

# sebastids Stocks

## v4.66 (Nov-03-2024)

Not present Present Preferred

Stock	Time Series Types			
	B/Bmsy	U/Umsy	B/Bmgt	U/Umgt
1. ACADRED2J3K [Acadian redfish NAFO Division 2J3K]	TB SSB	ER F	TB SSB	ER F
2. ACADREDGOMGB [Acadian redfish Gulf of Maine / Georges Bank]	TB SSB	ER F	TB SSB	ER F
3. ACADREDUT3 [Acadian redfish Unit 3]	TB SSB	ER F	TB SSB	ER F
4. AUROCKPCOAST [Aurora rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
5. BGROCKPCOAST [Blackgill rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
6. BLACKROCKCAL [Black rockfish California]	TB SSB	ER F	TB SSB	ER F
7. BLACKROCKORECOAST [Black rockfish Oregon Coast]	TB SSB	ER F	TB SSB	ER F
8. BLACKROCKWASH [Black rockfish Washington]	TB SSB	ER F	TB SSB	ER F
9. BLUEROCKCAL [Blue rockfish California]	TB SSB	ER F	TB SSB	ER F
10. BNKROCKCAL [Bank rockfish California]	TB SSB	ER F	TB SSB	ER F
11. BOCACCBW [Bocaccio British Columbia Waters]	TB SSB	ER F	TB SSB	ER F
12. BOCACCSPCOAST [Bocaccio Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
13. BRNROCKPCOAST [Brown rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
14. CHILISPCOAST [Chilipepper Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
15. CHROCKCPCOAST [China rockfish Central Pacific Coast]	TB SSB	ER F	TB SSB	ER F
16. CHROCKNPCOAST [China rockfish Northern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
17. CHROCKSPCOAST [China rockfish Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
18. COWCODSCAL [Cowcod Southern California]	TB SSB	ER F	TB SSB	ER F
19. CPRROCKPCOAST [Copper rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
20. CROCKPCOAST [Canary rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
21. CROCKWCVANISOGQCI [Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands]	TB SSB	ER F	TB SSB	ER F
22. DKROCKPCOAST [Darkblotched rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
23. DUSROCKGA [Dusky rockfish Gulf of Alaska]	TB SSB	ER F	TB SSB	ER F
24. GOLDREDNEAR [Golden redfish North-East Arctic]	TB SSB	ER F	TB SSB	ER F
25. GOLDREDV-VI-XII-XIV [Golden redfish ICES 5-6-12-14]	TB SSB	ER F	TB SSB	ER F
26. GOPHERSPCOAST [Gopher rockfish Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
27. GRNSTROCKPCOAST [Greenstriped rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
28. GRSPROCKNCAL [Greenspotted rockfish Northern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
29. GRSPROCKSCAL [Greenspotted rockfish Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
30. KCROCKNPAC [Kichiji rockfish North Pacific]	TB SSB	ER F	TB SSB	ER F
31. KCROCKOKS [Kichiji rockfish Okhotsk Sea]	TB SSB	ER F	TB SSB	ER F
32. KCROCKSWHOKK [Kichiji rockfish Southwestern coast of Hokkaido]	TB SSB	ER F	TB SSB	ER F
33. LSTHORNHPCOAST [Longspine thornyhead Pacific Coast]	TB SSB	ER F	TB SSB	ER F
34. NROCKBSAI [Northern rockfish Bering Sea and Aleutian Islands]	TB SSB	ER F	TB SSB	ER F
35. NROCKGA [Northern rockfish Gulf of Alaska]	TB SSB	ER F	TB SSB	ER F
36. PERCHEBSAI [Pacific ocean perch Eastern Bering Sea and Aleutian Islands]	TB SSB	ER F	TB SSB	ER F
37. PERCHHG [Pacific Ocean perch Haida Gwaii]	TB SSB	ER F	TB SSB	ER F

38. PERCHWCVANI [Pacific ocean perch West Coast of Vancouver Island]	TB SSB	ER F	TB SSB	ER F
39. POPERCHGA [Pacific ocean perch Gulf of Alaska]	TB SSB	ER F	TB SSB	ER F
40. POPERCHPCOAST [Pacific ocean perch Pacific Coast]	TB SSB	ER F	TB SSB	ER F
41. QROCKPCOASTIN [Quillback rockfish Pacific Coast of Canada (Inside)]	TB SSB	ER F	TB SSB	ER F
42. QROCKPCOASTOUT [Quillback rockfish Pacific Coast of Canada (Outside)]	TB SSB	ER F	TB SSB	ER F
43. REDDEEPDP-1-2-V-XII-XIV [Beaked redfish ICES 5-12-14 and NAFO Subareas 1-2 (deep)]	TB SSB	ER F	TB SSB	ER F
44. REDDEEPI-II [Deepwater redfish North-East Arctic]	TB SSB	ER F	TB SSB	ER F
45. REDDEEPSH1-2-V-XII-XIV [Beaked redfish ICES 5-12-14 and NAFO Subareas 1-2 (shallow)]	TB SSB	ER F	TB SSB	ER F
46. REDDEEPPVa-XIV [Beaked redfish ICES 5a-14]	TB SSB	ER F	TB SSB	ER F
47. REDDEEPPXIVb [Beaked redfish Southeast Greenland]	TB SSB	ER F	TB SSB	ER F
48. REDFISHSPP3LN [Redfish species N and SW Grand Banks]	TB SSB	ER F	TB SSB	ER F
49. REDFISHSPP3M [Redfish species Flemish Cap]	TB SSB	ER F	TB SSB	ER F
50. REDFISHSPPUT1 [Redfish species Unit 1]	TB SSB	ER F	TB SSB	ER F
51. REDFISHSPPUT2 [Redfish species Unit 2]	TB SSB	ER F	TB SSB	ER F
52. REYEROCKBSAI [Rougheye rockfish Bering Sea and Aleutian Islands]	TB SSB	ER F	TB SSB	ER F
53. REYEROCKGA [Rougheye rockfish Gulf of Alaska]	TB SSB	ER F	TB SSB	ER F
54. RSROCKBCWN [Redstripe rockfish British Columbia Waters North]	TB SSB	ER F	TB SSB	ER F
55. RSROCKBCWS [Redstripe rockfish British Columbia Waters South]	TB SSB	ER F	TB SSB	ER F
56. SBELLYROCKPCOAST [Shortbelly rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
57. SHCROCKPCOAST [Sharpchin rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
58. SNROCKPCOAST [Splitnose rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
59. SRAKEROCKBSAI [Shortraker rockfish Bering Sea and Aleutian Islands]	TB SSB	ER F	TB SSB	ER F
60. SRAKEROCKGA [Shortraker rockfish Gulf of Alaska]	TB SSB	ER F	TB SSB	ER F
61. SSTHORNHGA [Shortspine thornyhead Gulf of Alaska]	TB SSB	ER F	TB SSB	ER F
62. SSTHORNHPCOAST [Shortspine thornyhead Pacific Coast]	TB SSB	ER F	TB SSB	ER F
63. WROCKBCW [Widow rockfish British Columbia Waters]	TB SSB	ER F	TB SSB	ER F
64. WROCKPCOAST [Widow rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
65. YEYEROCKGA [Yelloweye rockfish Gulf of Alaska]	TB SSB	ER F	TB SSB	ER F
66. YEYEROCKPCOAST [Yelloweye rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
67. YEYEROCKPCOASTIN [Yelloweye rockfish Pacific Coast of Canada (Inside)]	TB SSB	ER F	TB SSB	ER F
68. YTROCKNPCOAST [Yellowtail rockfish Northern Pacific Coast]	TB SSB	ER F	TB SSB	ER F

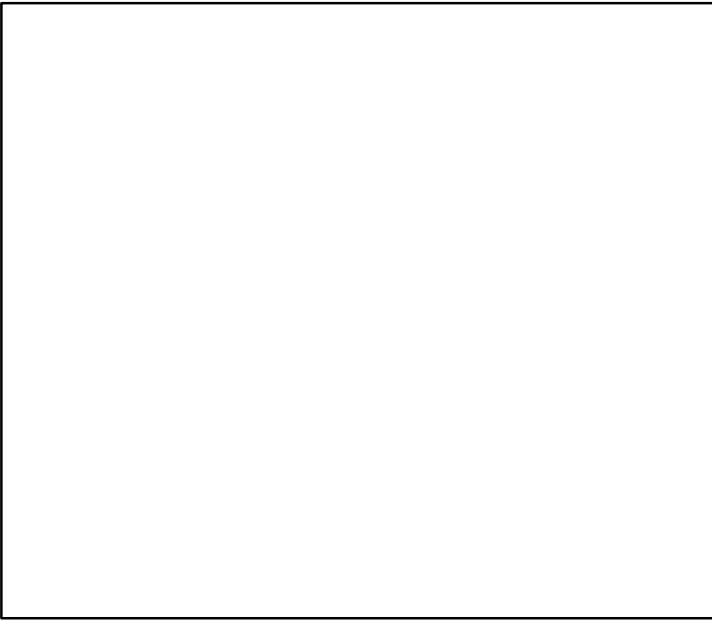
## Acadian redfish NAFO Division 2J3K [ACADRED2J3K]

Metadata	
<b>Scientific Name</b>	Sebastes fasciatus
<b>Current Assess ID</b>	DFO-ACADRED2J3K-1960-2010-WATSON
<b>Area</b>	NAFO Division 2J3K
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans
<b>Asmts in RAM</b>	2010

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2010	3000
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2010	27,600	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2010	0.002	-	-
TC	TC-MT	2010	49		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

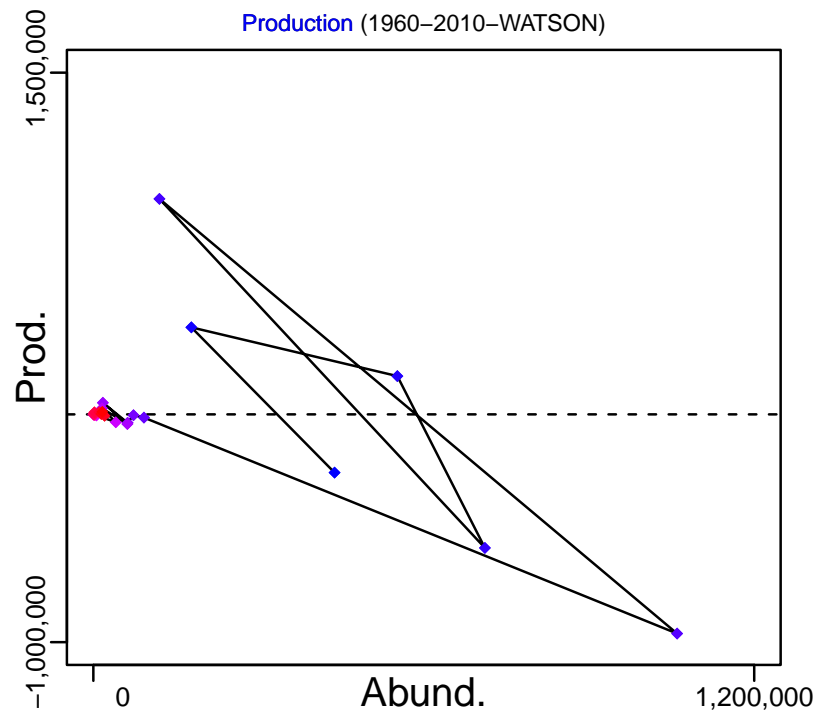
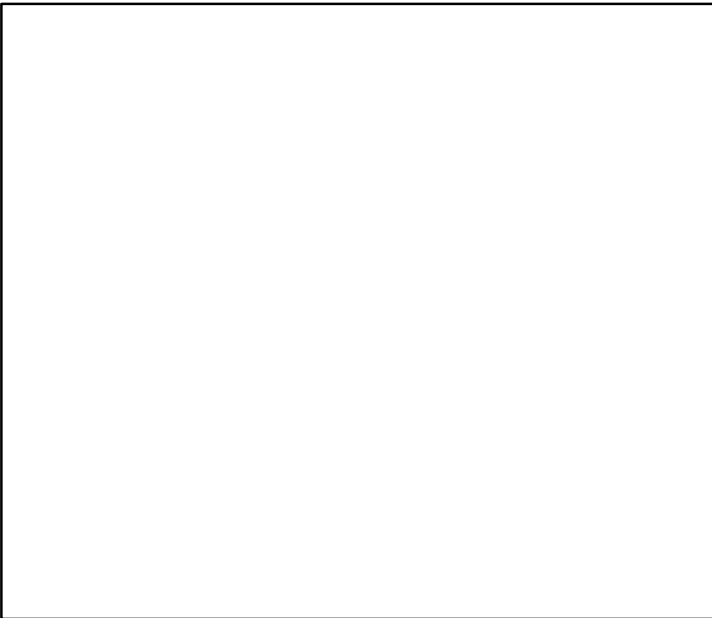
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*

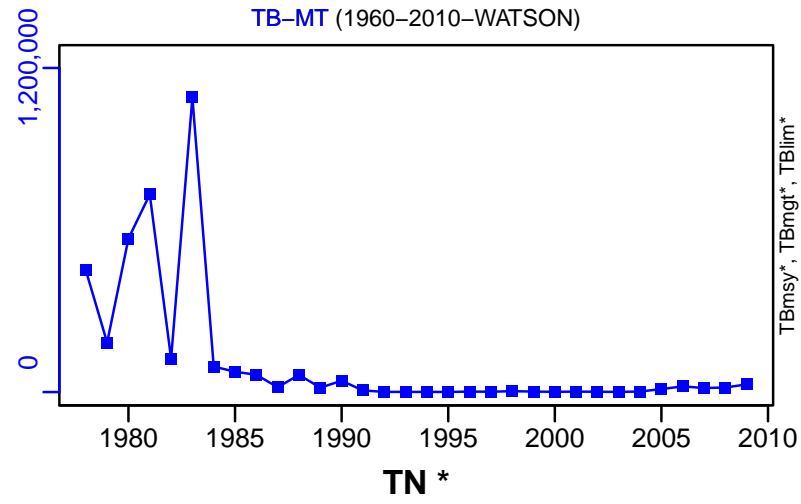


◆ Start Year ◆ End Year \* No Data

# Acadian redfish NAFO Division 2J3K [ACADRED2J3K]

TB-MT (1960-2010-WATSON)

SSB\*

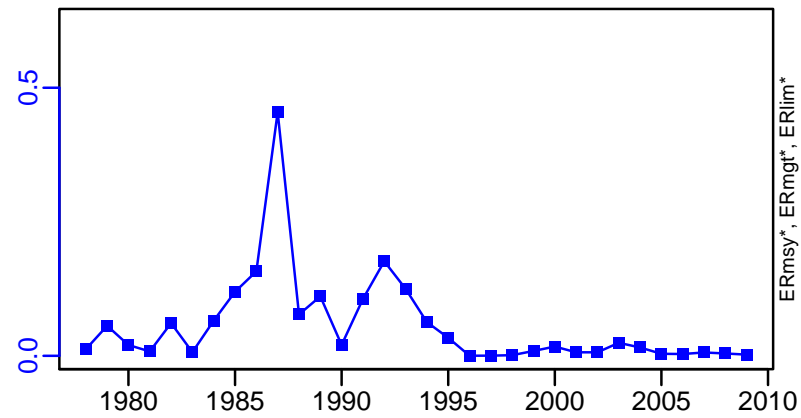


F\*



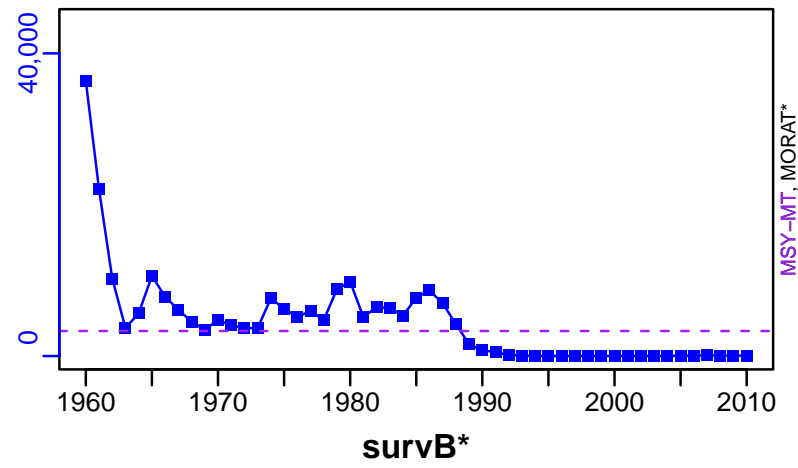
ER-calc-ratio (1960-2010-WATSON)

Recruits\*



# Acadian redfish NAFO Division 2J3K [ACADRED2J3K]

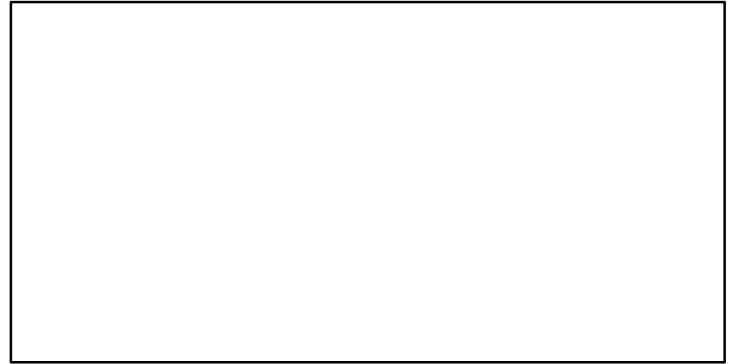
TC-MT, TL\*, RecC\* (1960-2010-WATSON)



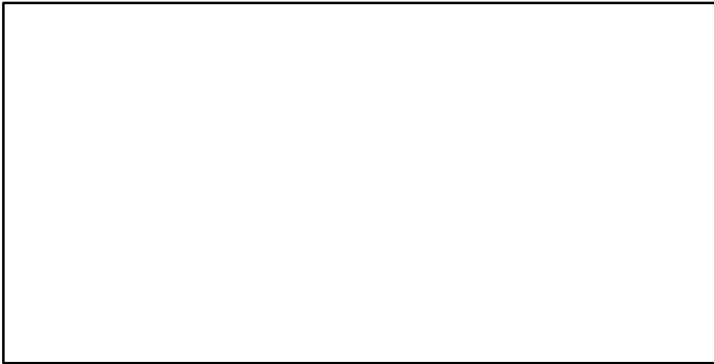
TAC\*, Cpair\*, Cadv\*



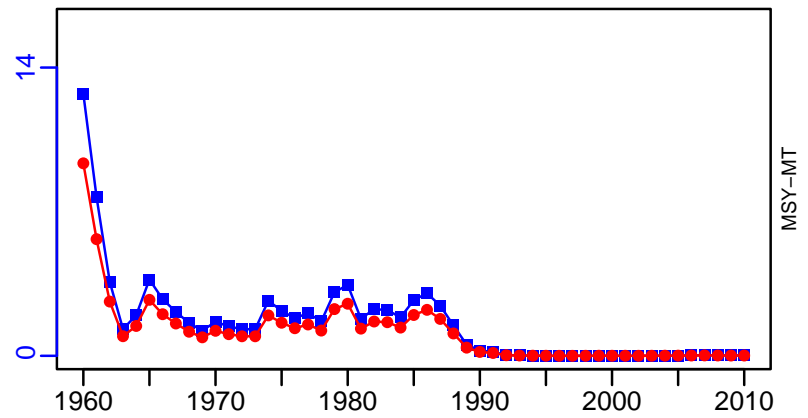
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1960-2010-WATSON)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
 ● 2nd listed time series    - - - MSY    \* No Data

## Acadian redfish Gulf of Maine / Georges Bank [ACADREDGOMGB]

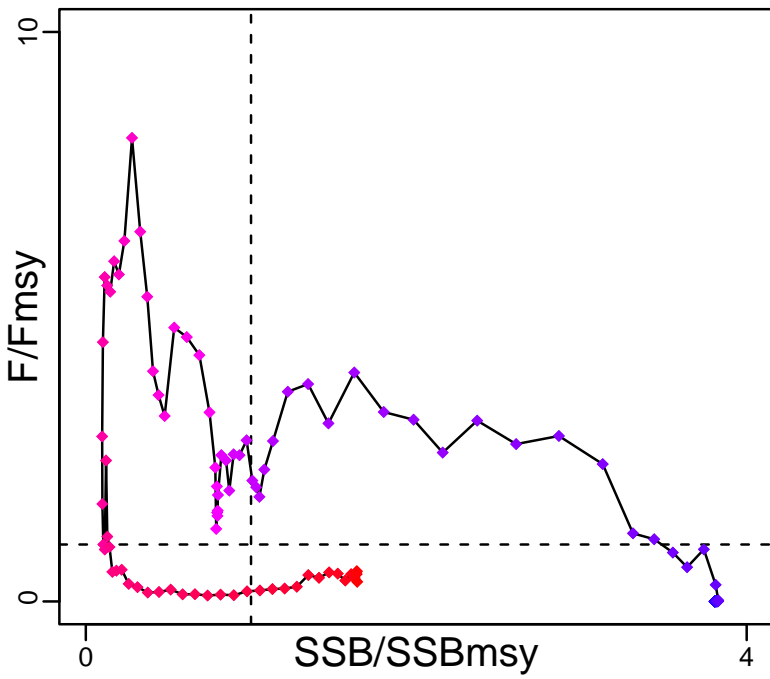
Metadata	
<b>Scientific Name</b>	Sebastes fasciatus
<b>Current Assess ID</b>	NEFSC-ACADREDGOMGB-1912-2023-SISIMP2024
<b>Area</b>	Gulf of Maine / Georges Bank
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northeast Fisheries Science Center
<b>Asmts in RAM</b>	2016, 2023, 2007, 2014, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2023	184,322
<b>Fmsy</b>	Fmsy-1/yr	2023	0.037
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2016	9318
<b>M</b>	M-1/yr	2007	0.05
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2023	92,161
<b>Flim</b>	Flim-1/yr	2019	0.038
<b>ERlim</b>	-	-	-

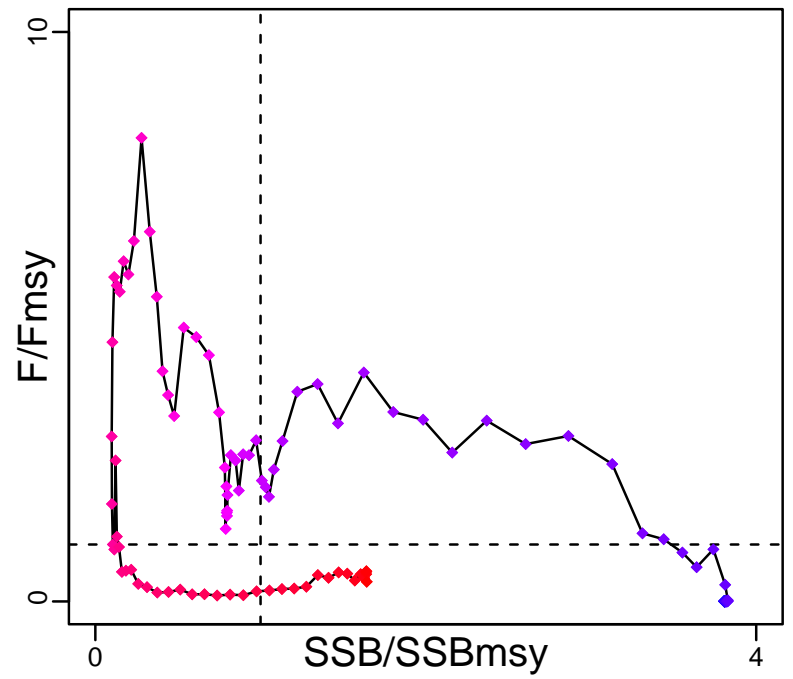
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-MT	2023	298,563	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2023	41,646	-	1
<b>F</b>	F-1/yr	2023	0.013	-	-
<b>ER</b>	ER-ratio	2007	0.002	-	-
<b>TC</b>	TC-MT	2023	3823		
<b>TL</b>	TL-MT	2007	787		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2023	1.62		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2023	0.346		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Acadian redfish Gulf of Maine / Georges Bank [ACADREDGOMGB]

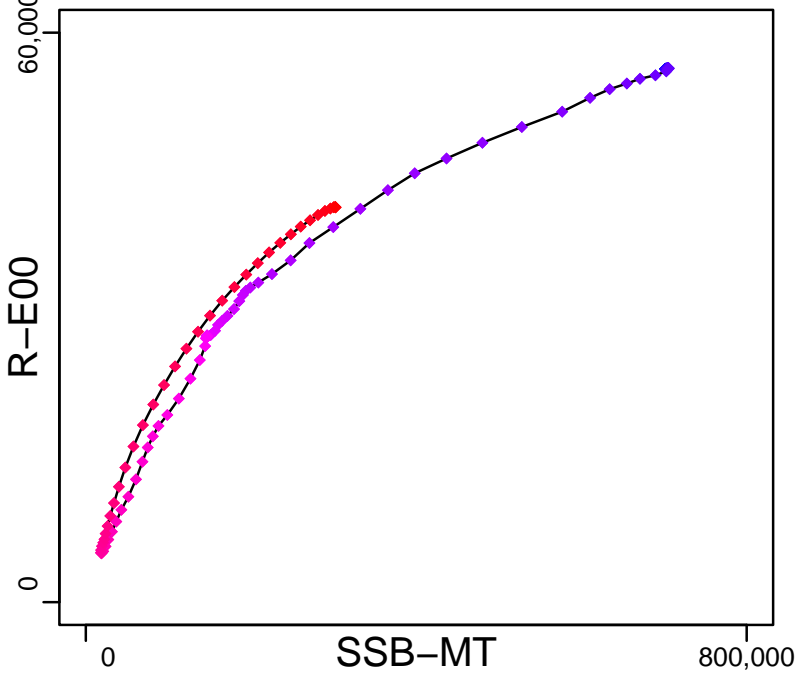
Kobe MSYpref (1912–2023–SISIMP2024)



Kobe MGTpref (1912–2023–SISIMP2024)



Spawner Recruit (1912–2023–SISIMP2024)



Production\*

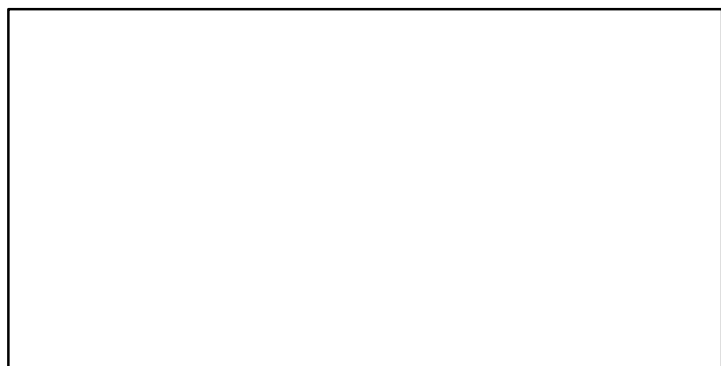


◆ Start Year ◆ End Year \* No Data

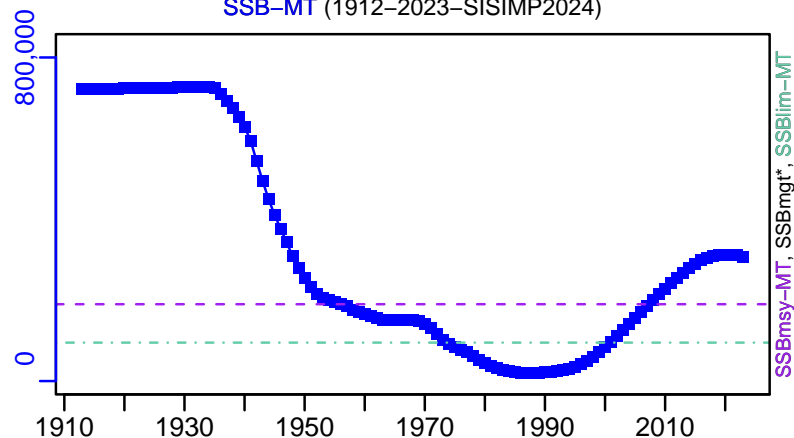


# Acadian redfish Gulf of Maine / Georges Bank [ACADREDGOMGB]

TB\*



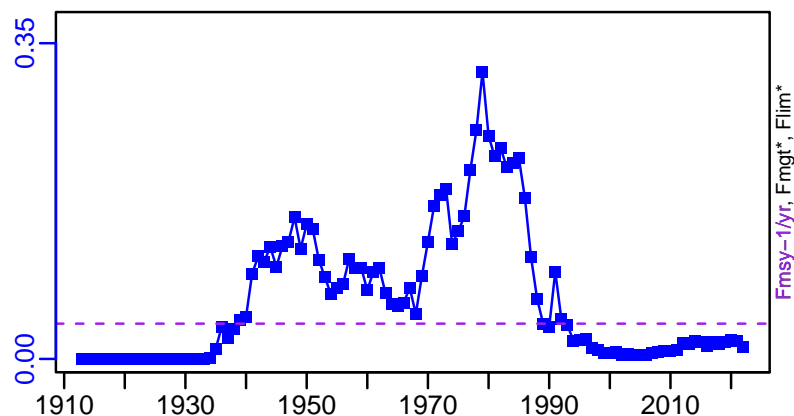
SSB-MT (1912-2023-SISIMP2024)



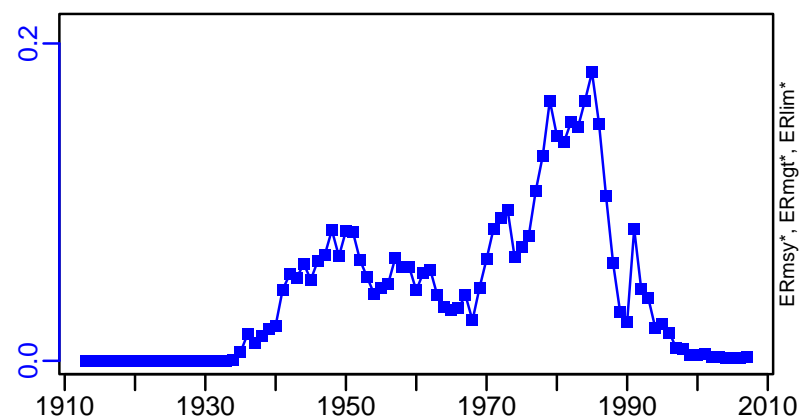
TN \*



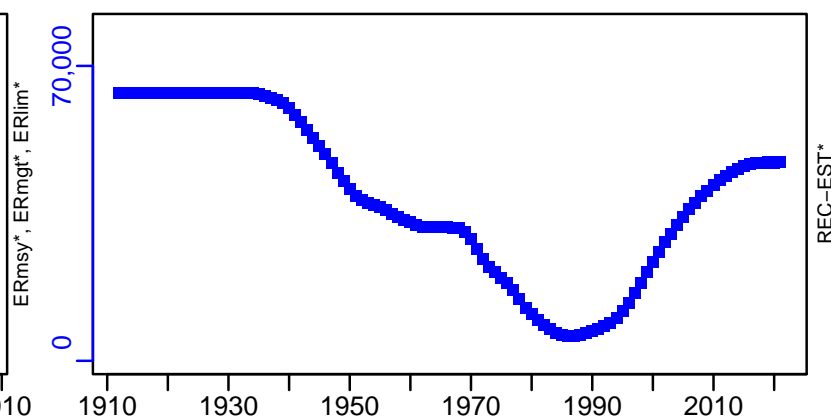
F-1/yr (1912-2023-SISIMP2024)



ER-ratio (1913-2007-MILLER)



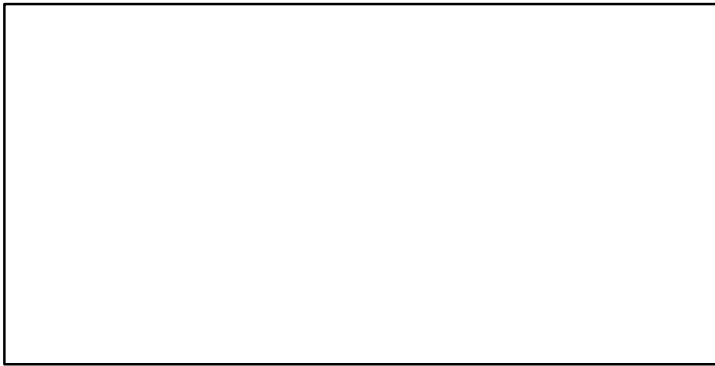
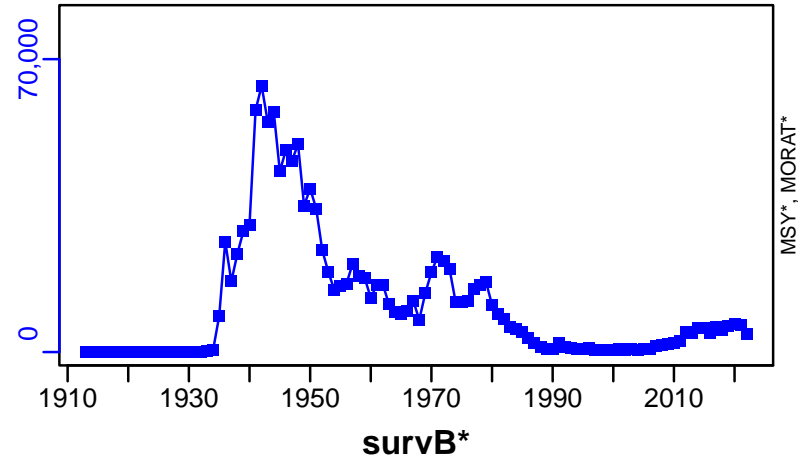
R-E00 (1912-2023-SISIMP2024)



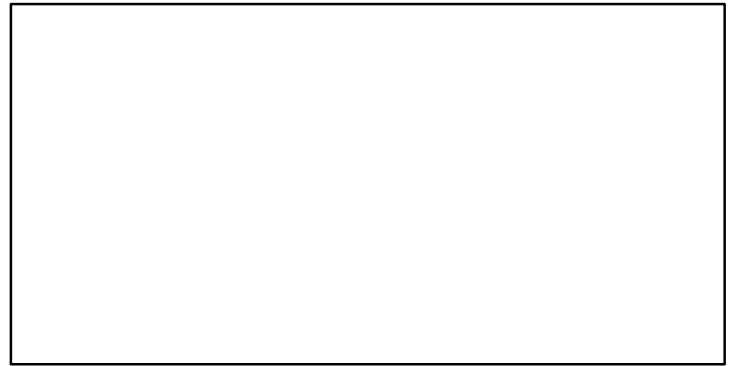
# Acadian redfish Gulf of Maine / Georges Bank [ACADREDGOMGB]

TC-MT, TL\*, RecC\* (1912-2023-SISIMP2024)

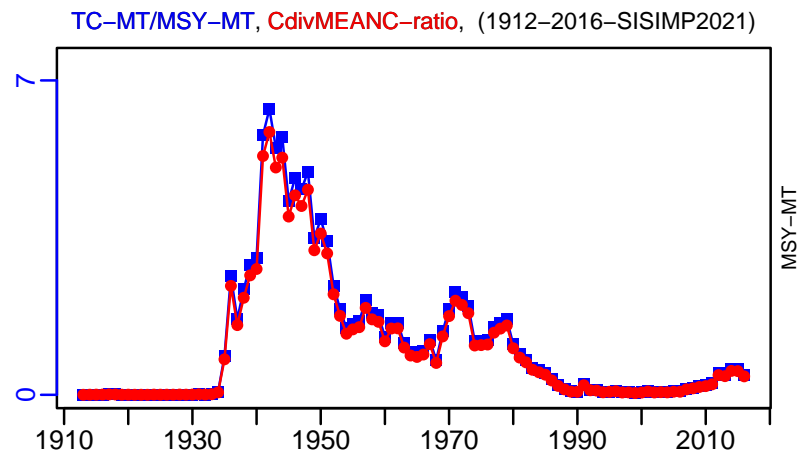
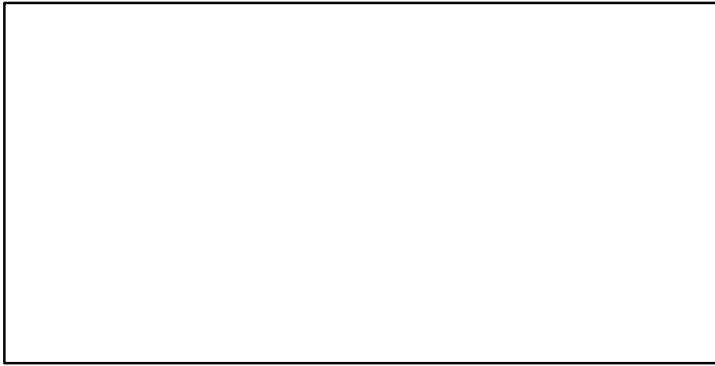
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*

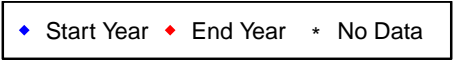
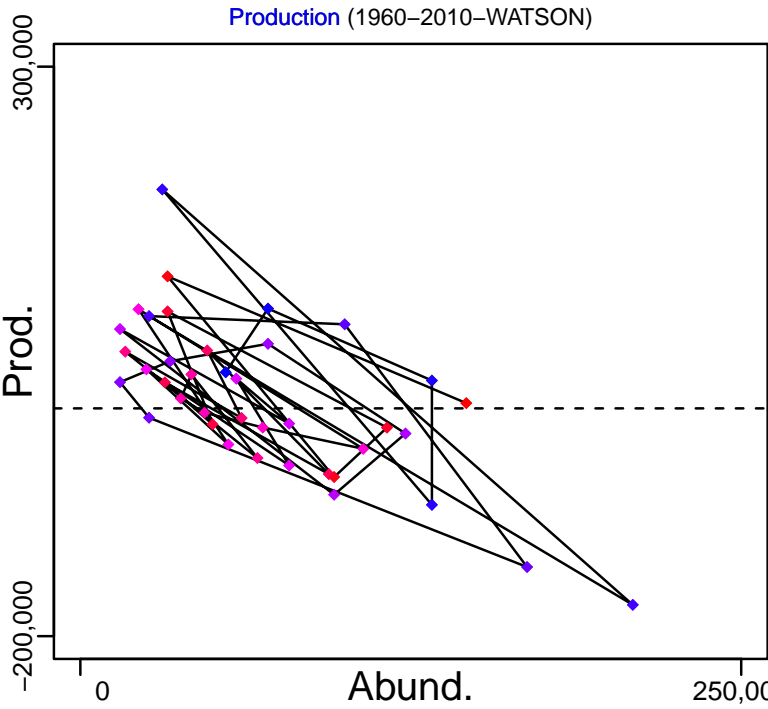
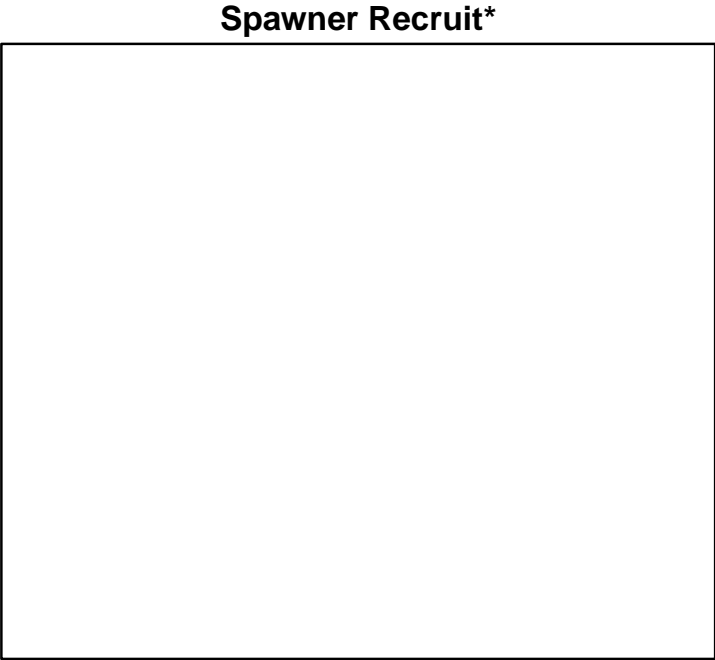
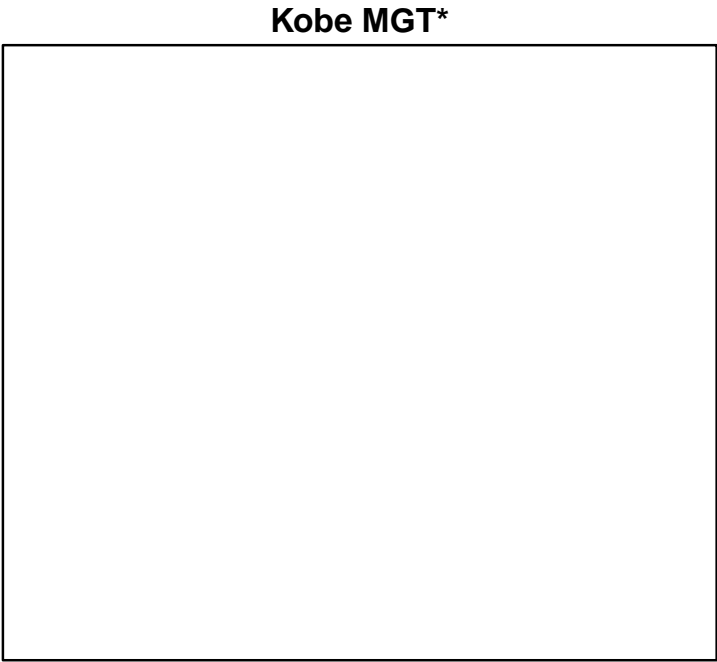
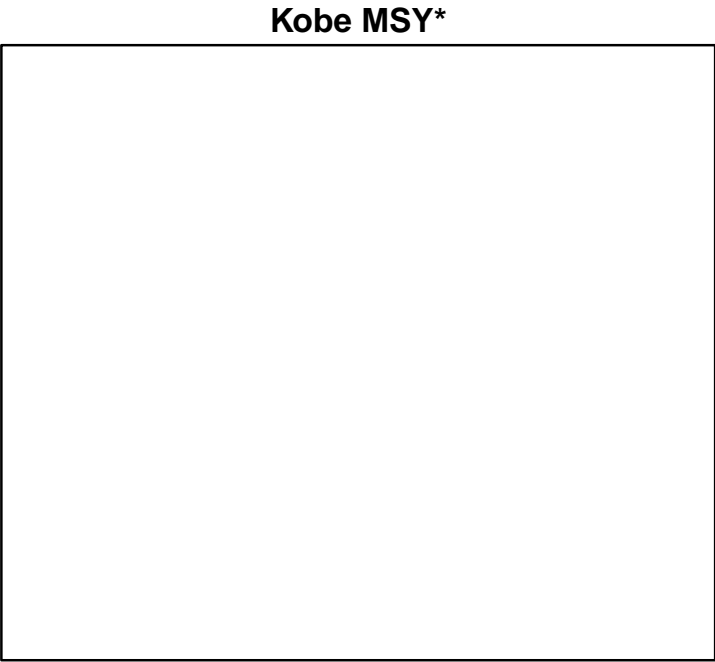


### Acadian redfish Unit 3 [ACADREDUT3]

Metadata	
<b>Scientific Name</b>	Sebastes fasciatus
<b>Current Assess ID</b>	DFO-ACADREDUT3-1960-2010-WATSON
<b>Area</b>	Unit 3
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans
<b>Asmts in RAM</b>	2010

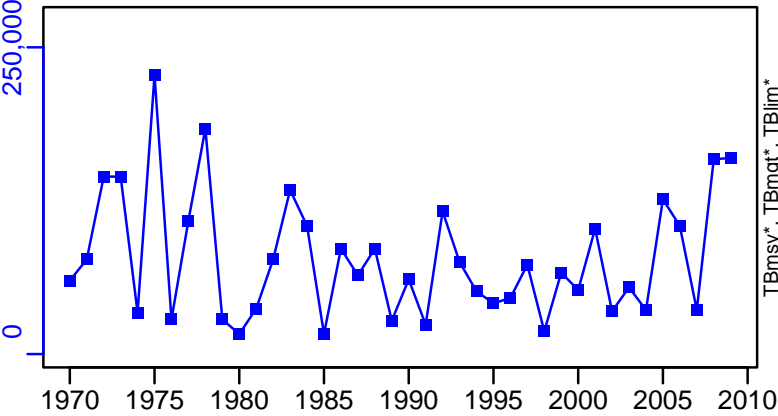
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2010	131,000
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2010	147,000	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2010	0.031	-	-
TC	TC-MT	2010	5200		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



Acadian redfish Unit 3 [ACADREDUT3]

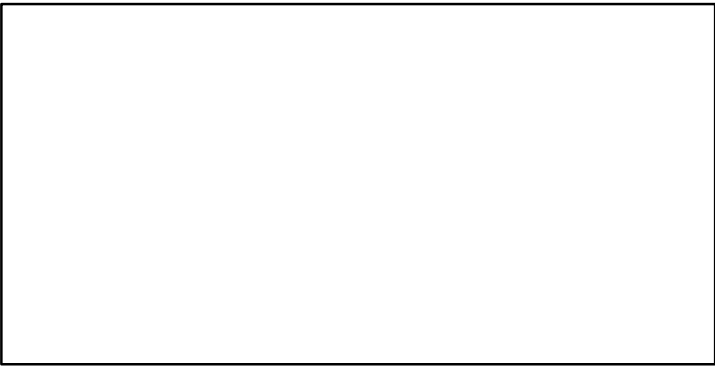
TB-MT (1960-2010-WATSON)



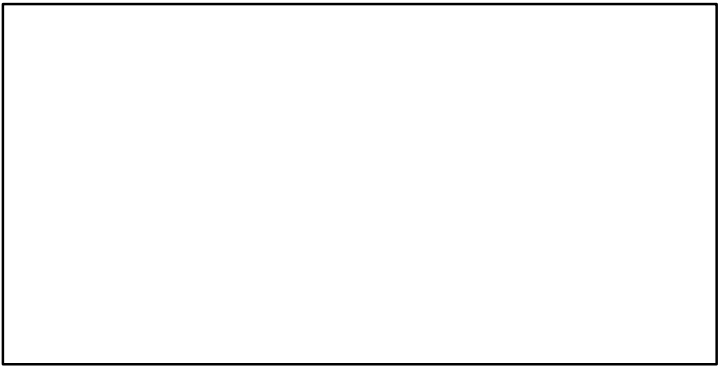
SSB\*



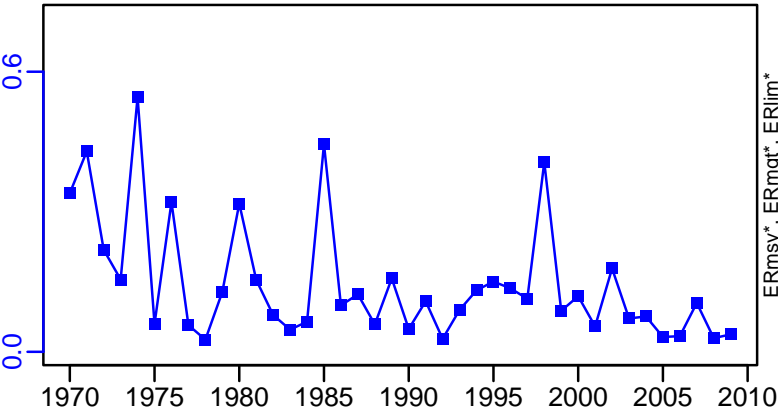
TN \*



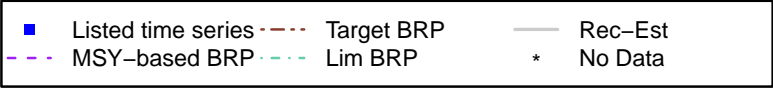
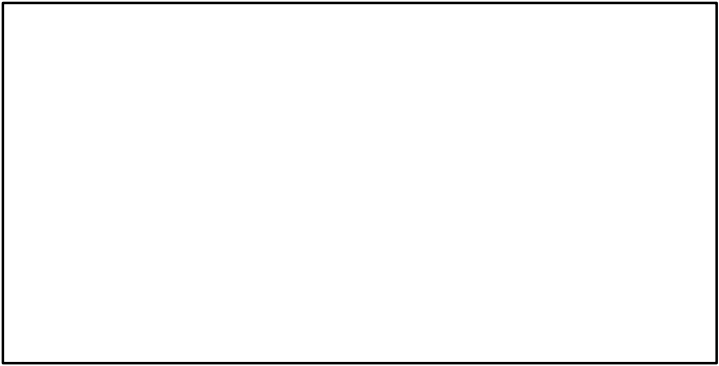
F\*



ER-calc-ratio (1960-2010-WATSON)

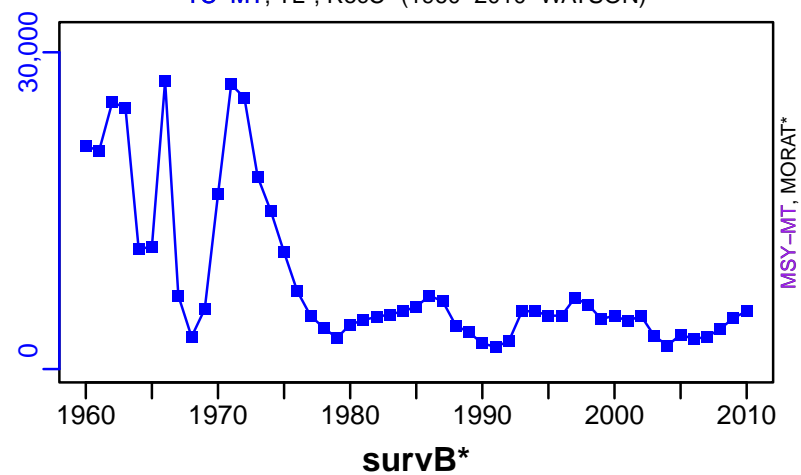


Recruits\*



# Acadian redfish Unit 3 [ACADREDUT3]

TC-MT, TL\*, RecC\* (1960-2010-WATSON)



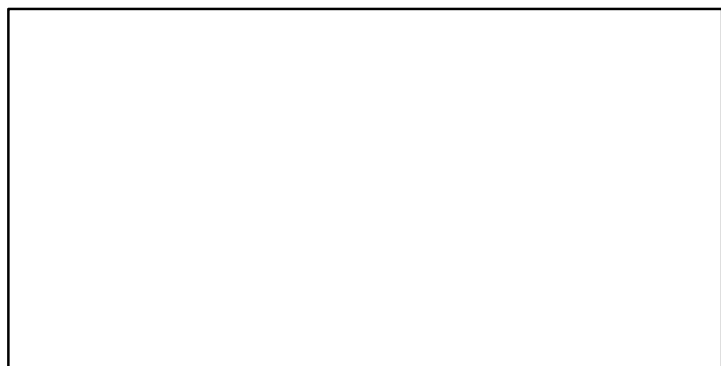
TAC\*, Cpair\*, Cadv\*



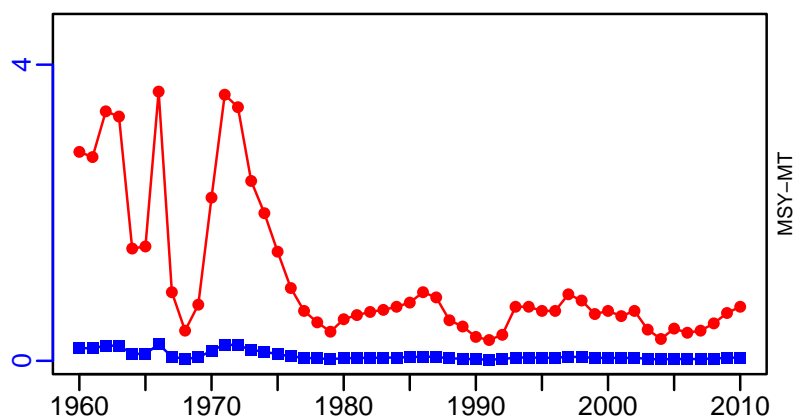
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1960-2010-WATSON)



■ 1st listed time series ▲ 3rd listed time series — MORAT  
● 2nd listed time series - - - MSY \* No Data

## Aurora rockfish Pacific Coast [AUROCKPCOAST]

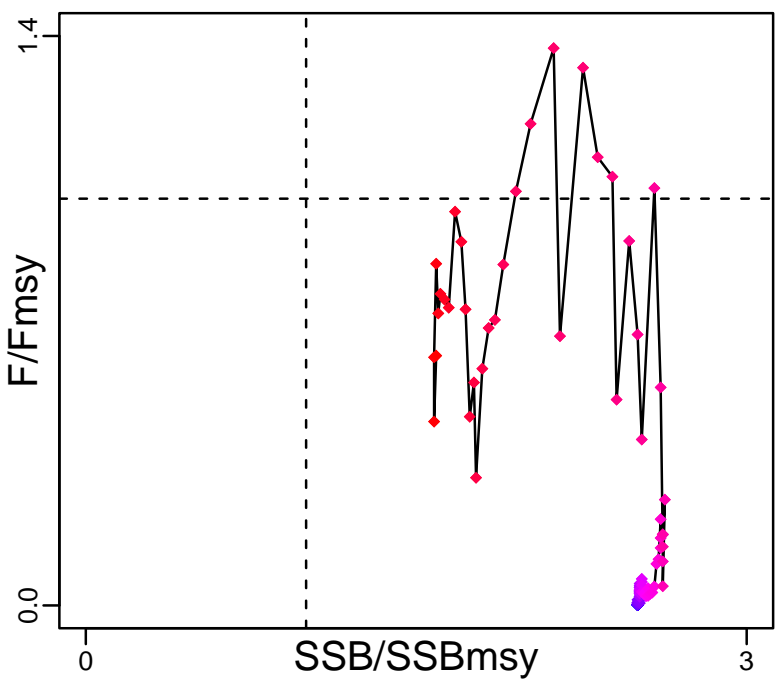
Metadata	
<b>Scientific Name</b>	Sebastes aurora
<b>Current Assess ID</b>	NWFSC-AUROCKPCOAST-1916-2013-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2013	1050
<b>Fmsy</b>	Fmsy-1/yr	2013	0.5
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	72
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2013	657
<b>Flim</b>	Flim-1/yr	2013	0.5
<b>ERlim</b>	-	-	-

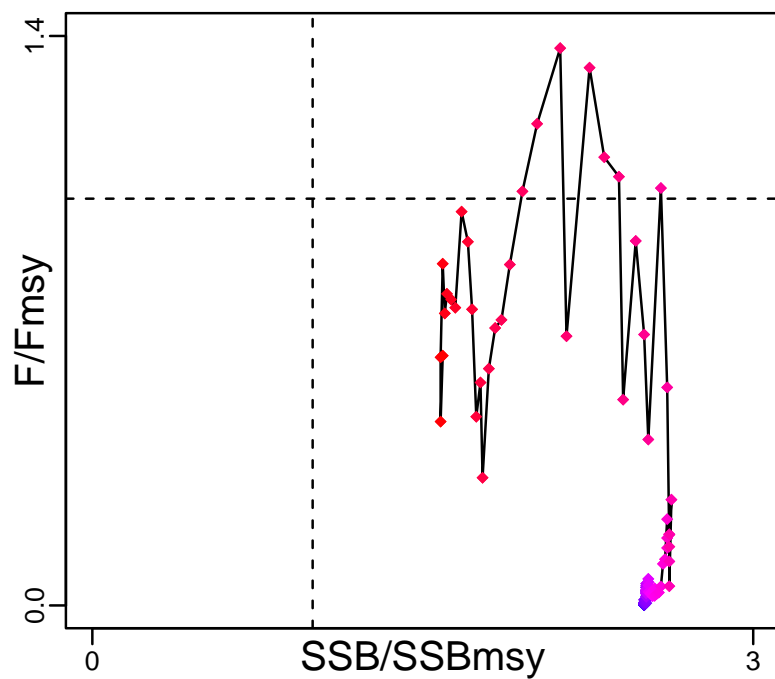
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	4370	-	0+
<b>SSB</b>	SSB-MT	2013	1670	Females	12.56
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	736,000	-	0
<b>F</b>	F-1/yr	2013	0.307	-	-
<b>ER</b>	ER-calc-ratio	2013	0.01	-	-
<b>TC</b>	TC-MT	2013	43		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	1.59		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2013	0.614		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Aurora rockfish Pacific Coast [AUROCKPCOAST]

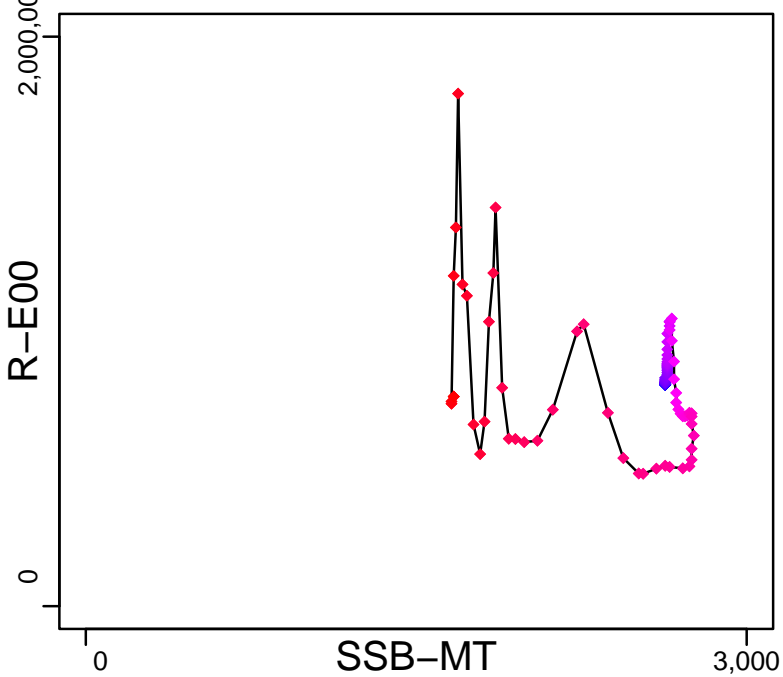
Kobe MSYpref (1916–2013–SISIMP2016)



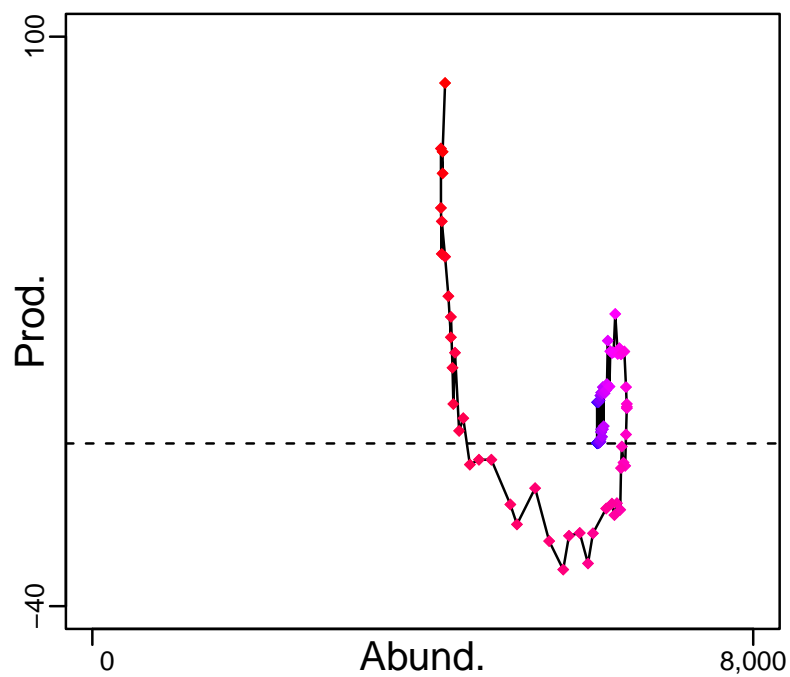
Kobe MGTpref (1916–2013–SISIMP2016)



Spawner Recruit (1916–2013–SISIMP2016)



Production (1916–2013–SISIMP2016)

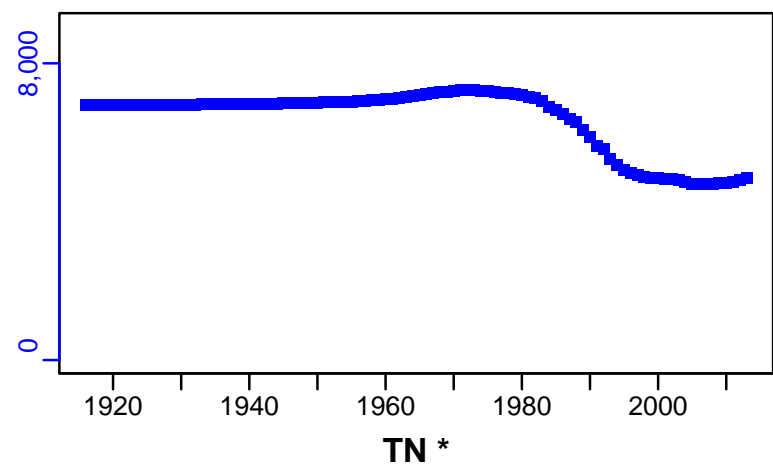


◆ Start Year ◆ End Year \* No Data

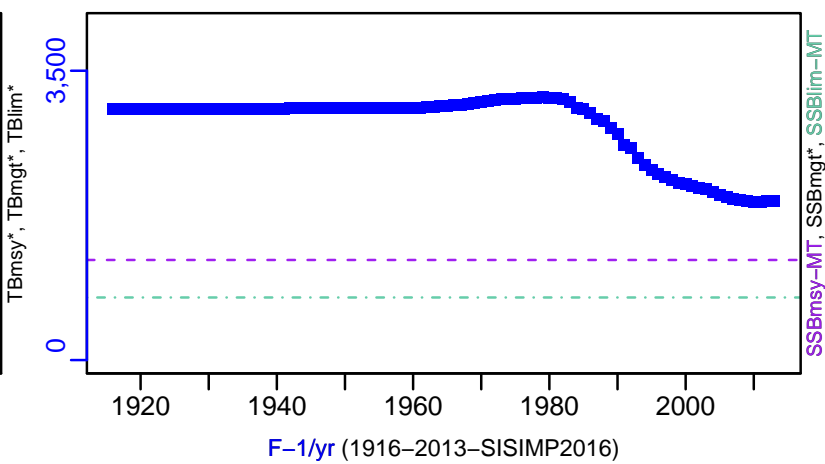


# Aurora rockfish Pacific Coast [AUROCKPCOAST]

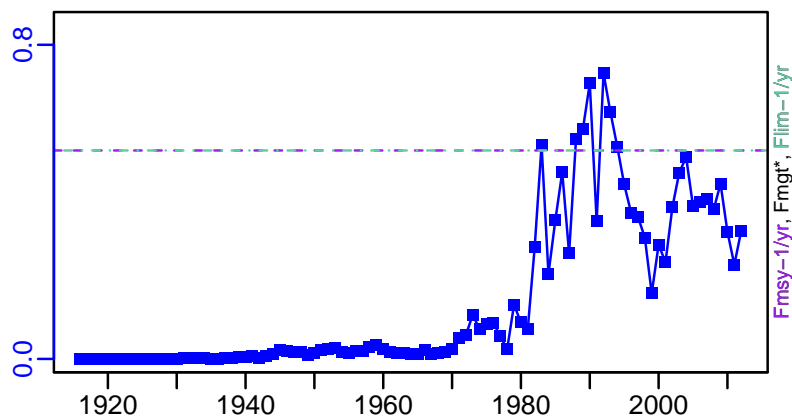
TB-MT (1916-2013-SISIMP2016)



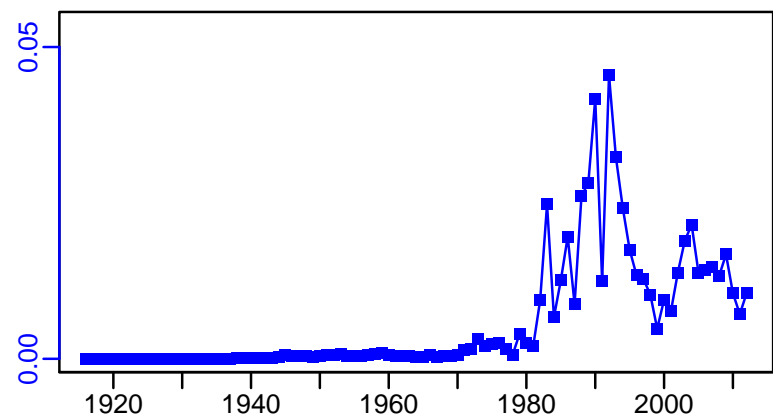
SSB-MT (1916-2013-SISIMP2016)



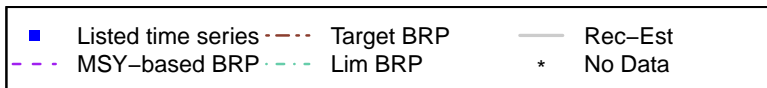
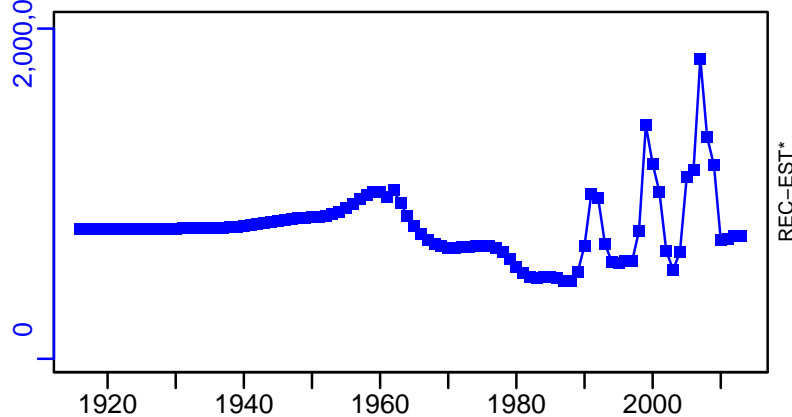
F-1/yr (1916-2013-SISIMP2016)



ER-calc-ratio (1916-2013-SISIMP2016)



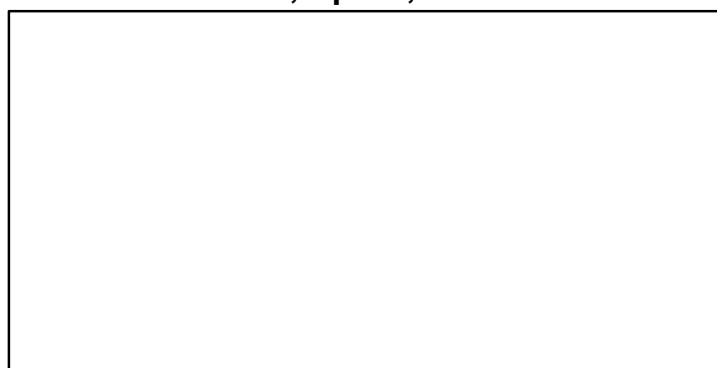
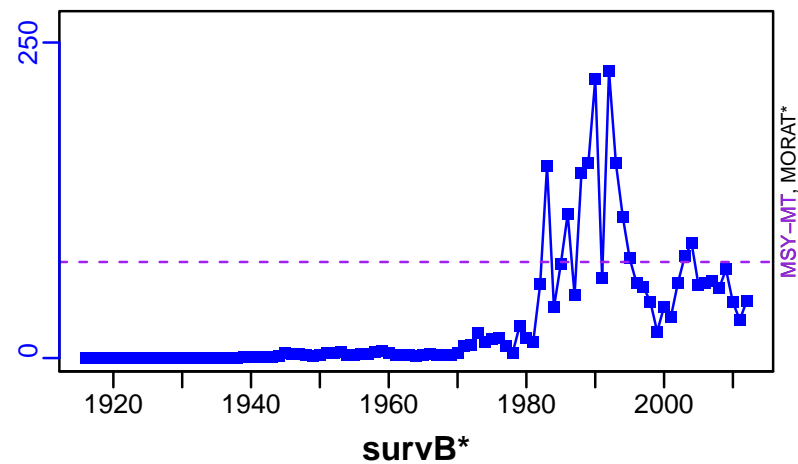
R-E00 (1916-2013-SISIMP2016)



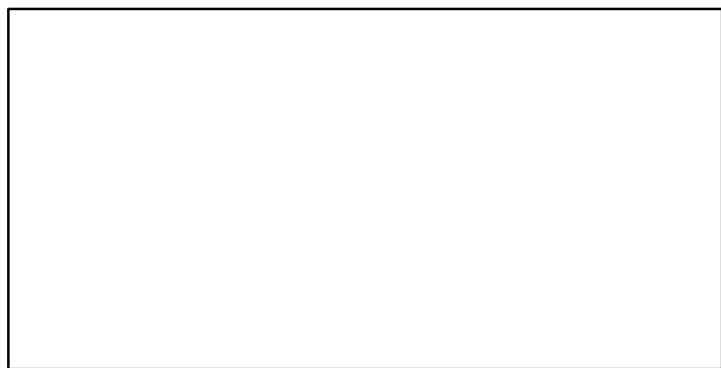
# Aurora rockfish Pacific Coast [AUROCKPCOAST]

TC-MT, TL\*, RecC\* (1916-2013-SISIMP2016)

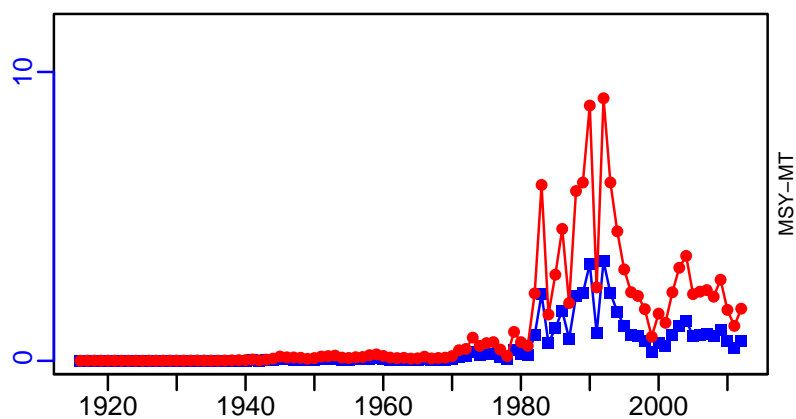
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1916-2013-SISIMP2016)



## Blackgill rockfish Pacific Coast [BGROCKPCOAST]

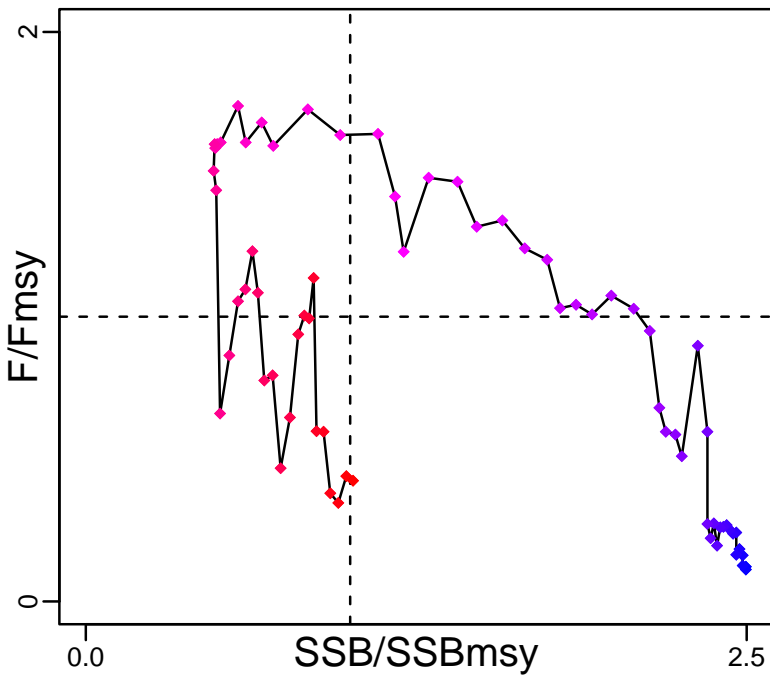
Metadata	
<b>Scientific Name</b>	Sebastes melanostomus
<b>Current Assess ID</b>	NWFSC-BGROCKPCOAST-1950-2019-SISIMP2021-2
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2011, 2017, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2011	5063
<b>SSBmsy</b>	SSBmsy-E00larvae	2019	$8.25 \times 10^{11}$
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	ERmsy-pr-ratio	2011	0.022
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2011	12,927
<b>SSB0</b>	SSB0-E00larvae	2011	1,187,800
<b>MSY</b>	MSY-MT	2019	189
<b>M</b>	M-1/yr	2011	0.07
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00larvae	2019	$5.16 \times 10^{11}$
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

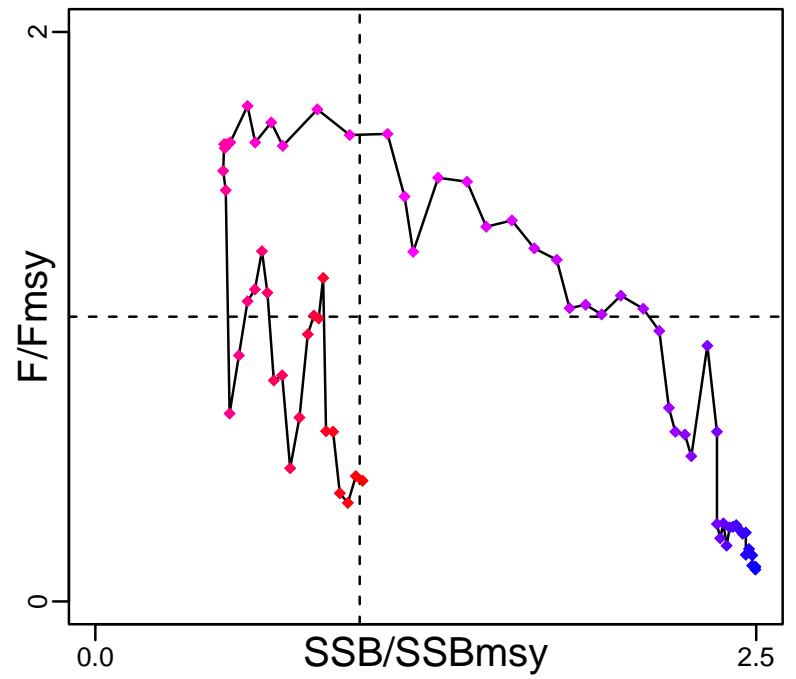
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	7910	-	-
<b>SSB</b>	SSB-E00larvae	2019	$8.56 \times 10^{11}$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	2,250,000	-	0
<b>F</b>	F-1/yr	2019	0.212	-	-
<b>ER</b>	ER-calc-ratio	2017	0.005	-	-
<b>TC</b>	TC-MT	2019	51		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2011	1.302		
<b>SSB/SSBmsy</b>	SSB-E00larvae/SSBmsy-E00larvae	2019	1.038		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.424		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-pr-ratio	2011	1.032		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Blackgill rockfish Pacific Coast [BGROCKPCOAST]

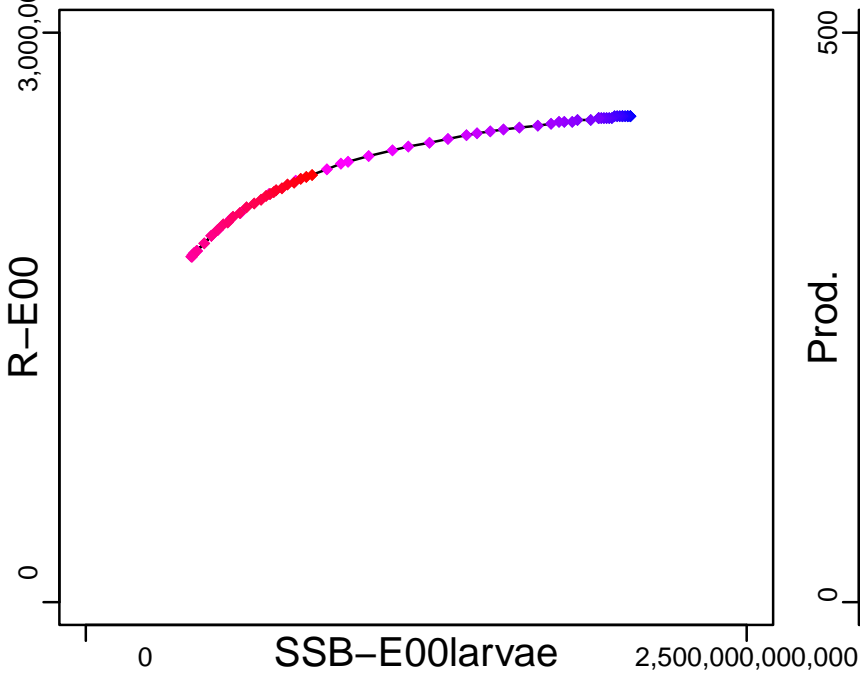
Kobe MSYpref (1950–2019–SISIMP2021–2)



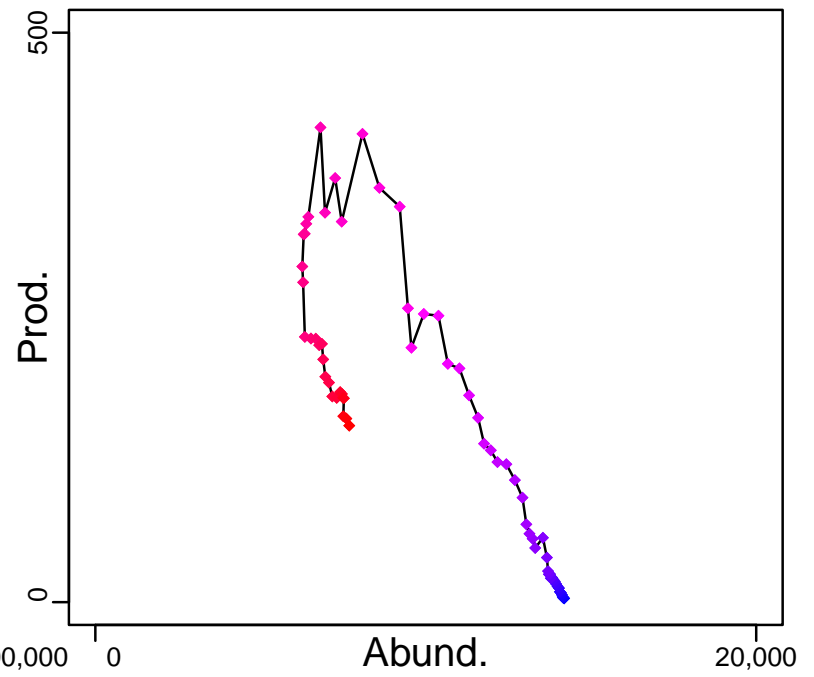
Kobe MGTpref (1950–2019–SISIMP2021–2)



Spawner Recruit (1950–2019–SISIMP2021–2)



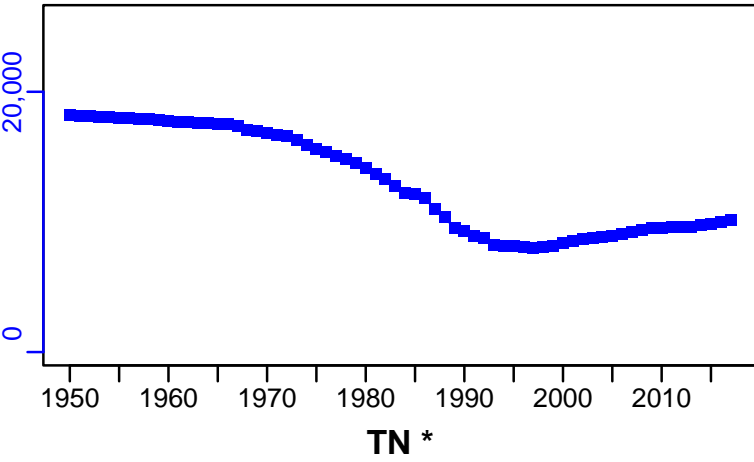
Production (1950–2017–SISIMP2021)



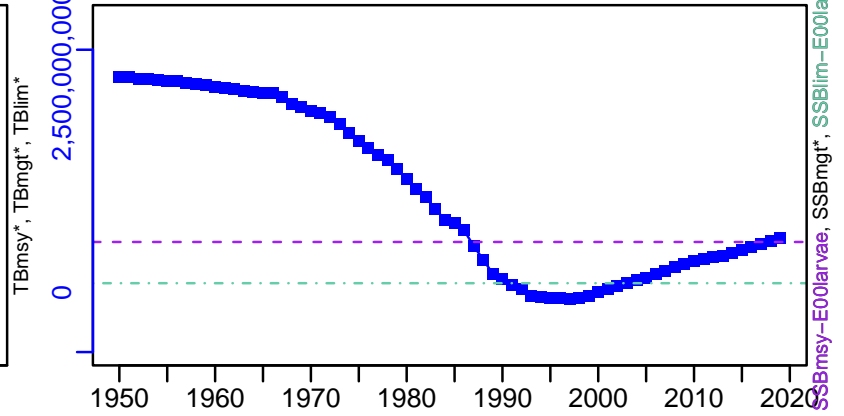
◆ Start Year ◆ End Year \* No Data

# Blackgill rockfish Pacific Coast [BGROCKPCOAST]

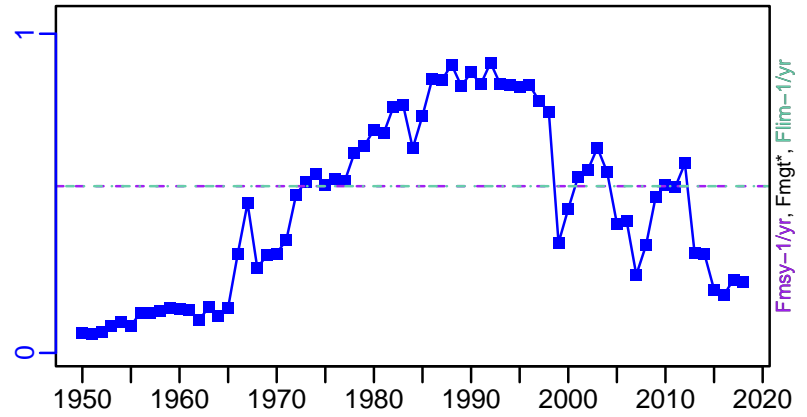
TB-MT (1950–2017–SISIMP2021)



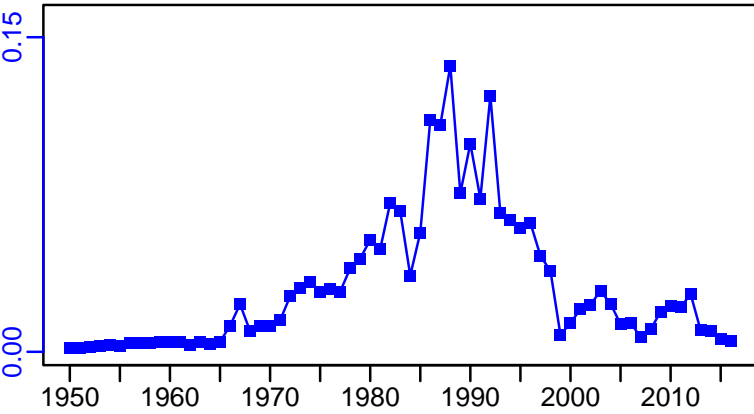
SSB-E00larvae (1950–2019–SISIMP2021–2)



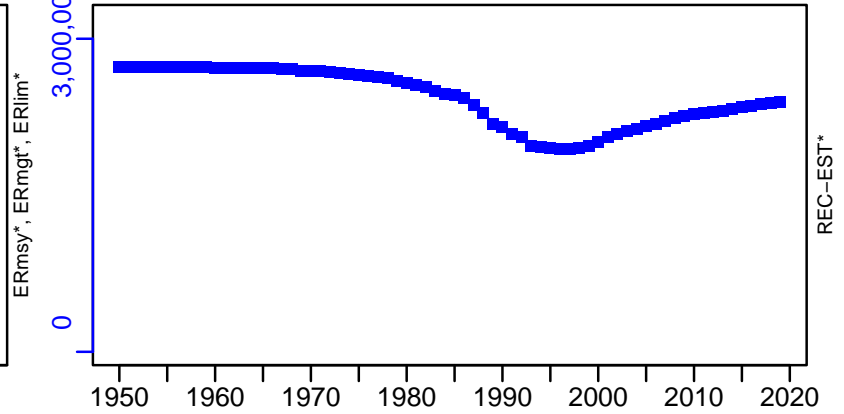
F-1/yr (1950–2019–SISIMP2021–2)



ER-calc-ratio (1950–2017–SISIMP2021)

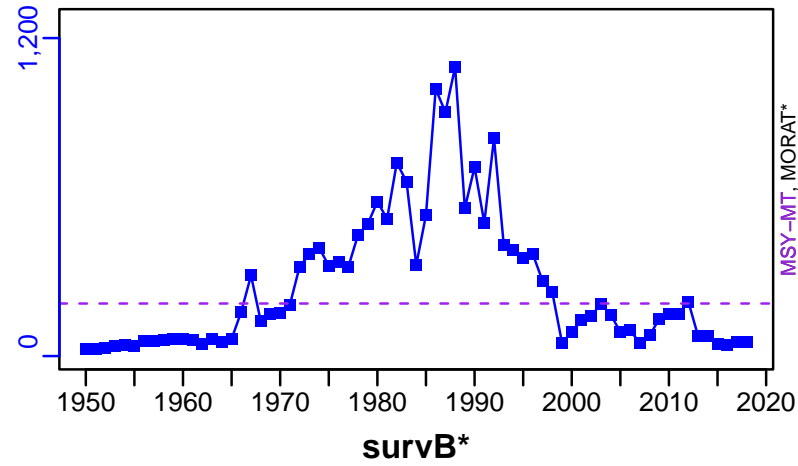


R-E00 (1950–2019–SISIMP2021–2)



# Blackgill rockfish Pacific Coast [BGROCKPCOAST]

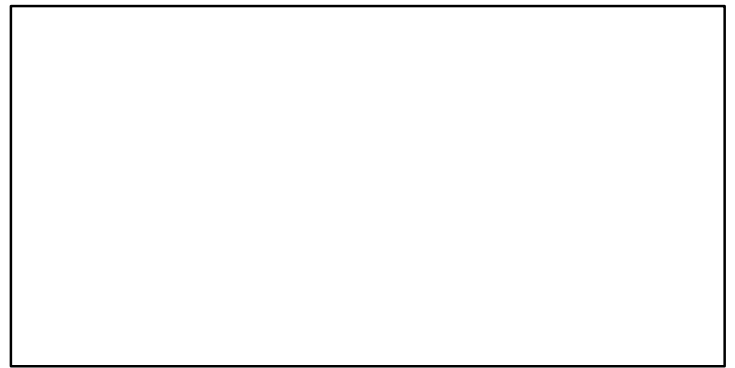
TC-MT, TL\*, RecC\* (1950-2019-SISIMP2021-2)



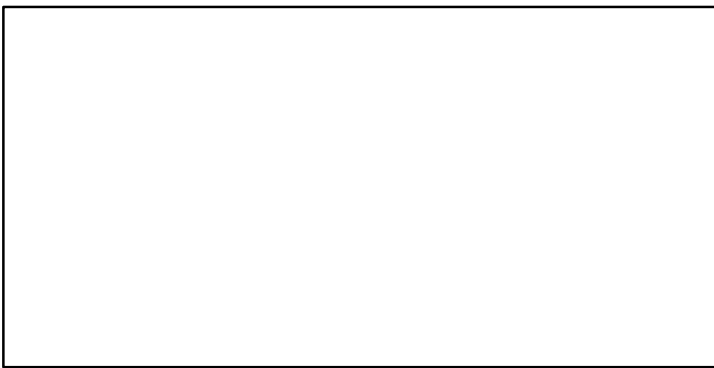
TAC\*, Cpair\*, Cadv\*



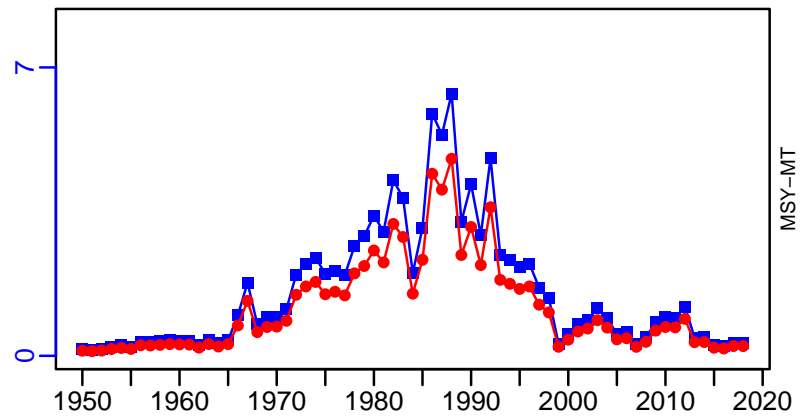
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1950-2019-SISIMP2021-2)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
 ● 2nd listed time series    - - - MSY    \* No Data

## Black rockfish California [BLACKROCKCAL]

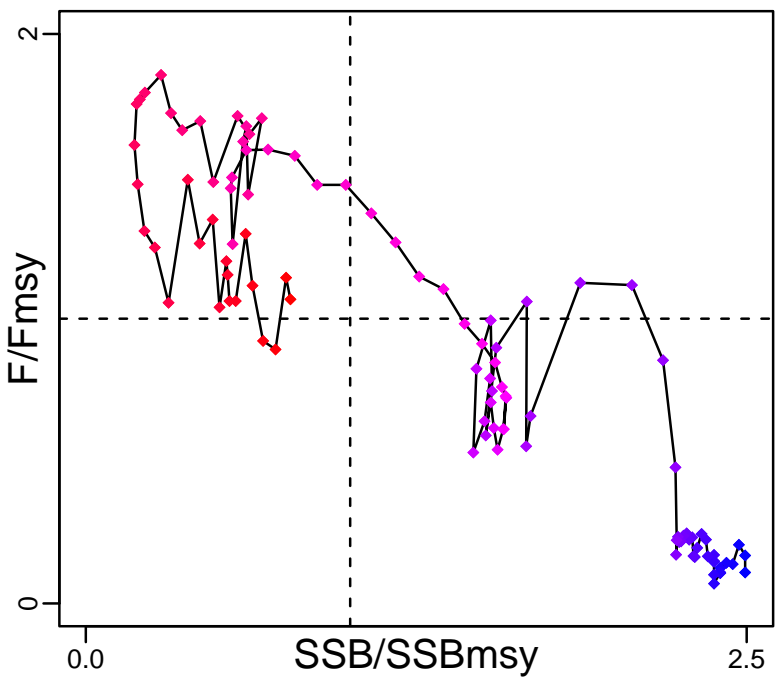
Metadata	
<b>Scientific Name</b>	Sebastes melanops
<b>Current Assess ID</b>	SWFSC-BLACKROCKCAL-1916-2019-SISIMP2021-2
<b>Area</b>	California
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2015	425
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2019	377
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	266
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

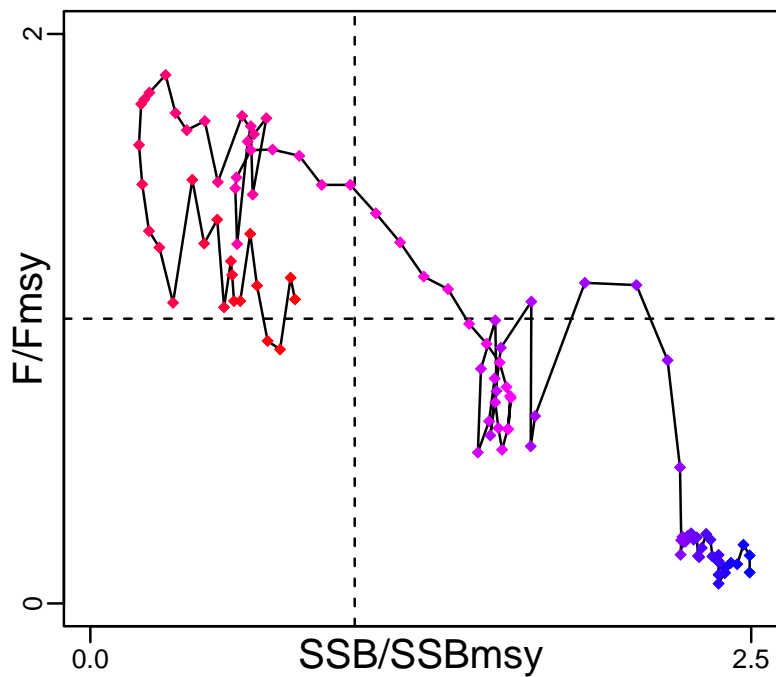
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	5770	-	3+
<b>SSB</b>	SSB-MT	2019	610	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	1,910,000	-	0
<b>F</b>	F-1/yr	2019	0.227	-	-
<b>ER</b>	ER-calc-ratio	2015	0.068	-	-
<b>TC</b>	TC-MT	2019	138		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2015	0.831		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.454		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Black rockfish California [BLACKROCKCAL]

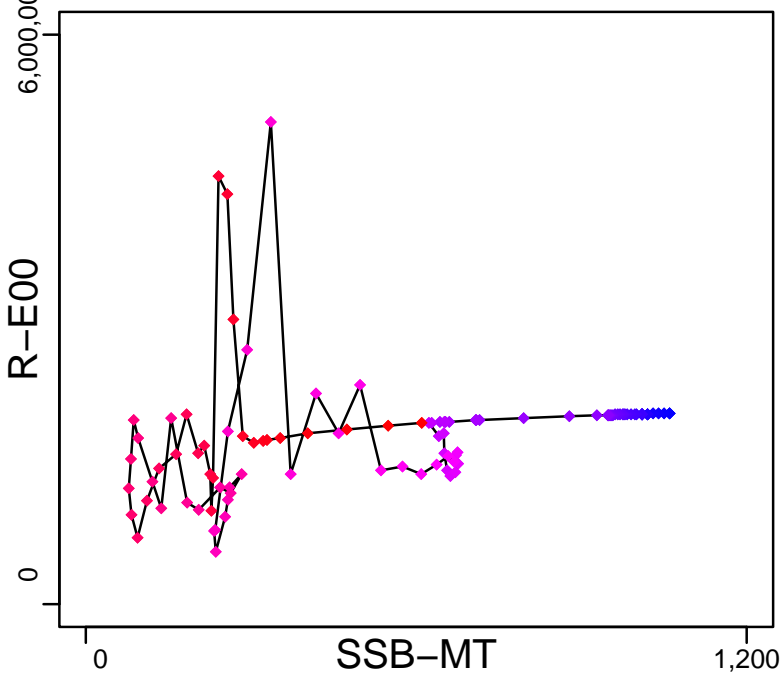
Kobe MSYpref (1916–2015–SISIMP2016)



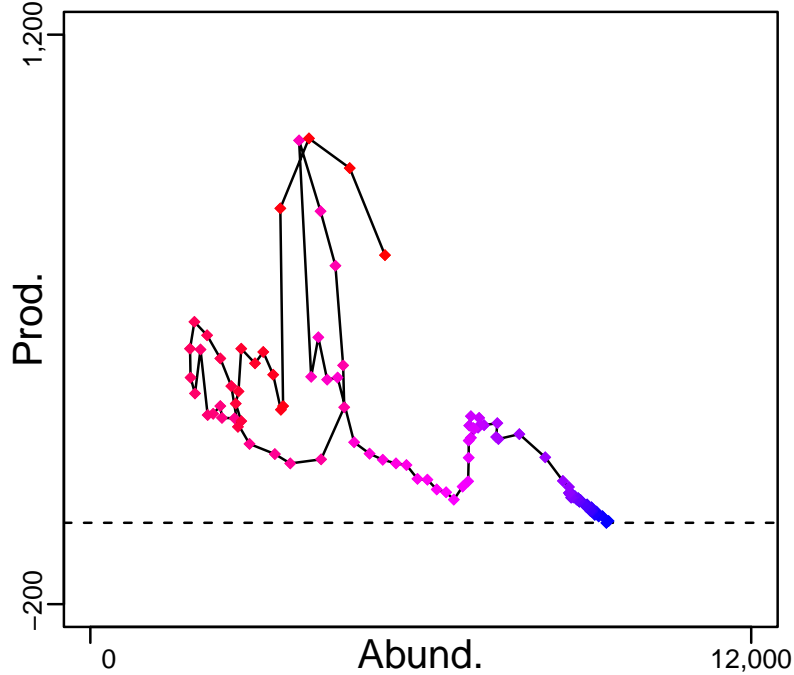
Kobe MGTpref (1916–2015–SISIMP2016)



Spawner Recruit (1916–2019–SISIMP2021–2)



Production (1916–2015–SISIMP2016)

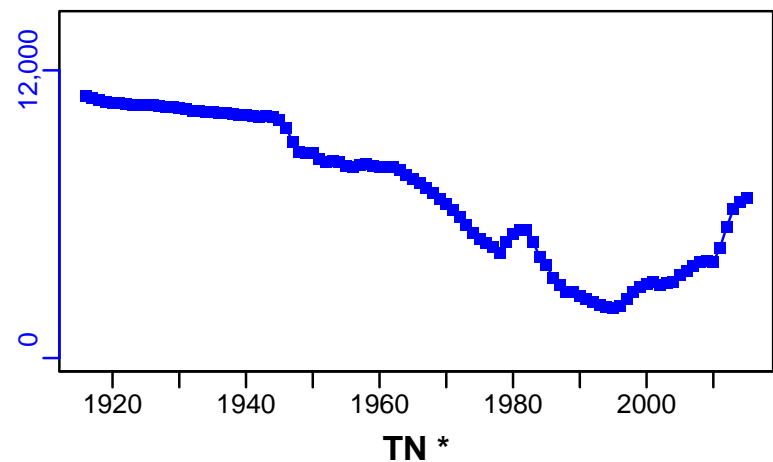


◆ Start Year ◆ End Year \* No Data

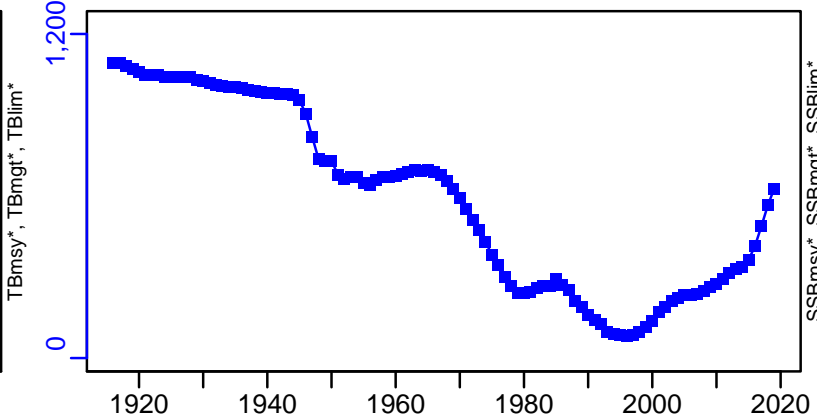


# Black rockfish California [BLACKROCKCAL]

TB-MT (1916-2015-SISIMP2016)



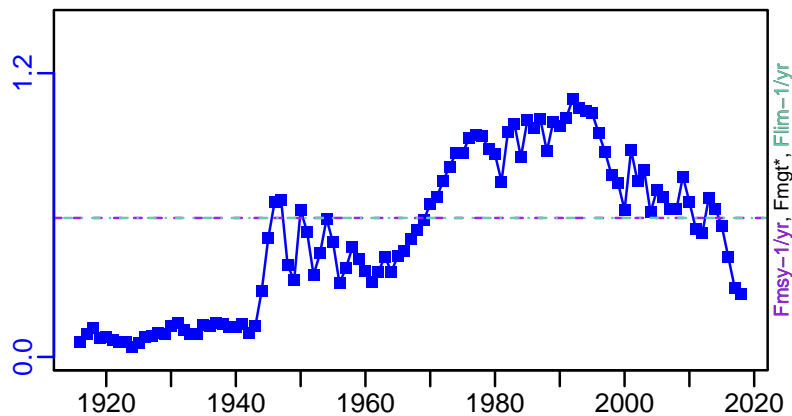
SSB-MT (1916-2019-SISIMP2021-2)



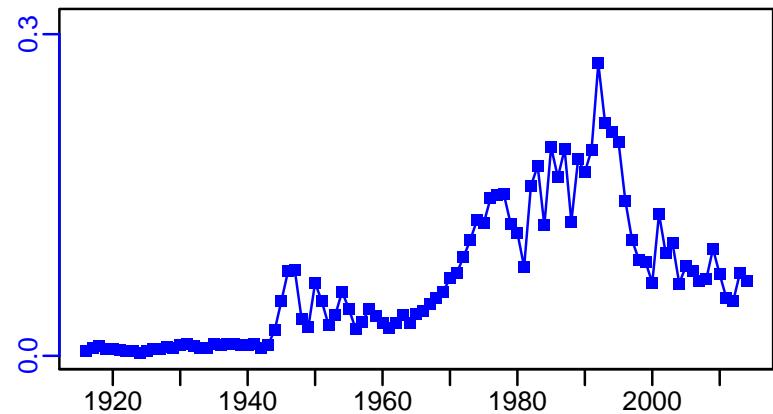
TN \*



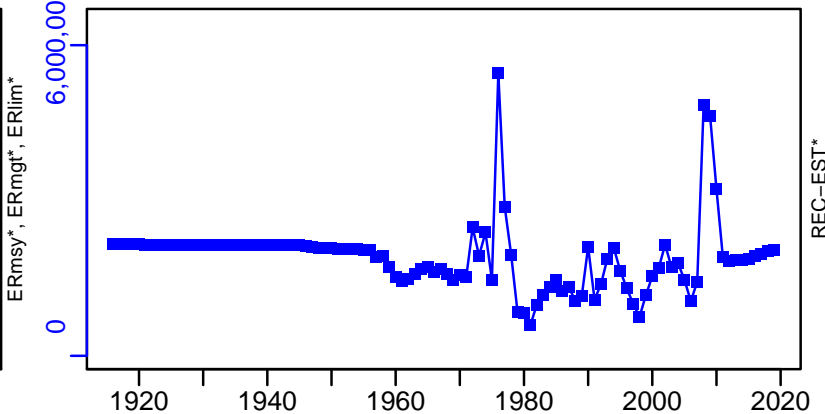
F-1/yr (1916-2019-SISIMP2021-2)



ER-calc-ratio (1916-2015-SISIMP2016)

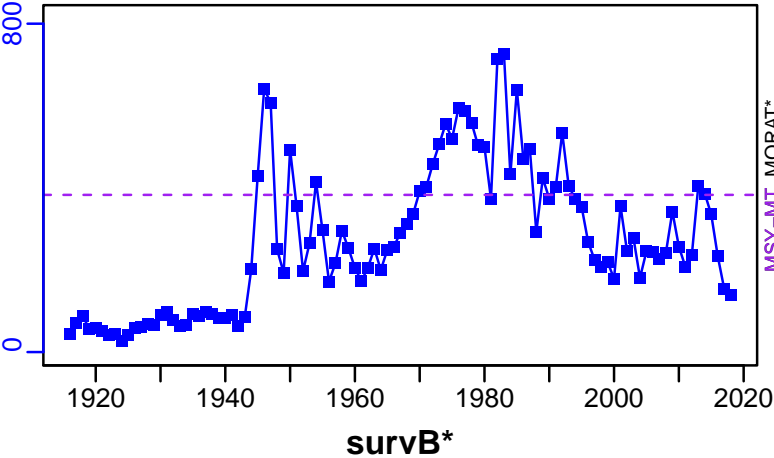


R-E00 (1916-2019-SISIMP2021-2)



Black rockfish California [BLACKROCKCAL]

TC-MT, TL\*, RecC\* (1916-2019-SISIMP2021-2)



TAC\*, Cpair\*, Cadv\*



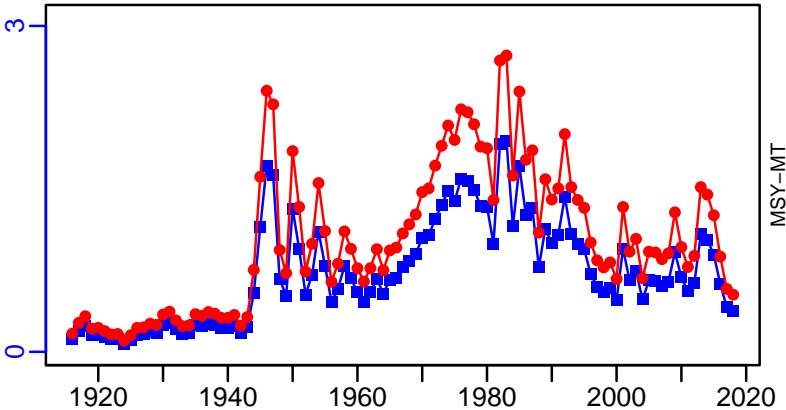
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1916-2019-SISIMP2021-2)



## Black rockfish Oregon Coast [BLACKROCKORECOAST]

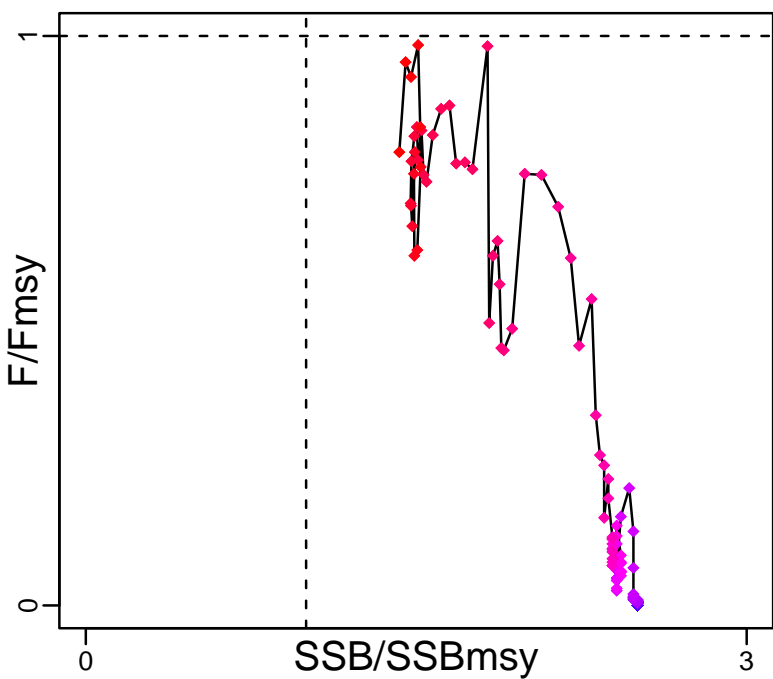
Metadata	
<b>Scientific Name</b>	Sebastes melanops
<b>Current Assess ID</b>	NWFSC-BLACKROCKORECOAST-1892-2019-SISIMP2021-2
<b>Area</b>	Oregon Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00eggs	2019	$5.27 \times 10^{11}$
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2019	556
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2019	$3.3 \times 10^{11}$
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

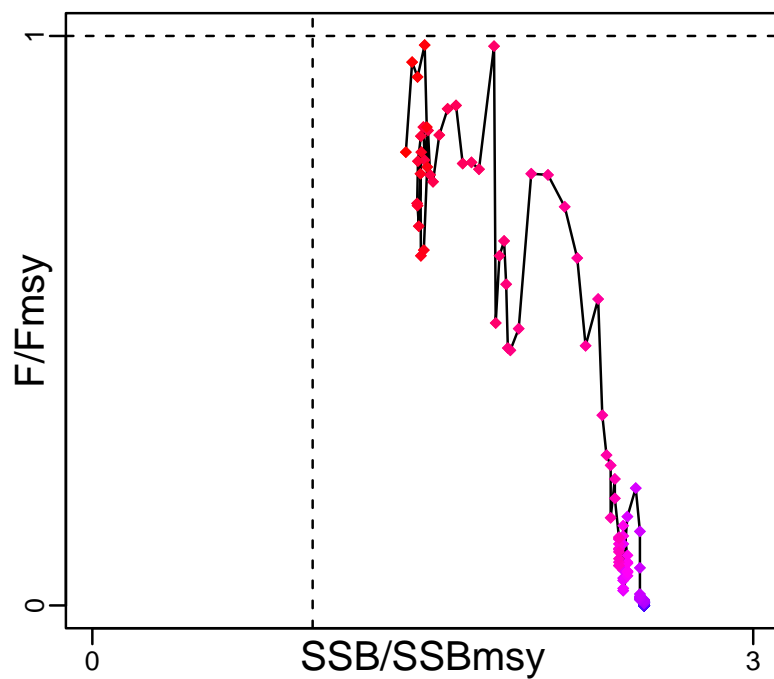
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	8060	-	3+
<b>SSB</b>	SSB-E00eggs	2019	$7.45 \times 10^{11}$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	3,470,000	-	0
<b>F</b>	F-1/yr	2019	0.398	-	-
<b>ER</b>	ER-calc-ratio	2015	0.06	-	-
<b>TC</b>	TC-MT	2019	418		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2019	1.414		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.796		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Black rockfish Oregon Coast [BLACKROCKKORECOAST]

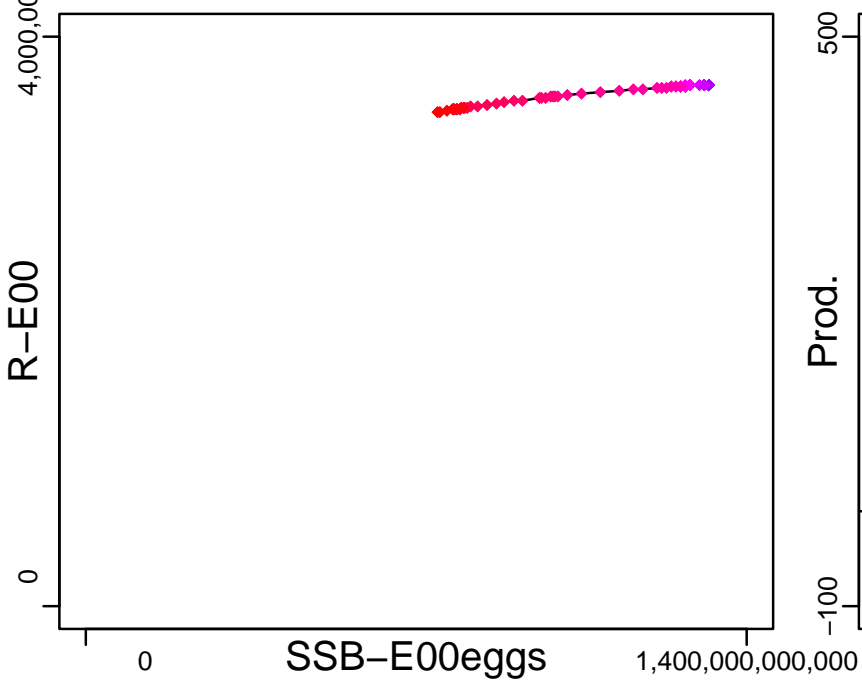
Kobe MSYpref (1892–2019–SISIMP2021–2)



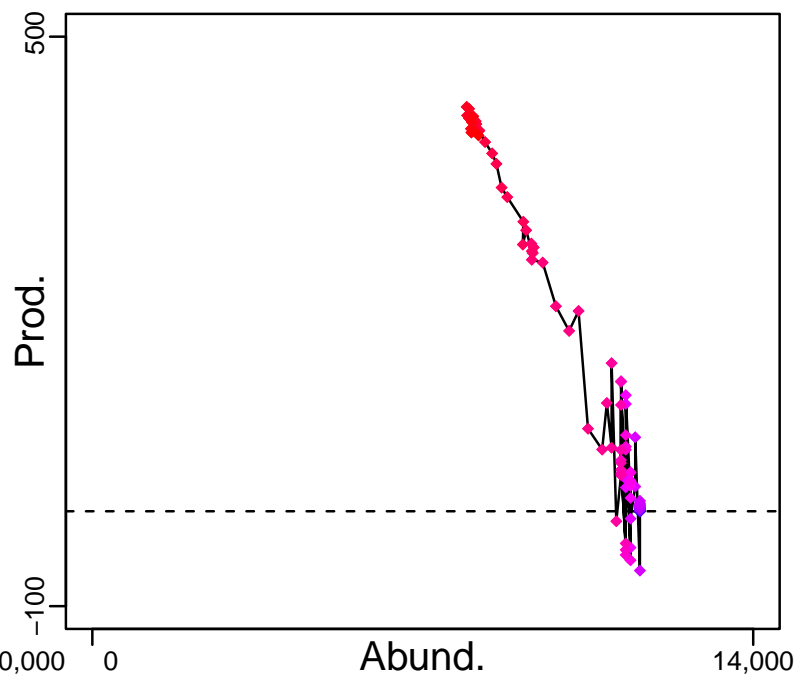
Kobe MGTpref (1892–2019–SISIMP2021–2)



Spawner Recruit (1892–2019–SISIMP2021–2)

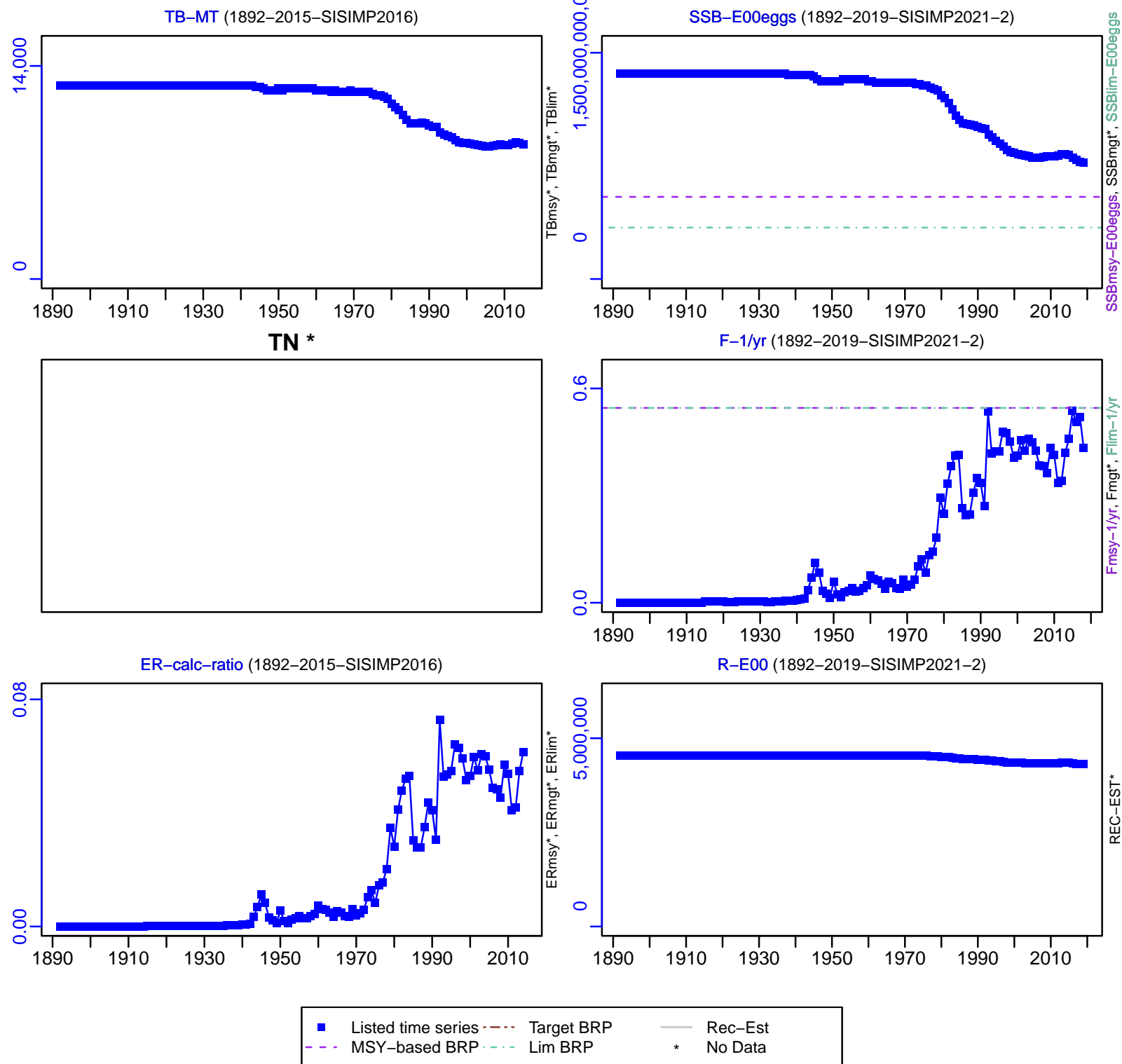


Production (1892–2015–SISIMP2016)



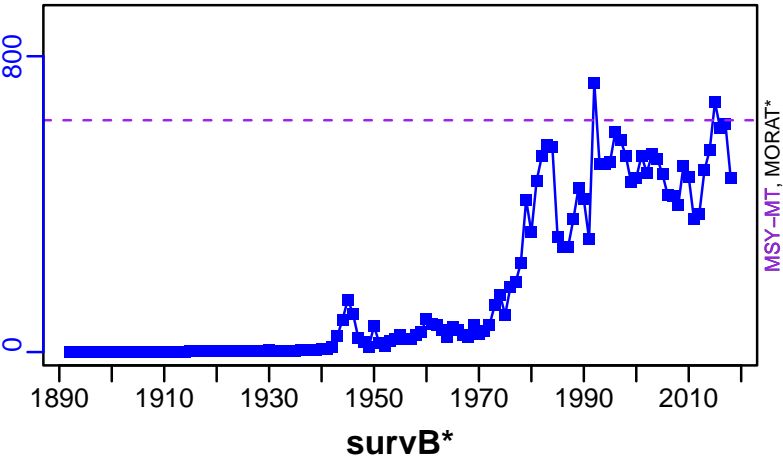
◆ Start Year ◆ End Year \* No Data

# Black rockfish Oregon Coast [BLACKROCKORECOAST]



Black rockfish Oregon Coast [BLACKROCKORECOAST]

TC-MT, TL\*, RecC\* (1892-2019-SISIMP2021-2)



TAC\*, Cpair\*, Cadv\*



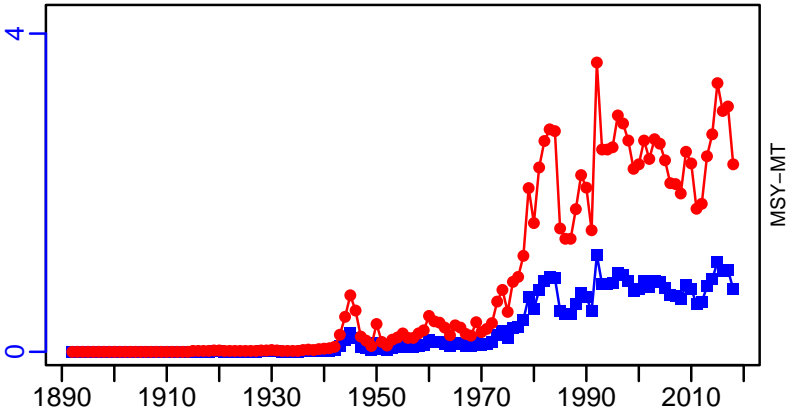
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1892-2019-SISIMP2021-2)



## Black rockfish Washington [BLACKROCKWASH]

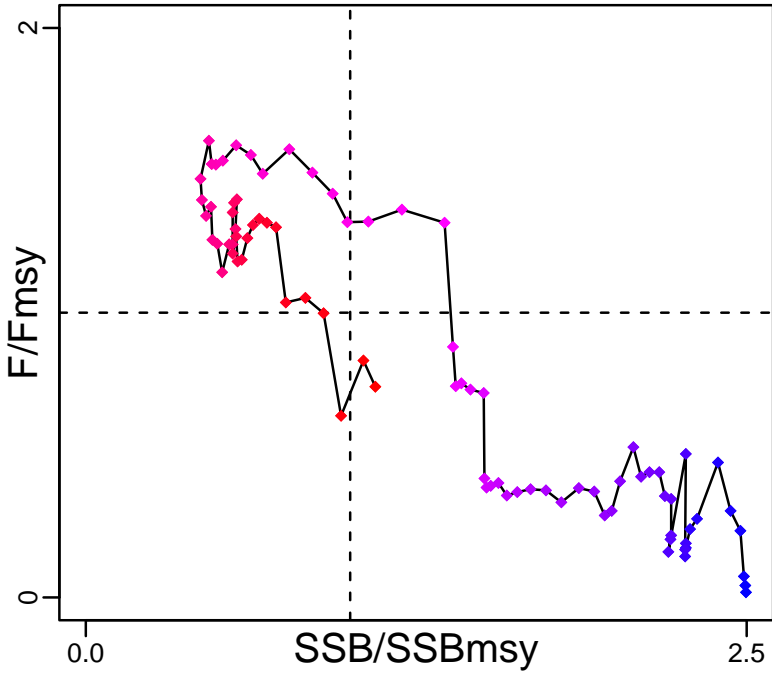
Metadata	
<b>Scientific Name</b>	Sebastes melanops
<b>Current Assess ID</b>	NWFSC-BLACKROCKWASH-1940-2023-SISIMP2024
<b>Area</b>	Washington
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2019, 2023

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00eggs	2023	$3.78 \times 10^{11}$
<b>Fmsy</b>	Fmsy-1/yr	2023	0.5
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2023	294
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2023	$2.36 \times 10^{11}$
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

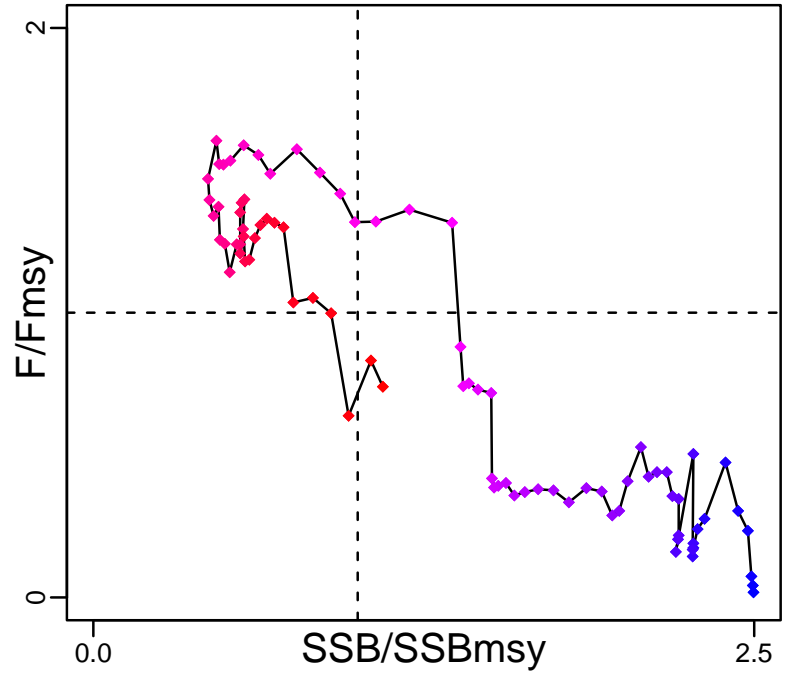
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	5640	-	3+
<b>SSB</b>	SSB-E00eggs	2023	$4.26 \times 10^{11}$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2023	1753	-	0
<b>F</b>	F-1/yr	2023	0.37	-	-
<b>ER</b>	ER-calc-ratio	2015	0.063	-	-
<b>TC</b>	TC-MT	2023	166		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2023	1.127		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2023	0.74		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Black rockfish Washington [BLACKROCKWASH]

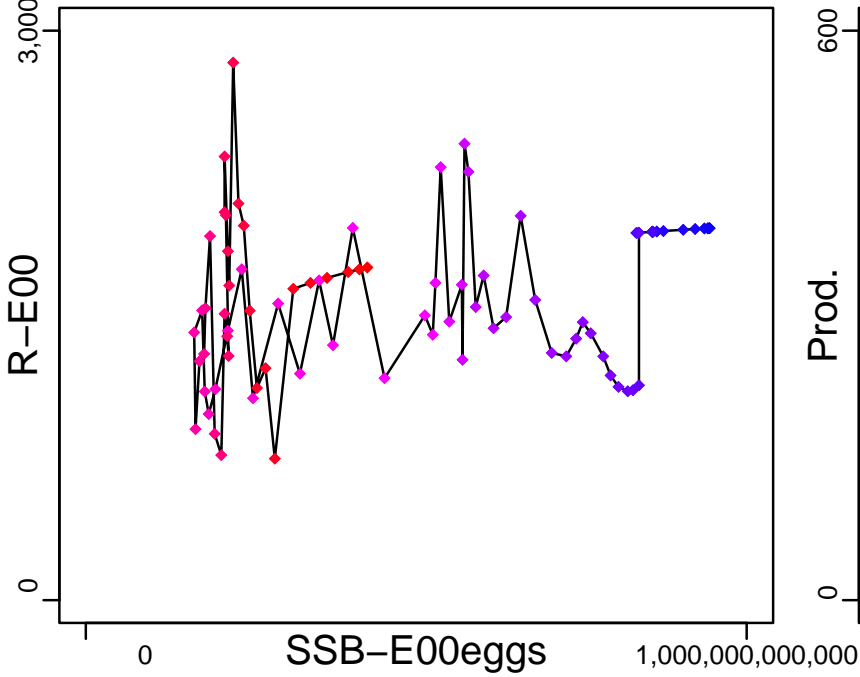
Kobe MSYpref (1940–2023–SISIMP2024)



