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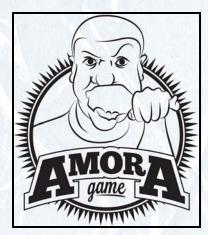


# Generations Ships

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#### Xeno File: Issue 8

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XF-1

## Xeno Files: Issue 8 Table of Simple Contents

Generation Ships XF-3	
Question 1 XF-3	
Question 2 XF-3	
Question 3 XF-4	
Question 4 XF-4	
Question 5 XF-5	
Question 6 XF-6	
Question 7 XF-6	
Generation Ships XF-6 to 8	
Question 8 XF-8	

Xeno File is an electronic "magazine" designed to add content for science fiction entertainment and play for multiple roleplaying systems. This issue focuses ships that house the population of races through multiple centauries for the *Starfinder Roleplaying Game.* 

These titanic vessels have been classified as Generation Ships. The following pages contain an article for Game-Masters, Players, and Sci-Fi Fans that will inspire you to run adventures living on or coming across these colossal feats of engineering. Found orbiting stars that are said to house a god, or when tripping the rift, Generation Ships can hold a key to the past, of a bygone technology. Within the cold metal walls could lurk a culture thought to be extinct or a culture that doesn't know they are in a Generation Ship.

Near the end of the article, Chance has designed 5 examples of Generation Ships. Each ship contains a brief backstory that can lay the seed of an encounter, adventure, or even a whole campaign.

Enjoy the read and we'll have issue 9 out soon. See you in the Void, Cowboy!

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XF-2

Generation ships, massive ships that act as colonies to entire generations of colonists, are a staple of science fiction. Prime examples of this can be found in likes of *Pandorum*'s Elysium, *The Orville*'s Dorahl bioship, the Voth city ship from *Star Trek: Voyager*, and the Dowager Queen from *A New Hope*, as well as a countless host of examples from sci-fi novels. This article is written to provide advice for GMs who want to include generation ships in their campaign. This article also provides several examples of generation ships for easy use in campaigns for the *Starfinder Roleplaying System*.

## 8 Simple Questions:

### 1. How do colonist get food?

Any ship that will be home to multiple generations of colonists will, by necessity, be able to replenish and recycle its food supply, or have a large enough food supply to sustain such a large and constant population. This is normally accomplished through the growth and harvesting of plants on a sequestered section of the generation ship. However, this process is not without its own problems.

Traditional plants are adapted to a certain gravity field that may not be present, stronger, or even weaker than usual on the galactic generation ship. A number of counter measures can offset this issue if the generation ship is spinning in such a manner as to generate sufficient centrifugal force to simulate gravity. Depending on the level of technology, there can be some other apparatus that creates a simulated gravity field acts according to the gravity similar to the home planet of the vegetation. However, there is the immediate problem of acquiring sunlight for plants that primarily use photosynthesis. This is remedied by having windows facing the solar system's star, but remains ineffective for dynamic generation ships or for ships in solar systems with weak stars. In such cases, there are two potential approaches.

One is to provide an artificial light source, such as grow lights, while the other solution is to grow a mushroom or fungus, which do not require sunlight. Fungi can also grow in very diverse and hostile environments in which plants would suffer. Many strands of fungi are also decomposers. Meaning that they must decompose rotting biomass in order to grow. The fungi methodology could help provide a solution for what to do with the bodies of dead colonists, though it may require a certain constitution.

#### 2. How do colonist breathe?

While food is very important for long term survival, the most pressing concern for any would-be colonist is the acquisition of fresh air in the empty vacuum of space (for those that require it). A common resolution develops through one of three ways. The first way, is the use of plants to filter the air and produce oxygen from carbon dioxide. This may also provide the added benefit of providing food for the colonists, if the agriculture being used are grains, vegetables, or fruit-bearing plants.

The second way is through the continuous chemical or mechanical recycling of air. One potential example of how this may be done is with the use of a laser to excite the carbon dioxide and convert it into carbon and oxygen directly. Races that breathe hydrogen gas might use water electrolysis, where electricity

XF-3

is applied to water, converting it into oxygen and hydrogen gas.

