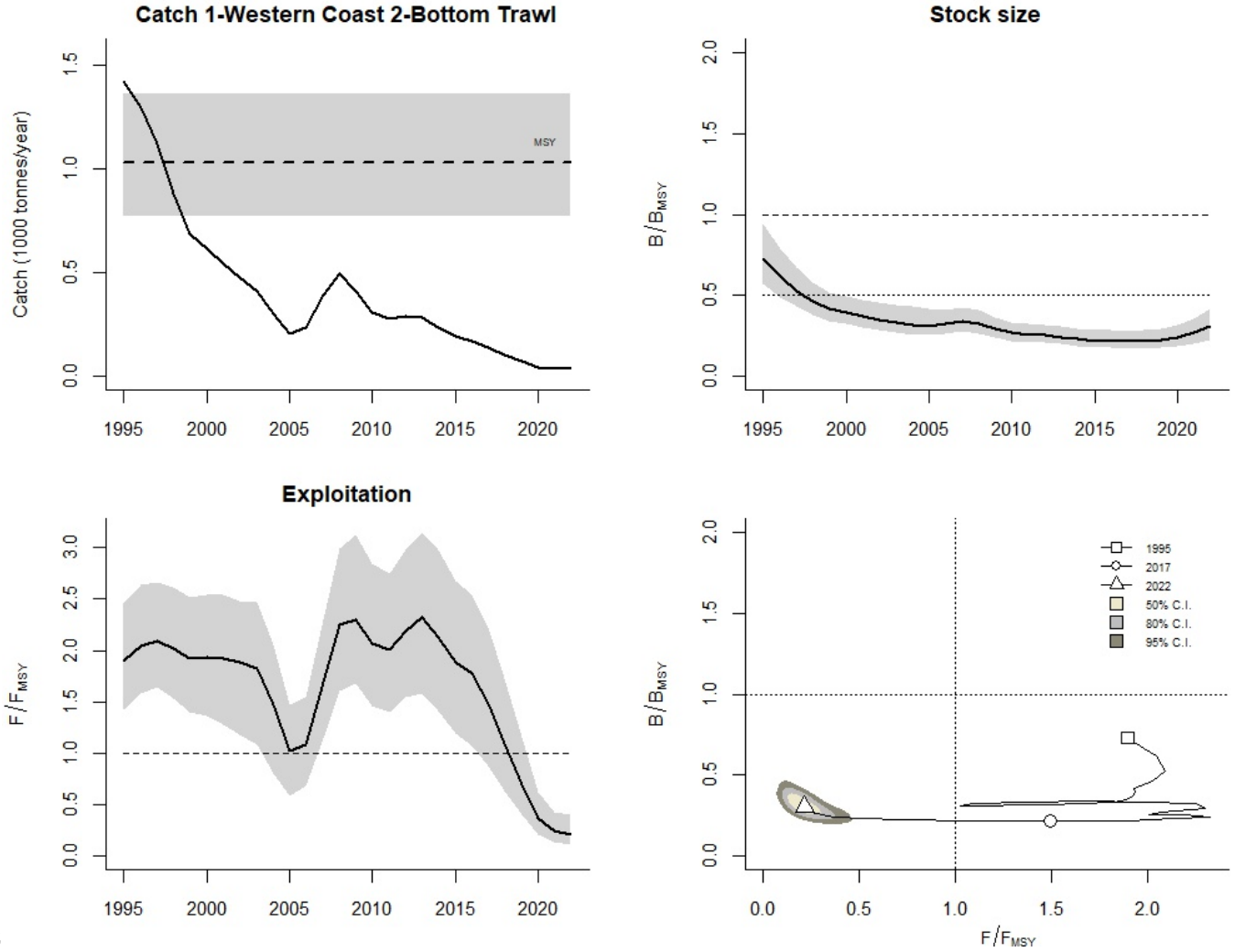
Octopus

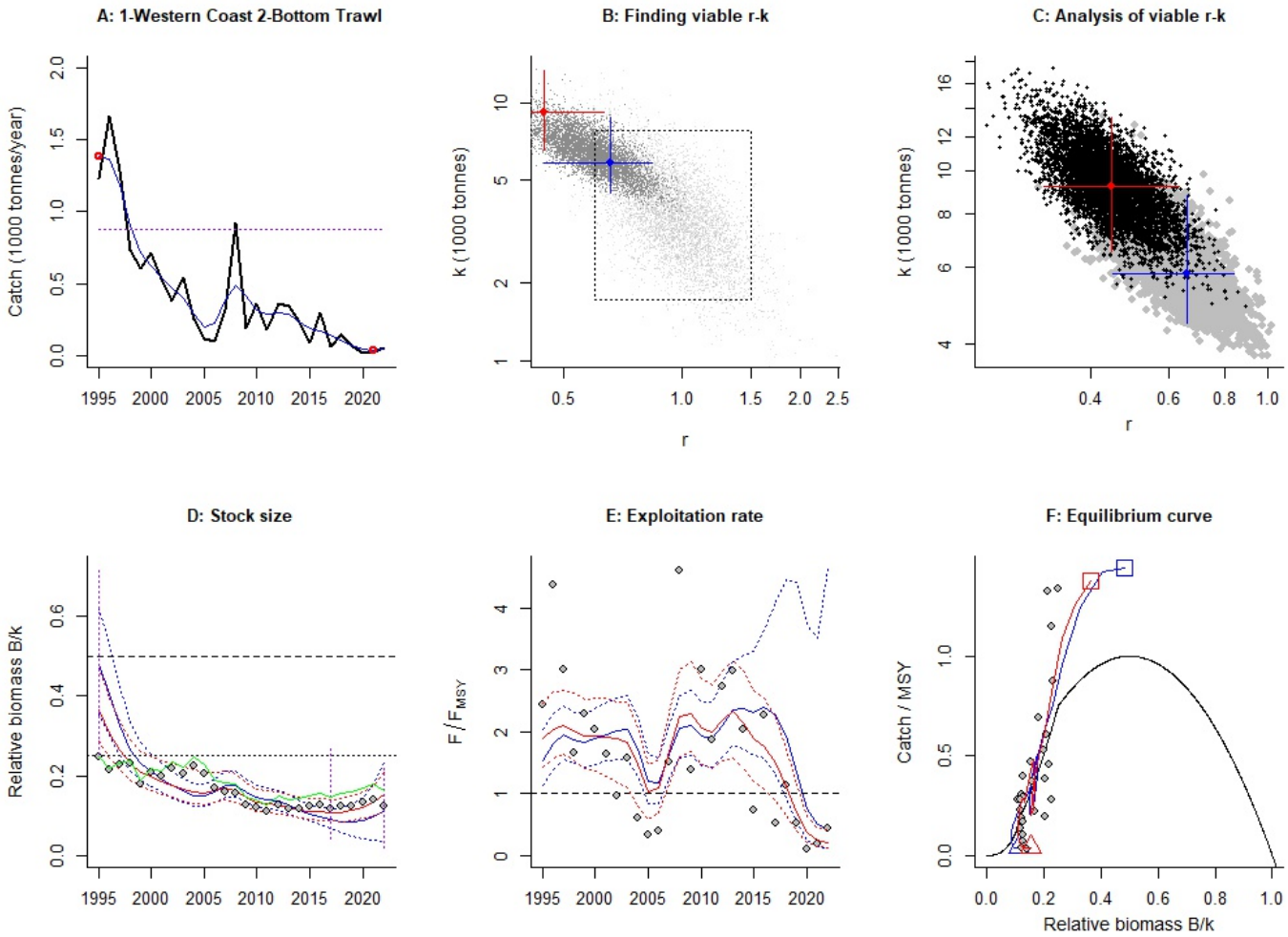
Species: *Octopus vulgaris*, Stock code: 1-Western Coast 2-Bottom Trawl
Region: Iberia
Marine Ecoregion: Portugal
Reconstructed catch data used from years 1995 - 2022
For figure captions and method see http://www.seaaroundus.org/cmsy-method



extext

Results for management (based on BSM analysis)

Fmsy = 0.223, 95% CL = 0.156 - 0.317 (if B > 1/2 Bmsy then Fmsy = 0.5 r)
Fmsy = 0.138, 95% CL = 0.0965 - 0.195 (r and Fmsy are linearly reduced if B < 1/2 Bmsy)
MSY = 1.03, 95% CL = 0.77 - 1.36; Bmsy = 4.6, 95% CL = 3.27 - 6.65 (1000 tonnes)
Biomass in last year = 1.43, 95% CL = 0.928 - 2.12 (1000 tonnes)
B/Bmsy in last year = 0.309, 95% CL = 0.225 - 0.415
Fishing mortality in last year = 0.0291, 95% CL =0.018 - 0.049
F/Fmsy = 0.212, 95% CL = 0.114 - 0.41
Comment:



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Results of CMSY analysis conducted in JAGS

r = 0.658, 95% CL = 0.448 - 0.839; k = 5.82, 95% CL = 4.46 - 8.77 (1000 tonnes)
MSY = 0.957, 95% CL = 0.751 - 1.24 (1000 tonnes/year)
Relative biomass last year = 0.112 k, 95% CL = 0.0352 - 0.233
Exploitation F/(r/2) in last year = 0.507

Results from Bayesian Schaefer model using catch and CPUE

r = 0.446, 95% CL = 0.312 - 0.633; k = 9.21, 95% CL = 6.54 - 13.3
r-k log correlation = -0.672
MSY = 1.03, 95% CL = 0.77 - 1.36 (1000 tonnes/year)
Relative biomass in last year = 0.112 k, 95% CL = 0.0352 - 0.233
Exploitation F/(r/2) in last year = 0.237
q = 3.72, 95% CL = 2.59 - 5.23
Prior range of q = 1.03 - 18.6
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 = 1.74 - 7.82 (1000 tonnes) default
Source for relative biomass:
DGRM