

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

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Potential competing interests: No potential competing interests to declare.

In this paper, the authors propose to incorporate audio and visual elements representing an Earth natural environment in future long duration space missions. This is an excellent idea that should be supported. The Reviewer would propose to include as well the additional sensory cues of Earth smells and scents. For example, it was reported that during a Mars analog simulation mission in the desert, scents of humid forest soil bring happy memories (see refs 1 and 2 here below). The paper is well written and the references support the statements made by the authors to push their case. A few minor comments are made here below. The paper should be supported for publication after these minor comments have been implemented.

In the introduction Section, lines 2 and 3, the Japanese should be included next to the Canadian and the European partners of the Artemis program as the Japan Aerospace Exploration Agency (JAXA) is involved with NASA, CSA and ESA in the Artemis program.

In the introduction Section, the sentence "Given the salutary effects that exposure to nature confer on cognitive performance, it would be prudent for NASA to consider some type of implementation in upcoming and especially future missions of greater length." is missing an element: "to consider some type of implementation" of what?

In the second line of Section "Benefits of Nature", perhaps "detrimental" would be a better choice of word instead of "orthogonal".

In Section "Biophilic Design", in the sentence "There exists a robust literature demonstrating the potential for audio-visual interventions to provide meaningful exposure to elements of nature.", please provide references to support this statement.

References

1) Pletser V. "Growing Vegetables on Mars: For Human Consumption or To Ease Psychological Tension? Simulation at the Mars Desert Research Station", Mars Desert Research Station MDRS, Utah Desert, USA, 2002; ResearchGate, 2002. (doi 10.13140/RG.2.2.32481.71523)
https://www.researchgate.net/publication/312030888_Growing_Vegetables_on_Mars_For_Human_Consumption_or_To_Ease_Psychological_Tension_Simulation_at_the_Mars_Desert_Research_Station

2) Pletser V., Lasseur C. "First observation regarding the psychological impact of growing vegetables during a manned Mars simulation at the Mars Desert Research Station", Paper IAC-03-IAA.10.3.04, 54th International Astronautical

Federation (IAF) Congress, Bremen, Germany, 2003.

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