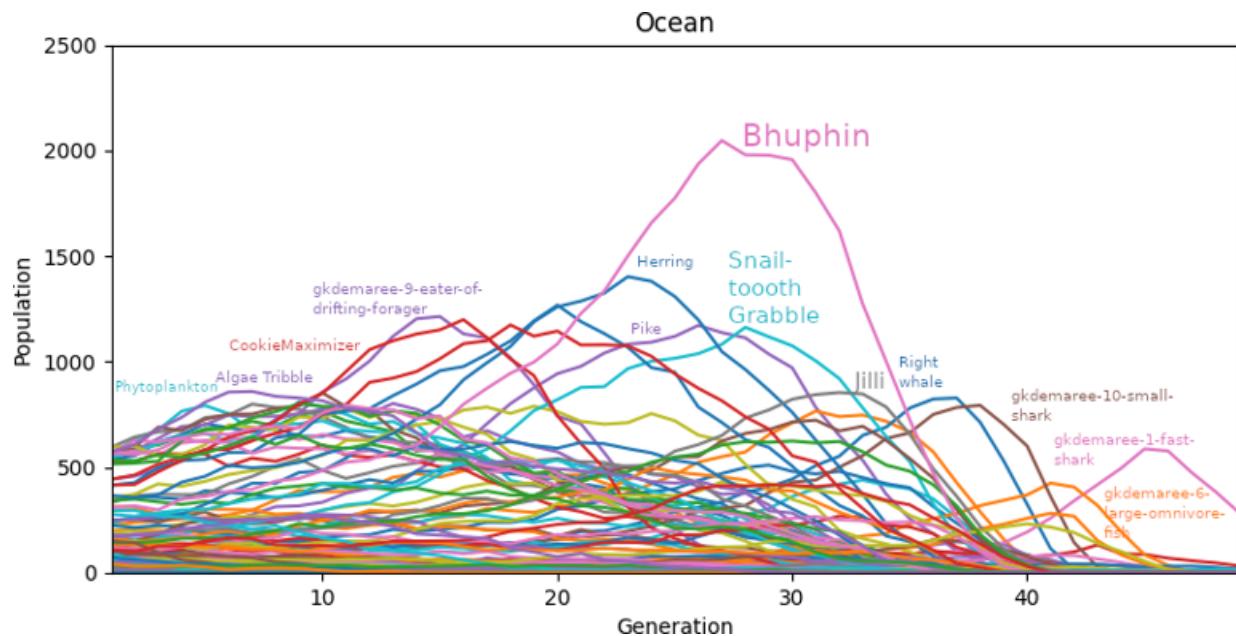
Now that Random guy in NY's silliness is out of the way let's get on to the real show.

## Generations 1-50

At first the defenseless foragers thrive. Increasingly large carnivores's populations grow and crash.

Name	Venom + Antivenom?	Attack	Armor	Speed	Forager?	Creator
Phytoplankton	Neither	0	0	0	Algae	aphyer
Algae Tribble	Neither	0	0	0	Algae	simon
CookieMaximizer	Neither	1	0	1		Saran
gkdemaree-9-eater-of-drifting-forager	Neither	1	0	1		Grant Demaree
Pike	Neither	2	0	3		Yair
Herring	Neither	2	0	2		Measure
Bhuphin	Neither	0	2	0	Algae	phenx
Snail-Eating Snail	Antivenom only	5	0	2	Carrion;Seeds;Detritus	Taleuntum
Jilli	Neither	3	0	1	Algae	Milli
Right whale	Neither	5	0	5		EricF
gkdemaree-10-small-shark	Neither	6	0	6		Grant Demaree
gkdemaree-1-fast-shark	Antivenom only	10	0	10		Grant Demaree

Name	Venom + Antivenom?	Attack	Armor	Speed	Forager?	Creator
gkdemaree-6-large-omnivore-fish	Antivenom only	7	0	7	Algae	Grant Demaree



Goes Extinct in Generation	Species
7	Cheerless Tidehunters
12	Krabs
12	Qoxeadian
13	Bloade
13	Squidheads
14	Sleeping Sealions
16	Sanguine Scavenger
17	Terror Whale
17	Sea Snake
17	Whale
17	Algae Sprinter
17	FOERDI 1,0,10,0,CDA
18	Blue whale
18	Chybcik
18	op511
18	Crab
19	Kraken1
19	The Aparatus
19	ocean vulture
20	magikarp
20	sea tortoise

<b>Goes Extinct in Generation</b>	<b>Species</b>
20	1-4-1 carrion
21	osc511
22	Manta Ray
22	Grerft
24	Plankton2
24	Poisonous Sponge
24	cg-fish
25	Speedy Algivore
26	cg-whale
28	RiverShark
28	Yellow Krill
28	0-0-0 algae-seed
29	Armored Algivore
30	Salt Water Crocodiles
30	speedFish
30	FOERDI 1,1,0,1,A
31	plopolo
31	Shellder
32	gkdemaree-9-eater-of-drifting-forager
33	CookiePaladin
35	CookieMaximizer
36	VenomousRiverShark
37	Little fish
37	Coconutwhale
37	CookieAshimo
38	AlgaeProbably
38	Kun
38	gkdemaree-3-defensive-venum-forager
38	gkdemaree-4-tiny-slow-fish
38	Leuphonim
38	Chasnee
39	Phytoplankton
39	Algae Eater
39	Shrimp
39	Green Krill
39	Angy Shrimp
39	Meta-Algae
39	Greenglow Bindylow
39	Smallums
39	Zooplankton
39	Anchovy
39	Guppy

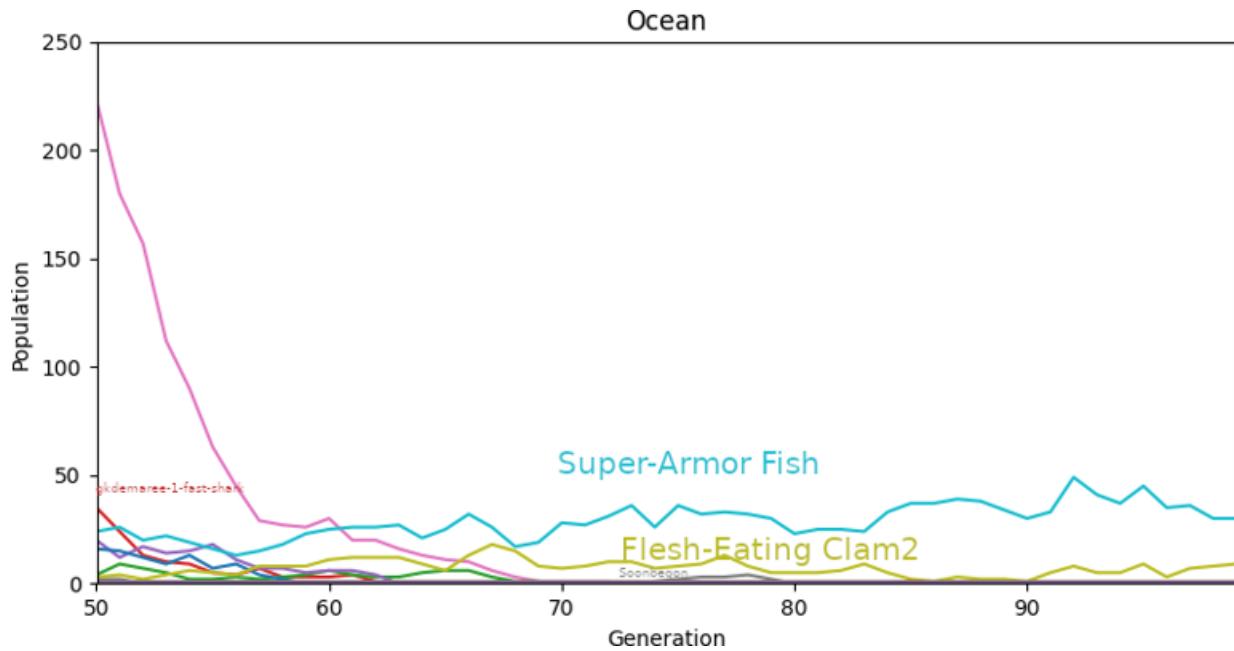
<b>Goes Extinct in Generation</b>	<b>Species</b>
39	0-0-0 algae
39	Algae Tribble
40	Plankton1
40	Microblu
40	Orange Krill
40	Krill3
40	Yonge_Ocean
40	CookieRunner
40	Blue Tang
40	FOERDI 0,0,0,0,A
41	Pike
41	Krill2
41	Fornicacious Krill
41	Red Krill
41	Scumsipper
41	Herring
41	SpeedyFeedy
41	OceanEaty
41	Beaufish
41	Khisesant
41	Senuboon
41	Bhuphin
42	River Llama
42	gkdemaree-5-small-omnivore-fish
42	Snail-tooth Grabble
42	CookieWhite
42	CookieEater
42	CookieSzybcik
42	ocean omnivore
42	cg-fleshfish
42	Jilli
42	Sea snek run
42	FOERDI 0,3,0,3,A
43	RiverSharkFood
43	Sapphire Jelly
43	foooley
43	defenseFish
43	Rosemary
43	Bissurus
44	Right whale
44	CookieShroom
44	Armor Fish

<b>Goes Extinct in Generation</b>	<b>Species</b>
44	Groundlings
45	Slorp
45	gkdemaree-10-small-shark
45	Emerald Jelly
45	Patricians
46	Plage
46	gkdemaree-8-slow-armored-forager
46	Nano-krill
47	Electric eel
47	CookieDevourer
47	CookieMedoKinematic
47	Buneh Rizak-e Chenar
48	Megaladon
48	gkdemaree-6-large-omnivore-fish
48	Twinkle Star
49	algae_eater
49	Lilli

## Generations 51-100

By generation 51, only 8 species remain.

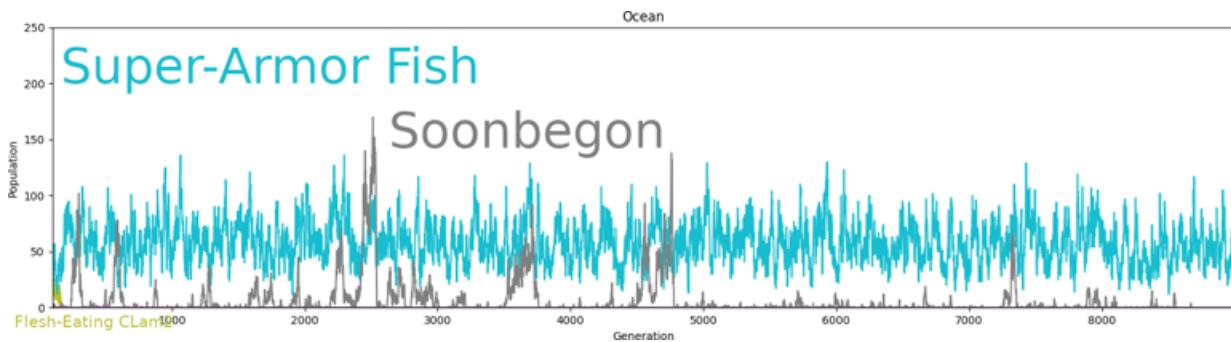
Name	Venom + Antivenom?	Attack	Armor	Speed	Forager?	Creator
Killer whale	Neither	9	1	10		Yair
gkdemaree-1-fast-shark	Antivenom only	10	0	10		Grant Demaree
gkdemaree-2-fast-ocean-venum	Venom + Antivenom	0	0	10	Algae	Grant Demaree
gkdemaree-7-fast-forager-fish	Neither	0	0	10	Algae	Grant Demaree
Apex Predator	Antivenom only	10	0	10		JSH
Killerspeed	Antivenom only	10	0	7	Carrión	VJ
Flesh-Eating Clam2	Antivenom only	0	10	0	Carrión	Yull-Rete
Super-Armor Fish	Antivenom only	0	10	0	Carrión;Algae guy in NY	Random



By Round 100, all that is left are the invincible foragers with maxed-out defense. However, this time there are two niches: one Flesh-Eating Clam 2, which specializes in carrion, and another for Super-Armor Fish, which eats algae too.

