



PROJECT SHATTERSTAR



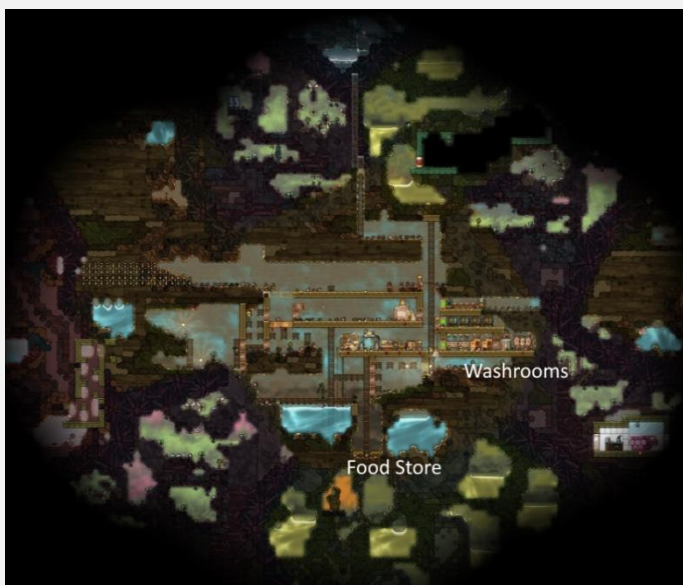
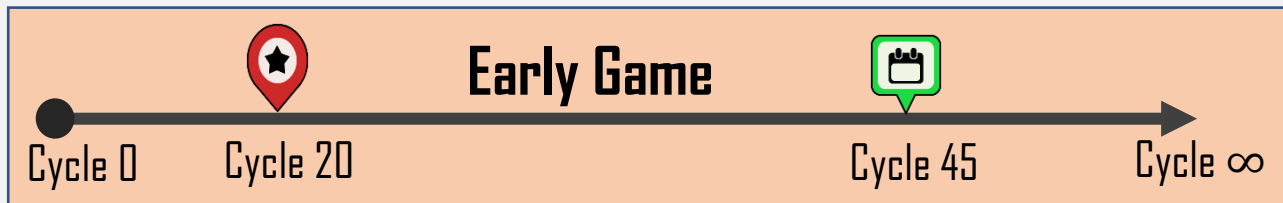
VOLUME 1 OF GUIDE TO THE ONI-VERSE

OXYGEN
NOT INCLUDED

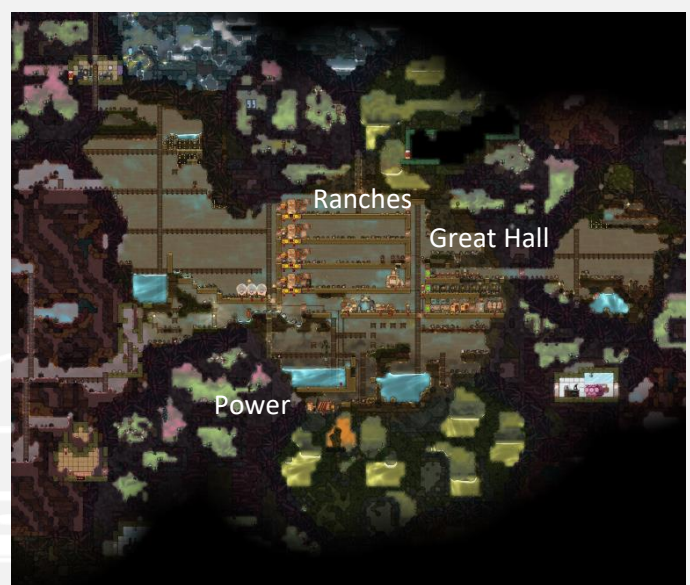
SPACED
OUT!

By-
the stormfather

CHAPTER 3 : Beginner Ranches and Power







Cycle 20



Cycle 45

StormFather

A stable source of food and power are critical elements for a sustainable game. While farming is a viable option, I believe in getting into ranching early and Ranch design is critical. Lets take a look at the **Highlights :**

-  We refine some metal
-  We set up early-game hatch ranches
-  We set up coal-based power
-  We build a great hall

<https://linktr.ee/Stormfather>



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power

OXYGEN
NOT INCLUDED

SPACED
OUT!

Disclaimer-

Oxygen Not Included Is a sandbox game limited only by the player's imagination. I can assure you that no player (including me) has figured out the 'right' way to play the game....No matter how many hours they may have put into the game.

That's because there is no right way. What you do depends on what you want to achieve. Some love building ridiculous and elaborate builds, while others are more efficient and practical. Both are perfectly acceptable ways to play. What matters is that you enjoy what you do.