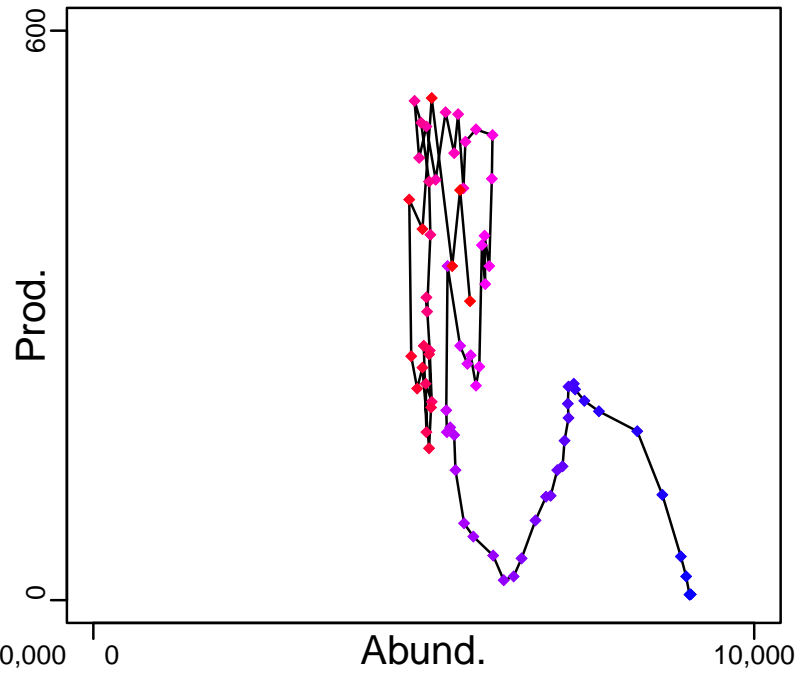
Kobe MGTpref (1940–2023–SISIMP2024)



Spawner Recruit (1940–2023–SISIMP2024)



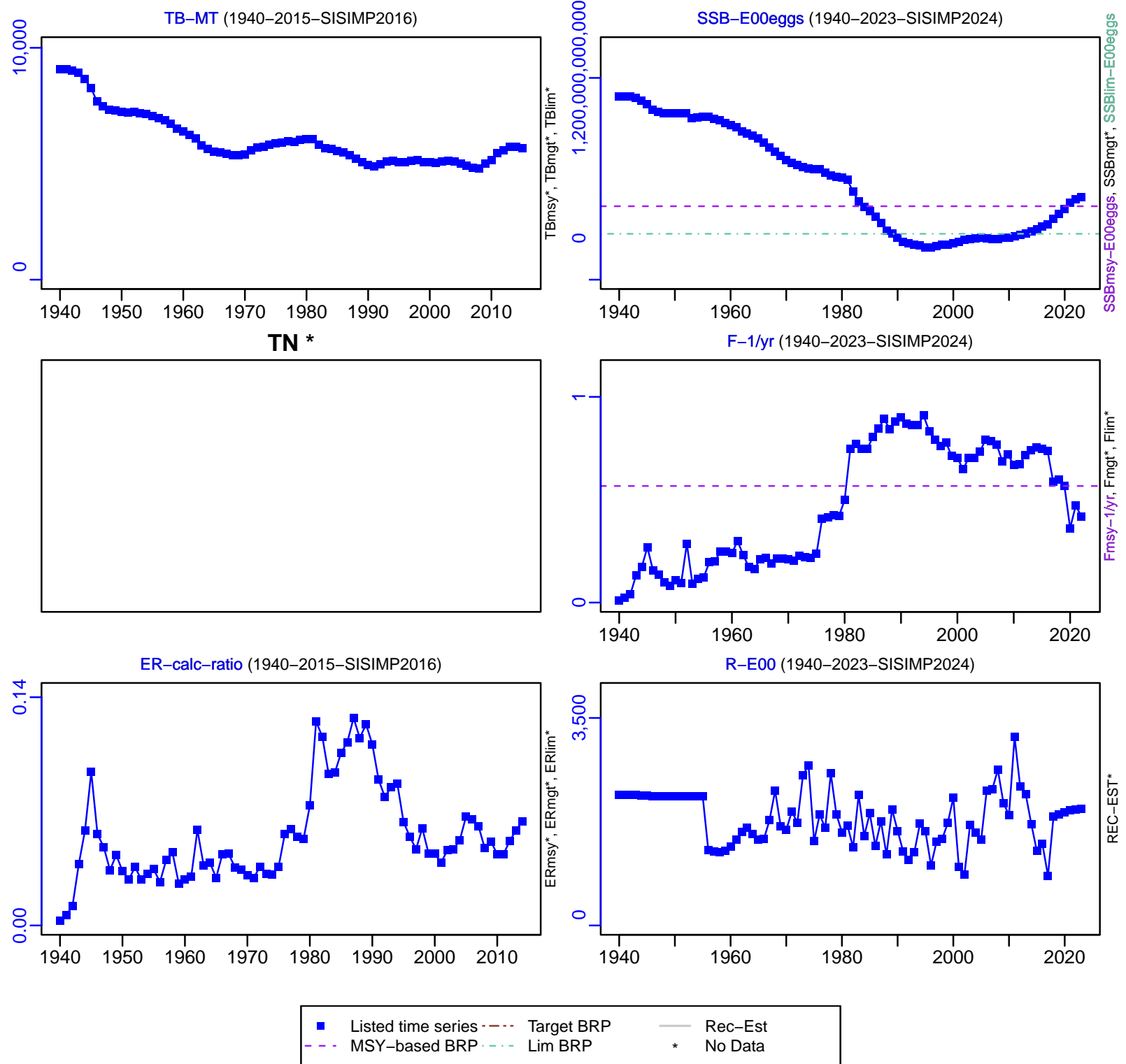
Production (1940–2015–SISIMP2016)



◆ Start Year ◆ End Year \* No Data

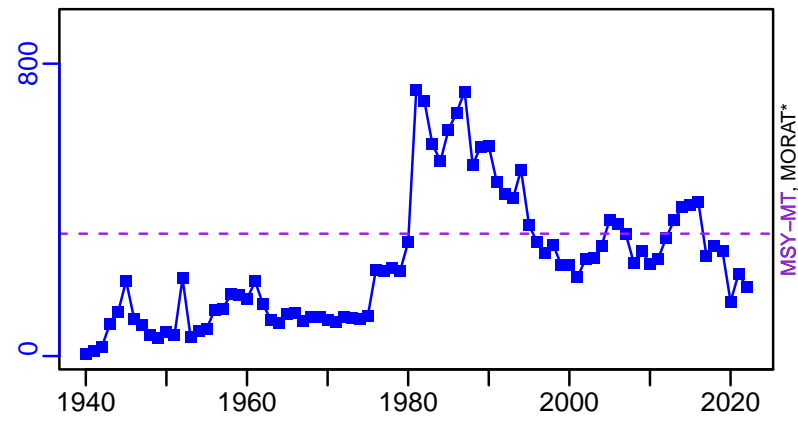


# Black rockfish Washington [BLACKROCKWASH]



# Black rockfish Washington [BLACKROCKWASH]

TC-MT, TL\*, RecC\* (1940-2023-SISIMP2024)



TAC\*, Cpair\*, Cadv\*



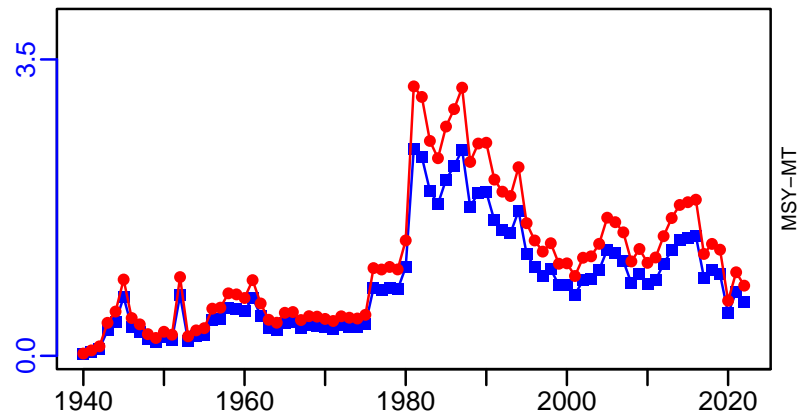
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1940-2023-SISIMP2024)



## Blue rockfish California [BLUEROCKCAL]

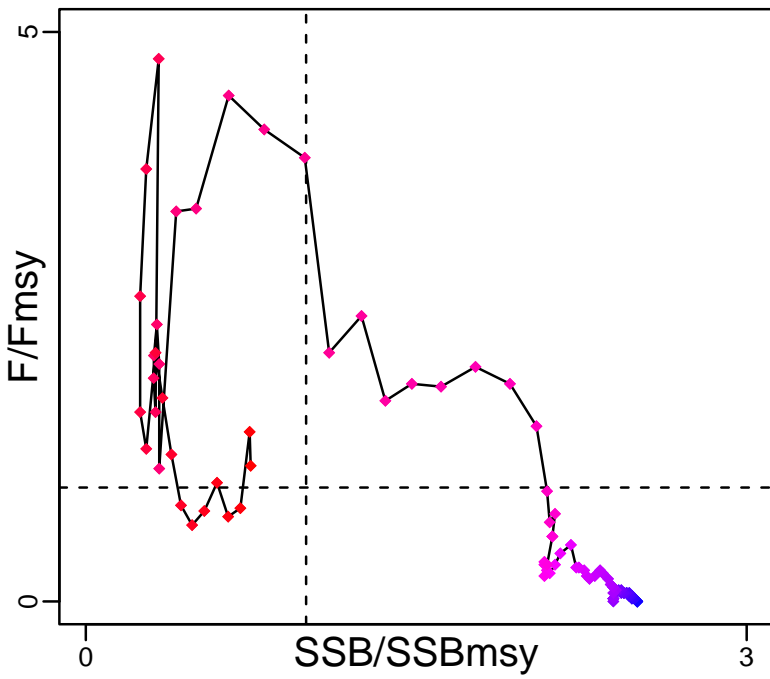
Metadata	
<b>Scientific Name</b>	Sebastes mystinus
<b>Current Assess ID</b>	NWFSC-BLUEROCKCAL-1916-2007-BRANCH
<b>Area</b>	California
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2007

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-E00larvae	2007	$8.31 \times 10^8$
<b>Fmsy</b>	Fmsy-pr-1/yr	2007	0.04
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2007	13,223
<b>SSB0</b>	SSB0-MT	2007	2077
<b>MSY</b>	MSY-MT	2007	275
<b>M</b>	M-1/yr	2007	0.12
<b>TBlim</b>	TBlim-MT	2007	205
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

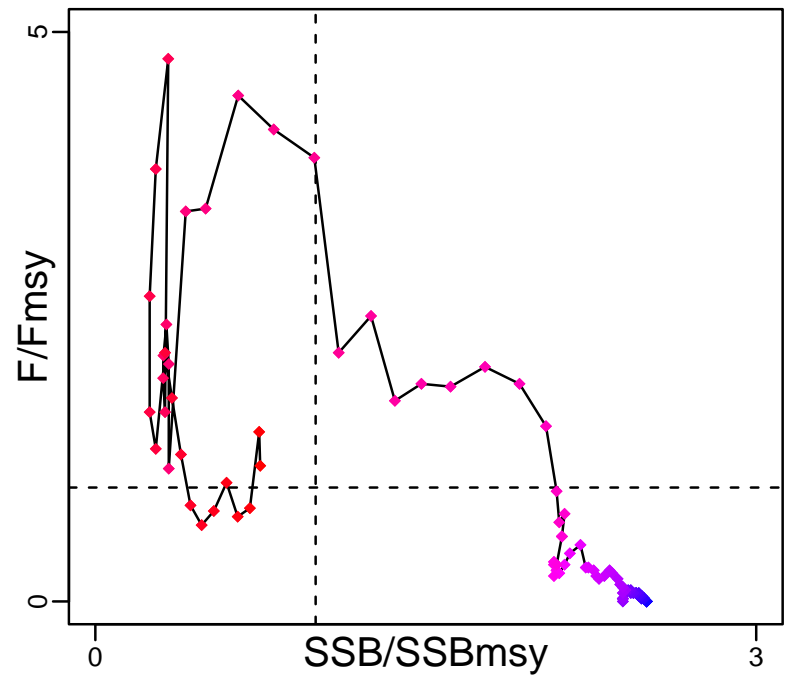
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2007	5450	-	1+
<b>SSB</b>	SSB-E00larvae	2007	$6.22 \times 10^8$	Females	6+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2007	2,260,000	-	0
<b>F</b>	F-1/yr	2007	0.048	Both	1+
<b>ER</b>	ER-ratio	2007	0.048	-	-
<b>TC</b>	TC-MT	2007	263		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-E00larvae/SSBmsy-pr-E00larvae	2007	0.748		
<b>F/Fmsy</b>	F-1/yr/Fmsy-pr-1/yr	2007	1.191		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Blue rockfish California [BLUEROCKCAL]

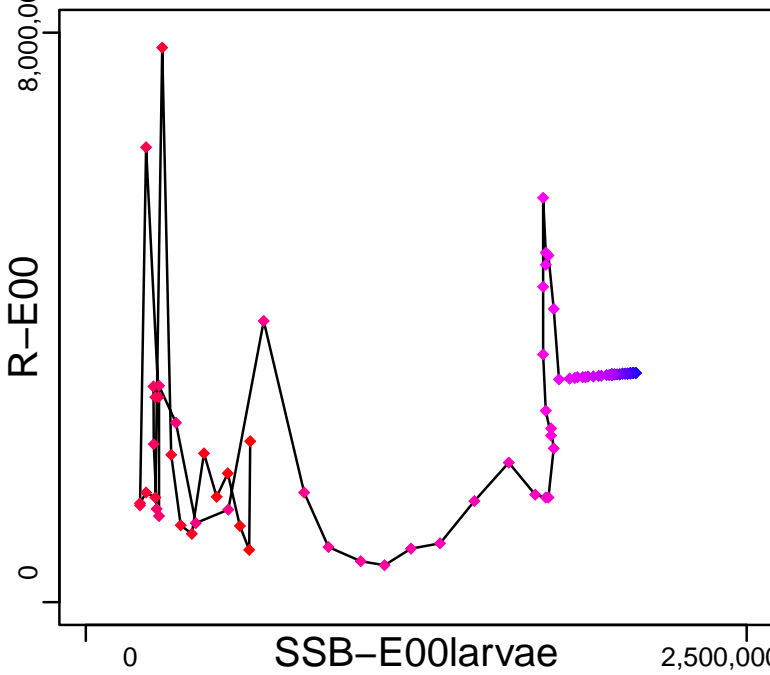
Kobe MSYpref (1916–2007–BRANCH)



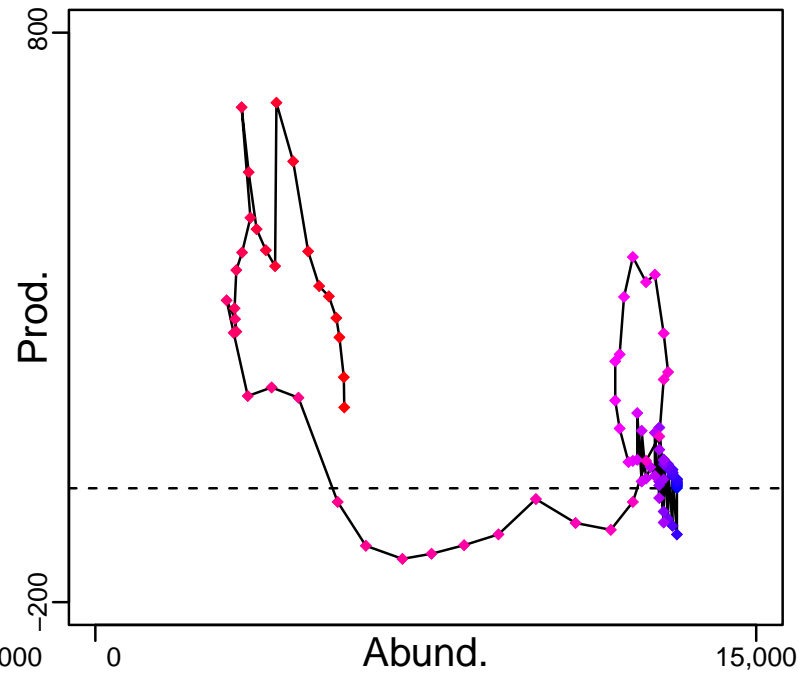
Kobe MGTpref (1916–2007–BRANCH)



Spawner Recruit (1916–2007–BRANCH)



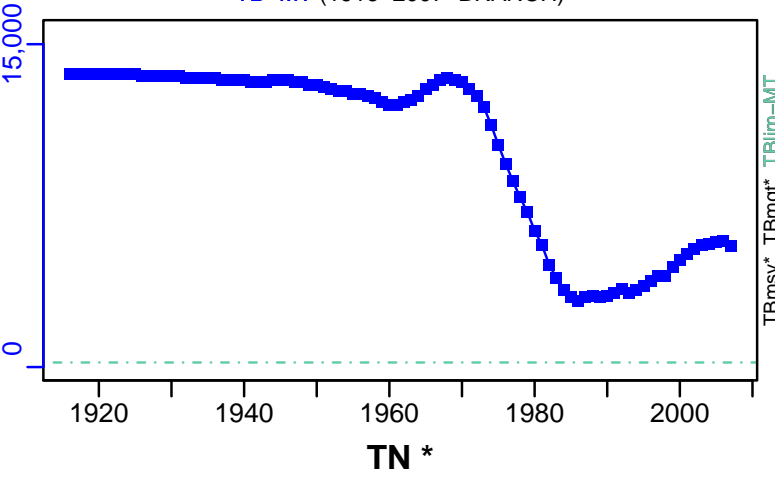
Production (1916–2007–BRANCH)



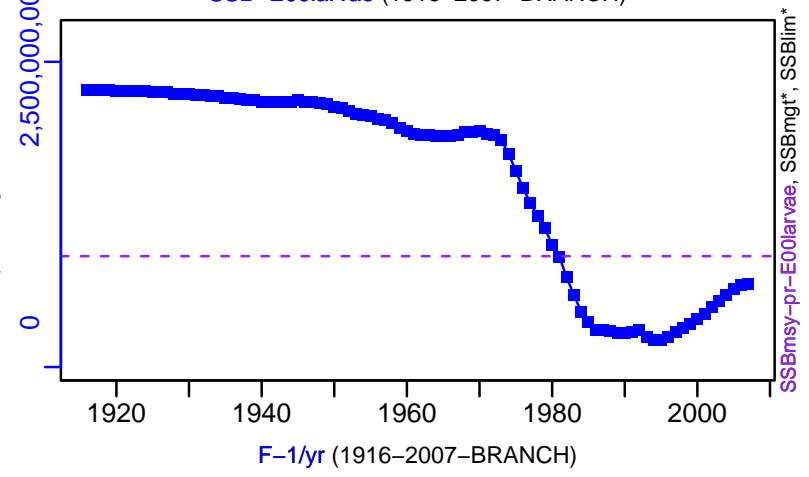
◆ Start Year ◆ End Year \* No Data

# Blue rockfish California [BLUEROCKCAL]

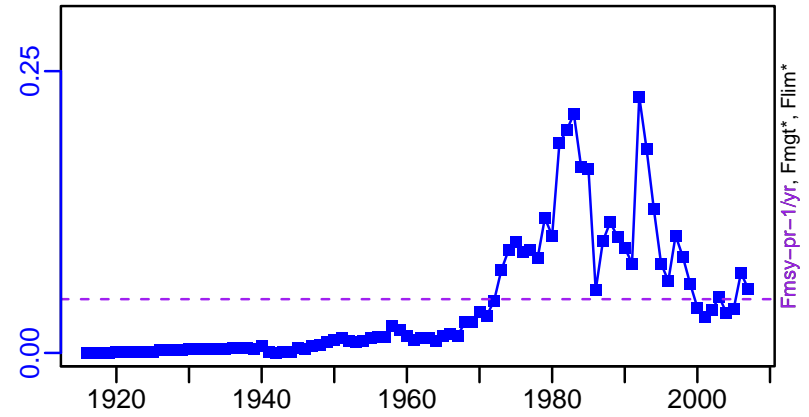
TB-MT (1916-2007-BRANCH)



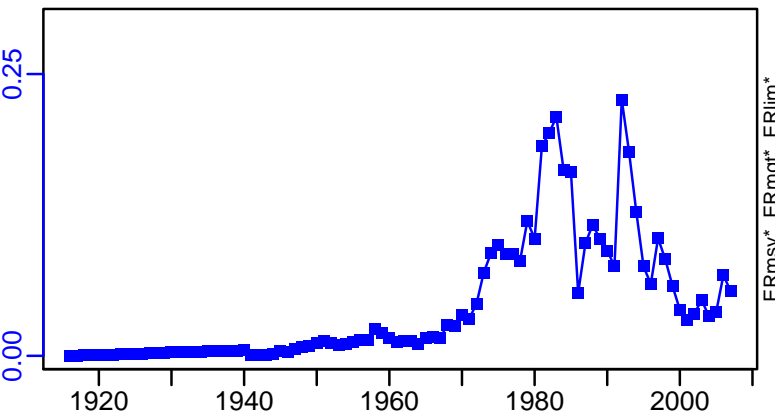
SSB-E00larvae (1916-2007-BRANCH)



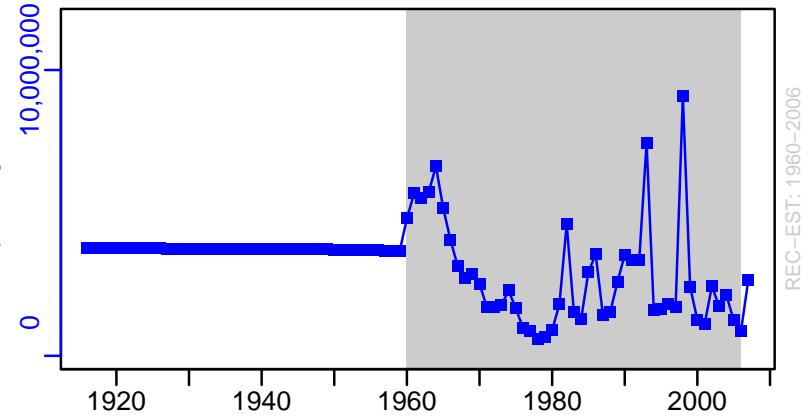
F-1/yr (1916-2007-BRANCH)



ER-ratio (1916-2007-BRANCH)



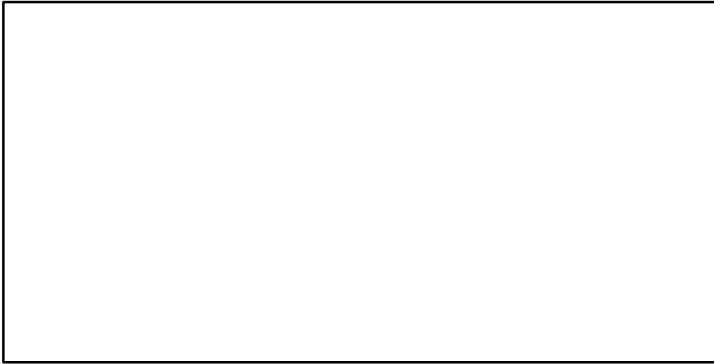
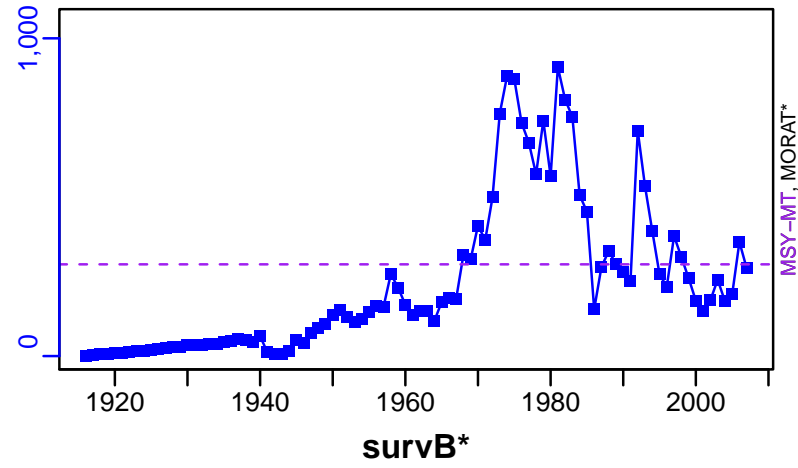
R-E00 (1916-2007-BRANCH)



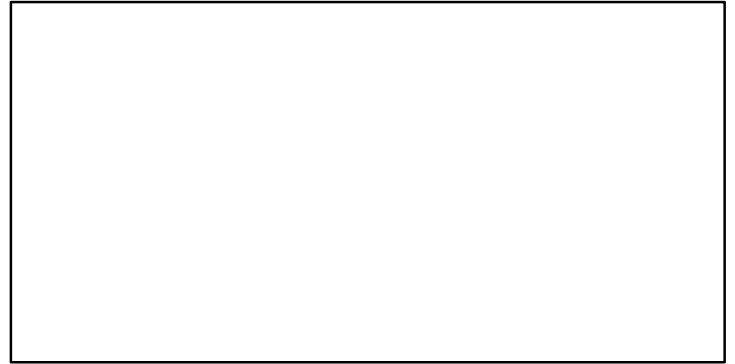
# Blue rockfish California [BLUEROCKCAL]

TC-MT, TL\*, RecC\* (1916-2007-BRANCH)

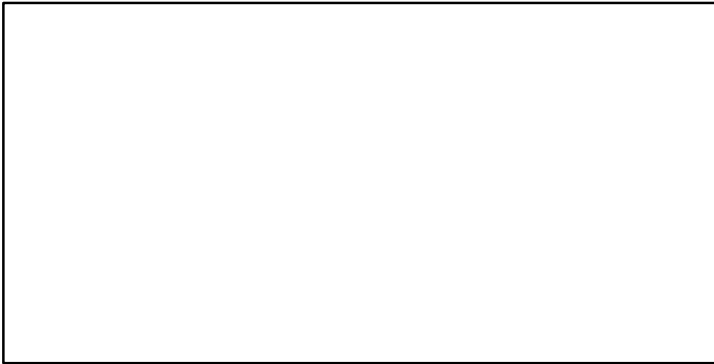
TAC\*, Cpair\*, Cadv\*



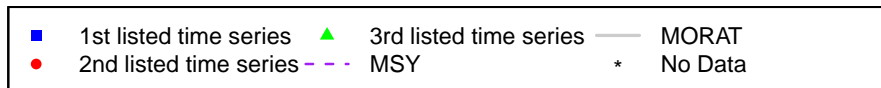
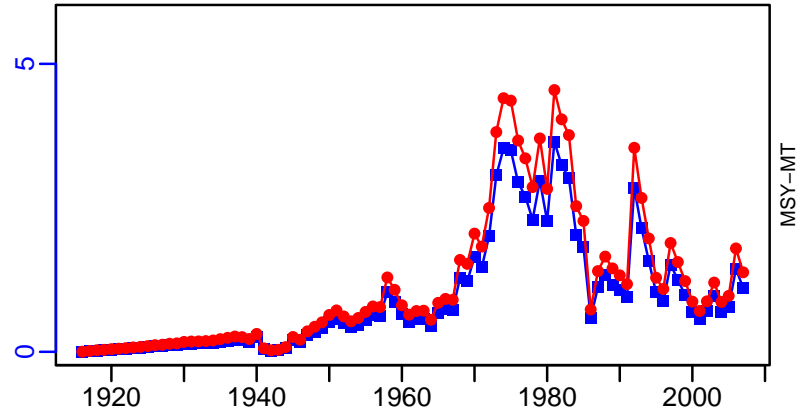
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1916-2007-BRANCH)



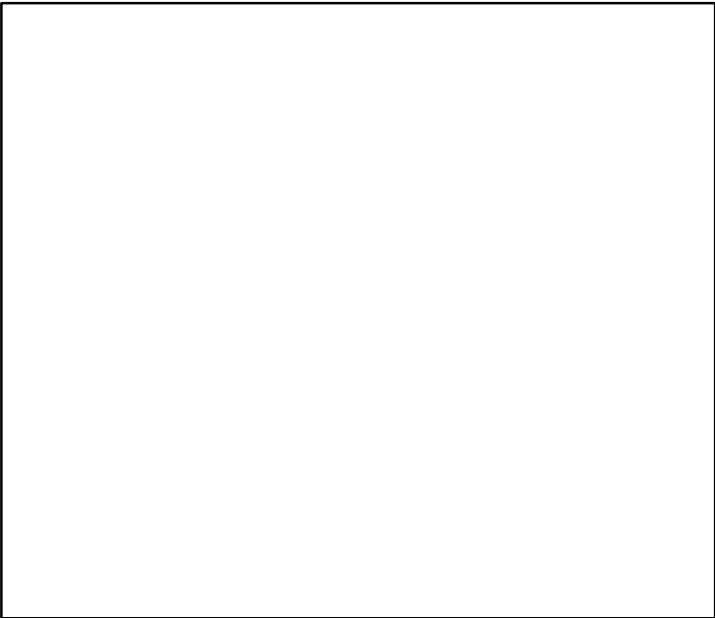
## Bank rockfish California [BNKROCKCAL]

Metadata	
<b>Scientific Name</b>	Sebastes rufus
<b>Current Assess ID</b>	PFMC-BNKROCKCAL-1979-1999-CHING
<b>Area</b>	California
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Pacific Fishery Management Council
<b>Asmts in RAM</b>	1999

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	1999	6380	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-ratio	1999	0.083	-	-
TC	TC-MT	1999	562		
TL	TL-MT	1999	562		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

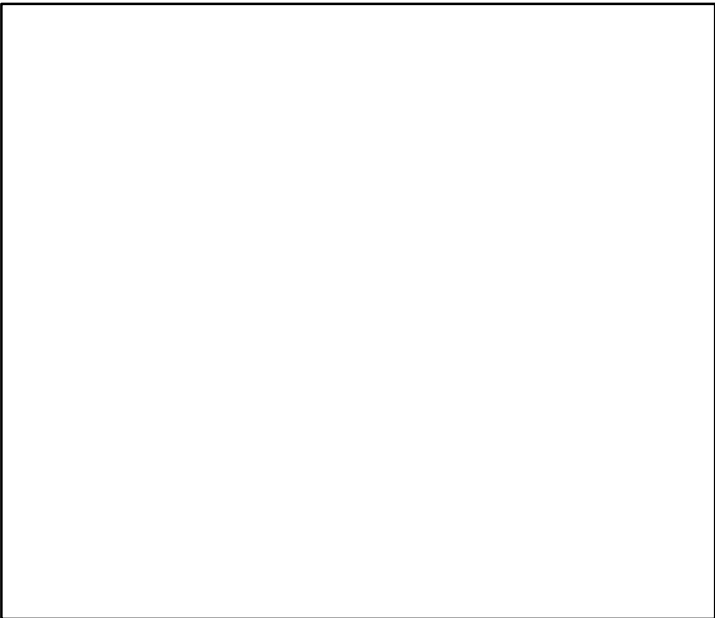
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*

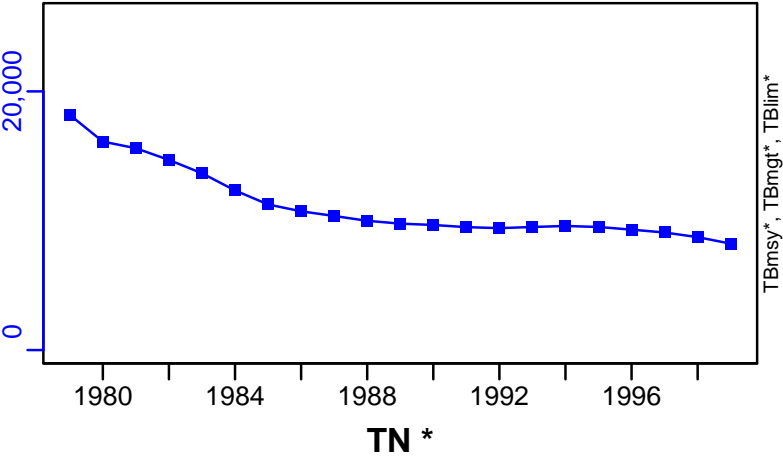


◆ Start Year   ◆ End Year   \* No Data

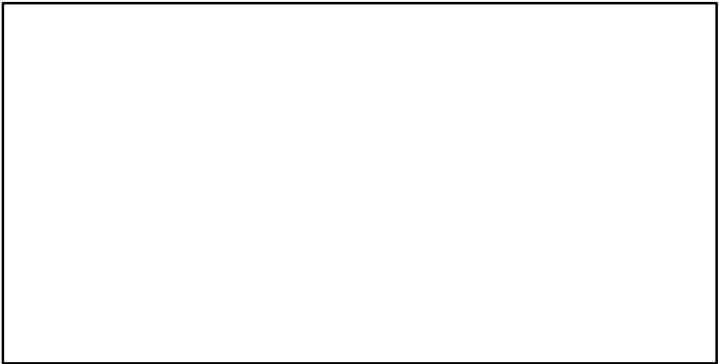


Bank rockfish California [BNKROCKCAL]

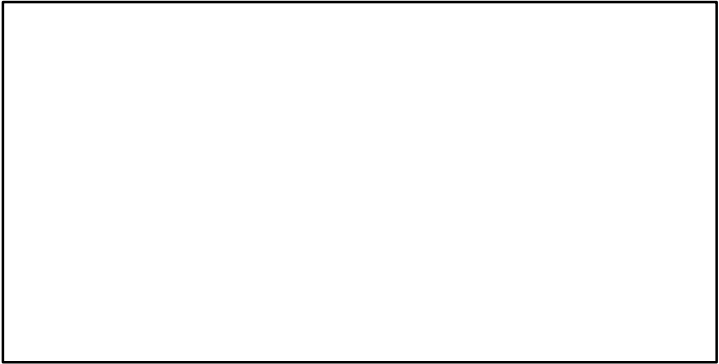
TB-MT (1979-1999-CHING)



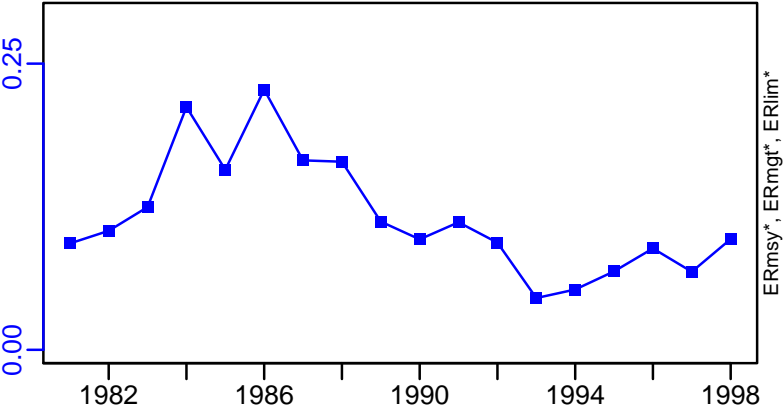
SSB\*



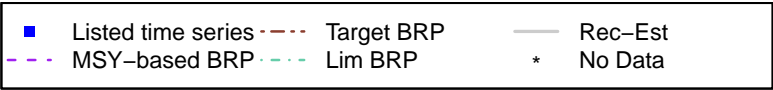
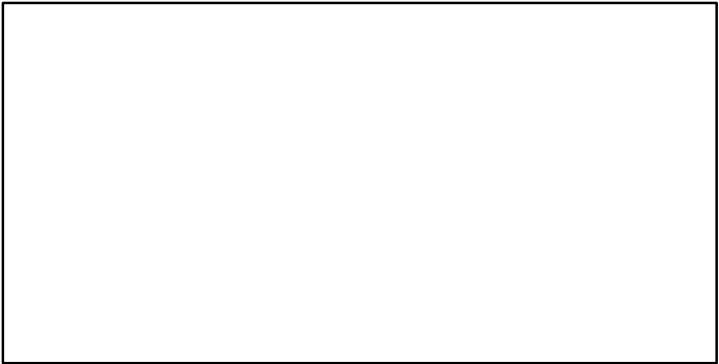
F\*



ER-ratio (1979-1999-CHING)

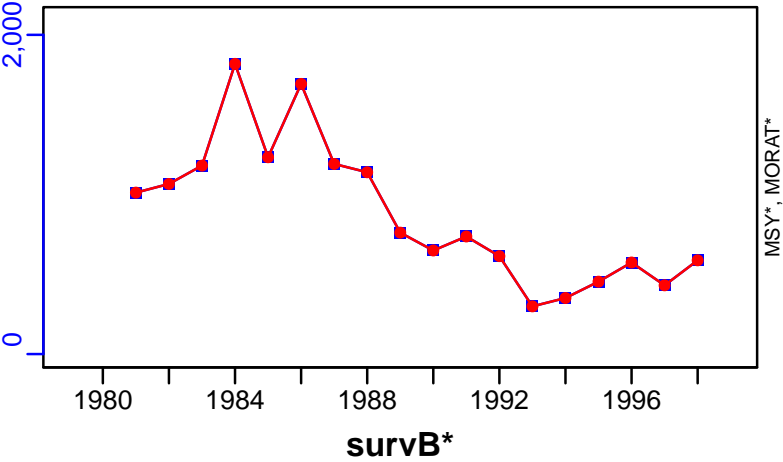


Recruits\*



Bank rockfish California [BNKROCKCAL]

TC-MT, TL-MT, RecC\* (1979-1999-CHING)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Bocaccio British Columbia Waters [BOCACCBW]

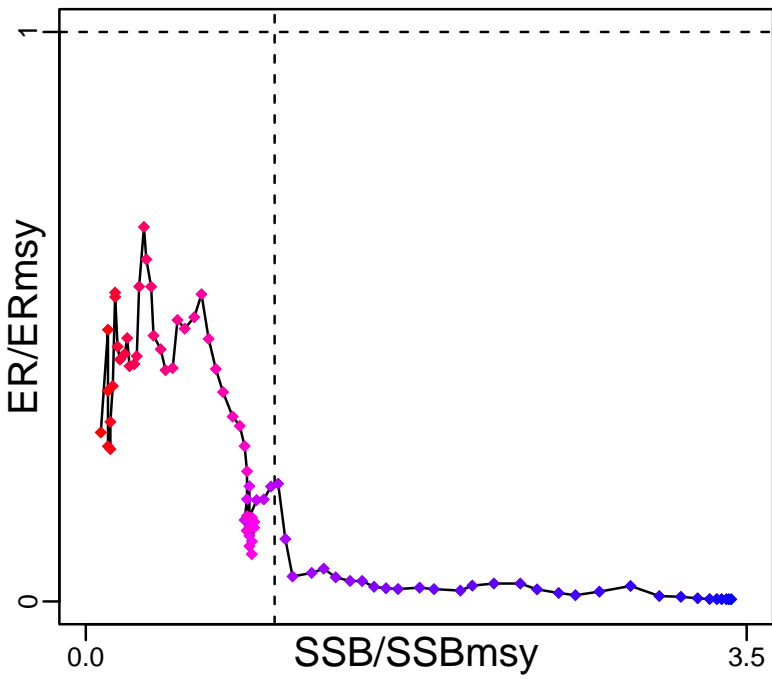
Metadata	
<b>Scientific Name</b>	Sebastes paucispinis
<b>Current Assess ID</b>	DFO-PAC-BOCACCBW-1935-2020-HIVELY
<b>Area</b>	British Columbia Waters
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans - Pacific Region
<b>Asmts in RAM</b>	2012, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2020	17,188
<b>SSBmsy</b>	SSBmsy-MT	2020	9462
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2020	0.085
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2020	1461
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

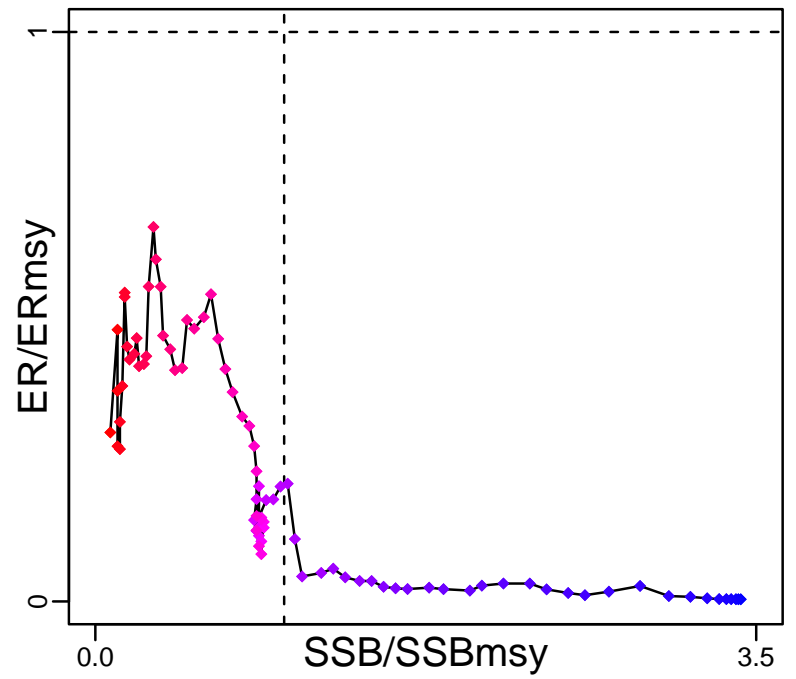
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2012	1880	-	-
<b>SSB</b>	SSB-MT	2020	751	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	1117	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2020	0.025	-	-
<b>TC</b>	TC-MT	2020	92		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2012	0.072		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2020	0.079		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2020	0.297		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Bocaccio British Columbia Waters [BOCACCBCW]

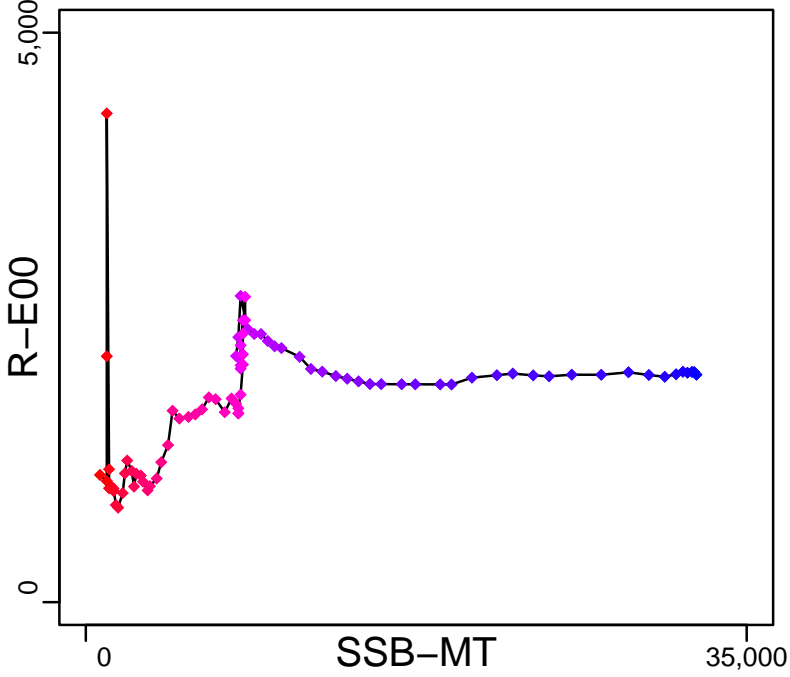
Kobe MSYpref (1935–2020–HIVELY)



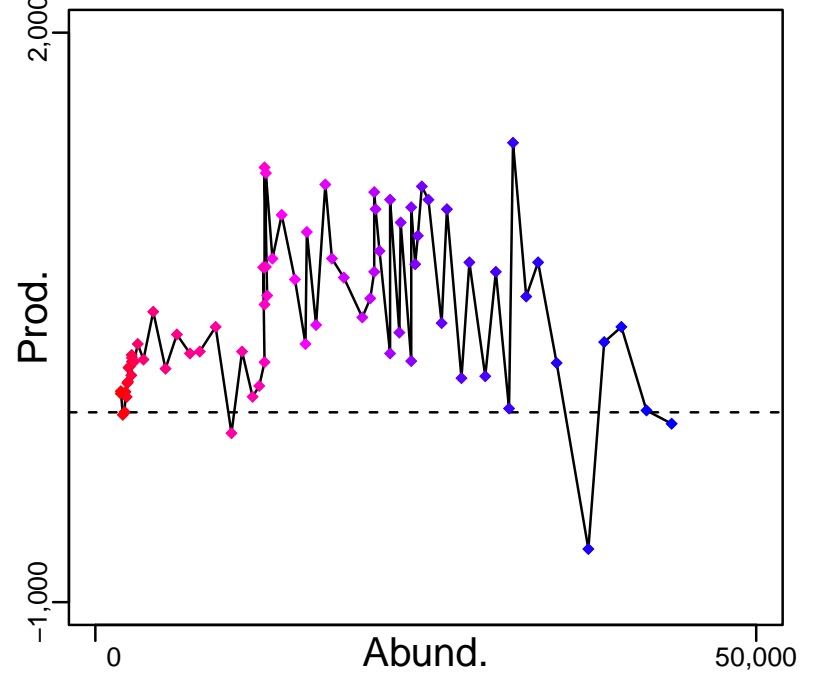
Kobe MGTpref (1935–2020–HIVELY)



Spawner Recruit (1935–2020–HIVELY)



Production (1935–2012–CHING)

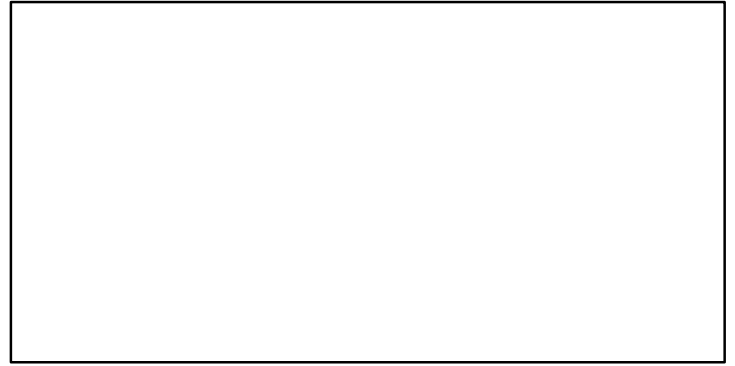
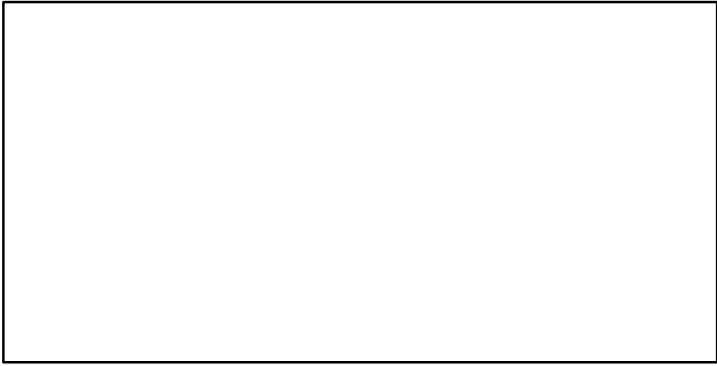
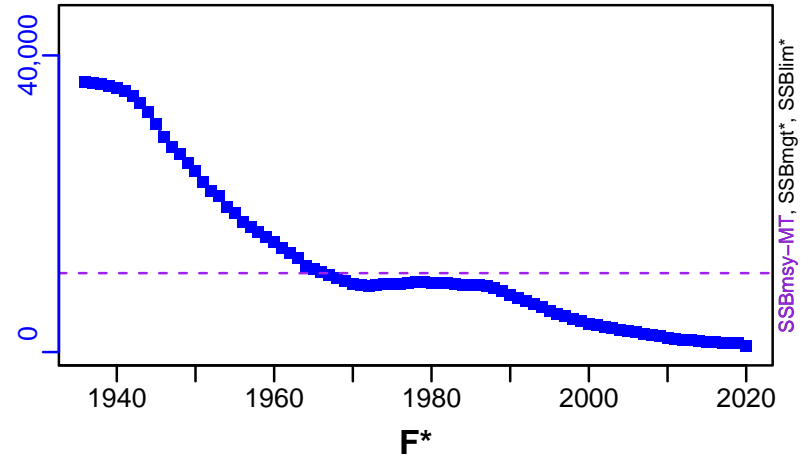
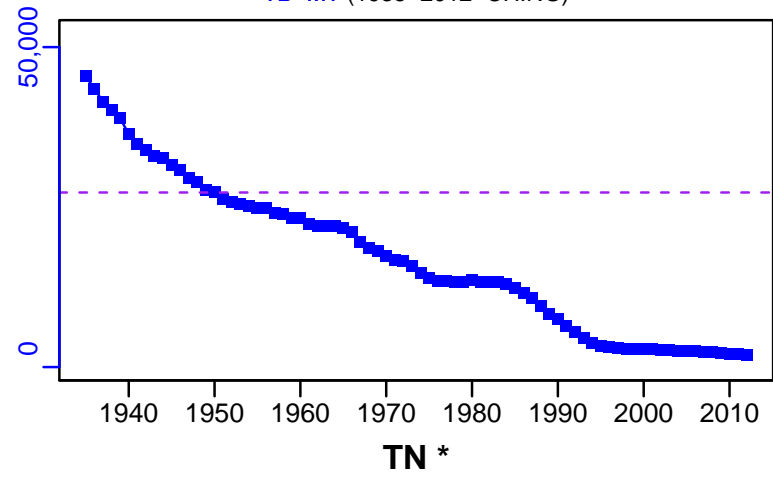


◆ Start Year ◆ End Year \* No Data

# Bocaccio British Columbia Waters [BOCACCBCW]

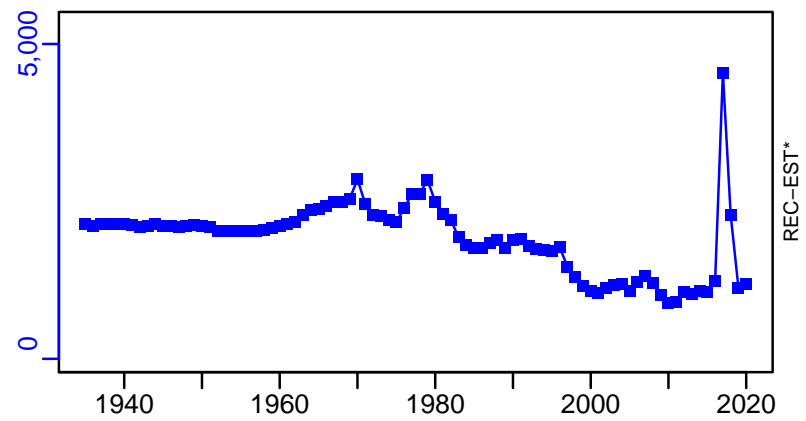
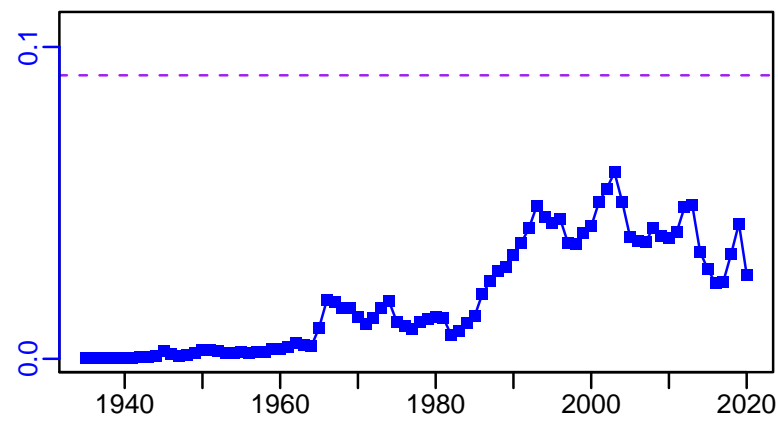
TB-MT (1935-2012-CHING)

SSB-MT (1935-2020-HIVELY)



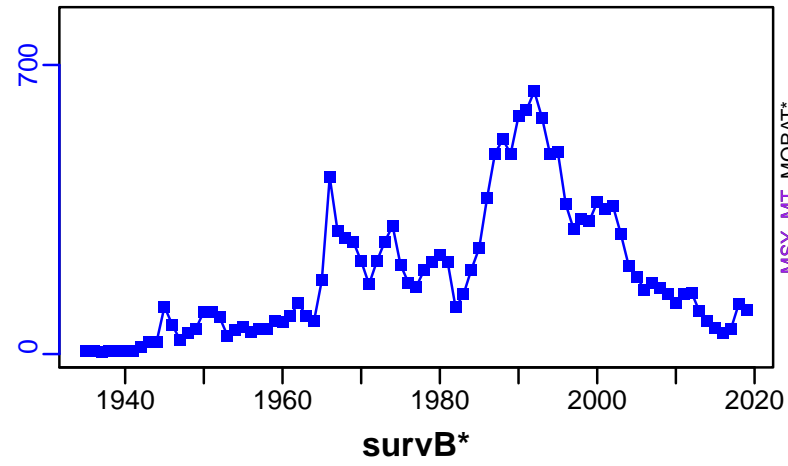
ER-ratio (1935-2020-HIVELY)

R-E00 (1935-2020-HIVELY)



# Bocaccio British Columbia Waters [BOCACCBW]

TC-MT, TL\*, RecC\* (1935-2020-HIVELY)



TAC\*, Cpair\*, Cadv\*



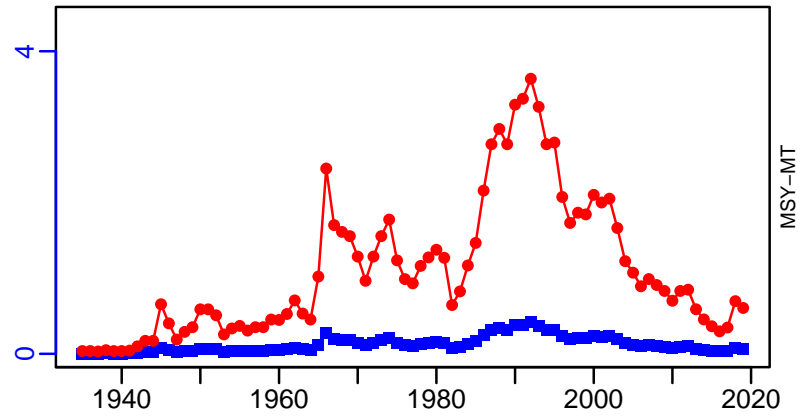
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1935-2020-HIVELY)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Bocaccio Southern Pacific Coast [BOCACCSPCOAST]

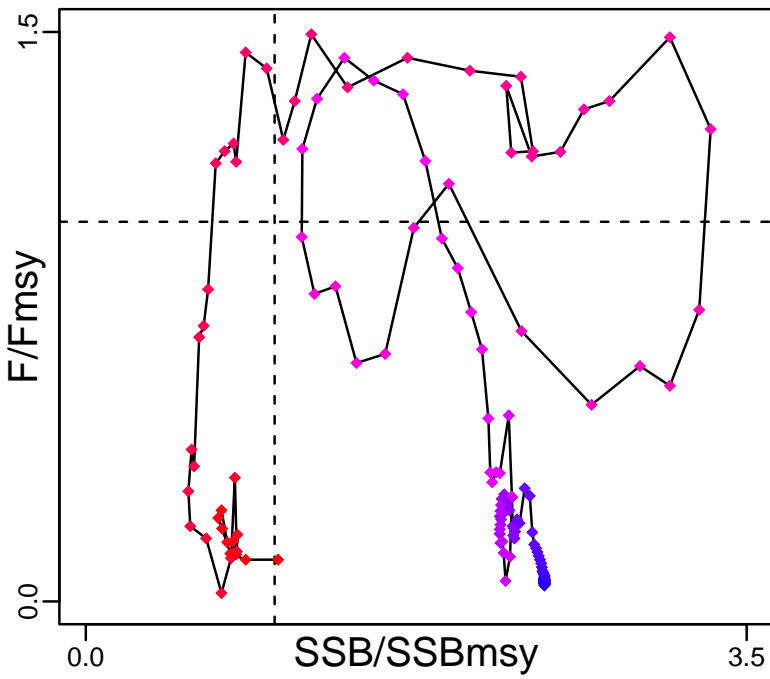
Metadata	
<b>Scientific Name</b>	Sebastes paucispinis
<b>Current Assess ID</b>	SWFSC-BOCACCSPCOAST-1892-2017-SISIMP2021
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2009, 2017, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00larvae	2017	2,964,399,902
<b>Fmsy</b>	Fmsy-1/yr	2017	0.5
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2009	44,070
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2017	1934
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00larvae	2017	1,852,750,000
<b>Flim</b>	Flim-1/yr	2017	0.5
<b>ERlim</b>	-	-	-

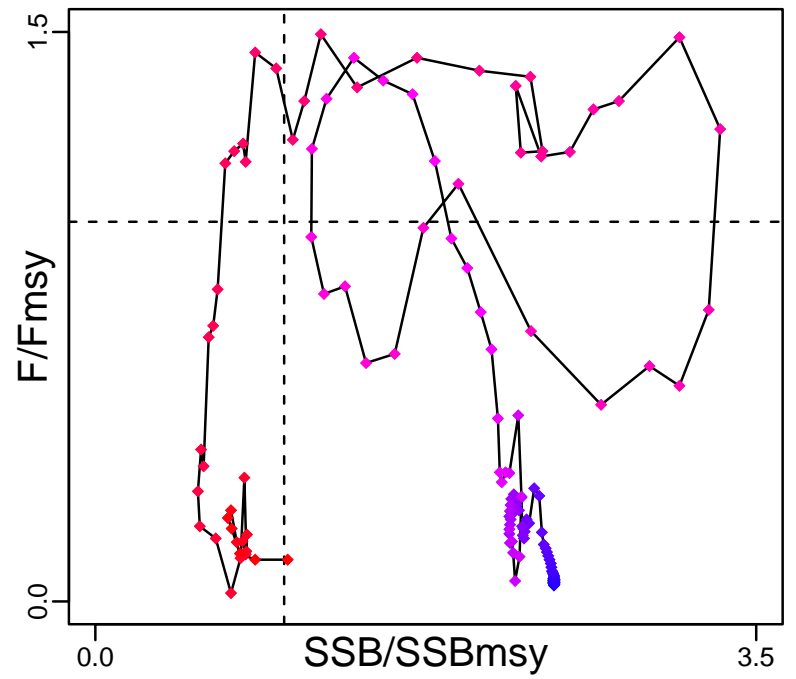
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	25,293	-	-
<b>SSB</b>	SSB-E00larvae	2017	$3.6 \times 10^9$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2017	6,220,000	-	0
<b>F</b>	F-1/yr	2017	0.055	-	-
<b>ER</b>	ER-calc-ratio	2017	0.007	-	-
<b>TC</b>	TC-MT	2017	157		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-E00larvae/SSBmsy-E00larvae	2017	1.214		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	0.11		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Bocaccio Southern Pacific Coast [BOCACCSPCOAST]

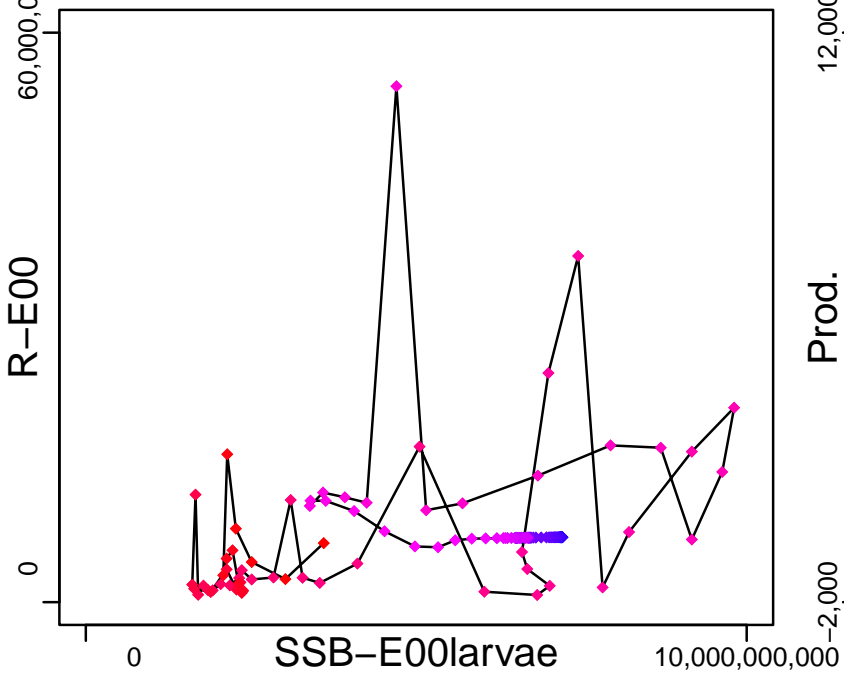
Kobe MSYpref (1892–2017–SISIMP2021)



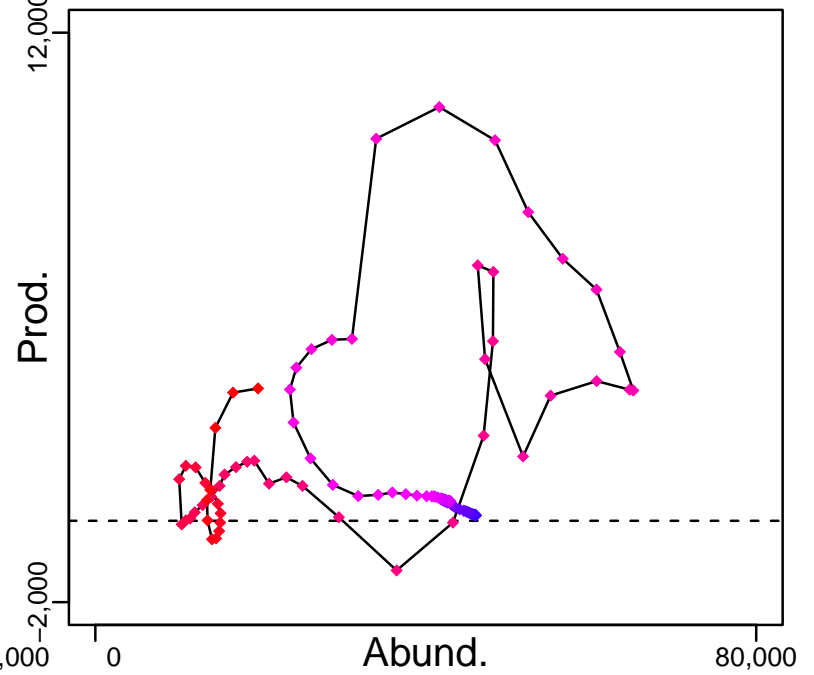
Kobe MGTpref (1892–2017–SISIMP2021)



Spawner Recruit (1892–2017–SISIMP2021)



Production (1892–2017–SISIMP2021)

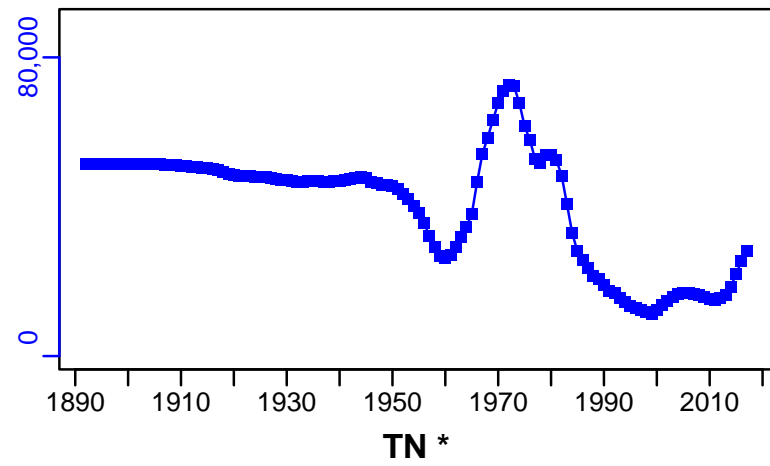


◆ Start Year ◆ End Year \* No Data

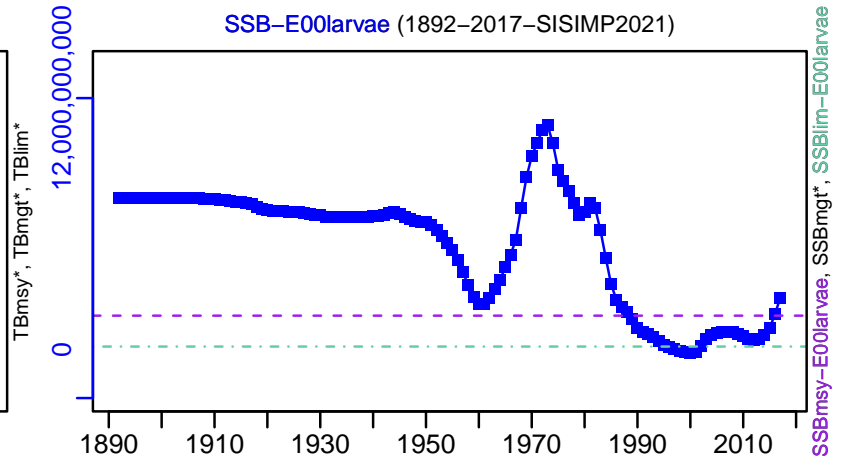


# Bocaccio Southern Pacific Coast [BOCACCSPOAST]

TB-MT (1892-2017-SISIMP2021)



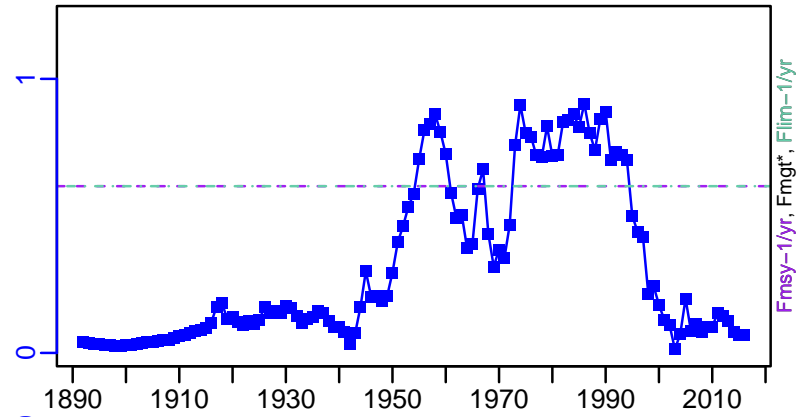
SSB-E00larvae (1892-2017-SISIMP2021)



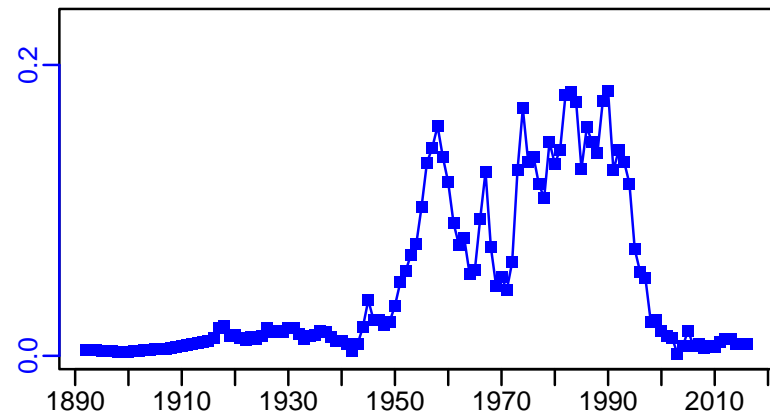
TN \*



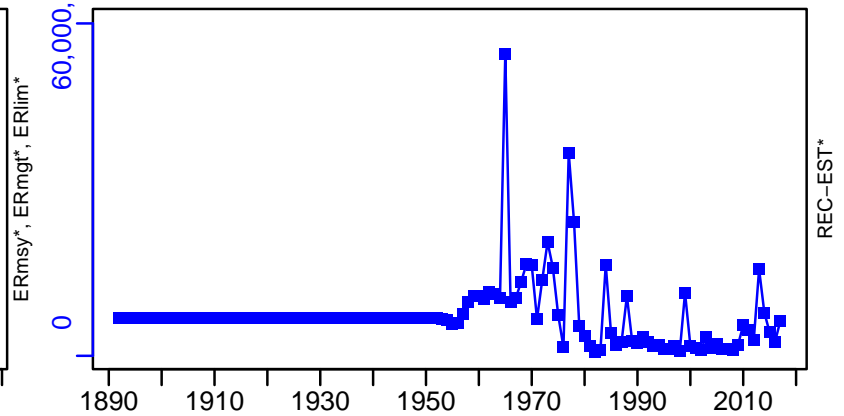
F-1/yr (1892-2017-SISIMP2021)



ER-calc-ratio (1892-2017-SISIMP2021)



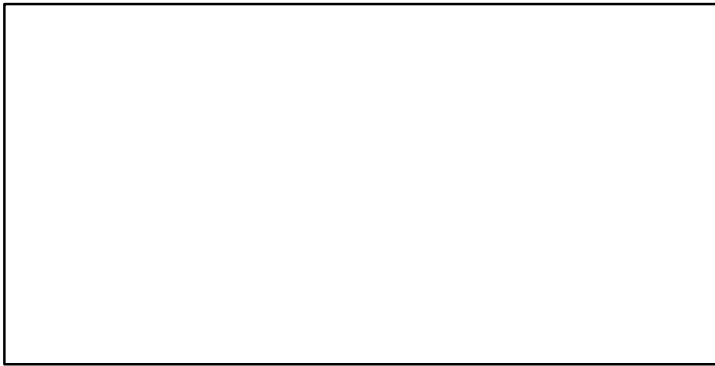
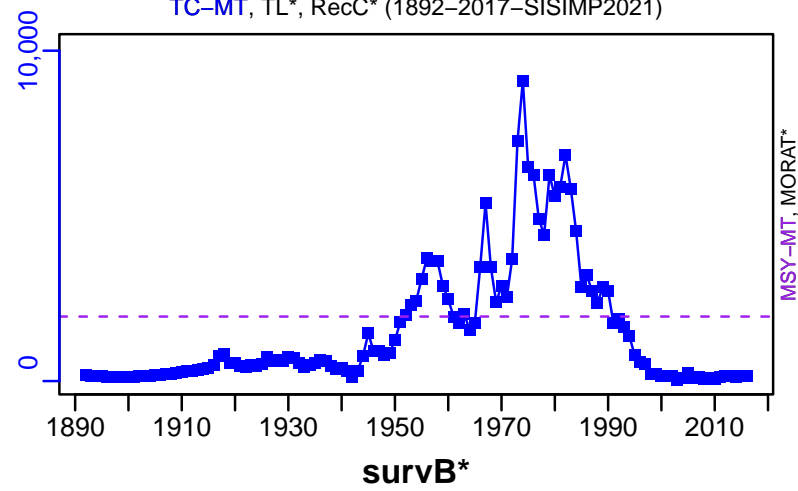
R-E00 (1892-2017-SISIMP2021)



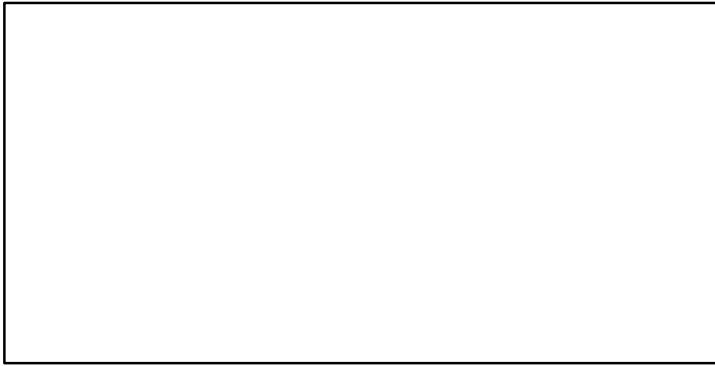
# Bocaccio Southern Pacific Coast [BOCACCSPCOAST]

TC-MT, TL\*, RecC\* (1892-2017-SISIMP2021)

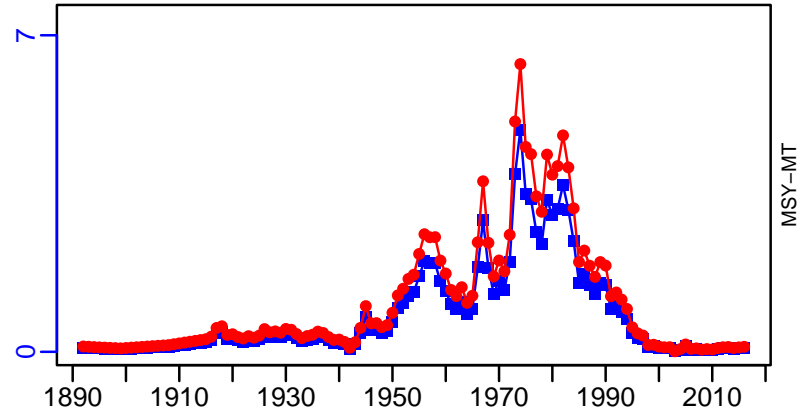
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1892-2017-SISIMP2021)



■ 1st listed time series ▲ 3rd listed time series — MORAT  
● 2nd listed time series - - - MSY \* No Data

## Brown rockfish Pacific Coast [BRNROCKPCOAST]

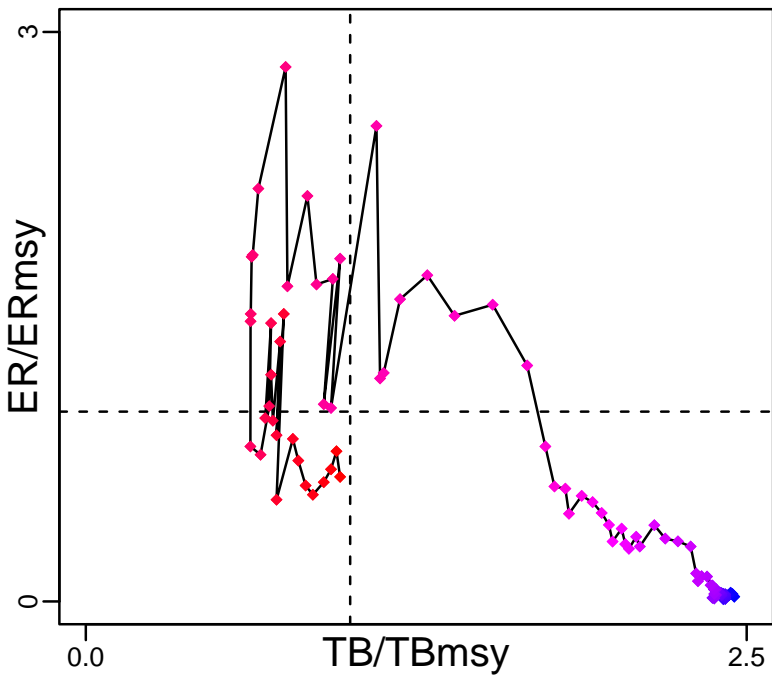
Metadata	
<b>Scientific Name</b>	Sebastes auriculatus
<b>Current Assess ID</b>	SWFSC-BRNROCKPCOAST-1916-2012-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2012

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2012	1455
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2012	0.103
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	150
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	ERlim-ratio	2012	0.103

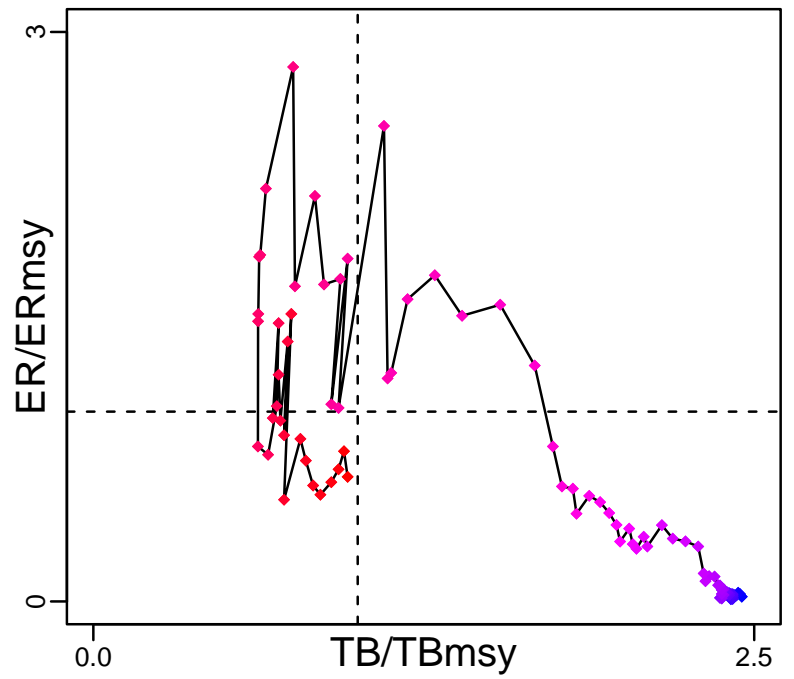
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2012	1450	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2012	0.068	-	-
<b>TC</b>	TC-MT	2012	95		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2012	0.996		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2012	0.656		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Brown rockfish Pacific Coast [BRNROCKPCOAST]

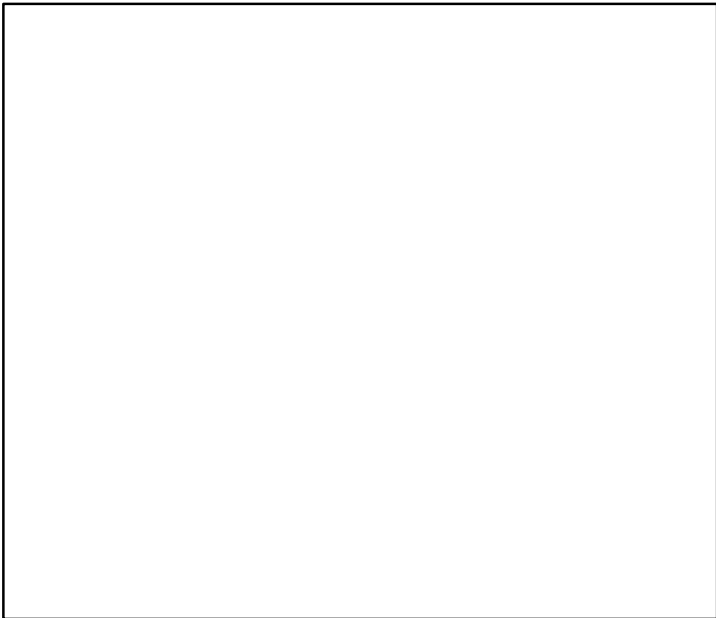
Kobe MSYpref (1916–2012–SISIMP2016)



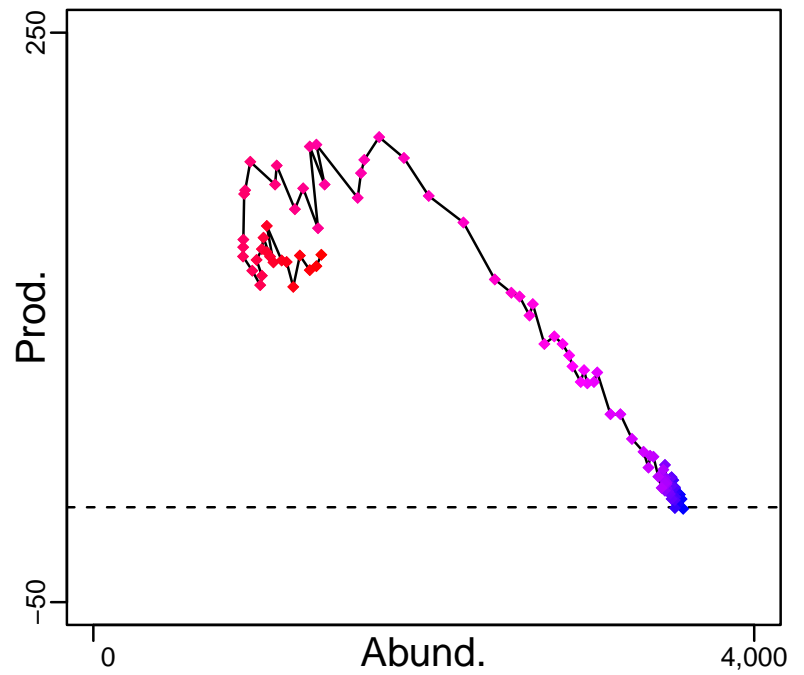
Kobe MGTpref (1916–2012–SISIMP2016)



Spawner Recruit\*



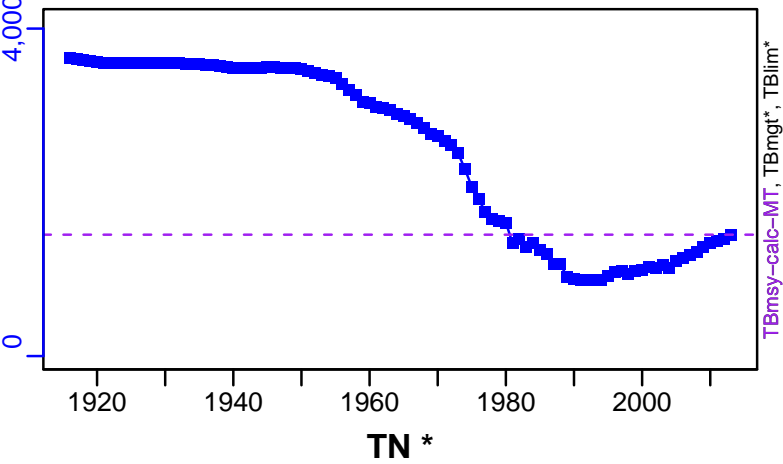
Production (1916–2012–SISIMP2016)



◆ Start Year ◆ End Year \* No Data

Brown rockfish Pacific Coast [BRNROCKPCOAST]

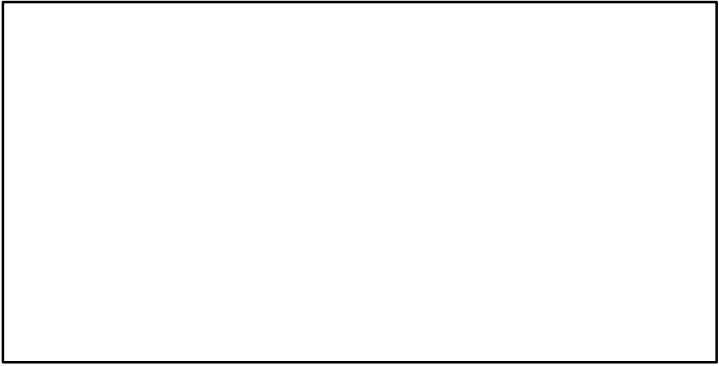
TB-MT (1916-2012-SISIMP2016)



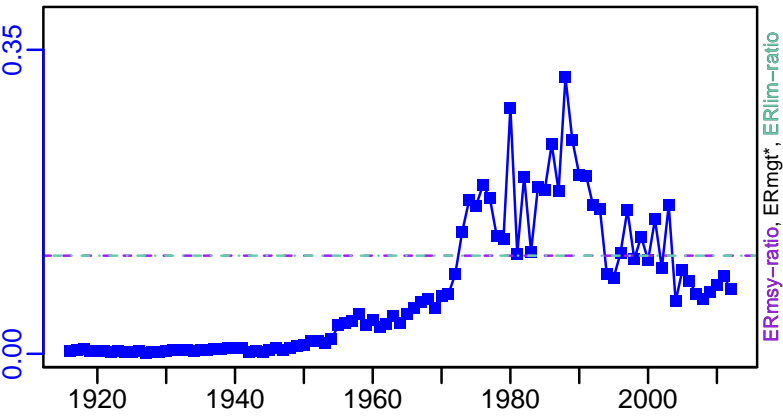
SSB\*



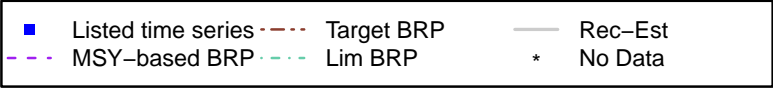
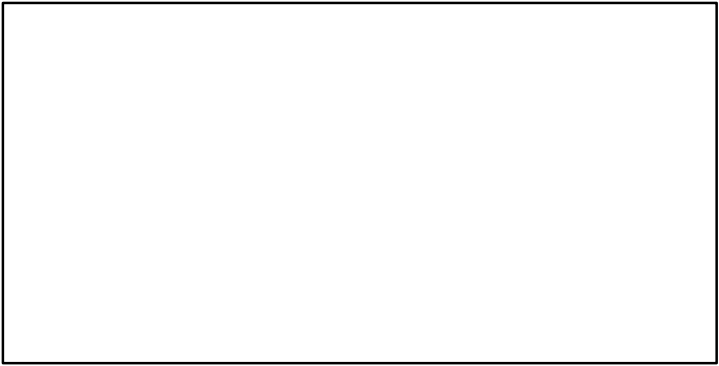
F\*



ER-ratio (1916-2012-SISIMP2016)

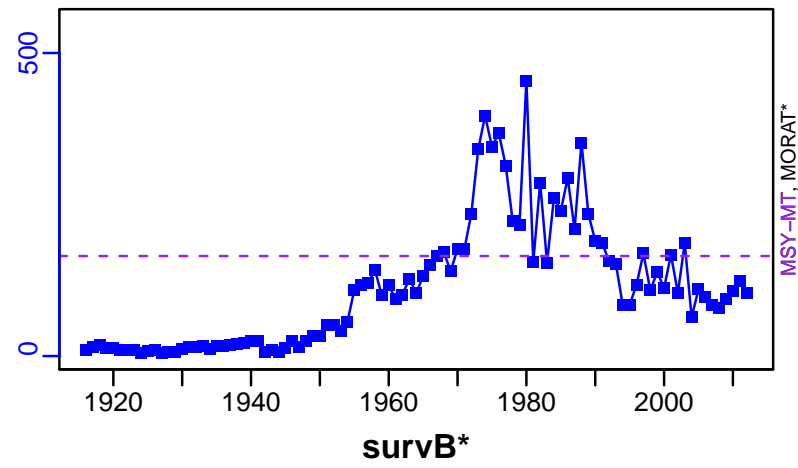


Recruits\*



# Brown rockfish Pacific Coast [BRNROCKPCOAST]

TC-MT, TL\*, RecC\* (1916-2012-SISIMP2016)



TAC\*, Cpair\*, Cadv\*



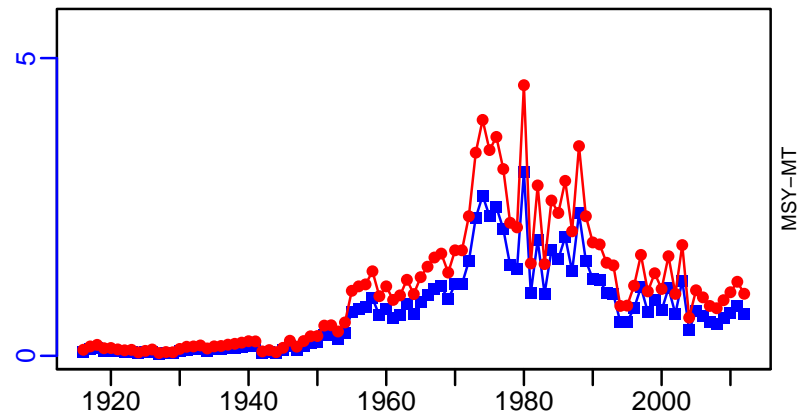
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1916-2012-SISIMP2016)



- 1st listed time series
- 2nd listed time series
- ▲ 3rd listed time series
- MORAT
- - - MSY
- \* No Data

## Chilipepper Southern Pacific Coast [CHILISPCOAST]

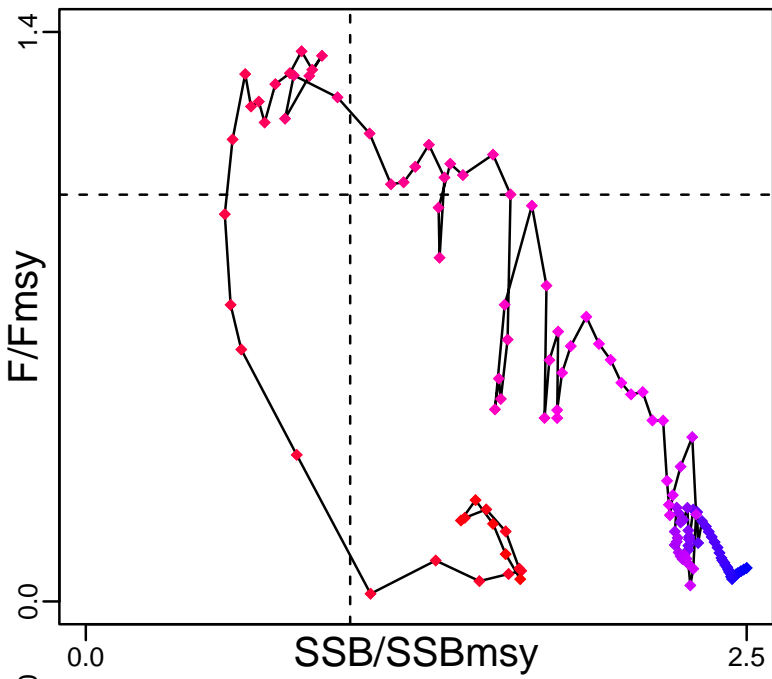
Metadata	
<b>Scientific Name</b>	Sebastes goodei
<b>Current Assess ID</b>	SWFSC-CHILISPCOAST-1892-2017-SISIMP2021
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2007, 2015, 2017

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2007	19,321
<b>SSBmsy</b>	SSBmsy-E00larvae	2017	$2.72 \times 10^9$
<b>Fmsy</b>	Fmsy-1/yr	2017	0.5
<b>ERmsy</b>	ERmsy-ratio	2007	0.112
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2007	45,057
<b>SSB0</b>	SSB0-MT	2007	33,390
<b>MSY</b>	MSY-MT	2017	2064
<b>M</b>	M-1/yr	2007	0.16
<b>TBlim</b>	TBlim-MT	2007	8666
<b>SSBlim</b>	SSBlim-E00larvae	2017	$1.7 \times 10^9$
<b>Flim</b>	Flim-1/yr	2017	0.5
<b>ERlim</b>	-	-	-

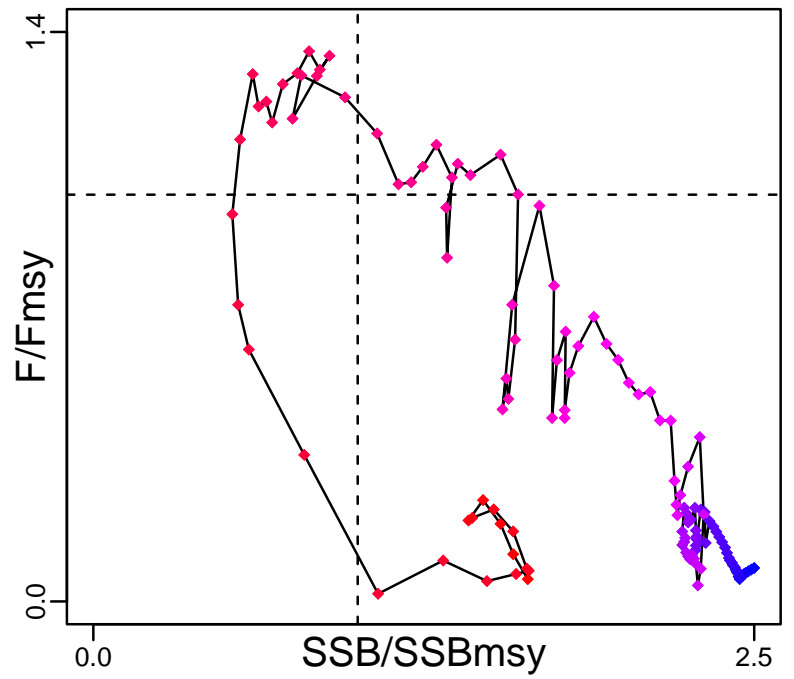
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	39,163	-	-
<b>SSB</b>	SSB-E00larvae	2017	$4.71 \times 10^9$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2017	37,210,400	-	0
<b>F</b>	F-1/yr	2017	0.027	-	-
<b>ER</b>	ER-calc-ratio	2017	0.003	-	-
<b>TC</b>	TC-MT	2017	97		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2007	1.739		
<b>SSB/SSBmsy</b>	SSB-E00larvae/SSBmsy-E00larvae	2017	1.732		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	0.055		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2007	0.035		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Chilipepper Southern Pacific Coast [CHILISPCOAST]

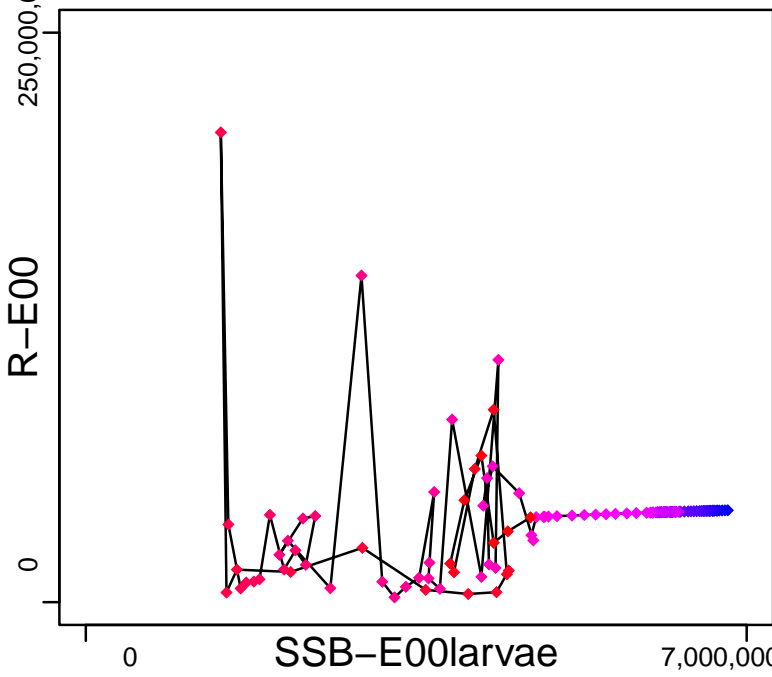
Kobe MSYpref (1892–2017–SISIMP2021)



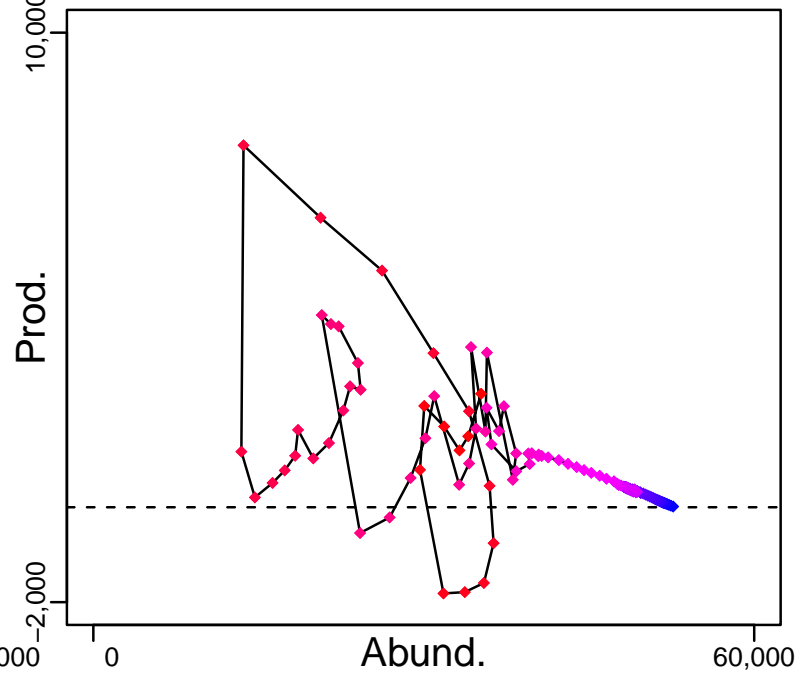
Kobe MGTpref (1892–2017–SISIMP2021)



Spawner Recruit (1892–2017–SISIMP2021)



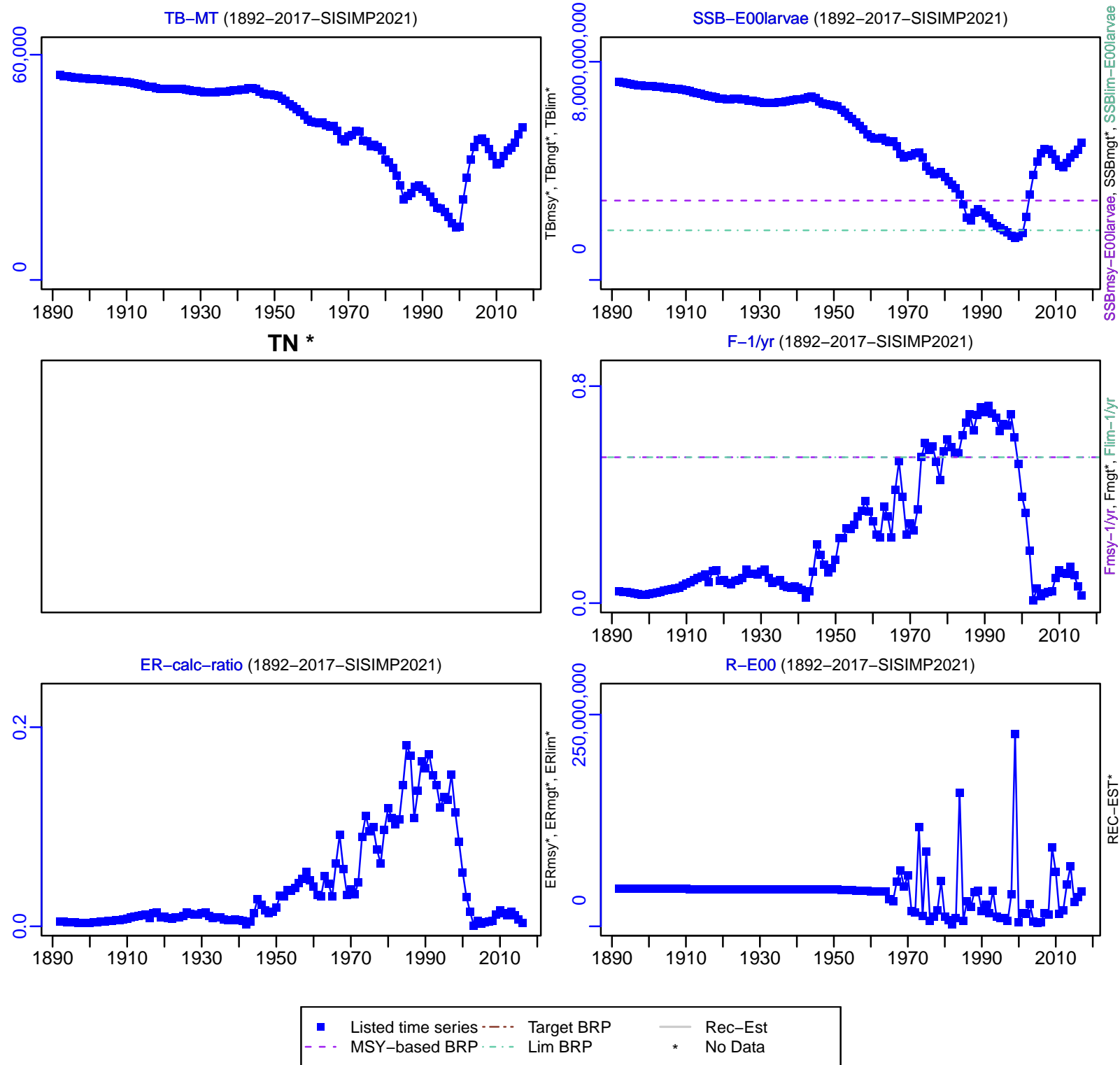
Production (1892–2017–SISIMP2021)



◆ Start Year ◆ End Year \* No Data

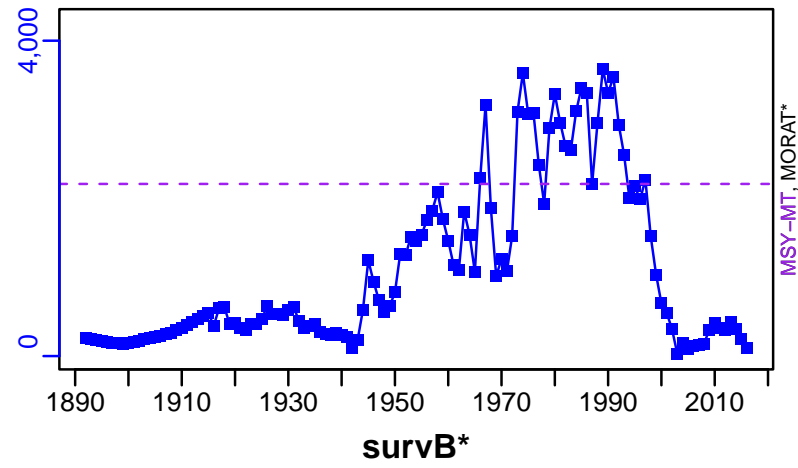


# Chilipepper Southern Pacific Coast [CHILISPCOAST]



# Chilipepper Southern Pacific Coast [CHILISPCOAST]

TC-MT, TL\*, RecC\* (1892-2017-SISIMP2021)



TAC\*, Cpair\*, Cadv\*



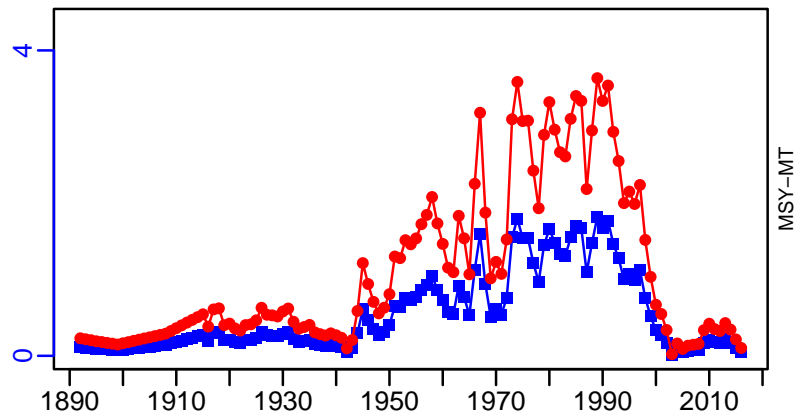
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1892-2017-SISIMP2021)



- 1st listed time series
- 2nd listed time series
- ▲ 3rd listed time series
- MORAT
- - - MSY
- \* No Data

## China rockfish Central Pacific Coast [CHROCKCPCOAST]

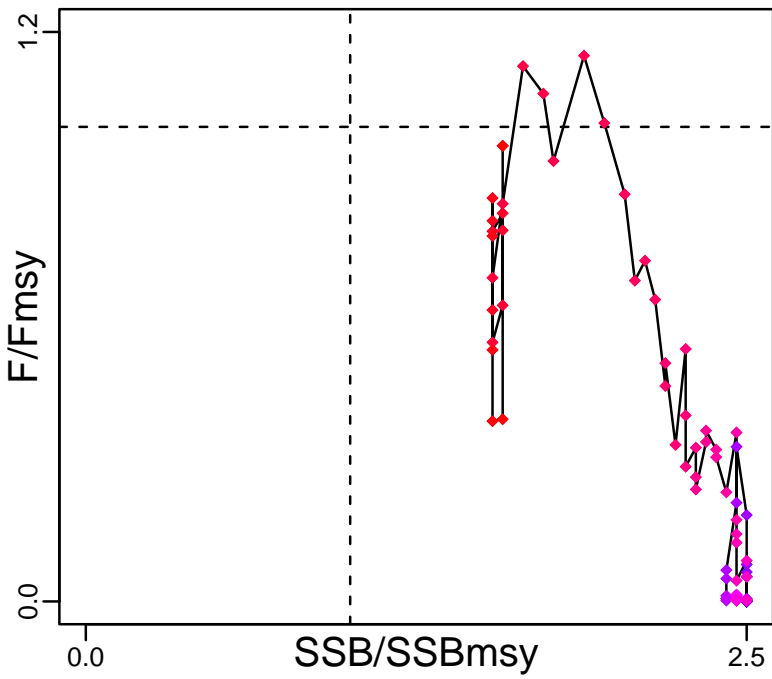
Metadata	
<b>Scientific Name</b>	Sebastes nebulosus
<b>Current Assess ID</b>	NWFSC-CHROCKCPCOAST-1900-2019-SISIMP2021-2
<b>Area</b>	Central Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00eggs	2019	$2.6 \times 10^{10}$
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2019	16
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2019	$1.63 \times 10^{10}$
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

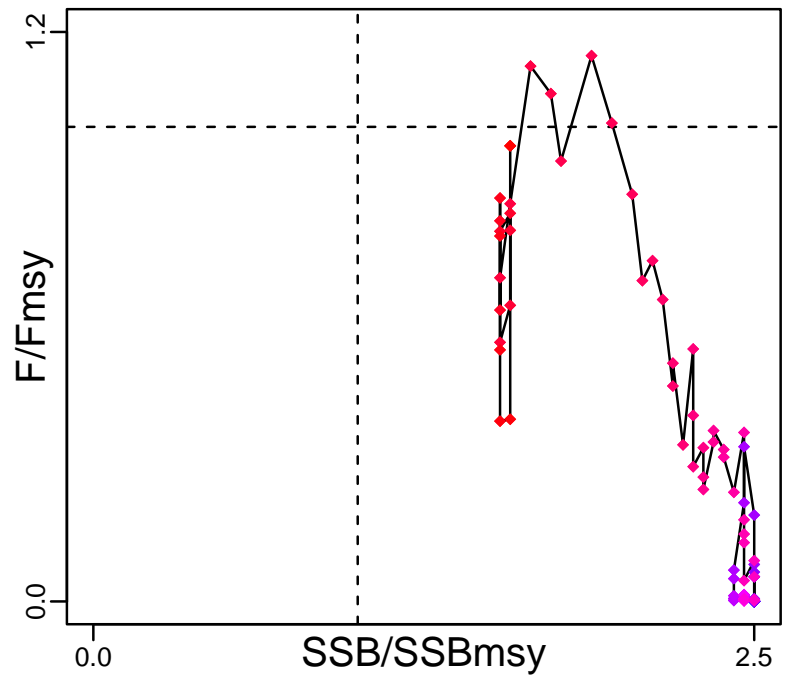
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	381	-	5+
<b>SSB</b>	SSB-E00eggs	2019	$4 \times 10^{10}$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	68,000	-	0
<b>F</b>	F-1/yr	2019	0.48	-	-
<b>ER</b>	ER-calc-ratio	2015	0.019	-	-
<b>TC</b>	TC-MT	2019	18		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2019	1.538		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.96		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# China rockfish Central Pacific Coast [CHROCKPCOAST]

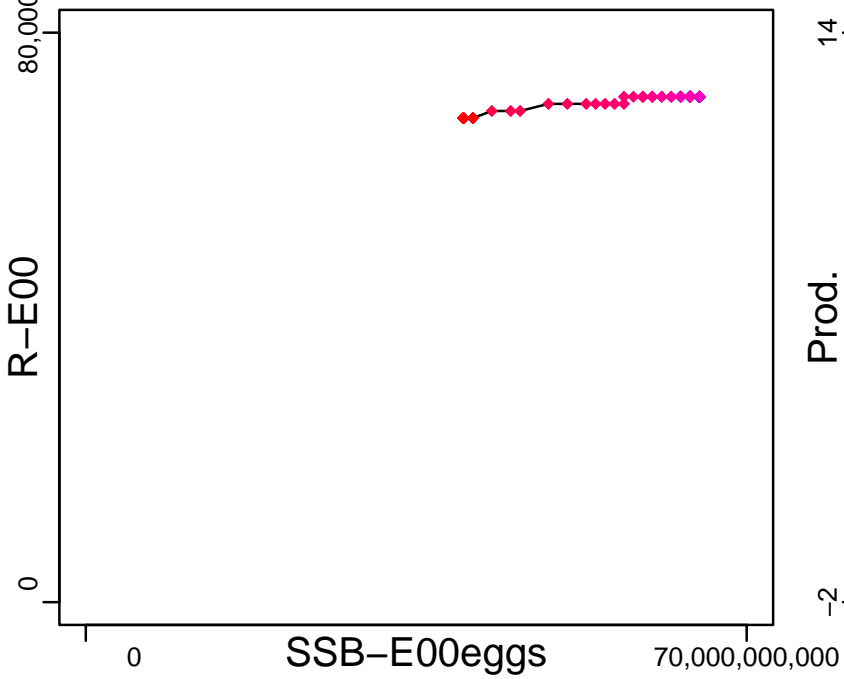
Kobe MSYpref (1900–2019–SISIMP2021–2)



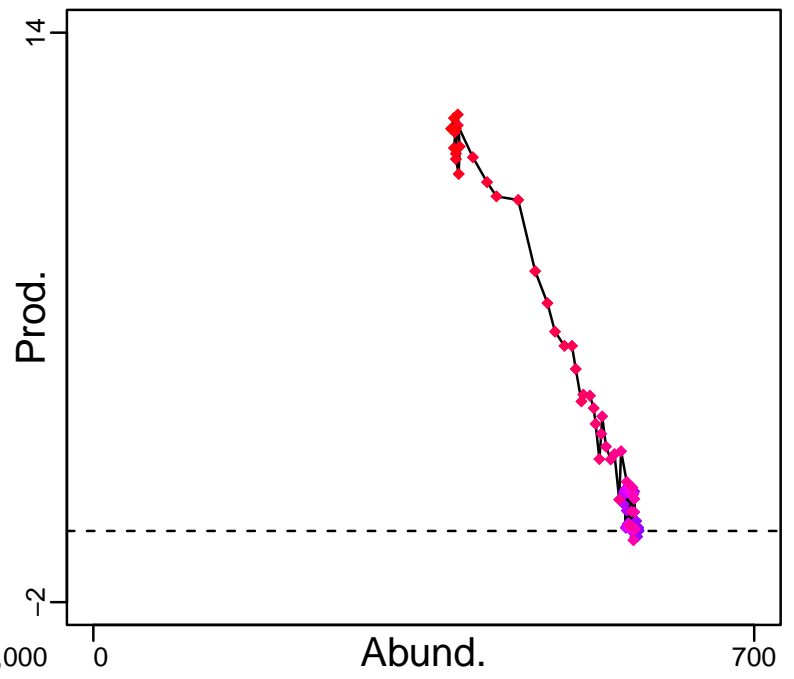
Kobe MGTpref (1900–2019–SISIMP2021–2)



Spawner Recruit (1900–2019–SISIMP2021–2)

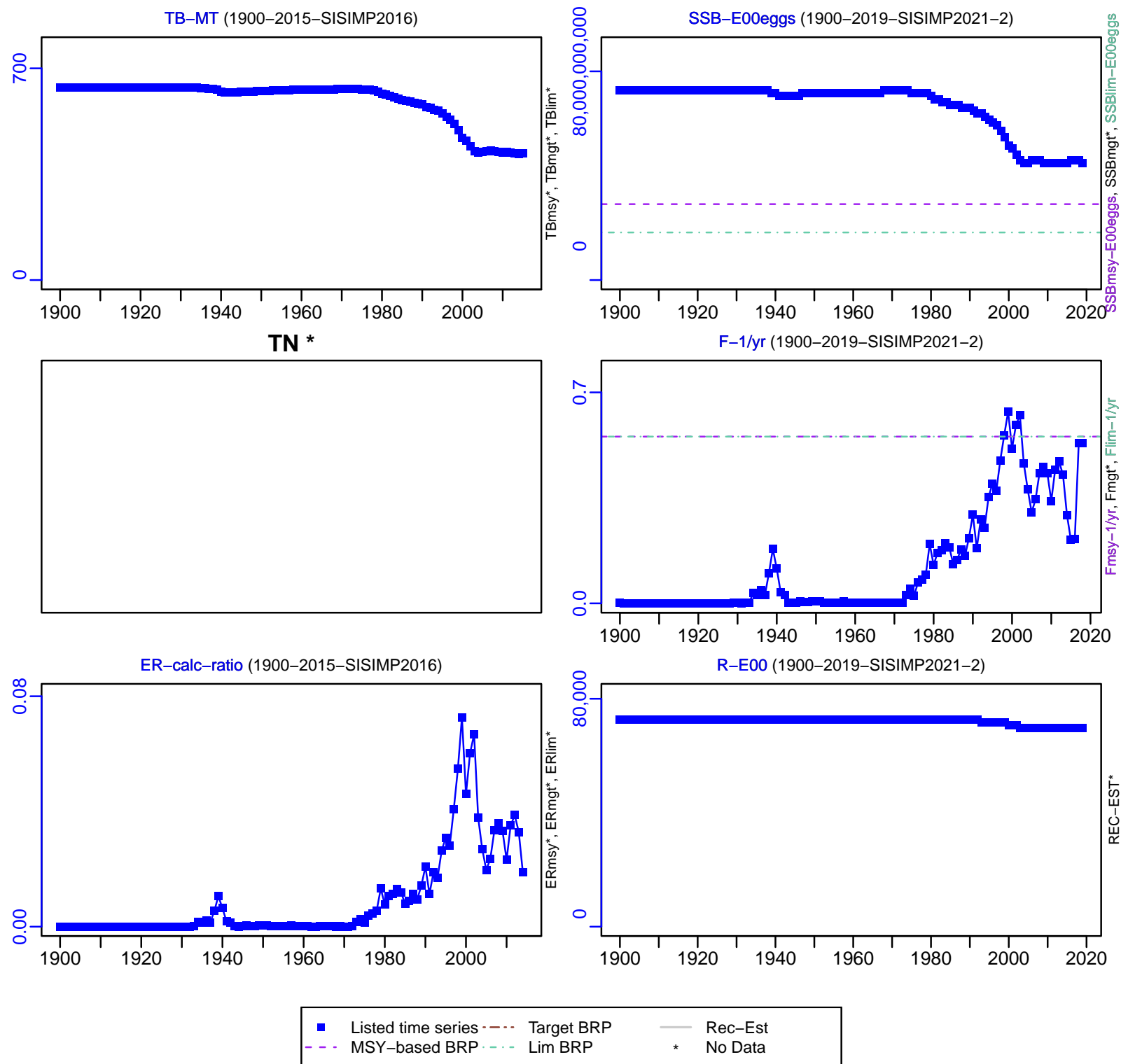


Production (1900–2015–SISIMP2016)



◆ Start Year ◆ End Year \* No Data

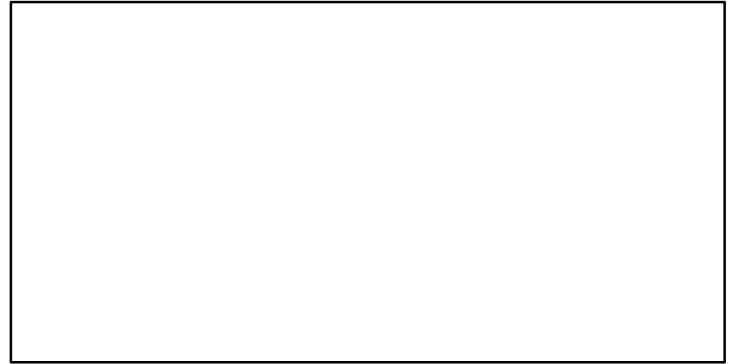
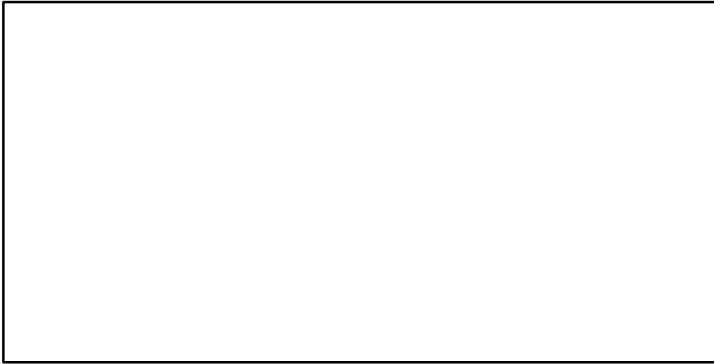
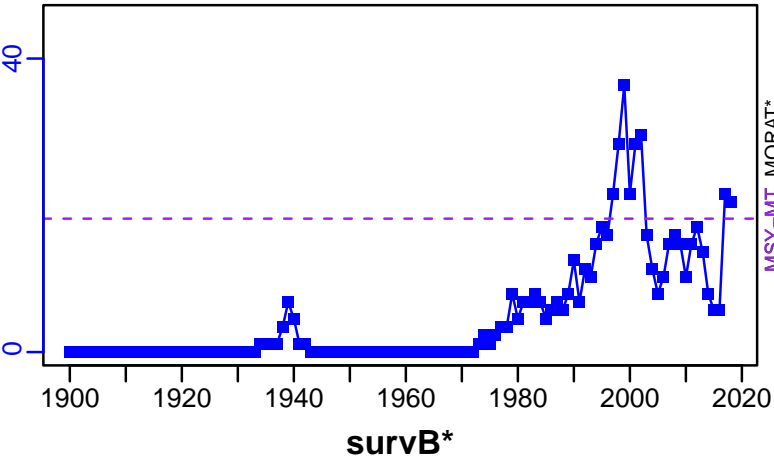
# China rockfish Central Pacific Coast [CHROCKPCOAST]



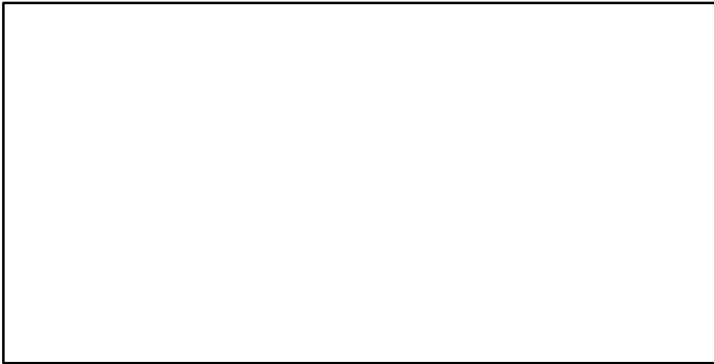
# China rockfish Central Pacific Coast [CHROCKCPCOAST]

TC-MT, TL\*, RecC\* (1900-2019-SISIMP2021-2)

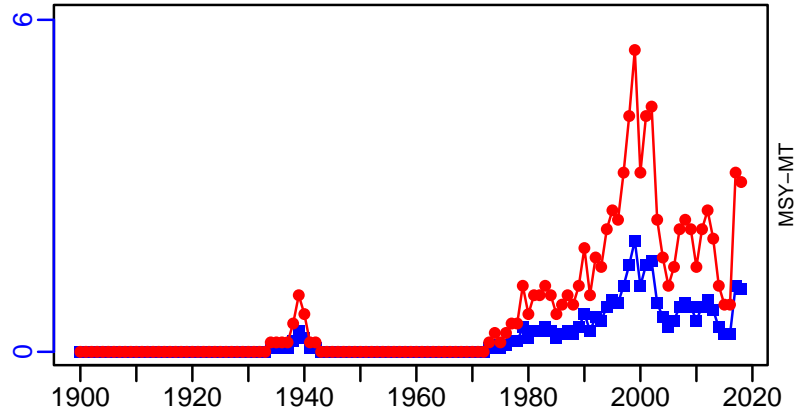
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1900-2019-SISIMP2021-2)



## China rockfish Northern Pacific Coast [CHROCKNP coast]

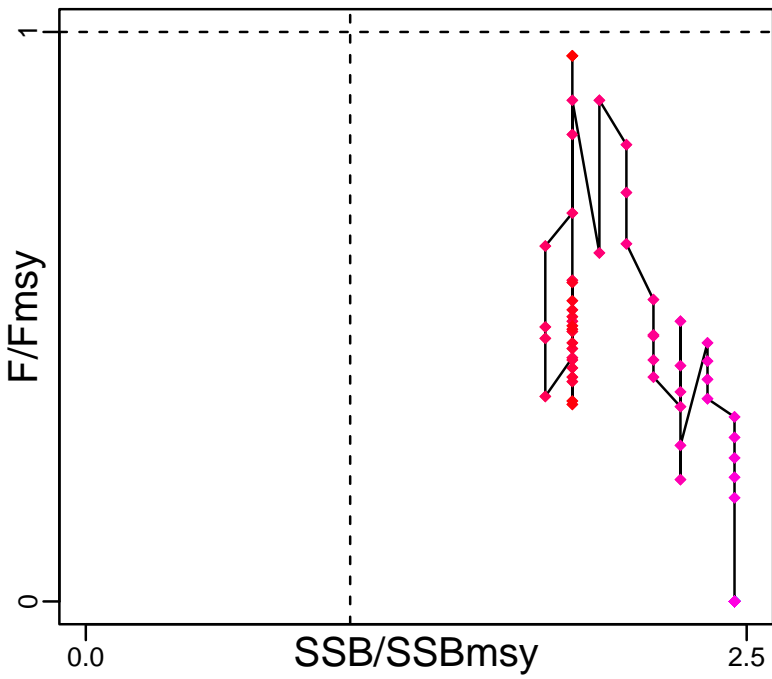
Metadata	
<b>Scientific Name</b>	Sebastes nebulosus
<b>Current Assess ID</b>	SWFSC-CHROCKNP coast-1900-2019-SISIMP2021-2
<b>Area</b>	Northern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00eggs	2019	$9.78 \times 10^9$
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2019	6
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2019	$6.11 \times 10^9$
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

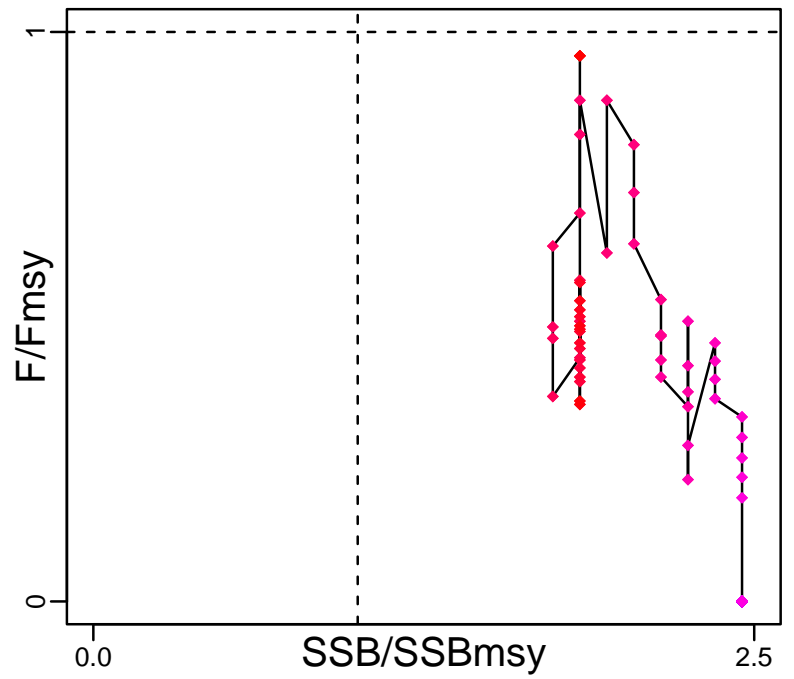
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	183	-	5+
<b>SSB</b>	SSB-E00eggs	2019	$1.7 \times 10^{10}$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	33,000	-	0
<b>F</b>	F-1/yr	2019	0.479	-	-
<b>ER</b>	ER-calc-ratio	2015	0.017	-	-
<b>TC</b>	TC-MT	2019	9		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2019	1.738		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.958		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# China rockfish Northern Pacific Coast [CHROCKNPCOAST]

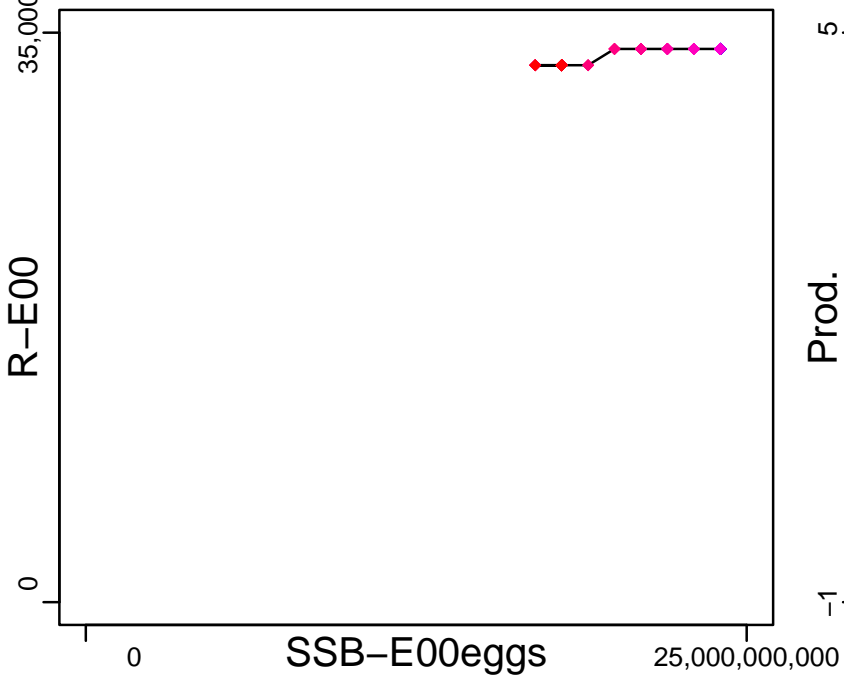
Kobe MSYpref (1900–2019–SISIMP2021–2)



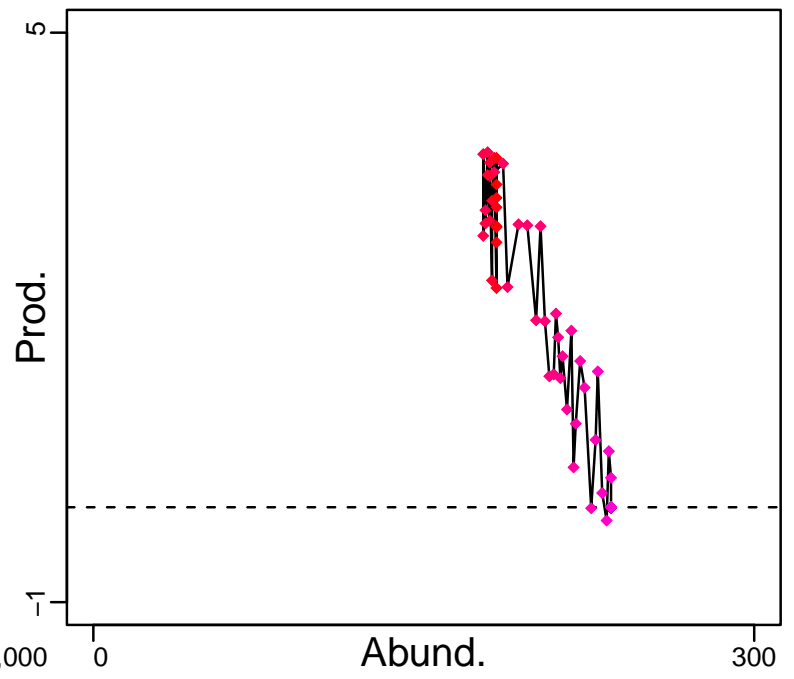
Kobe MGTpref (1900–2019–SISIMP2021–2)