## Generations 101-9000

Alas, the Super-Armor Fish's ability to digest Algae lets it eventually outcompete the Flesh-Eating Clam2. A Soonbegon wanders in from time to time from to eat the accumulated Detritus.



## Winners

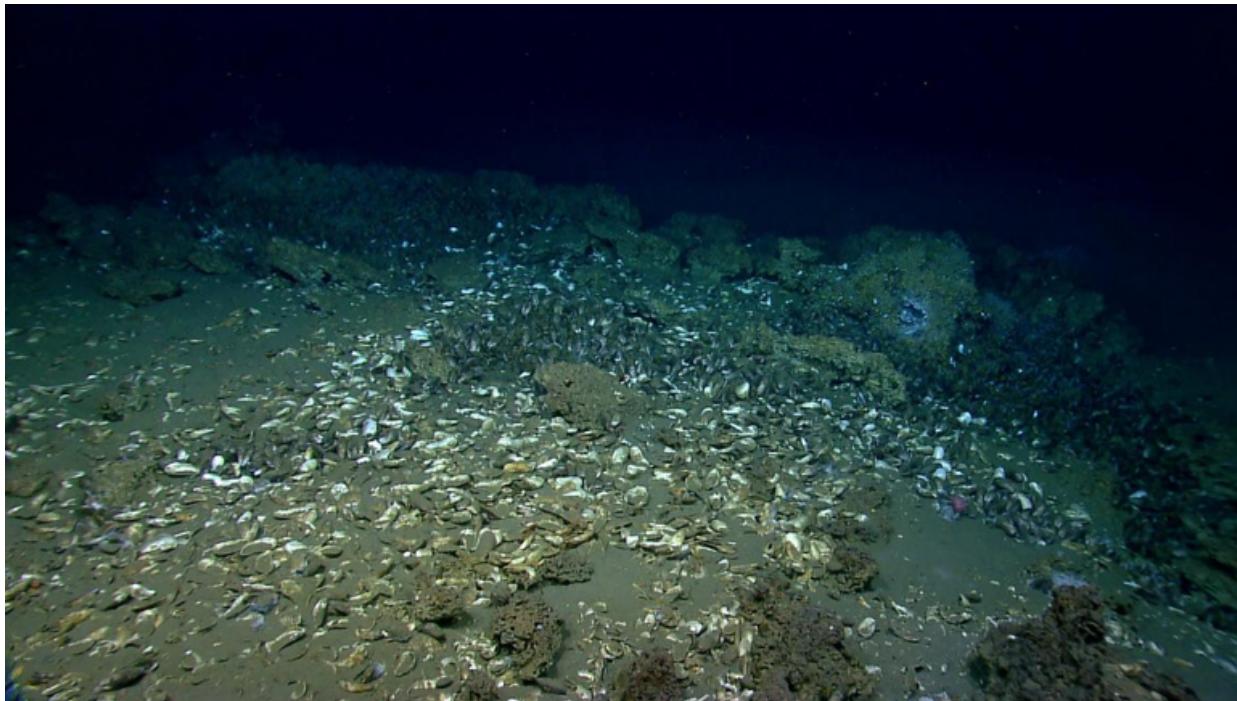
Technically the Soonbegon doesn't survive forever (it goes extinct sometime before generation 10,000) but it survived long enough and interestingly enough I'm going to bend the rules and give it credit anyway.

Name	Venom + Antivenom?	Attack Armor Speed	Forager?	Creator	Social Media
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Name	Venom + Antivenom?	Attack	Armor	Speed	Forager?	Creator	Social Media
Super-Armor Fish	Antivenom only	0	10	0	Carriion;Algae guy in NY	Random	<a href="#">Facebook</a>
Soonbegon	Venom + Antivenom	0	0	10	Detritus	Randall	<a href="#">LinkedIn</a>

# 2021 Darwin Game - Benthic

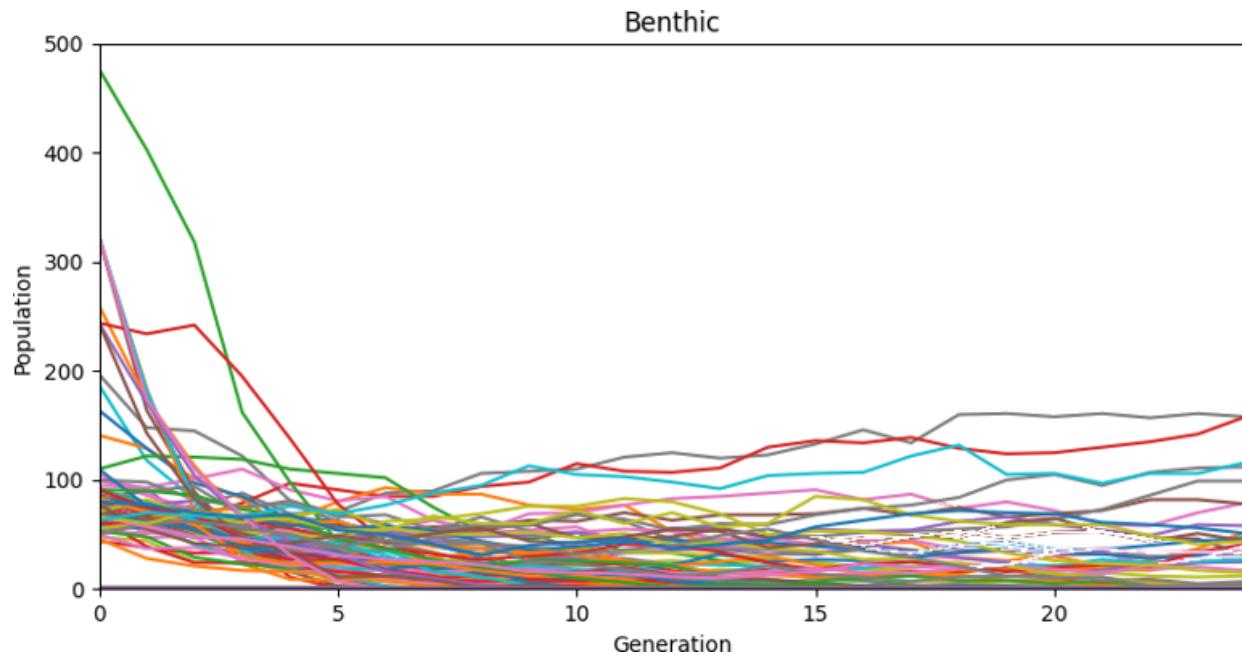
Welcome to the depths of the sea, far beyond the reach of sunlight. Here ye shall feast upon the dead.



Name	Carrion	Leaves	Grass	Seeds	Detritus	Coconuts	Algae	Lichen
Benthic	10	0	0	0	1000	0	0	0

72 species were submitted to the Benthic.

## Generations 0-25



We start with a population crash, as usual. After that, the populations almost look like they stabilize. Less than half of our species have gone extinct.

<b>Goes Extinct in Generation</b>	<b>Species</b>
6	Salpophore
6	Tasty
7	Marine Snow Worm
7	benthic bottom feeder
8	Scavenger
9	Isopoid
9	Detritus Eater Eater
10	Scavenger Shrimp
10	Rubble on Double
10	Sea Zombie
11	Fangliphere
11	Grumpy Jellyfish
11	Doomed
11	Happy Hunter
11	A new hope
12	Krill1
12	Sp0r3
12	Cnidophore
12	Cephalophore
12	Not Picky
13	Detritus Eater Eater Eater
14	Sea Snail
14	Hermit Crab

<b>Goes Extinct in Generation</b>	<b>Species</b>
14	Space Horse
14	BeauOmni3
14	aBa-CG751
15	Flounder
16	Microbet
16	Slowmo
17	aBa-D273
18	Hund
18	Glyptoderm
18	Squid Kid
19	Anglerfish
19	Toxic Squid
20	Torpedo Jelly
23	Willi
24	cg-riverfish

Here are our populations at generation 25.

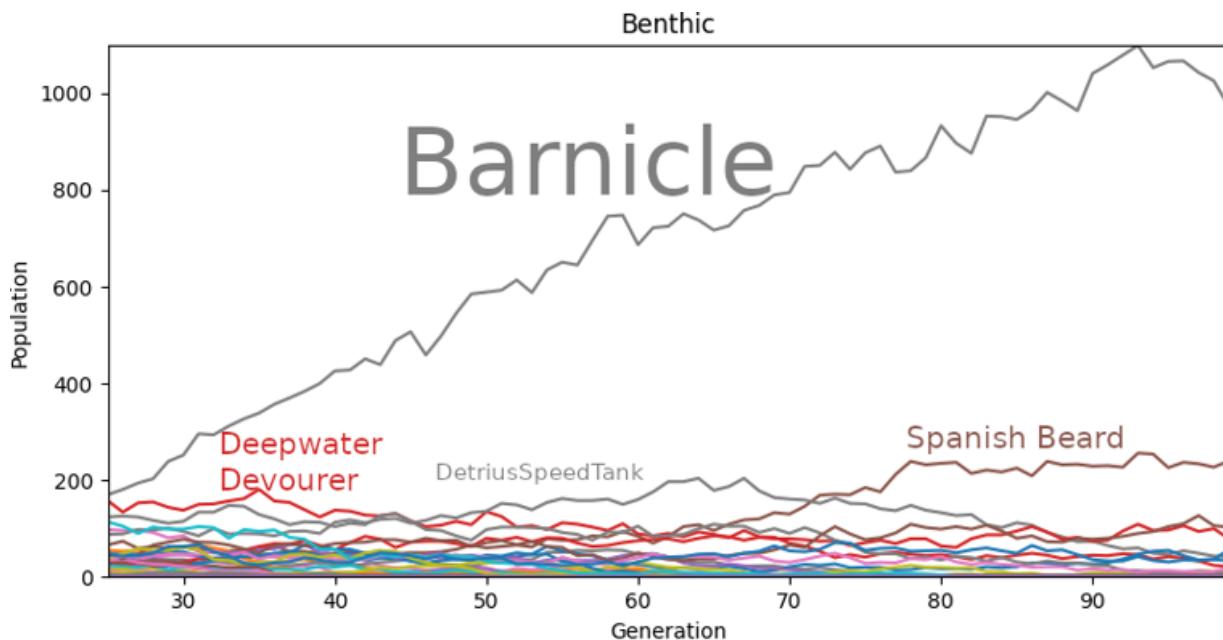
<b>Population</b>	<b>Species</b>
170	Barnacle
158	Deepwater Devourer
124	The Infinite Depths
114	FOERDI 1,6,4,3,D
98	Flutz
88	DetriusSpeedTank
66	Spanish Beard
55	BeauOmni1
50	Silli
46	FOERDI 1,0,10,1,D
45	aBa-D262
43	Tilli
40	FOERDI 0,0,0,10,D
39	FOERDI 1,3,7,3,D
35	Pilli
34	Blood Shark
33	FOERDI 1,10,0,1,D
32	Xilli
30	Chilli
29	omastar
27	Elephantfish
27	Abyssal eel
24	Billi
19	Kraken2

<b>Population</b>	<b>Species</b>
17	Space Fiddler
15	Giant Squid
10	The Tideless Depths
5	FOERDI 1,9,1,1,D
5	Soonbegon
2	gonnabiteit
2	Deap Sea Tortoise
2	Flesh-Eating Clam1
1	Killi
1	Tachyphore

As you might guess, the Barnicle is an invincible Detritus eater and the Deepwater Devourer is a carnivore. However, the Deepwater Devourer is not an apex predator. It has only 3 Attack and 6 speed. (It also has Antivenom and the ability to consume Detritus.)

## Generations 25-100

Barnicles dominate.