The following document is a guide and not a gospel. Like every other player, I have my unique style of play. What I intend to do is to share my playstyle and start a conversation with the community. This document will take you through a real and typical game, showcasing my approach to things. The playthrough will not be perfect. But it will be enlightening and entertaining. I hope my readers will use this series to modify their own unique style rather than copy mine.

Feel free to skip, ignore or modify any of the recommendations given in the series.

All Game art has been taken from the game files and are the property of Klei (if that wasn't obvious enough). I've used them only to make the document more engaging.

While this guide is quite simple, It is not meant to spoonfeed you. You may have to do a bit of additional research if you are a new player, and I'm happy to answer any specific questions.

The easiest way to find me is on Reddit. My handle u/Storm-Father. Please feel free to drop me a message or tag me in a post.

The series will use the following mods. These are quality of life mods and do not affect core gameplay

- | | |
|---------------------------|--|
| ● Wounded go to Med bed | ● Geyser Calculated Average Output tooltip |
| ● Per-planetoid materials | ● Critter Inventory |
| ● Blueprints fixed | ● Queue for Sinks |
| ● Pliers fixed | ● FreeCamera |
| ● Bigger Building Menu | ● MaterialColor |
| ● No 'Long Commutes' | ● Show industrial Machinery Tag |
| ● Suppress Notifications | |

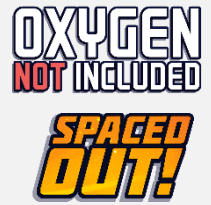
Game Coordinates – 'SNDST-C-360860549-0'



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power



1) To Refine or Not to Refine -

Refined metal is a key requirement in ONI, and there are 2 ways to get it. One is to refine the ore available to us, and the second is to tap a metal volcano that emits a certain amount of metal into the environment.

That being said, don't make the mistake of assuming refined metal is BETTER than metal ore. Each has its own place, with some buildings like autosweepers that can only be built with refined metal and gas pumps can only be built with metal ore. Steel is the only exception, but steel is technically not a refined metal but a manufactured material. But steel is a topic we'll get into later.

The point is, do not waste your ore by refining it. Refine only how much you'll need. You'll have plenty of refined metal once you tap into some volcanos and such.

The first few lots of refined metal can be made in a rock crusher, but you lose 50% of the material in the transaction. I would recommend that you move to a refinery as soon as you have the cooling potential available.



A rock crusher is inefficient, but easy to set up. I typically use it in the early game to set up my initial power setup, and at most a couple of autosweepers and incubators.

For anything more than that, a proper refinery is highly recommended.

But for now, a rock crusher will do nicely.



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power

OXYGEN
NOT INCLUDED

SPACED
OUT!

2) It's hatch season -

Anyone who has followed my previous series probably knows how much I love ranching, but let's go over it again.

Creating a stable food source is critical. So far, we have not planted any plants and have relied solely on wild plants and dug up muckroot. But we can't keep this up forever. You could just plant some mealwood, but that's a low quality food that provides minimal morale to the duplicants. On the other hand, critters give meat that can be cooked into barbeque. Barbeque provides +8 morale and also provides a good amount of calories. Thus barbeque provides good value for the amount of effort put into it.

Moreover, critters are much harder than plants. Plants need optimal temperature, pressure and material to grow. Critters are more forgiving about temperature and just need to be fed and groomed.

Thanks to their high egg-laying rate, hatches and sweetles are the best critters to ranch for food. I personally prefer hatches because they provide coal, which is an excellent fuel for the early game.

I am currently feeding my hatches sandstone, but that isn't sustainable because it'll run out soon enough. I personally prefer moving to stone hatches, which can eat igneous rock and granite, which is much more widely available than sandstone. You can get your hatches to lay stone hatch eggs by feeding them sedimentary rock.

It's not all fun and games, though. Here are some negatives to keep in mind –

The main issue is the time lag. Hatch eggs. For example, it takes 20 cycles for eggs to hatch and give you meat. You can use the eggs to make omelettes, but that's not as calorie or morale dense as meat. It's better to wait for the eggs to hatch. You could also use incubators, but that doesn't make sense in the long term because incubators do not increase the number of eggs, just the incubation speed. Also remember that incubators do not need to be on all the time. They just need to be on long enough for duplicants to come and operate them. I use a clock sensor to limit the on-time and save on power.

You need to monitor your hatches periodically. The effects of a ranch failure will not be felt immediately. For example, if your hatches run out of food, you may not even realize it for 40 cycles, and by then, it'll be too late, and your base will collapse from lack of calories.

