

# Review of: "A Case for Nature in Long-Haul Space Exploration"

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First, thank you so much for being part of an unusual attempt to review a paper. In the open, no safeties!

Now, I like this short communication very much. It emphasizes a vital issue in deep space exploration. However, other possibilities besides Space include a massive deprivation of humans. A couple of years ago, a study revealed that persons staying for a long time in the Neumayer station returned with a significantly reduced Amygdala. The Amygdala is considered to be involved in memories and spatial orientation. The same effect was found in persons living in elderly care homes. A recent stated that astronauts suffer from the same effect. However, it seems to be unclear whether this reduction is reversible. That finding strengthens the impetus of the paper significantly.

What I am missing is the more quantitative aspect of this attempt. Remember that the astronauts live in an environment where hearing might be important for their survival so that the sounds should not be too distracting. Furthermore, we are talking about a VERY noisy environment. So, how long a day you have to listen to birds singing and insects chirping to have a significant impact? Is it sufficient to have images of plants or do you need real plants to do the job? If yes: How many and how big? Can we combine this with food production for the astronauts?

Mars environment is most likely not very stimulating. Is that enough stimulation?

I would advise the authors to think further and make more substantial arguments! It might well be that biometrics might make the difference! So do not be shy!