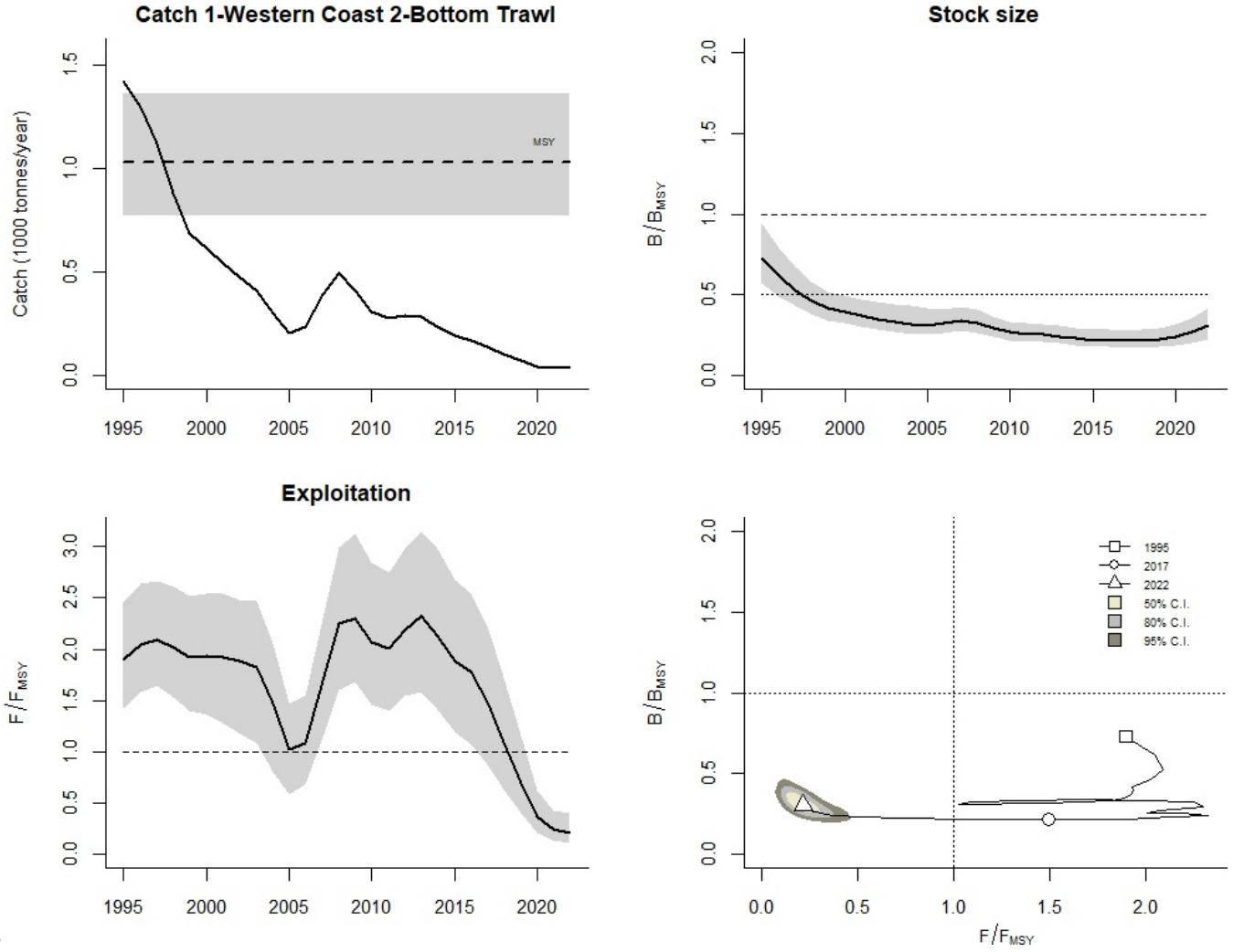
Octopus

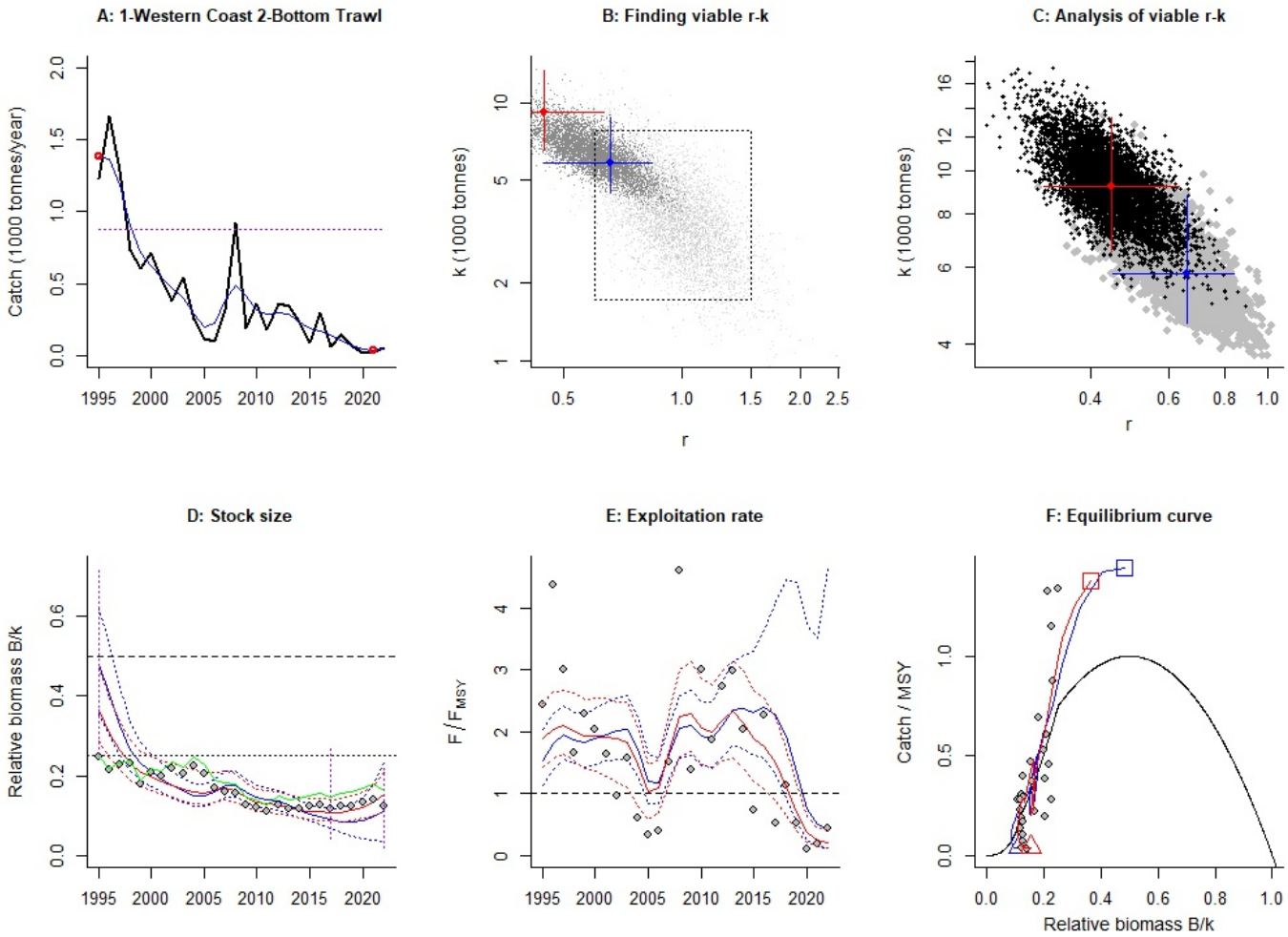
Species: *Octopus vulgaris*, Stock code: 1-Western Coast 2-Bottom Trawl
Region: Iberia
Marine Ecoregion: Portugal
Reconstructed catch data used from years 1995 - 2021
For figure captions and method see http://www.seaaroundus.org/cmsy-method



extext

Results for management (based on BSM analysis)

Fmsy = 0.234, 95% CL = 0.161 - 0.346 (if B > 1/2 Bmsy then Fmsy = 0.5 r)
Fmsy = 0.149, 95% CL = 0.102 - 0.22 (r and Fmsy are linearly reduced if B < 1/2 Bmsy)
MSY = 0.975, 95% CL = 0.735 - 1.3; Bmsy = 4.16, 95% CL = 2.81 - 5.93 (1000 tonnes)
Biomass in last year = 1.32, 95% CL = 0.848 - 1.99 (1000 tonnes)
B/Bmsy in last year = 0.317, 95% CL = 0.23 - 0.439
Fishing mortality in last year = 0.0225, 95% CL =0.0136 - 0.0374
F/Fmsy = 0.151, 95% CL = 0.0787 - 0.295
Comment:



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Results of CMSY analysis conducted in JAGS