Note that this is my default call, but I would change things depending on the circumstances and resources available around me.



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power



3) A Hatch Ranch with Automation?-

Building a hatch ranch without some level of automation is not advisable as it would take up too much of your attention too often. The main challenge is the mechanics of how a ranch works.

A hatch requires 12 tiles of space to live and lay eggs freely. If it does not get this space, it will not lay eggs, which defeats the entire purpose of having a ranch for food in the first place. Since we can have a maximum size of 96 tiles, we can have up to 8 hatches +eggs per ranch (yes, Eggs also count for the overcrowding debuff).

For more details on ranches, check out this Academy not Included article.

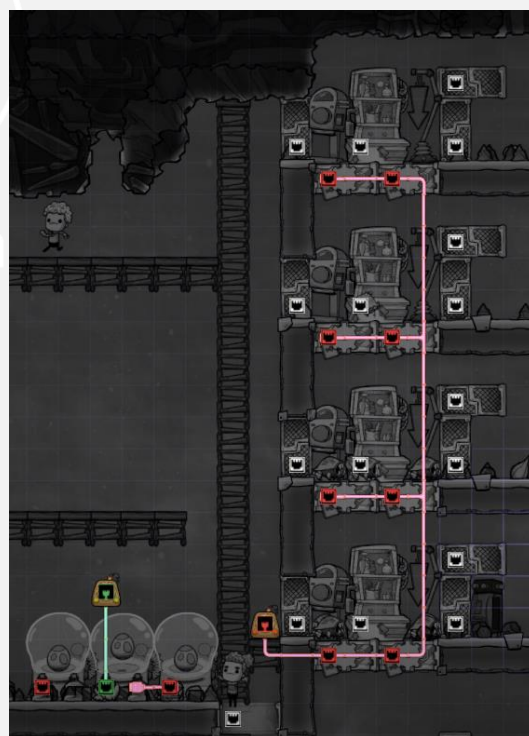
https://www.reddit.com/r/Oxygennotincluded/comments/q38ua9/academy_not_included_5_fantastic_critters_and/?utm_source=share&utm_medium=web2x&context=3

This is where we need automation – to remove eggs from the ranch as soon as they hatch. Later in the game, we can also automate food delivery, but that's a nice-to-have, not a necessity.



I have 4 ranches set up, and I am slowly populating them with hatches, using the incubators to speed up the process. I am currently using only 1 powered incubator to save on power, but you can use more if you so choose.

The automation of the doors is connected to a single clock sensor that opens the doors once a day.



There are ways to have duplicants manually pick up eggs and dump them in an inaccessible spot, but this usually makes the resultant meat inaccessible as well. In my opinion, a minimal amount of automation is worth it.



PROJECT SHATTERSTAR

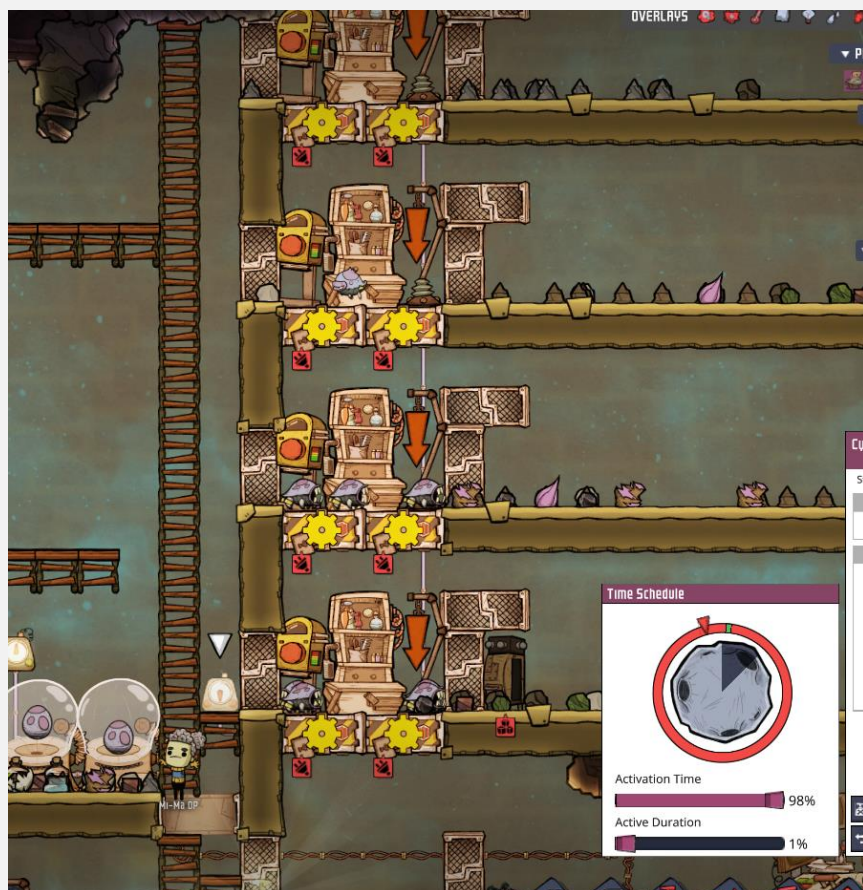
OXYGEN
NOT INCLUDED
SPACED
OUT!