Spawner Recruit (1900–2019–SISIMP2021–2)



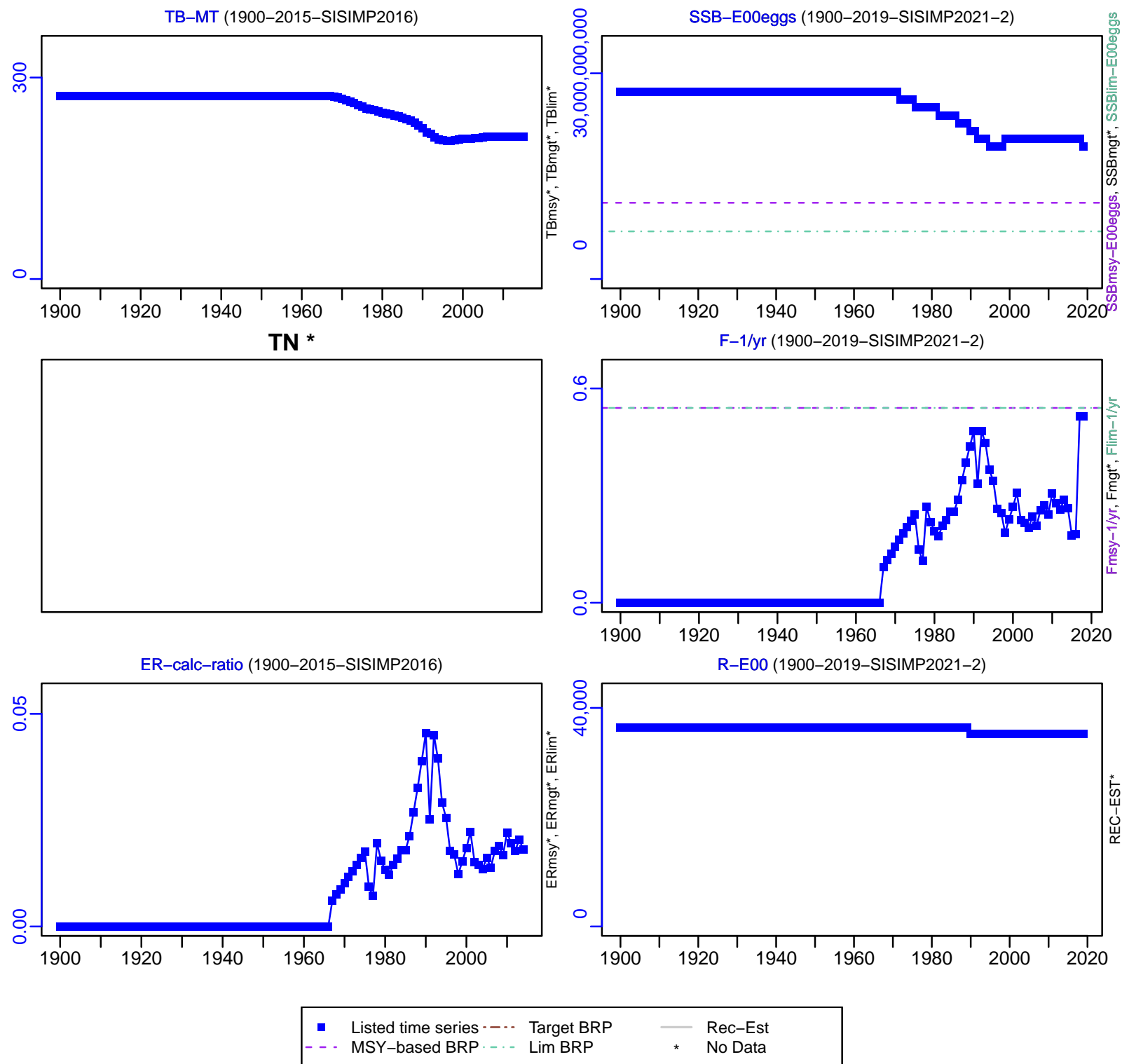
Production (1900–2015–SISIMP2016)



◆ Start Year ◆ End Year \* No Data



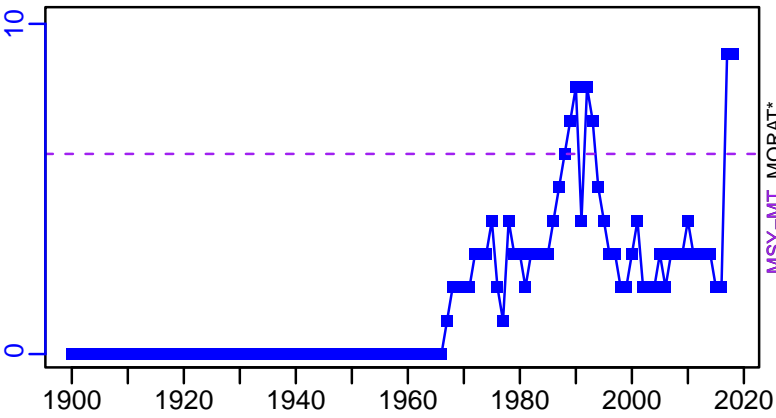
# China rockfish Northern Pacific Coast [CHROCKNPCOAST]



# China rockfish Northern Pacific Coast [CHROCKNPCOAST]

TC-MT, TL\*, RecC\* (1900-2019-SISIMP2021-2)

TAC\*, Cpair\*, Cadv\*



survB\*



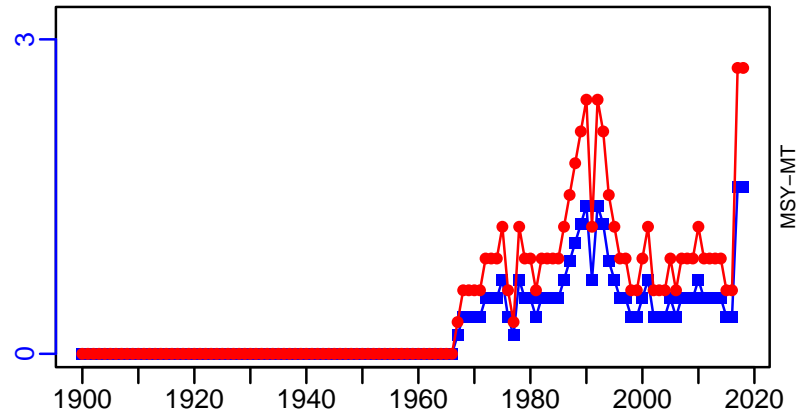
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1900-2019-SISIMP2021-2)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## China rockfish Southern Pacific Coast [CHROCKSPCOAST]

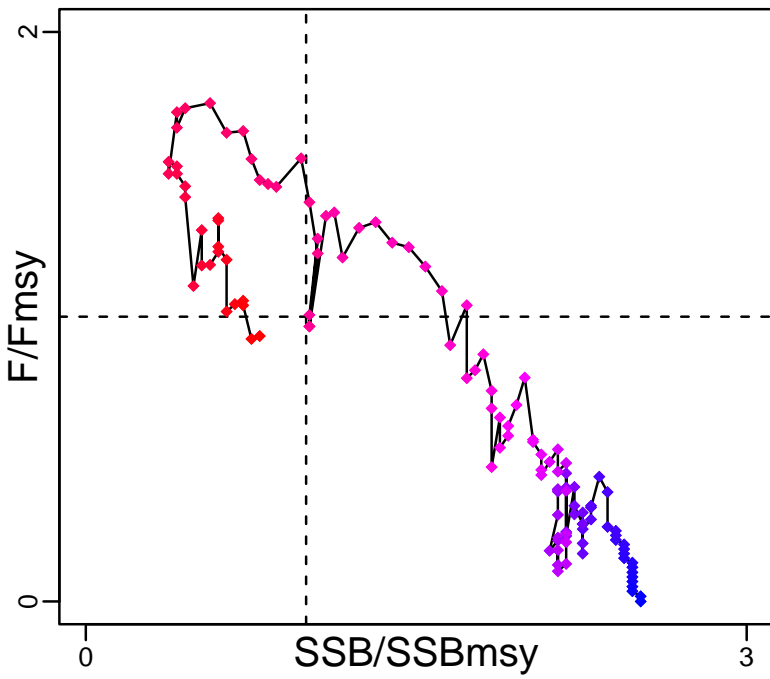
Metadata	
<b>Scientific Name</b>	Sebastes nebulosus
<b>Current Assess ID</b>	NWFSC-CHROCKSPCOAST-1900-2019-SISIMP2021-2
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00eggs	2019	$2.66 \times 10^{10}$
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2019	21
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2019	$1.66 \times 10^{10}$
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

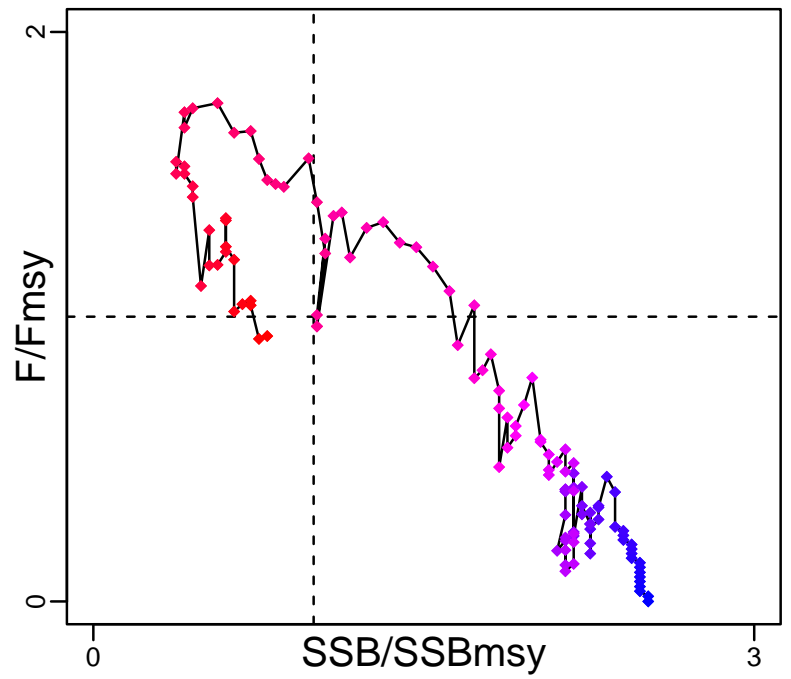
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	280	-	5+
<b>SSB</b>	SSB-E00eggs	2019	$2.1 \times 10^{10}$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	134,000	-	0
<b>F</b>	F-1/yr	2019	0.466	-	-
<b>ER</b>	ER-calc-ratio	2015	0.046	-	-
<b>TC</b>	TC-MT	2019	11		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2019	0.789		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.932		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# China rockfish Southern Pacific Coast [CHROCKSPCOAST]

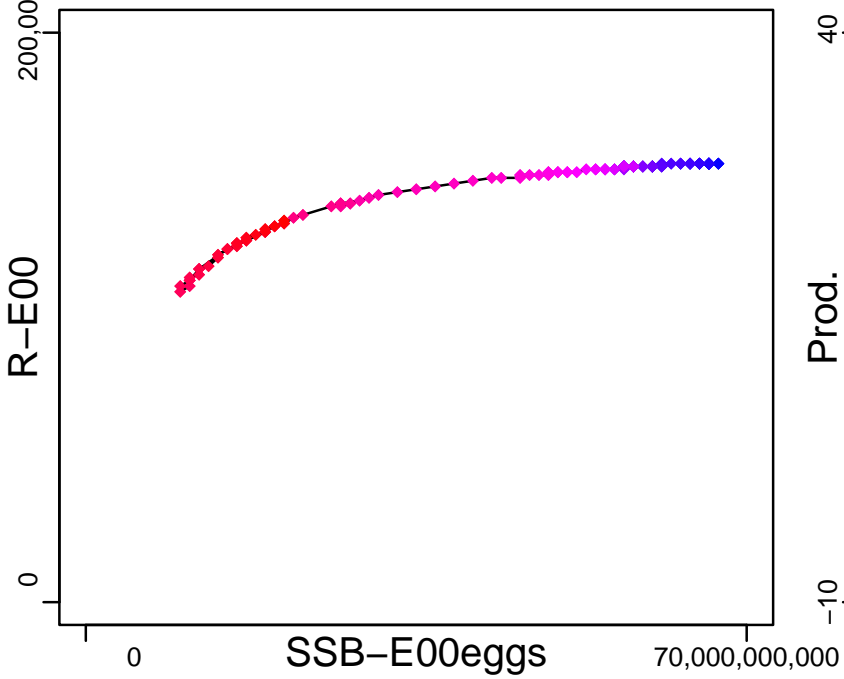
Kobe MSYpref (1900–2019–SISIMP2021–2)



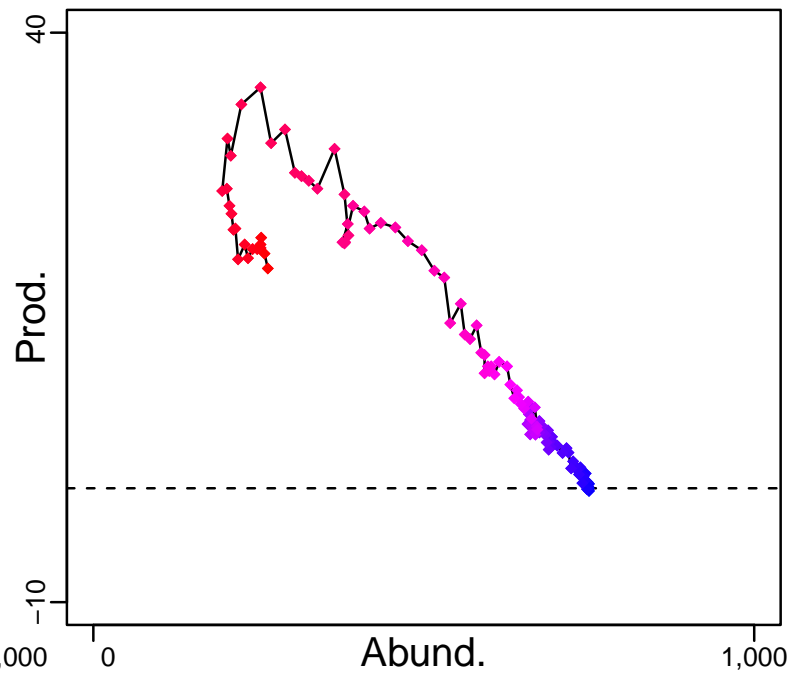
Kobe MGTpref (1900–2019–SISIMP2021–2)



Spawner Recruit (1900–2019–SISIMP2021–2)

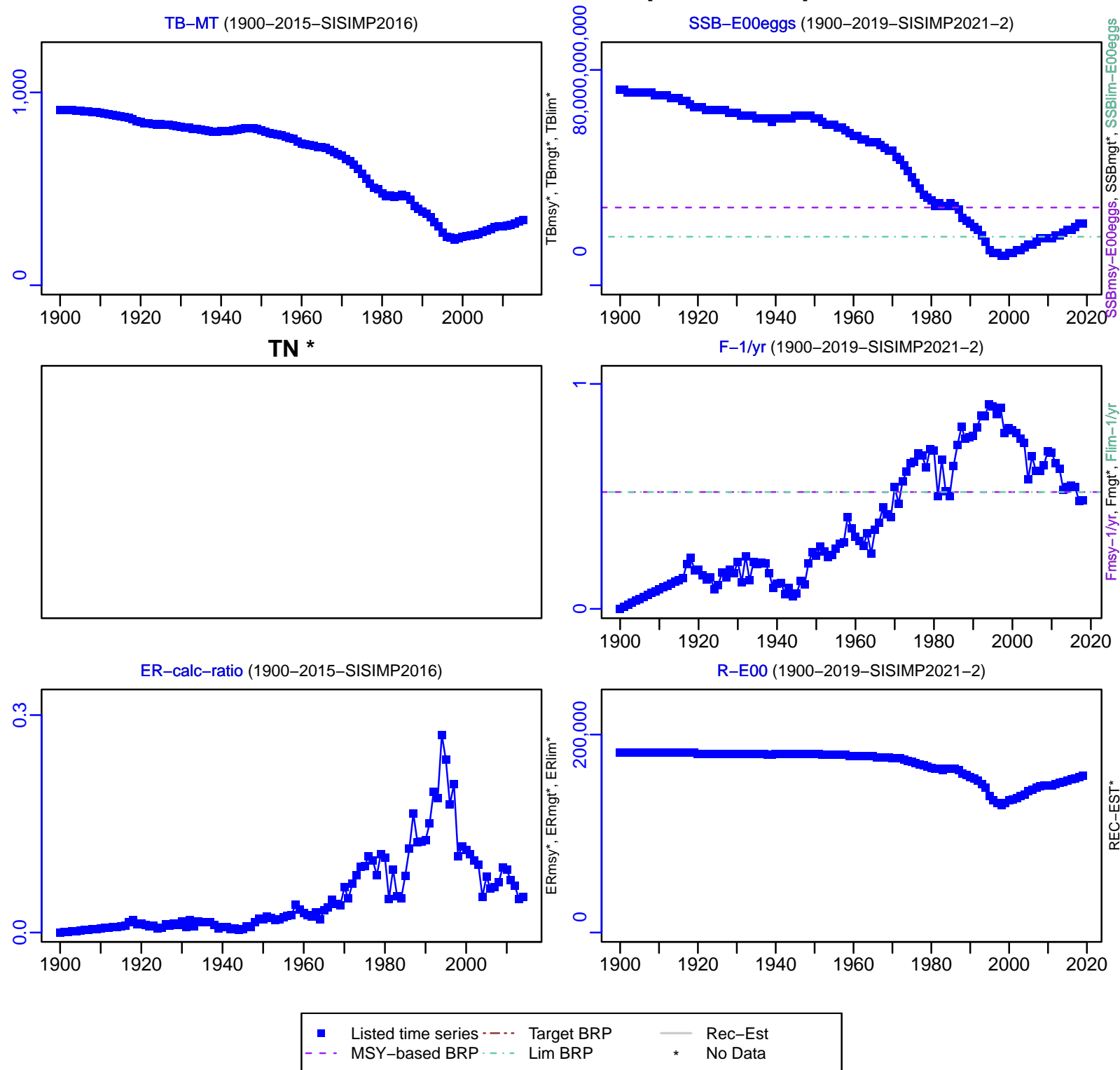


Production (1900–2015–SISIMP2016)



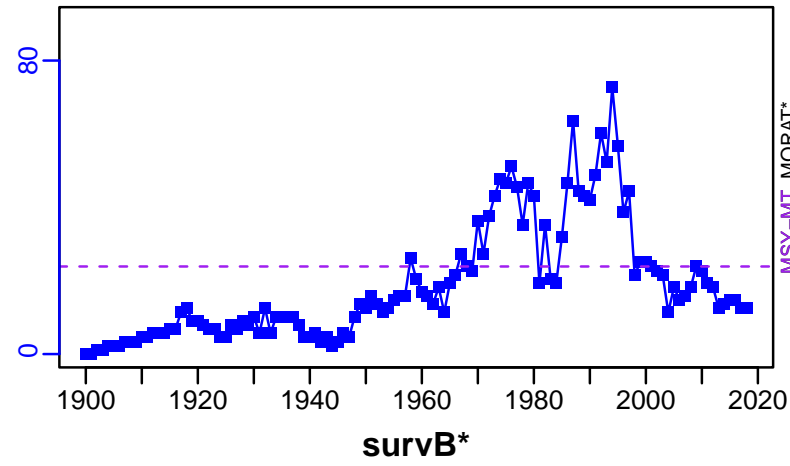
◆ Start Year ◆ End Year \* No Data

# China rockfish Southern Pacific Coast [CHROCKSPCOAST]



# China rockfish Southern Pacific Coast [CHROCKSPCOAST]

TC-MT, TL\*, RecC\* (1900-2019-SISIMP2021-2)



TAC\*, Cpair\*, Cadv\*



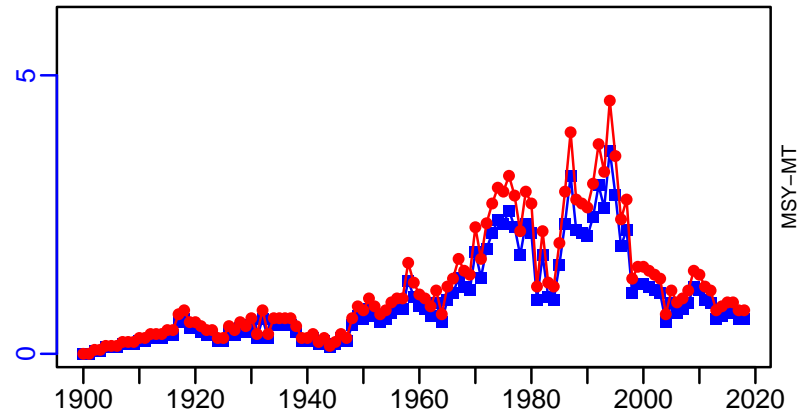
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1900-2019-SISIMP2021-2)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Cowcod Southern California [COWCODSCAL]

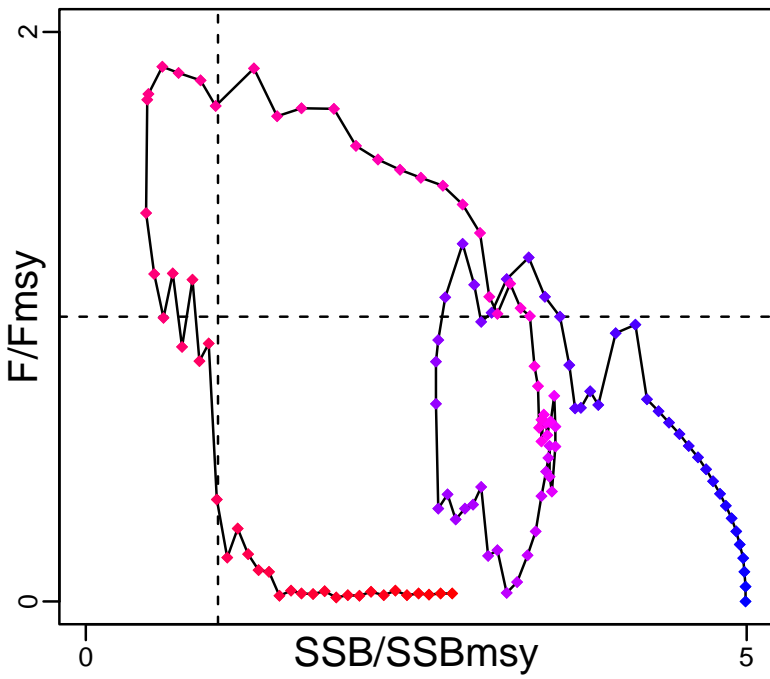
Metadata	
<b>Scientific Name</b>	Sebastes levis
<b>Current Assess ID</b>	PFMC-COWCODSCAL-1900-2019-SISIMP2021-2
<b>Area</b>	Southern California
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Pacific Fishery Management Council
<b>Asmts in RAM</b>	2015, 2019, 2012

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2015	1255
<b>SSBmsy</b>	SSBmsy-E00eggs	2019	$1.14 \times 10^{11}$
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	ERmsy-ratio	2015	0.055
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2015	620
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2015	0.05
<b>TB0</b>	TB0-MT	2015	3099
<b>SSB0</b>	SSB0-MT	2015	1549
<b>MSY</b>	MSY-MT	2019	76
<b>M</b>	M-1/yr	2015	0.06
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2019	$7.11 \times 10^{10}$
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	ERlim-ratio	2012	0.05

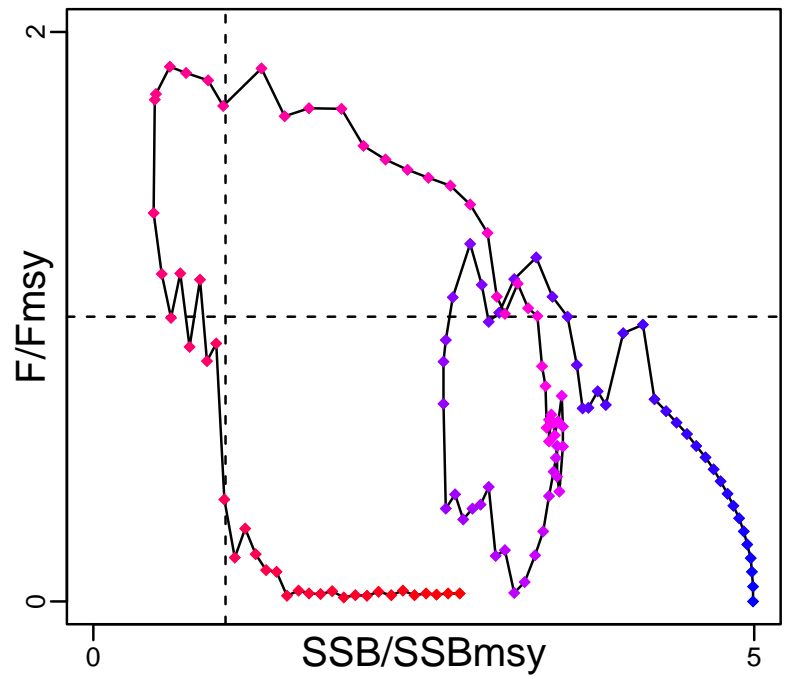
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	1120	-	11+
<b>SSB</b>	SSB-E00eggs	2019	$3.25 \times 10^{11}$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	168,000	-	0
<b>F</b>	F-1/yr	2019	0.014	-	-
<b>ER</b>	ER-ratio	2015	0.001	-	-
<b>TC</b>	TC-MT	2019	2		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2015	0.893		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2019	2.851		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.028		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2015	0.018		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2015	0.902		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Cowcod Southern California [COWCODSCAL]

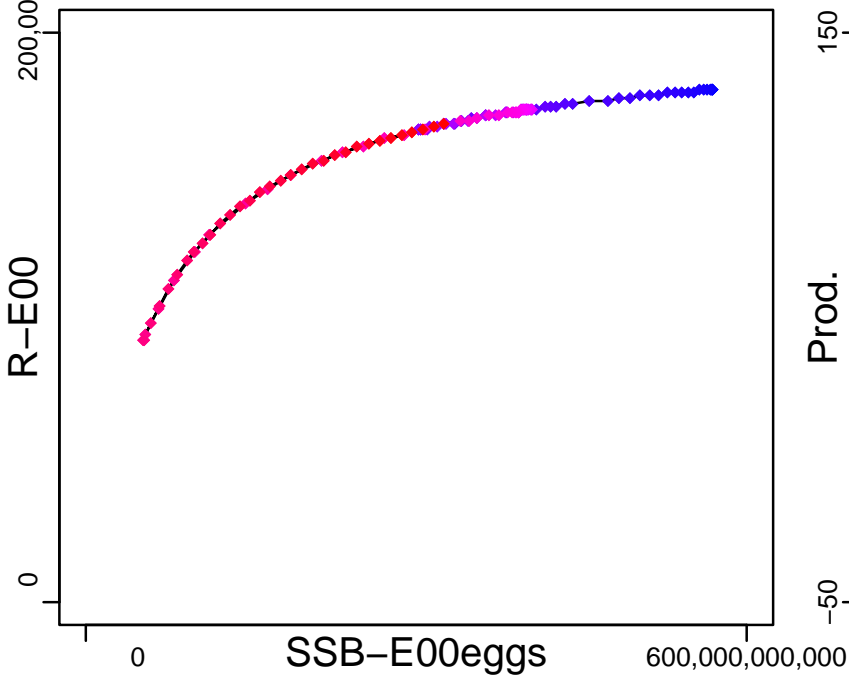
Kobe MSYpref (1900–2019–SISIMP2021–2)



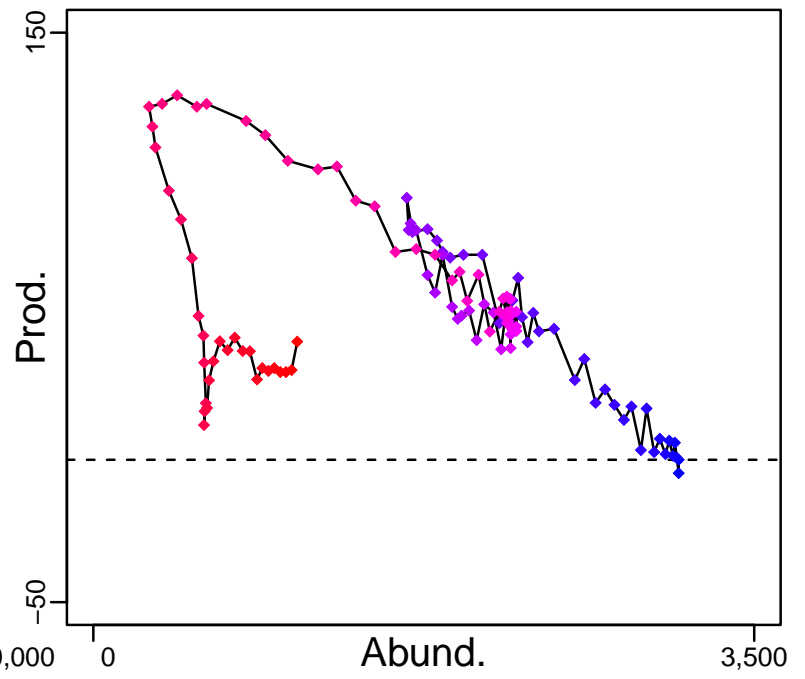
Kobe MGTpref (1900–2019–SISIMP2021–2)



Spawner Recruit (1900–2019–SISIMP2021–2)



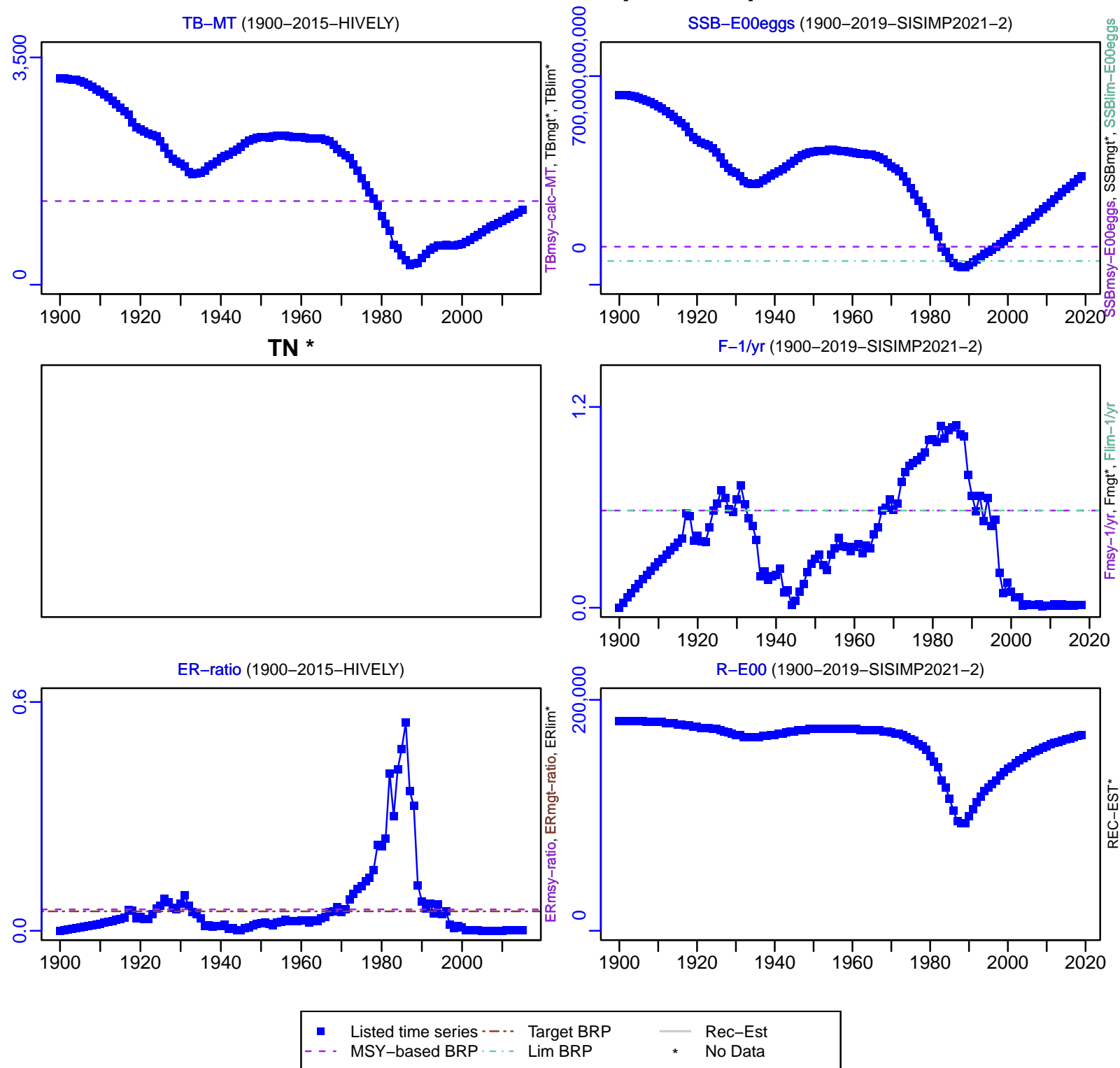
Production (1900–2015–HIVELY)



◆ Start Year ◆ End Year \* No Data

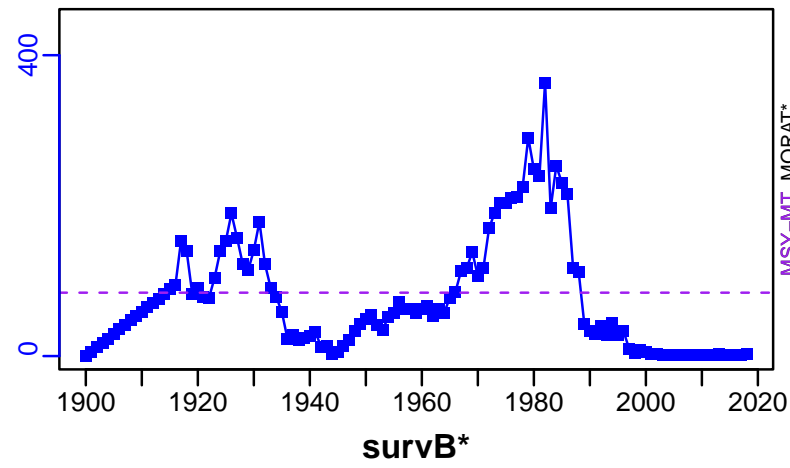


# Cowcod Southern California [COWCODSCAL]



# Cowcod Southern California [COWCODSCAL]

TC-MT, TL\*, RecC\* (1900-2019-SISIMP2021-2)



TAC\*, Cpair\*, Cadv\*



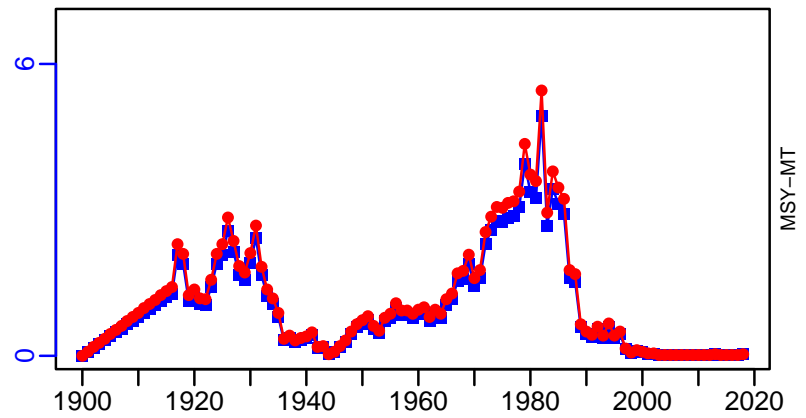
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1900-2019-SISIMP2021-2)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Copper rockfish Pacific Coast [CPRROCKPCOAST]

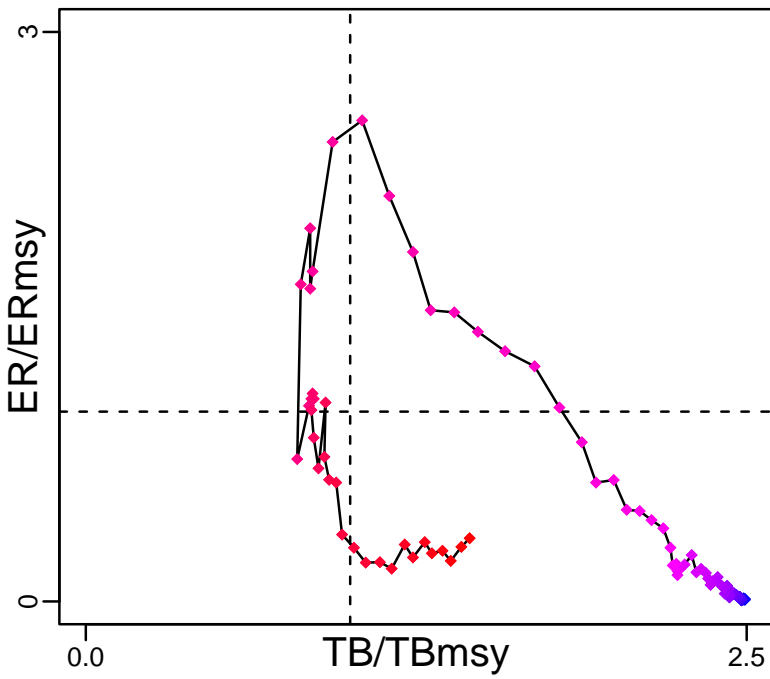
Metadata	
<b>Scientific Name</b>	Sebastes caurinus
<b>Current Assess ID</b>	SWFSC-CPRROCKPCOAST-1916-2012-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2012

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2012	2238
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2012	0.088
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	197
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	ERlim-ratio	2012	0.088

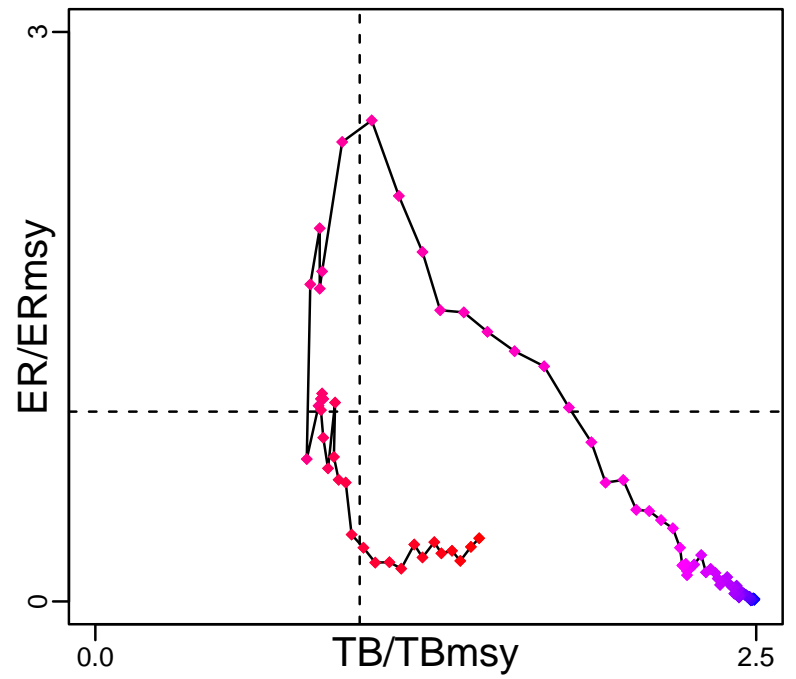
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2012	3290	-	6+
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2012	0.029	-	-
<b>TC</b>	TC-MT	2012	95		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2012	1.47		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2012	0.333		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Copper rockfish Pacific Coast [CPRROCKPCOAST]

Kobe MSY<sub>pref</sub> (1916–2012–SISIMP2016)



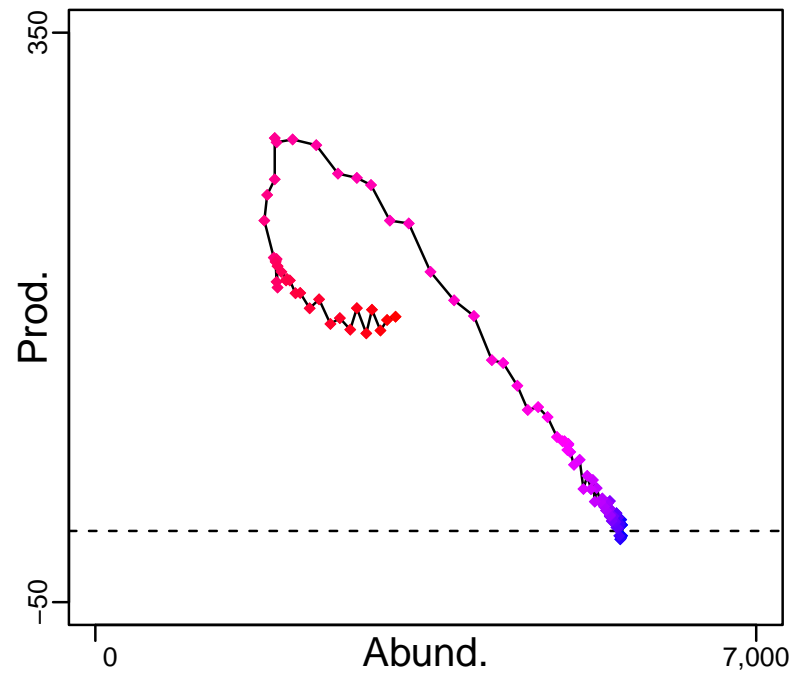
Kobe MGT<sub>pref</sub> (1916–2012–SISIMP2016)



Spawner Recruit\*



Production (1916–2012–SISIMP2016)

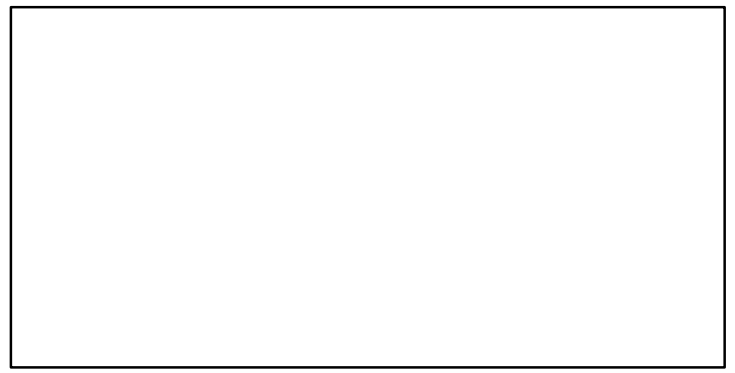
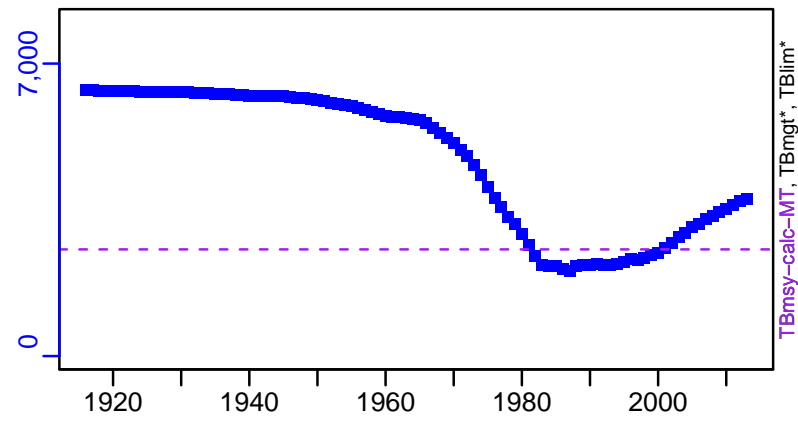


◆ Start Year ◆ End Year \* No Data

# Copper rockfish Pacific Coast [CPRROCKPCOAST]

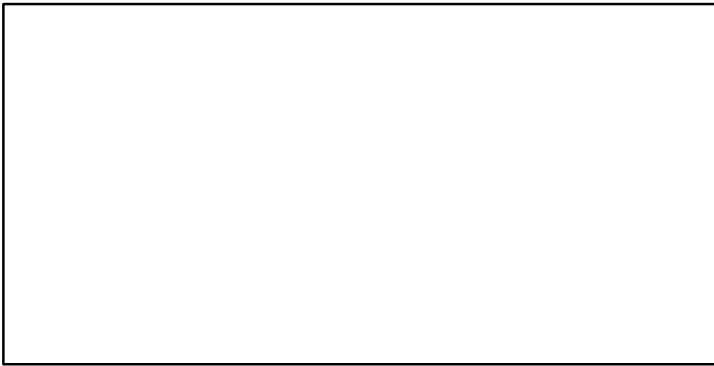
TB-MT (1916-2012-SISIMP2016)

SSB\*



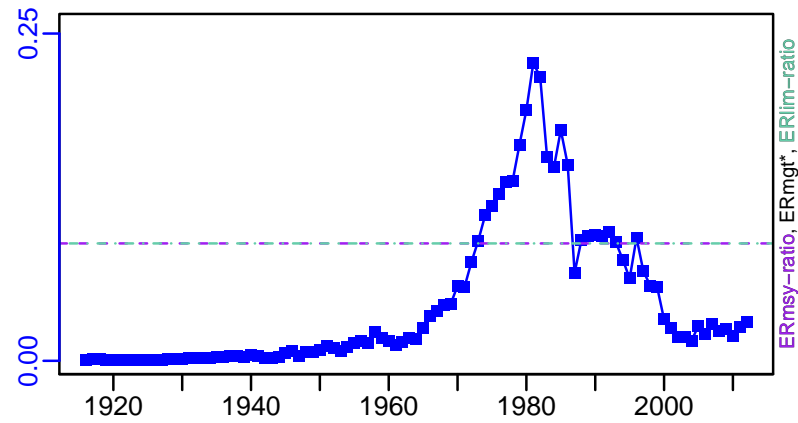
TN \*

F\*



ER-ratio (1916-2012-SISIMP2016)

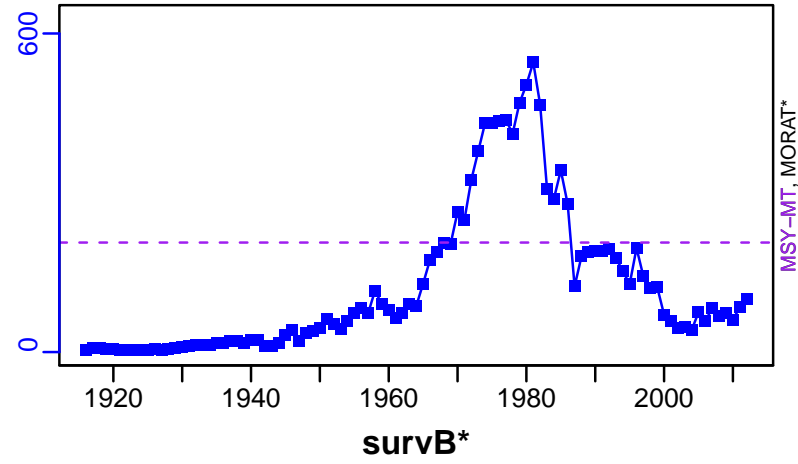
Recruits\*



# Copper rockfish Pacific Coast [CPRROCKPCOAST]

TC-MT, TL\*, RecC\* (1916-2012-SISIMP2016)

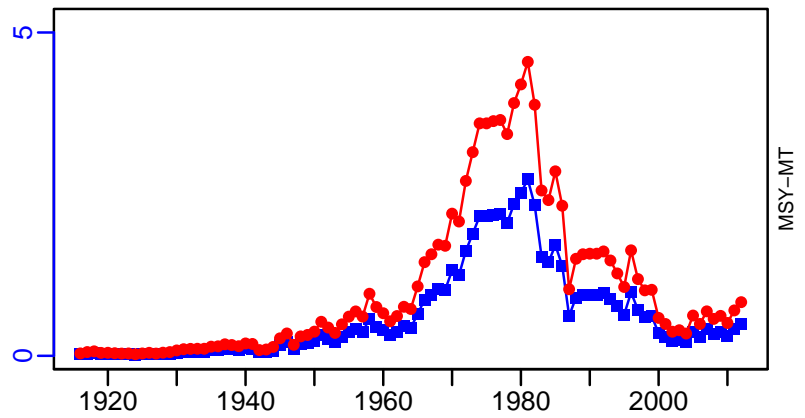
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1916-2012-SISIMP2016)



## Canary rockfish Pacific Coast [CROCKPCOAST]

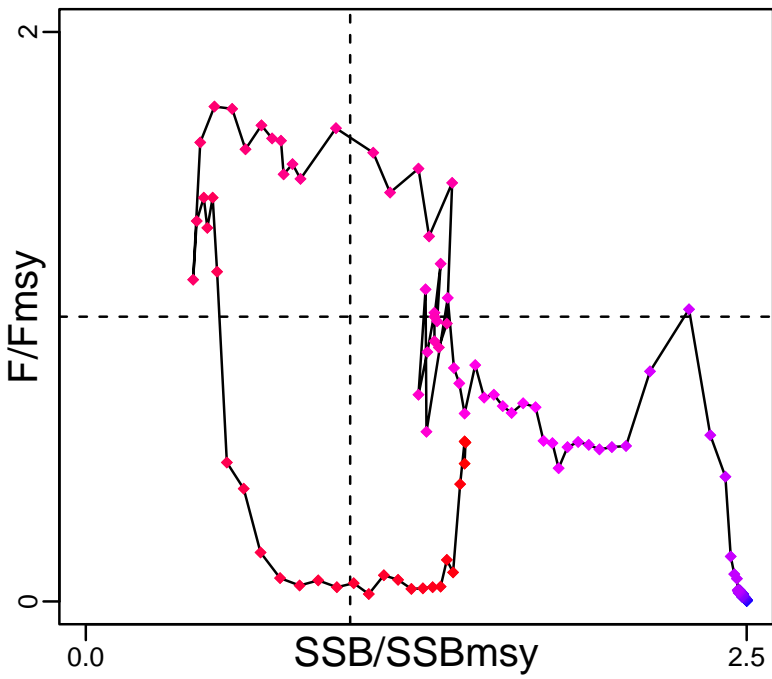
Metadata	
<b>Scientific Name</b>	Sebastes pinniger
<b>Current Assess ID</b>	NWFSC-CROCKPCOAST-1892-2021-SISIMP2021-2
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2017, 2019, 2021, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2011	26,414
<b>SSBmsy</b>	SSBmsy-E00eggs	2021	$2.98 \times 10^9$
<b>Fmsy</b>	Fmsy-1/yr	2021	0.5
<b>ERmsy</b>	ERmsy-ratio	2011	0.03
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2011	70,664
<b>SSB0</b>	SSB0-MT	2011	27,846
<b>MSY</b>	MSY-MT	2021	1280
<b>M</b>	M-1/yr	2011	0.06
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2021	$1.86 \times 10^9$
<b>Flim</b>	Flim-1/yr	2021	0.5
<b>ERlim</b>	-	-	-

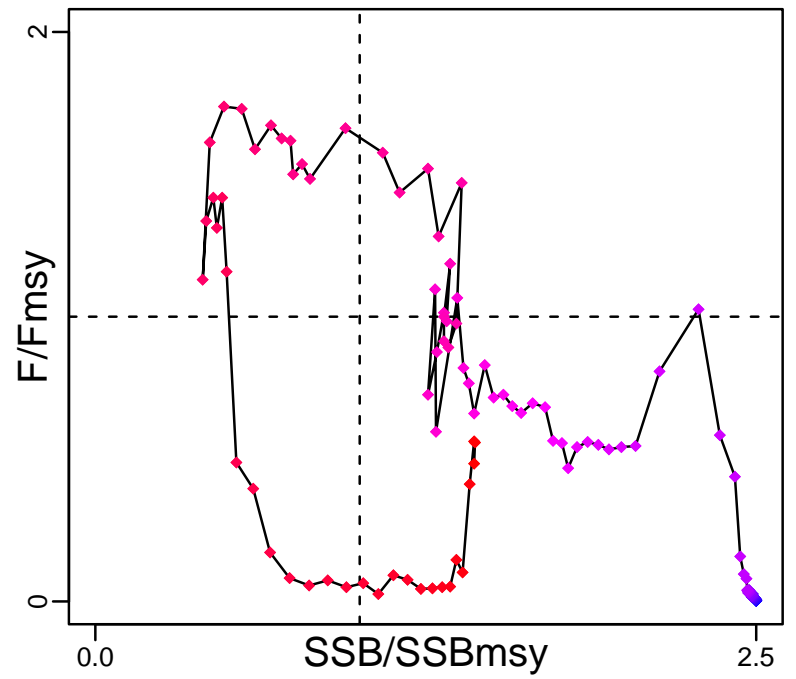
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	36,349	-	-
<b>SSB</b>	SSB-E00eggs	2021	$4.26 \times 10^9$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2021	2,660,000	-	0
<b>F</b>	F-1/yr	2021	0.242	-	-
<b>ER</b>	ER-calc-ratio	2017	0.003	-	-
<b>TC</b>	TC-MT	2021	867		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	0.61		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2021	1.43		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2021	0.484		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2011	0.171		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Canary rockfish Pacific Coast [CROCKPCOAST]

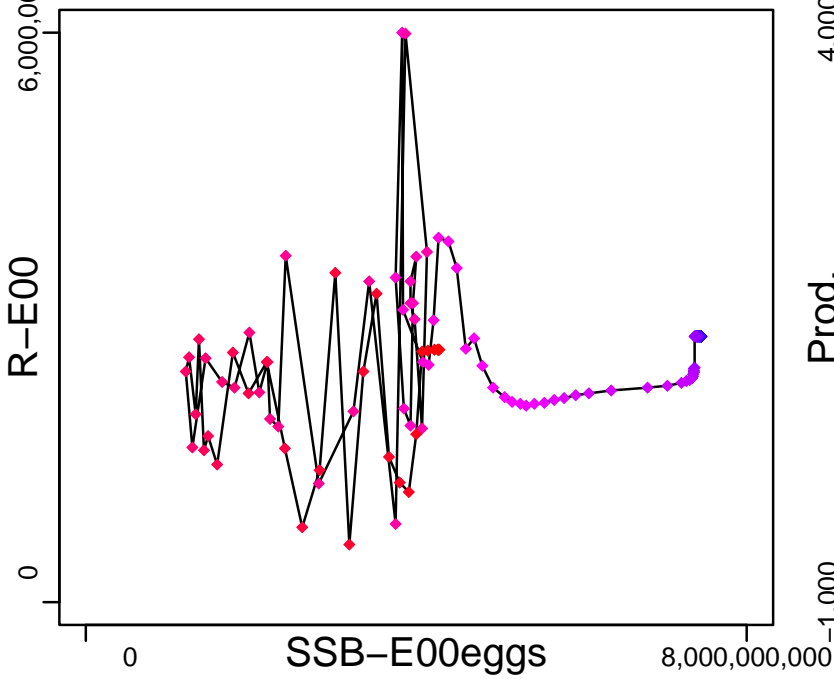
Kobe MSYpref (1892–2021–SISIMP2021–2)



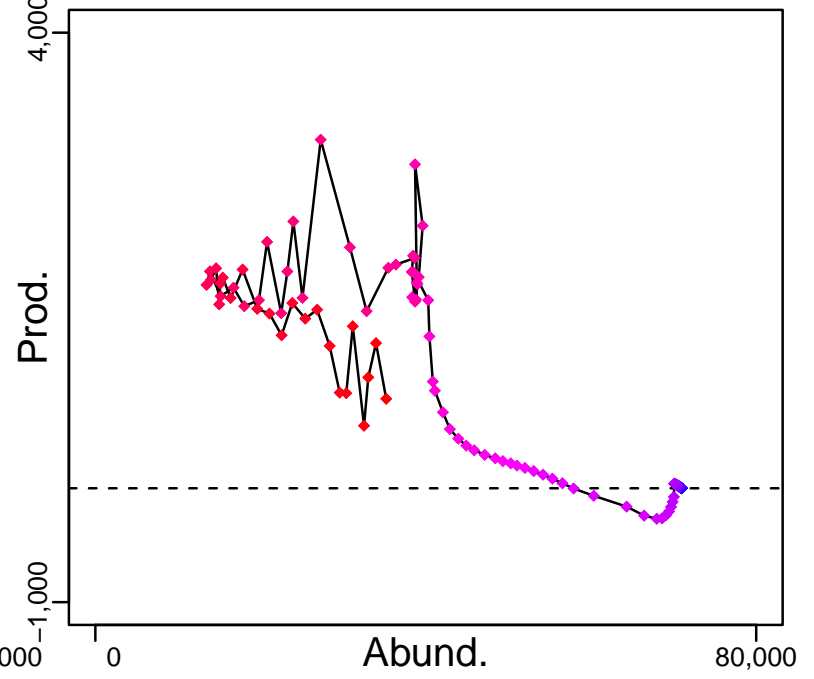
Kobe MGTpref (1892–2021–SISIMP2021–2)



Spawner Recruit (1892–2021–SISIMP2021–2)



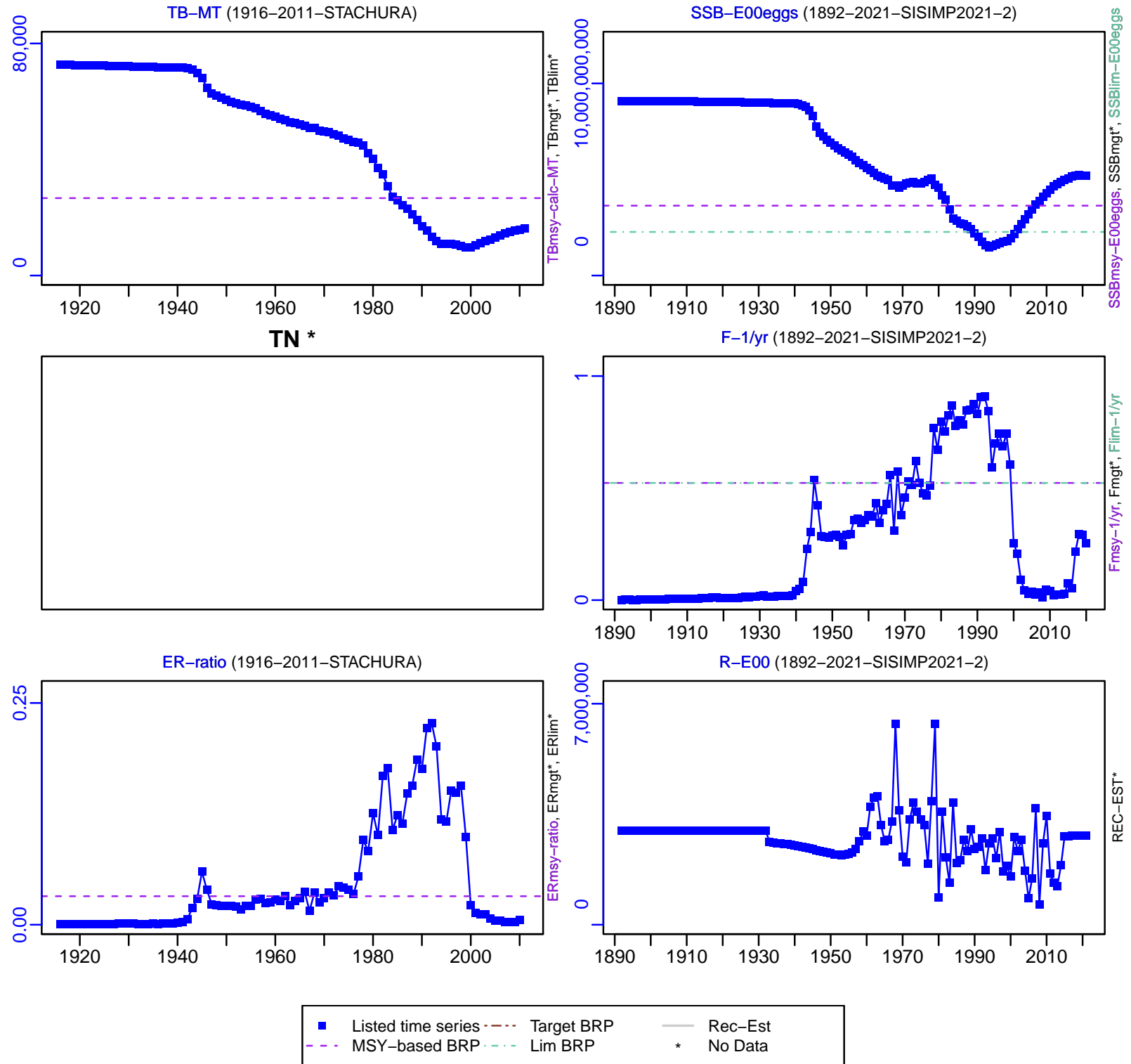
Production (1892–2017–SISIMP2021)



◆ Start Year ◆ End Year \* No Data

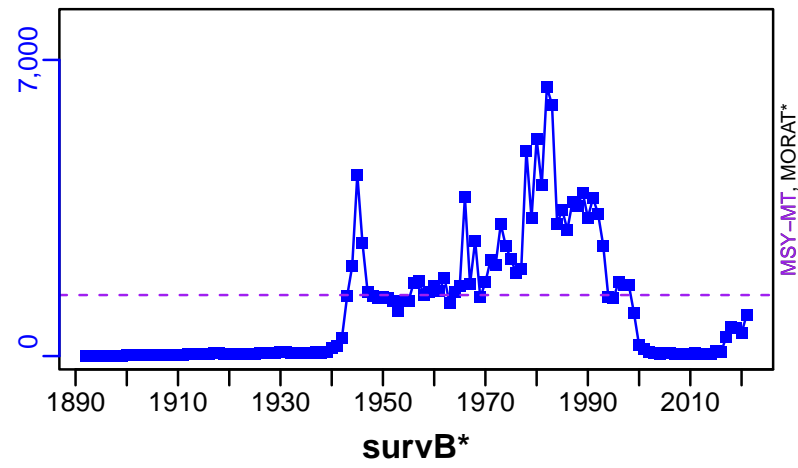


# Canary rockfish Pacific Coast [CROCKPCOAST]



# Canary rockfish Pacific Coast [CROCKPCOAST]

TC-MT, TL\*, RecC\* (1892-2021-SISIMP2021-2)



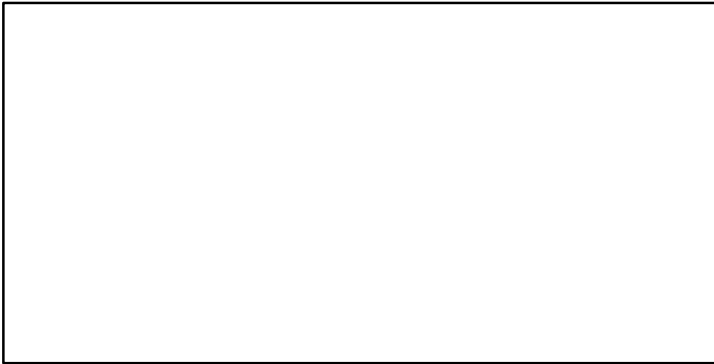
TAC\*, Cpair\*, Cadv\*



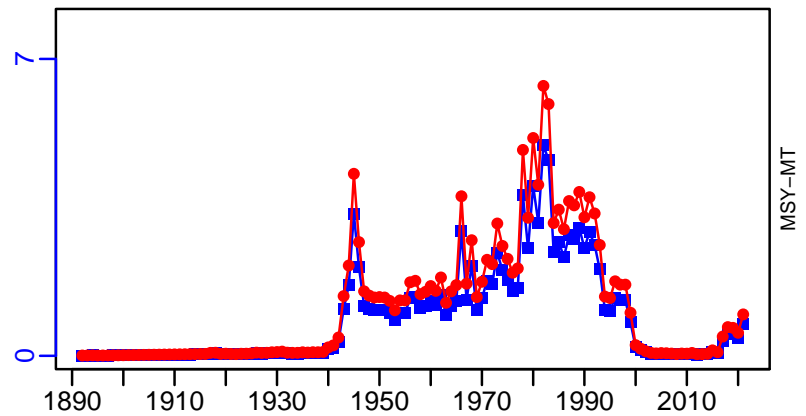
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1892-2021-SISIMP2021-2)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands [CROCKWCVANISOGQCI]

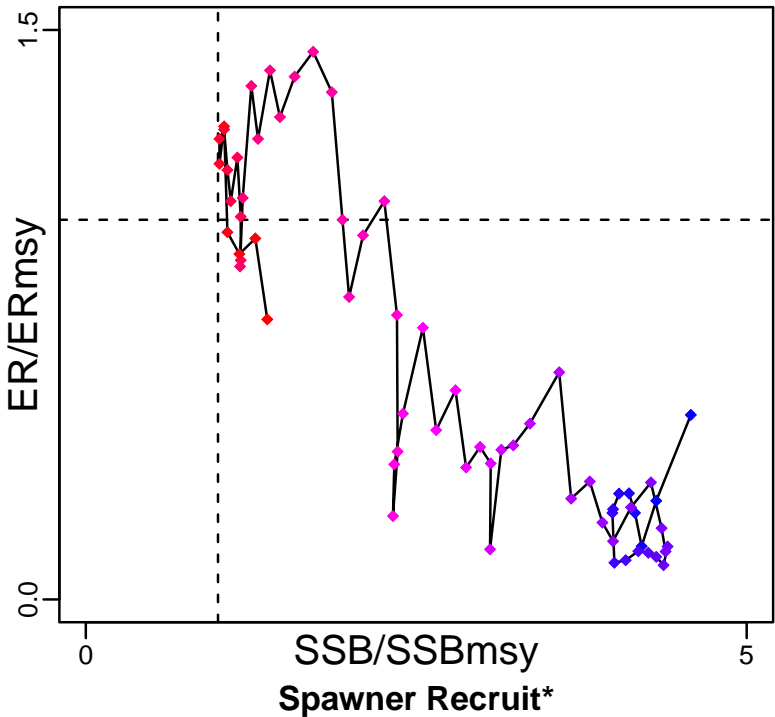
Metadata	
<b>Scientific Name</b>	Sebastes pinniger
<b>Current Assess ID</b>	DFO-CROCKWCVANISOGQCI-1945-2009-STANTON
<b>Area</b>	West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans
<b>Asmts in RAM</b>	2009

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2009	5851
<b>SSBmsy</b>	SSBmsy-MT	2009	1988
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2009	0.122
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2009	714
<b>M</b>	M-1/yr	2009	0.06
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

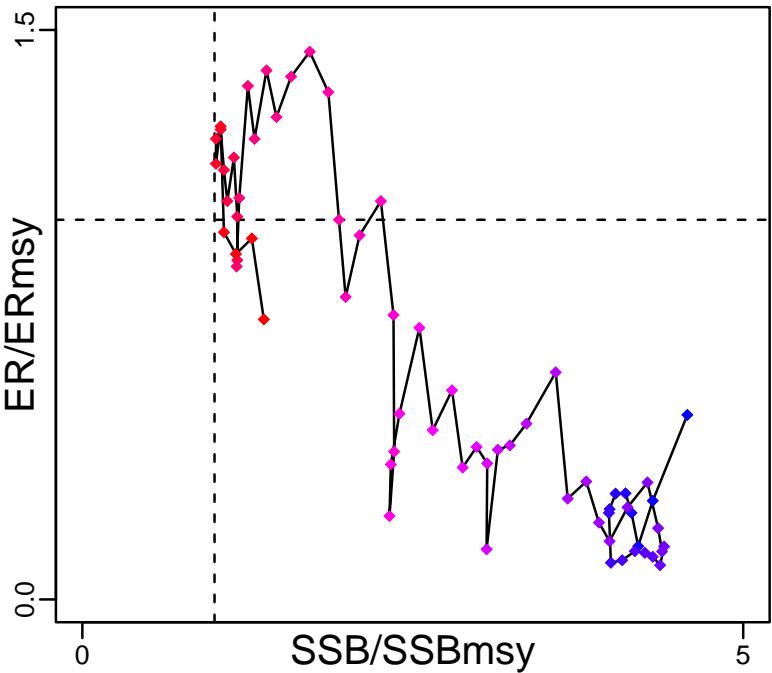
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2009	8890	-	14
<b>SSB</b>	SSB-MT	2009	2730	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2009	0.09	-	-
<b>TC</b>	TC-MT	2009	800		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2009	1.519		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2009	1.373		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2009	0.738		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands [CROCKWCVANISOGQCI]

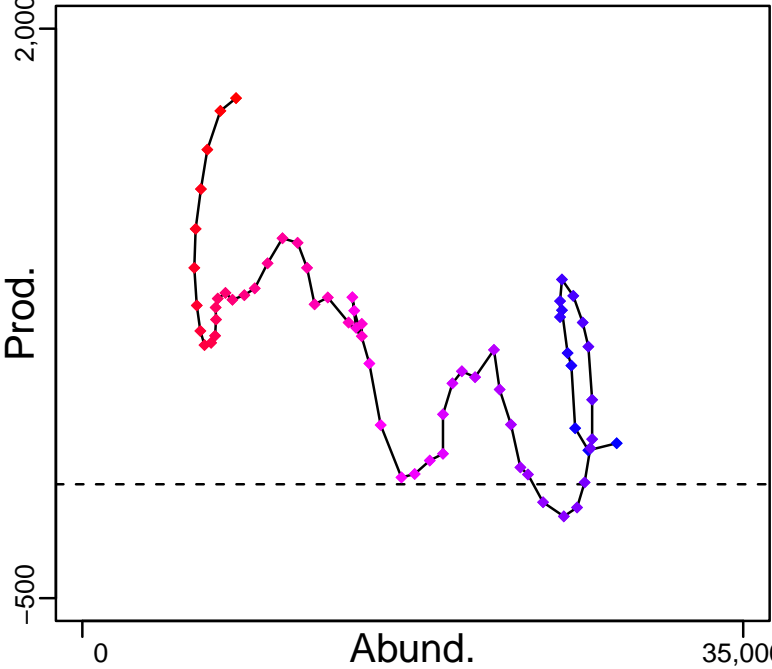
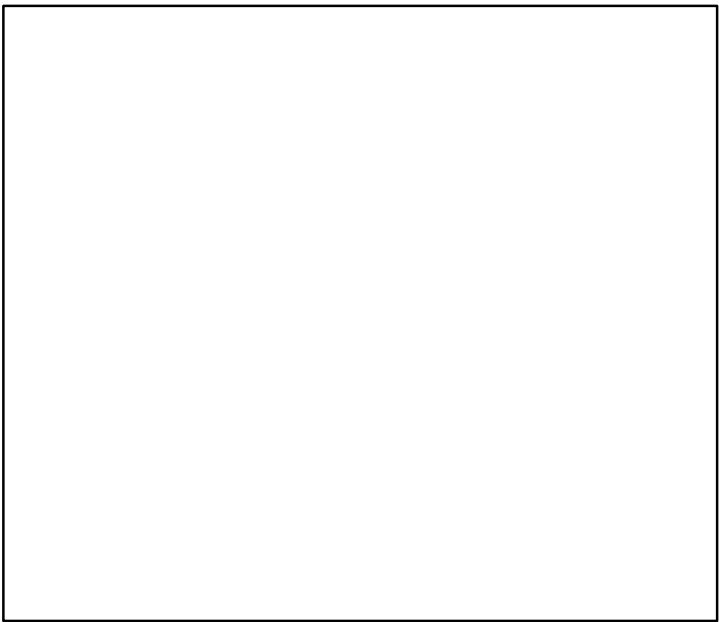
Kobe MSYpref (1945–2009–STANTON)



Kobe MGTpref (1945–2009–STANTON)



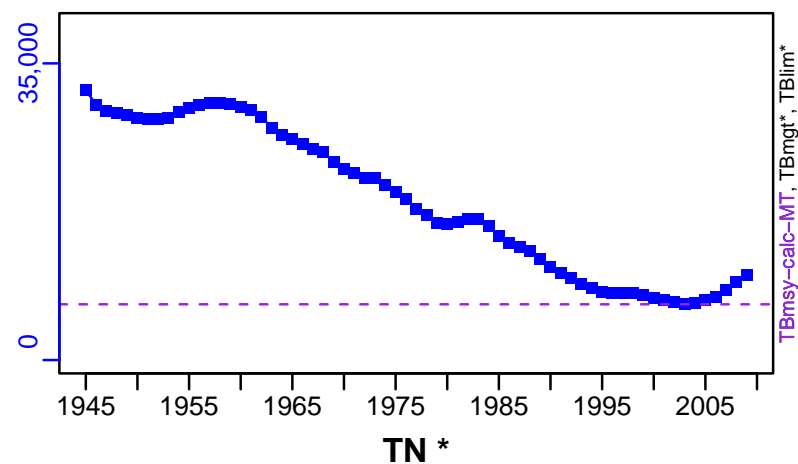
Production (1945–2009–STANTON)



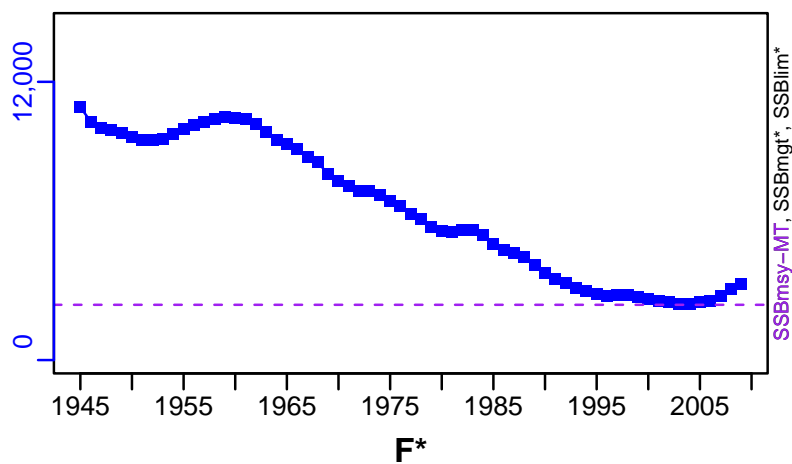
◆ Start Year ◆ End Year \* No Data

# Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands [CROCKWCVANISOGQCI]

TB-MT (1945-2009-STANTON)



SSB-MT (1945-2009-STANTON)



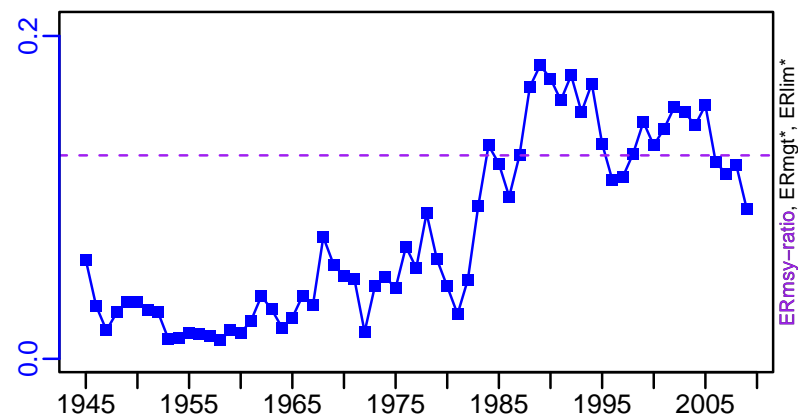
TN \*



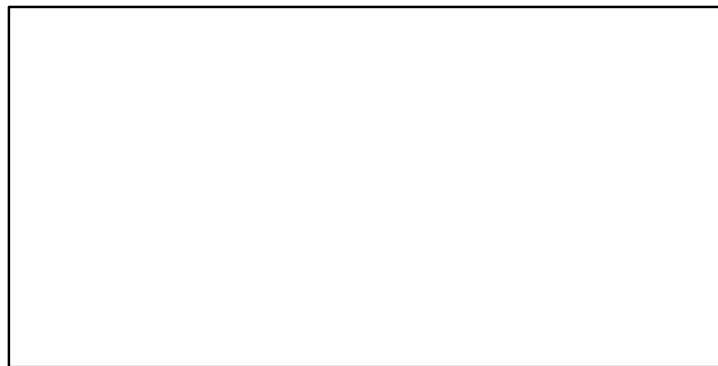
F\*



ER-ratio (1945-2009-STANTON)

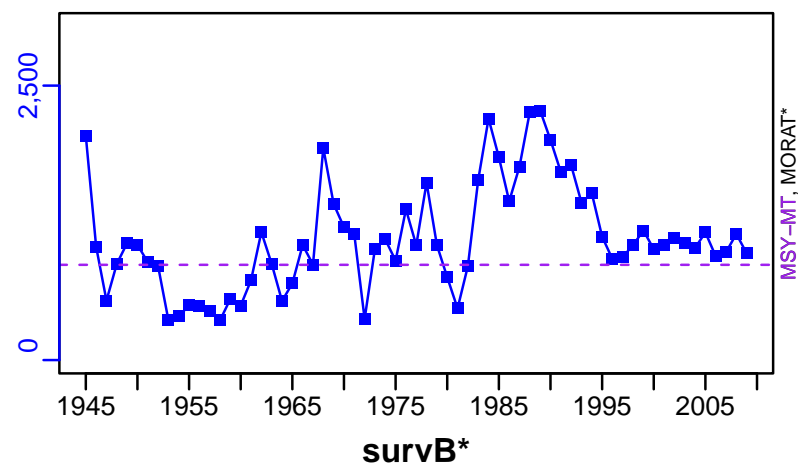


Recruits\*



# Canary rockfish West Coast of Vancouver Island and Strait of Georgia and Queen Charlotte Islands [CROCKWCVANISOGQCI]

TC-MT, TL\*, RecC\* (1945–2009–STANTON)



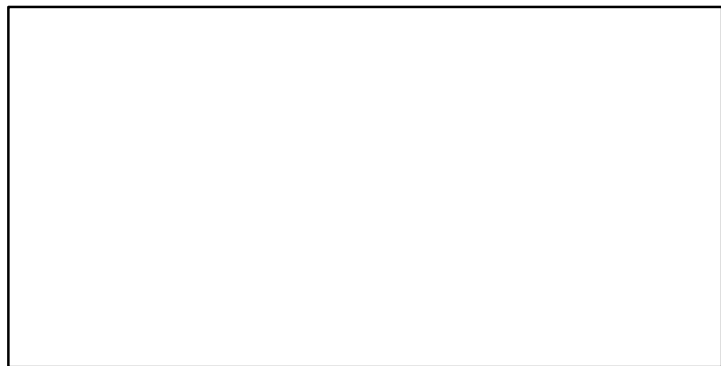
TAC\*, Cpair\*, Cadv\*



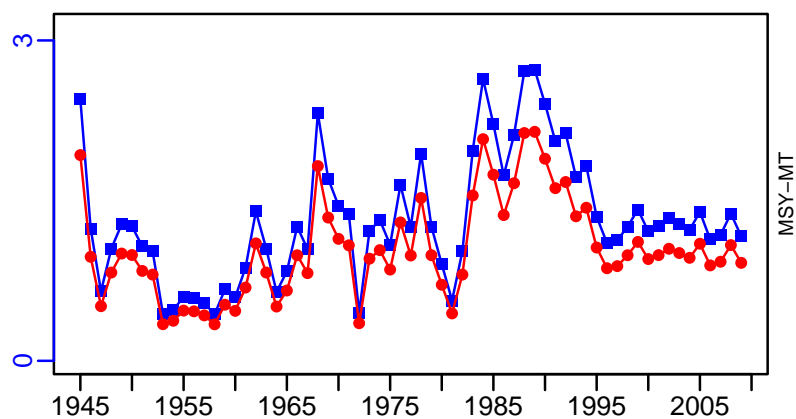
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1945–2009–STANTON)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Darkblotched rockfish Pacific Coast [DKROCKPCOAST]

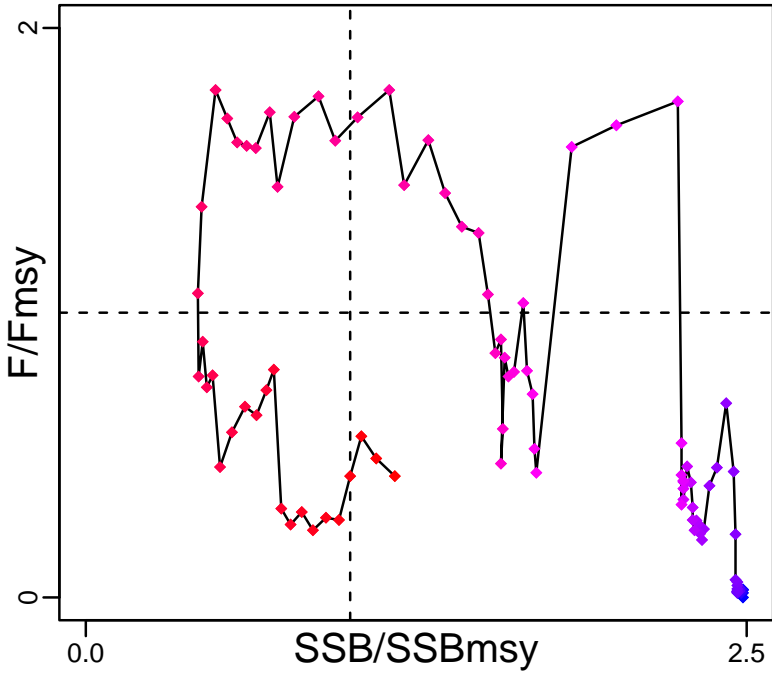
Metadata	
<b>Scientific Name</b>	Sebastes crameri
<b>Current Assess ID</b>	NWFSC-DKROCKPCOAST-1915-2021-SISIMP2021-2
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2017, 2019, 2021, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2011	11,382
<b>SSBmsy</b>	SSBmsy-E00eggs	2021	$1.42 \times 10^9$
<b>Fmsy</b>	Fmsy-1/yr	2021	0.5
<b>ERmsy</b>	ERmsy-ratio	2011	0.068
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2011	32,710
<b>SSB0</b>	SSB0-E00eggs	2011	$2.92 \times 10^{12}$
<b>MSY</b>	MSY-MT	2021	639
<b>M</b>	M-1/yr	2011	0.07
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2021	$8.86 \times 10^8$
<b>Flim</b>	Flim-1/yr	2021	0.5
<b>ERlim</b>	-	-	-

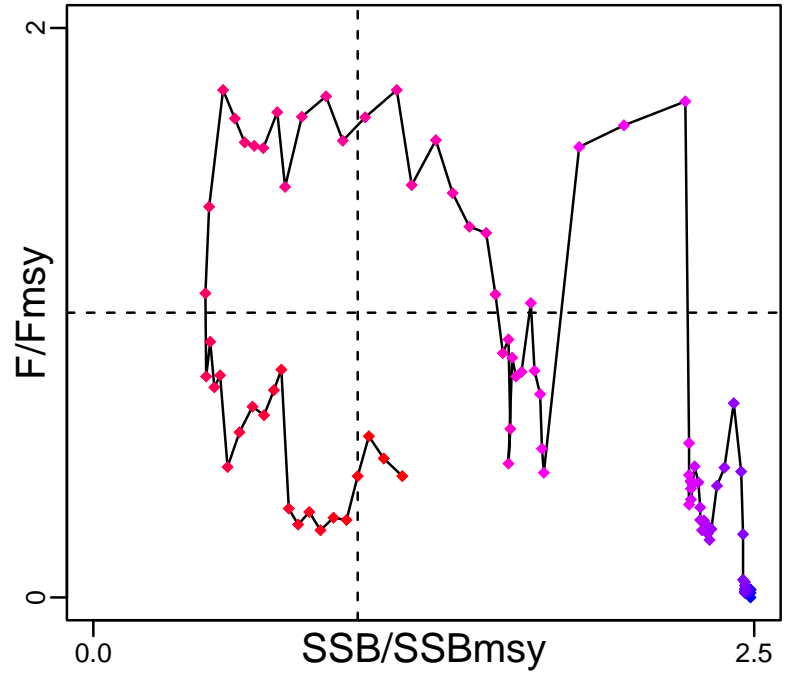
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	20,713	-	-
<b>SSB</b>	SSB-E00eggs	2021	$1.76 \times 10^9$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2021	2,740,000	-	0
<b>F</b>	F-1/yr	2021	0.213	-	-
<b>ER</b>	ER-calc-ratio	2017	0.007	-	-
<b>TC</b>	TC-MT	2021	479		
<b>TL</b>	TL-MT	2011	183		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	1.221		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2021	1.239		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2021	0.426		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2011	0.201		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Darkblotched rockfish Pacific Coast [DKROCKPCOAST]

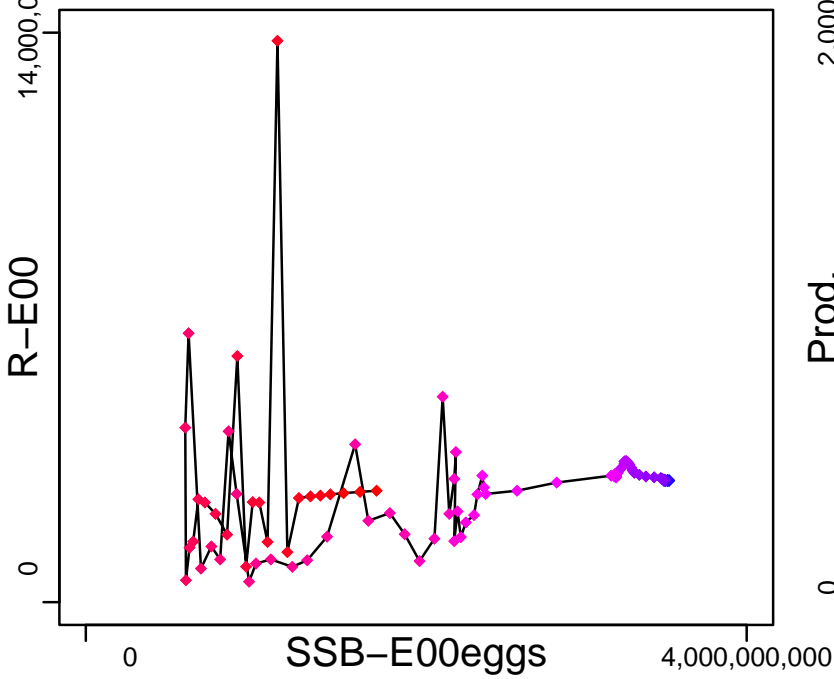
Kobe MSYpref (1915–2021–SISIMP2021–2)



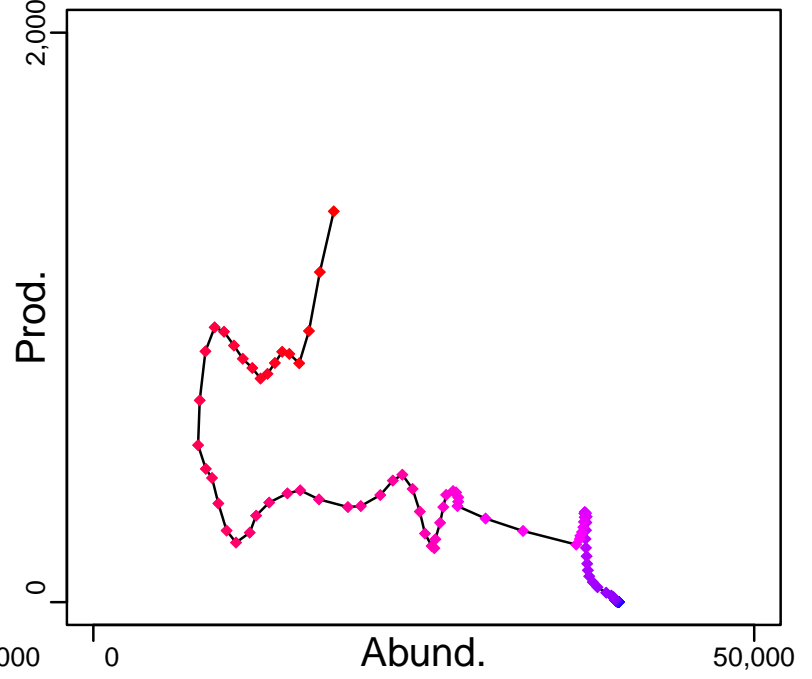
Kobe MGTpref (1915–2021–SISIMP2021–2)



Spawner Recruit (1915–2021–SISIMP2021–2)



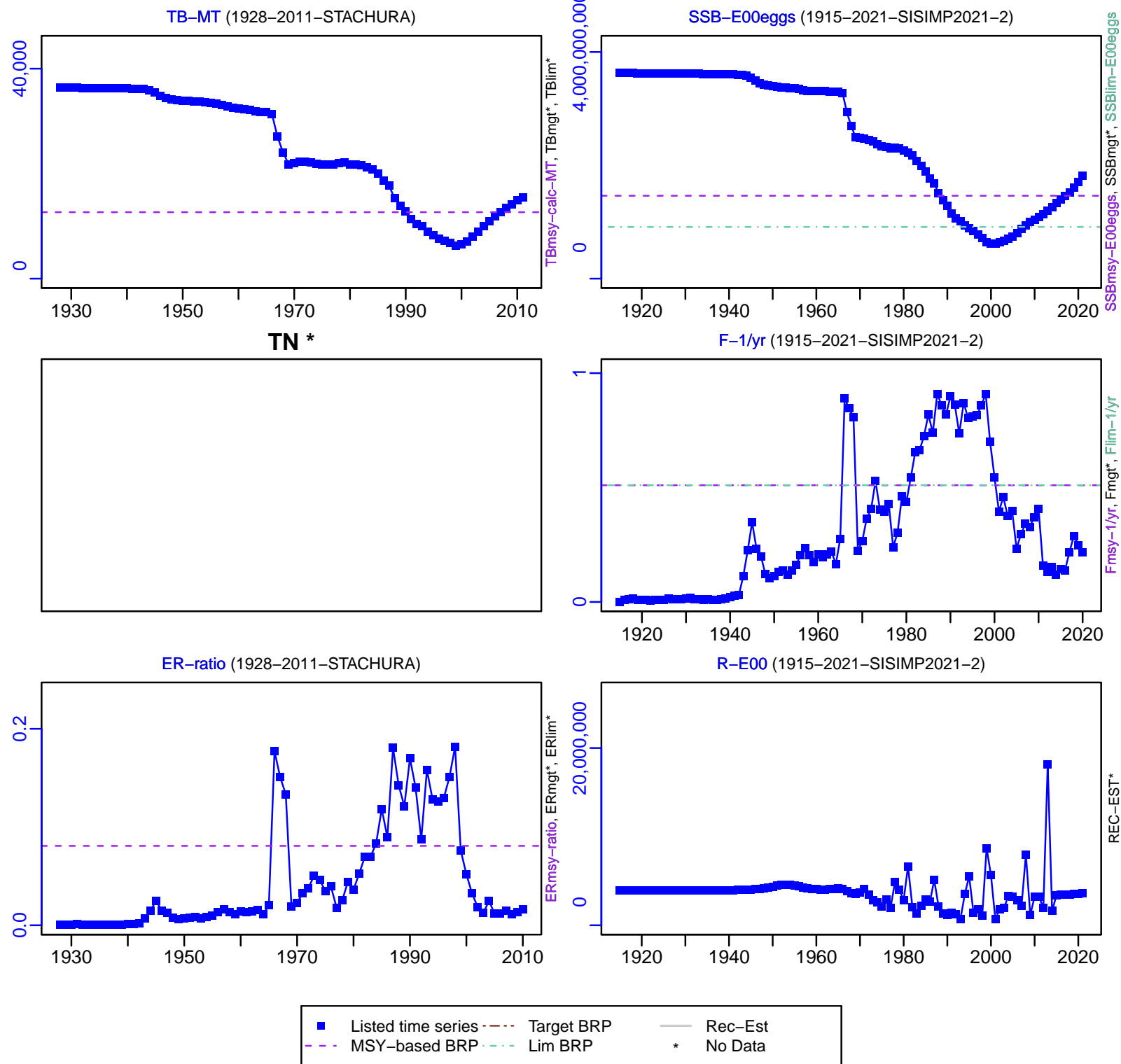
Production (1915–2017–SISIMP2021)



◆ Start Year ◆ End Year \* No Data



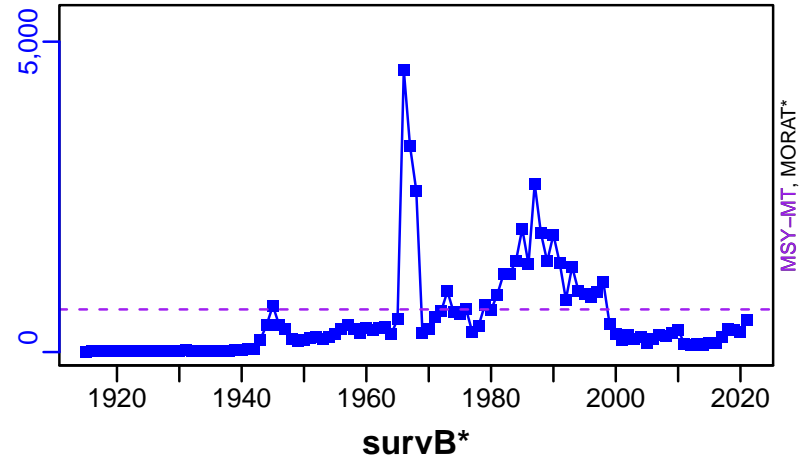
# Darkblotched rockfish Pacific Coast [DKROCKPCOAST]



# Darkblotched rockfish Pacific Coast [DKROCKPCOAST]

TC-MT, TL\*, RecC\* (1915-2021-SISIMP2021-2)

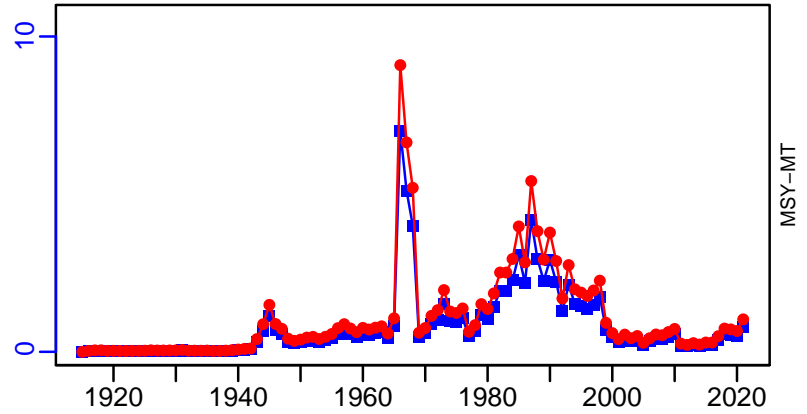
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1915-2021-SISIMP2021-2)



## Dusky rockfish Gulf of Alaska [DUSROCKGA]

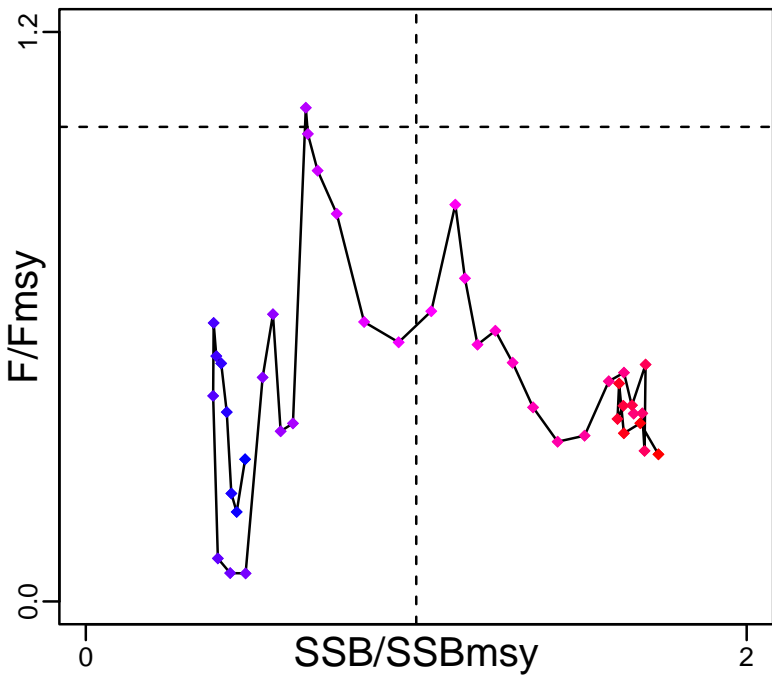
Metadata	
<b>Scientific Name</b>	Sebastes variabilis
<b>Current Assess ID</b>	AFSC-DUSROCKGA-1973-2020-SISIMP2022
<b>Area</b>	Gulf of Alaska
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2010, 2016, 2018, 2020, 2015, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2020	21,299
<b>Fmsy</b>	Fmsy-1/yr	2020	0.114
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2010	0.07
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-1/yr	2020	0.06
<b>ERlim</b>	-	-	-

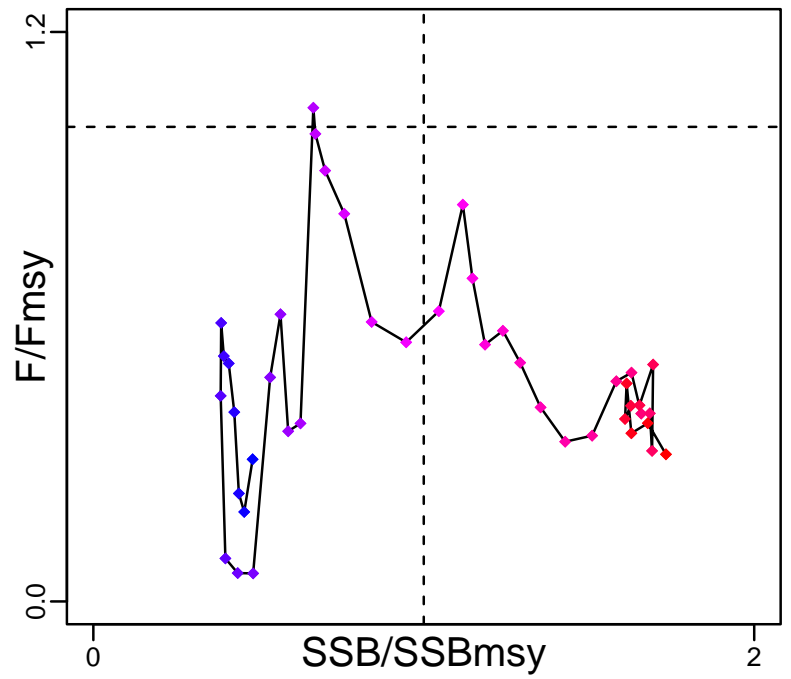
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	63,100	-	4+
<b>SSB</b>	SSB-MT	2020	38,202	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	2,220,000	-	4
<b>F</b>	F-1/yr	2020	0.035	-	-
<b>ER</b>	ER-calc-ratio	2015	0.045	-	-
<b>TC</b>	TC-MT	2020	2198		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2020	1.794		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2020	0.31		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Dusky rockfish Gulf of Alaska [DUSROCKGA]

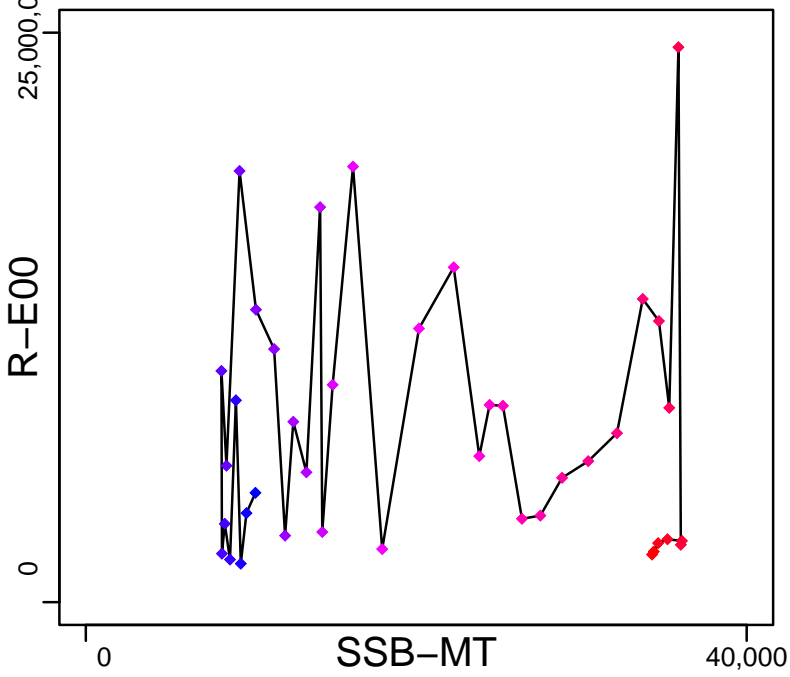
Kobe MSYpref (1973–2020–SISIMP2022)



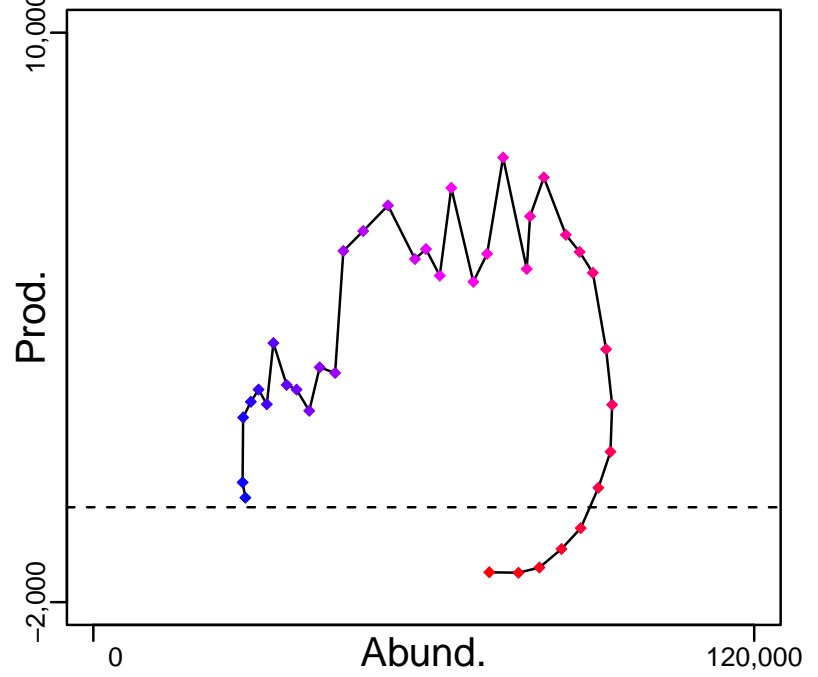
Kobe MGTpref (1973–2020–SISIMP2022)



Spawner Recruit (1973–2020–SISIMP2022)



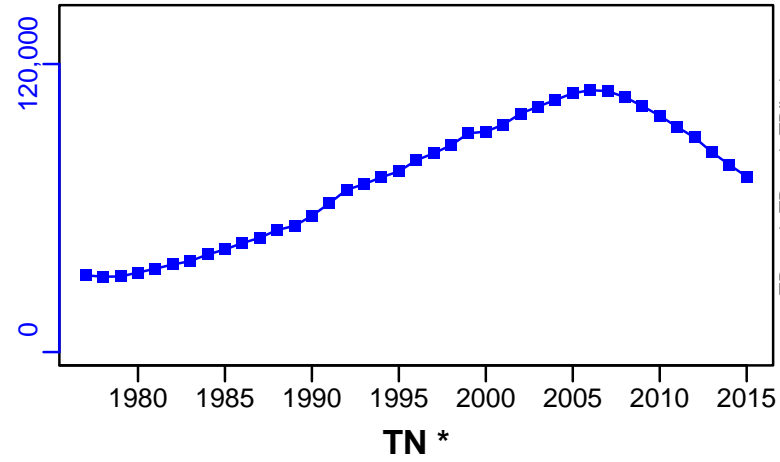
Production (1977–2015–SISIMP2016)



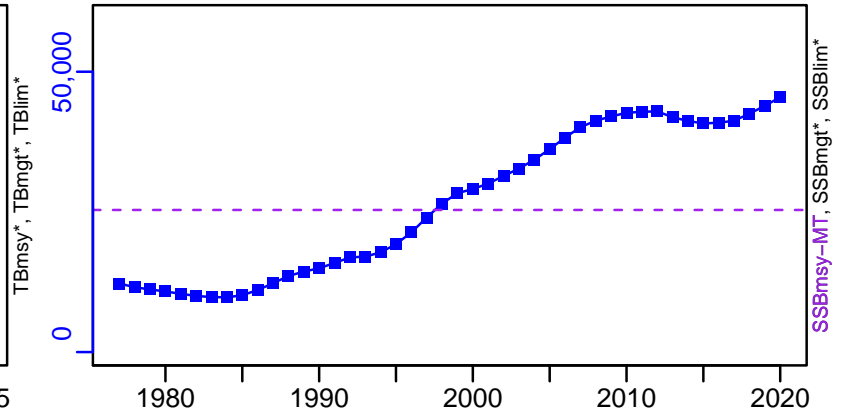
◆ Start Year ◆ End Year \* No Data

# Dusky rockfish Gulf of Alaska [DUSROCKGA]

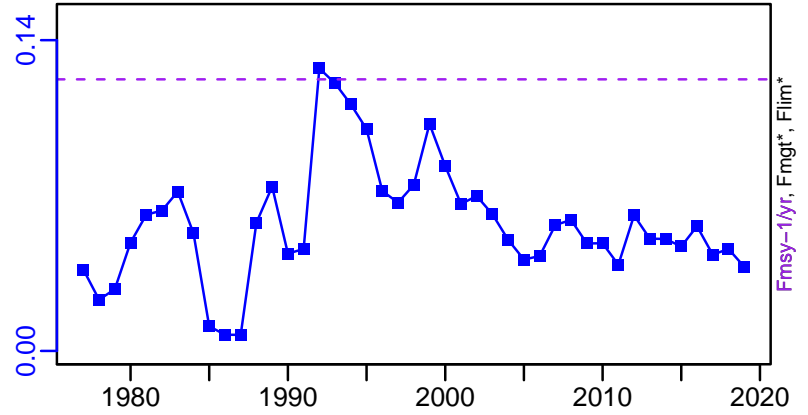
TB-MT (1977–2015–SISIMP2016)



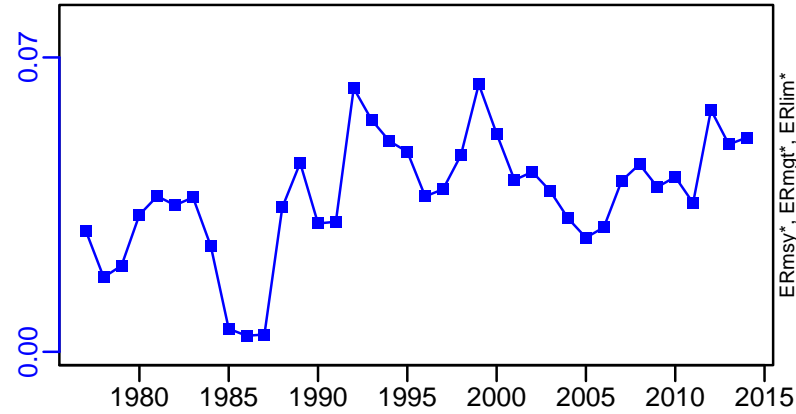
SSB-MT (1973–2020–SISIMP2022)



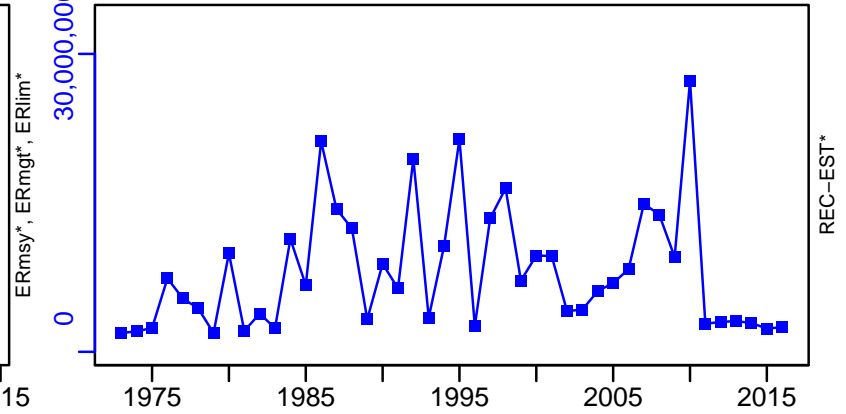
F-1/yr (1973–2020–SISIMP2022)



ER-calc-ratio (1977–2015–SISIMP2016)



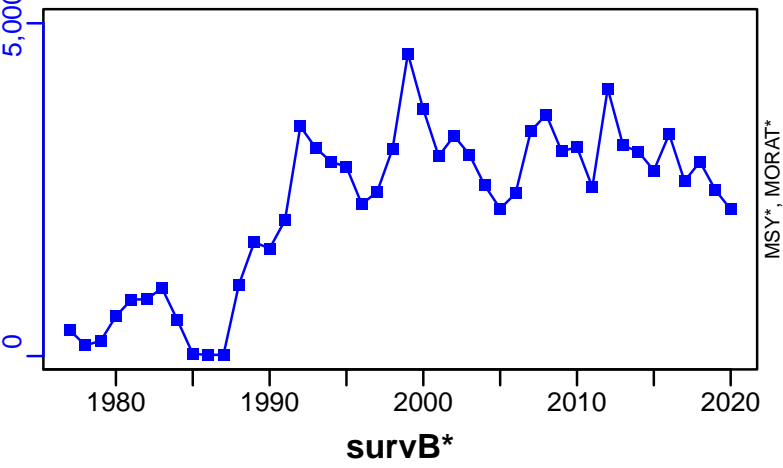
R-E00 (1973–2020–SISIMP2022)



# Dusky rockfish Gulf of Alaska [DUSROCKGA]

TC-MT, TL\*, RecC\* (1973-2020-SISIMP2022)

TAC\*, Cpair\*, Cadv\*



CPUE\*

EFFORT\*

CdivMSY\*

■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Golden redfish North-East Arctic [GOLDREDNEAR]

Metadata	
<b>Scientific Name</b>	Sebastes norvegicus
<b>Current Assess ID</b>	AFWG-GOLDREDNEAR-1986-2019-ICESIMP2021-2
<b>Area</b>	North-East Arctic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	Arctic Fisheries Working Group
<b>Asmts in RAM</b>	2016, 2010, 2017, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2019	0.052
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	Fmgt-1/yr	2019	0.052
<b>ERMgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2010	0.1
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2019	49,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

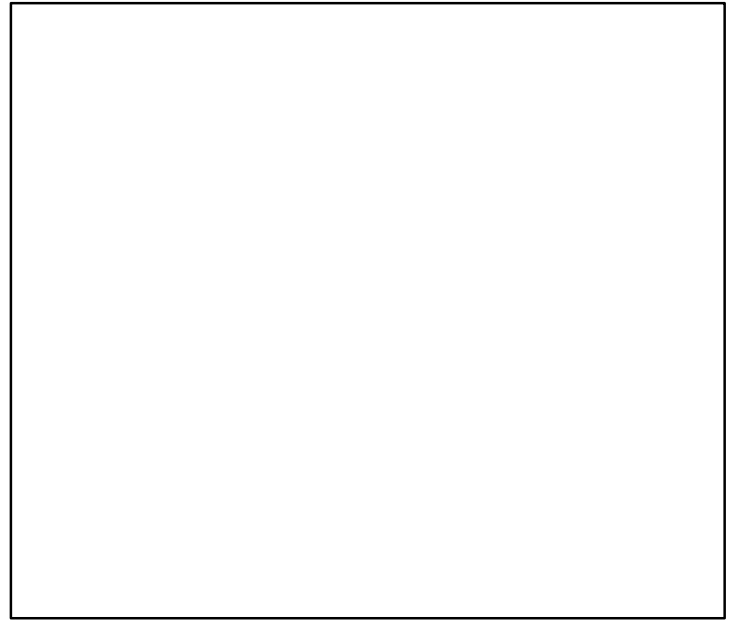
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	34,400	Both	-
<b>SSB</b>	SSB-MT	2019	23,900	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	2680	-	3
<b>F</b>	F-1/yr	2019	0.462	-	-
<b>ER</b>	ER-calc-ratio	2017	0.155	-	-
<b>TC</b>	TC-MT	2019	8280		
<b>TL</b>	TL-MT	2019	8280		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	8.805		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2019	8.805		
<b>ER/ERMgt</b>	-	-	-		

Golden redfish North-East Arctic [GOLDREDNEAR]

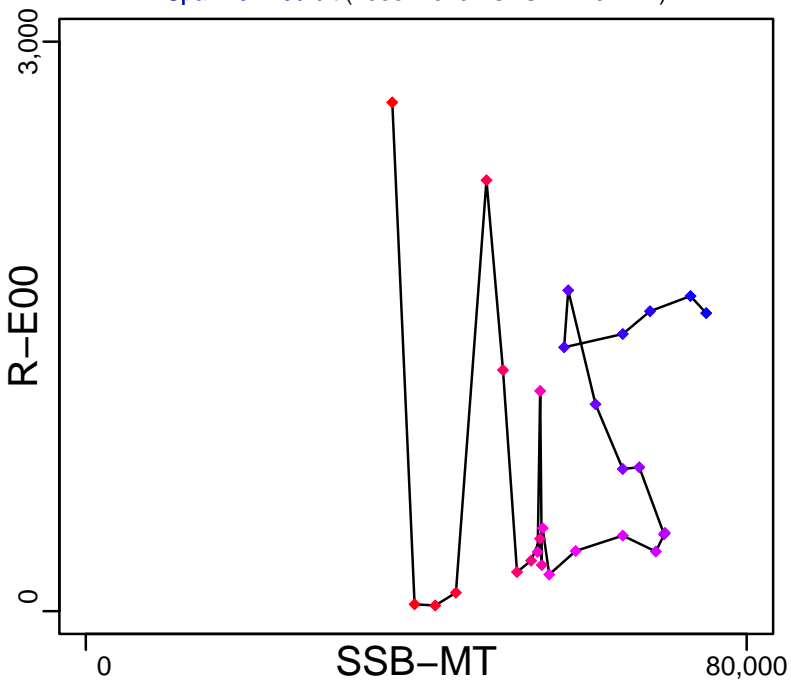
Kobe MSY\*



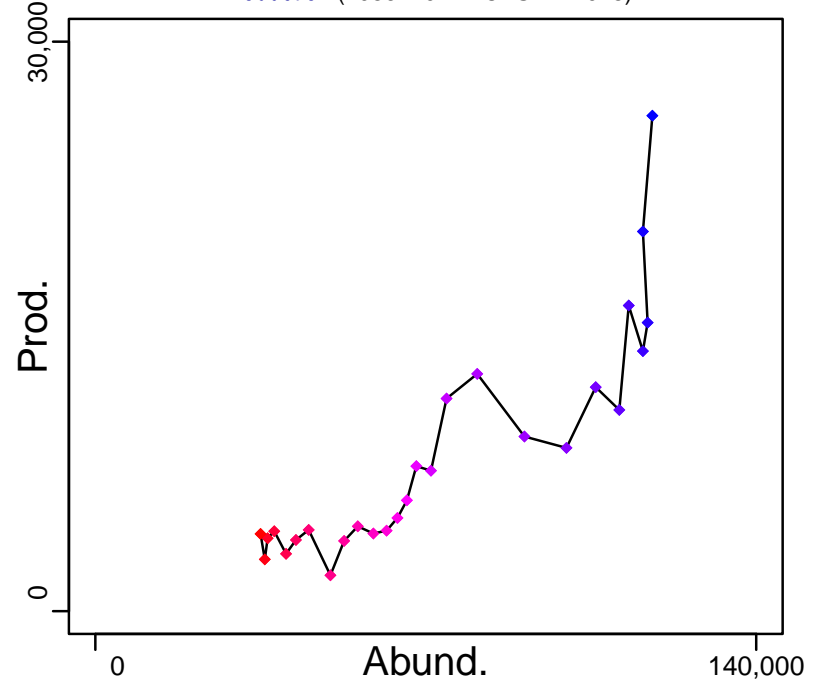
Kobe MGT\*



Spawner Recruit (1986–2019–ICESIMP2021–2)



Production (1986–2017–ICESIMP2018)

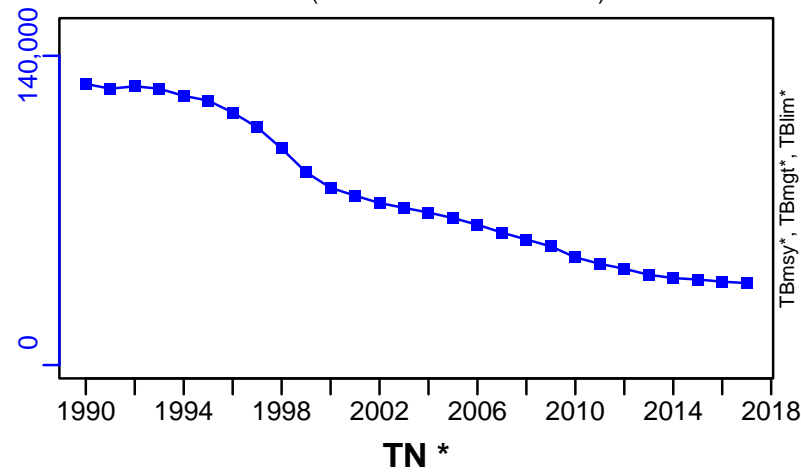


◆ Start Year ◆ End Year \* No Data

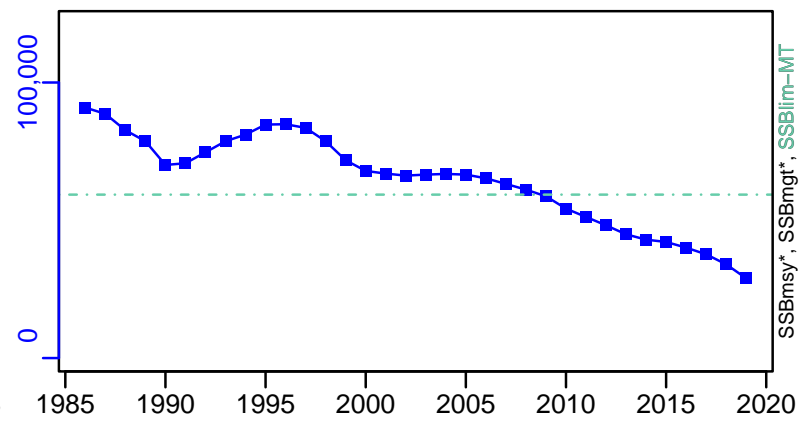


# Golden redfish North-East Arctic [GOLDREDNEAR]

TB-MT (1986-2017-ICESIMP2018)



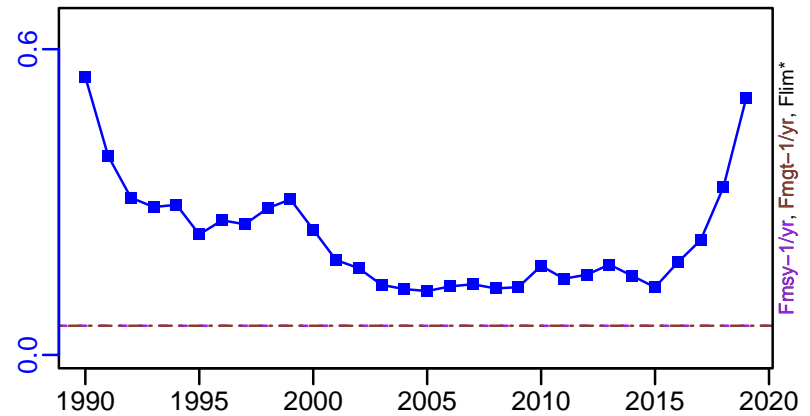
SSB-MT (1986-2019-ICESIMP2021-2)



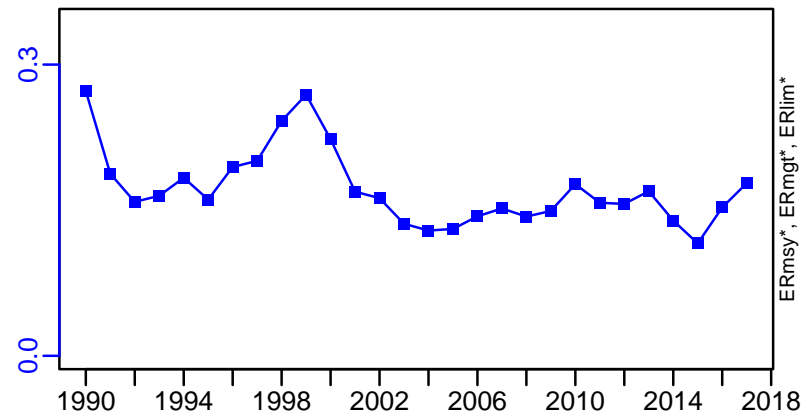
TN \*



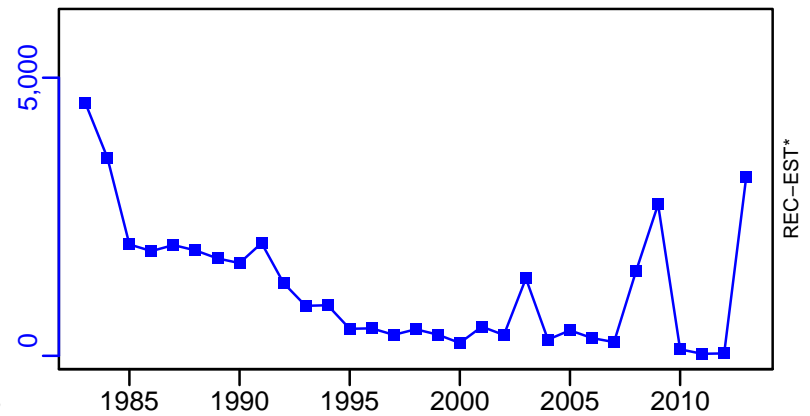
F-1/yr (1986-2019-ICESIMP2021-2)



ER-calc-ratio (1986-2017-ICESIMP2018)

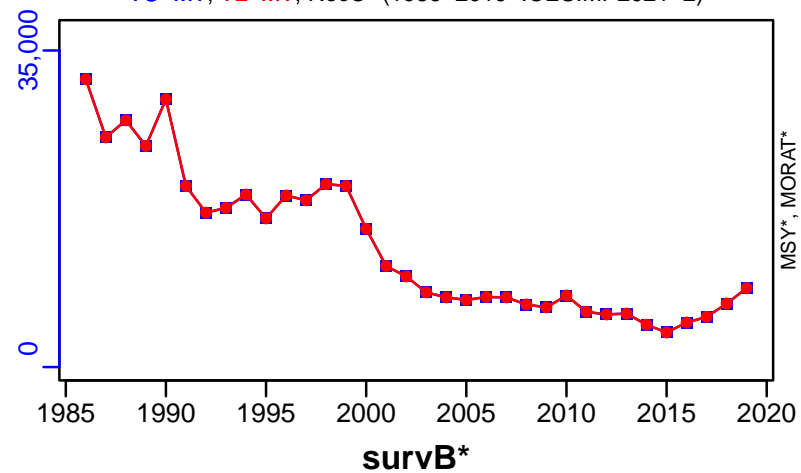


R-E00 (1986-2019-ICESIMP2021-2)



# Golden redfish North-East Arctic [GOLDREDNEAR]

TC-MT, TL-MT, RecC\* (1986–2019–ICESIMP2021–2)



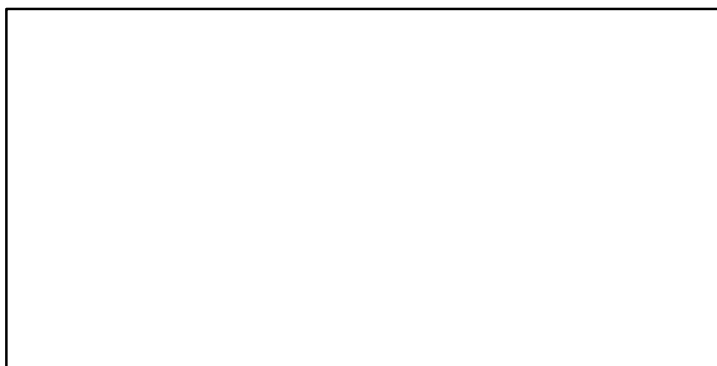
TAC\*, Cpair\*, Cadv\*



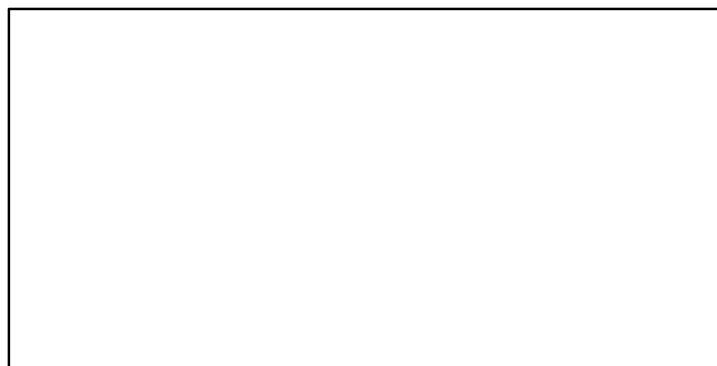
CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
 ● 2nd listed time series    - - MSY    \* No Data