r = 0.659, 95% CL = 0.456 - 0.841; k = 5.6, 95% CL = 4.44 - 8.37 (1000 tonnes)
MSY = 0.923, 95% CL = 0.713 - 1.21 (1000 tonnes/year)
Relative biomass last year = 0.0975 k, 95% CL = 0.0267 - 0.222
Exploitation F/(r/2) in last year = 0.752

Results from Bayesian Schaefer model using catch and CPUE

r = 0.468, 95% CL = 0.322 - 0.692; k = 8.32, 95% CL = 5.62 - 11.9
r-k log correlation = -0.719
MSY = 0.975, 95% CL = 0.735 - 1.3 (1000 tonnes/year)
Relative biomass in last year = 0.0975 k, 95% CL = 0.0267 - 0.222
Exploitation F/(r/2) in last year = 0.149
q = 3.92, 95% CL = 2.74 - 5.78
Prior range of q = 1.04 - 18.3
Relative abundance data type = CPUE
Prior initial relative biomass = 0.256 - 0.721 default
Prior intermediate relative biomass = 0.0501 - 0.285 in year 2016 default
Prior final relative biomass = 0.0169 - 0.215, default
Prior range for r = 0.6 - 1.5 default, prior range for k = 1.77 - 7.77 (1000 tonnes) default
Source for relative biomass:
DGRM