CH 3: Beginner Ranches and Power

We do not have access to autosweepers at this point, so we need to rely on much simpler automation to get the job done. My solution is to make the floor out of airlock doors, which can be timed to open at a certain time each day.

When the doors open, any eggs or debris will fall through them, but hatches will not. So eggs can automatically be removed from the ranches once a day with no duplicant intervention.

The eggs should ideally fall into a pool of water. When a hatch hatches out of its egg, it'll drown and automatically convert itself into meat. This is especially important for hatches because they are cannibals. If you don't remove meat from dead hatches immediately, the surviving hatches will eat it up.



I like programming the doors to open at night, when my rancher is asleep.

Opening the doors for 1% is enough, unless you're running a time mod, in which case you might need to open it for longer.

Right now, my eggs aren't falling into a pool of water because I haven't started looking at meat production yet. I want all the hatches alive till I have sufficiently populated all of my ranches. But I do have a pool of water ready, so once I'm done setting up the ranches, I just have to do some digging, and the drowning pool is ready.

While each ranch can technically hold up to 8 critters, I would recommend capping it to 6 or 7. This is because the doors are programmed to open only once a day, meaning that eggs could stay in the ranch for up to a full cycle at times, causing overcrowding.



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power

OXYGEN
NOT INCLUDED

SPACED
OUT!

4) Power: The What and the Where –

We have been using electricity for a while now, but we have been using our duplicants like hamsters. This isn't particularly efficient and uses up duplicant time, which could have been better utilized elsewhere.

When and to which power source you switch to will change based on your goals and your resource availability. For example, if you're going for the 'super sustainable' achievement, Using coal or natural gas is simply not an option. You'd have to survive on hamster power (and hydrogen, if you're lucky enough to have a geyser) till you can get to solar.

In this game, we have no such compulsions, so I am going for what is, in my opinion, the best early game fuel source – coal. While coal may not be readily available on all map times, most maps should have enough to tide you over the early game till you can dig up some natural gas or set up petroleum production.

Additionally, we are breeding hatches for food, which produce coal as a by-product. While the coal they produce may not be enough to meet all your energy requirements, at least it'll allow your existing reserves to last longer.

The early game power setup location is tricky and must be chosen carefully. There are a few considerations to be made –

- The setup should be close/accessible enough to the core base to allow duplicants to reach it quickly for refuelling
- The setup should be far/isolated enough for the resultant heat to not cause any problems in the core base
- Coal (and many other power sources produce a lot of CO₂, which should be considered while looking for a location.

Where exactly you place your power will depend on a combination of these 3 factors and what is most important for you. Also, keep in mind that these rules are not universal. For example, if your starting base is below freezing, having the power unit in your core base might be a good idea because the heat will make the base liveable over time (Assuming you have a way to handle the CO₂, of course).



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power



The coal generator is at the bottom of my core base.

It is also close enough to be accessed, but far enough for me to have reaction time to in case the temperatures get out of control. And enough space to expand my CO2 tank.

I've chosen to keep the coal away from the base for this game. It is not super accessible, but I am more paranoid about the heat and the CO2. My power requirement is pretty low, so I don't anticipate needing to refuel too often.

5) Power: The How –

Like Ranching, I strongly advocate having a basic amount of automation tech available before getting into power. While it is true that you can slap a coal generator to a jumbo battery pretty early in the game and call it a day, this is something I have never done and will probably never do. Let me explain.

In ONI (as in real life), the power generators produce the same amount of power, whether or not that power is being fully consumed. Meaning if I put a coal generator on



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power



a grid with a lightbulb, the coal generator will produce 400W at all times, even though the bulb is only taking up 10W. The 390W is simply wasted.

In simple terms, the coal generator will consume the same amount of coal and produce the same amount of heat and CO₂, irrespective of how much electricity you actually consume. The only way to change this is by using a smart battery.