## Golden redfish ICES 5-6-12-14 [GOLDREDV-VI-XII-XIV]

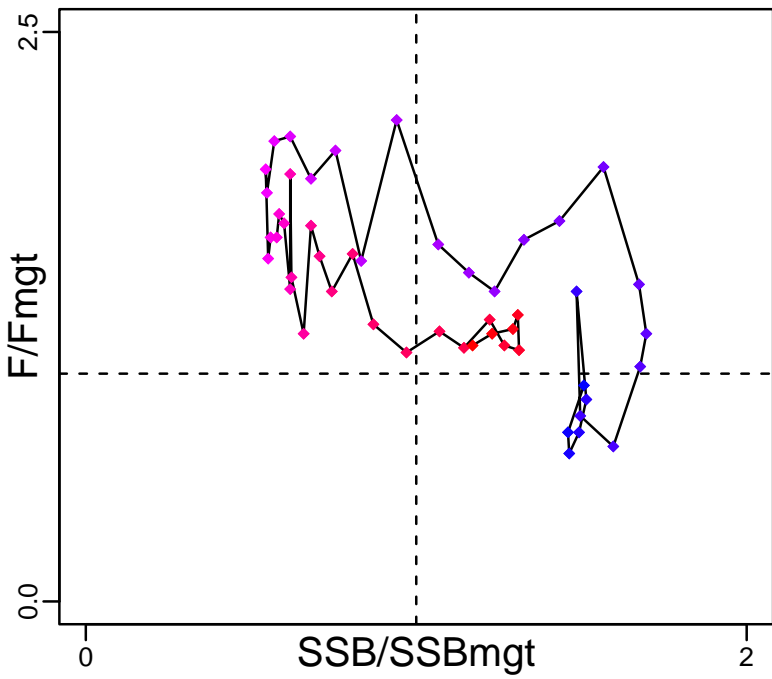
Metadata	
<b>Scientific Name</b>	Sebastes norvegicus
<b>Current Assess ID</b>	NWWG-GOLDREDV-VI-XII-XIV-1971-2021-ICESIMP2021-2
<b>Area</b>	ICES 5-6-12-14
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	North-Western Working Group
<b>Asmts in RAM</b>	2014, 2017, 2018, 2015, 2016, 2019, 2020, 2021

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2021	0.097
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2020	270,000
<b>Fmgt</b>	Fmgt-1/yr	2021	0.097
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2021	160,000
<b>Flim</b>	Flim-1/yr	2021	0.226
<b>ERlim</b>	-	-	-

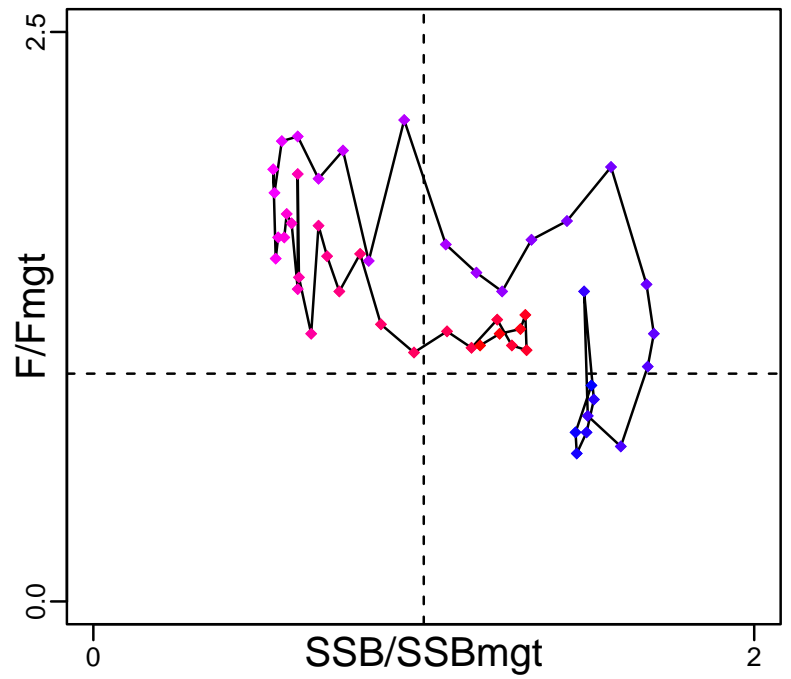
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	434,000	Both	-
<b>SSB</b>	SSB-MT	2021	260,000	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2021	33,200	-	5
<b>F</b>	F-1/yr	2021	0.118	-	-
<b>ER</b>	ER-calc-ratio	2018	0.122	-	-
<b>TC</b>	TC-MT	2021	46,100		
<b>TL</b>	TL-MT	2021	46,100		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2021	1.216		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2020	1.1		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2021	1.216		
<b>ER/ERmgt</b>	-	-	-		

# Golden redfish ICES 5–6–12–14 [GOLDREDV–VI–XII–XIV]

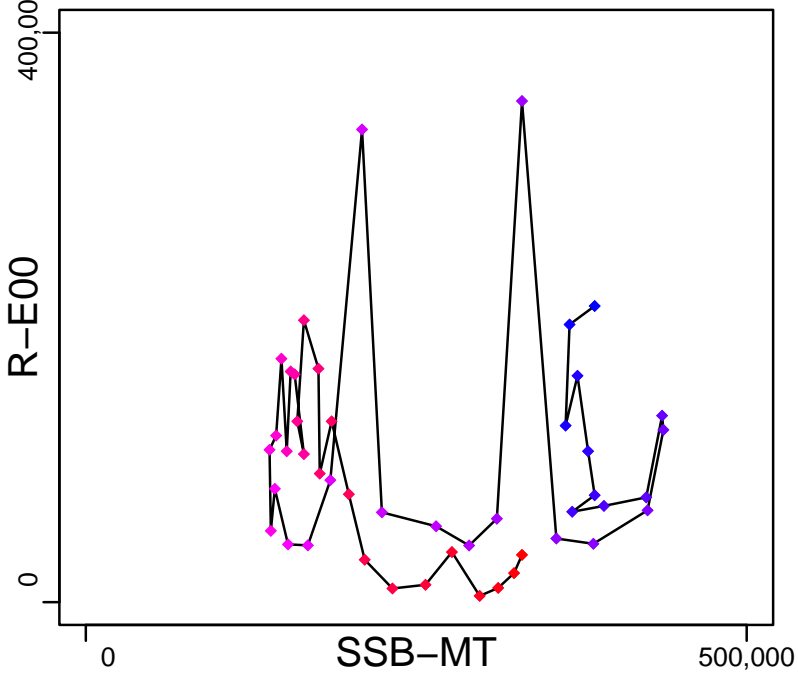
Kobe MSYpref (1971–2020–ICESIMP2021–2)



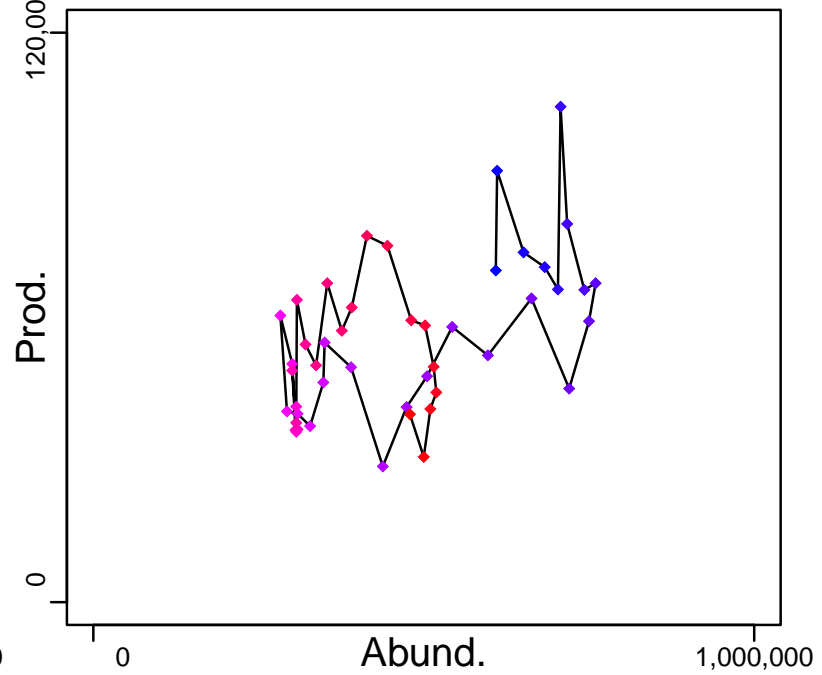
Kobe MGTpref (1971–2020–ICESIMP2021–2)



Spawner Recruit (1971–2021–ICESIMP2021–2)



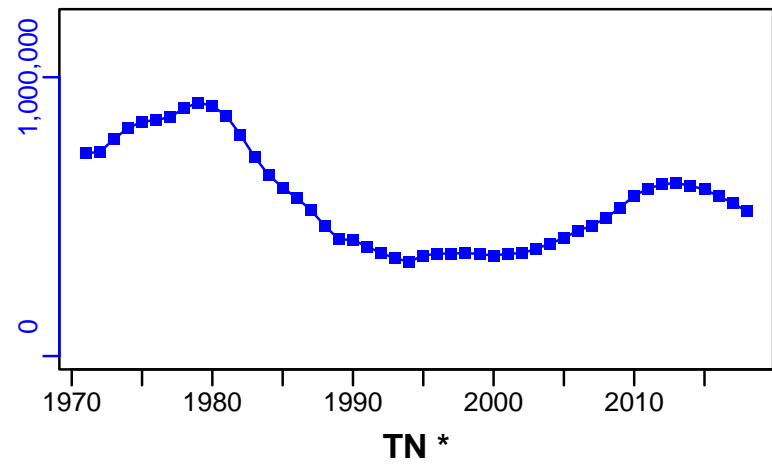
Production (1966–2018–ICESIMP2018)



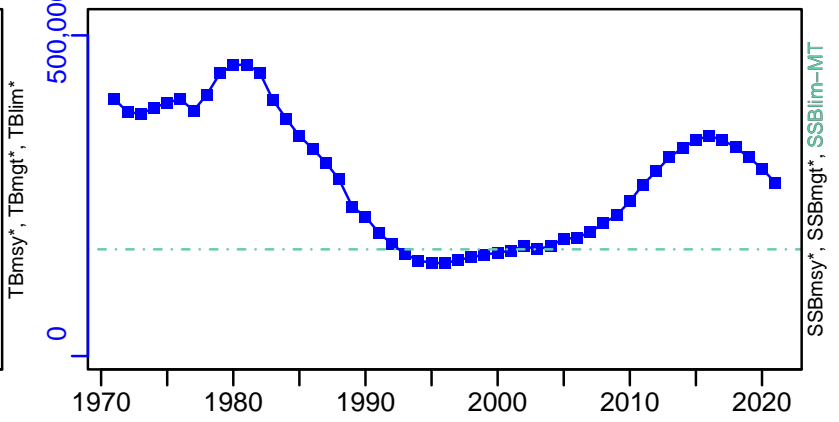
◆ Start Year ◆ End Year \* No Data

# Golden redfish ICES 5–6–12–14 [GOLDREDV–VI–XII–XIV]

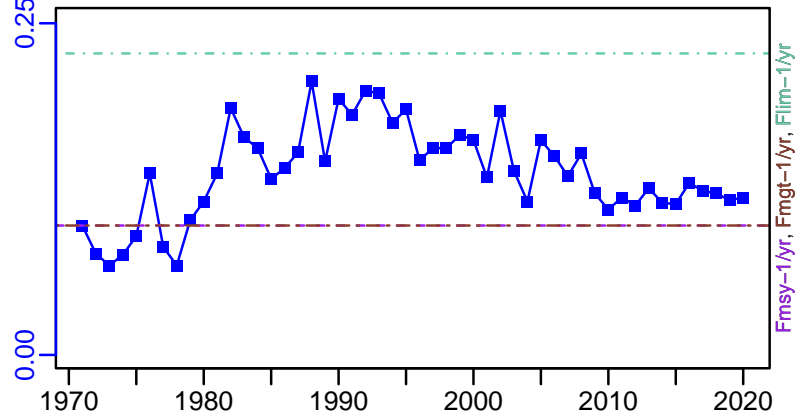
TB–MT (1966–2018–ICESIMP2018)



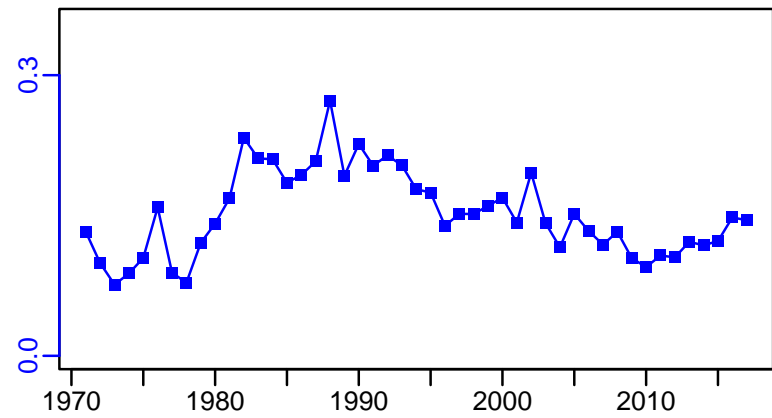
SSB–MT (1971–2021–ICESIMP2021–2)



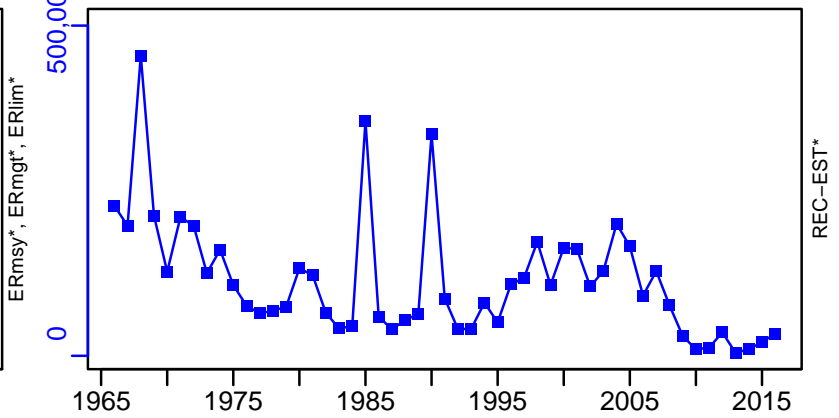
F–1/yr (1971–2021–ICESIMP2021–2)



ER–calc–ratio (1966–2018–ICESIMP2018)



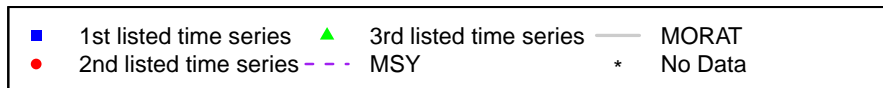
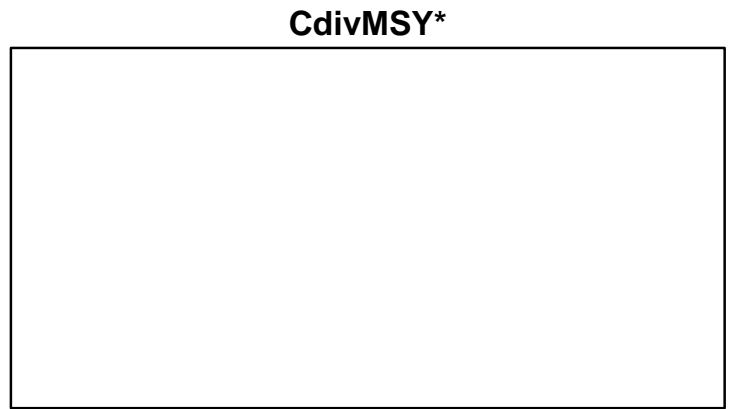
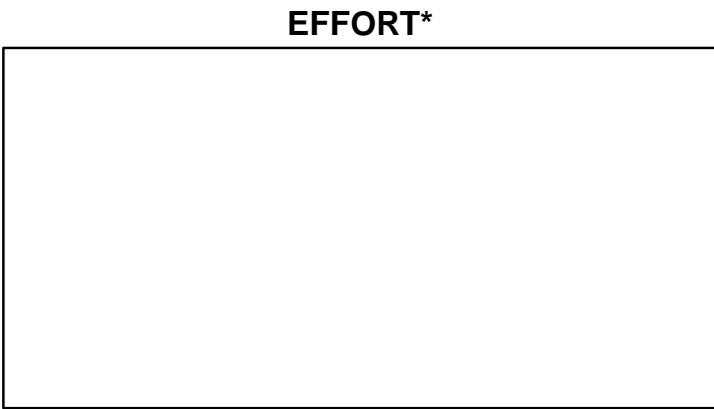
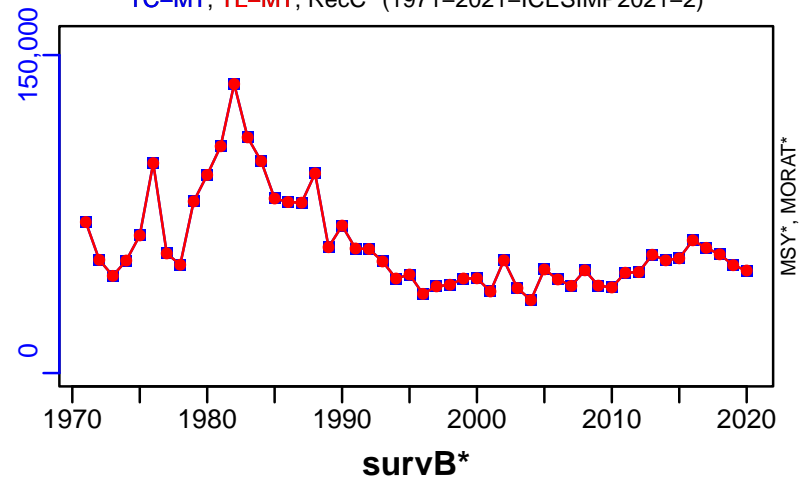
R–E00 (1971–2021–ICESIMP2021–2)



# Golden redfish ICES 5–6–12–14 [GOLDREDV–VI–XII–XIV]

TC–MT, TL–MT, RecC\* (1971–2021–ICESIMP2021–2)

TAC\*, Cpair\*, Cadv\*



## Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

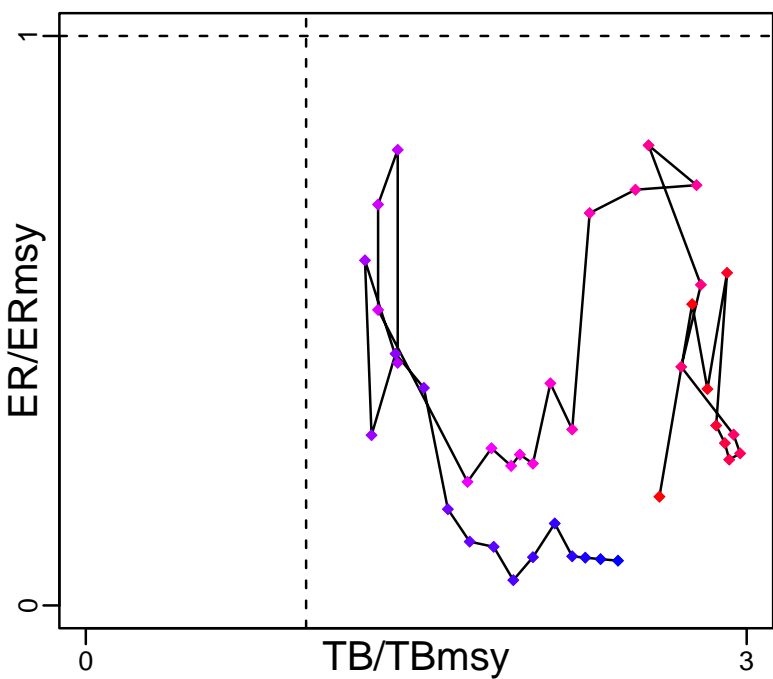
Metadata	
<b>Scientific Name</b>	Sebastes carnatus
<b>Current Assess ID</b>	SWFSC-GOPHERSPCOAST-1965-2005-STANTON
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2005

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2005	1010
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-calc-ratio	2005	0.1
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2005	2440
<b>SSB0</b>	SSB0-MT	2005	1995
<b>MSY</b>	MSY-MT	2005	101
<b>M</b>	M-1/yr	2005	0.2
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

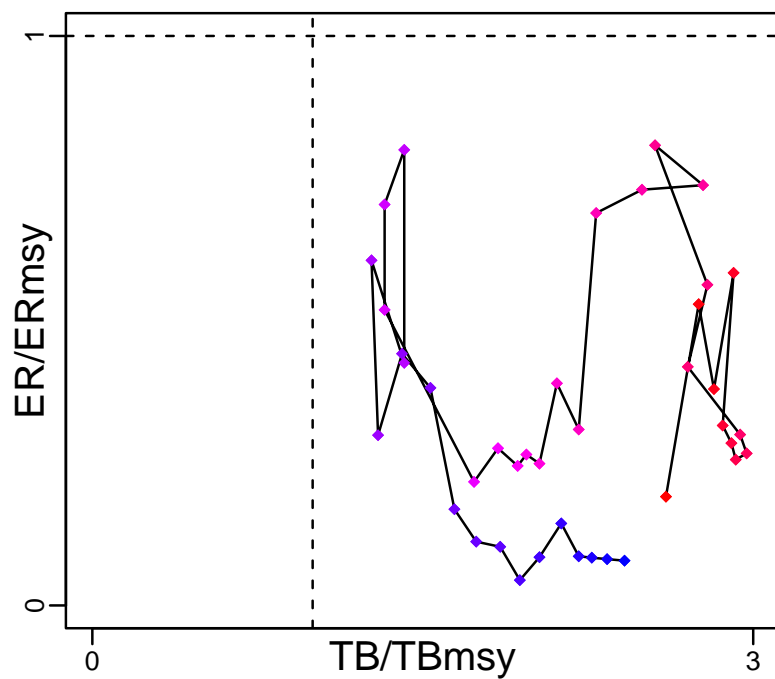
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2005	2570	-	1+
<b>SSB</b>	SSB-MT	2005	1900	Females	3+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-MT	2005	2730	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2005	0.019	-	-
<b>TC</b>	TC-MT	2005	50		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2005	2.545		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-calc-ratio	2005	0.191		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

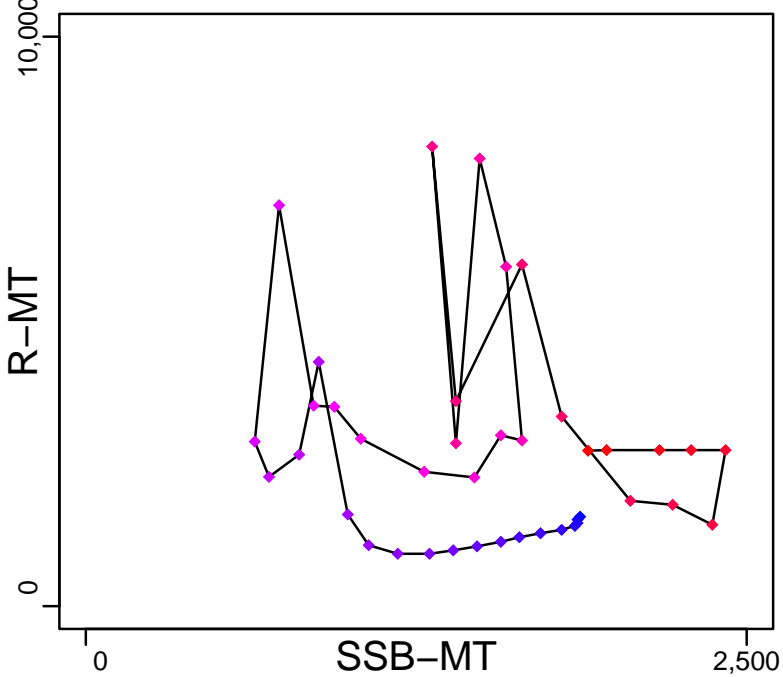
Kobe MSYpref (1965–2005–STANTON)



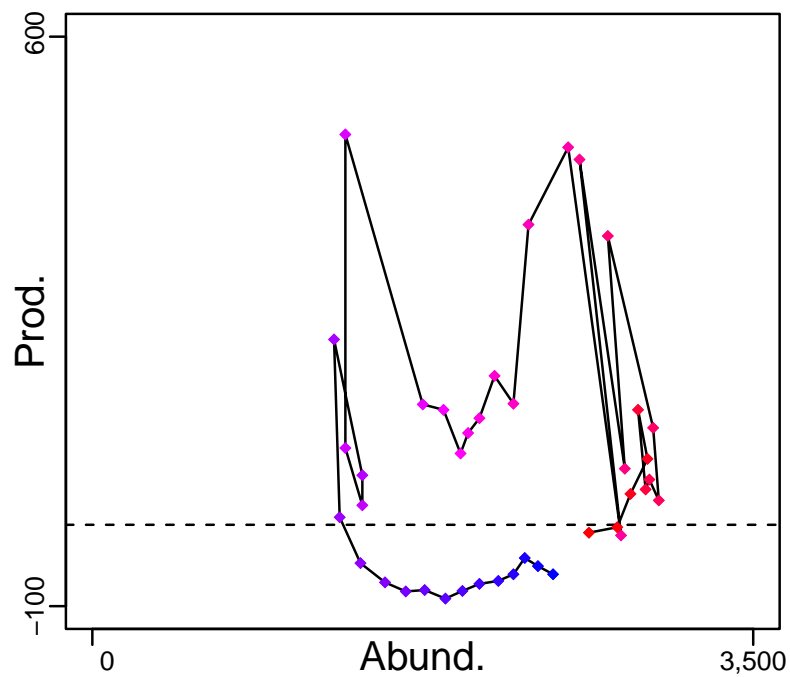
Kobe MGTpref (1965–2005–STANTON)



Spawner Recruit (1965–2005–STANTON)



Production (1965–2005–STANTON)

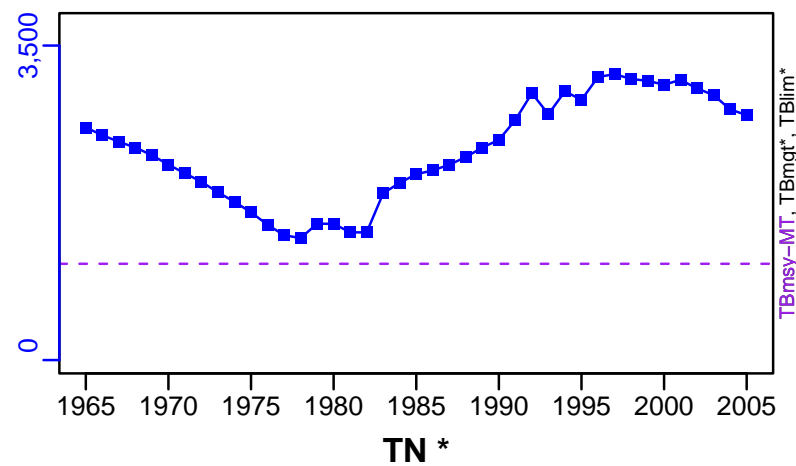


◆ Start Year ◆ End Year \* No Data

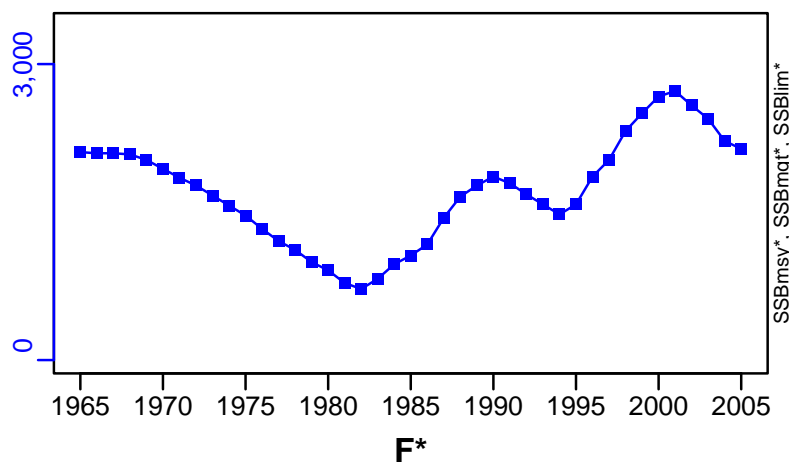


# Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

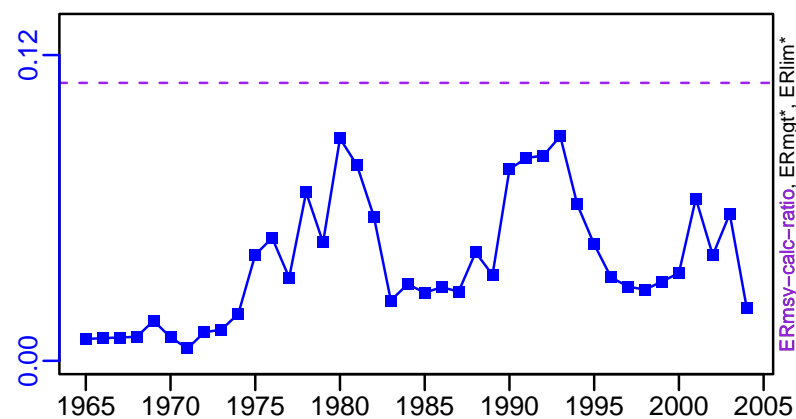
TB-MT (1965–2005–STANTON)



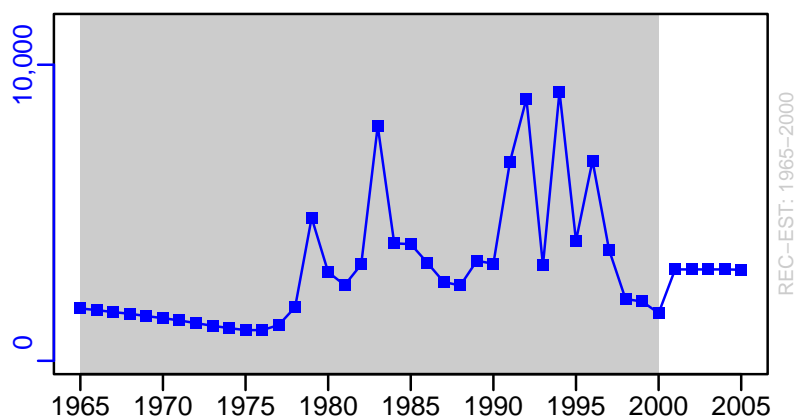
SSB-MT (1965–2005–STANTON)



ER-ratio (1965–2005–STANTON)

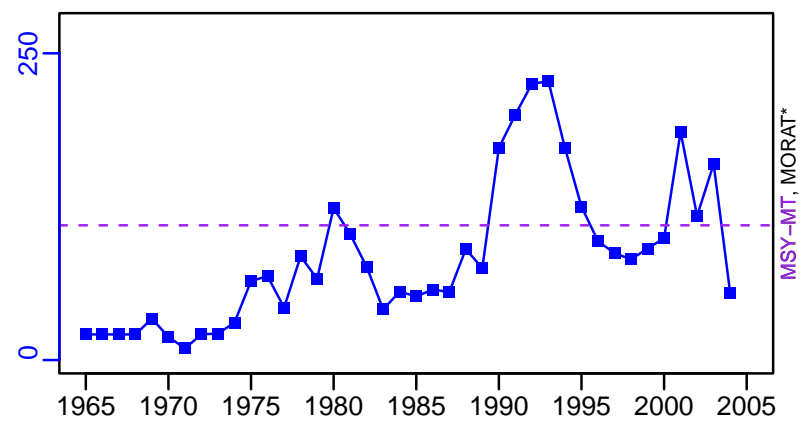


R-MT (1965–2005–STANTON)



# Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

TC-MT, TL\*, RecC\* (1965-2005-STANTON)



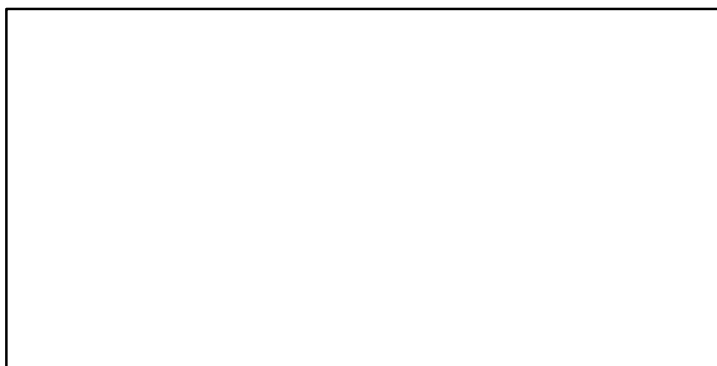
TAC\*, Cpair\*, Cadv\*



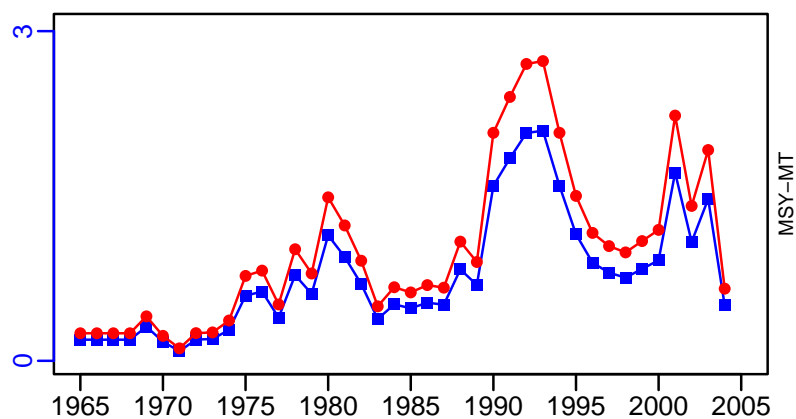
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1965-2005-STANTON)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

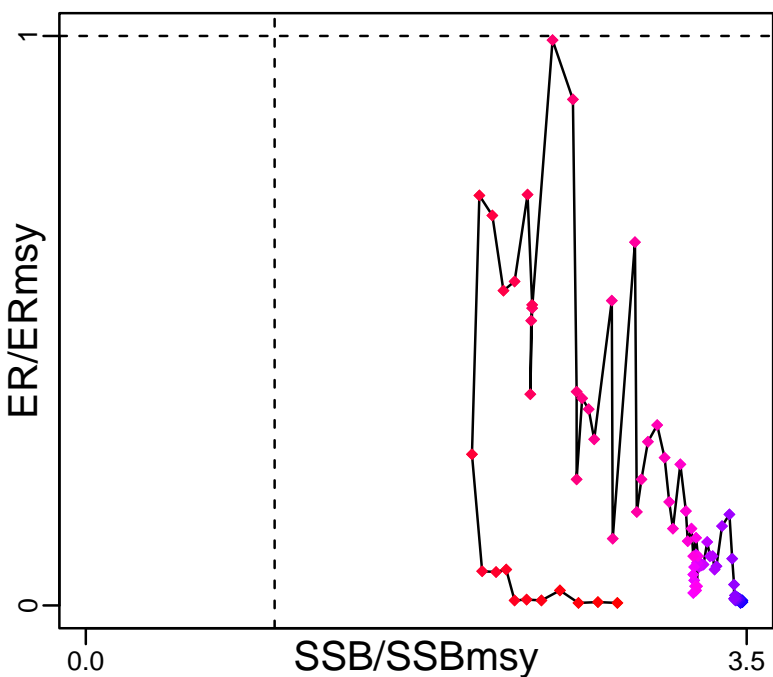
Metadata	
<b>Scientific Name</b>	Sebastes elongatus
<b>Current Assess ID</b>	PFMC-GRNSTROCKPCOAST-1916-2009-STANTON
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Pacific Fishery Management Council
<b>Asmts in RAM</b>	2009

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2009	11,774
<b>SSBmsy</b>	SSBmsy-E00eggs	2009	$2.039 \times 10^9$
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2009	0.068
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2009	803
<b>M</b>	M-1/yr	2009	0.08
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

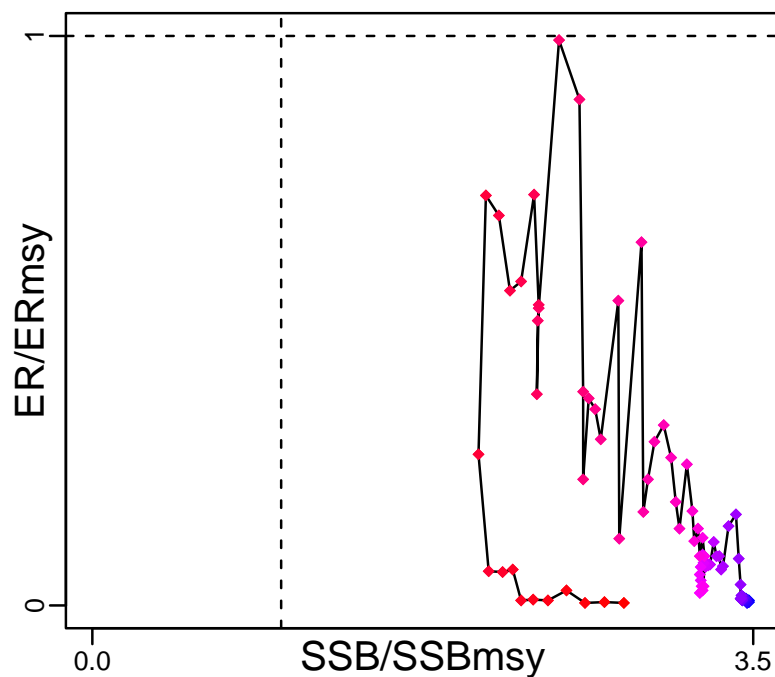
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2009	29,200	-	2+
<b>SSB</b>	SSB-E00eggs	2009	$5.74 \times 10^9$	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2009	14,700	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2009	0	-	-
<b>TC</b>	TC-MT	2009	9		
<b>TL</b>	TL-MT	2009	3.39		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2009	2.48		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2009	2.815		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2009	0.004		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

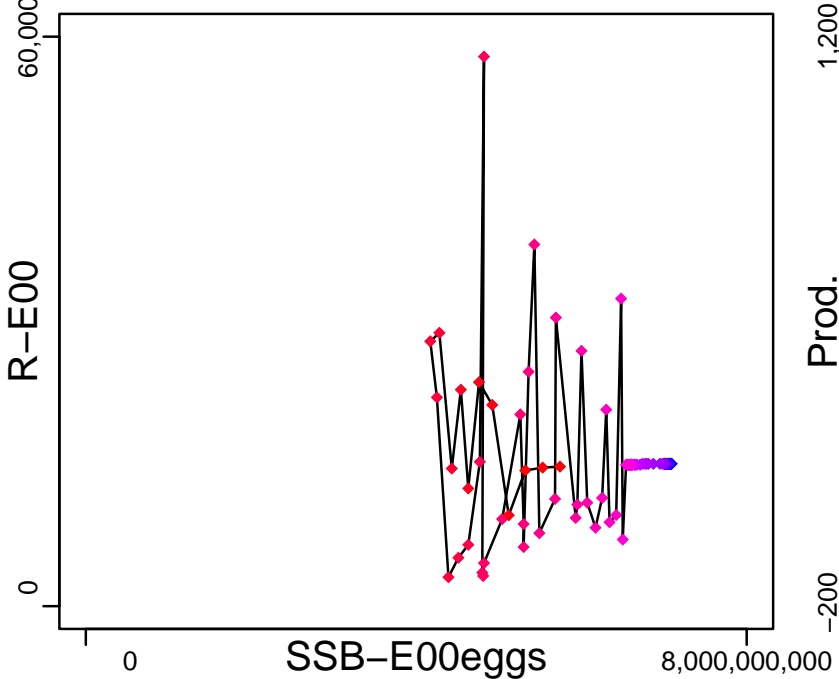
Kobe MSYpref (1916–2009–STANTON)



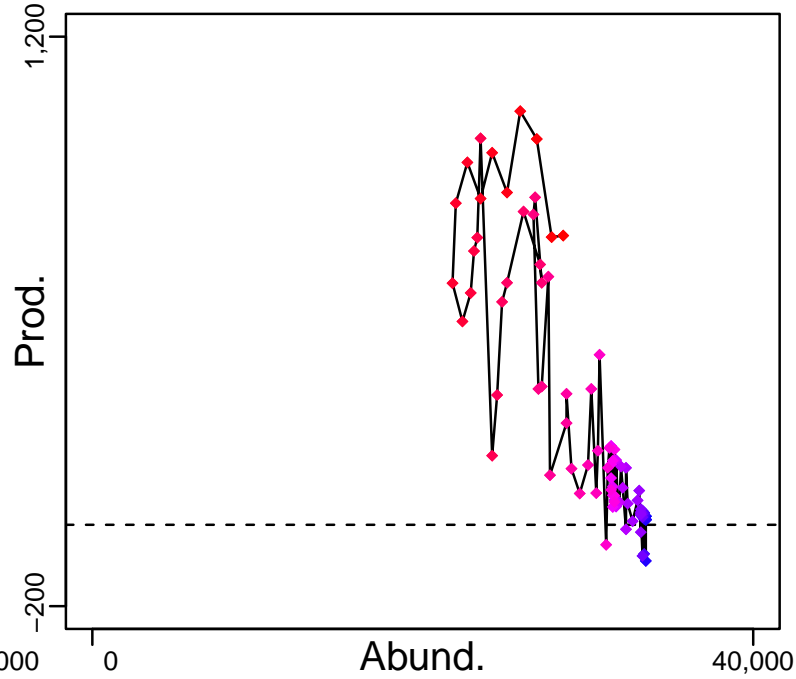
Kobe MGTpref (1916–2009–STANTON)



Spawner Recruit (1916–2009–STANTON)



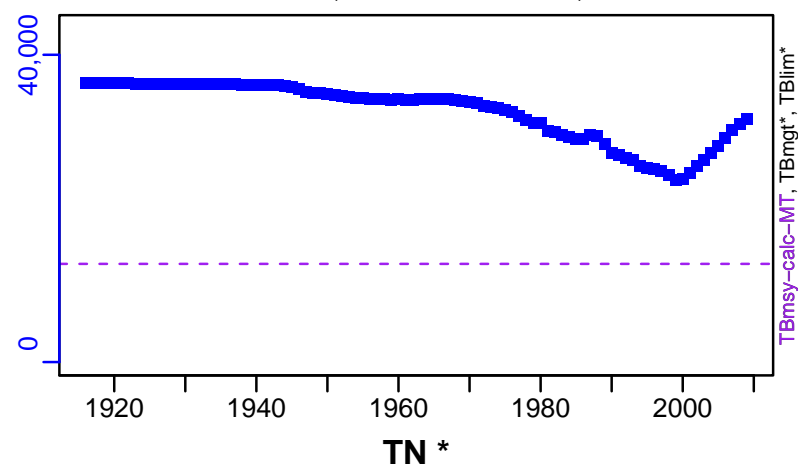
Production (1916–2009–STANTON)



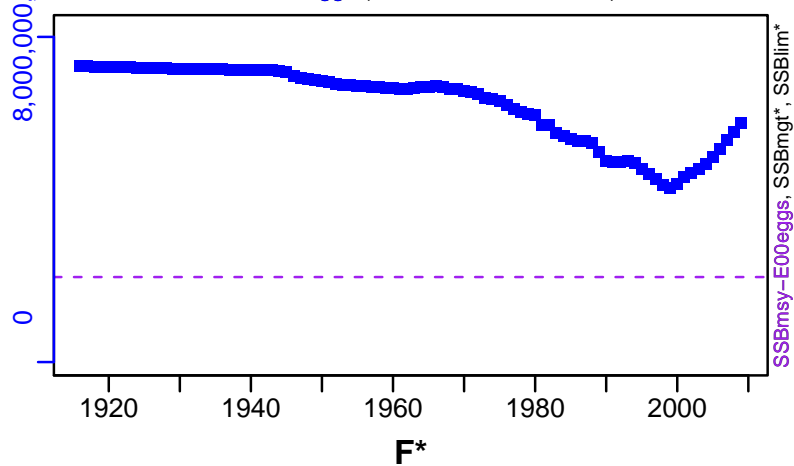
◆ Start Year ◆ End Year \* No Data

# Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

TB-MT (1916-2009-STANTON)



SSB-E00eggs (1916-2009-STANTON)



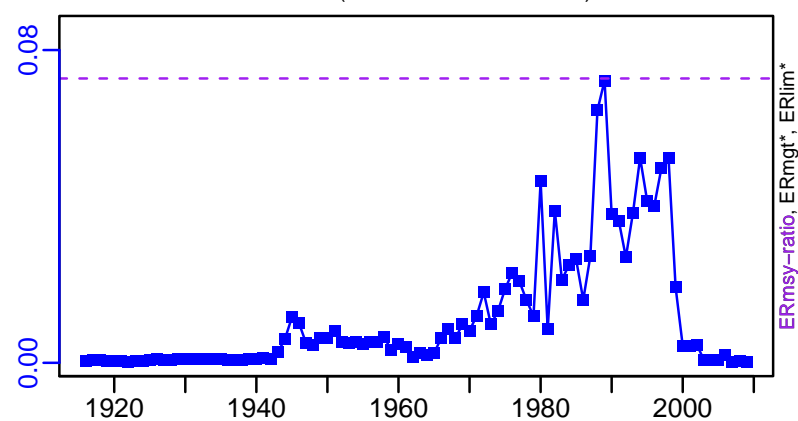
TN \*



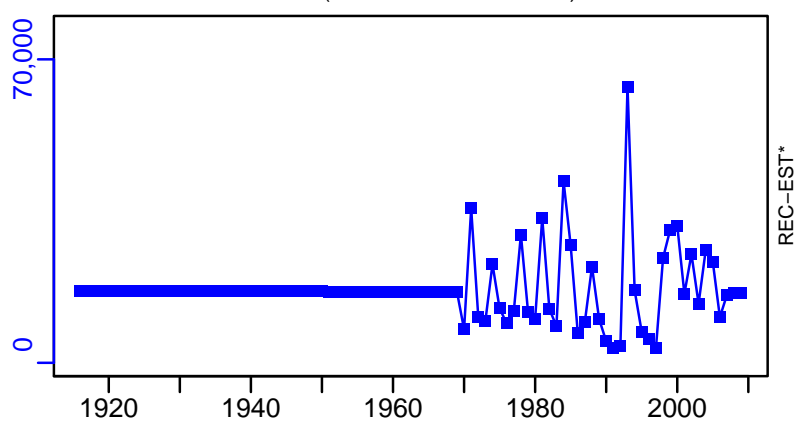
F\*



ER-ratio (1916-2009-STANTON)

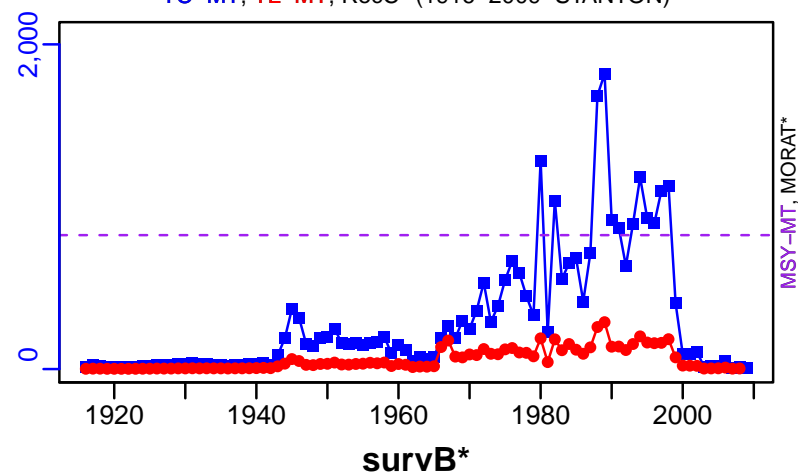


R-E00 (1916-2009-STANTON)



# Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

TC-MT, TL-MT, RecC\* (1916-2009-STANTON)



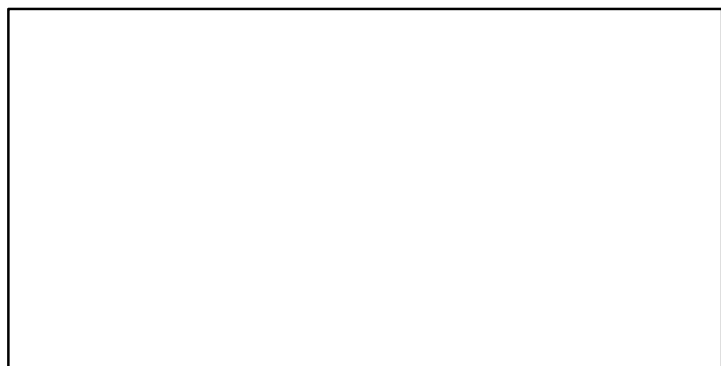
TAC\*, Cpair\*, Cadv\*



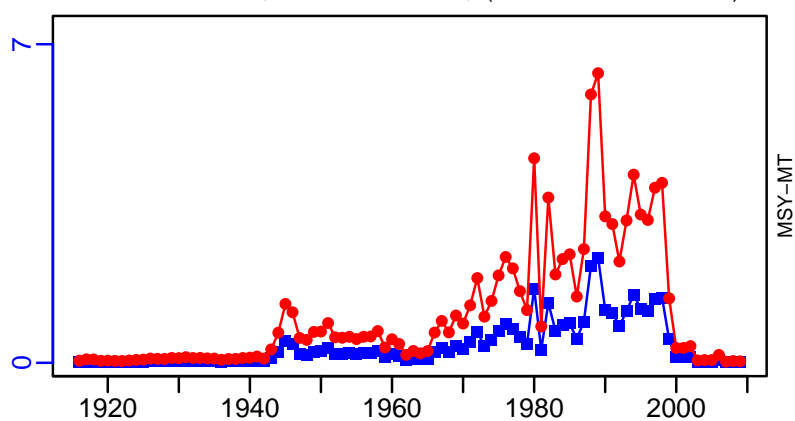
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1916-2009-STANTON)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Green spotted rockfish Northern Pacific Coast [GRSPROCKNCAL]

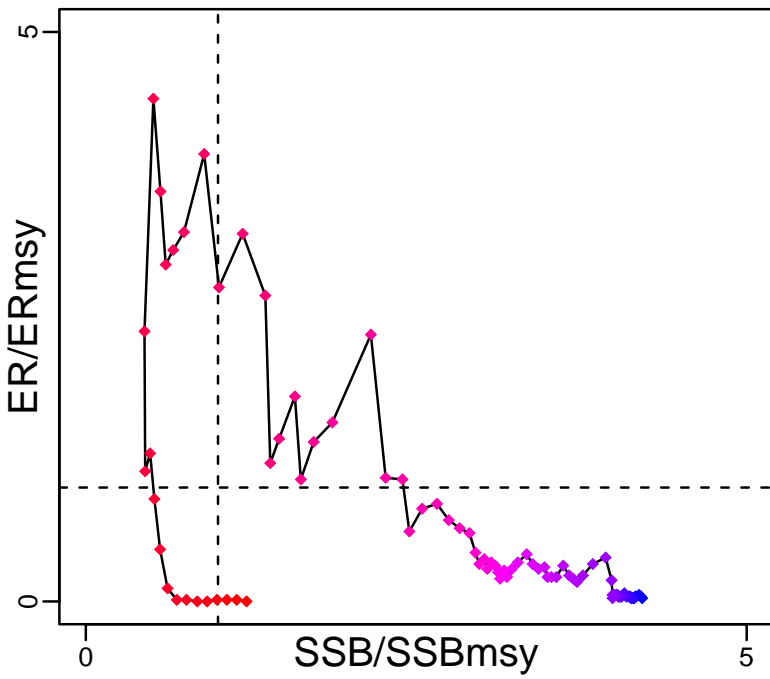
Metadata	
<b>Scientific Name</b>	Sebastes chlorostictus
<b>Current Assess ID</b>	SWFSC-GRSPROCKNCAL-1916-2010-STACHURA
<b>Area</b>	Northern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2010

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2010	840
<b>SSBmsy</b>	SSBmsy-E00eggs	2010	$1.34 \times 10^{11}$
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2010	0.07
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2010	3160
<b>SSB0</b>	SSB0-E00eggs	2010	$5.64 \times 10^9$
<b>MSY</b>	MSY-MT	2010	59
<b>M</b>	M-1/yr	2010	0.07
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

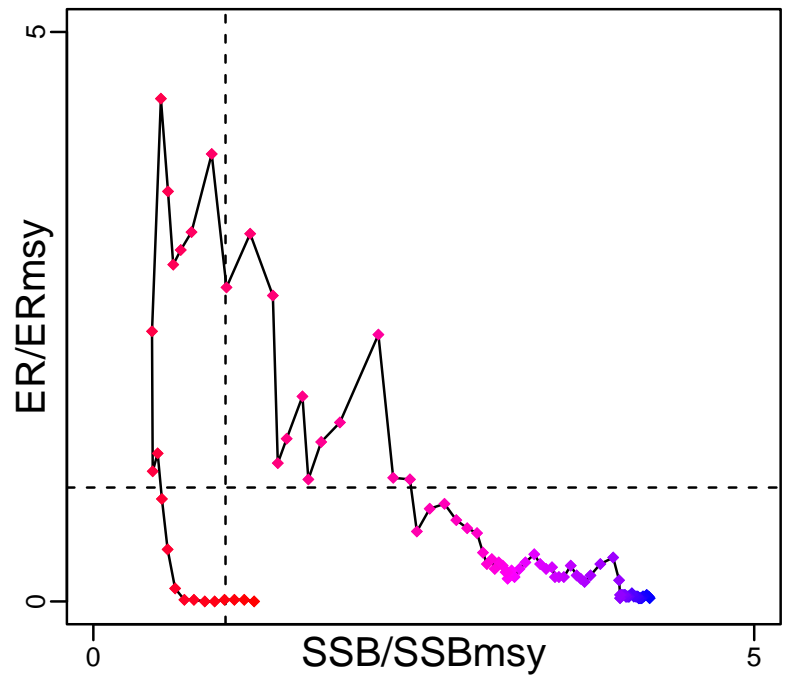
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2010	1190	-	0+
<b>SSB</b>	SSB-E00eggs	2010	$1.63 \times 10^{11}$	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2010	391,000	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2010	0	-	-
<b>TC</b>	TC-MT	2010	0.4		
<b>TL</b>	TL-MT	2010	0.37		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2010	1.417		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2010	1.216		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2010	0		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Greenspotted rockfish Northern Pacific Coast [GRSPROCKNCAL]

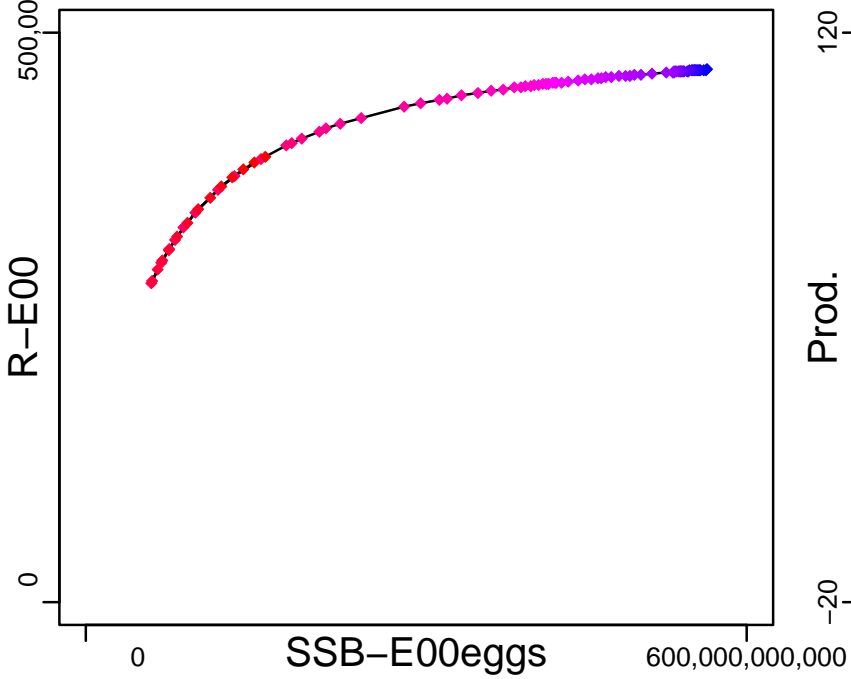
Kobe MSYpref (1916–2010–STACHURA)



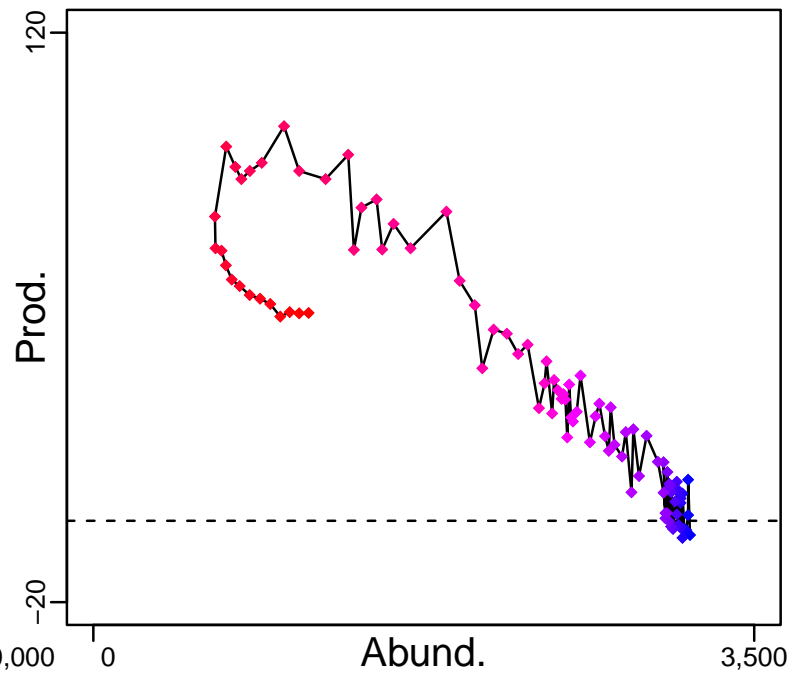
Kobe MGTpref (1916–2010–STACHURA)



Spawner Recruit (1916–2010–STACHURA)



Production (1916–2010–STACHURA)

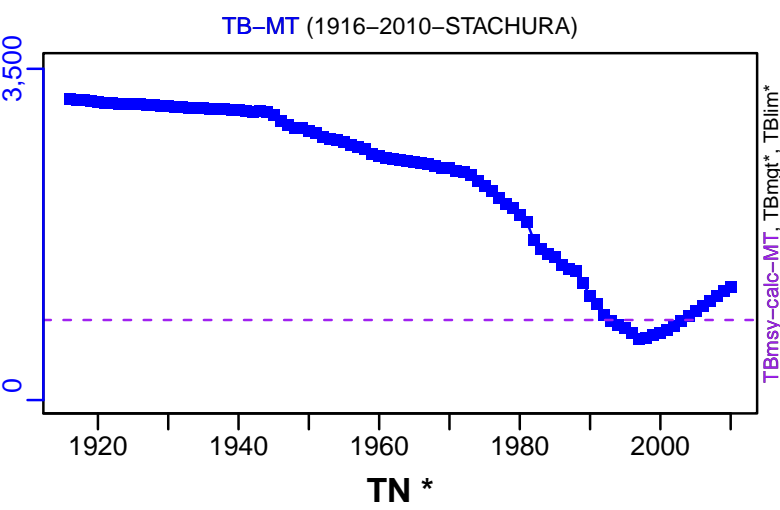


◆ Start Year ◆ End Year \* No Data

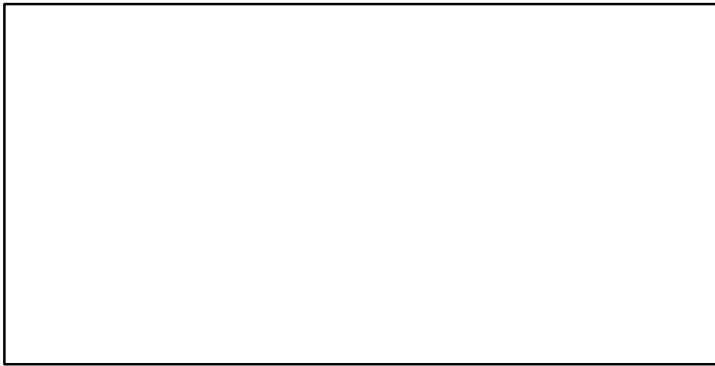
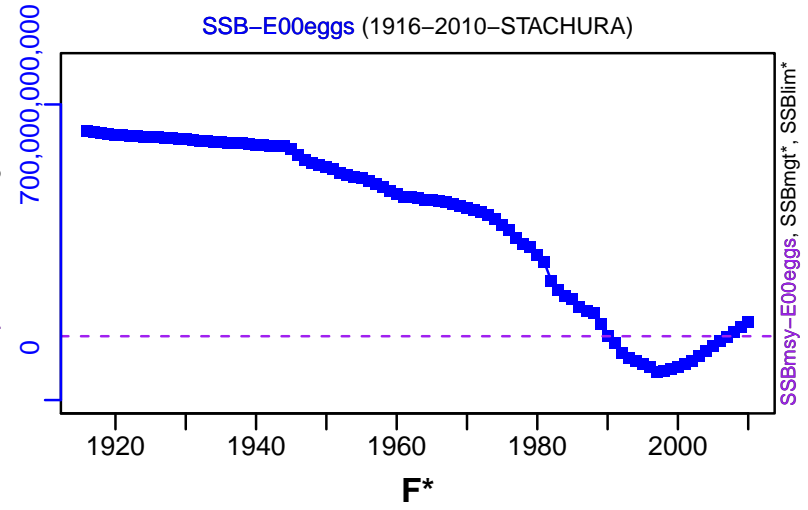


# Greenspotted rockfish Northern Pacific Coast [GRSPROCKNCAL]

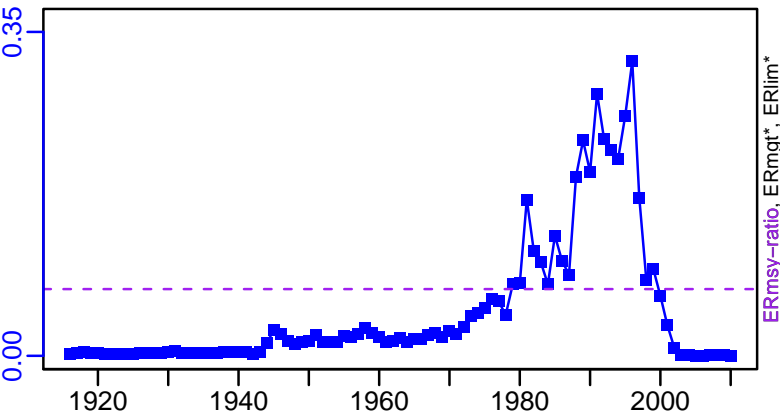
TB-MT (1916-2010-STACHURA)



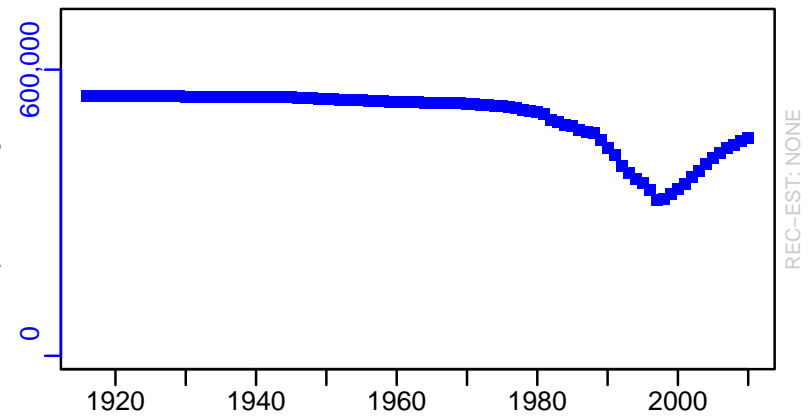
SSB-E00eggs (1916-2010-STACHURA)



ER-ratio (1916-2010-STACHURA)



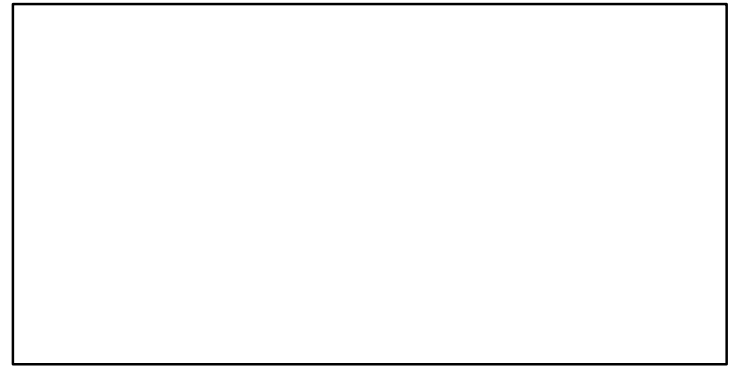
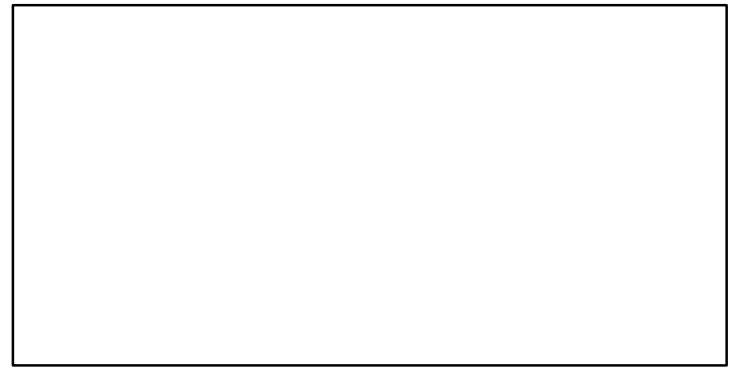
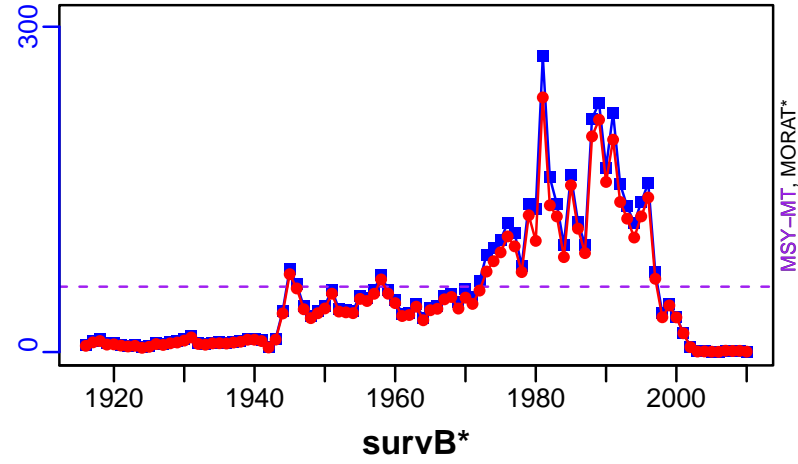
R-E00 (1916-2010-STACHURA)



# Greenspotted rockfish Northern Pacific Coast [GRSPROCKNCAL]

TC-MT, TL-MT, RecC\* (1916-2010-STACHURA)

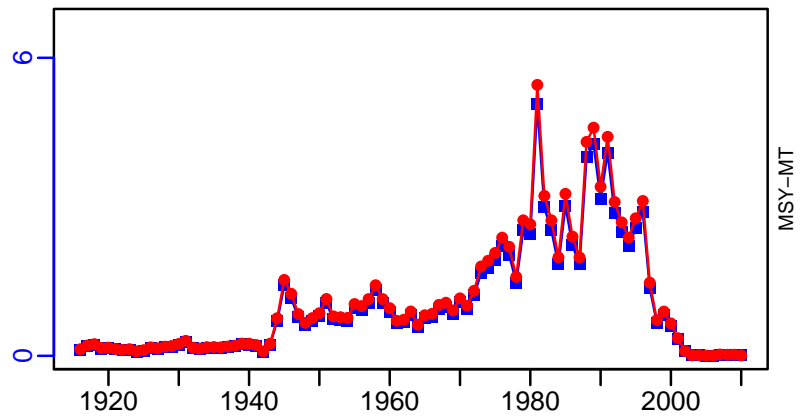
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1916-2010-STACHURA)



## Greenspotted rockfish Southern Pacific Coast [GRSPROCKSCAL]

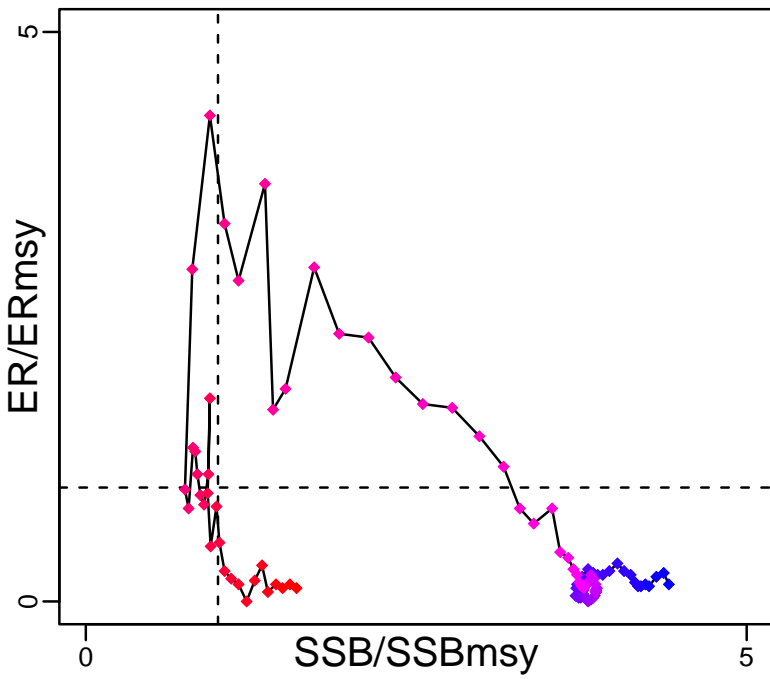
Metadata	
<b>Scientific Name</b>	Sebastes chlorostictus
<b>Current Assess ID</b>	SWFSC-GRSPROCKSCAL-1916-2010-STACHURA
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2010

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2010	932
<b>SSBmsy</b>	SSBmsy-E00eggs	2010	$1.8 \times 10^{11}$
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2010	0.06
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2010	4331
<b>SSB0</b>	SSB0-E00eggs	2010	$7.94 \times 10^9$
<b>MSY</b>	MSY-MT	2010	56
<b>M</b>	M-1/yr	2010	0.07
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

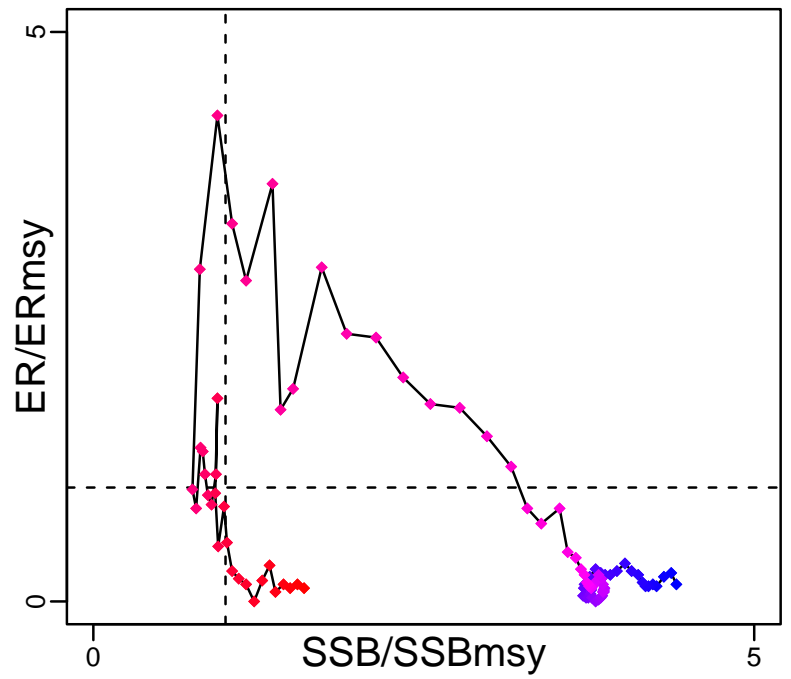
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2010	1920	-	0+
<b>SSB</b>	SSB-E00eggs	2010	$2.87 \times 10^{11}$	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2010	681,000	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2010	0.007	-	-
<b>TC</b>	TC-MT	2010	11		
<b>TL</b>	TL-MT	2010	11		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2010	2.061		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2010	1.594		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2010	0.117		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Greenspotted rockfish Southern Pacific Coast [GRSPROCKSCAL]

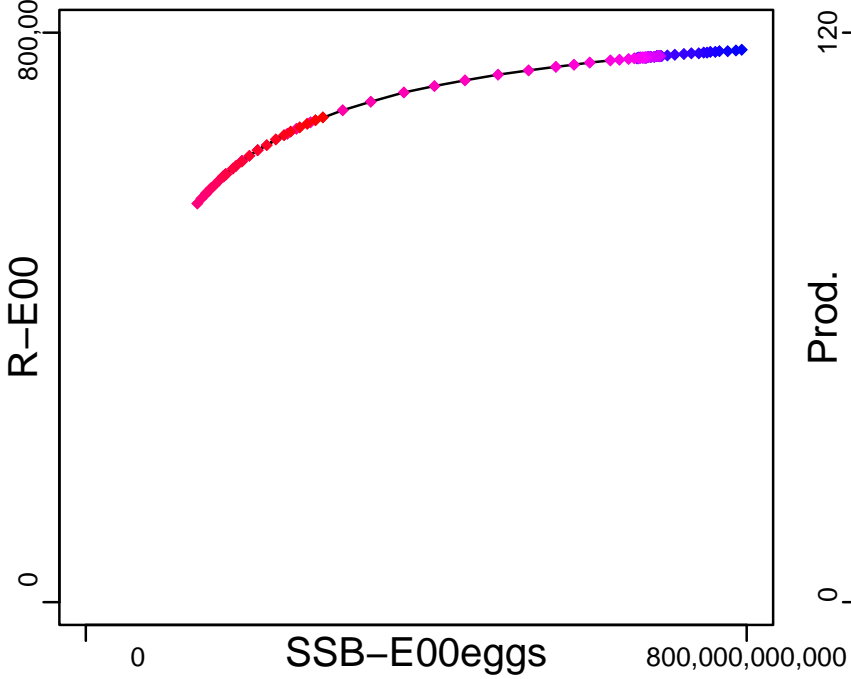
Kobe MSYpref (1916–2010–STACHURA)



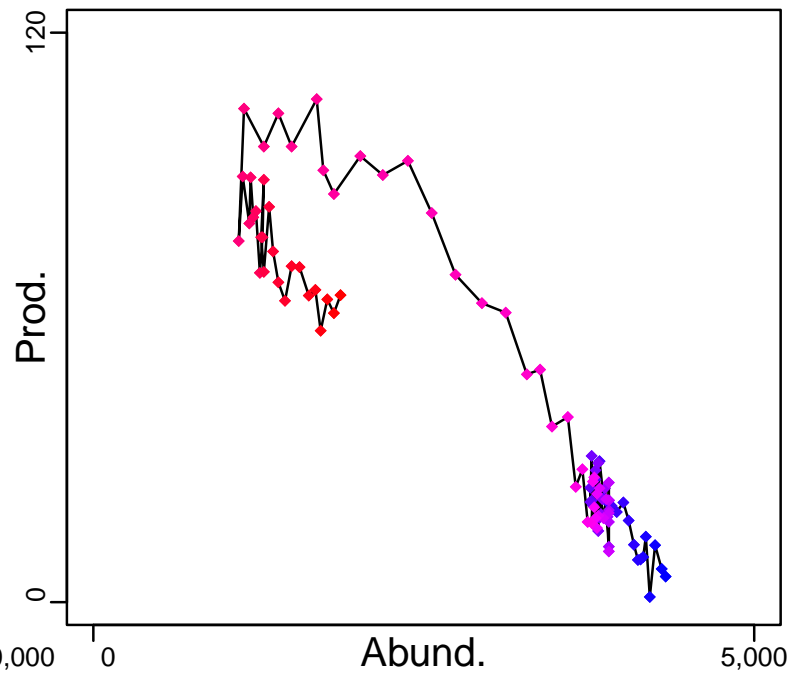
Kobe MGTpref (1916–2010–STACHURA)



Spawner Recruit (1916–2010–STACHURA)



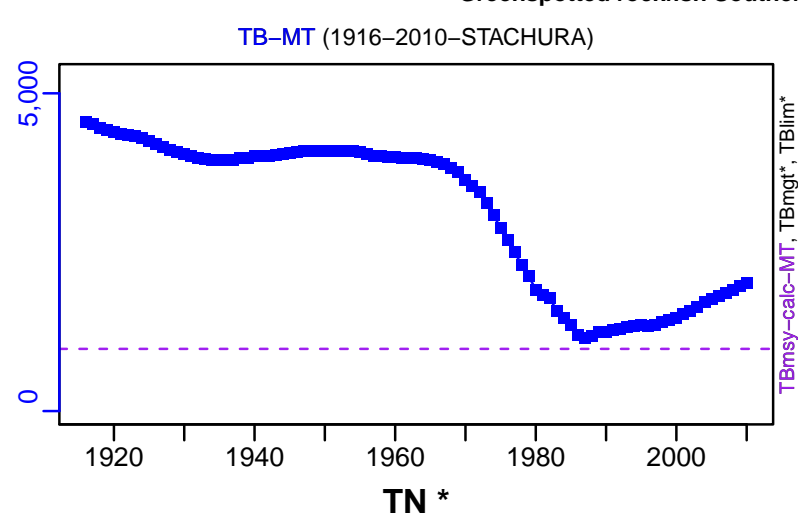
Production (1916–2010–STACHURA)



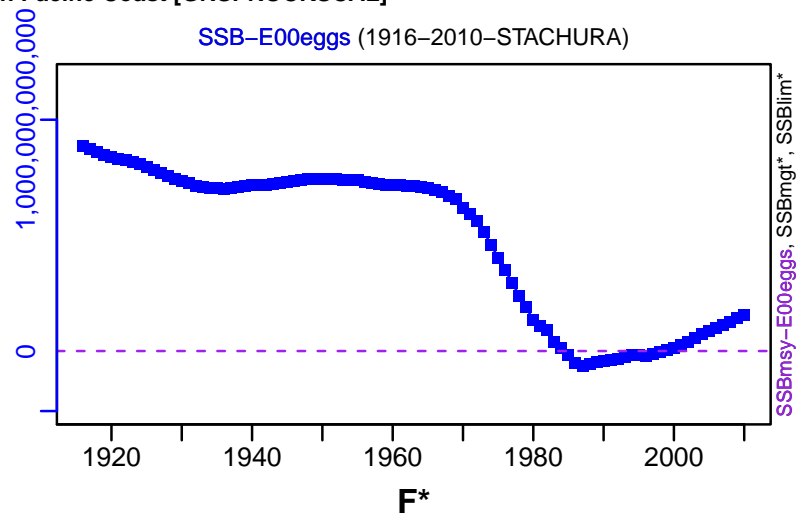
◆ Start Year ◆ End Year \* No Data

# Greenspotted rockfish Southern Pacific Coast [GRSPROCKSCAL]

TB-MT (1916-2010-STACHURA)

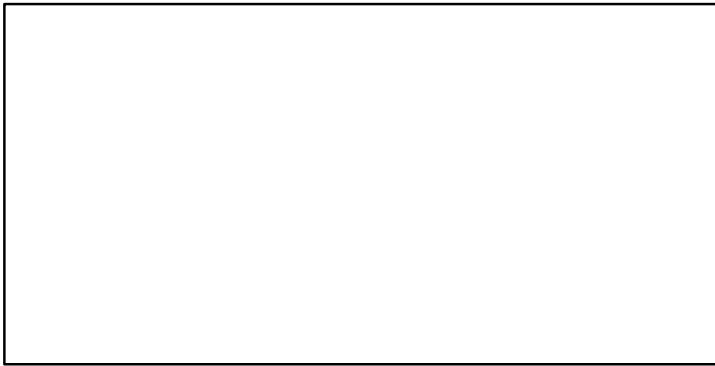


SSB-E00eggs (1916-2010-STACHURA)

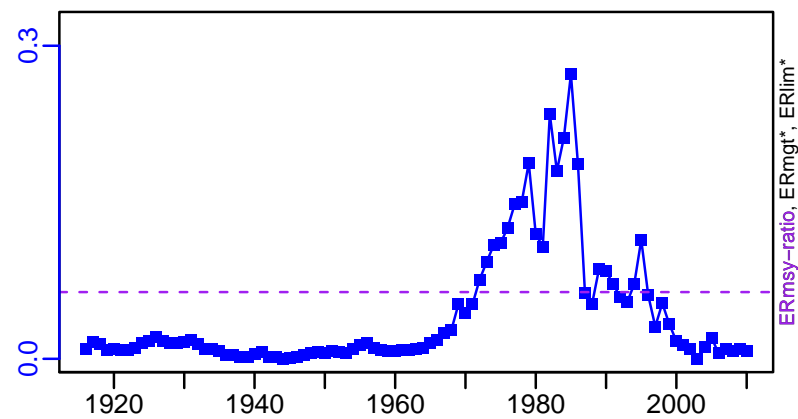


TN \*

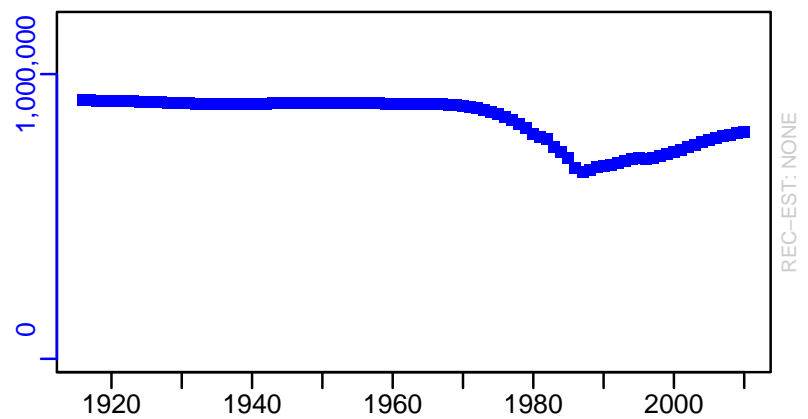
F\*



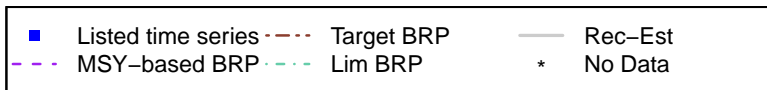
ER-ratio (1916-2010-STACHURA)



R-E00 (1916-2010-STACHURA)



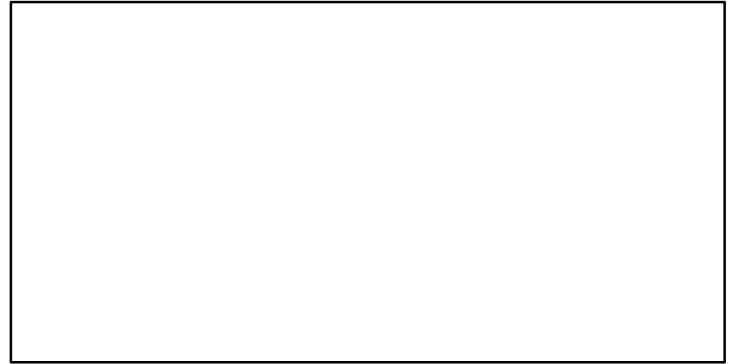
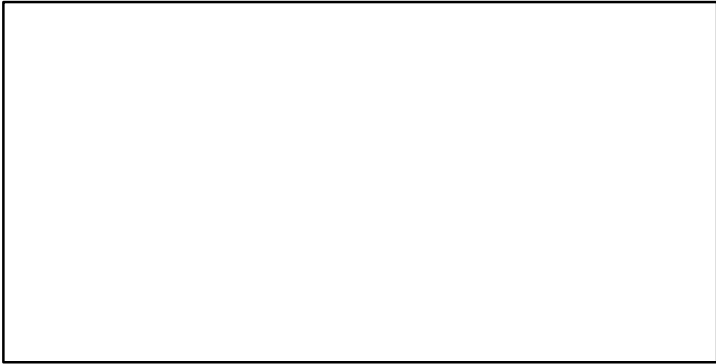
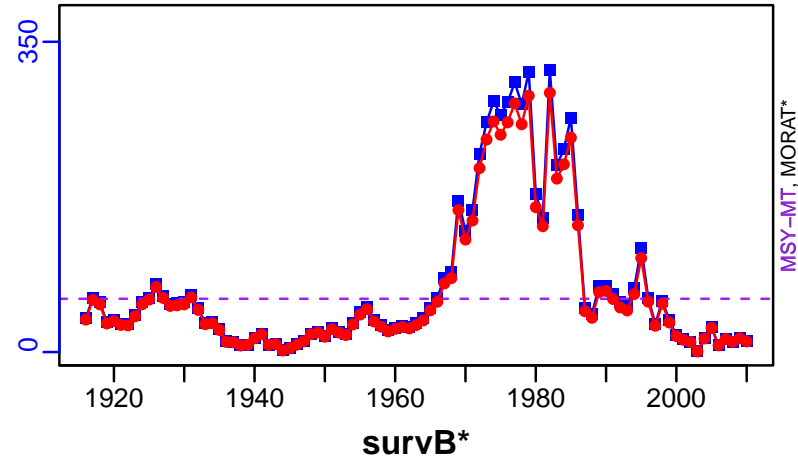
REC-EST: NONE



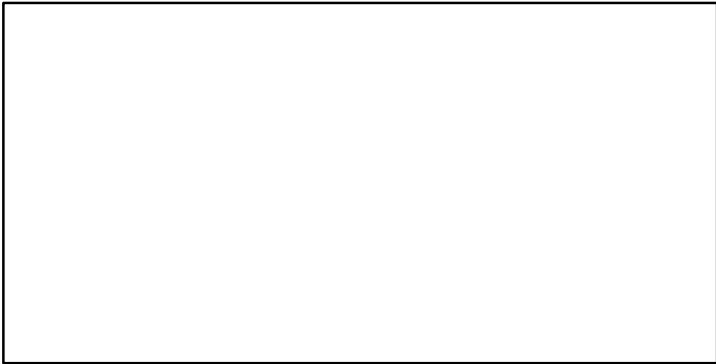
# Greenspotted rockfish Southern Pacific Coast [GRSPROCKSCAL]

TC-MT, TL-MT, RecC\* (1916-2010-STACHURA)

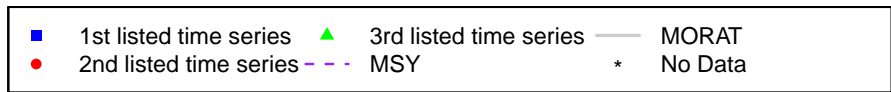
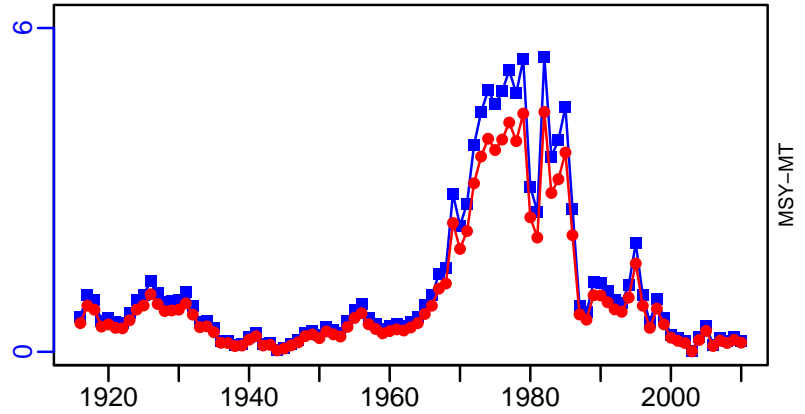
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1916-2010-STACHURA)



## Kichiji rockfish North Pacific [KCROCKNPAC]

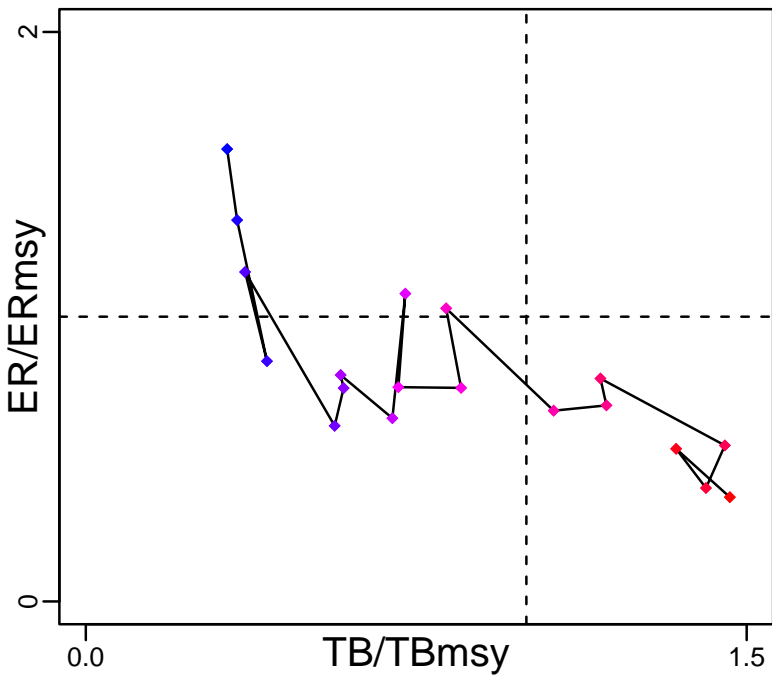
Metadata	
<b>Scientific Name</b>	Sebastolobus macrochir
<b>Current Assess ID</b>	FAFRFJ-KCROCKNPAC-1975-2013-JPNIMP2016
<b>Area</b>	North Pacific
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2013	4426
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.168
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-calc-MT	2013	744
<b>M</b>	M-1/yr	2013	0.125
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

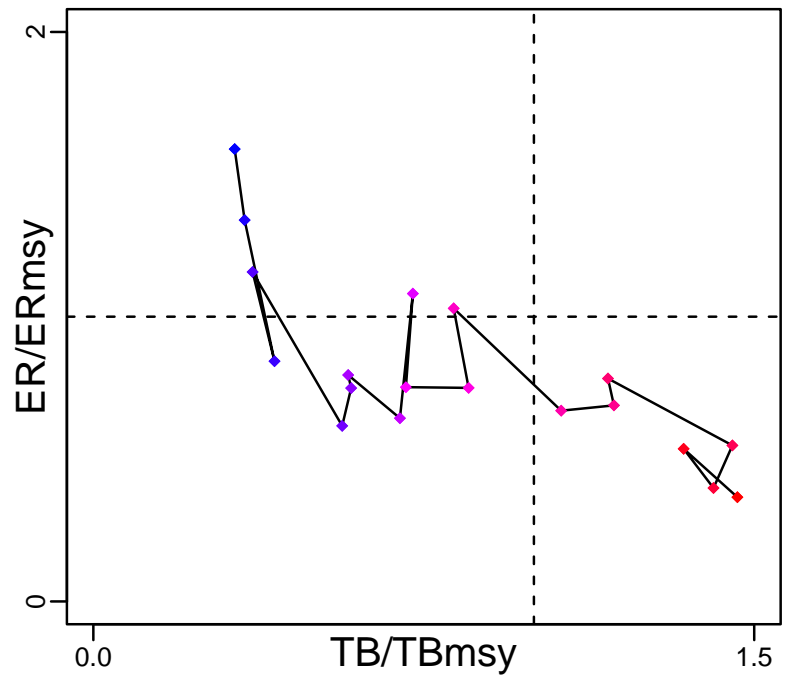
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	6470	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-calc-ratio	2013	0.062	-	-
<b>TC</b>	TC-MT	2013	398		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2013	1.462		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2013	0.366		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Kichiji rockfish North Pacific [KCROCKNPAC]

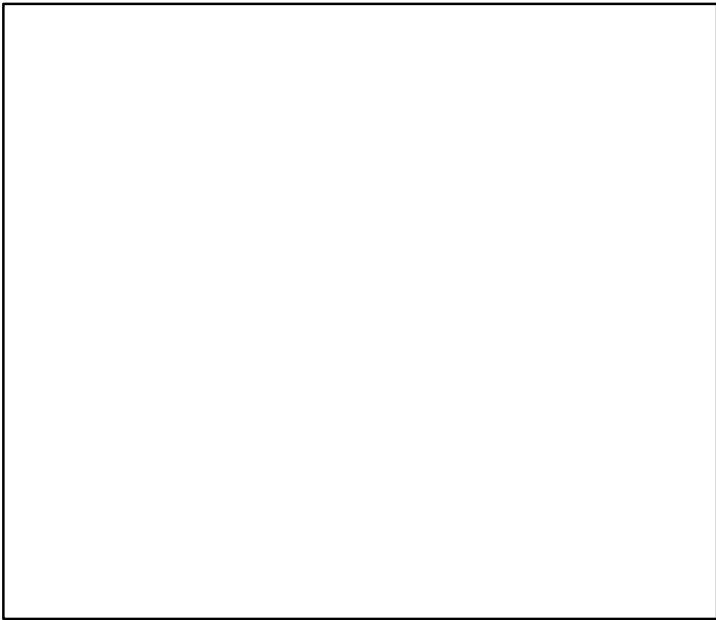
Kobe MSYpref (1975–2013–JPNIMP2016)



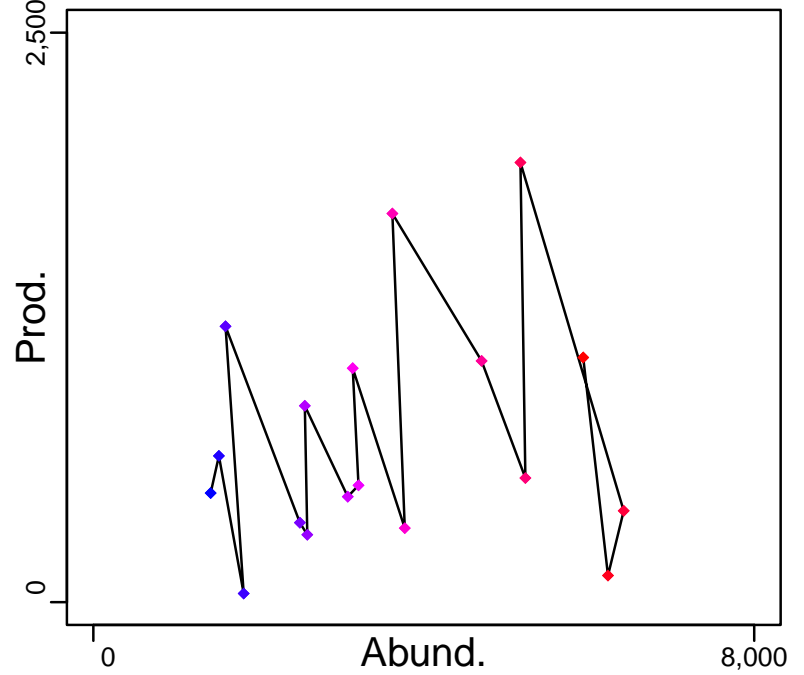
Kobe MGTpref (1975–2013–JPNIMP2016)



Spawner Recruit\*



Production (1975–2013–JPNIMP2016)



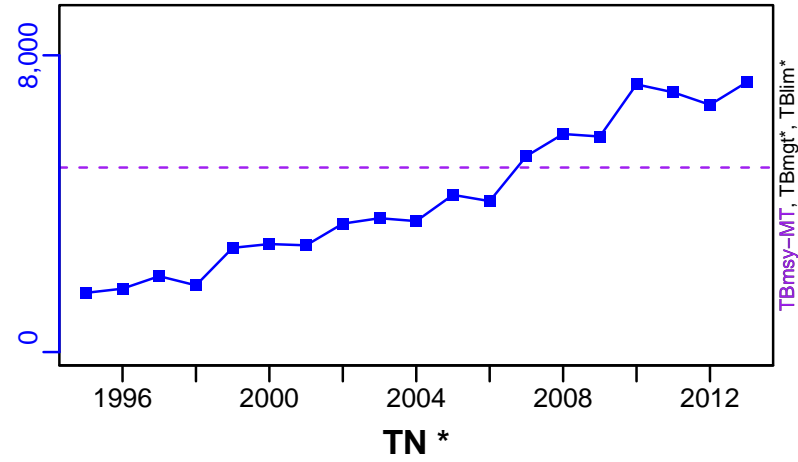
◆ Start Year ◆ End Year \* No Data



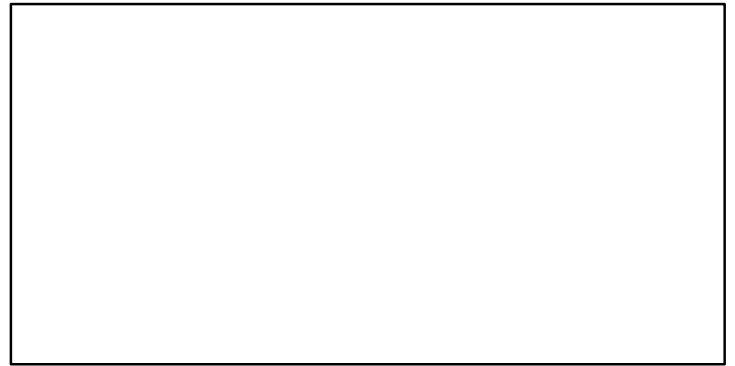
# Kichiji rockfish North Pacific [KCROCKNPAC]

TB-MT (1975-2013-JPNIMP2016)

SSB\*

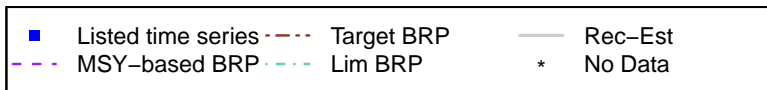
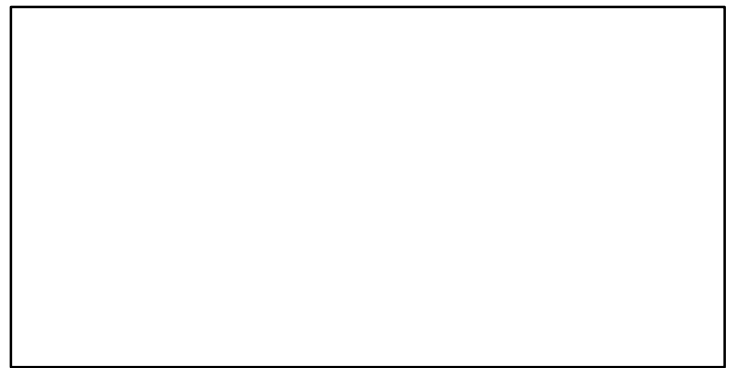
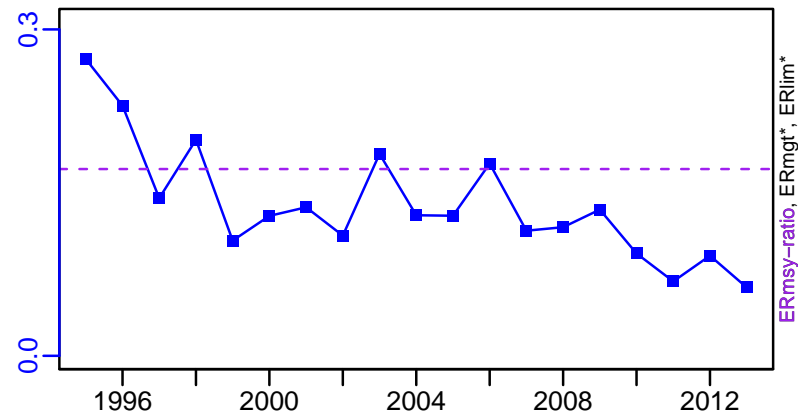


F\*



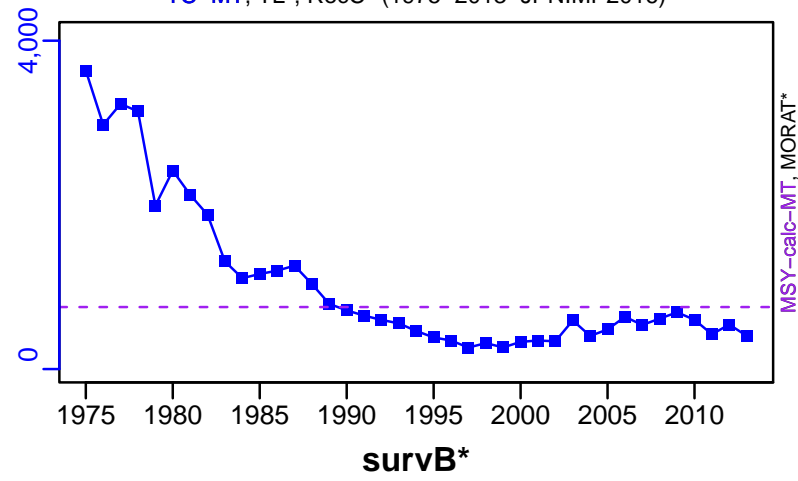
ER-calc-ratio (1975-2013-JPNIMP2016)

Recruits\*



# Kichiji rockfish North Pacific [KCROCKNPAC]

TC-MT, TL\*, RecC\* (1975–2013–JPNIMP2016)



TAC\*, Cpair\*, Cadv\*



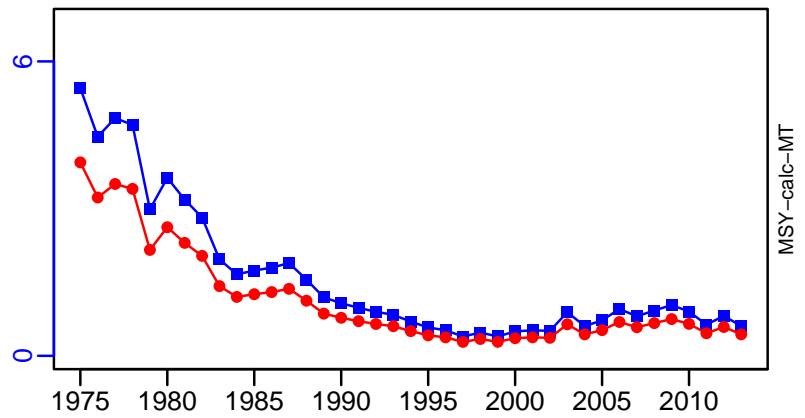
CPUE\*



EFFORT\*



TC-MT/MSY-calc-MT, CdivMEANC-ratio, (1975–2013–JPNIMP2016)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
 ● 2nd listed time series    - - - MSY    \* No Data

## Kichiji rockfish Okhotsk Sea [KCROCKOKS]

Metadata	
<b>Scientific Name</b>	Sebastolobus macrochir
<b>Current Assess ID</b>	FAFRFJ-KCROCKOKS-1975-2013-JPNIMP2016
<b>Area</b>	Okhotsk Sea
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	309		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year    ◆ End Year    \* No Data

Kichiji rockfish Okhotsk Sea [KCROCKOKS]

TB\*



SSB\*



TN \*



F\*



ER\*



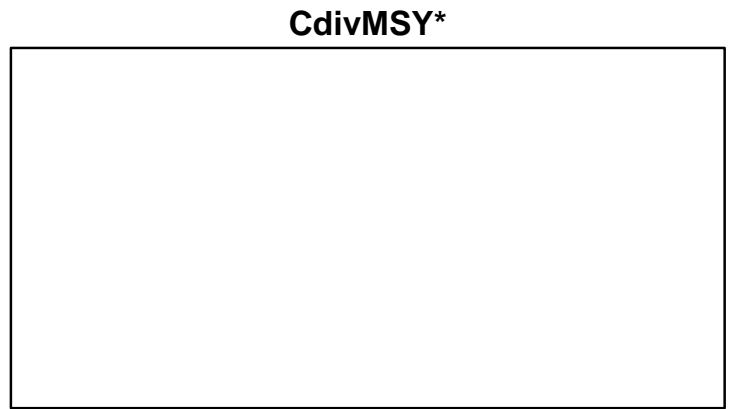
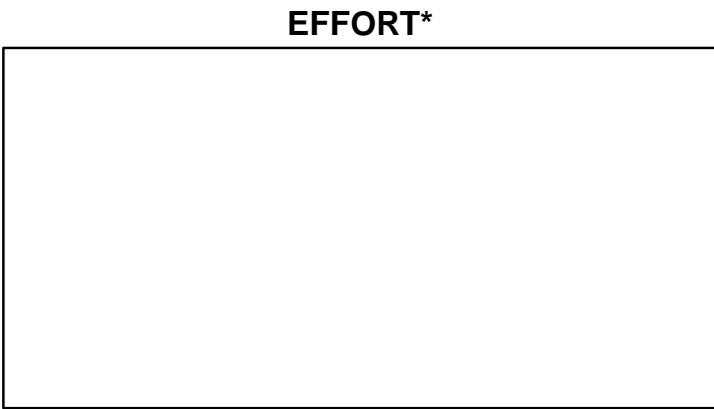
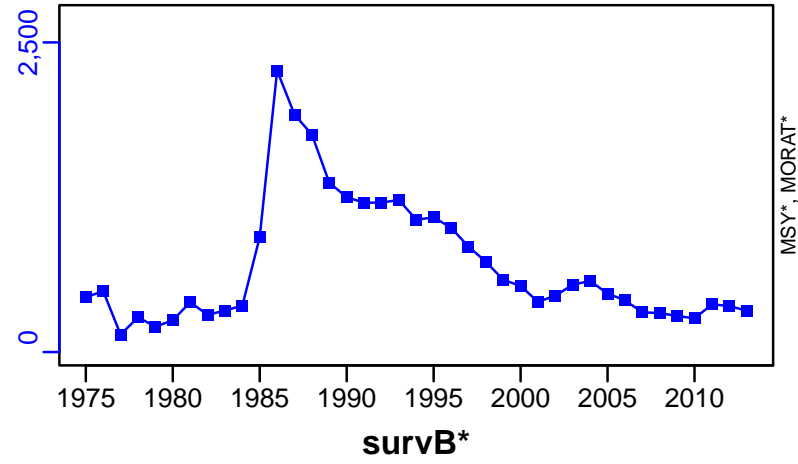
Recruits\*



# Kichiji rockfish Okhotsk Sea [KCROCKOKS]

TC-MT, TL\*, RecC\* (1975-2013-JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



# Kichiji rockfish Southwestern coast of Hokkaido [KCROCKSWHOKK]

Metadata	
<b>Scientific Name</b>	Sebastolobus macrochir
<b>Current Assess ID</b>	FAFRFJ-KCROCKSWHOKK-1975-2013-JPNIMP2016
<b>Area</b>	Southwestern coast of Hokkaido
<b>Management Authority</b>	Fisheries Agency of Japan
<b>Assessor</b>	Fisheries Agency and Fisheries Research Agency of Japan
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2013	363		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year ◆ End Year \* No Data



Kichiji rockfish Southwestern coast of Hokkaido [KCROCKSWHOKK]

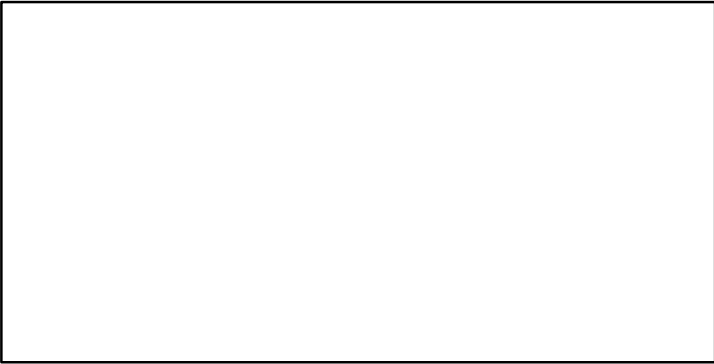
**TB\***



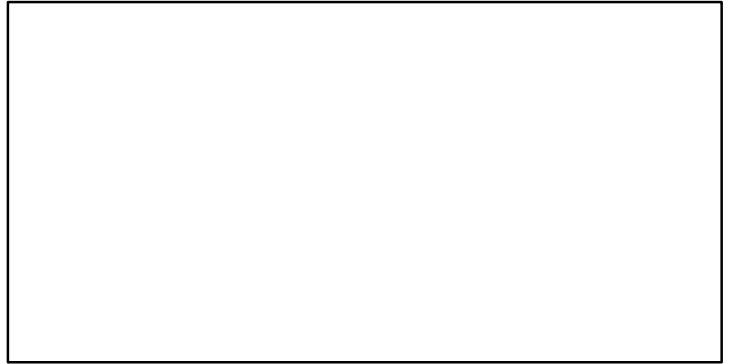
**SSB\***



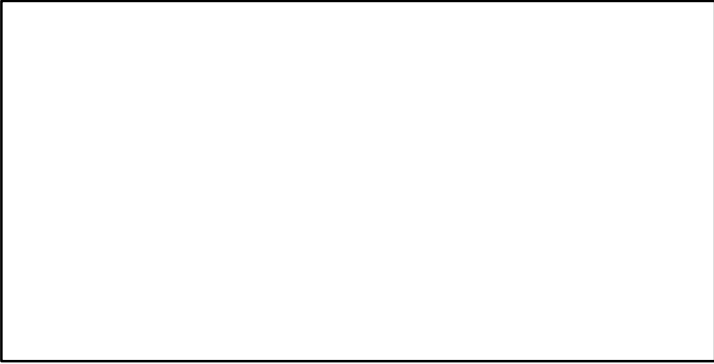
**TN \***



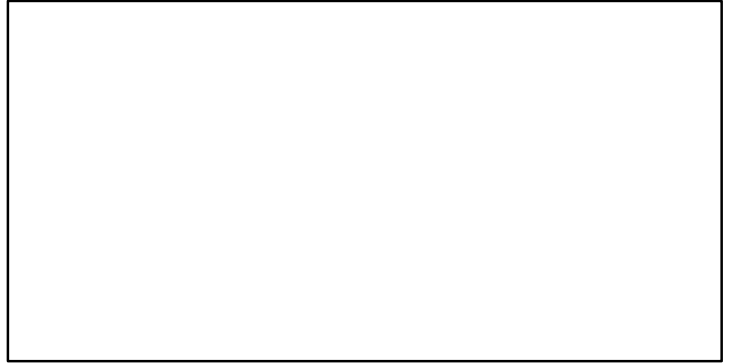
**F\***



**ER\***



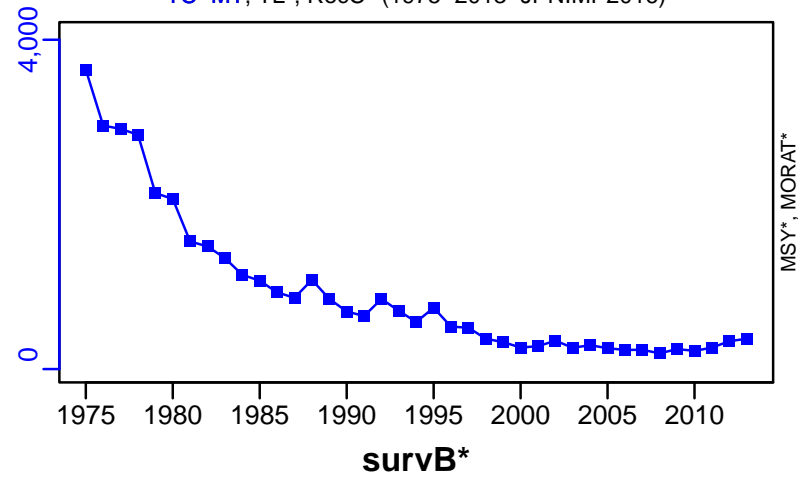
**Recruits\***



# Kichiji rockfish Southwestern coast of Hokkaido [KCROCKSWHOKK]

TC-MT, TL\*, RecC\* (1975–2013–JPNIMP2016)

TAC\*, Cpair\*, Cadv\*



## Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]

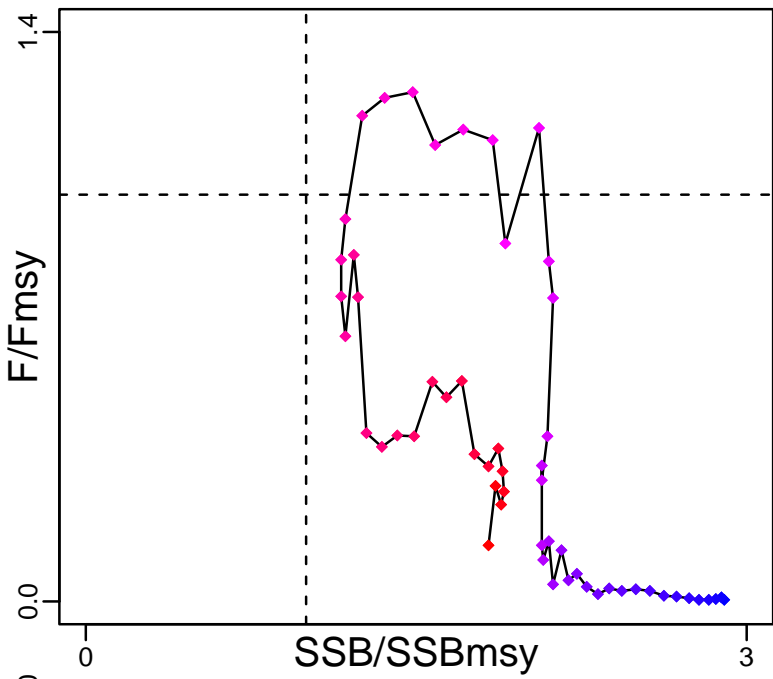
Metadata	
<b>Scientific Name</b>	Sebastes altivelis
<b>Current Assess ID</b>	NWFSC-LSTHORNHPCOAST-1964-2019-SISIMP2021-2
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2012, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2012	36,129
<b>SSBmsy</b>	SSBmsy-MT	2019	15,700
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	ERmsy-ratio	2012	0.07
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2012	15,654
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2012	0.06
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2019	2490
<b>M</b>	M-1/yr	2012	0.11
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2019	9780
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

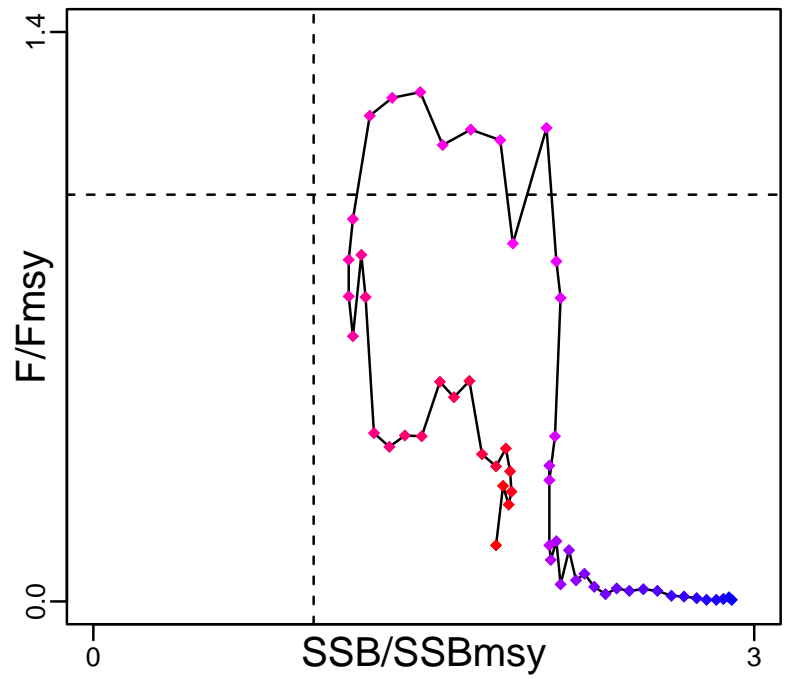
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2012	68,300	-	2+
<b>SSB</b>	SSB-MT	2019	28,400	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	$1.28 \times 10^8$	-	0
<b>F</b>	F-1/yr	2019	0.069	-	-
<b>ER</b>	ER-ratio	2012	0.01	-	-
<b>TC</b>	TC-MT	2019	371		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2012	1.89		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2019	1.809		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.138		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2012	0.143		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2012	1.833		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]

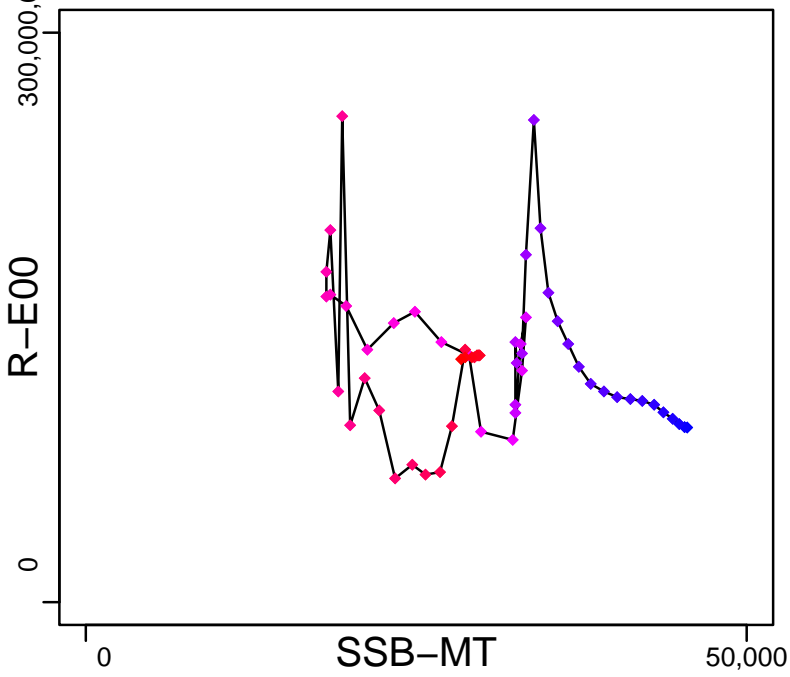
Kobe MSYpref (1964–2019–SISIMP2021–2)



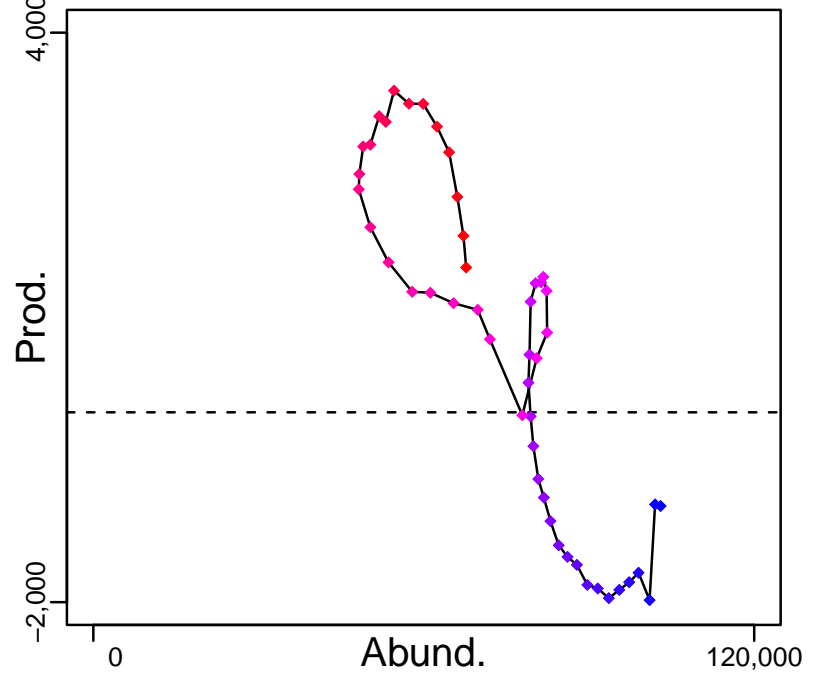
Kobe MGTpref (1964–2019–SISIMP2021–2)



Spawner Recruit (1964–2019–SISIMP2021–2)



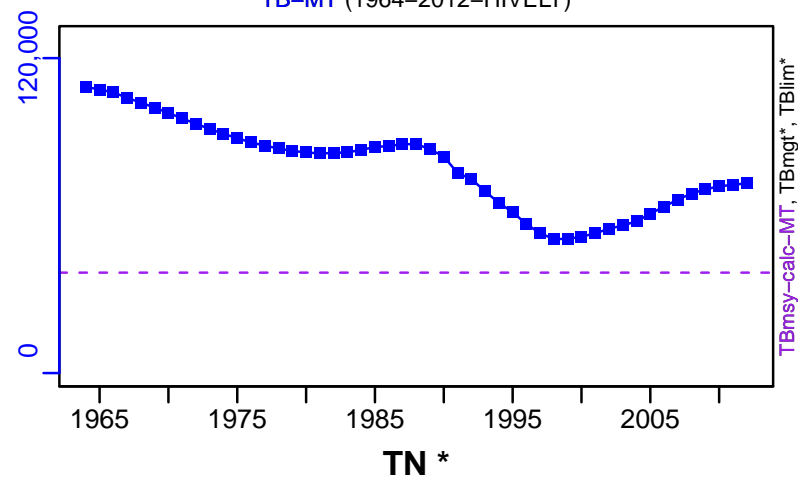
Production (1964–2012–HIVELY)



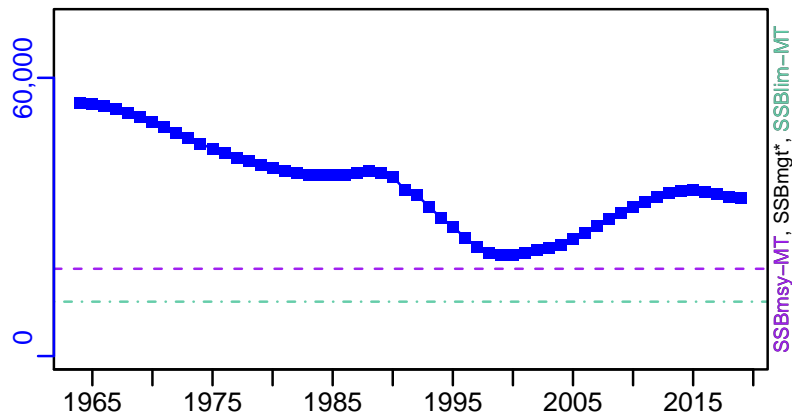
◆ Start Year ◆ End Year \* No Data

# Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]

TB-MT (1964–2012–HIVELY)



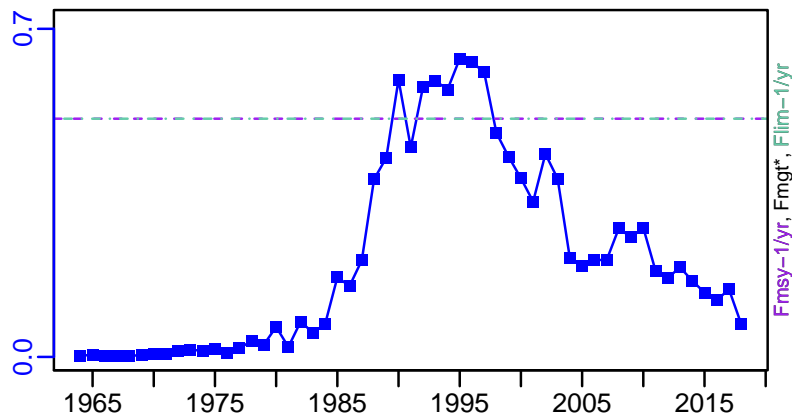
SSB-MT (1964–2019–SISIMP2021–2)



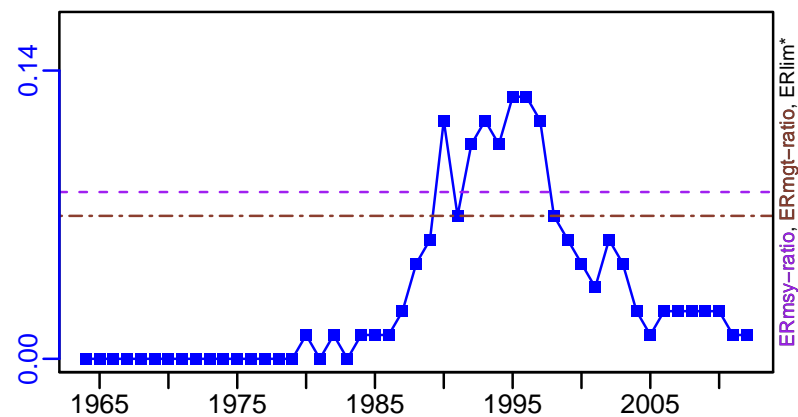
TN \*



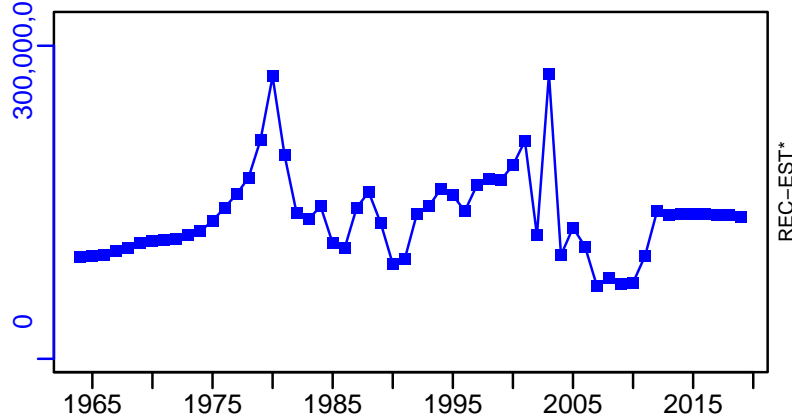
F-1/yr (1964–2019–SISIMP2021–2)



ER-ratio (1964–2012–HIVELY)

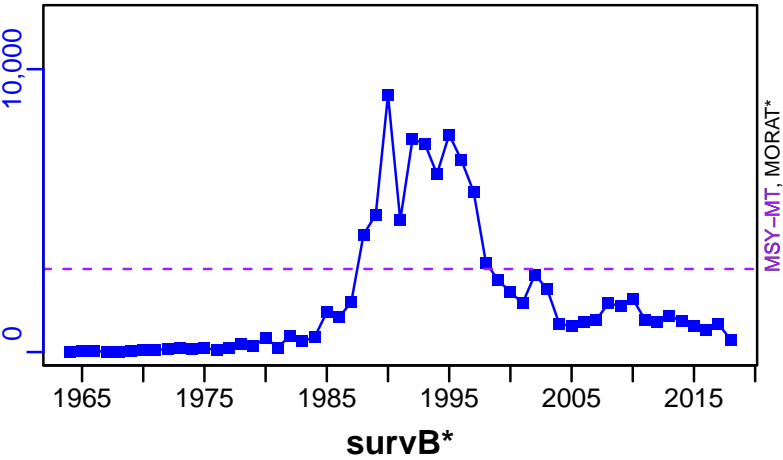


R-E00 (1964–2019–SISIMP2021–2)



Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]

TC-MT, TL\*, RecC\* (1964-2019-SISIMP2021-2)



TAC\*, Cpair\*, Cadv\*



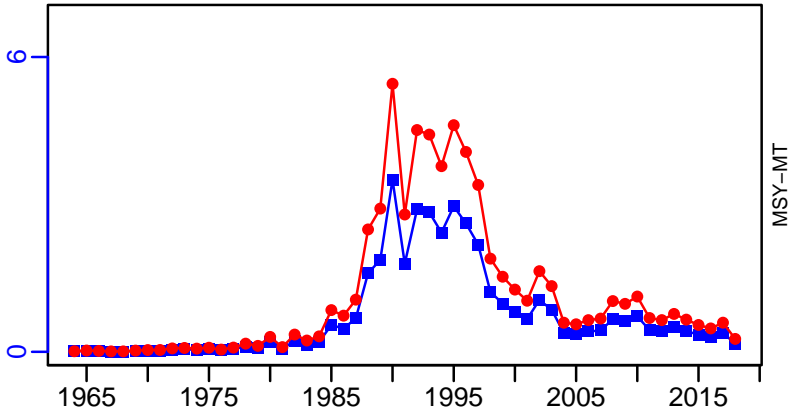
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1964-2019-SISIMP2021-2)



## Northern rockfish Bering Sea and Aleutian Islands [NROCKBSAI]

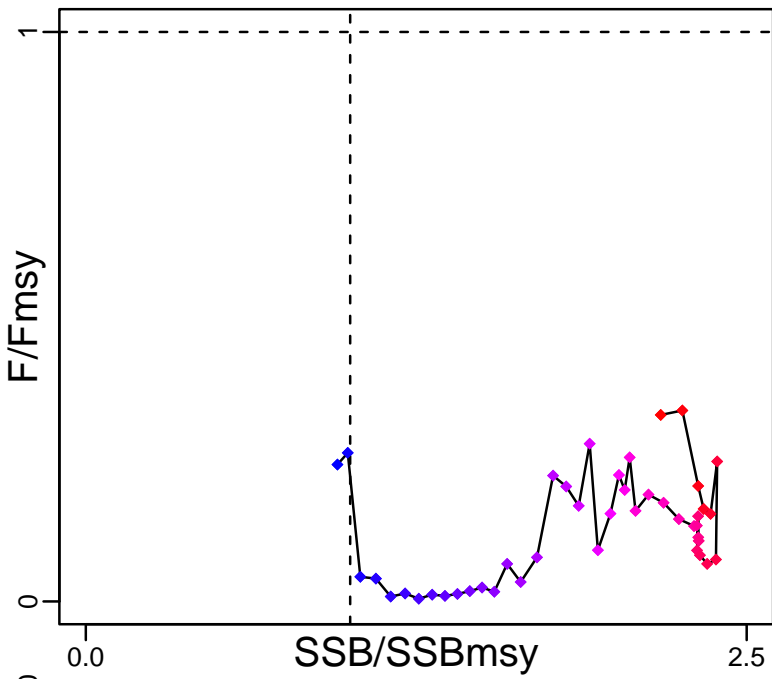
Metadata	
<b>Scientific Name</b>	Sebastes polypsinis
<b>Current Assess ID</b>	AFSC-NROCKBSAI-1974-2021-SISIMP2022
<b>Area</b>	Bering Sea and Aleutian Islands
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2011, 2016, 2017, 2018, 2021, 2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2021	60,119
<b>Fmsy</b>	Fmsy-1/yr	2021	0.085
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	Fmgt-1/yr	2016	0.07
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2011	0.043
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-1/yr	2019	0.055
<b>ERlim</b>	-	-	-

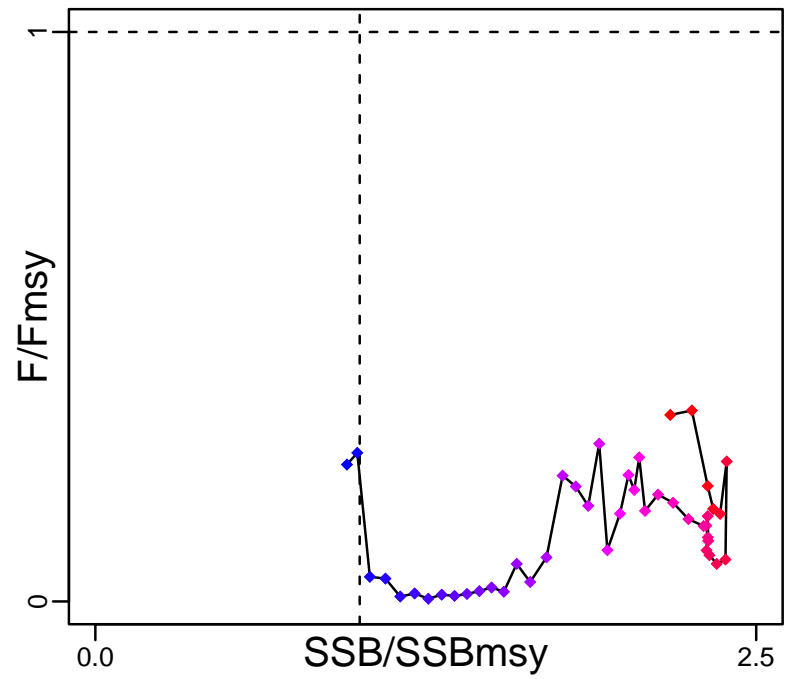
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	220,000	-	3+
<b>SSB</b>	SSB-MT	2021	125,932	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2021	63,498,500	-	3
<b>F</b>	F-1/yr	2021	0.028	-	-
<b>ER</b>	ER-calc-ratio	2015	0.011	-	-
<b>TC</b>	TC-MT	2021	8443		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2021	2.095		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2021	0.328		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	F-1/yr/Fmgt-1/yr	2016	0.295		
<b>ER/ERmgt</b>	-	-	-		

# Northern rockfish Bering Sea and Aleutian Islands [NROCKBSAI]

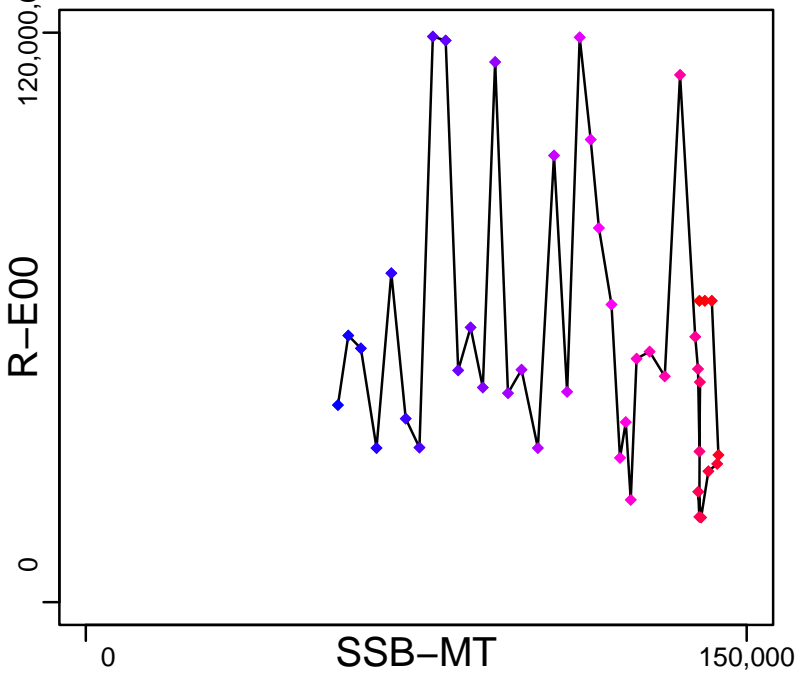
Kobe MSYpref (1974–2021–SISIMP2022)



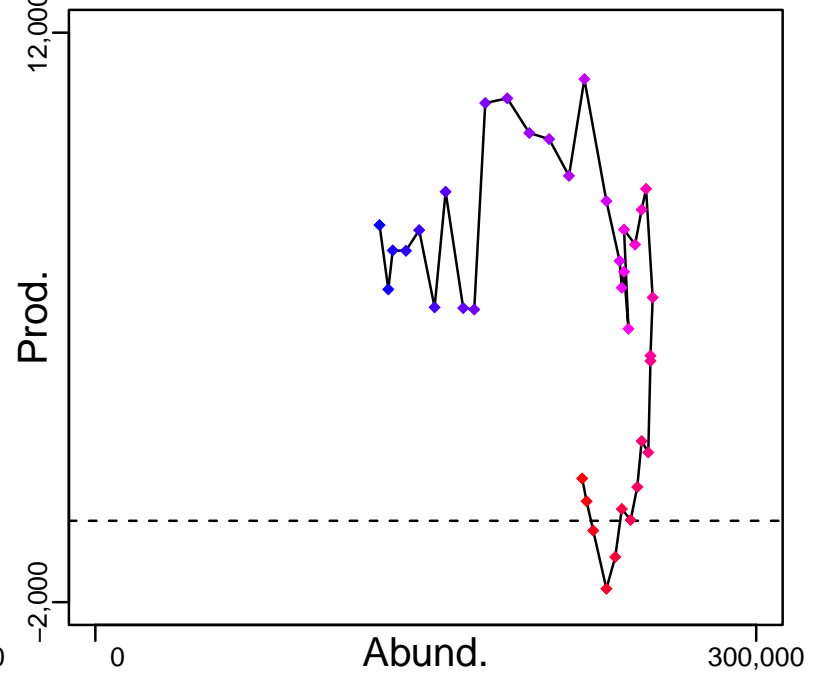
Kobe MGTpref (1974–2021–SISIMP2022)



Spawner Recruit (1974–2021–SISIMP2022)



Production (1977–2015–SISIMP2016)

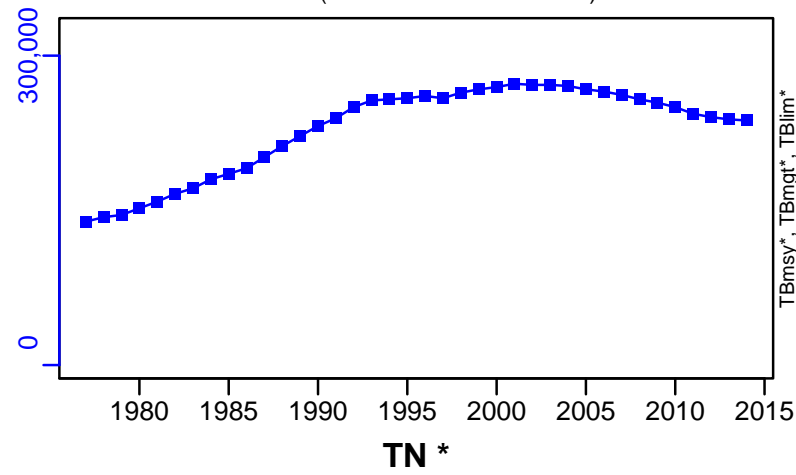


◆ Start Year ◆ End Year \* No Data

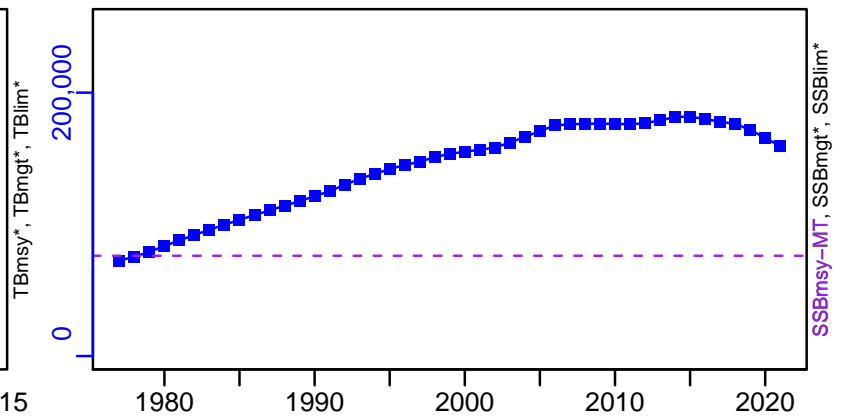


# Northern rockfish Bering Sea and Aleutian Islands [NROCKBSAI]

TB-MT (1977–2015–SISIMP2016)



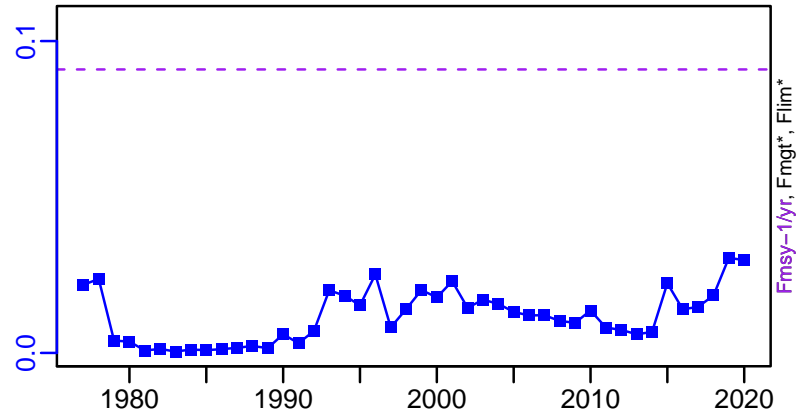
SSB-MT (1974–2021–SISIMP2022)



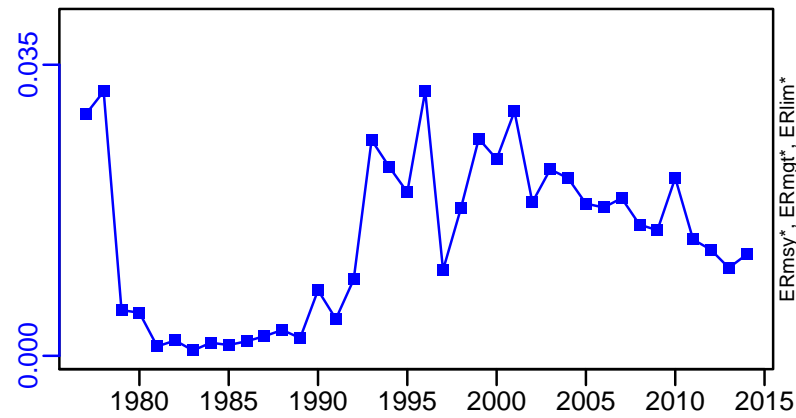
TN \*



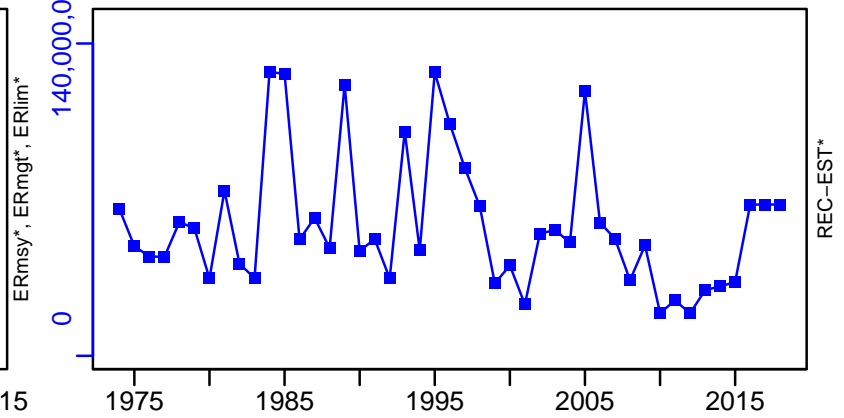
F-1/yr (1974–2021–SISIMP2022)



ER-calc-ratio (1977–2015–SISIMP2016)



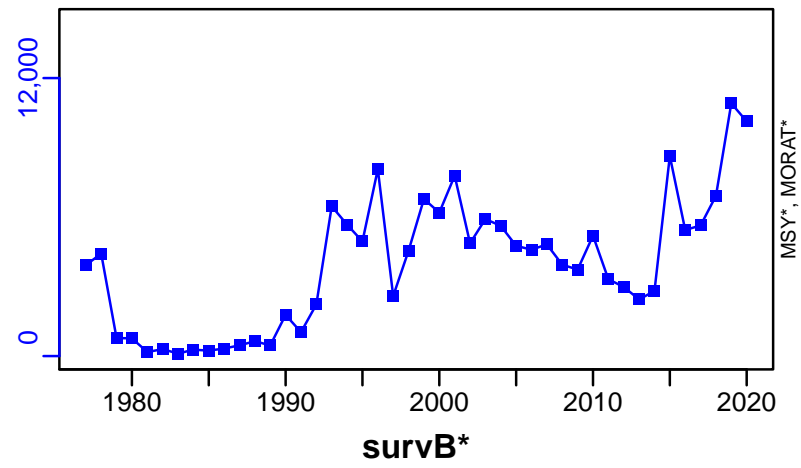
R-E00 (1974–2021–SISIMP2022)



# Northern rockfish Bering Sea and Aleutian Islands [NROCKBSAI]

TC-MT, TL\*, RecC\* (1974-2021-SISIMP2022)

TAC\*, Cpair\*, Cadv\*



## Northern rockfish Gulf of Alaska [NROCKGA]

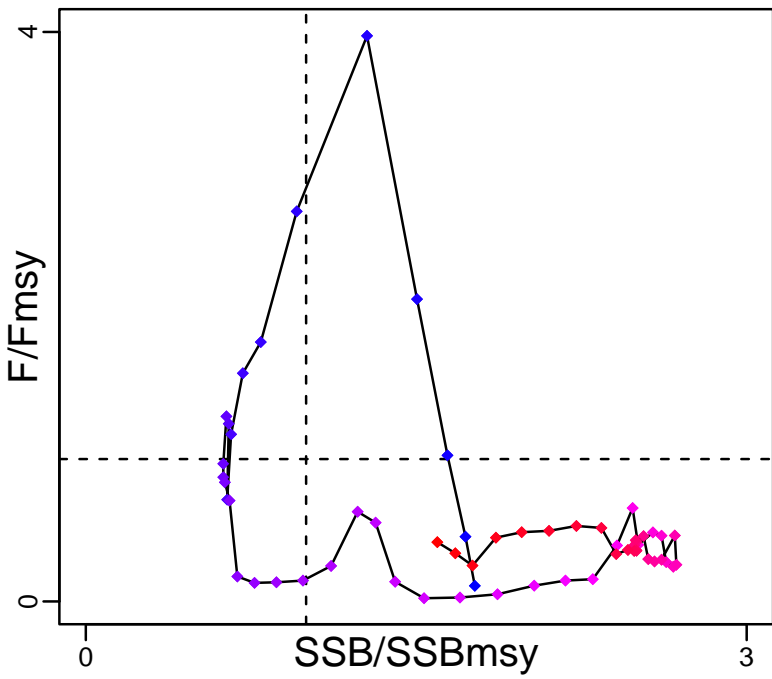
Metadata	
<b>Scientific Name</b>	Sebastes polyspinis
<b>Current Assess ID</b>	AFSC-NROCKGA-1961-2020-SISIMP2021-2
<b>Area</b>	Gulf of Alaska
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2010, 2016, 2017, 2018, 2015, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2010	64,270
<b>SSBmsy</b>	SSBmsy-MT	2020	28,200
<b>Fmsy</b>	Fmsy-1/yr	2020	0.073
<b>ERmsy</b>	ERmsy-ratio	2010	0.094
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2010	6070
<b>M</b>	M-1/yr	2010	0.06
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-1/yr	2020	0.064
<b>ERlim</b>	-	-	-

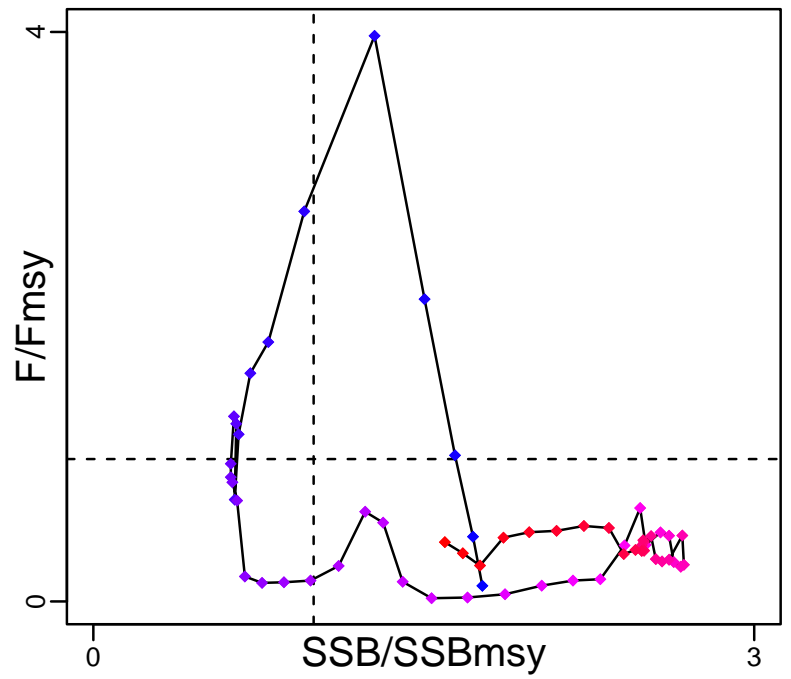
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	81,900	-	2+
<b>SSB</b>	SSB-MT	2020	42,600	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2020	10,500,000	-	2
<b>F</b>	F-1/yr	2020	0.03	-	-
<b>ER</b>	ER-ratio	2017	0.054	-	-
<b>TC</b>	TC-MT	2020	2750		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2010	1.603		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2020	1.511		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2020	0.416		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2010	0.366		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Northern rockfish Gulf of Alaska [NROCKGA]

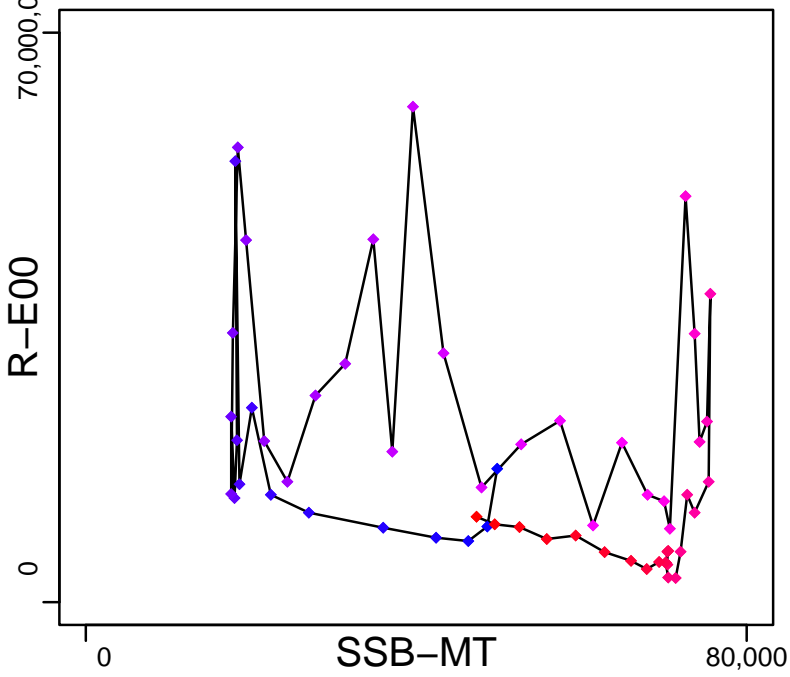
Kobe MSYpref (1961–2020–SISIMP2021–2)



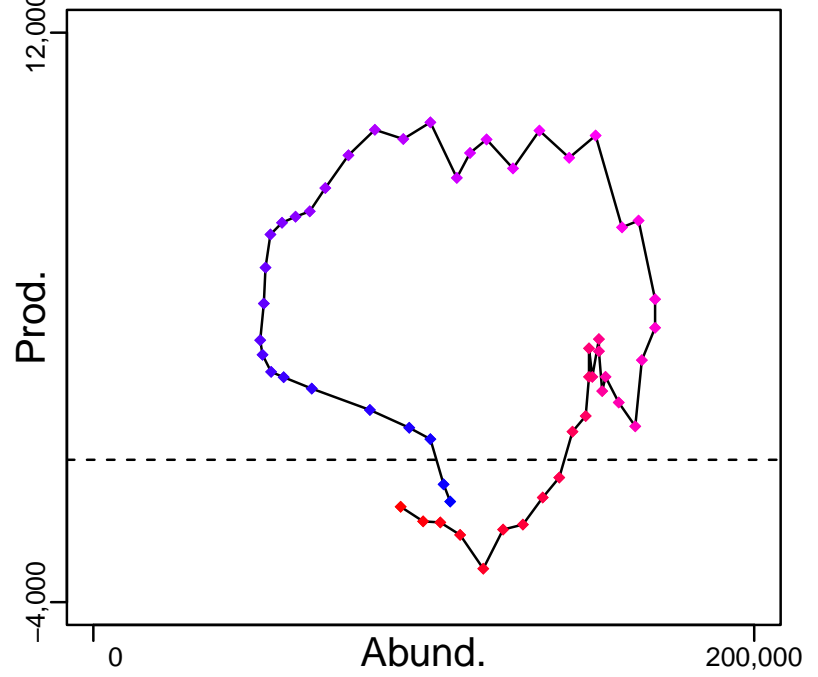
Kobe MGTpref (1961–2020–SISIMP2021–2)



Spawner Recruit (1961–2020–SISIMP2021–2)



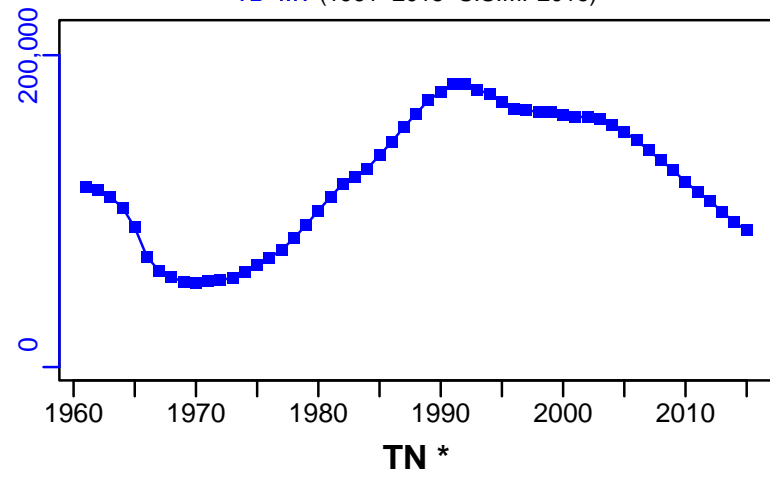
Production (1961–2015–SISIMP2016)



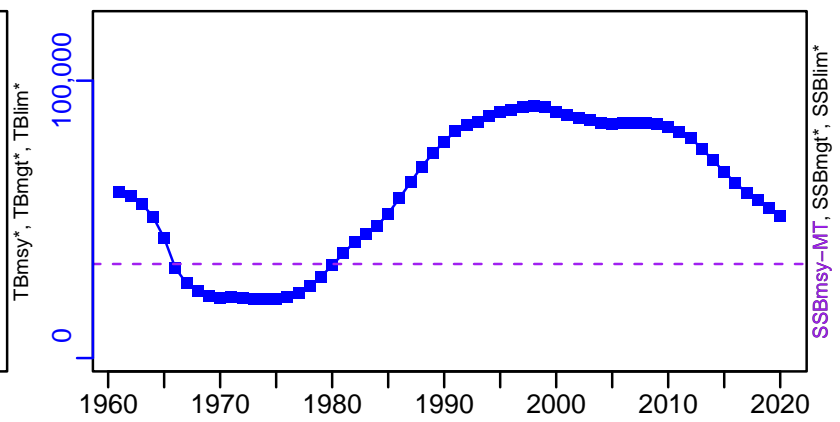
◆ Start Year ◆ End Year \* No Data

# Northern rockfish Gulf of Alaska [NROCKGA]

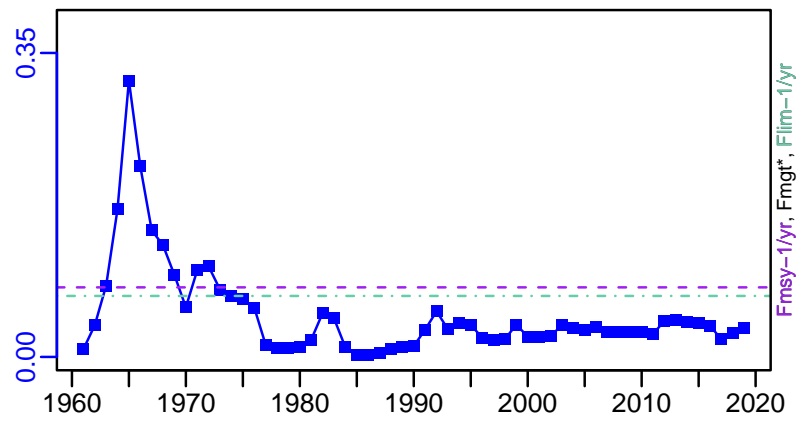
TB-MT (1961–2015–SISIMP2016)



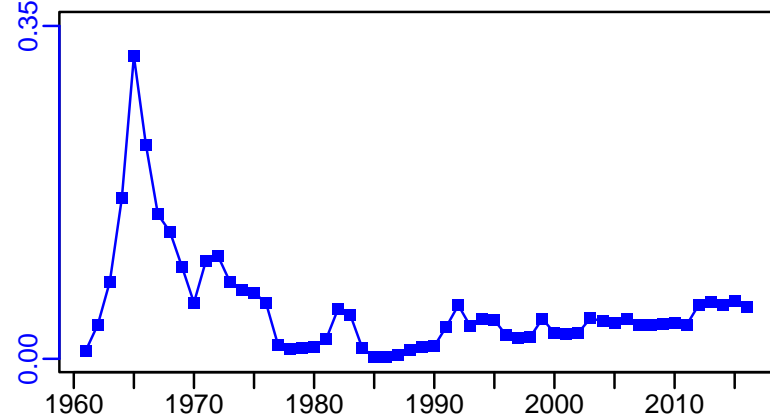
SSB-MT (1961–2020–SISIMP2021–2)



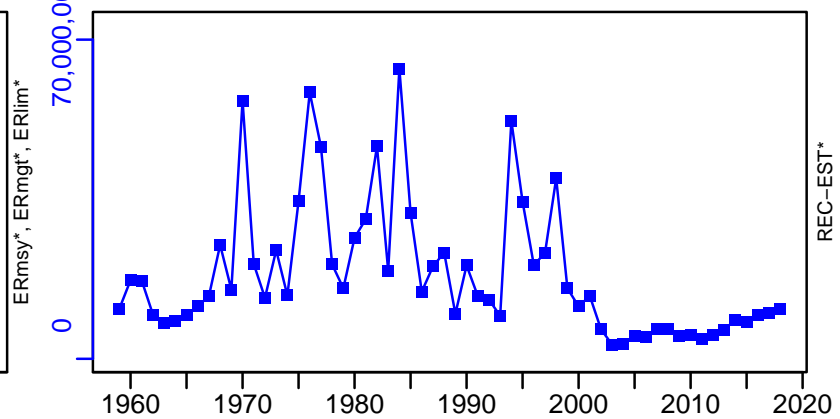
F-1/yr (1961–2020–SISIMP2021–2)



ER-ratio (1959–2017–SISIMP2021)

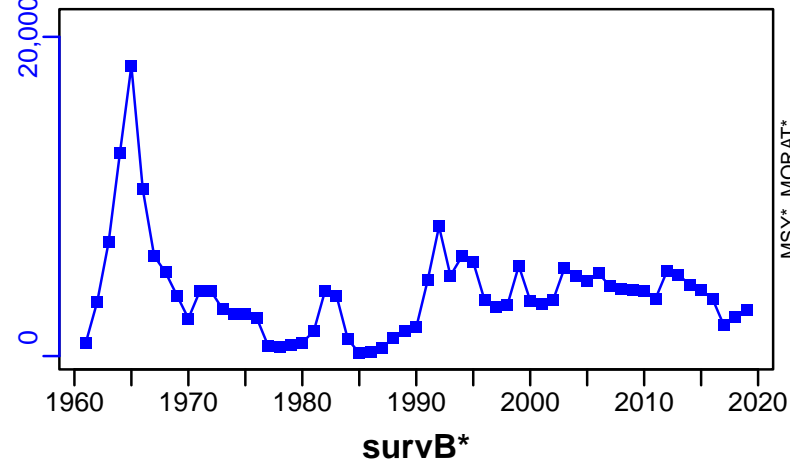


R-E00 (1961–2020–SISIMP2021–2)



# Northern rockfish Gulf of Alaska [NROCKGA]

TC-MT, TL\*, RecC\* (1961-2020-SISIMP2021-2)



TAC\*, Cpair\*, Cadv\*



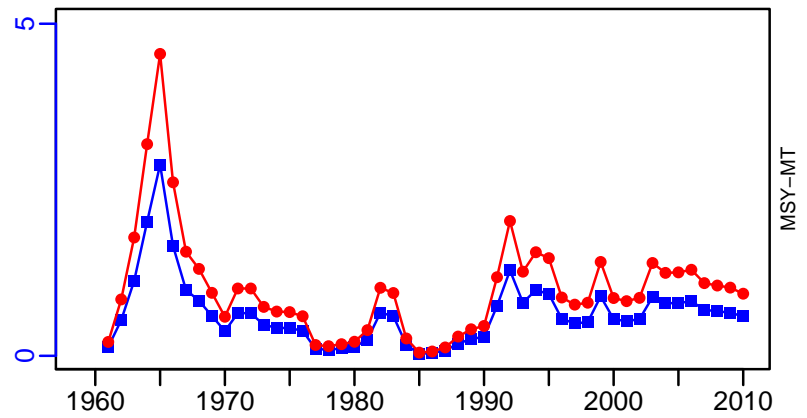
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1959-2010-STACHURA)



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
 ● 2nd listed time series    - - - MSY    \* No Data

## Pacific ocean perch Eastern Bering Sea and Aleutian Islands [PERCHEBSAI]

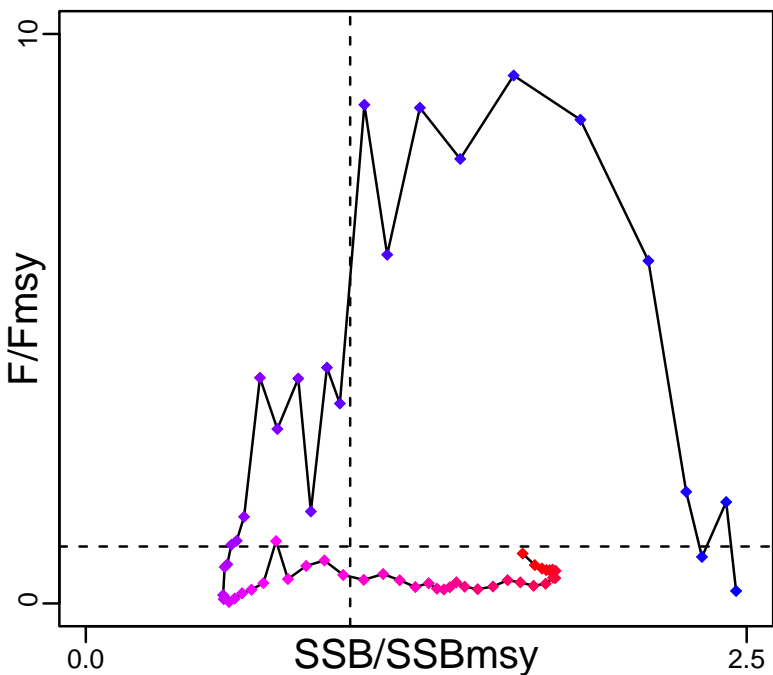
Metadata	
<b>Scientific Name</b>	Sebastes alutus
<b>Current Assess ID</b>	AFSC-PERCHEBSAI-1957-2021-SISIMP2022
<b>Area</b>	Eastern Bering Sea and Aleutian Islands
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2016, 2017, 2018, 2021, 2011, 2015, 2018, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2021	204,661
<b>Fmsy</b>	Fmsy-1/yr	2021	0.089
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2011	0.062
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-1/yr	2020	0.111
<b>ERlim</b>	-	-	-

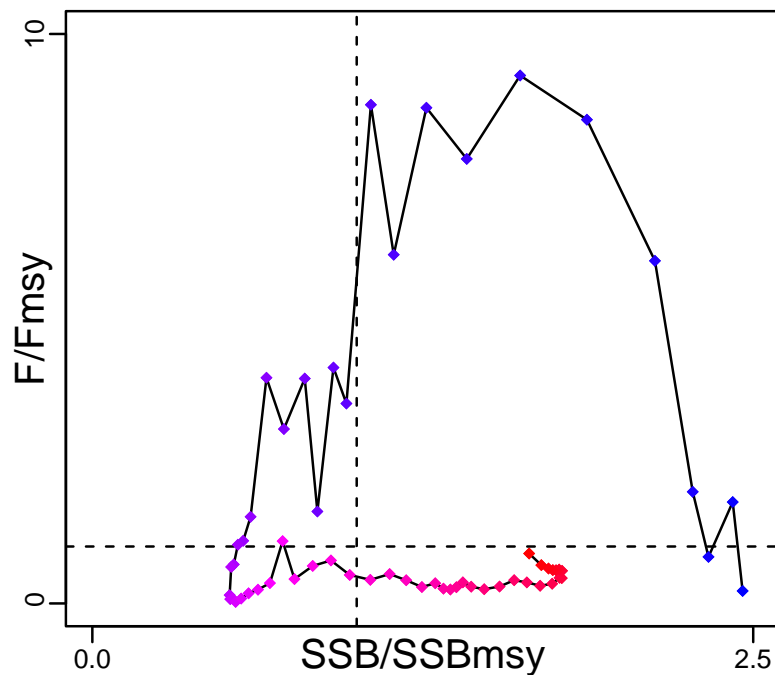
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	598,000	Both	3+
<b>SSB</b>	SSB-MT	2021	310,036	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2021	99,395,000	-	3
<b>F</b>	F-1/yr	2021	0.078	-	-
<b>ER</b>	ER-calc-ratio	2015	0.054	-	-
<b>TC</b>	TC-MT	2021	40,417		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2021	1.515		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2021	0.877		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Pacific ocean perch Eastern Bering Sea and Aleutian Islands [PERCHEBSAI]

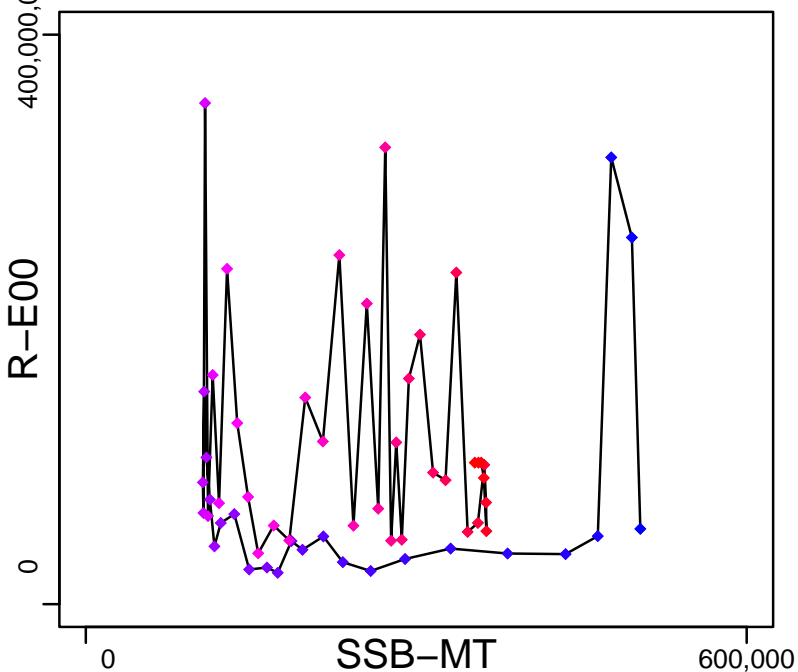
Kobe MSY<sub>pref</sub> (1957–2021–SISIMP2022)



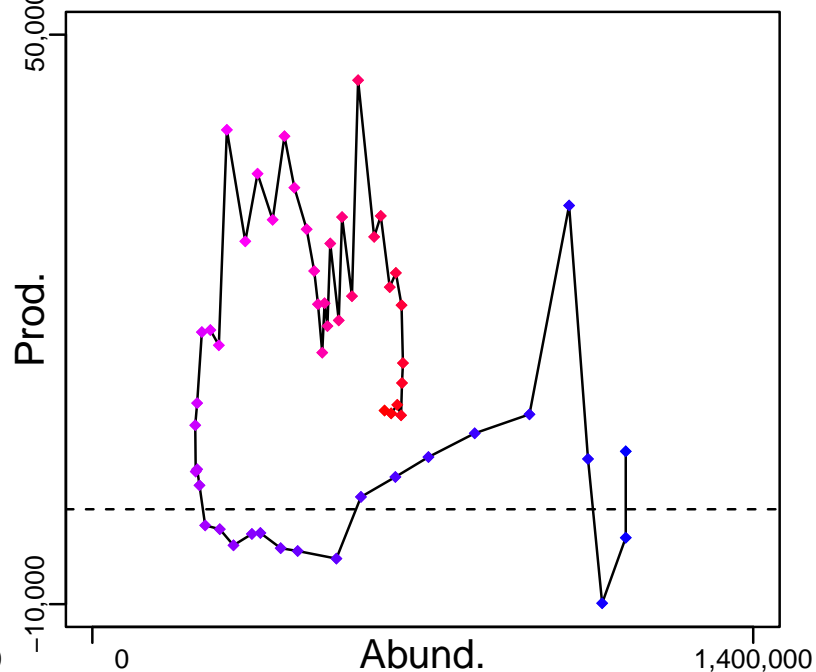
Kobe MGT<sub>pref</sub> (1957–2021–SISIMP2022)



Spawner Recruit (1957–2021–SISIMP2022)



Production (1960–2015–SISIMP2016)

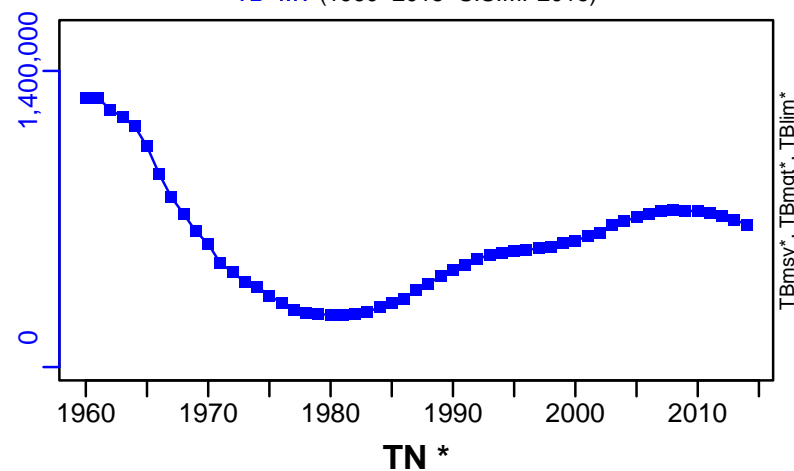


◆ Start Year ◆ End Year \* No Data

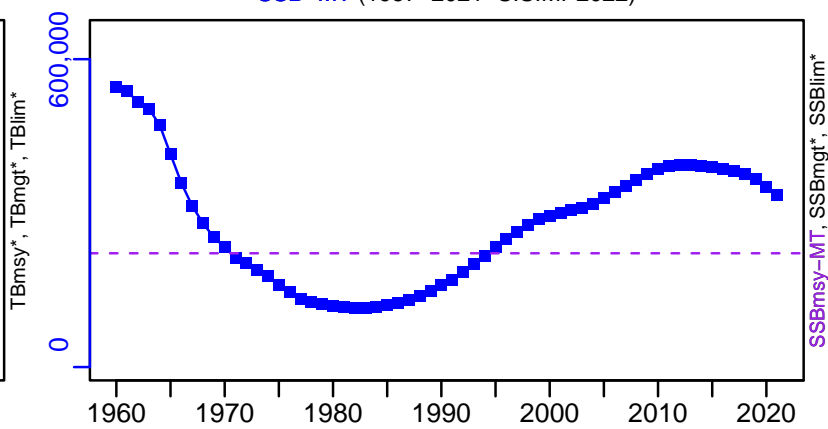


# Pacific ocean perch Eastern Bering Sea and Aleutian Islands [PERCHEBSAI]

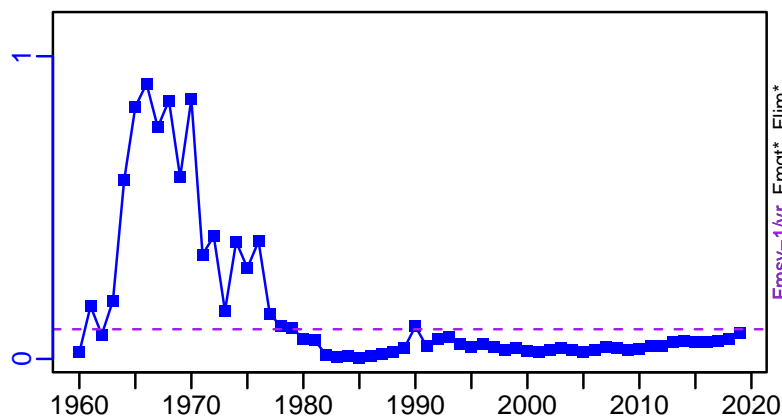
TB-MT (1960–2015–SISIMP2016)



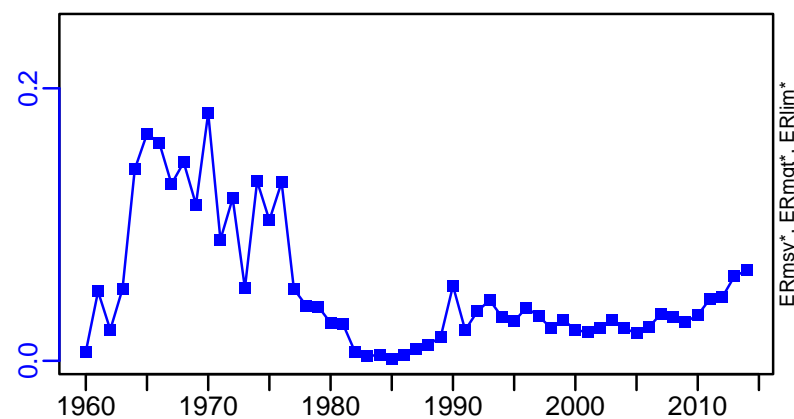
SSB-MT (1957–2021–SISIMP2022)



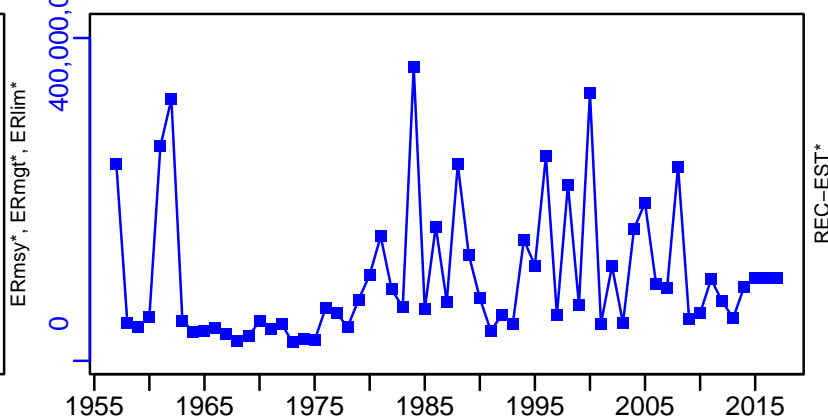
F-1/yr (1957–2021–SISIMP2022)



ER-calc-ratio (1960–2015–SISIMP2016)

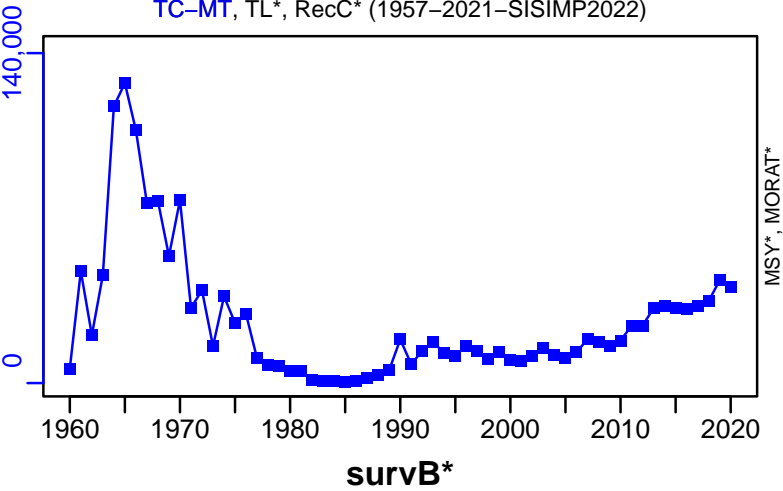


R-E00 (1957–2021–SISIMP2022)



Pacific ocean perch Eastern Bering Sea and Aleutian Islands [PERCHEBSAI]

TC-MT, TL\*, RecC\* (1957-2021-SISIMP2022)



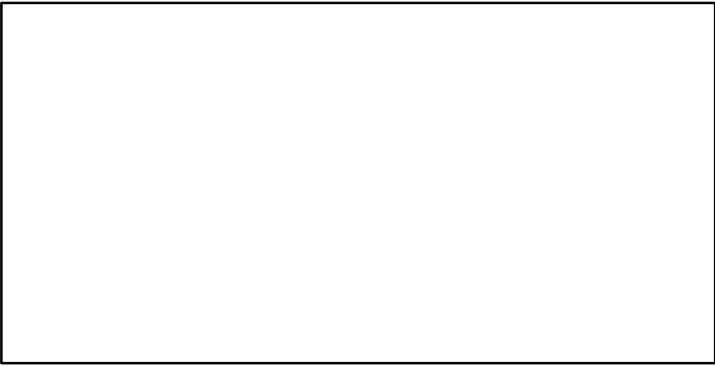
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Pacific Ocean perch Haida Gwaii [PERCHHG]

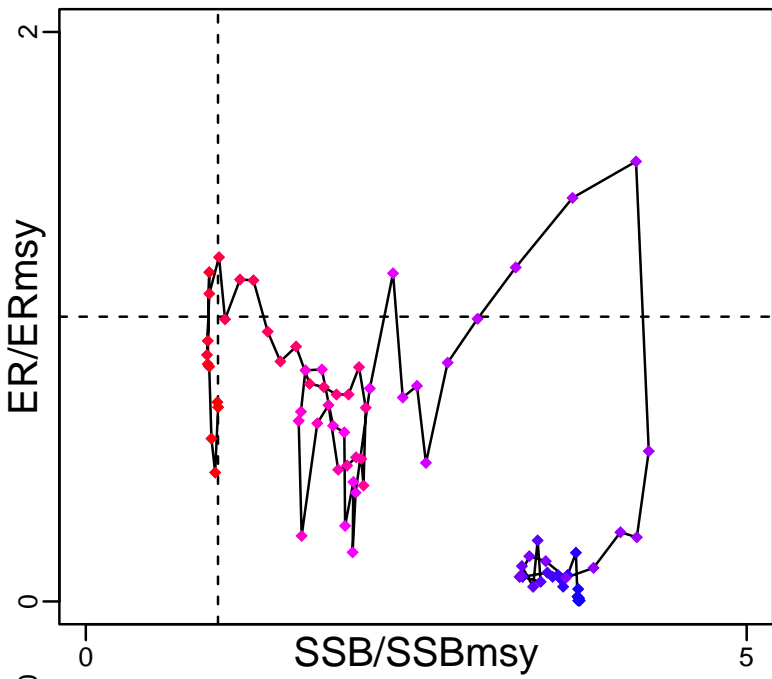
Metadata	
<b>Scientific Name</b>	Sebastes alutus
<b>Current Assess ID</b>	DFO-PAC-PERCHHG-1939-2017-ASHBROOK
<b>Area</b>	Haida Gwaii
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans - Pacific Region
<b>Asmts in RAM</b>	2017, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2017	47,982
<b>SSBmsy</b>	SSBmsy-MT	2017	24,116
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2017	0.08
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2017	160,337
<b>SSB0</b>	SSB0-MT	2017	89,993
<b>MSY</b>	MSY-MT	2017	3843
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

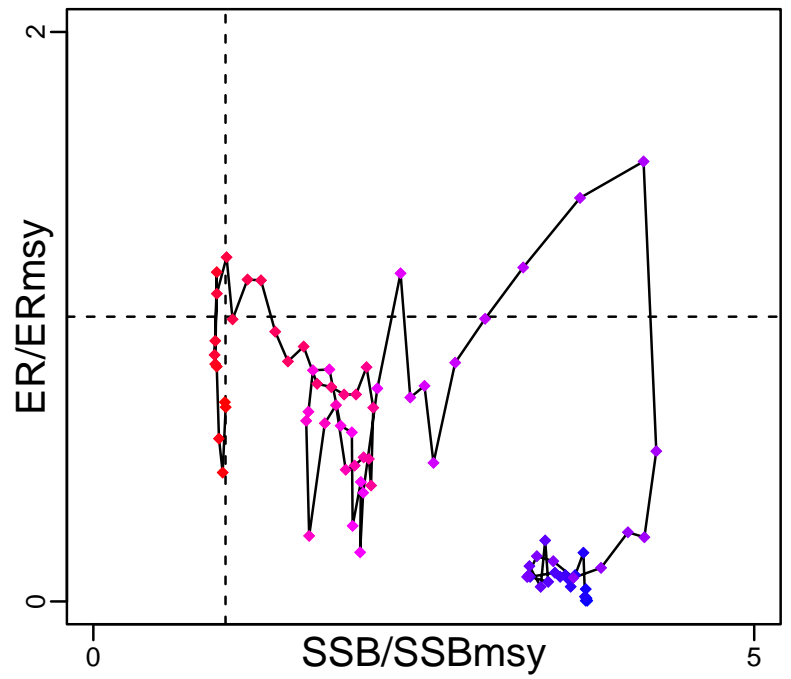
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	47,272	Both	-
<b>SSB</b>	SSB-MT	2017	24,302	Both	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2017	8,720,469	Both	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2017	0.056	Both	-
<b>TC</b>	TC-MT	2013	584		
<b>TL</b>	TL-MT	2017	2279		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2017	0.985		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2017	1.008		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2017	0.7		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Pacific Ocean perch Haida Gwaii [PERCHHG]

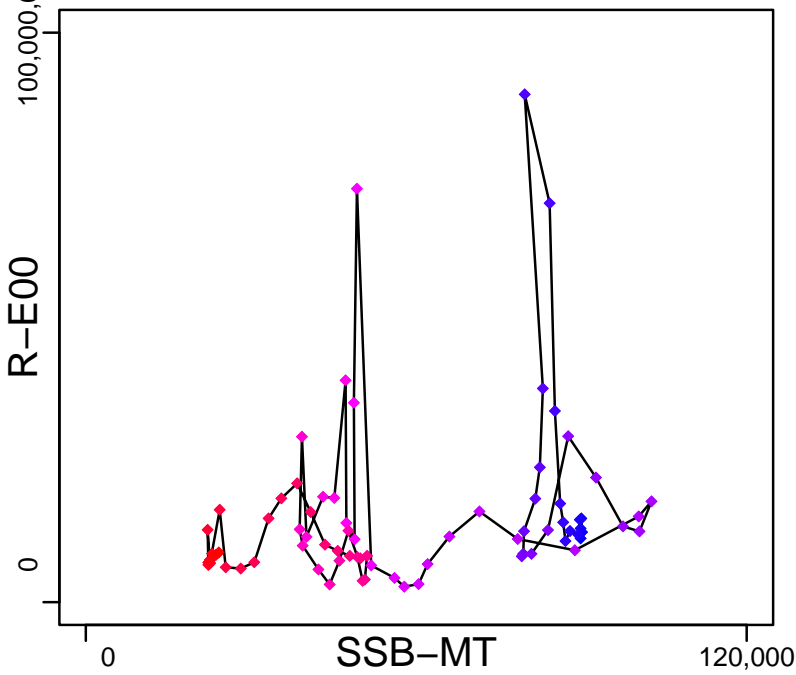
Kobe MSYpref (1939–2017–ASHBROOK)



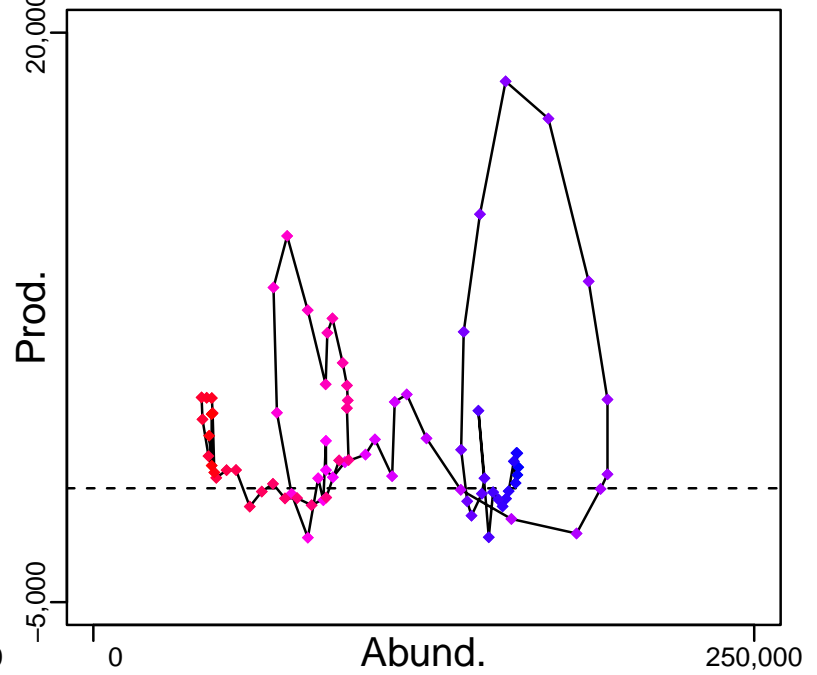
Kobe MGTpref (1939–2017–ASHBROOK)



Spawner Recruit (1939–2017–ASHBROOK)



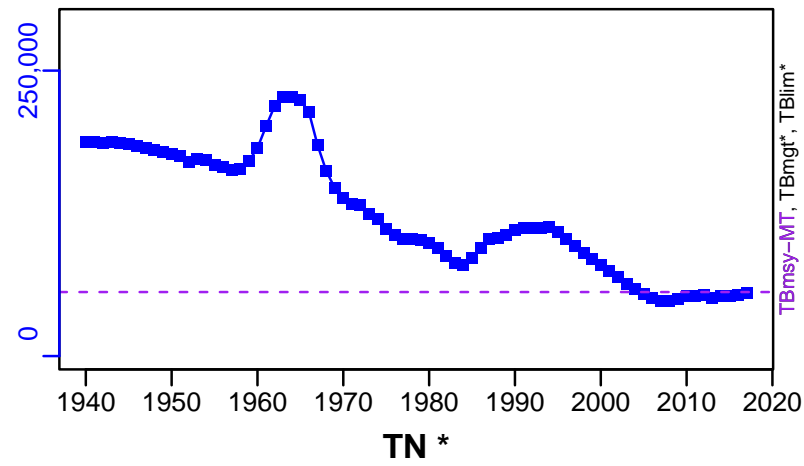
Production (1939–2017–ASHBROOK)



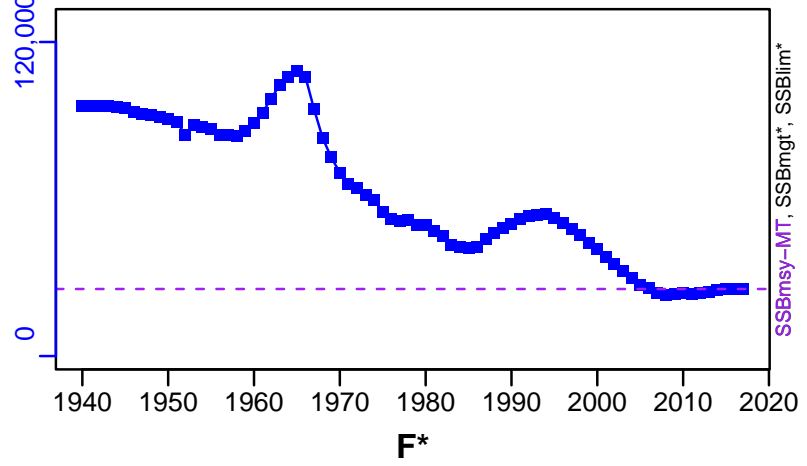
◆ Start Year ◆ End Year \* No Data

# Pacific Ocean perch Haida Gwaii [PERCHHG]

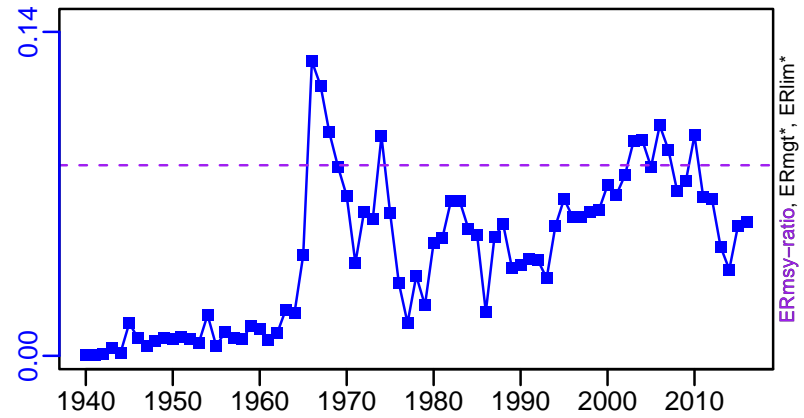
TB-MT (1939–2017–ASHBROOK)



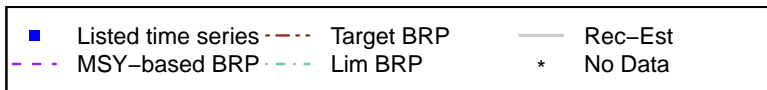
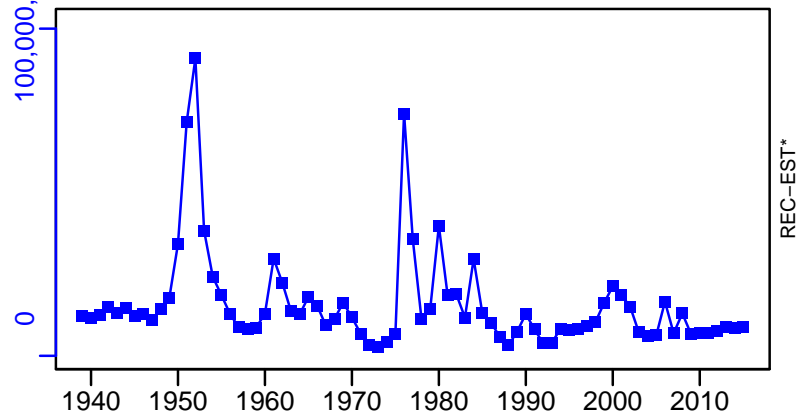
SSB-MT (1939–2017–ASHBROOK)



ER-ratio (1939–2017–ASHBROOK)



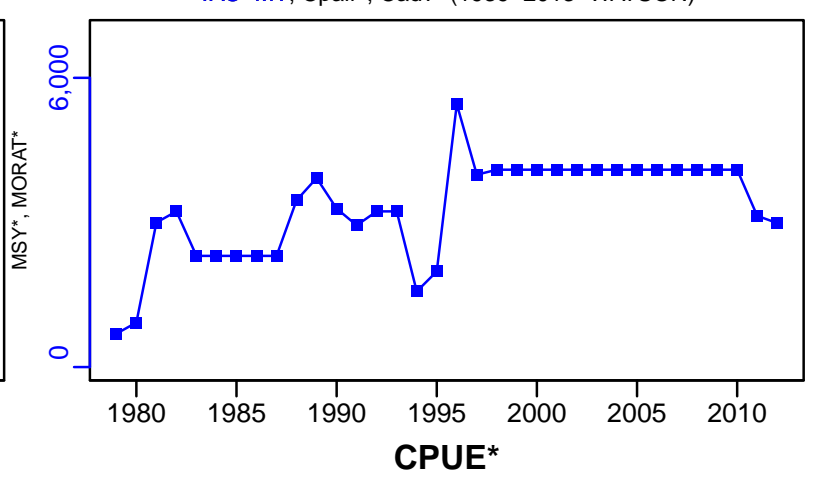
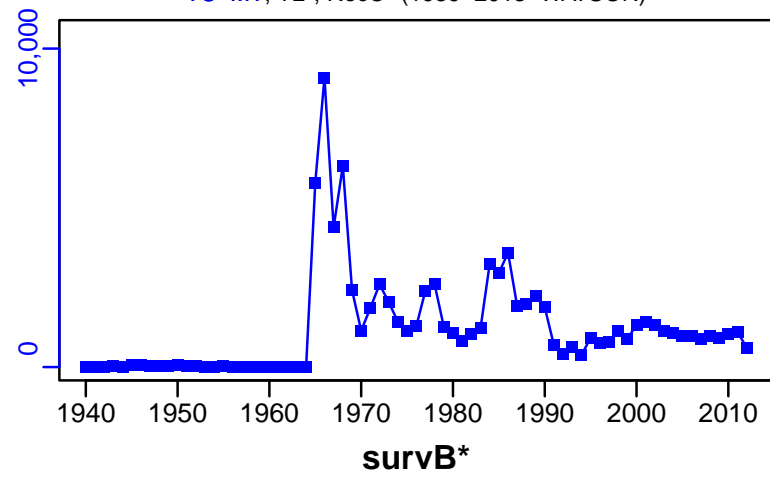
R-E00 (1939–2017–ASHBROOK)



# Pacific Ocean perch Haida Gwaii [PERCHHG]

TC-MT, TL\*, RecC\* (1939-2013-WATSON)

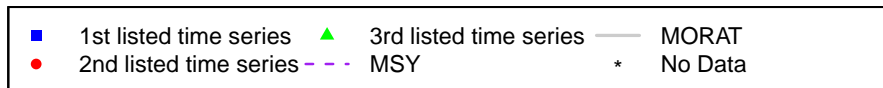
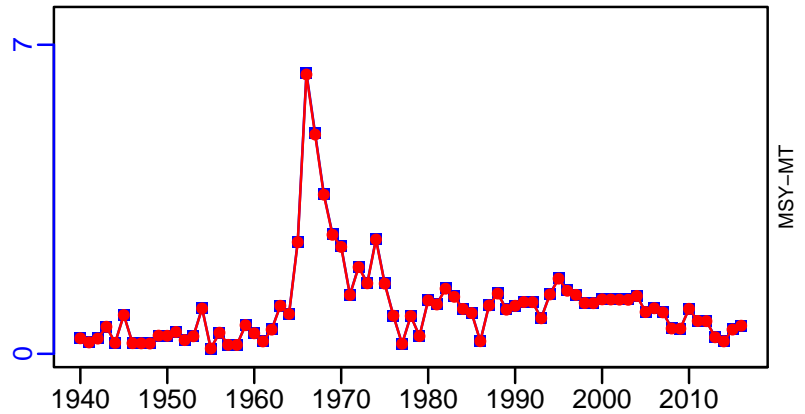
TAC-MT, Cpair\*, Cadv\* (1939-2013-WATSON)



EFFORT\*



TL-MT/MSY-MT, CdivMEANC-ratio, (1939-2017-ASHBROOK)



## Pacific ocean perch West Coast of Vancouver Island [PERCHWCVANI]

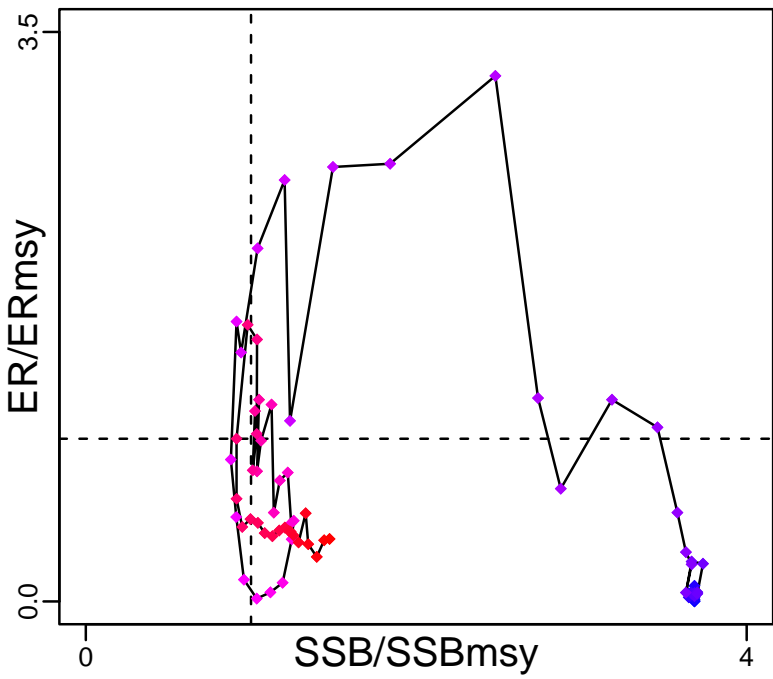
Metadata	
<b>Scientific Name</b>	Sebastes alutus
<b>Current Assess ID</b>	DFO-PERCHWCVANI-1939-2013-WATSON
<b>Area</b>	West Coast of Vancouver Island
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans
<b>Asmts in RAM</b>	2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2013	11,729
<b>SSBmsy</b>	SSBmsy-MT	2013	5809
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2013	0.091
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2013	21,442
<b>MSY</b>	MSY-MT	2013	1048
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2013	2324
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

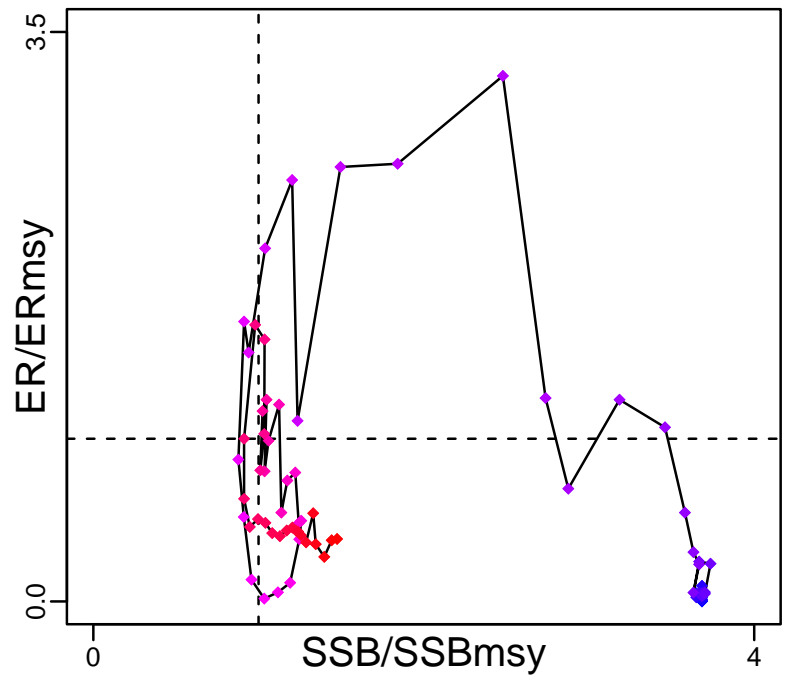
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	16,400	Both	-
<b>SSB</b>	SSB-MT	2013	8740	Females	10 to 20
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2013	3,160,000	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2013	0.035	-	-
<b>TC</b>	TC-MT	2013	382		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TBdivTBmsy-dimensionless	2013	1.53		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	1.505		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ERdivERmsy-dimensionless	2013	0.384		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Pacific ocean perch West Coast of Vancouver Island [PERCHWCVANI]

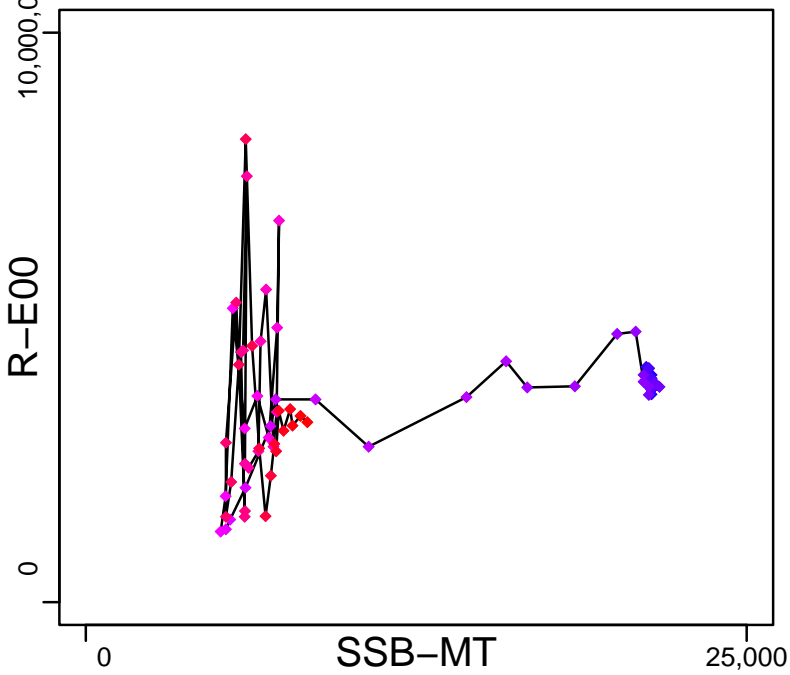
Kobe MSY<sub>pref</sub> (1939–2013–WATSON)



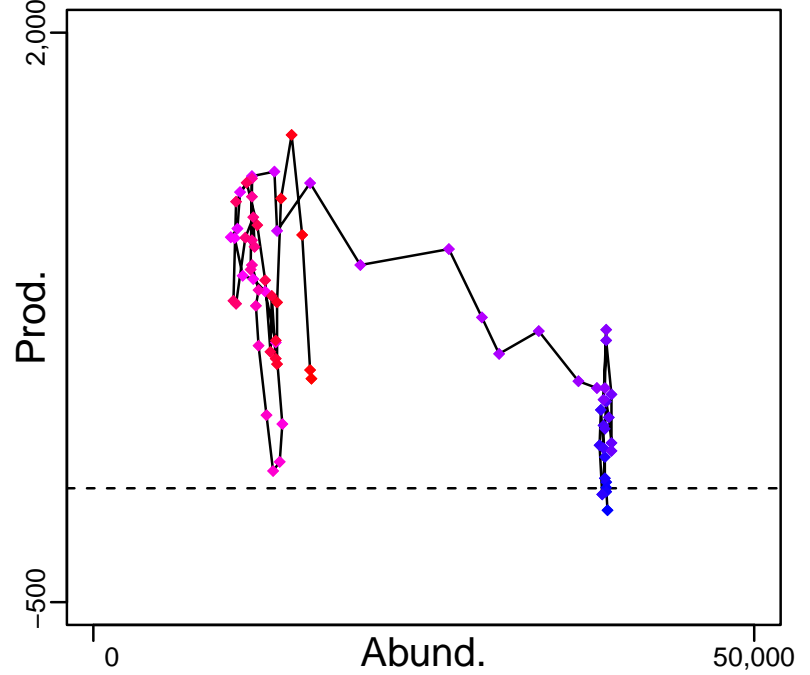
Kobe MGT<sub>pref</sub> (1939–2013–WATSON)



Spawner Recruit (1939–2013–WATSON)



Production (1939–2013–WATSON)

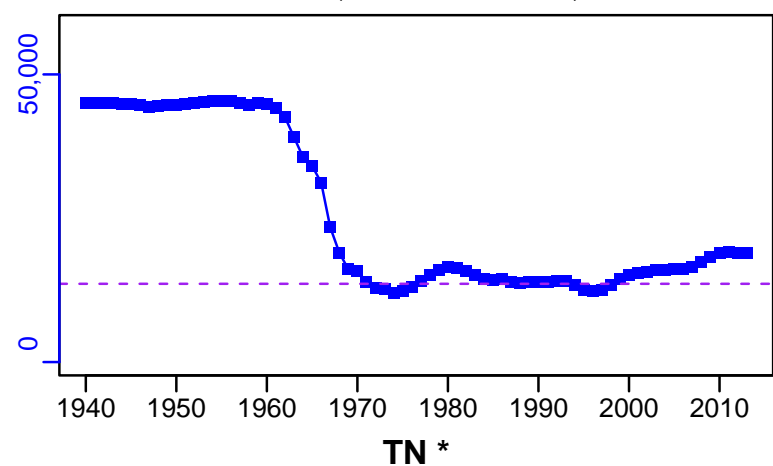


◆ Start Year ◆ End Year \* No Data

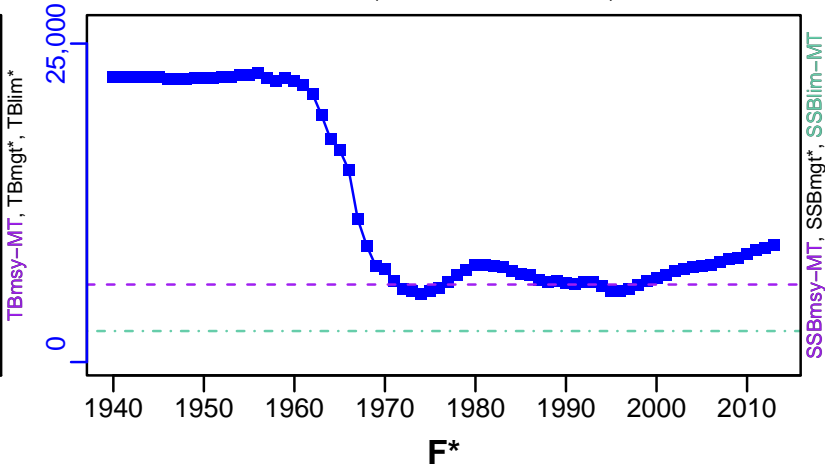


# Pacific ocean perch West Coast of Vancouver Island [PERCHWCVANI]

TB-MT (1939-2013-WATSON)



SSB-MT (1939-2013-WATSON)



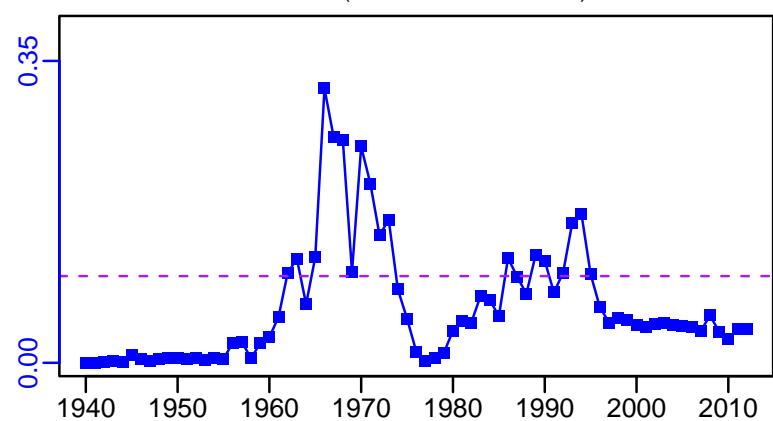
TN \*



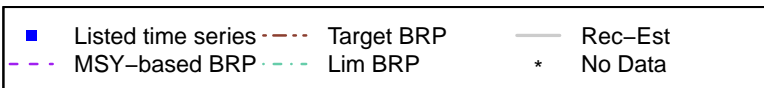
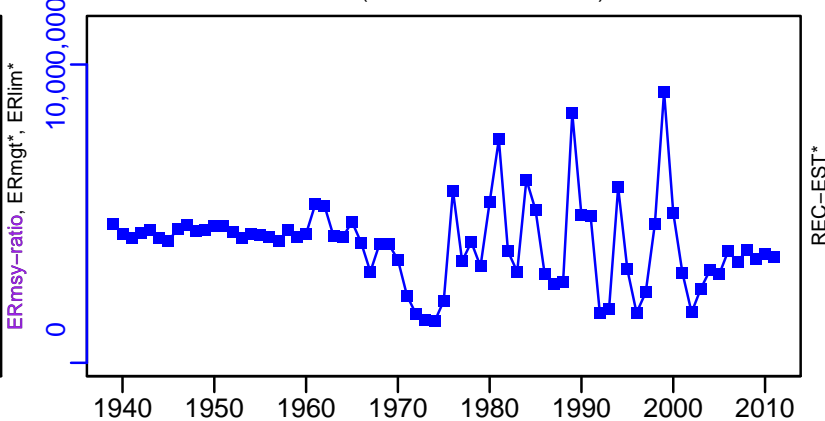
F\*



ER-ratio (1939-2013-WATSON)



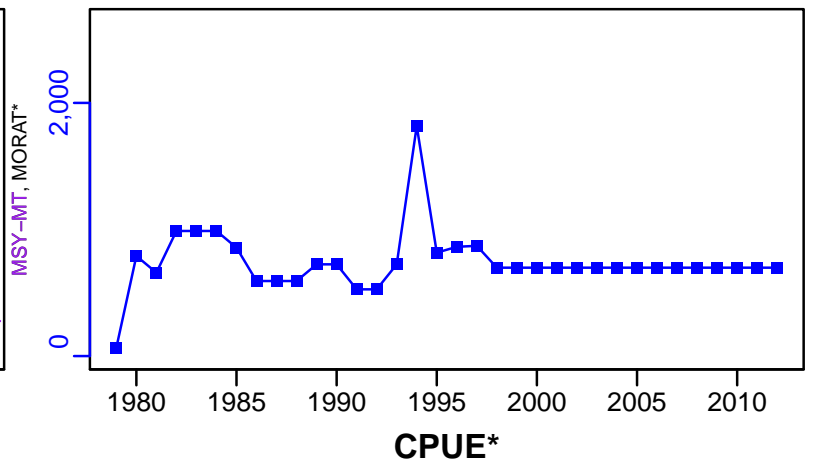
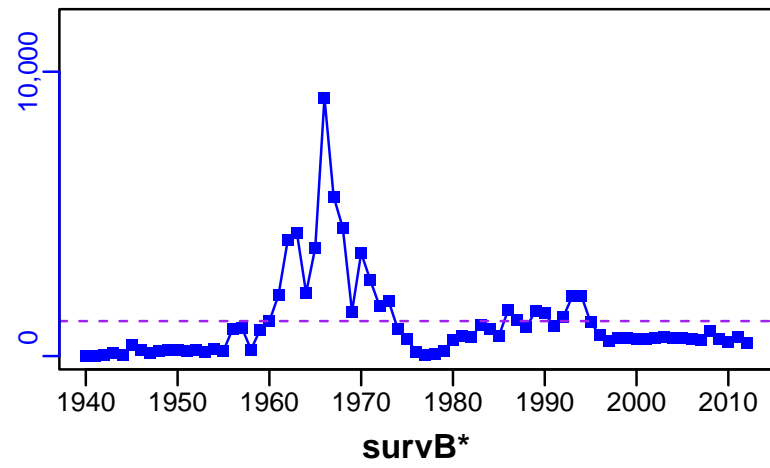
R-E00 (1939-2013-WATSON)



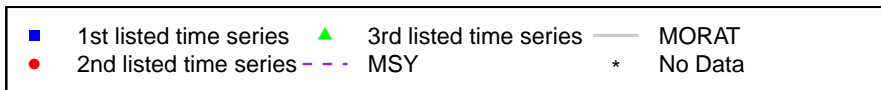
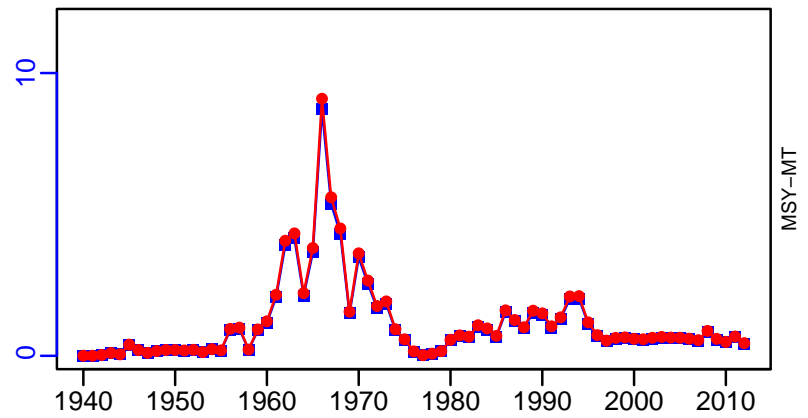
# Pacific ocean perch West Coast of Vancouver Island [PERCHWCVANI]

TC-MT, TL\*, RecC\* (1939-2013-WATSON)

TAC-MT, Cpair\*, Cadv\* (1939-2013-WATSON)



TC-MT/MSY-MT, CdivMEANC-ratio, (1939-2013-WATSON)



## Pacific ocean perch Gulf of Alaska [POPERCHGA]

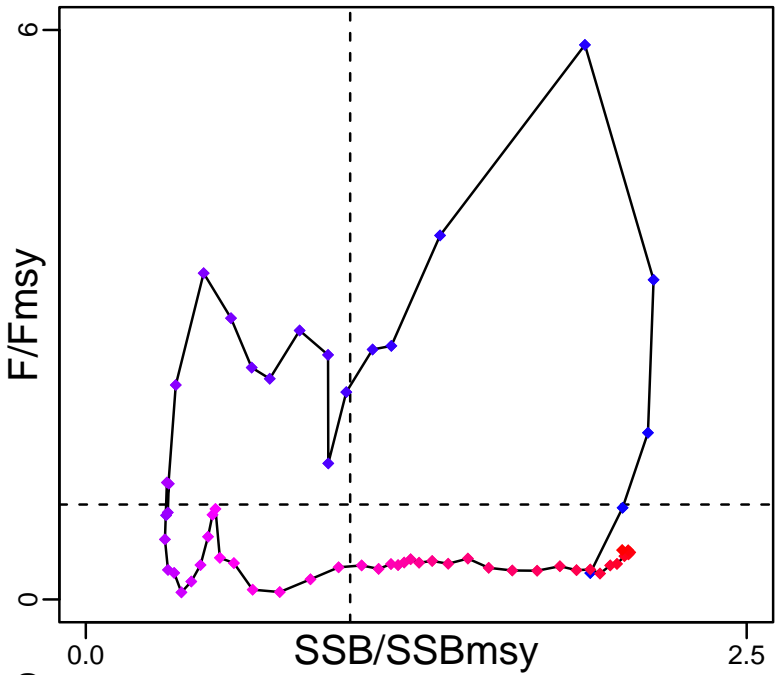
Metadata	
<b>Scientific Name</b>	Sebastes alutus
<b>Current Assess ID</b>	AFSC-POPERCHGA-1959-2021-SISIMP2022
<b>Area</b>	Gulf of Alaska
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2010, 2016, 2017, 2018, 2021, 2015, 2019, 2020

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2010	238,362
<b>SSBmsy</b>	SSBmsy-MT	2021	116,171
<b>Fmsy</b>	Fmsy-1/yr	2021	0.12
<b>ERmsy</b>	ERmsy-ratio	2010	0.085
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2010	20,243
<b>M</b>	M-1/yr	2010	0.06
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-1/yr	2020	0.1
<b>ERlim</b>	-	-	-

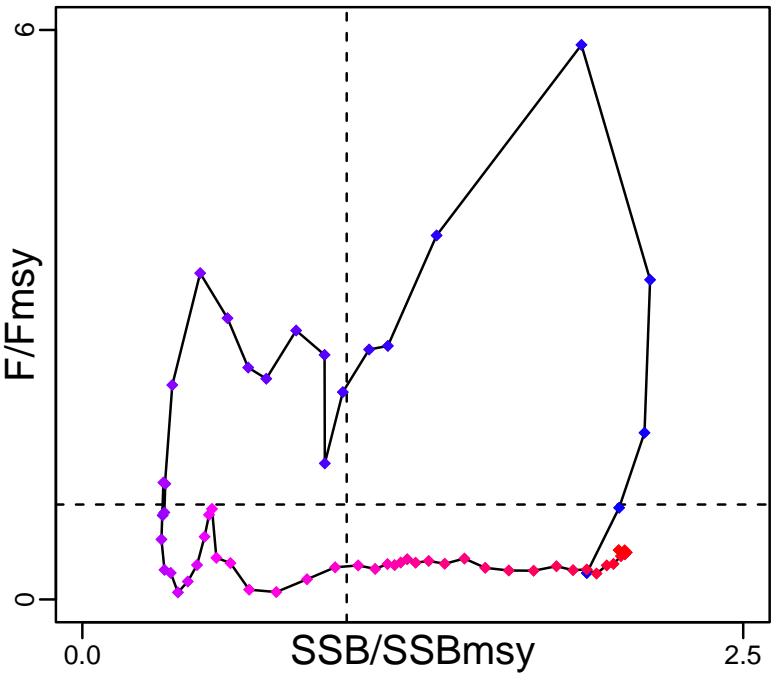
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	462,000	Both	2+
<b>SSB</b>	SSB-MT	2021	222,301	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2021	85,003,899	-	2
<b>F</b>	F-1/yr	2021	0.062	-	-
<b>ER</b>	ER-calc-ratio	2015	0.038	-	-
<b>TC</b>	TC-MT	2021	25,191		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2010	1.405		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2021	1.914		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2021	0.52		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2010	0.511		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Pacific ocean perch Gulf of Alaska [POPERCHGA]

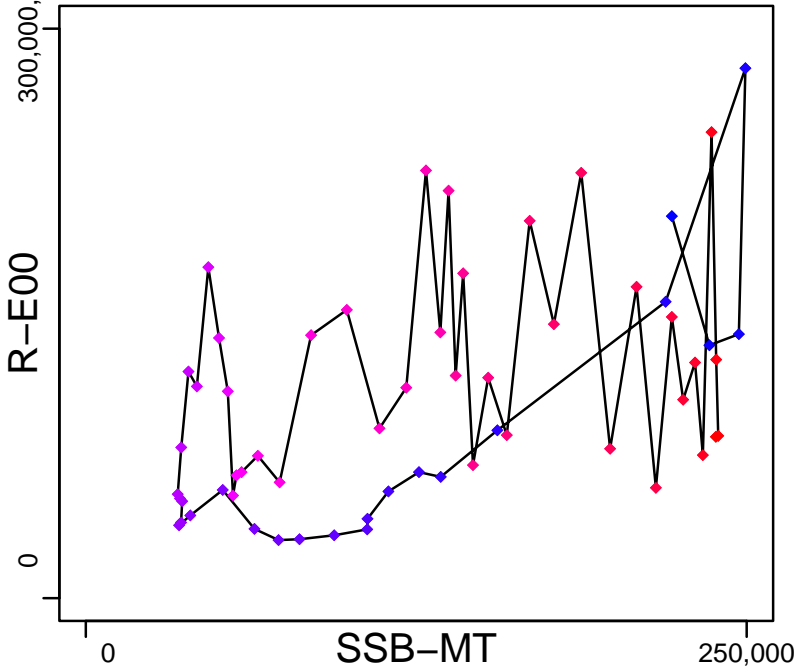
Kobe MSYpref (1959–2021–SISIMP2022)



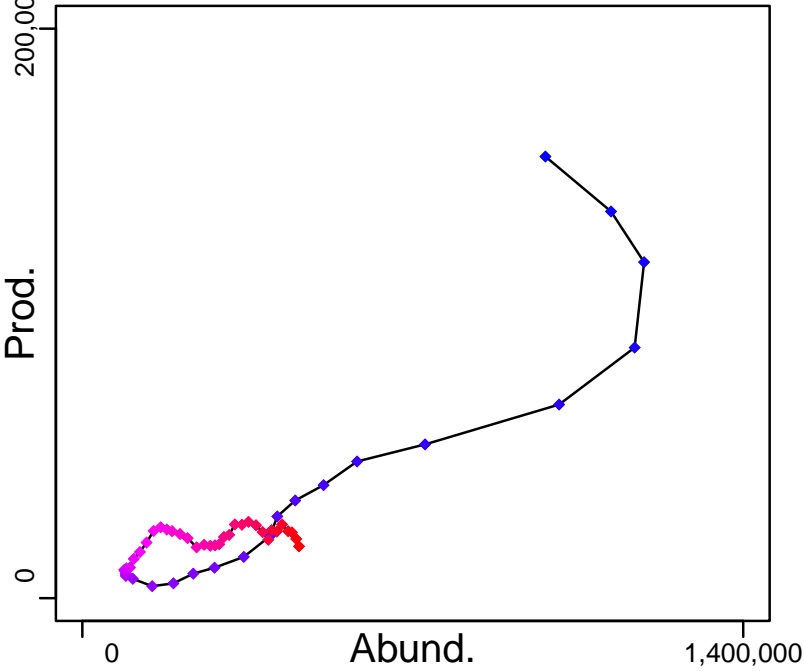
Kobe MGTpref (1959–2021–SISIMP2022)



Spawner Recruit (1959–2021–SISIMP2022)



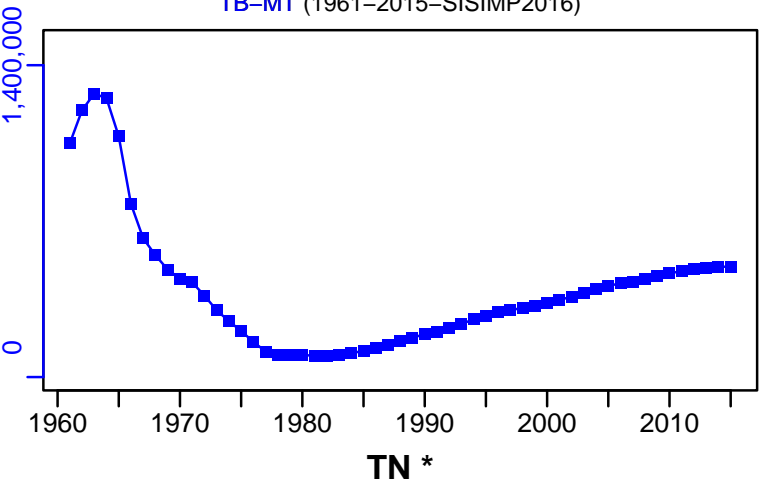
Production (1961–2015–SISIMP2016)



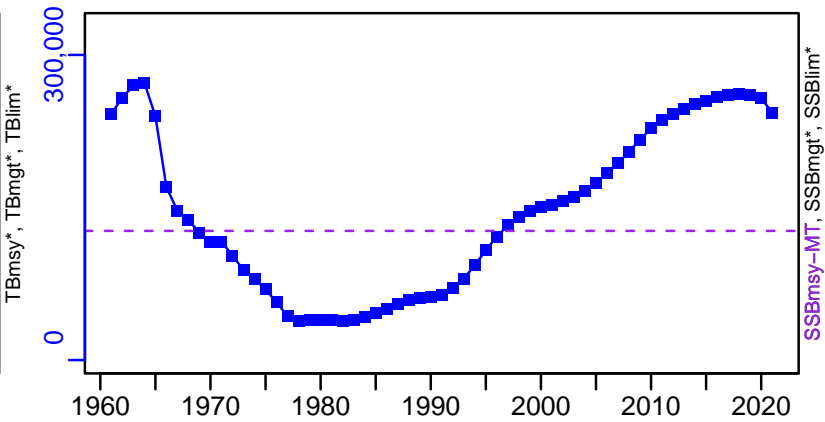
◆ Start Year ◆ End Year \* No Data

Pacific ocean perch Gulf of Alaska [POPERCHGA]

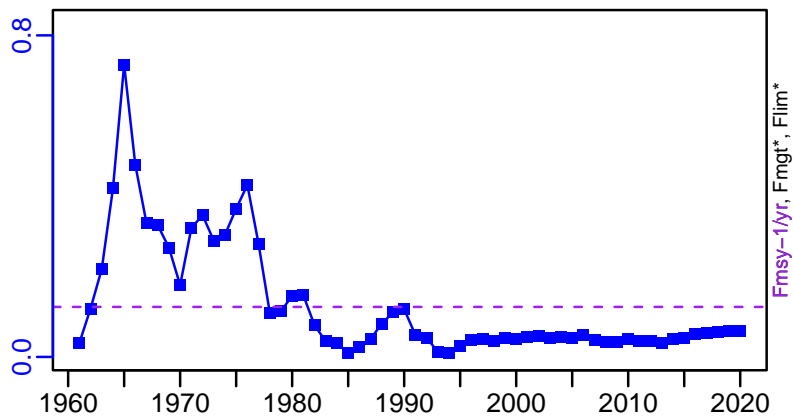
TB-MT (1961–2015–SISIMP2016)



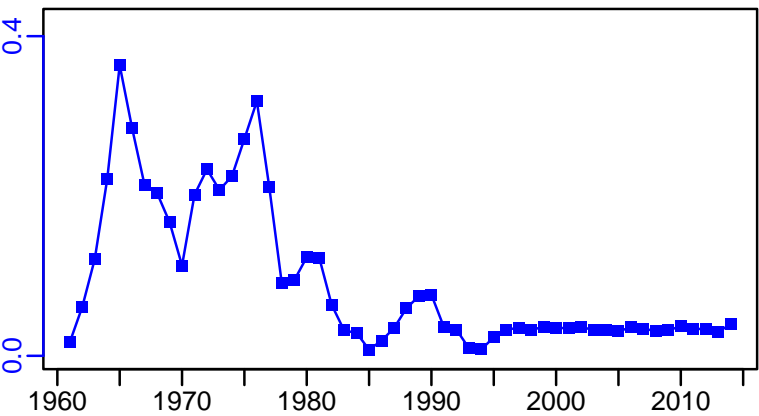
SSB-MT (1959–2021–SISIMP2022)



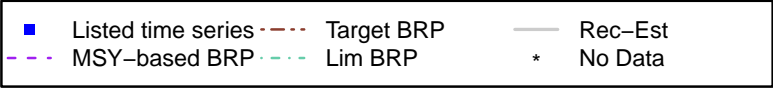
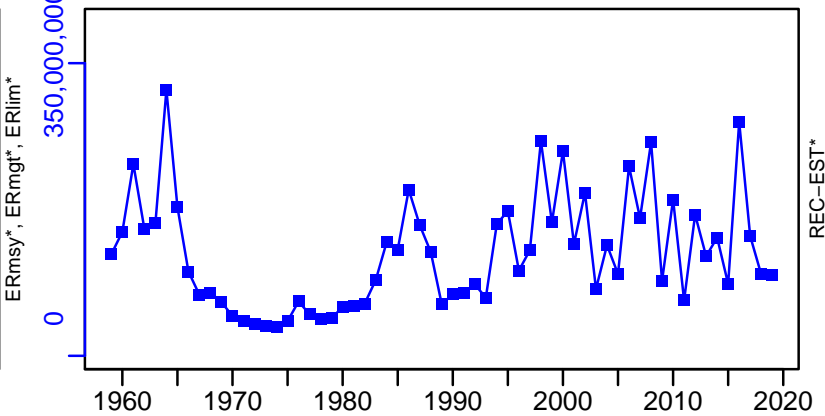
F-1/yr (1959–2021–SISIMP2022)



ER-calc-ratio (1961–2015–SISIMP2016)

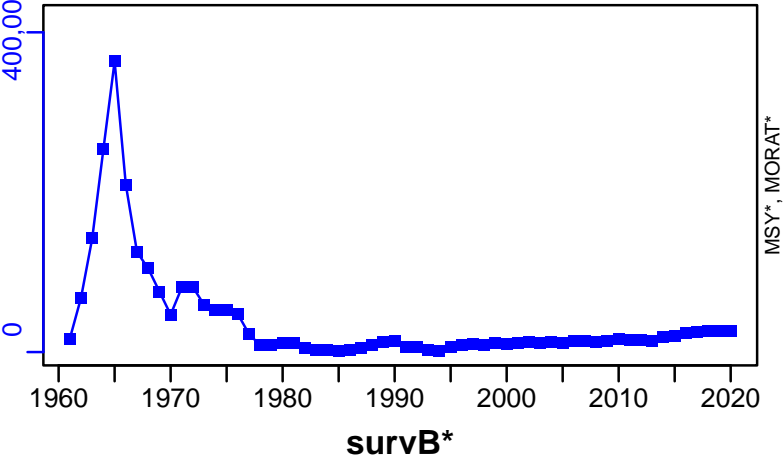


R-E00 (1959–2021–SISIMP2022)



Pacific ocean perch Gulf of Alaska [POPERCHGA]

TC-MT, TL\*, RecC\* (1959-2021-SISIMP2022)



TAC\*, Cpair\*, Cadv\*



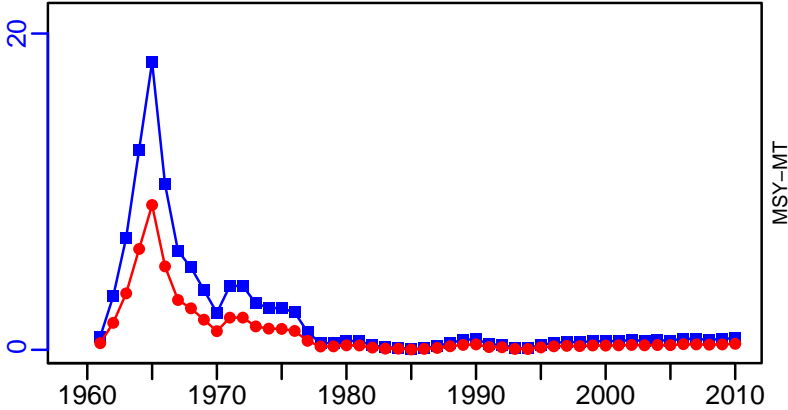
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1959-2010-STACHURA)



## Pacific ocean perch Pacific Coast [POPERCHPCOAST]

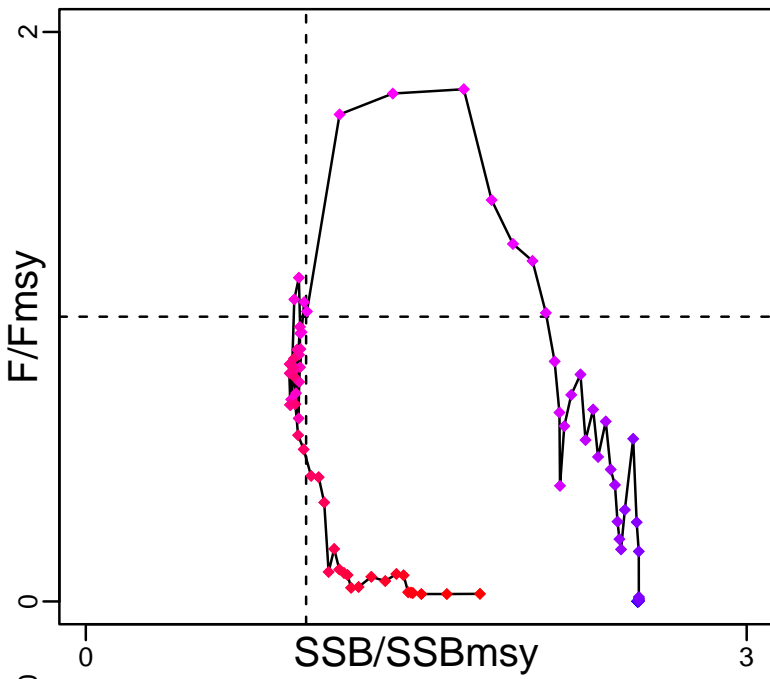
Metadata	
<b>Scientific Name</b>	Sebastes alutus
<b>Current Assess ID</b>	NWFSC-POPERCHPCOAST-1918-2017-SISIMP2021
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2017, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2011	50,381
<b>SSBmsy</b>	SSBmsy-E00eggs	2017	2,755,667,969
<b>Fmsy</b>	Fmsy-1/yr	2017	0.5
<b>ERmsy</b>	ERmsy-ratio	2011	0.021
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-E00eggs	2011	$6.56 \times 10^{12}$
<b>MSY</b>	MSY-MT	2017	1808
<b>M</b>	M-1/yr	2011	0.05
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2017	1,722,292,969
<b>Flim</b>	Flim-1/yr	2017	0.5
<b>ERlim</b>	-	-	-

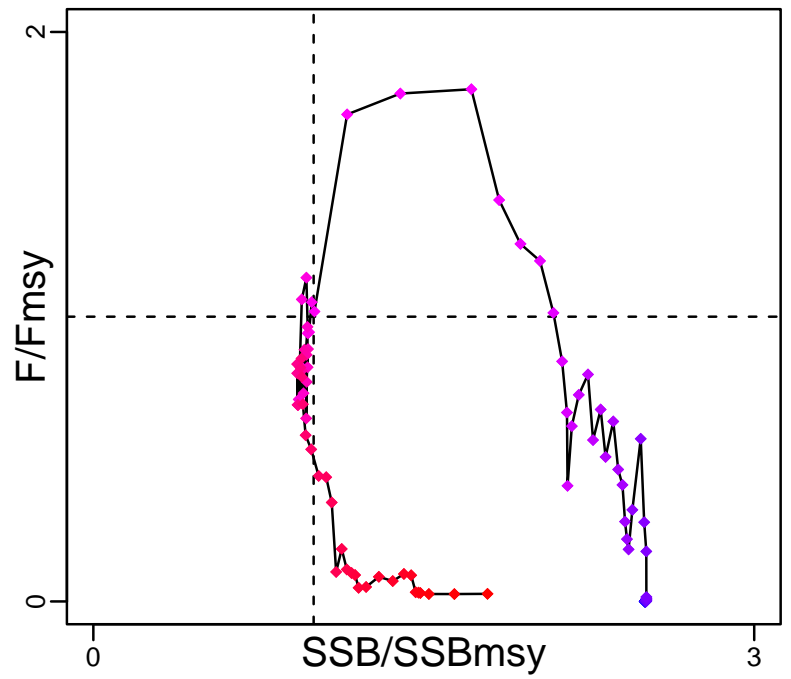
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	128,529	-	-
<b>SSB</b>	SSB-E00eggs	2017	5,280,380,000	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2017	11,253,100	-	0
<b>F</b>	F-1/yr	2017	0.013	-	-
<b>ER</b>	ER-calc-ratio	2017	0.001	-	-
<b>TC</b>	TC-MT	2017	68		
<b>TL</b>	TL-MT	2011	91		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	0.506		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2017	1.916		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	0.027		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2011	0.275		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Pacific ocean perch Pacific Coast [POPERCHPCOAST]

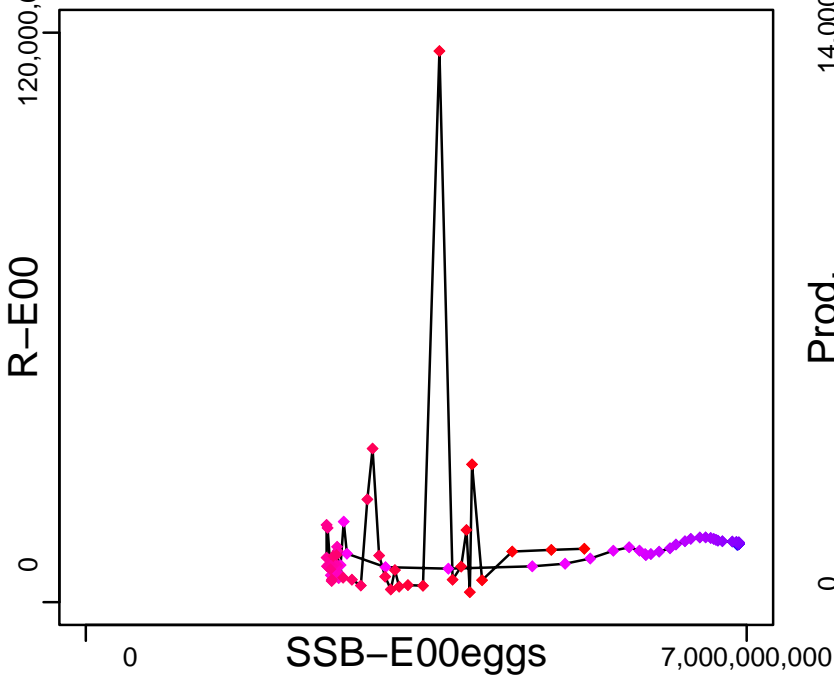
Kobe MSYpref (1918–2017–SISIMP2021)



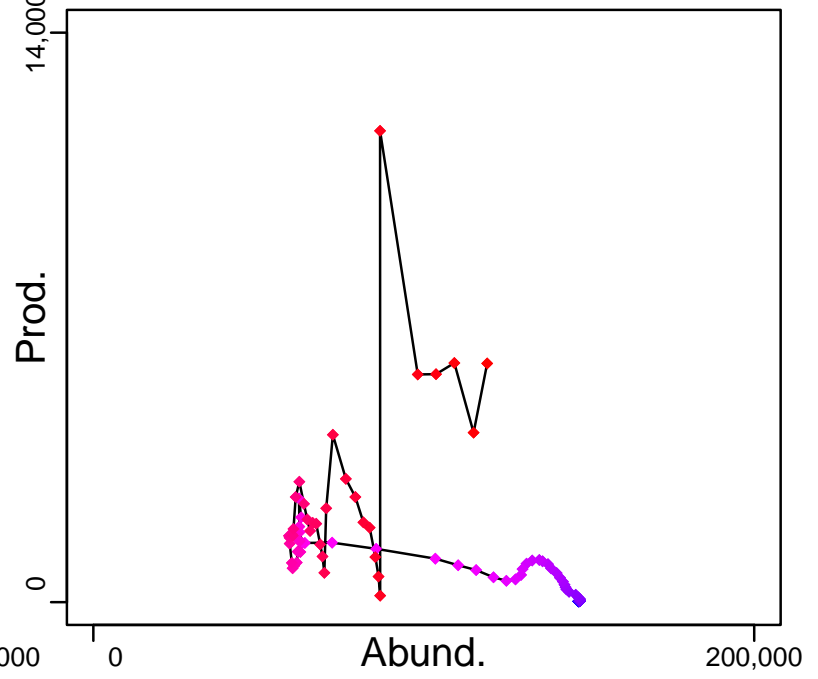
Kobe MGTpref (1918–2017–SISIMP2021)



Spawner Recruit (1918–2017–SISIMP2021)



Production (1918–2017–SISIMP2021)

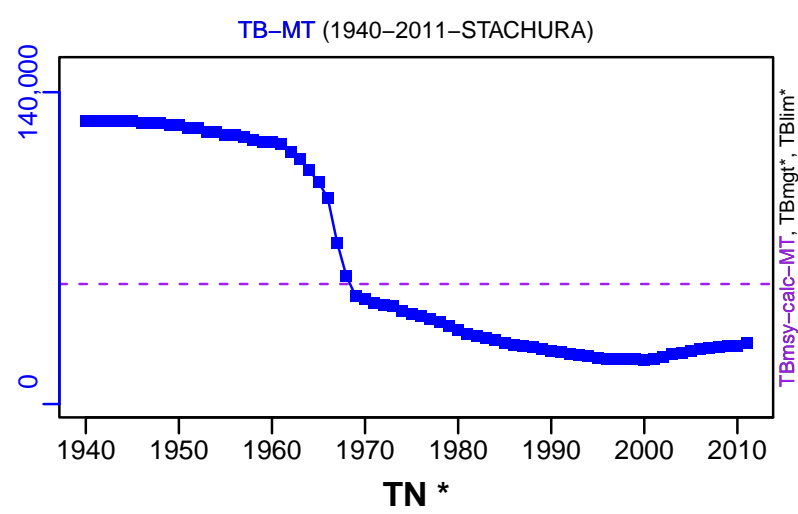


◆ Start Year ◆ End Year \* No Data

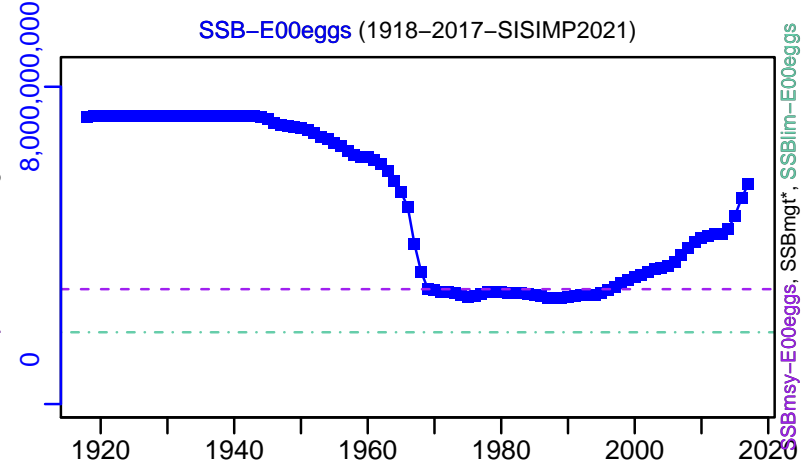


# Pacific ocean perch Pacific Coast [POPERCHPCOAST]

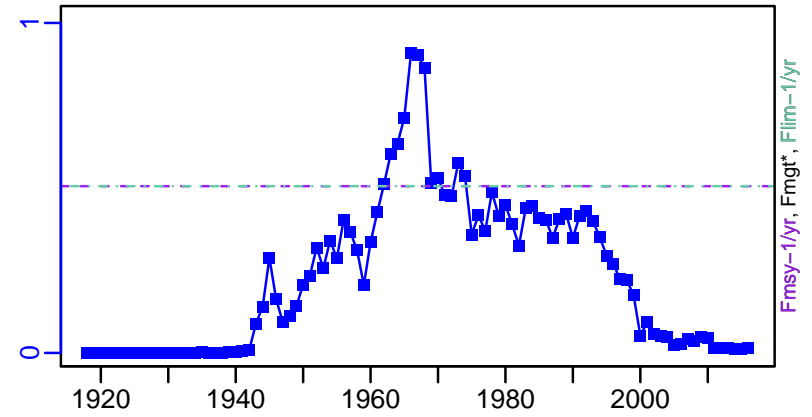
TB-MT (1940-2011-STACHURA)



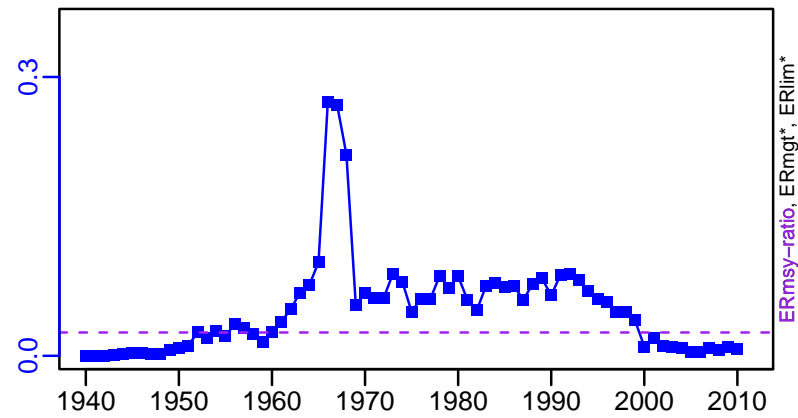
SSB-E00eggs (1918-2017-SISIMP2021)



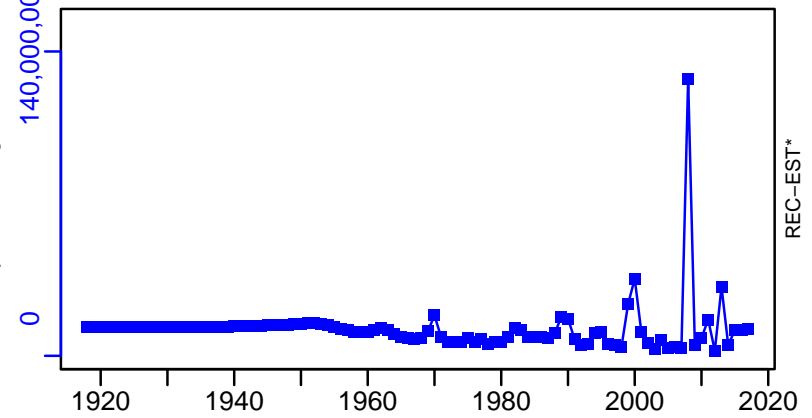
F-1/yr (1918-2017-SISIMP2021)



ER-calc-ratio (1940-2011-STACHURA)



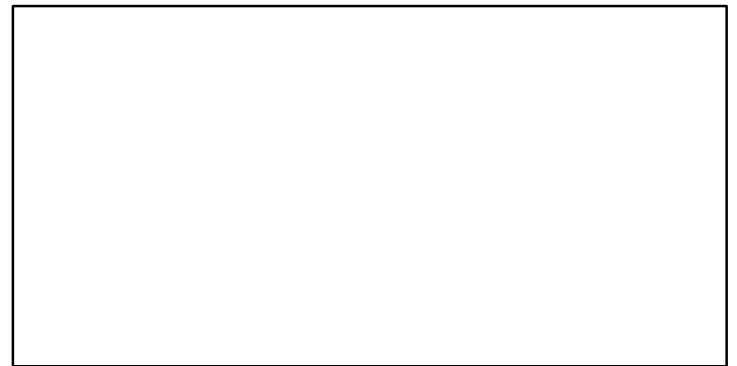
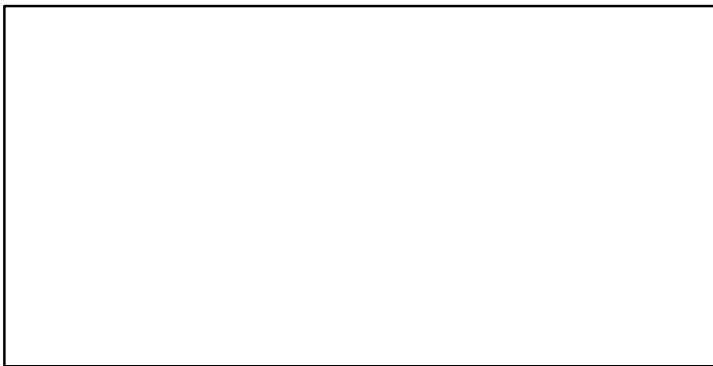
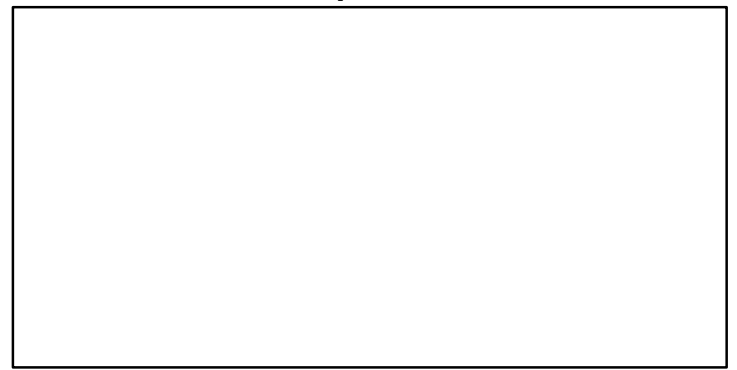
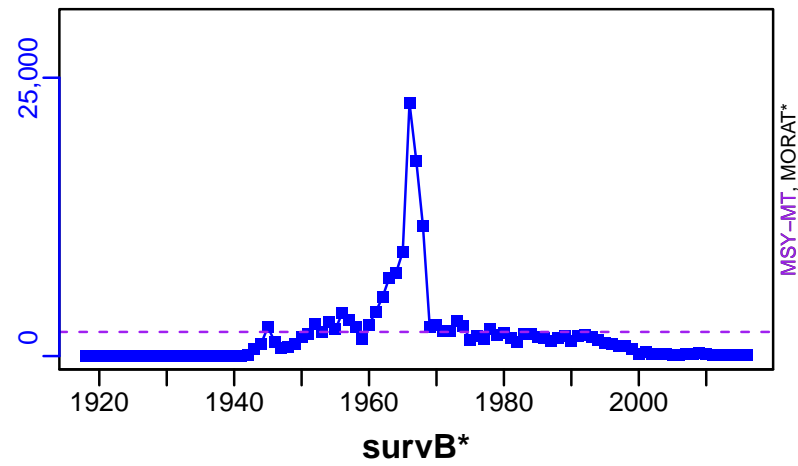
R-E00 (1918-2017-SISIMP2021)



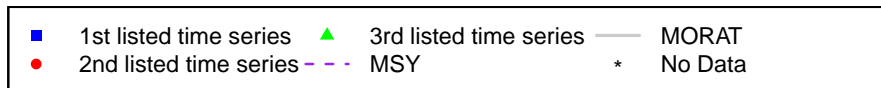
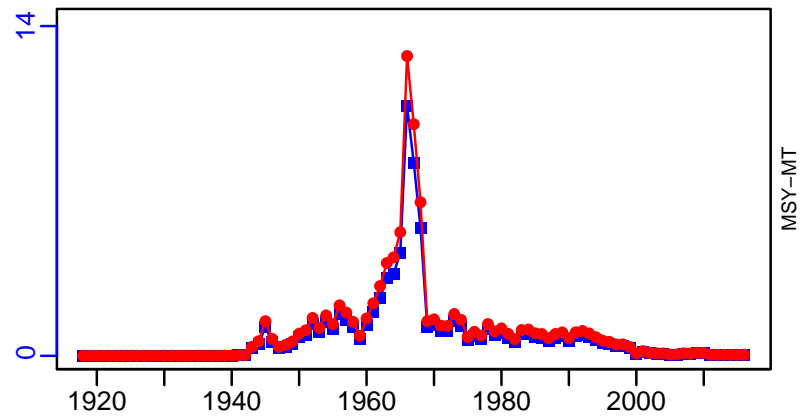
# Pacific ocean perch Pacific Coast [POPERCHPCOAST]

TC-MT, TL\*, RecC\* (1918-2017-SISIMP2021)

TAC\*, Cpair\*, Cadv\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1918-2017-SISIMP2021)



## Quillback rockfish Pacific Coast of Canada (Inside) [QROCKPCOASTIN]

Metadata	
<b>Scientific Name</b>	Sebastes maliger
<b>Current Assess ID</b>	DFO-QROCKPCOASTIN-1918-2010-WATSON
<b>Area</b>	Pacific Coast of Canada (Inside)
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans
<b>Asmts in RAM</b>	2010

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2010	144
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2010	34		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



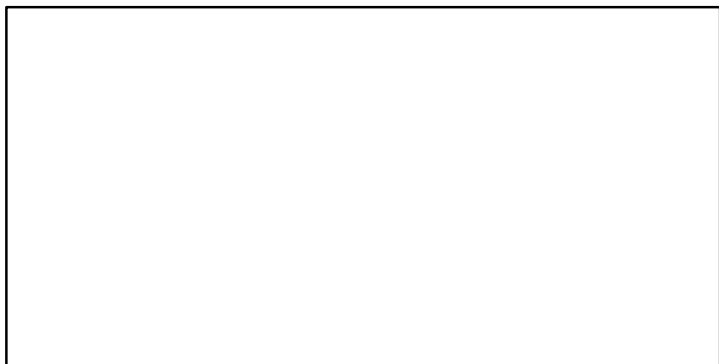
**Production\***



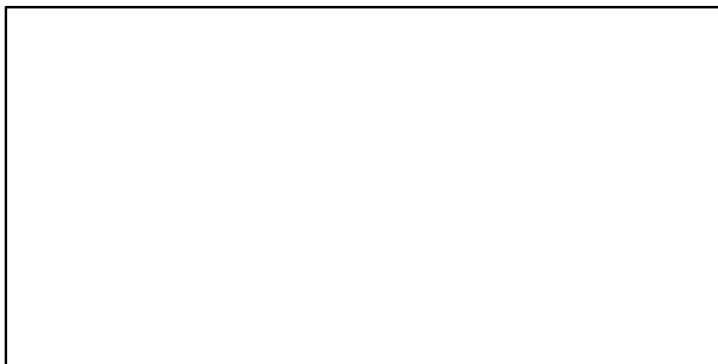
◆ Start Year   ◆ End Year   \* No Data

Quillback rockfish Pacific Coast of Canada (Inside) [QROCKPCOASTIN]

