

# US West Coast Stocks

## v4.41 (Aug-21-2018)

Not present Present Preferred

Stock	Time Series Types			
	B/Bmsy	U/Umsy	B/Bmgt	U/Umgmt
1. ARFLOUDPCOAST [Arrowtooth flounder Pacific Coast]	TB SSB	ER F	TB SSB	ER F
2. AUROCKPCOAST [Aurora rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
3. BGROCKPCOAST [Blackgill rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
4. BLACKROCKCAL [Black rockfish California]	TB SSB	ER F	TB SSB	ER F
5. BLACKROCKORECOAST [Black rockfish Oregon]	TB SSB	ER F	TB SSB	ER F
6. BLACKROCKWASH [Black rockfish Washington]	TB SSB	ER F	TB SSB	ER F
7. BLUEROCKCAL [Blue rockfish California]	TB SSB	ER F	TB SSB	ER F
8. BNKROCKCAL [Bank Rockfish California]	TB SSB	ER F	TB SSB	ER F
9. BOCACCSPCOAST [Bocaccio Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
10. BRNROCKPCOAST [Brown rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
11. CABEZNCAL [Cabezon Northern California]	TB SSB	ER F	TB SSB	ER F
12. CABEZORECOAST [Cabezon Oregon Coast]	TB SSB	ER F	TB SSB	ER F
13. CABEZSCAL [Cabezon Southern California]	TB SSB	ER F	TB SSB	ER F
14. CALSCORPSCAL [California scorpionfish Southern California]	TB SSB	ER F	TB SSB	ER F
15. CHILISPSCOAST [Chilipepper Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
16. CHROCKCPSCOAST [China rockfish Central Pacific Coast]	TB SSB	ER F	TB SSB	ER F
17. CHROCKNPSCOAST [China rockfish Northern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
18. CHROCKSPSCOAST [China rockfish Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
19. CMACKPCOAST [Pacific chub mackerel Pacific Coast]	TB SSB	ER F	TB SSB	ER F
20. COWCODSCAL [Cowcod Southern California]	TB SSB	ER F	TB SSB	ER F
21. CPRROCKPCOAST [Copper rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
22. CROCKPCOAST [Canary rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
23. DKROCKPCOAST [Darkblotched rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
24. DSOLEPCOAST [Dover sole Pacific Coast]	TB SSB	ER F	TB SSB	ER F
25. ESOLEPCOAST [English sole Pacific Coast]	TB SSB	ER F	TB SSB	ER F
26. GOPHERSPSCOAST [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 Pacific Coast North]	TB SSB	ER F	TB SSB	ER F
29. GRSPROCKSCAL [Greenspotted rockfish Pacific Coast South]	TB SSB	ER F	TB SSB	ER F
30. KELPGREENLINGORECOAST [Kelp greenling Oregon Coast]	TB SSB	ER F	TB SSB	ER F
31. LINGCODNPCOAST [Lingcod Northern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
32. LINGCODSPSCOAST [Lingcod Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
33. LNOSESKAPCOAST [Longnose skate Pacific Coast]	TB SSB	ER F	TB SSB	ER F
34. LSTHORNHPSCOAST [Longspine thornyhead Pacific Coast]	TB SSB	ER F	TB SSB	ER F
35. PGEODWA [Pacific Geoduck Washington]	TB SSB	ER F	TB SSB	ER F
36. PHAKEPCOAST [Pacific hake Pacific Coast]	TB SSB	ER F	TB SSB	ER F
37. POPERCHPCOAST [Pacific ocean perch Pacific Coast]	TB SSB	ER F	TB SSB	ER F
38. PSOLEPCOAST [Petrale sole Pacific Coast]	TB SSB	ER F	TB SSB	ER F
39. REXSOLEPCOAST [Rex sole Pacific Coast]	TB SSB	ER F	TB SSB	ER F

40. SABLEFPCOAST [Sablefish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
41. SARDPCOAST [Pacific sardine Pacific Coast]	TB SSB	ER F	TB SSB	ER F
42. SBELLYROCKPCOAST [Shortbelly rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
43. SHCROCKPCOAST [Sharpchin rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
44. SNROCKPCOAST [Splitnose Rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
45. SPSDOGPCOAST [Spotted spiny dogfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
46. SSTHORNHPCOAST [Shortspine thornyhead Pacific Coast]	TB SSB	ER F	TB SSB	ER F
47. STFLOUNNPCOAST [Starry flounder Northern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
48. STFLOUNSPCOAST [Starry flounder Southern Pacific Coast]	TB SSB	ER F	TB SSB	ER F
49. WROCKPCOAST [Widow rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
50. YEYEROCKPCOAST [Yelloweye rockfish Pacific Coast]	TB SSB	ER F	TB SSB	ER F
51. YTROCKNPSCOAST [Yellowtail rockfish Northern Pacific Coast]	TB SSB	ER F	TB SSB	ER F

## Arrowtooth flounder Pacific Coast [ARFLOUDPCOAST]

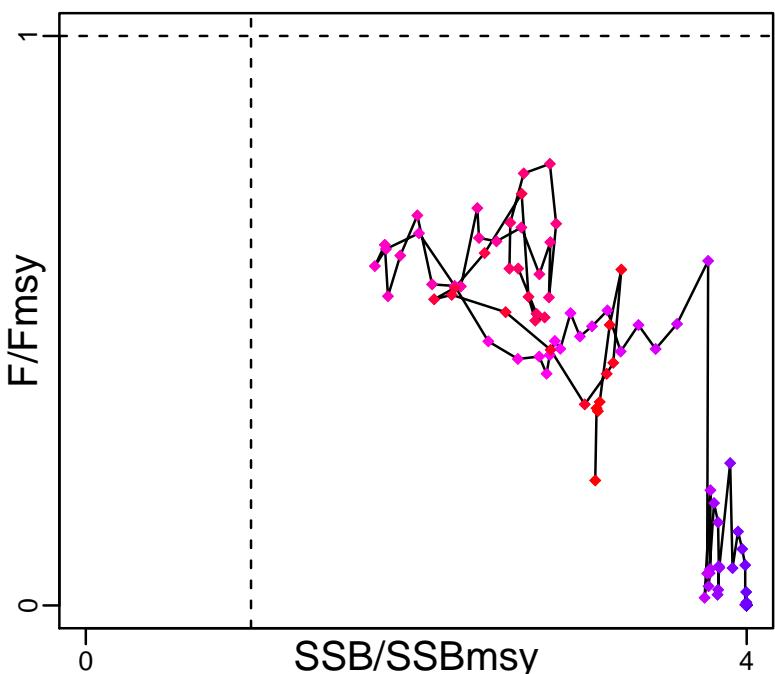
<b>Metadata</b>	
<b>Scientific Name</b>	Atheresthes stomias
<b>Current Assess ID</b>	NWFSC-ARFLOUDPCOAST-1914-2015-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2007

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TB<sub>msy</sub></b>	TB <sub>msy</sub> -calc-MT	2007	44,591
<b>SSB<sub>msy</sub></b>	SSB <sub>msy</sub> -MT	2015	20,078
<b>F<sub>msy</sub></b>	F <sub>msy</sub> -1/yr	2015	0.7
<b>ER<sub>msy</sub></b>	ER <sub>msy</sub> -ratio	2007	0.131
<b>TB<sub>mgt</sub></b>	-	-	-
<b>SSB<sub>mgt</sub></b>	-	-	-
<b>F<sub>mgt</sub></b>	-	-	-
<b>ER<sub>mgt</sub></b>	-	-	-
<b>TB<sub>0</sub></b>	-	-	-
<b>SSB<sub>0</sub></b>	SSB <sub>0</sub> -MT	2007	80,313
<b>MSY</b>	MSY-MT	2007	5844
<b>M</b>	M-1/yr	2007	0.166
<b>TB<sub>lim</sub></b>	-	-	-
<b>SSB<sub>lim</sub></b>	SSB <sub>lim</sub> -MT	2015	10,039
<b>F<sub>lim</sub></b>	F <sub>lim</sub> -1/yr	2015	0.7
<b>ER<sub>lim</sub></b>	-	-	-

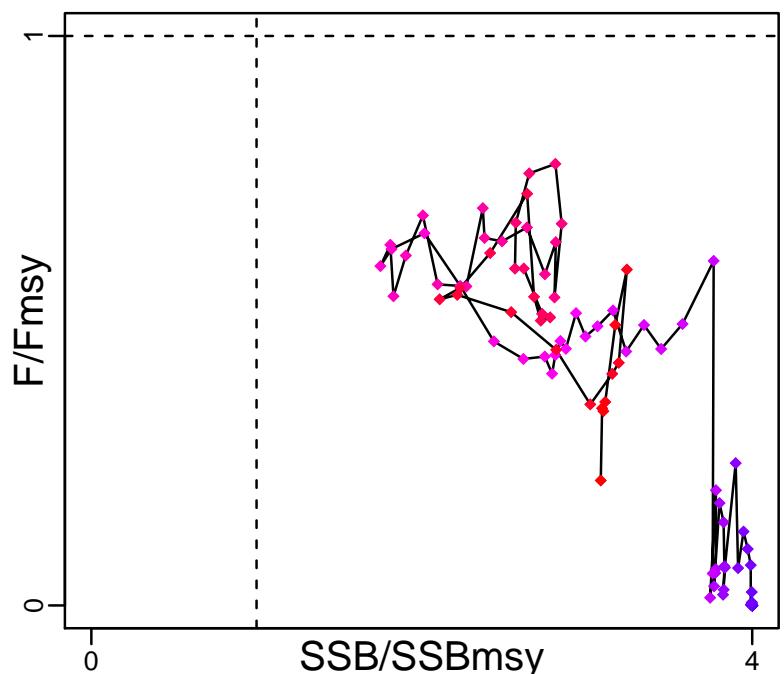
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2015	79,800	-	3+	
<b>SSB</b>	SSB-MT	2015	62,600	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	28,300,000	-	0	
<b>F</b>	F-1/yr	2015	0.154	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.018	-	-	
<b>TC</b>	TC-MT	2015	1440			
<b>TL</b>	-	-	-			
<b>TB/TB<sub>msy</sub></b>	TB-MT/TB <sub>msy</sub> -calc-MT	2007	1.868			
<b>SSB/SSB<sub>msy</sub></b>	SSB-MT/SSB <sub>msy</sub> -MT	2015	3.119			
<b>F/F<sub>msy</sub></b>	F-1/yr/F <sub>msy</sub> -1/yr	2015	0.219			
<b>ER/ER<sub>msy</sub></b>	ER-ratio/ER <sub>msy</sub> -ratio	2007	0.218			
<b>TB/TB<sub>mgt</sub></b>	-	-	-			
<b>SSB/SSB<sub>mgt</sub></b>	-	-	-			
<b>F/F<sub>mgt</sub></b>	-	-	-			
<b>ER/ER<sub>mgt</sub></b>	-	-	-			

**Arrowtooth flounder Pacific Coast [ARFLOUNDPCOAST]**

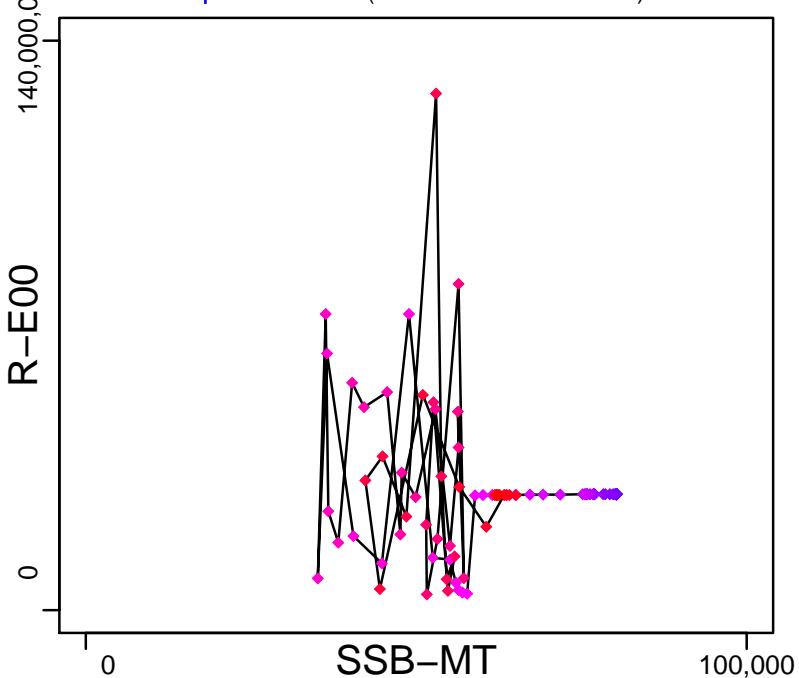
Kobe MSYpref (1914–2015–SISIMP2016)



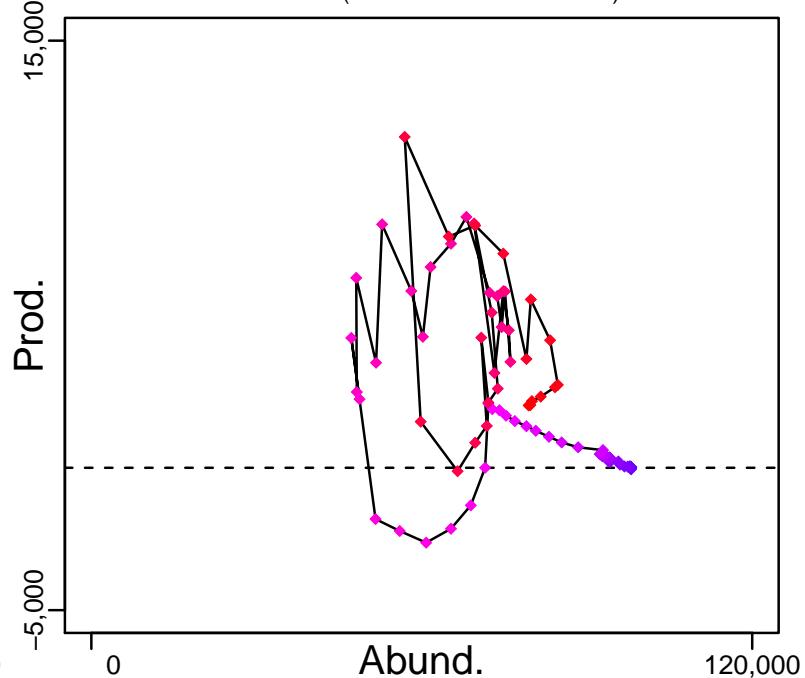
Kobe MGTpref (1914–2015–SISIMP2016)



Spawner Recruit (1914–2015–SISIMP2016)



Production (1914–2015–SISIMP2016)

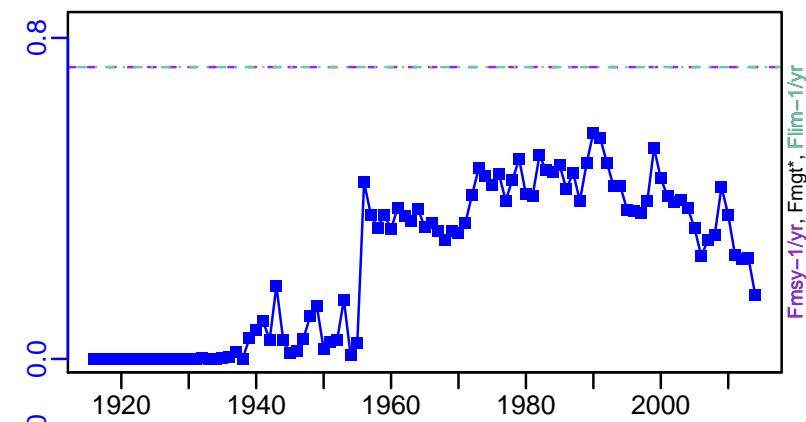
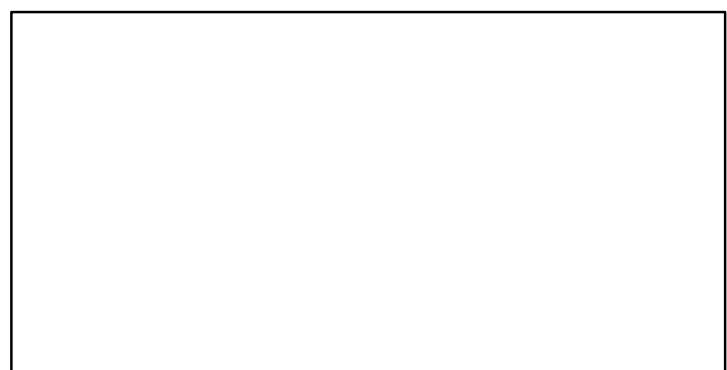
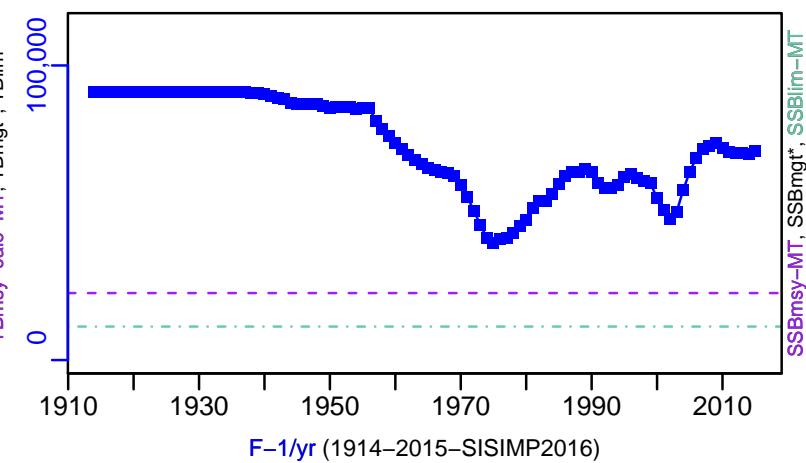
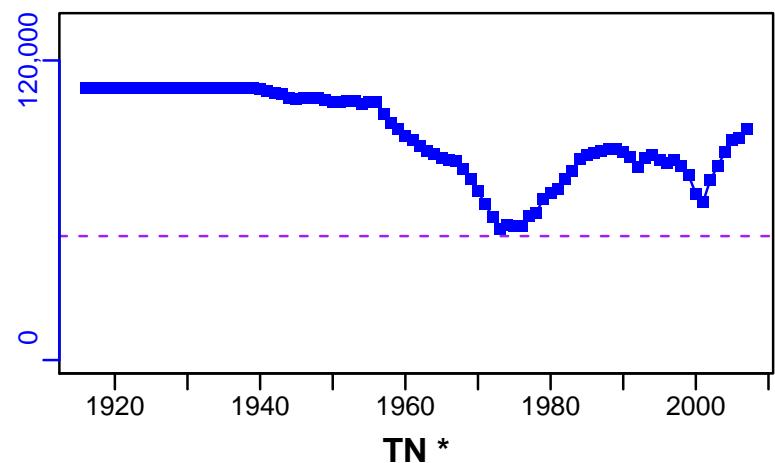


- ◆ Start Year
- ◆ End Year
- \* No Data

### Arrowtooth flounder Pacific Coast [ARFLOUNDPCOAST]

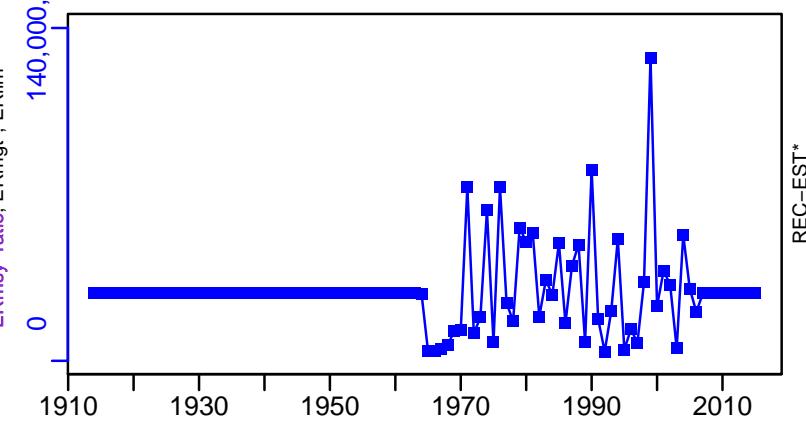
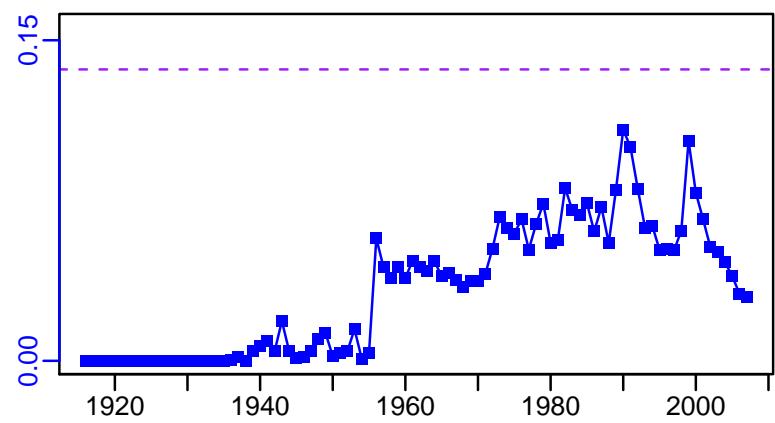
TB-MT (1916–2007–BRANCH)

SSB-MT (1914–2015–SISIMP2016)



ER-ratio (1916–2007–BRANCH)

R-E00 (1914–2015–SISIMP2016)

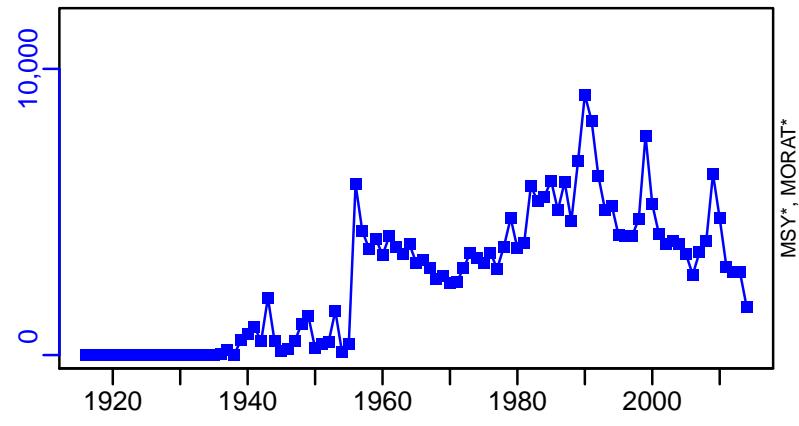


- |                      |               |           |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP  | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP | ■ No Data |

**Arrowtooth flounder Pacific Coast [ARFLOUNDPCOAST]**

TC-MT, TL\*, RecC\* (1914–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*

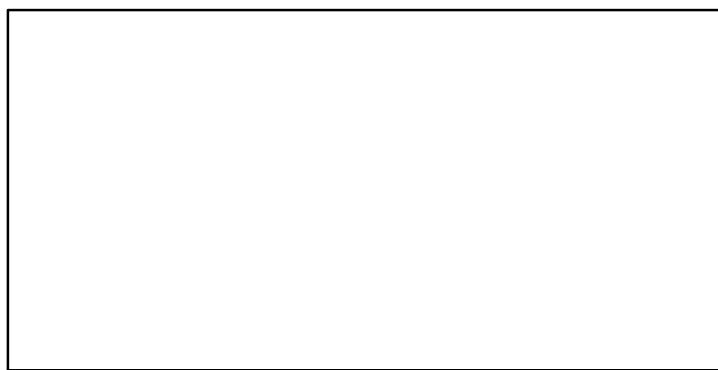


**survB\***

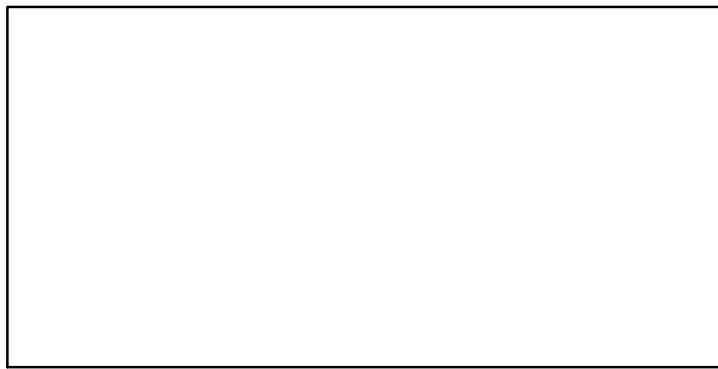
MSY\*, MORAT\*



**CPUE\***



**EFFORT\***



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

## Aurora rockfish Pacific Coast [AUROCKPCOAST]

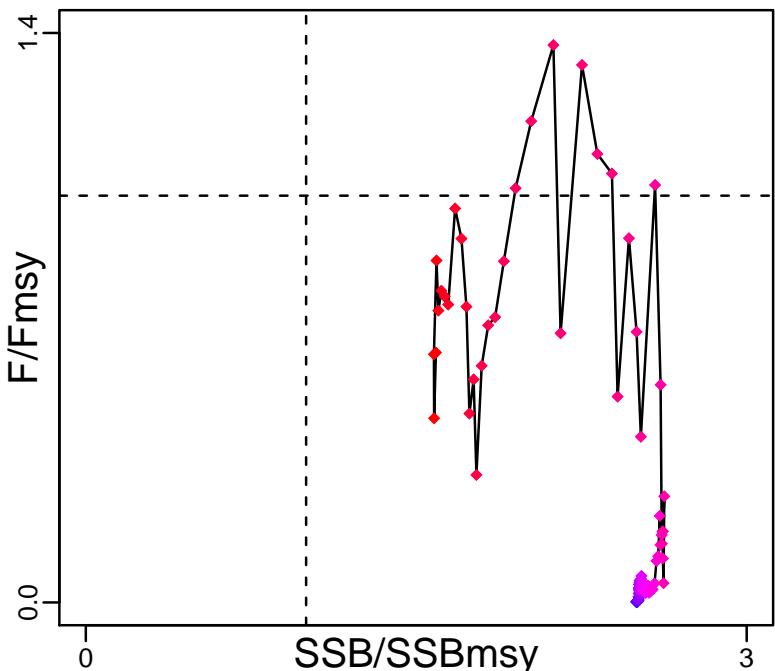
Metadata	
<b>Scientific Name</b>	Sebastes aurora
<b>Current Assess ID</b>	NWFSC-AUROCKPCOAST-1916-2013-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2013

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>	-	-	-

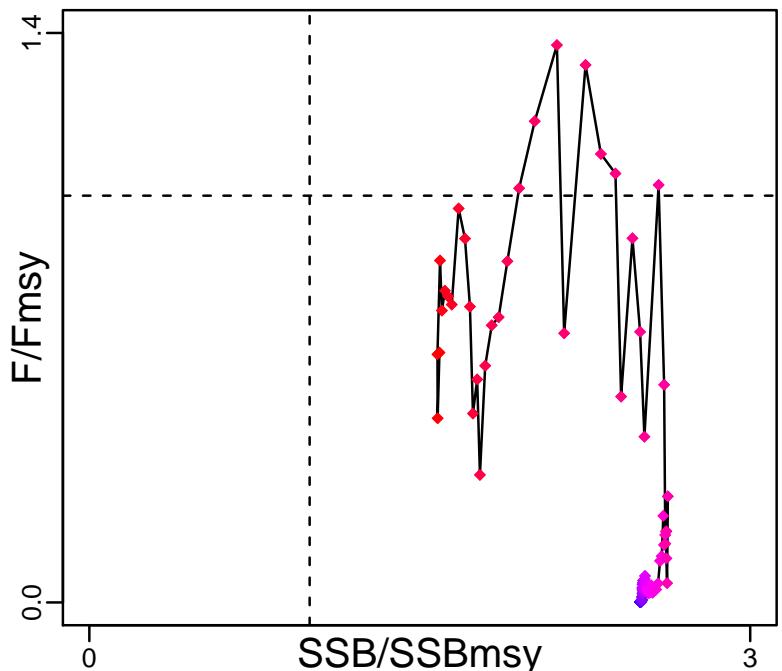
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2013	4370	-	0+	
<b>SSB</b>	SSB-MT	2013	1670	Females	12.56	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2013	736,000	-	0	
<b>F</b>	F-1/yr	2013	0.307	-	-	
<b>ER</b>	ER-calc-ratio	2013	0.01	-	-	
<b>TC</b>	TC-MT	2013	43			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2013	1.594			
<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]

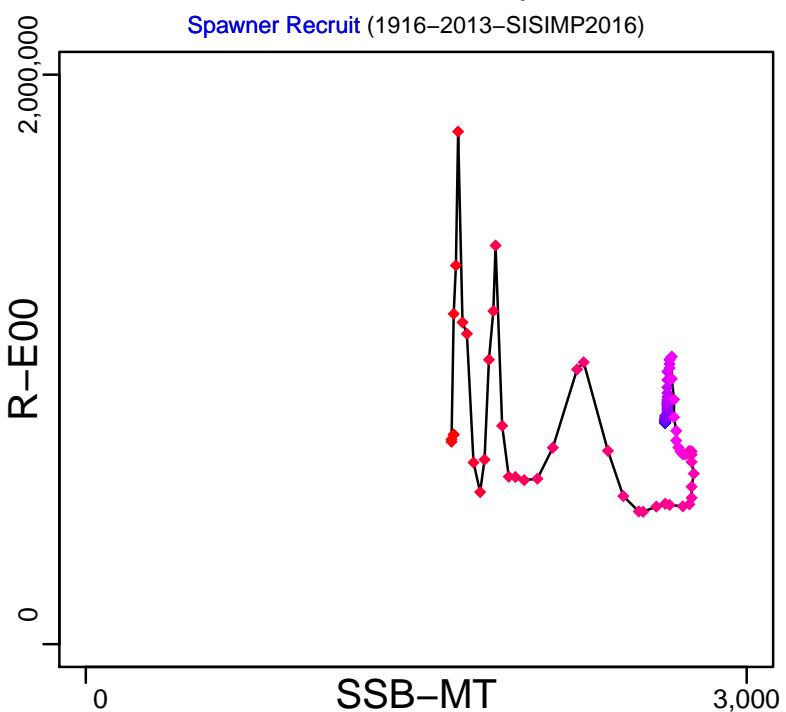
Kobe MSYpref (1916–2013–SISIMP2016)



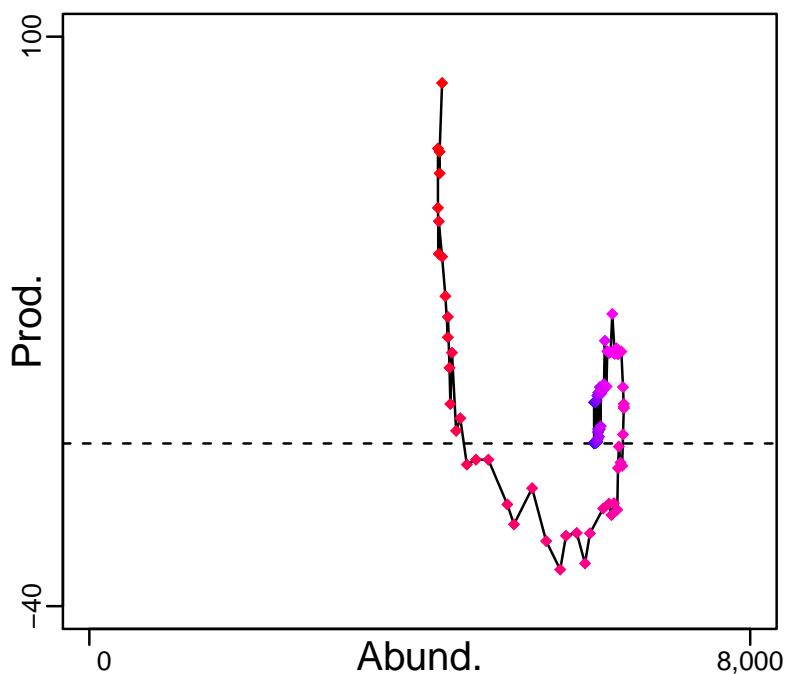
Kobe MGTpref (1916–2013–SISIMP2016)



Spawner Recruit (1916–2013–SISIMP2016)



Production (1916–2013–SISIMP2016)

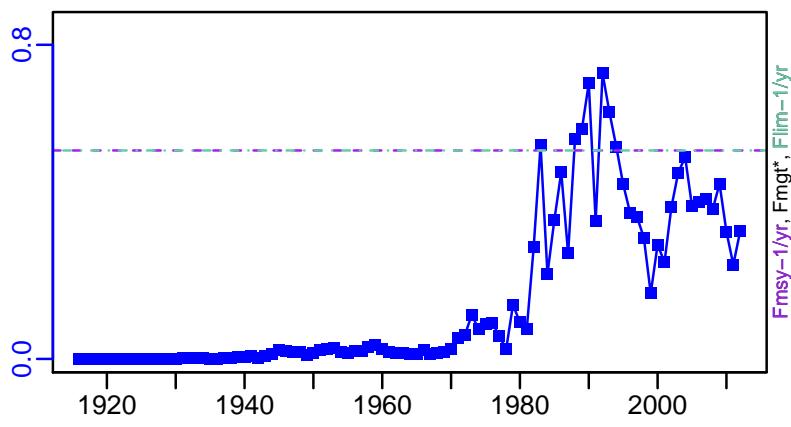
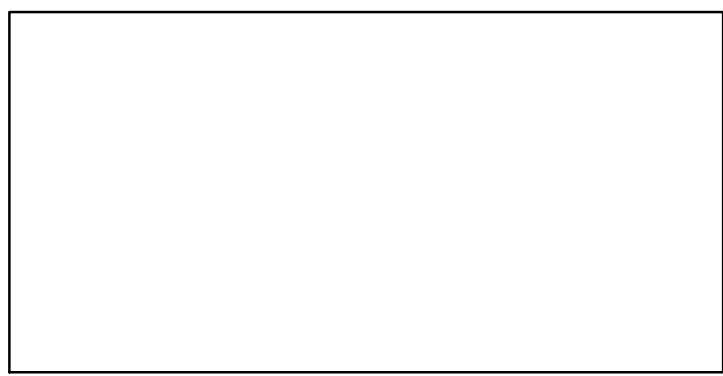
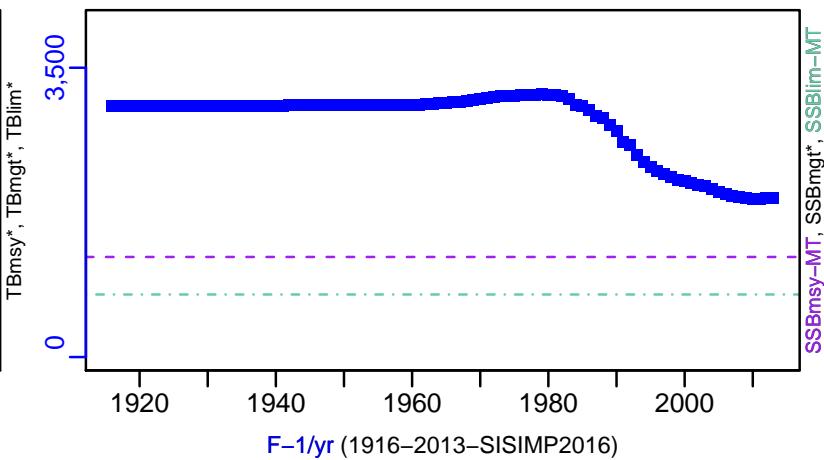
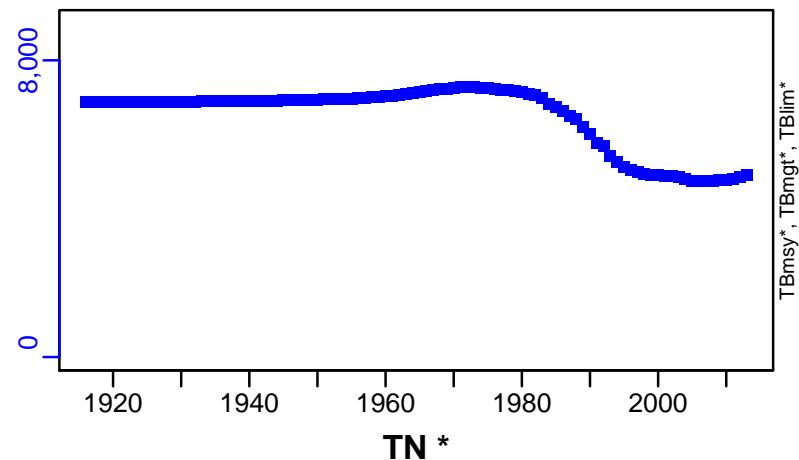


◆ Start Year   ◆ End Year   \* No Data

### Aurora rockfish Pacific Coast [AUROCKPCOAST]

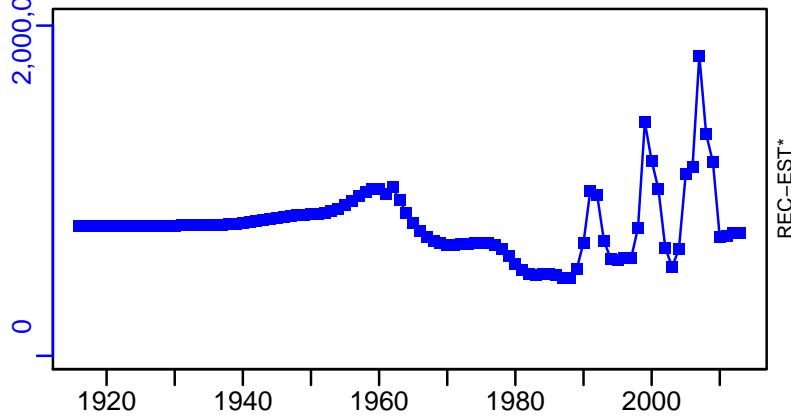
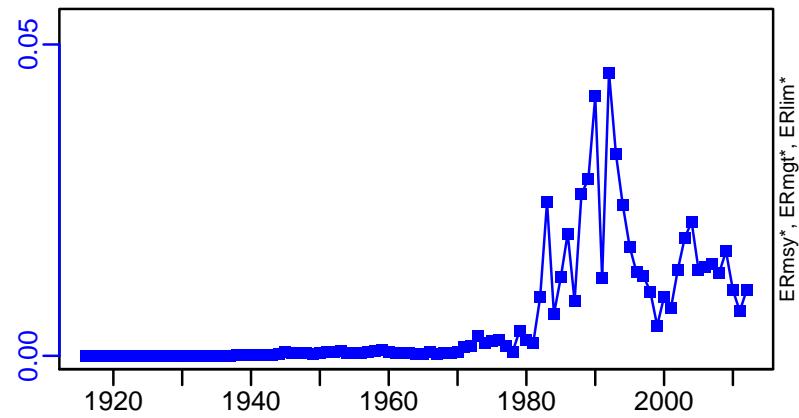
TB-MT (1916–2013–SISIMP2016)

SSB-MT (1916–2013–SISIMP2016)



ER-calc-ratio (1916–2013–SISIMP2016)

R-E00 (1916–2013–SISIMP2016)

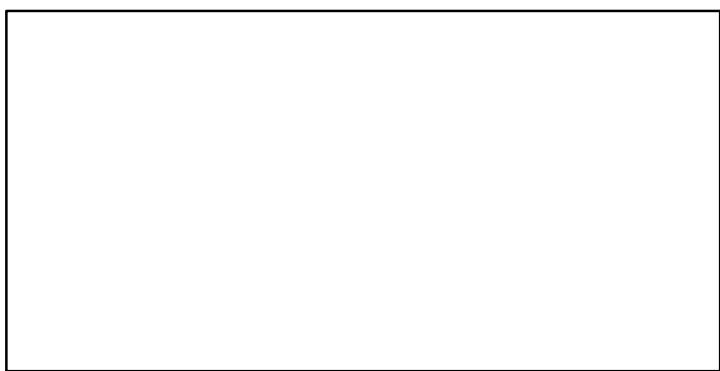
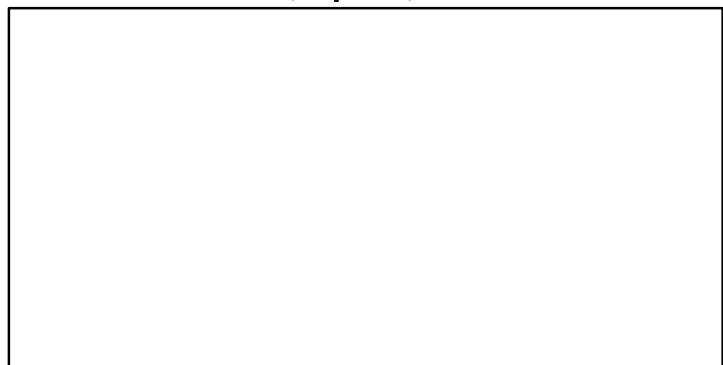
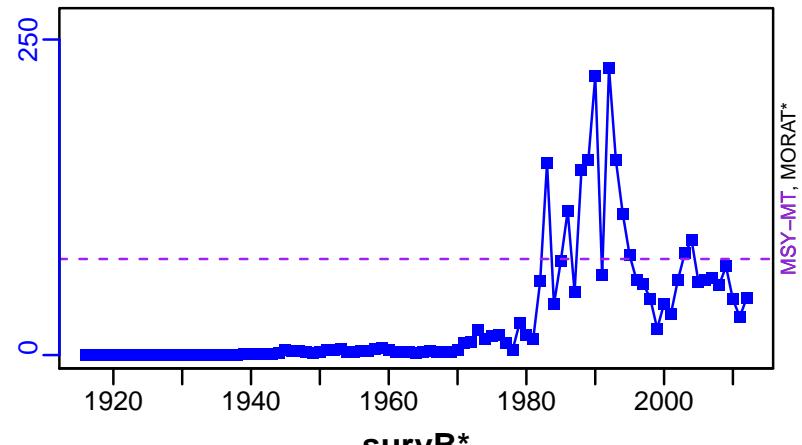


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | - - Lim BRP  | ■ No Data |

Aurora rockfish Pacific Coast [AUROCKPCOAST]

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

TAC\*, Cpair\*, Cadv\*



## Blackgill rockfish Pacific Coast [BGROCKPCOAST]

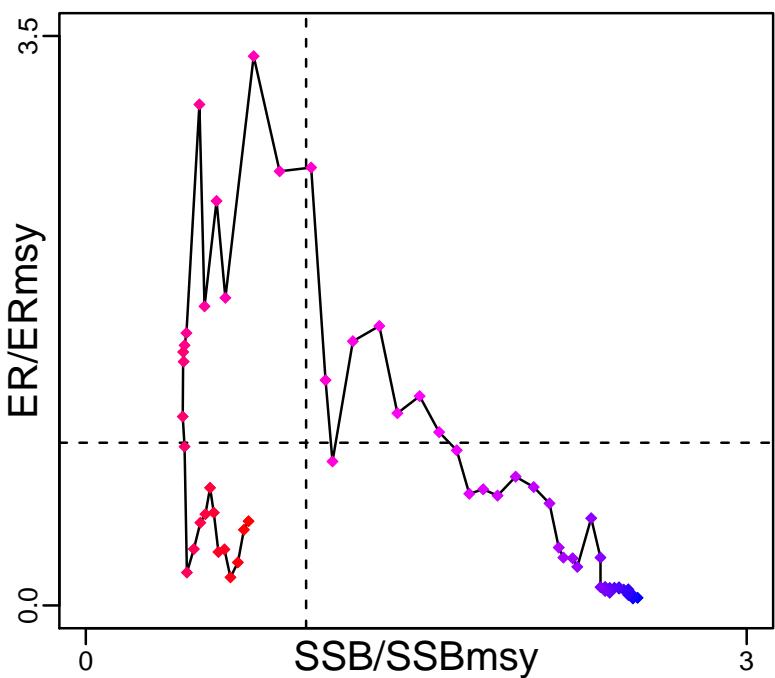
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes melanostomus
<b>Current Assess ID</b>	NWFSC-BGROCKPCOAST-1950-2011-STACHURA
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-MT	2011	5063
<b>SSBmsy</b>	SSBmsy-pr-E00larvae	2011	475,100
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-calc-ratio	2011	0.044
<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	2011	222
<b>M</b>	M-1/yr	2011	0.07
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

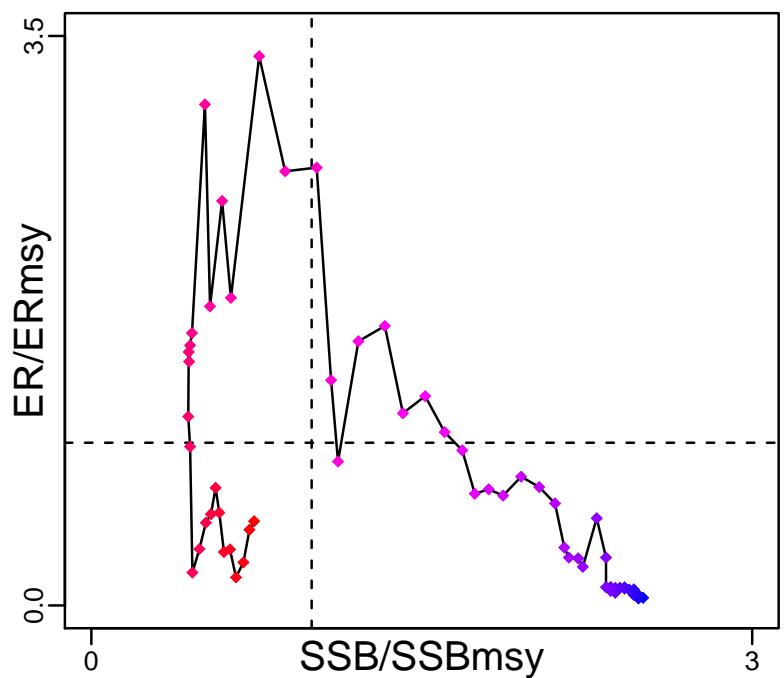
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2011	6590	-	0+	
<b>SSB</b>	SSB-E00larvae	2011	359,000	Females	20+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2011	1,920,000	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2011	0.023	Both	1+	
<b>TC</b>	TC-MT	2011	149			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2011	1.302			
<b>SSB/SSBmsy</b>	SSB-E00larvae/SSBmsy-pr-E00larvae	2011	0.756			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-calc-ratio	2011	0.518			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Blackgill rockfish Pacific Coast [BGROCKPCOAST]**

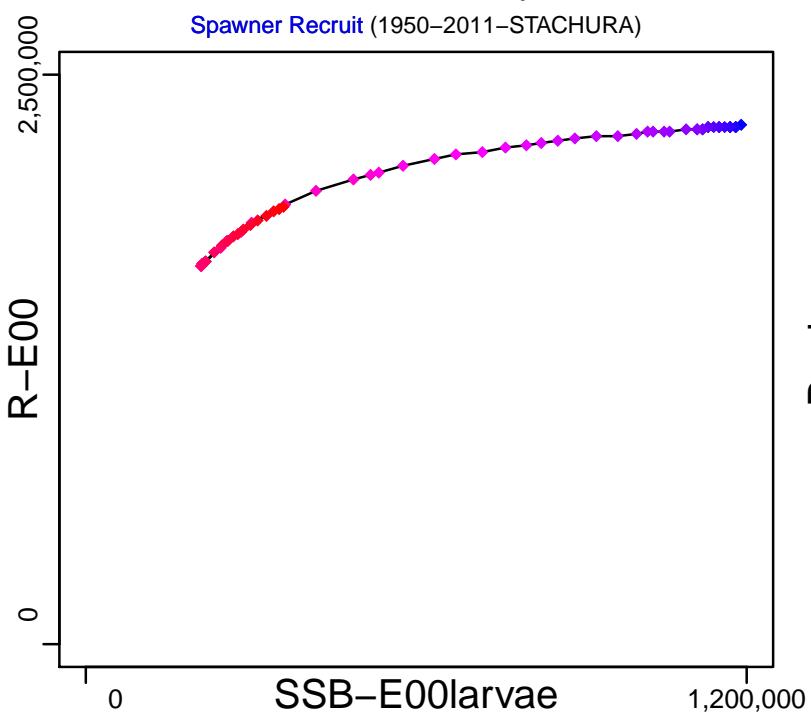
Kobe MSYpref (1950–2011–STACHURA)



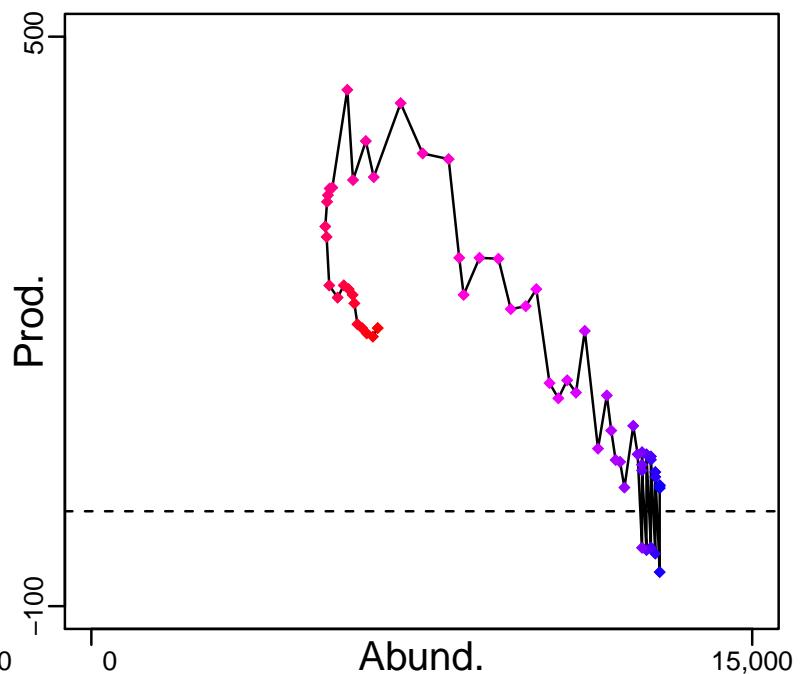
Kobe MGTpref (1950–2011–STACHURA)



Spawner Recruit (1950–2011–STACHURA)



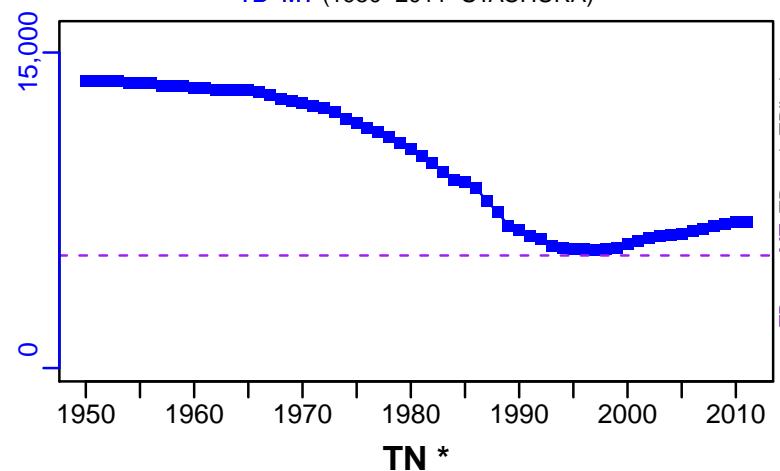
Production (1950–2011–STACHURA)



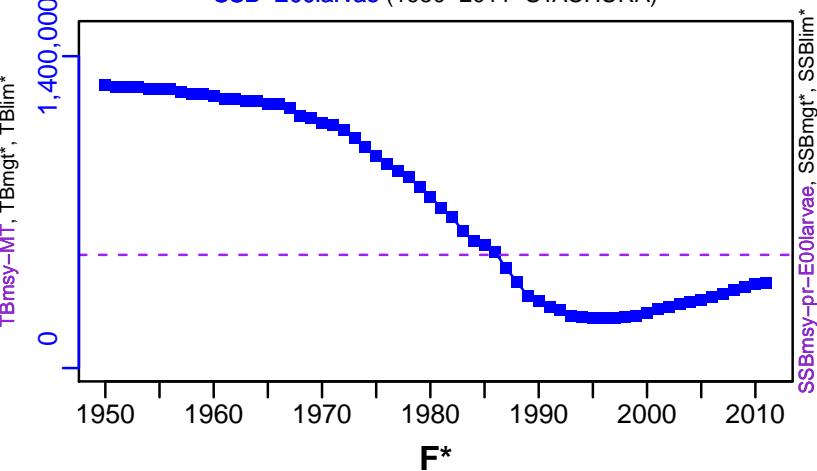
◆ Start Year	◆ End Year	*	No Data
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**Blackgill rockfish Pacific Coast [BGROCKPCOAST]**

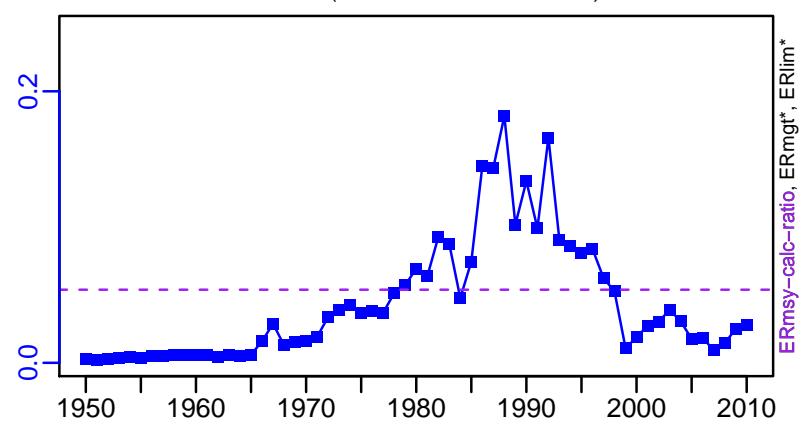
TB-MT (1950–2011–STACHURA)



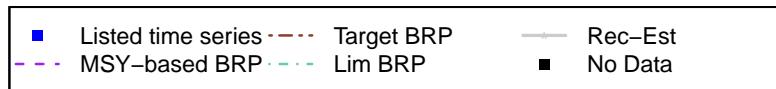
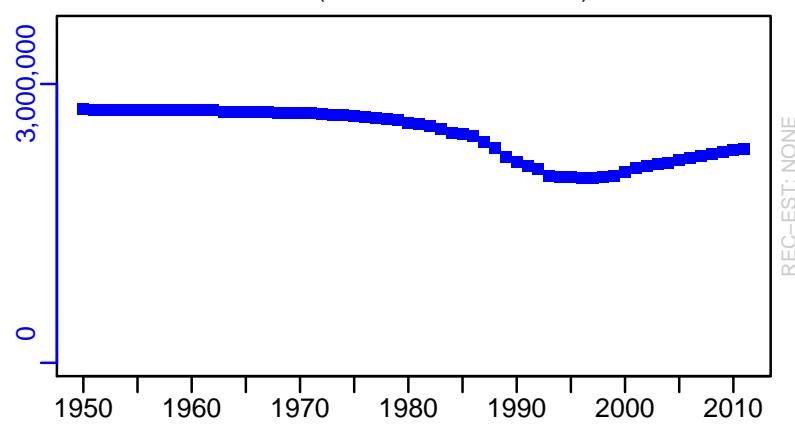
SSB-E00larvae (1950–2011–STACHURA)



ER-ratio (1950–2011–STACHURA)



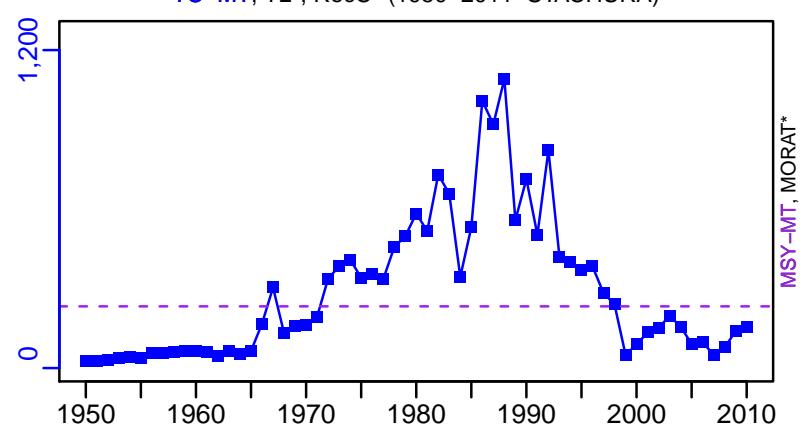
R-E00 (1950–2011–STACHURA)



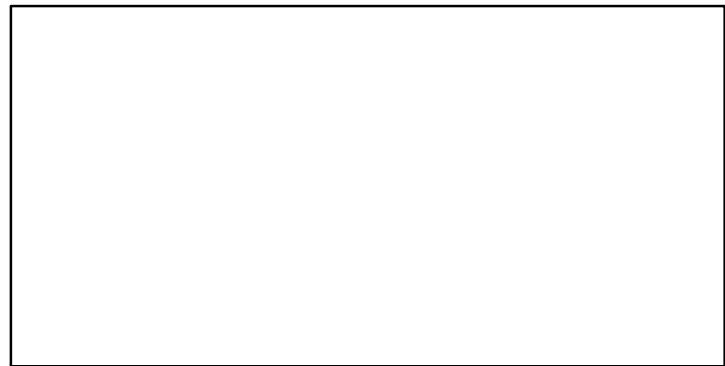
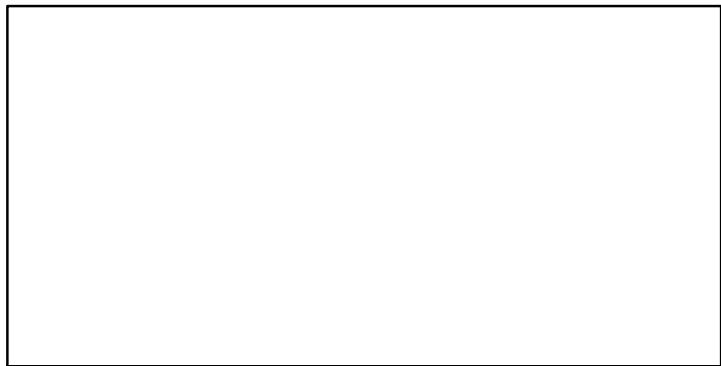
**Blackgill rockfish Pacific Coast [BGROCKPCOAST]**

TC-MT, TL\*, RecC\* (1950–2011-STACHURA)

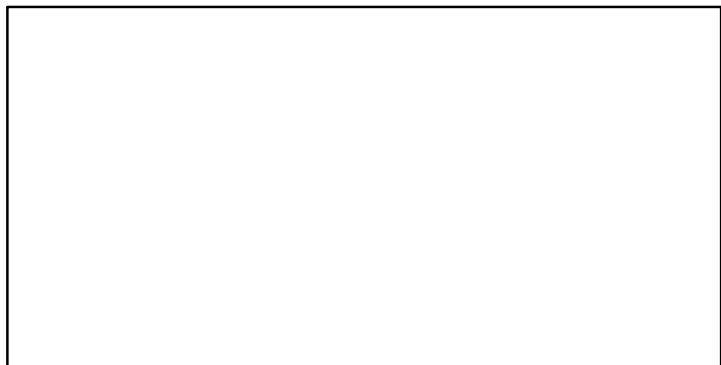
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



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

## Black rockfish California [BLACKROCKCAL]

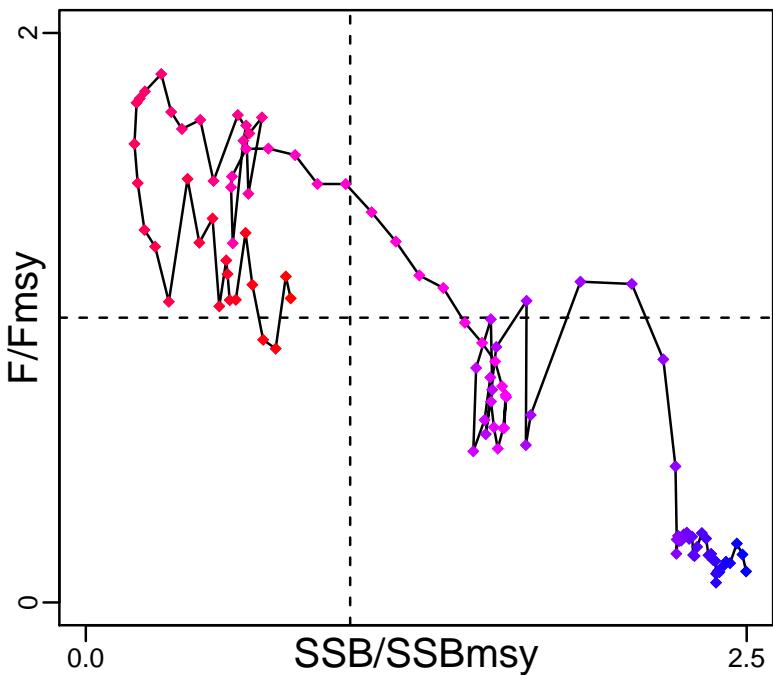
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastes melanops
<b>Current Assess ID</b>	SWFSC-BLACKROCKCAL-1916-2015-SISIMP2016
<b>Area</b>	California
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2015

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2015	425
<b>Fmsy</b>	Fmsy-1/yr	2015	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	2015	343
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	266
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

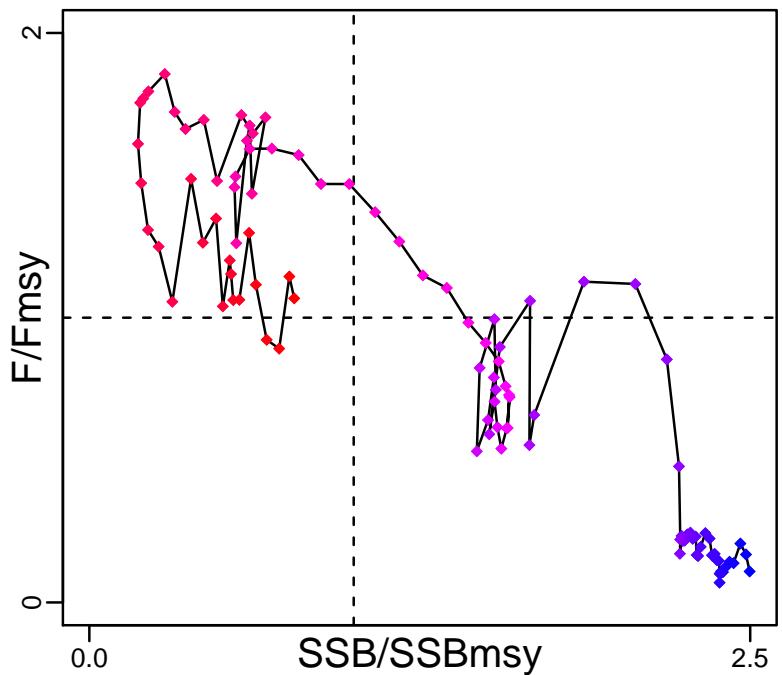
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2015	5770	-	3+	
<b>SSB</b>	SSB-MT	2015	353	Females	7+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	1,750,000	-	0	
<b>F</b>	F-1/yr	2015	0.534	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.068	-	-	
<b>TC</b>	TC-MT	2015	380			
<b>TL</b>	-	-	-			
<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	2015	1.068			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Black rockfish California [BLACKROCKCAL]**

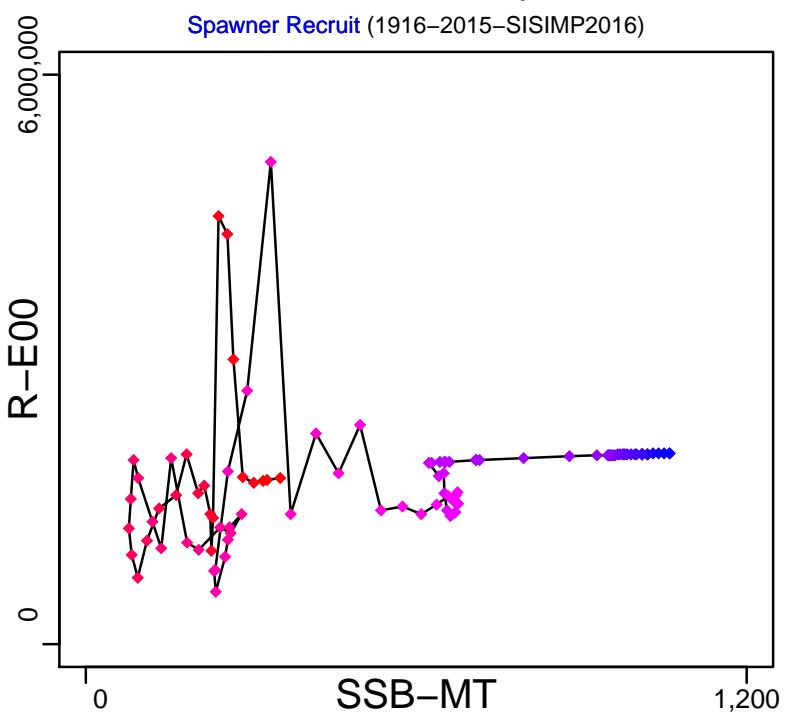
Kobe MSYpref (1916–2015–SISIMP2016)



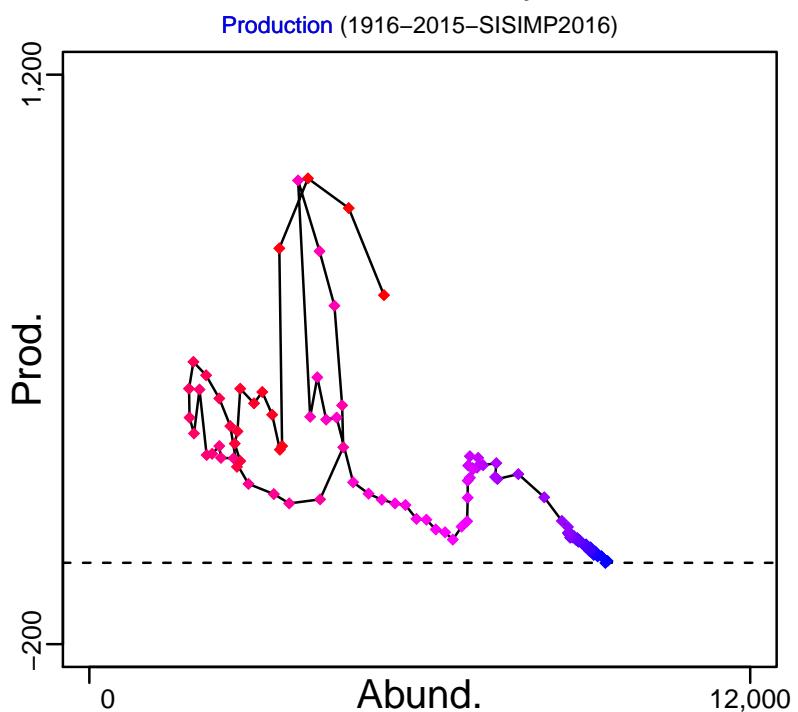
Kobe MGTPref (1916–2015–SISIMP2016)



Spawner Recruit (1916–2015–SISIMP2016)



Production (1916–2015–SISIMP2016)

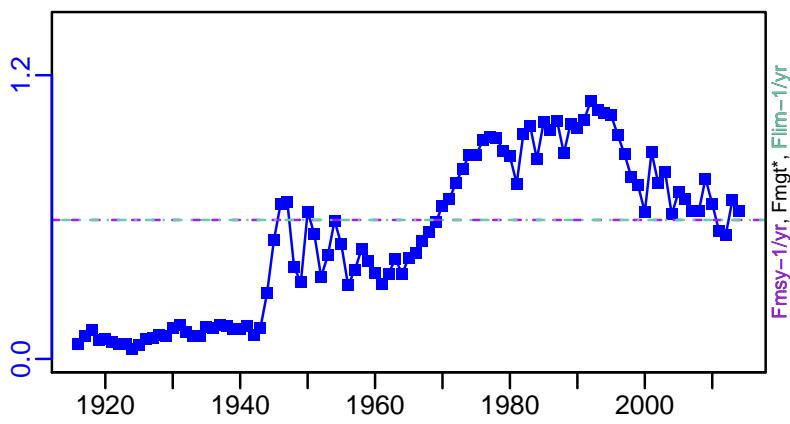
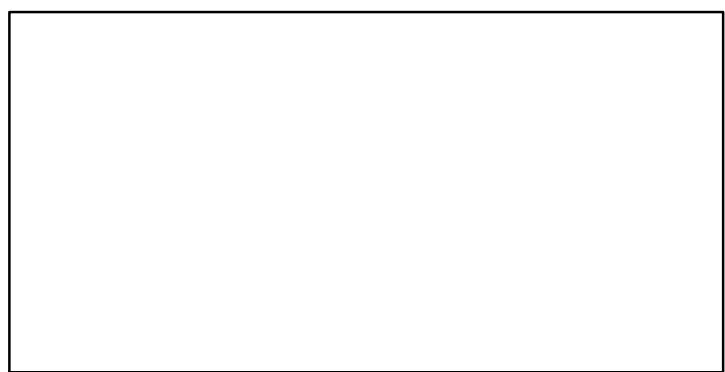
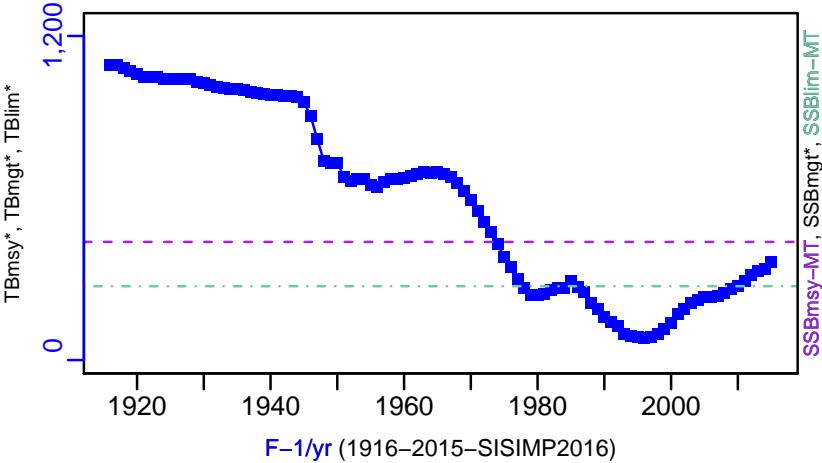
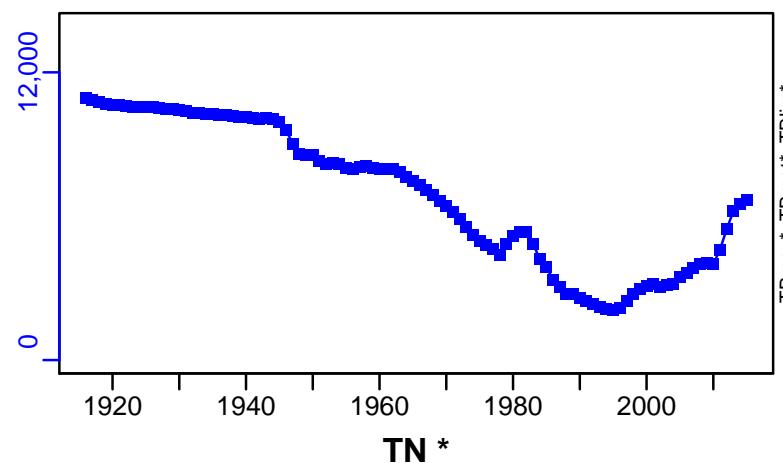


◆ Start Year	◆ End Year	*	No Data
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### Black rockfish California [BLACKROCKCAL]

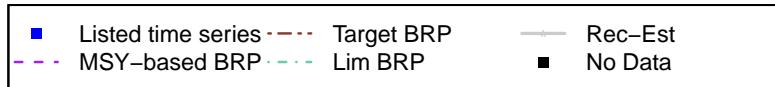
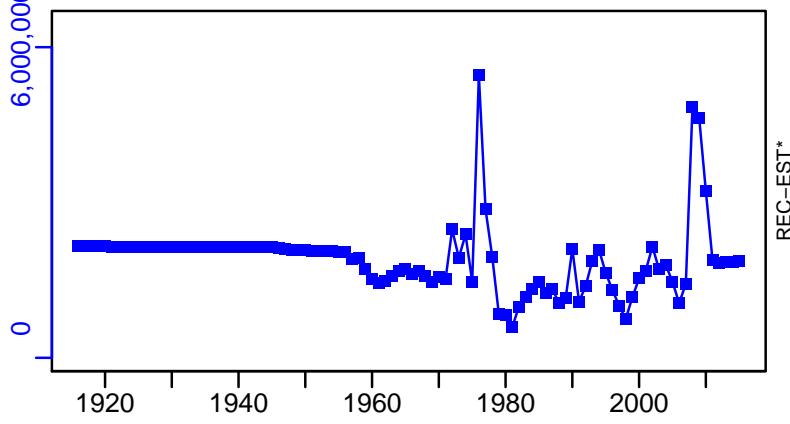
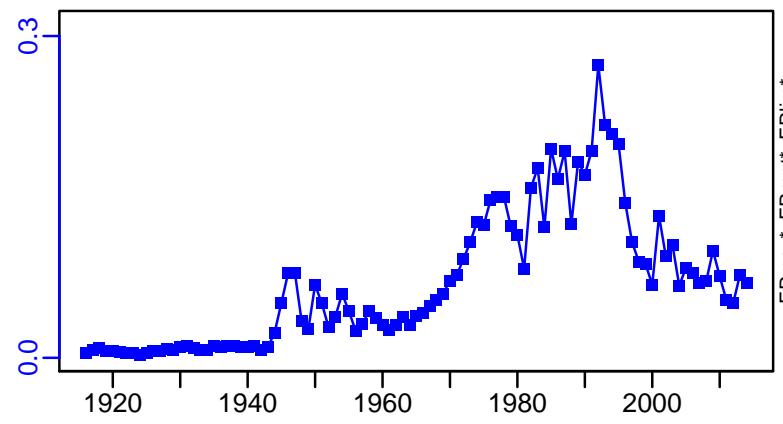
TB-MT (1916–2015–SISIMP2016)

