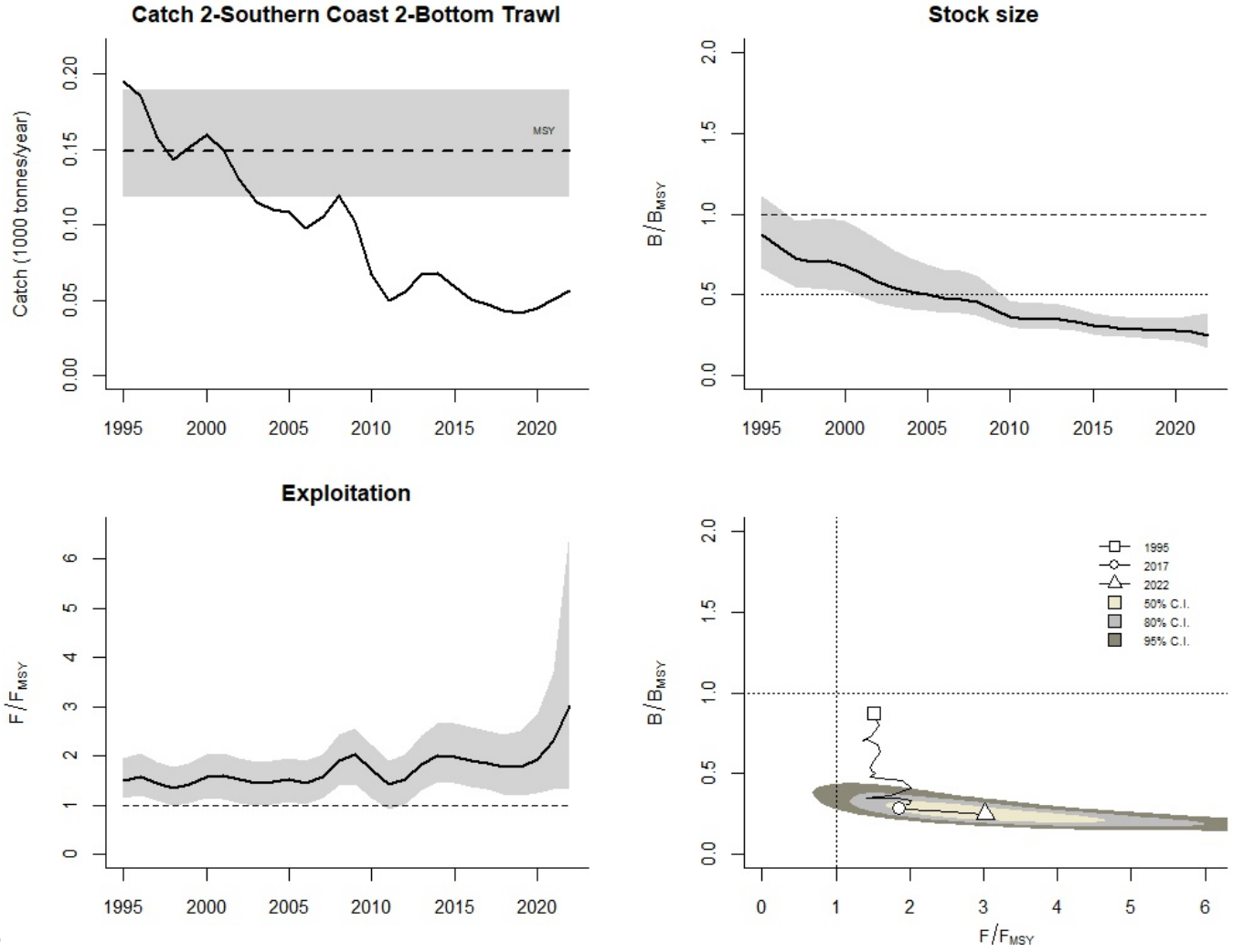
Octopus

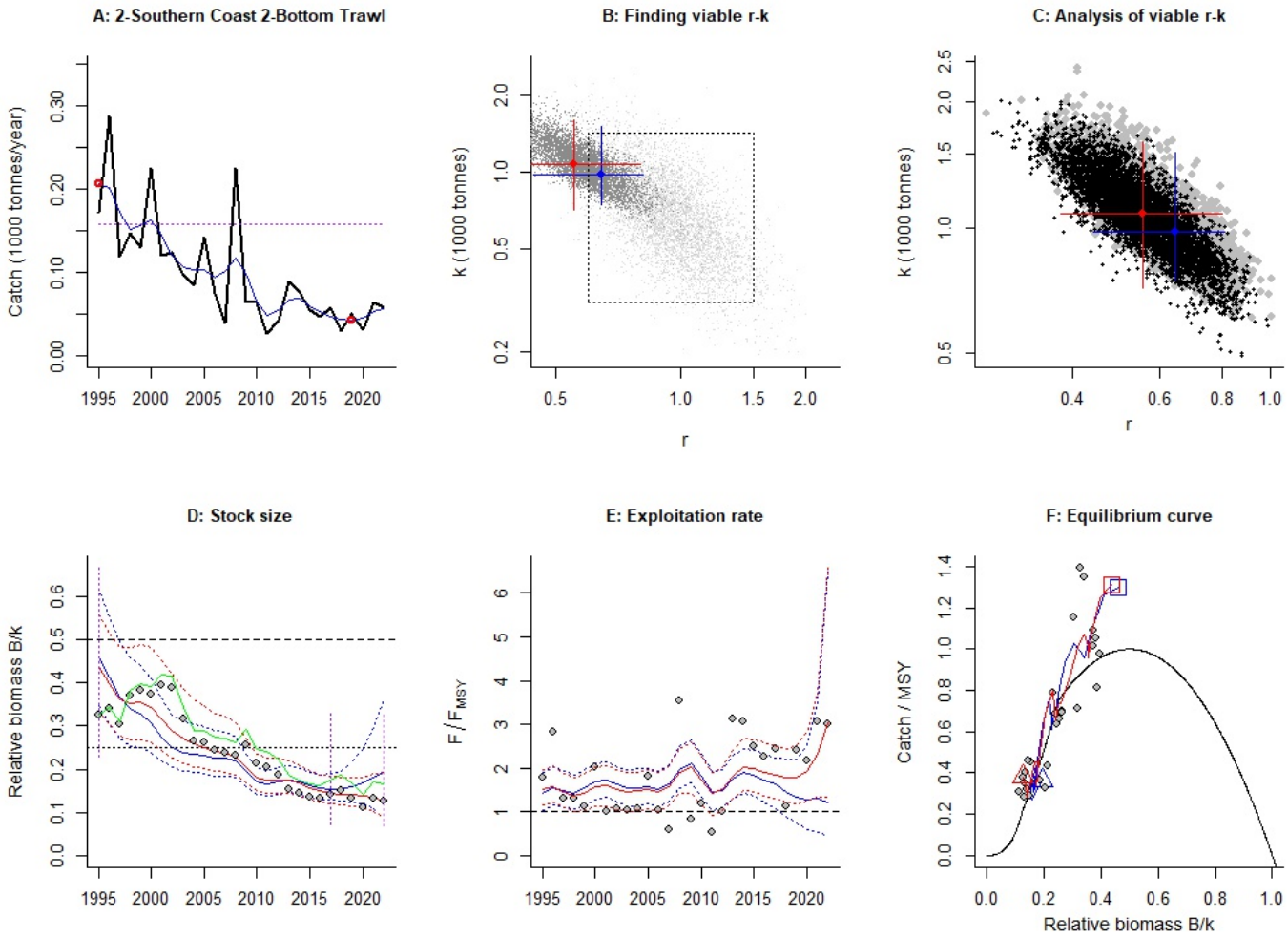
Species: *Octopus vulgaris*, Stock code: 2-Southern Coast 2-Bottom Trawl
Region: Iberia
Marine Ecoregion: Portugal
Reconstructed catch data used from years 1995 - 2019
For figure captions and method see http://www.seaaroundus.org/cmsy-method



extext

Results for management (based on BSM analysis)

Fmsy = 0.294, 95% CL = 0.2 - 0.44 (if B > 1/2 Bmsy then Fmsy = 0.5 r)
Fmsy = 0.158, 95% CL = 0.108 - 0.236 (r and Fmsy are linearly reduced if B < 1/2 Bmsy)
MSY = 0.15, 95% CL = 0.124 - 0.188; Bmsy = 0.511, 95% CL = 0.35 - 0.751 (1000 tonnes)
Biomass in last year = 0.137, 95% CL = 0.0837 - 0.222 (1000 tonnes)
B/Bmsy in last year = 0.269, 95% CL = 0.18 - 0.391
Fishing mortality in last year = 0.317, 95% CL =0.18 - 0.571
F/Fmsy = 2.02, 95% CL = 0.94 - 4.31
Comment:



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Results of CMSY analysis conducted in JAGS