In fact, the manual generator is in a way smarter than the coal generator. The duplicant will stop using the generator once the battery reaches 100% and will again come to use the wheel once the minimum threshold has been hit. This prevents the wastage of energy. Coal generators do not have such a feature by default.

So here, we hook up a smart battery to the coal generators and set the values as we see fit. I would advise keeping the maximum under 100%, as keeping it at 100% may result in slight extra power production. The minimum depends on you. When the coal generators are not being fed directly by autosweepers, I would recommend a higher minimum threshold.



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power

OXYGEN
NOT INCLUDED
SPACED OUT!



Turns on at 40% , turns off at 90%.

As simple as that.

In this configuration, The coal generators will automatically stop once the maximum power threshold is reached and will restart once it reaches the lower limits. This simple bit of automation only required some refined metal and patience. Worth it, in my opinion.

6) CO2, the base killer? -

It seems to me that of all the ways to lose a base, CO2 seems to be the biggest concern, with lack of food as a distant second. In most cases, the problem seems to be too much CO2, not a lack of Oxygen. Is CO2 really such a big problem?

As always, the answer is 'it depends'. While it is absolutely true that CO2 will kill you given enough time, there are plenty of ways to mitigate it, with the strategy changing depending on how long the game has been going.

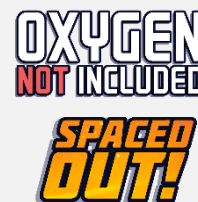
All you need to handle your CO2 in the early game is a big pit and gravity. In ONI (As in real life), CO2 is heavier than other gases, which settles to the bottom, leaving other gases like oxygen to float to the top. This is why you will notice that I **always** put my power setup at the bottom of the core base. If I put it on the top, it would float down to the core base below it, disrupting oxygen availability. As long as you have a big enough pit and enough oxygen being produced, the CO2 will float to the bottom and stay below the living area.



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power



Later in the game, you will have to develop more sophisticated ways to handle CO2... but if done well, the CO2 pit will keep you going well past the 200 cycle mark. We'll get into exactly what those are when we need to.



As you can see, CO2 settles on the bottom.

And while the CO2 has built up a fair bit, as long as we keep digging, we can keep it away from our duplicants.

7) Make halls great again-

We made a mess hall in the last chapter, but this time we have the opportunity to make a further upgrade – turning our mess hall into a great hall. The input required is minimal, and the benefit is additional morale, so the upgrade is a no-brainer.

All we need to do is have a room of a minimum size, have a recreational building and a décor building. A water cooler and potted plant do just fine.



Doesn't have to be fancy, it just has to work.

Remember, though, that the potted plant is not stifled. If it gets stifled, you lose the bonus. So make sure the plant can survive at the temperature of the core base. Later in the game, we can replace the plant with a metal block, which is immune to changes in temperature.



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power



8) The Way Forward -

I think digging around the map and understanding what kind of resources we have to work with is crucial to understand what options we have for the mid and late game.

It would also be a good idea to make a beeline to the planet's surface if possible and start space exploration with a telescope. We will also need to find the teleporter system and see which planet it is connected to and what resources are available on it.

9) Base Check –

Food is still the biggest issue we have. While I have tried to make do with muckroot and my hatches have been set up, it will take at least 30 cycles for them to run at an acceptable capacity. I don't think I will last that long. I may have to consider planting some mealwood next game.

Research continues to be reasonably quick. **The following tech was researched –**

- Ranching
- Internal combustion
- Sound amplifiers
- Generic sensors
- Agriculture
- Animal control
- Smart storage
- Refined renovations
- Fossil fuels
- Refined renovations
- Space program
- Improved ventilation
- Artistic expression
- Textile production
- Hazard protection
- Crash plan
- Material science research