**TB\***



**SSB\***



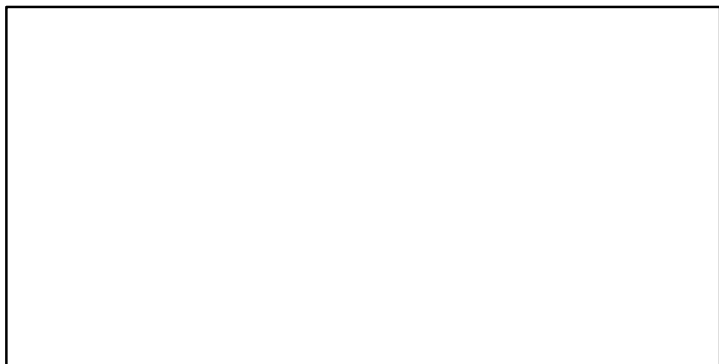
**TN \***



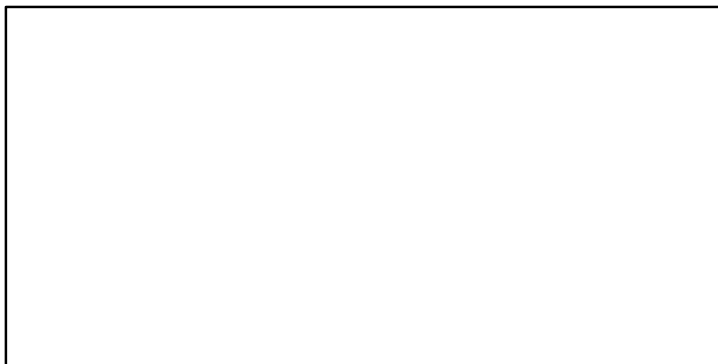
**F\***



**ER\***



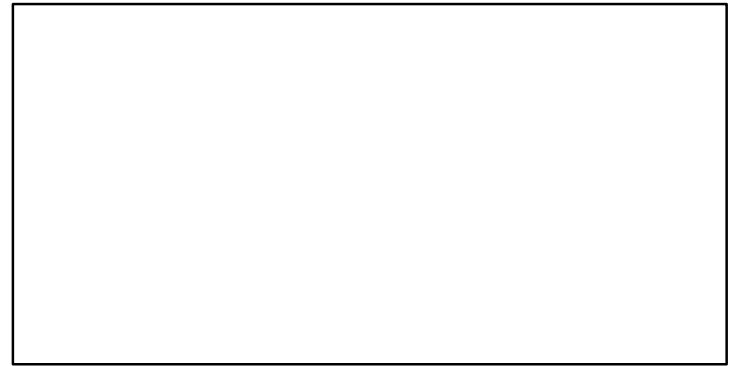
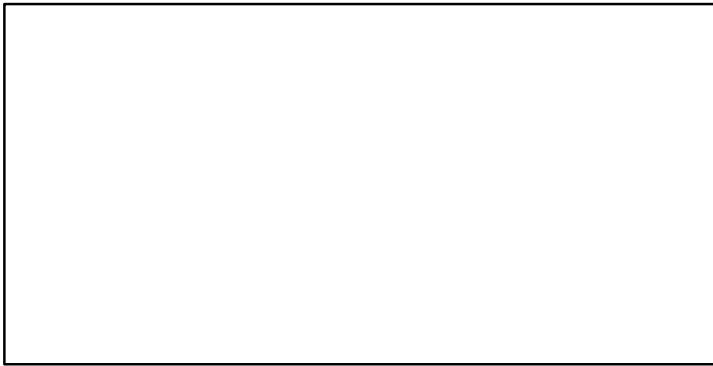
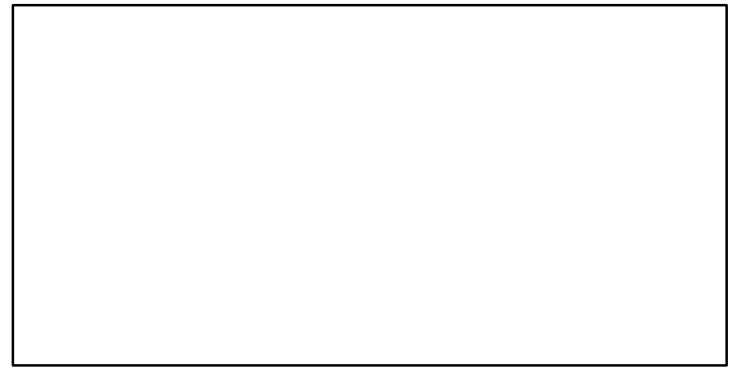
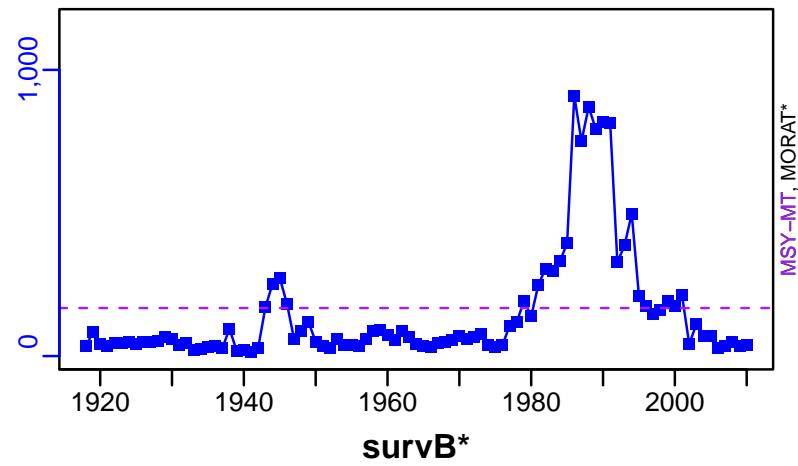
**Recruits\***



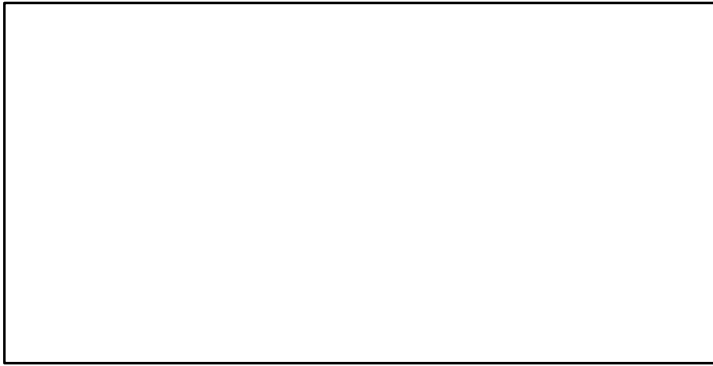
# Quillback rockfish Pacific Coast of Canada (Inside) [QROCKPCOASTIN]

TC-MT, TL\*, RecC\* (1918-2010-WATSON)

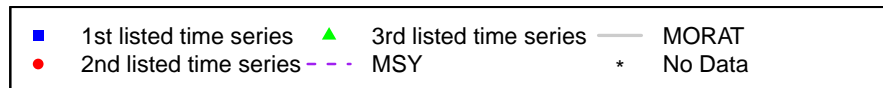
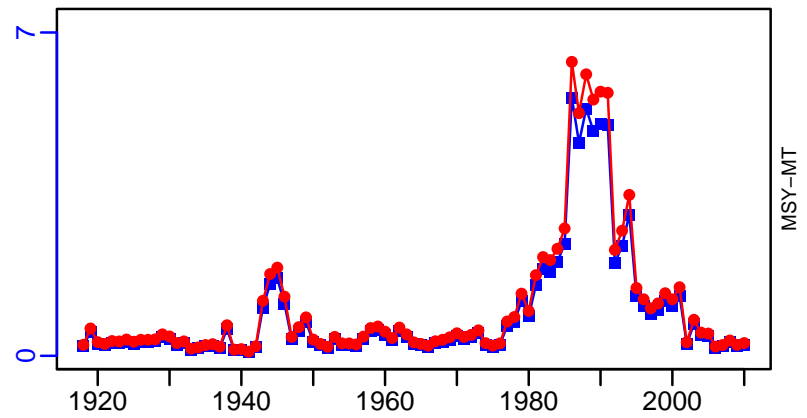
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1918-2010-WATSON)



## Quillback rockfish Pacific Coast of Canada (Outside) [QROCKPCOASTOUT]

Metadata	
<b>Scientific Name</b>	Sebastes maliger
<b>Current Assess ID</b>	DFO-QROCKPCOASTOUT-1918-2010-WATSON
<b>Area</b>	Pacific Coast of Canada (Outside)
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans
<b>Asmts in RAM</b>	2010

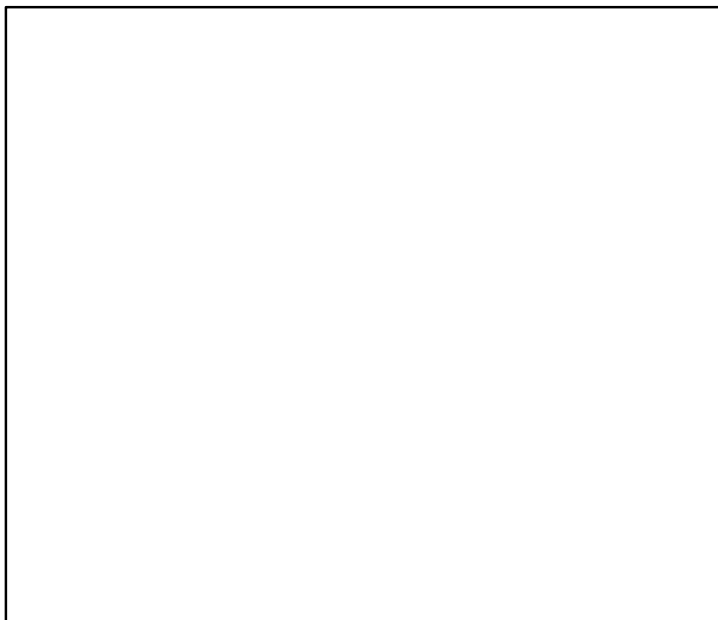
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	MSY-MT	2010	462
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2010	159		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

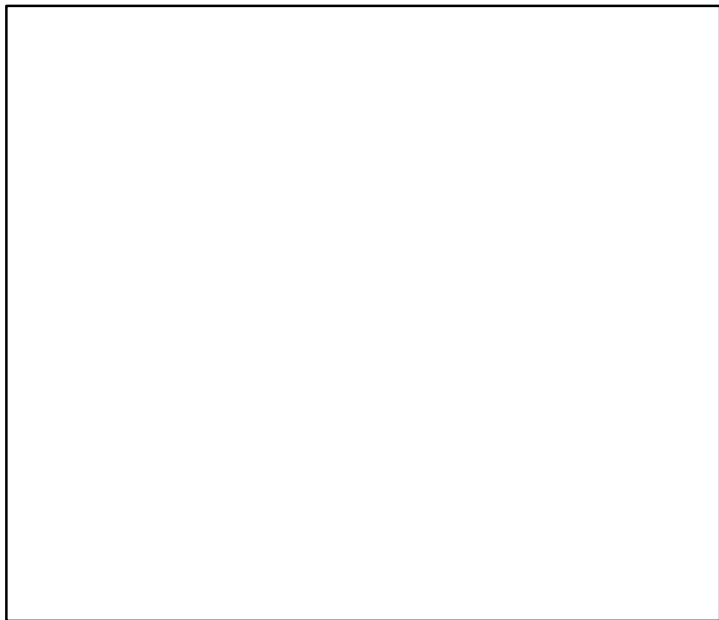
**Kobe MSY\***



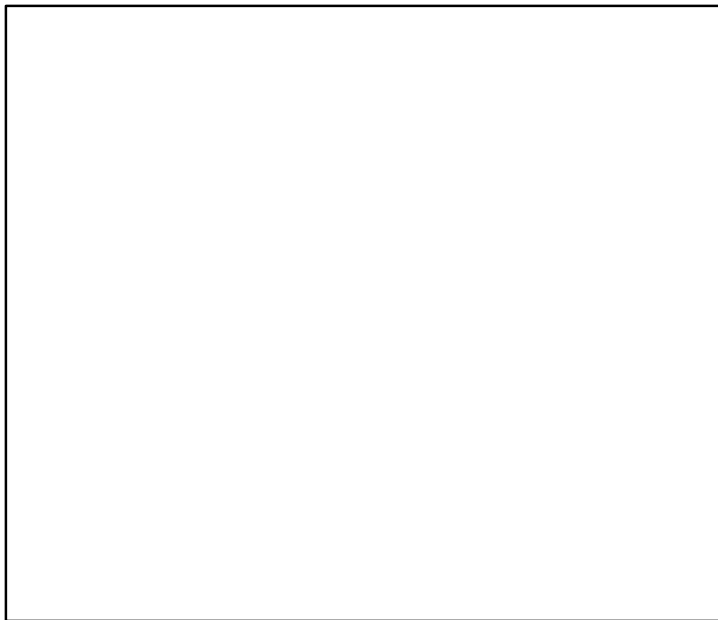
**Kobe MGT\***



**Spawner Recruit\***



**Production\***

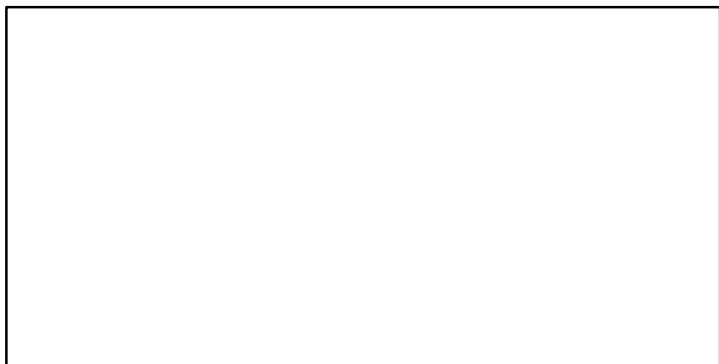


◆ Start Year ◆ End Year \* No Data

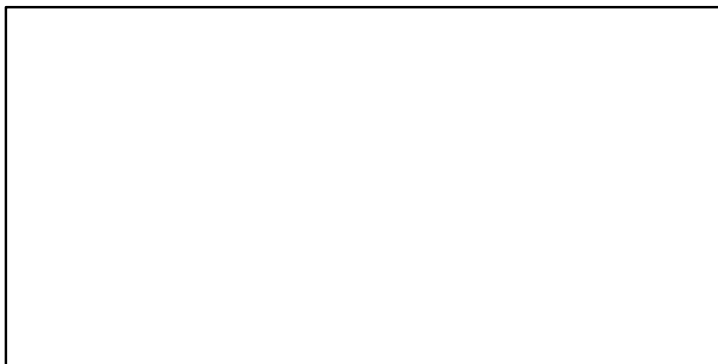


Quillback rockfish Pacific Coast of Canada (Outside) [QROCKPCOASTOUT]

**TB\***



**SSB\***



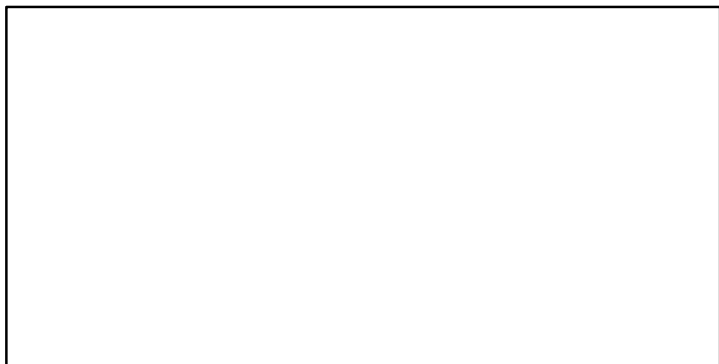
**TN \***



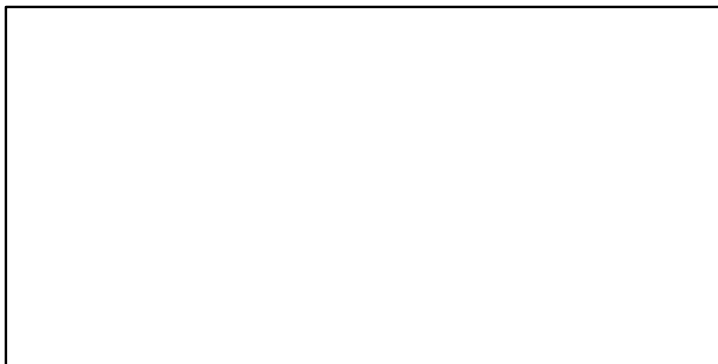
**F\***



**ER\***

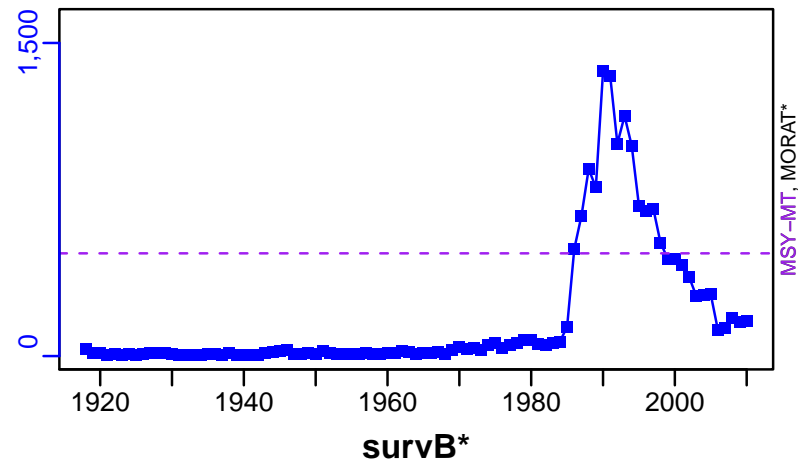


**Recruits\***



# Quillback rockfish Pacific Coast of Canada (Outside) [QROCKPCOASTOUT]

TC-MT, TL\*, RecC\* (1918-2010-WATSON)



TAC\*, Cpair\*, Cadv\*



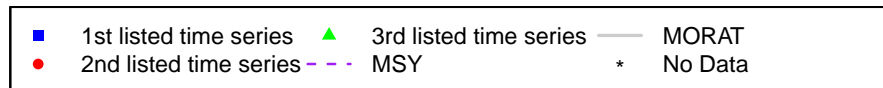
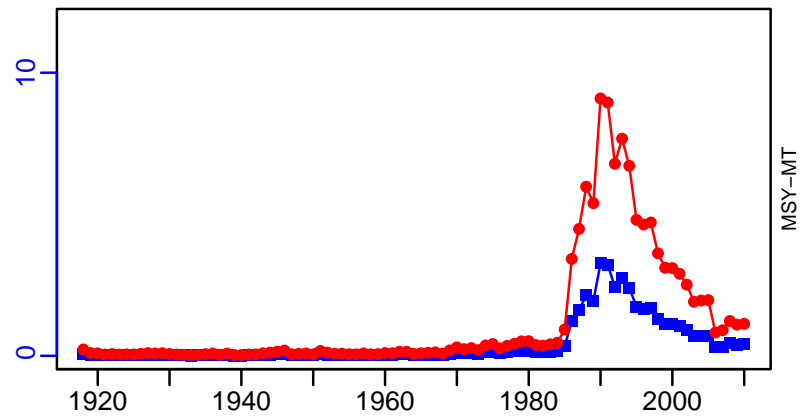
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1918-2010-WATSON)



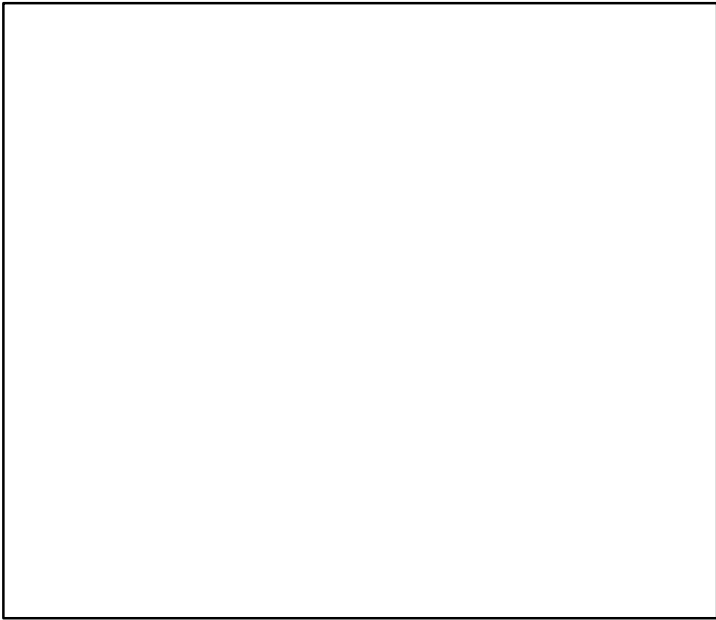
**Beaked redfish ICES 5-12-14 and NAFO Subareas 1-2 (deep)  
[REDDEEPDP-1-2-V-XII-XIV]**

Metadata	
<b>Scientific Name</b>	Sebastes mentella
<b>Current Assess ID</b>	NWWG-REDDEEPDP-1-2-V-XII-XIV-1980-2019-ICESIMP2021
<b>Area</b>	ICES 5-12-14 and NAFO Subareas 1-2 (deep)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	North-Western Working Group
<b>Asmts in RAM</b>	2016, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-relative	2019	0.131
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	Fmgt-relative	2019	0.131
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-relative	2016	0.779
<b>Flim</b>	Flim-relative	2016	0.24
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-relative	2019	0.321	-	-
<b>SSB</b>	SSB-relative	2019	0.282	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-relative	2019	0.885	-	5
<b>F</b>	F-relative	2019	1.593	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	TC-MT	2019	24,453		
<b>TL</b>	TL-MT	2019	24,453		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

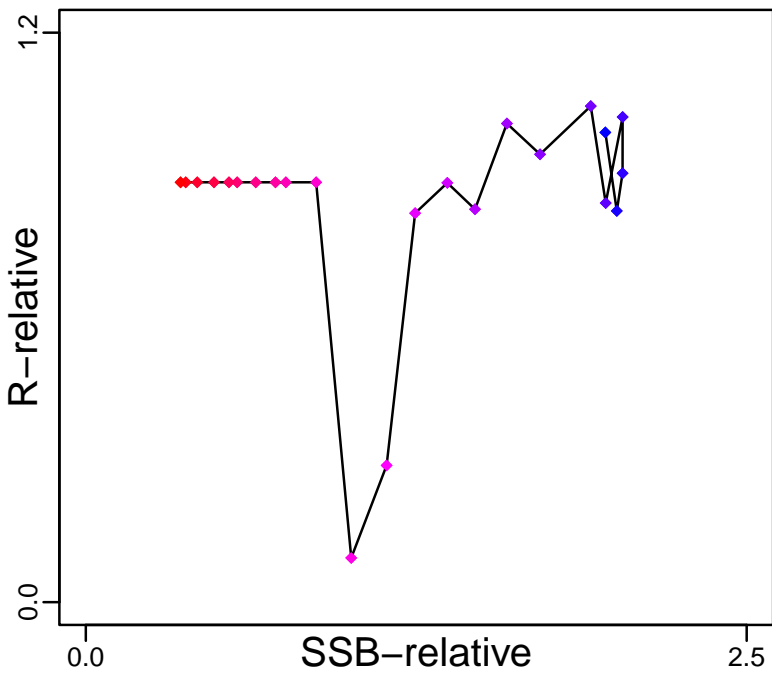
**Kobe MSY\***



**Kobe MGT\***

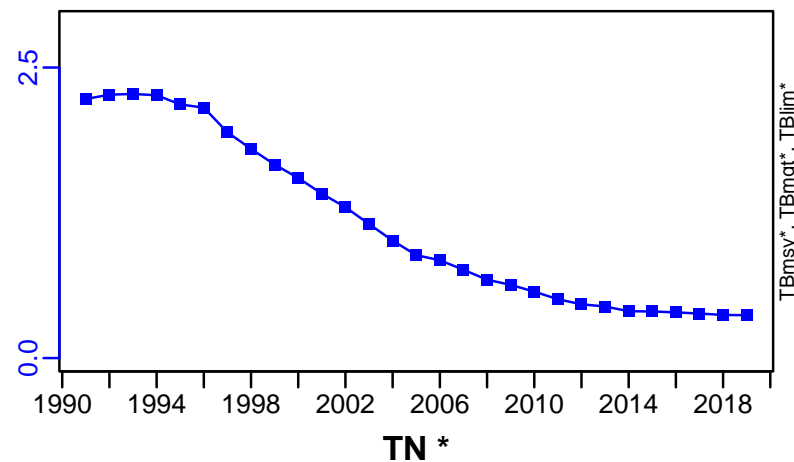


Spawner Recruit (1980–2019–ICESIMP2021)

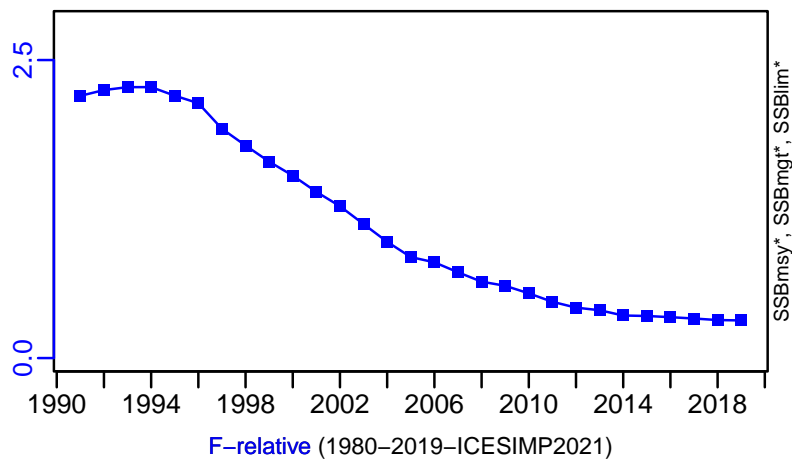


# Beaked redfish ICES 5–12–14 and NAFO Subareas 1–2 (deep) [REDDEEPDP-1-2-V-XII-XIV]

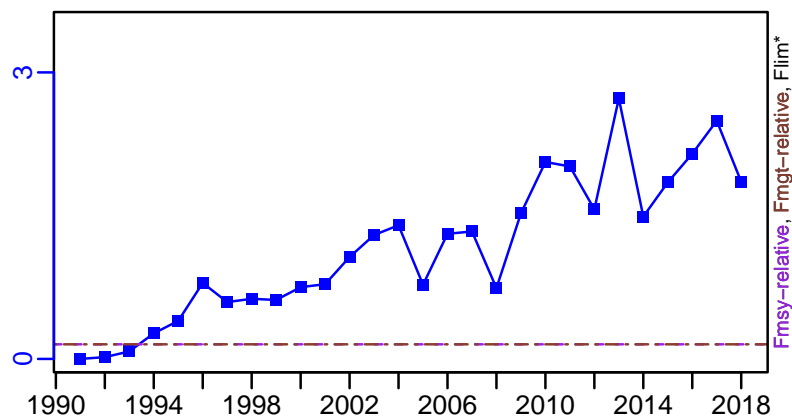
TB-relative (1980–2019–ICESIMP2021)



SSB-relative (1980–2019–ICESIMP2021)



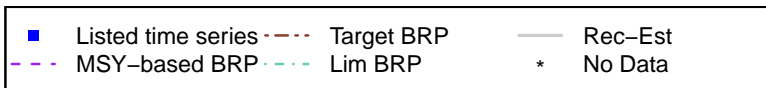
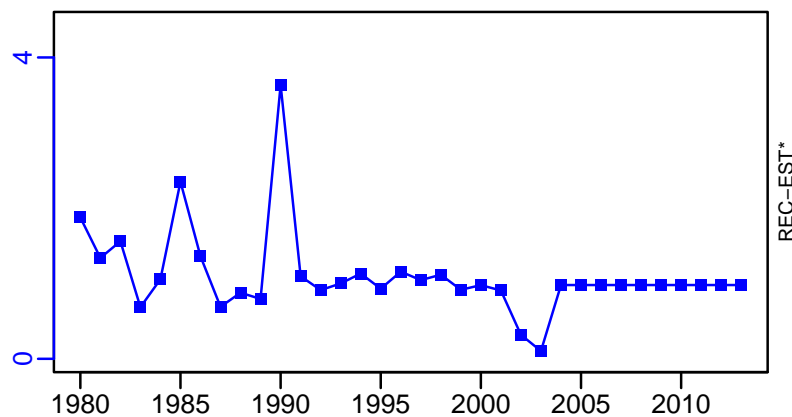
F-relative (1980–2019–ICESIMP2021)



ER\*

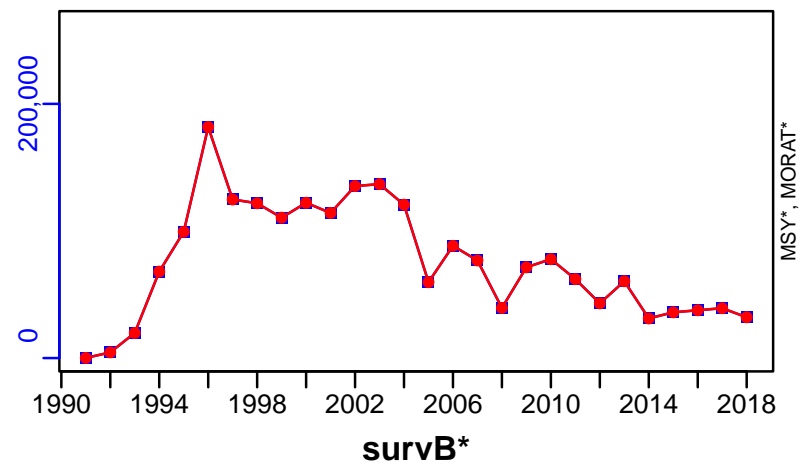


R-relative (1980–2019–ICESIMP2021)



# Beaked redfish ICES 5–12–14 and NAFO Subareas 1–2 (deep) [REDDEEPDP–1–2–V–XII–XIV]

TC–MT, TL–MT, RecC\* (1980–2019–ICESIMP2021)



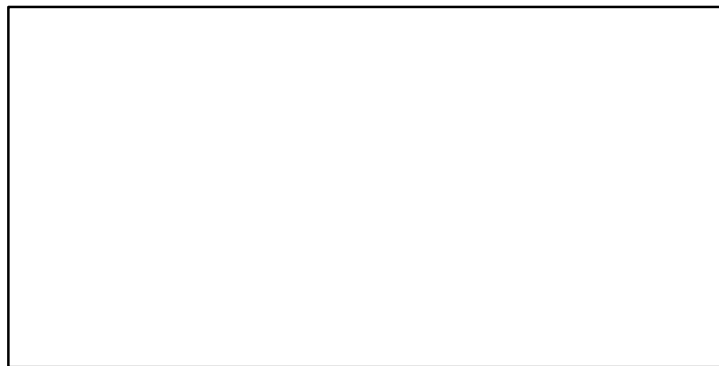
TAC\*, Cpair\*, Cadv\*



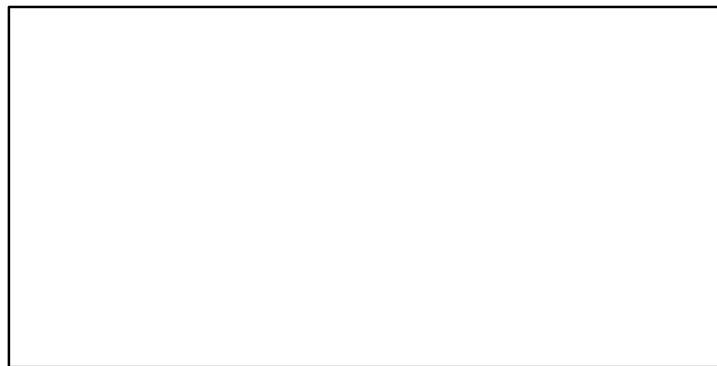
CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Deepwater redfish North-East Arctic [REDDEEPI-II]

Metadata	
<b>Scientific Name</b>	Sebastes mentella
<b>Current Assess ID</b>	NWWG-REDDEEPI-II-1952-2020-ICESIMP2021-2
<b>Area</b>	North-East Arctic
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	North-Western Working Group
<b>Asmts in RAM</b>	2006, 2018, 2020, 2014, 2016

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	SSBlim-MT	2020	227,000
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2016	1,260,000	Both	-
SSB	SSB-MT	2020	918,000	-	-
TN	-	-	-	-	-
R	R-E00	2020	$2.65 \times 10^8$	-	2
F	F-1/yr	2018	0.039	-	19+
ER	ER-ratio	2020	0.045	-	-
TC	TC-MT	2020	46,000		
TL	TL-MT	2018	31,201		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

# Deepwater redfish North-East Arctic [REDDEEPI-II]

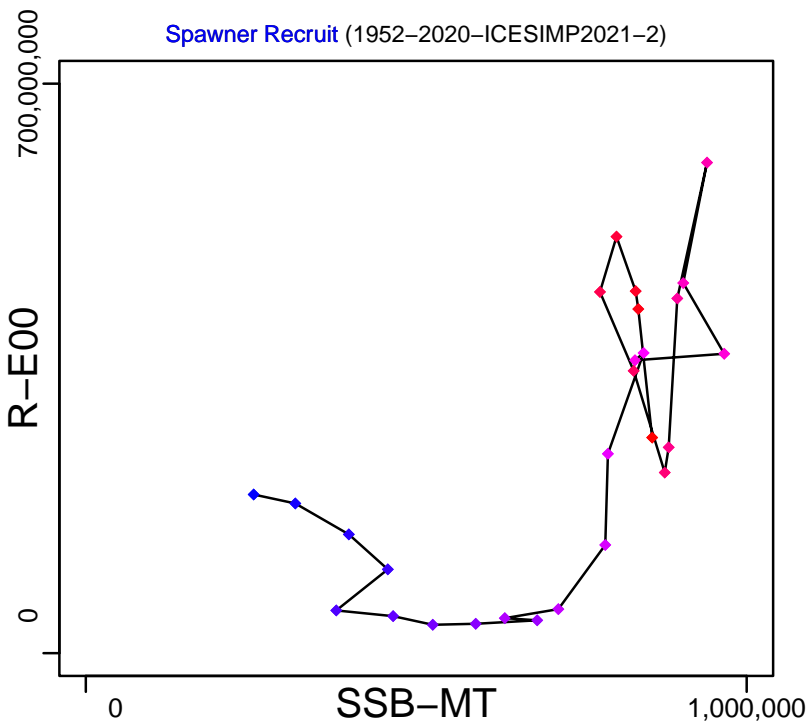
Kobe MSY\*



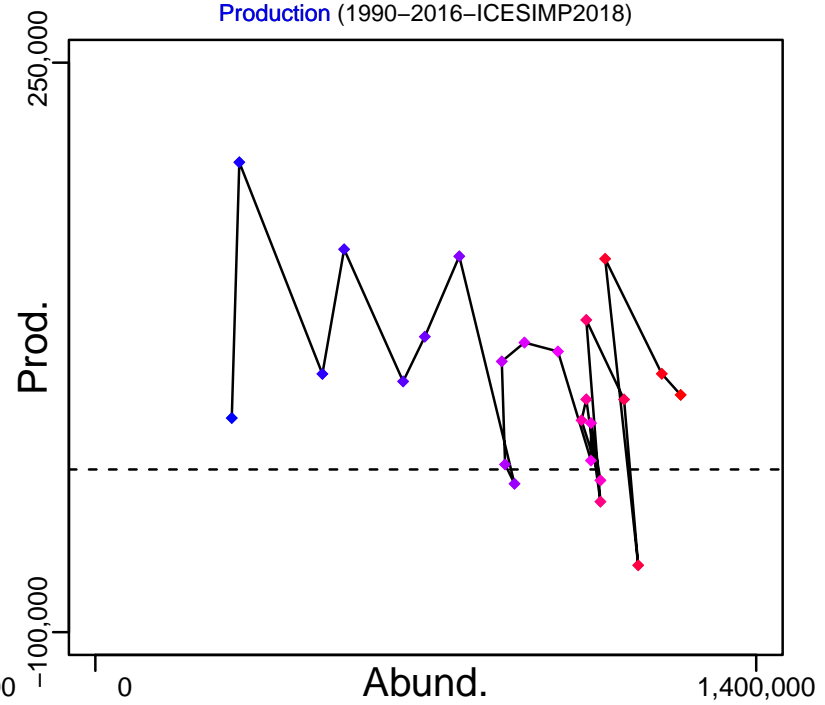
Kobe MGT\*



Spawner Recruit (1952–2020–ICESIMP2021–2)



Production (1990–2016–ICESIMP2018)

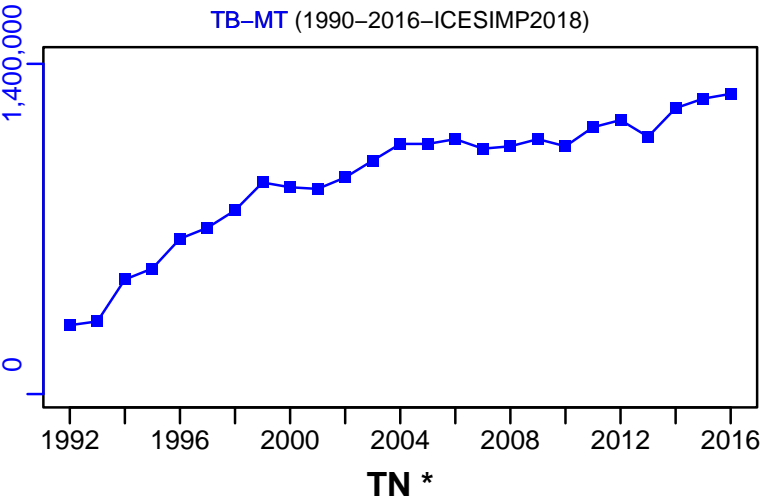


◆ Start Year ◆ End Year \* No Data

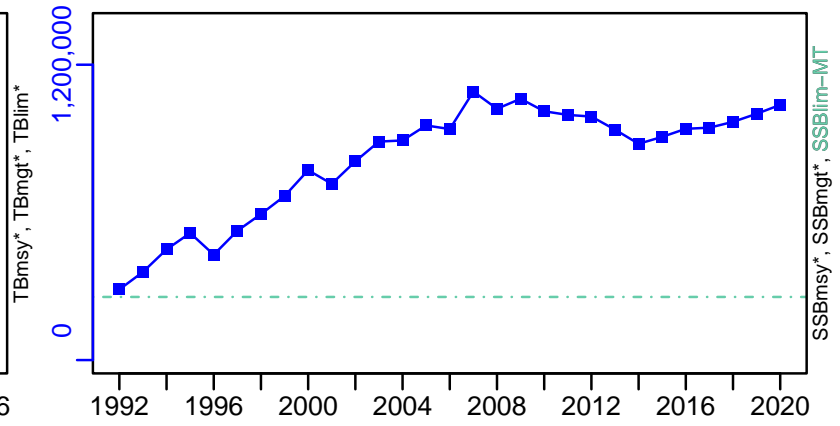


# Deepwater redfish North-East Arctic [REDDEEPI-II]

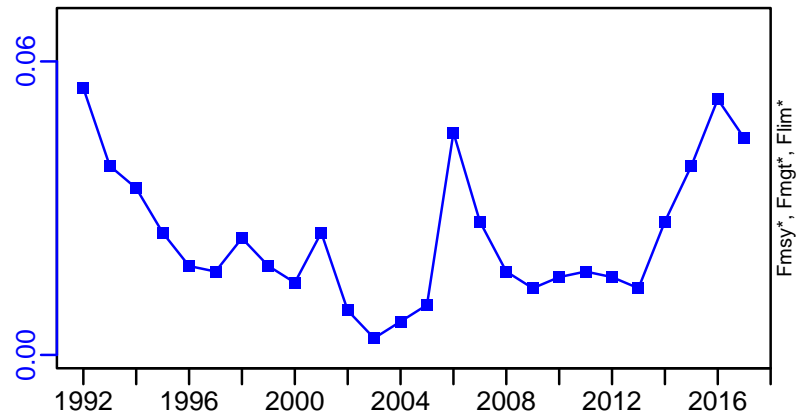
TB-MT (1990–2016–ICESIMP2018)



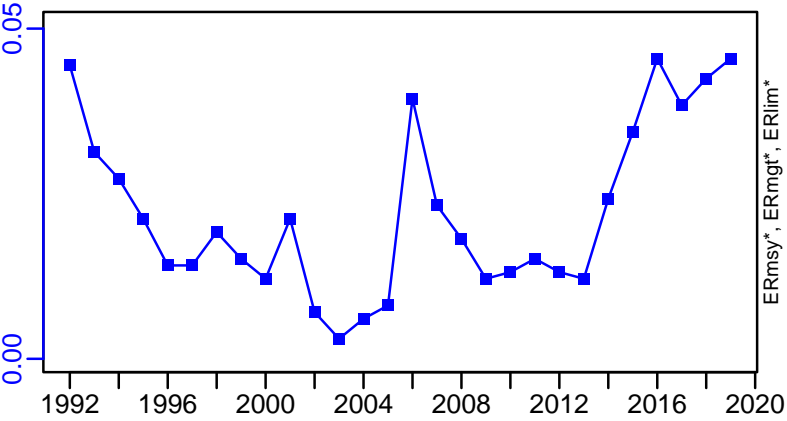
SSB-MT (1952–2020–ICESIMP2021–2)



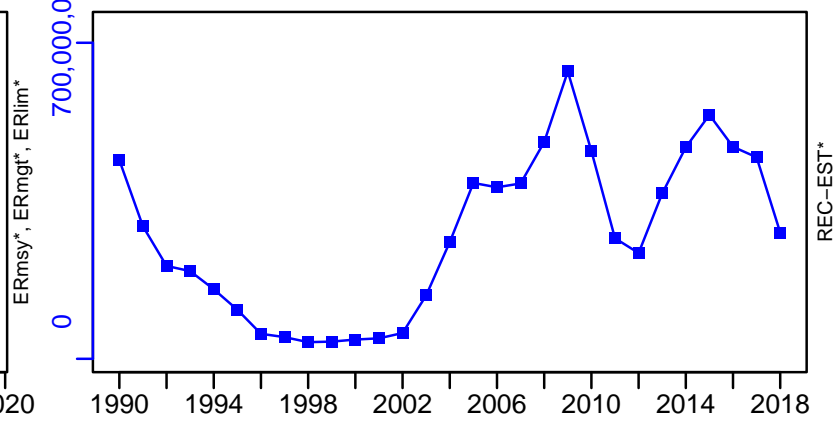
F-1/yr (1952–2018–ICESIMP2021)



ER-ratio (1952–2020–ICESIMP2021–2)

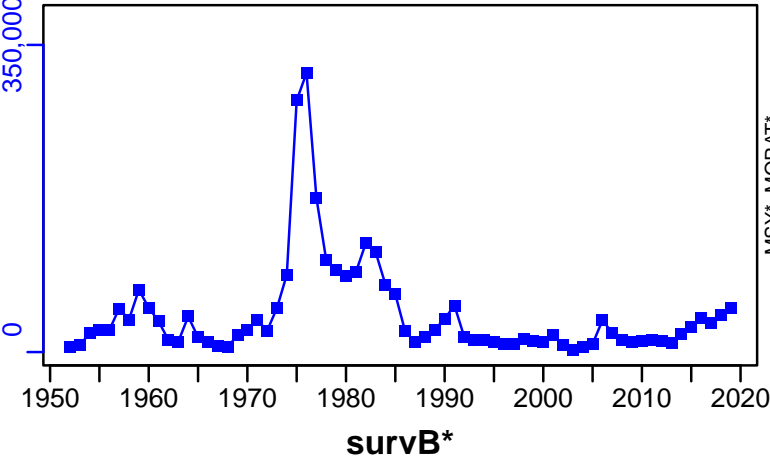


R-E00 (1952–2020–ICESIMP2021–2)



Deepwater redfish North-East Arctic [REDDEEPI-II]

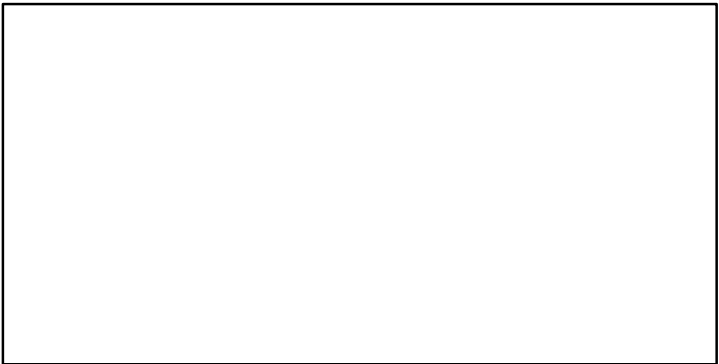
TC-MT, TL\*, RecC\* (1952-2020-ICESIMP2021-2)



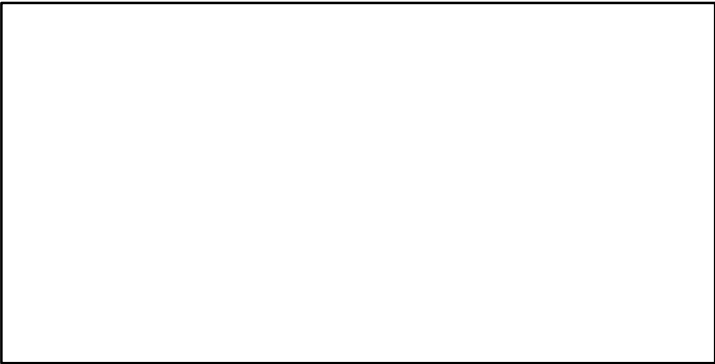
TAC\*, Cpair\*, Cadv\*



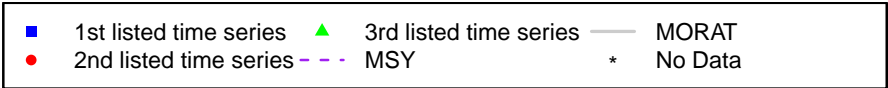
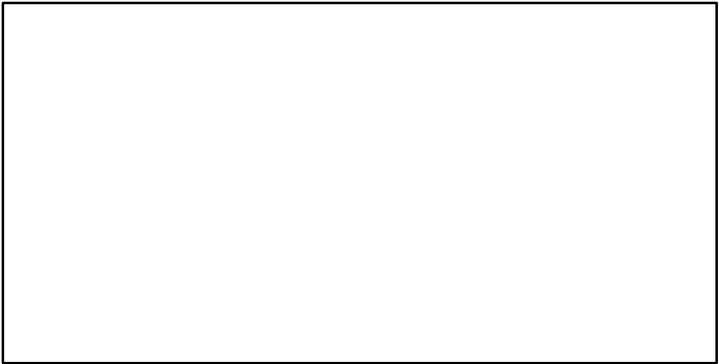
CPUE\*



EFFORT\*



CdivMSY\*



**Beaked redfish ICES 5-12-14 and NAFO Subareas 1-2 (shallow)  
[REDDEEPSH1-2-V-XII-XIV]**

Metadata	
<b>Scientific Name</b>	Sebastes mentella
<b>Current Assess ID</b>	NWWG-REDDEEPSH1-2-V-XII-XIV-1982-2018-ICESIMP2021
<b>Area</b>	ICES 5-12-14 and NAFO Subareas 1-2 (shallow)
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	North-Western Working Group
<b>Asmts in RAM</b>	2016, 2018

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2018	4599		
TL	TL-MT	2016	5600		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***



◆ Start Year   ◆ End Year   \* No Data

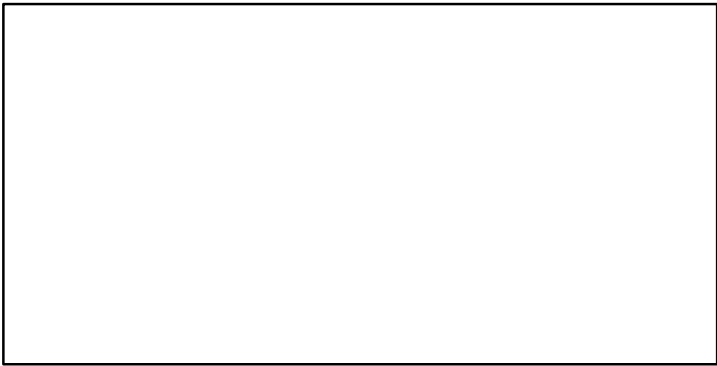
**TB\***



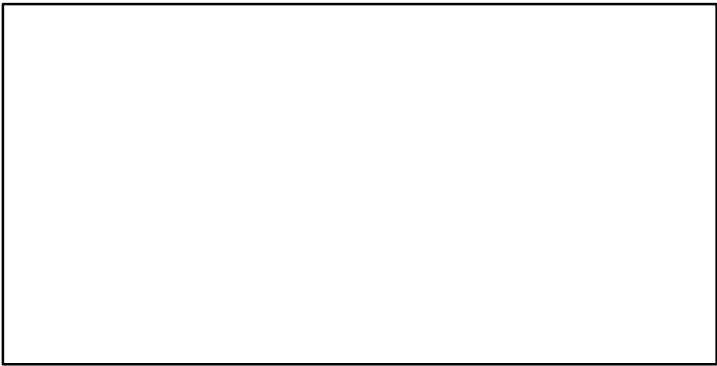
**SSB\***



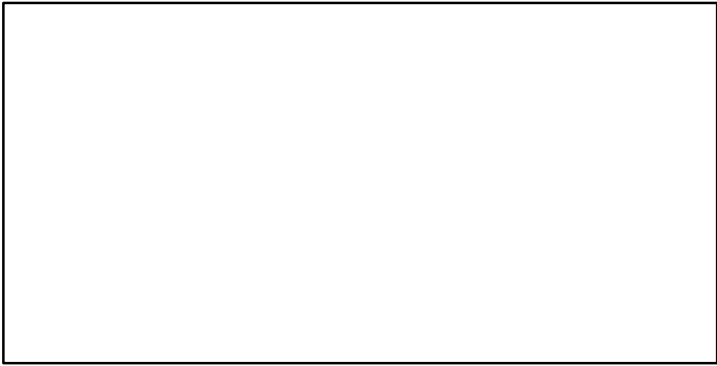
**TN \***



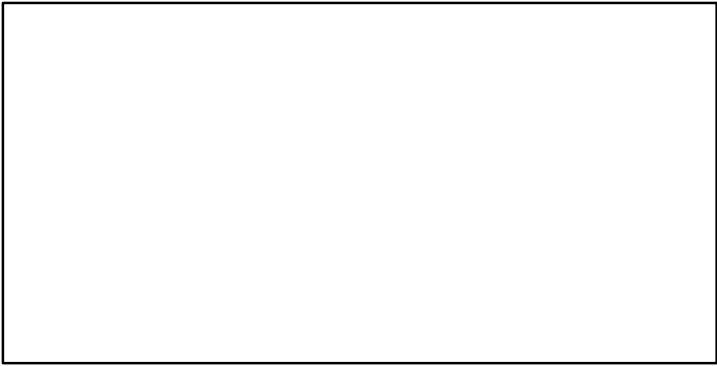
**F\***



**ER\***



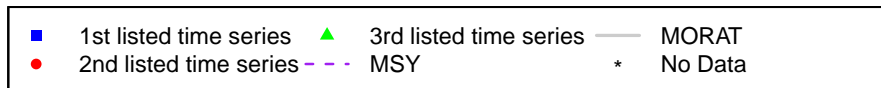
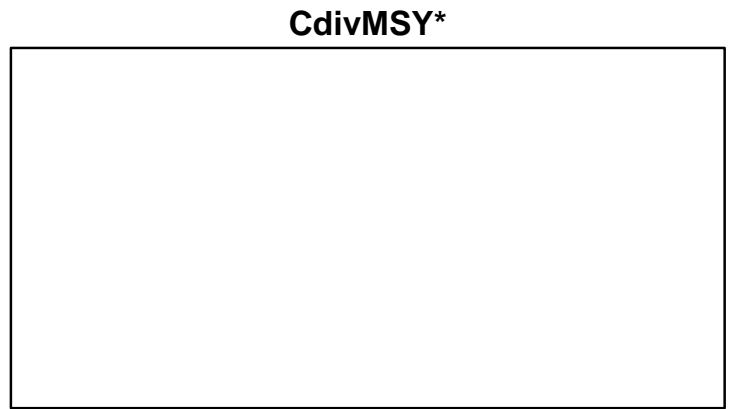
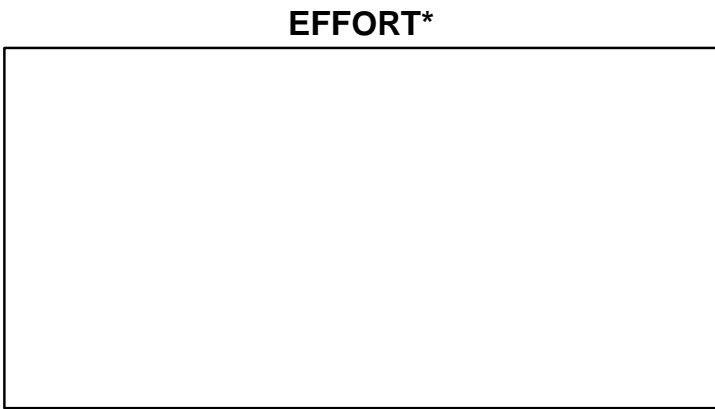
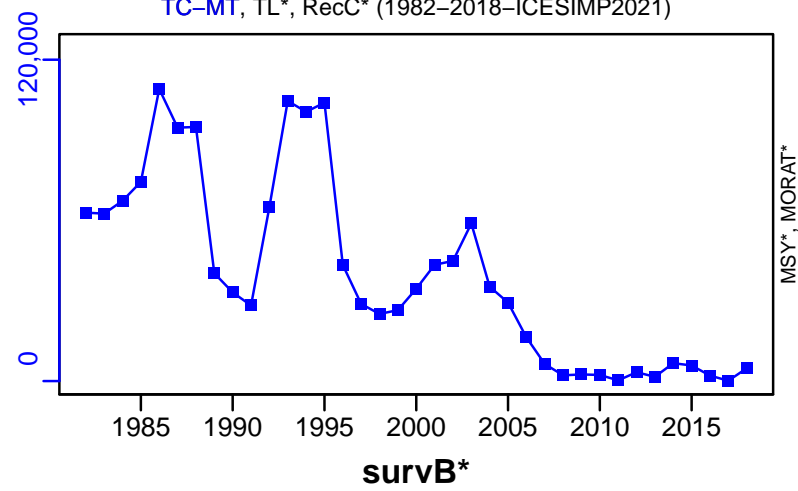
**Recruits\***



Beaked redfish ICES 5–12–14 and NAFO Subareas 1–2 (shallow) [REDDEEPSH1–2–V–XII–XIV]

TC–MT, TL\*, RecC\* (1982–2018–ICESIMP2021)

TAC\*, Cpair\*, Cadv\*



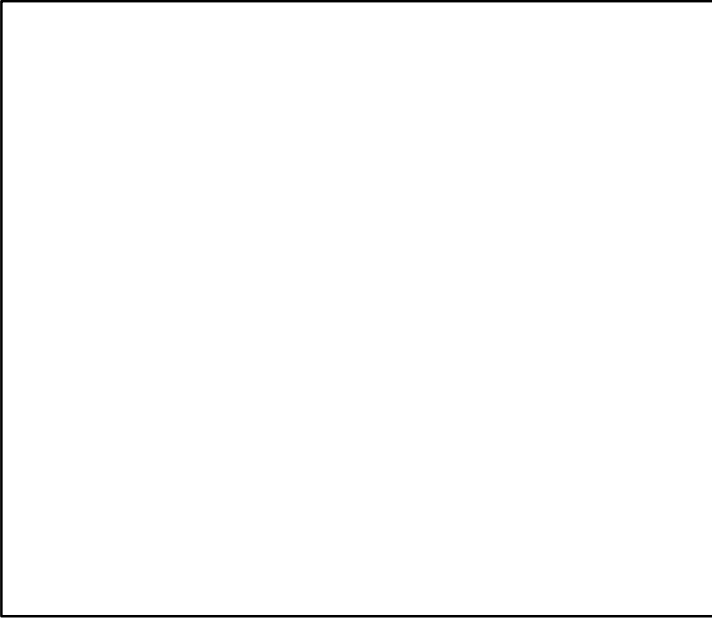
## Beaked redfish ICES 5a-14 [REDDEEPVa-XIV]

Metadata	
<b>Scientific Name</b>	Sebastes mentella
<b>Current Assess ID</b>	NWWG-REDDEEPVa-XIV-1978-2017-ICESIMP2018
<b>Area</b>	ICES 5a-14
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	North-Western Working Group
<b>Asmts in RAM</b>	2016, 2016, 2017

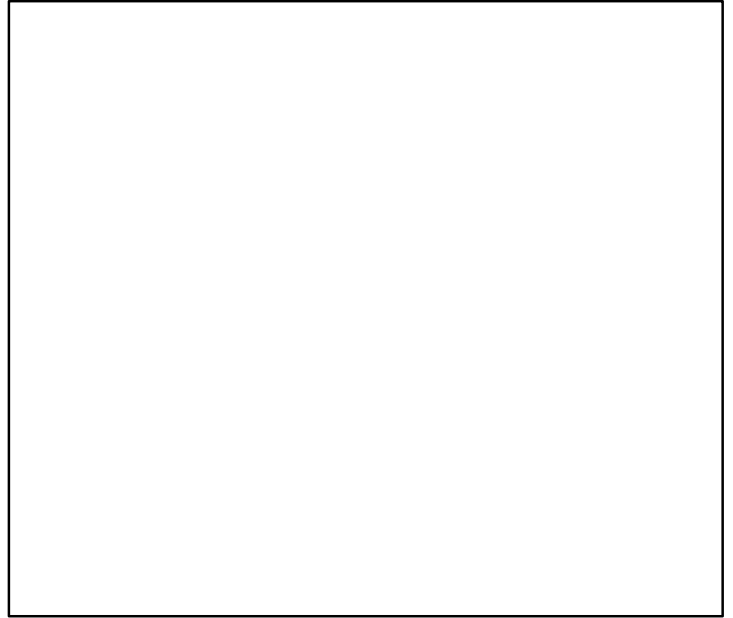
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2017	8370		
TL	TL-MT	2017	8370		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

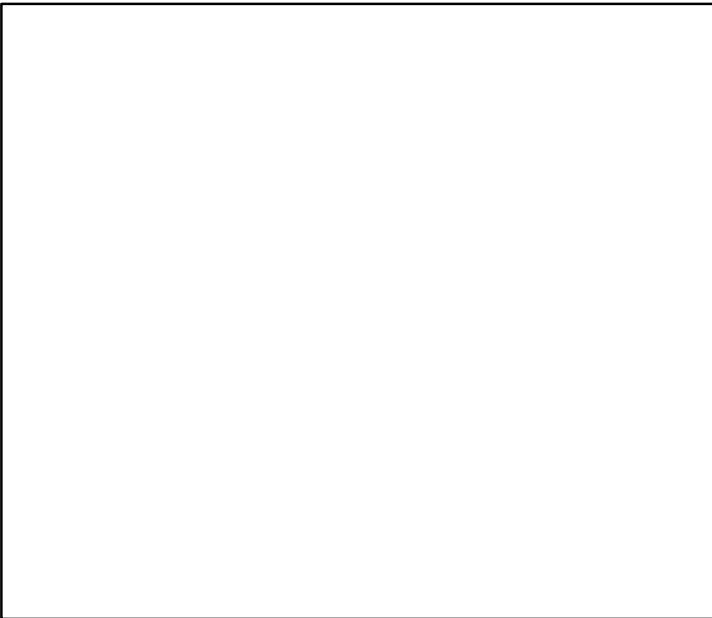
**Kobe MSY\***



**Kobe MGT\***



**Spawner Recruit\***



**Production\***

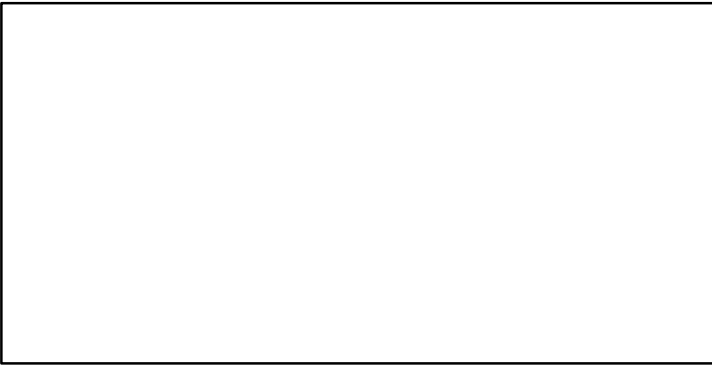


◆ Start Year ◆ End Year \* No Data

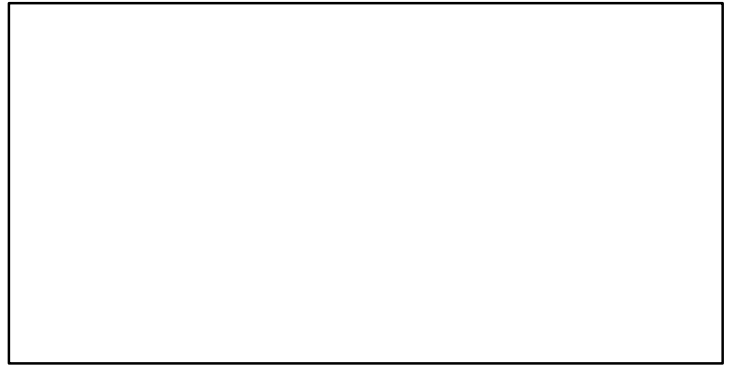


Beaked redfish ICES 5a–14 [REDDEEPVa–XIV]

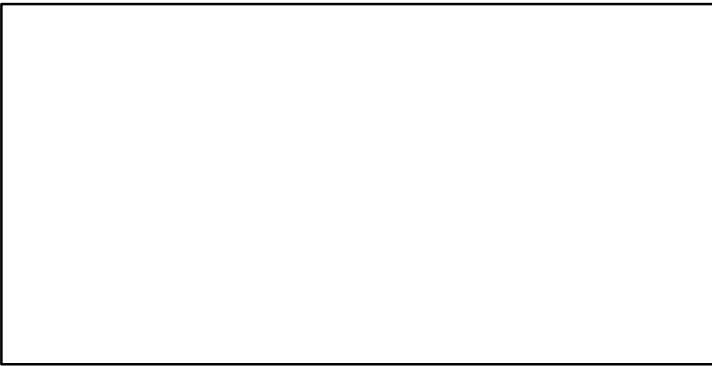
**TB\***



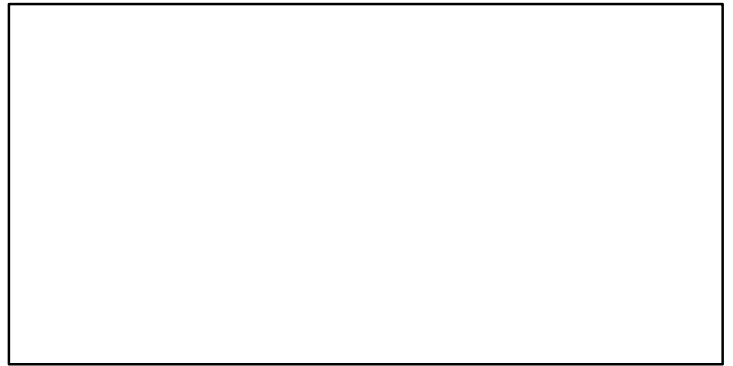
**SSB\***



**TN \***



**F\***



**ER\***



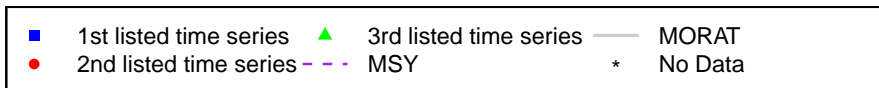
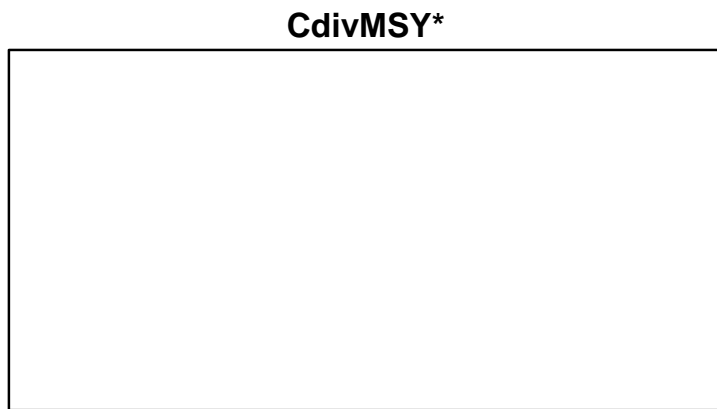
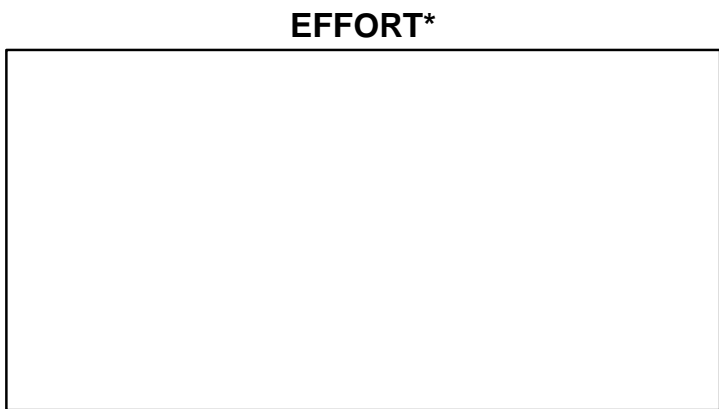
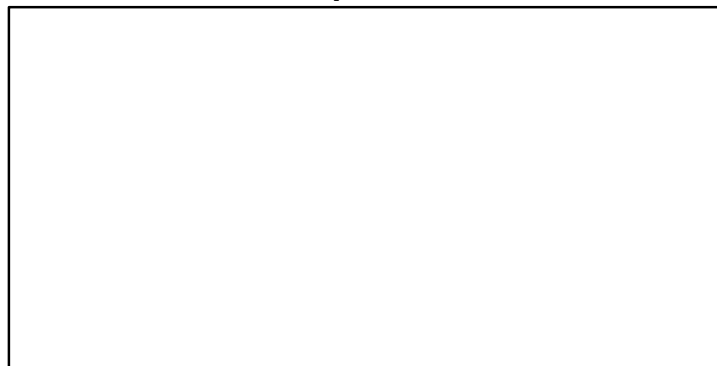
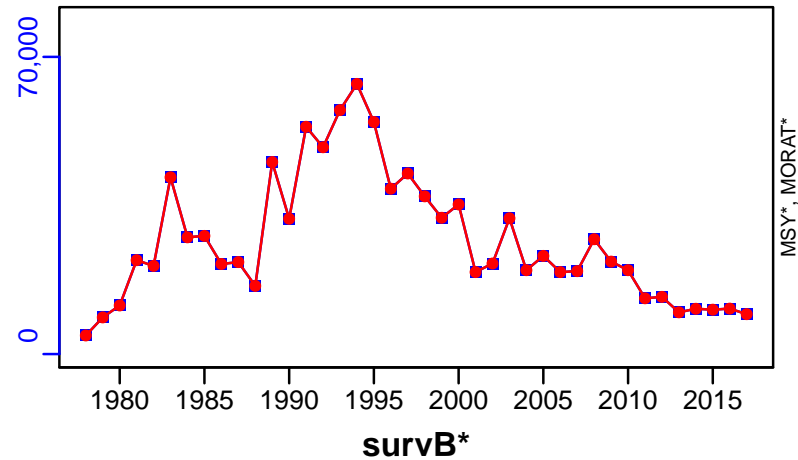
**Recruits\***



# Beaked redfish ICES 5a-14 [REDDEEPVa-XIV]

TC-MT, TL-MT, RecC\* (1978-2017-ICESIMP2018)

TAC\*, Cpair\*, Cadv\*



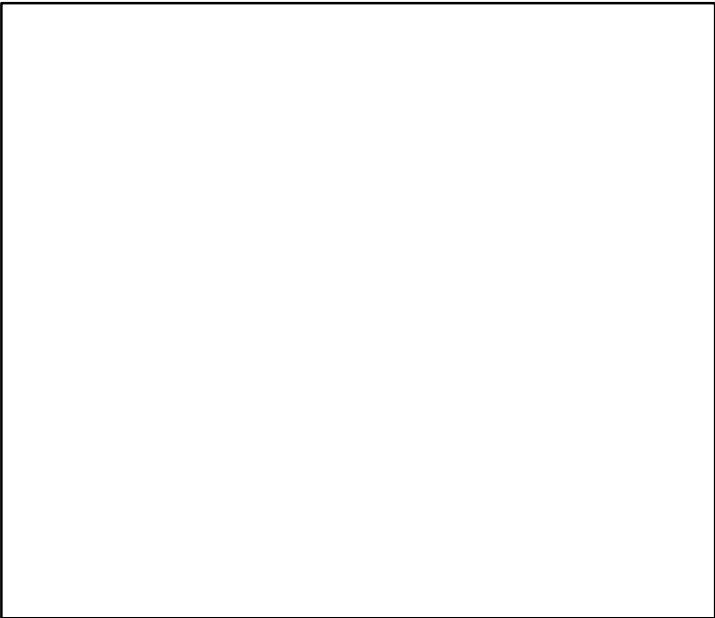
## Beaked redfish Southeast Greenland [REDDEEPXIVb]

Metadata	
<b>Scientific Name</b>	Sebastes mentella
<b>Current Assess ID</b>	NWWG-REDDEEPXIVb-1974-2017-ICESIMP2018
<b>Area</b>	Southeast Greenland
<b>Management Authority</b>	International Council for the Exploration of the Sea
<b>Assessor</b>	North-Western Working Group
<b>Asmts in RAM</b>	2016, 2016, 2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2016	5980		
TL	TL-MT	2017	3030		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

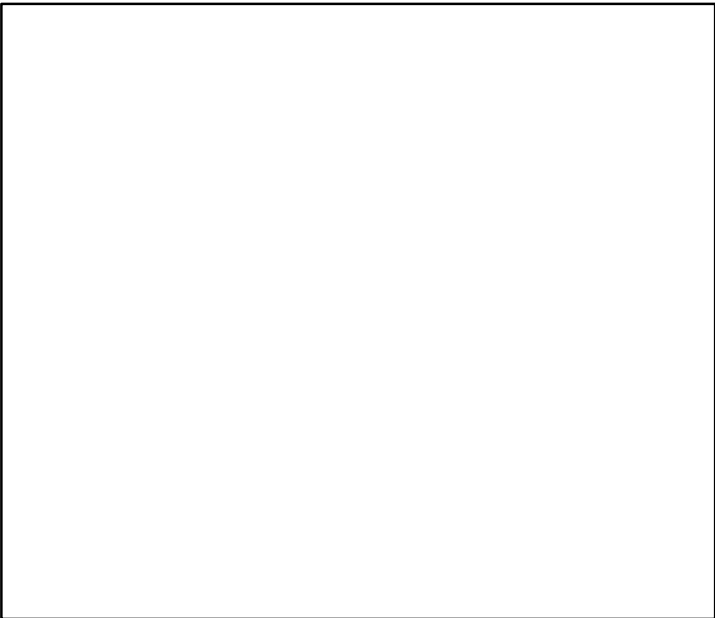
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Beaked redfish Southeast Greenland [REDDEEPXIVb]

TB\*



SSB\*



TN \*



F\*



ER\*

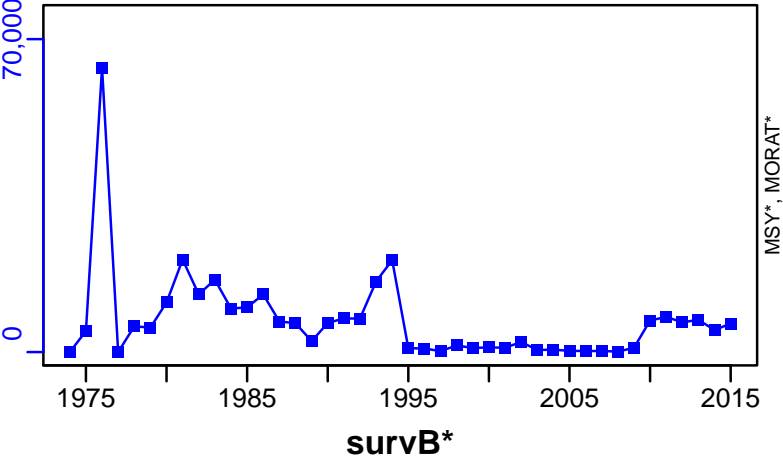


Recruits\*



Beaked redfish Southeast Greenland [REDDEEPXIVb]

TC-MT, TL\*, RecC\* (1974–2016–ICESIMP2016)



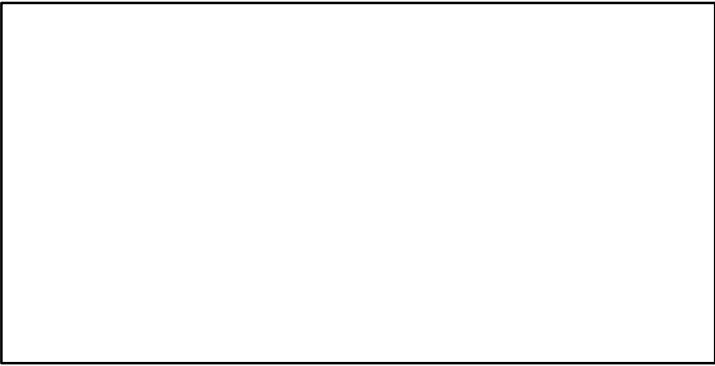
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Redfish species N and SW Grand Banks [REDFISHSPP3LN]

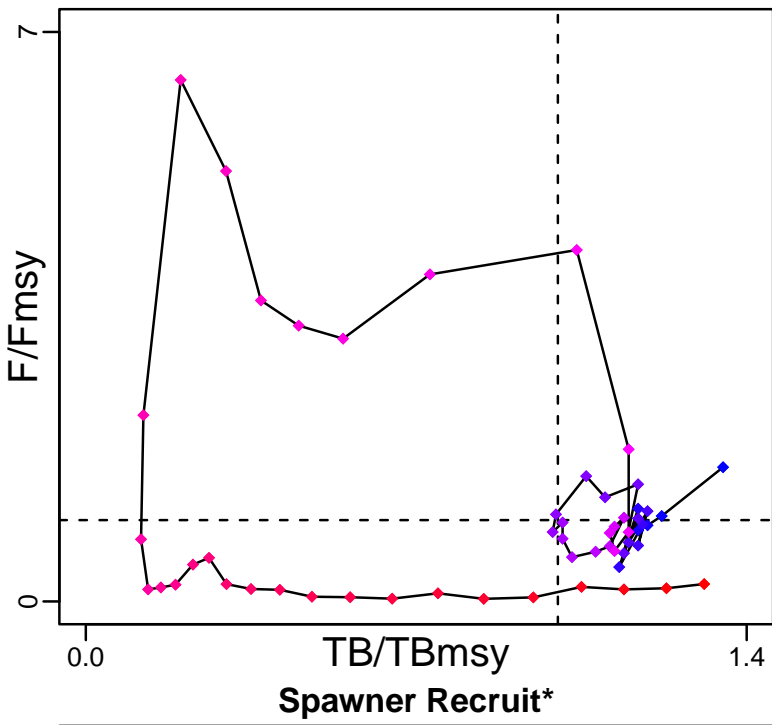
Metadata	
<b>Scientific Name</b>	Sebastes spp
<b>Current Assess ID</b>	NAFO-SC-REDFISHSPP3LN-1959-2013-WATSON
<b>Area</b>	N and SW Grand Banks
<b>Management Authority</b>	Northwest Atlantic Fisheries Organization
<b>Assessor</b>	NAFO Scientific Council
<b>Asmts in RAM</b>	2008, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2008	141,900
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2008	0.172
<b>ERmsy</b>	ERmsy-ratio	2008	0.172
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2008	24,440
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

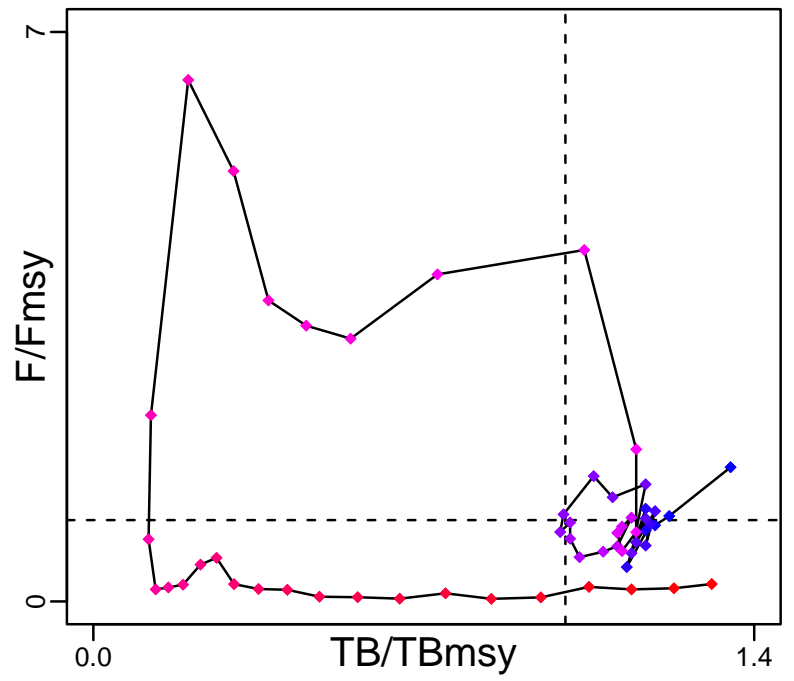
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2008	267,000	-	ALL AGES
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	F-1/yr	2008	0.007	Both	-
<b>ER</b>	ER-ratio	2008	0.006	-	-
<b>TC</b>	TC-MT	2013	6000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TBdivTBmsy-dimensionless	2013	1.31		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	FdivFmsy-dimensionless	2013	0.214		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2008	0.037		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Redfish species N and SW Grand Banks [REDFISHSPP3LN]

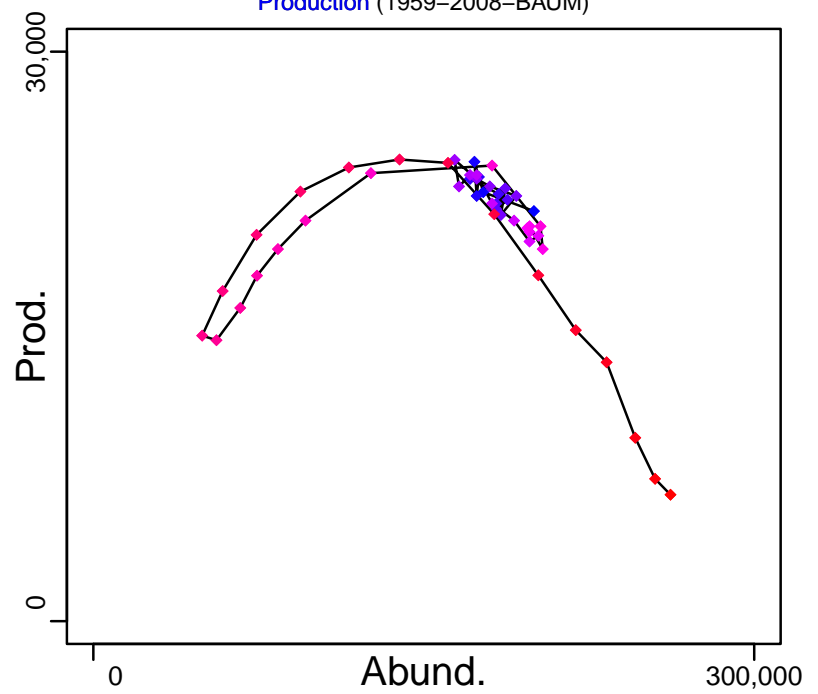
Kobe MSYpref (1959–2013–WATSON)



Kobe MGTpref (1959–2013–WATSON)



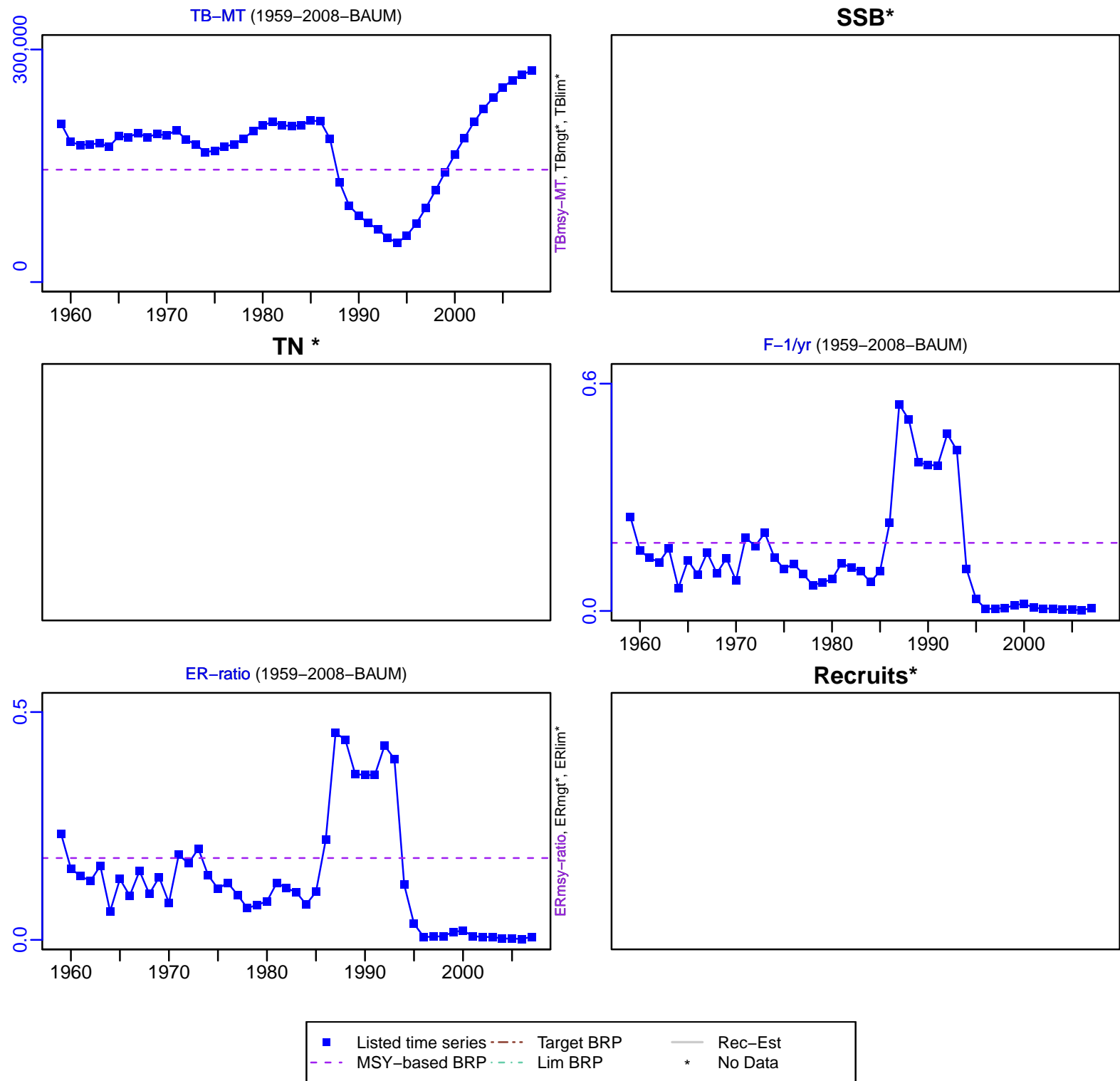
Production (1959–2008–BAUM)



◆ Start Year ◆ End Year \* No Data

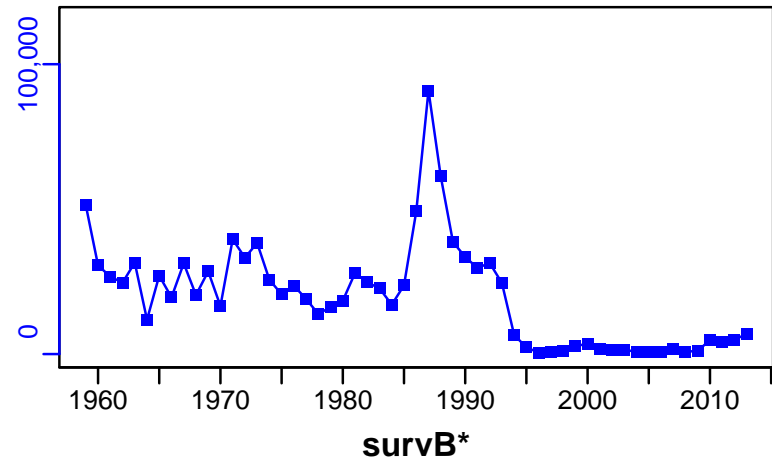


# Redfish species N and SW Grand Banks [REDFISHSPP3LN]

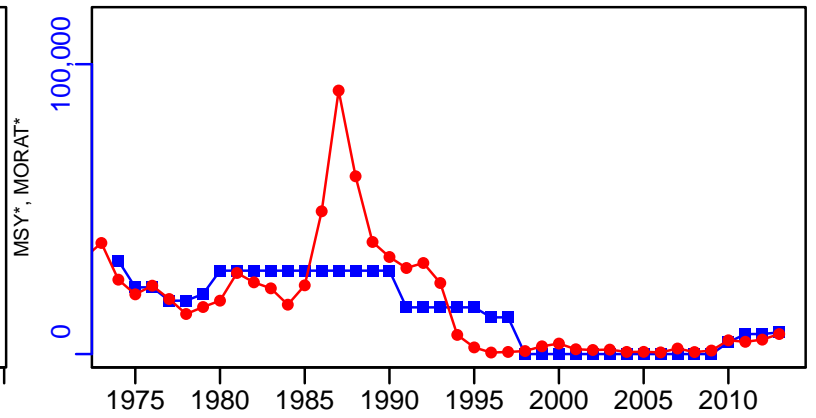


# Redfish species N and SW Grand Banks [REDFISHSPP3LN]

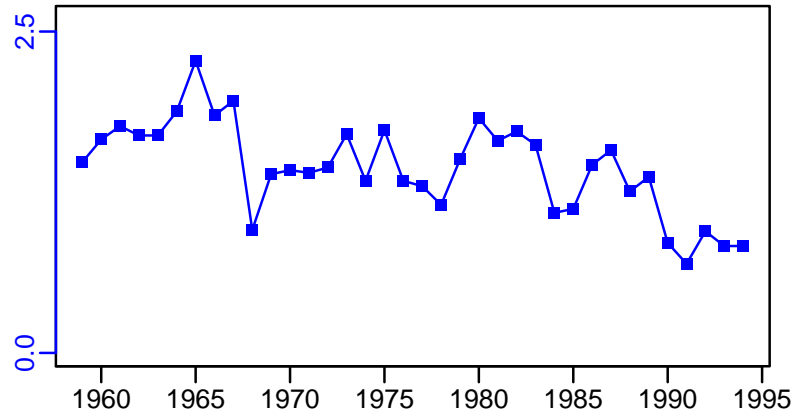
TC-MT, TL\*, RecC\* (1959-2013-WATSON)



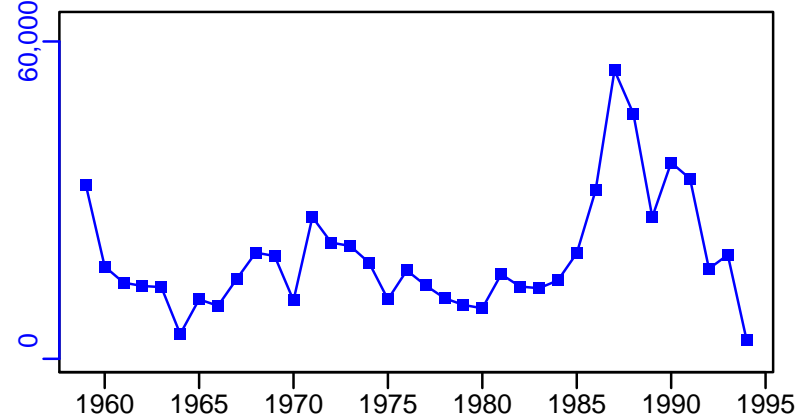
TAC-MT, Cpair-MT, Cadv\* (1959-2013-WATSON)



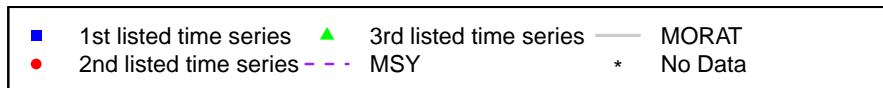
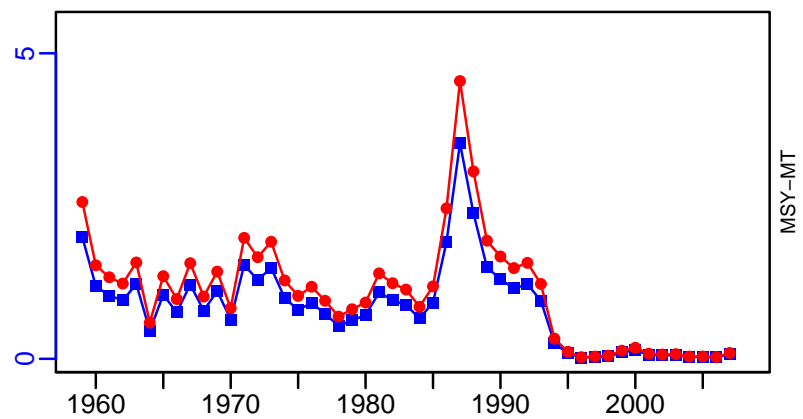
CPUE-MT/hour (1959-2013-WATSON)



EFFORT-hour (1959-2013-WATSON)



TC-MT/MSY-MT, CdivMEANC-ratio, (1959-2008-BAUM)

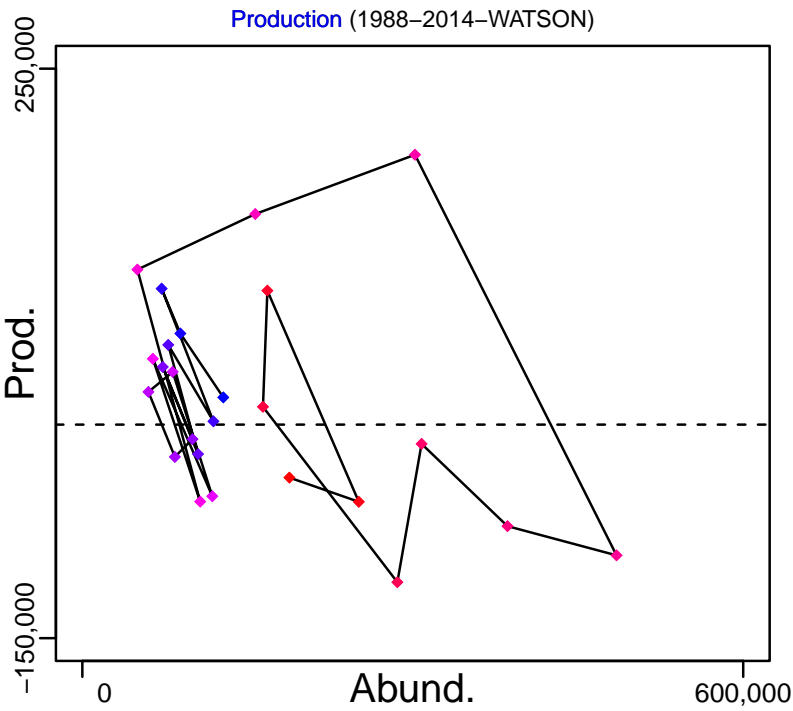
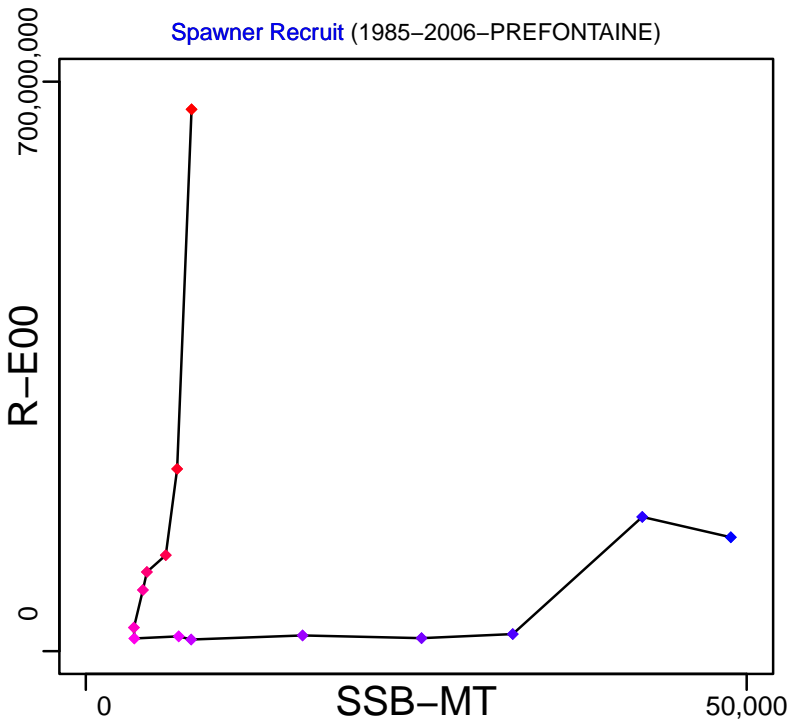
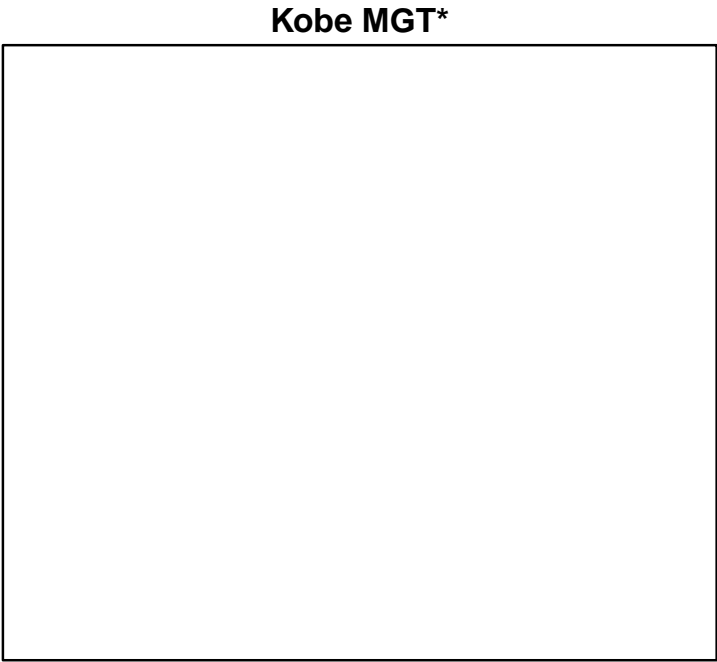
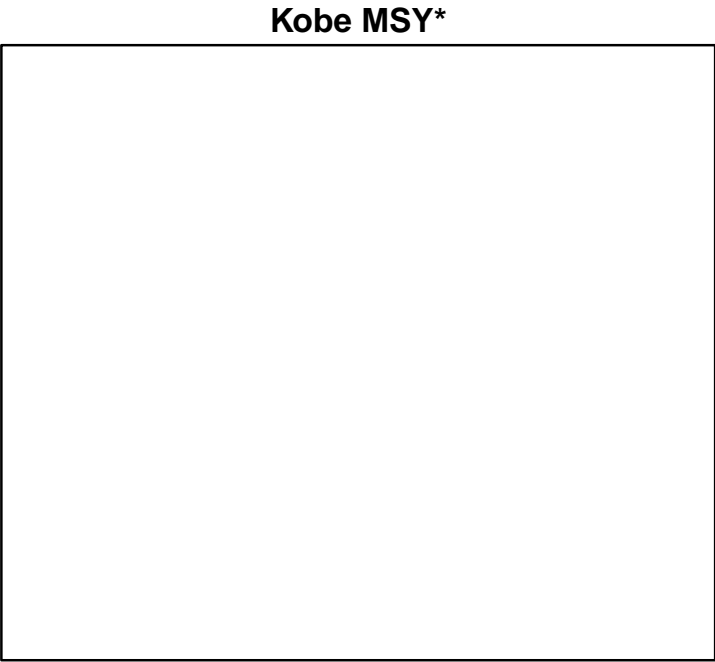


## Redfish species Flemish Cap [REDFISHSPP3M]

Metadata	
<b>Scientific Name</b>	Sebastes spp
<b>Current Assess ID</b>	NAFO-SC-REDFISHSPP3M-1988-2014-WATSON
<b>Area</b>	Flemish Cap
<b>Management Authority</b>	Northwest Atlantic Fisheries Organization
<b>Assessor</b>	NAFO Scientific Council
<b>Asmts in RAM</b>	2006, 2014

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2006	0.1
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

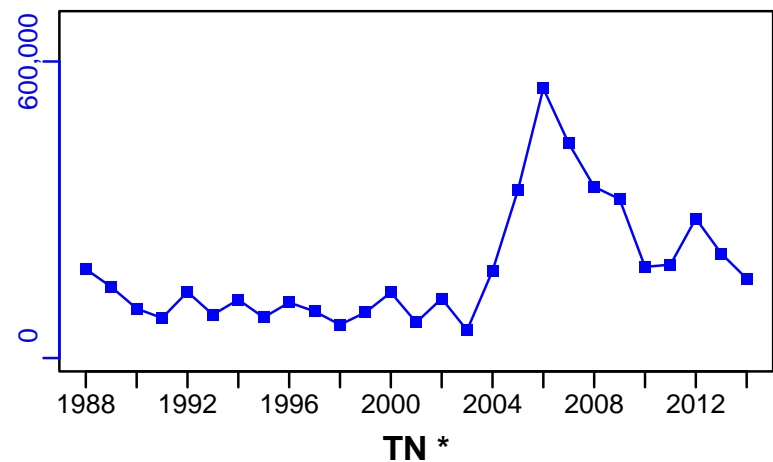
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2014	143,000	Both	-
<b>SSB</b>	SSB-MT	2014	63,000	Females	13+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2006	$6.66 \times 10^8$	-	4
<b>F</b>	F-1/yr	2006	0.046	-	6 to 16
<b>ER</b>	ER-calc-ratio	2014	0.052	-	-
<b>TC</b>	TC-MT	2014	7400		
<b>TL</b>	TL-MT	2006	4120		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		



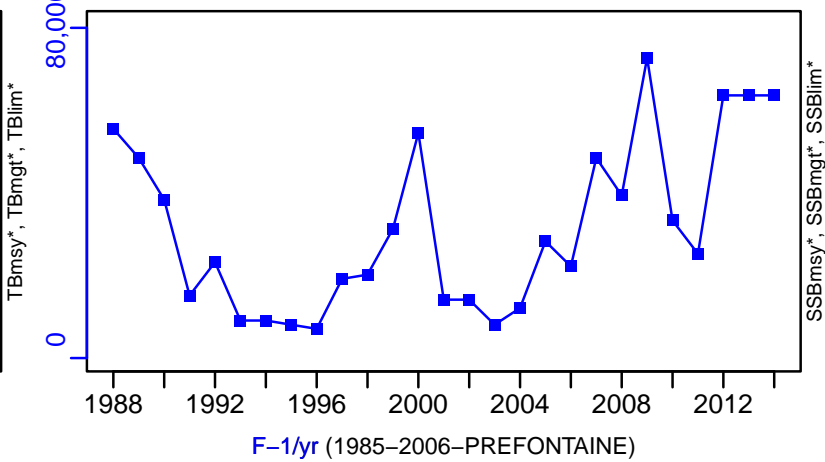
◆ Start Year ◆ End Year \* No Data

# Redfish species Flemish Cap [REDFISHSPP3M]

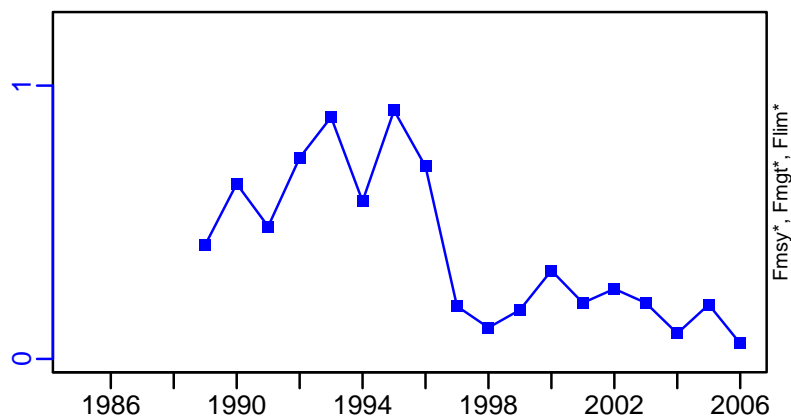
TB-MT (1988–2014–WATSON)



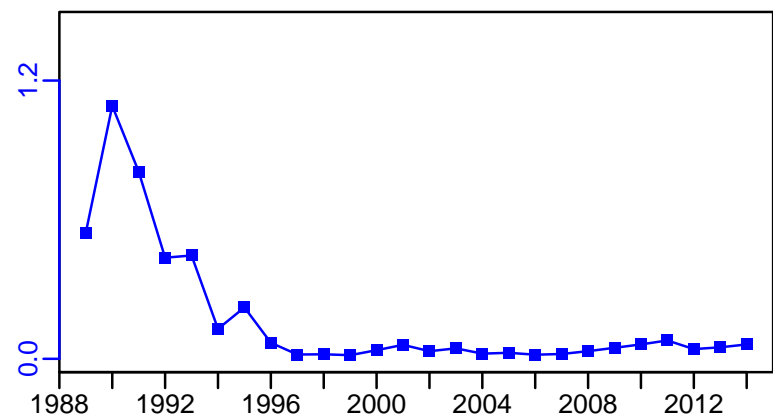
SSB-MT (1988–2014–WATSON)



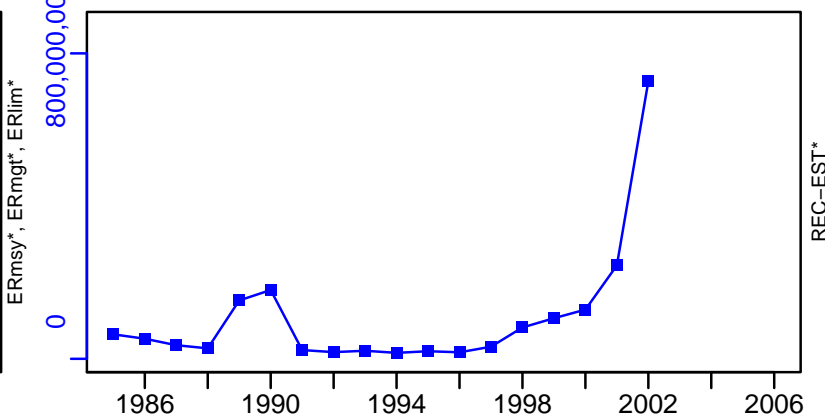
F-1/yr (1985–2006–PREFONTAINE)



ER-calc-ratio (1988–2014–WATSON)

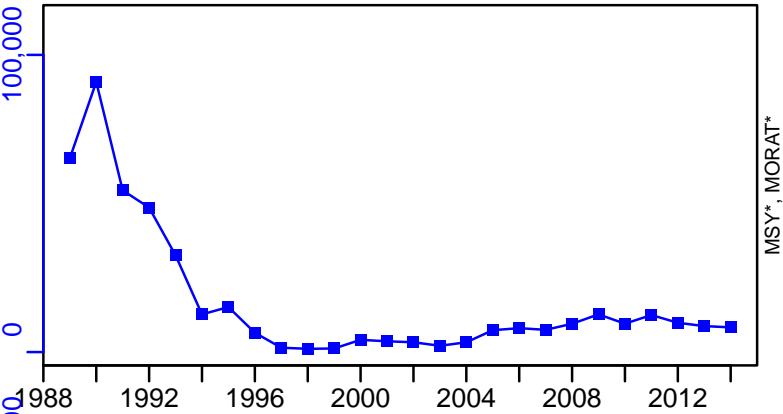


R-E00 (1985–2006–PREFONTAINE)



Redfish species Flemish Cap [REDFISHSPP3M]

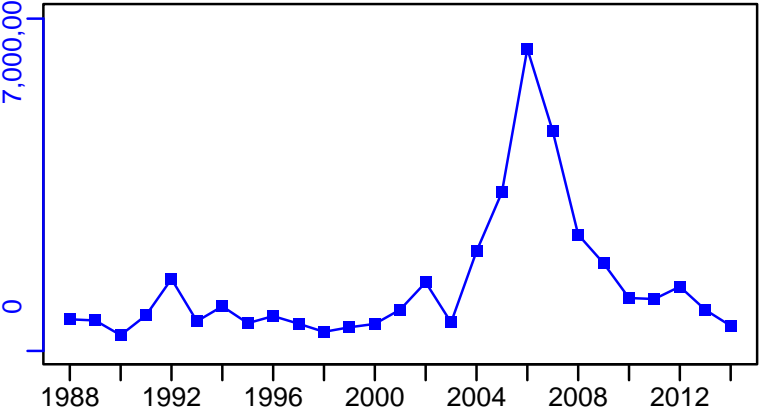
TC-MT, TL\*, RecC\* (1988-2014-WATSON)



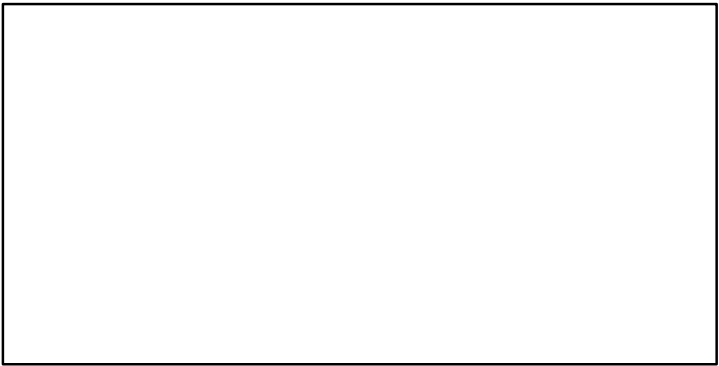
TAC\*, Cpair\*, Cadv\*



survB-E00 (1988-2014-WATSON)



CPUE\*



CdivMSY\*



## Redfish species Unit 1 [REDFISHSPPUT1]

Metadata	
<b>Scientific Name</b>	Sebastes spp
<b>Current Assess ID</b>	DFO-REDFISHSPPUT1-1960-2017-ASHBROOK
<b>Area</b>	Unit 1
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans
<b>Asmts in RAM</b>	2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2017	328		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

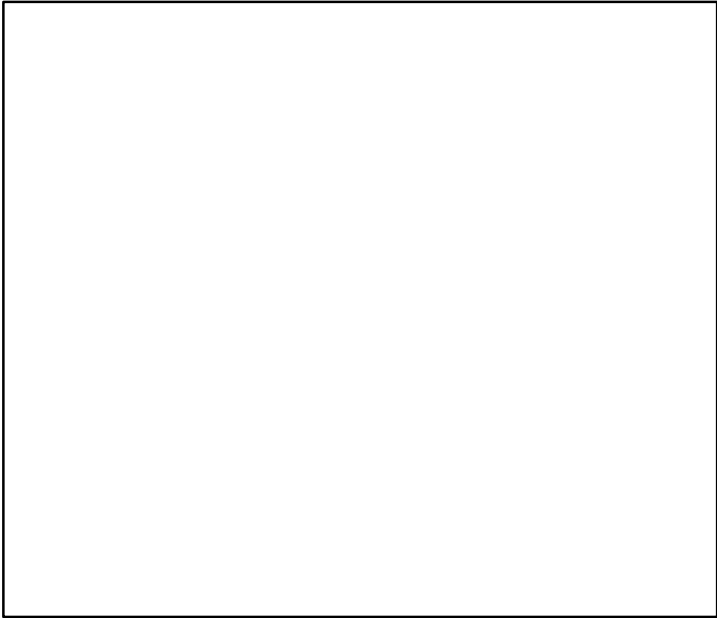
Kobe MSY\*



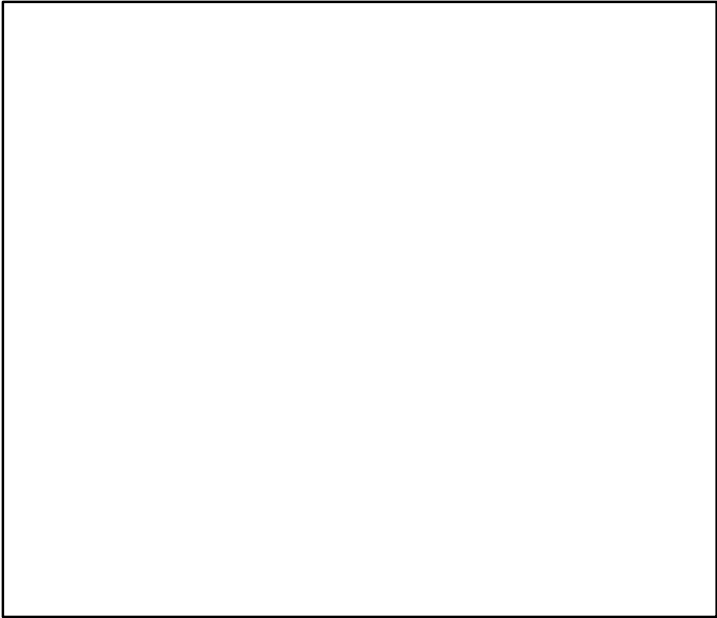
Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data



Redfish species Unit 1 [REDFISHSPPUT1]

TB\*



SSB\*



TN \*



F\*



ER\*



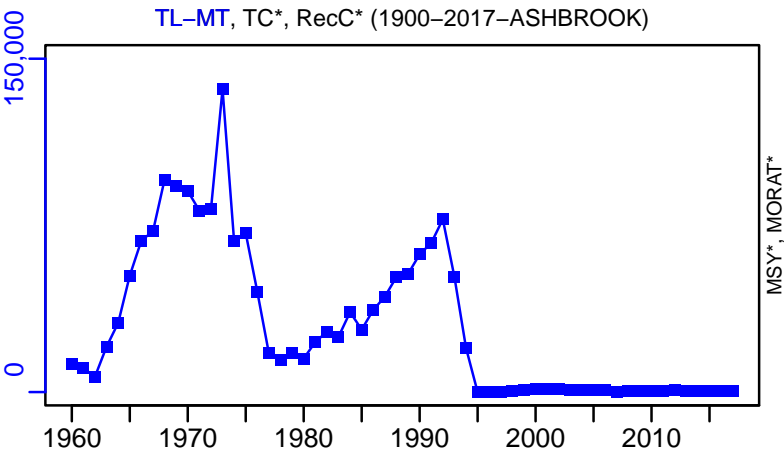
Recruits\*



# Redfish species Unit 1 [REDFISHSPPUT1]

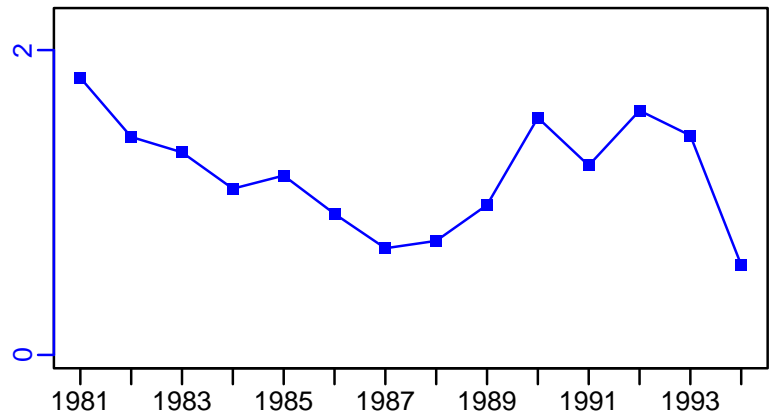
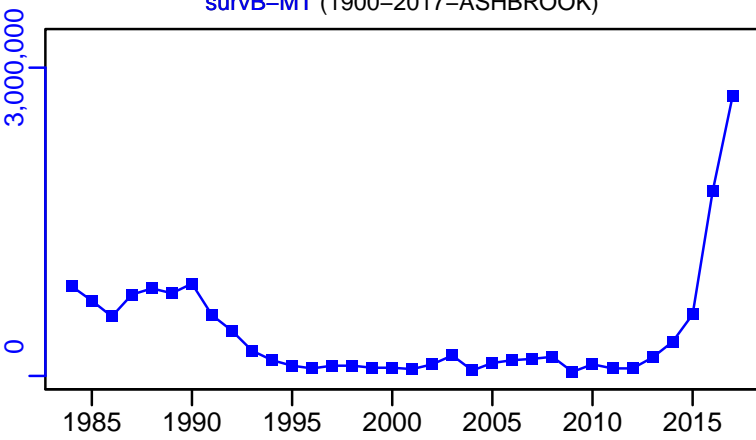
TL-MT, TC\*, RecC\* (1900-2017-ASHBROOK)

TAC\*, Cpair\*, Cadv\*



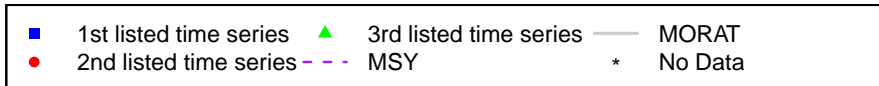
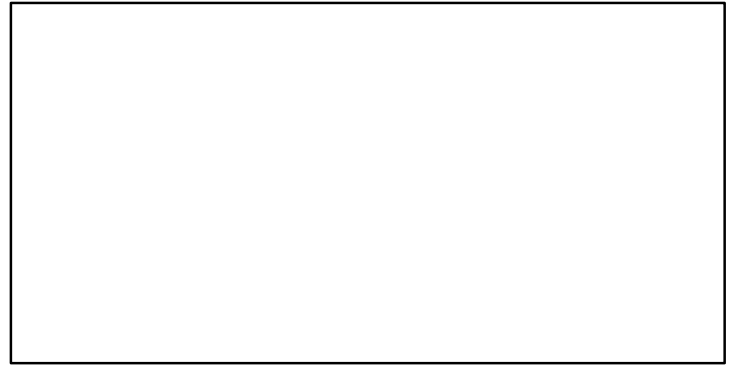
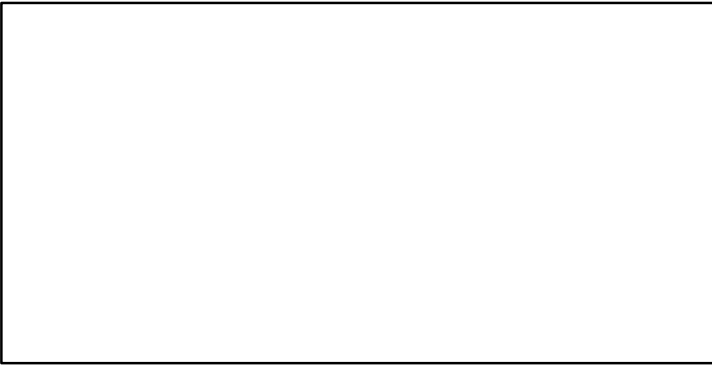
survB-MT (1900-2017-ASHBROOK)

CPUE-1-index (1900-2017-ASHBROOK)



EFFORT\*

CdivMSY\*



## Redfish species Unit 2 [REDFISHSPPUT2]

Metadata	
<b>Scientific Name</b>	Sebastes spp
<b>Current Assess ID</b>	DFO-REDFISHSPPUT2-1960-2017-ASHBROOK
<b>Area</b>	Unit 2
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans
<b>Asmts in RAM</b>	2017

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	-	-	-		
TL	TL-MT	2017	3042		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*



◆ Start Year   ◆ End Year   \* No Data

Redfish species Unit 2 [REDFISHSPPUT2]

TB\*



SSB\*



TN \*



F\*









ER\*



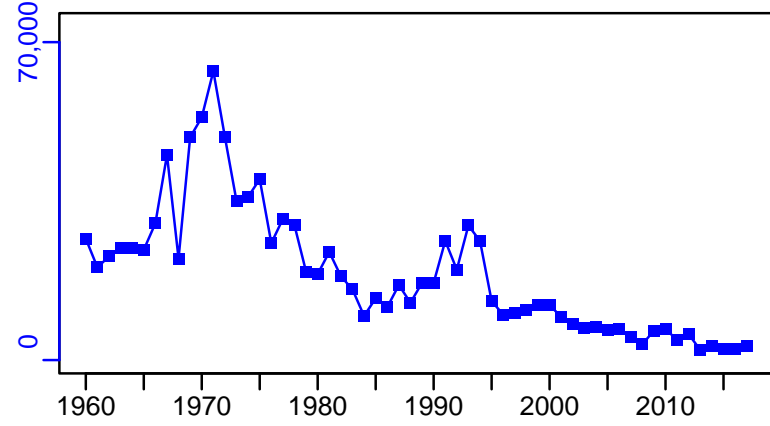
Recruits\*



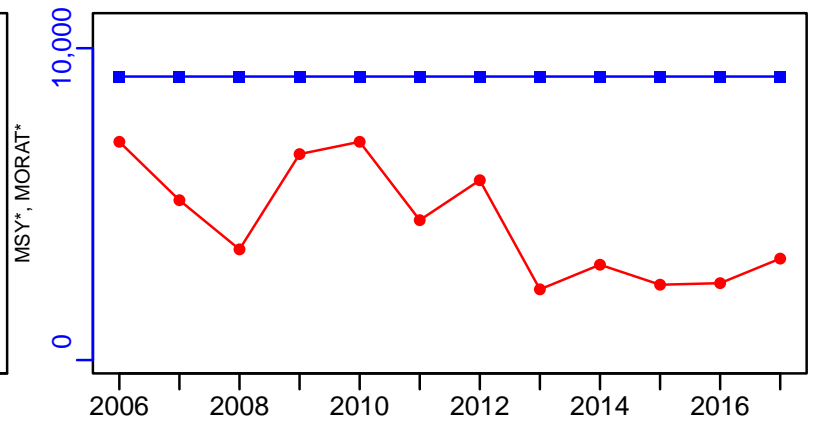
 Listed time series	 Target BRP	 Rec-Est
 MSY-based BRP	 Lim BRP	 No Data

# Redfish species Unit 2 [REDFISHSPPUT2]

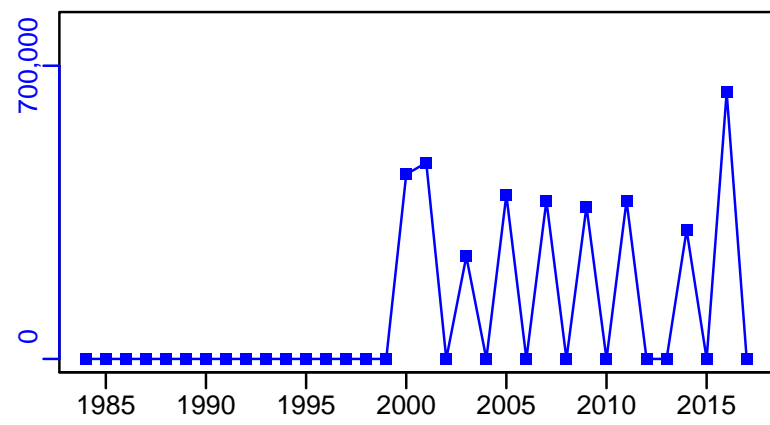
TL-MT, TC\*, RecC\* (1960-2017-ASHBROOK)



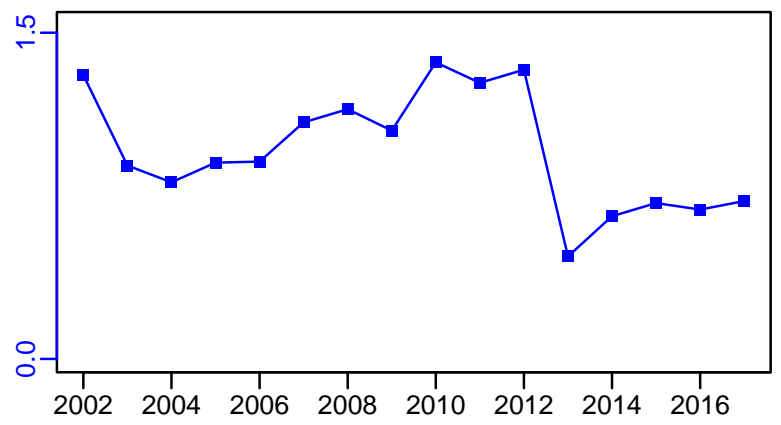
TAC-MT, Cpair-MT, Cadv\* (1960-2017-ASHBROOK)



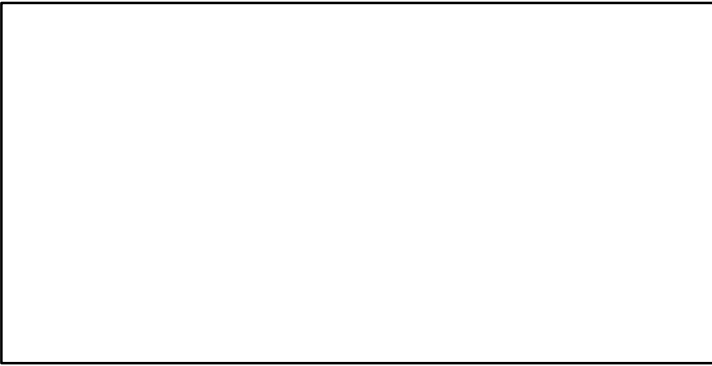
survB-MT (1960-2017-ASHBROOK)



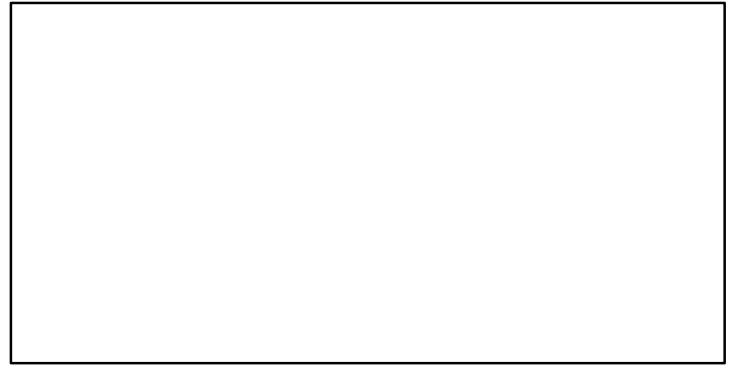
CPUE-index (1960-2017-ASHBROOK)



EFFORT\*



CdivMSY\*



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Rougheye rockfish Bering Sea and Aleutian Islands [REYEROCKBSAI]

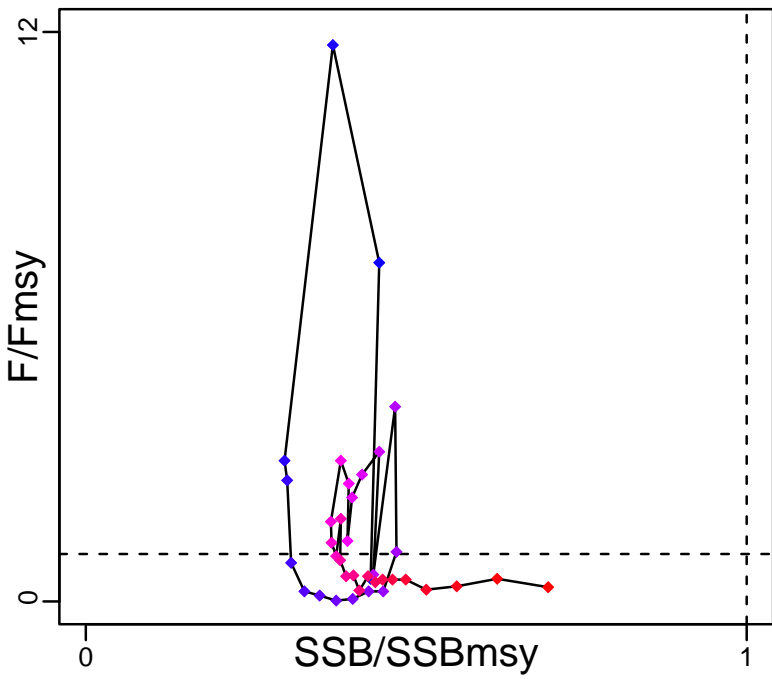
Metadata	
<b>Scientific Name</b>	Sebastes aleutianus
<b>Current Assess ID</b>	AFSC-REYEROCKBSAI-1974-2015-HIVELY
<b>Area</b>	Bering Sea and Aleutian Islands
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2015	9977
<b>Fmsy</b>	Fmsy-pr-1/yr	2015	0.058
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2015	0.03
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

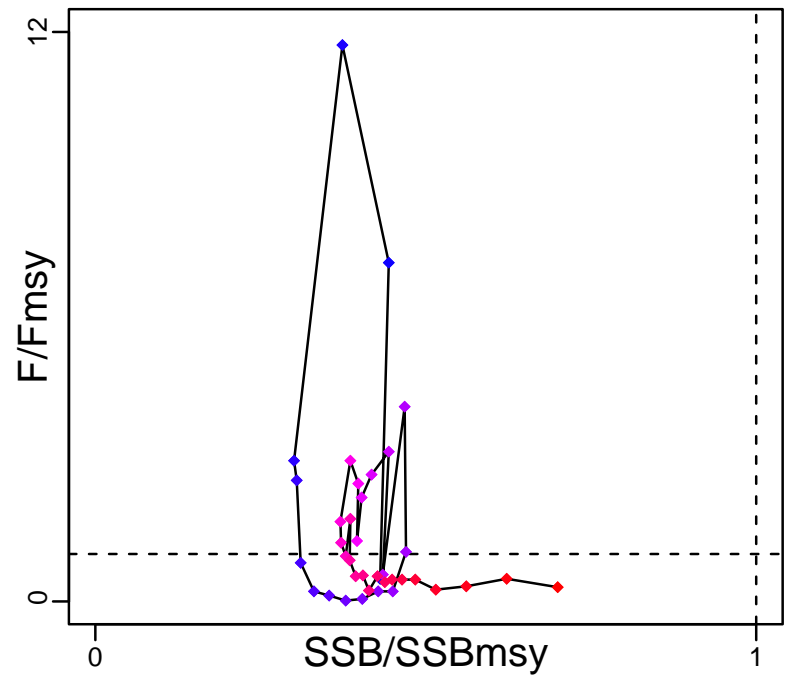
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	40,400	Both	3+
<b>SSB</b>	SSB-MT	2015	6980	Females	3+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	1,560,000	-	3
<b>F</b>	F-1/yr	2015	0.017	-	-
<b>ER</b>	ER-calc-ratio	2015	0.005	-	-
<b>TC</b>	TC-MT	2015	194		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2015	0.7		
<b>F/Fmsy</b>	F-1/yr/Fmsy-pr-1/yr	2015	0.3		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Rougheye rockfish Bering Sea and Aleutian Islands [REYEROCKBSAI]

