

APPLICATION TO CCN PROBLEM

- 1 Assume values for C and k
- 2 For each observation N_i , determine the probability of making that observation given that the value expected from the assumed parameters is $N_i^* = V_i C(SS_i)^k$ where V is the volume sampled. That is given by the Poisson distribution:

$$\phi^{Poisson}(N_i; N_i^*) = \frac{(N_i^*)^{N_i} e^{-N_i^*}}{N_i!}$$

- 3 Vary C and k over a grid of values to search for the maximum \mathcal{W} , or use the R function "nlm ()" to search for the maximum.

But, in R, also consider glm ()

- Like lm() but can represent distributions other than Gaussian, including Poisson. It can perform this CCN fit directly.
- Useful to consider when fitting to counted measurements