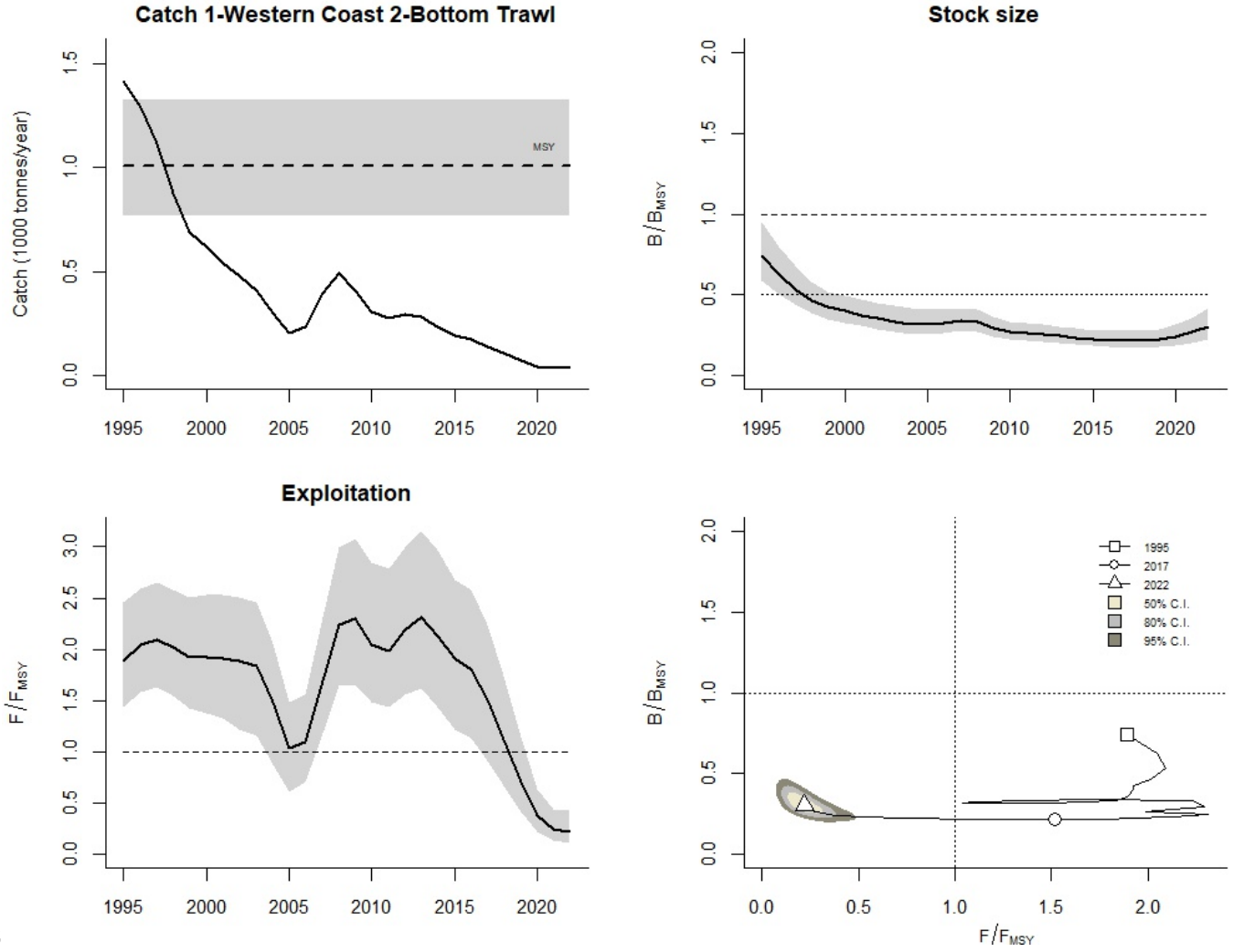
Octopus

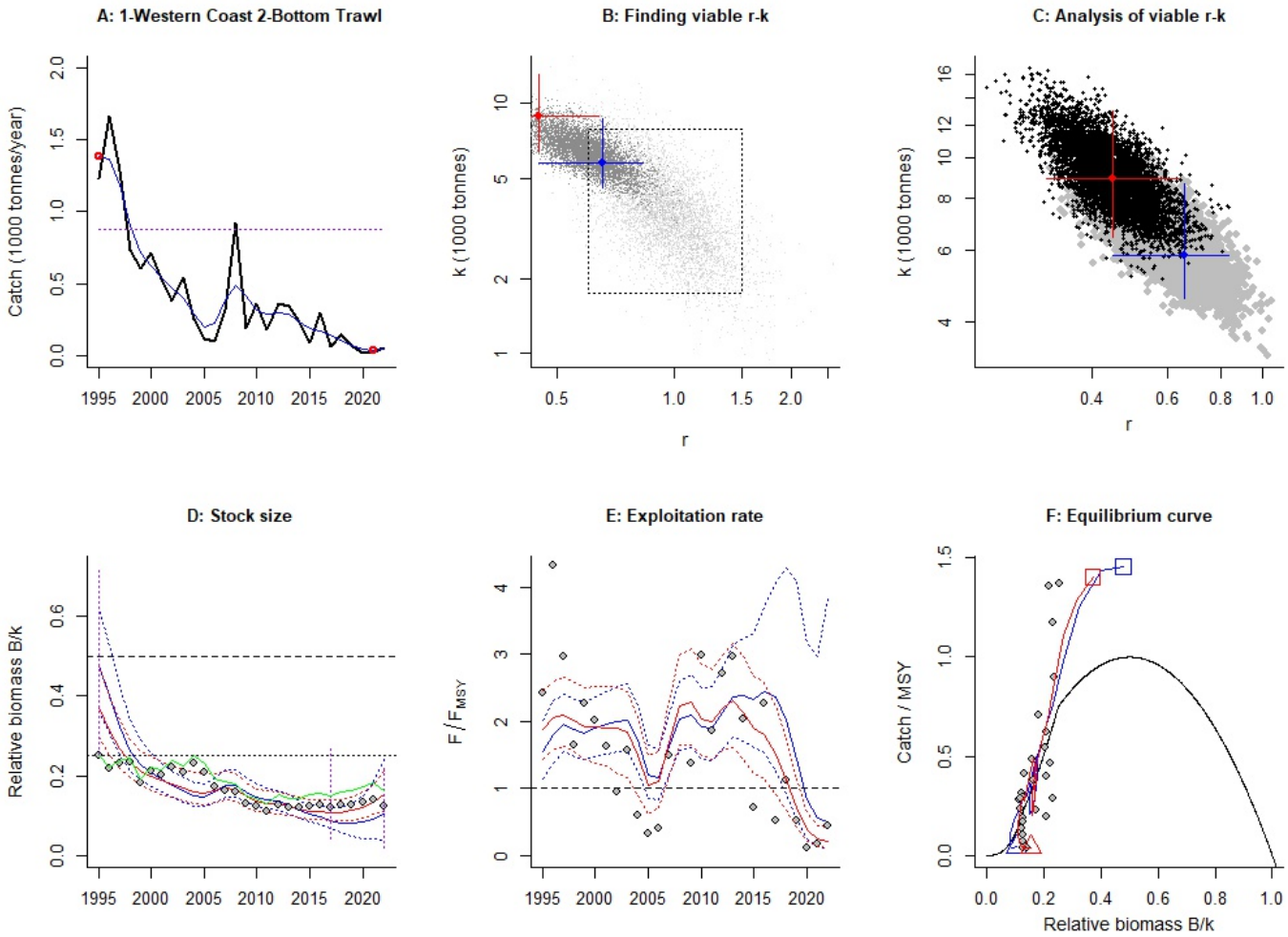
Species: *Octopus vulgaris*, Stock code: 1-Western Coast 2-Bottom Trawl
Region: Iberia
Marine Ecoregion: Portugal
Reconstructed catch data used from years 1995 - 2022
For figure captions and method see http://www.seaaroundus.org/cmsy-method



extext

Results for management (based on BSM analysis)

Fmsy = 0.223, 95% CL = 0.157 - 0.32 (if B > 1/2 Bmsy then Fmsy = 0.5 r)
Fmsy = 0.137, 95% CL = 0.0961 - 0.196 (r and Fmsy are linearly reduced if B < 1/2 Bmsy)
MSY = 1.01, 95% CL = 0.766 - 1.33; Bmsy = 4.47, 95% CL = 3.22 - 6.52 (1000 tonnes)
Biomass in last year = 1.38, 95% CL = 0.918 - 2.07 (1000 tonnes)
B/Bmsy in last year = 0.306, 95% CL = 0.224 - 0.421
Fishing mortality in last year = 0.03, 95% CL =0.0185 - 0.0496
F/Fmsy = 0.218, 95% CL = 0.115 - 0.43
Comment:



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Results of CMSY analysis conducted in JAGS

