

Are fishes good candidates for space colonization?

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Participation to the Moon base food autonomy.

Lunar Hatch project.

Prospect the Earth aquatic life biodiversity for selecting organism able to **hatch** after a space ship launch and a trip to the moon.

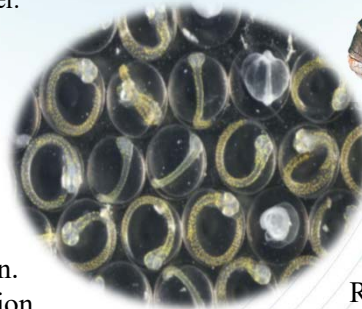
Advantages for the aquatic organism application:

- Large biodiversity and flexibility for feed adaptation.
- Breeder stock and eggs fertilization on the Earth.
- Aquatic media reduce cosmic radiations impact.
- Positive impact on resident psychology ?
- Several thousand eggs per liter.
- Low O₂ and CO₂ exchanges.
- Protein and lipid sources.



Selection parameters:

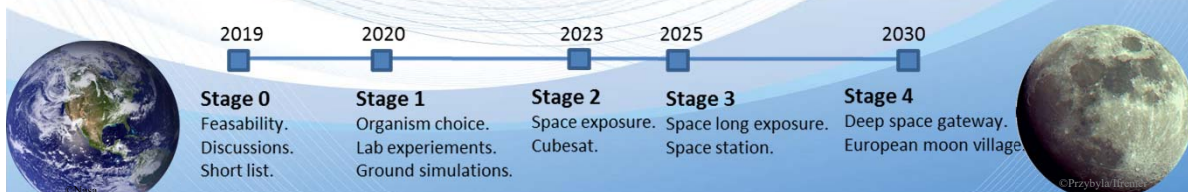
- Launch environment.
- Egg resistance to radiation.
- Media temperature variation.
- Pressure variation.
- Time between fertilization and hatching.



Water quality hypothesis:

Regolith hydroxyl extraction.
Deep lunar ice (ongoing exploration).
Water reuse from *Bioregenerative Life Support System*.

Deliverable 2019 : An aquatic organism short list proposition for ground simulation (Stage 1) .



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