SSB-MT (1916–2015–SISIMP2016)



ER-calc-ratio (1916–2015–SISIMP2016)

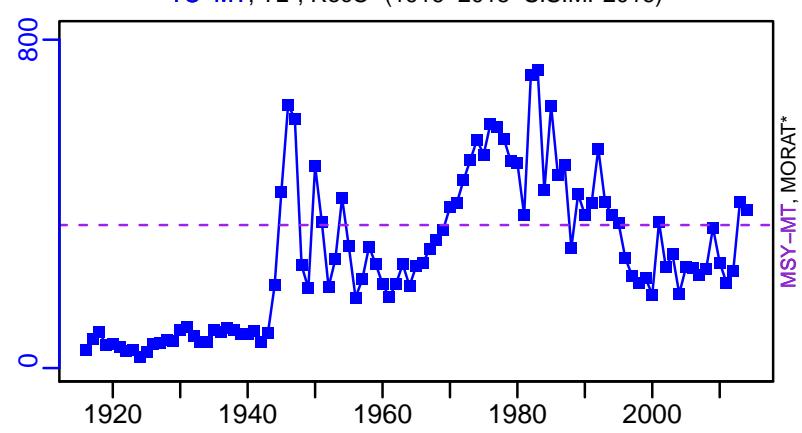
R-E00 (1916–2015–SISIMP2016)



**Black rockfish California [BLACKROCKCAL]**

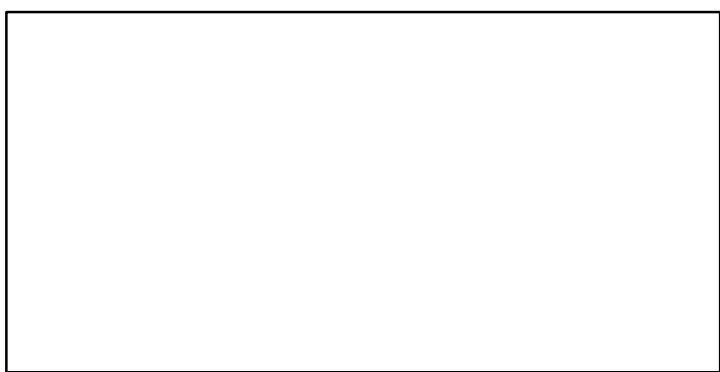
TC-MT, TL\*, RecC\* (1916–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*

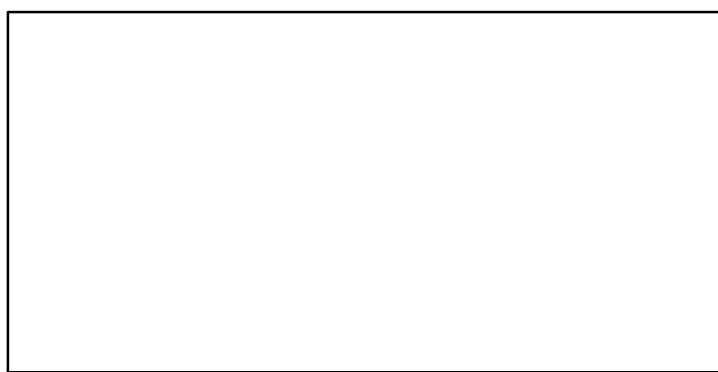


**survB\***

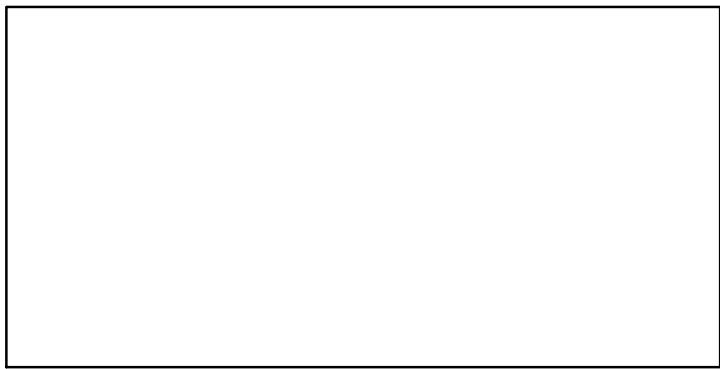
MSY-MT, MORAT\*



**CPUE\***



**EFFORT\***



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

## Black rockfish Oregon [BLACKROCKORECOAST]

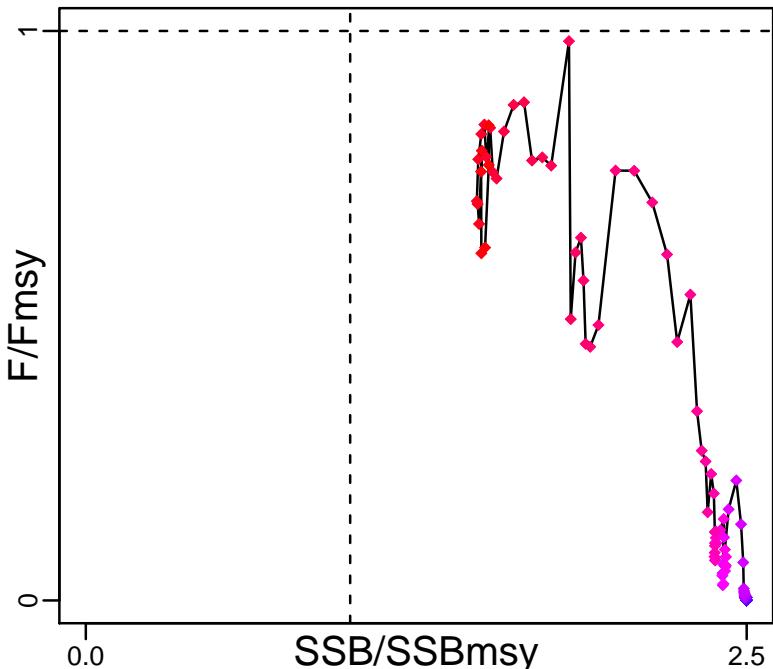
Metadata	
<b>Scientific Name</b>	Sebastes melanops
<b>Current Assess ID</b>	NWFSC-BLACKROCKORECOAST-1892-2015-SISIMP2016
<b>Area</b>	Oregon Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2015	554
<b>Fmsy</b>	Fmsy-1/yr	2015	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	2015	518
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	346
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

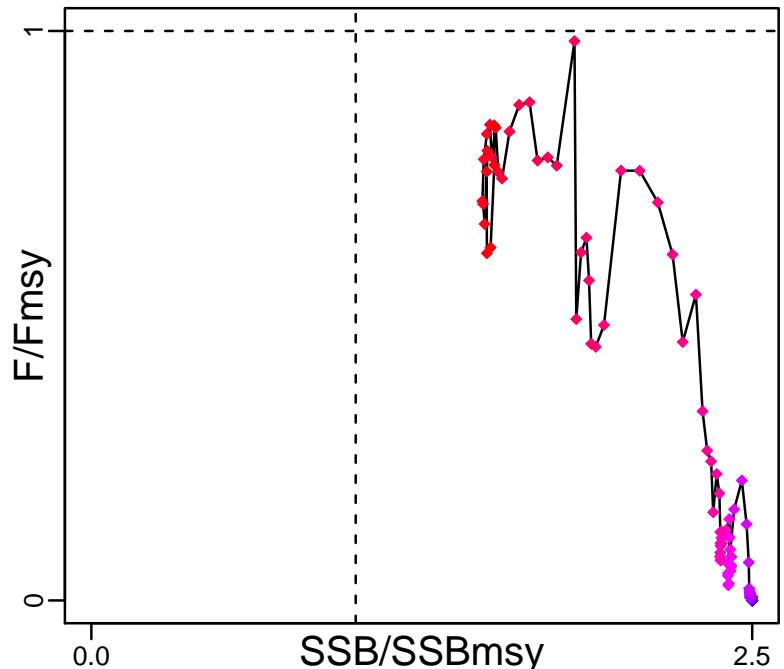
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2015	8060	-	3+	
<b>SSB</b>	SSB-MT	2015	838	Females	7+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	3,510,000	-	0	
<b>F</b>	F-1/yr	2015	0.417	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.06	-	-	
<b>TC</b>	TC-MT	2015	485			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2015	1.514			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.834			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Black rockfish Oregon [BLACKROCKORECOAST]**

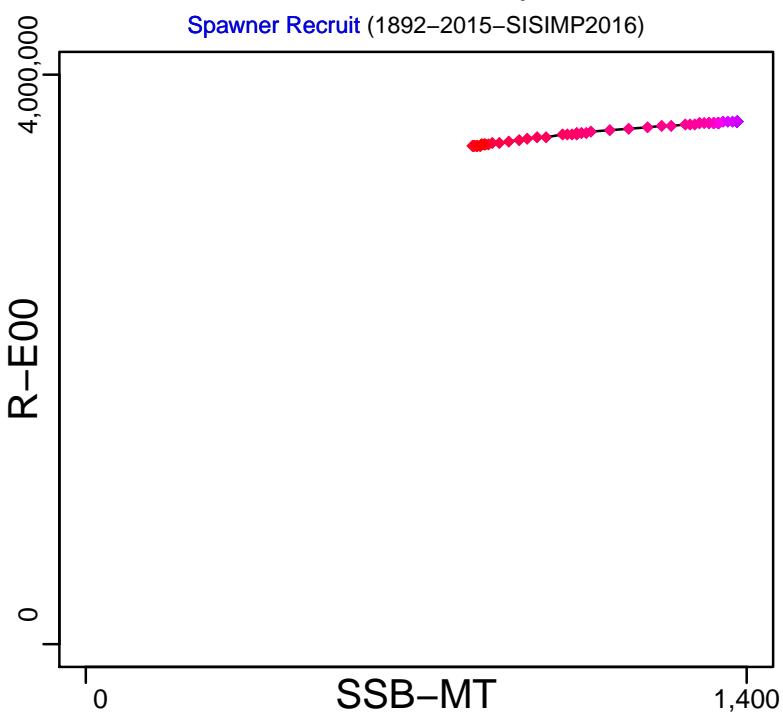
Kobe MSYpref (1892–2015–SISIMP2016)



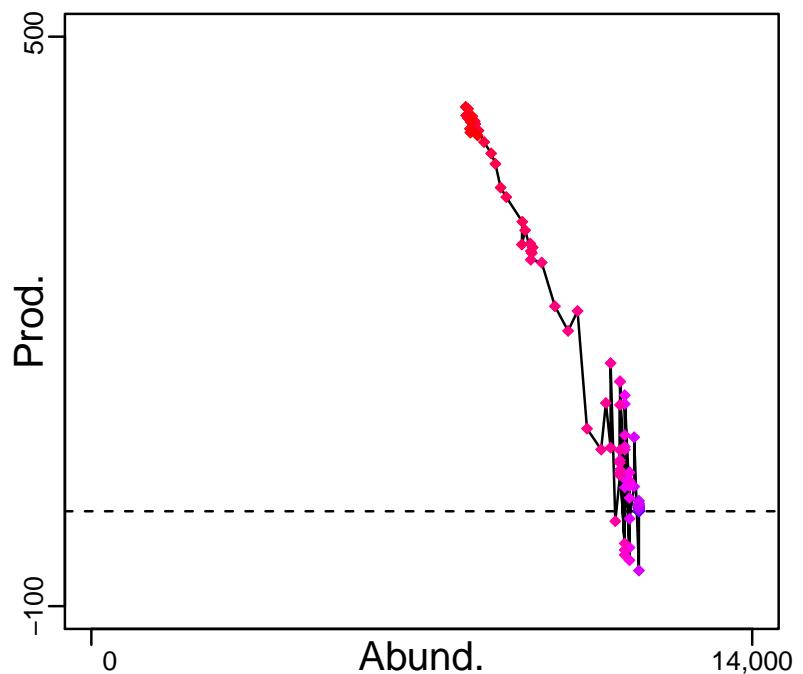
Kobe MGTPref (1892–2015–SISIMP2016)



Spawner Recruit (1892–2015–SISIMP2016)



Production (1892–2015–SISIMP2016)

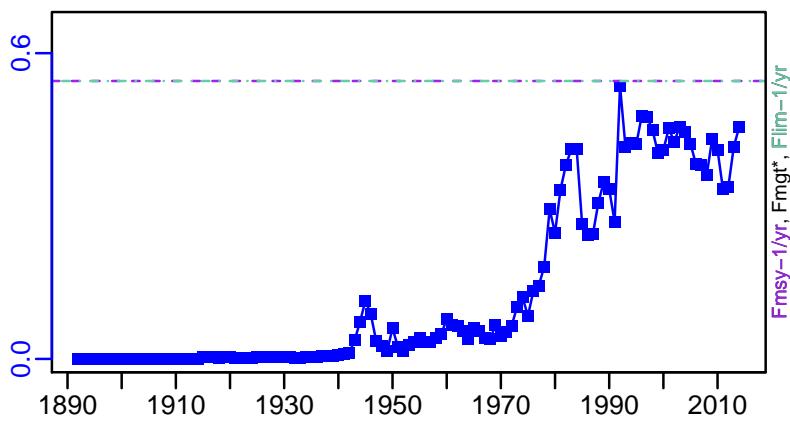
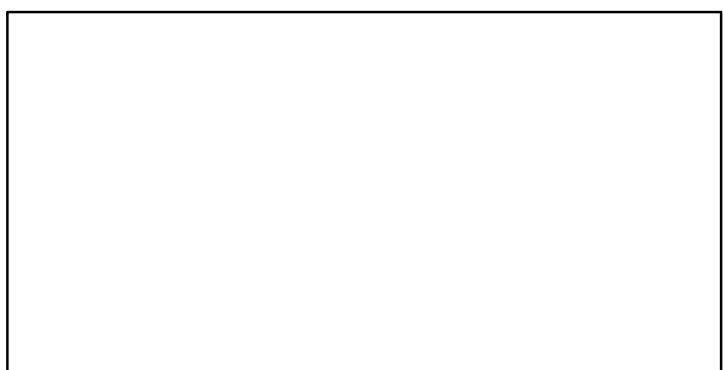
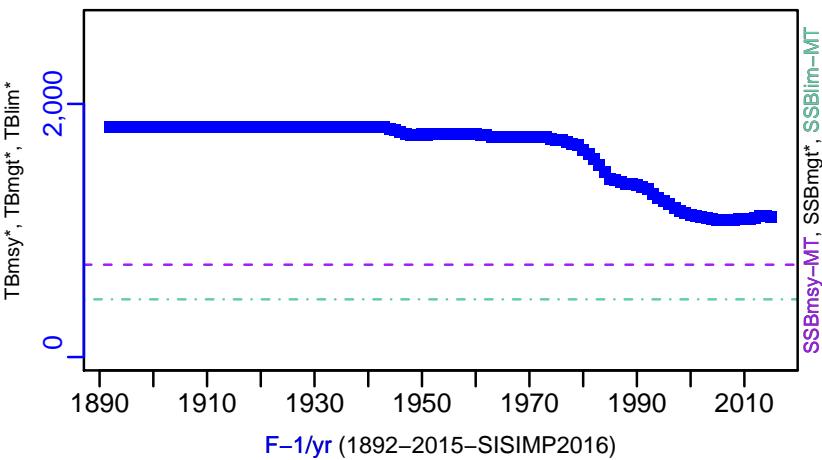
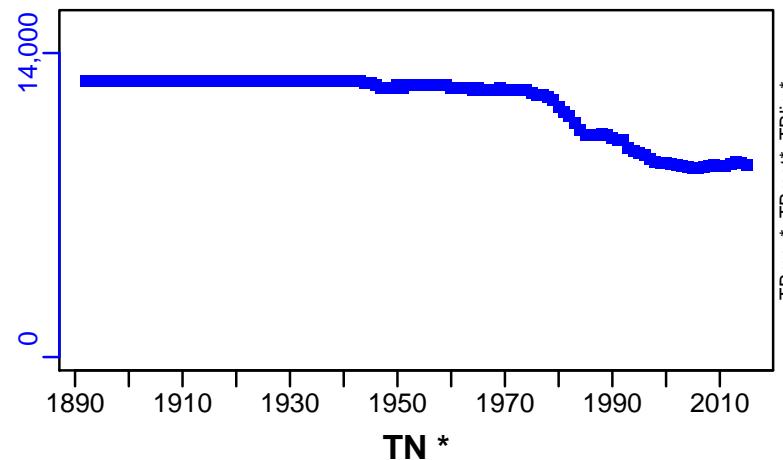


◆ Start Year   ◆ End Year   \* No Data

### Black rockfish Oregon [BLACKROCKORECOAST]

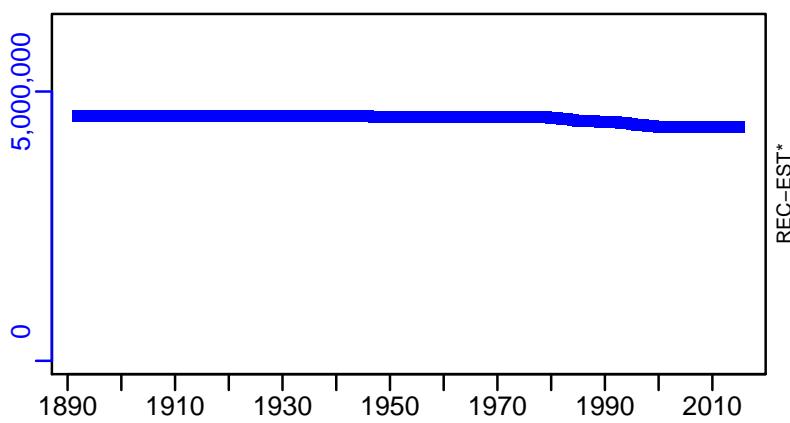
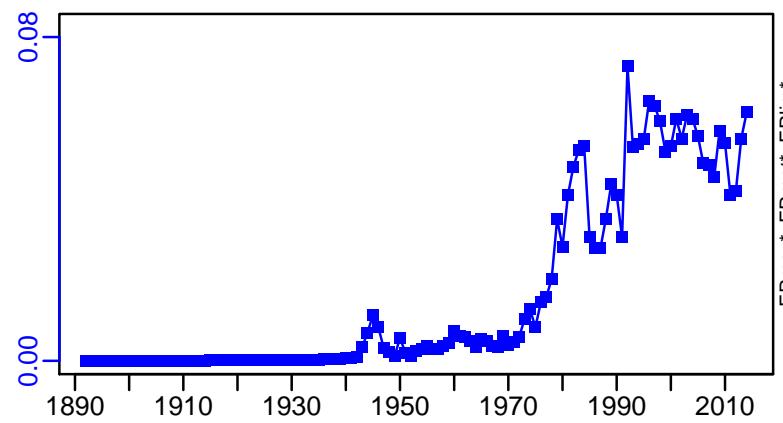
TB-MT (1892–2015–SISIMP2016)

SSB-MT (1892–2015–SISIMP2016)



ER-calc-ratio (1892–2015–SISIMP2016)

R-E00 (1892–2015–SISIMP2016)

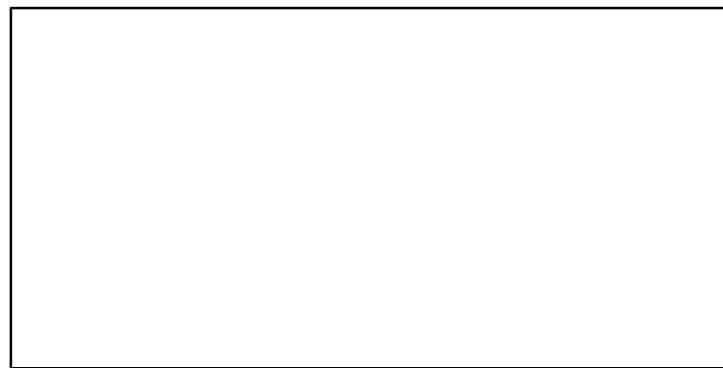
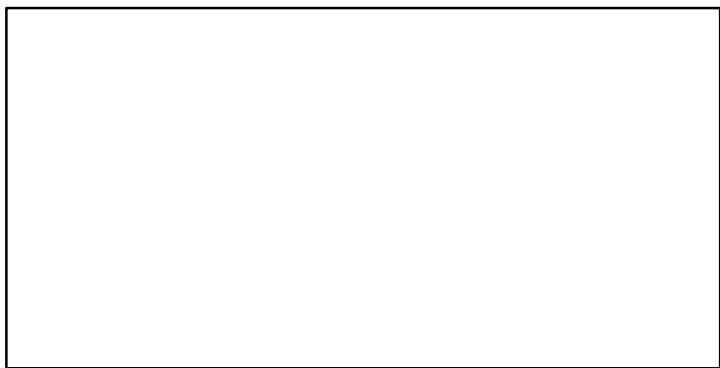
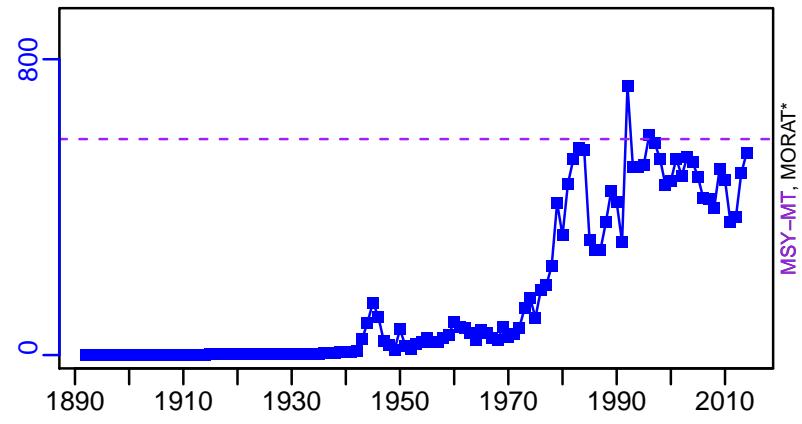


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | - - Lim BRP  | ■ No Data |

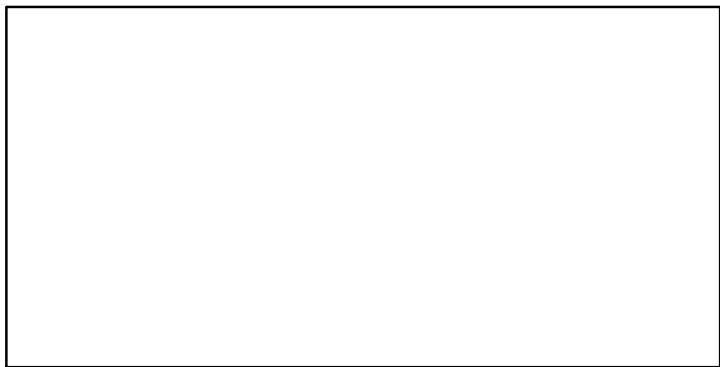
**Black rockfish Oregon [BLACKROCKORECOAST]**

TC-MT, TL\*, RecC\* (1892–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



**EFFORT\***



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

## Black rockfish Washington [BLACKROCKWASH]

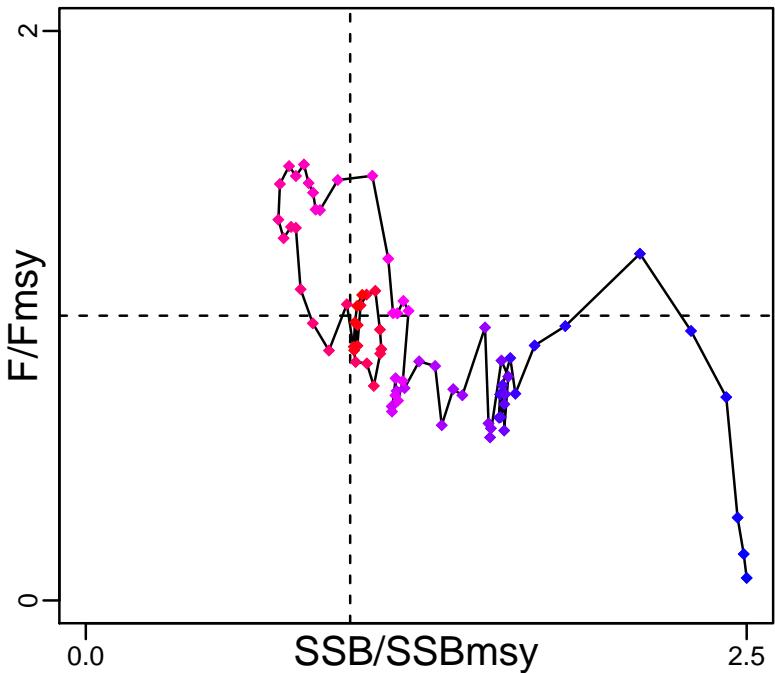
Metadata	
<b>Scientific Name</b>	Sebastodes melanops
<b>Current Assess ID</b>	NWFSC-BLACKROCKWASH-1940-2015-SISIMP2016
<b>Area</b>	Washington
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2015	542
<b>Fmsy</b>	Fmsy-1/yr	2015	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>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	339
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

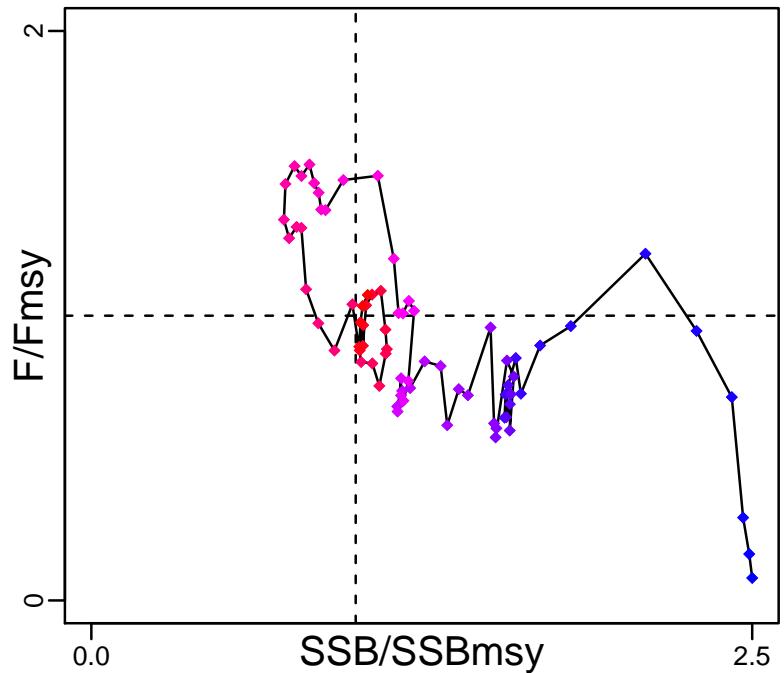
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2015	5640	-	3+	
<b>SSB</b>	SSB-MT	2015	582	Females	7+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	1,910,000	-	0	
<b>F</b>	F-1/yr	2015	0.536	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.063	-	-	
<b>TC</b>	TC-MT	2015	356			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2015	1.074			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	1.073			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Black rockfish Washington [BLACKROCKWASH]**

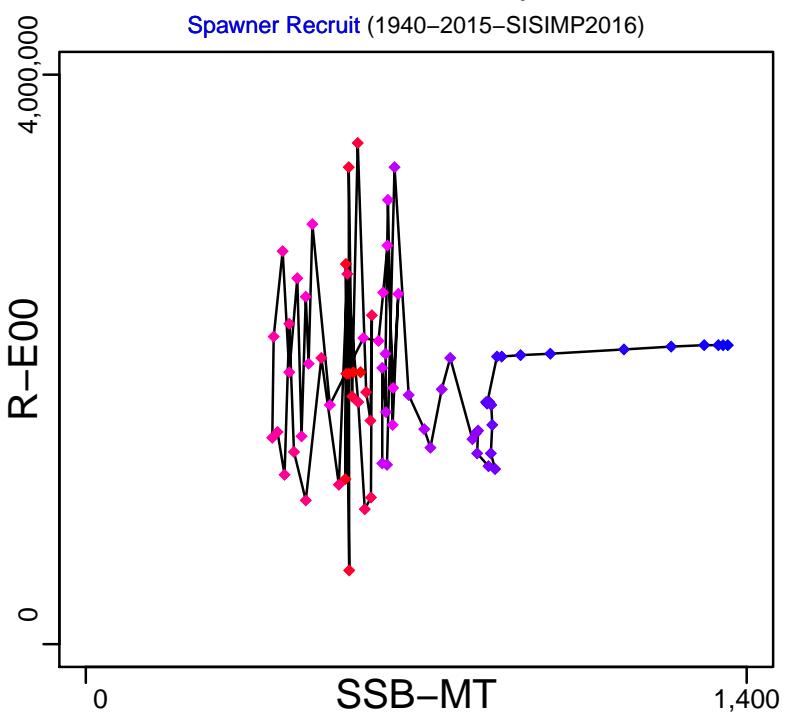
Kobe MSYpref (1940–2015–SISIMP2016)



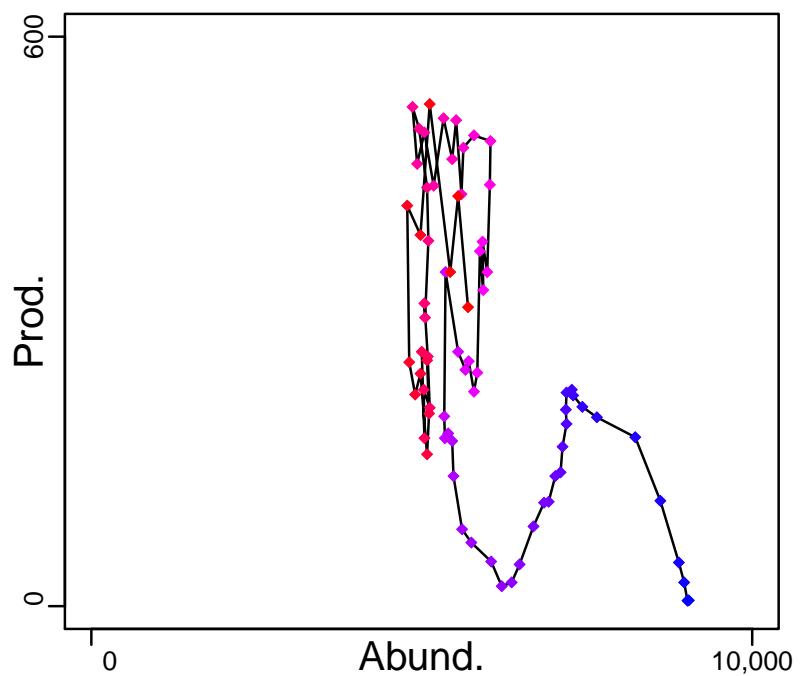
Kobe MGTpref (1940–2015–SISIMP2016)



Spawner Recruit (1940–2015–SISIMP2016)



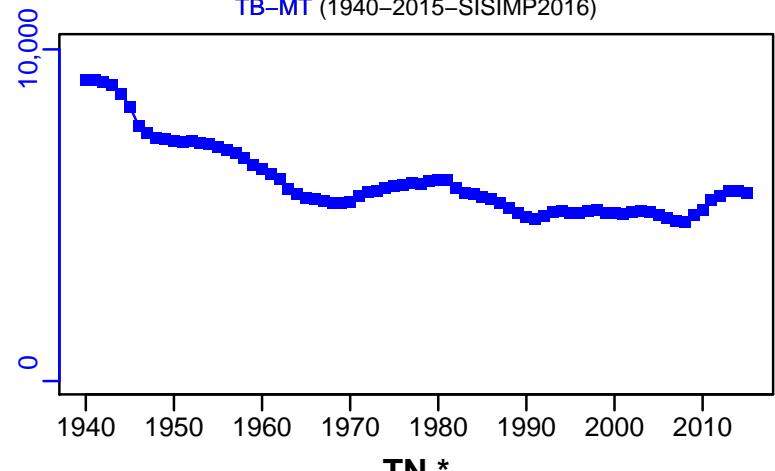
Production (1940–2015–SISIMP2016)



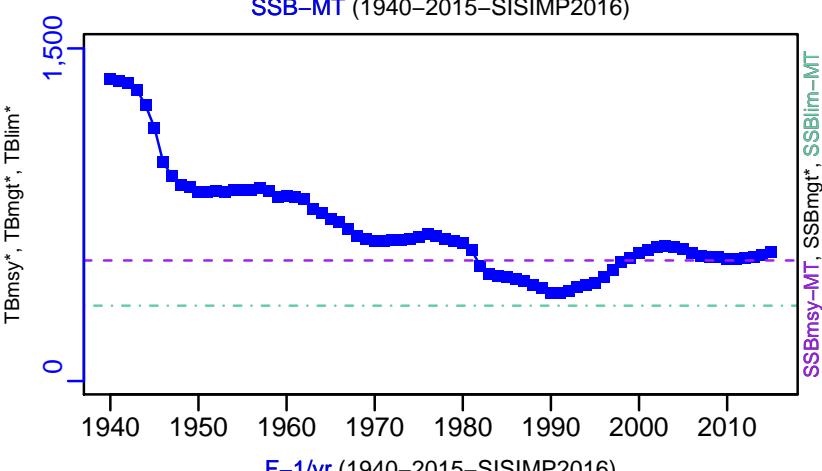
◆ Start Year	◆ End Year	*	No Data
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### Black rockfish Washington [BLACKROCKWASH]

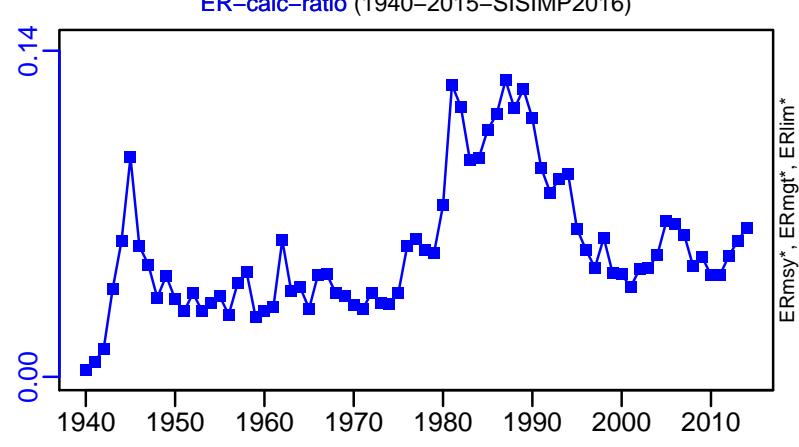
TB-MT (1940–2015–SISIMP2016)



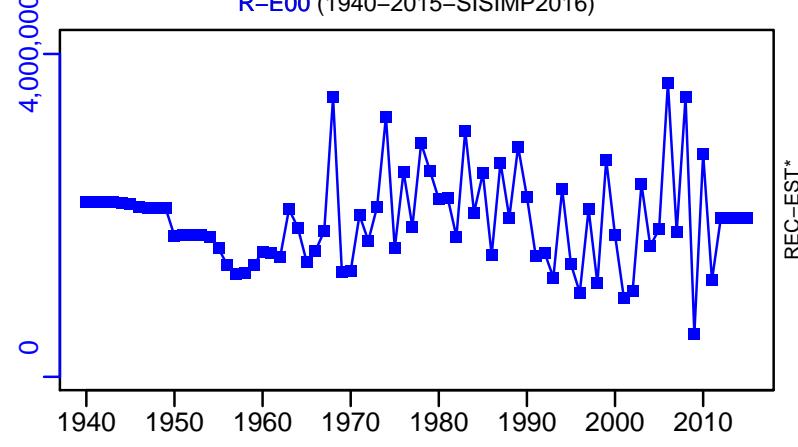
SSB-MT (1940–2015–SISIMP2016)



ER-calc-ratio (1940–2015–SISIMP2016)



R-E00 (1940–2015–SISIMP2016)

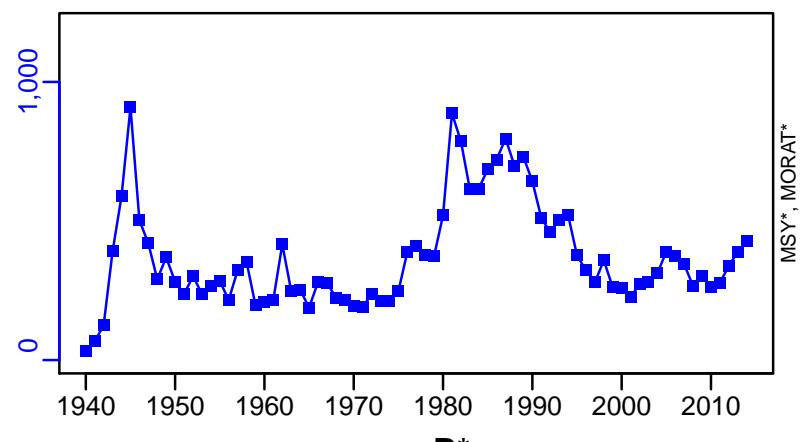


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	■ No Data

**Black rockfish Washington [BLACKROCKWASH]**

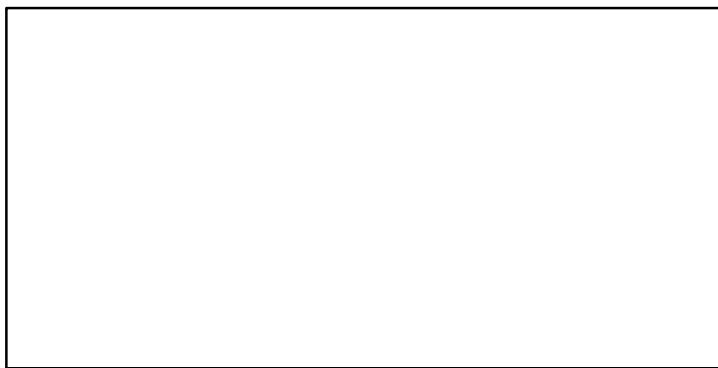
TC-MT, TL\*, RecC\* (1940–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*

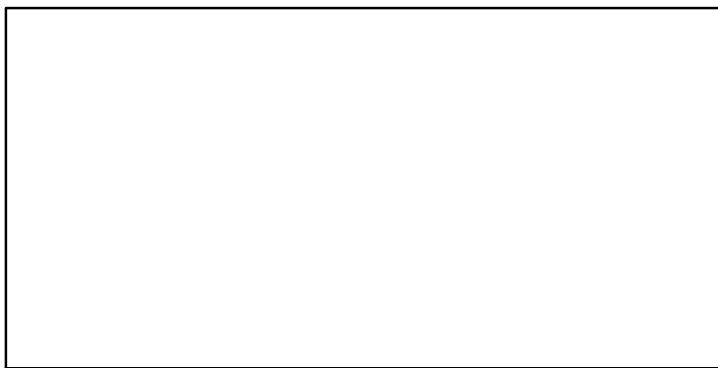


**survB\***

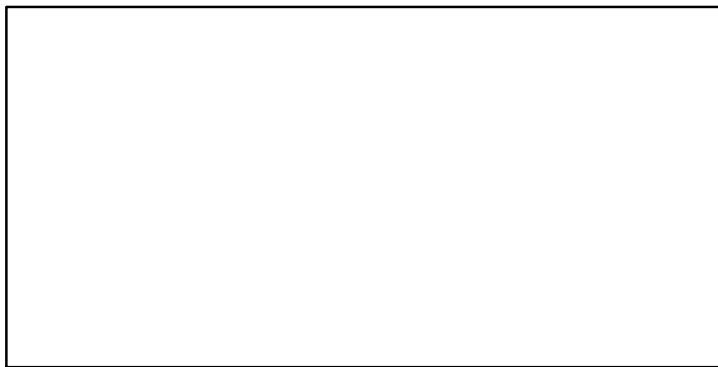
MSY\*, MORAT\*



**CPUE\***



**EFFORT\***



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

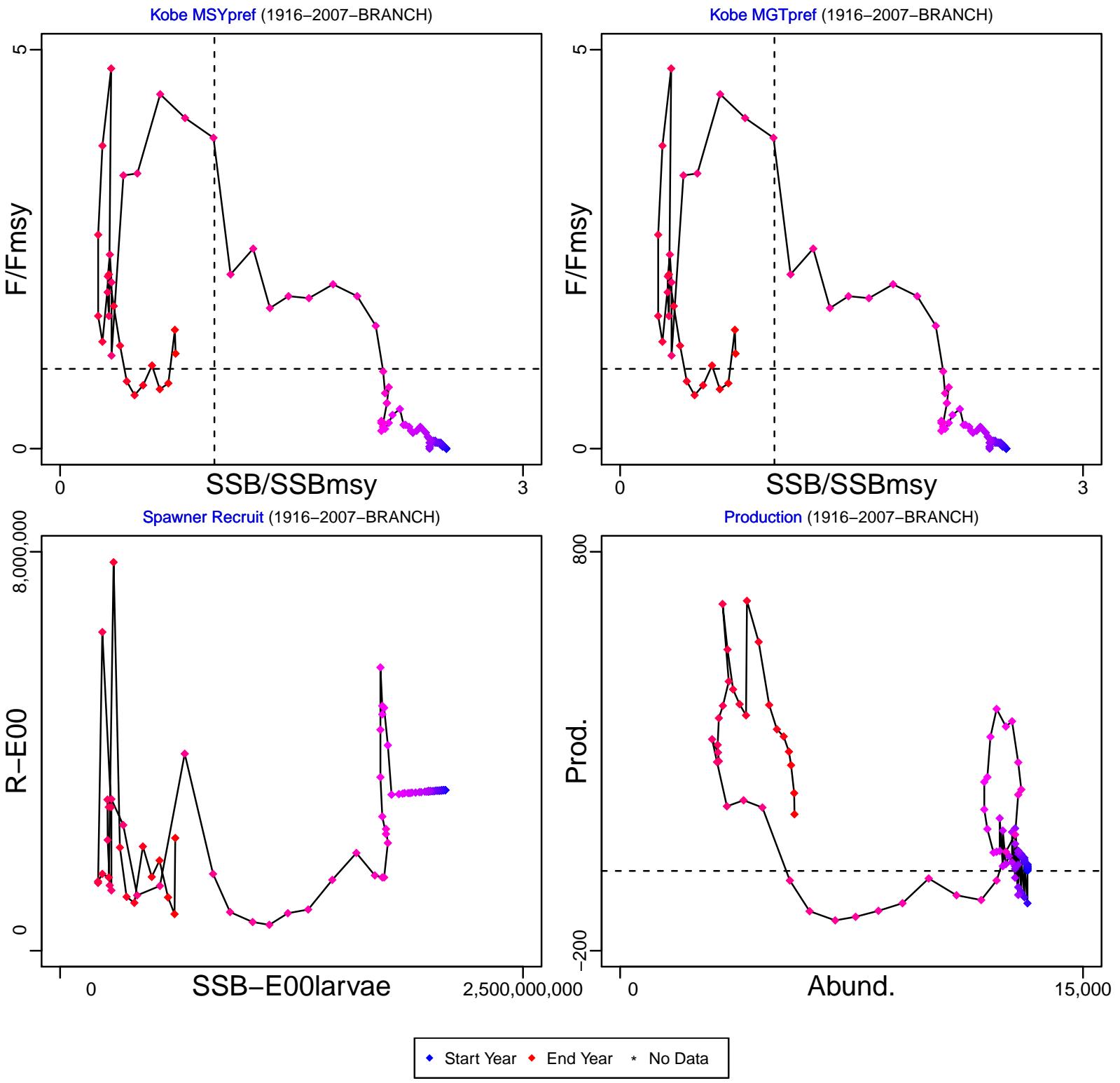
## Blue rockfish California [BLUEROCKCAL]

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>	-	-	-

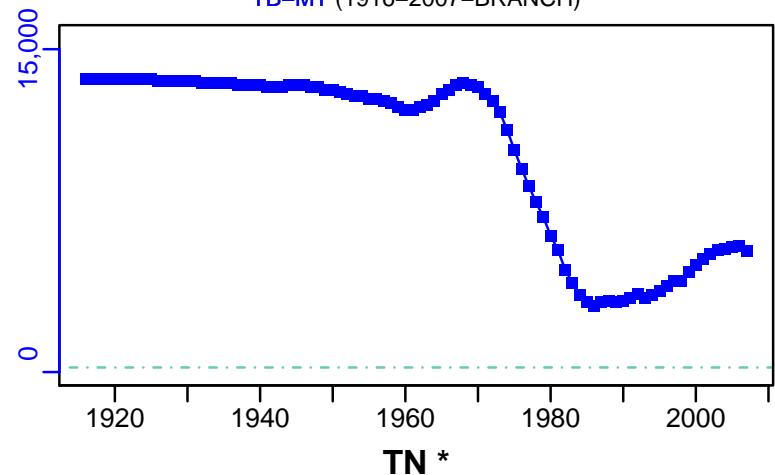
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2007	5450	-	1+	
<b>SSB</b>	SSB-E00larvae	2007	$6.22 \times 10^8$	Females	6+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2007	2,260,000	-	0	
<b>F</b>	F-1/yr	2007	0.048	Both	1+	
<b>ER</b>	ER-ratio	2007	0.048	-	-	
<b>TC</b>	TC-MT	2007	263			
<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]

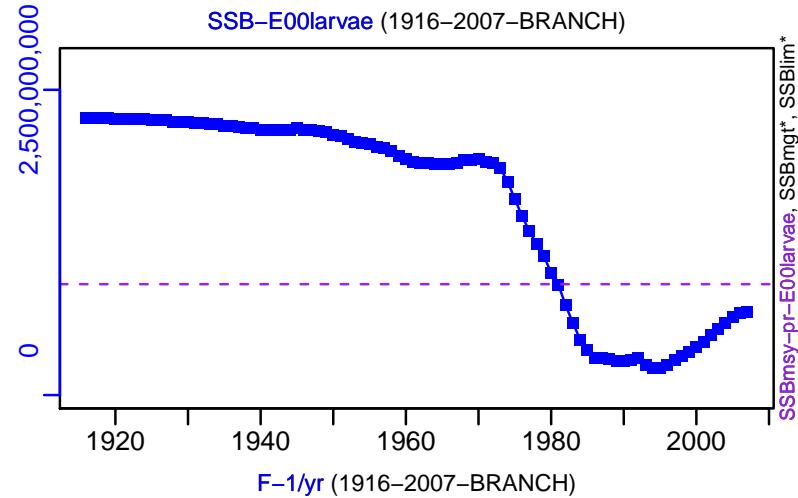


### Blue rockfish California [BLUEROCKCAL]

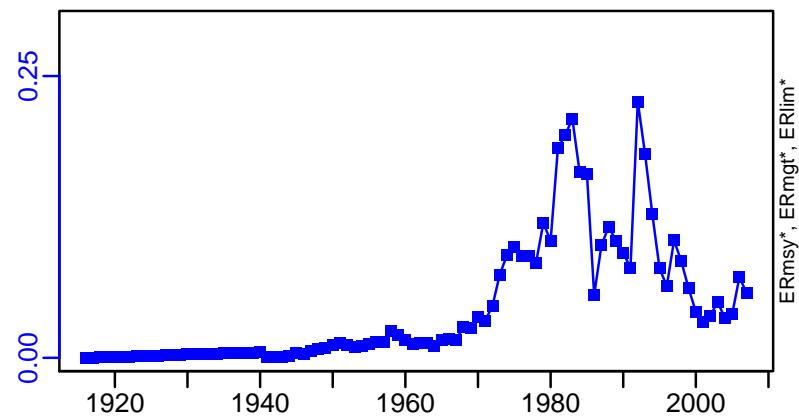
TB-MT (1916–2007–BRANCH)



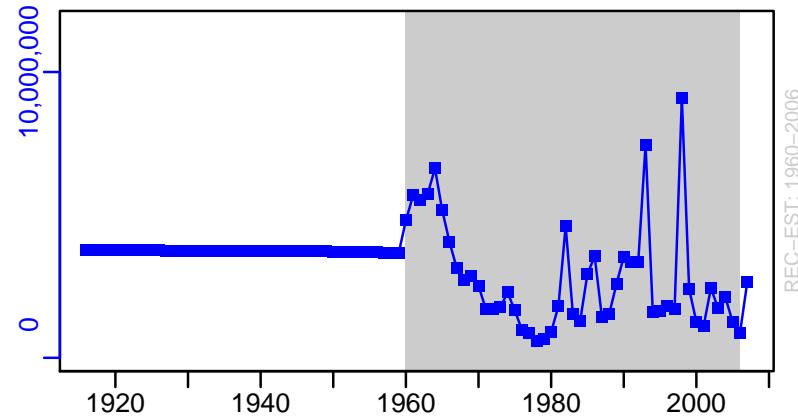
SSB-E00larvae (1916–2007–BRANCH)



ER-ratio (1916–2007–BRANCH)



R-E00 (1916–2007–BRANCH)

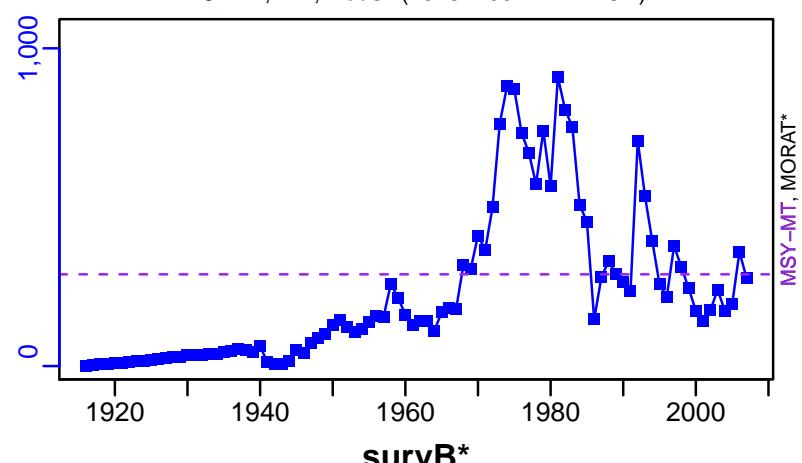


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	--- Lim BRP	■ No Data

Blue rockfish California [BLUEROCKCAL]

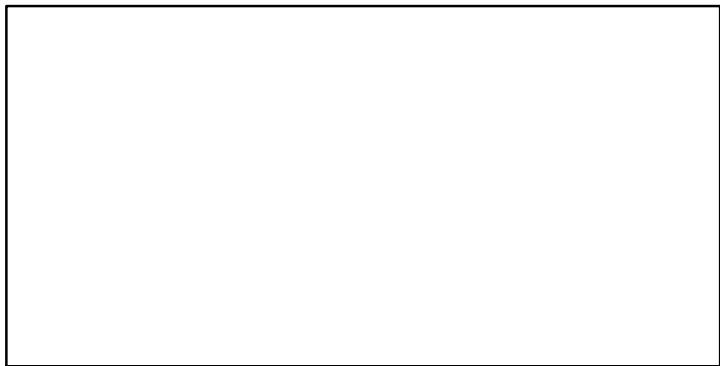
TC-MT, TL\*, RecC\* (1916–2007-BRANCH)

TAC\*, Cpair\*, Cadv\*

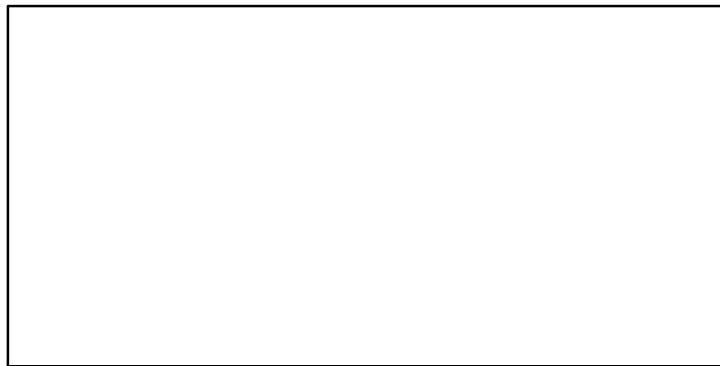


MSY-MT, MORAT\*

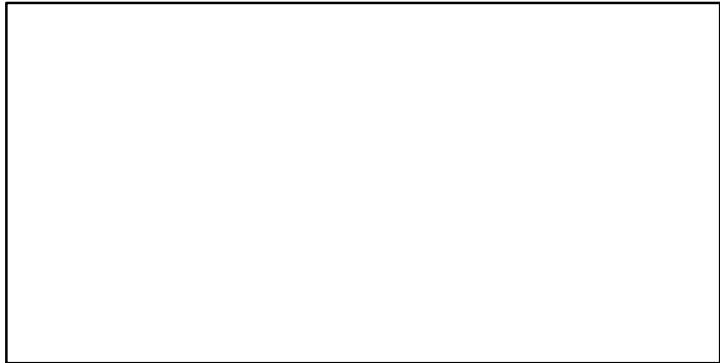
survB\*



CPUE\*



EFFORT\*



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

## Bank Rockfish California [BNKROCKCAL]

<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes 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

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERrmsy</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>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBLim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

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

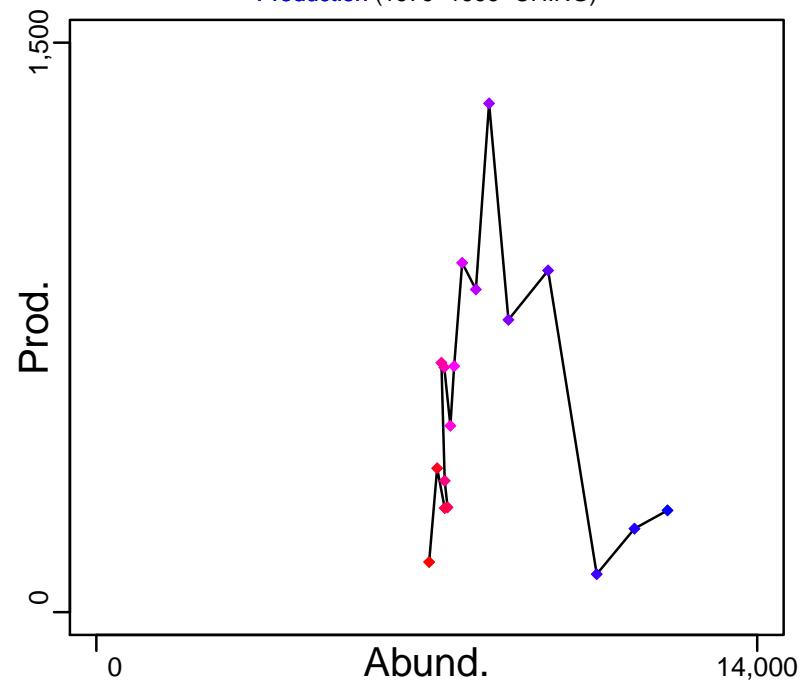
Bank Rockfish California [BNKROCKCAL]

Kobe MSY\*

Kobe MGT\*

Spawner Recruit\*

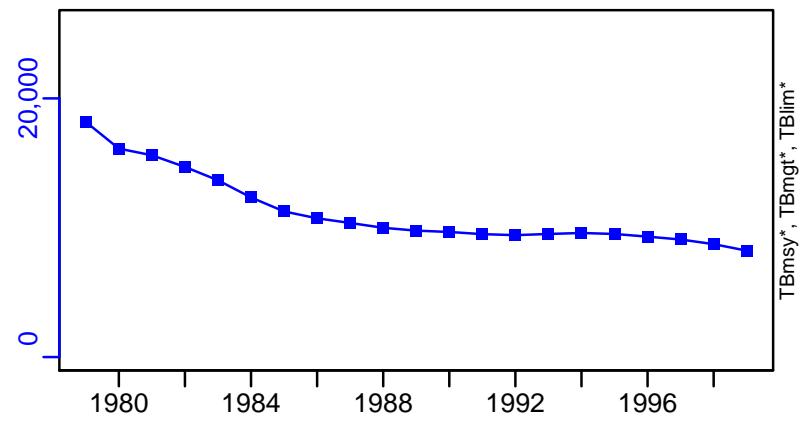
Production (1979–1999–CHING)



◆ Start Year ♦ End Year \* No Data

**Bank Rockfish California [BNKROCKCAL]**

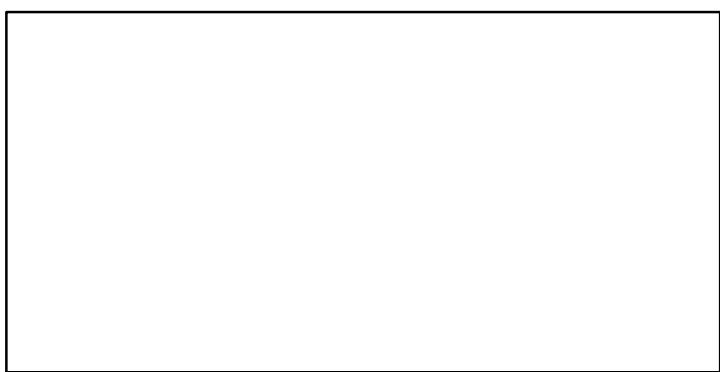
TB-MT (1979–1999–CHING)



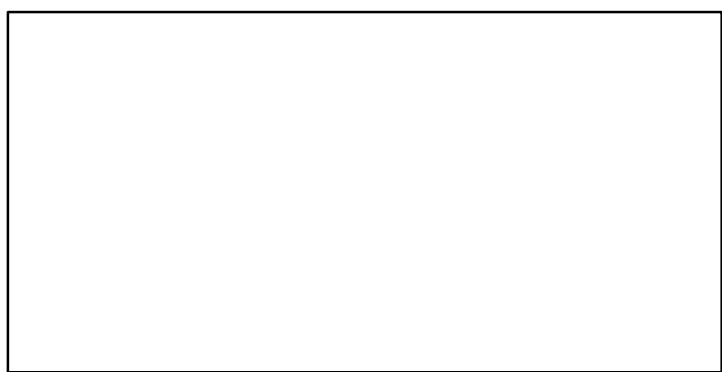
**SSB\***



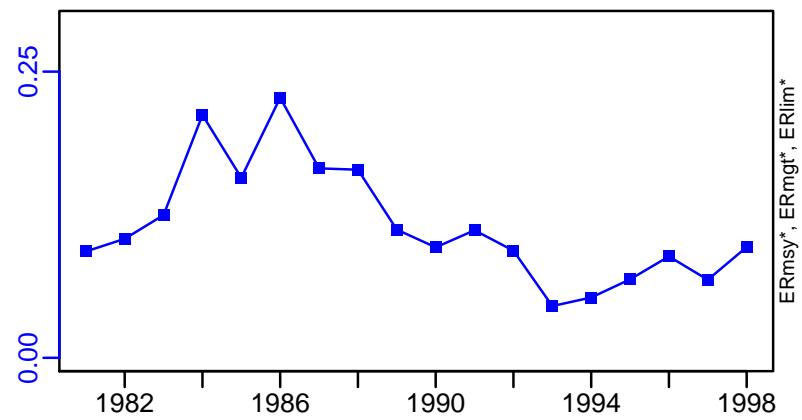
**TN \***



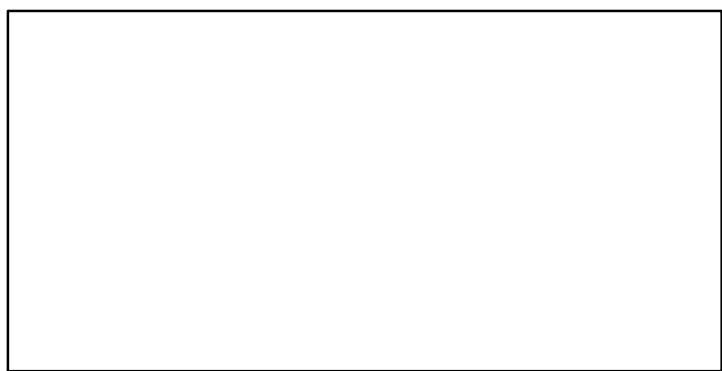
**F\***



ER-ratio (1979–1999–CHING)



**Recruits\***

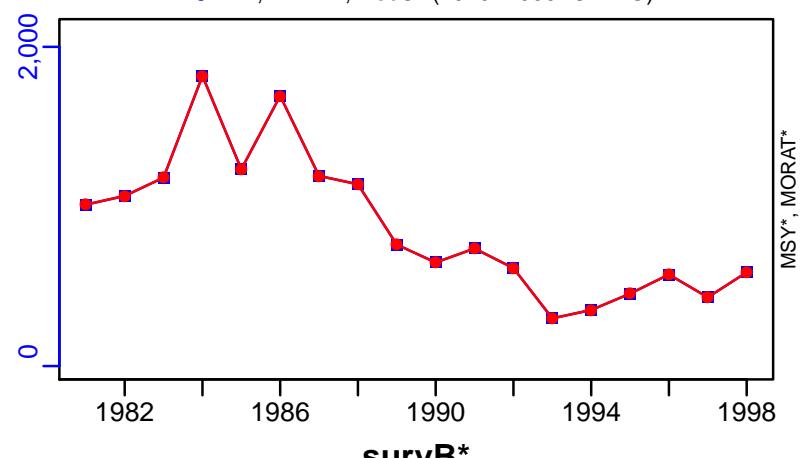


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | ·· Lim BRP   | ■ No Data |

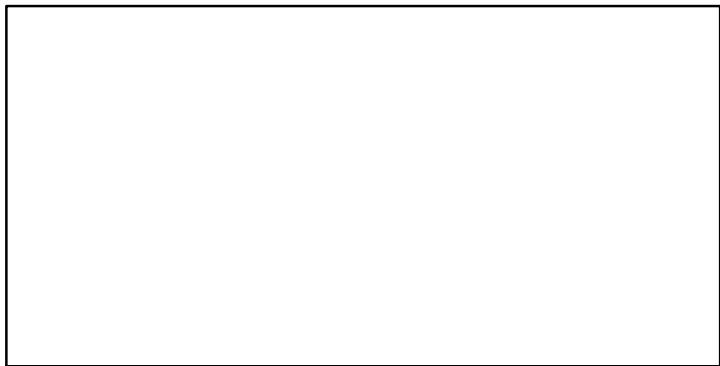
**Bank Rockfish California [BNKROCKCAL]**

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

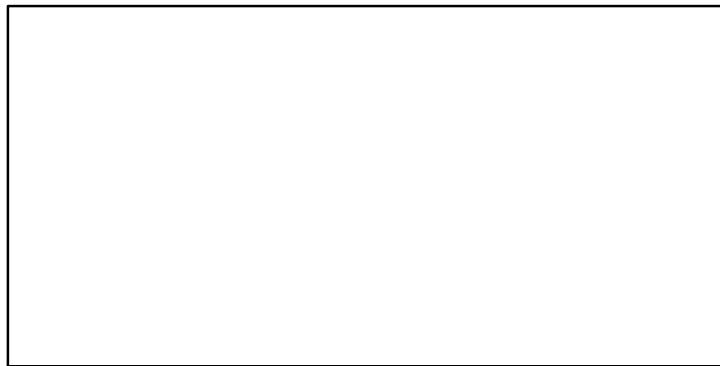
TAC\*, Cpair\*, Cadv\*



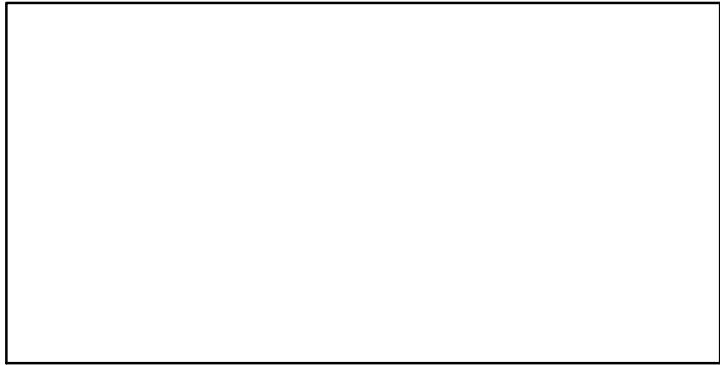
survB\*



CPUE\*



EFFORT\*



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

## Bocaccio Southern Pacific Coast [BOCACCSPOAST]

Metadata	
<b>Scientific Name</b>	Sebastes paucispinis
<b>Current Assess ID</b>	SWFSC-BOCACCSPOAST-1935-2013-SISIMP2016
<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, 2013

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<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>	TB0-MT	2009	44,070
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2013	1347
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<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	19,100	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2013	3,860,000	-	0	
<b>F</b>	F-1/yr	2013	0.105	-	-	
<b>ER</b>	ER-calc-ratio	2013	0.011	-	-	
<b>TC</b>	TC-MT	2013	188			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2013	0.21			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

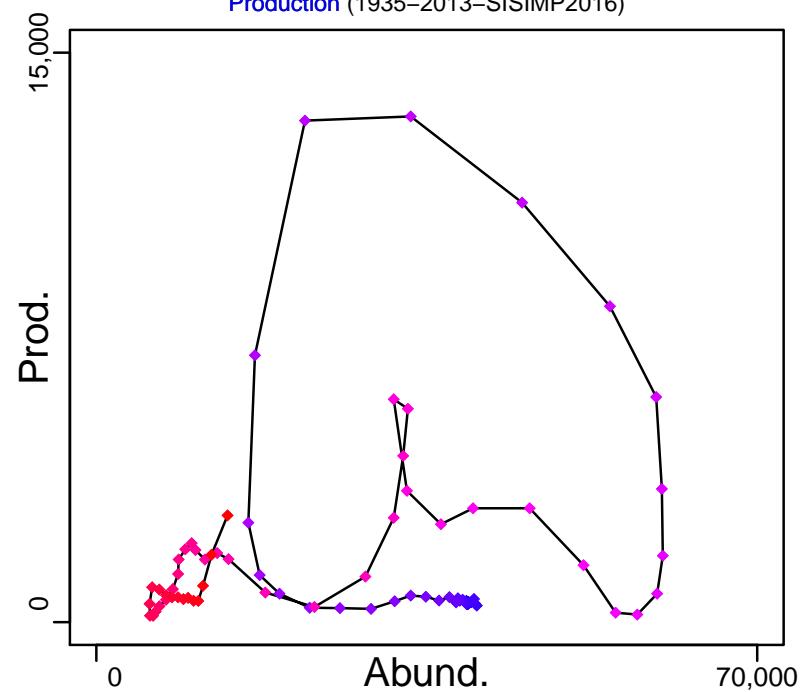
Bocaccio Southern Pacific Coast [BOCACCSPCOAST]

Kobe MSY\*

Kobe MGT\*

Spawner Recruit\*

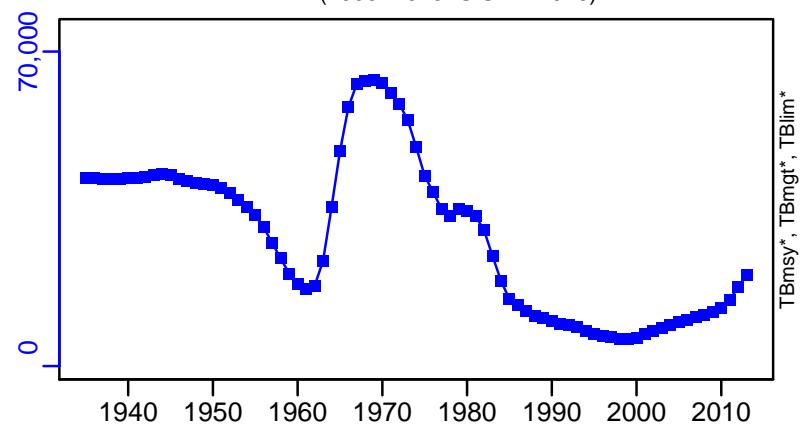
Production (1935–2013–SISIMP2016)



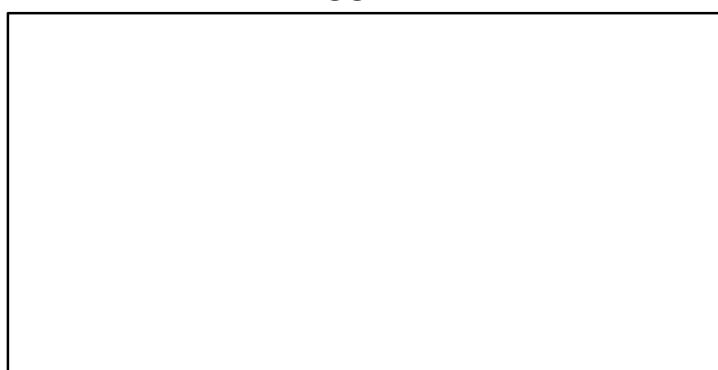
◆ Start Year   ♦ End Year   \* No Data

### Bocaccio Southern Pacific Coast [BOCACCSPCOAST]

TB-MT (1935–2013–SISIMP2016)



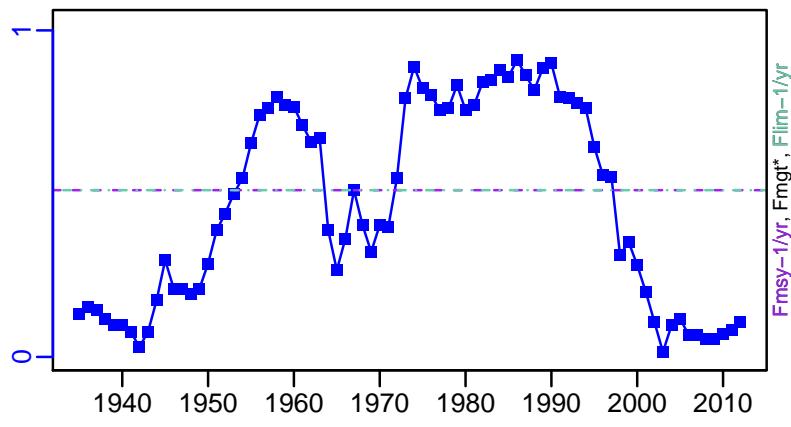
SSB\*



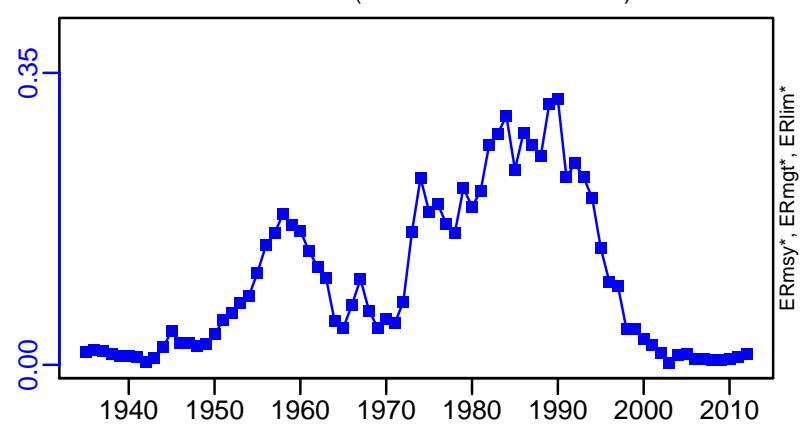
TN \*



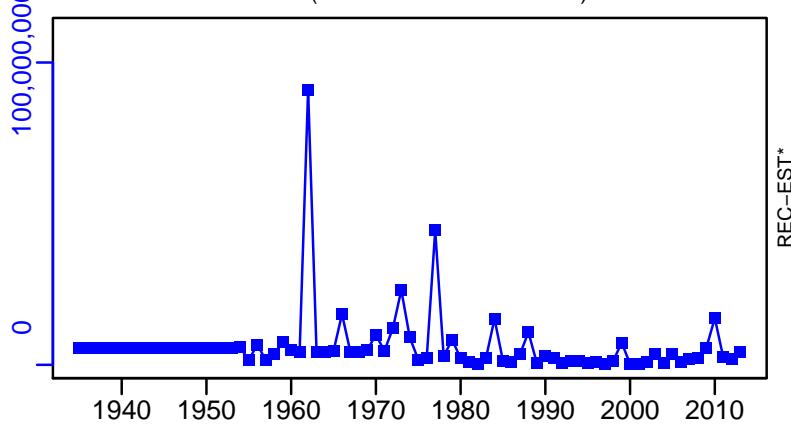
F-1/yr (1935–2013–SISIMP2016)



ER-calc-ratio (1935–2013–SISIMP2016)



R-E00 (1935–2013–SISIMP2016)

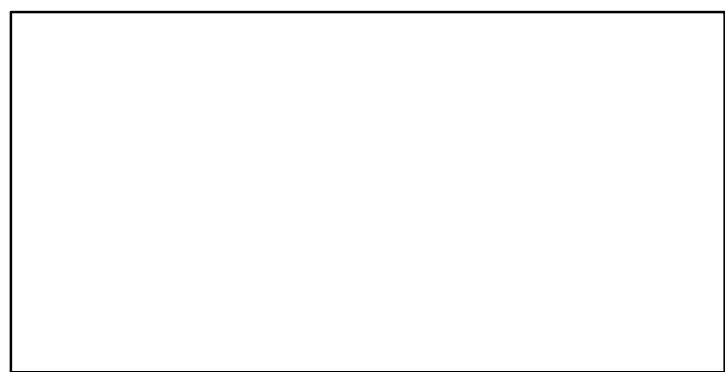
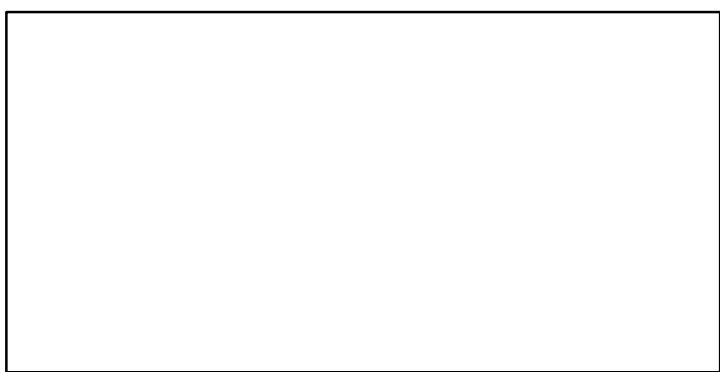
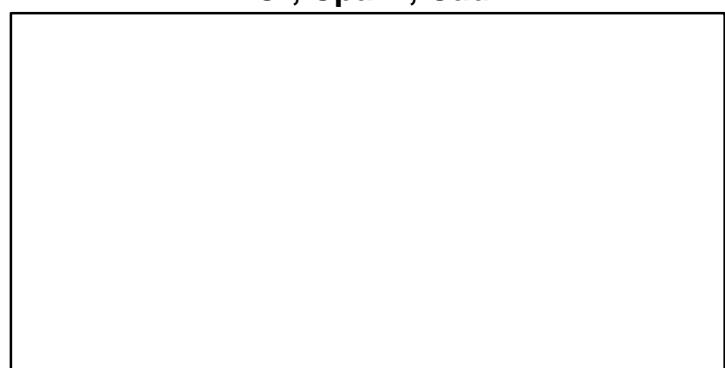
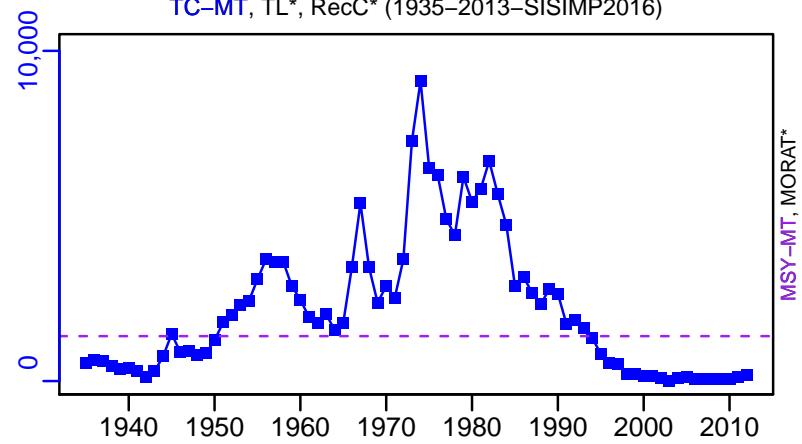


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | --- Lim BRP  | ■ No Data |

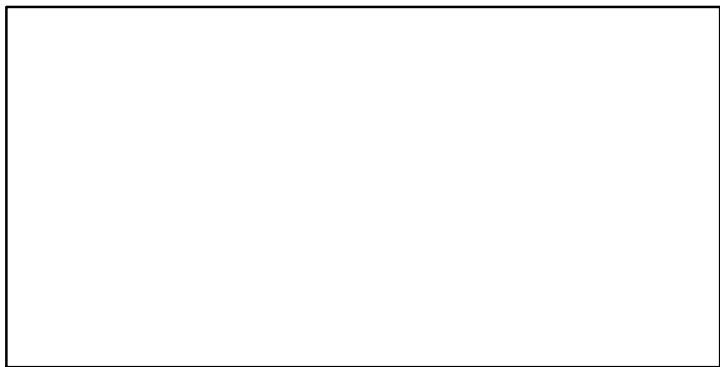
Bocaccio Southern Pacific Coast [BOCACCSPOCOAST]

TC-MT, TL\*, RecC\* (1935–2013–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



EFFORT\*



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

## Brown rockfish Pacific Coast [BRNROCKPCOAST]

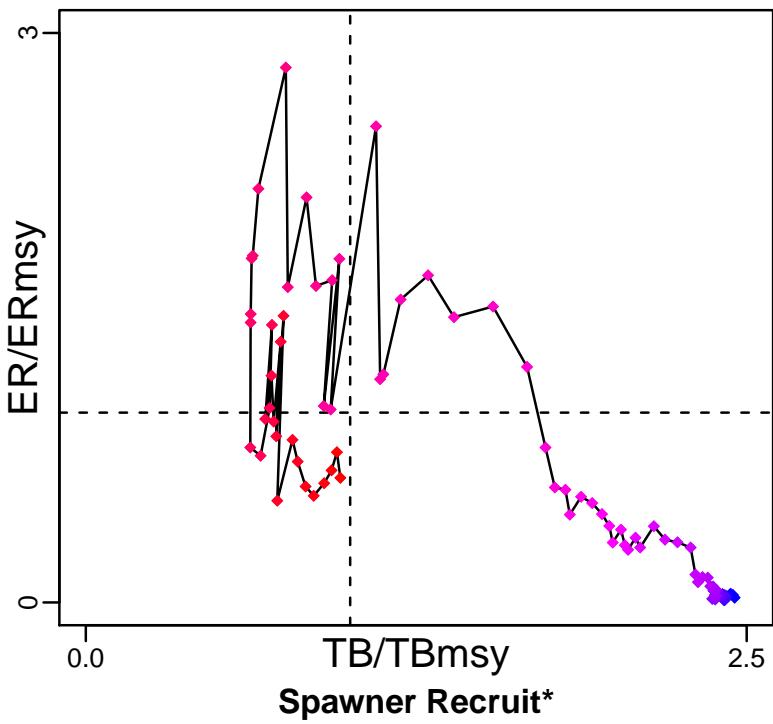
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes auriculatus
<b>Current Assess ID</b>	SWFSC-BRNROCKPCOAST-1916-2012-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<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

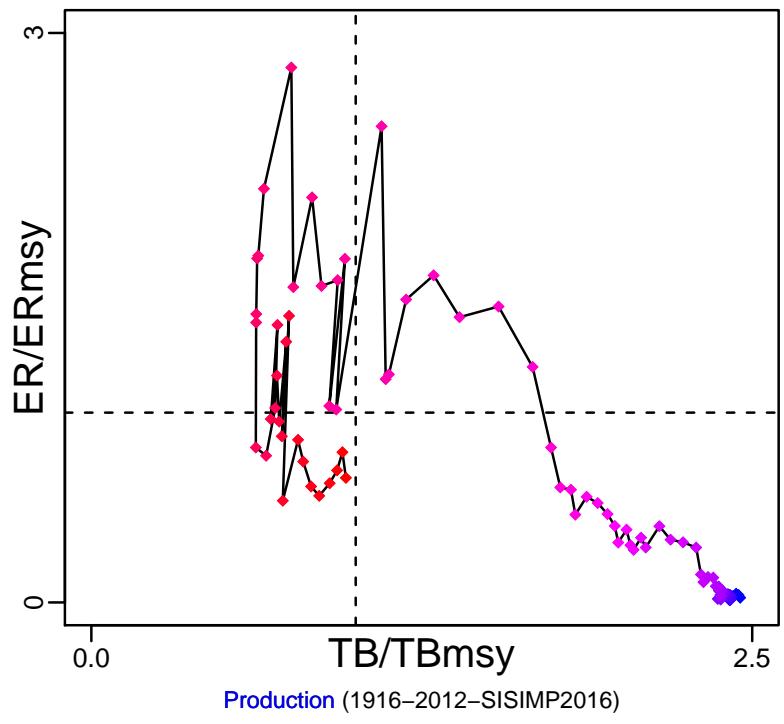
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2012	1450	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2012	0.068	-	-	
<b>TC</b>	TC-MT	2012	95			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2012	0.993			
<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)

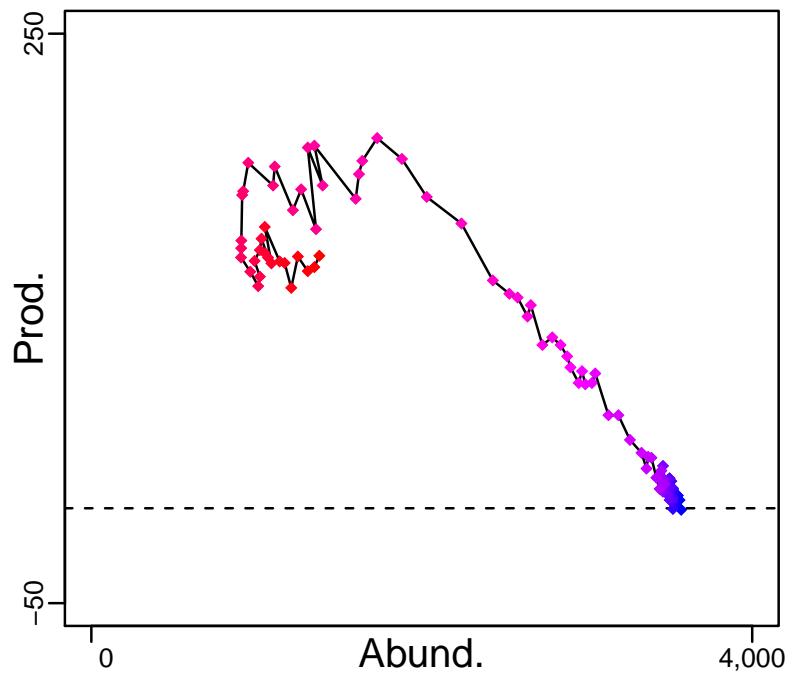


Kobe MGTpref (1916–2012–SISIMP2016)



Spawner Recruit\*

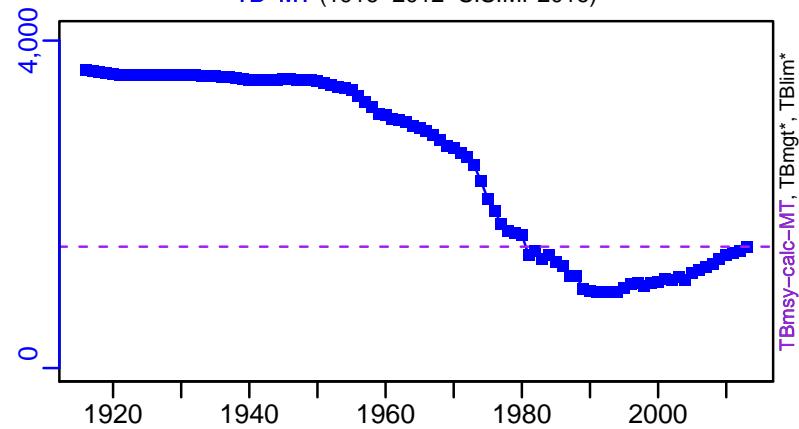
Production (1916–2012–SISIMP2016)



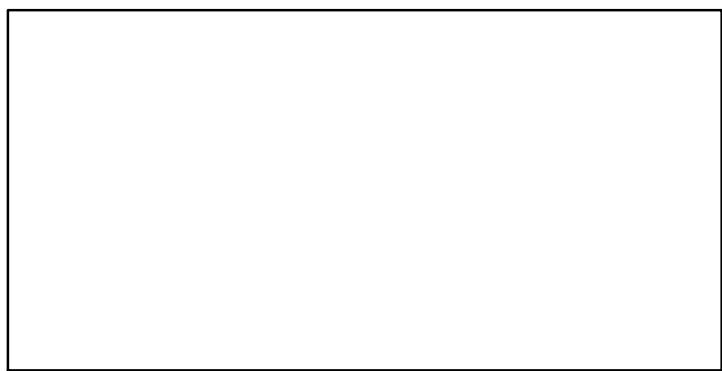
◆ Start Year   ◆ End Year   \* No Data

Brown rockfish Pacific Coast [BRNROCKPCOAST]

TB-MT (1916–2012–SISIMP2016)



SSB\*



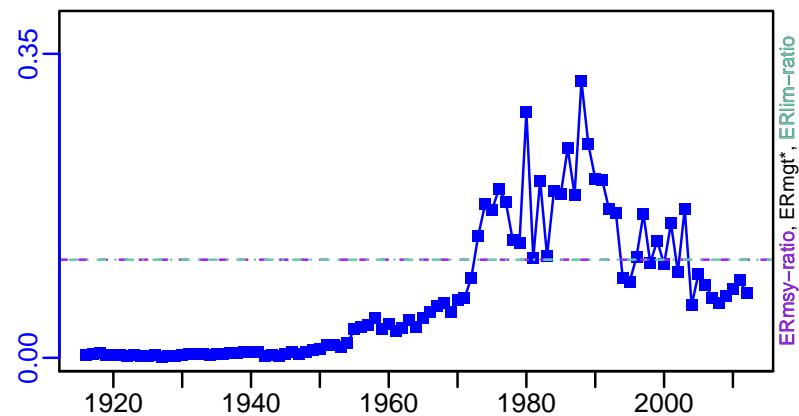
TN \*



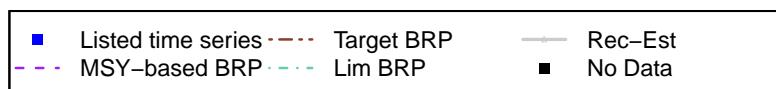
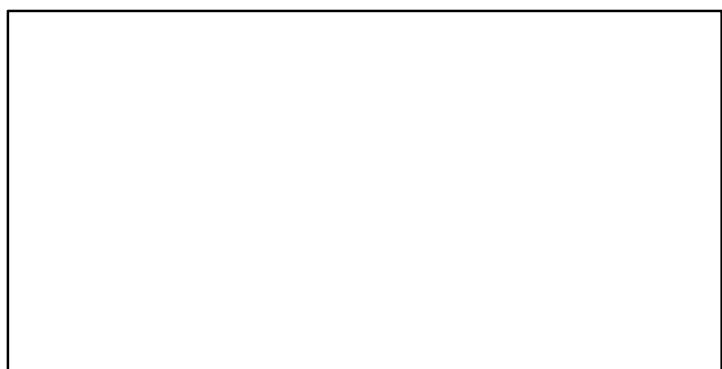
F\*



ER-ratio (1916–2012–SISIMP2016)



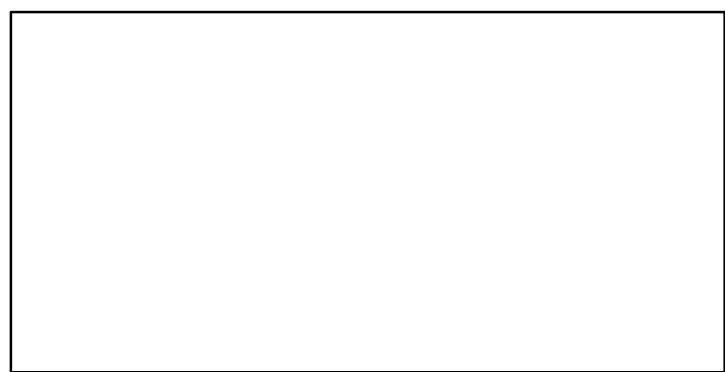
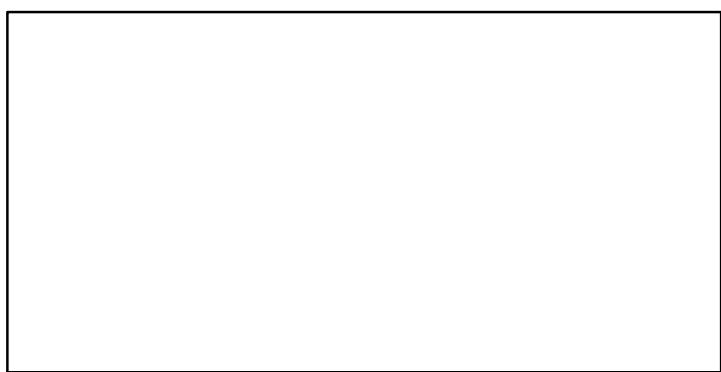
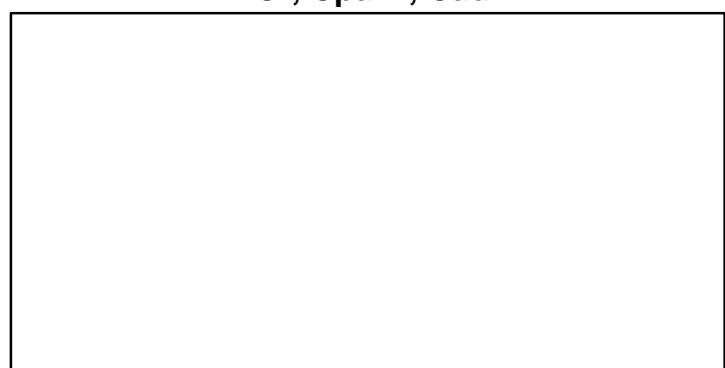
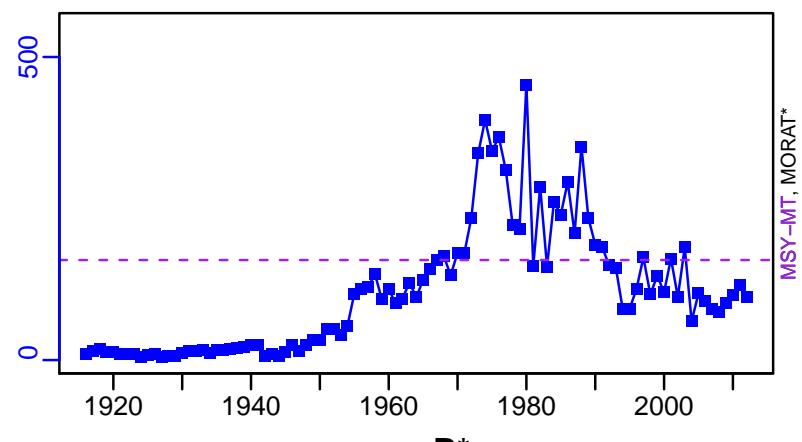
Recruits\*



Brown rockfish Pacific Coast [BRNROCKPCOAST]

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

TAC\*, Cpair\*, Cadv\*



EFFORT\*



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

## Cabezon Northern California [CABEZNCAL]

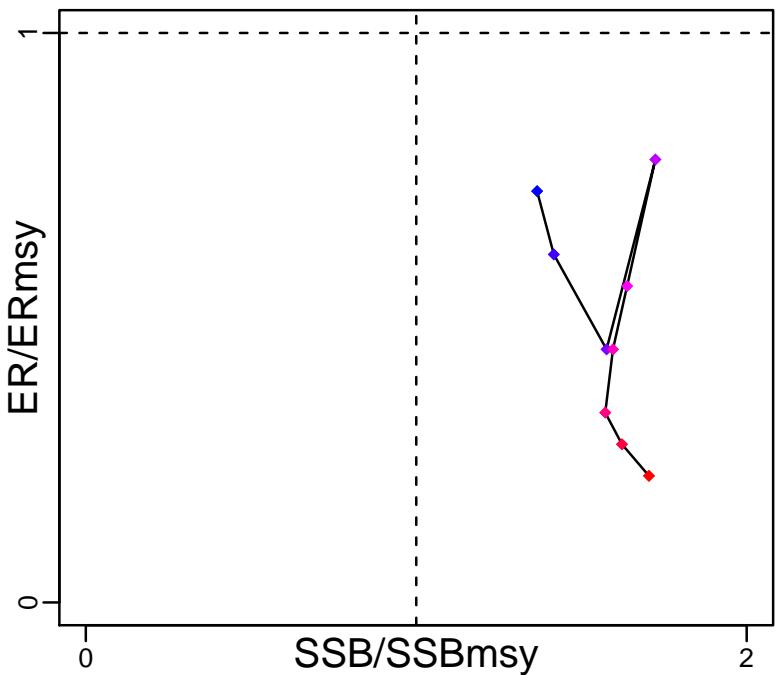
<b>Metadata</b>	
<b>Scientific Name</b>	Scorpaenichthys marmoratus
<b>Current Assess ID</b>	PFMC-CABEZNCAL-1930-2009-CHING
<b>Area</b>	Northern California
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Pacific Fishery Management Council
<b>Asmts in RAM</b>	2009

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2009	717
<b>SSBmsy</b>	SSBmsy-MT	2009	257
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2009	0.18
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2009	1835
<b>SSB0</b>	SSB0-MT	2009	1036
<b>MSY</b>	MSY-MT	2009	129
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

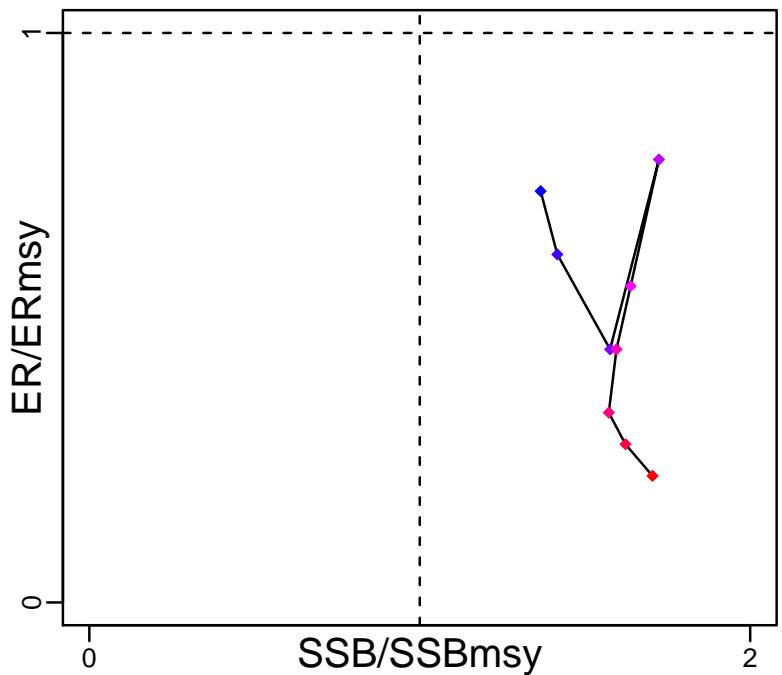
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2009	483	Both	2+
<b>SSB</b>	SSB-MT	2009	469	Females	3+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2009	776	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2009	0.04	-	-
<b>TC</b>	TC-MT	2009	39		
<b>TL</b>	TL-MT	2009	20		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2009	0.674		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2009	1.825		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2009	0.222		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Cabezon Northern California [CABEZNCAL]**

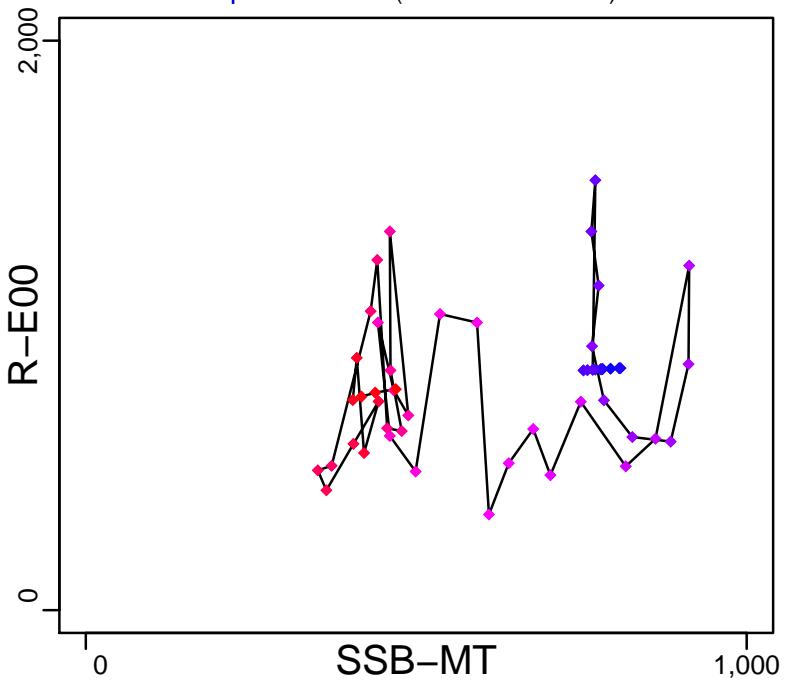
Kobe MSYpref (1930–2009–CHING)



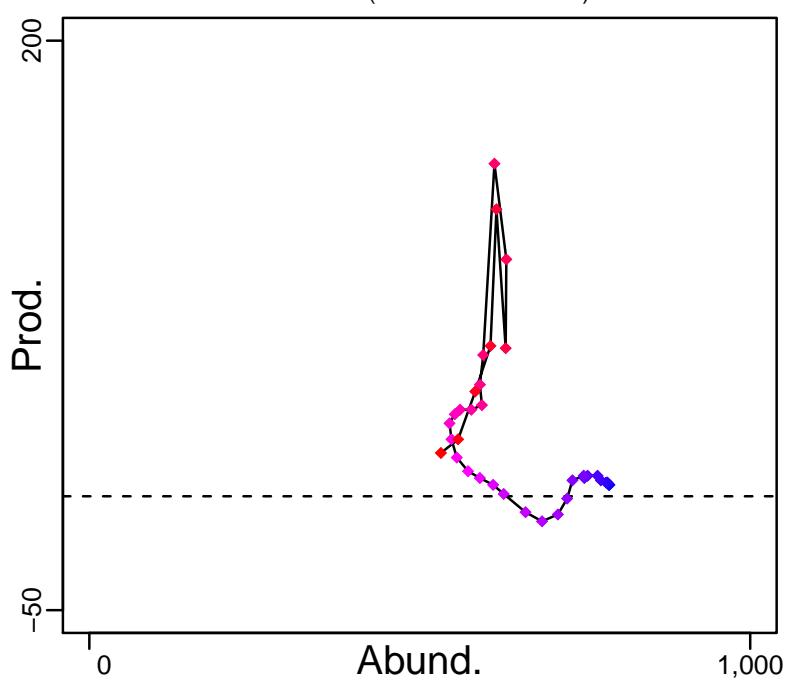
Kobe MGTPref (1930–2009–CHING)



Spawner Recruit (1930–2009–CHING)



Production (1930–2009–CHING)

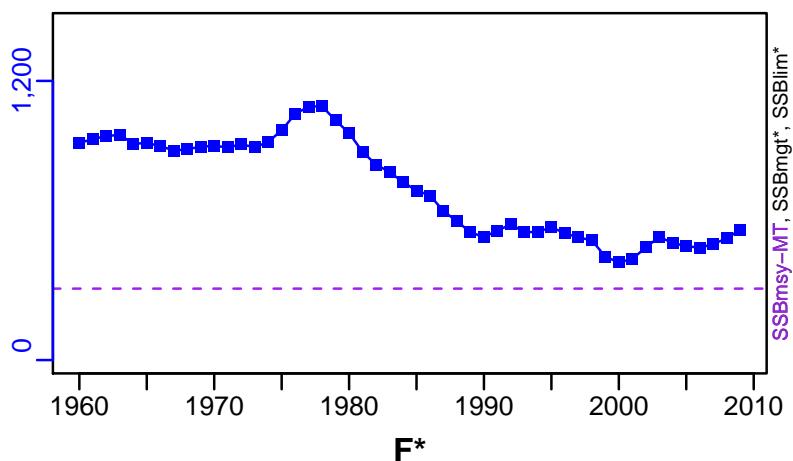
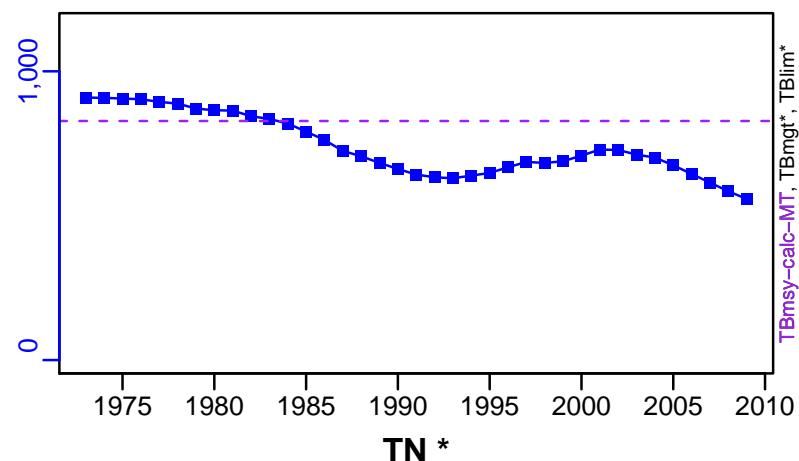


◆ Start Year   ◆ End Year   \* No Data

### Cabezon Northern California [CABEZNCAL]

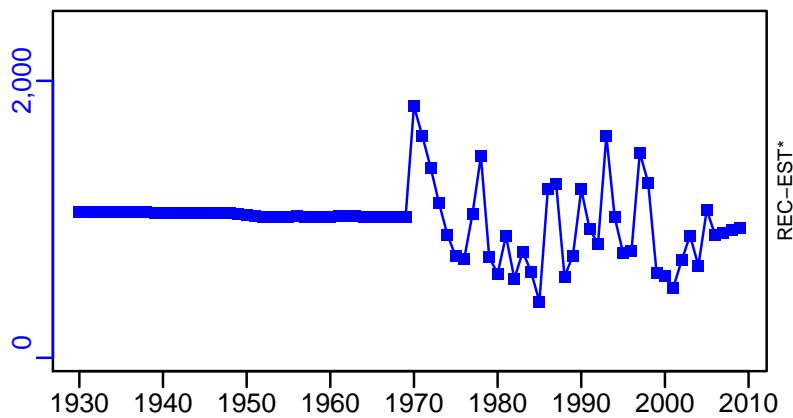
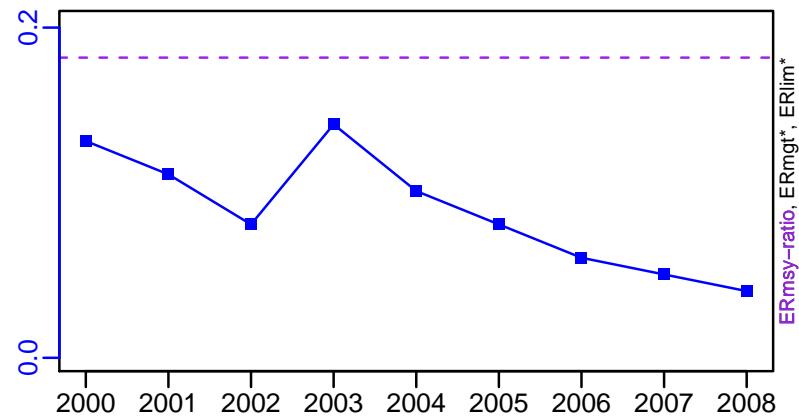
TB-MT (1930–2009–CHING)

SSB-MT (1930–2009–CHING)



ER-ratio (1930–2009–CHING)

R-E00 (1930–2009–CHING)

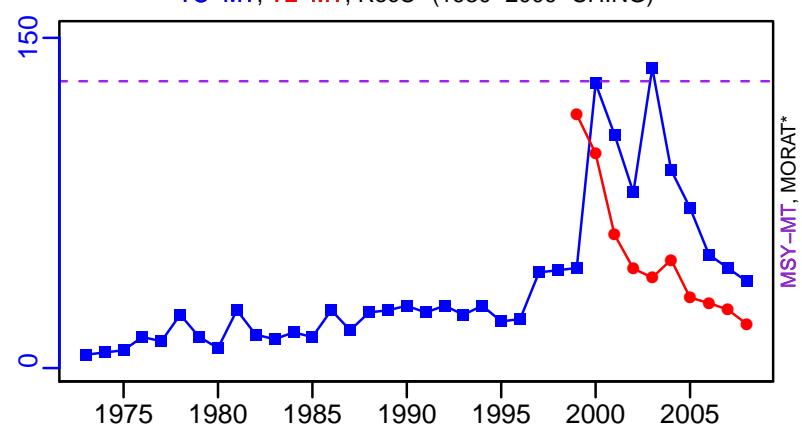


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - Lim BRP  | ■ No Data |

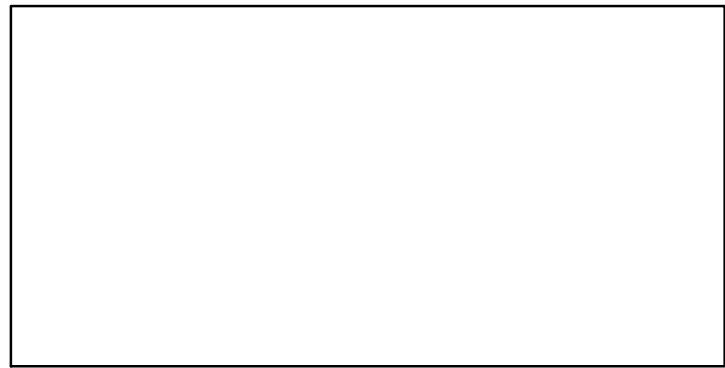
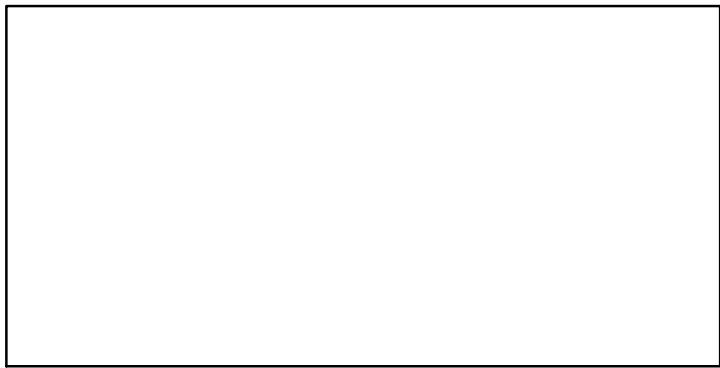
Cabezon Northern California [CABEZNCAL]

TC-MT, TL-MT, RecC\* (1930–2009–CHING)

TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



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

## Cabezon Oregon Coast [CABEZORECOAST]

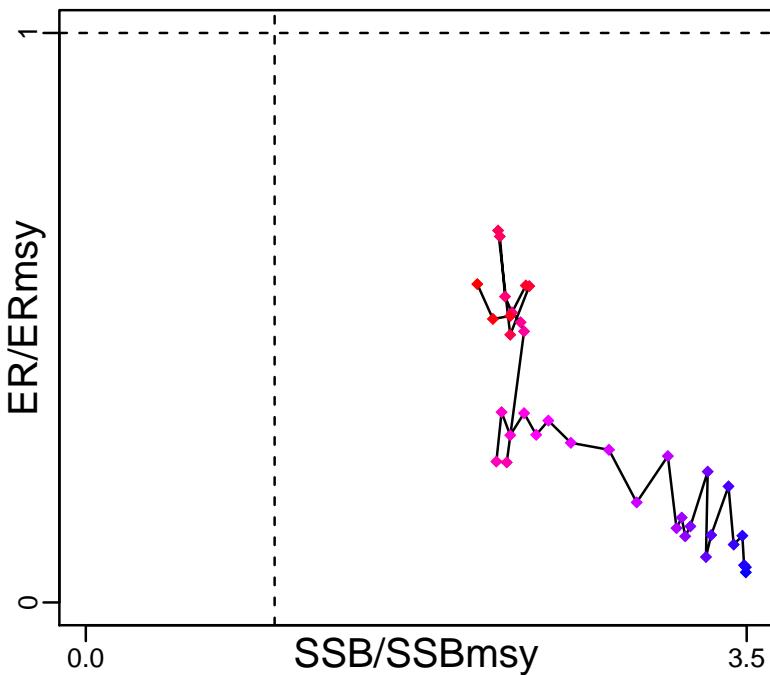
<b>Metadata</b>	
<b>Scientific Name</b>	Scorpaenichthys marmoratus
<b>Current Assess ID</b>	NWFSC-CABEZORECOAST-1973-2009-STACHURA
<b>Area</b>	Oregon Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2009

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2009	300
<b>SSBmsy</b>	SSBmsy-MT	2009	109
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2009	0.16
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2009	409
<b>MSY</b>	MSY-MT	2009	48
<b>M</b>	M-1/yr	2009	0.25
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

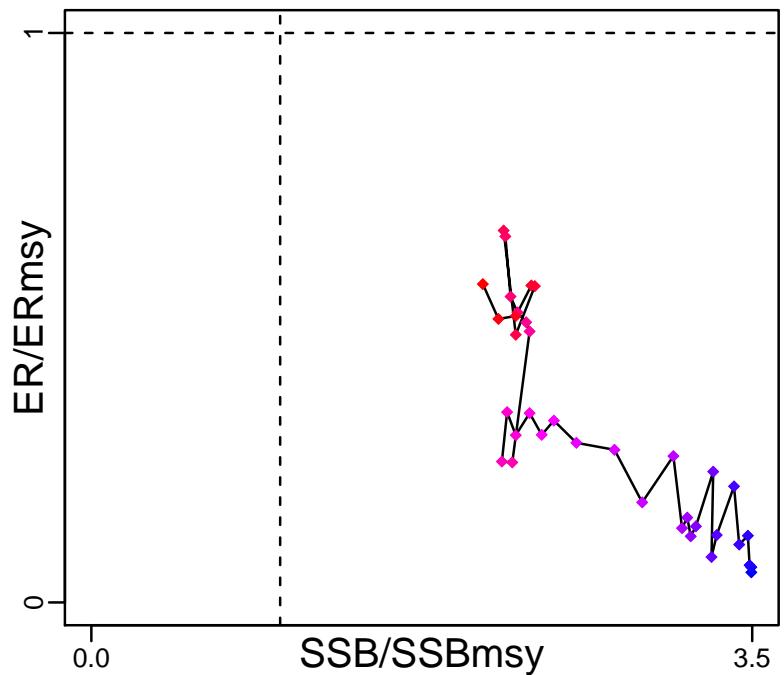
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2009	455	-	2+	
<b>SSB</b>	SSB-MT	2009	214	Females	3.86	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2009	178,000	-	0	
<b>F</b>	F-1/yr	2009	0.742	-	-	
<b>ER</b>	ER-calc-ratio	2009	0.089	-	-	
<b>TC</b>	TC-MT	2009	43			
<b>TL</b>	TL-MT	2009	43			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2009	1.517			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2009	1.963			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-ratio	2009	0.559			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Cabezon Oregon Coast [CABEZORECOAST]

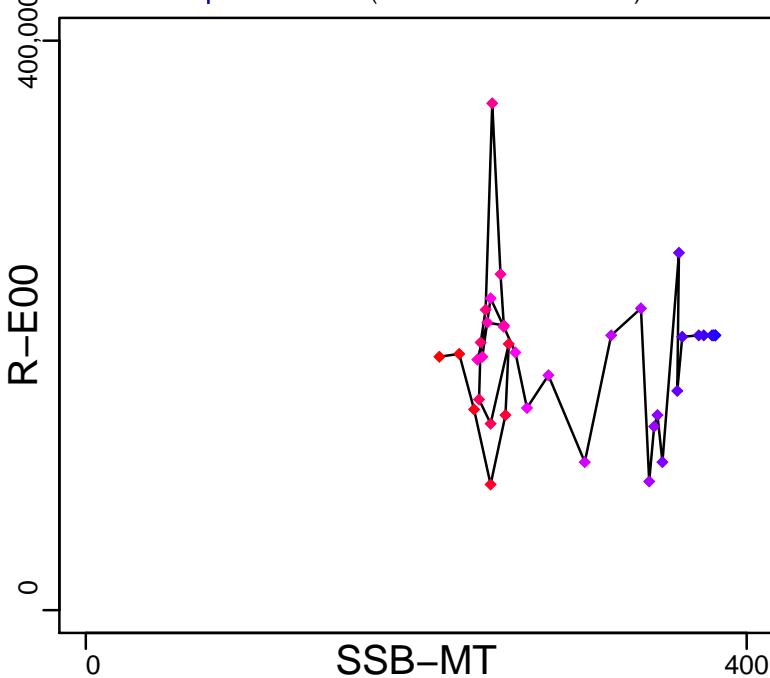
Kobe MSYpref (1973–2009–STACHURA)



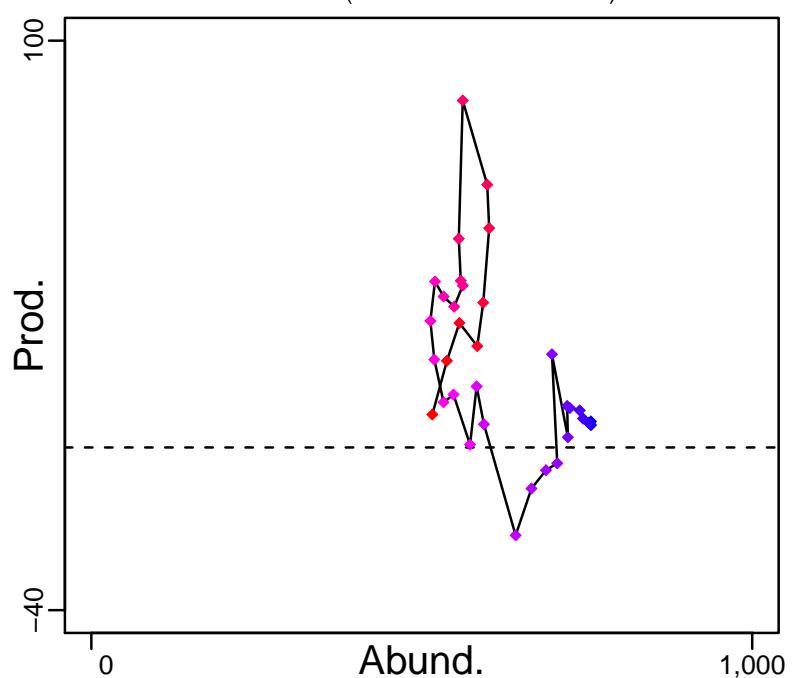
Kobe MGTpref (1973–2009–STACHURA)



Spawner Recruit (1973–2009–STACHURA)



Production (1973–2009–STACHURA)

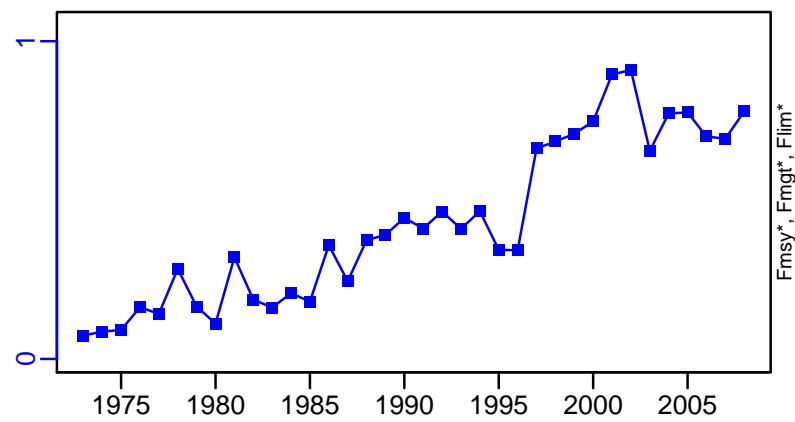
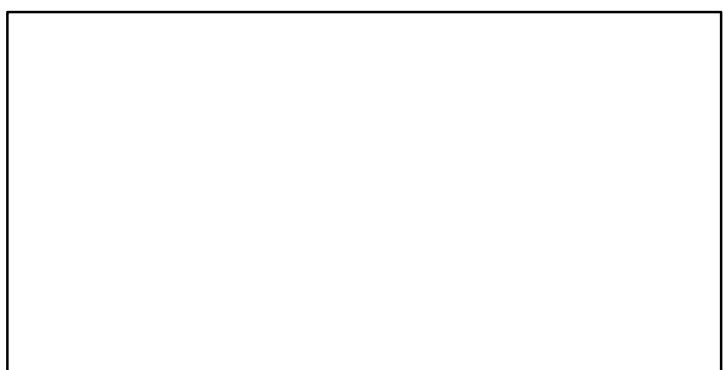
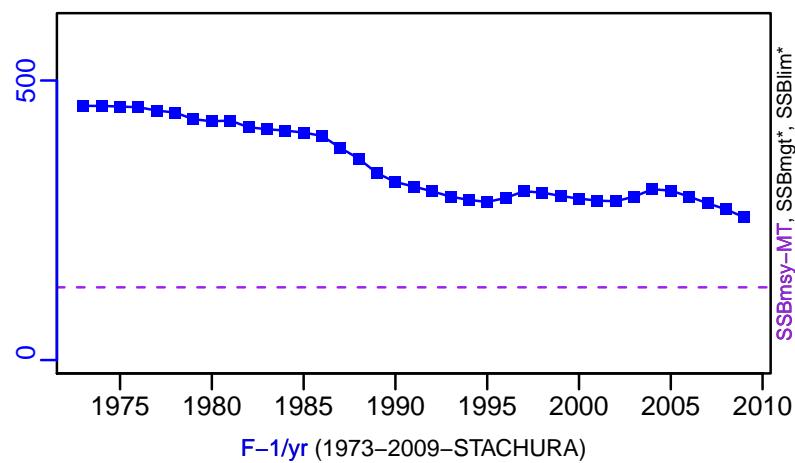
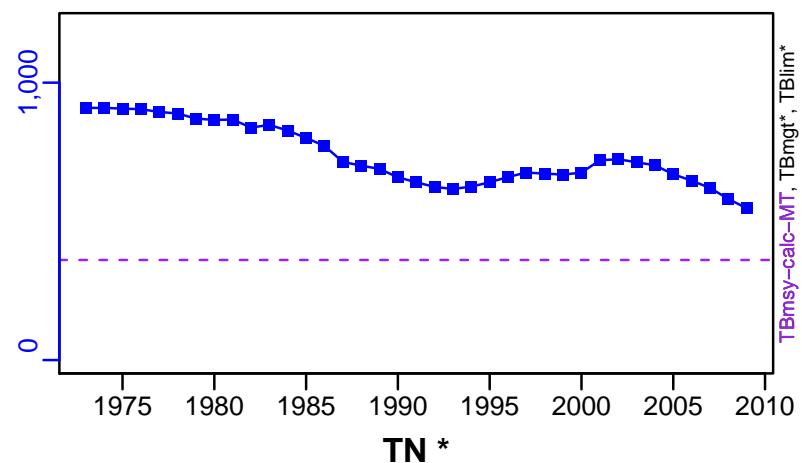


◆ Start Year	◆ End Year	*	No Data
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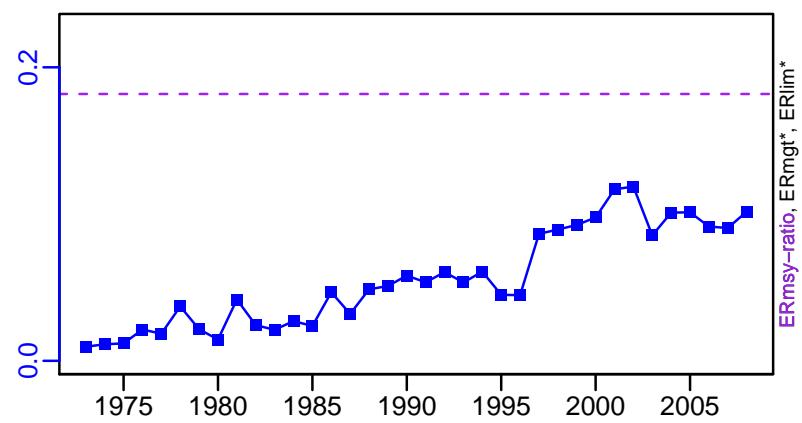
Cabezon Oregon Coast [CABEZORECOAST]

TB-MT (1973–2009–STACHURA)

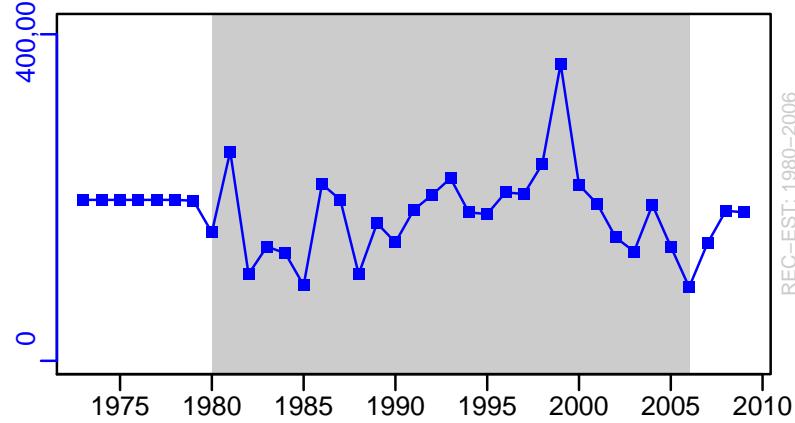
SSB-MT (1973–2009–STACHURA)



ER-calc-ratio (1973–2009–STACHURA)



R-E00 (1973–2009–STACHURA)

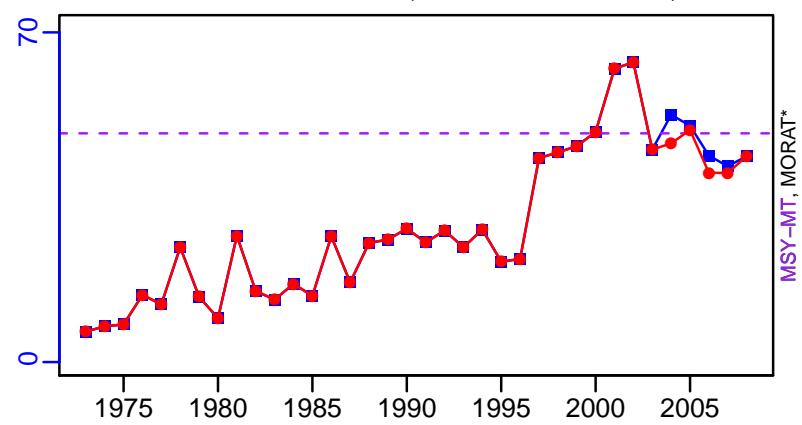


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - Lim BRP  | ■ No Data |

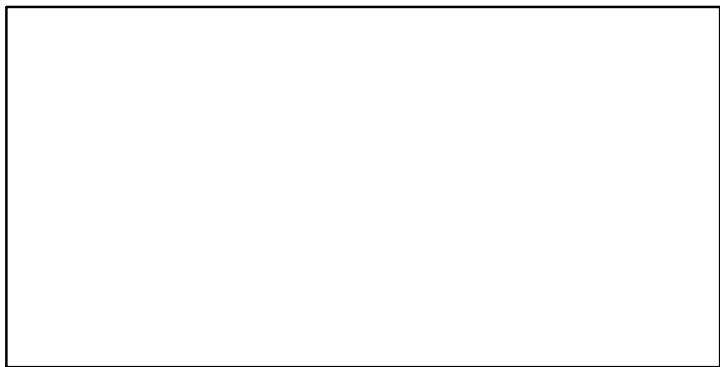
Cabezon Oregon Coast [CABEZORECOAST]

TC-MT, TL-MT, RecC\* (1973–2009-STACHURA)

TAC\*, Cpair\*, Cadv\*



EFFORT\*



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

## Cabezon Southern California [CABEZSCAL]

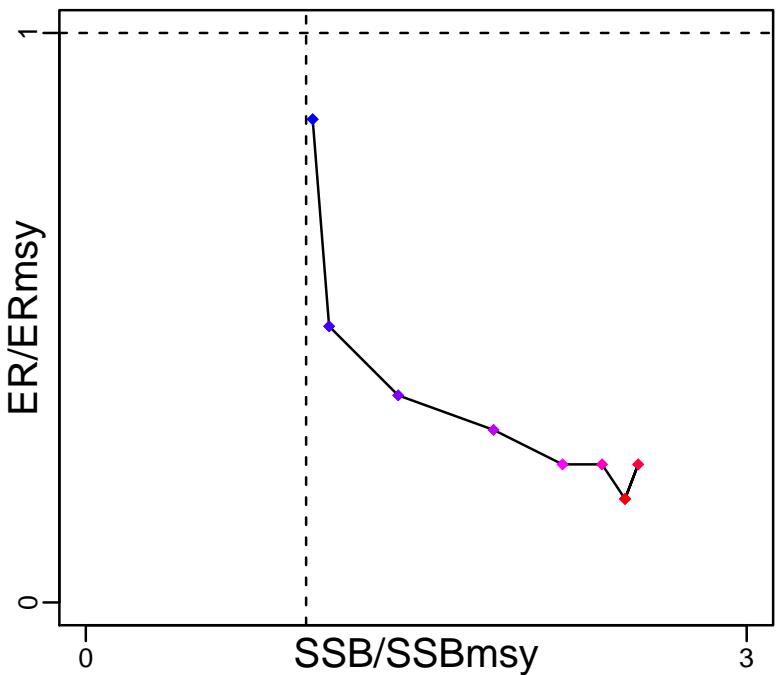
Metadata	
<b>Scientific Name</b>	Scorpaenichthys marmoratus
<b>Current Assess ID</b>	PFMC-CABEZSCAL-1930-2009-CHING
<b>Area</b>	Southern California
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Pacific Fishery Management Council
<b>Asmts in RAM</b>	2009

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2009	182
<b>SSBmsy</b>	SSBmsy-MT	2009	67
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2009	0.165
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2009	470
<b>SSB0</b>	SSB0-MT	2009	263
<b>MSY</b>	MSY-MT	2009	30
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

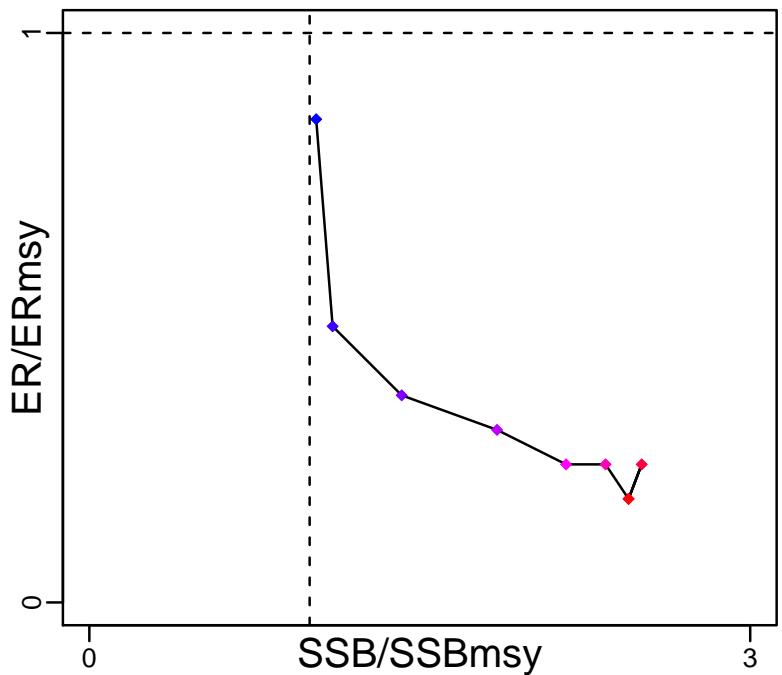
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2009	789	Both	2+
<b>SSB</b>	SSB-MT	2009	158	Females	3+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2009	192	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2009	0.03	-	-
<b>TC</b>	TC-MT	2009	10		
<b>TL</b>	TL-MT	2009	3.9		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2009	4.34		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2009	2.358		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2009	0.182		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

**Cabezon Southern California [CABEZSCAL]**

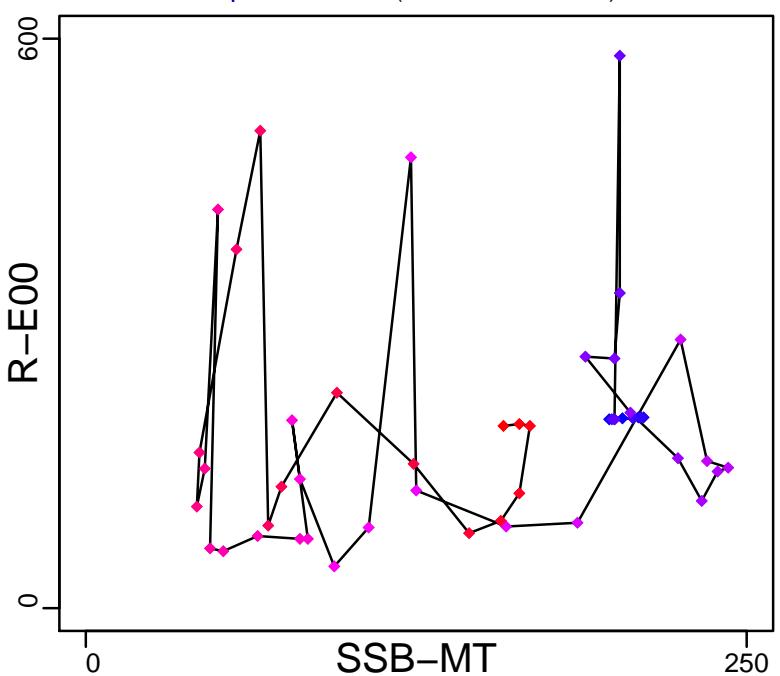
Kobe MSYpref (1930–2009–CHING)



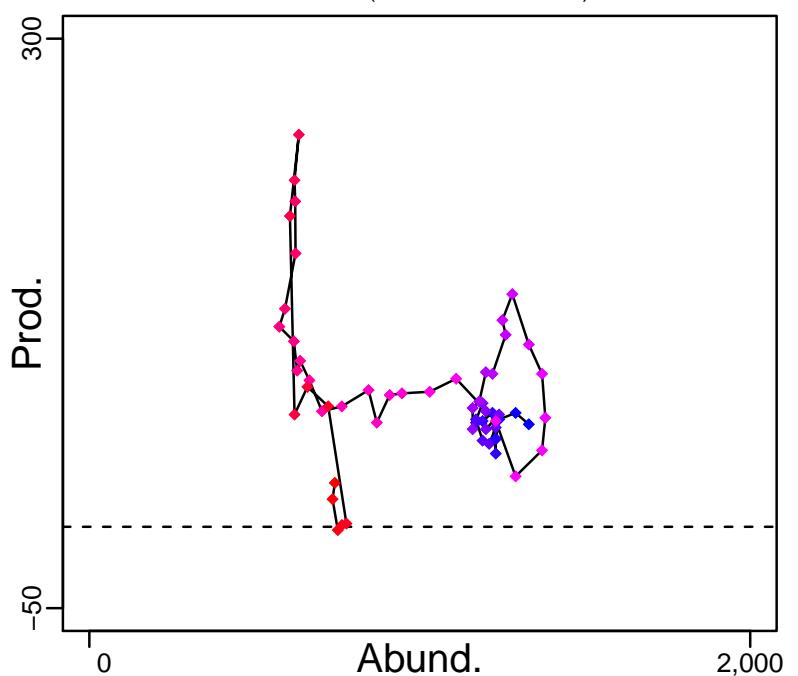
Kobe MGTPref (1930–2009–CHING)



Spawner Recruit (1930–2009–CHING)



Production (1930–2009–CHING)

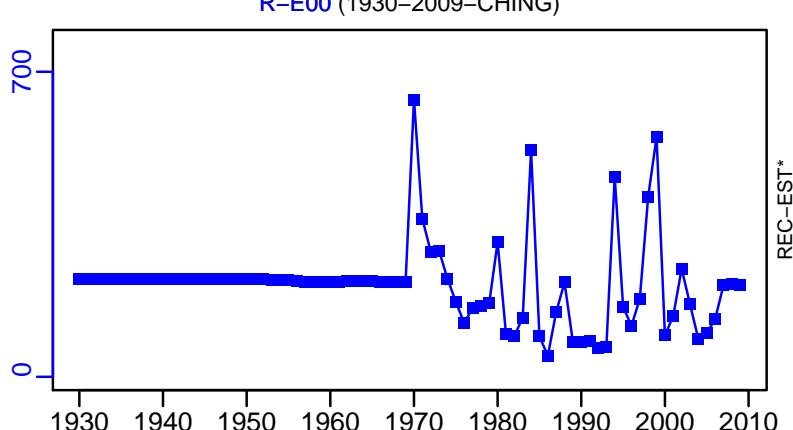
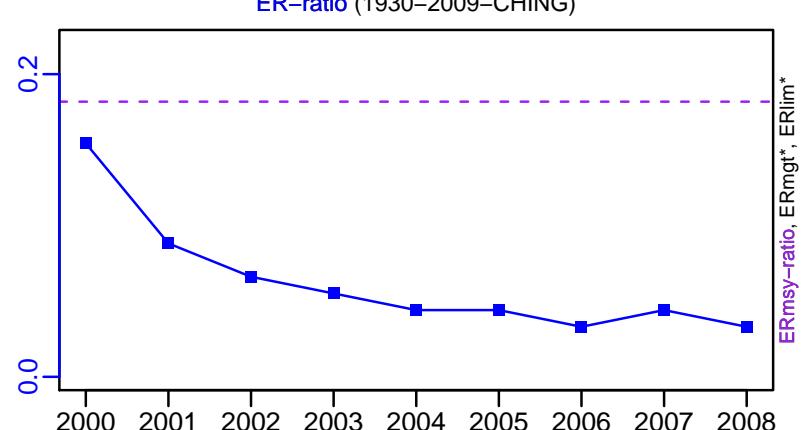
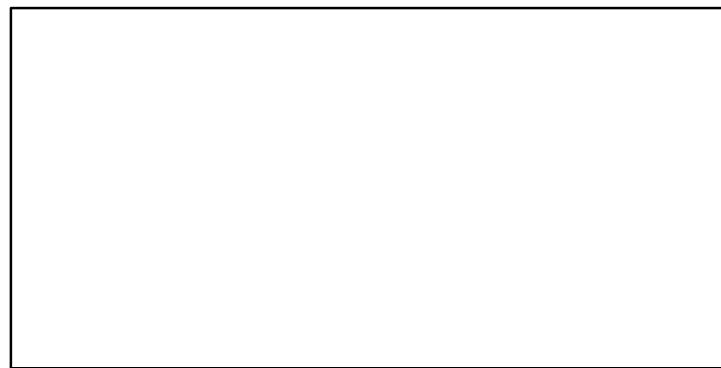
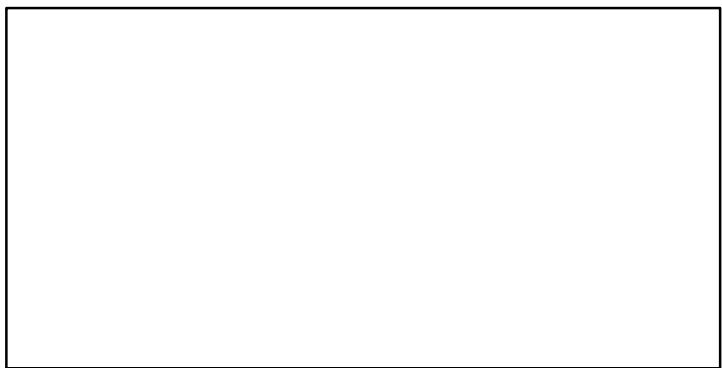
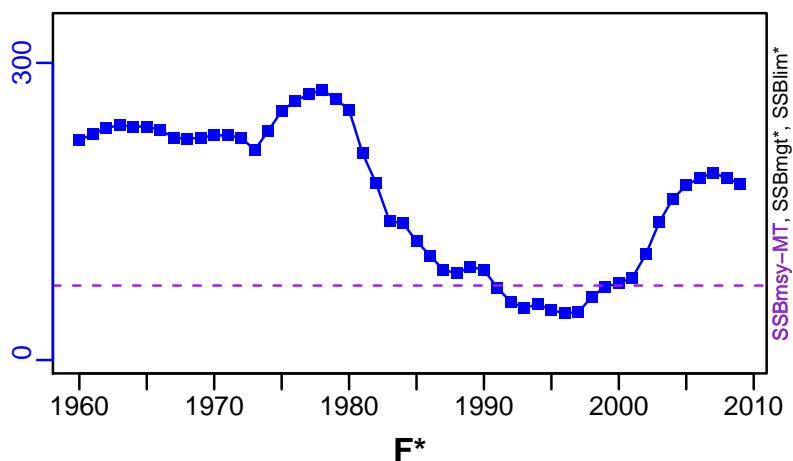
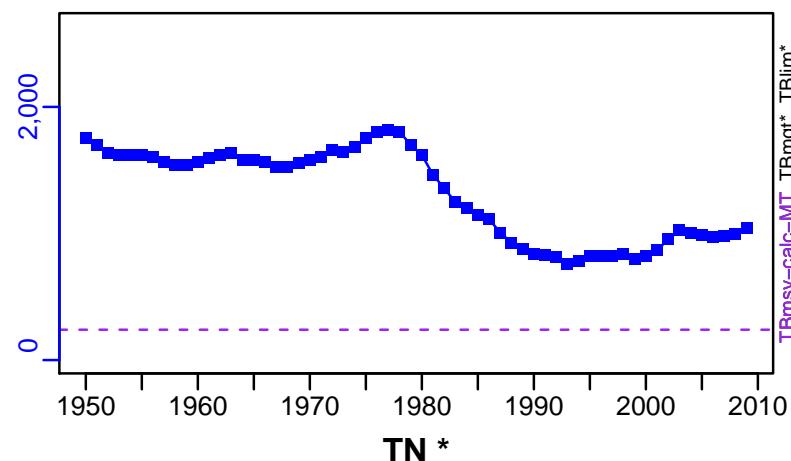


◆ Start Year   ◆ End Year   \* No Data

### Cabezon Southern California [CABEZSCAL]

TB-MT (1930–2009–CHING)

SSB-MT (1930–2009–CHING)

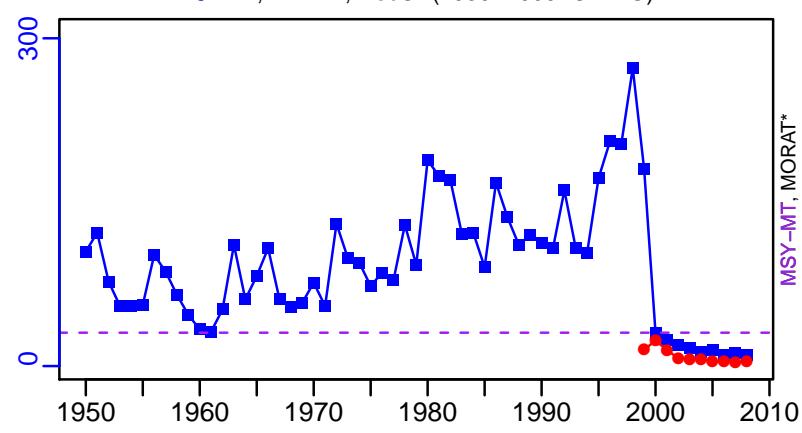


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - Lim BRP  | ■ No Data |

Cabezon Southern California [CABEZSCAL]

TC-MT, TL-MT, RecC\* (1930–2009–CHING)

TAC\*, Cpair\*, Cadv\*



survB\*

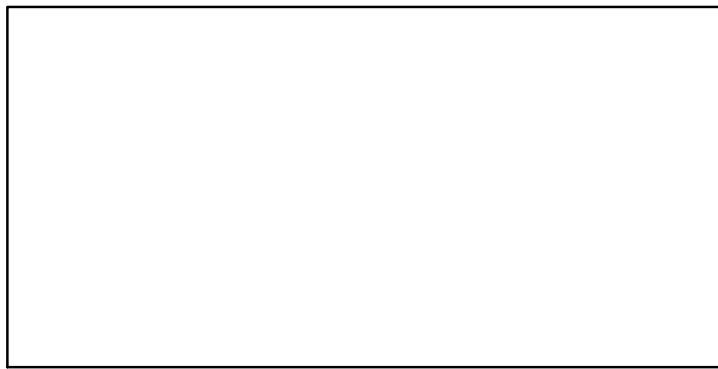
MSY-MT, MORAT\*



CPUE\*



EFFORT\*



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

## California scorpionfish Southern California [CALSCORPSCAL]

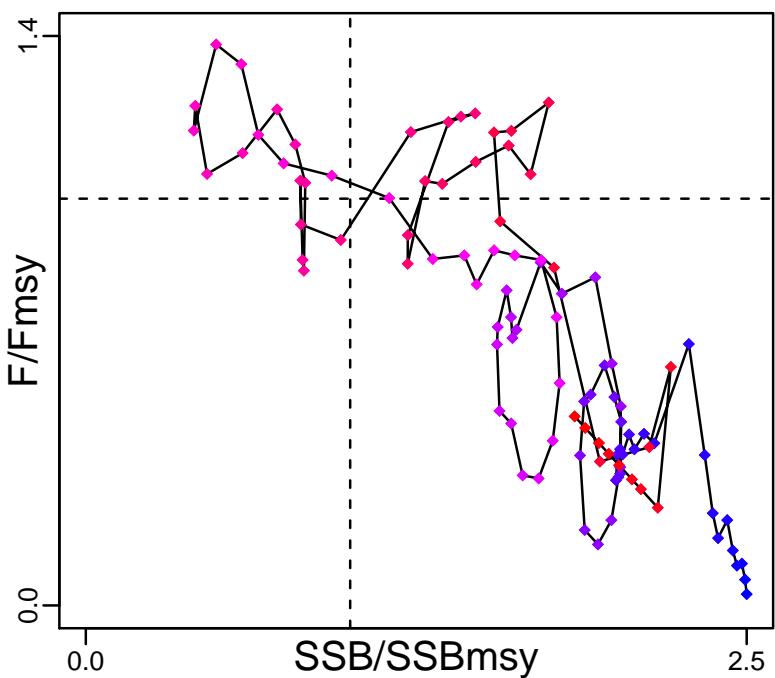
<b>Metadata</b>	
<b>Scientific Name</b>	Scorpaena guttata
<b>Current Assess ID</b>	SWFSC-CALSCORPSCAL-1914-2015-SISIMP2016
<b>Area</b>	Southern California
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2005

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2005	789
<b>SSBmsy</b>	SSBmsy-MT	2015	392
<b>Fmsy</b>	Fmsy-1/yr	2015	0.5
<b>ERmsy</b>	ERmsy-ratio	2005	0.161
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2005	2007
<b>SSB0</b>	SSB0-MT	2005	1024
<b>MSY</b>	MSY-MT	2005	127
<b>M</b>	M-1/yr	2005	0.25
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	245
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

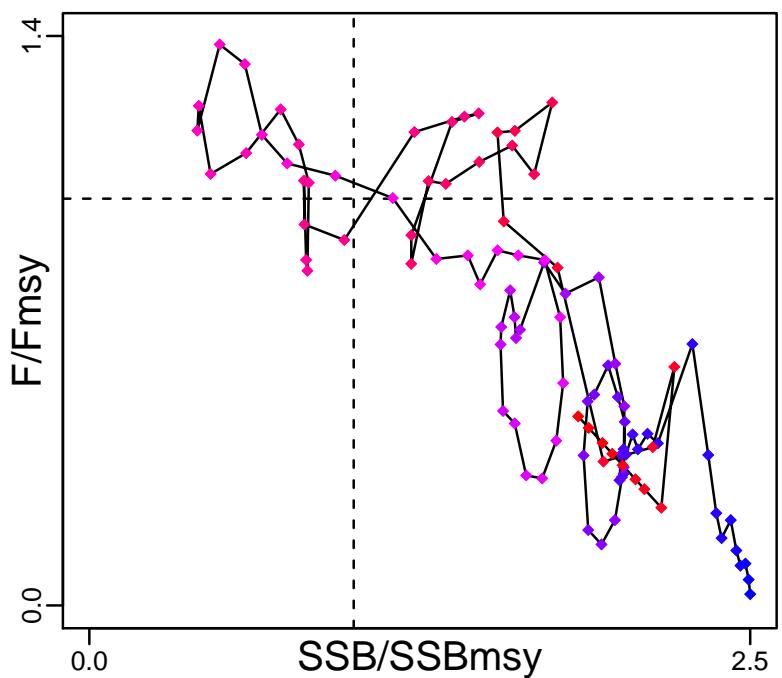
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2015	1550	-	2+	
<b>SSB</b>	SSB-MT	2015	708	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	1900	-	0	
<b>F</b>	F-1/yr	2015	0.232	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.078	-	-	
<b>TC</b>	TC-MT	2015	124			
<b>TL</b>	TL-MT	2005	81			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2005	2.371			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2015	1.805			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.465			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2005	0.441			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

California scorpionfish Southern California [CALSCORPSCAL]

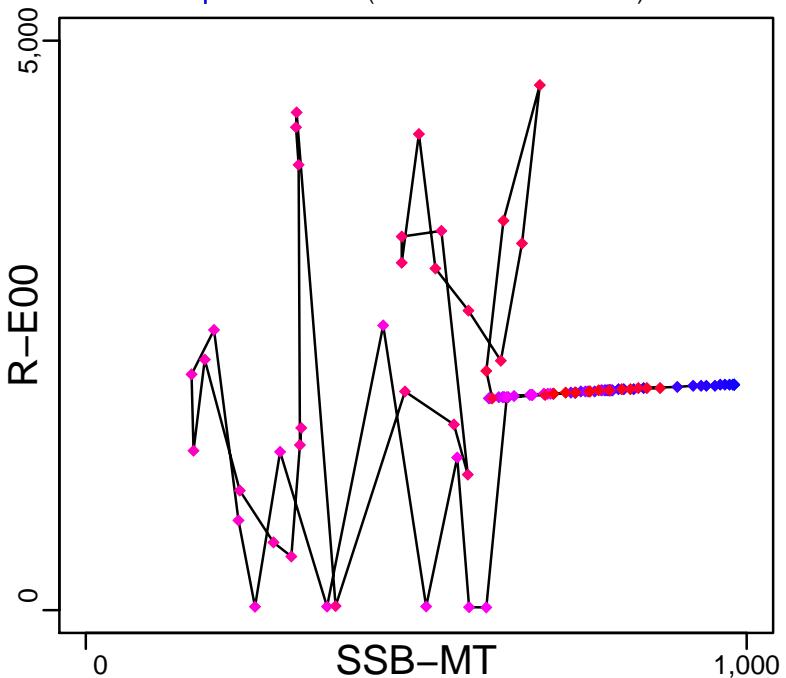
Kobe MSYpref (1914–2015–SISIMP2016)



