

Fig. S1. Model flow.

A way of approximating the value of the energy in our model at every second on a computer (note this routine rounds success times up to the next whole second for simplicity);

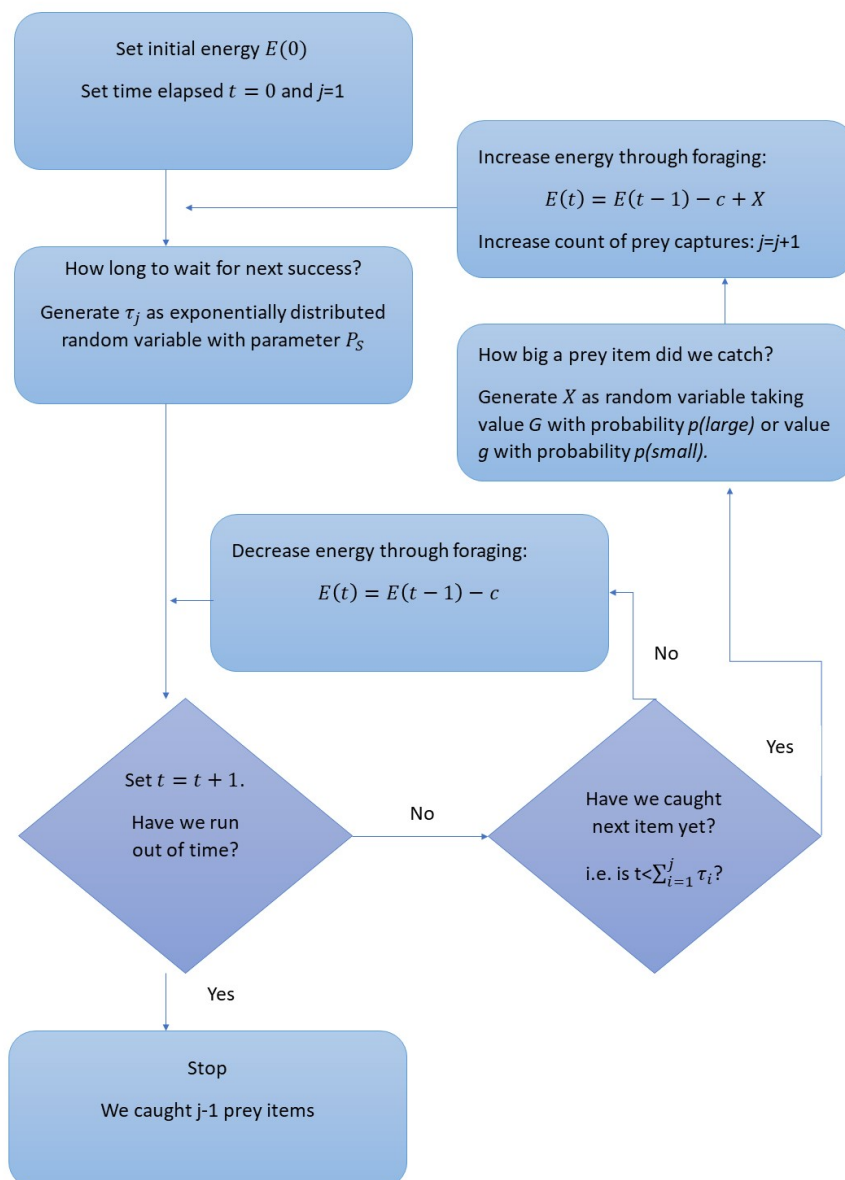


Fig S2. Prey encounter time histograms for each cormorant superimposed against the hypothesised probability of encounter assuming random encounter rates (the blocks show the relative frequency of values for each bin in the real data while the red line joins up the theoretical probabilities of distributions for bin centres assuming these times are exponentially distributed with parameter $1/P_s$ corresponding to the value of P_s for each individual). We note that each of these graphs broadly shows the correct shape corresponding to the expected exponential distribution. It is unrealistic to expect all these times actually to be perfectly exponentially distributed as that would only hold if the “rate” of success (i.e. P_s) was constant in space and time, which it most likely is not (see text).