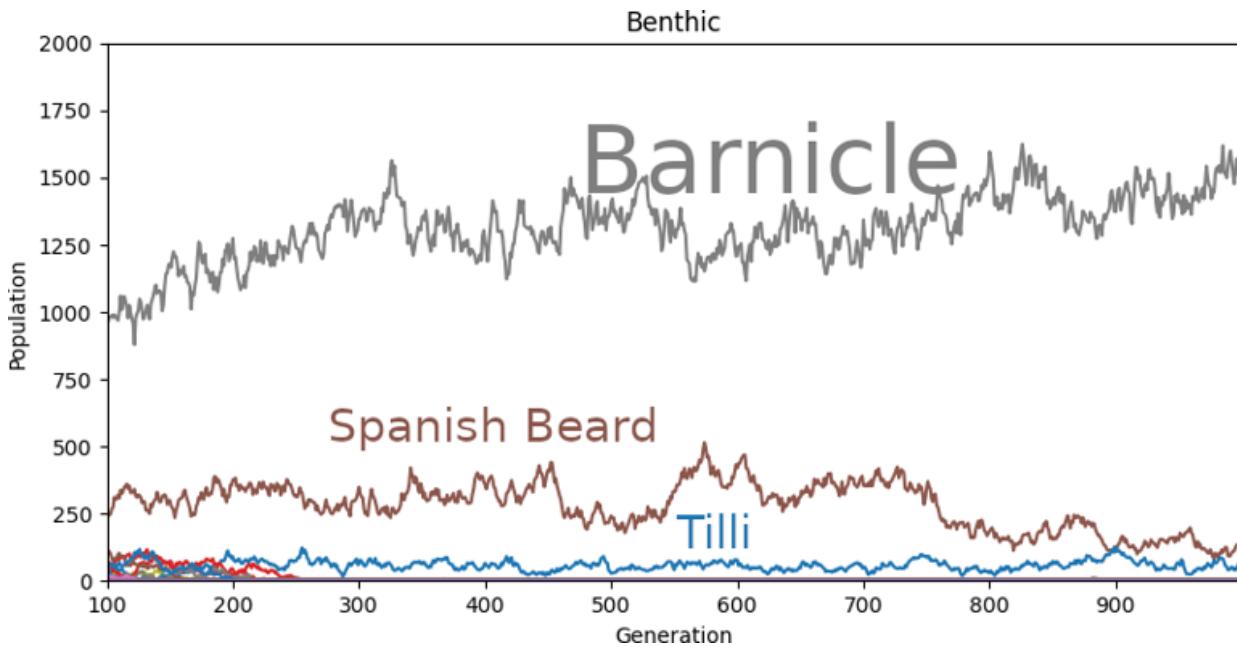
<b>Goes Extinct in Generation</b>	<b>Species</b>
6	Salpophore
6	Tasty
7	Marine Snow Worm
7	benthic bottom feeder
8	Scavenger

<b>Goes Extinct in Generation</b>	<b>Species</b>
9	Isopoid
9	Detritus Eater Eater
10	Scavenger Shrimp
10	Rubble on Double
10	Sea Zombie
11	Fangliphere
11	Grumpy Jellyfish
11	Doomed
11	Happy Hunter
11	A new hope
12	Krill1
12	Sp0r3
12	Cnidophore
12	Cephalophore
12	Not Picky
13	Detritus Eater Eater Eater
14	Sea Snail
14	Hermit Crab
14	Space Horse
14	BeauOmni3
14	aBa-CG751
15	Flounder
16	Microbet
16	Slowmo
17	aBa-D273
18	Hund
18	Glyptoderm
18	Squid Kid
19	Anglerfish
19	Toxic Squid
20	Torpedo Jelly
23	Willi
24	cg-riverfish
28	gonnabiteit
29	Killi
33	Tachyphore
35	Giant Squid
40	Space Fiddler
40	Xilli
40	Pilli
40	FOERDI 1,9,1,1,D
43	Flesh-Eating Clam1

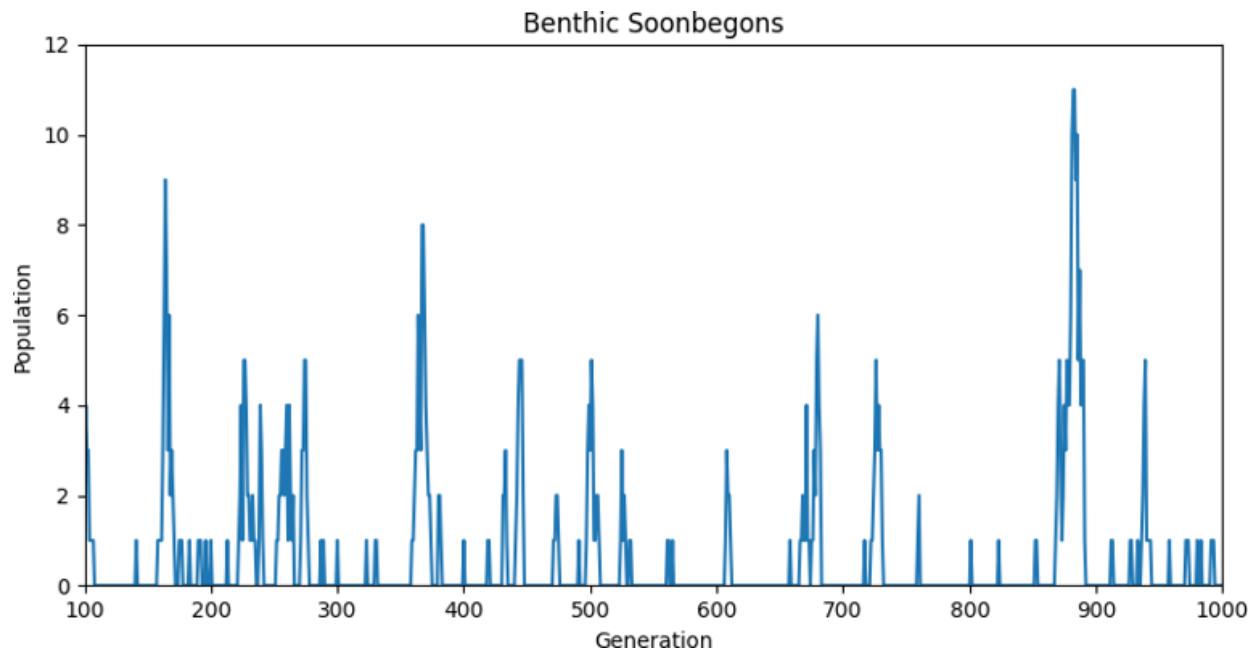
Goes Extinct in Generation	Species
44	Soonbegon
47	Deap Sea Tortoise
63	omastar
63	aBa-D262
65	FOERDI 1,3,7,3,D
66	Kraken2
68	BeauOmni1
73	Elephantfish
75	Billi
78	Flutz
82	FOERDI 1,6,4,3,D
83	Blood Shark
83	Silli
89	The Tideless Depths

## Generations 100-1000

Most of our species die out leaving only Barnicles, Spanish Beards and Tillis.



You can't see it in the above graph but a few Soonbegons trickle in to compete for Detritus.



The Barnicle and Spanish Beard are identicle invincible detritivores. The Tilli occupies a slightly different niche by foraging for Carrion too.

Goes Extinct in Generation	Species
125	FOERDI 1,10,0,1,D
152	DetriusSpeedTank
170	FOERDI 0,0,0,10,D
183	Abyssal eel
203	FOERDI 1,0,10,1,D
230	The Infinite Depths
232	Deepwater Devourer
257	Chilli

## Winners

Name	Venom?	Attack	Armor	Speed	Forage?	Creator	Social Media
Barnacle	Antivenom only	0	10	0	Detritus	Guy Srinivasan	
Spanish Beard	Antivenom only	0	10	0	Detritus	VJ	None
Tilli	Antivenom only	0	10	0	Carrion;Detritus	Milli	None
Soonbegon	Venom + Antivenom	0	0	10	Detritus	Martin Randall	<a href="#">LinkedIn</a>

# 2021 Darwin Game - Human Garbage Dump

The human garbage dump is a place you can find anything. It was also (to me) surprisingly popular with 90 species submitted.

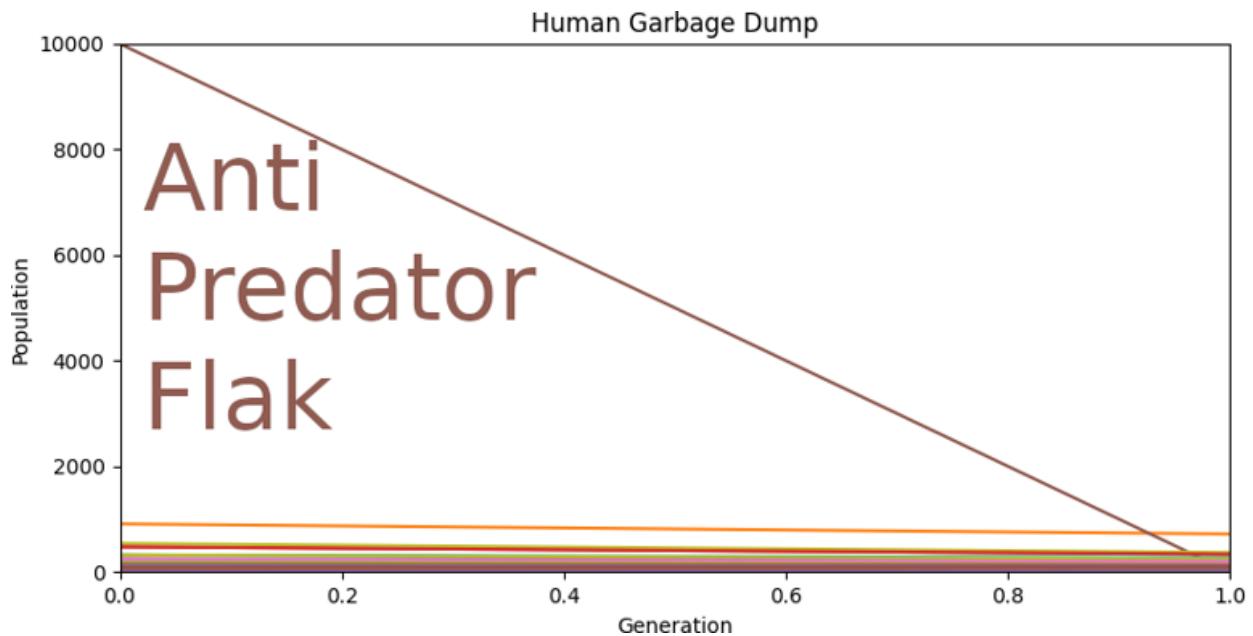


Name	Carrion	Leaves	Grass	Seeds	Detritus	Coconuts	Algae	Lichen
Human Garbage Dump	100	100	100	100	100	100	100	100

In each of our previous biomes, there was one primary source of forage. This is our first biome with many different viable options to forage. However, individually, none of them are very large. Even if there's no predators, the diverse primary production should ensure a little more biodiversity among foragers.

## Generations 0-1

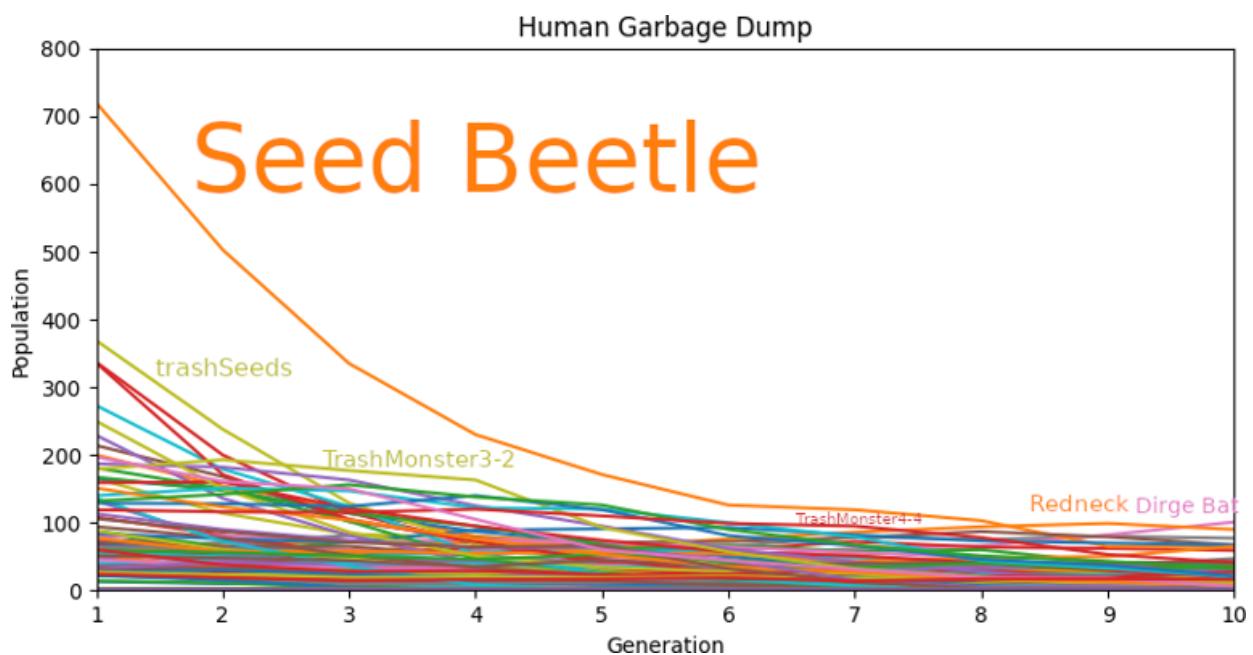
We start with Anti Predator Flak. It's just like just like the Ocean's First Round Predator Distractor except it was created by Multicore.