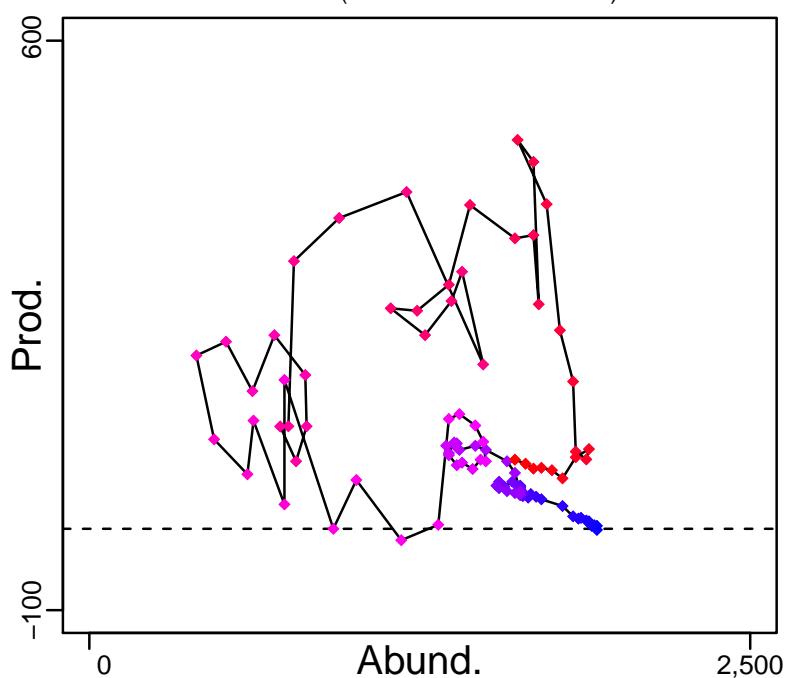
Kobe MGTpref (1914–2015–SISIMP2016)



Spawner Recruit (1914–2015–SISIMP2016)



Production (1914–2015–SISIMP2016)

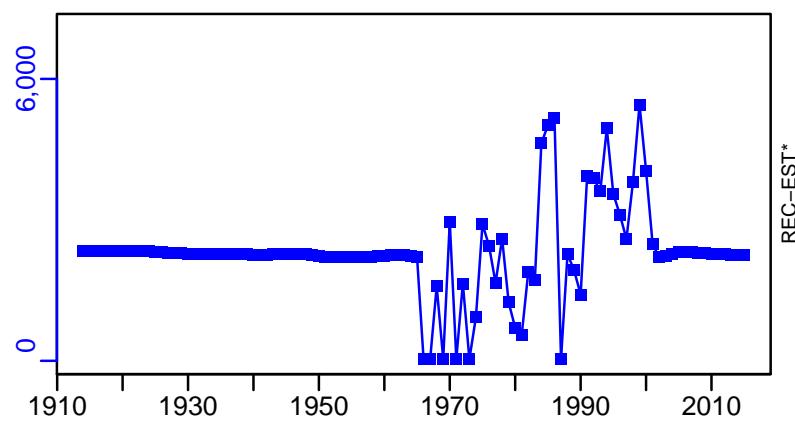
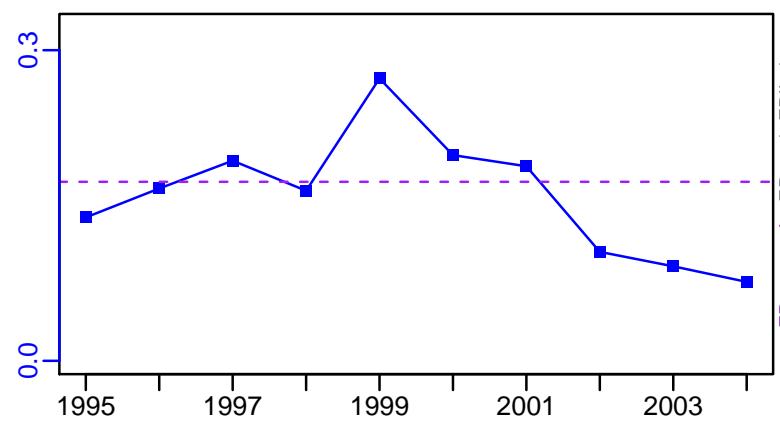
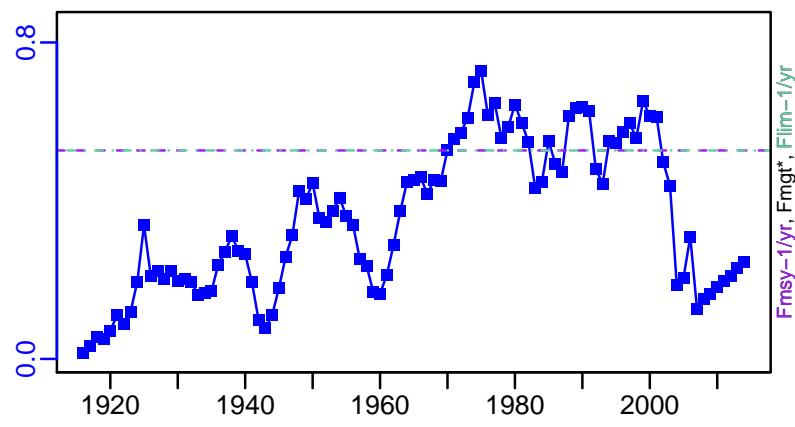
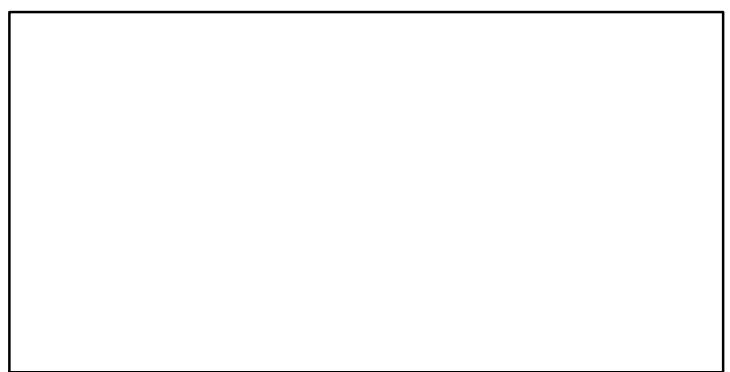
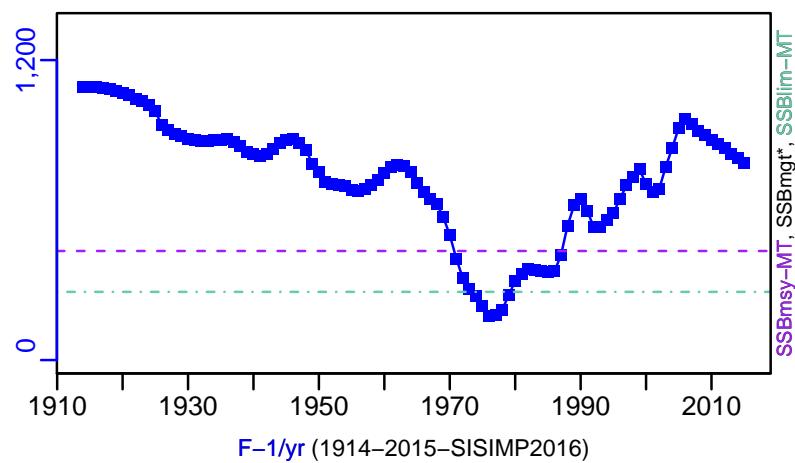
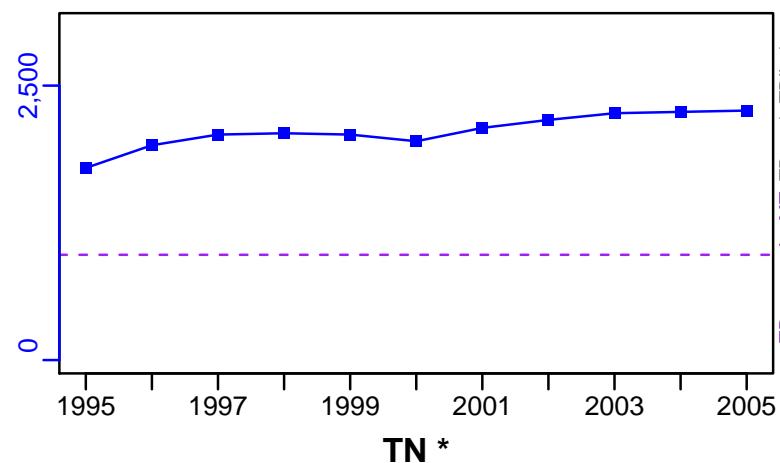


◆ Start Year ♦ End Year \* No Data

California scorpionfish Southern California [CALSCORPSCAL]

TB-MT (1990–2005-STANTON)

SSB-MT (1914–2015-SISIMP2016)

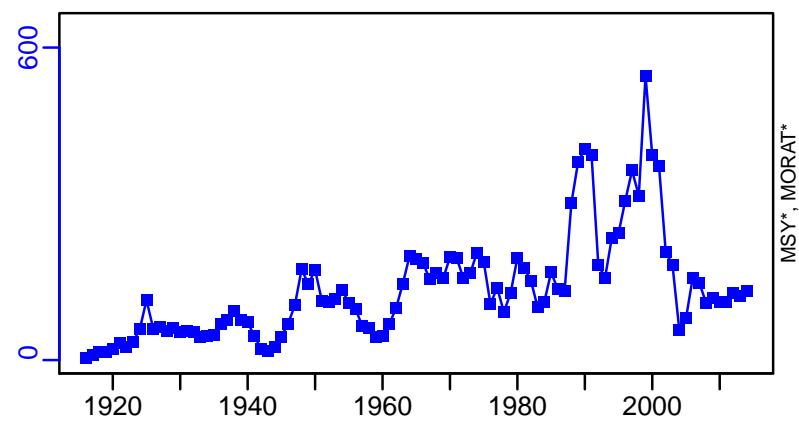


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	— Lim BRP	■ No Data

**California scorpionfish Southern California [CALSCORPSCAL]**

TC-MT, TL\*, RecC\* (1914–2015–SISIMP2016)

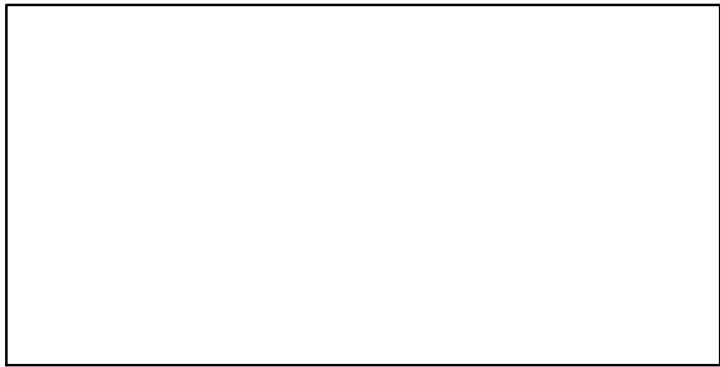
TAC\*, Cpair\*, Cadv\*



TAC\*, Cpair\*, Cadv\*



EFFORT\*



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

## Chilipepper Southern Pacific Coast [CHILISPSCOAST]

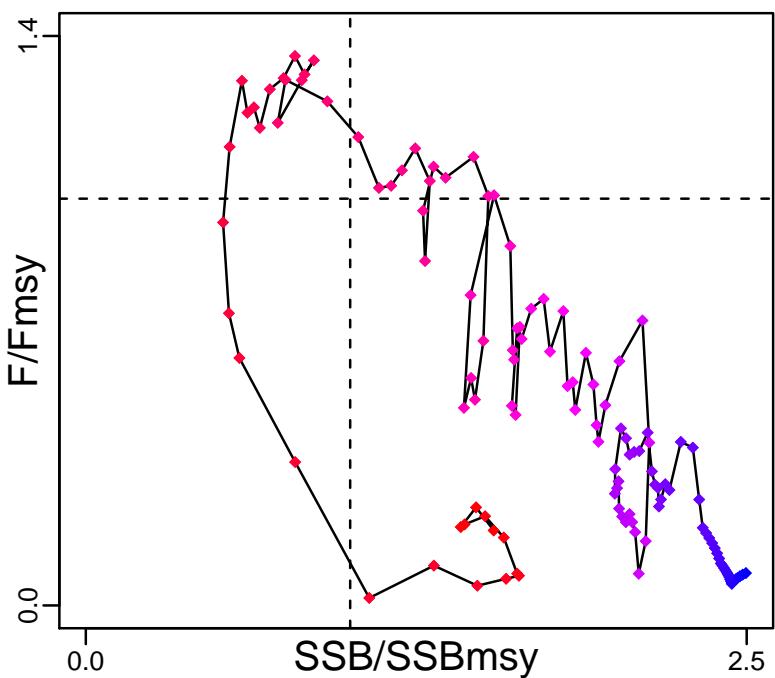
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes goodei
<b>Current Assess ID</b>	SWFSC-CHILISPSCOAST-1892-2015-SISIMP2016
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2007, 2015

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2007	19,321
<b>SSBmsy</b>	SSBmsy-E00larvae	2015	$2.82 \times 10^9$
<b>Fmsy</b>	Fmsy-1/yr	2015	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	2015	2133
<b>M</b>	M-1/yr	2007	0.16
<b>TBlim</b>	TBlim-MT	2007	8666
<b>SSBlim</b>	SSBlim-E00larvae	2015	$1.76 \times 10^9$
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

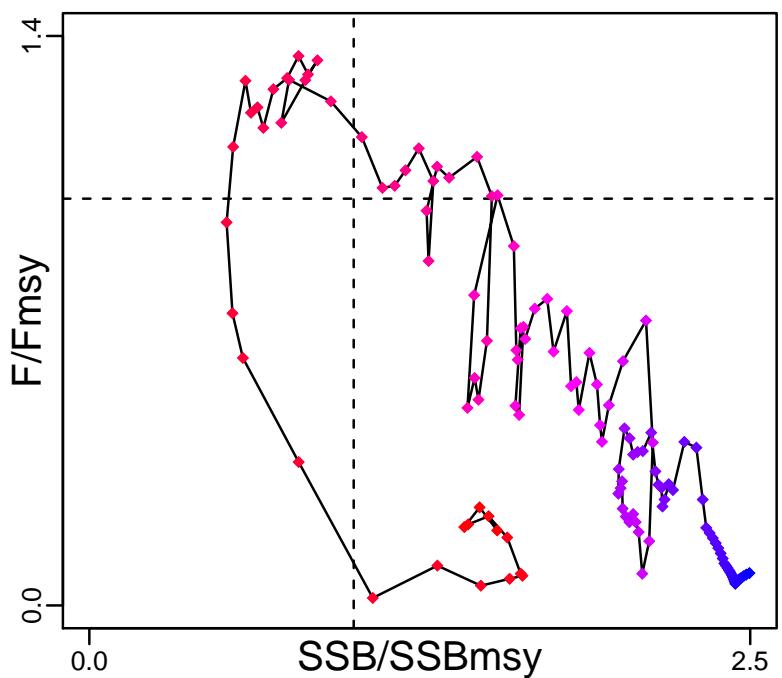
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2015	36,700	-	2+	
<b>SSB</b>	SSB-E00larvae	2015	$4.5 \times 10^9$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	37,700,000	-	0	
<b>F</b>	F-1/yr	2015	0.092	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.009	-	-	
<b>TC</b>	TC-MT	2015	325			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2007	1.739			
<b>SSB/SSBmsy</b>	SSB-E00larvae/SSBmsy-E00larvae	2015	1.597			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.184			
<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 [CHILISPSCOAST]

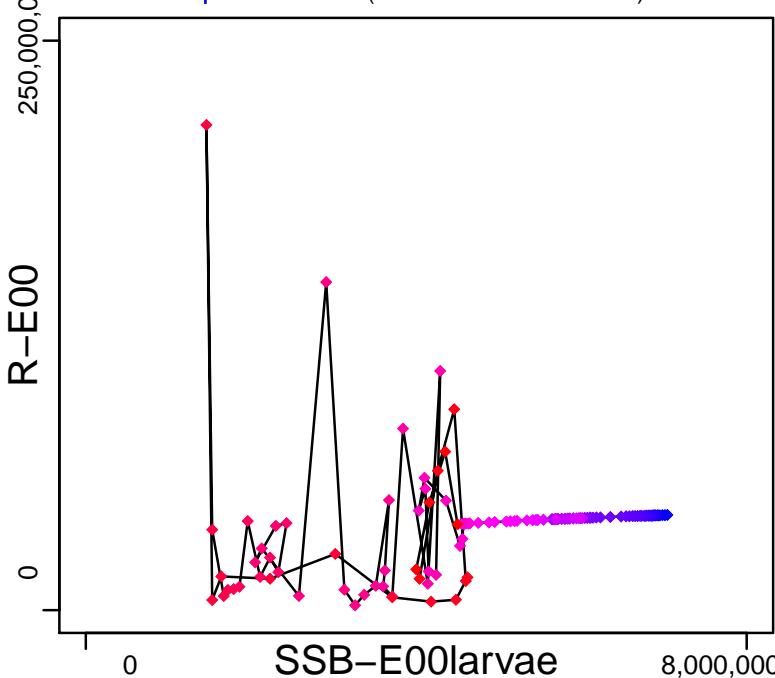
Kobe MSYpref (1892–2015–SISIMP2016)



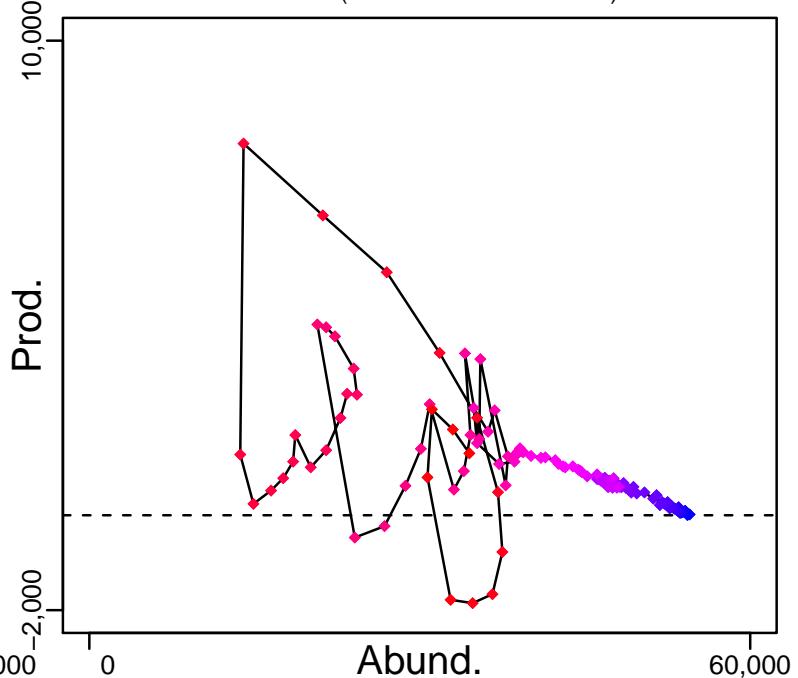
Kobe MGTpref (1892–2015–SISIMP2016)



Spawner Recruit (1892–2015–SISIMP2016)



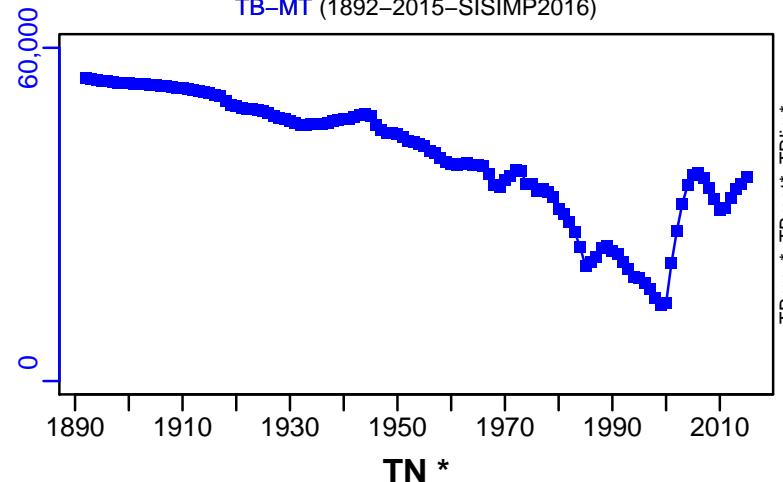
Production (1892–2015–SISIMP2016)



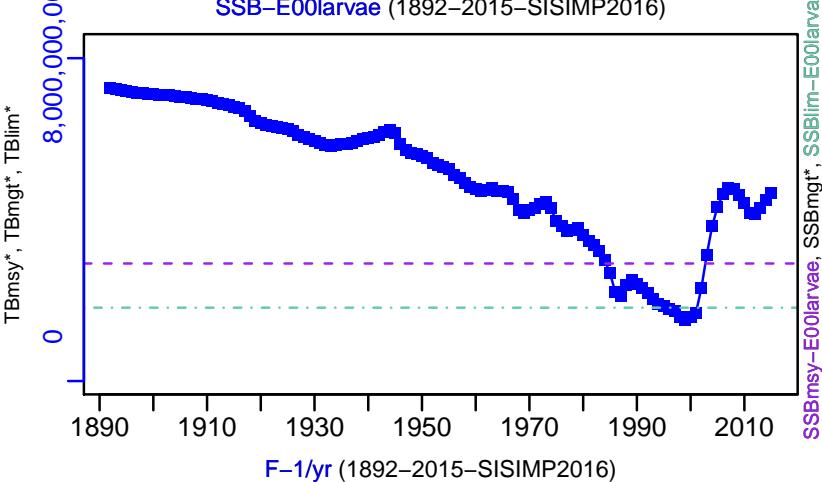
◆ Start Year ◆ End Year \* No Data

### Chilipepper Southern Pacific Coast [CHILISPSCOAST]

TB-MT (1892–2015–SISIMP2016)



SSB-E00larvae (1892–2015–SISIMP2016)

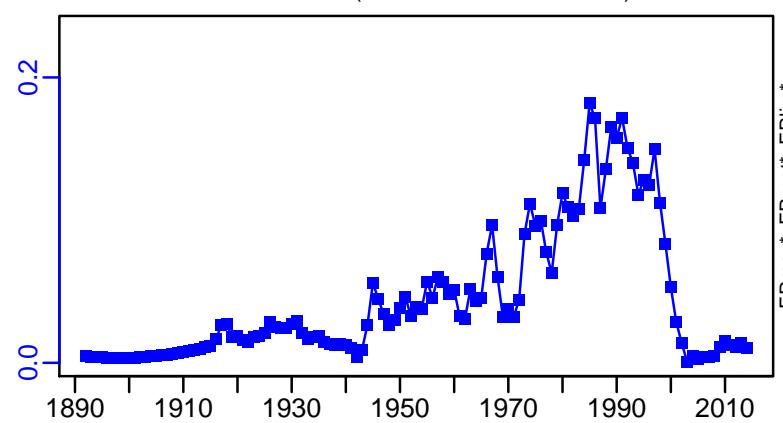


SSBmsy–E00larvae, SSBmgt\*, SSBlim\*

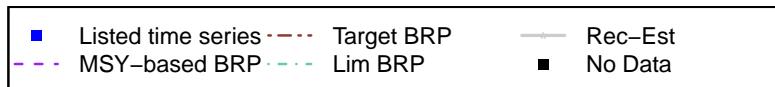
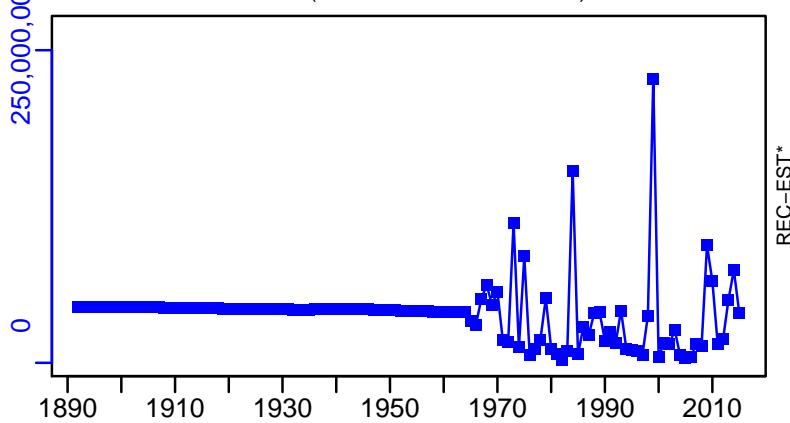
Fmsy–1/yr, Fmgt\*, Filim–1/yr

REC-EST\*

ER-calc-ratio (1892–2015–SISIMP2016)



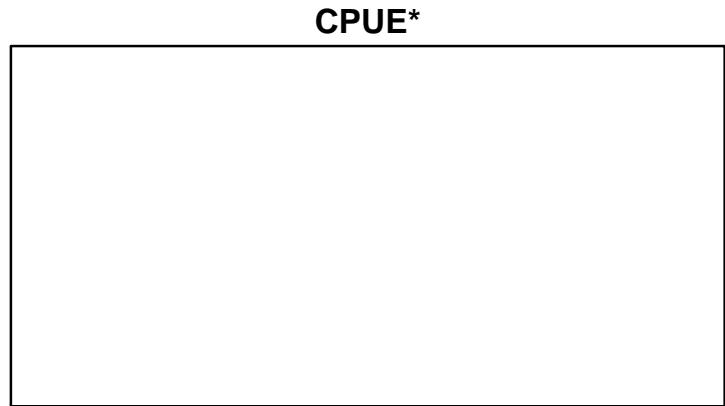
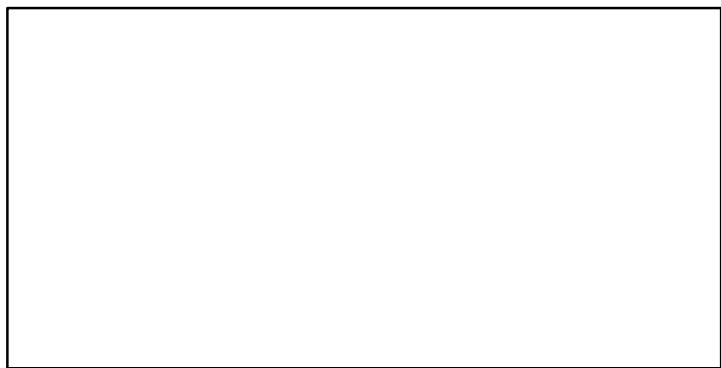
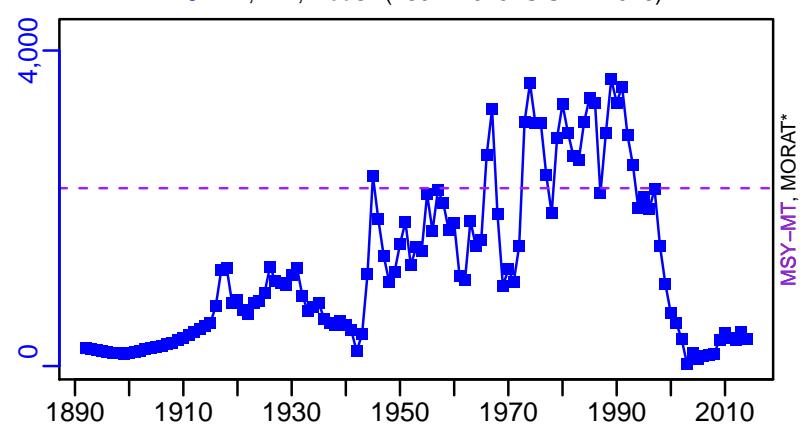
R-E00 (1892–2015–SISIMP2016)



Chilipepper Southern Pacific Coast [CHILISPSCOAST]

TC-MT, TL\*, RecC\* (1892–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



EFFORT\*

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

## China rockfish Central Pacific Coast [CHROCKCPCOAST]

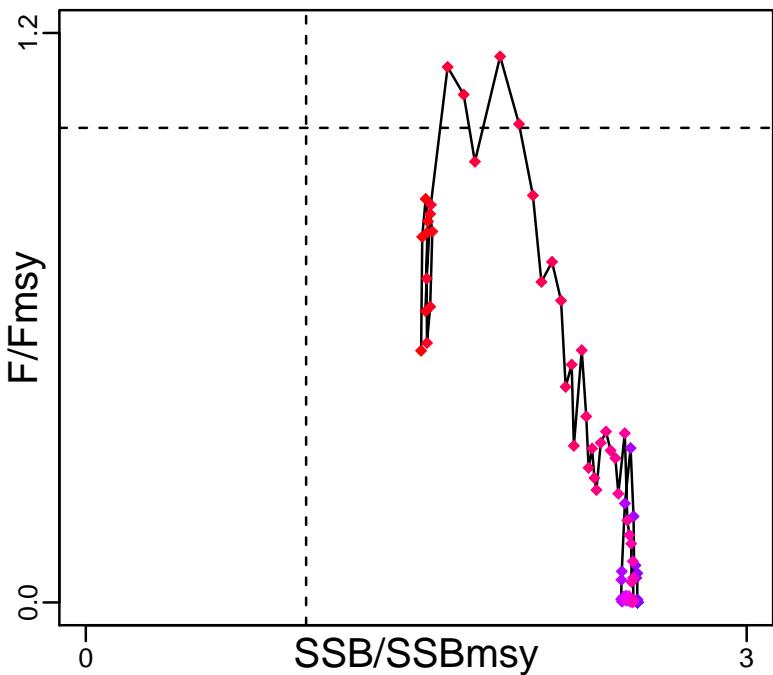
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes nebulosus
<b>Current Assess ID</b>	NWFSC-CHROCKCPCOAST-1900-2015-SISIMP2016
<b>Area</b>	Central Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00eggs	2015	$2.6 \times 10^{10}$
<b>Fmsy</b>	Fmsy-1/yr	2015	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	2015	16
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2015	$1.63 \times 10^{10}$
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

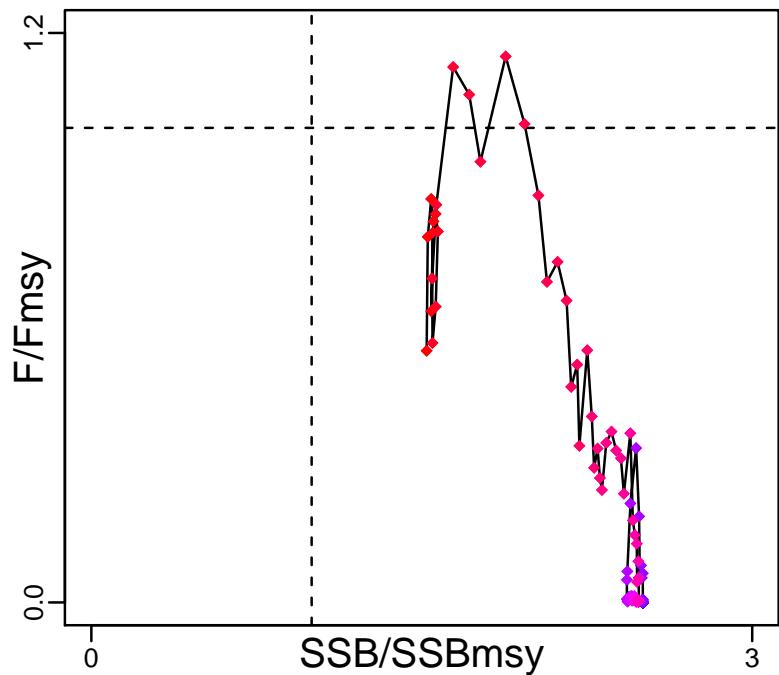
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2015	381	-	5+	
<b>SSB</b>	SSB-E00eggs	2015	$4 \times 10^{10}$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	68,200	-	0	
<b>F</b>	F-1/yr	2015	0.265	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.019	-	-	
<b>TC</b>	TC-MT	2015	7			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2015	1.54			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.53			
<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 [CHROCKCPCOAST]

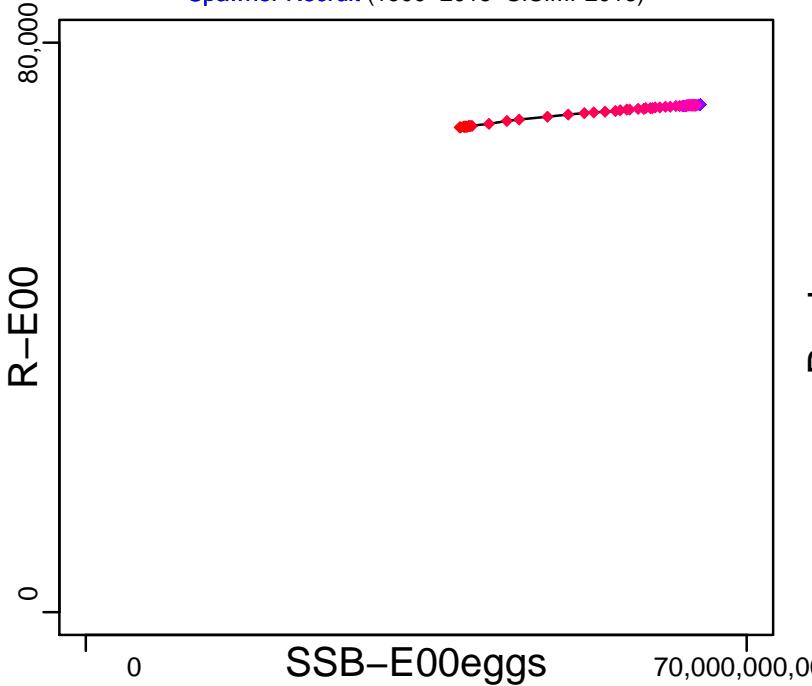
Kobe MSYpref (1900–2015–SISIMP2016)



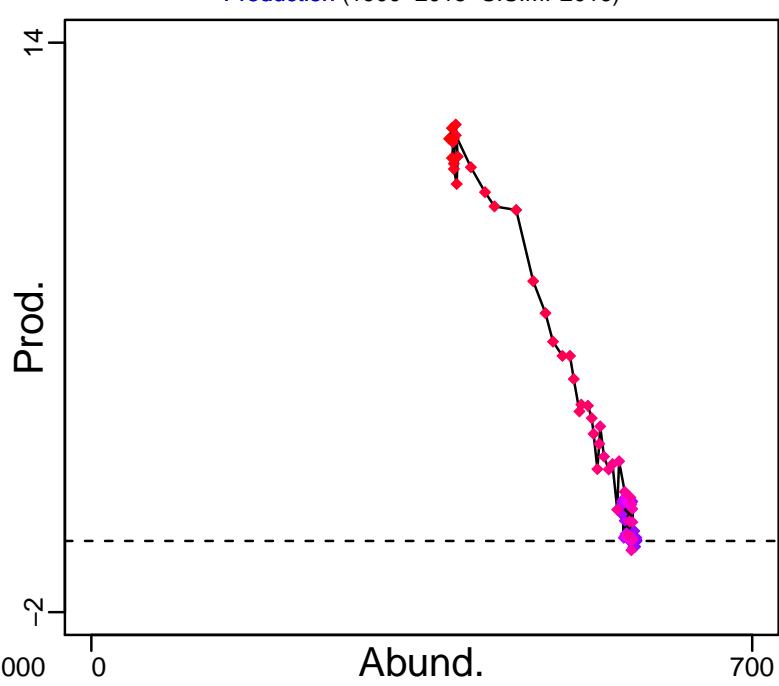
Kobe MGTpref (1900–2015–SISIMP2016)



Spawner Recruit (1900–2015–SISIMP2016)



Production (1900–2015–SISIMP2016)

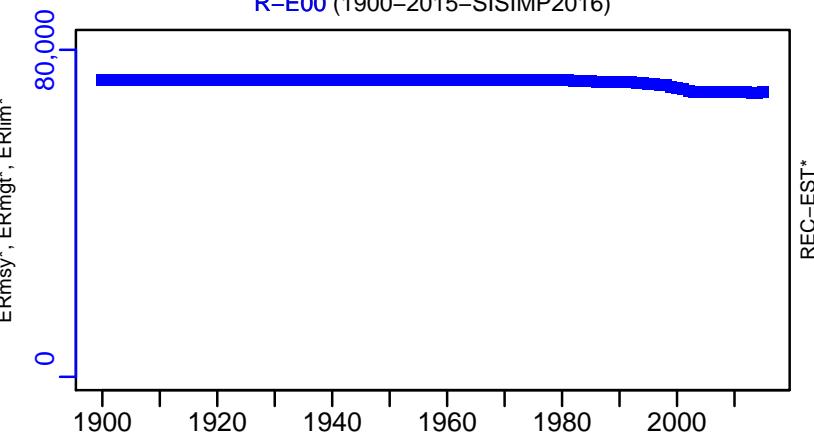
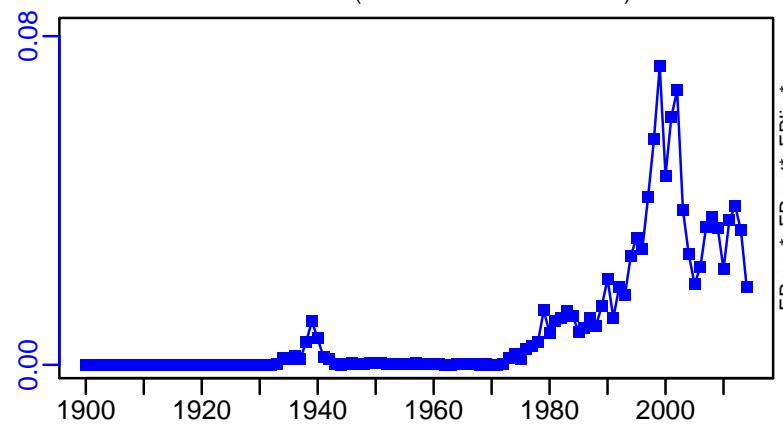
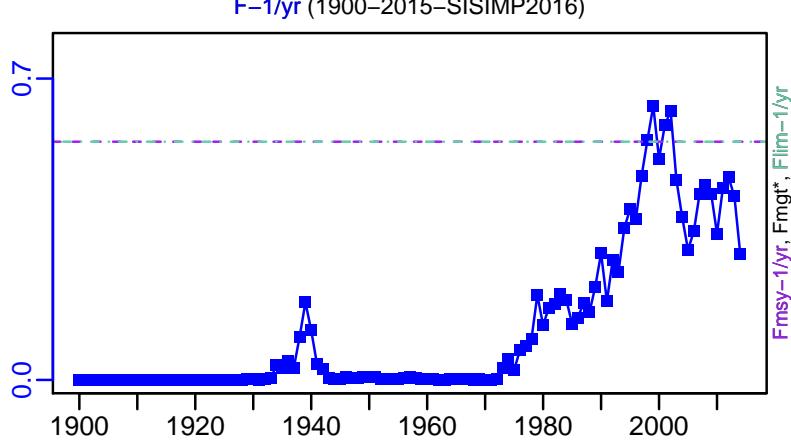
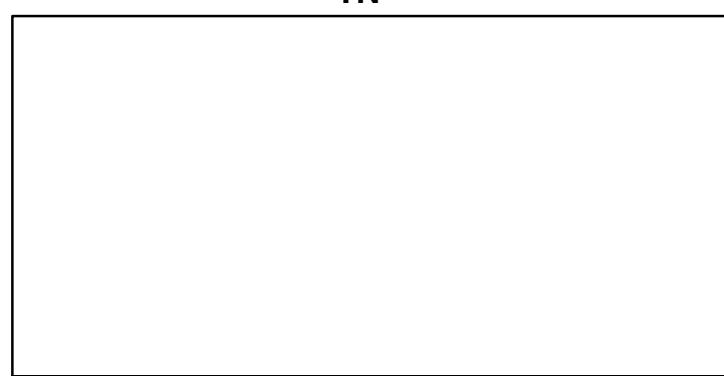
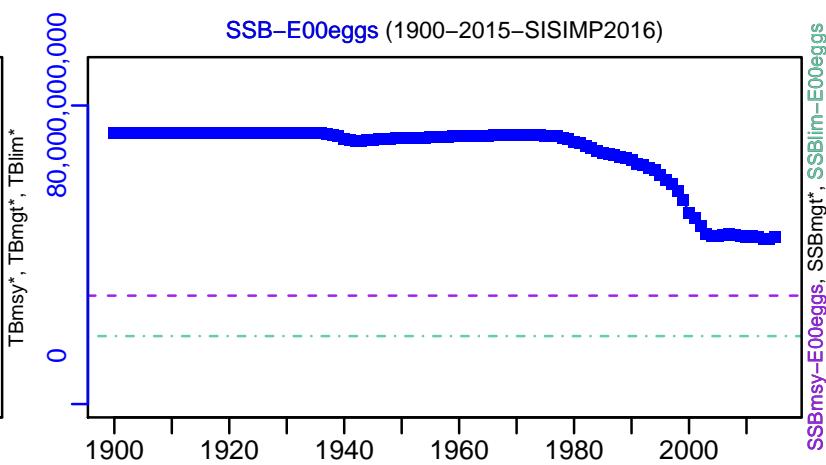
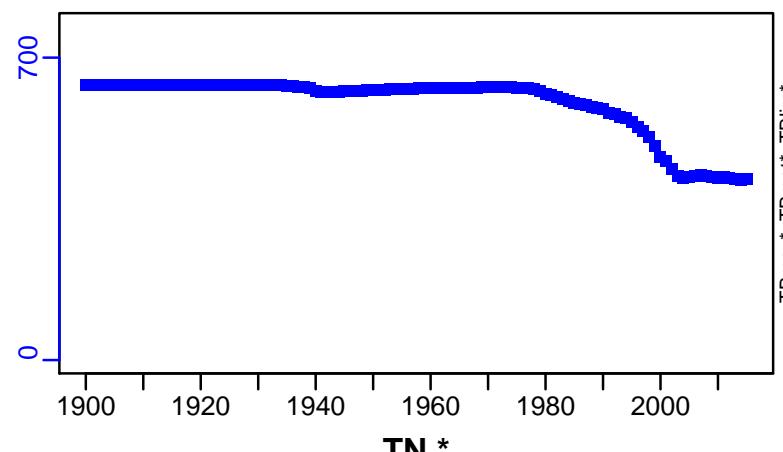


◆ Start Year   ◆ End Year   \* No Data

### China rockfish Central Pacific Coast [CHROCKCPCOAST]

TB-MT (1900–2015–SISIMP2016)

SSB-E00eggs (1900–2015–SISIMP2016)

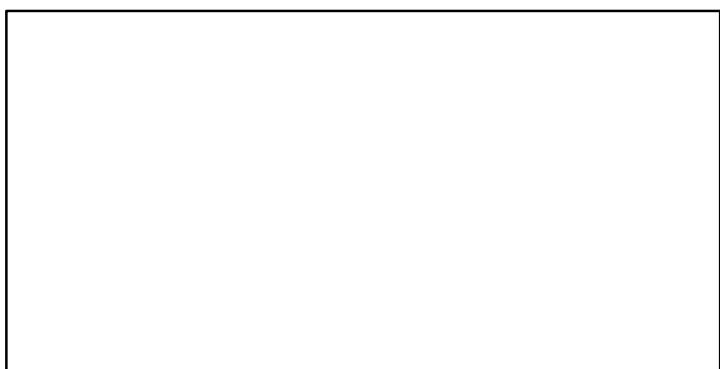
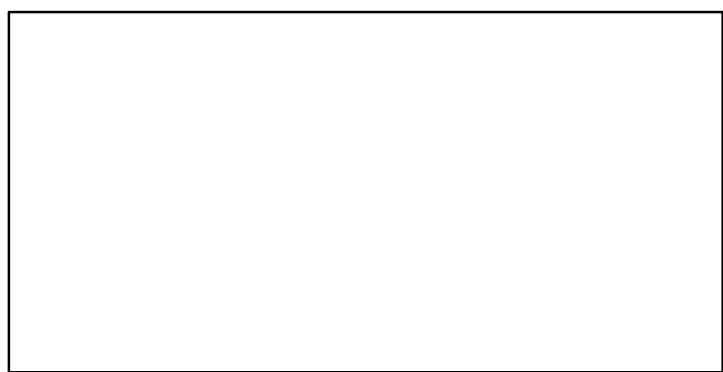
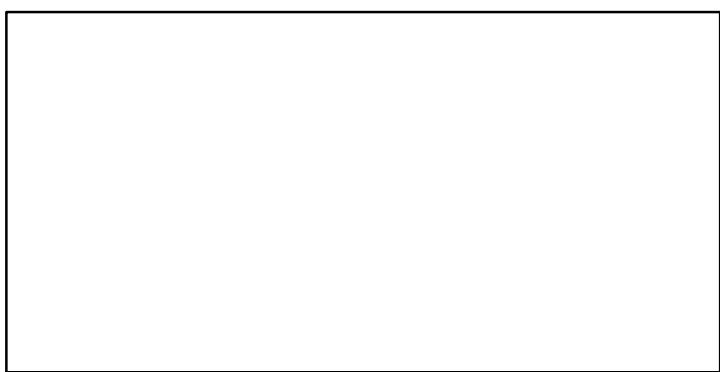
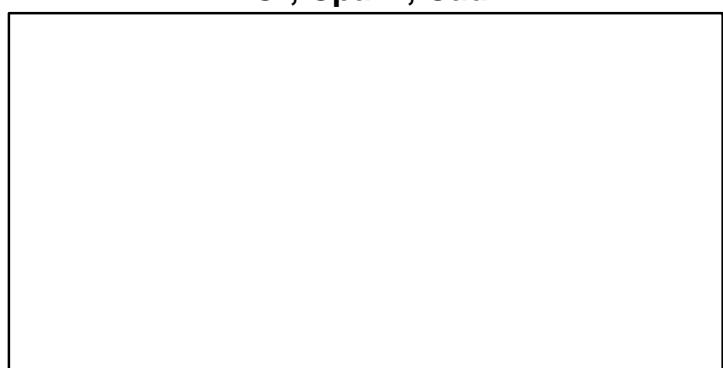
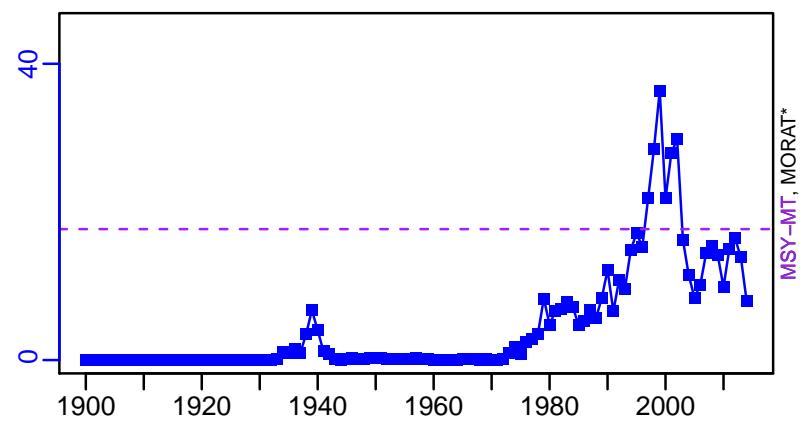


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	- - Lim BRP	■ No Data

China rockfish Central Pacific Coast [CHROCKCPCOAST]

TC-MT, TL\*, RecC\* (1900–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



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

## China rockfish Northern Pacific Coast [CHROCKNPCOAST]

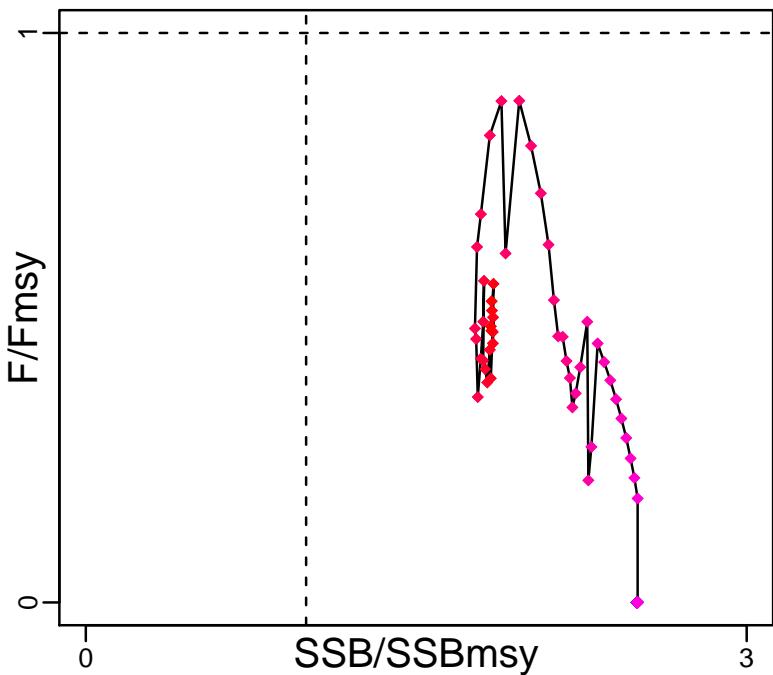
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes nebulosus
<b>Current Assess ID</b>	SWFSC-CHROCKNPCOAST-1900-2015-SISIMP2016
<b>Area</b>	Northern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2015

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00eggs	2015	$9.76 \times 10^9$
<b>Fmsy</b>	Fmsy-1/yr	2015	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>	-	-	-
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2015	$6.13 \times 10^9$
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

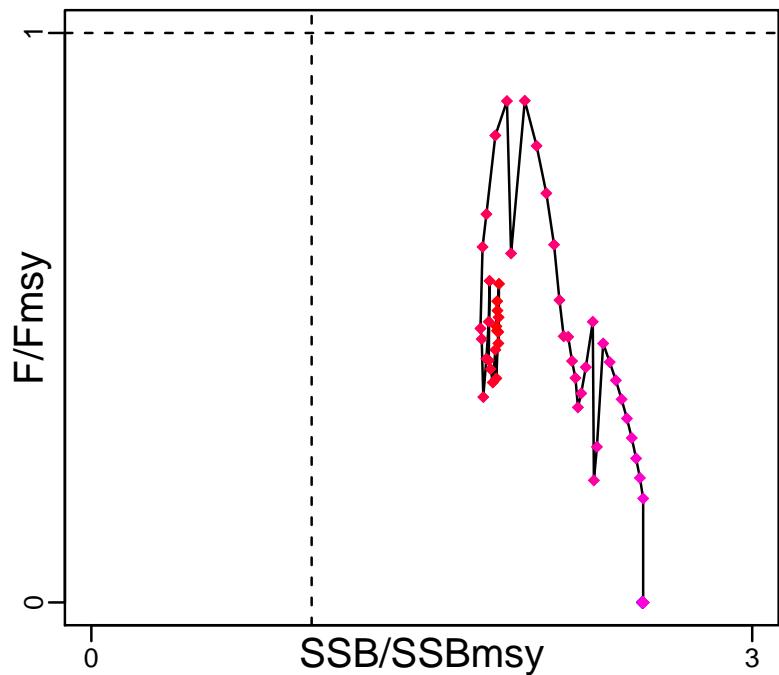
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2015	183	-	5+	
<b>SSB</b>	SSB-E00eggs	2015	$1.79 \times 10^{10}$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	33,300	-	0	
<b>F</b>	F-1/yr	2015	0.242	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.017	-	-	
<b>TC</b>	TC-MT	2015	3.02			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2015	1.839			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.485			
<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]

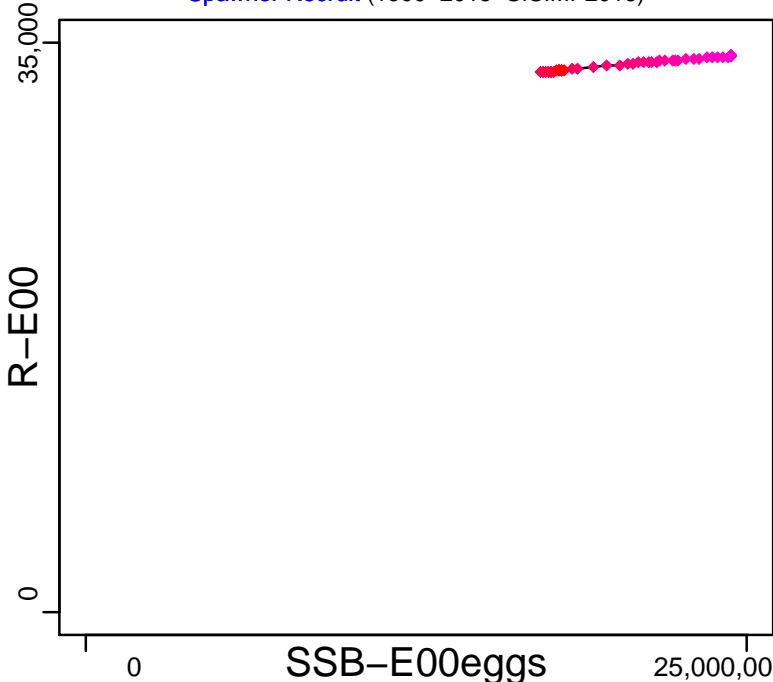
Kobe MSYpref (1900–2015–SISIMP2016)



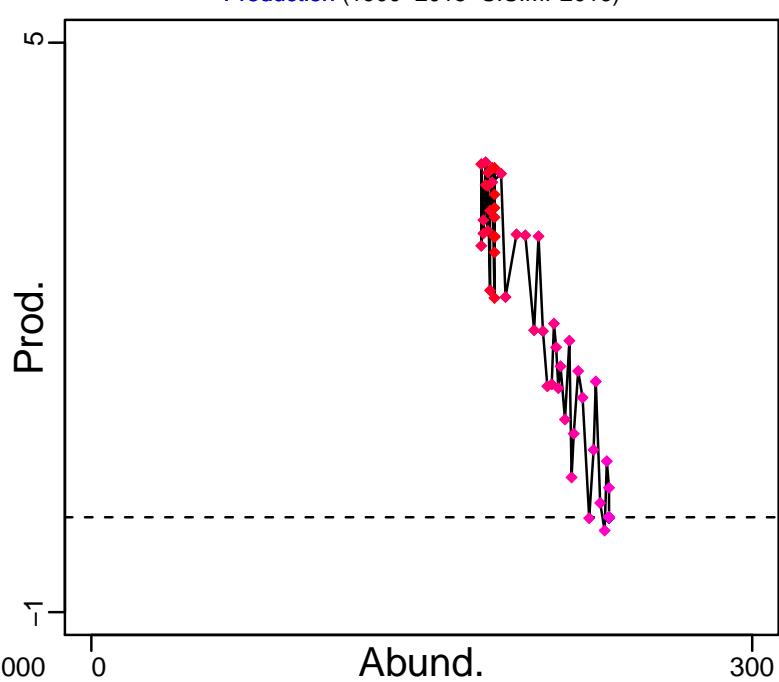
Kobe MGTpref (1900–2015–SISIMP2016)



Spawner Recruit (1900–2015–SISIMP2016)



Production (1900–2015–SISIMP2016)

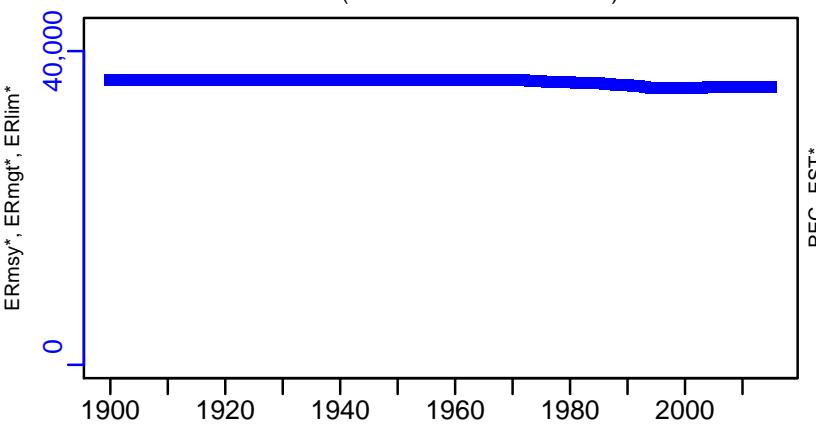
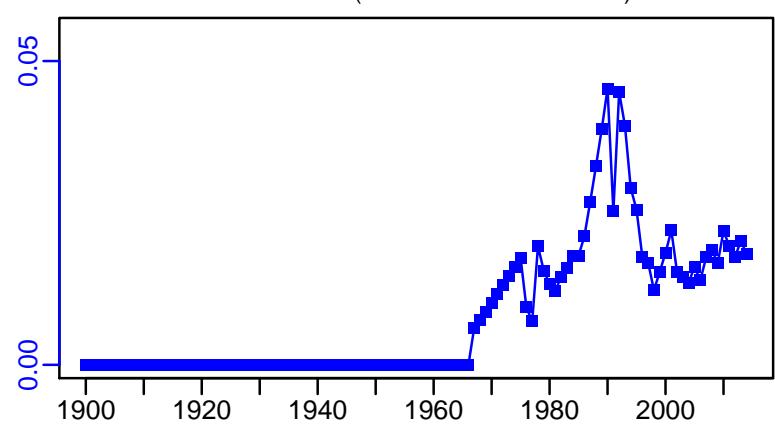
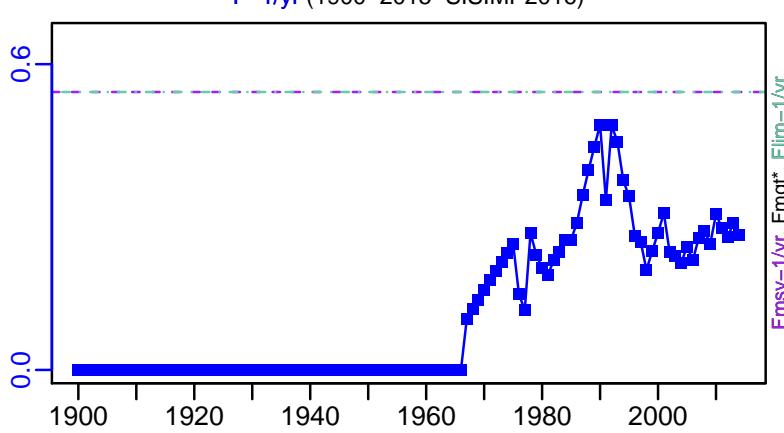
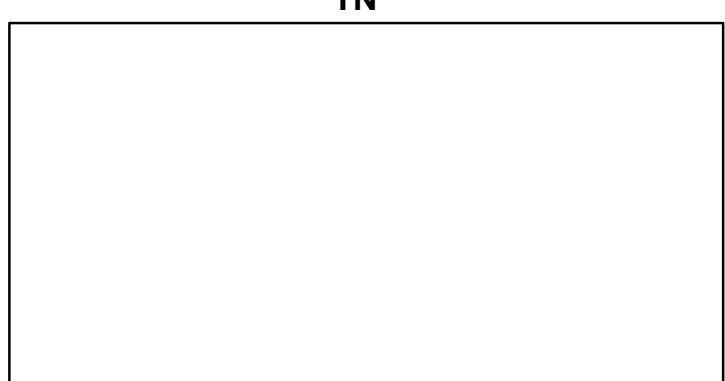
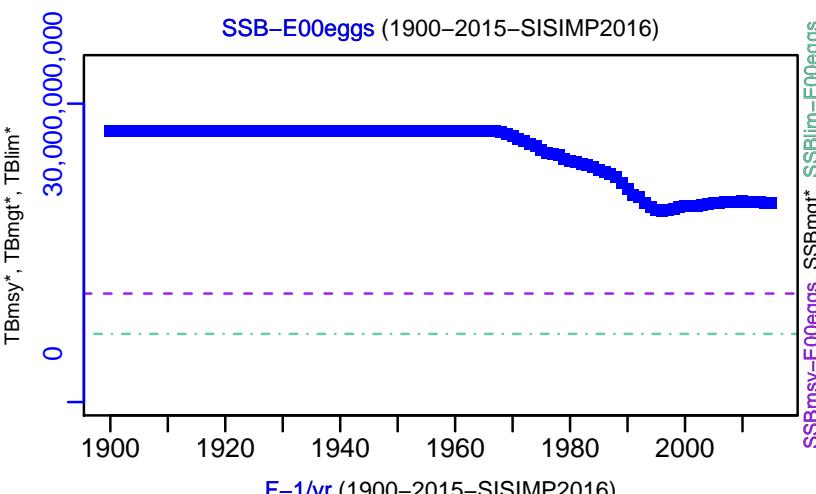
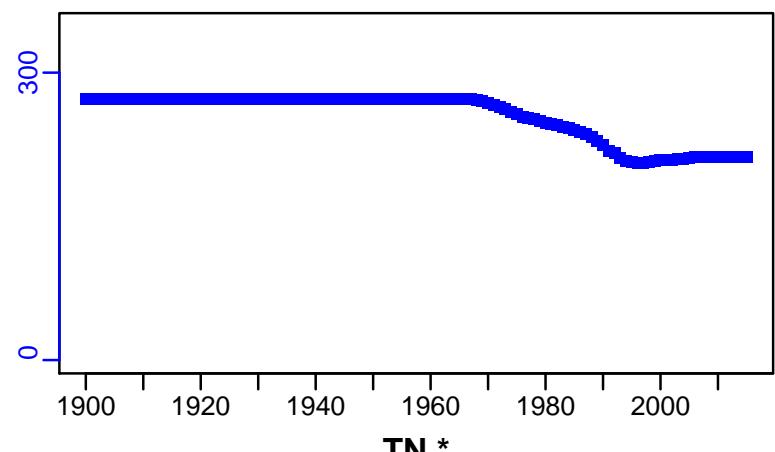


◆ Start Year ◆ End Year \* No Data

### China rockfish Northern Pacific Coast [CHROCKNPCOAST]

TB-MT (1900–2015–SISIMP2016)

SSB-E00eggs (1900–2015–SISIMP2016)

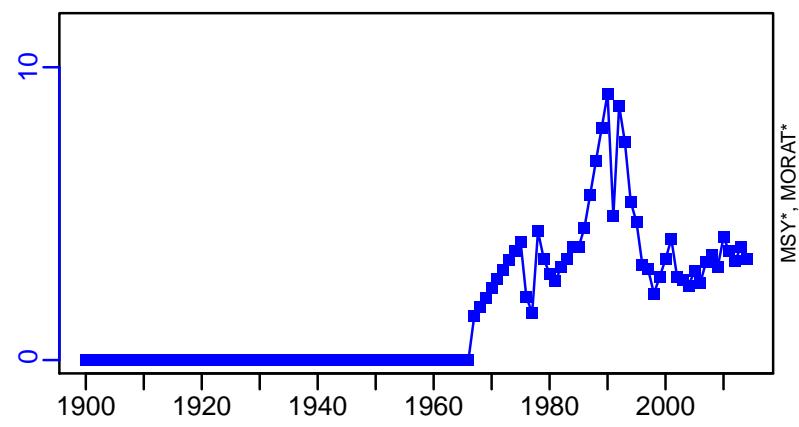


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | - - Lim BRP  | ■ No Data |

**China rockfish Northern Pacific Coast [CHROCKNPCOAST]**

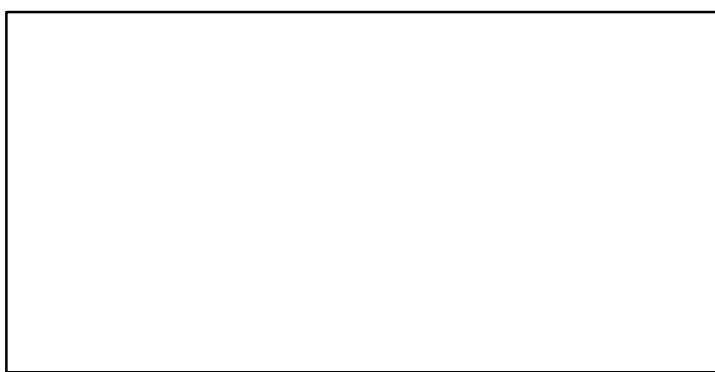
TC-MT, TL\*, RecC\* (1900–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*

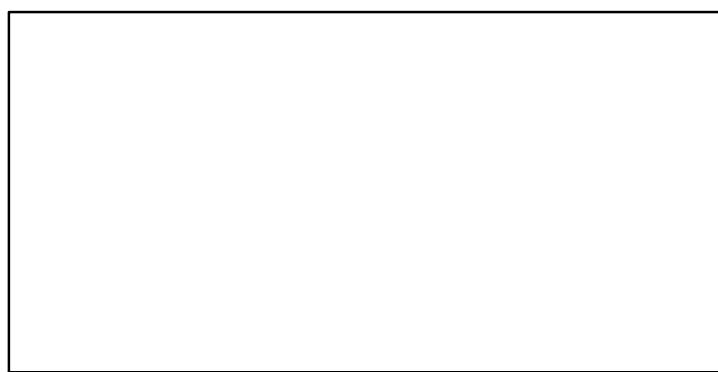


**survB\***

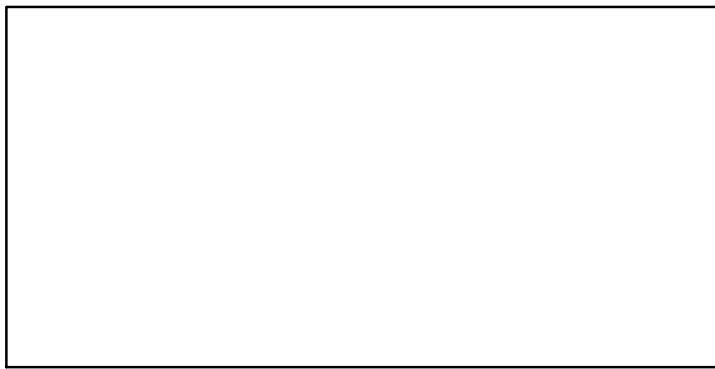
MSY\*, MORAT\*



**CPUE\***



**EFFORT\***



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

## China rockfish Southern Pacific Coast [CHROCKSPCOAST]

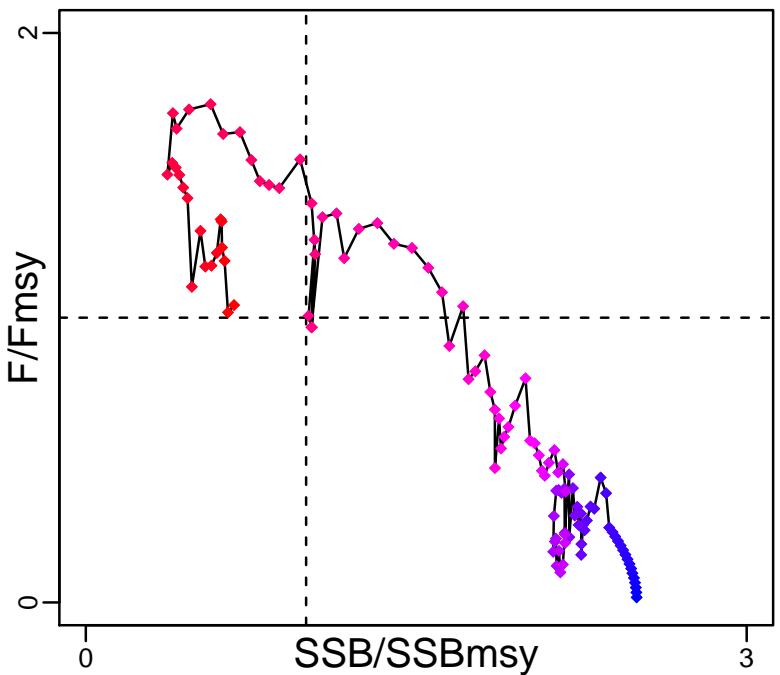
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes nebulosus
<b>Current Assess ID</b>	NWFSC-CHROCKSPCOAST-1900-2015-SISIMP2016
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00eggs	2015	$2.66 \times 10^{10}$
<b>Fmsy</b>	Fmsy-1/yr	2015	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	2015	21
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2015	$1.66 \times 10^{10}$
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

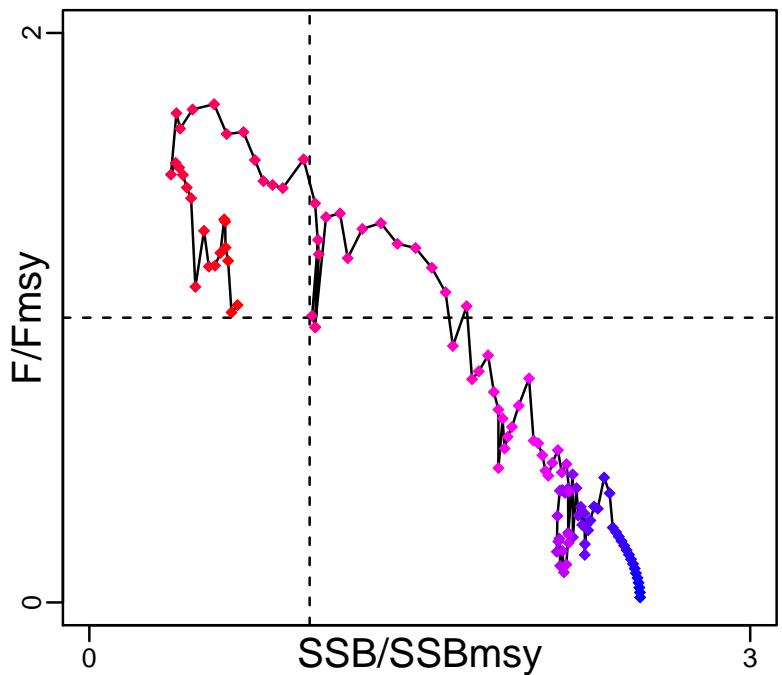
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2015	280	-	5+	
<b>SSB</b>	SSB-E00eggs	2015	$1.86 \times 10^{10}$	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	130,000	-	0	
<b>F</b>	F-1/yr	2015	0.522	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.046	-	-	
<b>TC</b>	TC-MT	2015	12			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2015	0.698			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	1.044			
<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]

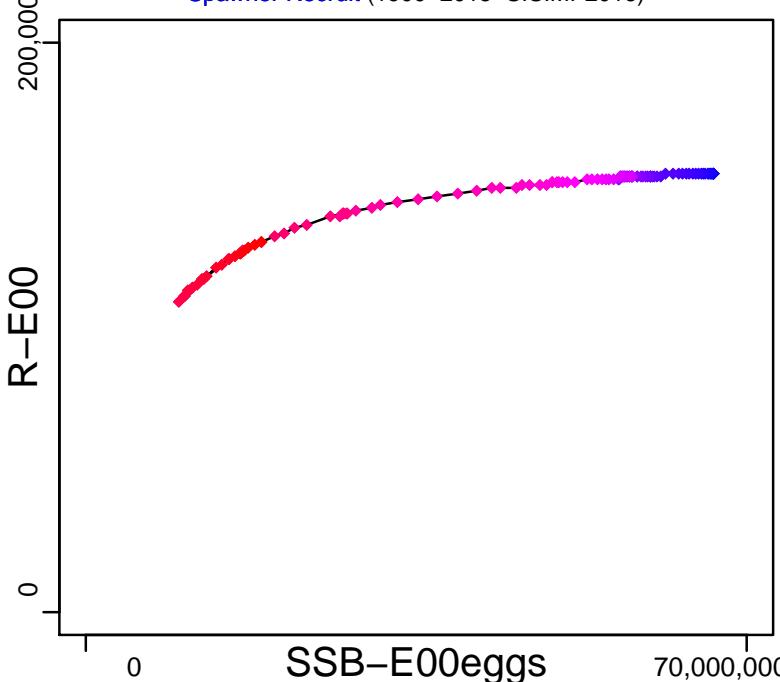
Kobe MSYpref (1900–2015–SISIMP2016)



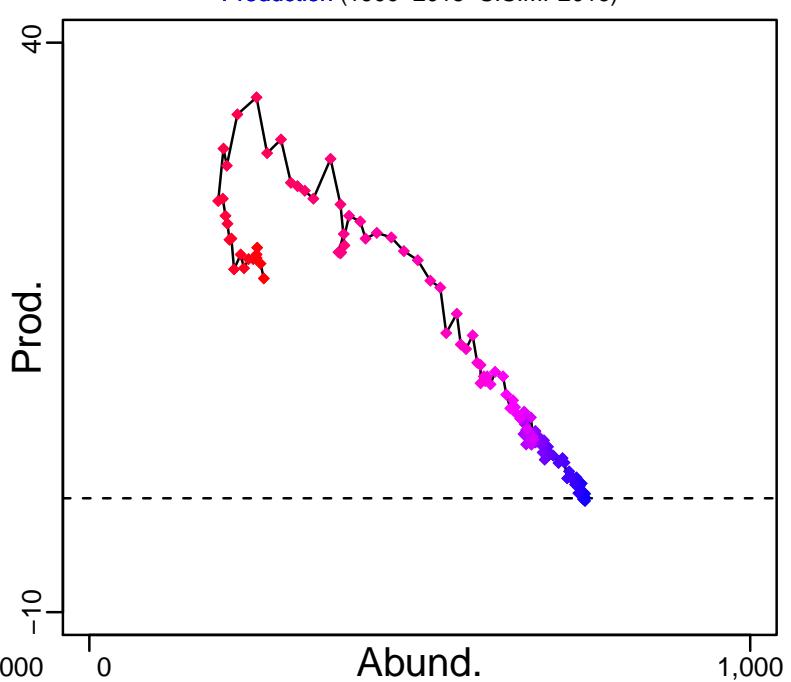
Kobe MGTpref (1900–2015–SISIMP2016)



Spawner Recruit (1900–2015–SISIMP2016)



Production (1900–2015–SISIMP2016)