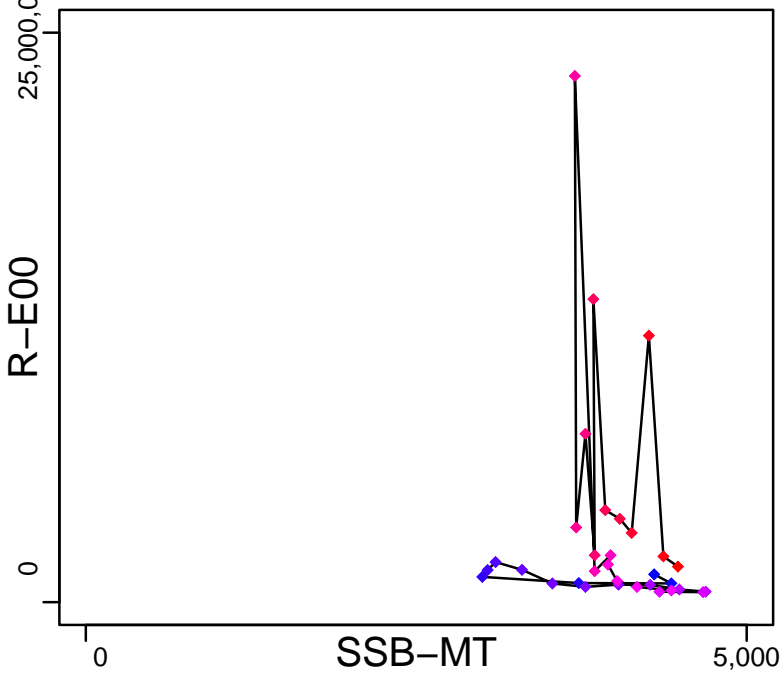
Kobe MSYpref (1974–2015–HIVELY)



Kobe MGTpref (1974–2015–HIVELY)



Spawner Recruit (1974–2015–HIVELY)



Production\*



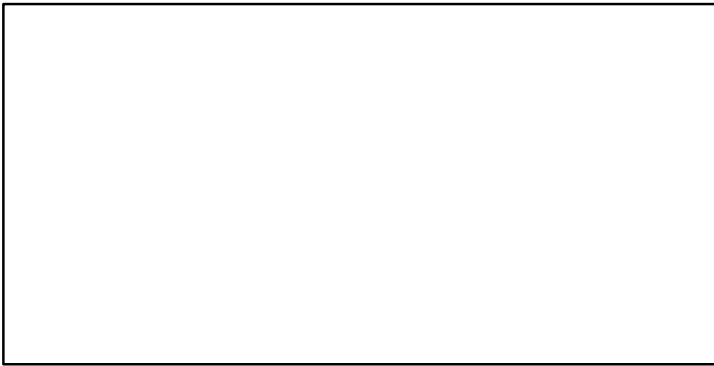
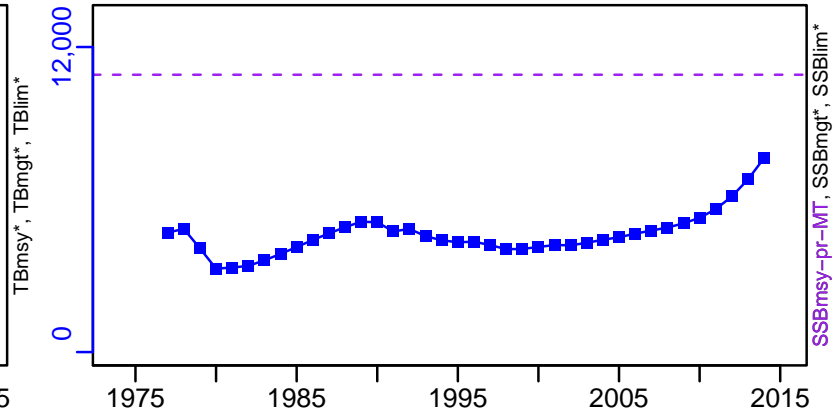
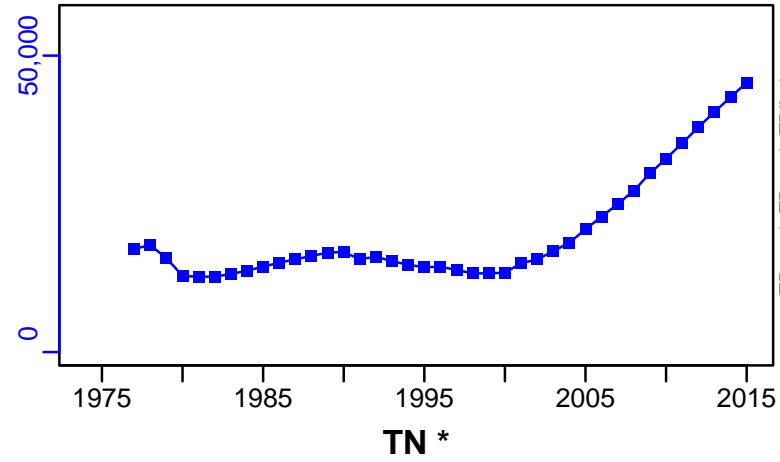
◆ Start Year ◆ End Year \* No Data



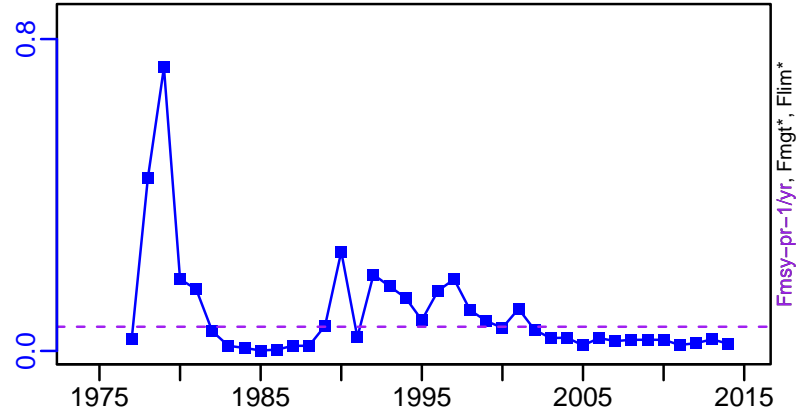
# Roughye rockfish Bering Sea and Aleutian Islands [REYEROCKBSAI]

TB-MT (1974-2015-HIVELY)

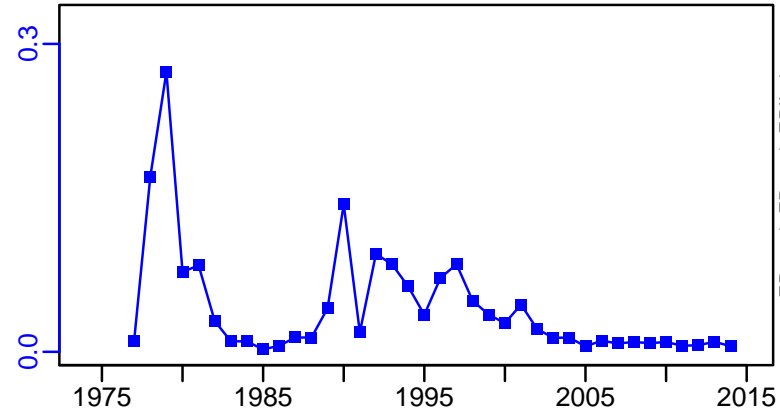
SSB-MT (1974-2015-HIVELY)



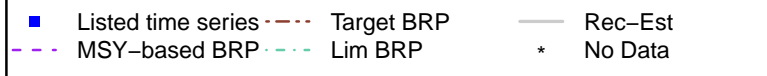
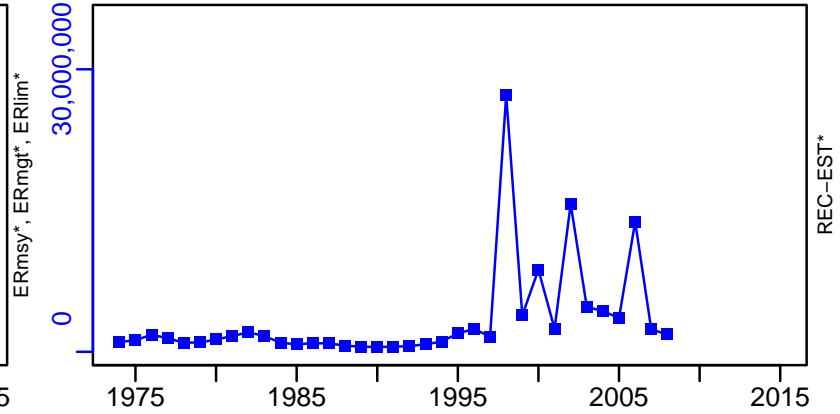
F-1/yr (1974-2015-HIVELY)



ER-calc-ratio (1974-2015-HIVELY)



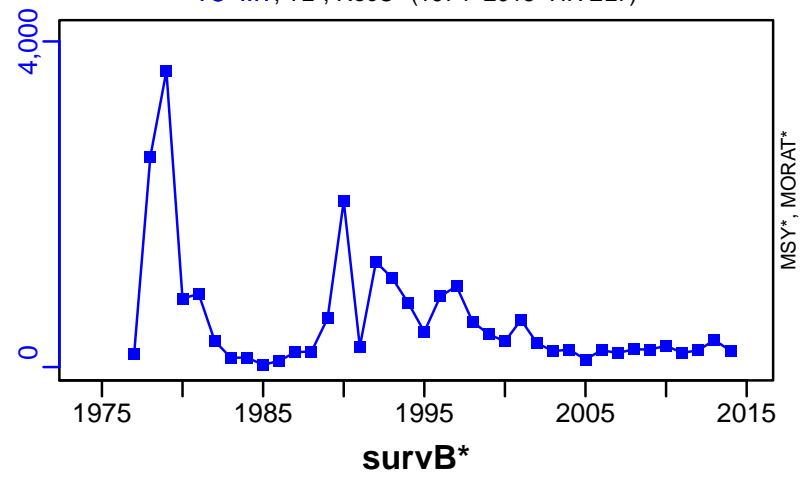
R-E00 (1974-2015-HIVELY)



# Rougheye rockfish Bering Sea and Aleutian Islands [REYEROCKBSAI]

TC-MT, TL\*, RecC\* (1974-2015-HIVELY)

TAC\*, Cpair\*, Cadv\*



CPUE\*

EFFORT\*

CdivMSY\*

■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

## Rougheye rockfish Gulf of Alaska [REYEROCKGA]

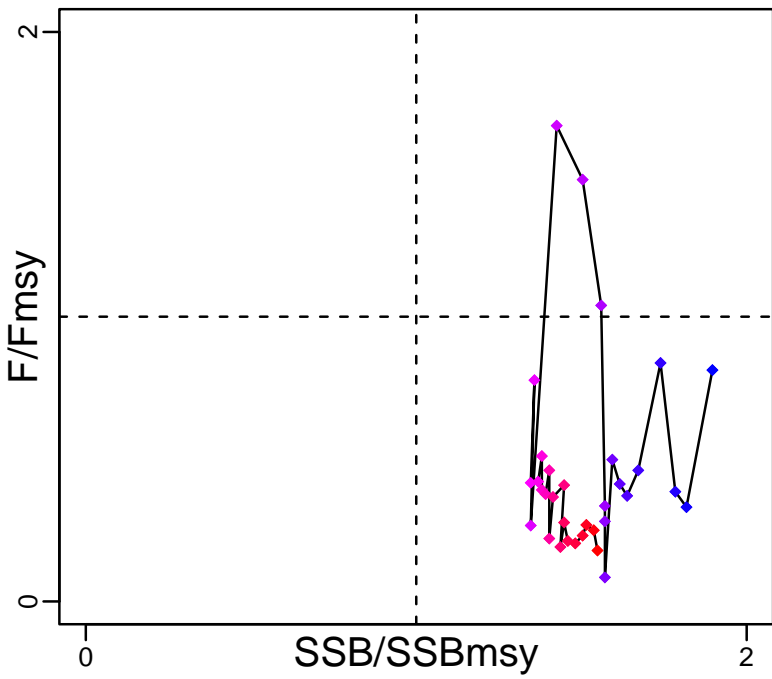
Metadata	
<b>Scientific Name</b>	Sebastes aleutianus
<b>Current Assess ID</b>	AFSC-REYEROCKGA-1974-2010-STACHURA
<b>Area</b>	Gulf of Alaska
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2010

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-pr-MT	2010	8912
<b>Fmsy</b>	Fmsy-pr-1/yr	2010	0.048
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2010	0.034
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

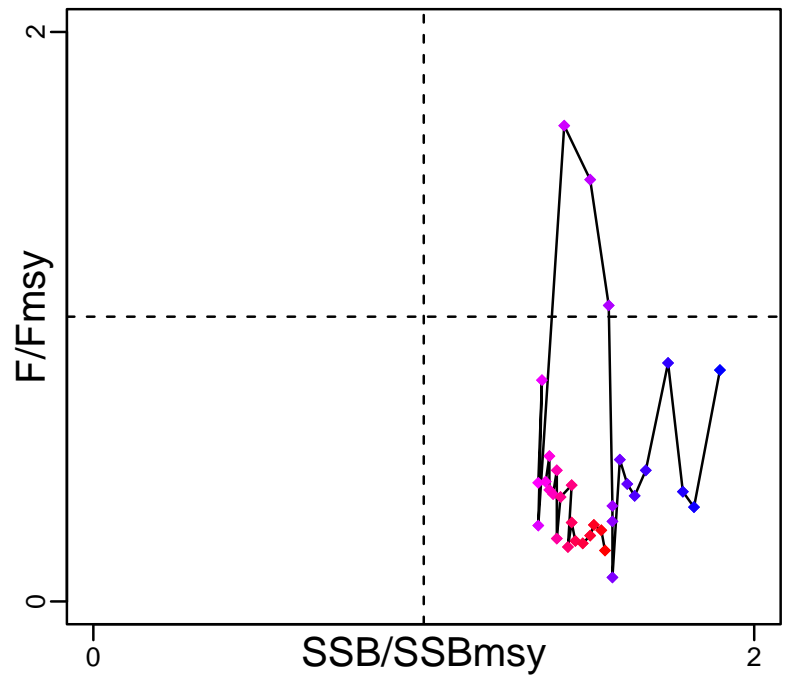
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2010	45,400	-	-
<b>SSB</b>	SSB-MT	2010	13,800	Females	19+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2010	1,160,000	-	-
<b>F</b>	F-1/yr	2010	0.009	-	-
<b>ER</b>	ER-ratio	2010	0.006	-	-
<b>TC</b>	TC-MT	2010	445		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2010	1.548		
<b>F/Fmsy</b>	F-1/yr/Fmsy-pr-1/yr	2010	0.179		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Rougeye rockfish Gulf of Alaska [REYEROCKGA]

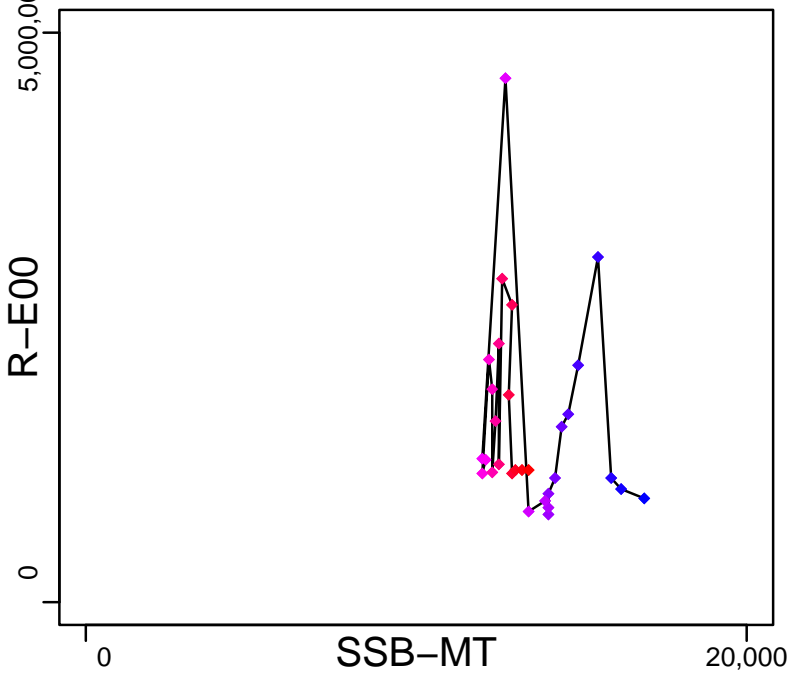
Kobe MSYpref (1974–2010–STACHURA)



Kobe MGTpref (1974–2010–STACHURA)



Spawner Recruit (1974–2010–STACHURA)



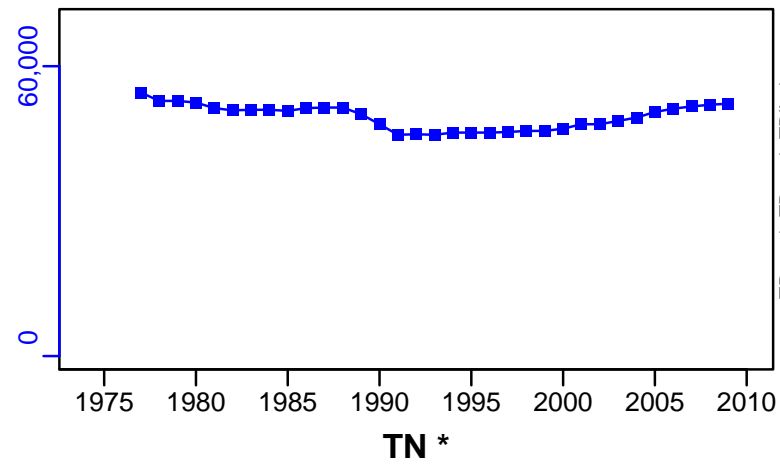
Production\*



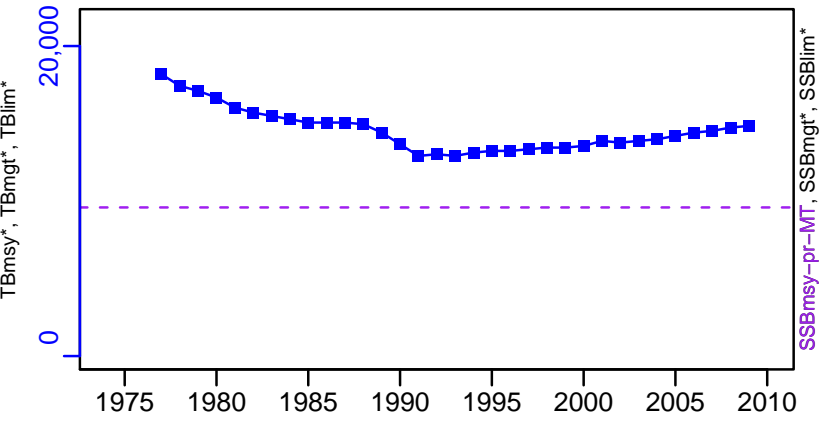
◆ Start Year ◆ End Year \* No Data

# Rougheye rockfish Gulf of Alaska [REYEROCKGA]

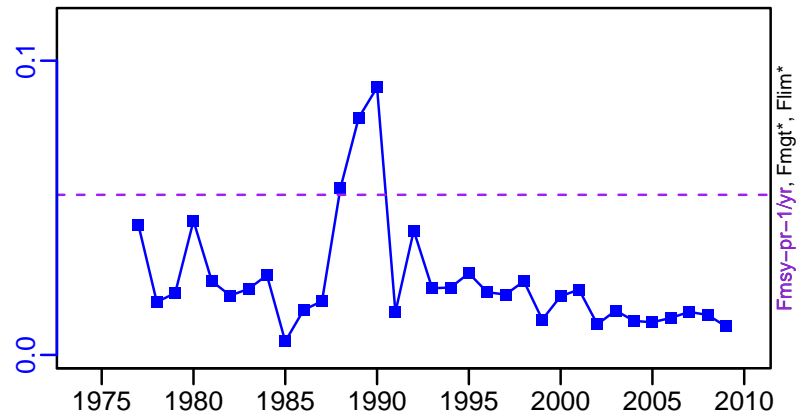
TB-MT (1974–2010–STACHURA)



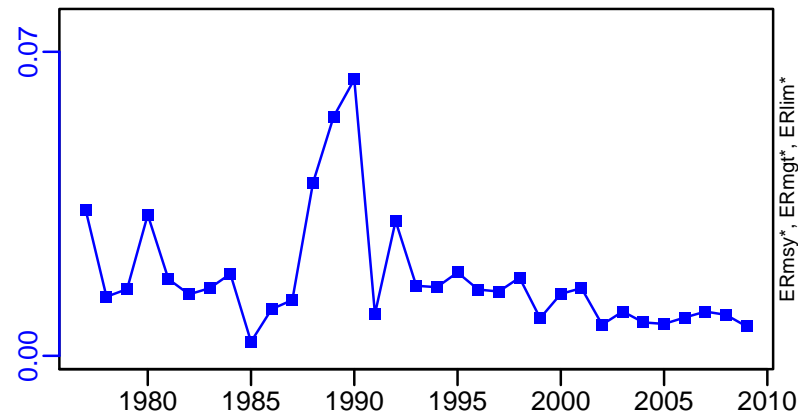
SSB-MT (1974–2010–STACHURA)



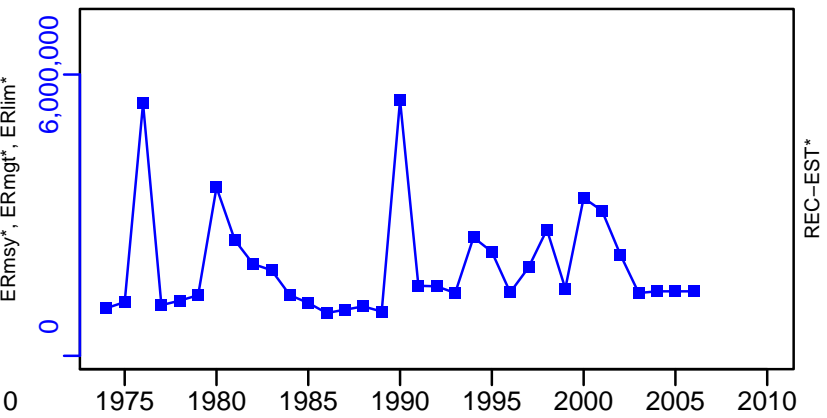
F-1/yr (1974–2010–STACHURA)



ER-ratio (1974–2010–STACHURA)

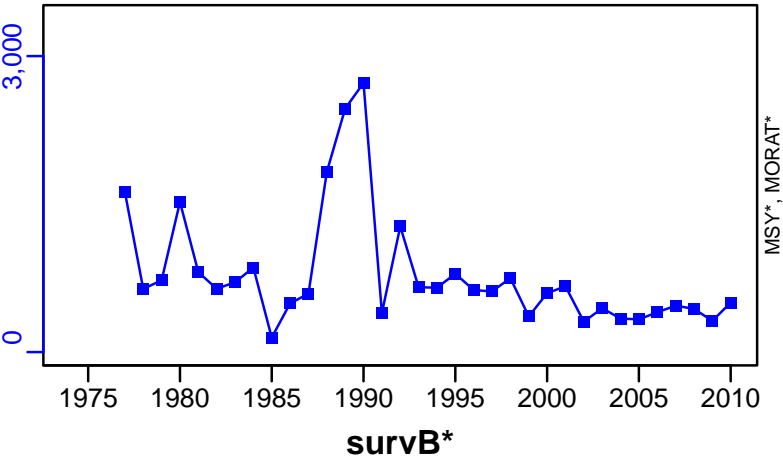


R-E00 (1974–2010–STACHURA)



Rougheye rockfish Gulf of Alaska [REYEROCKGA]

TC-MT, TL\*, RecC\* (1974-2010-STACHURA)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Redstripe rockfish British Columbia Waters North [RSROCKBCWN]

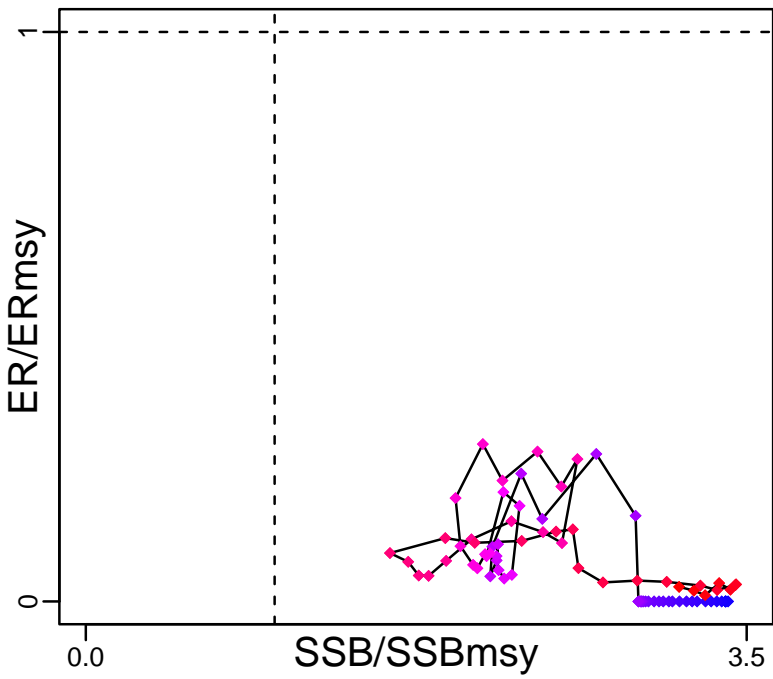
Metadata	
<b>Scientific Name</b>	Sebastes proriger
<b>Current Assess ID</b>	DFO-PAC-RSROCKBCWN-1939-2018-ASHBROOK
<b>Area</b>	British Columbia Waters North
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans - Pacific Region
<b>Asmts in RAM</b>	2018

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2018	848
<b>SSBmsy</b>	SSBmsy-MT	2018	2135
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2018	0.638
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2018	7216
<b>MSY</b>	MSY-calc-MT	2018	541
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

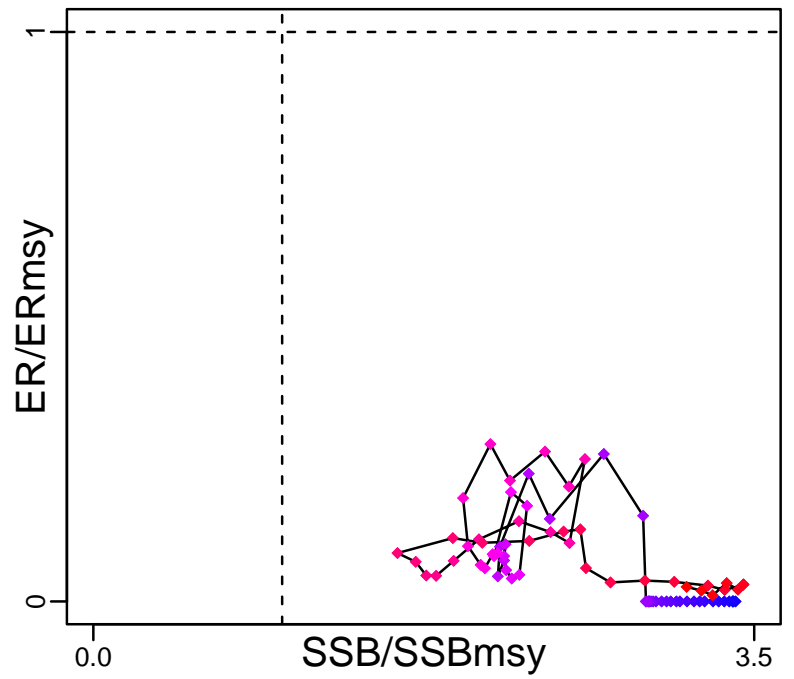
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	7455	Both	-
<b>SSB</b>	SSB-MT	2018	6500	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	2,608,148	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.016	-	-
<b>TC</b>	-	-	-	-	-
<b>TL</b>	TL-MT	2018	170	-	-
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2018	8.791	-	-
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2018	3.044	-	-
<b>F/Fmsy</b>	-	-	-	-	-
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2018	0.026	-	-
<b>TB/TBmgt</b>	-	-	-	-	-
<b>SSB/SSBmgt</b>	-	-	-	-	-
<b>F/Fmgt</b>	-	-	-	-	-
<b>ER/ERmgt</b>	-	-	-	-	-

# Redstripe rockfish British Columbia Waters North [RSROCKBCWN]

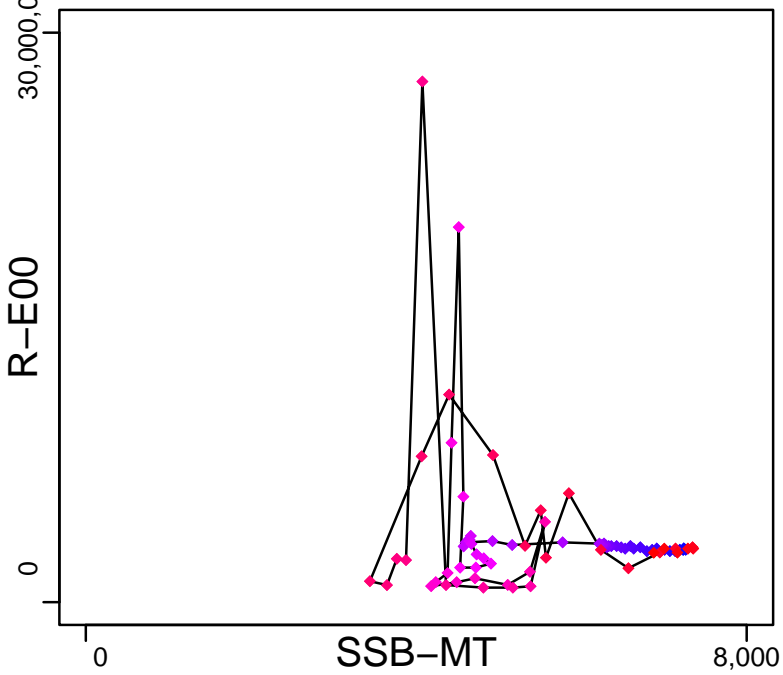
Kobe MSYpref (1939–2018–ASHBROOK)



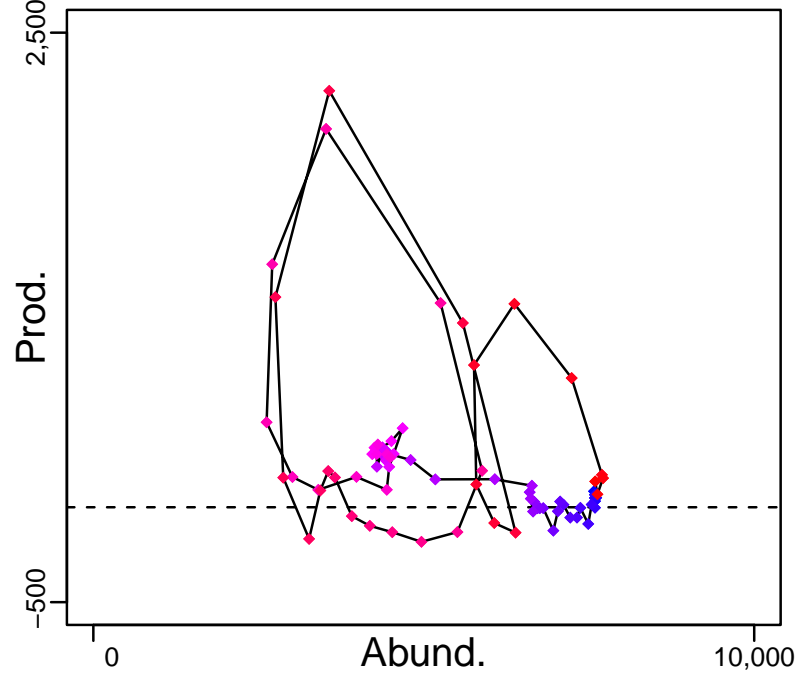
Kobe MGTpref (1939–2018–ASHBROOK)



Spawner Recruit (1939–2018–ASHBROOK)



Production (1939–2018–ASHBROOK)

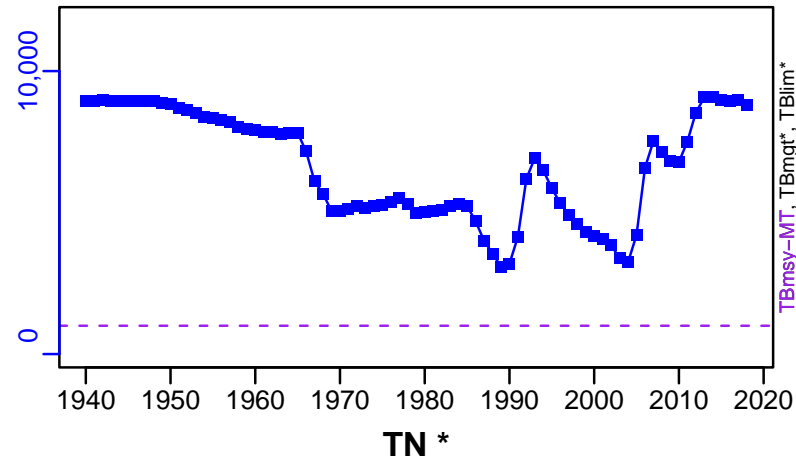


◆ Start Year ◆ End Year \* No Data

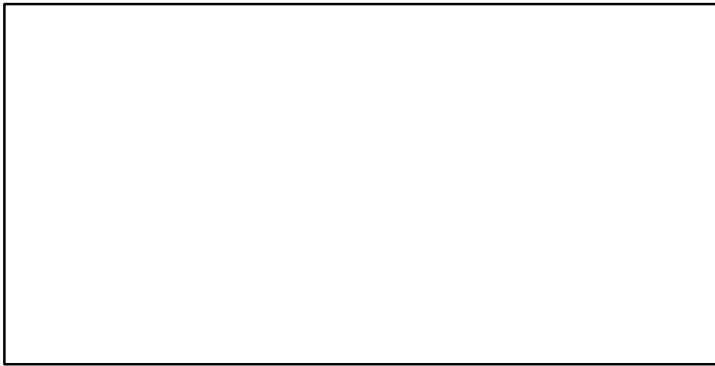
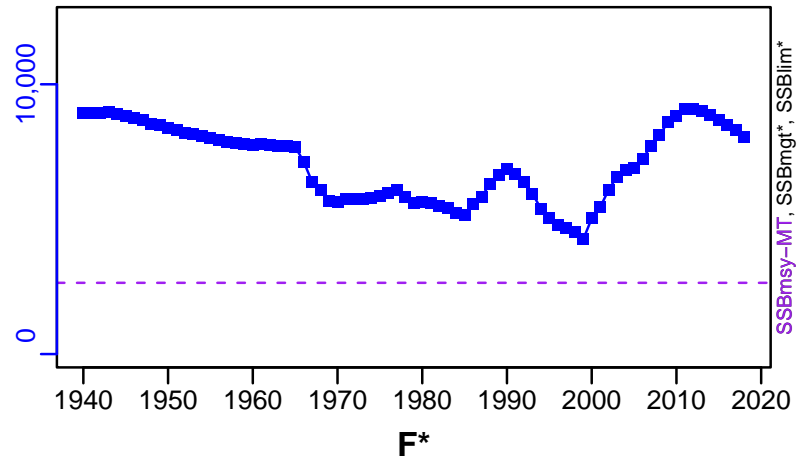


# Redstripe rockfish British Columbia Waters North [RSROCKBCWN]

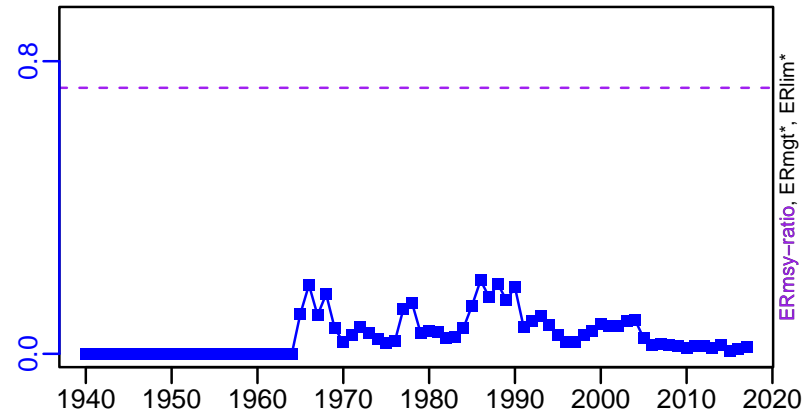
TB-MT (1939–2018–ASHBROOK)



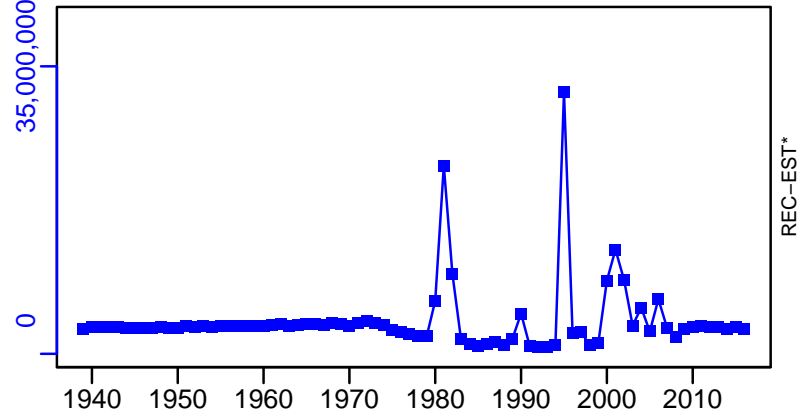
SSB-MT (1939–2018–ASHBROOK)



ER-ratio (1939–2018–ASHBROOK)



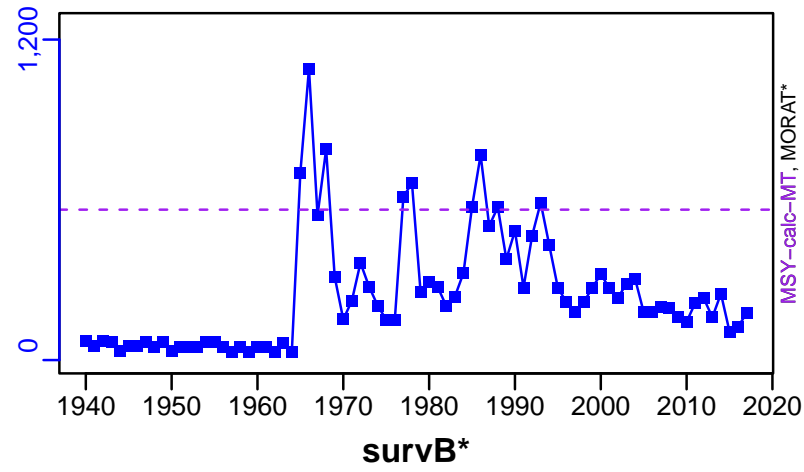
R-E00 (1939–2018–ASHBROOK)



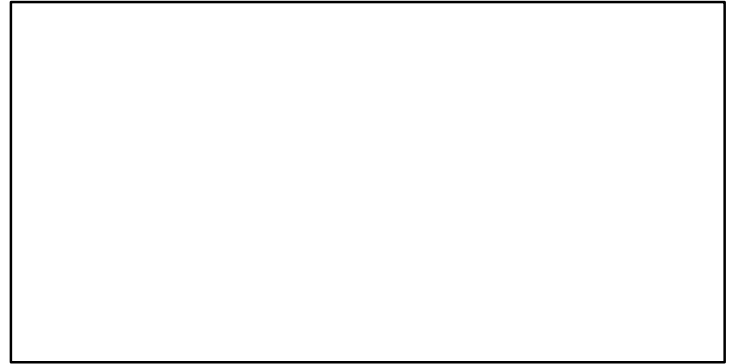
# Redstripe rockfish British Columbia Waters North [RSROCKBCWN]

TL-MT, TC\*, RecC\* (1939-2018-ASHBROOK)

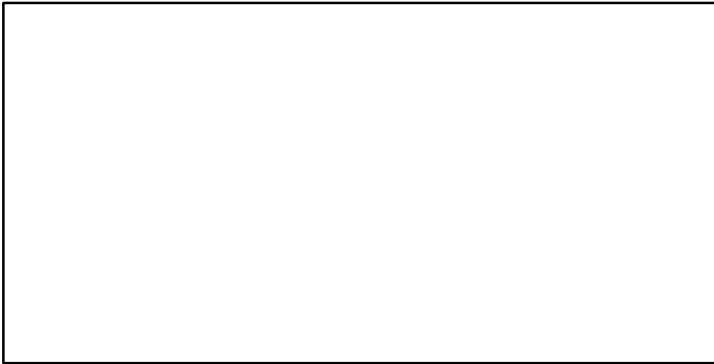
TAC\*, Cpair\*, Cadv\*



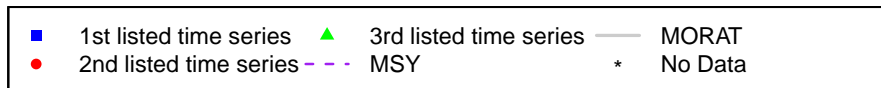
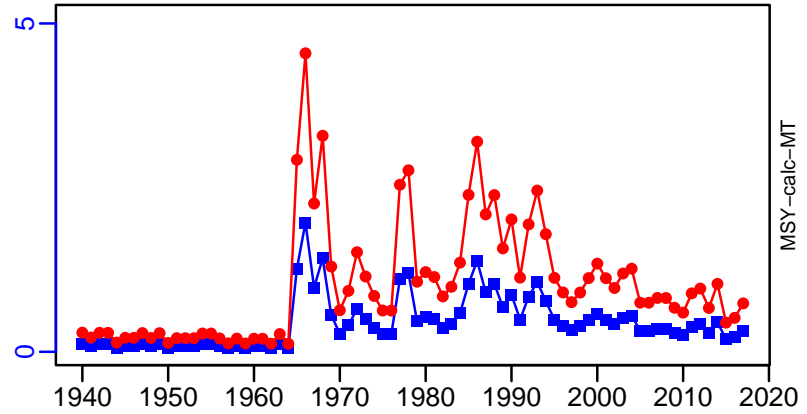
CPUE\*



EFFORT\*



TL-MT/MSY-calc-MT, CdivMEANC-ratio, (1939-2018-ASHBROOK)



## Redstripe rockfish British Columbia Waters South [RSROCKBCWS]

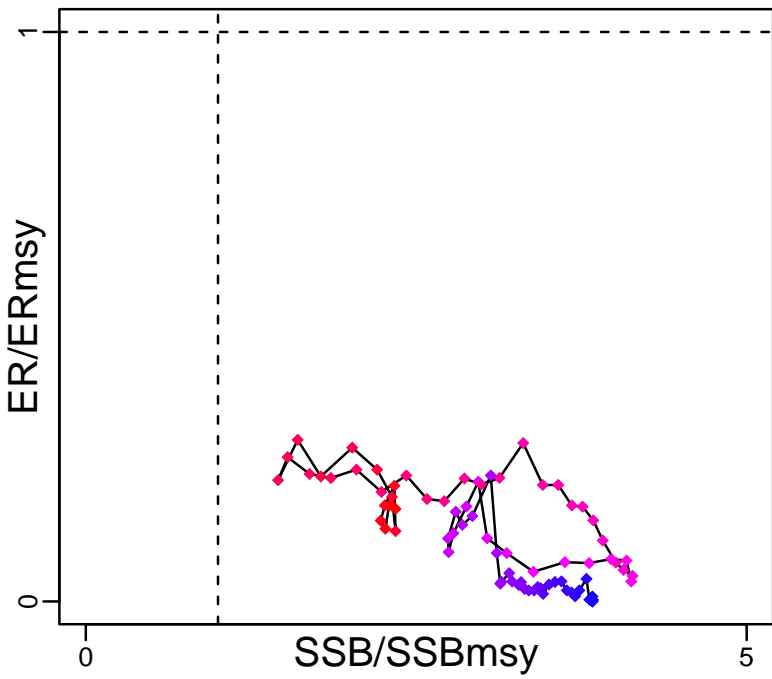
Metadata	
<b>Scientific Name</b>	Sebastes proriger
<b>Current Assess ID</b>	DFO-PAC-RSROCKBCWS-1939-2018-ASHBROOK
<b>Area</b>	British Columbia Waters South
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans - Pacific Region
<b>Asmts in RAM</b>	2018

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2018	5043
<b>SSBmsy</b>	SSBmsy-MT	2018	6830
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2018	0.3
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2018	26,149
<b>MSY</b>	MSY-calc-MT	2018	1513
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

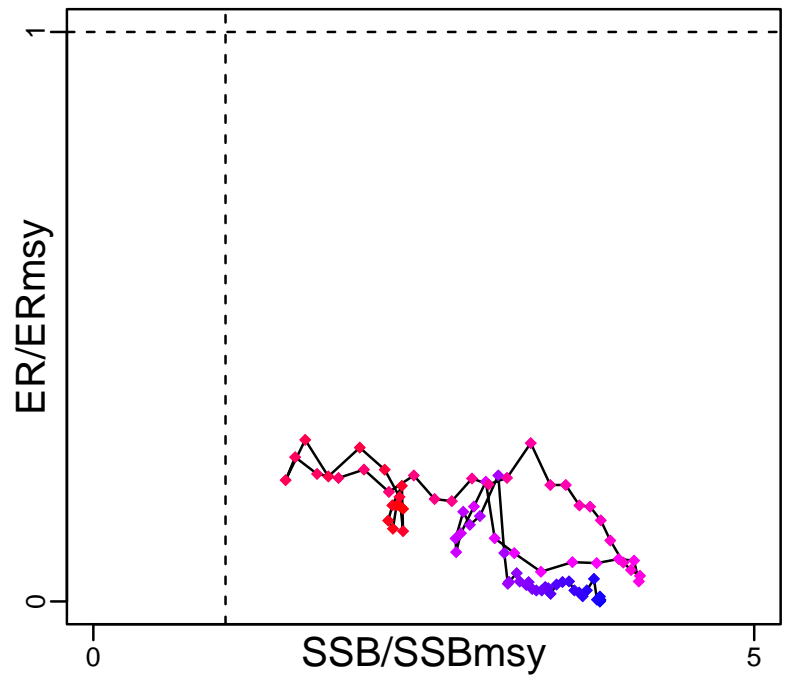
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	15,665	Both	-
<b>SSB</b>	SSB-MT	2018	16,235	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	10,994,945	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.049	-	-
<b>TC</b>	-	-	-	-	-
<b>TL</b>	TL-MT	2018	1023	-	-
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2018	3.106	-	-
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2018	2.377	-	-
<b>F/Fmsy</b>	-	-	-	-	-
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2018	0.163	-	-
<b>TB/TBmgt</b>	-	-	-	-	-
<b>SSB/SSBmgt</b>	-	-	-	-	-
<b>F/Fmgt</b>	-	-	-	-	-
<b>ER/ERmgt</b>	-	-	-	-	-

# Redstripe rockfish British Columbia Waters South [RSROCKBCWS]

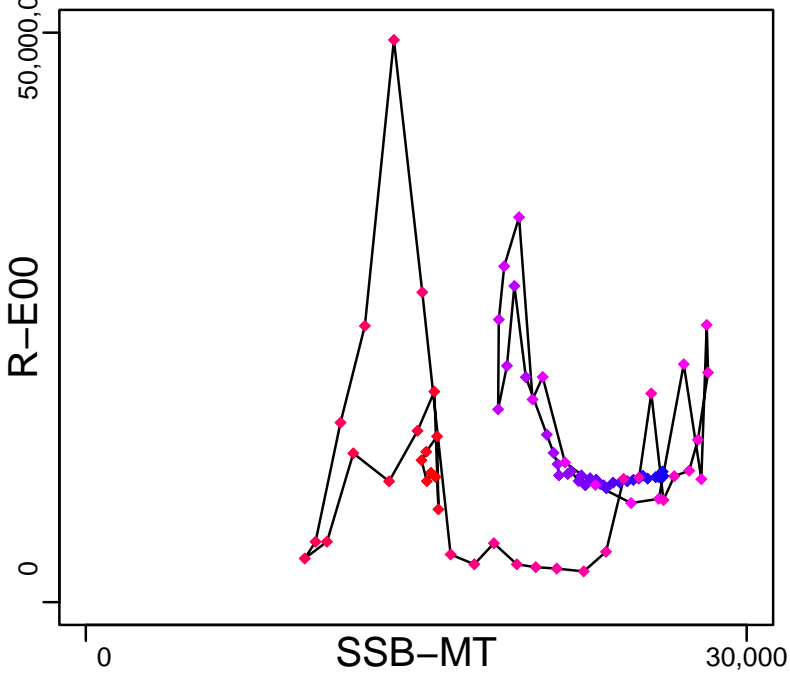
Kobe MSY<sub>pref</sub> (1939–2018–ASHBROOK)



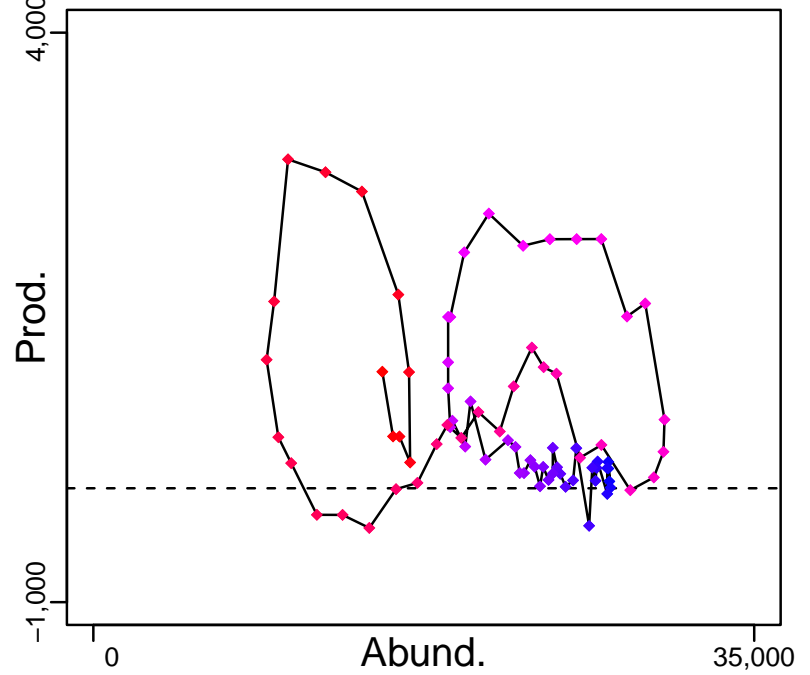
Kobe MGT<sub>pref</sub> (1939–2018–ASHBROOK)



Spawner Recruit (1939–2018–ASHBROOK)



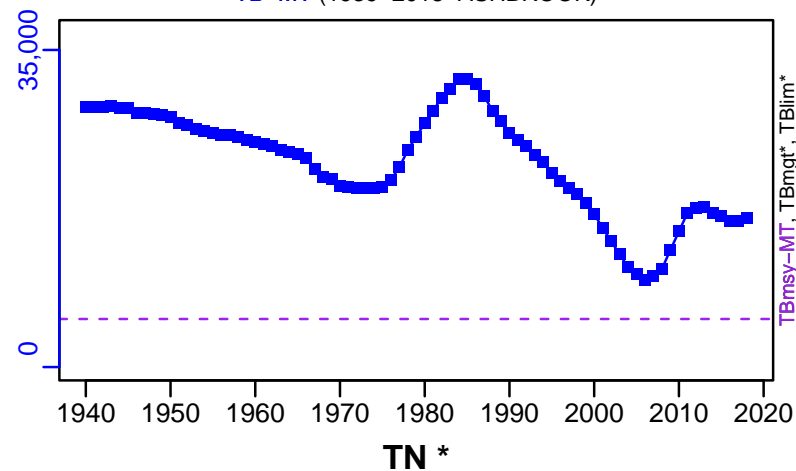
Production (1939–2018–ASHBROOK)



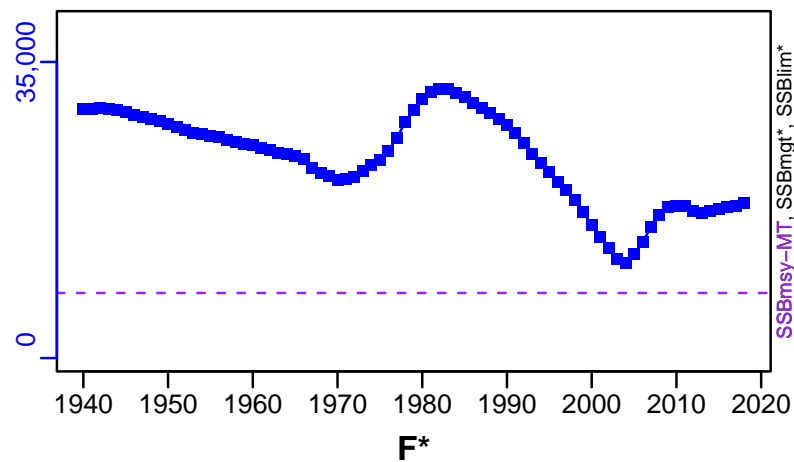
◆ Start Year ◆ End Year \* No Data

# Redstripe rockfish British Columbia Waters South [RSROCKBCWS]

TB-MT (1939–2018–ASHBROOK)



SSB-MT (1939–2018–ASHBROOK)



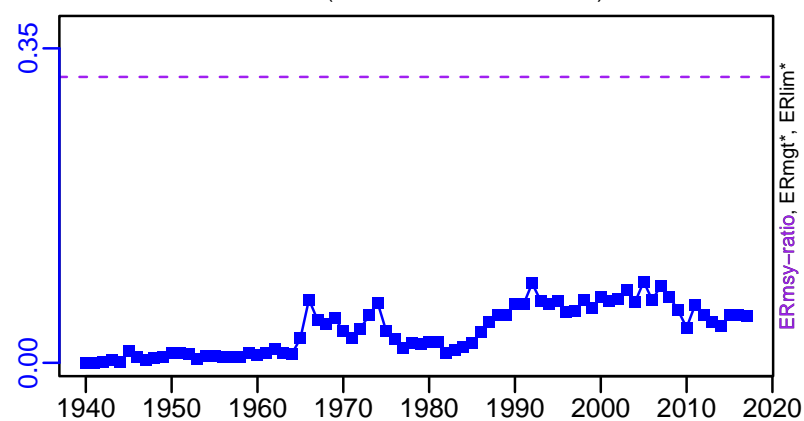
TN \*



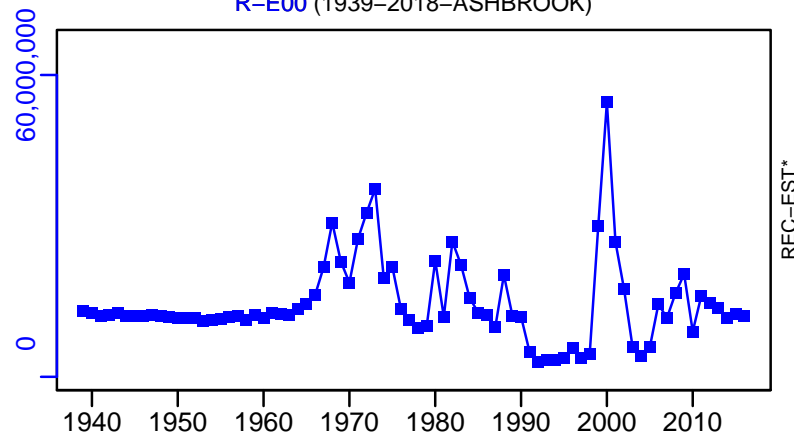
F\*



ER-ratio (1939–2018–ASHBROOK)

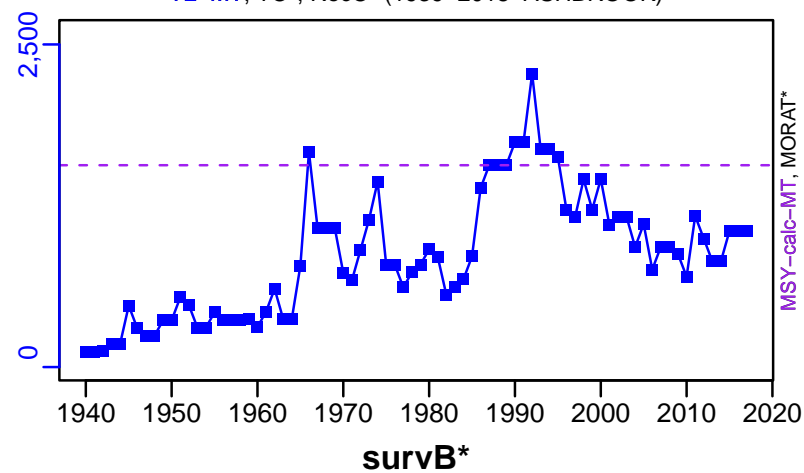


R-E00 (1939–2018–ASHBROOK)



# Redstripe rockfish British Columbia Waters South [RSROCKBCWS]

TL-MT, TC\*, RecC\* (1939-2018-ASHBROOK)



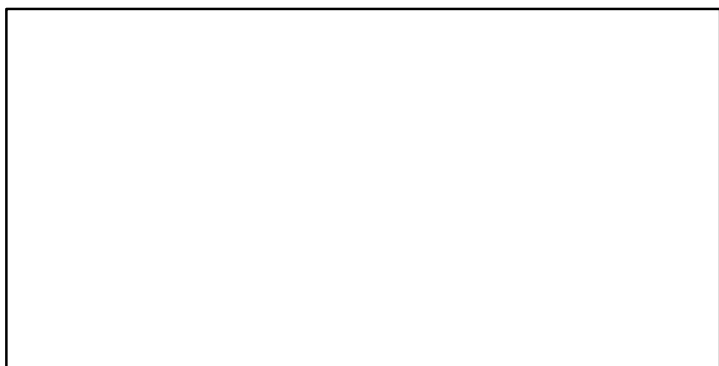
TAC\*, Cpair\*, Cadv\*



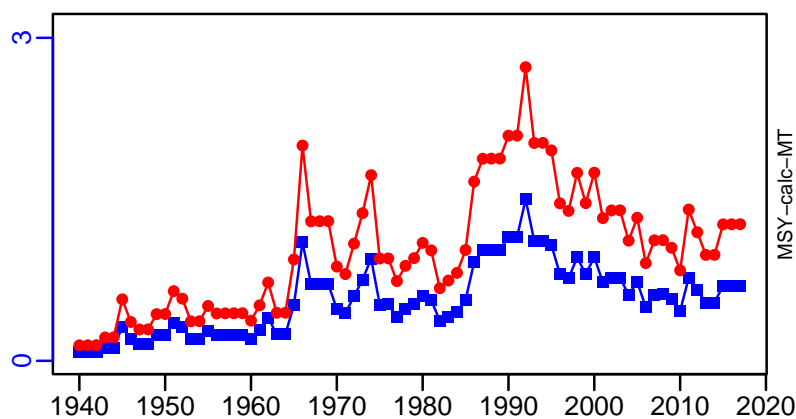
CPUE\*



EFFORT\*



TL-MT/MSY-calc-MT, CdivMEANC-ratio, (1939-2018-ASHBROOK)



- 1st listed time series
- 2nd listed time series
- 3rd listed time series
- MORAT
- MSY
- No Data

## Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

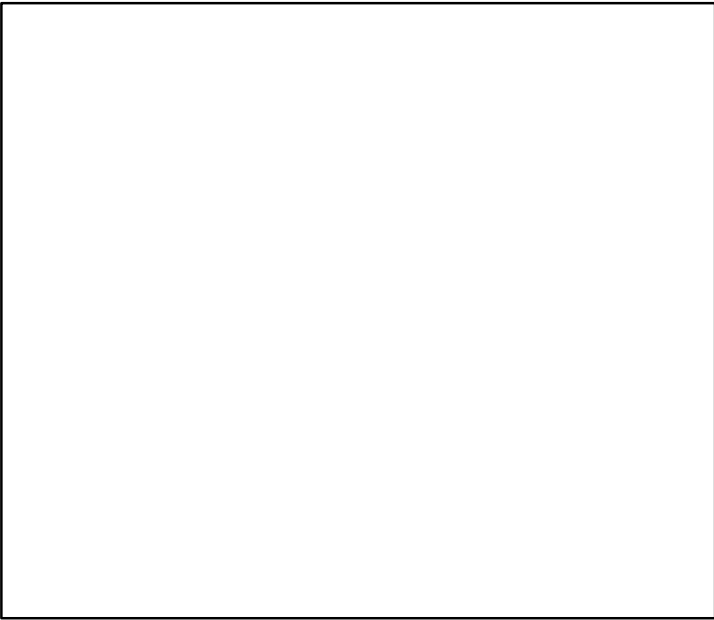
Metadata	
<b>Scientific Name</b>	Sebastes jordani
<b>Current Assess ID</b>	SWFSC-SBELLYROCKPCOAST-1950-2005-BRANCH
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2005

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	TB0-MT	2005	98,400
SSB0	SSB0-MT	2005	49,500
MSY	-	-	-
M	M-1/yr	2005	0.26
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2005	64,000	-	1+
SSB	SSB-MT	2005	33,000	Females	2+
TN	-	-	-	-	-
R	R-E00	2005	9000	-	0
F	F-1/yr	2005	0	Both	1+
ER	ER-ratio	2005	0	-	-
TC	TC-MT	2005	0		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

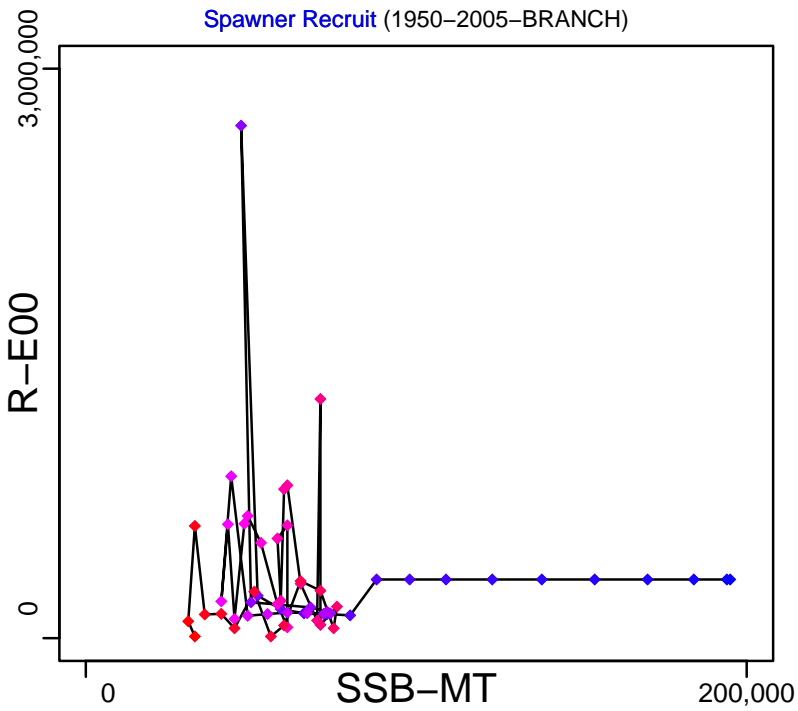
Kobe MSY\*



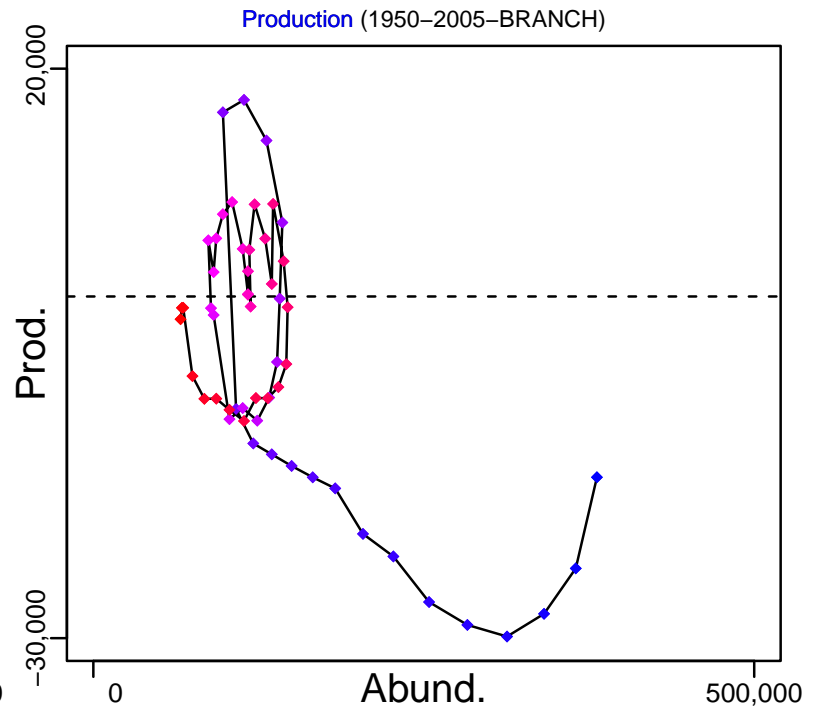
Kobe MGT\*



Spawner Recruit (1950–2005–BRANCH)



Production (1950–2005–BRANCH)

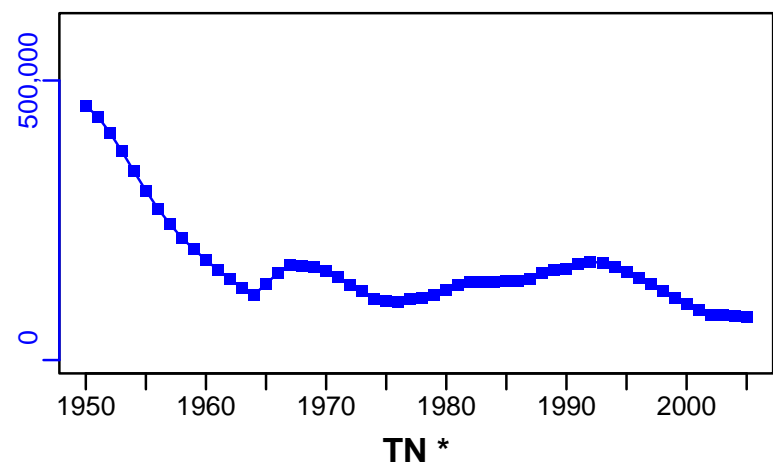


◆ Start Year ◆ End Year \* No Data

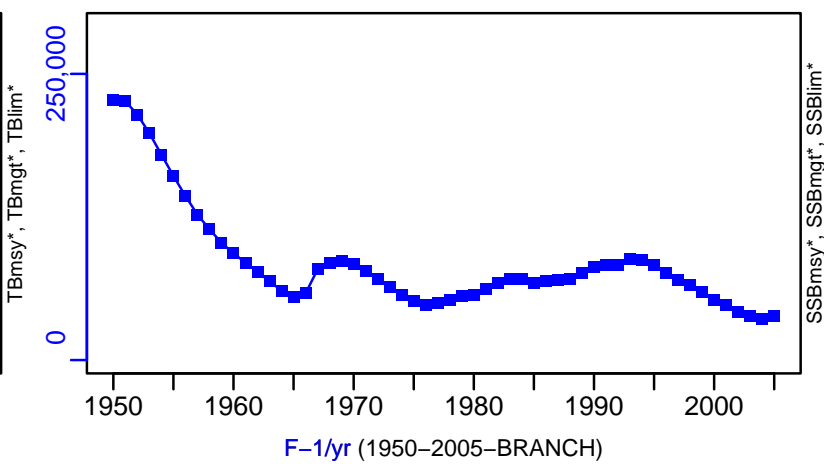


# Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

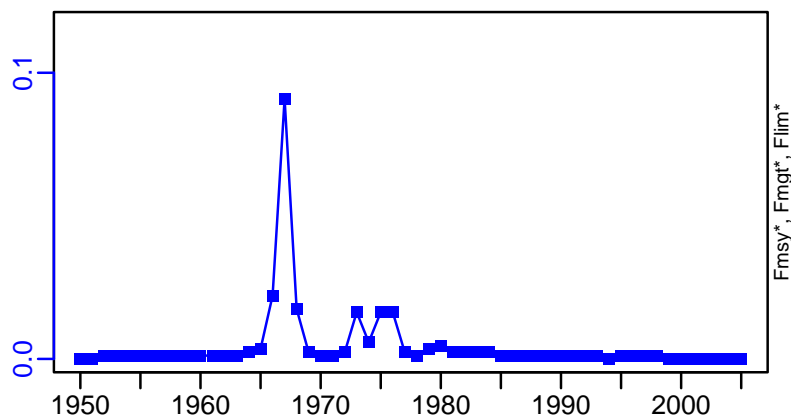
TB-MT (1950-2005-BRANCH)



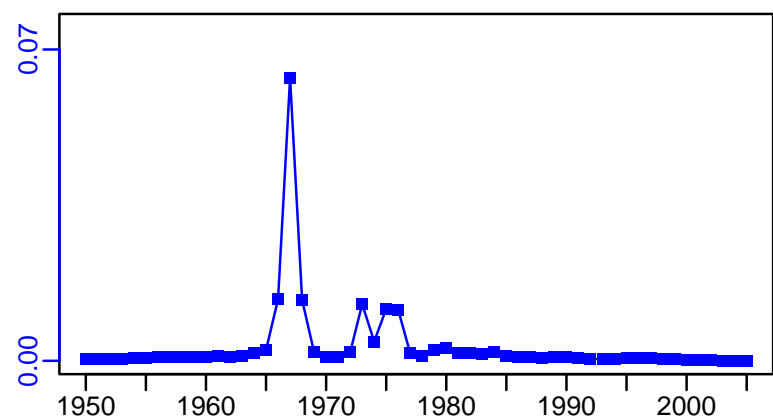
SSB-MT (1950-2005-BRANCH)



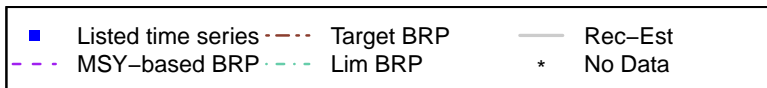
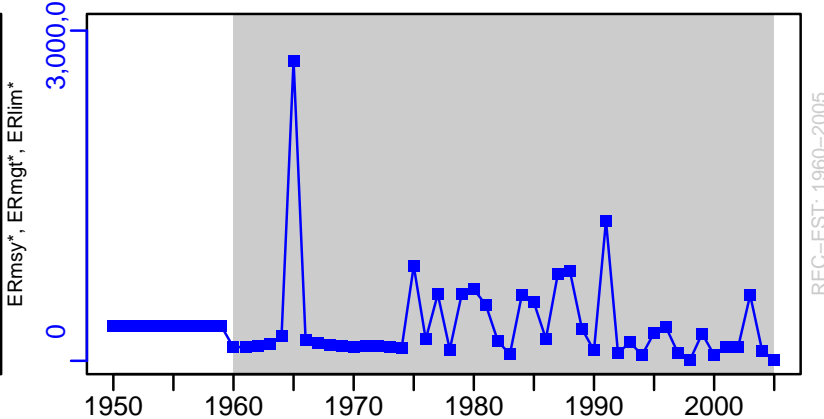
F-1/yr (1950-2005-BRANCH)



ER-ratio (1950-2005-BRANCH)

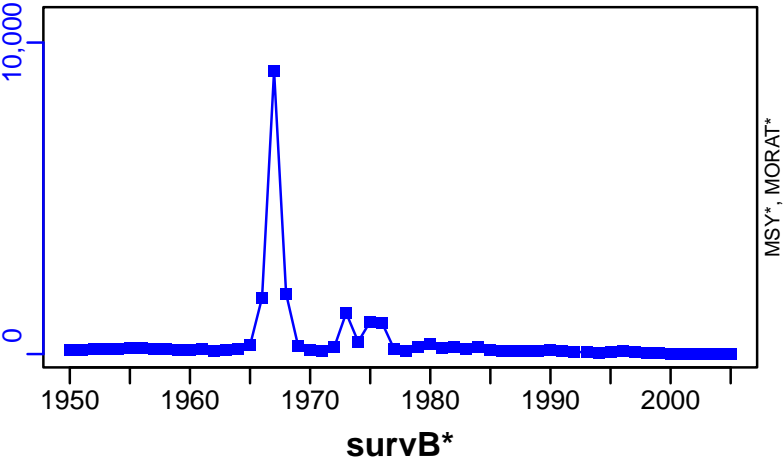


R-E00 (1950-2005-BRANCH)

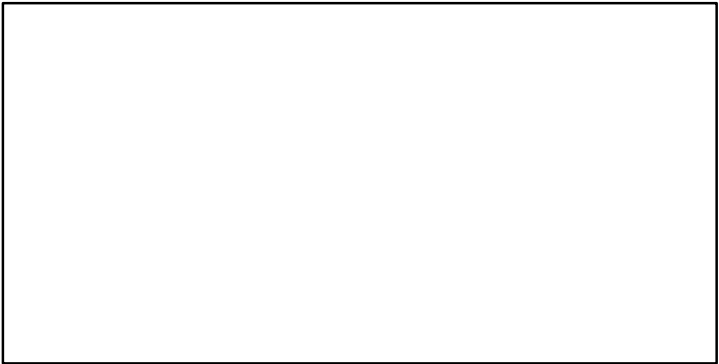


Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

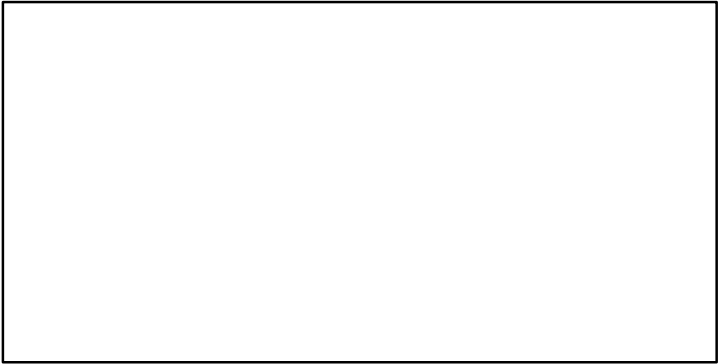
TC-MT, TL\*, RecC\* (1950-2005-BRANCH)



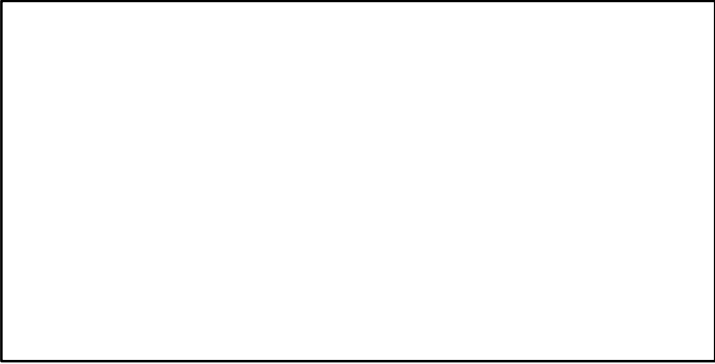
TAC\*, Cpair\*, Cadv\*



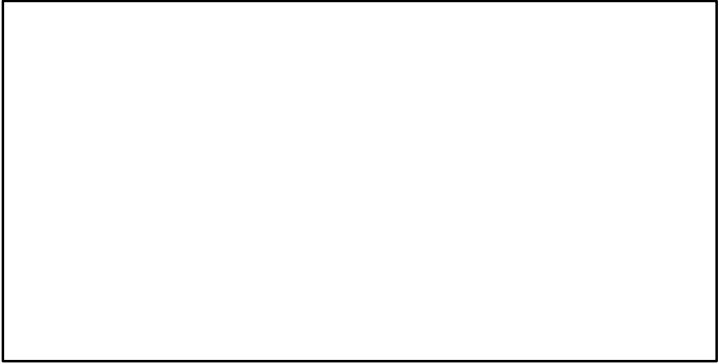
CPUE\*



EFFORT\*



CdivMSY\*



## Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

Metadata	
<b>Scientific Name</b>	Sebastes zacentrus
<b>Current Assess ID</b>	NWFSC-SHCROCKPCOAST-1892-2012-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2012

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2012	0.5
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	270
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-1/yr	2012	0.5
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2012	12,800	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	F-1/yr	2012	0.03	-	-
<b>ER</b>	ER-calc-ratio	2012	0.001	-	-
<b>TC</b>	TC-MT	2012	14		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2012	0.06		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

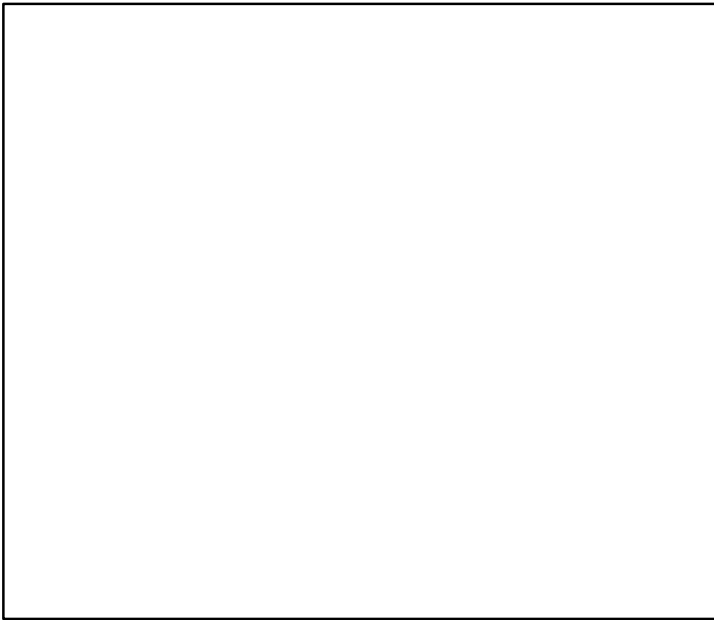
Kobe MSY\*



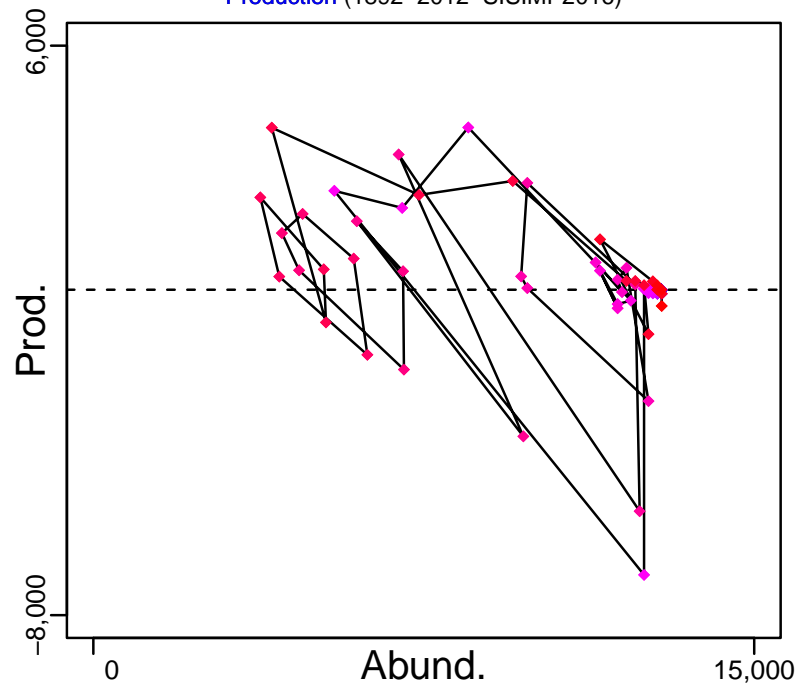
Kobe MGT\*



Spawner Recruit\*



Production (1892–2012–SISIMP2016)

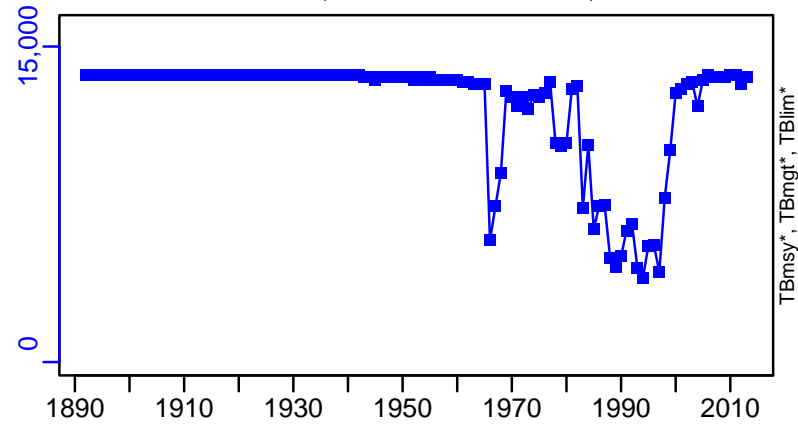


◆ Start Year ◆ End Year \* No Data

# Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

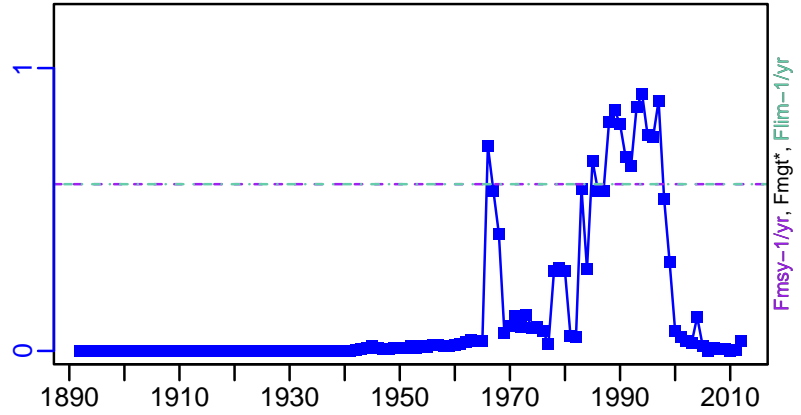
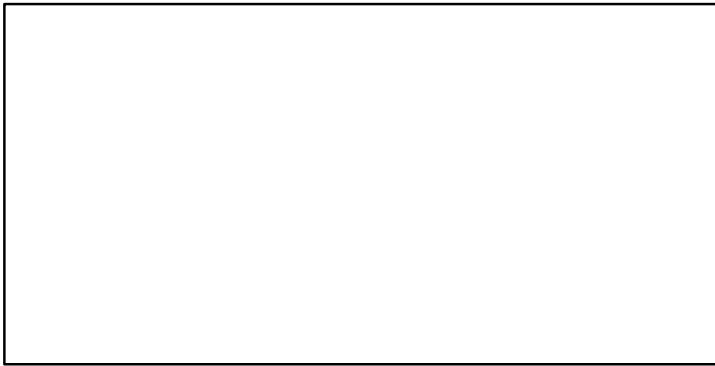
TB-MT (1892–2012–SISIMP2016)

SSB\*



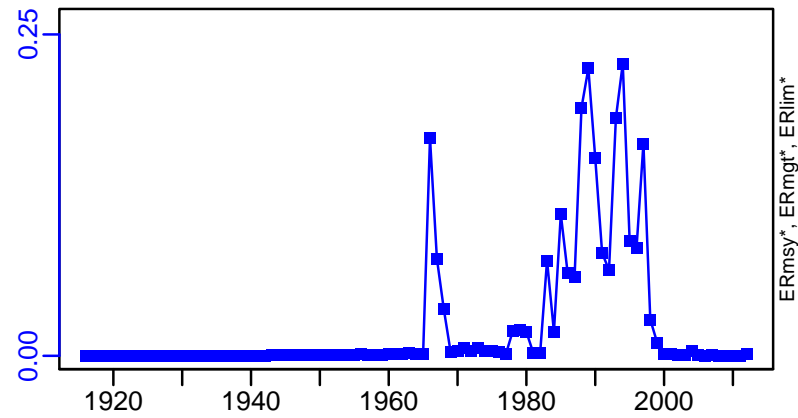
TN \*

F-1/yr (1892–2012–SISIMP2016)



ER-calc-ratio (1892–2012–SISIMP2016)

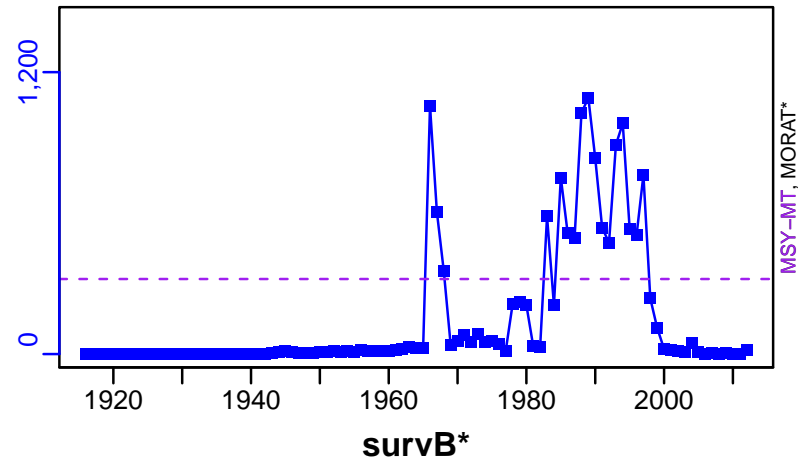
Recruits\*



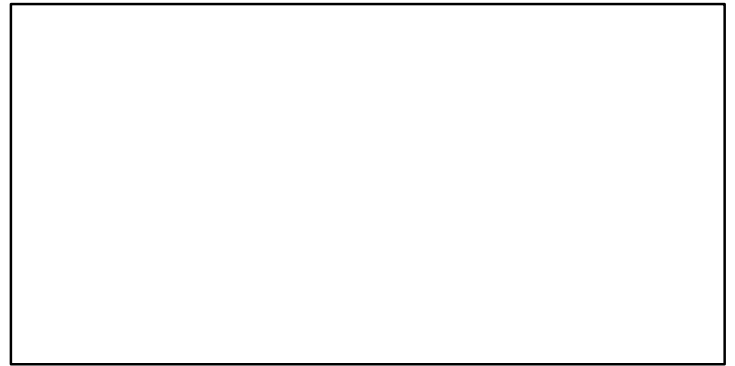
# Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

TC-MT, TL\*, RecC\* (1892-2012-SISIMP2016)

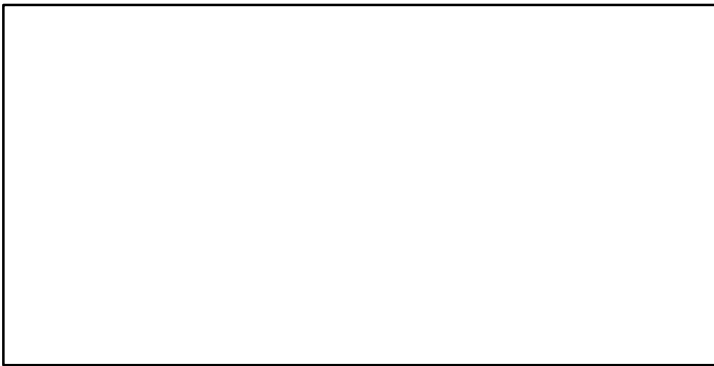
TAC\*, Cpair\*, Cadv\*



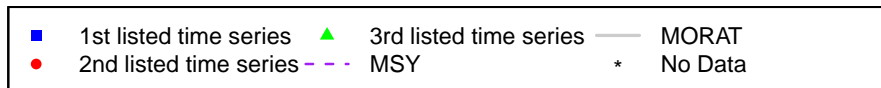
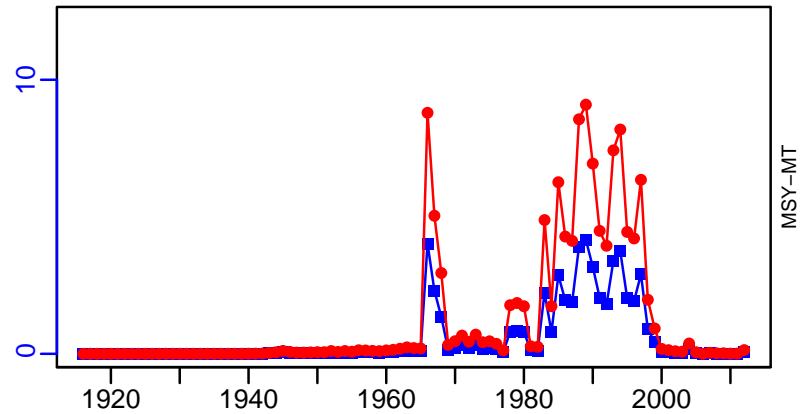
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1892-2012-SISIMP2016)



## Splitnose rockfish Pacific Coast [SNROCKPCOAST]

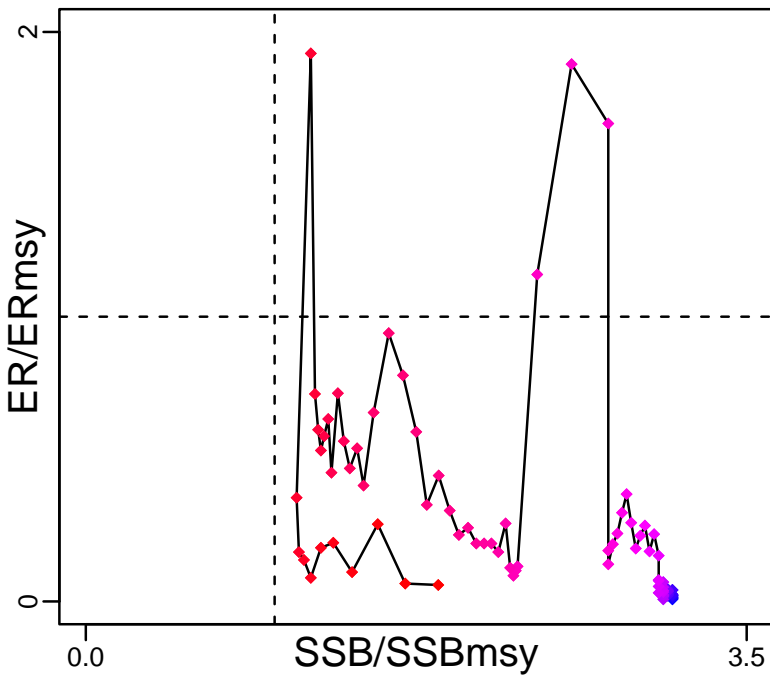
Metadata	
<b>Scientific Name</b>	Sebastes diploproa
<b>Current Assess ID</b>	NWFSC-SNROCKPCOAST-1905-2009-STANTON
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2009

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2009	31,859
<b>SSBmsy</b>	SSBmsy-E00eggs	2009	$4.12 \times 10^9$
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2009	0.04
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2009	87,584
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2009	1268
<b>M</b>	M-1/yr	2009	0.048
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

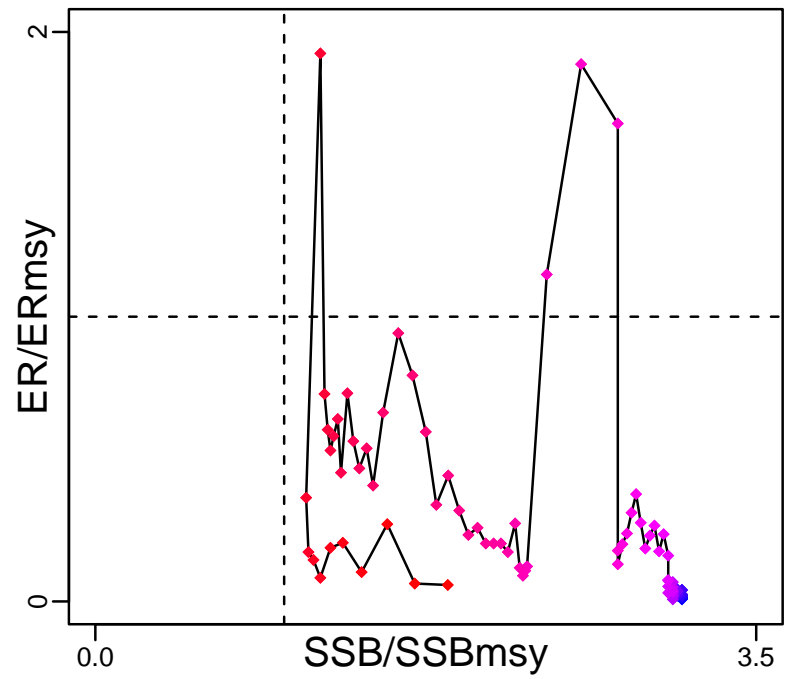
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2009	70,200	-	4+
<b>SSB</b>	SSB-E00eggs	2009	$8.43 \times 10^9$	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2009	12,700,000	-	0
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2009	0.002	-	-
<b>TC</b>	TC-MT	2009	66		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2009	2.203		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2009	2.046		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2009	0.058		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Splitnose rockfish Pacific Coast [SNROCKPCOAST]

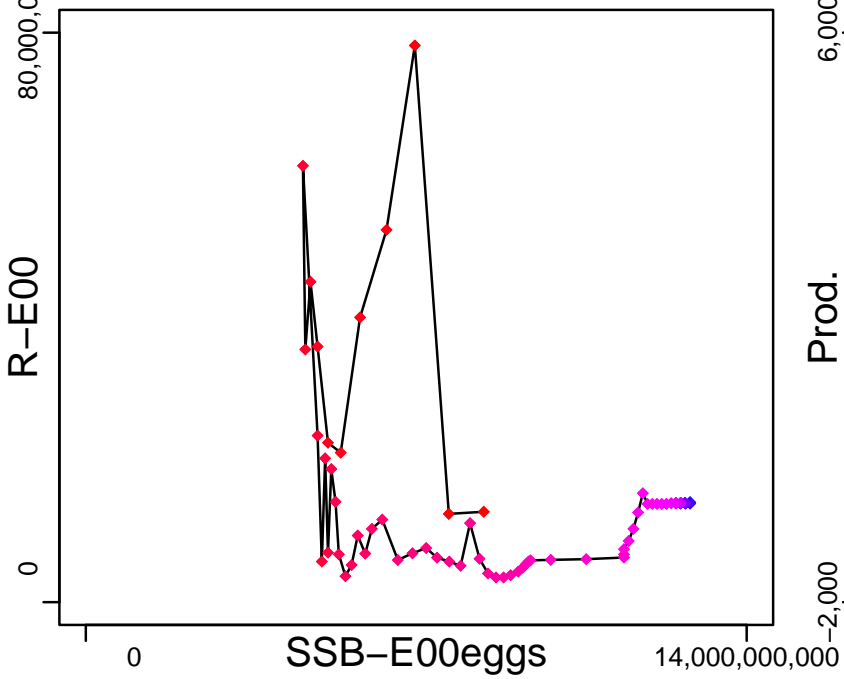
Kobe MSYpref (1905–2009–STANTON)



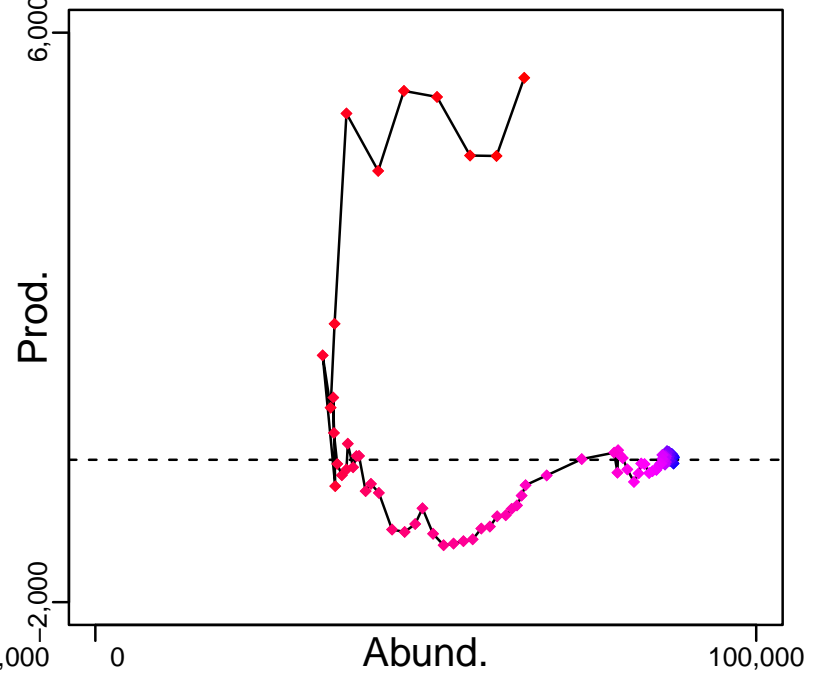
Kobe MGTpref (1905–2009–STANTON)



Spawner Recruit (1905–2009–STANTON)



Production (1905–2009–STANTON)

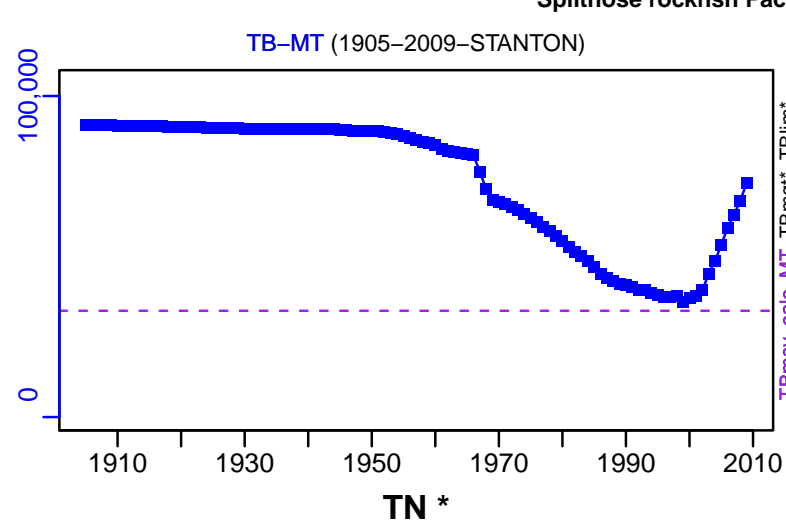


◆ Start Year ◆ End Year \* No Data

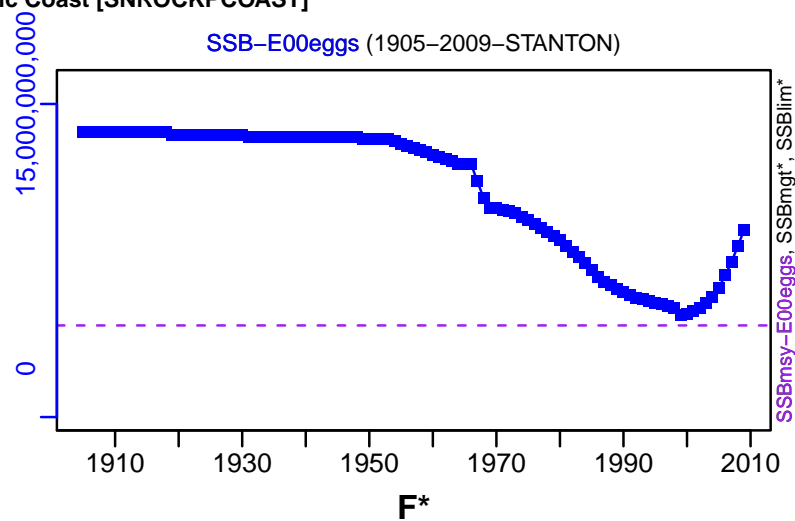


# Splitnose rockfish Pacific Coast [SNROCKPCOAST]

TB-MT (1905-2009-STANTON)



SSB-E00eggs (1905-2009-STANTON)



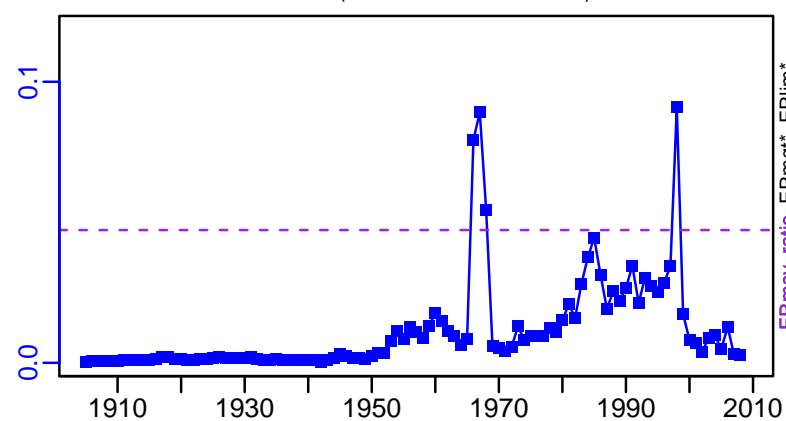
TN \*



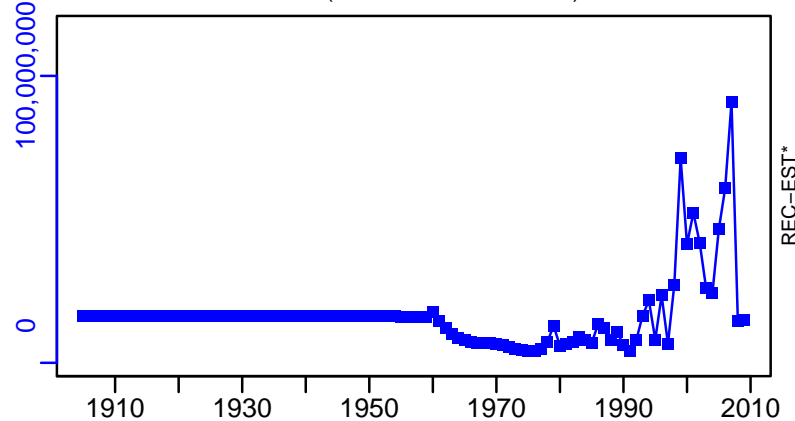
F\*



ER-ratio (1905-2009-STANTON)



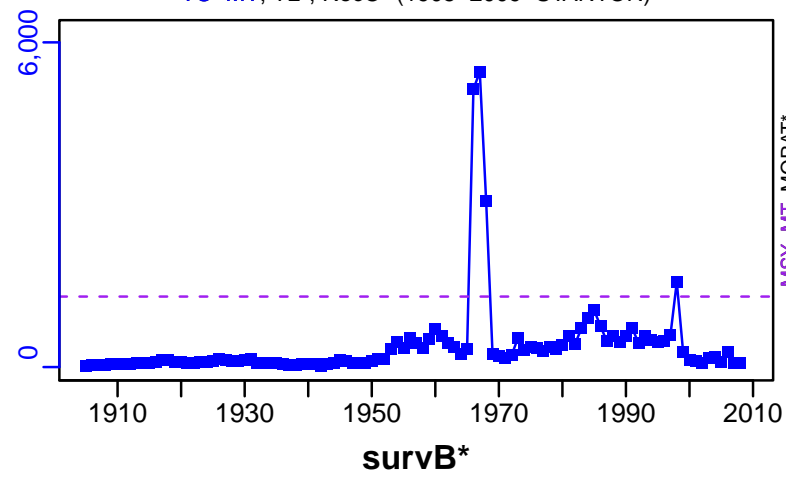
R-E00 (1905-2009-STANTON)



# Splitnose rockfish Pacific Coast [SNROCKPCOAST]

TC-MT, TL\*, RecC\* (1905-2009-STANTON)

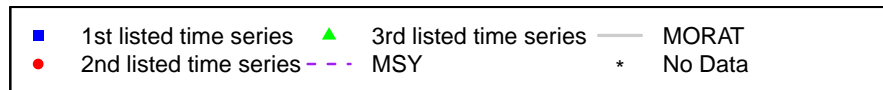
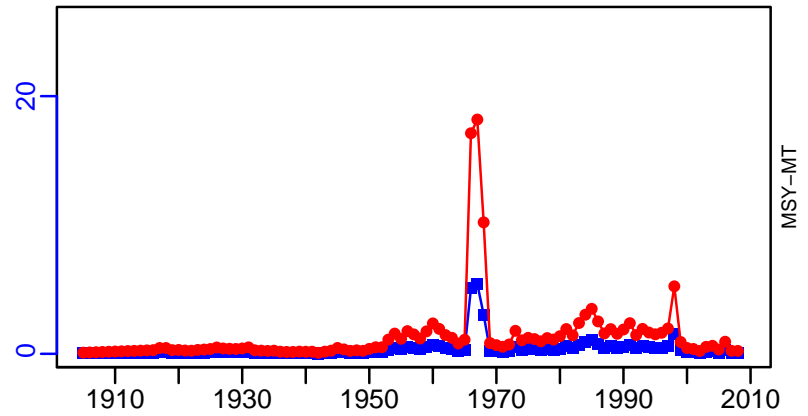
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1905-2009-STANTON)



## Shortraker rockfish Bering Sea and Aleutian Islands [SRAKEROCKBSAI]

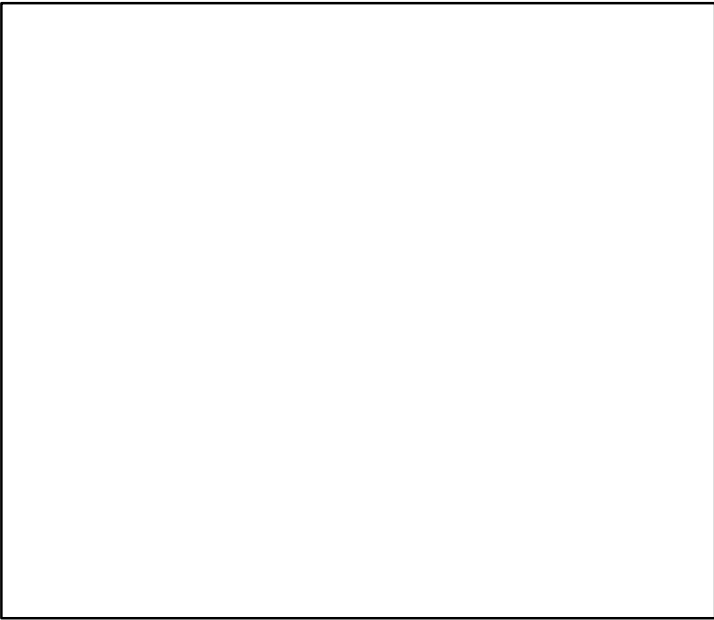
Metadata	
<b>Scientific Name</b>	Sebastes borealis
<b>Current Assess ID</b>	AFSC-SRAKEROCKBSAI-1977-2020-SISIMP2021-2
<b>Area</b>	Bering Sea and Aleutian Islands
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2010, 2018, 2020, 2016, 2014

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.031
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	-	-	-
<b>M</b>	M-1/yr	2010	0.03
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-1/yr	2010	0.03
<b>ERlim</b>	ERlim-ratio	2016	0.031

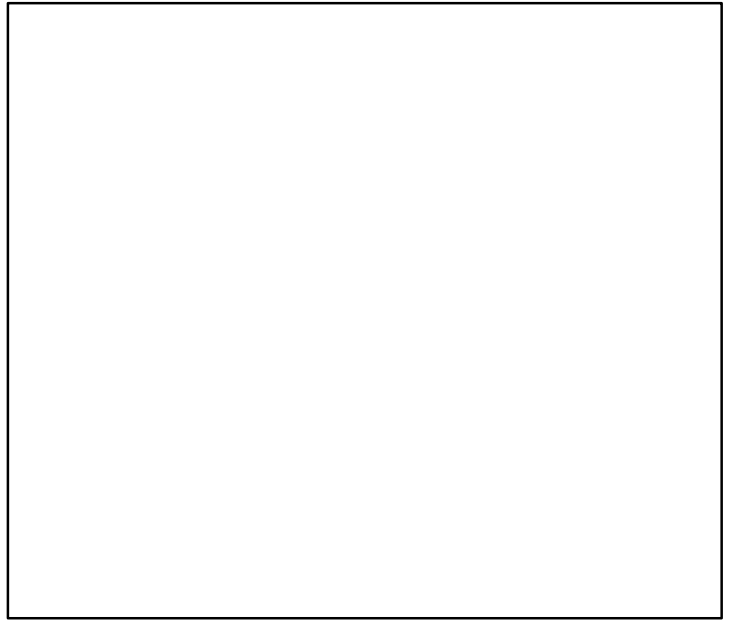
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2018	24,055	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	F-1/yr	2010	0.012	Both	-
<b>ER</b>	ER-calc-ratio	2018	0.007	-	-
<b>TC</b>	TC-MT	2020	380		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.223		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Shortraker rockfish Bering Sea and Aleutian Islands [SRAKEROCKBSAI]

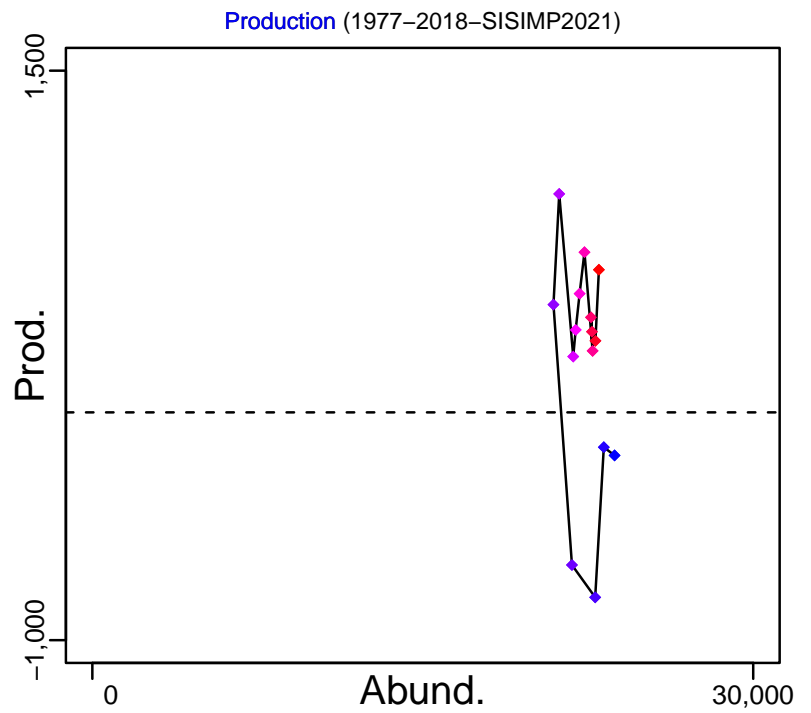
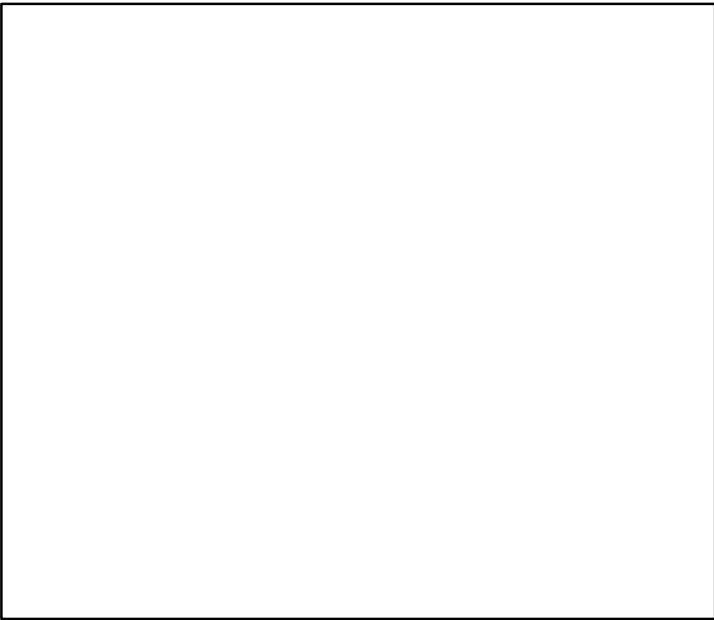
Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*

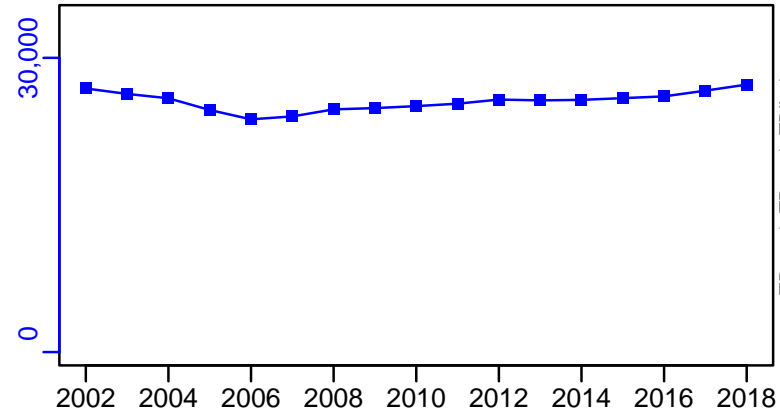


◆ Start Year ◆ End Year \* No Data

# Shorttraker rockfish Bering Sea and Aleutian Islands [SRAKEROCKBSAI]

TB-MT (1977–2018–SISIMP2021)

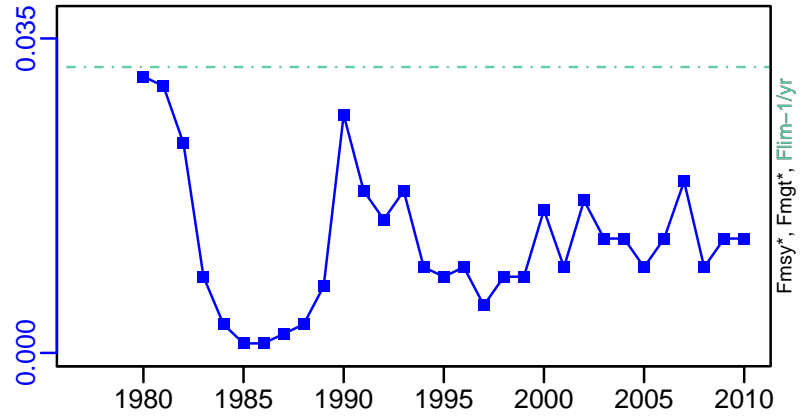
SSB\*



TN \*

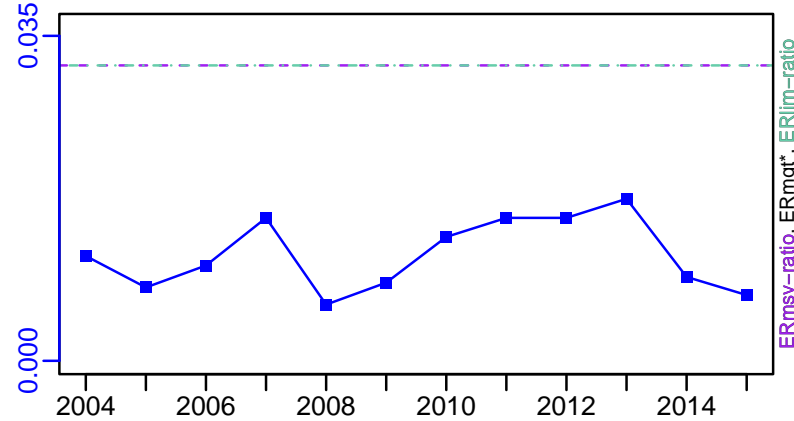


F-1/yr (1977–2010–STACHURA)



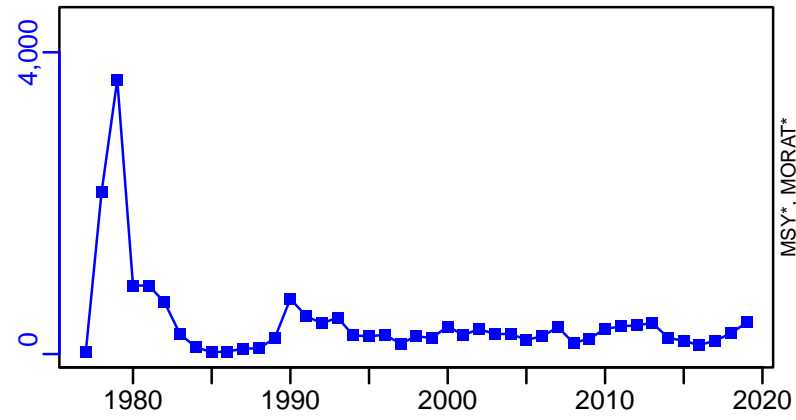
ER-ratio (2002–2016–SISIMP2021)

Recruits\*



# Shortraker rockfish Bering Sea and Aleutian Islands [SRAKEROCKBSAI]

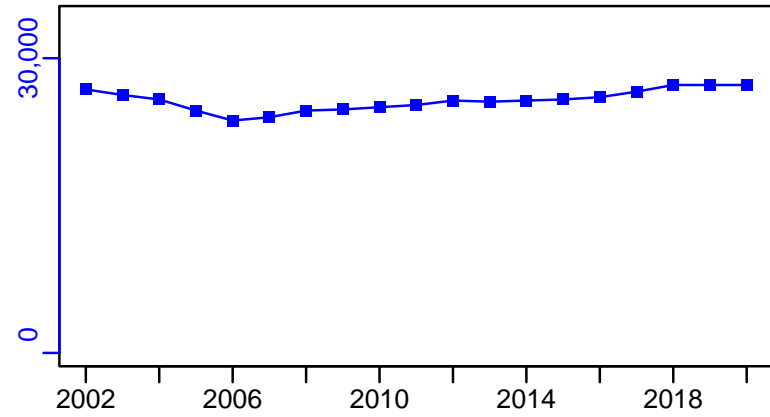
TC-MT, TL\*, RecC\* (1977-2020-SISIMP2021-2)



TAC\*, Cpair\*, Cadv\*



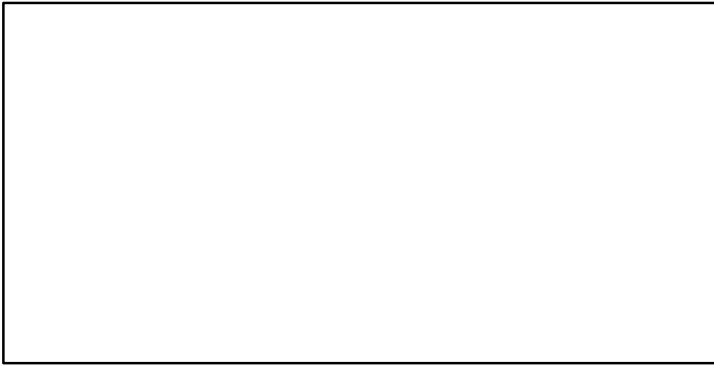
survB-MT (1977-2020-SISIMP2021-2)



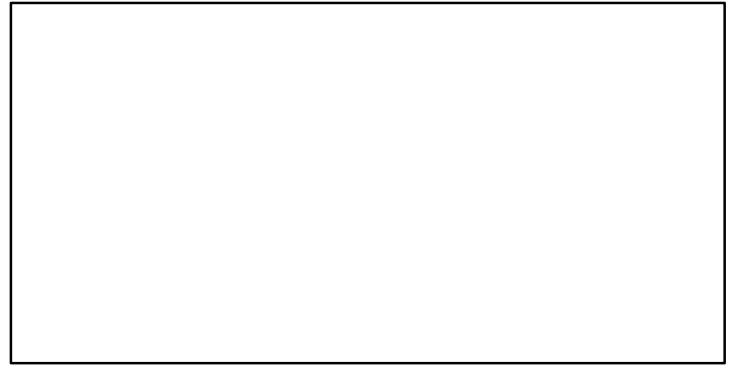
CPUE\*



EFFORT\*



CdivMSY\*



■ 1st listed time series    ▲ 3rd listed time series    — MORAT  
● 2nd listed time series    - - - MSY    \* No Data

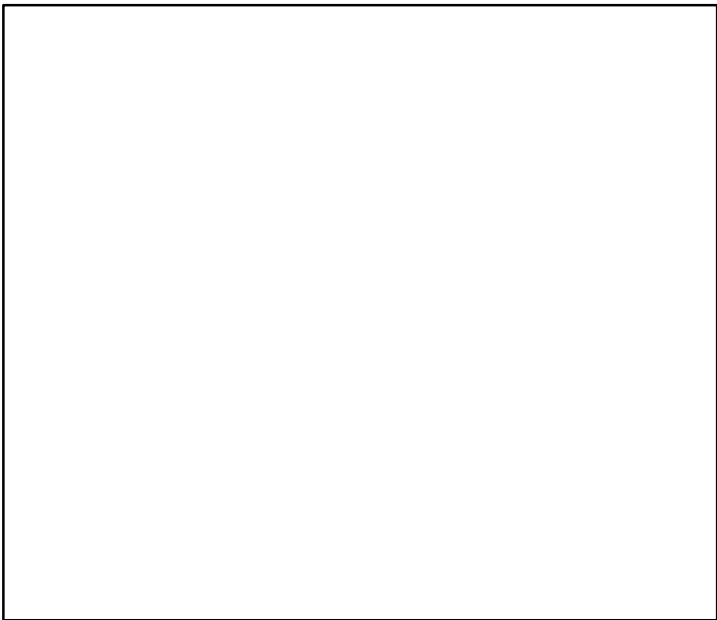
## Shortraker rockfish Gulf of Alaska [SRAKEROCKGA]

Metadata	
<b>Scientific Name</b>	Sebastes borealis
<b>Current Assess ID</b>	AFSC-SRAKEROCKGA-1991-2018-SISIMP2021-2
<b>Area</b>	Gulf of Alaska
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2016, 2017, 2018, 2014

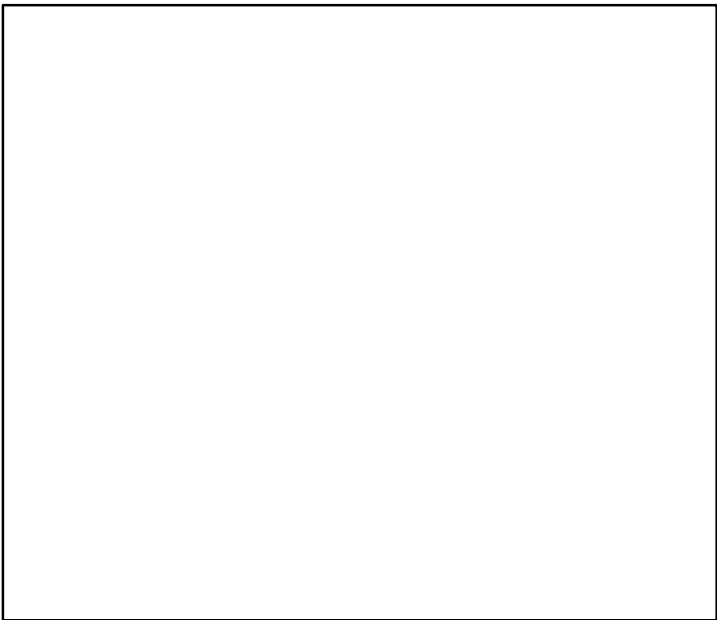
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2016	0.031
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	ERlim-ratio	2016	0.031

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2017	31,534	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-calc-ratio	2017	0.009	-	-
TC	TC-MT	2018	763		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2016	0.323		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Kobe MSY\*



Kobe MGT\*



Spawner Recruit\*



Production\*

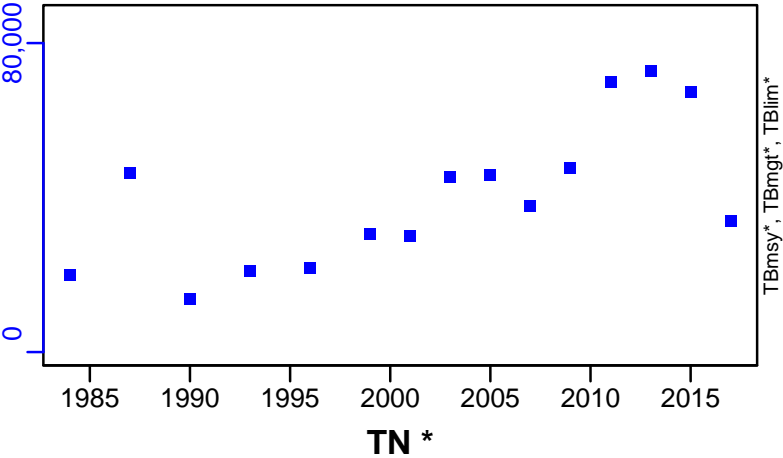


◆ Start Year    ◆ End Year    \* No Data



Shortraker rockfish Gulf of Alaska [SRAKEROCKGA]

TB-MT (1984-2017-SISIMP2021)



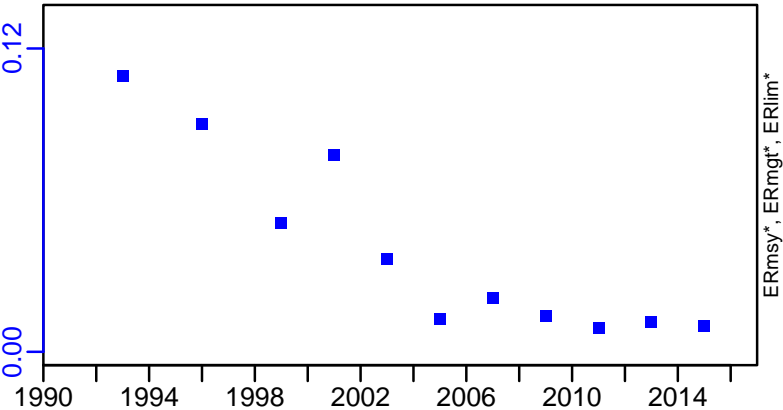
SSB\*



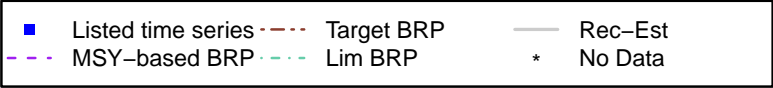
F\*



ER-calc-ratio (1984-2017-SISIMP2021)

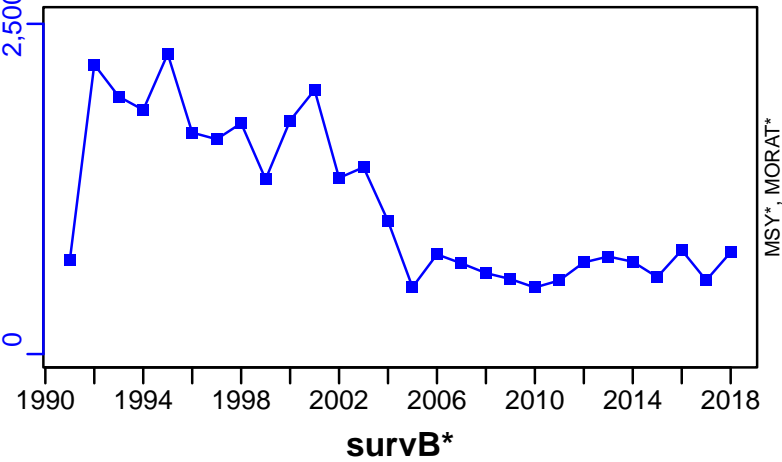


Recruits\*



Shortraker rockfish Gulf of Alaska [SRAKEROCKGA]

