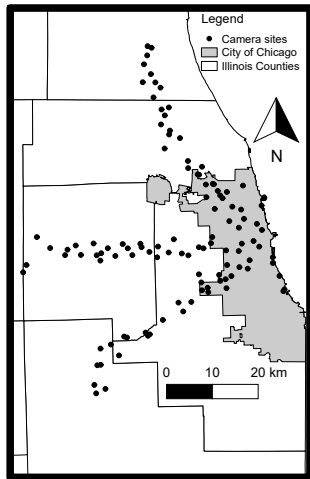


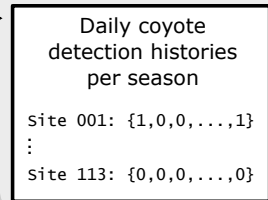
Camera trap locations



Coyote images



Multi-season occupancy model

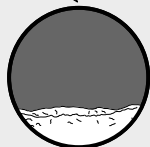


$$\Psi_{j,t} \quad 1 - \Psi_{j,t}$$

$$\rho_{j,t,d}$$

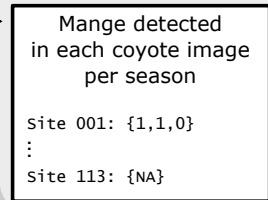


Coyote present



Coyote absent

Conditional mange model



$$\omega_{j,t} \quad 1 - \omega_{j,t}$$

$$\gamma_{k,j,t}$$



Mange present



Mange absent

$\Psi_{j,t}$: Pr(coyote occupy site j on season t)

$\rho_{j,t,d}$: Pr(coyote detected at site j on season t , day d)

$\omega_{j,t}$: Pr(mange at site j on season t | coyote present)

$\gamma_{k,j,t}$: Pr(mange detected in image k from site j , season t)