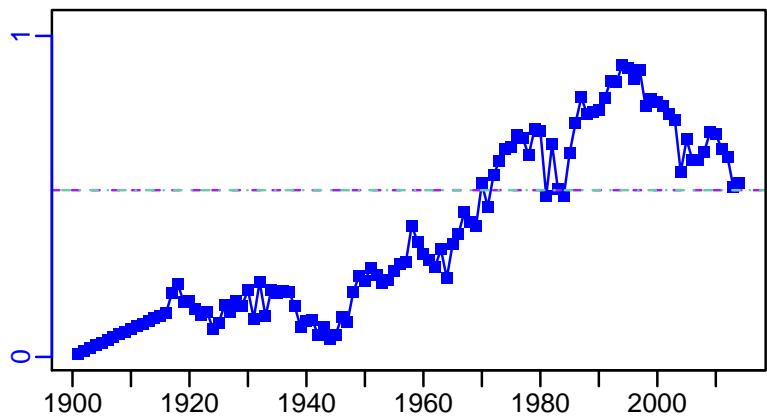
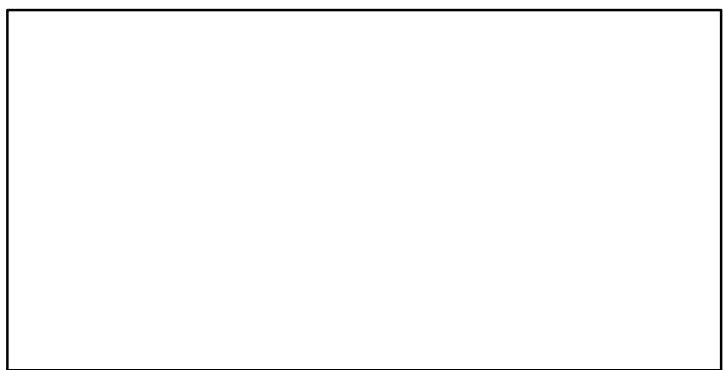
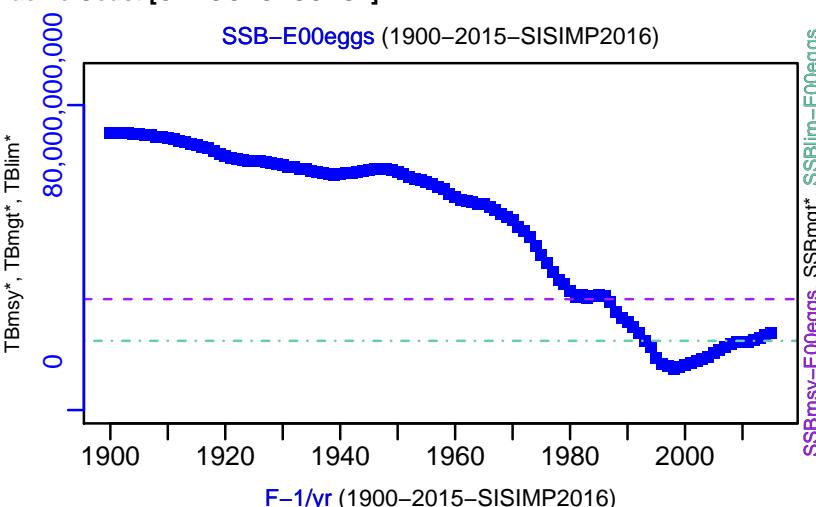
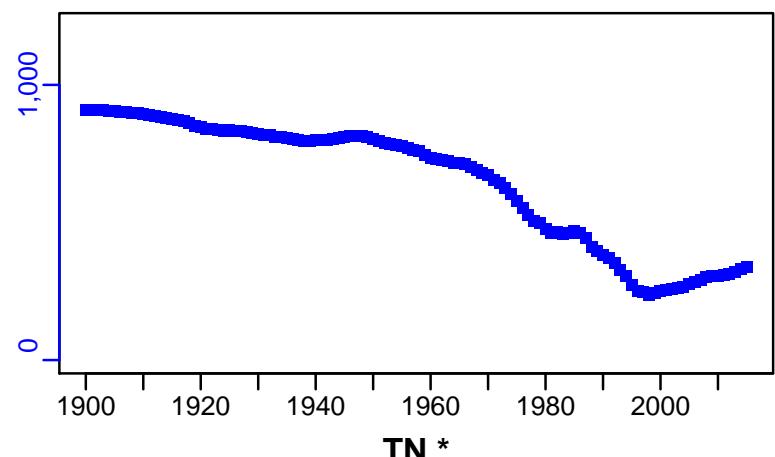


◆ Start Year	◆ End Year	*	No Data
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### China rockfish Southern Pacific Coast [CHROCKSPCOAST]

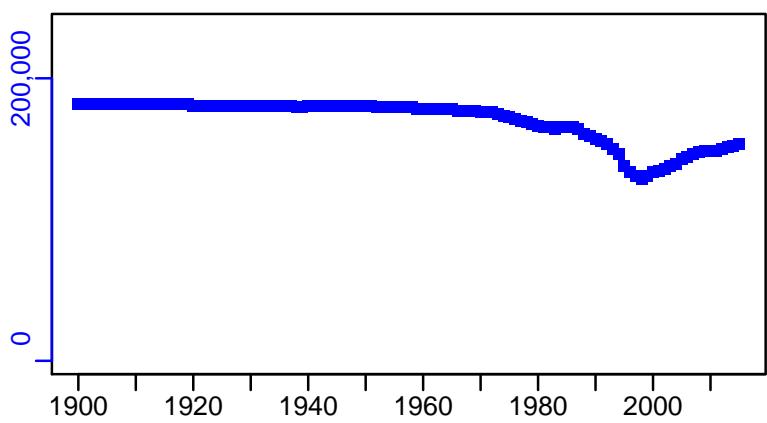
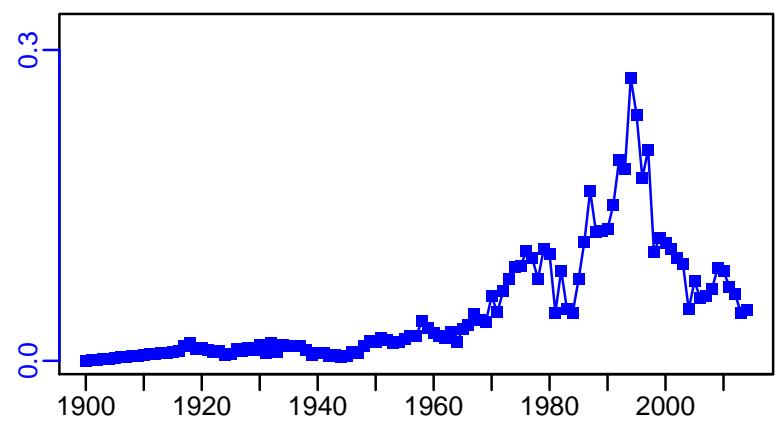
TB-MT (1900–2015–SISIMP2016)

SSB-E00eggs (1900–2015–SISIMP2016)



ER-calc-ratio (1900–2015–SISIMP2016)

R-E00 (1900–2015–SISIMP2016)

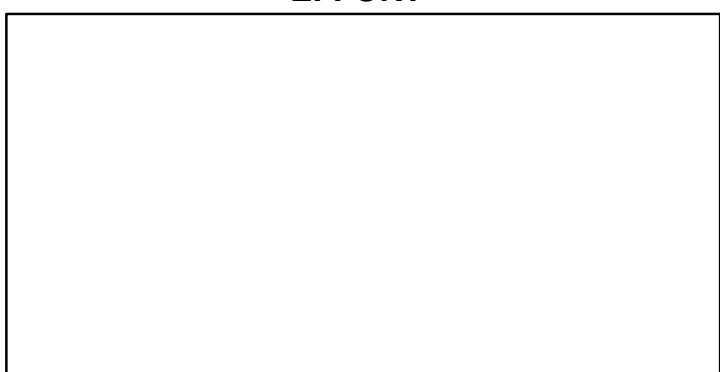
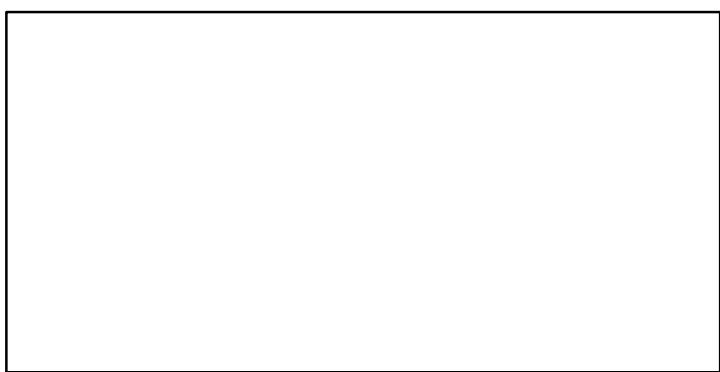
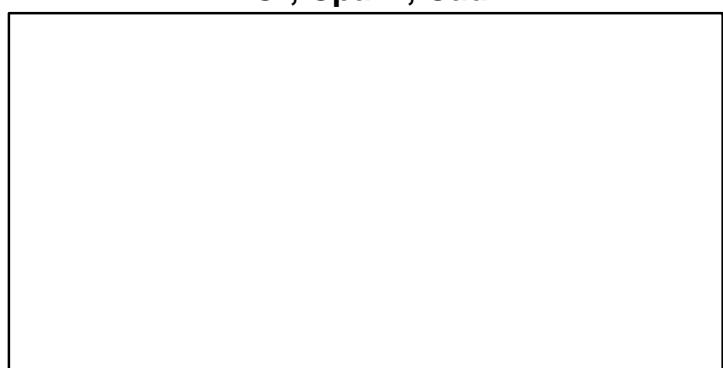
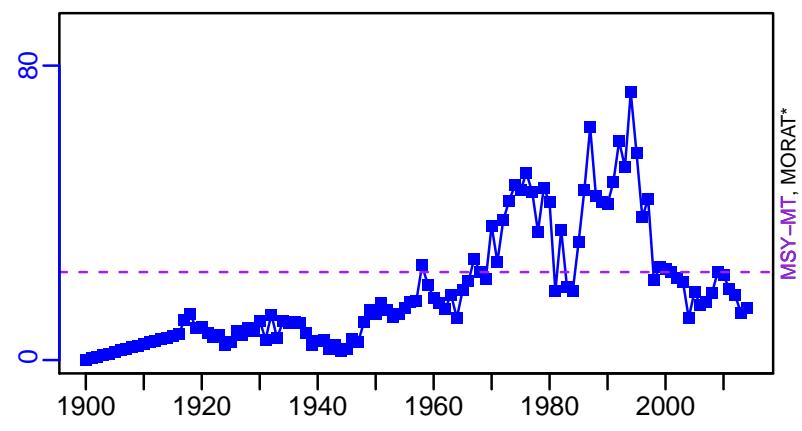


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | - - Lim BRP  | ■ No Data |

**China rockfish Southern Pacific Coast [CHROCKSPCOAST]**

TC-MT, TL\*, RecC\* (1900–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



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

## Pacific chub mackerel Pacific Coast [CMACKPCOAST]

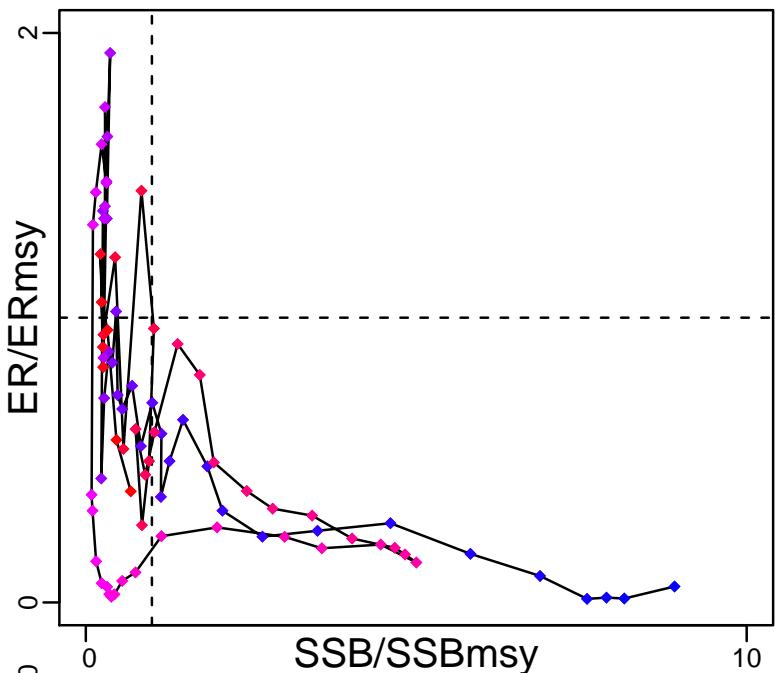
Metadata	
<b>Scientific Name</b>	Scomber japonicus
<b>Current Assess ID</b>	SWFSC-CMACKPCOAST-1983-2015-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2008, 2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2008	125,285
<b>SSBmsy</b>	SSBmsy-MT	2008	122,357
<b>Fmsy</b>	Fmsy-1/yr	2008	0.138
<b>ERmsy</b>	ERmsy-ratio	2008	0.184
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2008	182,791
<b>MSY</b>	MSY-MT	2008	23,048
<b>M</b>	M-1/yr	2008	0.5
<b>TBlim</b>	TBlim-MT	2015	18,200
<b>SSBlim</b>	SSBlim-MT	2008	29,420
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

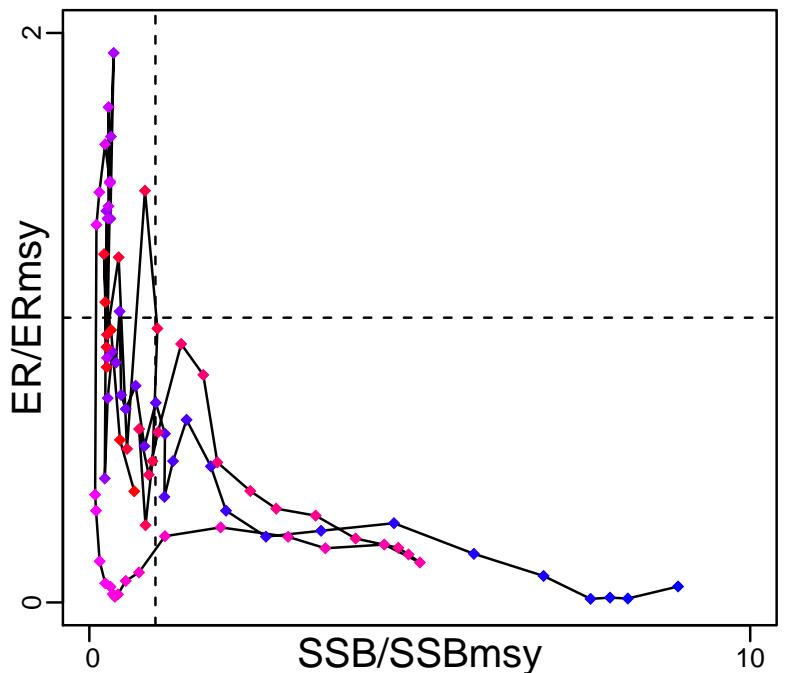
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2015	120,000	Both	1+	
<b>SSB</b>	SSB-E00eggs	2015	40,800	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	$3.01 \times 10^8$	-	0	
<b>F</b>	F-1/yr	2008	0.087	-	-	
<b>ER</b>	ER-ratio	2015	0.104	-	-	
<b>TC</b>	TC-MT	2015	10,100			
<b>TL</b>	TL-MT	2008	13,700			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2008	0.68			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2008	0.633			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2008	0.39			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Pacific chub mackerel Pacific Coast [CMACKPCOAST]

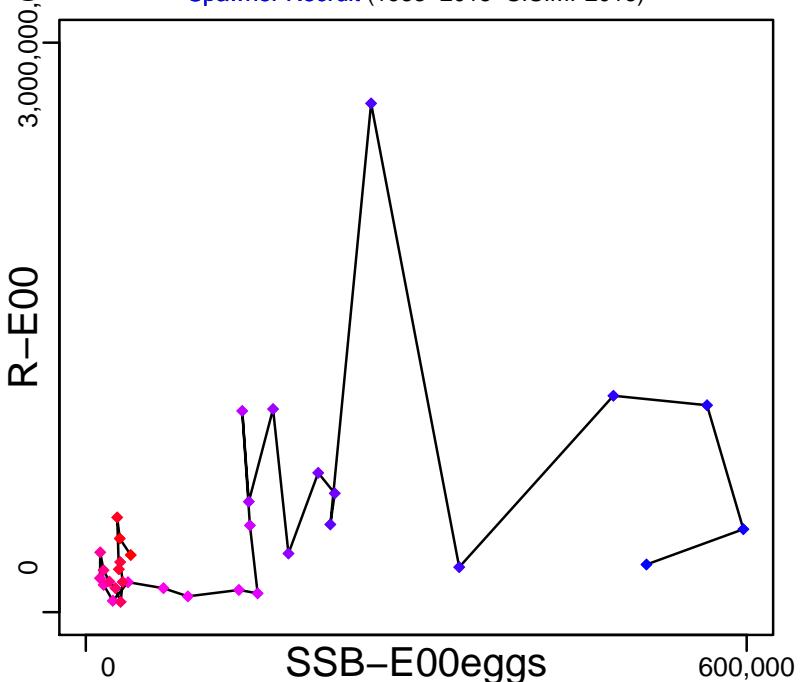
Kobe MSYpref (1929–2008–PINSKY)



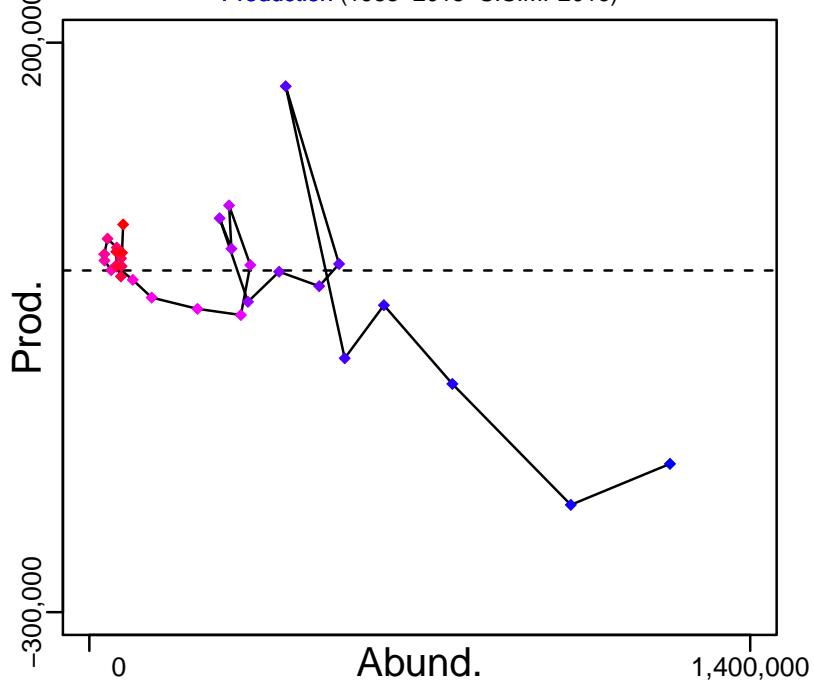
Kobe MGTpref (1929–2008–PINSKY)



Spawner Recruit (1983–2015–SISIMP2016)



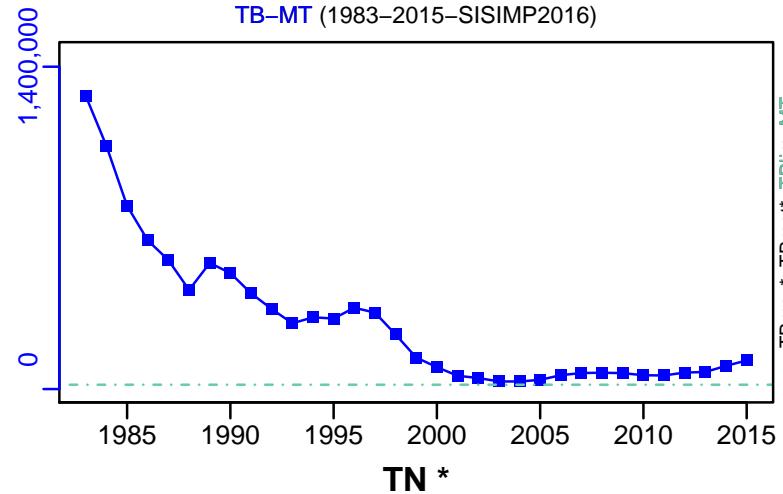
Production (1983–2015–SISIMP2016)



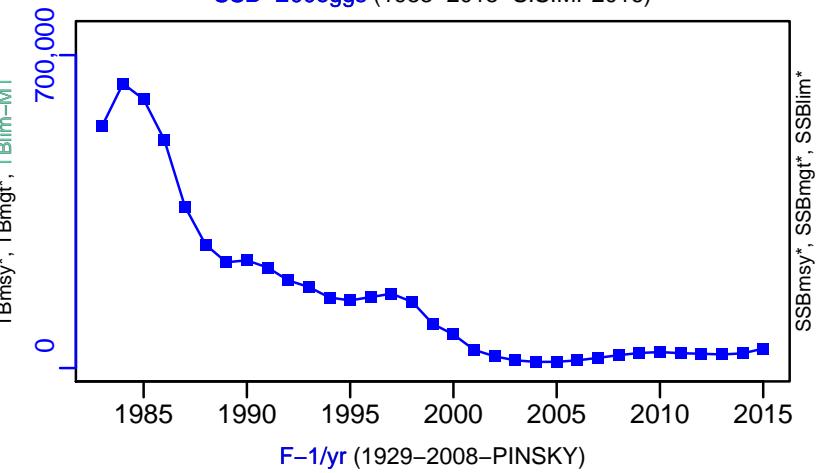
◆ Start Year ♦ End Year \* No Data

### Pacific chub mackerel Pacific Coast [CMACKPCOAST]

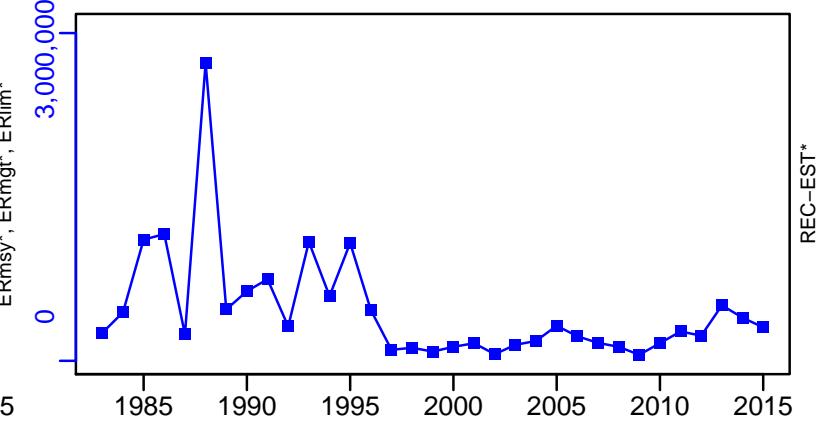
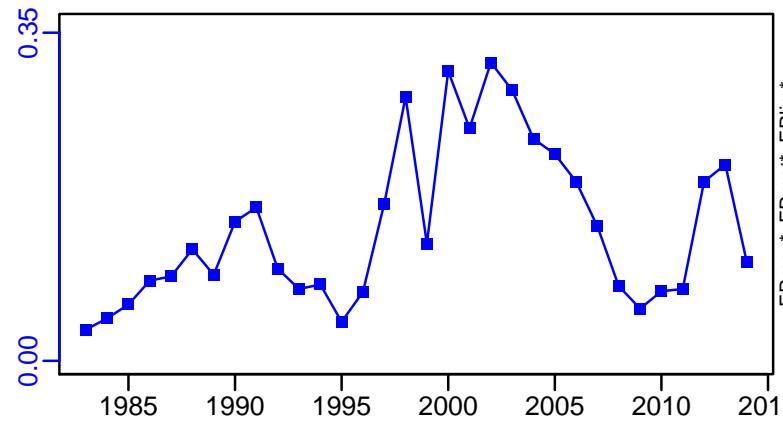
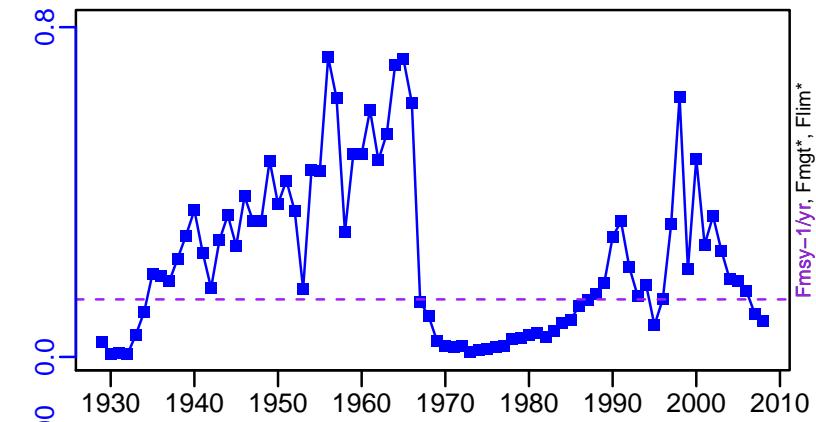
TB-MT (1983–2015–SISIMP2016)



SSB-E00eggs (1983–2015–SISIMP2016)



ER-ratio (1983–2015–SISIMP2016)

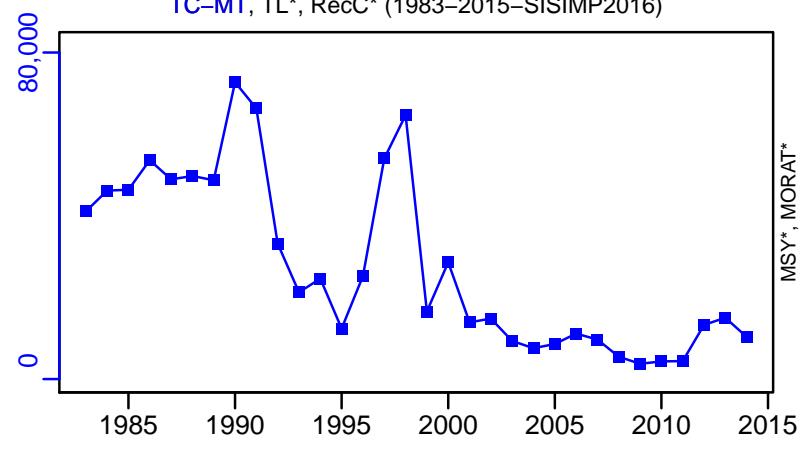


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	■ No Data

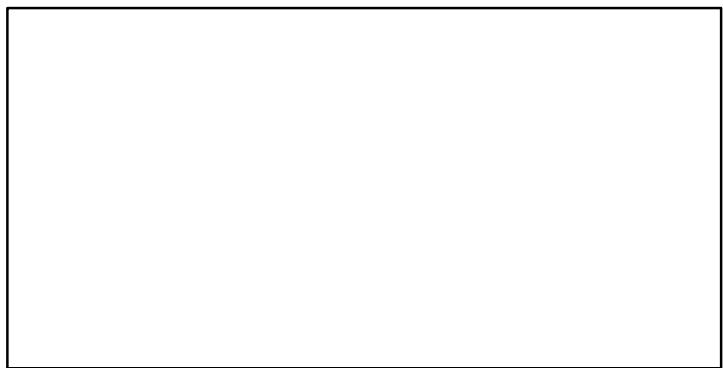
Pacific chub mackerel Pacific Coast [CMACKPCOAST]

TC-MT, TL\*, RecC\* (1983–2015–SISIMP2016)

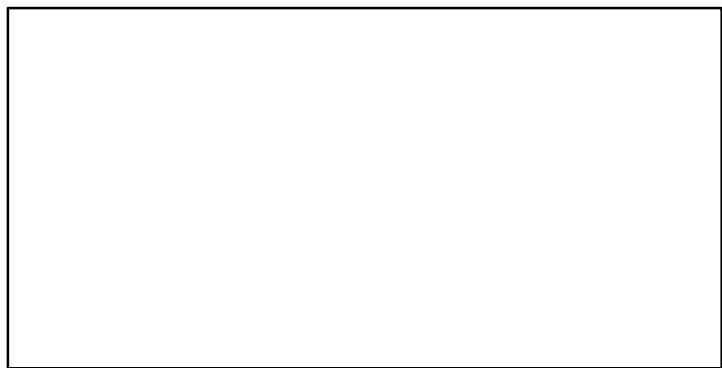
TAC\*, Cpair\*, Cadv\*



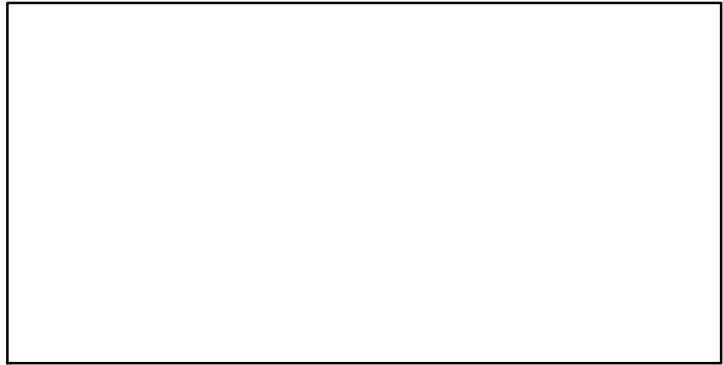
survB\*



CPUE\*



EFFORT\*



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

## Cowcod Southern California [COWCODSCAL]

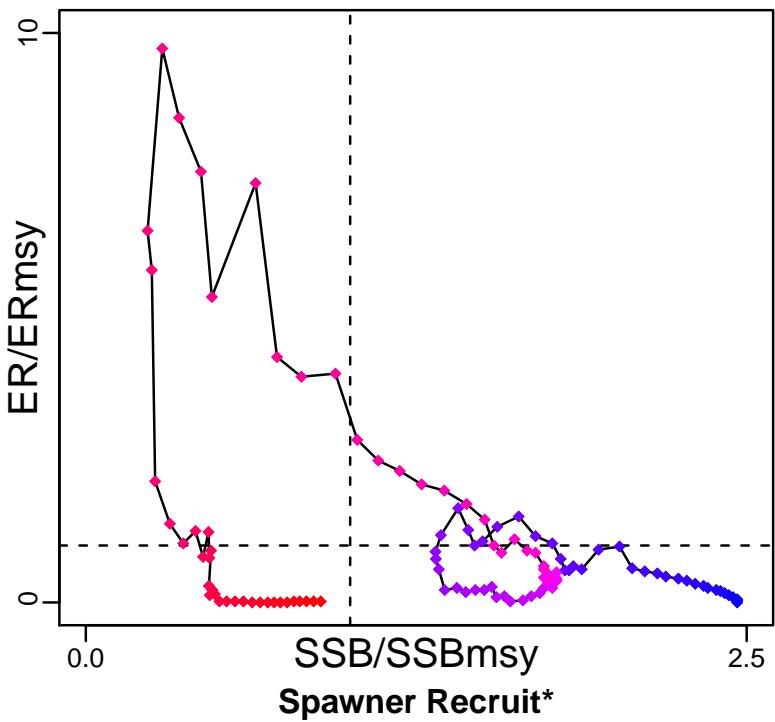
Metadata	
<b>Scientific Name</b>	Sebastodes levis
<b>Current Assess ID</b>	PFMC-COWCODSCAL-1900-2015-HIVELY
<b>Area</b>	Southern California
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Pacific Fishery Management Council
<b>Asmts in RAM</b>	2015,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

Reference Points				
Type	ID	Asmt Year	Value	
<b>TBmsy</b>	TBmsy-calc-MT	2015	1255	
<b>SSBmsy</b>	SSBmsy-MT	2015	629	
<b>Fmsy</b>	-	-	-	
<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	2015	69	
<b>M</b>	M-1/yr	2015	0.06	
<b>TBlim</b>	-	-	-	
<b>SSBlim</b>	-	-	-	
<b>Flim</b>	-	-	-	
<b>ERlim</b>	ERlim-ratio	2012	0.05	

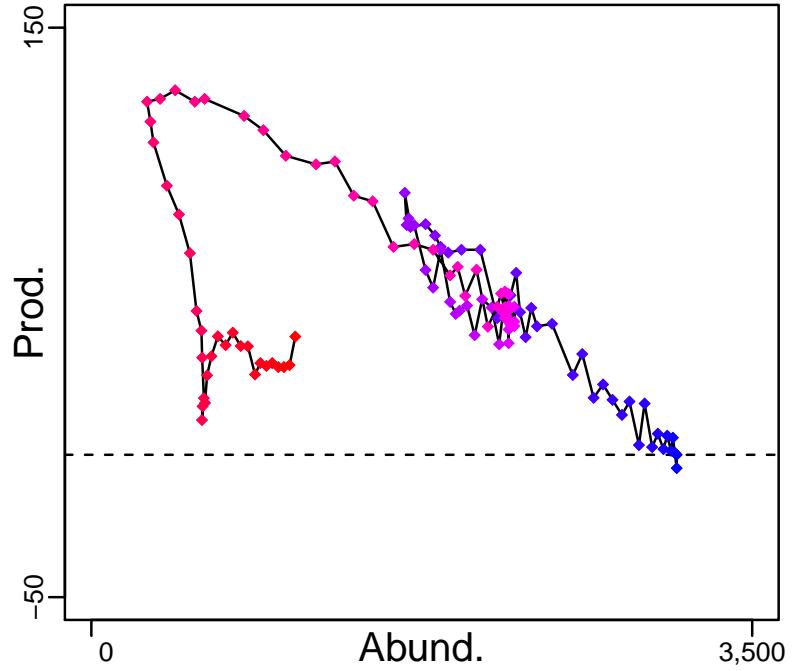
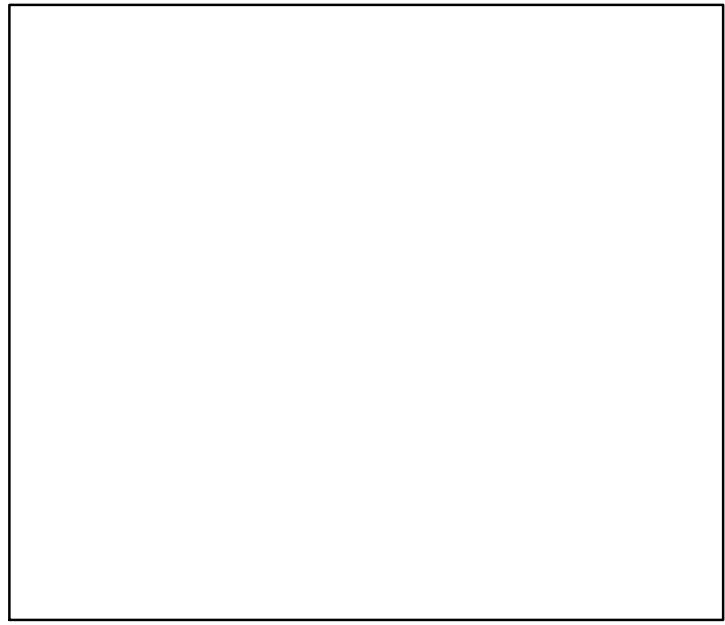
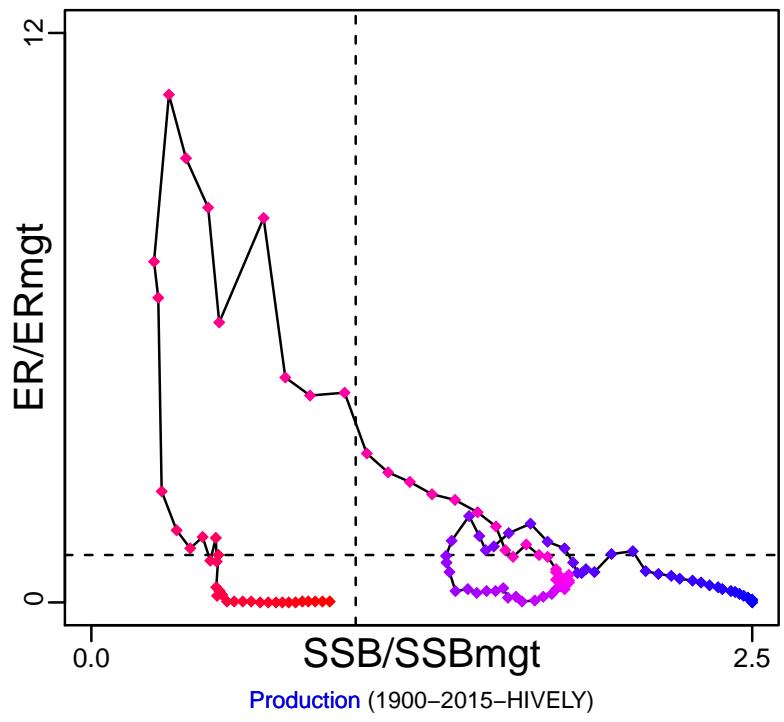
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2015	1120	-	11+	
<b>SSB</b>	SSB-MT	2015	559	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2015	0.001	-	-	
<b>TC</b>	TC-MT	2015	1.5			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2015	0.893			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2015	0.889			
<b>F/Fmsy</b>	-	-	-			
<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 (1900–2015–HIVELY)



Kobe MGTPref (1900–2015–HIVELY)

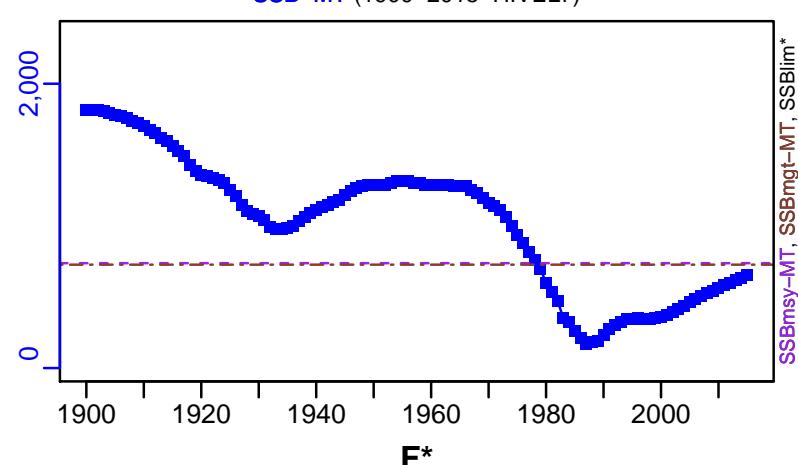
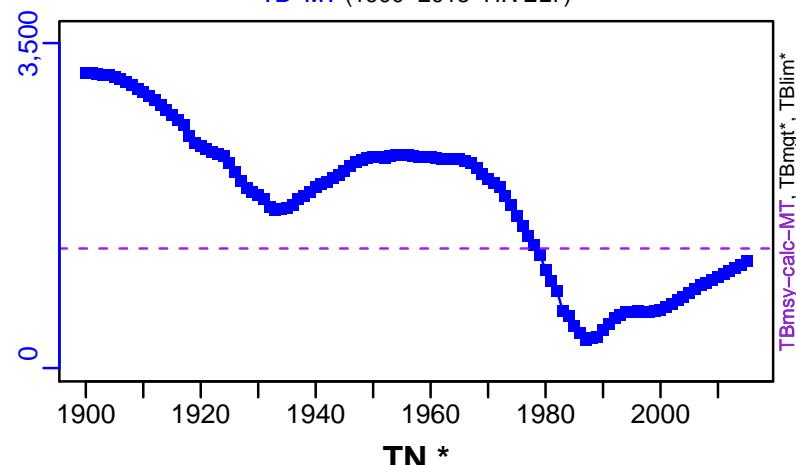


◆ Start Year	◆ End Year	* No Data
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### Cowcod Southern California [COWCODSCAL]

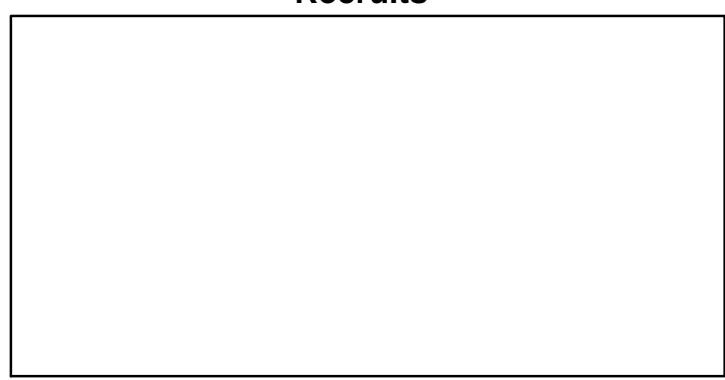
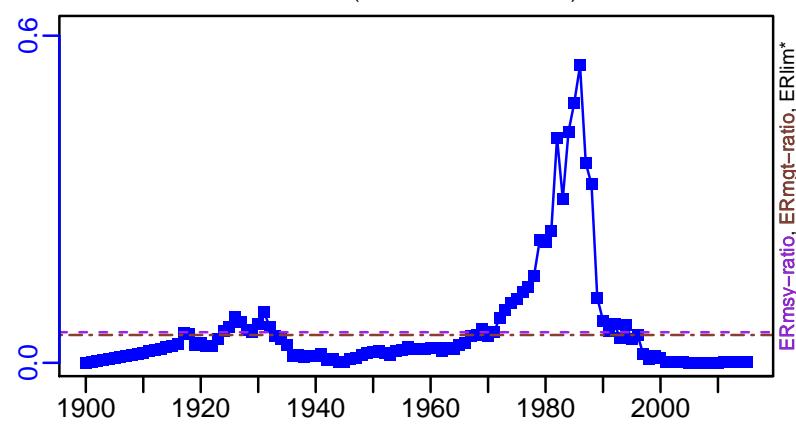
TB-MT (1900–2015–HIVELY)

SSB-MT (1900–2015–HIVELY)



ER-ratio (1900–2015–HIVELY)

Recruits\*

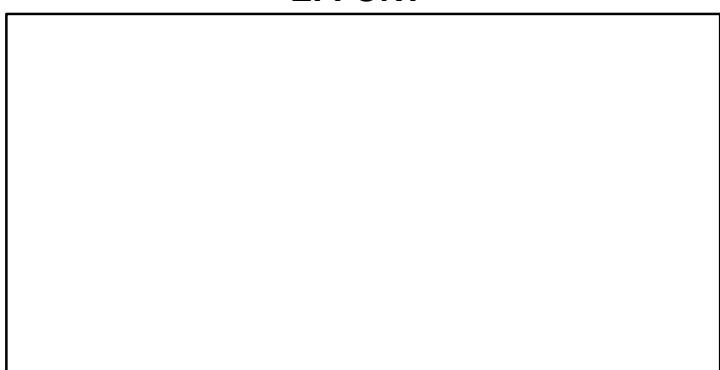
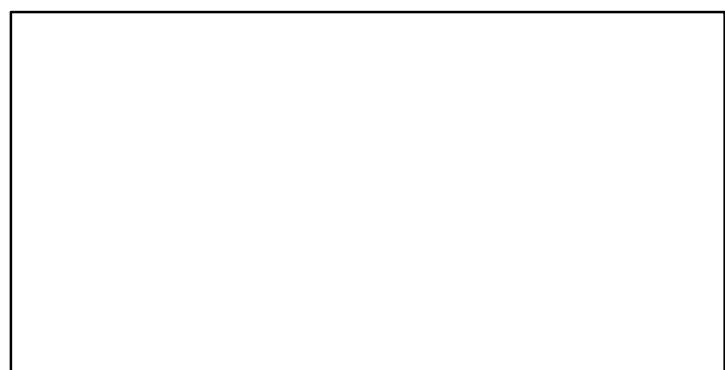
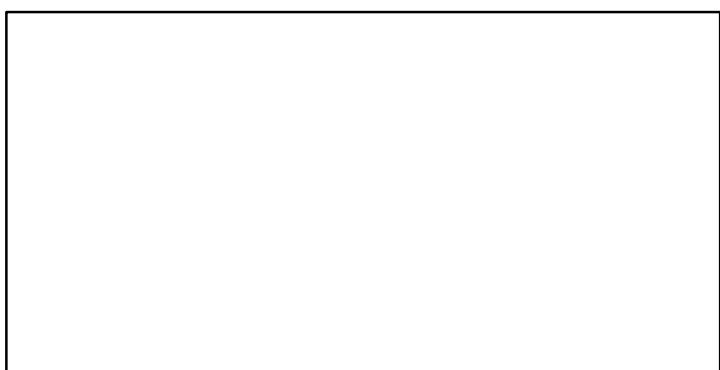
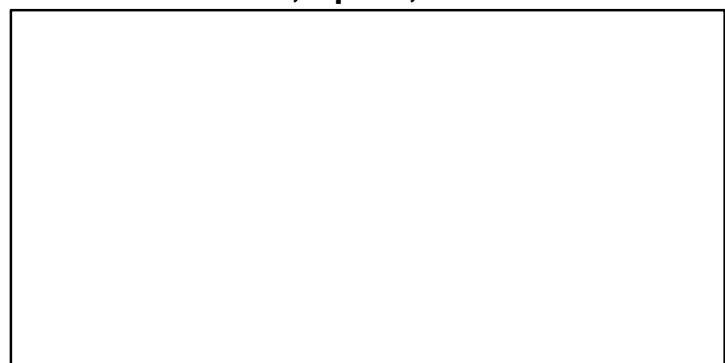
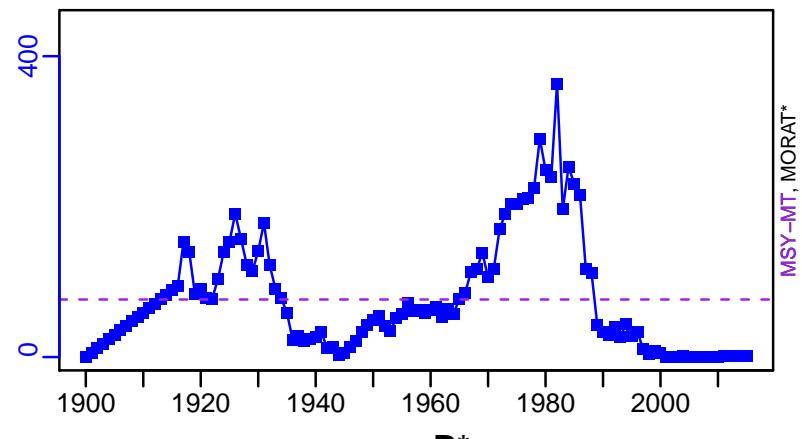


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | --- Lim BRP  | ■ No Data |

Cowcod Southern California [COWCODSCAL]

TC-MT, TL\*, RecC\* (1900–2015-HIVELY)

TAC\*, Cpair\*, Cadv\*



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

## Copper rockfish Pacific Coast [CPRROCKPCOAST]

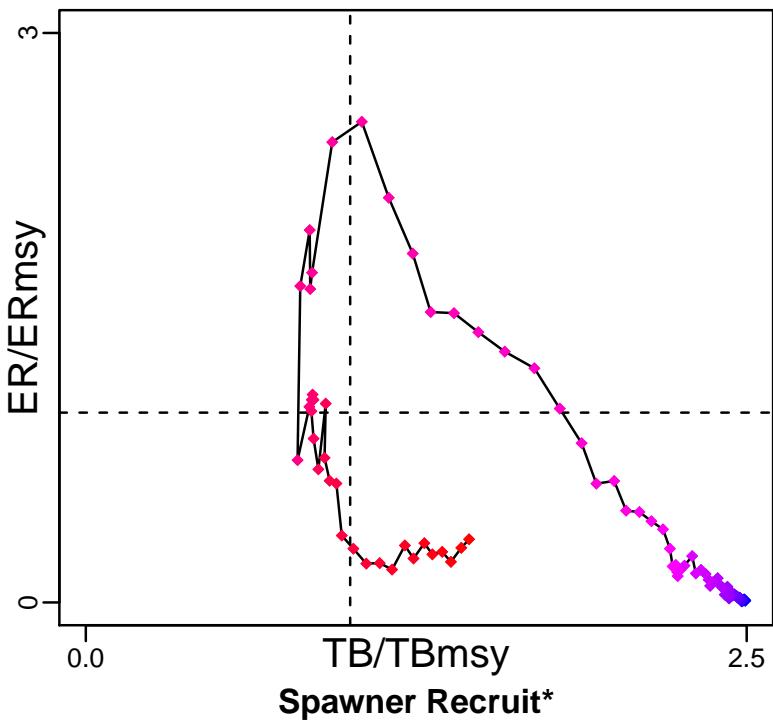
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes caurinus
<b>Current Assess ID</b>	SWFSC-CPRROCKPCOAST-1916-2012-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<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

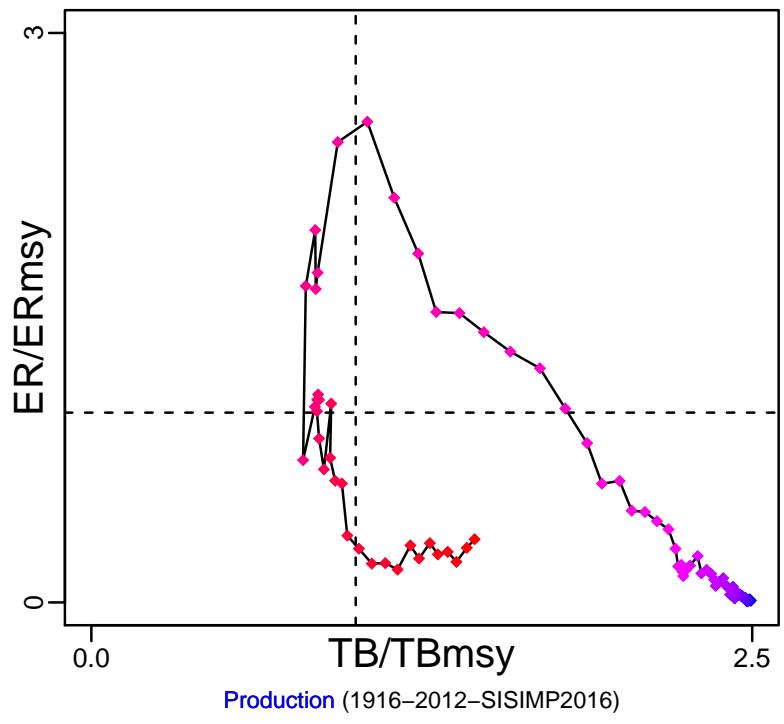
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2012	3290	-	6+	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2012	0.029	-	-	
<b>TC</b>	TC-MT	2012	95			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2012	1.468			
<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 MSYpref (1916–2012–SISIMP2016)

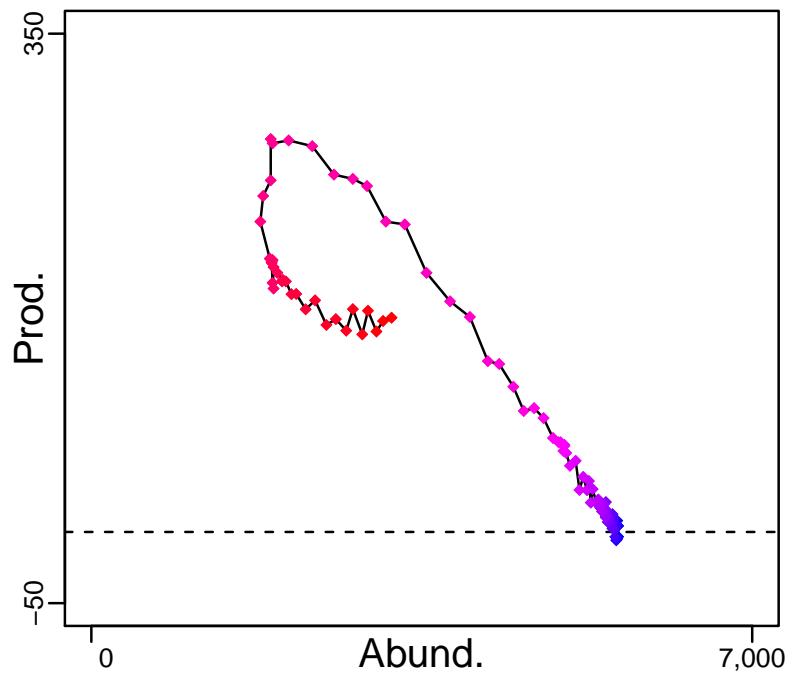


Kobe MGTpref (1916–2012–SISIMP2016)



Spawner Recruit\*

Production (1916–2012–SISIMP2016)

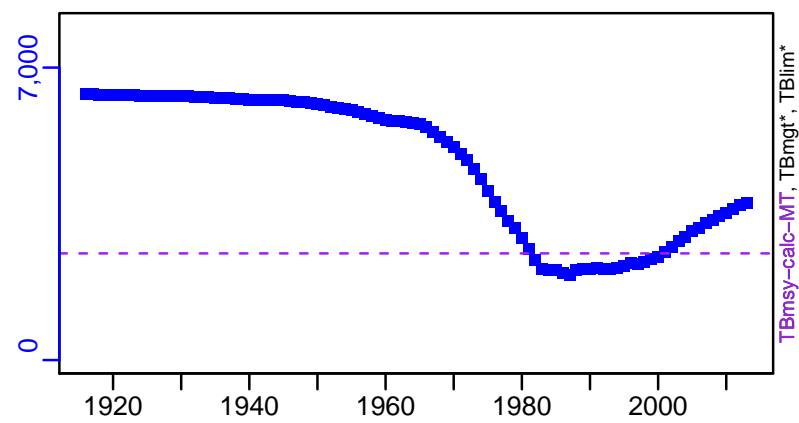


◆ Start Year   ◆ End Year   \* No Data

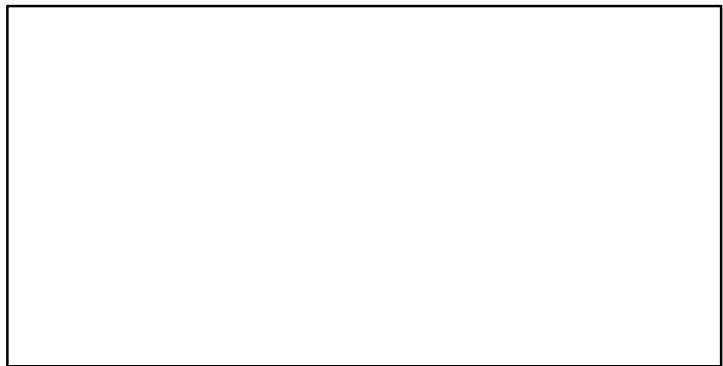
Copper rockfish Pacific Coast [CPRROCKPCOAST]

TB-MT (1916–2012–SISIMP2016)

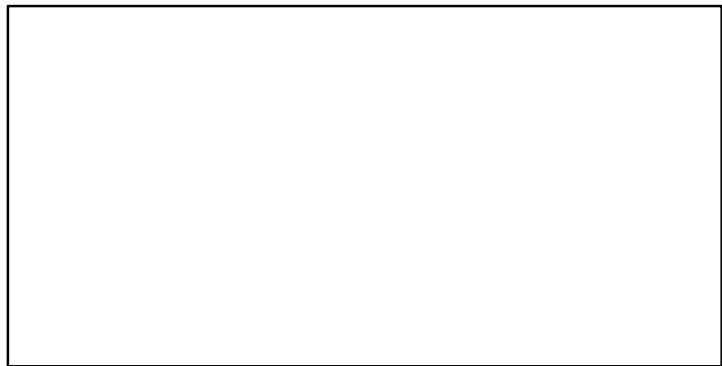
SSB\*



TN \*

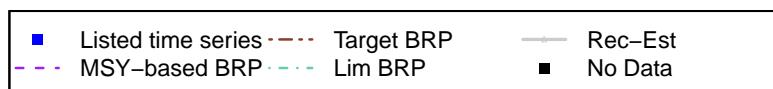
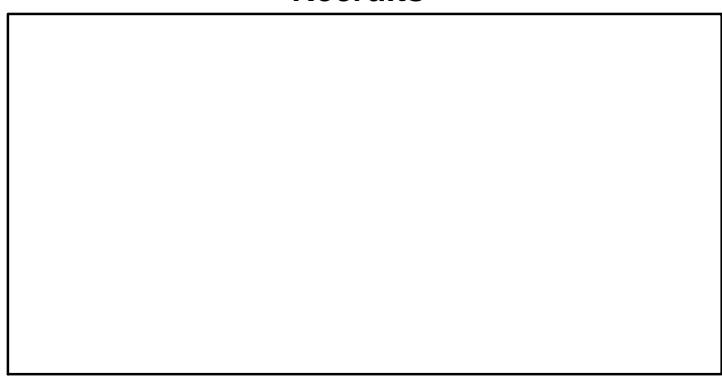
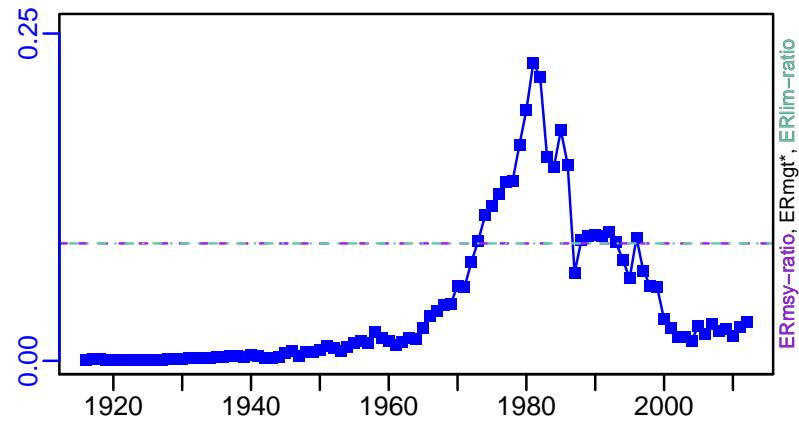


F\*



ER-ratio (1916–2012–SISIMP2016)

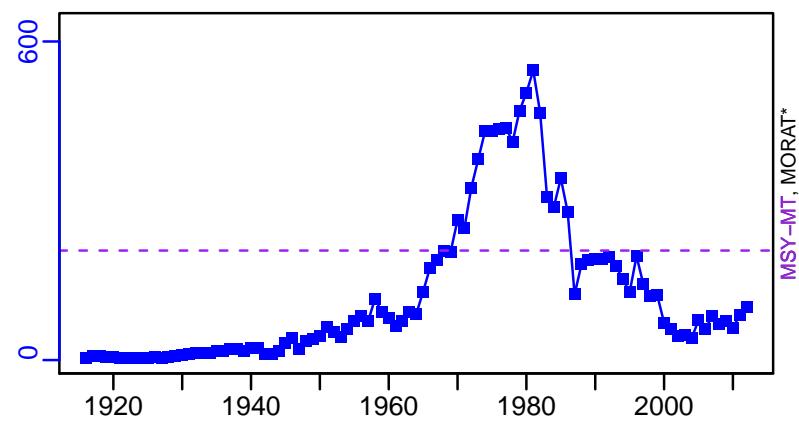
Recruits\*



Copper rockfish Pacific Coast [CPRROCKPCOAST]

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

TAC\*, Cpair\*, Cadv\*



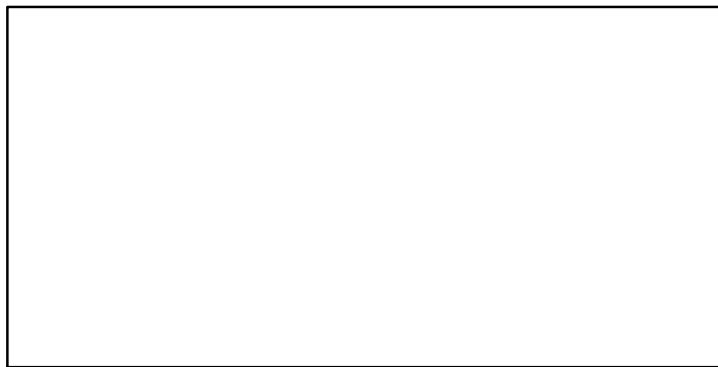
survB\*



CPUE\*



EFFORT\*



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

## Canary rockfish Pacific Coast [CROCKPCOAST]

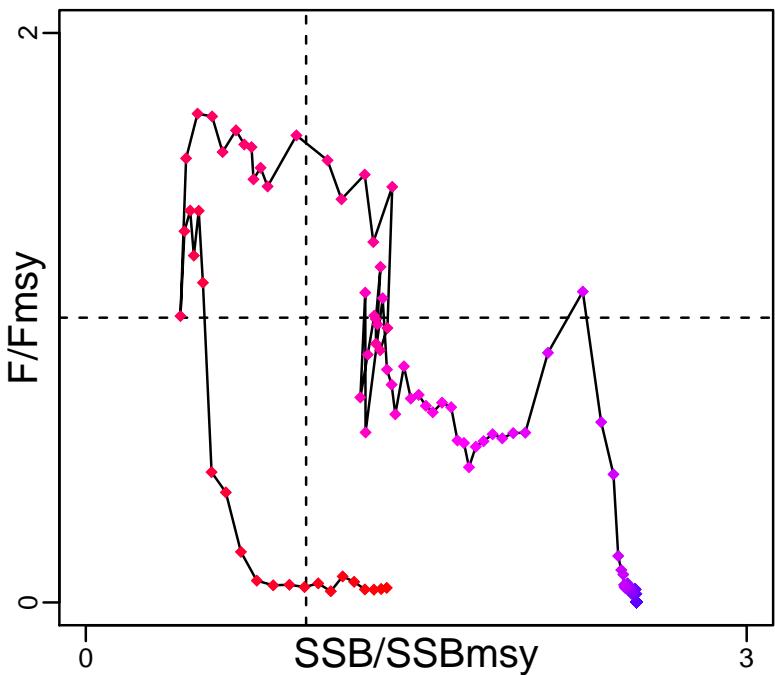
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes pinniger
<b>Current Assess ID</b>	NWFSC-CROCKPCOAST-1892-2015-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2011

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2011	26,414
<b>SSBmsy</b>	SSBmsy-E00eggs	2015	2,996,400,000
<b>Fmsy</b>	Fmsy-1/yr	2015	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	2015	1226
<b>M</b>	M-1/yr	2011	0.06
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2015	1,872,750,000
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

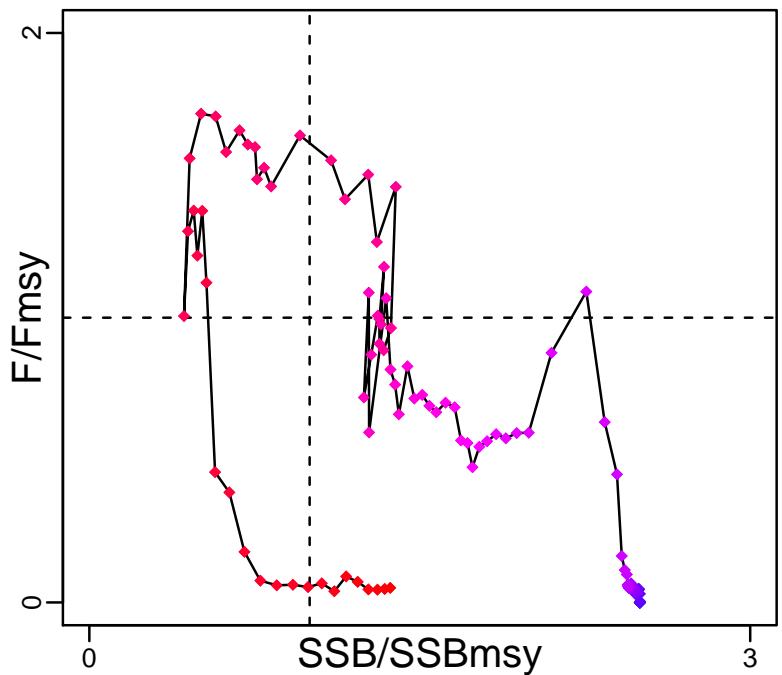
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2015	36,000	-	5+	
<b>SSB</b>	SSB-E00eggs	2015	$4.16 \times 10^9$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	2,700,000	-	0	
<b>F</b>	F-1/yr	2015	0.026	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.001	-	-	
<b>TC</b>	TC-MT	2015	42			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	0.61			
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2015	1.387			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.051			
<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]

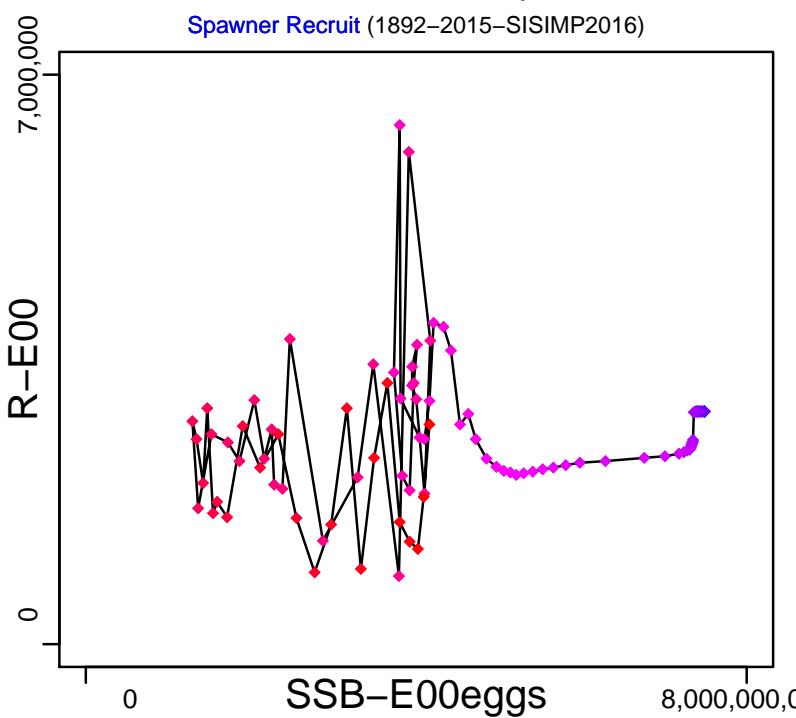
Kobe MSYpref (1892–2015–SISIMP2016)



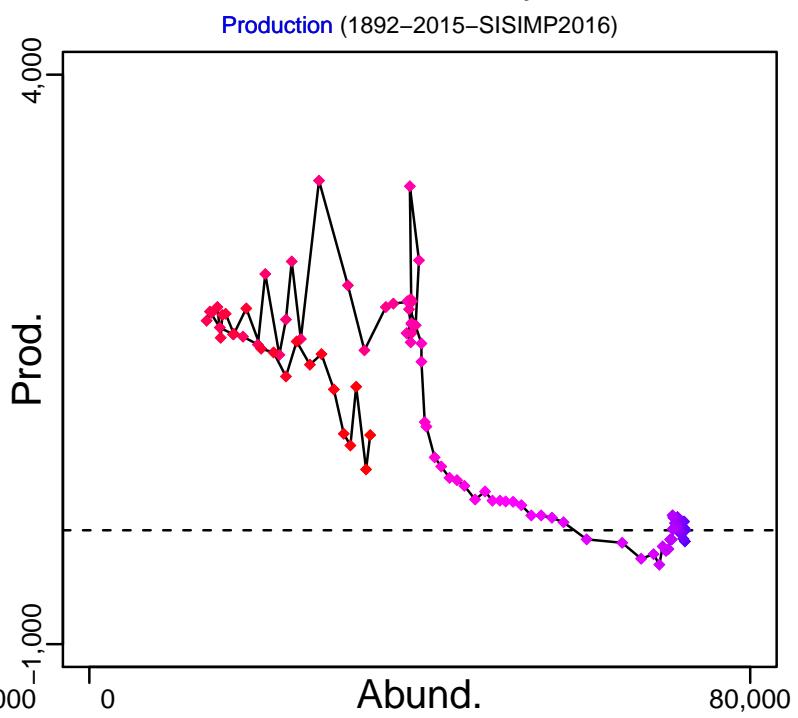
Kobe MGTpref (1892–2015–SISIMP2016)



Spawner Recruit (1892–2015–SISIMP2016)



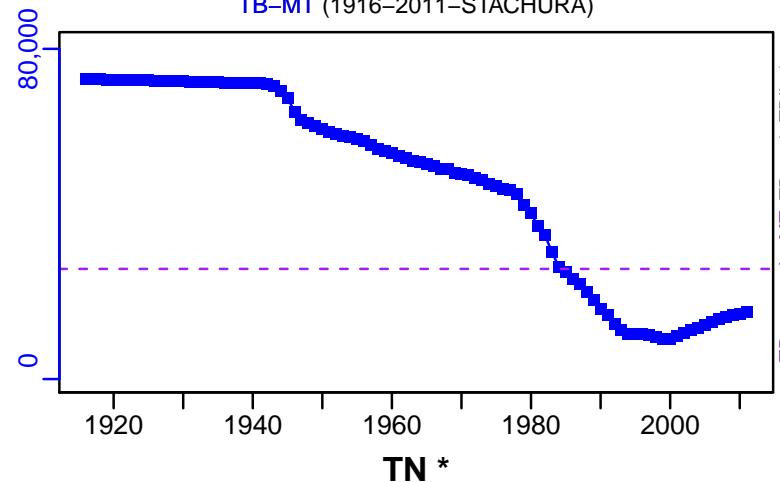
Production (1892–2015–SISIMP2016)



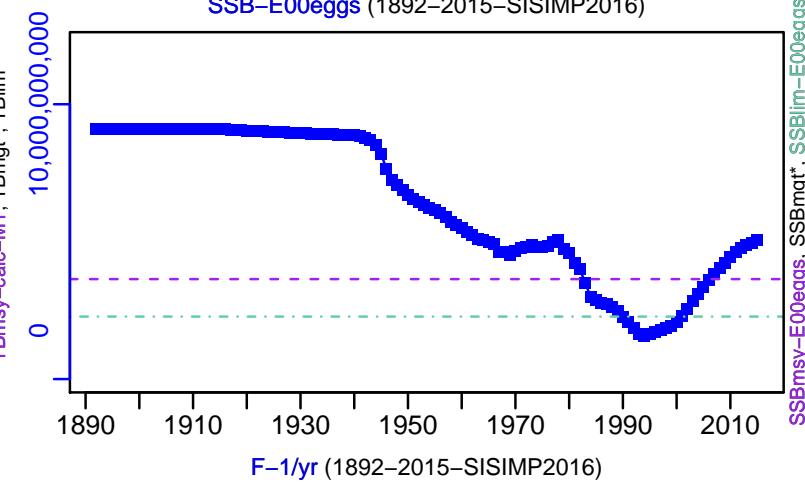
◆ Start Year	◆ End Year	*	No Data
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### Canary rockfish Pacific Coast [CROCKPCOAST]

TB-MT (1916–2011–STACHURA)



SSB-E00eggs (1892–2015–SISIMP2016)



TN \*

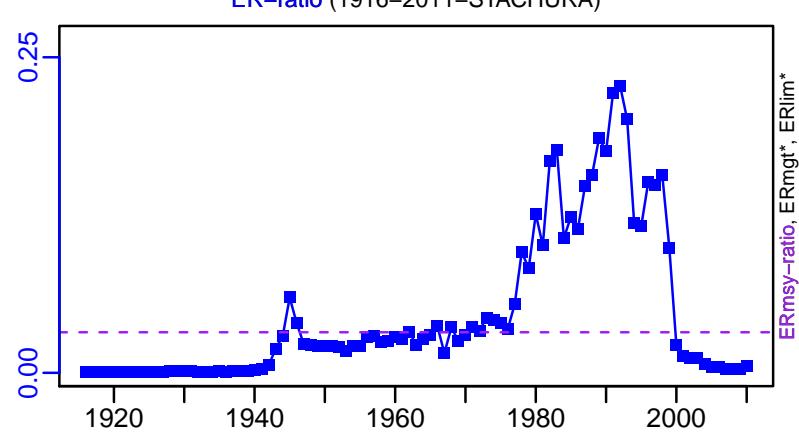
TB<sub>msy</sub>-calc-MT, TB<sub>mgt\*</sub>, TB<sub>lim\*</sub>

F<sub>m</sub><sub>sy</sub>-1/yr, F<sub>mgt\*</sub>, F<sub>lim</sub>-1/yr

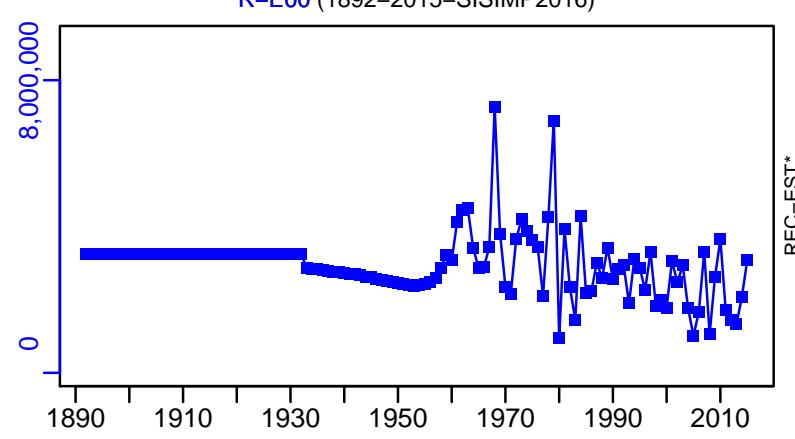
F<sub>m</sub><sub>sy</sub>-ratio, ER<sub>mgt\*</sub>, ER<sub>lim\*</sub>

SSB<sub>msy</sub>-E00eggs, SSB<sub>mgt\*</sub>, SSB<sub>lim</sub>-E00eggs

ER-ratio (1916–2011–STACHURA)



R-E00 (1892–2015–SISIMP2016)