TC-MT, TL\*, RecC\* (1991-2018-SISIMP2021-2)



TAC\*, Cpair\*, Cadv\*



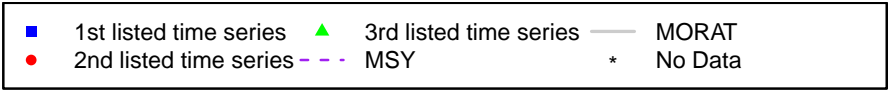
CPUE\*



EFFORT\*



CdivMSY\*



## Shortspine thornyhead Gulf of Alaska [SSTHORNHGA]

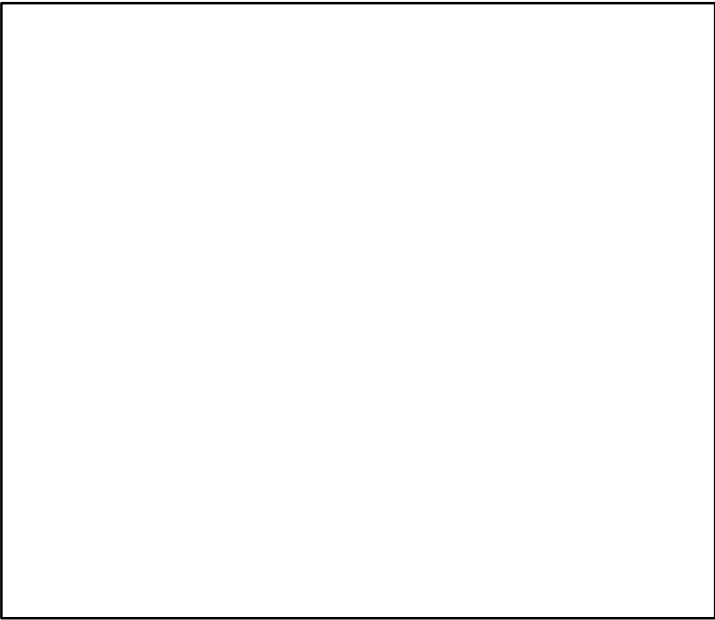
Metadata	
<b>Scientific Name</b>	Sebastolobus alascanus
<b>Current Assess ID</b>	AFSC-SSTHORNHGA-1980-2020-SISIMP2021-2
<b>Area</b>	Gulf of Alaska
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2014, 2016, 2017, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2020	0.03
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	ERlim-ratio	2020	0.03

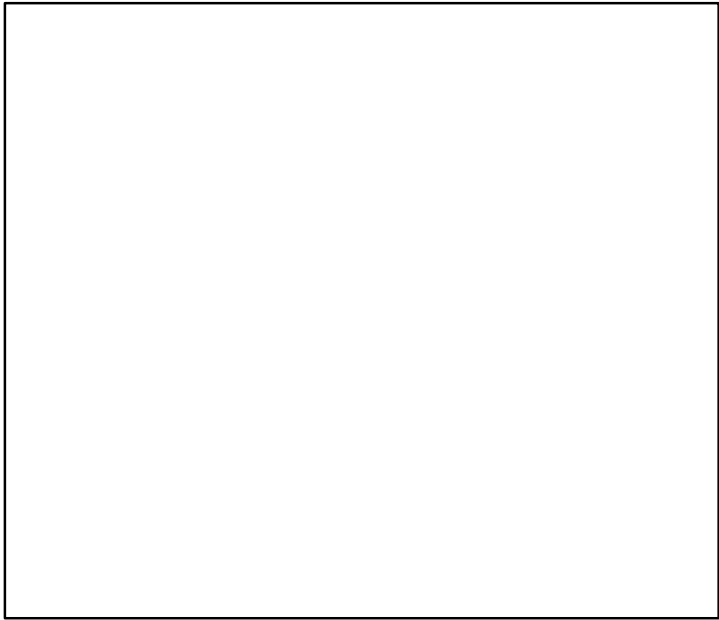
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2020	86,800	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-ratio	2020	0.009	-	-
TC	TC-MT	2020	777		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2020	0.298		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

Shortspine thornyhead Gulf of Alaska [SSTHORNHGA]

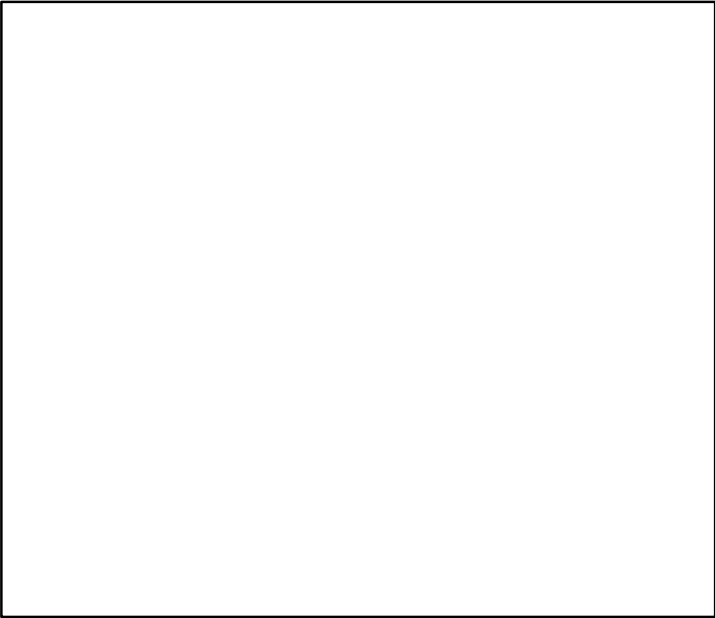
Kobe MSY\*



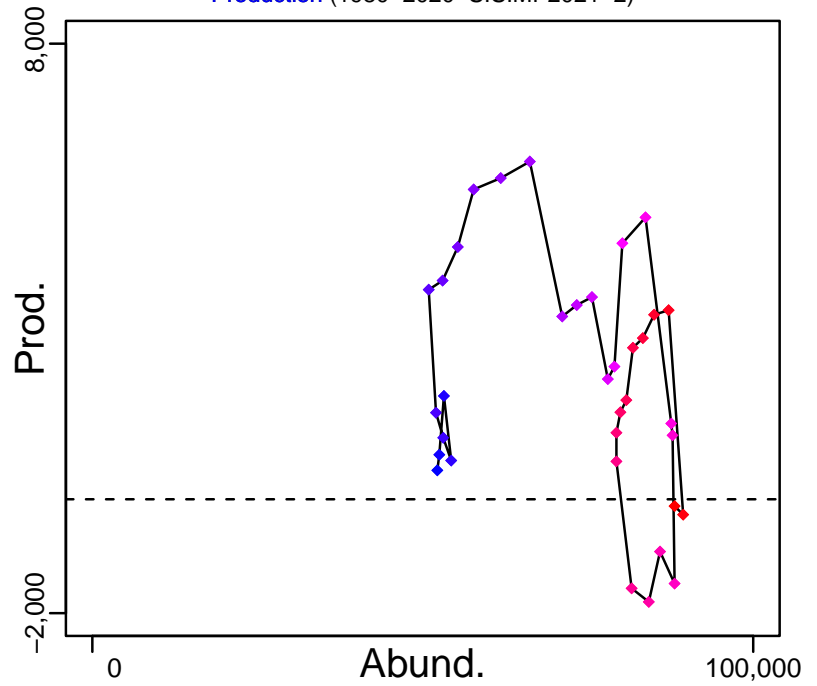
Kobe MGT\*



Spawner Recruit\*



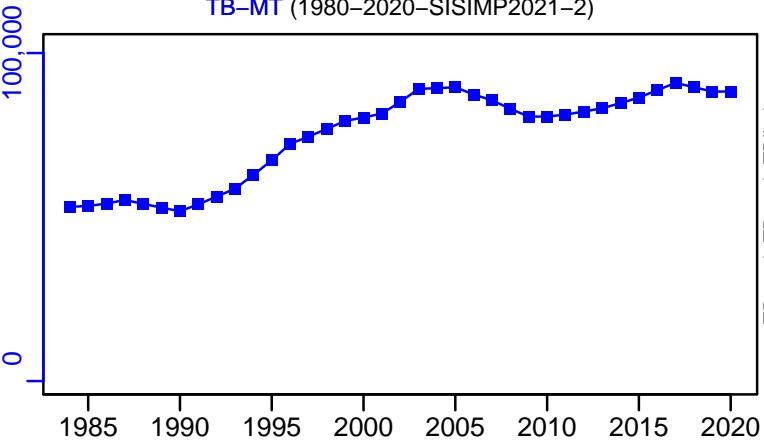
Production (1980–2020–SISIMP2021–2)



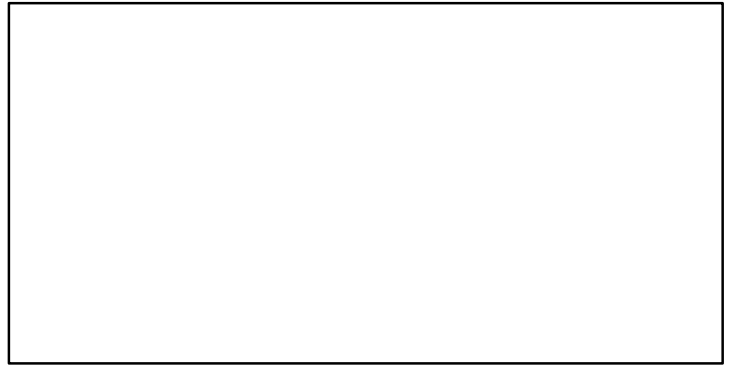
◆ Start Year ◆ End Year \* No Data

# Shortspine thornyhead Gulf of Alaska [SSTHORNHGA]

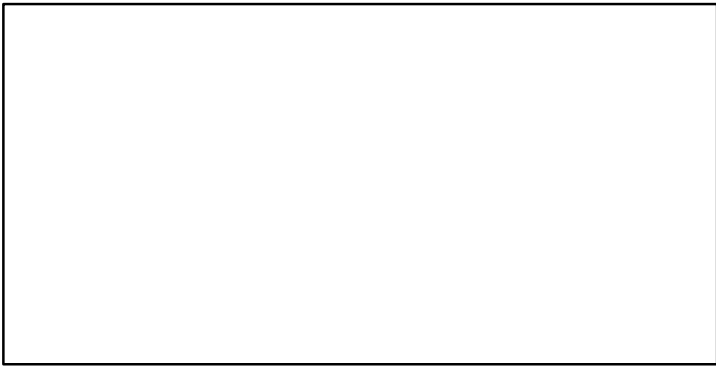
TB-MT (1980-2020-SISIMP2021-2)



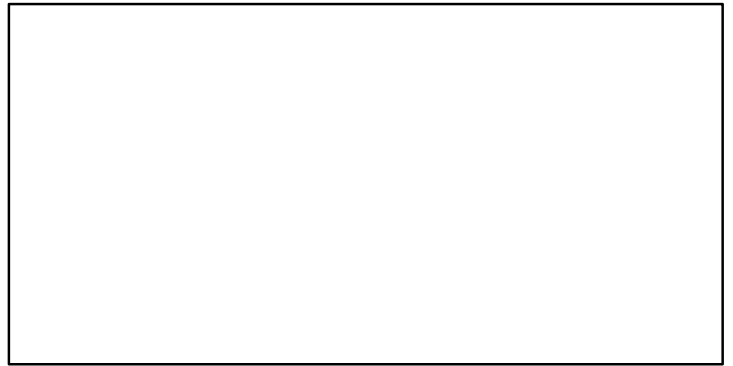
SSB\*



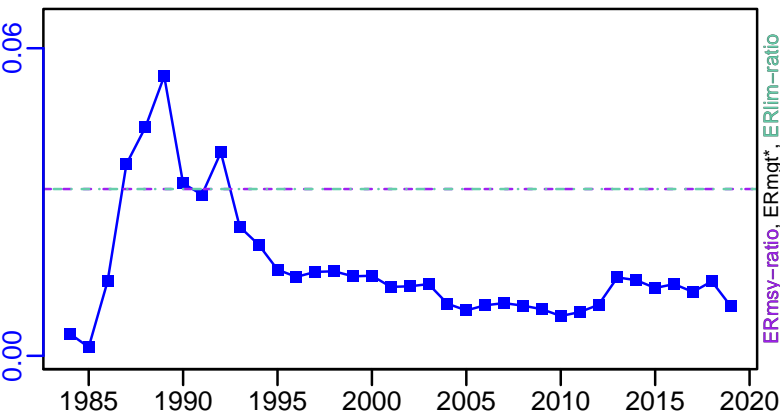
TN \*



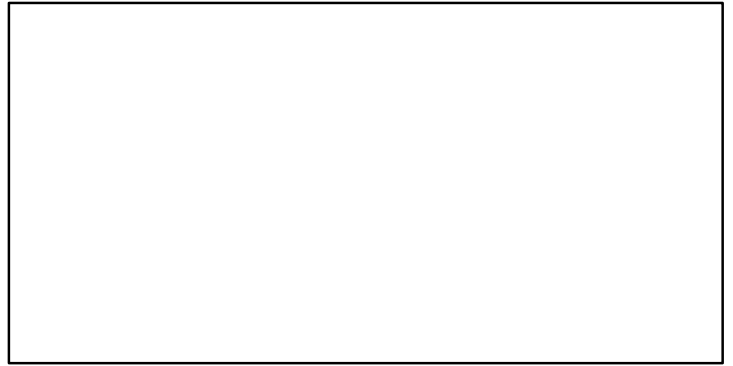
F\*



ER-ratio (1980-2020-SISIMP2021-2)

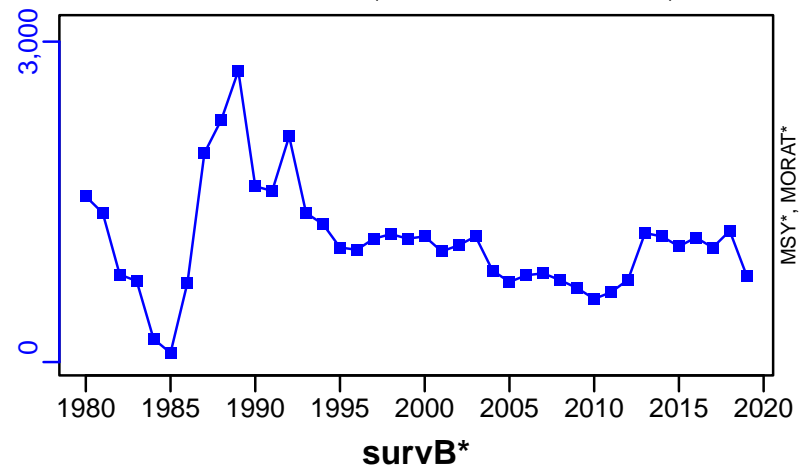


Recruits\*



# Shortspine thornyhead Gulf of Alaska [SSTHORNHGA]

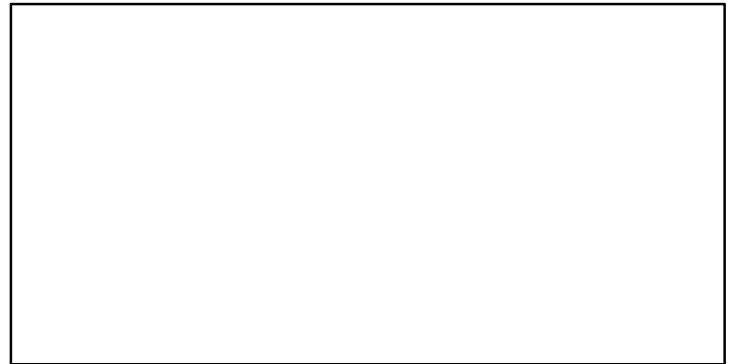
TC-MT, TL\*, RecC\* (1980-2020-SISIMP2021-2)



TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



CdivMSY\*



## Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]

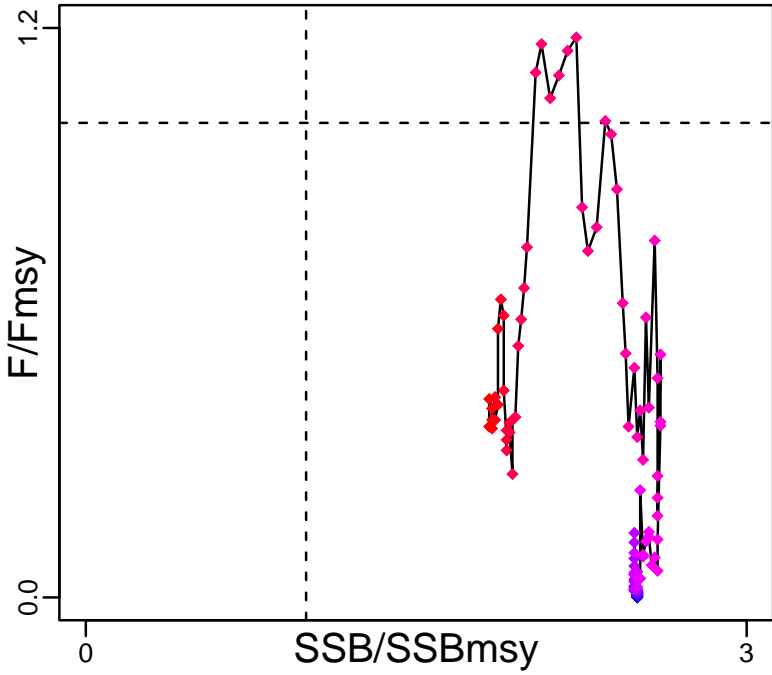
Metadata	
<b>Scientific Name</b>	Sebastes alascanus
<b>Current Assess ID</b>	NWFSC-SSTHORNHPCOAST-1901-2019-SISIMP2021-2
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2005, 2013, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2005	86,000
<b>SSBmsy</b>	SSBmsy-MT	2019	75,900
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	ERmsy-ratio	2005	0.018
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2005	230,500
<b>SSB0</b>	SSB0-MT	2005	130,646
<b>MSY</b>	MSY-MT	2019	2030
<b>M</b>	M-1/yr	2005	0.05
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2019	47,400
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

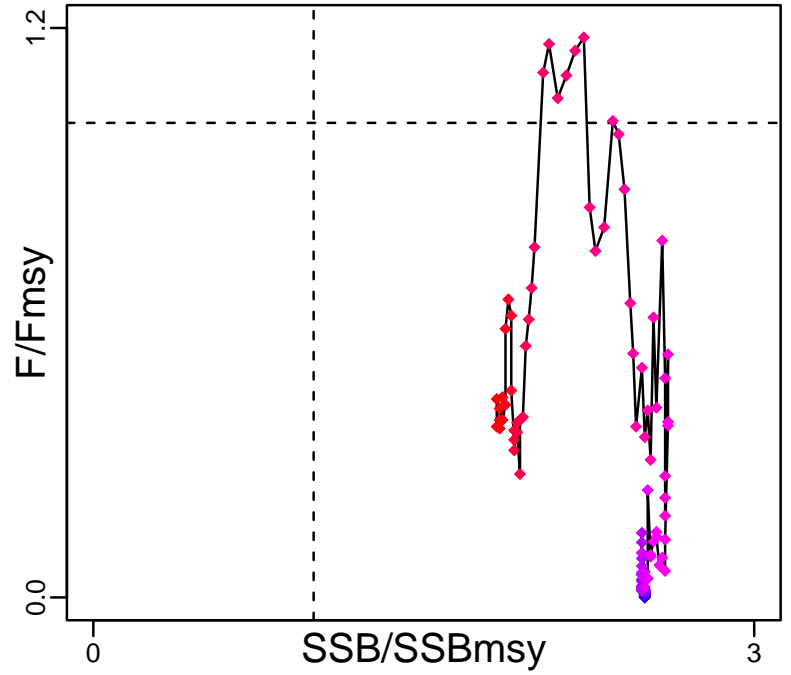
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2013	244,000	-	1+
<b>SSB</b>	SSB-MT	2019	139,000	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	28,700,000	-	0
<b>F</b>	F-1/yr	2019	0.18	-	-
<b>ER</b>	ER-calc-ratio	2013	0.004	-	-
<b>TC</b>	TC-MT	2019	847		
<b>TL</b>	TL-MT	2005	867		
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2005	1.686		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2019	1.831		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.36		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2005	0.265		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]

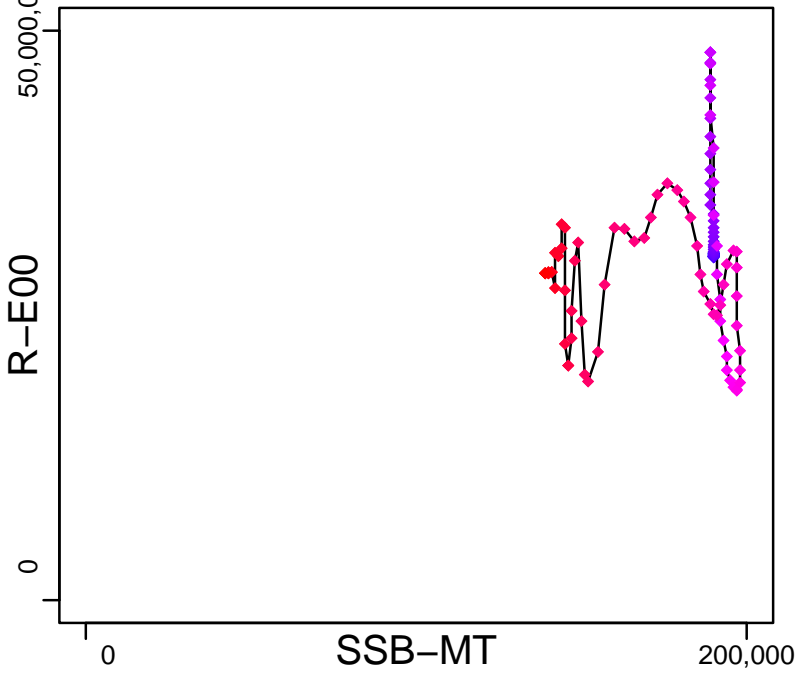
Kobe MSYpref (1901–2019–SISIMP2021–2)



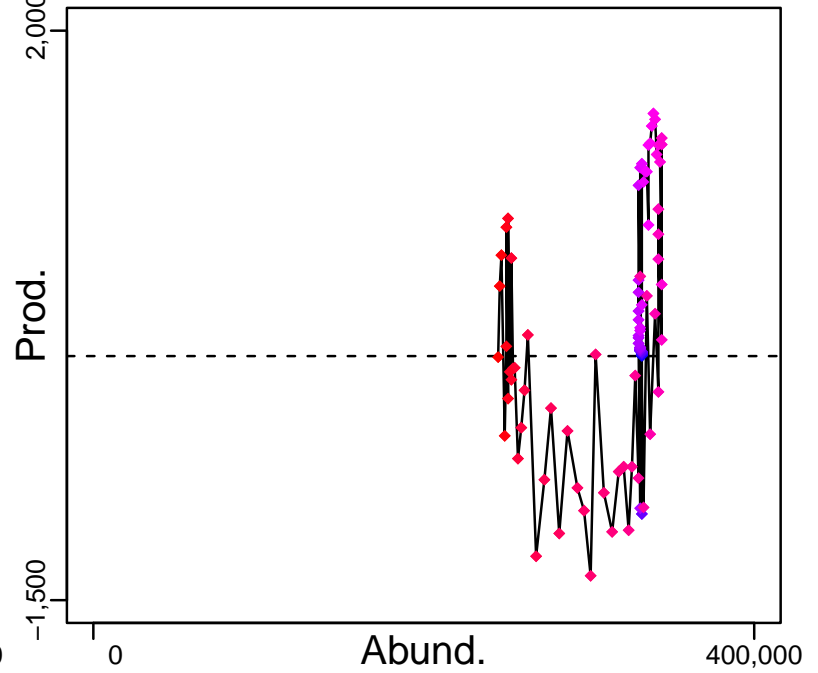
Kobe MGTpref (1901–2019–SISIMP2021–2)



Spawner Recruit (1901–2019–SISIMP2021–2)



Production (1901–2013–SISIMP2016)

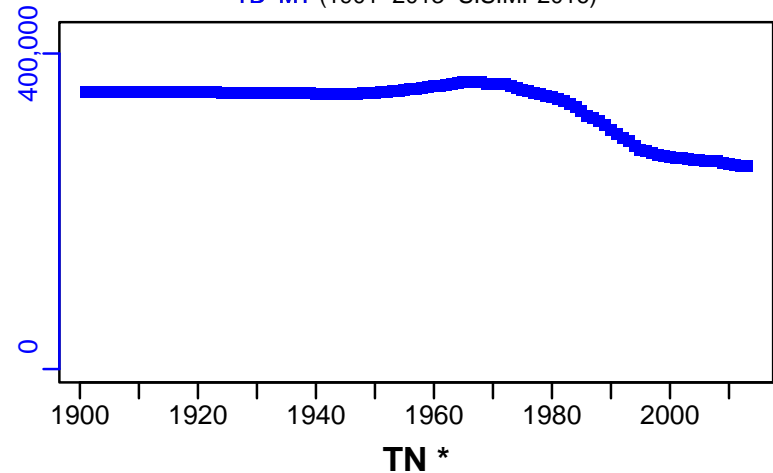


◆ Start Year ◆ End Year \* No Data

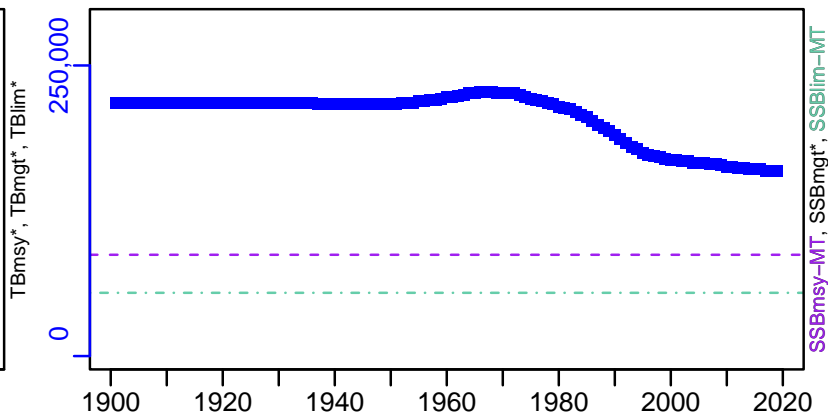


# Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]

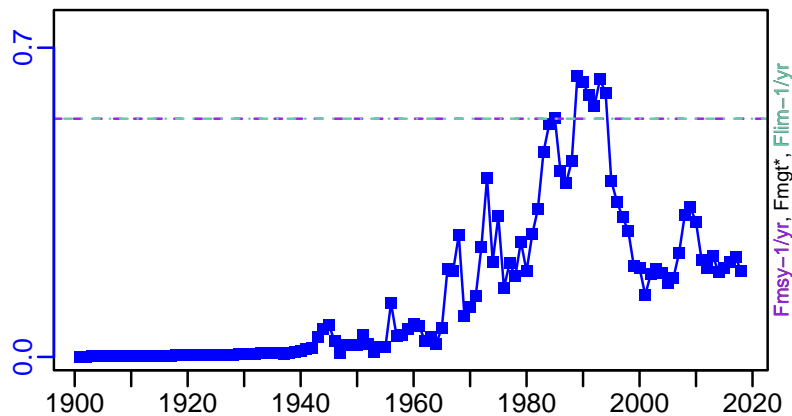
TB-MT (1901-2013-SISIMP2016)



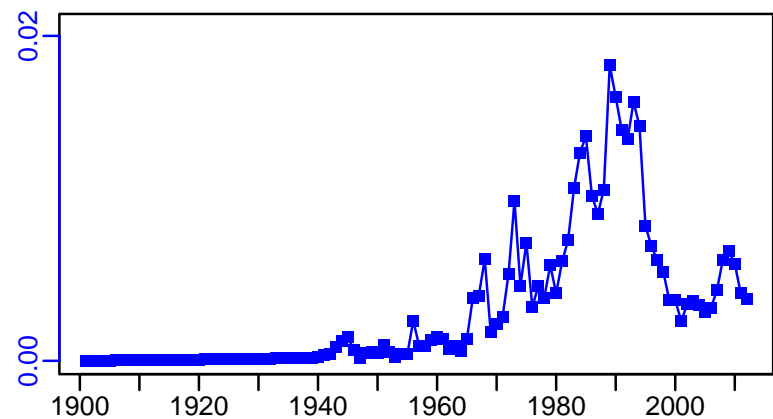
SSB-MT (1901-2019-SISIMP2021-2)



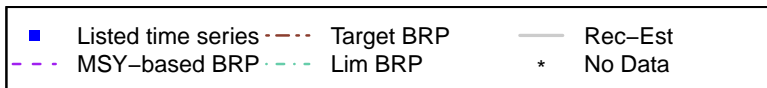
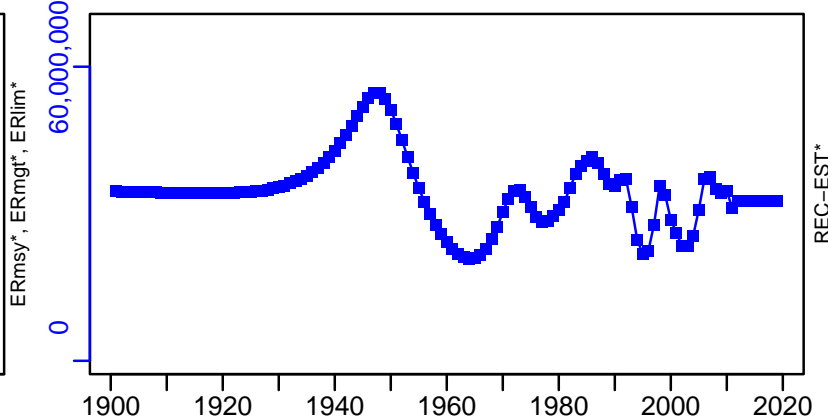
F-1/yr (1901-2019-SISIMP2021-2)



ER-calc-ratio (1901-2013-SISIMP2016)



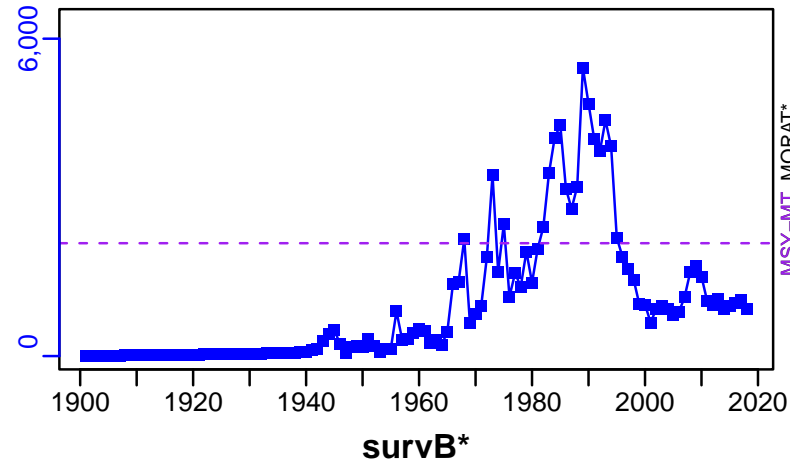
R-E00 (1901-2019-SISIMP2021-2)



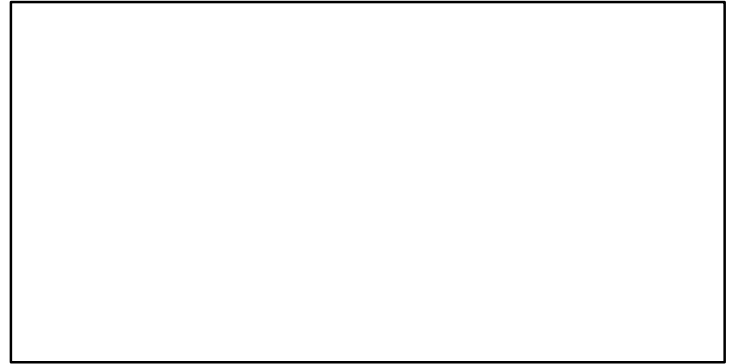
# Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]

TC-MT, TL\*, RecC\* (1901-2019-SISIMP2021-2)

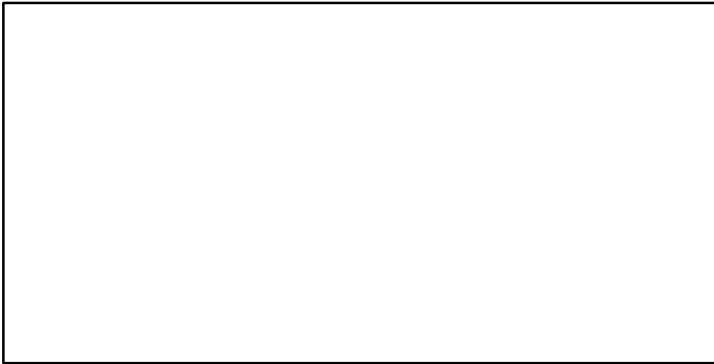
TAC\*, Cpair\*, Cadv\*



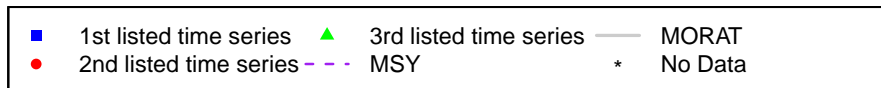
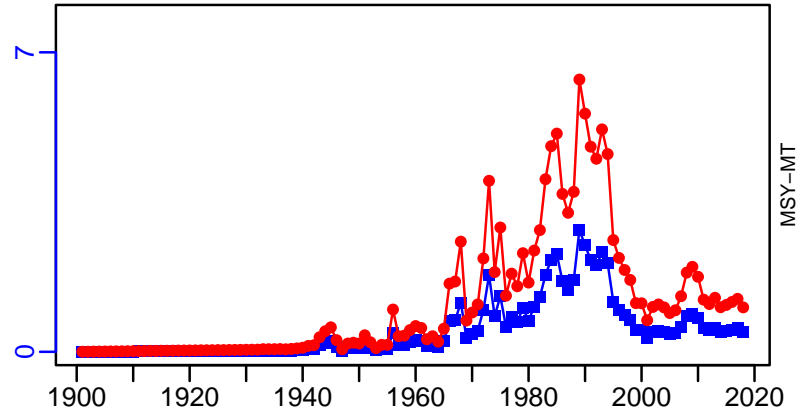
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1901-2019-SISIMP2021-2)



## Widow rockfish British Columbia Waters [WROCKBCW]

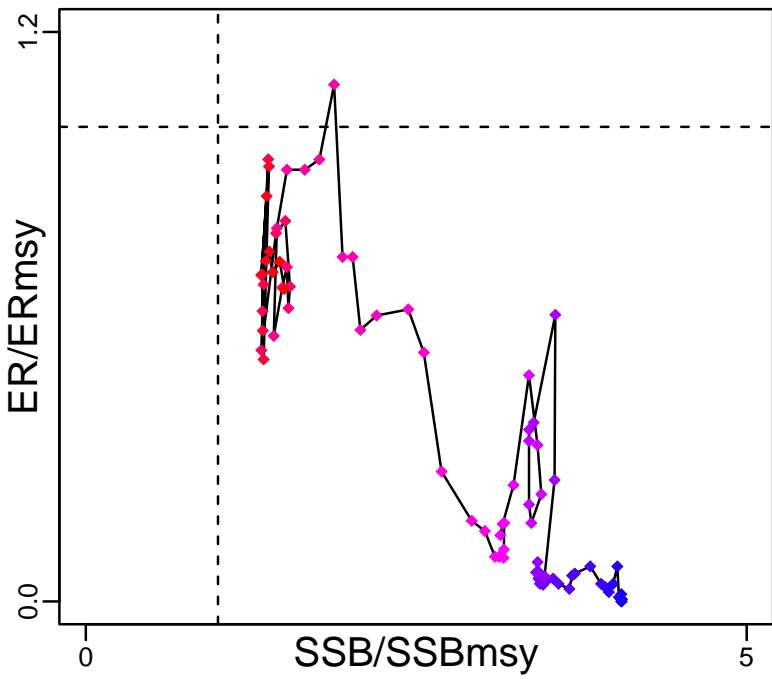
Metadata	
<b>Scientific Name</b>	Sebastes entomelas
<b>Current Assess ID</b>	DFO-PAC-WROCKBCW-1939-2018-ASHBROOK
<b>Area</b>	British Columbia Waters
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans - Pacific Region
<b>Asmts in RAM</b>	2018

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2018	12,899
<b>SSBmsy</b>	SSBmsy-MT	2018	7373
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2018	0.148
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2018	29,951
<b>MSY</b>	MSY-MT	2018	1909
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

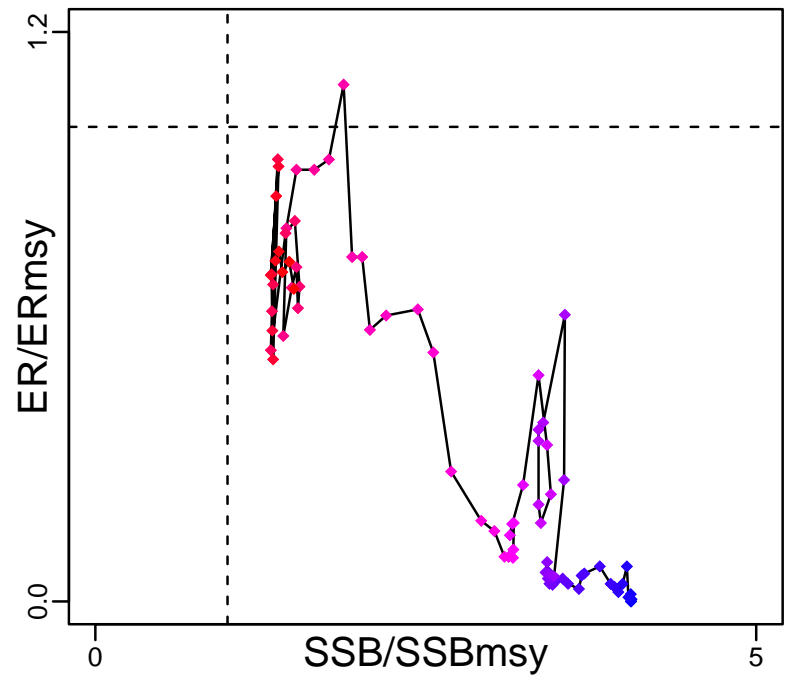
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-MT	2018	11,077	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2018	2,782,219	-	1
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2018	0.098	-	-
<b>TC</b>	-	-	-	-	-
<b>TL</b>	TL-MT	2018	1909	-	-
<b>TB/TBmsy</b>	-	-	-	-	-
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2018	1.502	-	-
<b>F/Fmsy</b>	-	-	-	-	-
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2018	0.659	-	-
<b>TB/TBmgt</b>	-	-	-	-	-
<b>SSB/SSBmgt</b>	-	-	-	-	-
<b>F/Fmgt</b>	-	-	-	-	-
<b>ER/ERmgt</b>	-	-	-	-	-

# Widow rockfish British Columbia Waters [WROCKBCW]

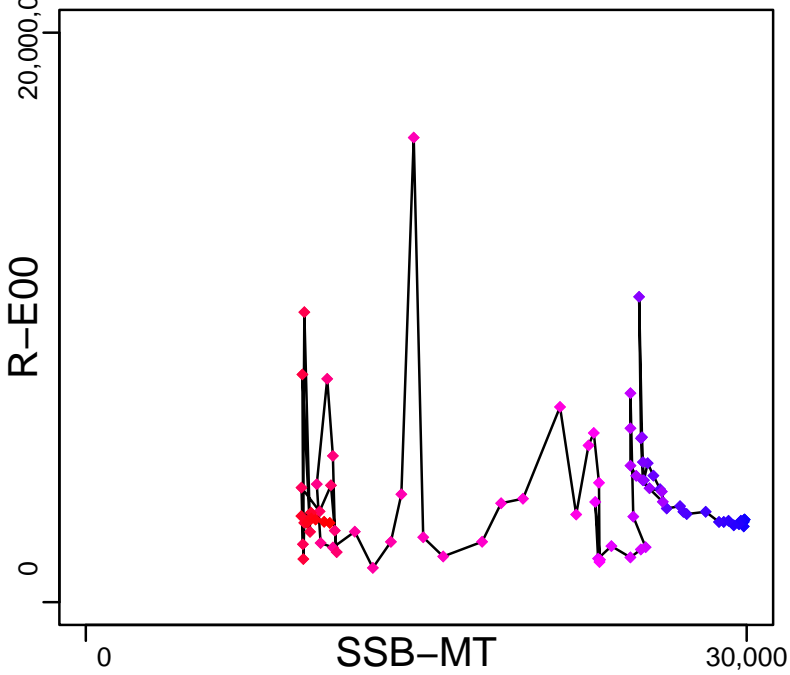
Kobe MSYpref (1939–2018–ASHBROOK)



Kobe MGTpref (1939–2018–ASHBROOK)



Spawner Recruit (1939–2018–ASHBROOK)



Production\*



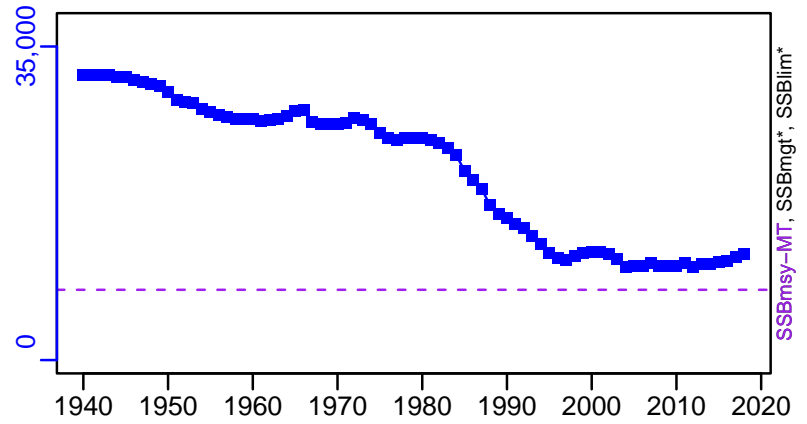
◆ Start Year ◆ End Year \* No Data

Widow rockfish British Columbia Waters [WROCKBCW]

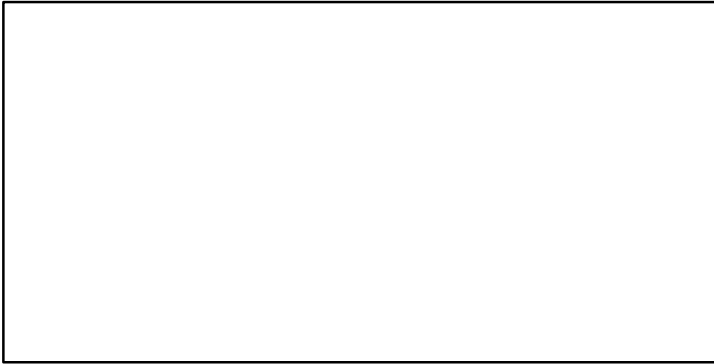
TB\*



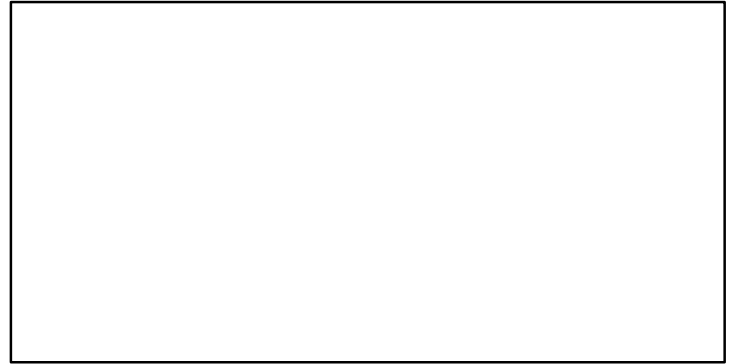
SSB-MT (1939–2018–ASHBROOK)



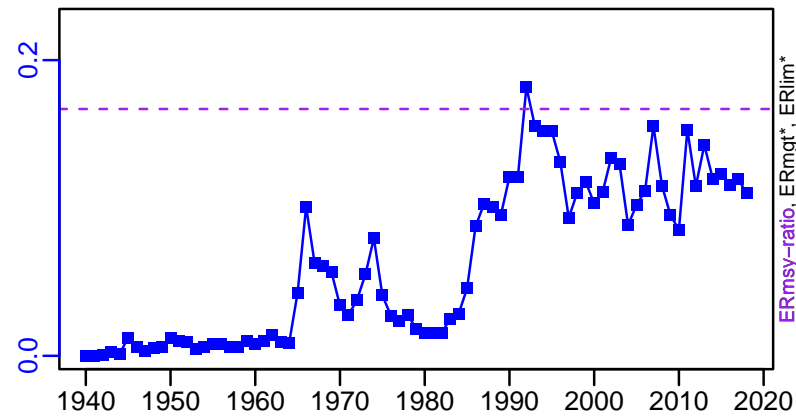
TN \*



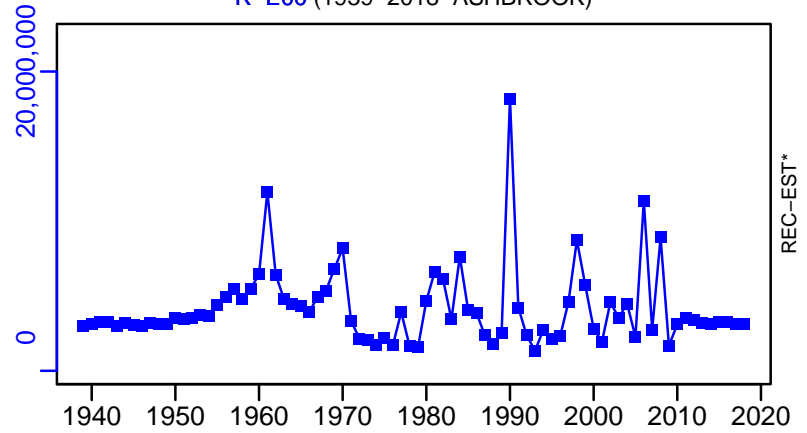
F\*



ER-ratio (1939–2018–ASHBROOK)



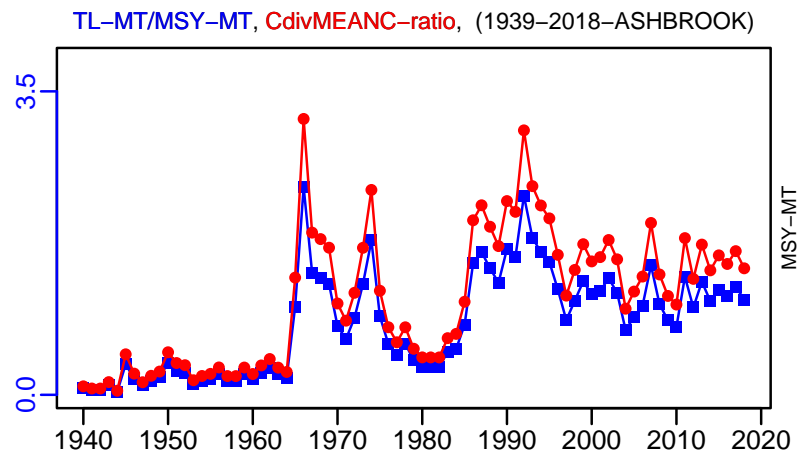
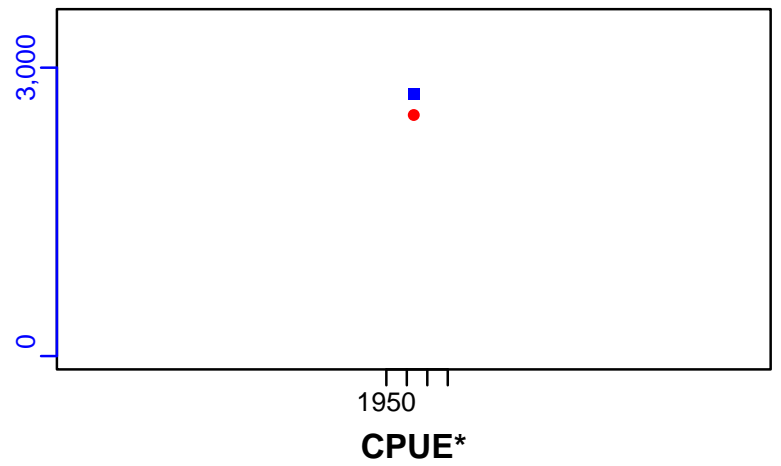
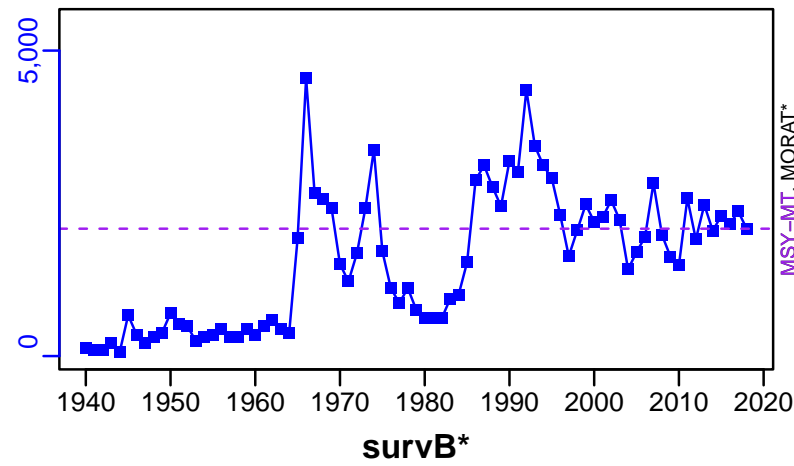
R-E00 (1939–2018–ASHBROOK)



# Widow rockfish British Columbia Waters [WROCKBCW]

TL-MT, TC\*, RecC\* (1939-2018-ASHBROOK)

TAC-MT, Cpair-MT, Cadv\* (1939-2018-ASHBROOK)



## Widow rockfish Pacific Coast [WROCKPCOAST]

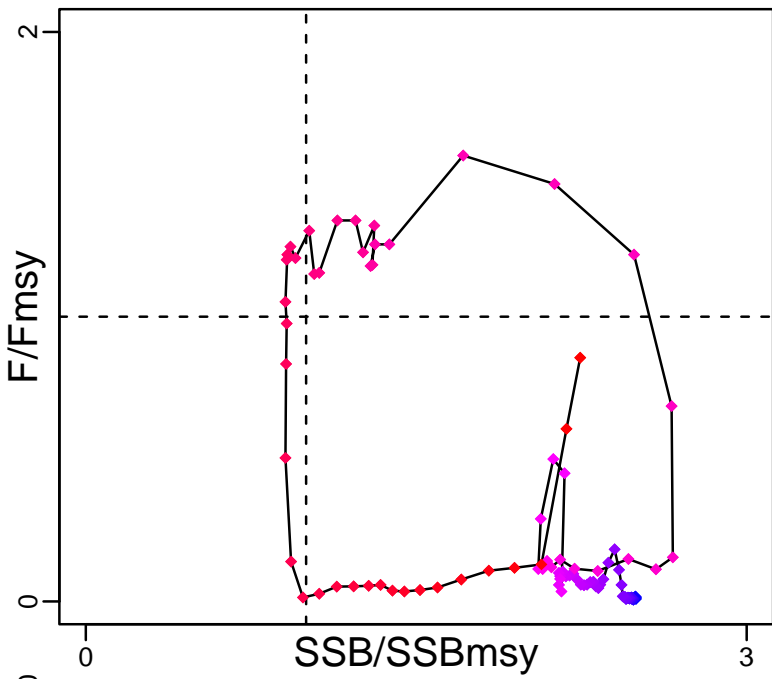
Metadata	
<b>Scientific Name</b>	Sebastes entomelas
<b>Current Assess ID</b>	NWFSC-WROCKPCOAST-1916-2019-SISIMP2021-2
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2011, 2015, 2019

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2011	45,750
<b>SSBmsy</b>	SSBmsy-MT	2019	35,200
<b>Fmsy</b>	Fmsy-1/yr	2019	0.5
<b>ERmsy</b>	ERmsy-ratio	2011	0.12
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2011	28,451
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2011	71,126
<b>MSY</b>	MSY-MT	2019	7610
<b>M</b>	M-1/yr	2011	0.12
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2019	22,000
<b>Flim</b>	Flim-1/yr	2019	0.5
<b>ERlim</b>	-	-	-

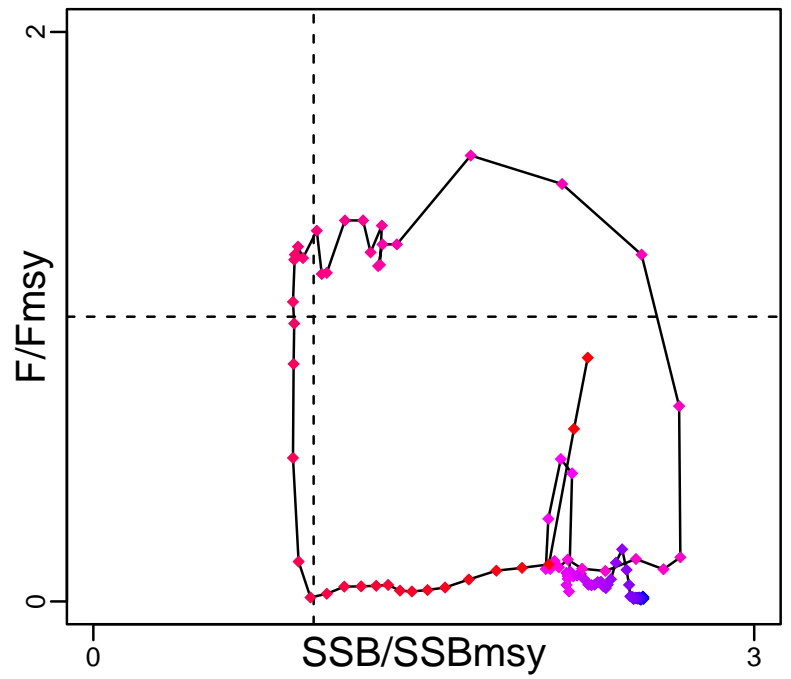
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2015	132,000	Both	4+
<b>SSB</b>	SSB-MT	2019	80,900	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2019	49,300,000	-	0
<b>F</b>	F-1/yr	2019	0.428	-	-
<b>ER</b>	ER-calc-ratio	2015	0.006	-	-
<b>TC</b>	TC-MT	2019	10,600		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	1.491		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2019	2.298		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2019	0.856		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2011	0.019		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2011	1.276		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Widow rockfish Pacific Coast [WROCKPCOAST]

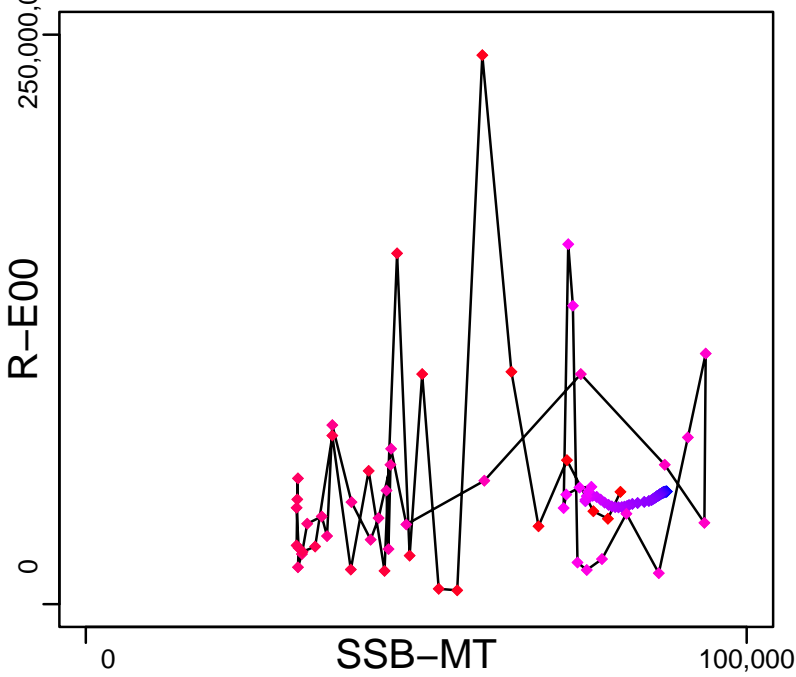
Kobe MSYpref (1916–2019–SISIMP2021–2)



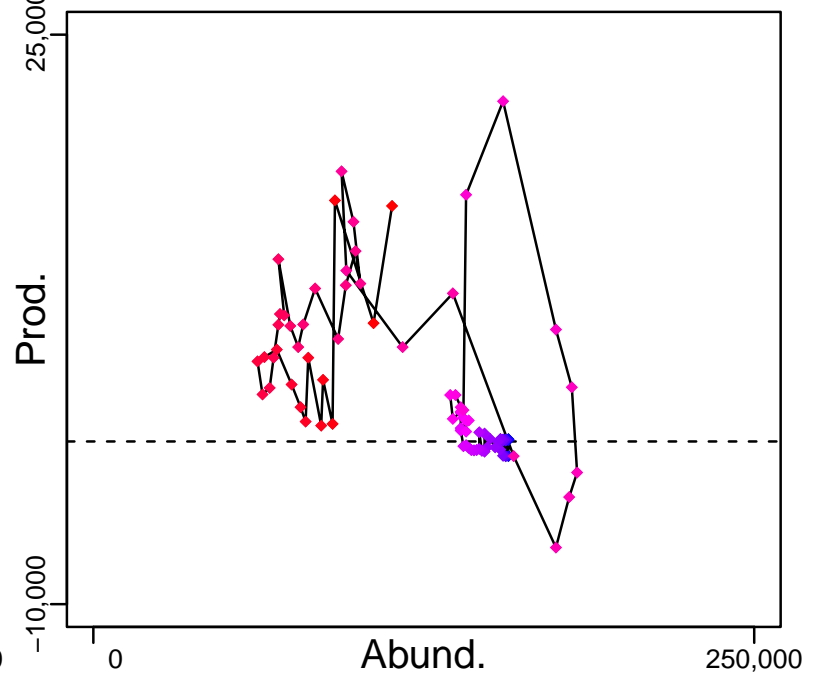
Kobe MGTpref (1916–2019–SISIMP2021–2)



Spawner Recruit (1916–2019–SISIMP2021–2)



Production (1916–2015–SISIMP2016)

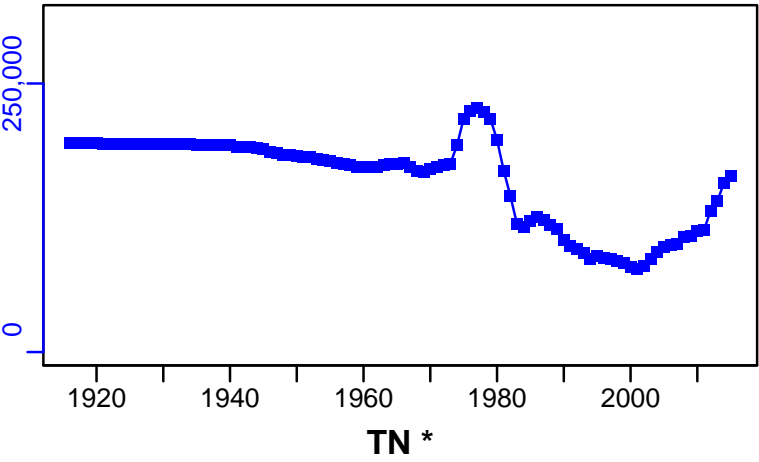


◆ Start Year ◆ End Year \* No Data

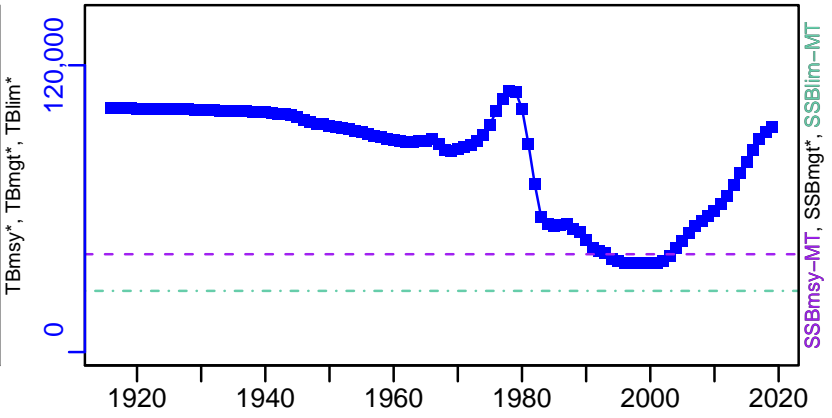


# Widow rockfish Pacific Coast [WROCKPCOAST]

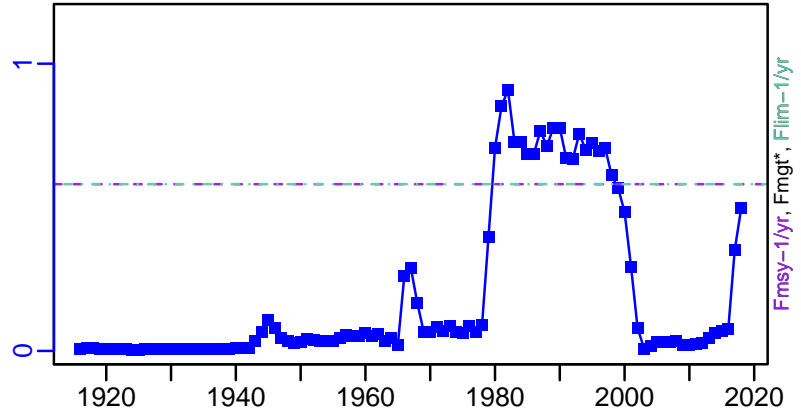
TB-MT (1916-2015-SISIMP2016)



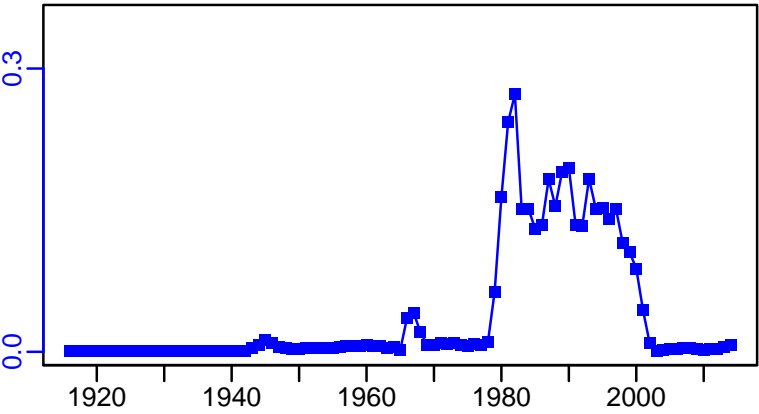
SSB-MT (1916-2019-SISIMP2021-2)



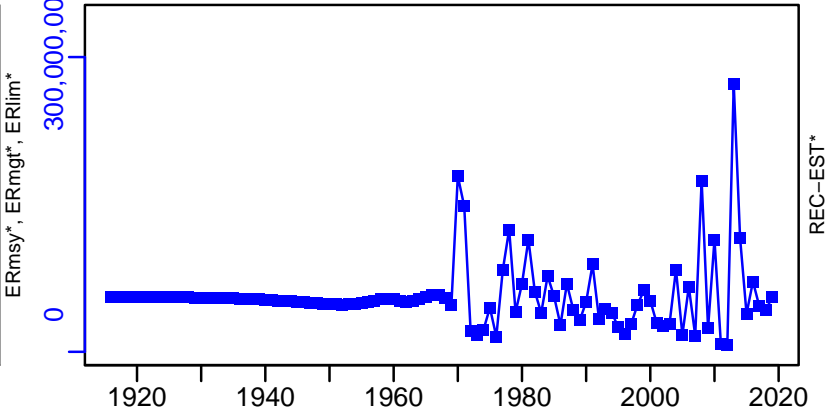
F-1/yr (1916-2019-SISIMP2021-2)



ER-calc-ratio (1916-2015-SISIMP2016)



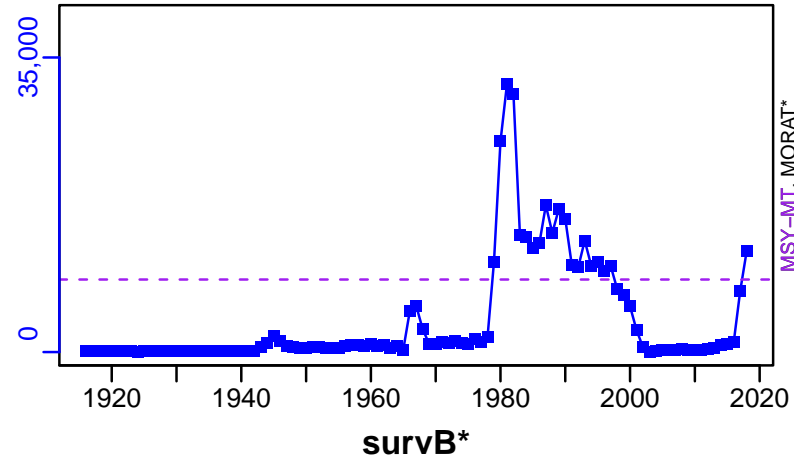
R-E00 (1916-2019-SISIMP2021-2)



# Widow rockfish Pacific Coast [WROCKPCOAST]

TC-MT, TL\*, RecC\* (1916-2019-SISIMP2021-2)

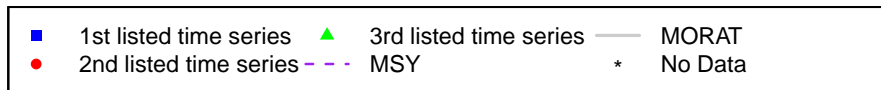
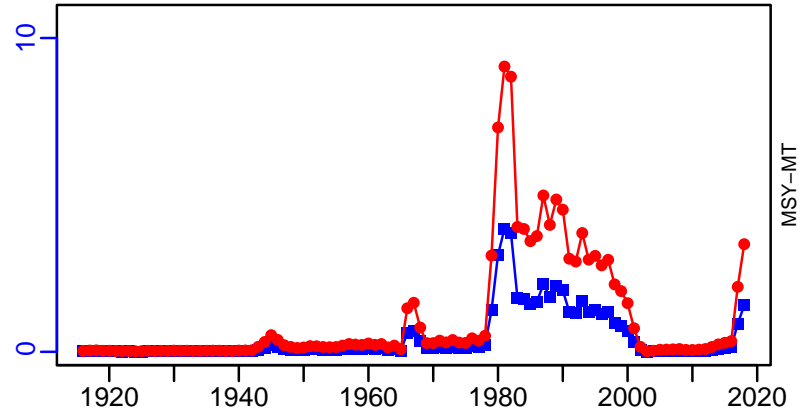
TAC\*, Cpair\*, Cadv\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1916-2019-SISIMP2021-2)

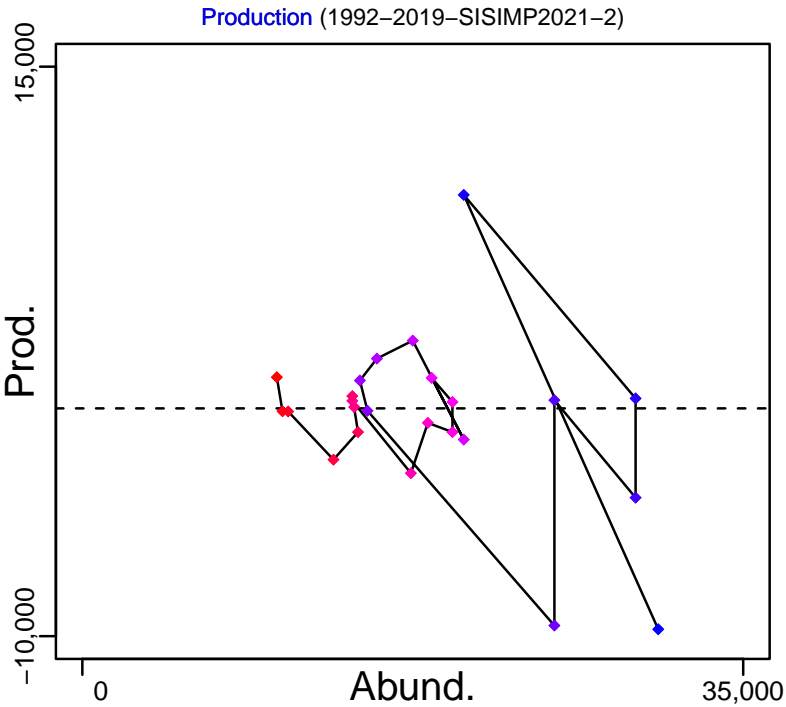
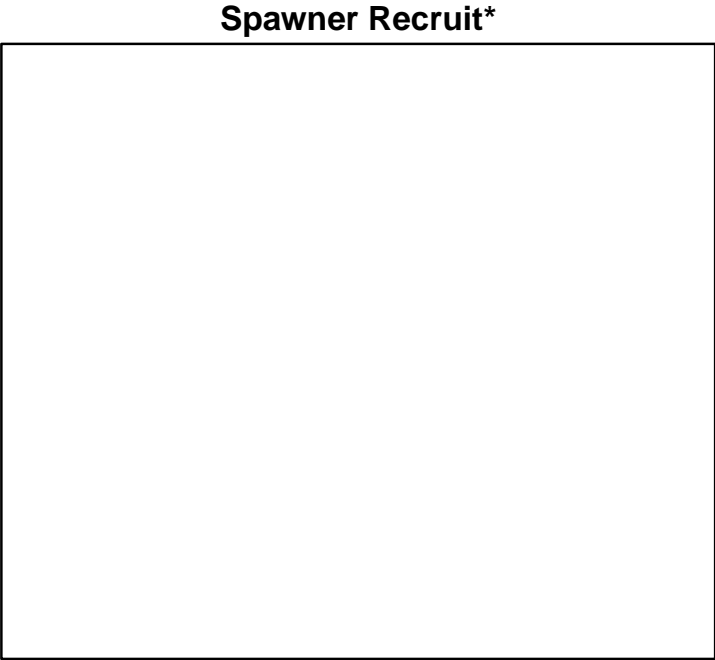
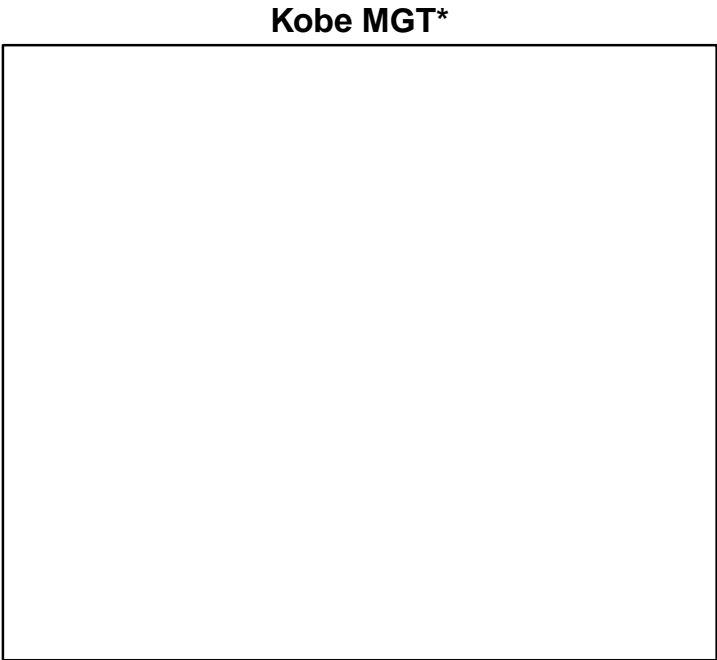
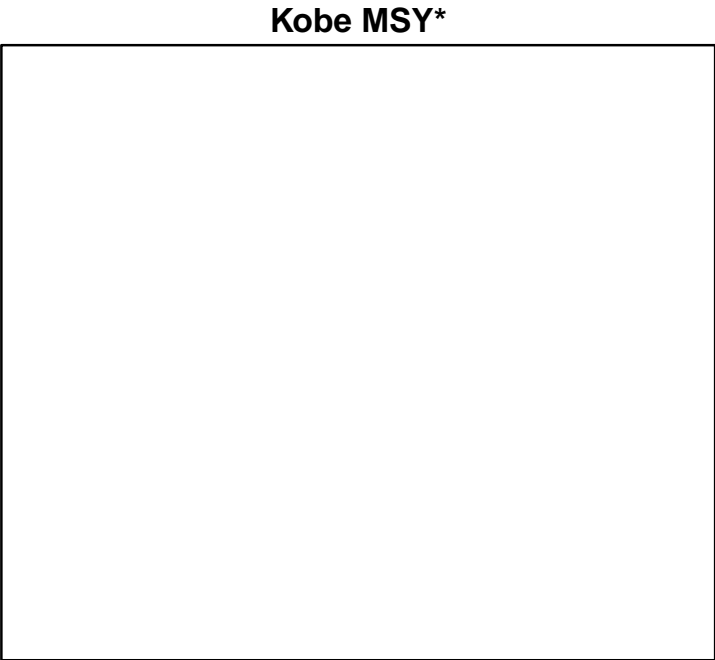


## Yelloweye rockfish Gulf of Alaska [YEYEROCKGA]

Metadata	
<b>Scientific Name</b>	Sebastes ruberrimus
<b>Current Assess ID</b>	AFSC-YEYEROCKGA-1992-2020-SISIMP2021-2
<b>Area</b>	Gulf of Alaska
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Alaska Fisheries Science Center
<b>Asmts in RAM</b>	2014, 2016, 2016, 2017, 2019, 2020

Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	ERmsy-ratio	2020	0.032
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	ERlim-ratio	2020	0.032

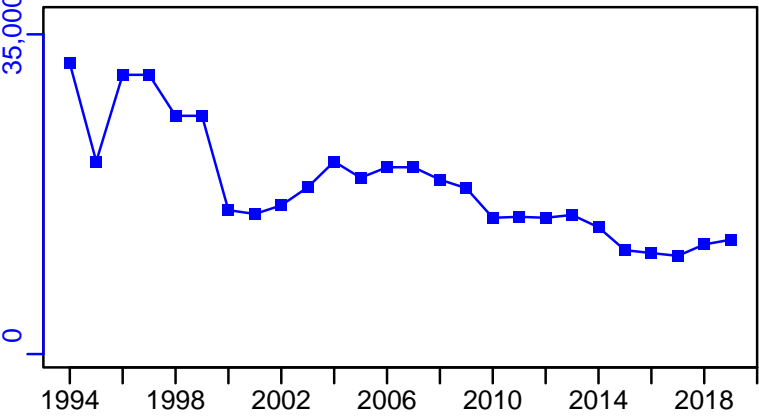
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	TB-MT	2019	12,000	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	ER-ratio	2020	0.015	-	-
TC	TC-MT	2020	185		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	ER-ratio/ERmsy-ratio	2020	0.481		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		



◆ Start Year ◆ End Year \* No Data

Yelloweye rockfish Gulf of Alaska [YEYEROCKGA]

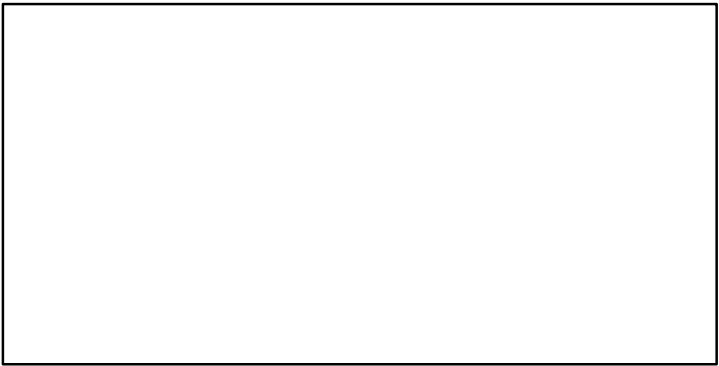
TB-MT (1992-2019-SISIMP2021-2)



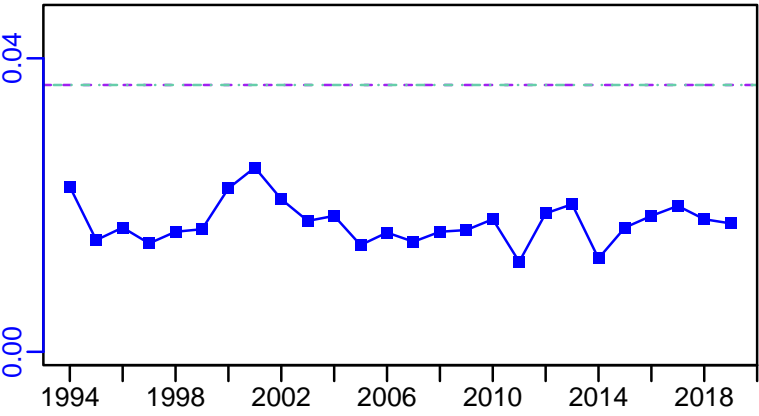
SSB\*



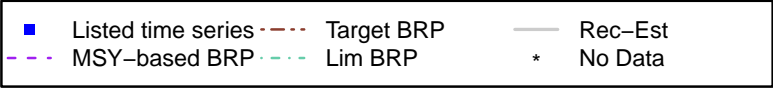
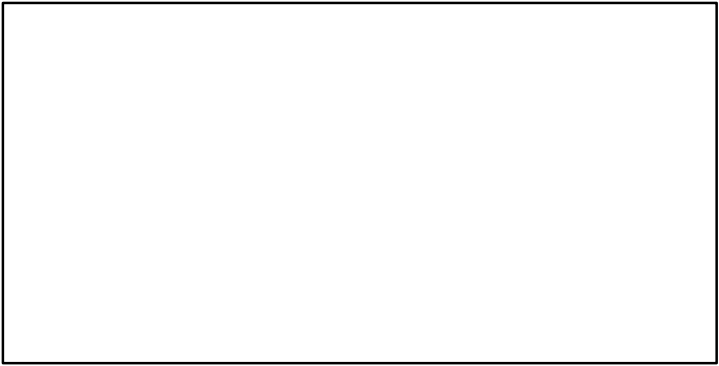
F\*



ER-ratio (1992-2020-SISIMP2021-2)

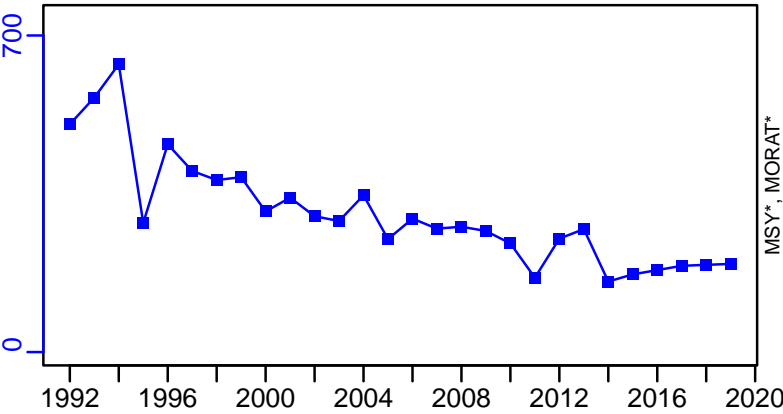


Recruits\*



Yelloweye rockfish Gulf of Alaska [YEYEROCKGA]

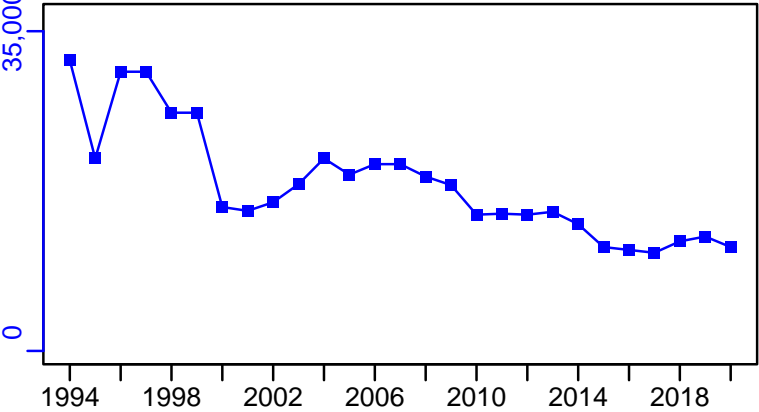
TC-MT, TL\*, RecC\* (1992-2020-SISIMP2021-2)



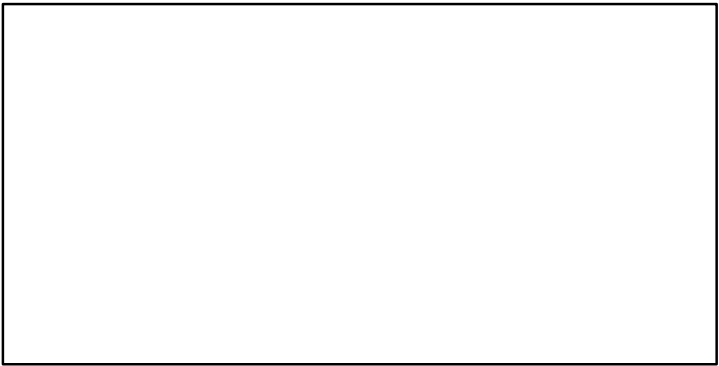
TAC\*, Cpair\*, Cadv\*



survB-MT (1992-2020-SISIMP2021-2)



CPUE\*



CdivMSY\*



## Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]

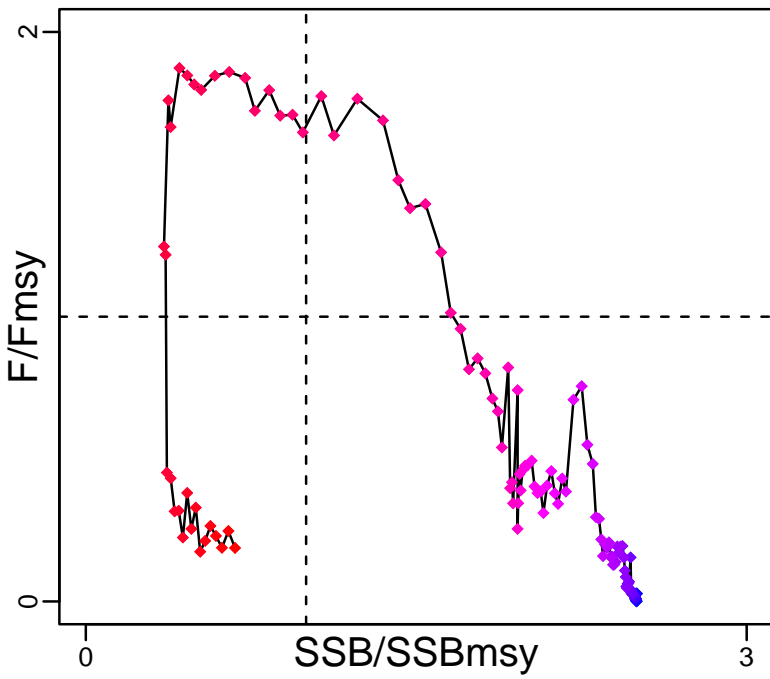
Metadata	
<b>Scientific Name</b>	Sebastes ruberrimus
<b>Current Assess ID</b>	NWFSC-YEYEROCKPCOAST-1889-2017-SISIMP2021
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2017, 2011, 2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2011	3706
<b>SSBmsy</b>	SSBmsy-E00eggs	2017	455,619,995
<b>Fmsy</b>	Fmsy-1/yr	2017	0.5
<b>ERmsy</b>	ERmsy-ratio	2011	0.017
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2011	8882
<b>SSB0</b>	SSB0-E00eggs	2011	$1.03 \times 10^9$
<b>MSY</b>	MSY-MT	2017	109
<b>M</b>	M-1/yr	2011	0.046
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2017	284,760,010
<b>Flim</b>	Flim-1/yr	2017	0.5
<b>ERlim</b>	-	-	-

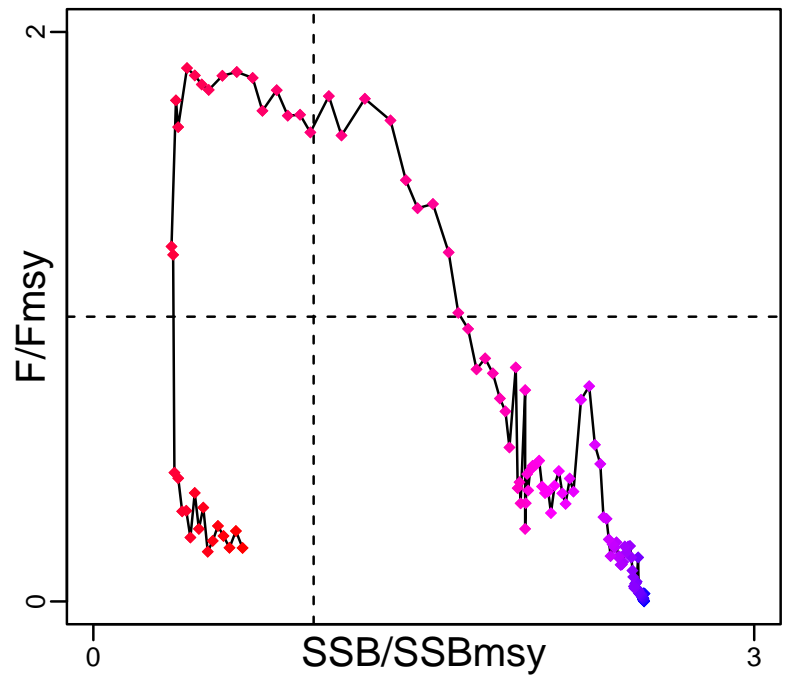
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	3432	-	-
<b>SSB</b>	SSB-E00eggs	2017	323,130,000	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2017	176,200	-	0
<b>F</b>	F-1/yr	2017	0.094	-	-
<b>ER</b>	ER-calc-ratio	2017	0.003	-	-
<b>TC</b>	TC-MT	2017	10		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	0.591		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2017	0.709		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	0.188		
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2011	0.312		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]

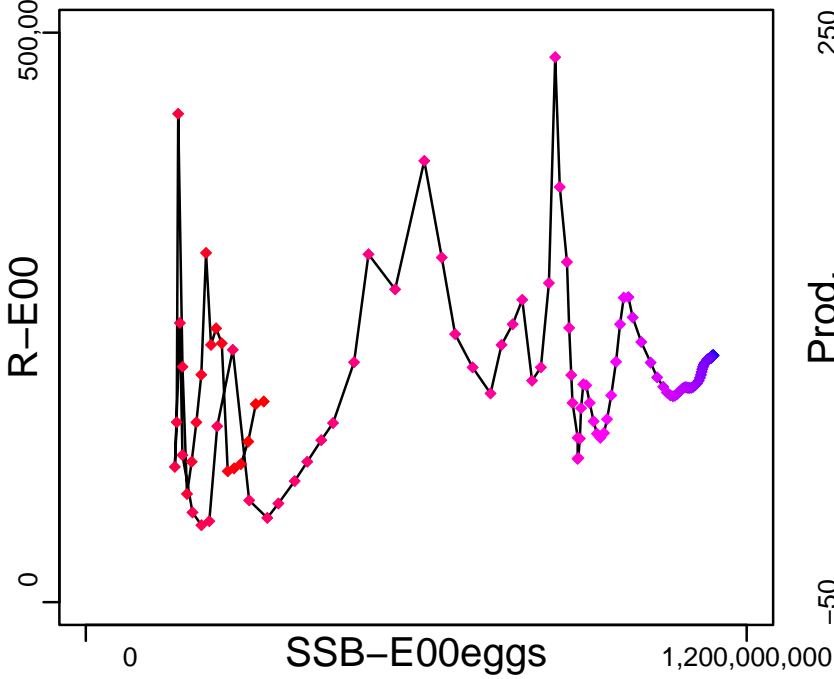
Kobe MSYpref (1889–2017–SISIMP2021)



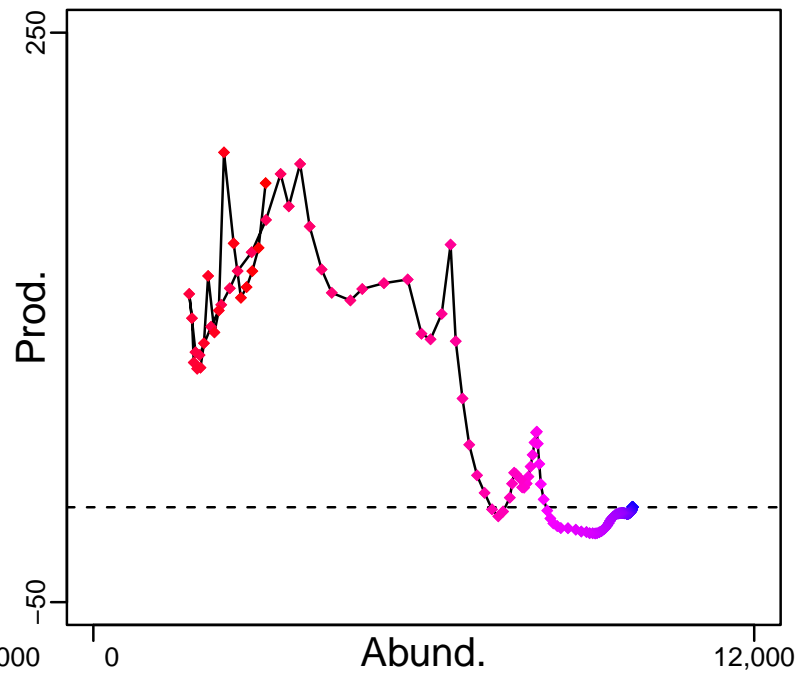
Kobe MGTpref (1889–2017–SISIMP2021)



Spawner Recruit (1889–2017–SISIMP2021)



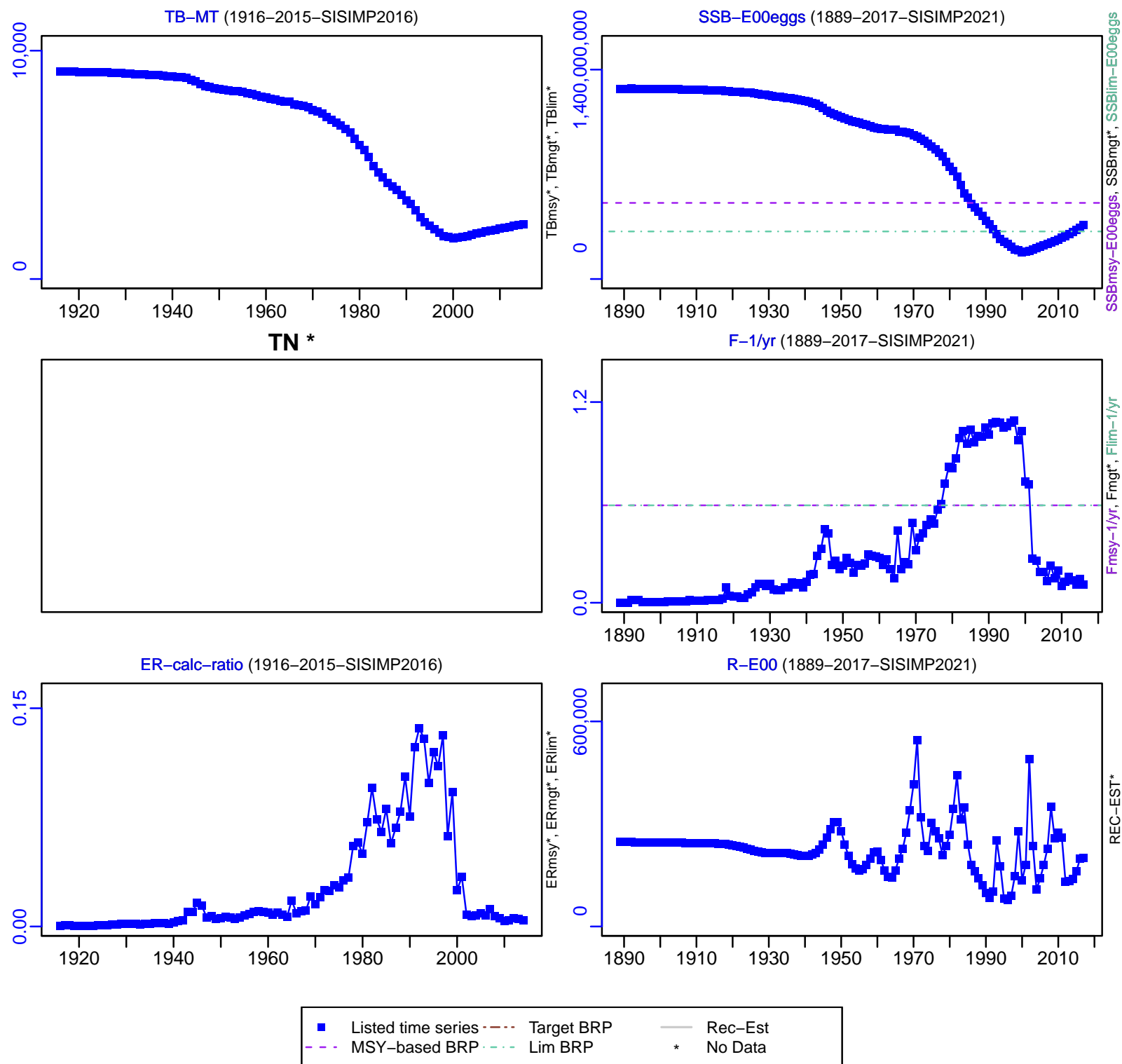
Production (1889–2017–SISIMP2021)



◆ Start Year ◆ End Year \* No Data

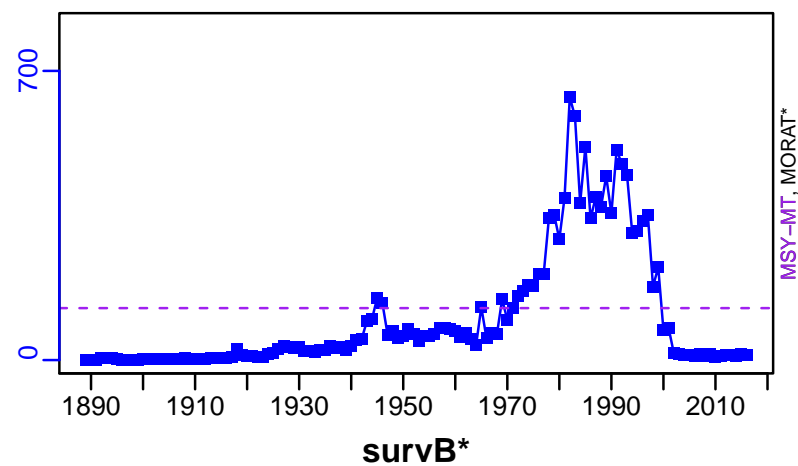


# Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]



# Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]

TC-MT, TL\*, RecC\* (1889–2017–SISIMP2021)



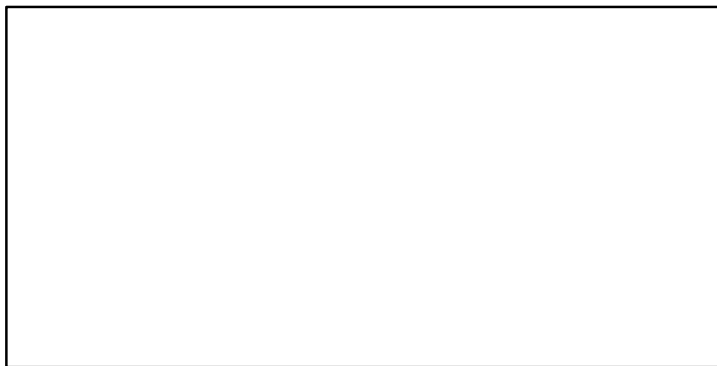
TAC\*, Cpair\*, Cadv\*



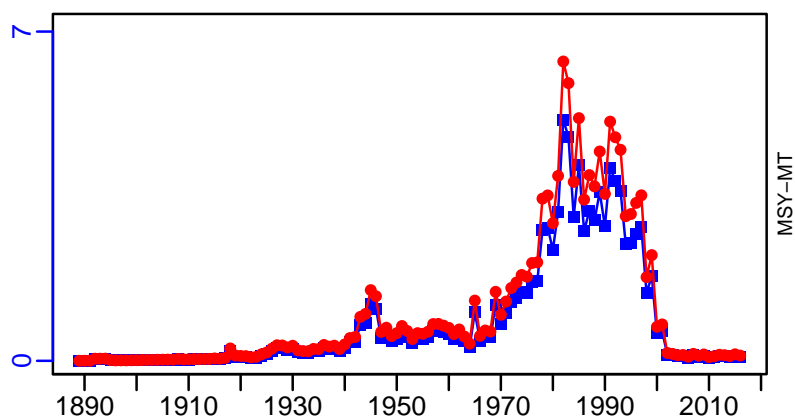
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1889–2017–SISIMP2021)



- 1st listed time series
- 2nd listed time series
- ▲ 3rd listed time series
- MORAT
- - MSY
- \* No Data

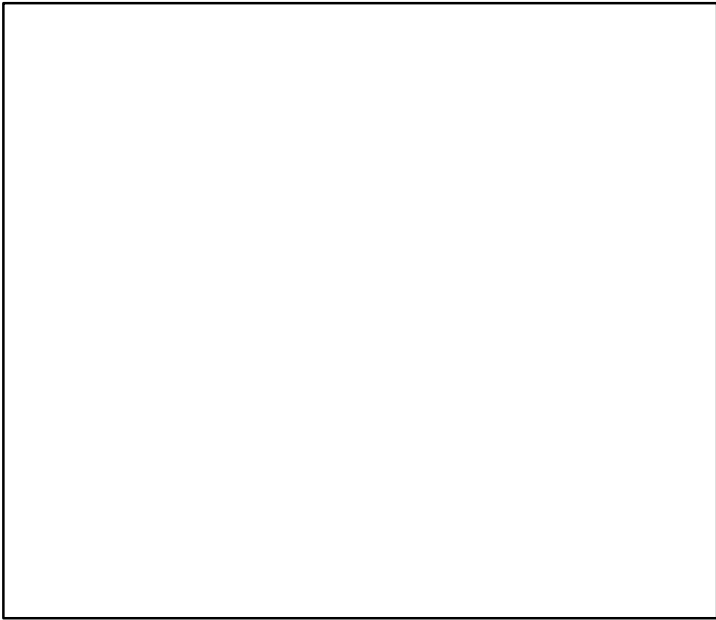
## Yelloweye rockfish Pacific Coast of Canada (Inside) [YEYEROCKPCOASTIN]

Metadata	
<b>Scientific Name</b>	Sebastes ruberrimus
<b>Current Assess ID</b>	DFO-YEYEROCKPCOASTIN-1918-2009-WATSON
<b>Area</b>	Pacific Coast of Canada (Inside)
<b>Management Authority</b>	Department of Fisheries and Oceans, Canada national management
<b>Assessor</b>	Department of Fisheries and Oceans
<b>Asmts in RAM</b>	2009

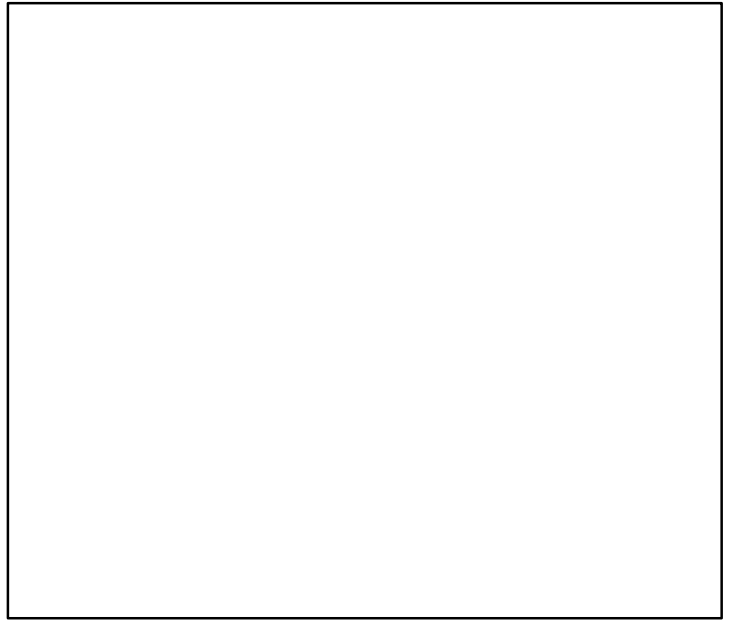
Reference Points			
Type	ID	Asmt Year	Value
TBmsy	-	-	-
SSBmsy	-	-	-
Fmsy	-	-	-
ERmsy	-	-	-
TBmgt	-	-	-
SSBmgt	-	-	-
Fmgt	-	-	-
ERmgt	-	-	-
TB0	-	-	-
SSB0	-	-	-
MSY	-	-	-
M	-	-	-
TBlim	-	-	-
SSBlim	-	-	-
Flim	-	-	-
ERlim	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
TB	-	-	-	-	-
SSB	-	-	-	-	-
TN	-	-	-	-	-
R	-	-	-	-	-
F	-	-	-	-	-
ER	-	-	-	-	-
TC	TC-MT	2009	8		
TL	-	-	-		
TB/TBmsy	-	-	-		
SSB/SSBmsy	-	-	-		
F/Fmsy	-	-	-		
ER/ERmsy	-	-	-		
TB/TBmgt	-	-	-		
SSB/SSBmgt	-	-	-		
F/Fmgt	-	-	-		
ER/ERmgt	-	-	-		

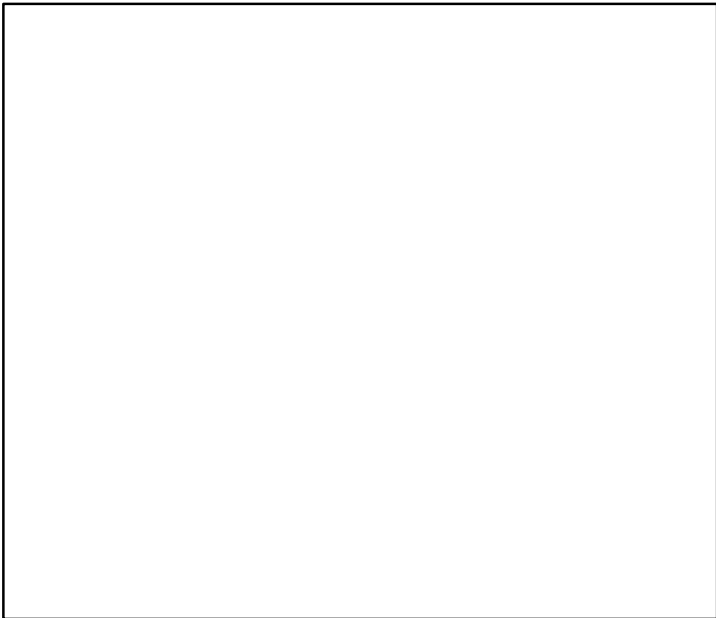
**Kobe MSY\***



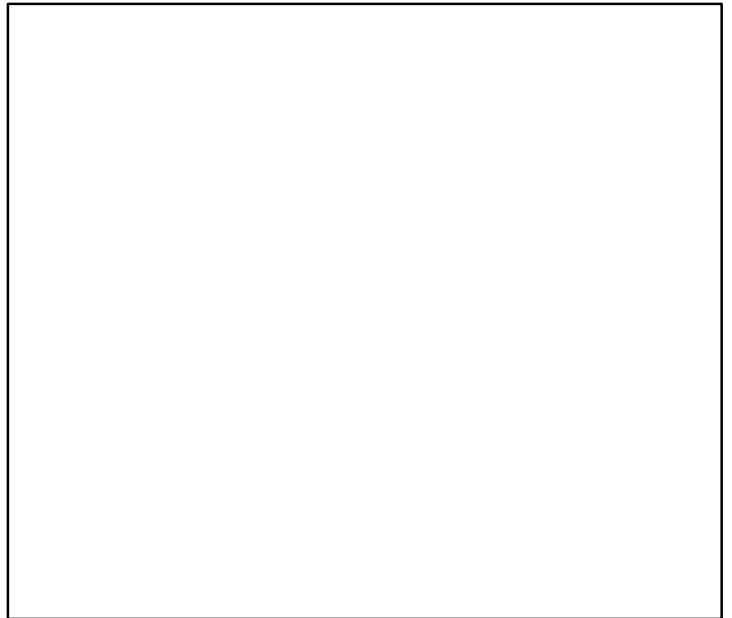
**Kobe MGT\***



**Spawner Recruit\***



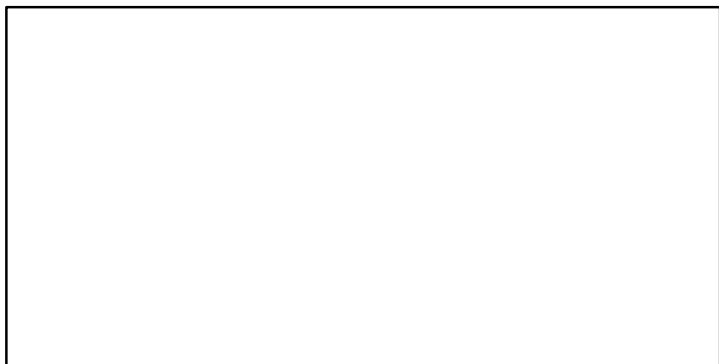
**Production\***



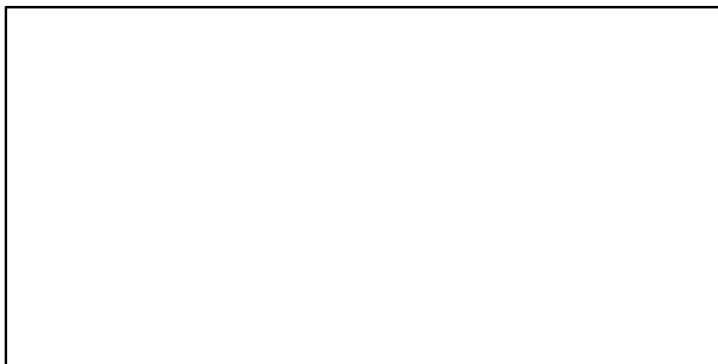
◆ Start Year ◆ End Year \* No Data

Yelloweye rockfish Pacific Coast of Canada (Inside) [YEYEROCKPCOASTIN]

**TB\***



**SSB\***



**TN \***



**F\***



**ER\***



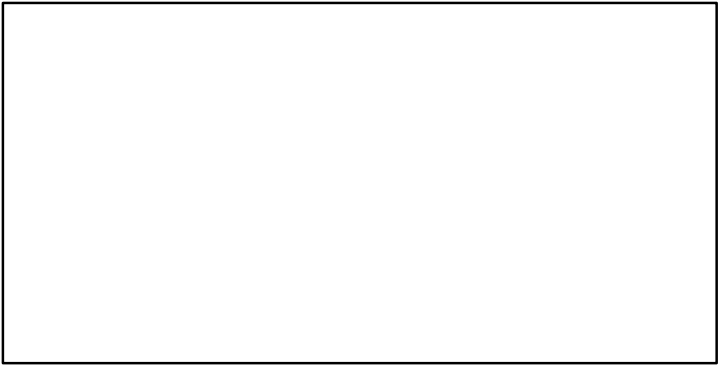
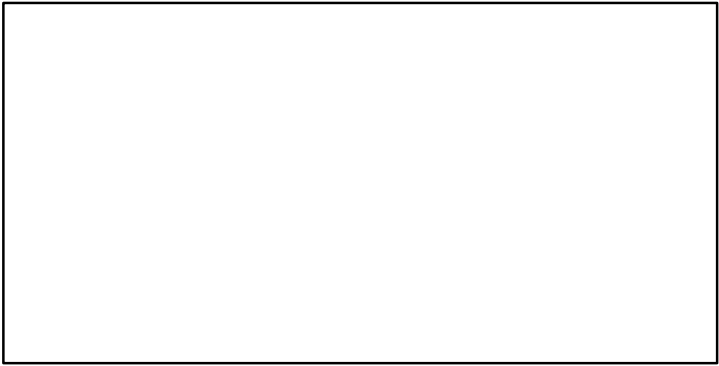
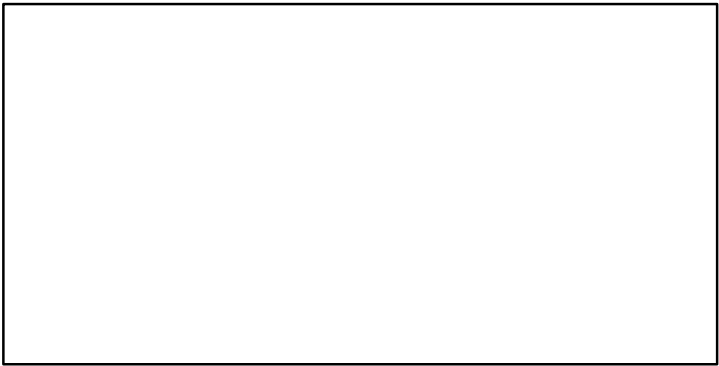
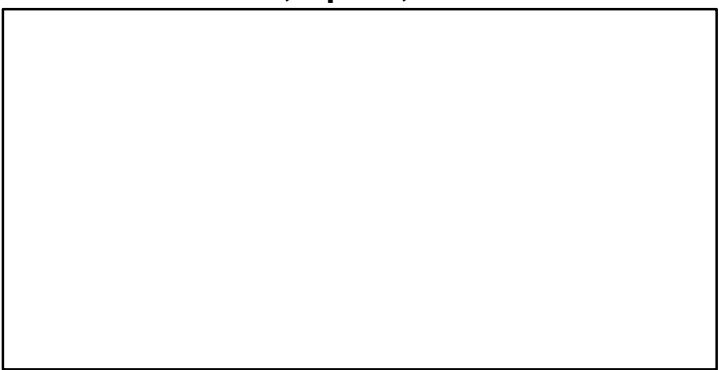
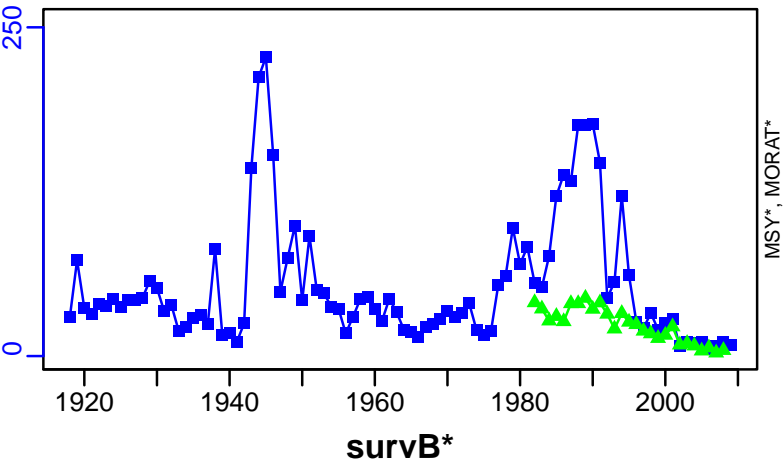
**Recruits\***



Yelloweye rockfish Pacific Coast of Canada (Inside) [YEYEROCKPCOASTIN]

TC-MT, TL\*, RecC-MT (1918-2009-WATSON)

TAC\*, Cpair\*, Cadv\*



## Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

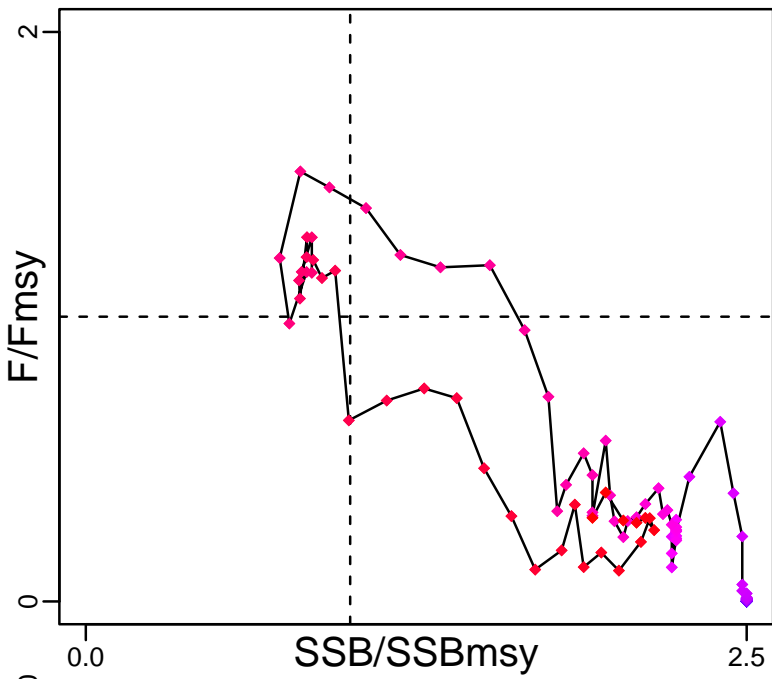
Metadata	
<b>Scientific Name</b>	Sebastes flavidus
<b>Current Assess ID</b>	NWFSC-YTROCKNPCOAST-1889-2017-SISIMP2021
<b>Area</b>	Northern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2017, 2012, 2005

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2005	37,123
<b>SSBmsy</b>	SSBmsy-E00eggs	2017	$6 \times 10^{12}$
<b>Fmsy</b>	Fmsy-1/yr	2017	0.5
<b>ERmsy</b>	ERmsy-ratio	2005	0.126
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2005	120,024
<b>SSB0</b>	SSB0-MT	2005	31,016
<b>MSY</b>	MSY-MT	2017	5434
<b>M</b>	M-1/yr	2005	0.11
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2017	$4 \times 10^{12}$
<b>Flim</b>	Flim-1/yr	2017	0.5
<b>ERlim</b>	-	-	-

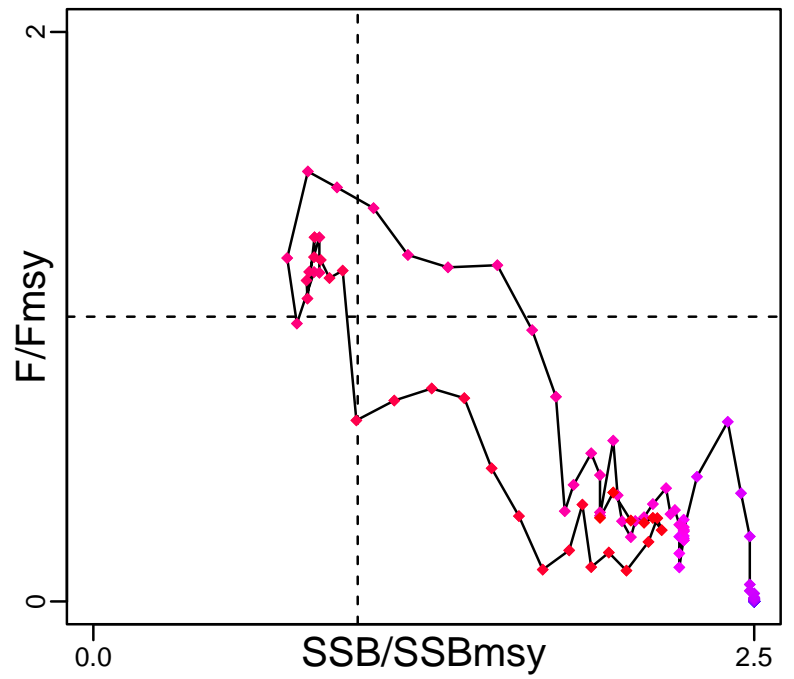
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2017	124,456	-	-
<b>SSB</b>	SSB-E00eggs	2017	$1.13 \times 10^{13}$	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2017	49,090,800	-	0
<b>F</b>	F-1/yr	2017	0.147	-	-
<b>ER</b>	ER-calc-ratio	2017	0.012	-	-
<b>TC</b>	TC-MT	2017	1449		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2005	1.999		
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2017	1.883		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2017	0.294		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2005	0.172		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

# Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

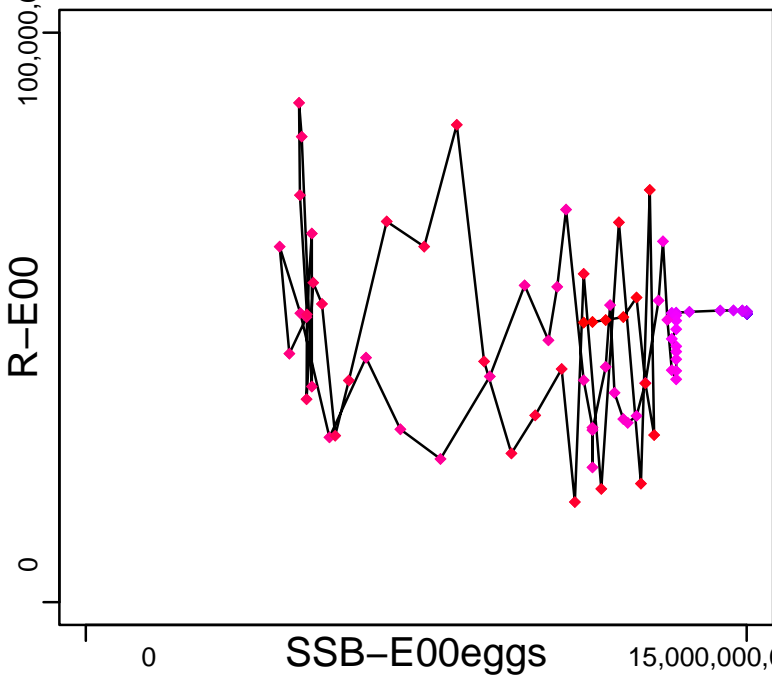
Kobe MSYpref (1889–2017–SISIMP2021)



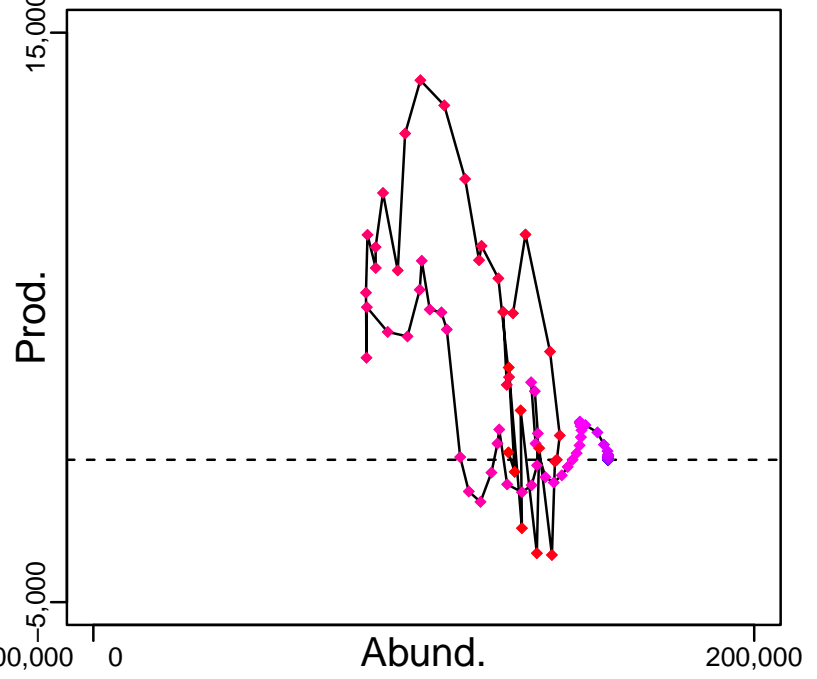
Kobe MGTpref (1889–2017–SISIMP2021)



Spawner Recruit (1889–2017–SISIMP2021)



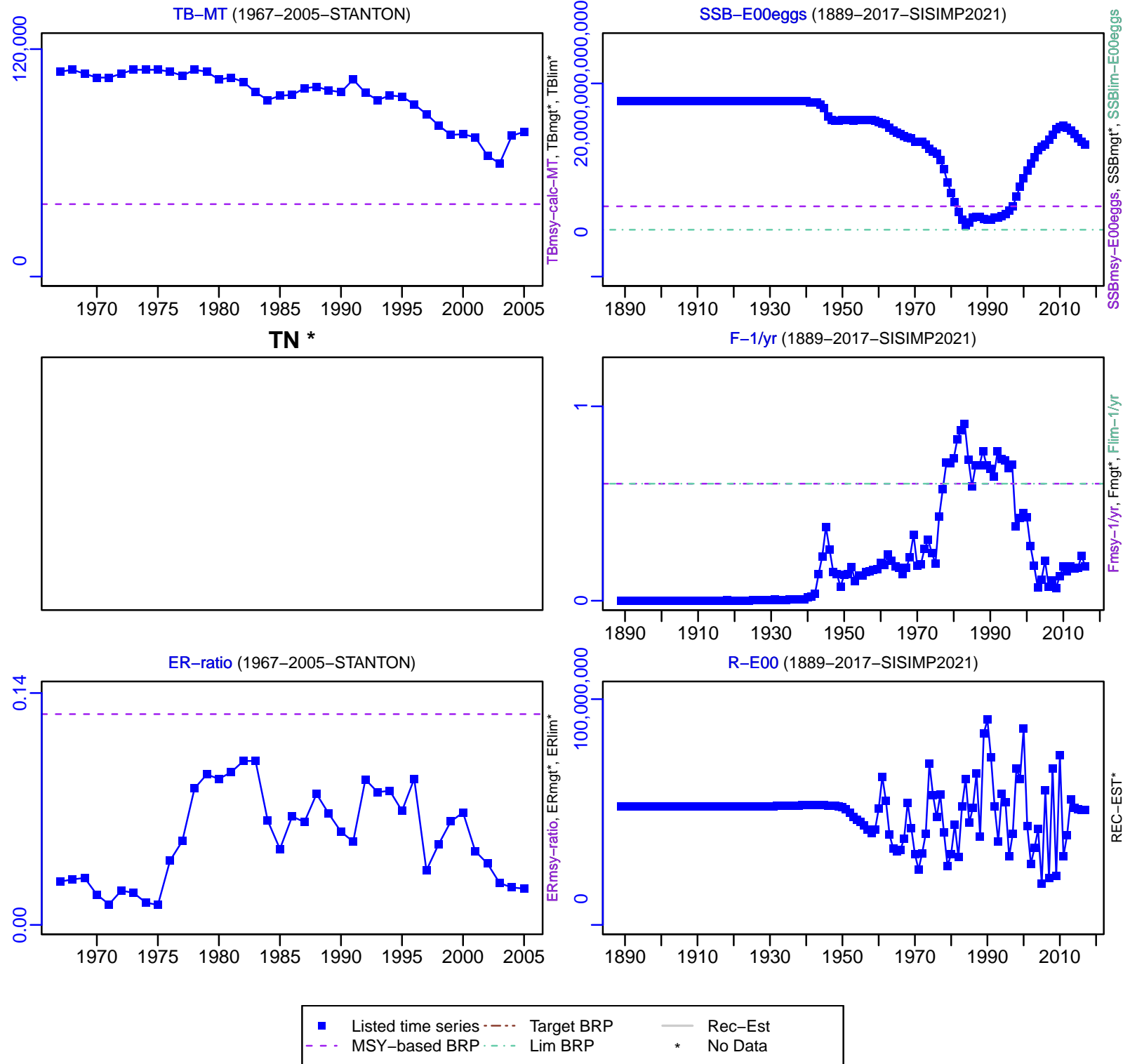
Production (1889–2017–SISIMP2021)



◆ Start Year ◆ End Year \* No Data

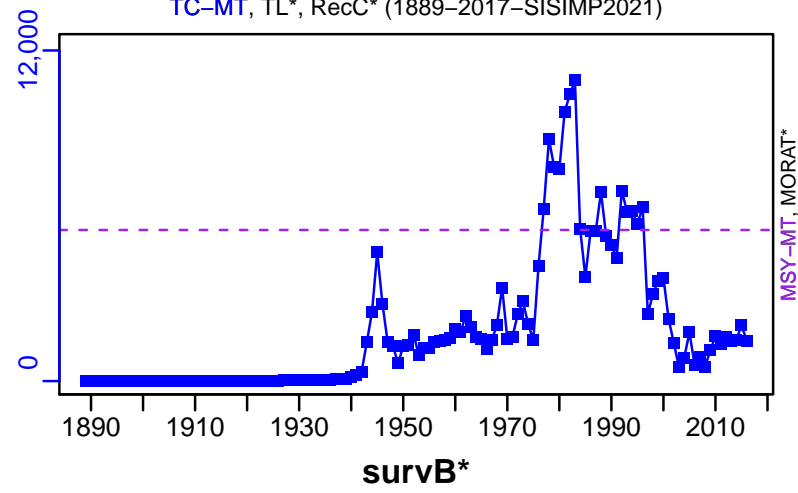


# Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]



# Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

TC-MT, TL\*, RecC\* (1889-2017-SISIMP2021)



TAC\*, Cpair\*, Cadv\*



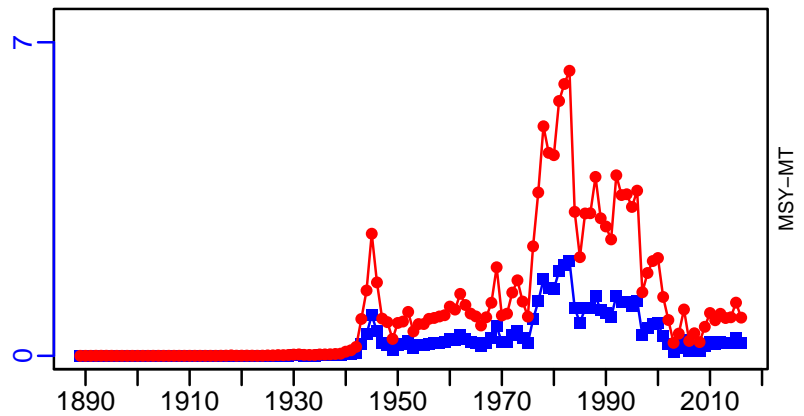
CPUE\*



EFFORT\*



TC-MT/MSY-MT, CdivMEANC-ratio, (1889-2017-SISIMP2021)



■ 1st listed time series ▲ 3rd listed time series — MORAT  
● 2nd listed time series - - - MSY \* No Data