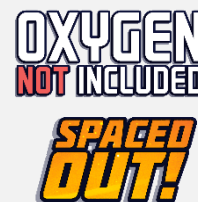
StormFather



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power

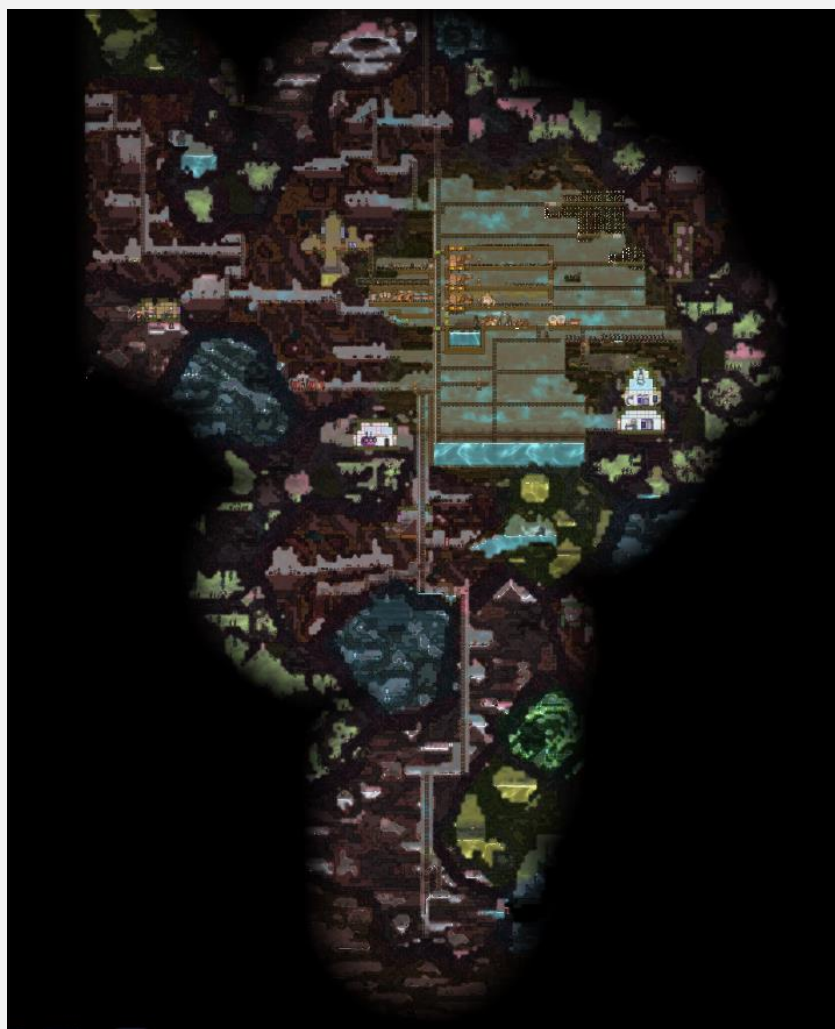


10) Comparison To The StormFather's Guide to the Galaxy-

A major difference between SGG and PSS comes out in this chapter. In SGG, we had found oil by cycle 50. In fact, since I knew we had oil on the planetoid, I prioritized the quest for oil and found it quite early on. Digging towards the bottom of the map was a priority.

In this game, however, we know that there is no oil on this planet and that we will have to travel to a 2nd planet to find oil. I also need to find the teleporters that allow me to teleport my duplicants to my 2nd planet—as such, Digging up and exploring the map, in general, is my biggest priority.

Since my mid-game is heavily oil-focused, I expect Project ShatterStar to deviate substantially from SGG from now on. Stay tuned 😊.



This is SGG at cycle 50.

As you can see, there was a major focus on focussed targeted exploration to the bottom of the map, especially because we wanted to find oil and because we were lucky enough to find the teleporters early.

On the other hand, We hadn't set up our power yet, which we have done this time.

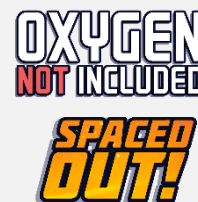
All in all, its not like we have done less this time as compared to SGG, even though it may look like that. We have just gone in a different direction.