Rec-Est

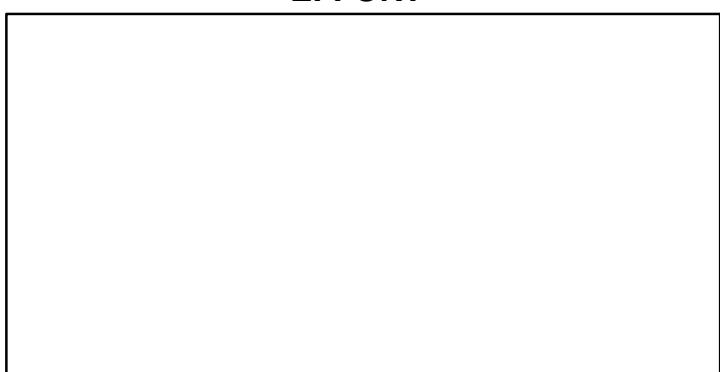
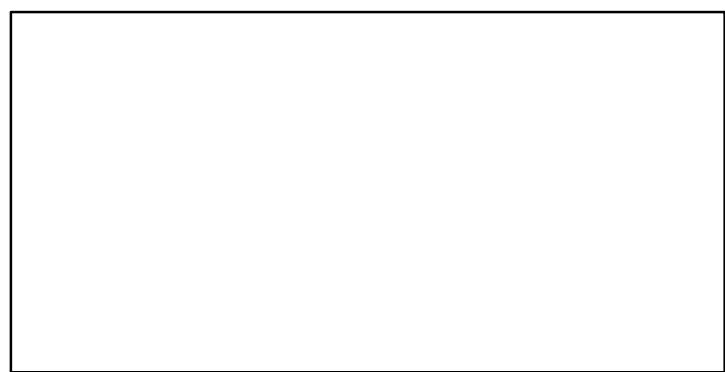
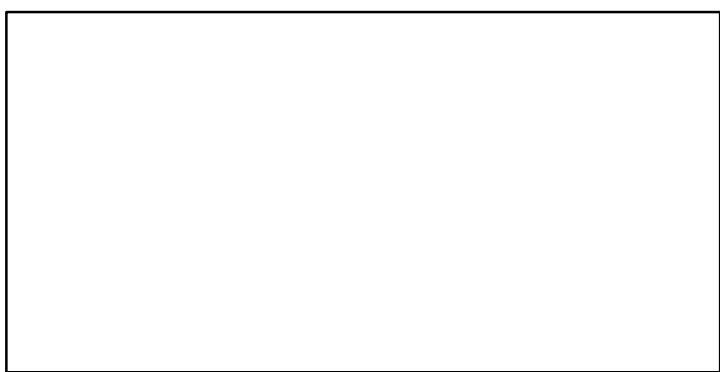
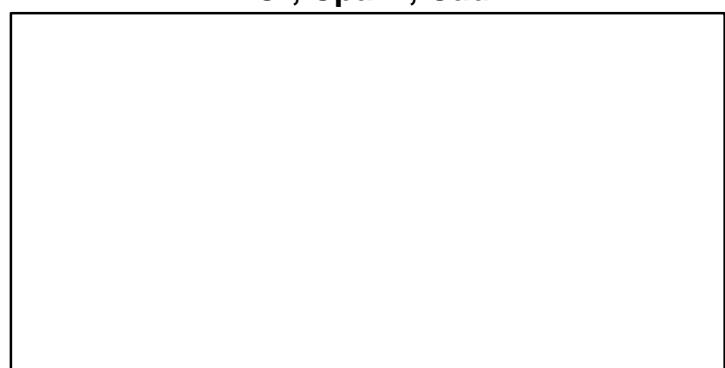
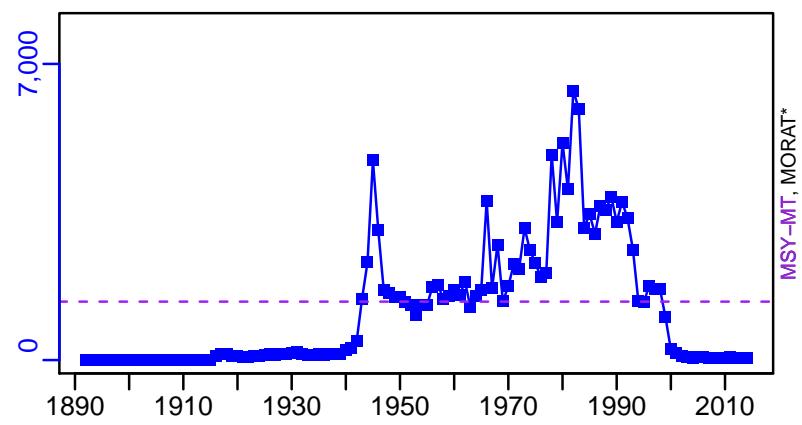
No Data

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

Canary rockfish Pacific Coast [CROCKPCOAST]

TC-MT, TL\*, RecC\* (1892–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



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

## Darkblotched rockfish Pacific Coast [DKROCKPCOAST]

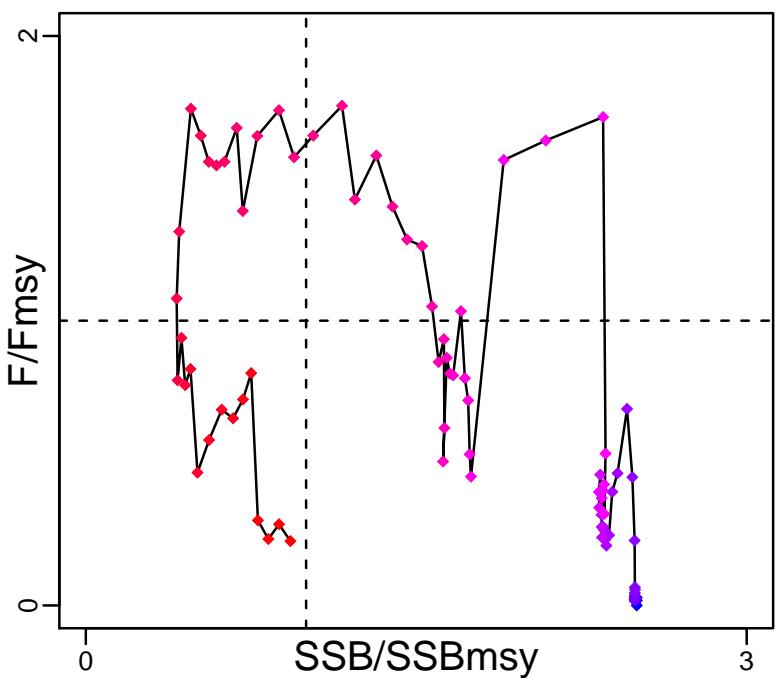
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes crameri
<b>Current Assess ID</b>	NWFSC-DKROCKPCOAST-1915-2015-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2011

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-E00eggs	2015	$1.28 \times 10^9$
<b>Fmsy</b>	Fmsy-1/yr	2015	0.5
<b>ERmsy</b>	-	-	-
<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	2015	674
<b>M</b>	M-1/yr	2011	0.07
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2015	$8 \times 10^8$
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

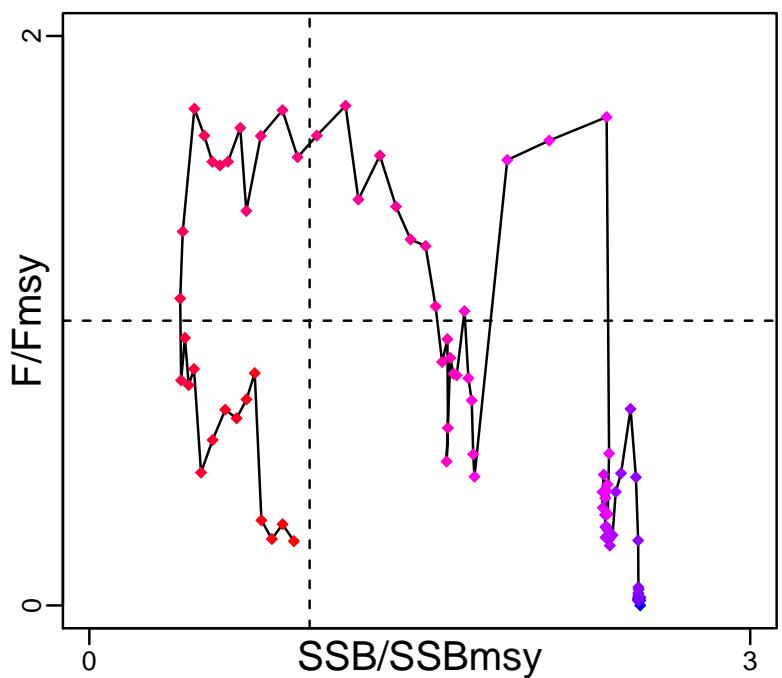
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2015	17,900	-	1+	
<b>SSB</b>	SSB-E00eggs	2015	$1.26 \times 10^9$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	2,490,000	-	0	
<b>F</b>	F-1/yr	2015	0.113	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.006	-	-	
<b>TC</b>	TC-MT	2015	104			
<b>TL</b>	TL-MT	2011	183			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2015	0.985			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.226			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Darkblotched rockfish Pacific Coast [DKROCKPCOAST]**

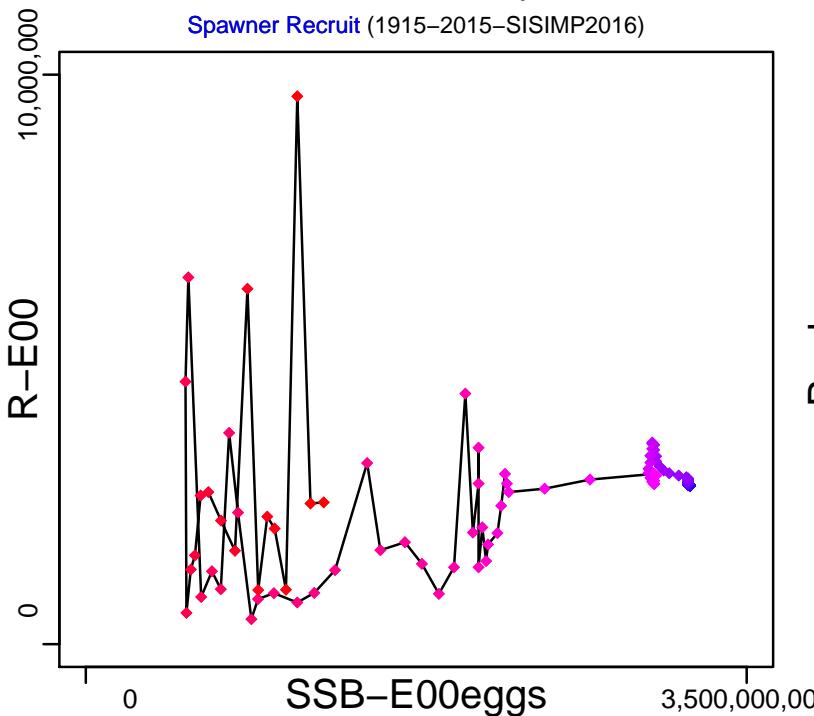
Kobe MSYpref (1915–2015–SISIMP2016)



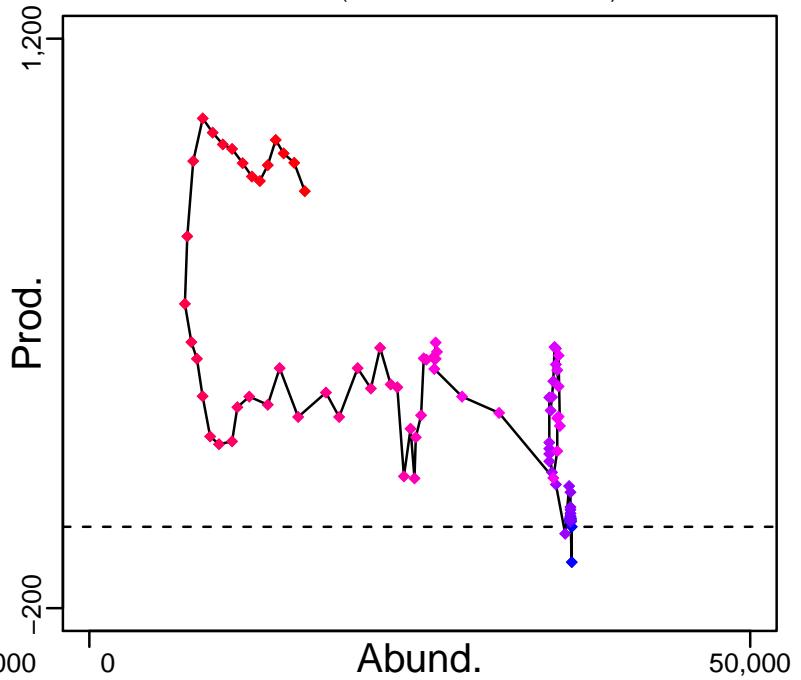
Kobe MGTpref (1915–2015–SISIMP2016)



Spawner Recruit (1915–2015–SISIMP2016)



Production (1915–2015–SISIMP2016)

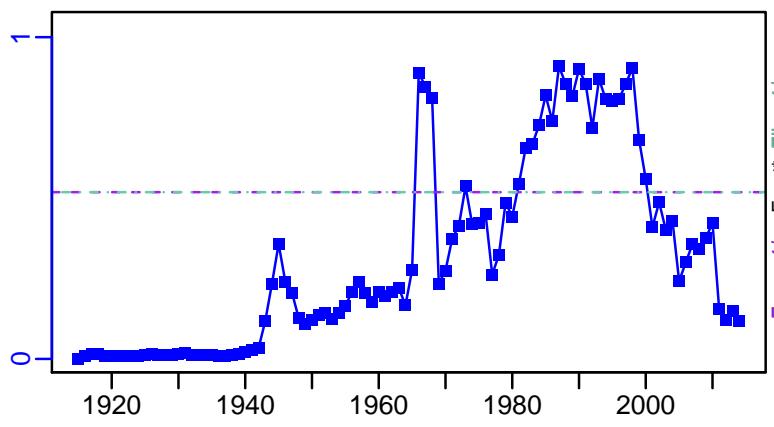
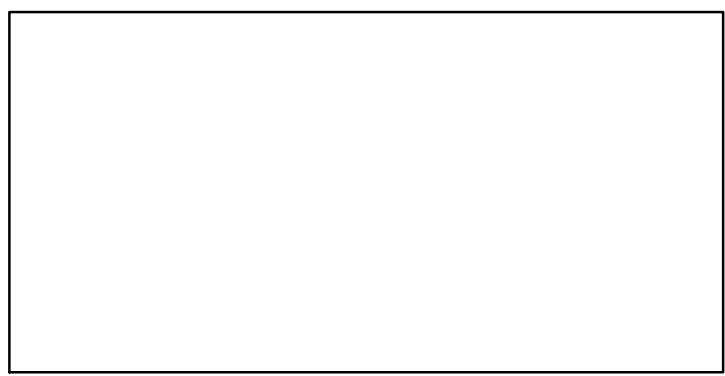
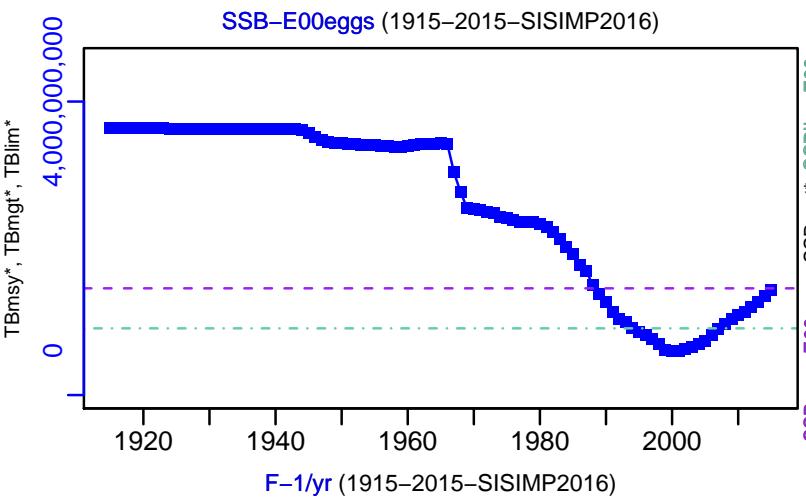
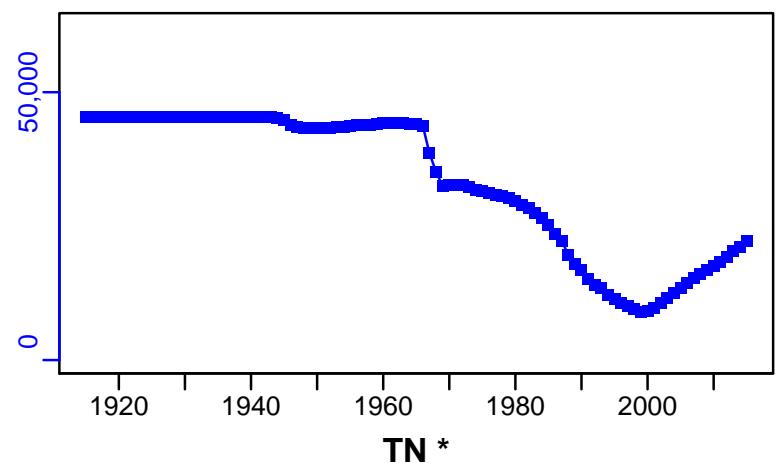


◆ Start Year	◆ End Year	*	No Data
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### Darkblotched rockfish Pacific Coast [DKROCKPCOAST]

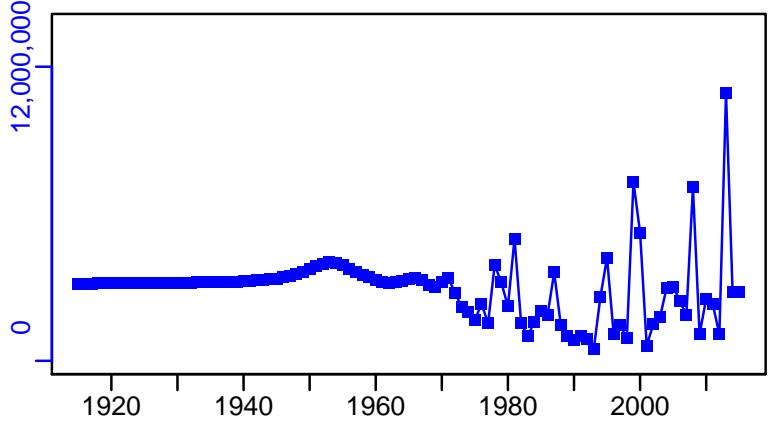
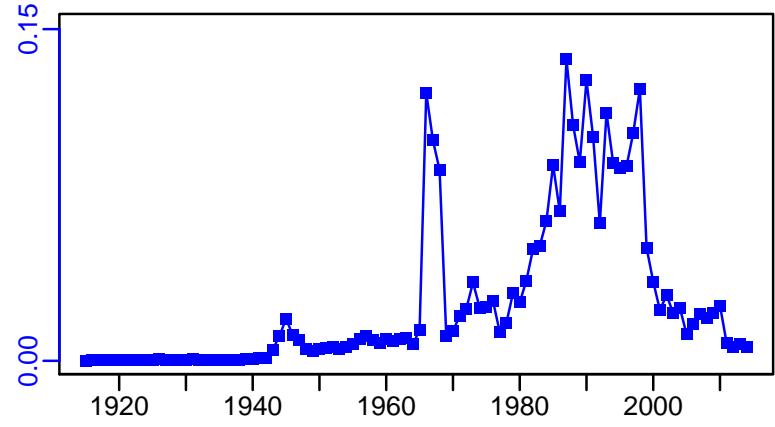
TB-MT (1915–2015–SISIMP2016)

SSB-E00eggs (1915–2015–SISIMP2016)



ER-calc-ratio (1915–2015–SISIMP2016)

R-E00 (1915–2015–SISIMP2016)

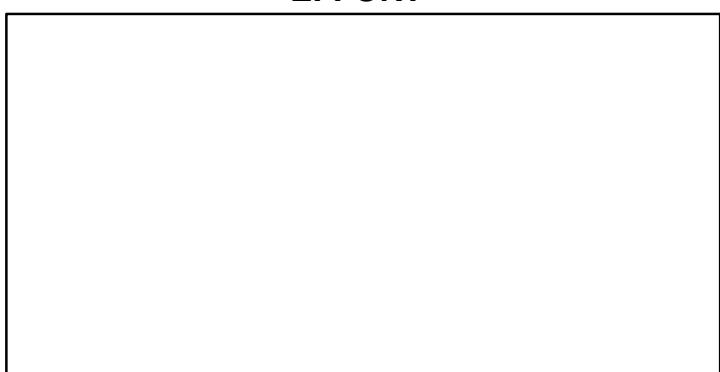
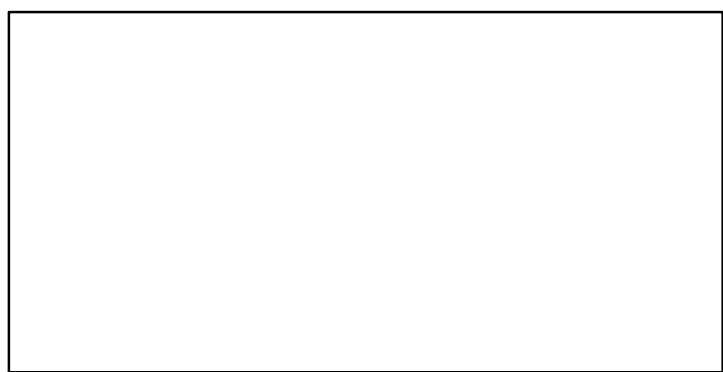
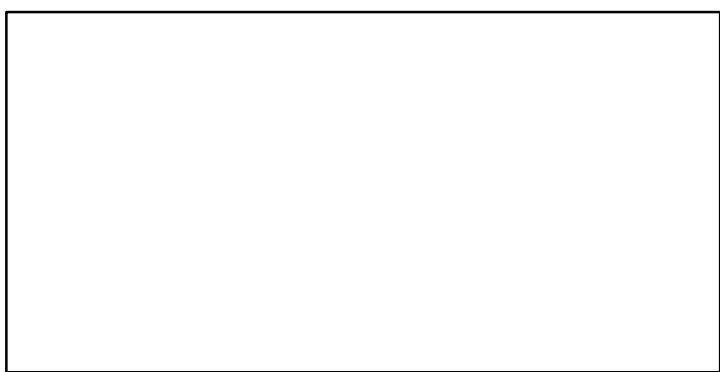
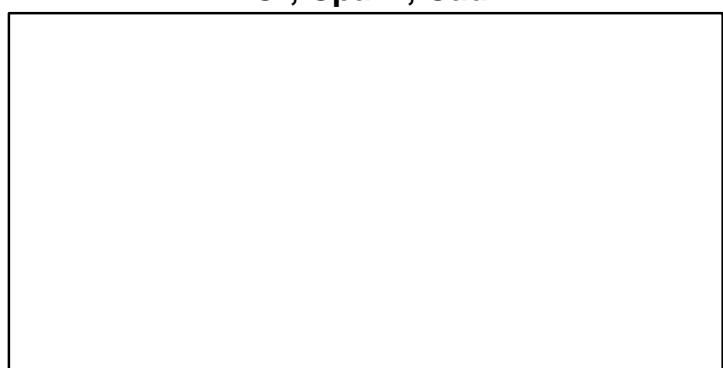
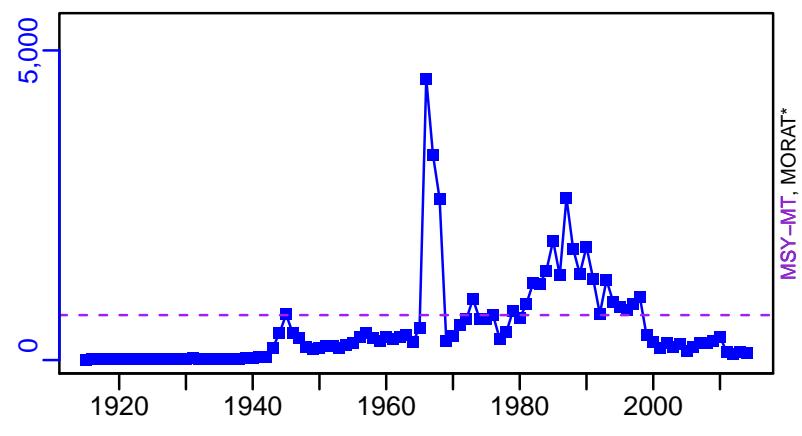


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | - - Lim BRP  | ■ No Data |

**Darkblotched rockfish Pacific Coast [DKROCKPCOAST]**

TC-MT, TL\*, RecC\* (1915–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



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

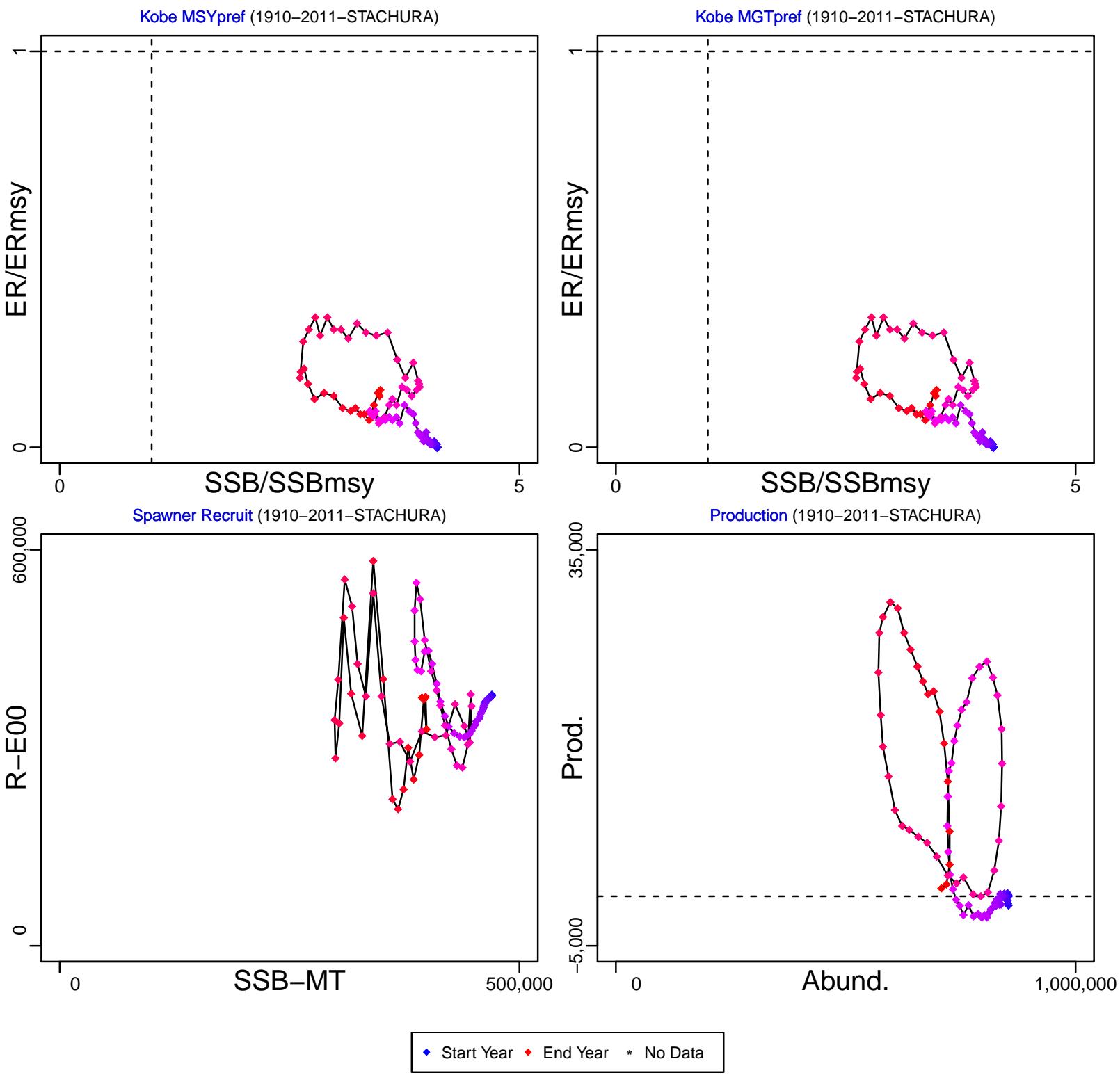
## Dover sole Pacific Coast [DSOLEPCOAST]

<b>Metadata</b>	
<b>Scientific Name</b>	Microstomus pacificus
<b>Current Assess ID</b>	SWFSC-DSOLEPCOAST-1910-2011-STACHURA
<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>	2011

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2011	265,321
<b>SSBmsy</b>	SSBmsy-MT	2011	114,398
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2011	0.131
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2011	821,271
<b>SSB0</b>	SSB0-MT	2011	469,866
<b>MSY</b>	MSY-MT	2011	34,757
<b>M</b>	M-1/yr	2011	0.101
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2011	685,000	-	0+	
<b>SSB</b>	SSB-MT	2011	394,000	Females	5+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2011	376,000	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2011	0.017	Both	5+	
<b>TC</b>	TC-MT	2011	11,300			
<b>TL</b>	TL-MT	2011	10,400			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	2.582			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2011	3.444			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2011	0.13			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

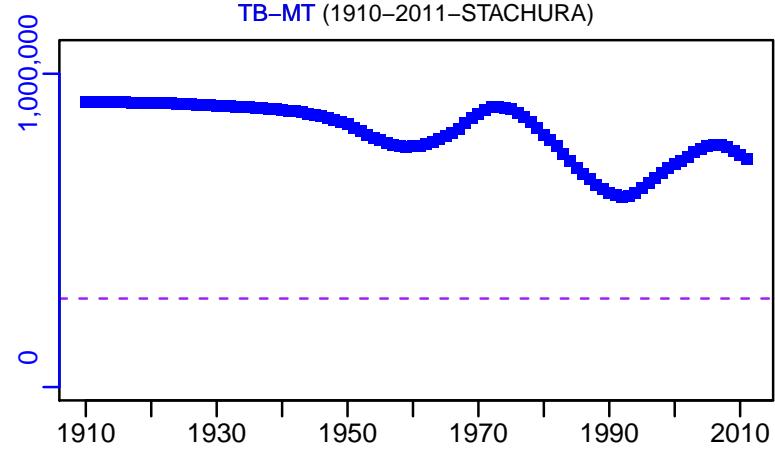
Dover sole Pacific Coast [DSOLEPCOAST]



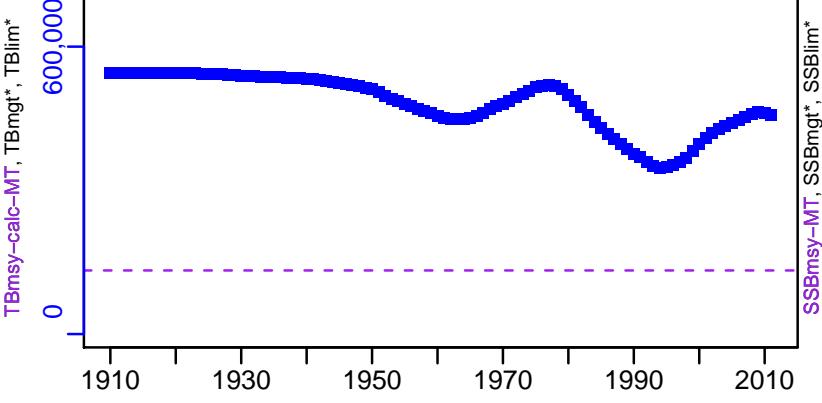
### Dover sole Pacific Coast [DSOLEPCOAST]

TB-MT (1910–2011–STACHURA)

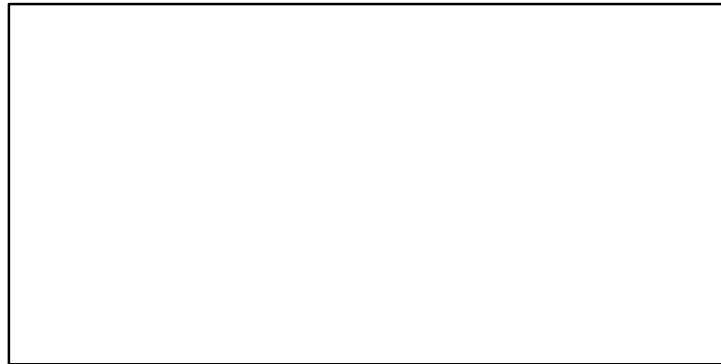
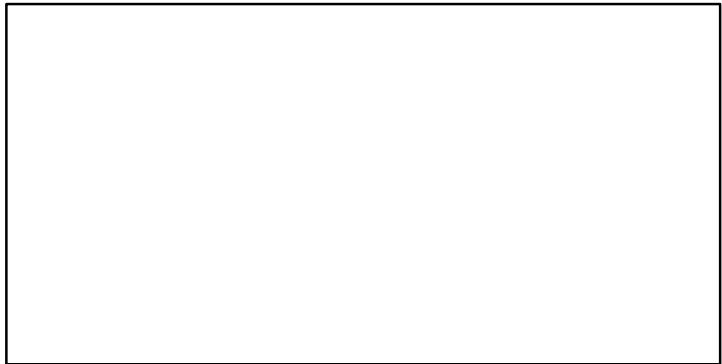
SSB-MT (1910–2011–STACHURA)



TN \*

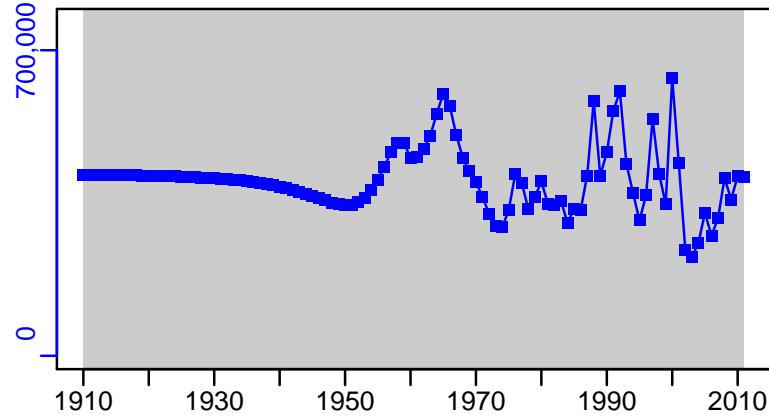
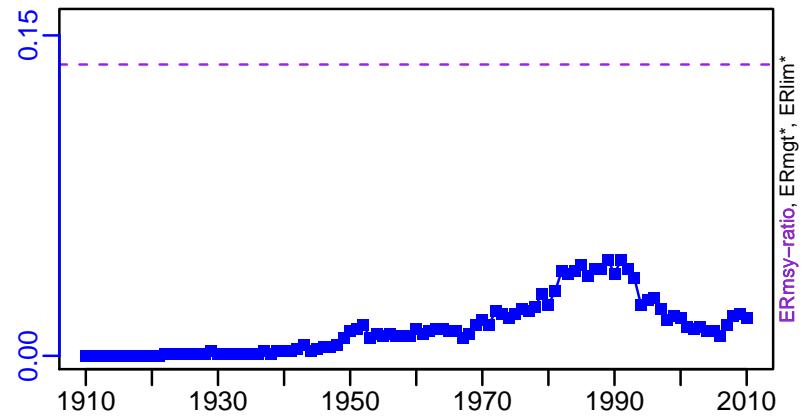


F\*

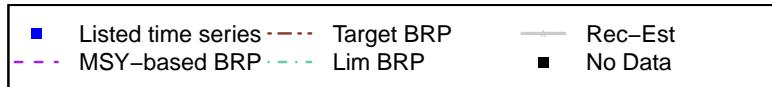


ER-ratio (1910–2011–STACHURA)

R-E00 (1910–2011–STACHURA)



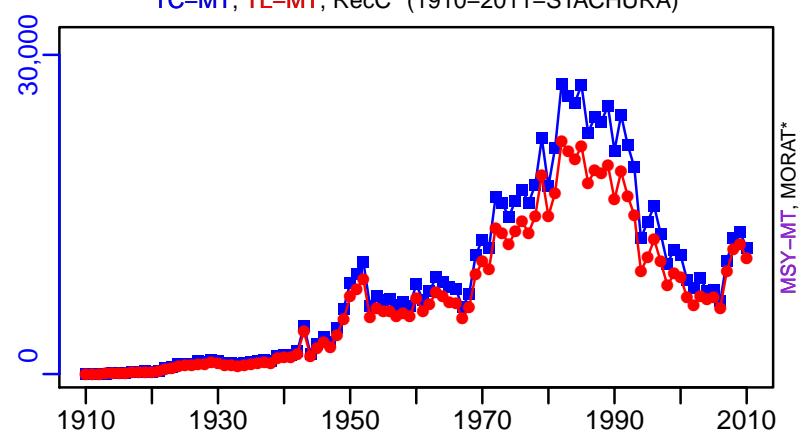
REC-EST: 1910–2011



Dover sole Pacific Coast [DSOLEPCOAST]

TC-MT, TL-MT, RecC\* (1910–2011-STACHURA)

TAC\*, Cpair\*, Cadv\*



MSY-MT, MORAT\*

CPUE\*

EFFORT\*

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

## English sole Pacific Coast [ESOLEPCOAST]

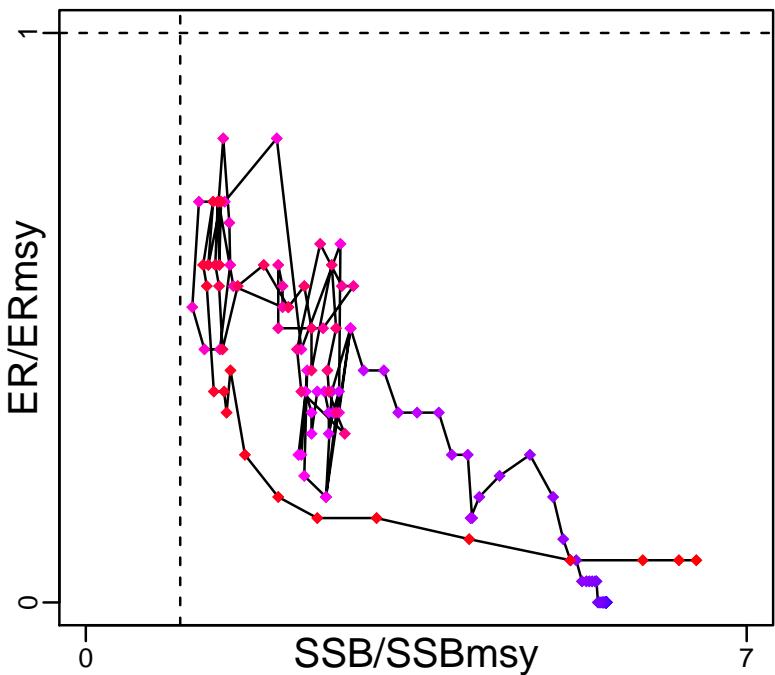
<b>Metadata</b>	
<b>Scientific Name</b>	Parophrys vetulus
<b>Current Assess ID</b>	NWFSC-ESOLEPCOAST-1876-2012-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2007, 2012

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2007	15,748
<b>SSBmsy</b>	SSBmsy-MT	2007	6526
<b>Fmsy</b>	Fmsy-1/yr	2012	0.7
<b>ERmsy</b>	ERmsy-ratio	2007	0.27
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2007	36,012
<b>MSY</b>	MSY-MT	2012	3875
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2007	7364
<b>Flim</b>	Flim-1/yr	2012	0.7
<b>ERlim</b>	-	-	-

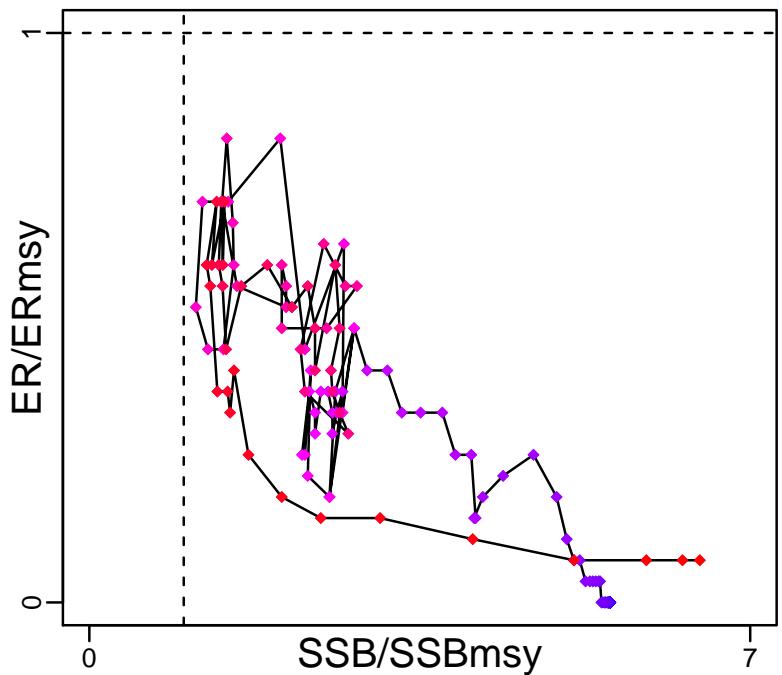
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2007	69,900	-	7.7+	
<b>SSB</b>	SSB-MT	2007	41,900	Females	3+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2007	$1.25 \times 10^8$	-	0	
<b>F</b>	F-1/yr	2012	0.037	-	-	
<b>ER</b>	ER-ratio	2007	0.02	-	-	
<b>TC</b>	TC-MT	2007	1080			
<b>TL</b>	TL-MT	2007	886			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2007	4.439			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2007	6.42			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2012	0.053			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2007	0.074			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

### English sole Pacific Coast [ESOLEPCOAST]

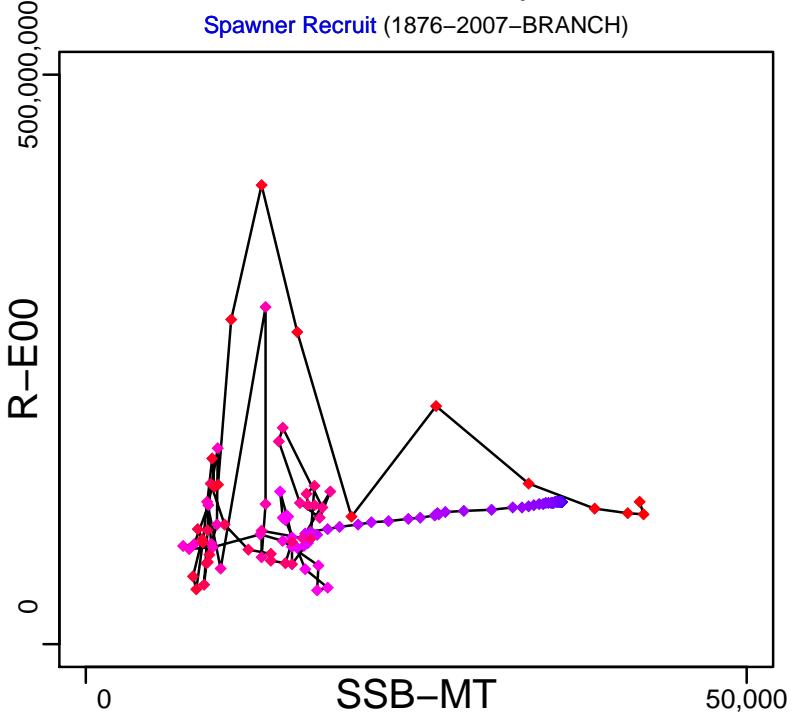
Kobe MSYpref (1876–2007–BRANCH)



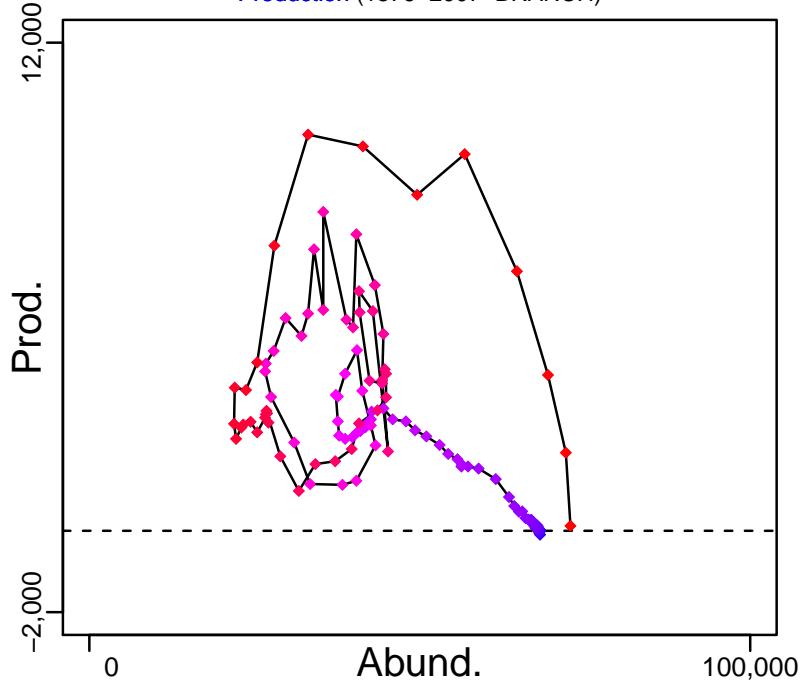
Kobe MGTpref (1876–2007–BRANCH)



Spawner Recruit (1876–2007–BRANCH)



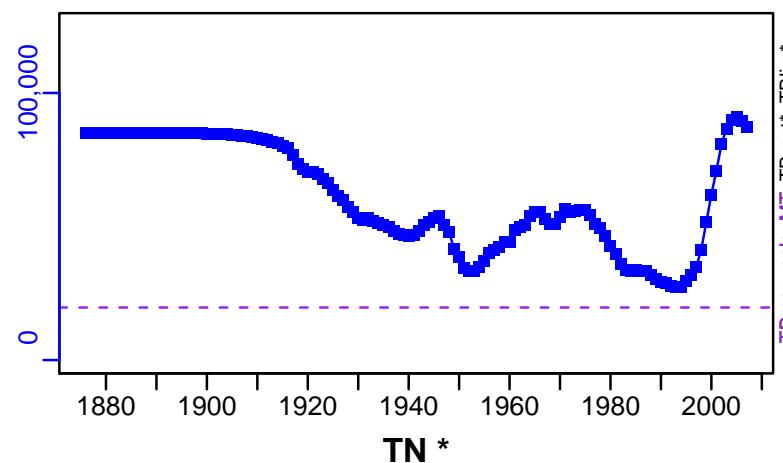
Production (1876–2007–BRANCH)



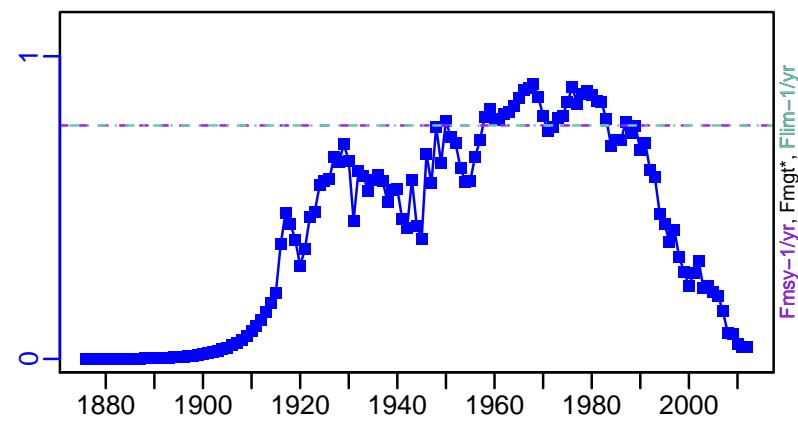
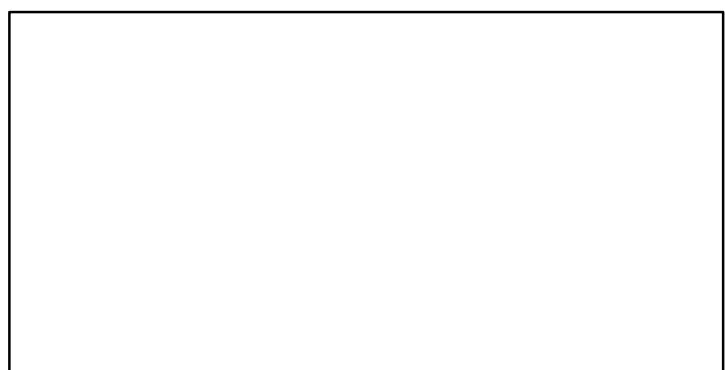
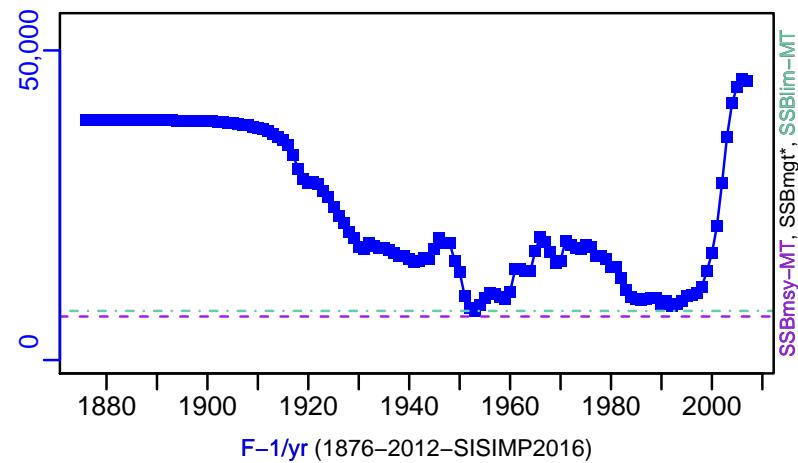
◆ Start Year   ◆ End Year   \* No Data

### English sole Pacific Coast [ESOLEPCOAST]

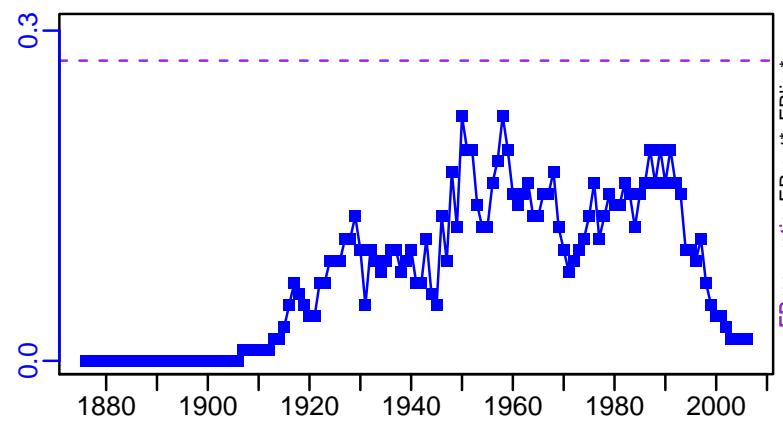
TB-MT (1876–2007–BRANCH)



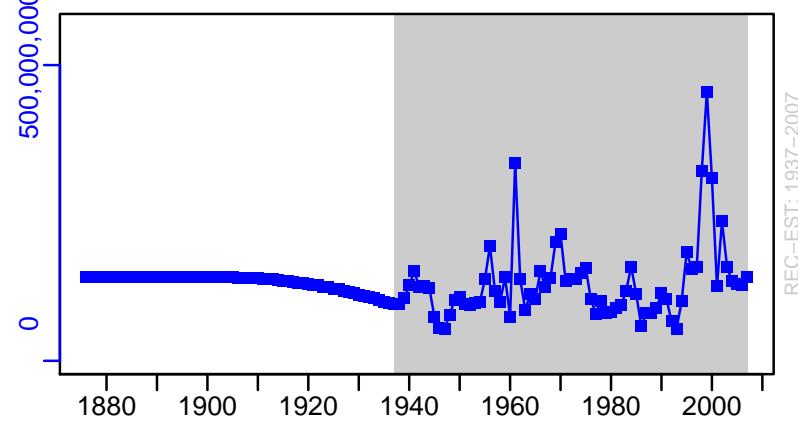
SSB-MT (1876–2007–BRANCH)



ER-ratio (1876–2007–BRANCH)



R-E00 (1876–2007–BRANCH)

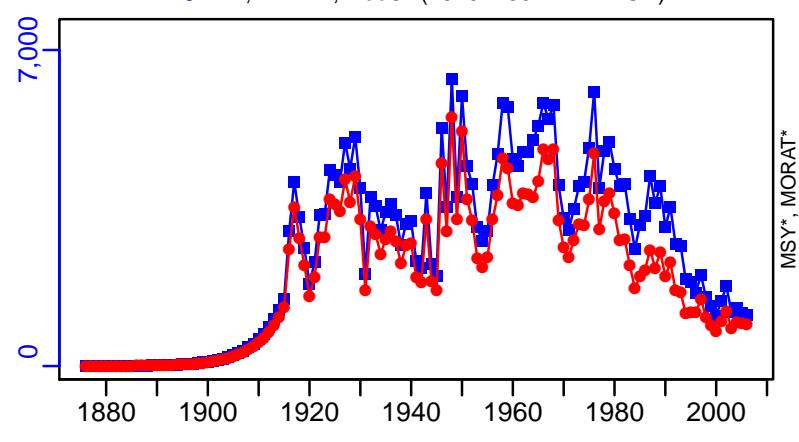


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | --- Lim BRP  | ■ No Data |

**English sole Pacific Coast [ESOLEPCOAST]**

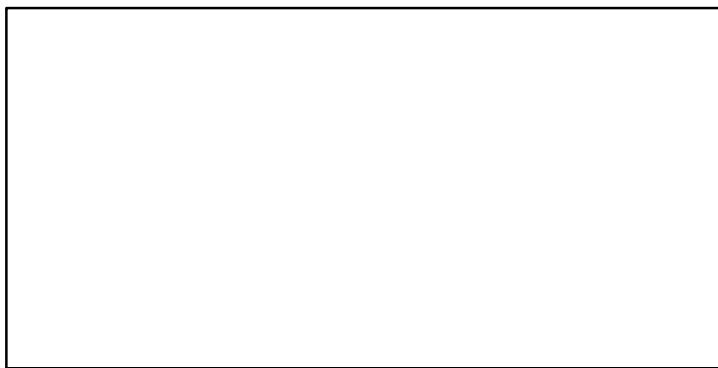
TC-MT, TL-MT, RecC\* (1876–2007-BRANCH)

TAC\*, Cpair\*, Cadv\*

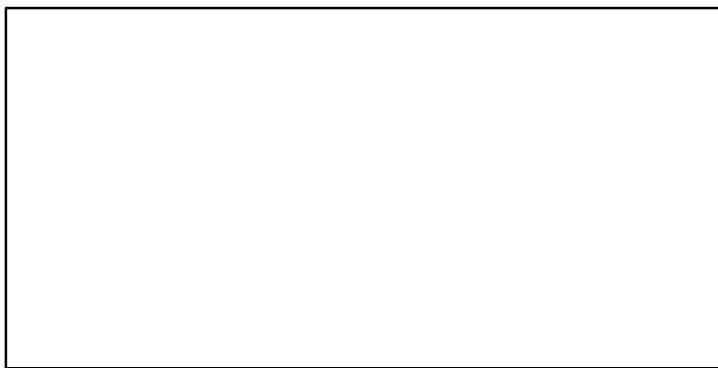


**survB\***

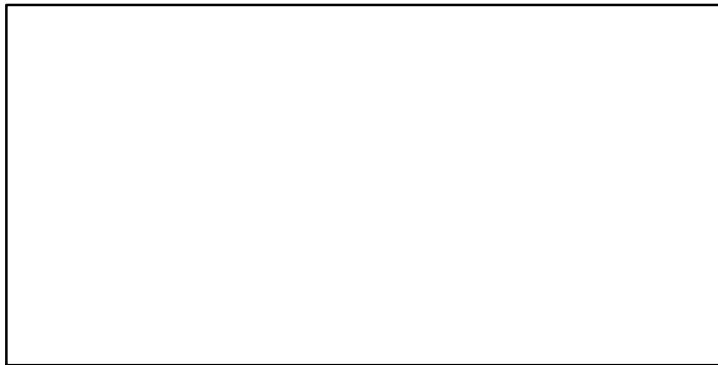
MSY\*, MORAT\*



**CPUE\***



**EFFORT\***



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

## Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

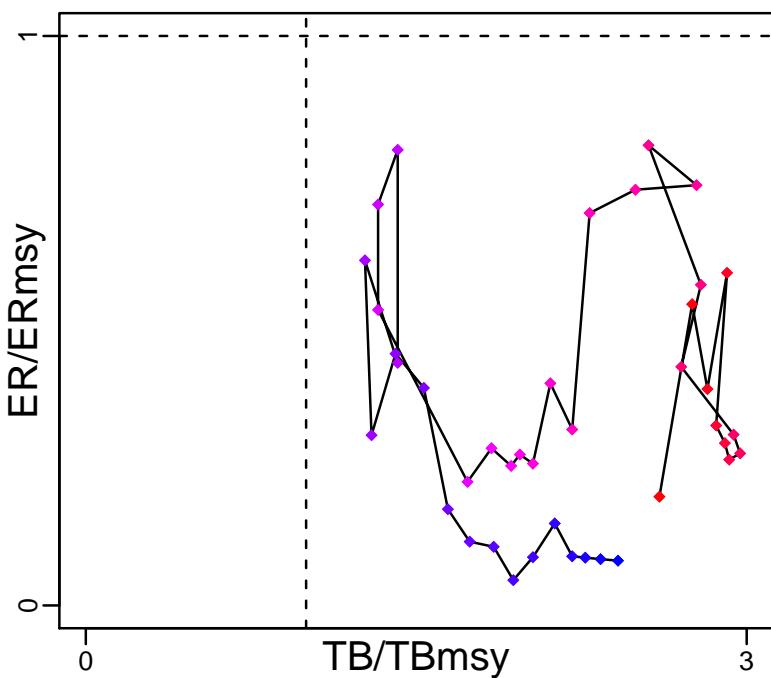
Metadata	
<b>Scientific Name</b>	Sebastodes carnatus
<b>Current Assess ID</b>	SWFSC-GOPHERSPCOAST-1965-2005-STANTON
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM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

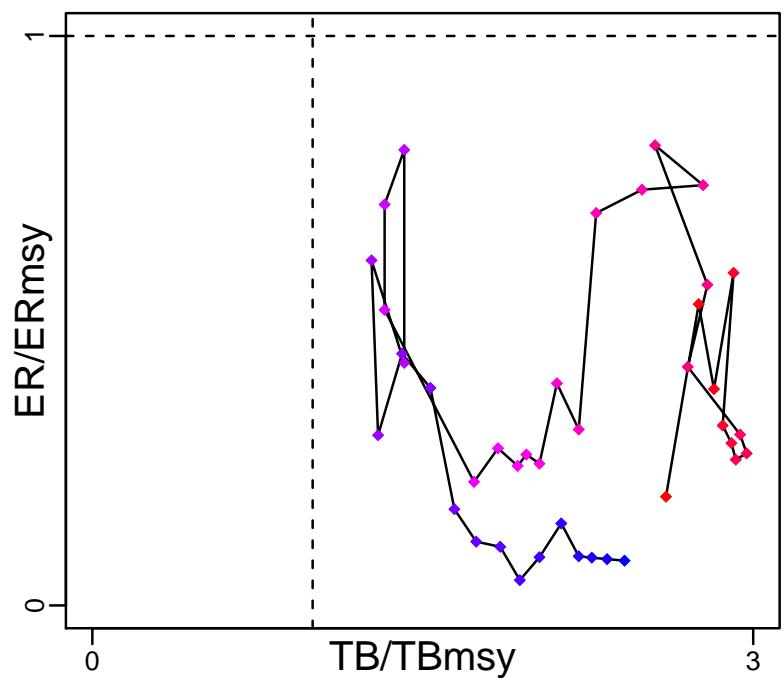
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2005	2570	-	1+	
<b>SSB</b>	SSB-MT	2005	1900	Females	3+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-MT	2005	2730	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2005	0.019	-	-	
<b>TC</b>	TC-MT	2005	50			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	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]

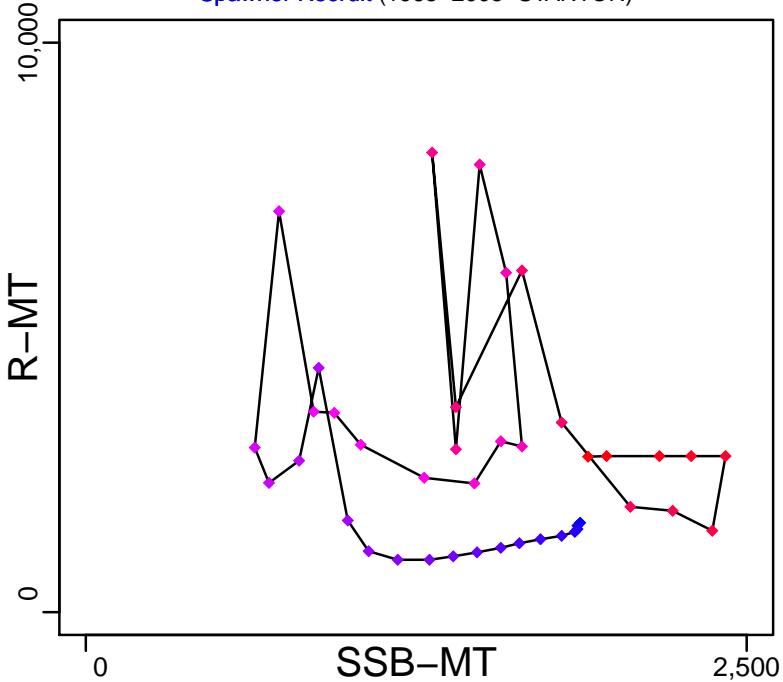
Kobe MSYpref (1965–2005-STANTON)



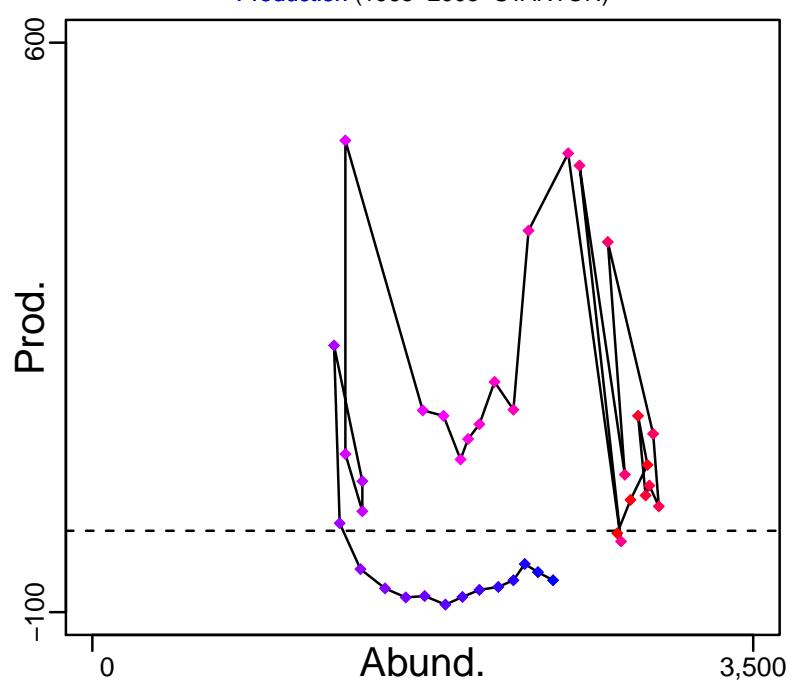
Kobe MGTpref (1965–2005-STANTON)



Spawner Recruit (1965–2005-STANTON)



Production (1965–2005-STANTON)

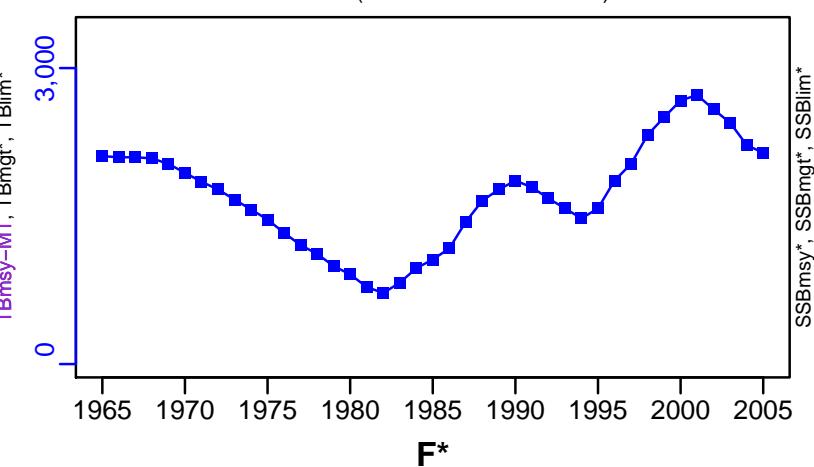
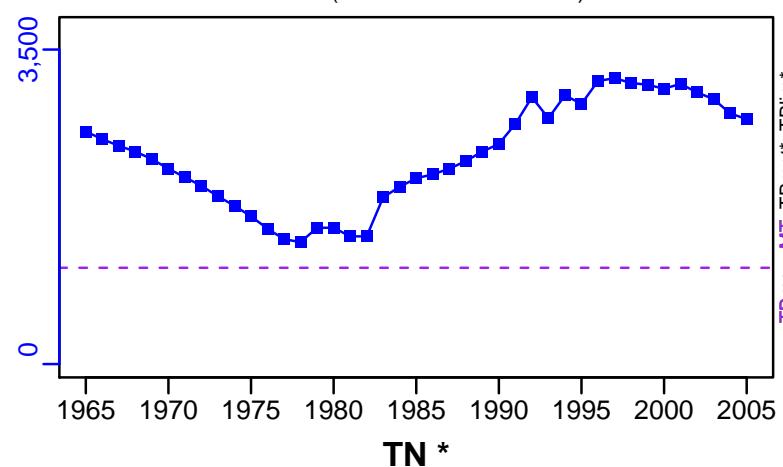


◆ Start Year ◆ End Year \* No Data

Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

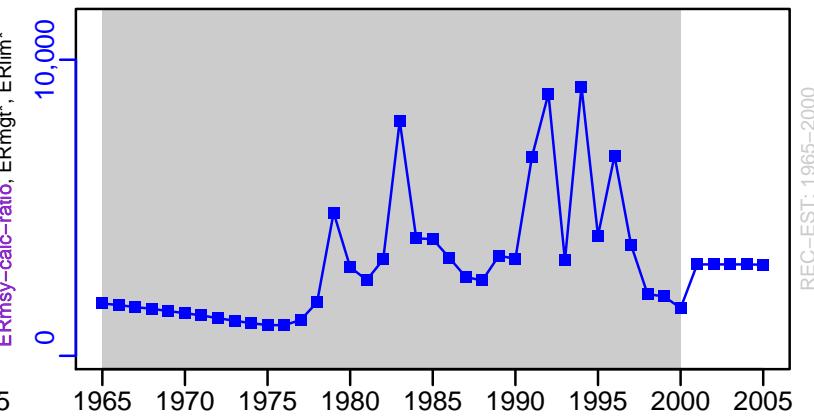
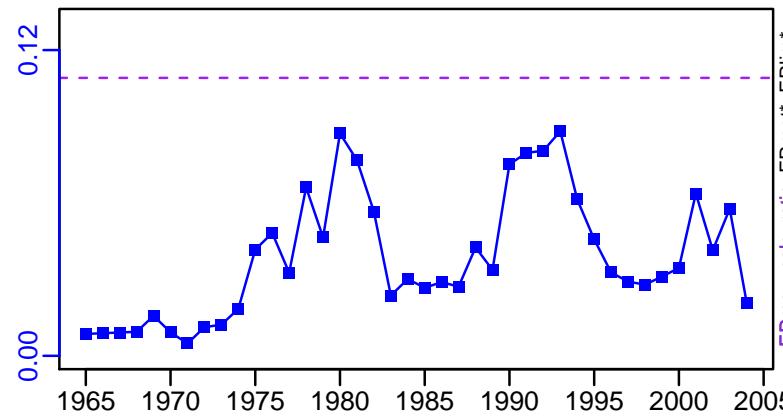
TB-MT (1965–2005-STANTON)

SSB-MT (1965–2005-STANTON)



ER-ratio (1965–2005-STANTON)

R-MT (1965–2005-STANTON)

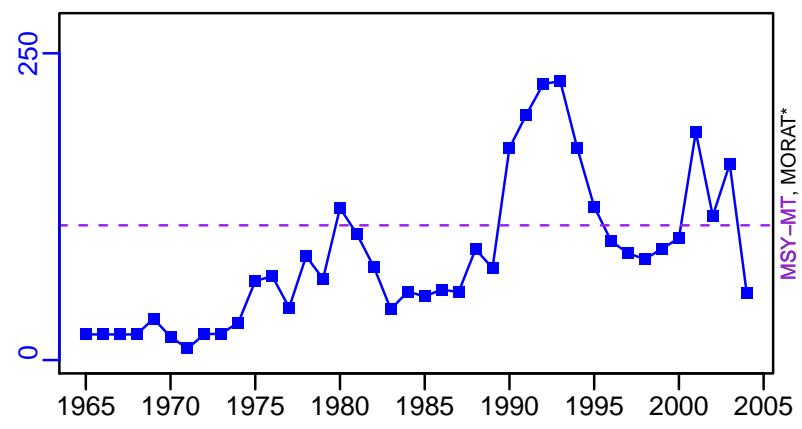


■ Listed time series	— Target BRP	— Rec-Est
- - MSY-based BRP	--- Lim BRP	■ No Data

Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

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

TAC\*, Cpair\*, Cadv\*



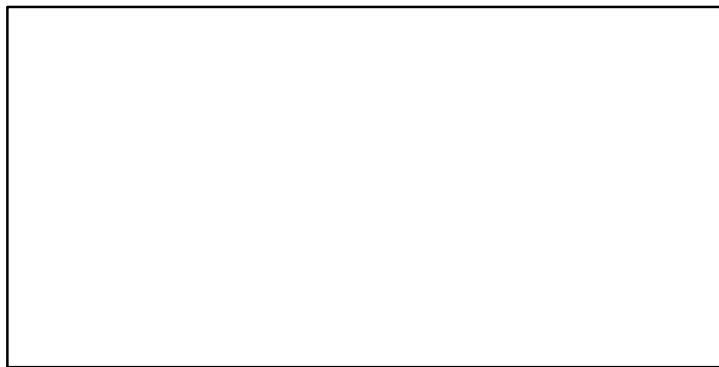
survB\*



CPUE\*



EFFORT\*



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

## Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

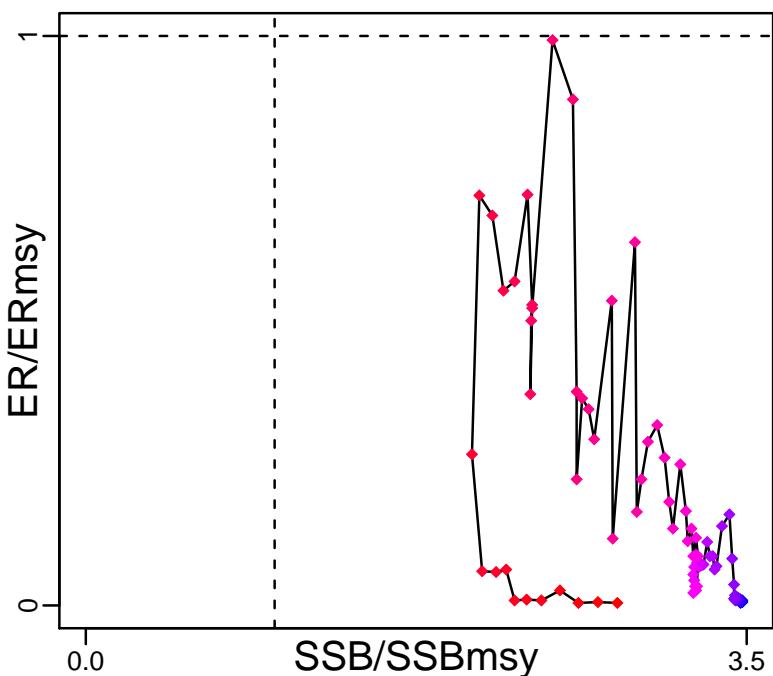
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes elongatus
<b>Current Assess ID</b>	PFMC-GRNSTROCKPCOAST-1916-2009-STANTON
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Pacific Fishery Management Council
<b>Asmts in RAM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

<b>Reference Points</b>			
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>	-	-	-

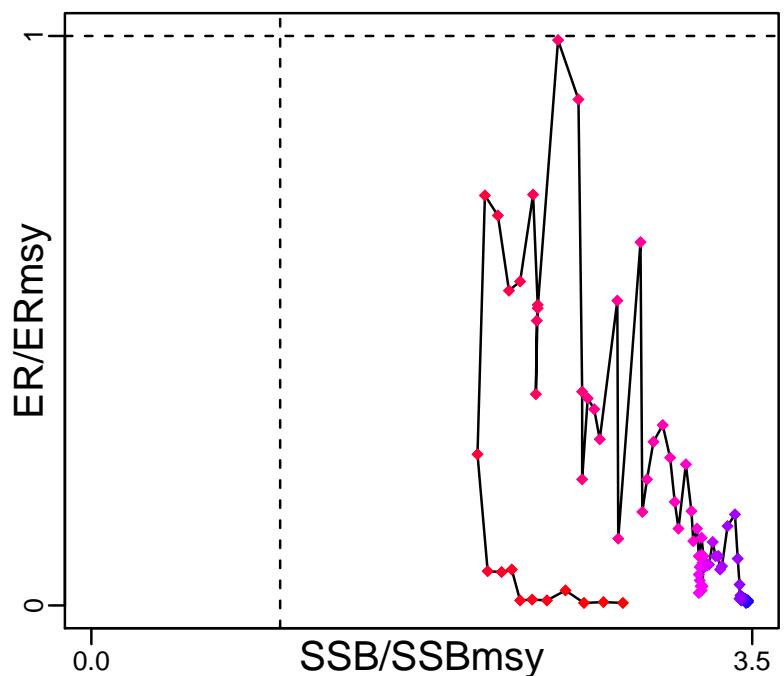
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2009	29,200	-	2+	
<b>SSB</b>	SSB-E00eggs	2009	$5.74 \times 10^9$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2009	14,700	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2009	0	-	-	
<b>TC</b>	TC-MT	2009	9			
<b>TL</b>	TL-MT	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]**