The third way while the most tedious, is through stocking the generation ship with vast stores of oxygen, typically in a liquid form, and replenishing these stores with oxygen from a neighboring planet. While the simplest way to obtain clean air, but holds the threat of being the most unreliable. Varying factors, such as a transport ship is unable to reach the colony or a planet side war prevents use of resources can cause a multitude of problems for colonist. In these situations, generation ship crews would have to figure out how to preserve their existing supply of air and how to ensure they will receive fresh air in the immediate future. This is the least popular option among more developed spacefaring societies.

3. How do colonists stay clean?

The continual operation of a space station where the colonists do not remain in space suits or similar contained systems indefinitely

means that the colonists will be shedding skin cells, scales, or other forms of biomass, creating dust and dirt. Additionally, if the ship uses plants or fungus as a source of food, they will need fertilizer or decomposing material, giving rise to other sources of dirt. Ships use air filters to reduce an amount of passive dust in the air, but the colonists will need to clean themselves in order to avoid bringing dust into sensitive areas.

Showers should do the trick, so long as there is a water filtration system onboard the ship. Sound based showers, called sonic showers, use vibrations to shake off dust and debris. While useful, you would need a way to dispose of the resulting debris. Those with the technology could use nanobots to remove the dirt passively, resulting in the colonists not having to ever actively consider their hygiene.

A method that can be used in order to maintain water resources is the sand bath as seen in Tank Girl, or real life example of Tayammum. For removal of dirt and dust deposits on the floors or walls of the generation ship, it would be easy enough to use automated cleaning units. There could be sonic cleaning facilities in the airlocks in advanced generation ships that preemptively contain the arrival of foreign particulate. However, this would not affect biomass from the colonists.

4. How do colonists get energy? The acquisition of electricity is most likely

necessity to take steps in answering the first three questions. The most reliable answer is simply harnessing solar energy. This requires a large amount of surface area on the outside of the ship for solar panels, which should not be a problem for generation ships. However, it would require housing for large 000000 000000 batteries to store the energy collected. Additionally, if it is far from a system's star, or in between solar systems, this may prove unreliable for a generation ship. Crews could

XF-4

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use traditional reactors, but this requires a ready acquisition of fuel to burn continuously.

A reliable, but potentially deadly option is to use nuclear reactors. Reactors are very stable but an untimely meltdown (for enemy firepower) would be utterly catastrophic in a contained area. This can quickly escalate if there is not an easy way to evacuate the generation ship. Even so, survivors would need a nearby planet to evacuate to for safety. It could also be possible in a high concept science fiction setting to utilize piezoelectric surfaces on the generation ship to generate electricity from the day-to-day movements of the colonists, which while not one to one returns, would help conserve and recycle energy for a longer amount of time.

## 5. What do you do with the bodies?

There are several ways to dispose of corpses in the vacuum of space, each varying in tastefulness and practicality. The most obvious and commonly seen on screen and print format is to shove the corpses into space, through an airlock or similar device. This does make for a somber sight for visitors to the colony, but if properly aimed, the departed could be sent towards the closest star to eliminate any waste. The most practical, but least tasteful option is to convert the corpses into food, *Soylent Green*-style.

While this would not work as a primary food source due to various impracticalities, as a supplement to another sustainable food source, it can help with both problems. If the colony uses fungi as a primary food source, then the bodies could be used as food for the fungi, making this option slightly more acceptable. Cremation is the simplest and

## PLOT POINT: LOST COLONY

Has the generation ship ran out of fuel? Is it a ship with solar plating along the hull that sustained damaged while passing through an asteroid field? Using classic science fiction plots, a ship could have suffered major damage to their energy source. They had to "park" above another planet to send a beacon or make repairs. After a time, they began to colonize the planet they orbited, never returning to the journey, never reaching their original destination.

most tasteful option but does result in a lot of fuel being used. Another, more tolerable option, is just using the corpses as fertilizer for the plants, perhaps after decomposition by a fungal food source.

## 6. Where is the ship?

Generation ships can be static, immobile, or dynamic, which means that they are capable of movement and are most likely moving towards some far off destination planet. Dynamic ships need engines and a much more powerful energy source than static ships, but they do not need a special location? Static ships will commonly utilize Lagrangian points in order to minimize fuel expenditure and to maintain a static position without having to use their engines. Lagrangian points are the points in space where the gravity between two bodies provides sufficient centripetal energy to maintain a static relative location. This means that a generation ship located at a Lagrange point does not have to expend any fuel to maintain a single location without falling towards a celestial body. This is useful, as it means that the fuel or energy that would be

used to maintain a single location can instead be used for life support or other purposes.

## 7. How do I use Generation Ships in my game?

Some of the larger generation ships are simply too large to reasonably exist under the current spaceship rules. For the purposes of these incredibly massive ships, the Titanic size category is used. Titanic ships are ships with a length over 30,000 ft and a weight of over 16,000 tons. They suffer a -16 penalty to their AC and Target Lock due to their massive size making them almost impossible to miss. For example, you never saw a Starfighter scale ship Archae is similar to a gigantic greenhouse. It is fire on the Death Star and miss in A New Hope. The tension was created by having Luke have to attack a very specific part of the Death Star. Additionally, Titanic ships can have up to six power cores and can use thrusters meant for Colossal ships.

The following is a base frame for generation

## **Generation Ships**

ships:

Size Titanic

Maneuverability clumsy (-2 Piloting, turn 4) HP 1000 (increment 100) DT 20; CT 200 Mounts forward arc (2 capital, turret (3 light; 2 heavy)

**Expansion Bays 40** 

Minimum Crew 300; Maximum Crew 1,000 Cost 400

#### Archae, the Living Moon

Titanic generation ship

Speed 8; Maneuverability clumsy (turn 5); Drift 1 AC 10; TL 16

Tier 18

- HP 1,500; DT 20; CT 300
- Shields superior 600 (forward 150, port 150, starboard 150, aft 150)
- Attack (Forward) nuclear mega-missile launcher (4d8x10)
- Attack (Turret) light plasma torpedo launcher (3d8), gravity gun (6d6), heavy laser array (6d4)

Power Core Gateway Ultra (500 PCU); FTL Engine Signal Basic; Systems basic computer, mk 8 armor, mk 15 defenses, advances long-range sensors; Expansion Bays power core housing, guest

a static ship at the Lagrange point between an uninhabited planet and its red giant star. Compiled out of an incredibly strong and transparent material, the creation of which has been lost to the eons. Entry is almost impossible, except for small one-person fighters, as they are the only ships that can fit through the single airlock. Inside, Archae is a home to a bustling ecosystem of megafauna and megaflora, sustained by the incredibly advanced nuclear heating and lighting systems. There are occasional villages of the descendants of travelers who could not leave Archae (whether their ship crashed or they merely didn't want to). The descendants have adapted to the prehistoric nature of the ship and live in relative peaceful savagery. Archae generates artificial gravity by constantly rotating on its axis fast enough to generate enough centrifugal force to simulate gravity.

#### Dominus, the Holy Ark

#### Tier 18 Phagis, the World Eater

Tier 18

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l itanic	generation	ship
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- Speed 6; Maneuverability clumsy (turn 4); Drift 1 AC 10; TL 2
- HP 1,500; DT 20; CT 300
- Shields medium 160 (forward 40, port 40, starboard 40, aft 40)
- Attack (Forward) mass driver (2d6 x 10)
- Attack (Turret) light particle beam (3d6), coilgun (4d4)
- Power Core Gateway Ultra (500 PCU); FTL Engine Signal Basic; Systems basic computer, mk 8 armor, mk 5 monomode, mk 15 defenses, basic mediumrange sensors; Expansion Bays guest quarters (40)
- Dominus is home to a million and one righteous souls, told by their god that he was going to wash away the cosmos with righteous fires. Saying that they should ascend to the heavens in a new holy ark. Their prophet led his followers in the construction of the ship, an act that took a hundred years. It has been another hundred years since the ark took to the cosmic ocean, and the worshippers still navigate through the void sea, waiting for the heretics to receive their just desserts. Upon visiting them, you are greeted with smiles, for they know that they will live forever with their god. However, you will be exhumed from existence by the fiery power of their god. They will trade with 'lesser' cultures, but only true believers may stay on the ark. Some find it unsettling dealing with a culture that is built around your eventual death ensuring their deliverance, but for most people, the credits win out.

Titanic generation ship

- Speed 8; Maneuverability clumsy (turn 4); Drift 5 AC 17; TL 11
- HP 1,500; DT 20; CT 300
- Shields superior 600 (forward 300, port 100, starboard 100, aft 100)
- Attack (Forward) vortex cannon (2d12 x 10)
- Attack (Turret) x-laser cannon (8d6), x-laser cannon (8d6), chain cannon (6d4), chain cannon (6d4)
- Power Core Gateway Heavy (400 PCU); FTL Engine Signal Basic; Systems mk 15 armor, mk 9 defenses, mk 1 trinode, advanced long-range sensors;
- Phagis is built around the husk of a dead, or dying, world. It flies from world to world, seeking the resources and minerals that the crew has already exhausted and strip mined from the original planet. Either a hivemind crew, or perhaps a congregation of hiveminds, so alien in thought processes that all negotiations between it and the planets they attack, are unsuccessful in communication. Most scholars agree that the world Phagis is built around was once a thriving planet, until its inhabitants extracted all the natural minerals for use in industry. With no concern for the state of the world's environment, it collapsed in on itself, making it nigh uninhabitable.

### Praeson, the Roving Prison

Tier 18

Titanic generation ship

- Speed 4; Maneuverability clumsy (turn 4); Drift 1 AC 2; TL 17
- HP 1,500; DT 20; CT 300
- Shields heavy 320 (forward 80, port 80, starboard 80, aft 80)
- Attack (Turret) gyrolaser (1d8), coilgun (4d4), flakthrower (3d4), heavy laser cannon (4d8), heavy laser cannon (4d8)
- Power Core Gateway Ultra (500 PCU); FTL Engine Signal Basic; Systems mk 15 defenses, mk 10 duonode
- Praeson is a sprawling prison built within the asteroid belt of a small system. The asteroids are hollowed out and connected with steel tubing, each asteroid acting as a cell for a single prisoner. There are no wardens, the cold emptiness of space serves as enough deterrent for any potential jail breaks. The turrets are fully automated to stop any outside help as well. Praeson floats along with the rest of the asteroid belt, using a strong selective magnetic field repulsing any asteroids that would crack the hull of one of the jail cells or dent the tubing in between them. The prisoners, isolated from civilization, have developed their own cultural norms and practices. The vast majority of the 'inmates' are not even convicts, they are the children or grandchildren of the convicts originally incarcerated in Praeson. New inmates are rare, due to the hassle required, but when they do arrive, they'll have to find a gang or faction to join, and quickly. Praeson does revolve around the system's sun, but stays with the asteroid belt it is located in.

# 8. How do I use the pregenerated ships in my game?

The pregenerated generation ships all have placeholder names that describe their basic function. For use in your game, you should give them a new name that more aptly fits your setting. You should assign a generation ship an actual race that exists in your setting and an actual god as well, in the case of the Holy Ark. Then, you should assign the generation ship a relative location in your setting, or an exact location in the case of the static ships. Generation ships should generally be things the players run across, not that come to them. The generation ships are responsible for hundreds of thousands or millions of lives, what do they care about a small group of three to seven adventurers? If the players never run across the generation ship, then they never encounter it. Of course, outside forces could drive the characters towards the generation ship. Perhaps one of their enemies hides in the Living Moon, or they have to bust their close ally out of the Roving Prison, with everything that implies.

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