

In population ( $z_i$ )

0

1



$$y_{i,k}^* = 1$$

Encountered

0

1



$$y_{i,k}^* = 1$$

Captured

0

1



Individuals  $i = 1, \dots, M$   
Surveys  $k = 1, \dots, K$

$$y_{i,k}^* = 2$$

$$y_{i,k}^* = 3$$