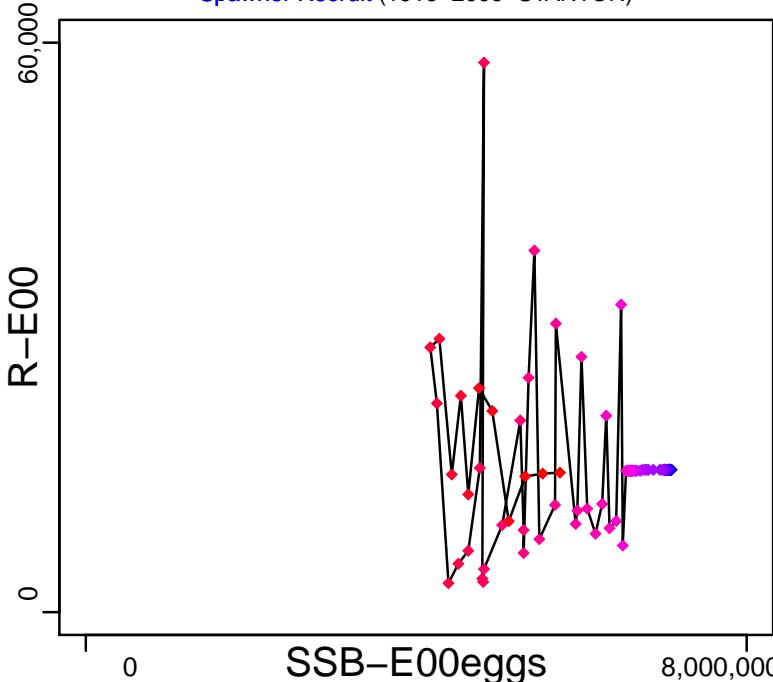
Kobe MSYpref (1916–2009–STANTON)



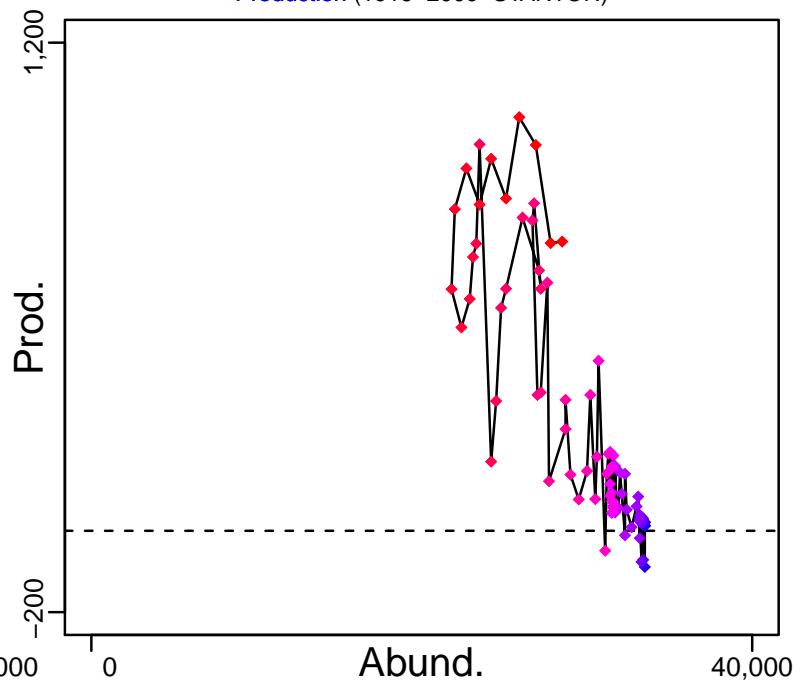
Kobe MGTpref (1916–2009–STANTON)



Spawner Recruit (1916–2009–STANTON)



Production (1916–2009–STANTON)

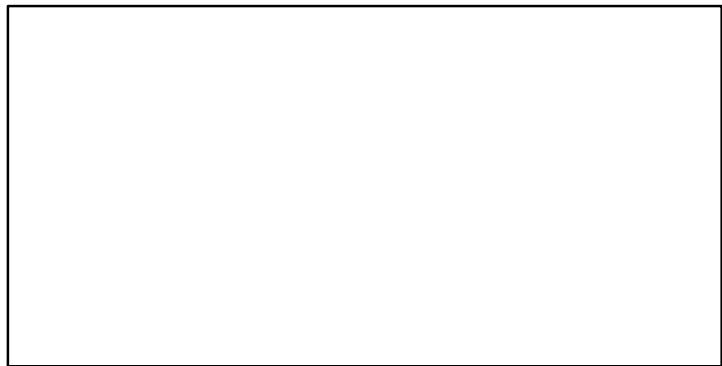
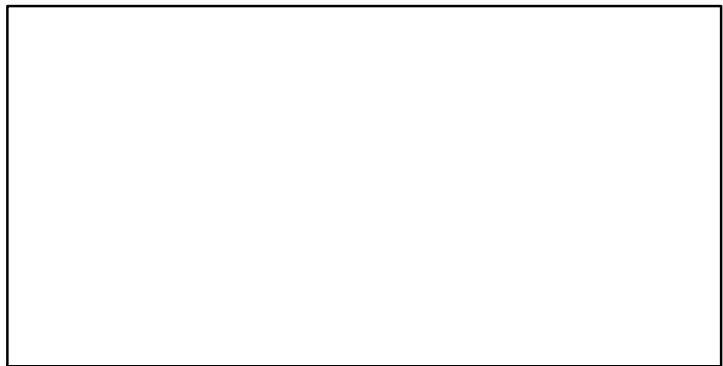
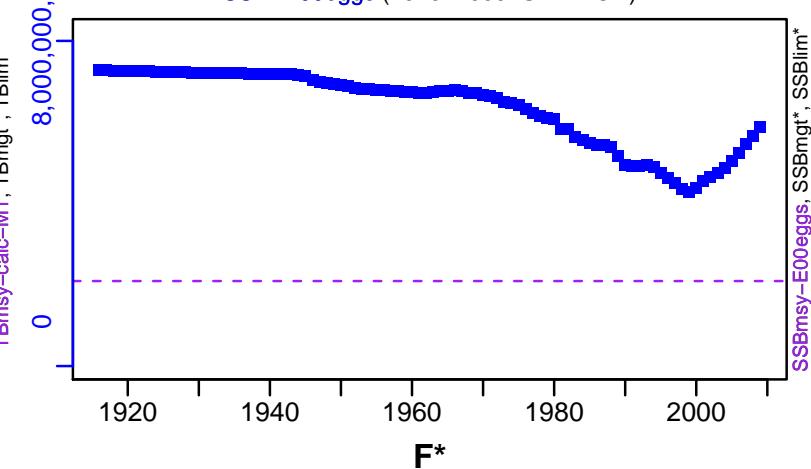
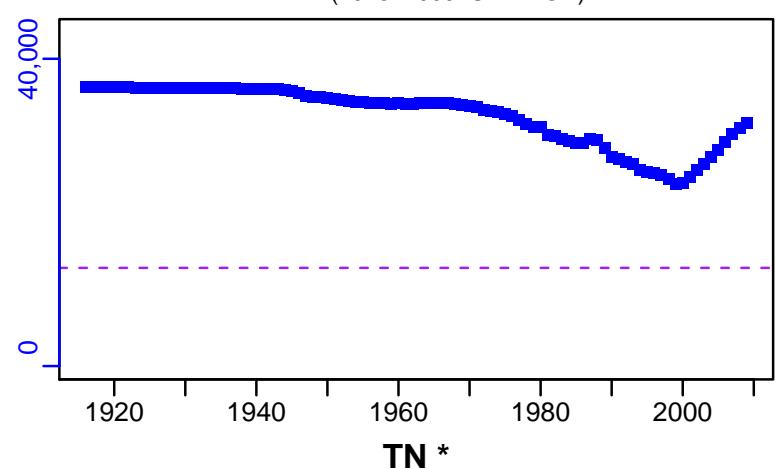


◆ Start Year	◆ End Year	*	No Data
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**Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]**

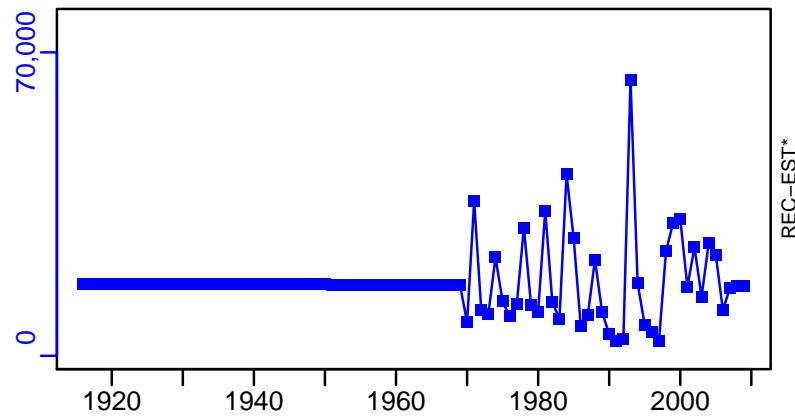
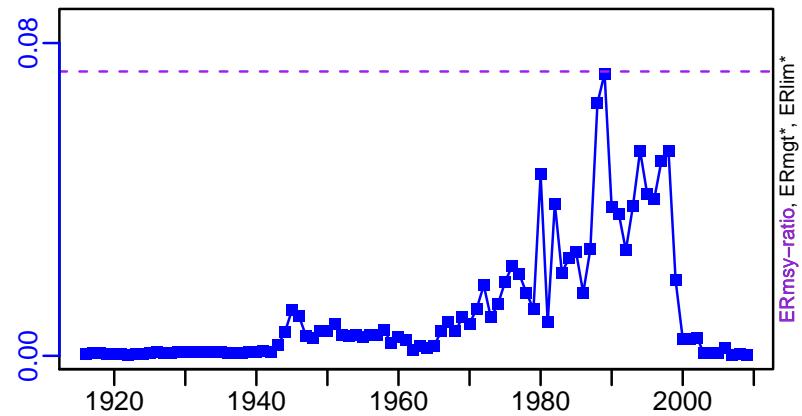
**TB-MT (1916–2009–STANTON)**

**SSB-E00eggs (1916–2009–STANTON)**



**ER-ratio (1916–2009–STANTON)**

**R-E00 (1916–2009–STANTON)**

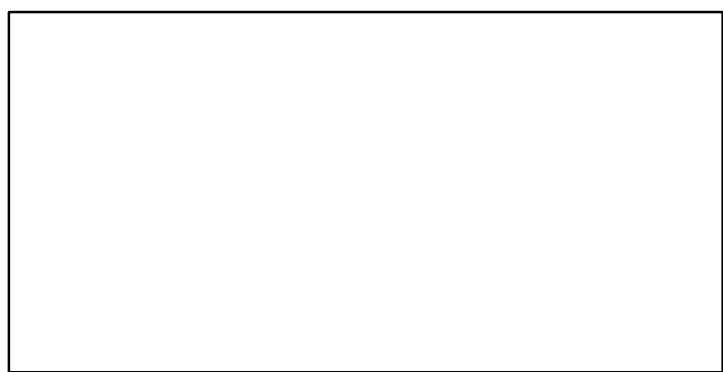
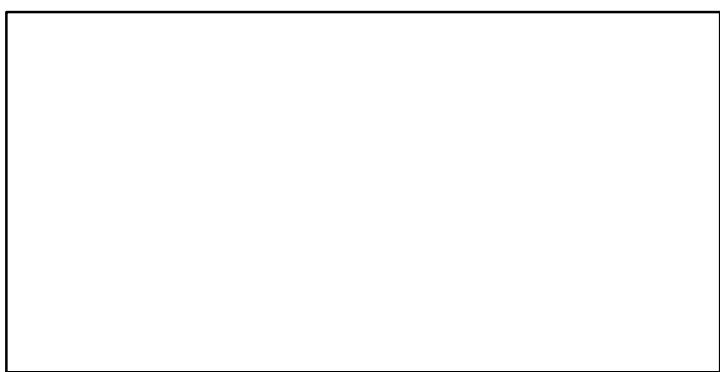
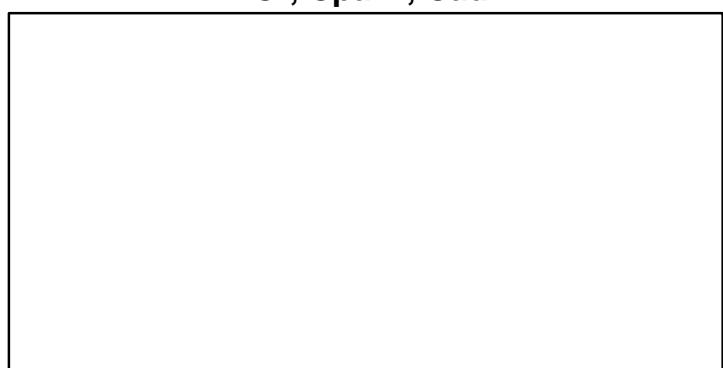
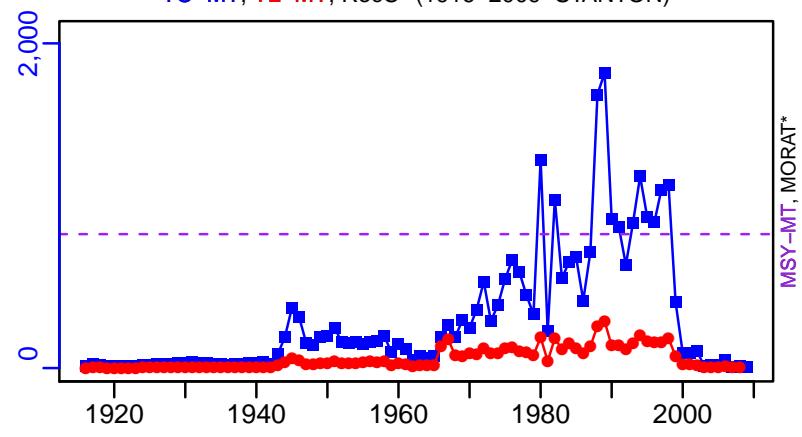


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	··· Lim BRP	■ No Data

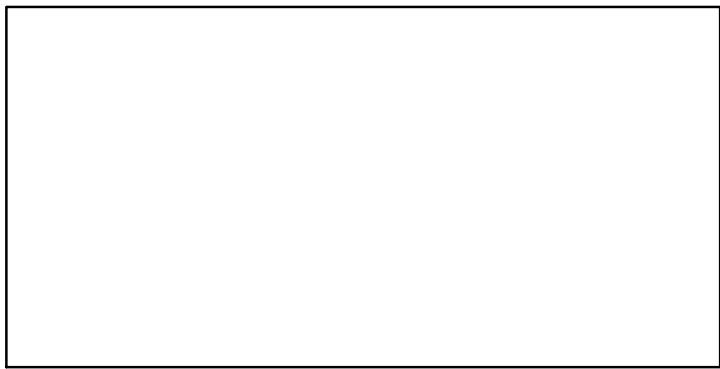
Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

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

TAC\*, Cpair\*, Cadv\*



EFFORT\*



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

## Greenspotted rockfish Pacific Coast North [GRSPROCKNCAL]

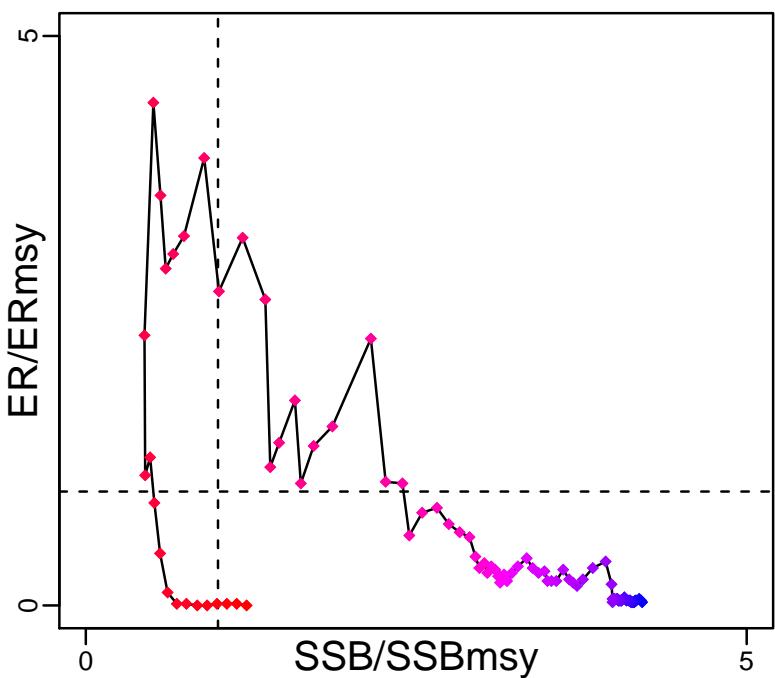
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes chlorostictus
<b>Current Assess ID</b>	SWFSC-GRSPROCKNCAL-1916-2010-STACHURA
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<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>	-	-	-

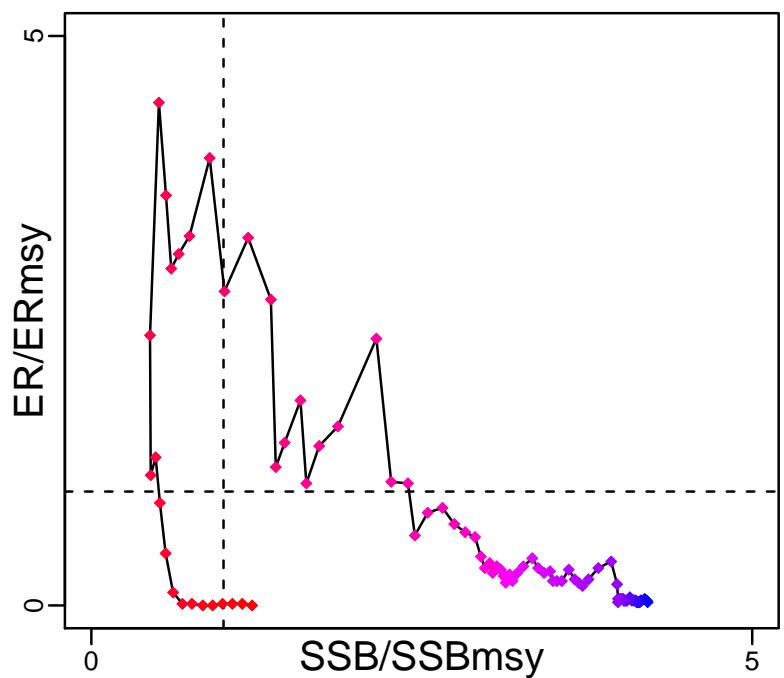
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2010	1190	-	0+	
<b>SSB</b>	SSB-E00eggs	2010	$1.63 \times 10^{11}$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2010	391,000	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2010	0	-	-	
<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 Pacific Coast North [GRSPROCKNCAL]**

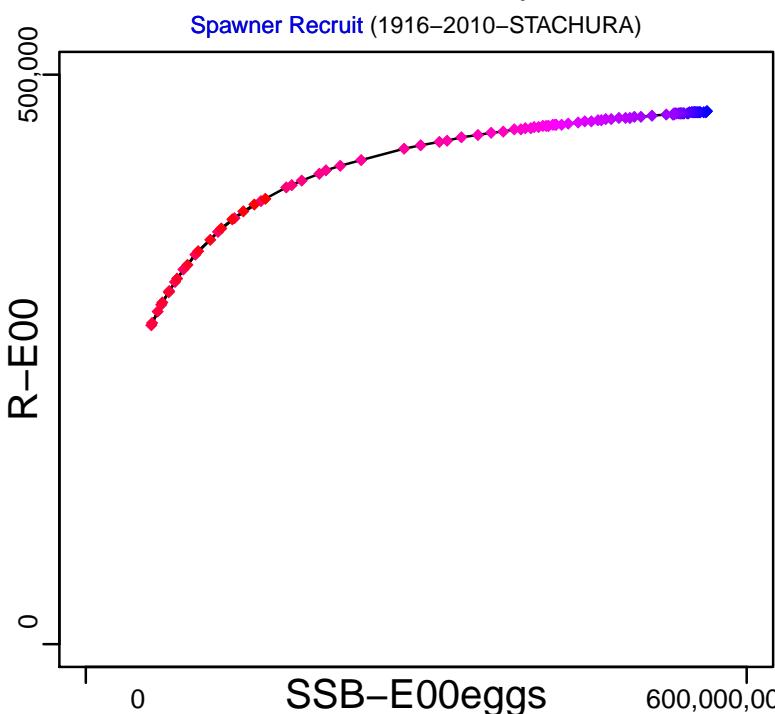
Kobe MSYpref (1916–2010–STACHURA)



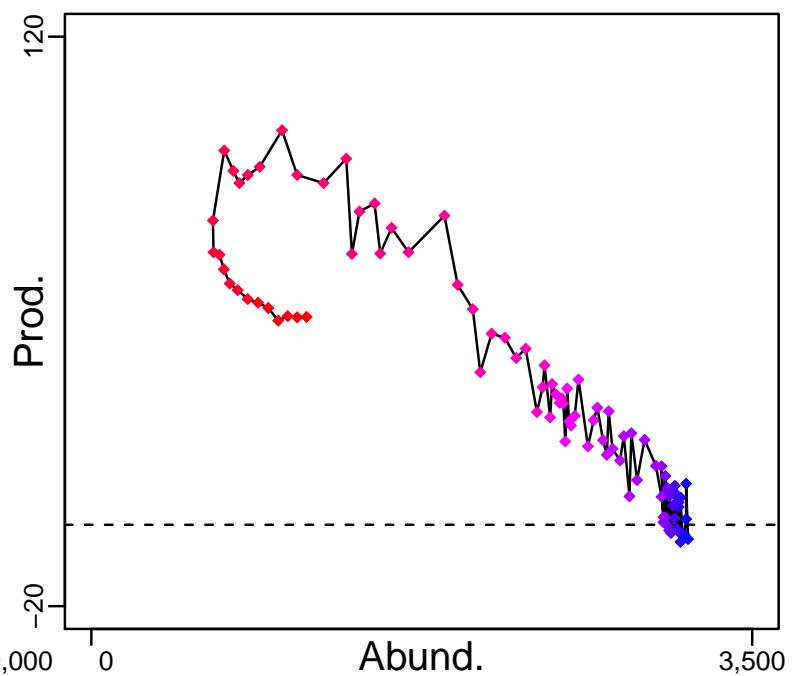
Kobe MGTpref (1916–2010–STACHURA)



Spawner Recruit (1916–2010–STACHURA)



Production (1916–2010–STACHURA)

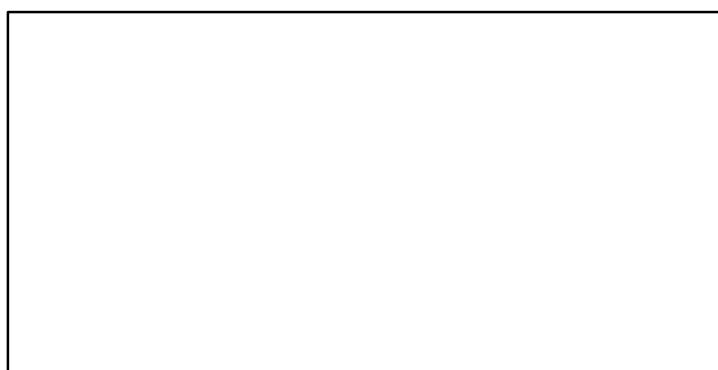
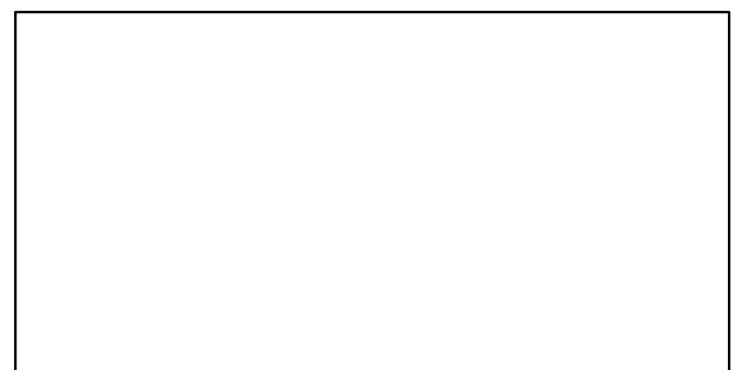
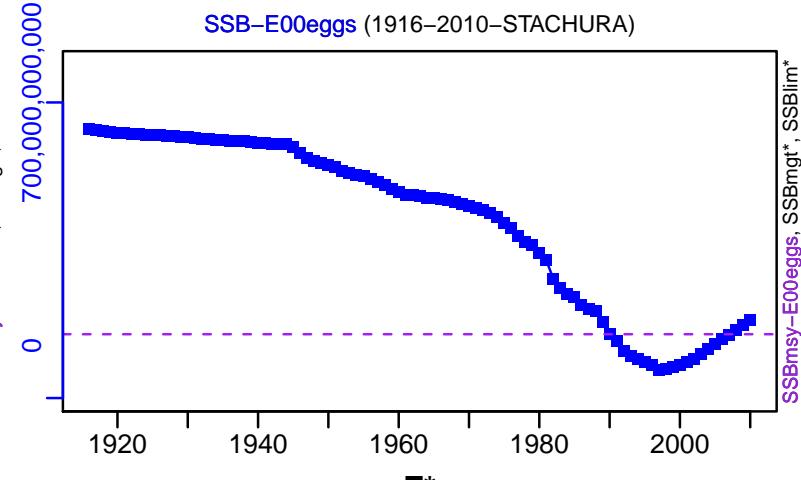
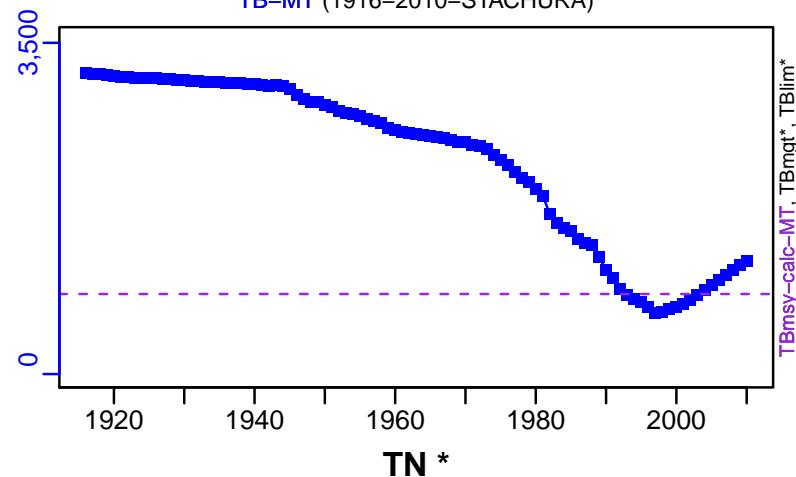


◆ Start Year   ◆ End Year   \* No Data

**Greenspotted rockfish Pacific Coast North [GRSPROCKNCAL]**

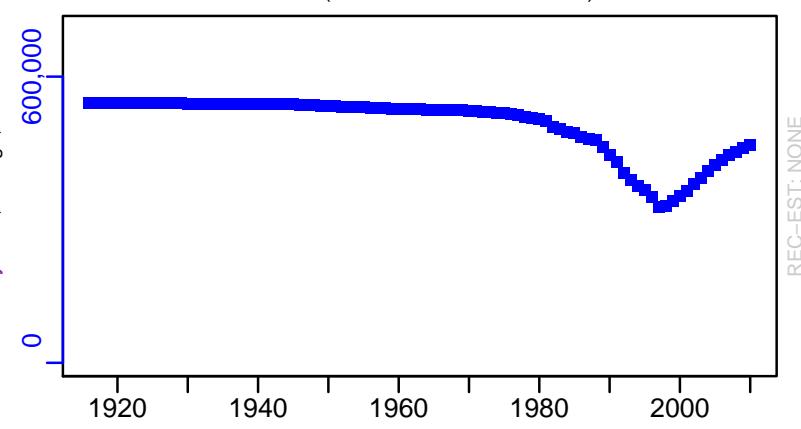
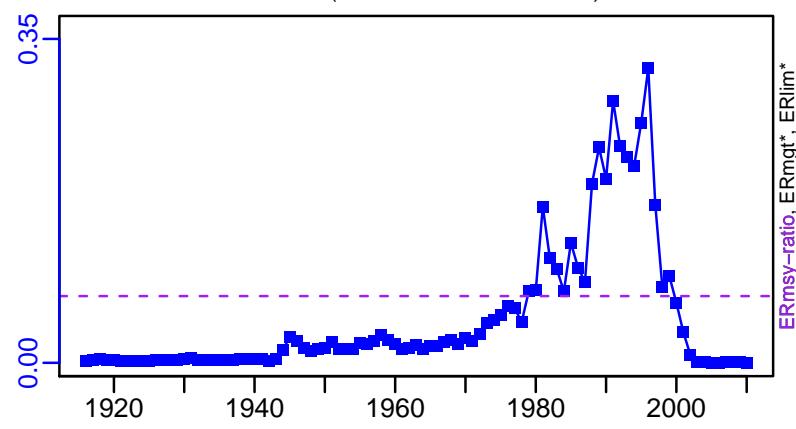
TB-MT (1916–2010–STACHURA)

SSB-E00eggs (1916–2010–STACHURA)



ER-ratio (1916–2010–STACHURA)

R-E00 (1916–2010–STACHURA)

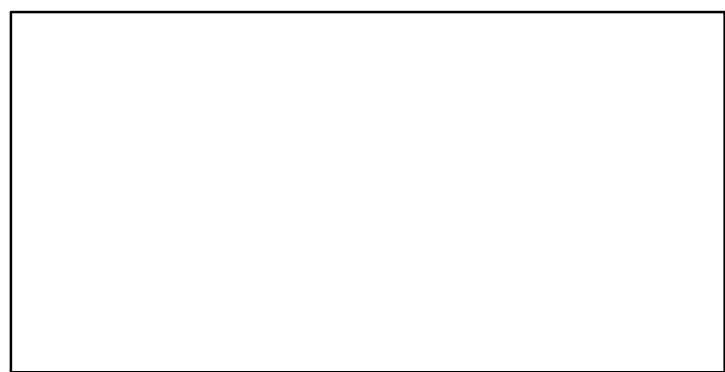
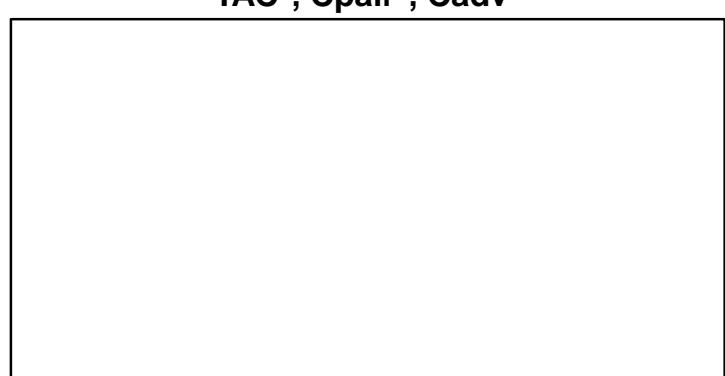
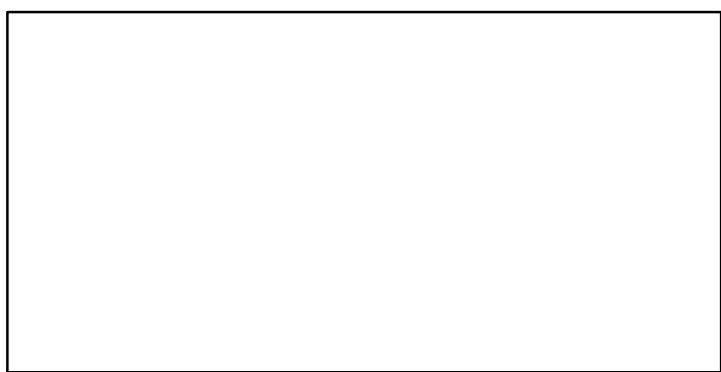
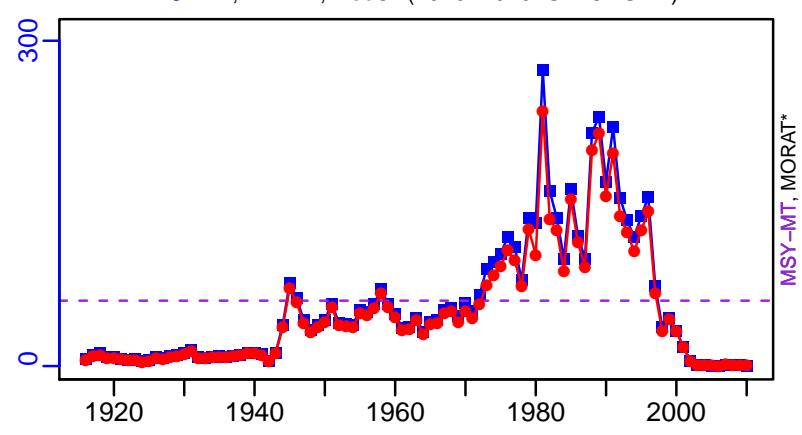


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | - - Lim BRP  | ■ No Data |

**Greenspotted rockfish Pacific Coast North [GRSPROCKNCAL]**

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

TAC\*, Cpair\*, Cadv\*



**EFFORT\***



## Greenspotted rockfish Pacific Coast South [GRSPROCKSCAL]

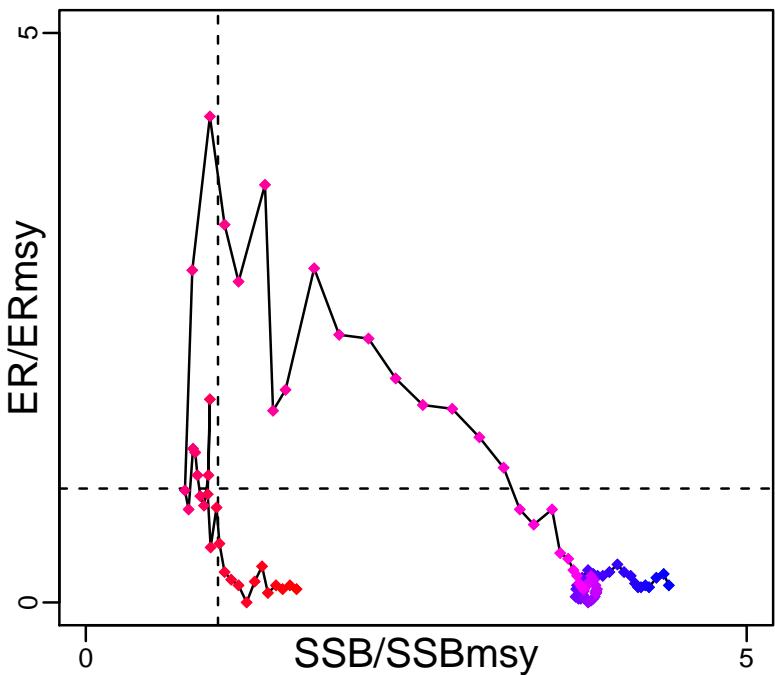
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes chlorostictus
<b>Current Assess ID</b>	SWFSC-GRSPROCKSCAL-1916-2010-STACHURA
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<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>	-	-	-

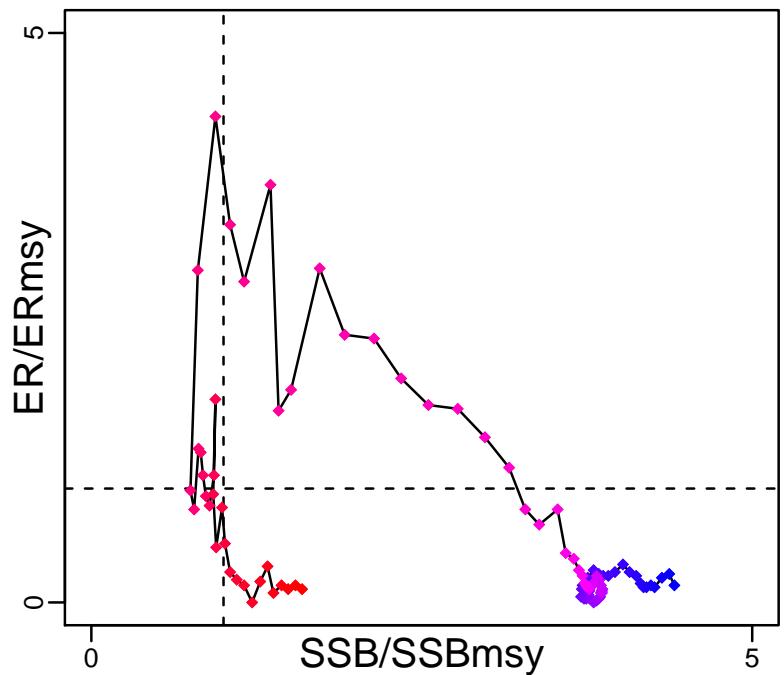
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2010	1920	-	0+	
<b>SSB</b>	SSB-E00eggs	2010	$2.87 \times 10^{11}$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2010	681,000	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2010	0.007	-	-	
<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 Pacific Coast South [GRSPROCKSCAL]**

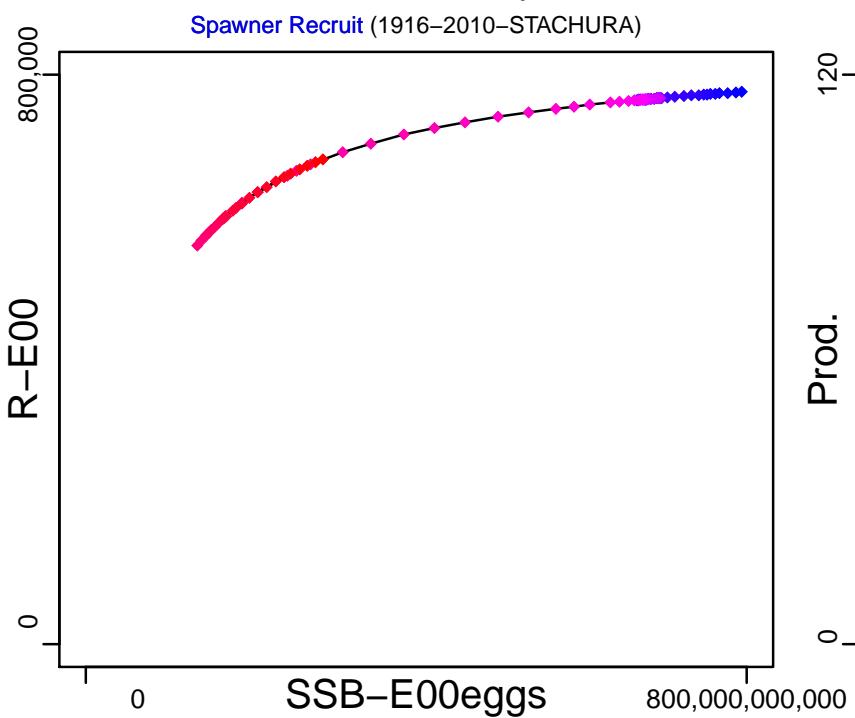
Kobe MSYpref (1916–2010–STACHURA)



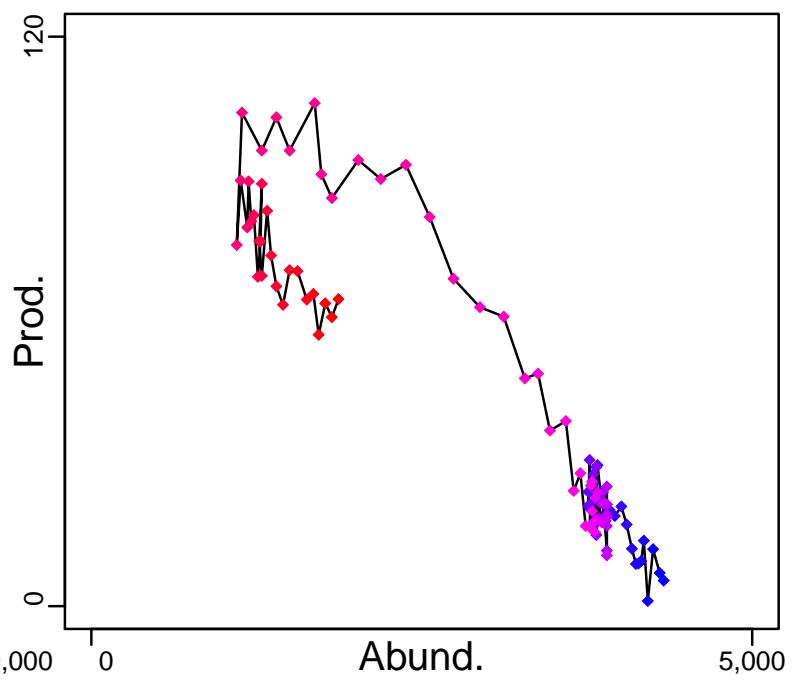
Kobe MGTpref (1916–2010–STACHURA)



Spawner Recruit (1916–2010–STACHURA)



Production (1916–2010–STACHURA)

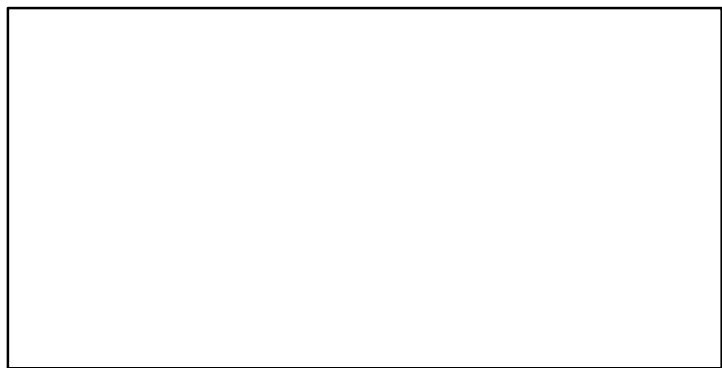
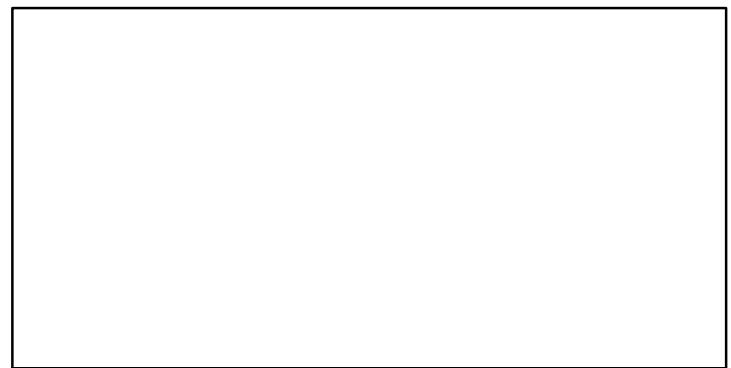
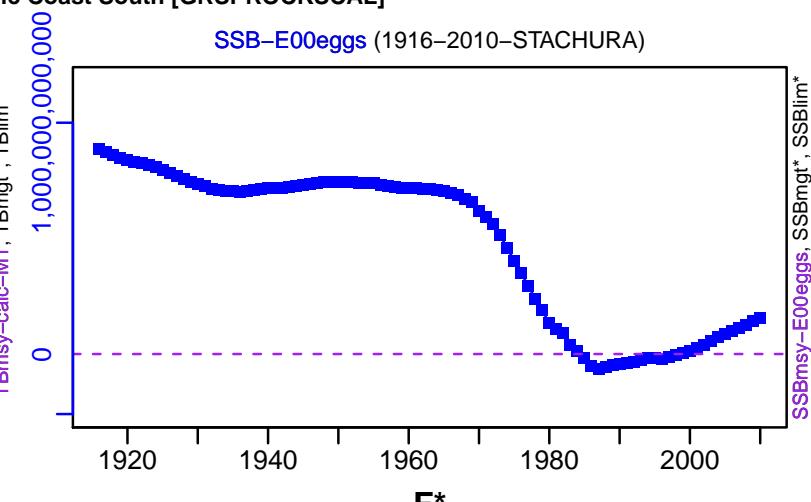
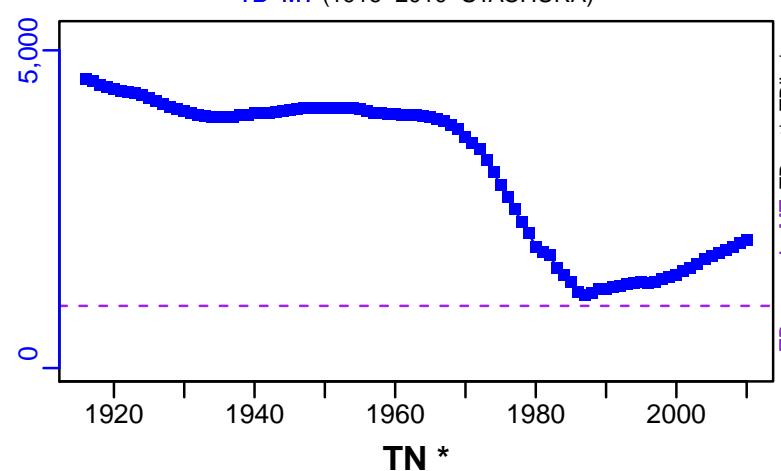


◆ Start Year   ◆ End Year   \* No Data

**Greenspotted rockfish Pacific Coast South [GRSPROCKSCAL]**

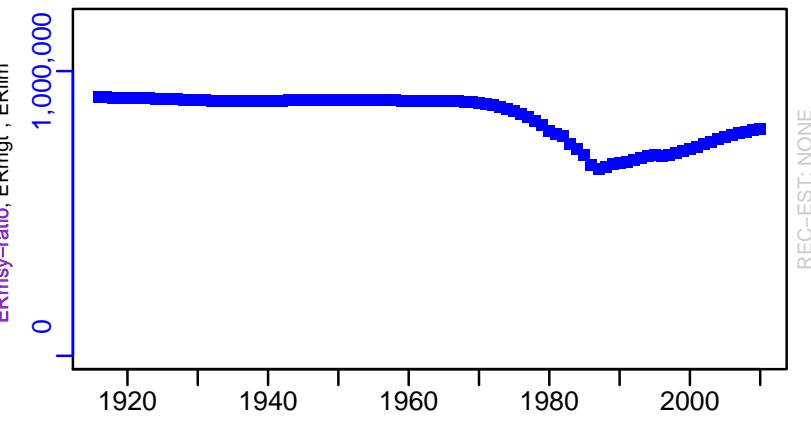
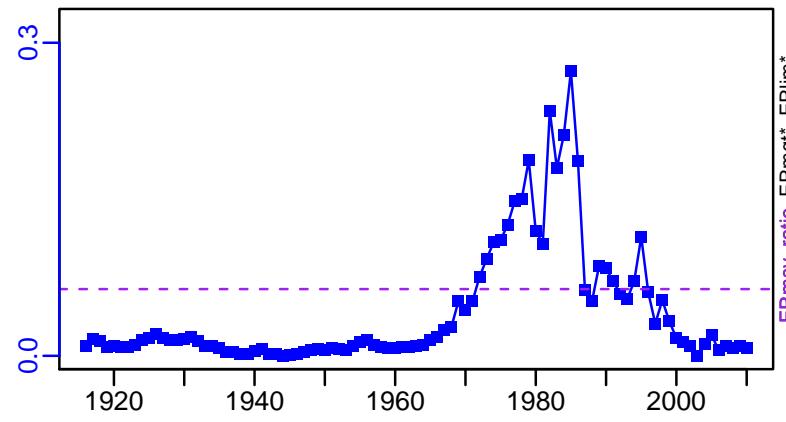
TB-MT (1916–2010–STACHURA)

SSB-E00eggs (1916–2010–STACHURA)



ER-ratio (1916–2010–STACHURA)

R-E00 (1916–2010–STACHURA)

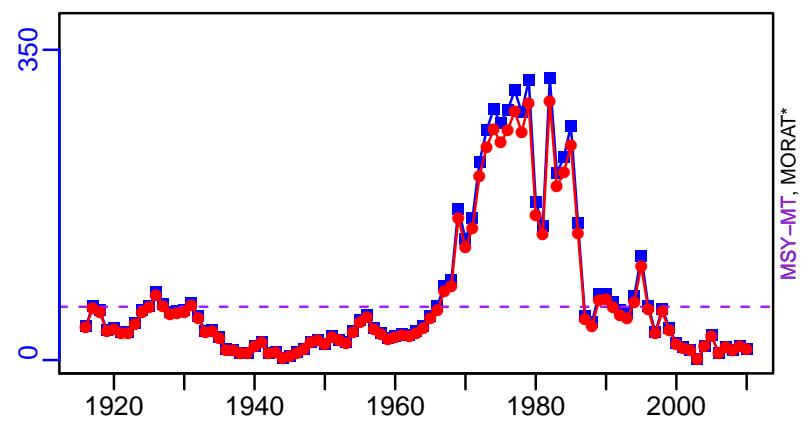


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP  | ··· Lim BRP  | ■ No Data |

**Greenspotted rockfish Pacific Coast South [GRSPROCKSCAL]**

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

TAC\*, Cpair\*, Cadv\*



**survB\***

MSY-MT, MORAT\*

**CPUE\***

**EFFORT\***

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

## Kelp greenling Oregon Coast [KELPGREENLINGORECOAST]

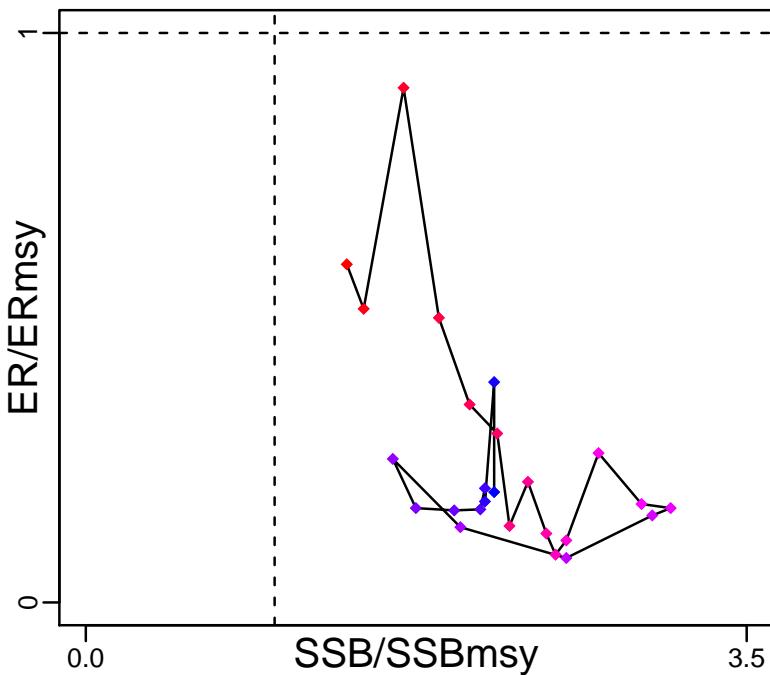
Metadata	
<b>Scientific Name</b>	Hexagrammos decagrammus
<b>Current Assess ID</b>	NWFSC-KELPGREENLINGORECOAST-1915-2015-SISIMP2016
<b>Area</b>	Oregon Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2005

Reference Points			
Type	ID	Asmt Year	Value
<b>TB<sub>m</sub>s<sub>y</sub></b>	TB <sub>m</sub> s <sub>y</sub> -calc-MT	2005	656
<b>SSB<sub>m</sub>s<sub>y</sub></b>	SSB <sub>m</sub> s <sub>y</sub> -MT	2015	159
<b>F<sub>m</sub>s<sub>y</sub></b>	-	-	-
<b>ER<sub>m</sub>s<sub>y</sub></b>	ER <sub>m</sub> s <sub>y</sub> -pr-ratio	2005	0.125
<b>TB<sub>m</sub>gt</b>	-	-	-
<b>SSB<sub>m</sub>gt</b>	-	-	-
<b>F<sub>m</sub>gt</b>	-	-	-
<b>ER<sub>m</sub>gt</b>	-	-	-
<b>TB<sub>0</sub></b>	TB <sub>0</sub> -MT	2005	1295
<b>SSB<sub>0</sub></b>	SSB <sub>0</sub> -MT	2005	321
<b>MSY</b>	MSY-MT	2015	130
<b>M</b>	M-1/yr	2005	0.26
<b>TB<sub>lim</sub></b>	-	-	-
<b>SSB<sub>lim</sub></b>	SSB <sub>lim</sub> -MT	2015	99
<b>F<sub>lim</sub></b>	-	-	-
<b>ER<sub>lim</sub></b>	-	-	-

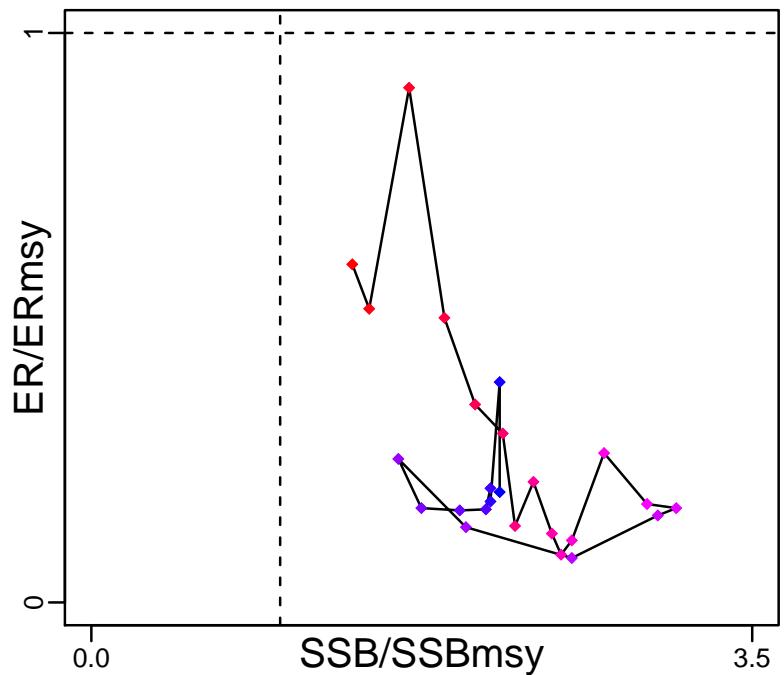
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2015	1130	-	0+	
<b>SSB</b>	SSB-MT	2015	316	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	1,410,000	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.03	-	-	
<b>TC</b>	TC-MT	2015	33			
<b>TL</b>	TL-MT	2005	52			
<b>TB/TB<sub>m</sub>s<sub>y</sub></b>	TB-MT/TB <sub>m</sub> s <sub>y</sub> -calc-MT	2005	0.951			
<b>SSB/SSB<sub>m</sub>s<sub>y</sub></b>	SSB-MT/SSB <sub>m</sub> s <sub>y</sub> -MT	2015	1.99			
<b>F/F<sub>m</sub>s<sub>y</sub></b>	-	-	-			
<b>ER/ER<sub>m</sub>s<sub>y</sub></b>	ER-calc-ratio/ER <sub>m</sub> s <sub>y</sub> -pr-ratio	2005	0.594			
<b>TB/TB<sub>m</sub>gt</b>	-	-	-			
<b>SSB/SSB<sub>m</sub>gt</b>	-	-	-			
<b>F/F<sub>m</sub>gt</b>	-	-	-			
<b>ER/ER<sub>m</sub>gt</b>	-	-	-			

Kelp greenling Oregon Coast [KELPGREENLINGORECOAST]

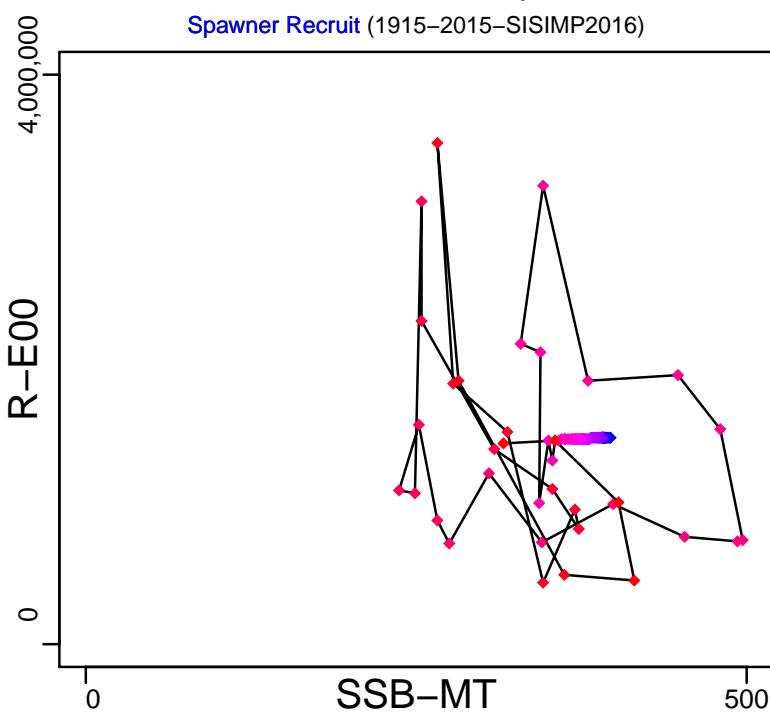
Kobe MSYpref (1979–2005-STANTON)



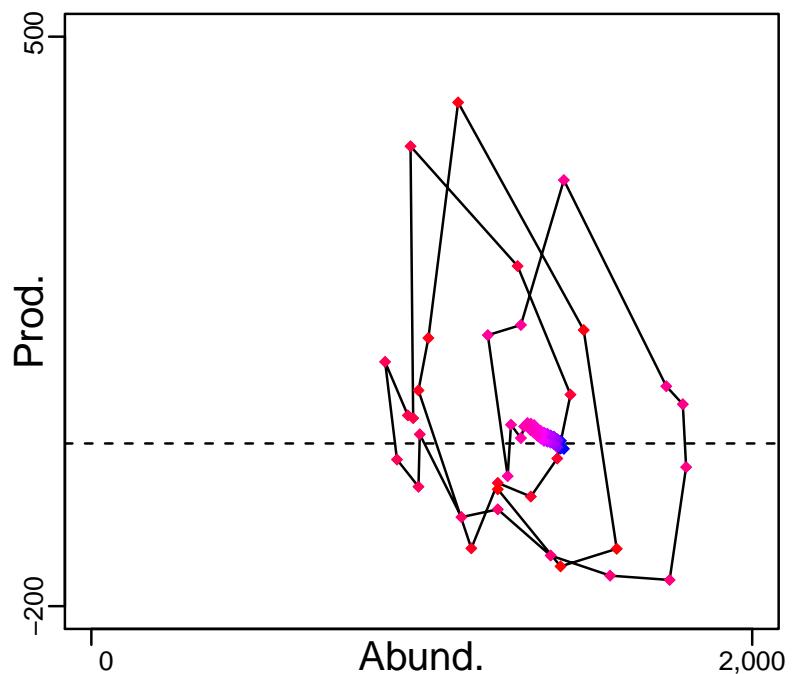
Kobe MGTpref (1979–2005-STANTON)



Spawner Recruit (1915–2015–SISIMP2016)



Production (1915–2015–SISIMP2016)

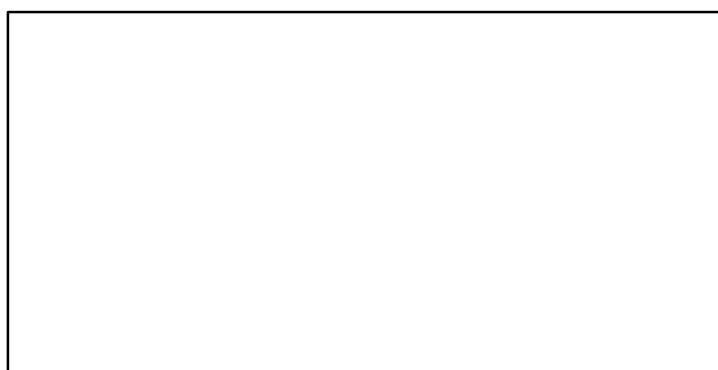
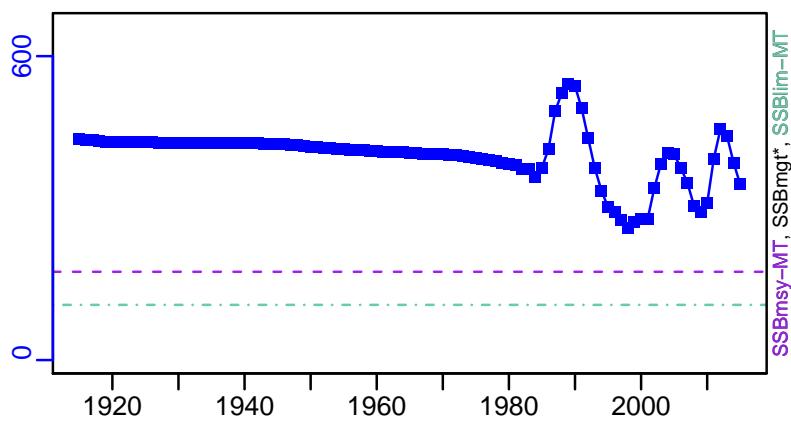
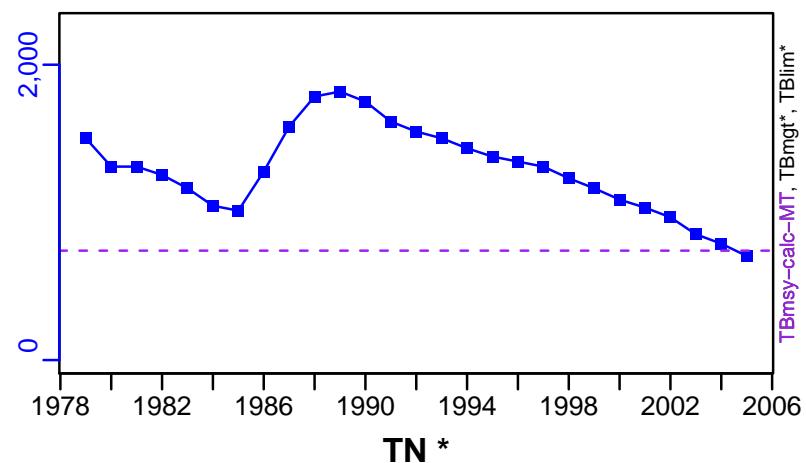


◆ Start Year ◆ End Year \* No Data

Kelp greenling Oregon Coast [KELPGREENLINGORECOAST]

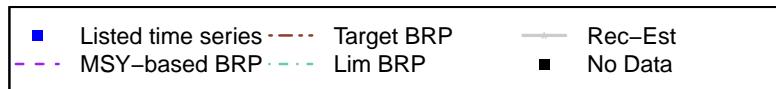
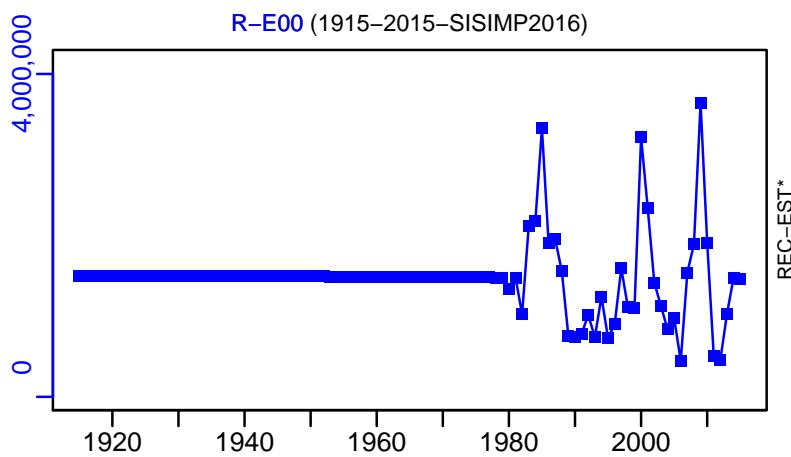
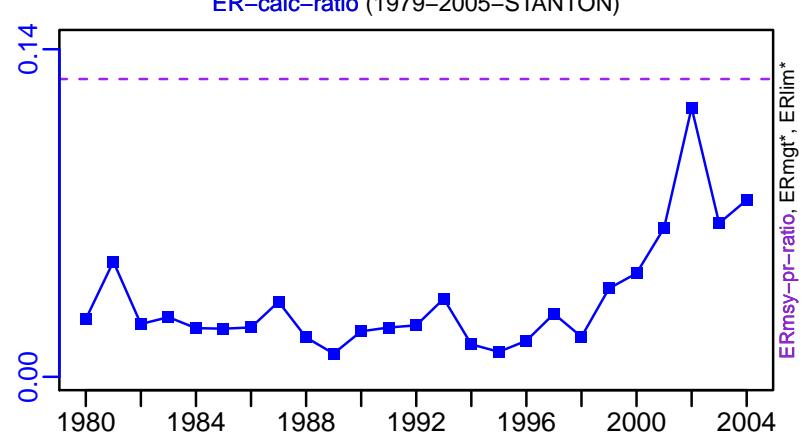
TB-MT (1979–2005-STANTON)

SSB-MT (1915–2015-SISIMP2016)



ER-calc-ratio (1979–2005-STANTON)

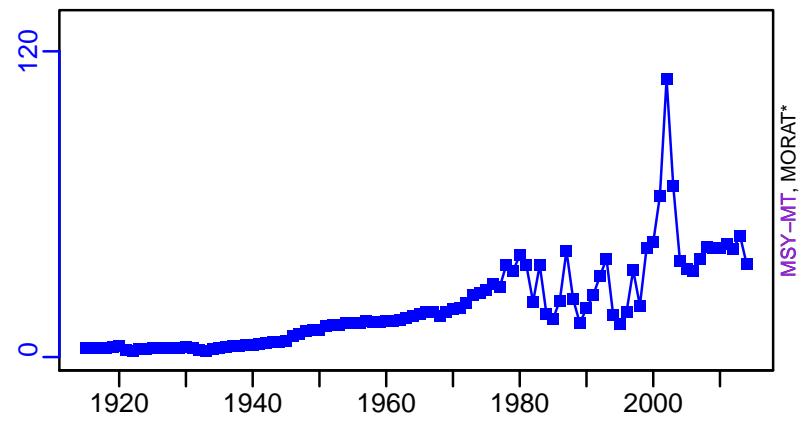
R-E00 (1915–2015-SISIMP2016)



Kelp greenling Oregon Coast [KELPGREENLINGORECOAST]

TC-MT, TL\*, RecC\* (1915–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



survB\*

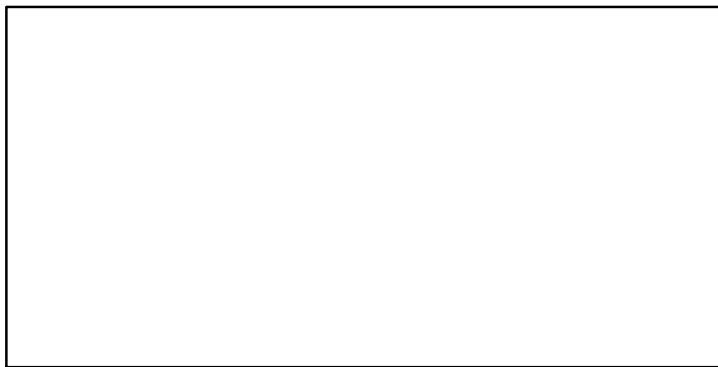
MSY-MT, MORAT\*



CPUE\*



EFFORT\*



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

## Lingcod Northern Pacific Coast [LINGCODNPOCOAST]

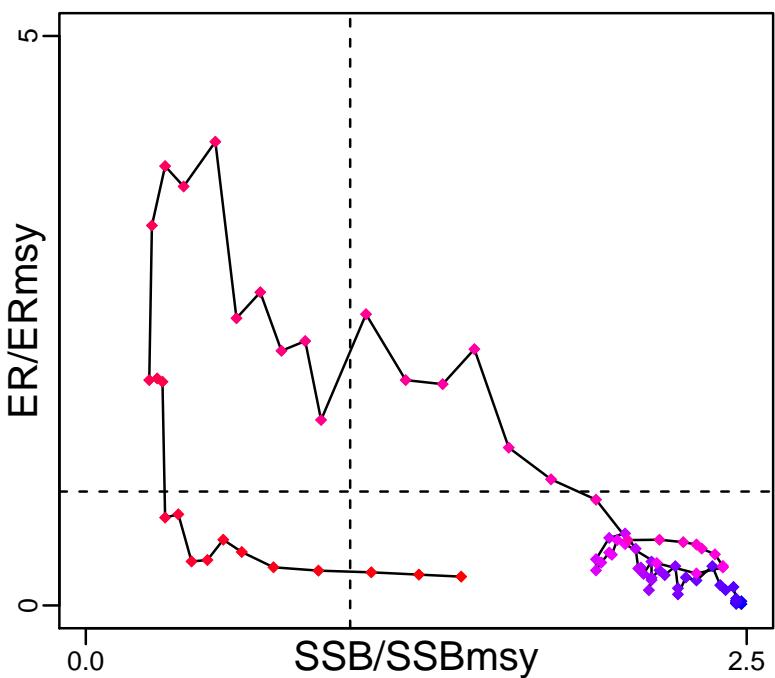
Metadata	
<b>Scientific Name</b>	Ophiodon elongatus
<b>Current Assess ID</b>	NWFSC-LINGCODNPOCOAST-1928-2009-STACHURA
<b>Area</b>	Northern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2009

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-MT	2009	12,386
<b>SSBmsy</b>	SSBmsy-extr-MT	2009	13,233
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2009	0.14
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2009	44,536
<b>SSB0</b>	SSB0-MT	2009	33,075
<b>MSY</b>	MSY-MT	2009	1734
<b>M</b>	M-1/yr	2009	0.18
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

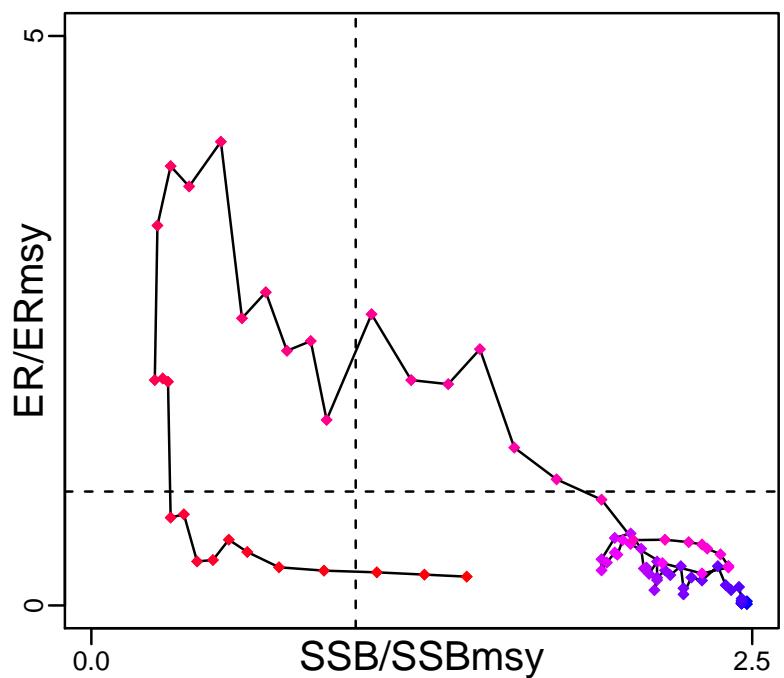
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2009	31,800	-	2+	
<b>SSB</b>	SSB-MT	2009	20,500	Females	4.6	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2009	3050	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2009	0.035	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2009	350			
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2009	2.567			
<b>SSB/SSBmsy</b>	SSBdivSSBmsy-dimensionless	2009	1.55			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2009	0.253			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Lingcod Northern Pacific Coast [LINGCODNP COAST]

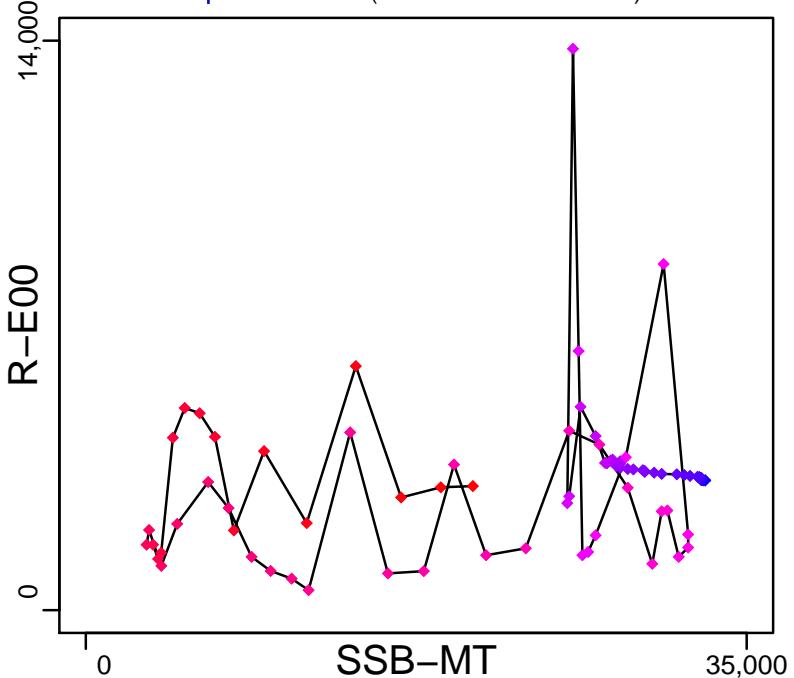
Kobe MSYpref (1928–2009–STACHURA)