r = 0.658, 95% CL = 0.45 - 0.828; k = 0.938, 95% CL = 0.74 - 1.44 (1000 tonnes)
MSY = 0.154, 95% CL = 0.125 - 0.192 (1000 tonnes/year)
Relative biomass last year = 0.183 k, 95% CL = 0.0773 - 0.338
Exploitation F/(r/2) in last year = 1.25

Results from Bayesian Schaefer model using catch and CPUE

r = 0.589, 95% CL = 0.401 - 0.879; k = 1.02, 95% CL = 0.7 - 1.5
r-k log correlation = -0.858
MSY = 0.15, 95% CL = 0.124 - 0.188 (1000 tonnes/year)
Relative biomass in last year = 0.183 k, 95% CL = 0.0773 - 0.338
Exploitation F/(r/2) in last year = 0.912
q = 13.9, 95% CL = 9.49 - 20.3
Prior range of q = 3.76 - 67.1
Relative abundance data type = CPUE
Prior initial relative biomass = 0.229 - 0.665 default
Prior intermediate relative biomass = 0.0727 - 0.333 in year 2011 default
Prior final relative biomass = 0.066 - 0.319, default
Prior range for r = 0.6 - 1.5 default, prior range for k = 0.318 - 1.42 (1000 tonnes) default
Source for relative biomass:
DGRM