**Goes Extinct in Generation**      **Species**  
1    Anti Predator Flak

## Generations 1-10

Most of the initial populations crash, as usual.



The Seed Beetle is exactly what it sounds like: a tiny organism with the ability to digest seeds and nothing else.

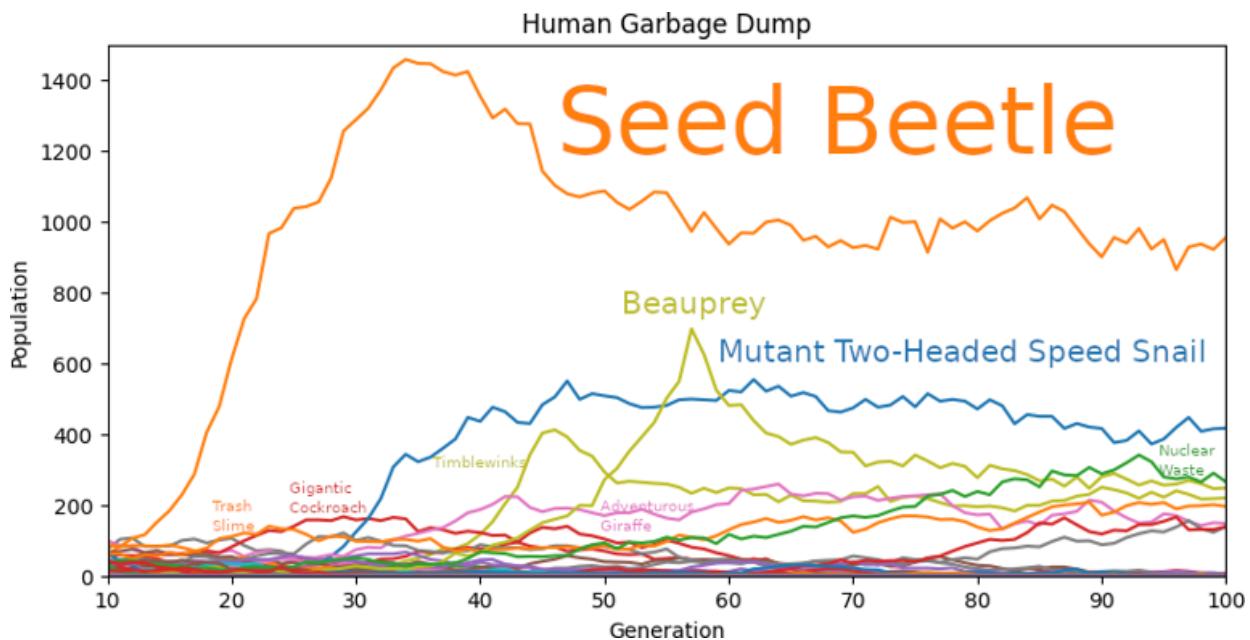
**Goes Extinct in Generation**      **Species**

Goes Extinct in Generation	Goo Species
6	Beauconut
8	Gelatinous Cube
8	Ivem
10	Chittering Harvester
10	Boot Nipper
10	Dump Leaf Blight

## Generations 10-100

The Seed Beetle Population explodes. I think what's going on is something Multicore pointed out at the game launch. The Seed Beetle is so small that it provides inadequate nutrition to large carnivores. At first, predators eat the Seed Beetle, then the carnivores starve. The Seed Beetle is thus left without predators.

The Mutant Two-Headed Speed Snail is a Grass forager with Speed 2. The Beauprey forages for Seeds and Lichen and has Speed 1.



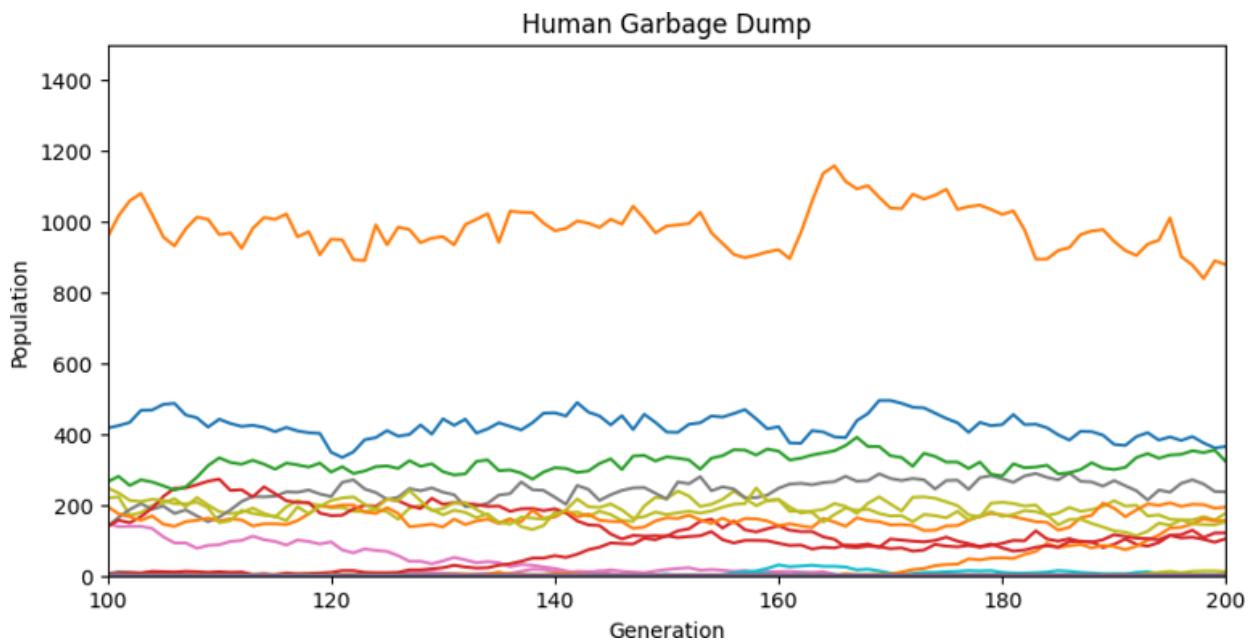
Goes Extinct in Generation	Species
11	Trash Lobster
11	Carrion Condor
11	Roaches
11	Trash Panda2
11	Muk1
12	Small CocoCrab
12	The Fart Brigade
12	Thread-Nibbler
12	Dump Aphid

<b>Goes Extinct in Generation</b>	<b>Species</b>
12	Slime Mold
12	mediocre 2-2-s2
12	Muk2
13	Olchi
13	TrashMonster3-2
14	Sentient Bio Reactor
14	BottomFeeder
14	SpeedDemon
14	mediocre 2-2-g
14	TrashMonster2-2
15	TrashMonster3-4
15	TrashMonster4-3
16	Big CocoCrab
16	Unpalatable Coconut Crab
16	TrashMonster4-2
17	Rabbit
17	Lazy Stationary Glutton
17	sc511
17	trashSeeds
18	Grease Monkey
19	Garbage Dump Shai-Hulud
19	Trolley
20	Coconut Crabs (tiny)
20	TrashMonster3-3
21	Robot
21	Rat
21	CP445957
22	mediocre 2-2-s1
23	Frogger
23	Coconut Cruncher
23	Yonge_Dump
23	TrashMonster4-4
24	All-eating Leviathan
24	Inquisition
25	Bleh
25	Robber Crab
27	Hyper fly
28	Coconut crab
28	Slow Moving Nuclear Waste
29	Garbage Disposal
32	Blitz Leech
32	2-8-0 A algae-carrion-coconut-detritus-lichen

Goes Extinct in Generation	Species
32	Jibbers Crabst
33	Snail-Eating Snail
34	Micro Swamp Dragon
37	Mecha giraffe
37	Twangoola
38	25kg Racing Snake
38	Redneck
40	weaponized human
44	Garbovorous Mirages
45	Dirge Bat
47	AI Lawnmower
48	Trash Locust+
50	gumbler
50	Cubic Carrion Crawlers
56	Trash Dino
56	CarrionSpeedTank
75	COCONUT511
89	Lary
89	Gigantic Cockroach
99	Roomba

## Generations 100-200

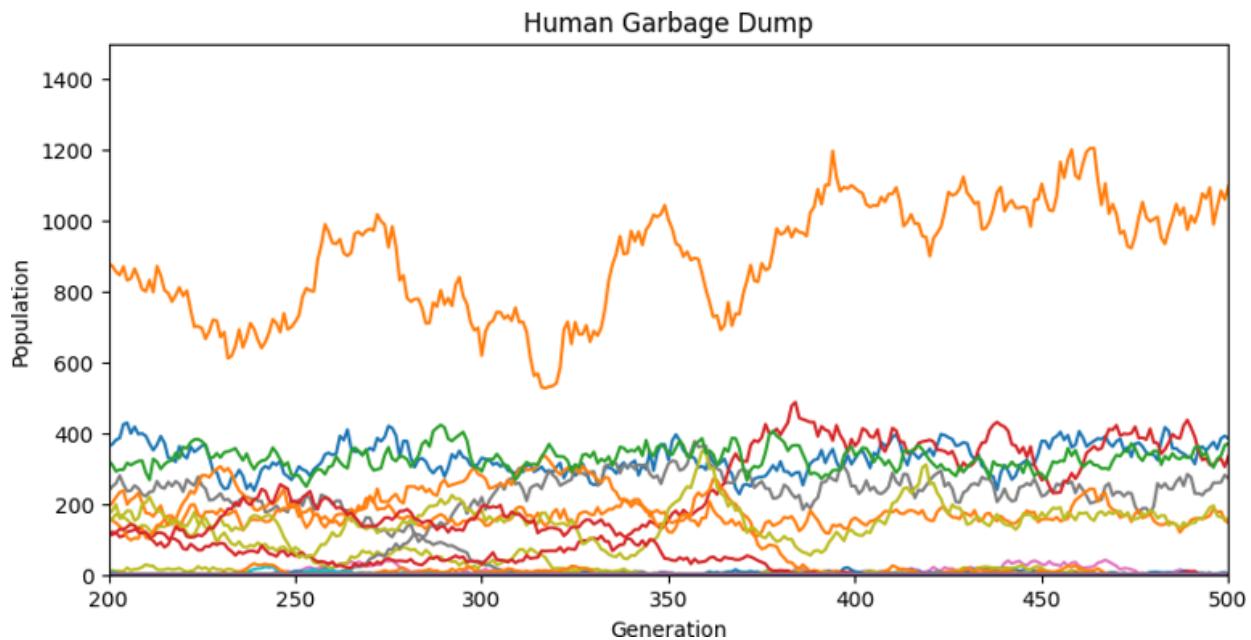
Species die out more slowly but there are no dramatic shifts in population.



<b>Goes Extinct in Generation</b>	<b>Species</b>
105	Living Garbage Can
107	Ironshell Crab
109	Zigzagoon
157	Adventurous Giraffe

## Generations 200-500

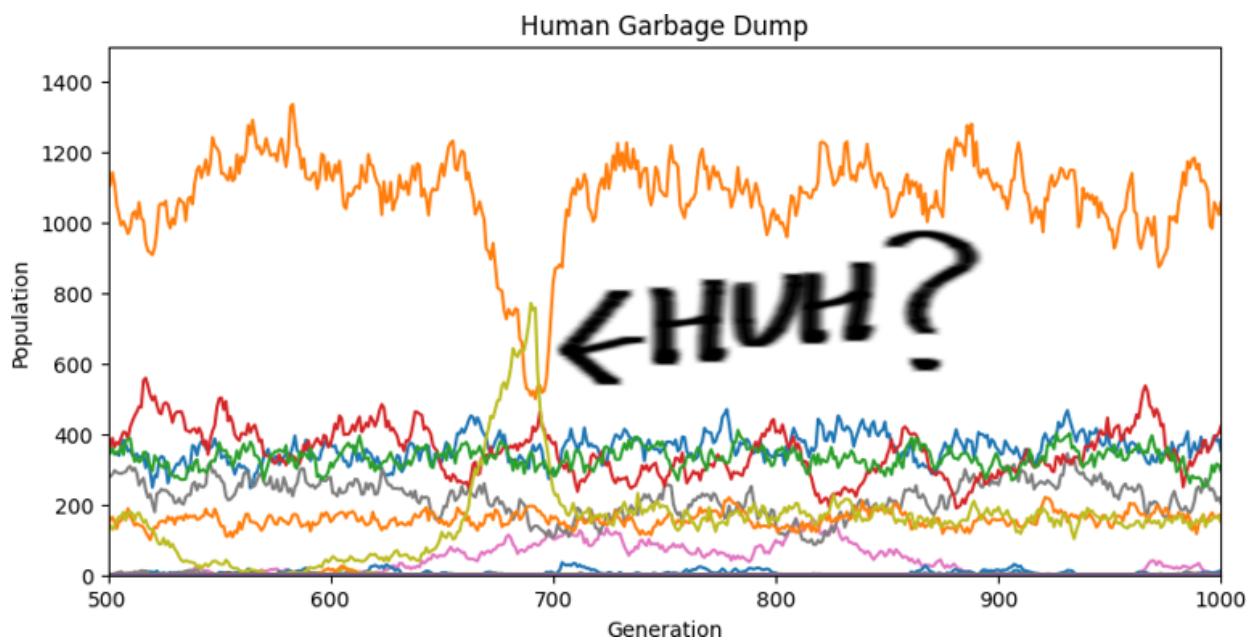
Nothing to see here.



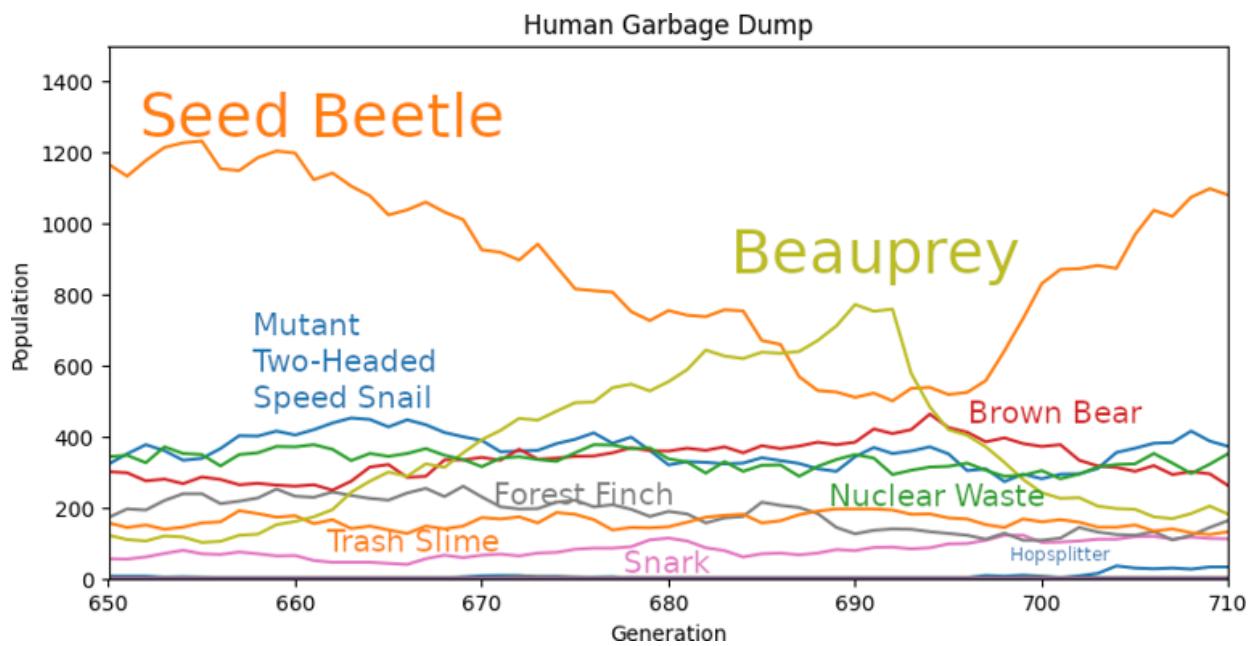
<b>Goes Extinct in Generation</b>	<b>Species</b>
330	Timblewinks

## Generations 500-1000

Nothing to...wait what?



Let's take a closer look at what's going on.



There are nine species of consequence.

Name	Venom?	Weapons	Armor	Speed	Forage?	Creator
Seed Beetle	Neither	0	0	0	Seeds	DaemonicSigil
Mutant Two-Headed Speed Snail	Neither	0	0	2	Grass	DaemonicSigil
Nuclear Waste	Antivenom only	0	10	0	Carrion	Henny
Brown Bear	Neither	3	0	6		elspoof

Name	Venom?	Weapons	Armor	Speed	Forage?	Creator
Beaprey	Neither	0	0	1	Seeds;Lichen	Luke
Trash Slime	Antivenom only	0	10	0	Detritus	Yull-Rete
Forest Finch	Neither	0	0	3	Leaves	MA
Snark	Neither	0	0	10	Leaves	Vanessa
Hopsplitter	Neither	0	0	10	Grass;Seeds	Nem

We have four invincible foragers: Nuclear Waste consumes Carrion. Trash Slime consumes Detritus. Snarks consume Leaves. Hopsplitters consume Grass and Seeds.

The Forest Finch competes for leaves with the Snark.

The Hopsplitters compete for seeds with the Seed Beetles and the Beaupreys. The Seed Beetle is a tiny organism optimized to consume seeds. The Beauprey is less efficient at eating seeds than the Seed Beetle but makes up for it by also being able to digest Lichen.

The Mutant Two-Headed Speed Snail eats grass, where it competes with the Hopsplitter.

The Brown Bear is a pure predator. It cannot eat the invincible foragers but it can eat the Seed Beetles, Snails, Hopsplitters, Forest Finghes and Forest Finches.

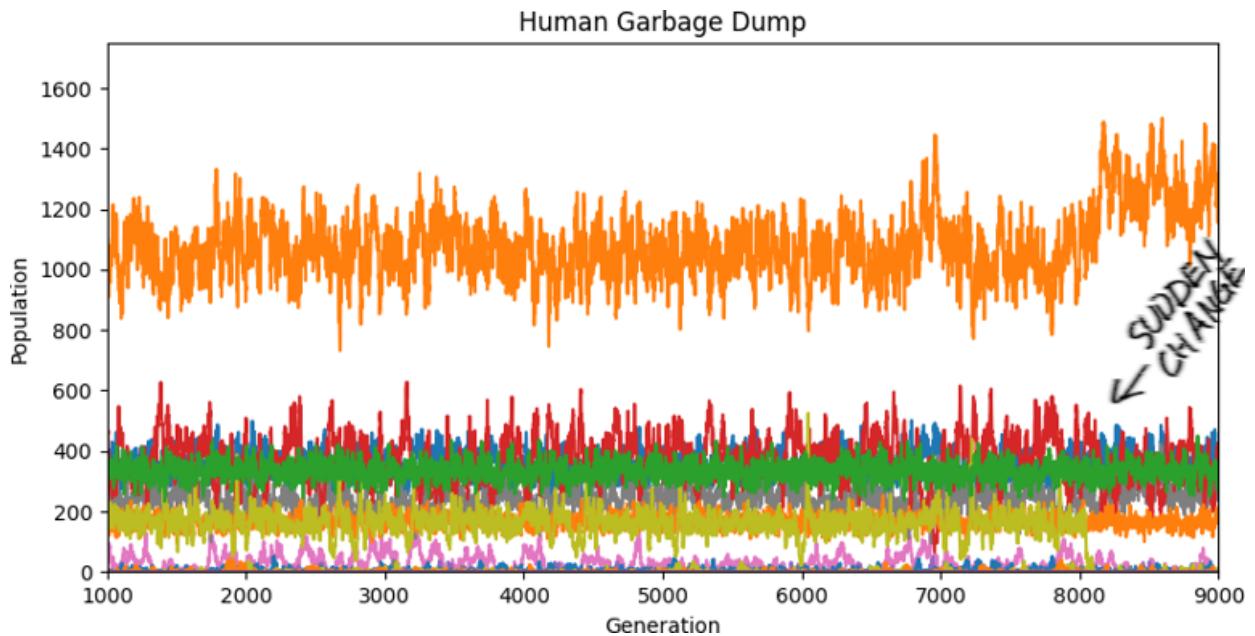
Putting this all together, we have two kinds of foragers: small foragers that can be eaten by bears and invincible foragers those that cannot. If the bear population increases the small forager population decreases which increases the invincible forager population which decreases the bear population. This cycle works in reverse too. We have a stable ecosystem.

But if it's stable then what happened around generation 690?

The Seed Beetle population decreased because the Beauprey population increased. The Beauprey Population increased because there was lots of Lichen available. The Beauprey is the only species which can eat Lichen. Around generations 550 to 650 there were very few Beaupreys. The Lichen accumulated. The Beauprey's growth around population 680 ate that accumulated Lichen. After the Lichen was consumed, the Beauprey population decreased to something stable.

## Generations 1000-9000

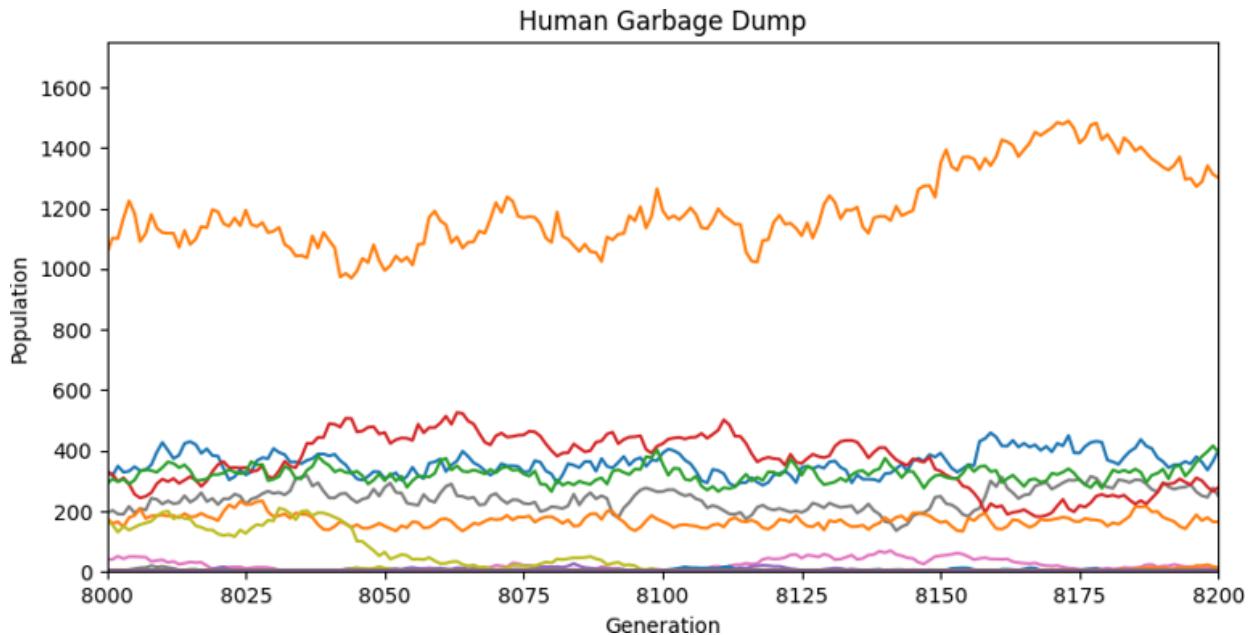
The dynamic equilibrium is maintained until generation 8101 when the Beaupreys suddenly go extinct.



### Goes Extinct in Generation Species

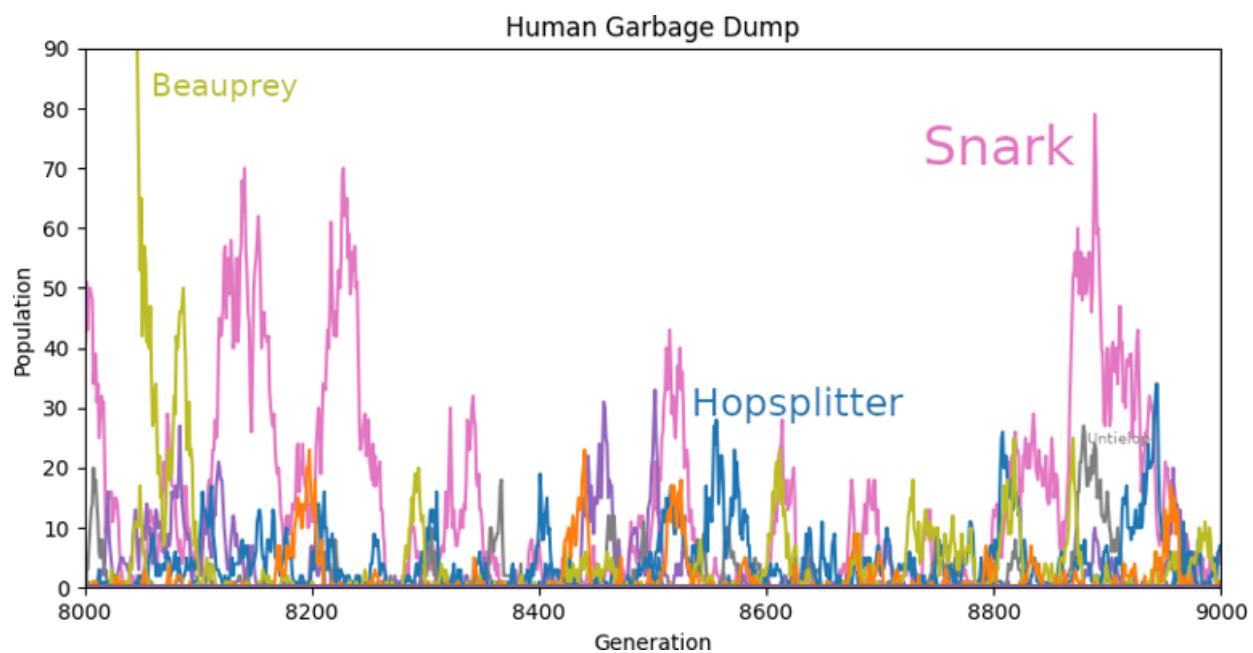
8101 Beauprey

Let's zoom in.



What happened is the Brown Bear population randomly rose for long enough to extinguish the Beaupreys, which were already in a precarious position due to competition from the Seed Beetles..

But that's not all. I just counted the common species. There are a few rare species hiding on the bottom edge of our graph, like Snarks. The Snark is a 10-speed Leaf eater by Vanessa. The Beauprey, having Speed 1, comes back from time to time too.



## Winners

Species	Creator	Social Media
Seed Beetle	DaemonicSigil	<a href="#">Twitter</a>
Mutant Two-Headed Snail	DaemonicSigil	<a href="#">Twitter</a>
Nuclear Waste	Henny	None
Forest Finch	MA	None
Brown Bear	elspoold	None
Trash Slim	Yull-Rete	None
Snark	Vanessa	None

# 2021 Darwin Game - River

The River contains lots of every foragable food. The River is like the Human Garbage Dump except:

1. It has 5x as many resources.
2. Both air-breathing and water-breathing species can survive in the River.
3. Organisms may not start in the River. They must wander in.

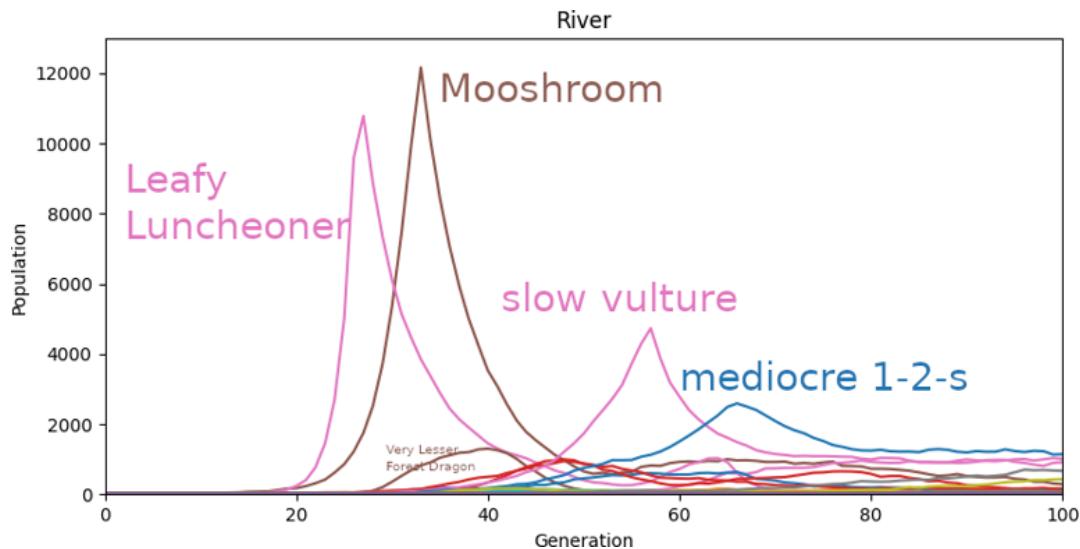


Name	Carrion	Leaves	Grass	Seeds	Detritus	Coconuts	Algae	Lichen
River	500	500	500	500	500	500	500	500

## Generation 0

At first, there are no animals and the foragables accumulate.

## Generations 1-100



Species	Original Biome	Venom?	Weapons	Armor	Speed	Forage?	Creator
Leafy Luncheoner	Temperate Forest	Neither	0	0	1	Leaves	Sean Hyer
Mooshroom	Grassland	Neither	0	0	5	Grass;Seeds	Vanessa
slow vulture	Desert	Antivenom only	0	10	10	Carrion	eat (Allows survival in the Desert),Corm
mediocre 1-2-s	Grassland	Neither	1	0	2	Seeds	Corm
Very Lesser Forest Dragon	Rainforest	Neither	2	0	2		Persephone 0461

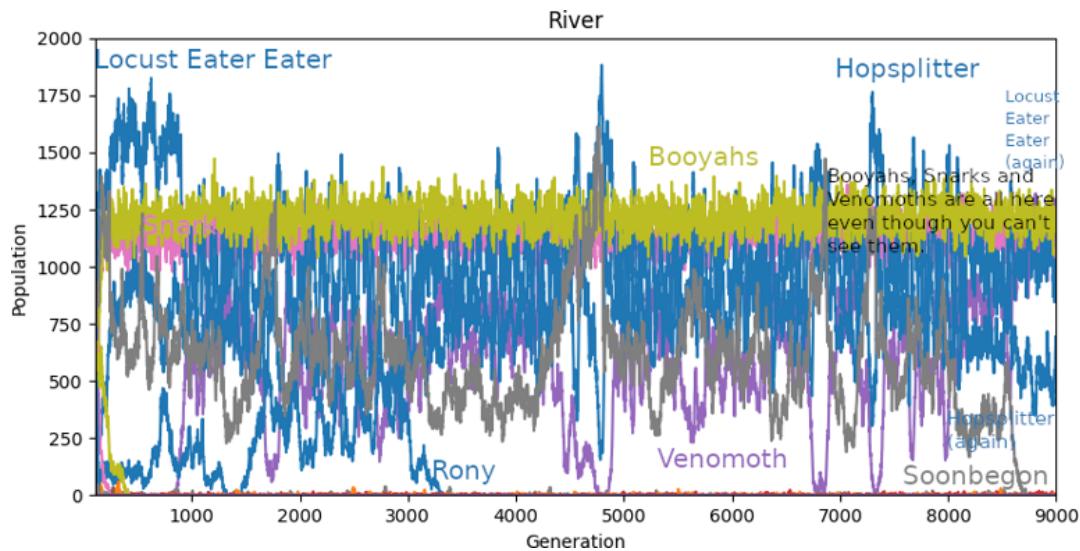
The same pattern repeats for each foragable. First the foragable accumulates. Then a species which can consume the foragable appears. Its population explodes until it has eaten the accumulated foragable. Finally, its population reverts to carrying capacity.

Persephone 0461's Very Lesser Forest Dragon wandered in. It thrived until another predator appeared which hunted it to extinction.

## Generations 100-9000

Species appear. Species Disappear. Life is always in flux.

This is where all the Ocean's Soonbegons were coming from. Until they didn't anymore.



## Winners

Name	Native Biome	Venom?	Attack	Armor	Speed	Forage?	Temperature Adaptation?	Creator	Social Media
Booyahs	Desert	Neither	2	0	10	Carrion	Heat (Allows survival in the CK Desert)		None
Snark	Temperate Forest	Neither	0	0	10	Leaves		Vanessa	None
Venomoth	Rainforest	Venom + Antivenom	0	0	3	Grass		aphyer	None
Locust Eater Eater	Temperate Forest	Neither	2	0	2	Seeds		Multicore	None
Hopsplitter	Grassland	Neither	0	0	10	Grass;Seeds		Nem	None

# 2021 Darwin Game - Everywhere Else

## Shore

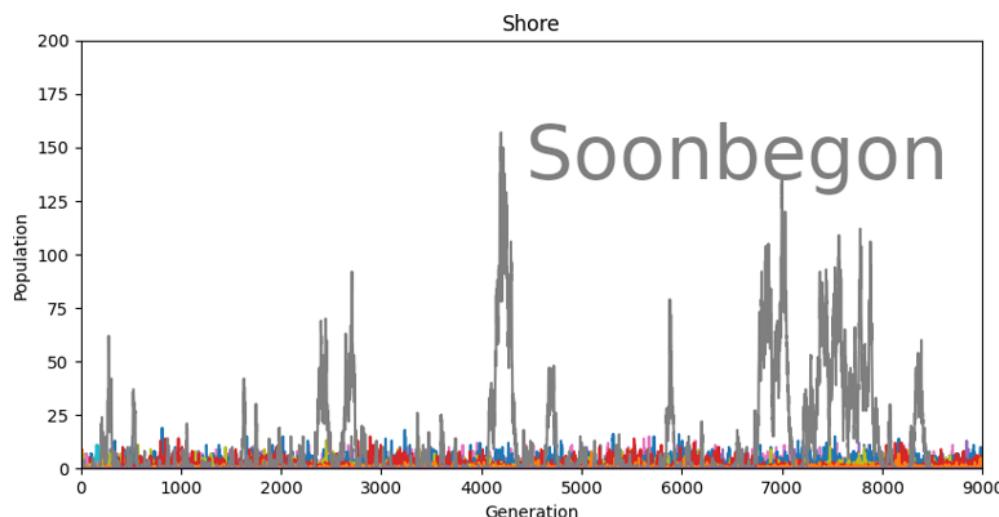
The Shore is an inhospitable wasteland. Algae is available, but it's not very nutritious. Coconuts offer an even worse calories-to-digestion ratio.



