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Interactive comment on "A Global Model of Predicted Peregrine Falcon (*Falco peregrinus*) Distribution with Open Source GIS Code and 104 Open Access Layers for use by the global public" *by* Sumithra Sriram and Falk Huettmann

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This paper is completely out of touch with peregrine biology and the ecological drivers behind peregrine distribution. Figure 4 indicates that peregrines are associated with areas with low human infant mortality, high population density, and lots of light pollution. No explanations are given for why there might be more peregrines in areas with low infant morality and higher population density, although I suspect it has more to do with the fact countries with lower infant mortality rates are affluent. These are the countries that banned DDT and have programs that look for peregrines. Does anyone think

that peregrine falcons actually prefer light pollution? If not, then we should not use light pollution to predict where they may occur or what places need to be protected. Without an understanding of the biological mechanisms that underlie the models and what sources of confounding might be present, the inferences are useless at best and misleading at worst.

The main conclusion of the paper, that few peregrine falcons are present in protected areas and, therefore, we must protect more areas is also flawed. The recovery of peregrine populations is a conservation success story. Based upon their own models, peregrine falcons are predicted to occur virtually EVERYWHERE outside of Siberia, the Gobi Desert, the Sahara Desert, and the Greenland ice sheet. If we believed their model had real predictive value, we would prioritize the protection of areas with more people and more light pollution and we would search out areas of low infant mortality. In reality, populations of peregrine falcons are recovering because the relevant protections (namely the banning of DDT in developed countries) are already in place.

Unfortunately, important ecological drivers, such as the presence of nesting structures (mostly cliffs) or the use of DDT are not included. In short, there is nothing in this paper that is useful for someone that actually studies or needs to manage populations of peregrine falcons.

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