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power

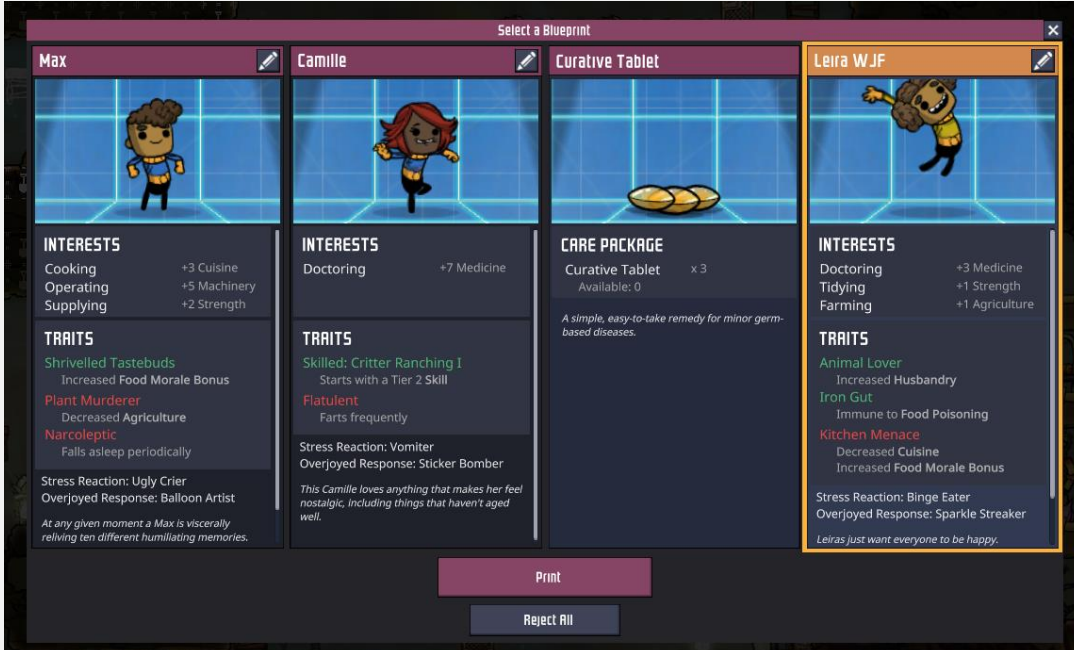


11) Meet the duplicants-

Since the start of the playthrough, I have recruited 3 Duplicants, and I realized that I hadn't introduced them to you. So from now on, I'll be talking about any new recruits I pick up and discuss the implications.

I am not very picky when it comes to picking up duplicants. In the short run, I like playing with larger numbers of duplicants, and in the long run, the exact skill composition is not really important because you have had enough time to train them up. In any case, here are my picks.

Leira (Cycle 18)



Max	Camille	Curative Tablet	Leira WJF
INTERESTS Cooking +3 Cuisine Operating +5 Machinery Supplying +2 Strength	INTERESTS Doctoring +7 Medicine	CARE PACKAGE Curative Tablet x 3 Available: 0 <i>A simple, easy-to-take remedy for minor germ-based diseases.</i>	INTERESTS Doctoring +3 Medicine Tidying +1 Strength Farming +1 Agriculture
TRAITS <i>Shriveled Tastebuds</i> Increased Food Morale Bonus <i>Plant Murderer</i> Decreased Agriculture <i>Narcoleptic</i> Falls asleep periodically Stress Reaction: Ugly Crier Overjoyed Response: Balloon Artist <i>At any given moment a Max is viscerally reliving ten different humiliating memories.</i>	TRAITS <i>Skilled: Critter Ranching I</i> Starts with a Tier 2 Skill <i>Fatulent</i> Farts frequently Stress Reaction: Vomiter Overjoyed Response: Sticker Bomber <i>This Camille loves anything that makes her feel nostalgic, including things that haven't aged well.</i>		TRAITS <i>Animal Lover</i> Increased Husbandry <i>Iron Gut</i> Immune to Food Poisoning <i>Kitchen Menace</i> Decreased Cuisine Increased Food Morale Bonus Stress Reaction: Binge Eater Overjoyed Response: Sparkle Streaker <i>Leiras just want everyone to be happy.</i>

Print
Reject All

I hadn't picked up a duplicant for like 18 cycles, and I wanted to get my recruitment started. Leira was not particularly talented, but the animal lover might be a useful trait and kitchen menace is harmless, so I picked them out of the lot.



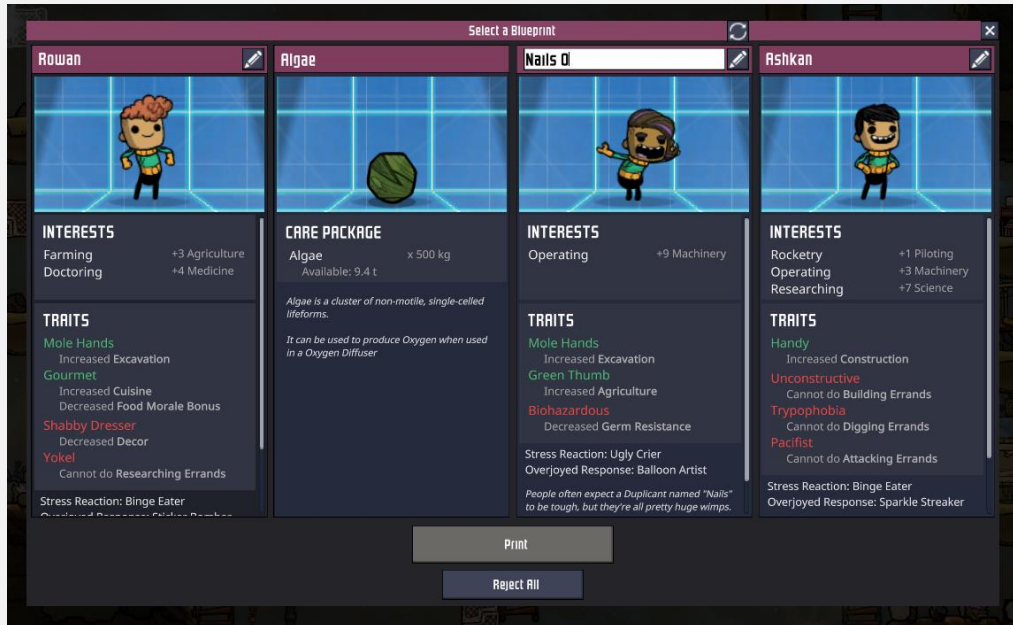
PROJECT SHATTERSTAR

OXYGEN
NOT INCLUDED
SPACED
OUT!