Name	Carrion	Leaves	Grass	Seeds	Detritus	Coconuts	Algae	Lichen
Shore	0	0	0	0	20	1000	1000	10

No coconut eaters got established in the Human Garbage Dump, which means no coconut eaters got established in the River or Shore instead. The only available food is algae. The Shore is basically a small bit of Ocean biome with  $\frac{1}{10}$  of the algae. The algae-eating winner of our Ocean competition has zero speed so it cannot migrate to the Shore.

To top all of it off, predators migrate in from both sea and land.



Soonbegons migrate from time to time to eat the Detritus. Otherwise, the Shore is mostly a graveyard.

## Winners?

Soonbegons (kind of) by Martin Randall.

## Grassland

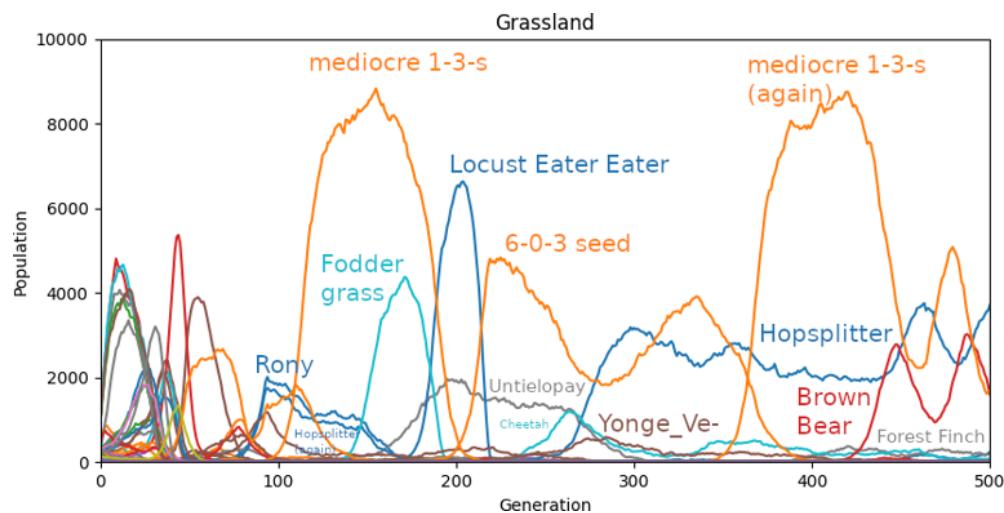
The grassland has lots of grass and even more seeds.



Name	Carrion Leaves	Grass Seeds	Detritus	Coconuts	Algae	Lichen
Grassland	0	100	1000	2,000	0	0

The Grassland took 500 turns to establish an equilibrium.

## Generations 1-500

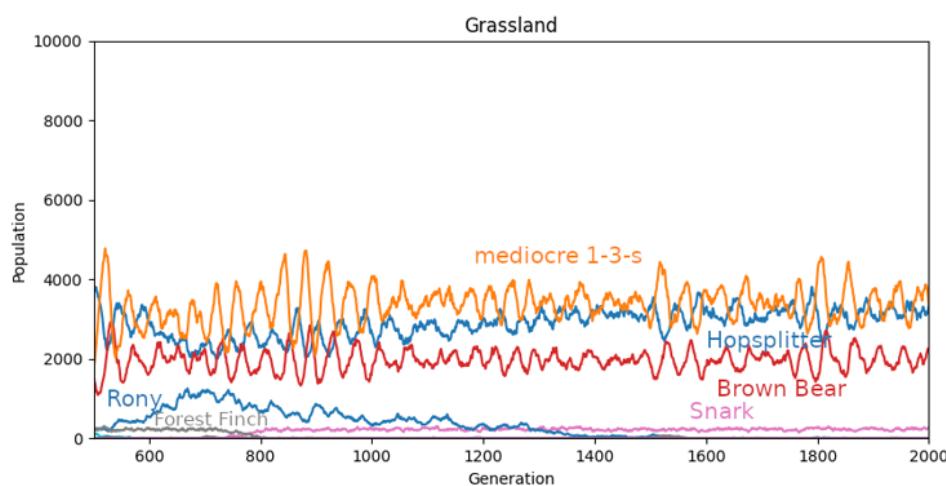


<b>Goes Extinct in Generation</b>	<b>Species</b>
11	Meercat colony
14	Flock of birbs
15	Bool
16	Big Oof
17	Empowered Turtle
17	glpp511
18	cg-bird
19	Nyarlathotep
20	Human
21	Tiny Snek
21	grass_mouse
22	Sleepypotat
22	Frontier-W8
23	Armored Nutcracker
23	Toxikeet
23	IGha-S541
24	Cowlagor
27	Karthosorox
30	Piranhakeet
30	cg-fastbird
31	Vampirek
32	Yonge_Snake
34	Sheep
37	Jackrabbit
39	Grassland Tribble
39	Grassland Aphid
40	basic seed fodder
40	Galumphers
40	IGca-AS154
41	GrassSeeater
41	Small Moth
41	SpeedyLichen
41	BeaupreyButGrassland
41	Tribble
42	DefinitelyJustARock
44	Weedle
45	Bob
45	SeedyEaty
45	Locust-Seeds
47	Tribble Hunter Hunter
49	Goat
51	seed fodder
52	Seed Eater Eater Eater
53	Frontier-W2
56	Trash Panda1
56	mediocre 1-2-s
59	Common Rat
61	Omnivorous Tribble Hunter
62	Frontier-W5
63	Siolid
65	Cannibal Locust
68	Tribble Hunter Hunter Hunter Hunter
73	Ziarnojad Malutki

Goes Extinct in Generation	Species
74	Horned Owl
78	Yonge_Omnivore
83	Medium Seedrat
86	Maverick Goose
89	Squish
187	Mooshroom
294	Killer Bunny
345	Untielopay
423	6-0-3 seed
466	Yonge_Vegan

## Generations 500-2000

The grassland establishes an equilibrium. The only native species left is the Hopsplitter.



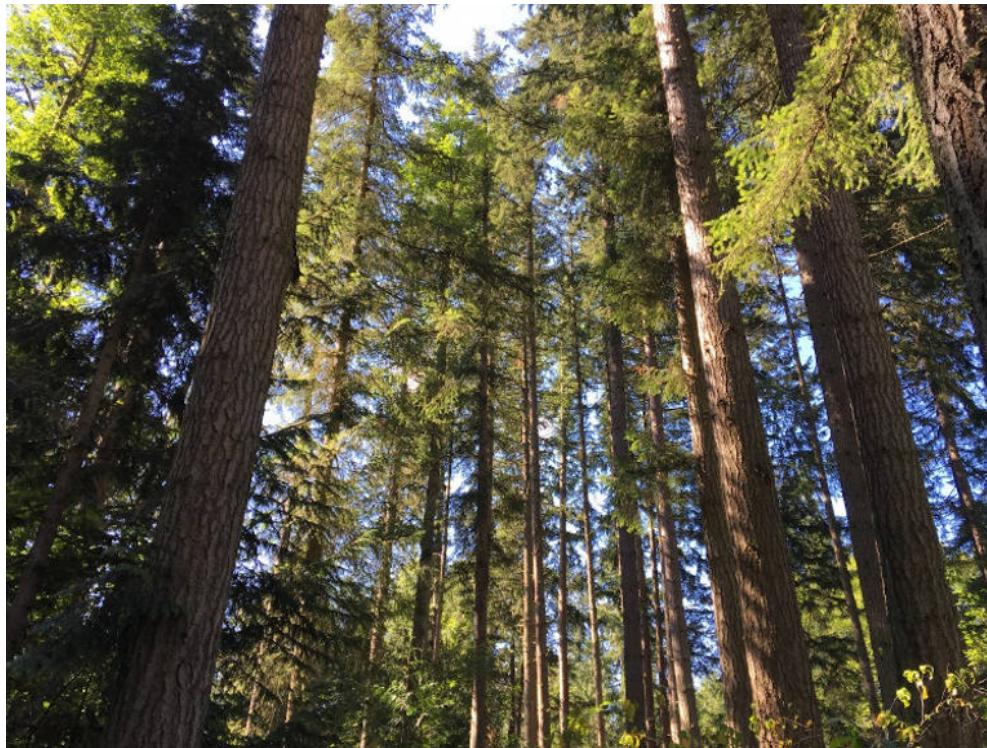
You can't see it but there's a single Venomoth on the bottom of the graph.

## Winners

Species	Native Biome	Venom?	Weapons	Armor	Speed	Forage?	Temperature Adaptation?	Creator	Social Media
mediocre 1-3-s	Temperate Forest	Neither	1	0	3	Seeds		Corm	None
Hopsplitter	Grassland	Neither	0	0	10	Grass;Seeds		Nem	None
Brown Bear	Temperate Forest	Neither	3	0	6			elspoold	None
Venomous Snark	Desert	Venom + Antivenom	1	0	3	Carriion	Heat (Allows survival in the DaemonicSigil Desert)		<a href="#">Twitter</a>
Venomoth	Rainforest	Venom + Antivenom	0	0	3	Grass		aphyer	None

## Temperate Forest

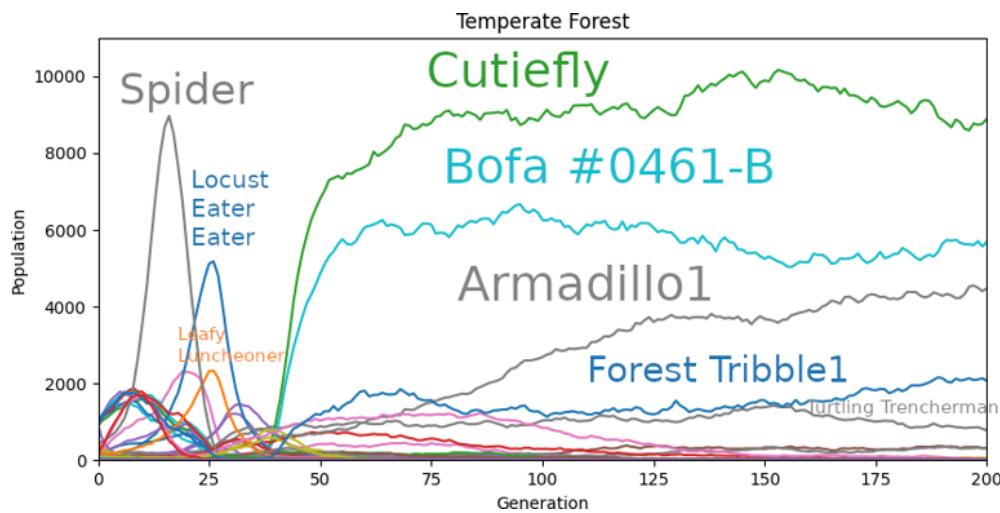
The temperate forest has lots of leaves and significant seeds.



Name	Carrion	Leaves	Grass	Seeds	Detritus	Coconuts	Algae	Lichen
Temperate Forest	0	2,000	100	1000	0	0	0	50

## Generations 1-200

The population grows, crashes, and then grows again.