r = 0.656, 95% CL = 0.447 - 0.835; k = 5.81, 95% CL = 4.59 - 8.67 (1000 tonnes)
MSY = 0.953, 95% CL = 0.745 - 1.24 (1000 tonnes/year)
Relative biomass last year = 0.104 k, 95% CL = 0.039 - 0.241
Exploitation F/(r/2) in last year = 0.565

Results from Bayesian Schaefer model using catch and CPUE

r = 0.447, 95% CL = 0.314 - 0.641; k = 8.93, 95% CL = 6.44 - 13
r-k log correlation = -0.701
MSY = 1.01, 95% CL = 0.766 - 1.33 (1000 tonnes/year)
Relative biomass in last year = 0.104 k, 95% CL = 0.039 - 0.241
Exploitation F/(r/2) in last year = 0.264
q = 3.77, 95% CL = 2.65 - 5.27
Prior range of q = 1.02 - 18.7
Relative abundance data type = CPUE
Prior initial relative biomass = 0.256 - 0.721 default
Prior intermediate relative biomass = 0.0426 - 0.269 in year 2017 default
Prior final relative biomass = 0.0196 - 0.22, default
Prior range for r = 0.6 - 1.5 default, prior range for k = 1.73 - 7.91 (1000 tonnes) default
Source for relative biomass:
DGRM