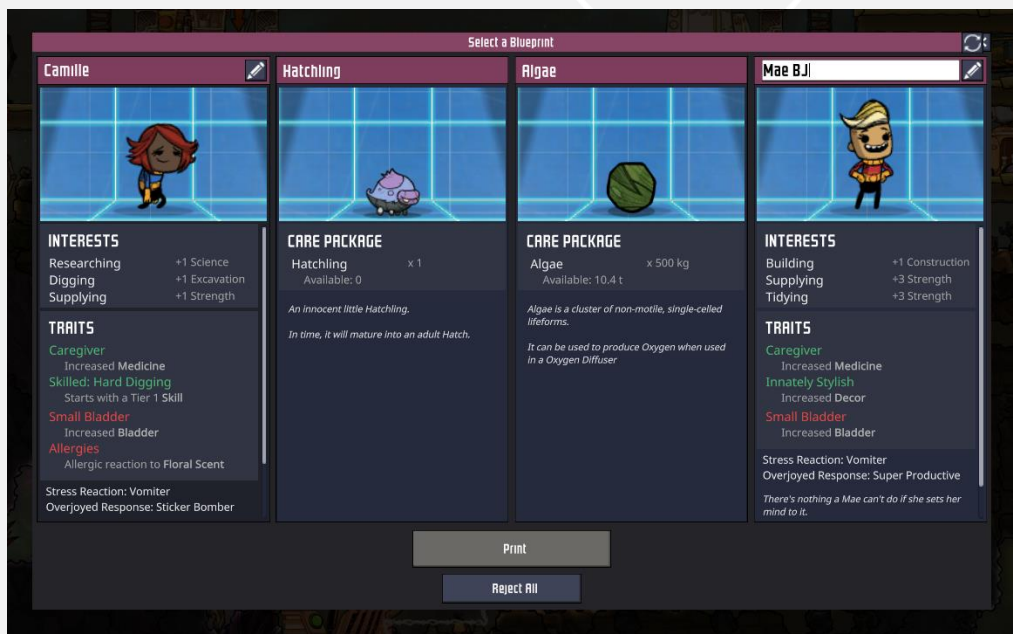
CH 3: Beginner Ranches and Power

Nails (Cycle 21)



Nails is a mega-operator and also has some excellent positive traits. Also, Biohazardous is not a difficult trait to manage, so this pick was a no-brainer.

Mae (Cycle 27)



Mae is a solid all-rounder and perfect for the role of Janitor. The small bladder trait is not a big deal.



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power

OXYGEN
NOT INCLUDED

SPACED
OUT!

Author's Note –

Thank you for taking the time to check out Project Shatterstar. I hope this helps you up to your game. Each episode will be updated when necessary, so do keep an eye on the change history.

This series is a labour of love and an attempt to create quality written content. It does take up a lot of effort, though, so If you do like the work, please share and recommend it actively. You can also support me directly if you are willing and able.

There is always scope for improvement and new perspectives, so I encourage you to reach out to me if you have any specific thoughts on the work, be it good, bad or ugly. Reddit is the best way to get a hold of me. Do follow me there to keep up to date with the latest of what I do.

Check out the 'Stormfather's Guide to the Galaxy' and 'Academy Not Included', both of which are series that I built on Reddit. SGG is now scrapped, thanks to some complications when Spaced Out came out of Beta. But ANI will continue in some form or another.

Reddit is also the perfect place to point out any errors in the file. Due credit will be given to those who find errors or provide feedback that is incorporated into the file.

To check out any past or future work, or to support or follow me, do check out the following link-

<https://linktr.ee/Stormfather>

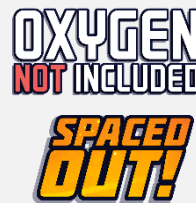
Until Next time



PROJECT SHATTERSTAR



CH 3: Beginner Ranches and Power



Change History –

Date	Version	Change	Idea Credit
27 Mar '22	0	New Release	-



StormFather