is abundance at age vector estimated by stock assessment

is age class in the stock assessment

is independent published fecundity-at-age vector

is relative abundance across regions as estimated by standardized video survey

is to x-m2 grid cell in statistical fecundity map, within the domain covered by the video survey (AL/FL line to southernmost survey extent ~24.9 degree N in Gulf; Keys/Tortugas area; 28.0069 deg N to 30.5296 deg N in Atlantic)

* Note no statistical map in the FL Keys; use handful of locations where RS have been detected.

is fecundity in each grid cell as estimated by statistical map

Solve for three independent constants such that right hand sides of each pair of equations are equal.

Seed simulation with egg releases as follows: