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CORRIGENDUM

In 'Uncovering ecological state dynamics with hidden Markov models' by McClintock *et al*. (2020), which was published in volume 23, issue 12 in December 2020, the state-dependent observation distribution matrix $\mathbf{P}(x_t)$ for the multi-state capture–recapture HMM (top left of page 1888) was missing components to account for the fact that $\Pr(x_t = \mathrm{B} \mid S_t = \mathrm{NB}) = 0$ and $\Pr(x_t = \mathrm{NB} \mid S_t = \mathrm{B}) = 0$. The correct equation is:

$$\mathbf{P}(x_t) = \begin{array}{c} \begin{matrix} \text{breeding} & \text{non-breeding} & \text{dead} \end{matrix} \\ \begin{bmatrix} p_B^{I(x_t=B)}(1-p_B)^{I(x_t=0)}0^{I(x_t=NB)} & 0 & 0 \\ 0 & p_{NB}^{I(x_t=NB)}(1-p_{NB})^{I(x_t=0)}0^{I(x_t=B)} & 0 \\ 0 & 0 & I(x_t=0) \end{bmatrix} \end{array}$$

On page 2 of Appendix A in the Supplementary Material, the state-dependent observation distributions $f(\mathbf{x}_t \mid S_t = i)$ for the dynamic species coexistence HMM were missing similar components, and $f(\mathbf{x}_t \mid S_t = \mathrm{AB})$ did not properly account for $x_{t,k} = 0$. The correct equations are:

$$f(\mathbf{x}_t|\mathrm{S}_t = \mathrm{AB}) = \prod_{k=1}^{K} r_{Ab}^{I(x_{t,k}=1)} r_{aB}^{I(x_{t,k}=2)} r_{AB}^{I(x_{t,k}=3)} (1 - r_{Ab} - r_{aB} - r_{AB})^{I(x_{t,k}=0)}$$

$$f(\mathbf{x}_t|\mathrm{S}_t = \mathrm{A}) = \prod_{k=1}^{K} p_A^{I(x_{t,k}=1)} (1-p_A)^{I(x_{t,k}=0)} 0^{I(x_{t,k}\in\{2,3\})}$$

$$f(\mathbf{x}_t|\mathrm{S}_t = \mathrm{B}) = \prod_{k=1}^{K} p_B^{I(x_{t,k}=2)} (1-p_B)^{I(x_{t,k}=0)} 0^{I(x_{t,k}\in\{1,3\})}$$

$$f(\mathbf{x}_t|\mathrm{S}_t = \mathrm{U}) = \prod_{k=1}^{K} I(x_{t,k}=0)$$

REFERENCE

McClintock, B.T., Langrock, R., Gimenez, O., Cam, E., Borchers, D.L., Glennie, R. *et al*. (2020). Uncovering ecological state dynamics with hidden Markov models. *Ecol. Lett*., 23, 1878–1903.