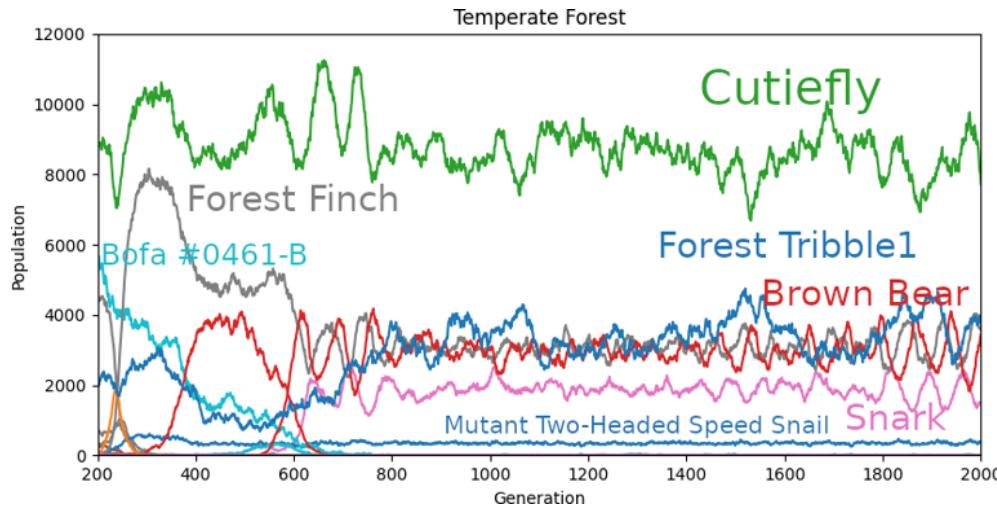
### Goes Extinct in Generation

	Species
9	Grizzly Bear
12	Optimistic Omnivore
13	LeavySpeedyTanky
13	The Dark Secret of Harvest Home
14	Colonoscopies
15	TFP511

<b>Goes Extinct in Generation</b>	<b>Species</b>
15	Gobbledygook
16	Boojum
16	Ankylosaurus
16	Monstrous Bandersnatch
17	Arboreal Assailant
17	Ultimate Lifeform
17	Bear2
18	BeauOmni2
21	FastHerbivore
22	RockMonkey
22	Gino Soupprayen
23	Hedgie
24	Basilisk
24	Meta-Lichen
25	Armored Pigeon
26	Lichen Bug
26	Fox
26	Predator
29	Forest Leaf Blight
29	Leaf Tribble
31	TreeSeeater
31	Yonge_Slug
32	Gippip
32	You Worm!
33	Leafy Luncheoner
33	Caterpie
33	Spider
34	Forest Dragon
34	Woodland Locust
34	Forest Tribble2
40	Munchers
41	Skitter Critter
52	SpeedySeedy
57	Unicorn
57	mediocre 1-3-s
57	IF-LM732
60	Songalagala
62	Mango
69	Sky Shark
70	Locust Eater Eater
71	Brown Bear
72	Snake
78	Bullfrog
79	Pidgeotto
81	Fast Venomous Snake
82	Morpork Owl
85	Deadly Mickey K
89	IFa-G172
93	Phanpy
97	Bear1
104	Omnom
109	Ken Nishimura
110	Forest Scorpion

Goes Extinct in Generation	Species
114	Yonge_Defense
140	Snark
152	Bastion
169	Titanosaur

## Generations 200-2000



The system achieves stability stable (except for a random walk among equals).

Goes Extinct in Generation	Species
219	Gypsy Moth
272	Armored Sloth
290	Donphan
333	Armadillo1
336	Szaromysik
342	Turtling Trencherman
762	Bofa #0461-B

## Winners

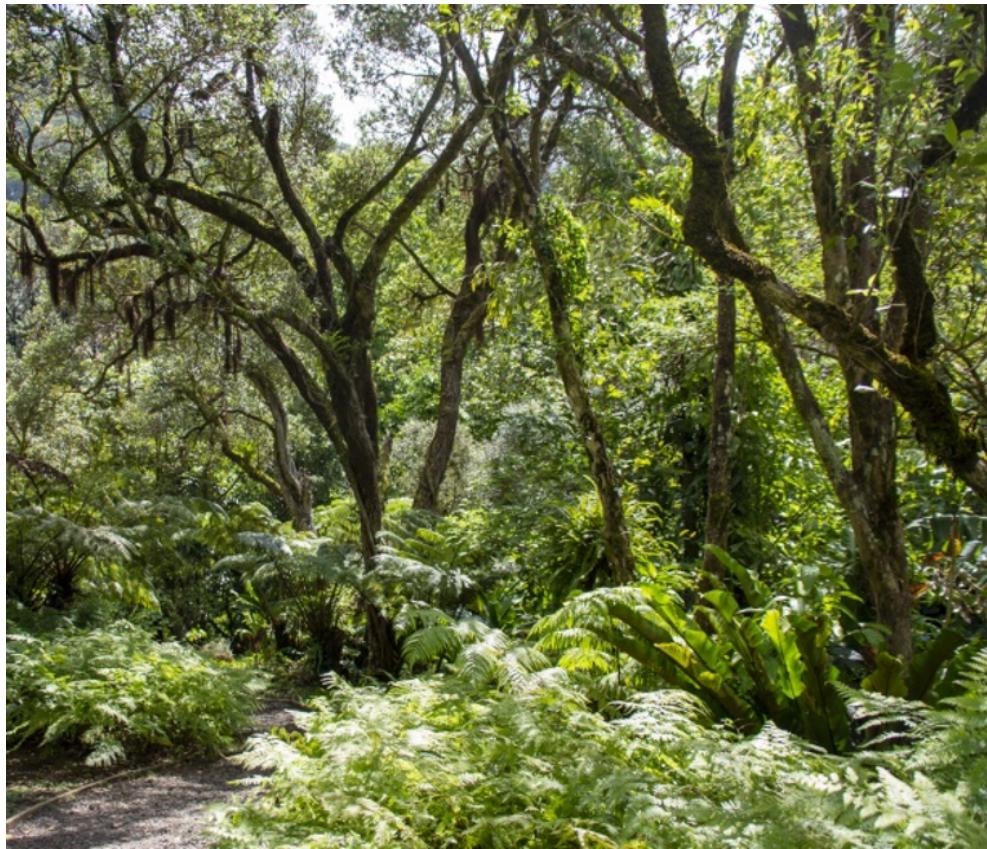
None of our final species have venom or antivenom.

Species	Native Biome	Venom?	Weapons	Armor	Speed	Forage?	Creator	Social Media
Cutiefly	Temperate Forest	Neither	0	0	0	Seeds	alkjash	None
Brown Bear	Temperate Forest	Neither	3	0	6		elspoold	None
Forest Finch	Rainforest	Neither	0	0	3	Leaves	MA	None
Snark	Temperate Forest	Neither	0	0	10	Leaves	Vanessa	None
Forest Tribble1	Temperate Forest	Neither	0	0	0	Seeds	simon	None
Mutant Two-Headed Speed Snail	Human Garbage Dump	Neither	0	0	2	Grass	DaemonicSigil	<a href="#">Twitter</a>

An honorable mention goes to the N054J's Forest Tribble2 which is identical to the Cutiefly and the Forest Tribble1.

## Rainforest

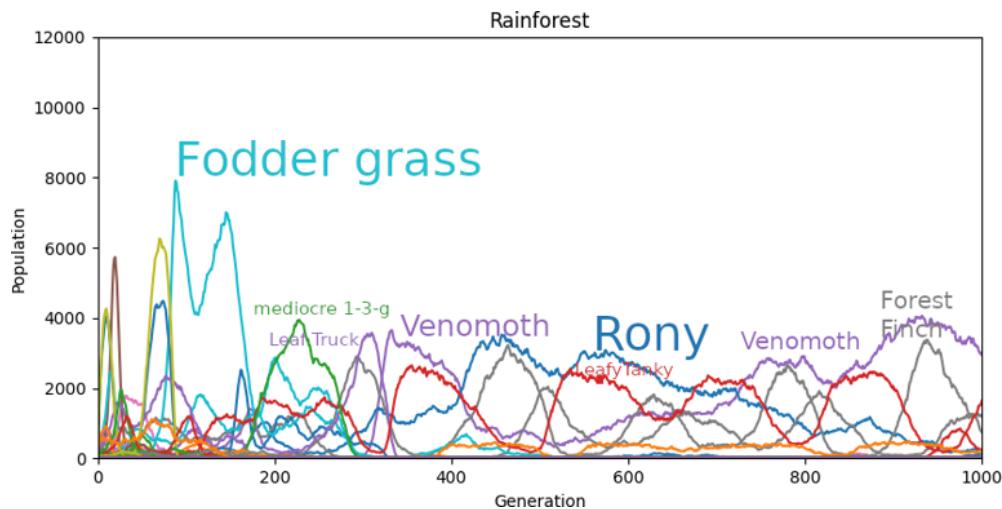
The Rainforest has lots of leaves and grass but few seeds.



Name	Carrion Leaves	Grass Seeds	Detritus	Coconuts	Algae	Lichen
Rainforest	0	1000	2,000	100	0	0

## Generations 0-1000

It takes 1000 generations to establish an introduction.



Goes Extinct in Generation

11

11

Species

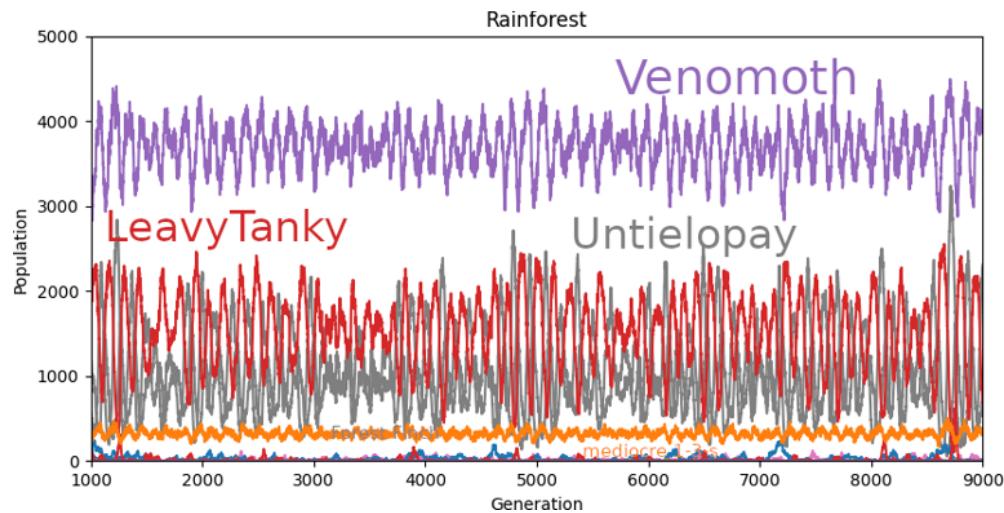
Quartosaurus

Jon Rahoi

<b>Goes Extinct in Generation</b>	<b>Species</b>
12	Stinging ant colony
14	Slug
16	Smok Wawelski Przezuwacz
18	Tree Clam
19	Slebon
22	Rainmun
25	J's RLB
25	Iuden
29	Rainforest Leaf Blight
31	Tinysnek
32	Agyneta insolita
36	Crocodile
37	Giant Snake
39	Forest Ape
40	Very Lesser Forest Dragon
42	Birgus
47	Deerling
49	Elephant
60	IRa-G256
61	Murder Hornet
64	Yonge_Rainforest
66	BeauOmni2ButRainforest
79	Jungle Hare
81	Stomporz
84	Raincow
90	Grazing Snake
91	Wombat
93	basic grass fodder
95	Armadillo2
98	Rainforest Aphid
100	GrasseatyTank
111	Bofa 0461
119	Arboreal Grazer
127	Boop
128	Nine-Banded Armadillo
145	Tell Masoud
156	Rain Tribble
168	Lily the Unicorn
187	Panther
283	Forest Finch
305	mediocre 1-3-g
306	Will Die
316	IRa-GLM281
318	Fodder grass
344	Leaf Truck
537	Cheetah

## **Generations 1000-9000**

The population oscillates from there. A small number of Snarks and Brown Bears are not visible.



#### Goes Extinct in Generation Species

1485

Rony

## Winners

Species	Native Biome	Venom?	Weapons	Armor	Speed	Forage?	Temperature Adaptation?	Creator
Venomoth	Rainforest	Venom + Antivenom	0	0	3	Grass		aphyer
LeavyTanky	Rainforest	Antivenom only	0	10	0	Leaves		ViktorThink
Untielopay	Grassland	Neither	2	0	10	Grass	Heat (Allows survival in the Desert)	Anonymous #5
mediocre 1-3-s	Temperate Forest	Neither	1	0	3	Seeds		Corm
Forest Finch	Rainforest	Neither	0	0	3	Leaves		MA
Snark	Temperate Forest	Neither	0	0	10	Leaves		Vanessa