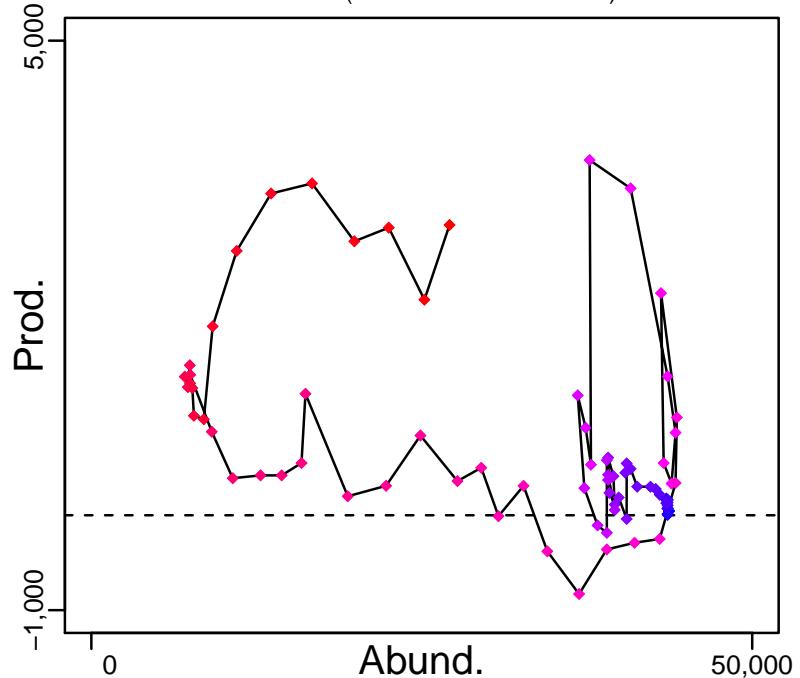
Kobe MGTpref (1928–2009–STACHURA)



Spawner Recruit (1928–2009–STACHURA)



Production (1928–2009–STACHURA)

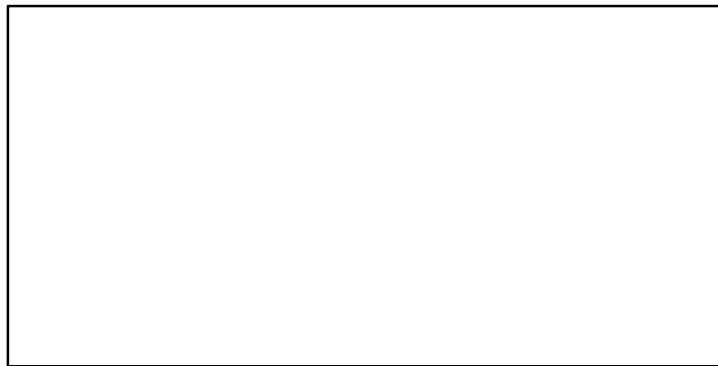
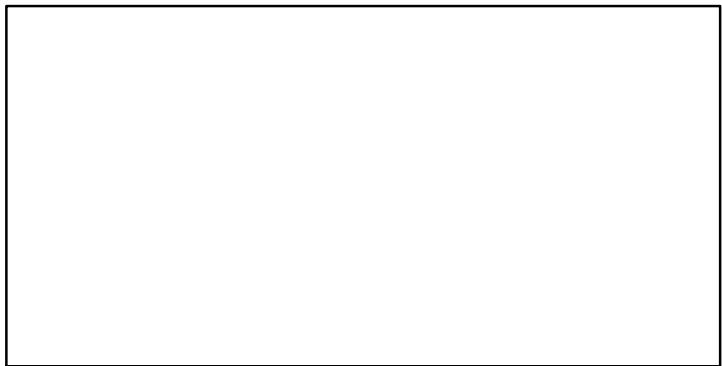
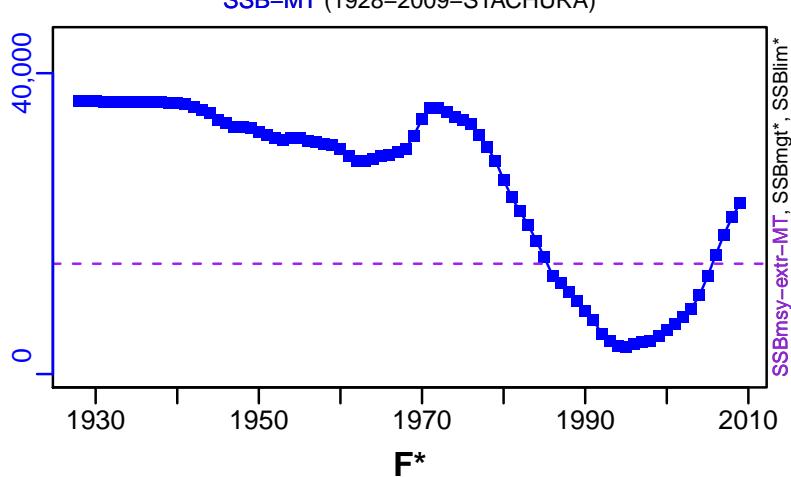
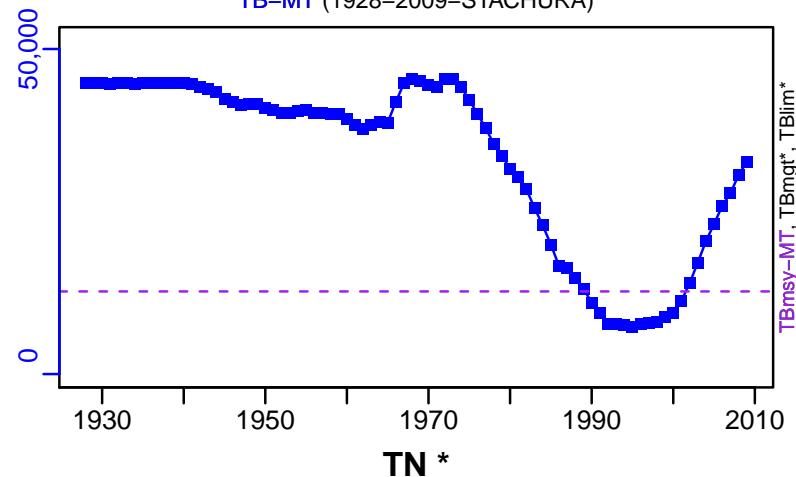


◆ Start Year ♦ End Year \* No Data

### Lingcod Northern Pacific Coast [LINGCODNPSCOAST]

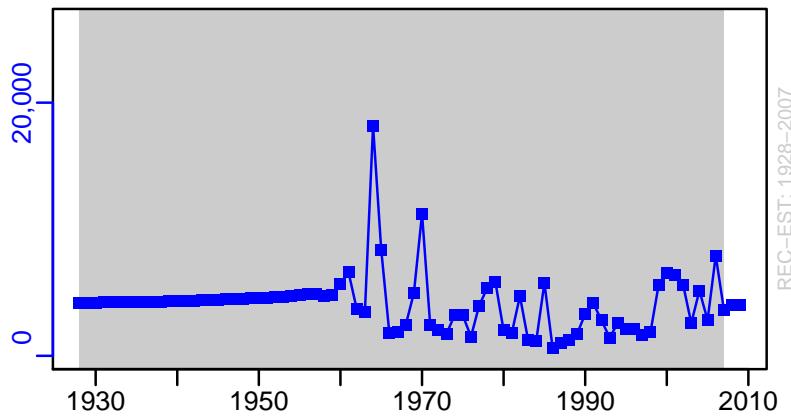
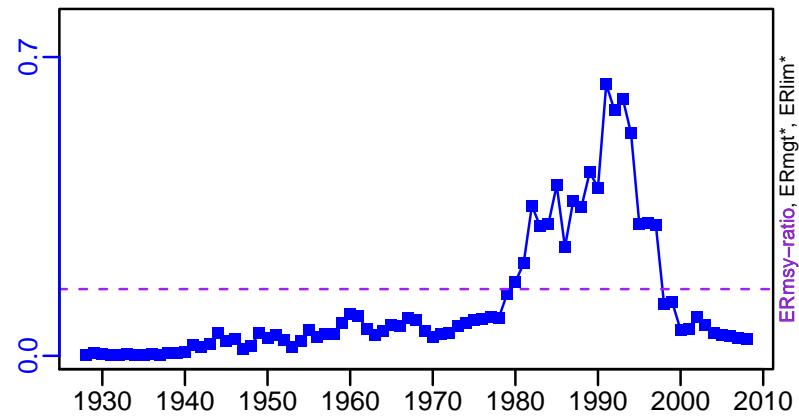
TB-MT (1928–2009–STACHURA)

SSB-MT (1928–2009–STACHURA)



ER-ratio (1928–2009–STACHURA)

R-E00 (1928–2009–STACHURA)

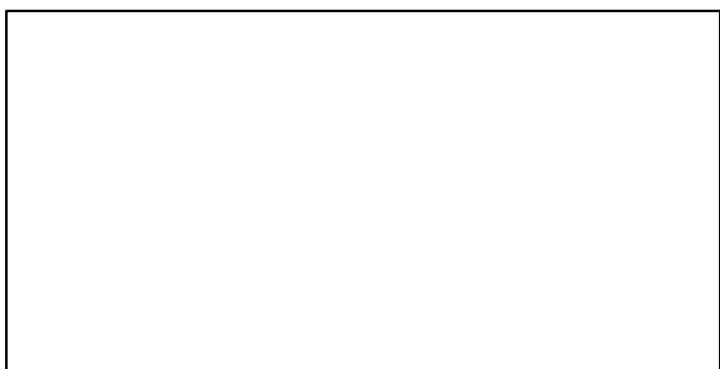
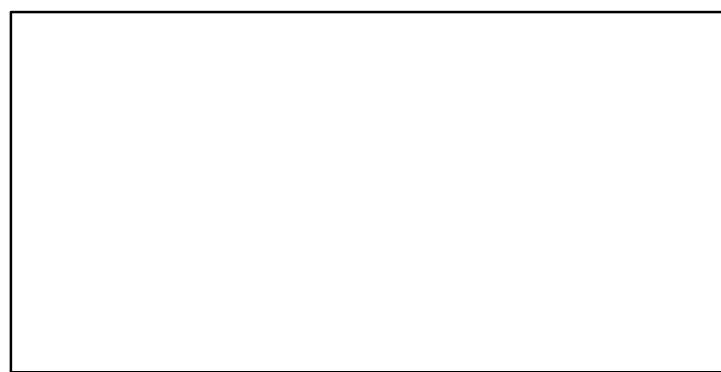
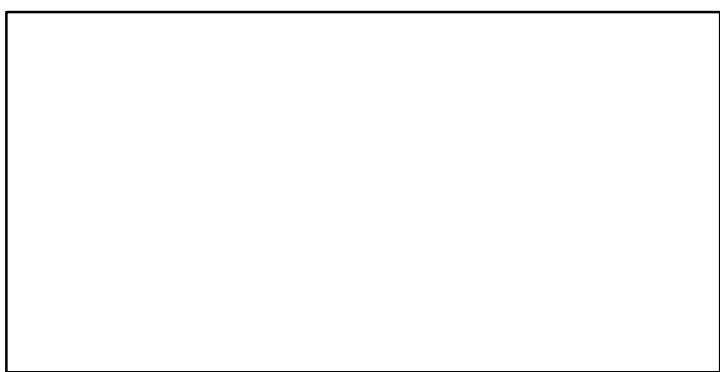
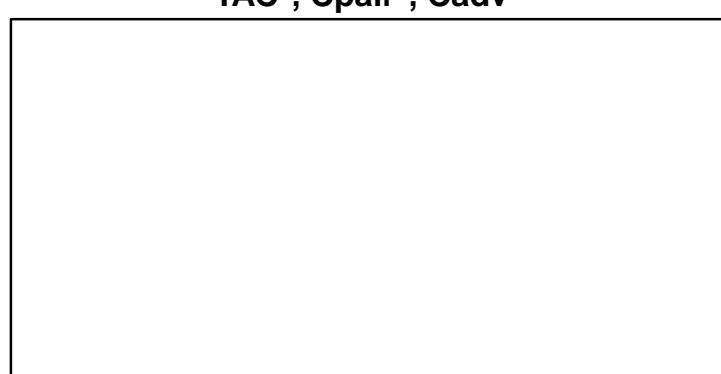
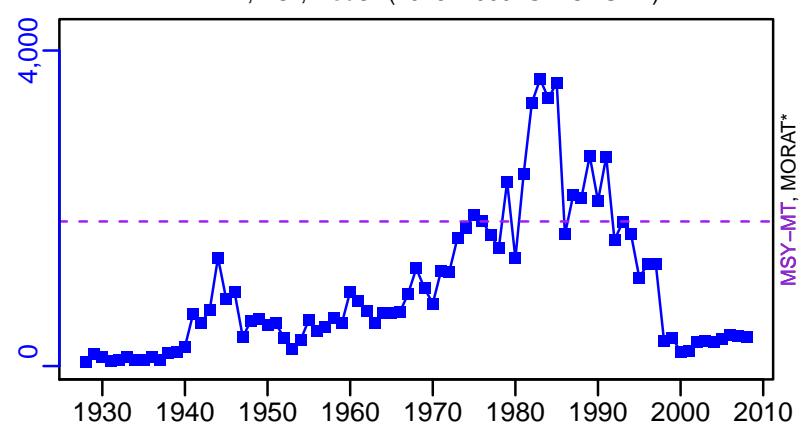


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - Lim BRP  | ■ No Data |

Lingcod Northern Pacific Coast [LINGCODNPSCOAST]

TL-MT, TC\*, RecC\* (1928–2009-STACHURA)

TAC\*, Cpair\*, Cadv\*



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

## Lingcod Southern Pacific Coast [LINGCODSPCOAST]

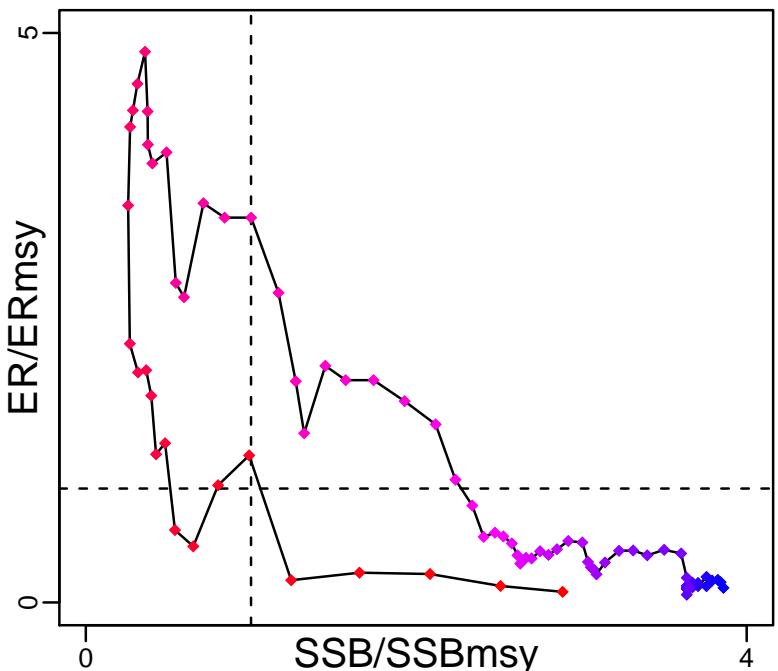
Metadata	
<b>Scientific Name</b>	Ophiodon elongatus
<b>Current Assess ID</b>	NWFSC-LINGCODSPCOAST-1928-2009-STACHURA
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2009

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2009	16,291
<b>SSBmsy</b>	SSBmsy-MT	2009	5856
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2009	0.103
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2009	25,311
<b>MSY</b>	MSY-MT	2009	1678
<b>M</b>	M-1/yr	2009	0.18
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

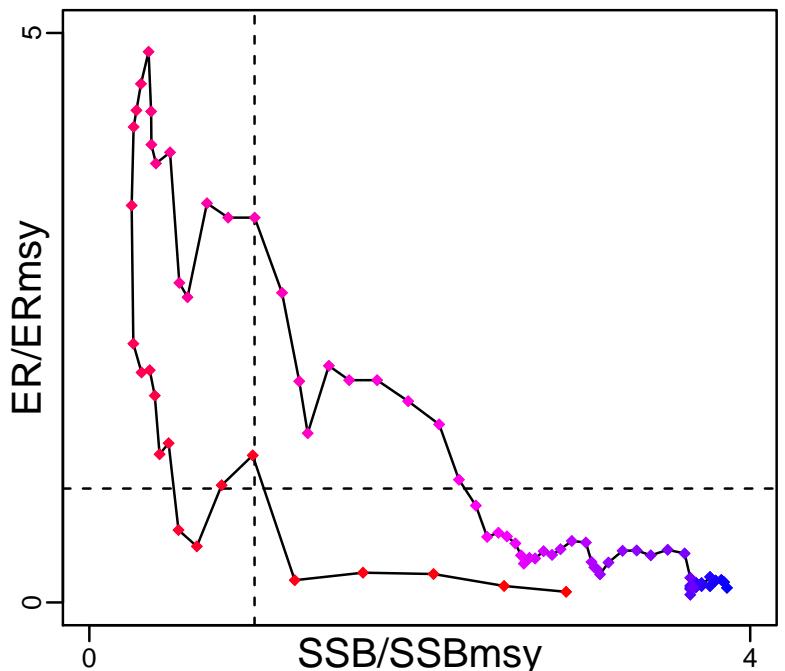
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2009	30,900	-	2+	
<b>SSB</b>	SSB-MT	2009	18,700	Females	5	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2009	3440	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2009	0.01	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	TL-MT	2009	171			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2009	1.897			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2009	3.193			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2009	0.093			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Lingcod Southern Pacific Coast [LINGCODSPCOAST]

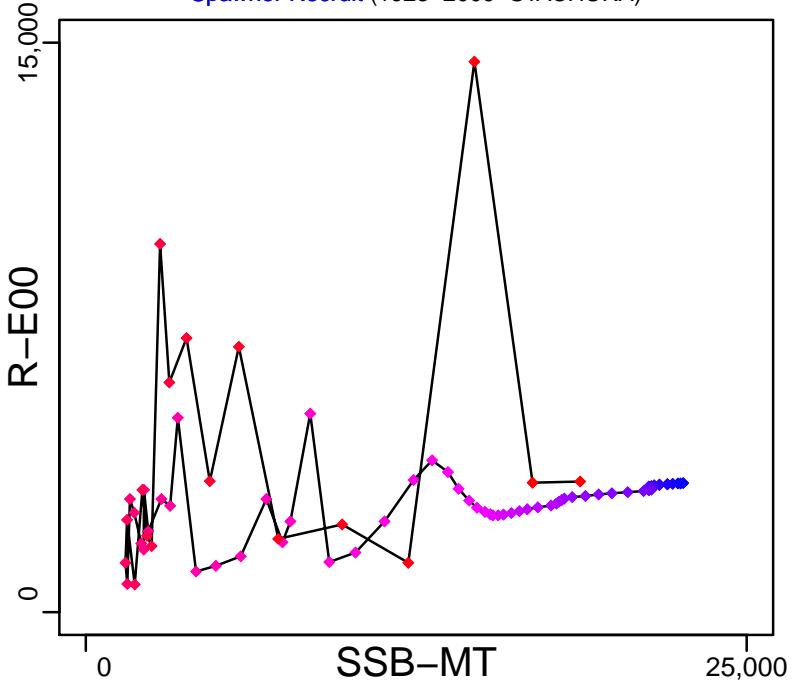
Kobe MSYpref (1928–2009–STACHURA)



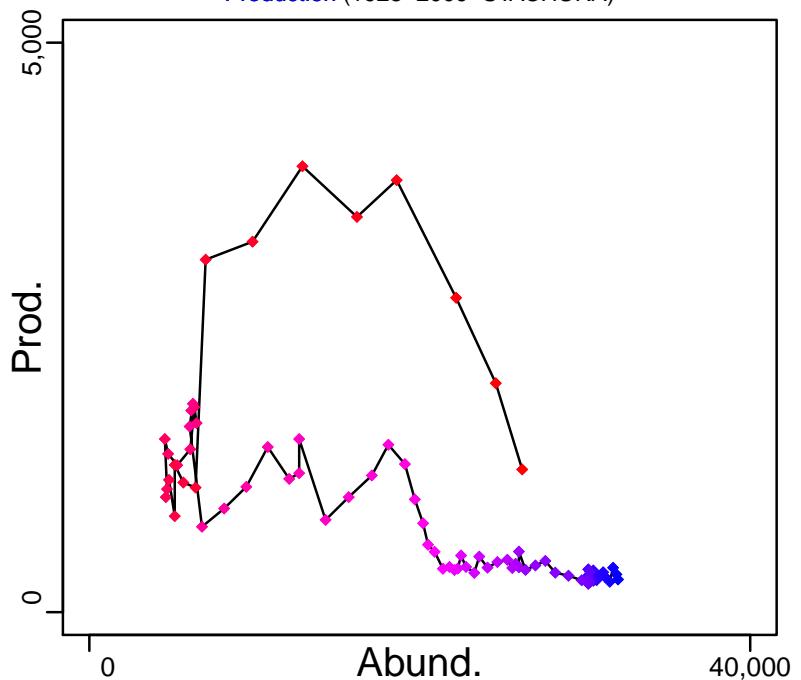
Kobe MGTpref (1928–2009–STACHURA)



Spawner Recruit (1928–2009–STACHURA)



Production (1928–2009–STACHURA)

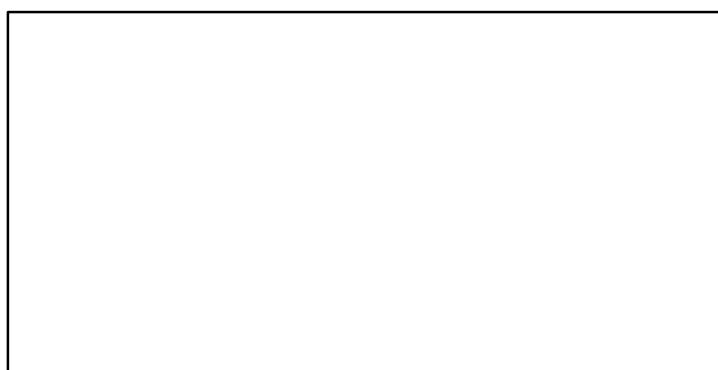
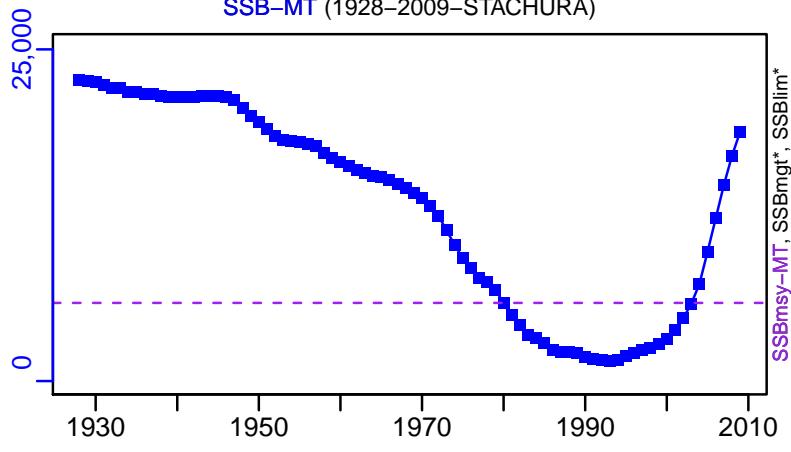
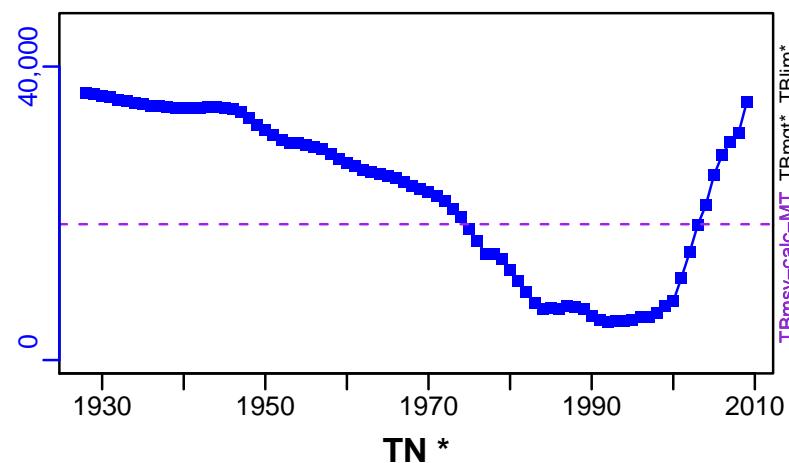


◆ Start Year	◆ End Year	*	No Data
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Lingcod Southern Pacific Coast [LINGCODSPCOAST]

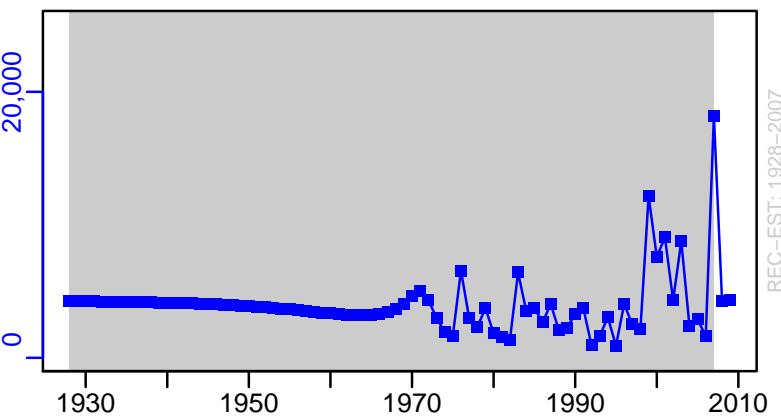
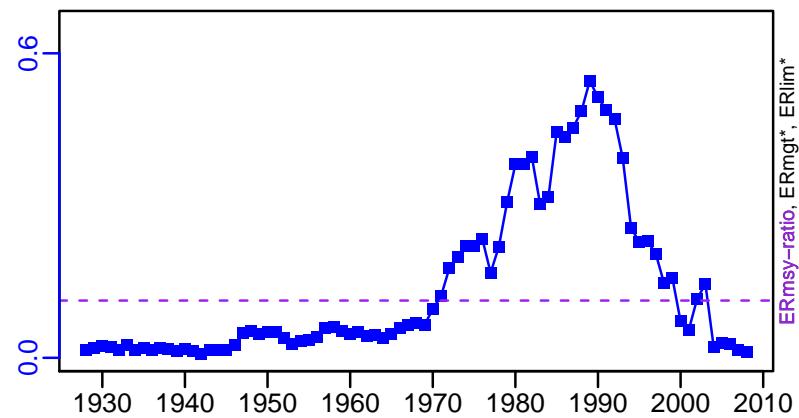
TB-MT (1928–2009–STACHURA)

SSB-MT (1928–2009–STACHURA)



ER-ratio (1928–2009–STACHURA)

R-E00 (1928–2009–STACHURA)



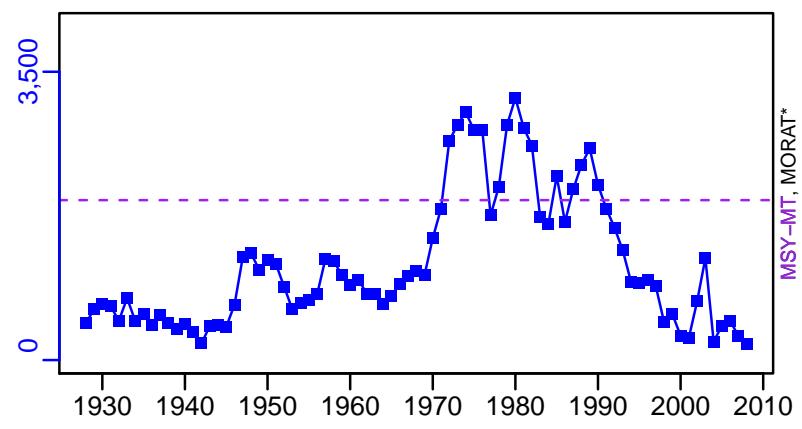
REC-EST: 1928–2007

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

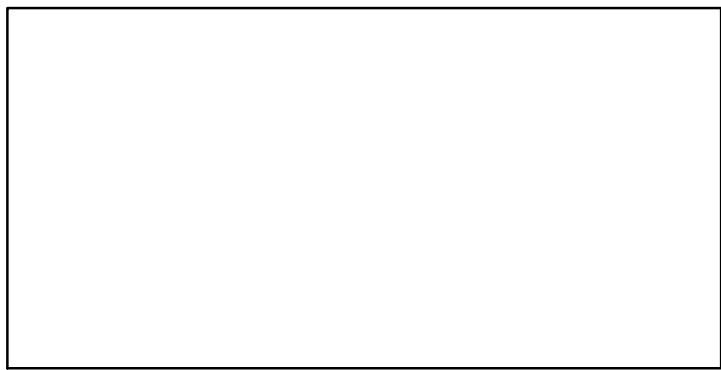
Lingcod Southern Pacific Coast [LINGCODSPCOAST]

TL-MT, TC\*, RecC\* (1928–2009–STACHURA)

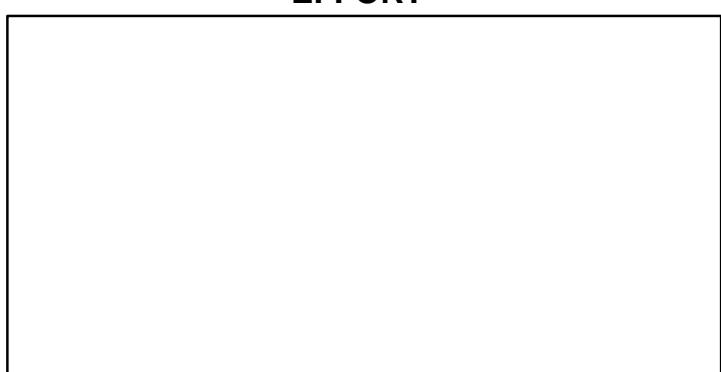
TAC\*, Cpair\*, Cadv\*



MSY-MT, MORAT\*



CPUE\*



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

## Longnose skate Pacific Coast [LNOSESKAPCOAST]

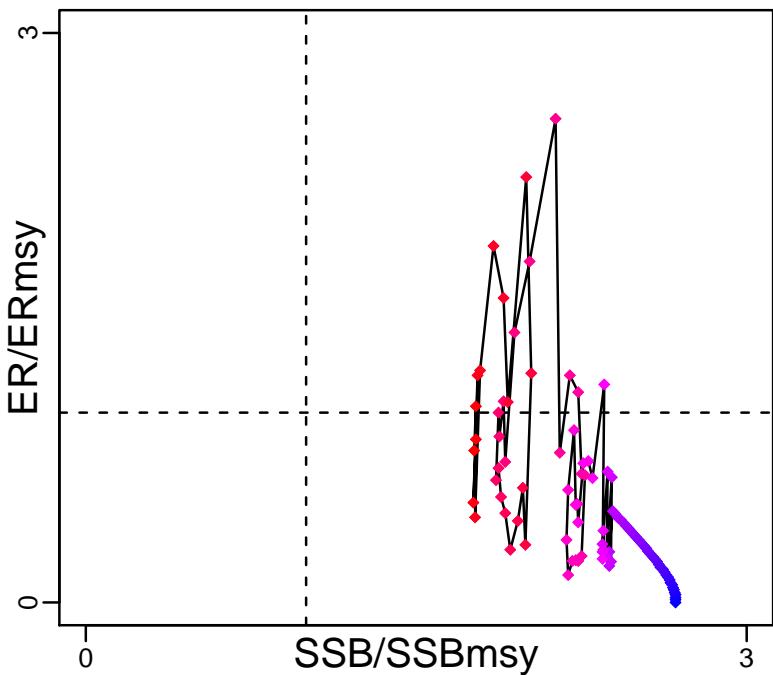
<b>Metadata</b>	
<b>Scientific Name</b>	Raja rhina
<b>Current Assess ID</b>	NWFSC-LNOSESKAPCOAST-1915-2007-BRANCH
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2007

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2007	46,963
<b>SSBmsy</b>	SSBmsy-MT	2007	2626
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2007	0.027
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2007	7034
<b>MSY</b>	MSY-MT	2007	1268
<b>M</b>	M-1/yr	2007	0.2
<b>TBlim</b>	TBlim-MT	2007	4617
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

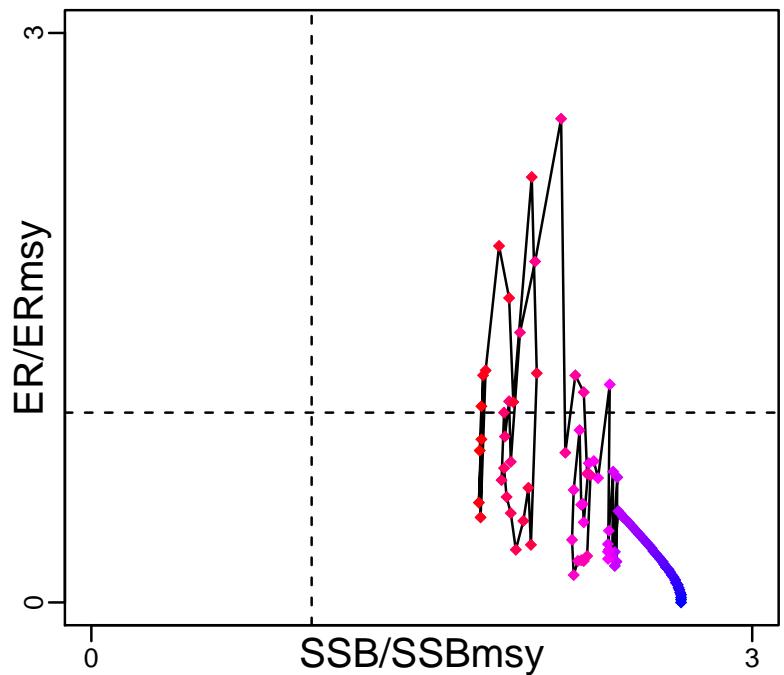
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2007	71,200	-	0+	
<b>SSB</b>	SSB-MT	2007	4630	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2007	12,900,000	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2007	0.022	-	-	
<b>TC</b>	TC-MT	2007	899			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2007	1.516			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2007	1.763			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2007	0.8			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Longnose skate Pacific Coast [LNOSESKAPCOAST]**

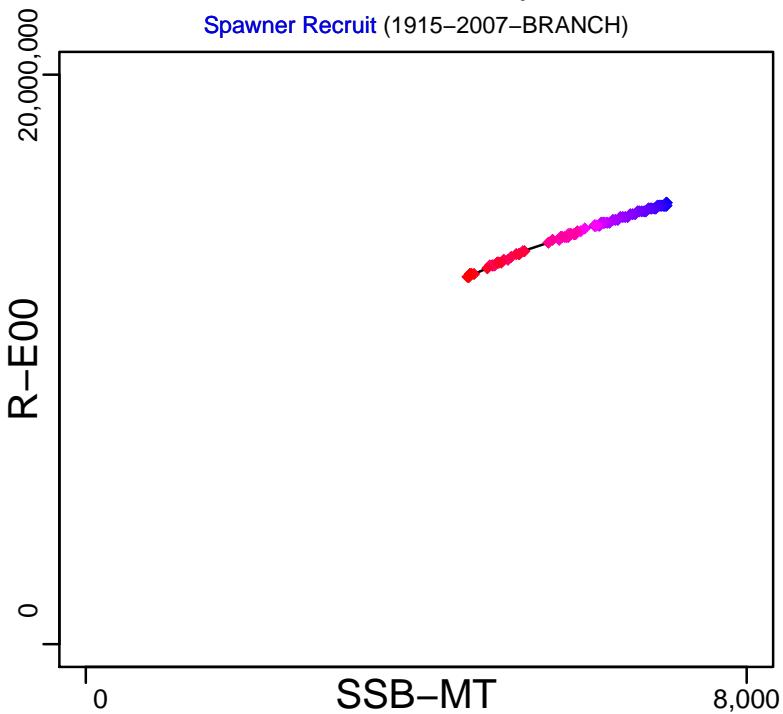
Kobe MSYpref (1915–2007–BRANCH)



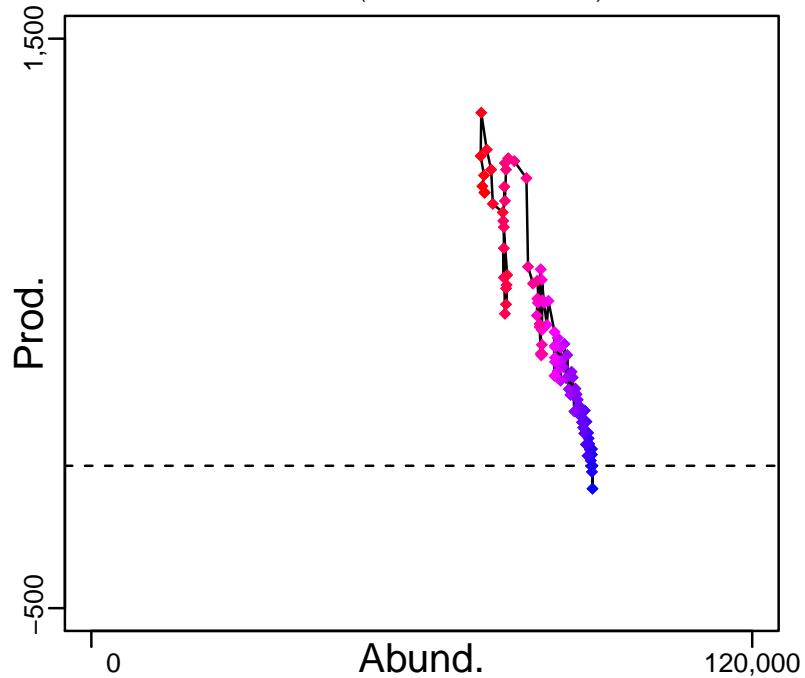
Kobe MGTPref (1915–2007–BRANCH)



Spawner Recruit (1915–2007–BRANCH)



Production (1915–2007–BRANCH)

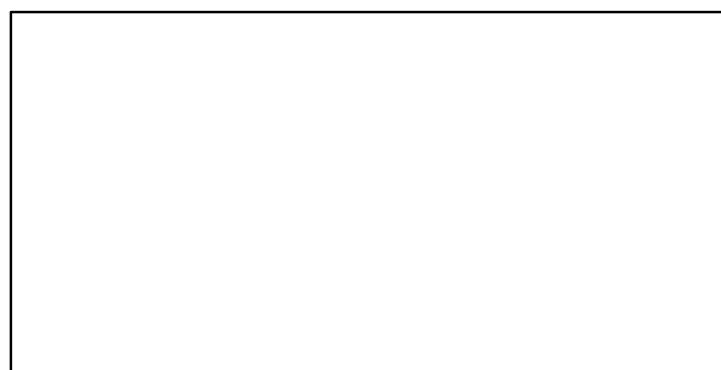
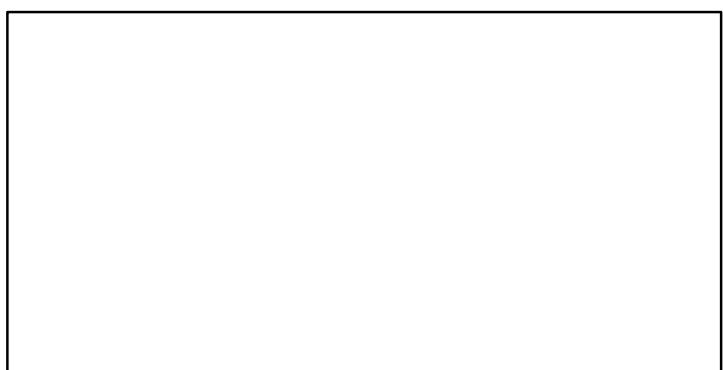
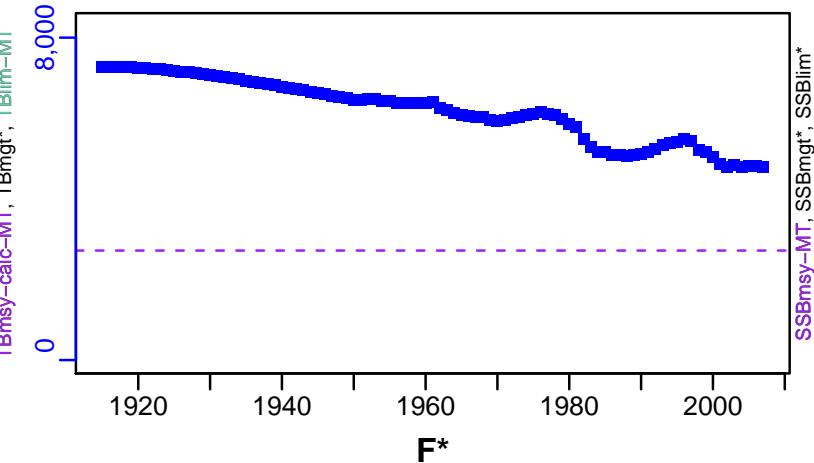
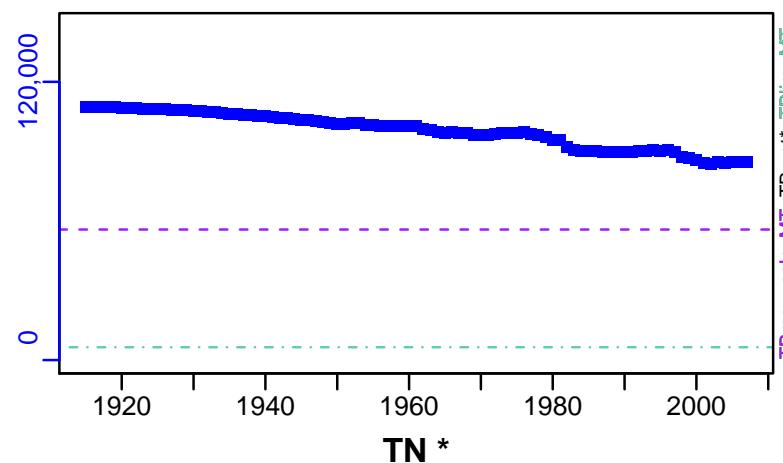


◆ Start Year   ◆ End Year   \* No Data

### Longnose skate Pacific Coast [LNOSESKAPCOAST]

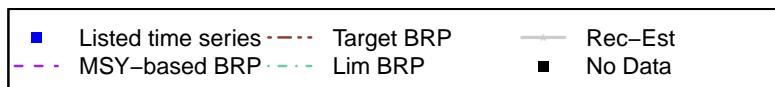
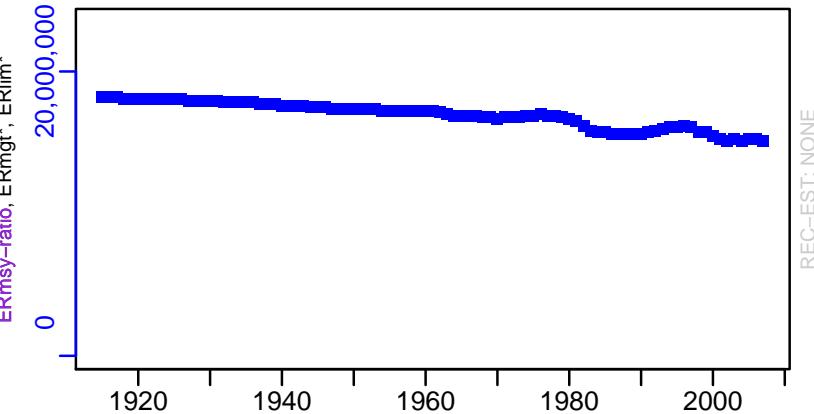
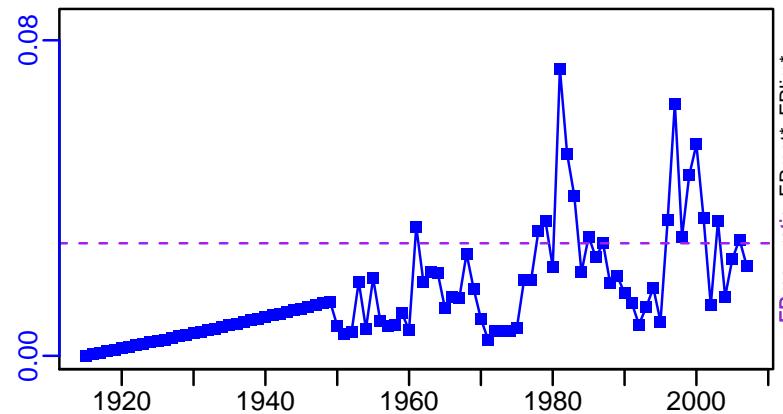
TB-MT (1915–2007–BRANCH)

SSB-MT (1915–2007–BRANCH)



ER-ratio (1915–2007–BRANCH)

R-E00 (1915–2007–BRANCH)

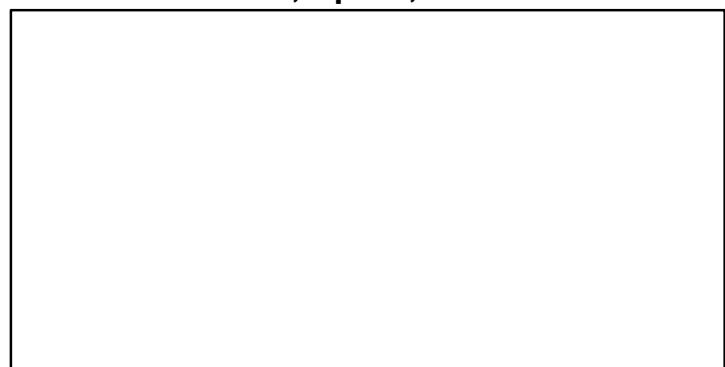
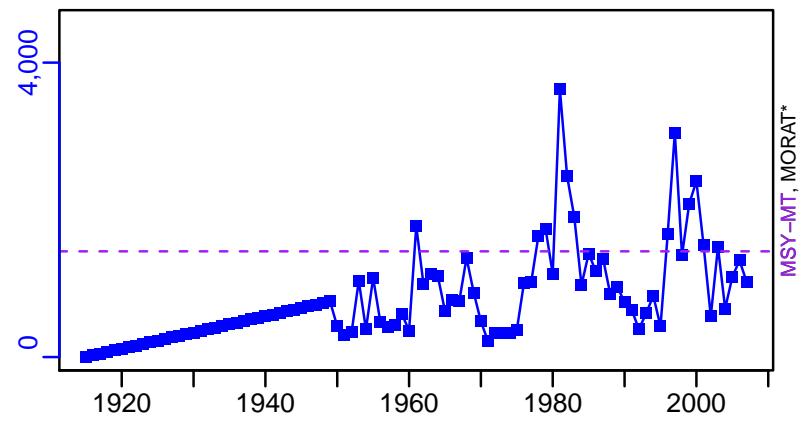


REC-EST: NONE

Longnose skate Pacific Coast [LNOSESKAPCOAST]

TC-MT, TL\*, RecC\* (1915–2007-BRANCH)

TAC\*, Cpair\*, Cadv\*



EFFORT\*



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

## Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]

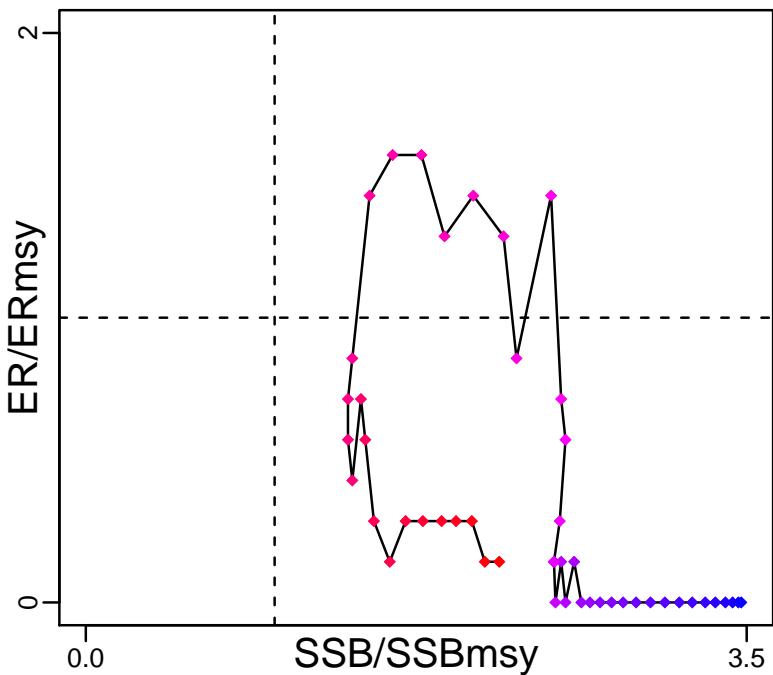
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastolobus altivelis
<b>Current Assess ID</b>	NWFSC-LSTHORNHPCOAST-1964-2012-HIVELY
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2012	36,129
<b>SSBmsy</b>	SSBmsy-MT	2012	13,108
<b>Fmsy</b>	-	-	-
<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	2012	2529
<b>M</b>	M-1/yr	2012	0.11
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

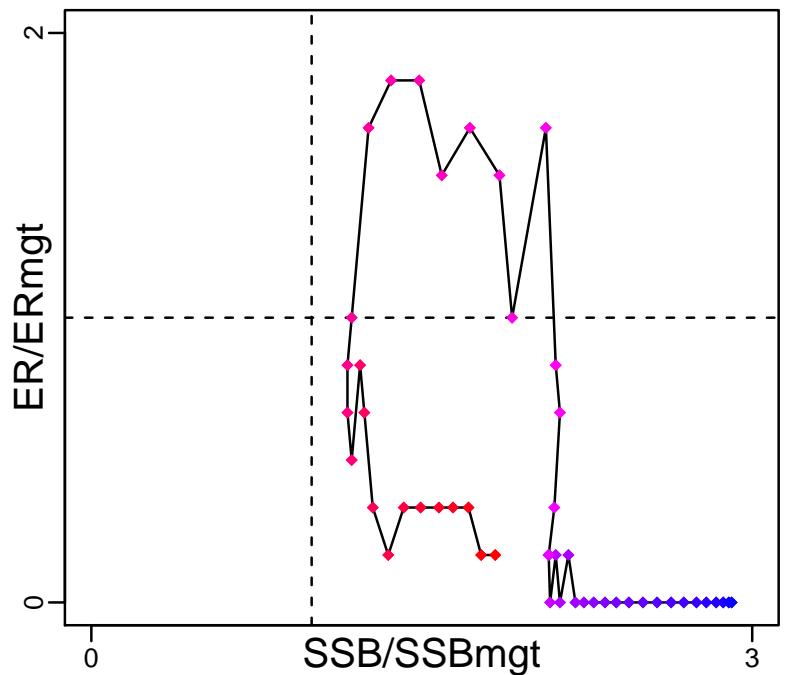
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2012	68,300	-	2+	
<b>SSB</b>	SSB-MT	2012	28,700	Females	12 to 15	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2012	$1.33 \times 10^8$	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2012	0.01	-	-	
<b>TC</b>	TC-MT	2012	871			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2012	1.89			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2012	2.19			
<b>F/Fmsy</b>	-	-	-			
<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]

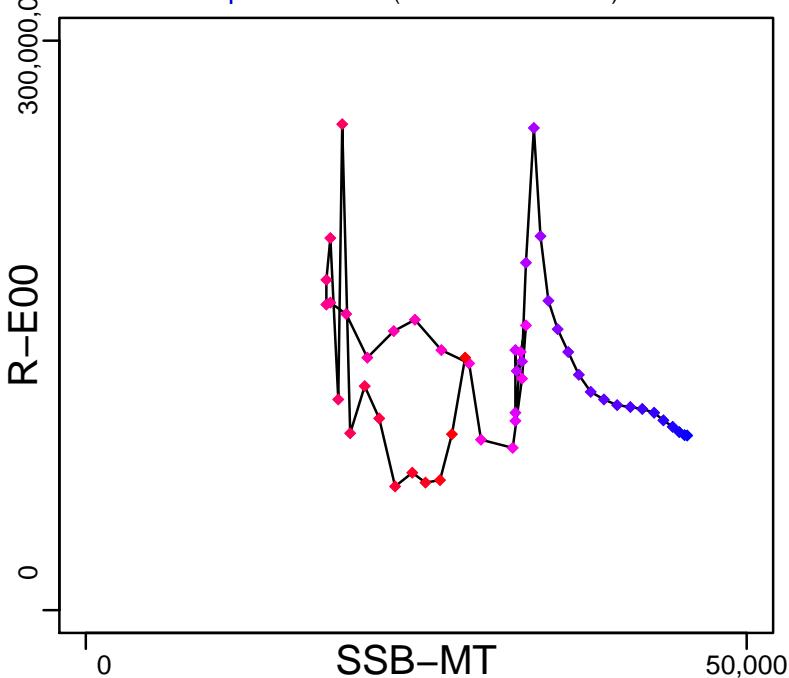
Kobe MSYpref (1964–2012–HIVELY)



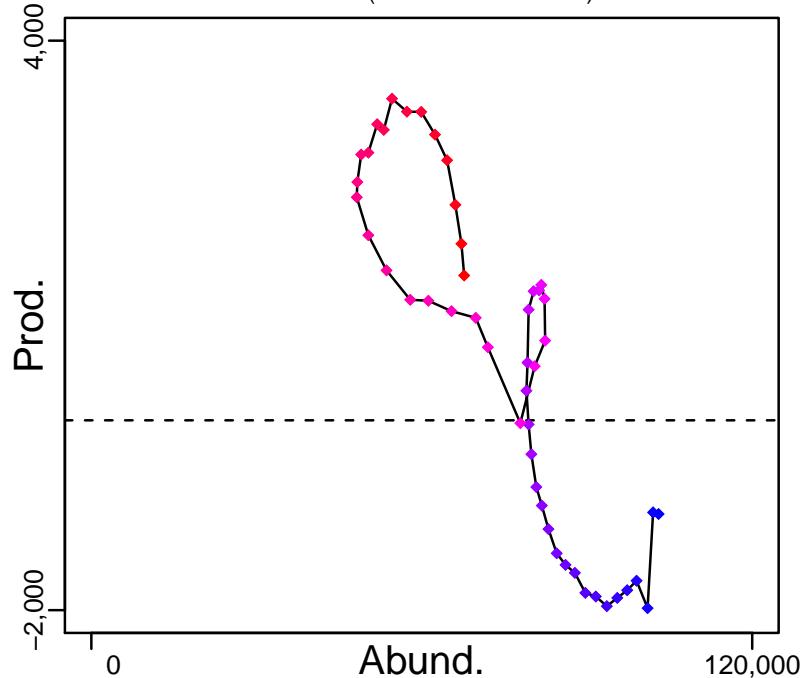
Kobe MGTPref (1964–2012–HIVELY)



Spawner Recruit (1964–2012–HIVELY)



Production (1964–2012–HIVELY)

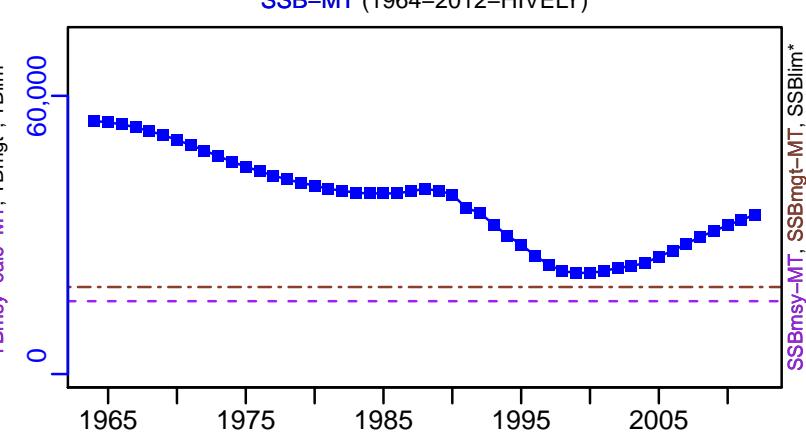
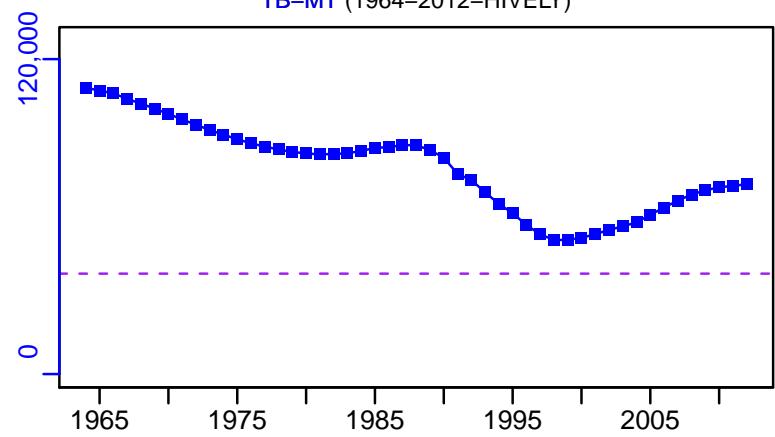


◆ Start Year   ◆ End Year   \* No Data

**Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]**

TB-MT (1964–2012-HIVELY)

SSB-MT (1964–2012-HIVELY)



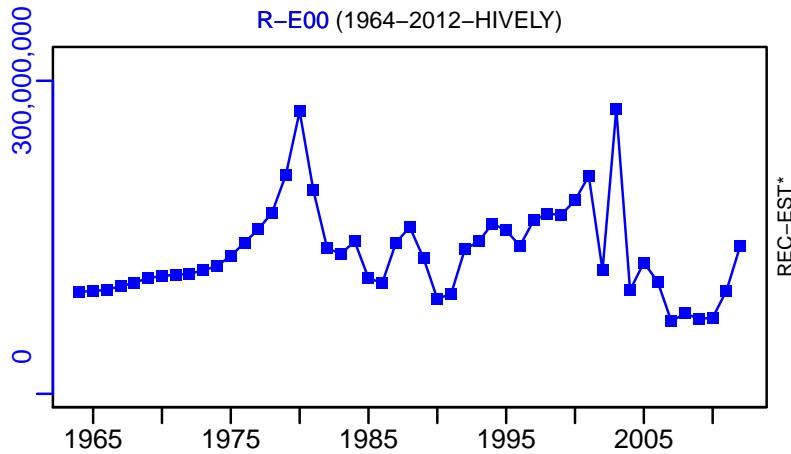
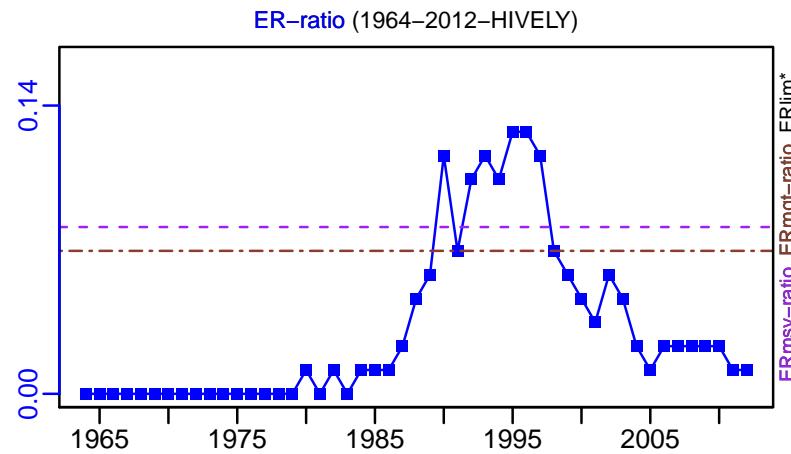
**TN \***

**F\***



ER-ratio (1964–2012-HIVELY)

R-E00 (1964–2012-HIVELY)

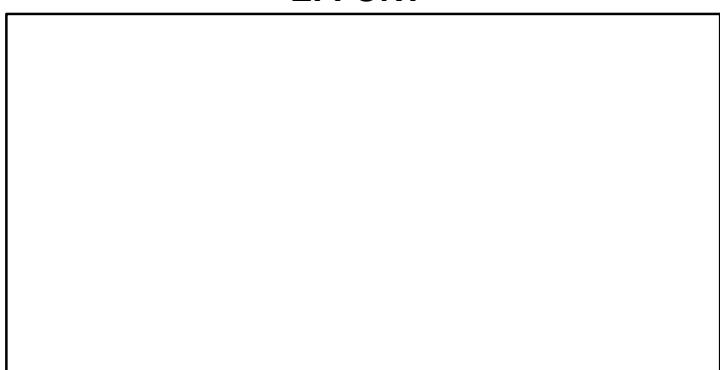
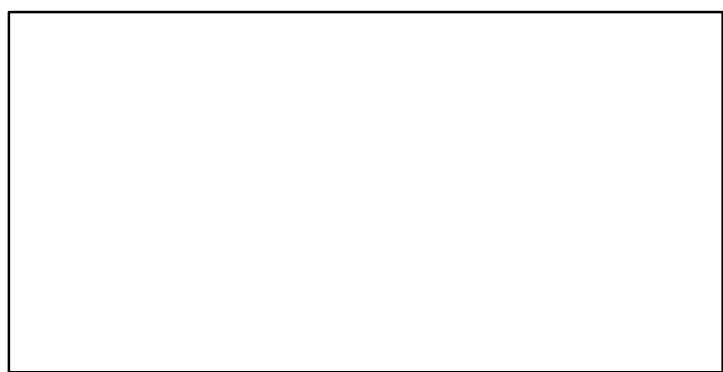
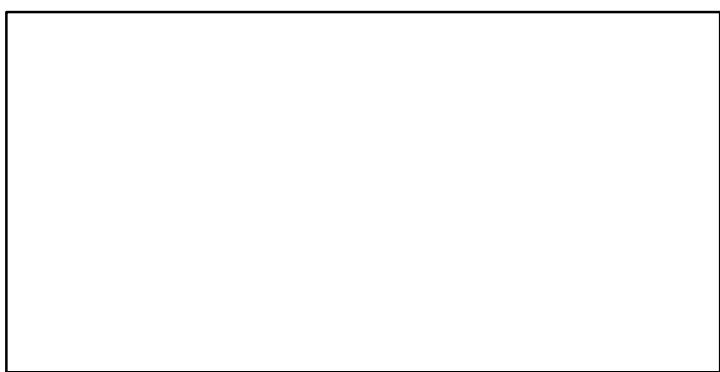
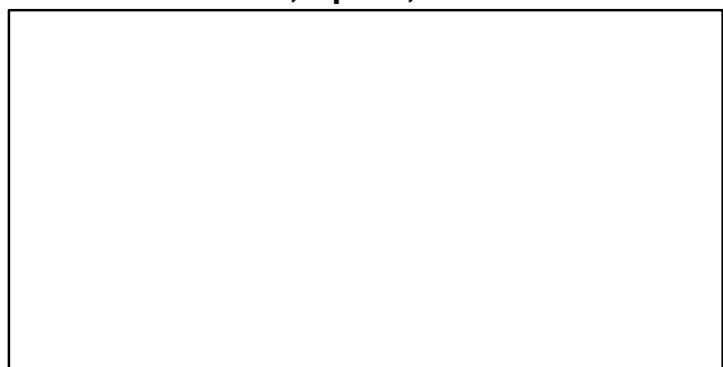
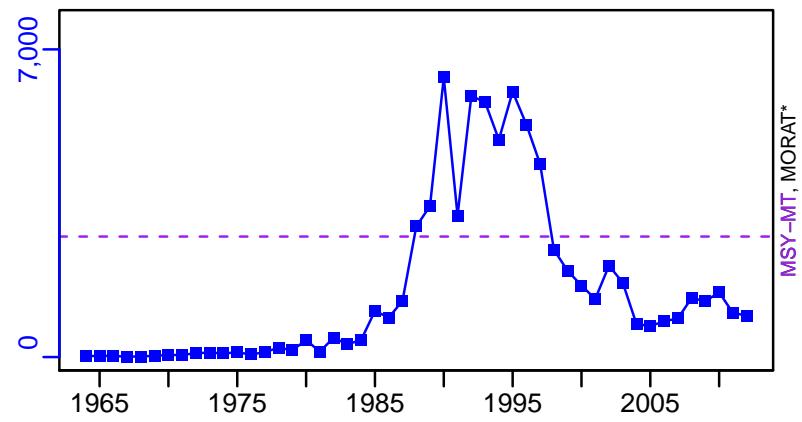


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - Lim BRP	■ No Data

**Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]**

TC-MT, TL\*, RecC\* (1964–2012-HIVELY)

TAC\*, Cpair\*, Cadv\*



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

## Pacific Geoduck Washington [PGEODWA]

Metadata	
Scientific Name	Panopea generosa
Current Assess ID	WDFW-PGEODWA-1980-2010-HIVELY
Area	Washington
Management Authority	State of Washington
Assessor	Washington Department of Fish and Wildlife
Asmts in RAM	2010

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>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

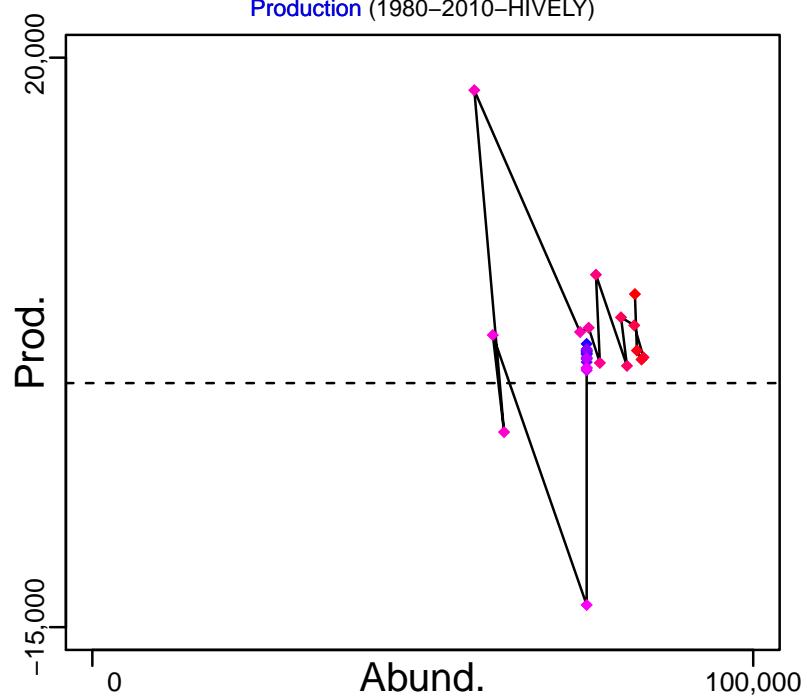
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2010	85,400	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2010	0.025	-	-	
<b>TC</b>	TC-MT	2010	2150			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<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\*

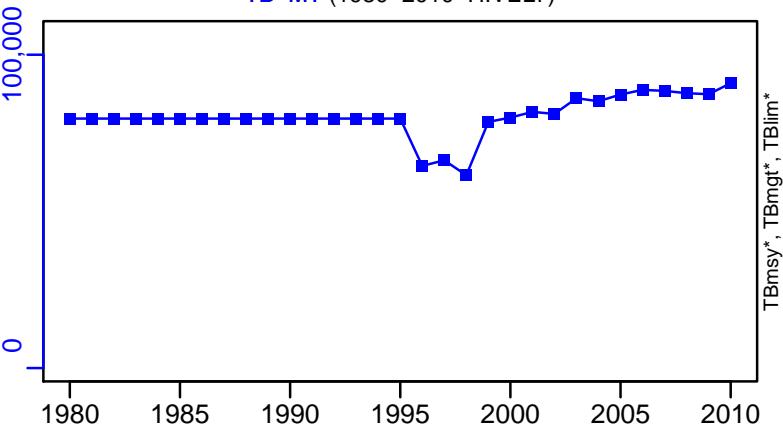
Production (1980–2010–HIVELY)



◆ Start Year ◆ End Year \* No Data

Pacific Geoduck Washington [PGEODWA]

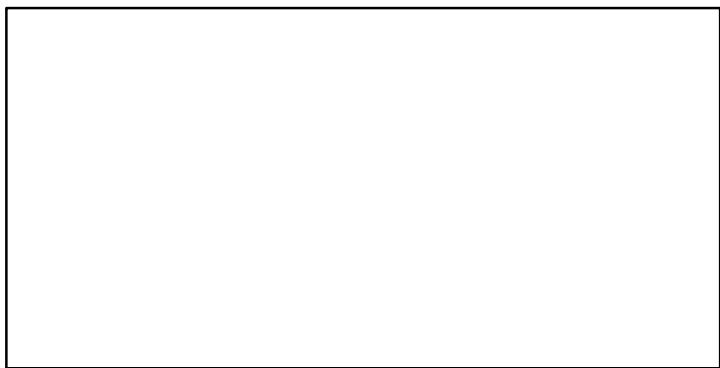
TB-MT (1980–2010-HIVELY)



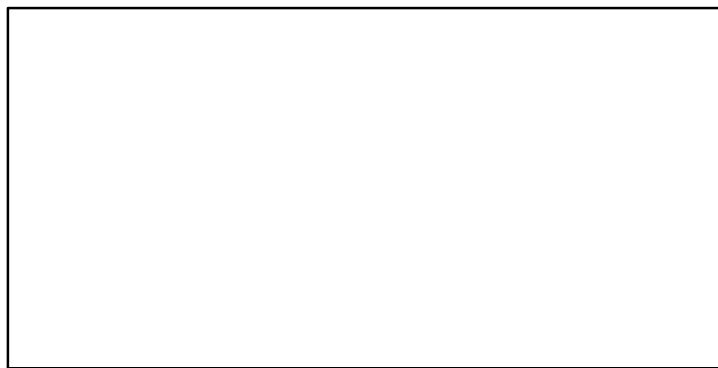
SSB\*



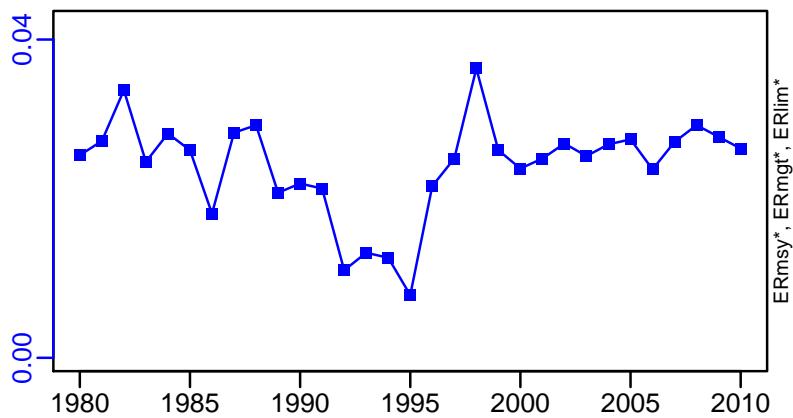
TN \*



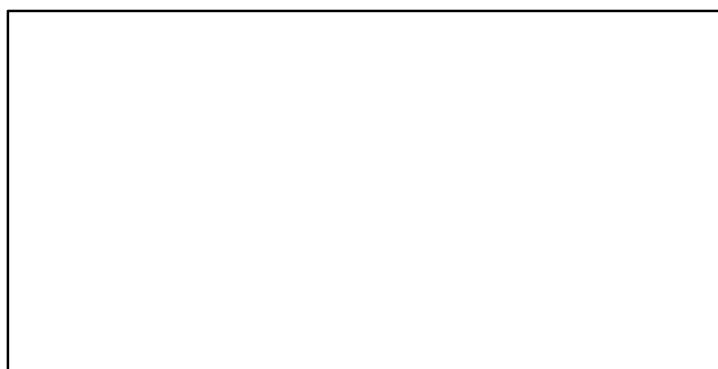
F\*



ER-ratio (1980–2010-HIVELY)



Recruits\*

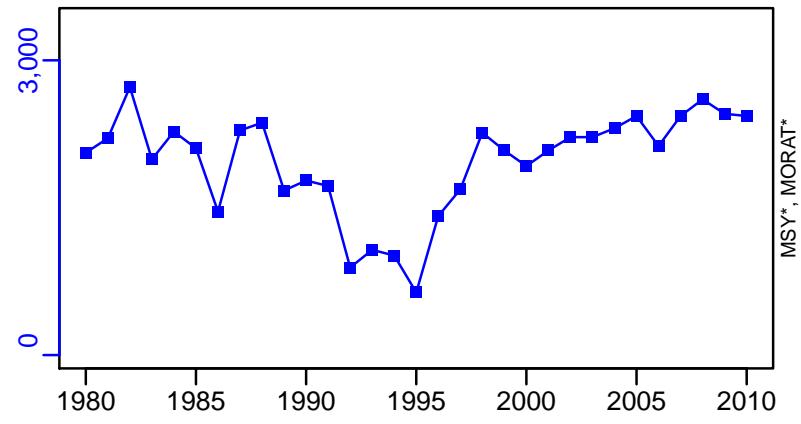


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | ·· Lim BRP   | ■ No Data |

Pacific Geoduck Washington [PGEODWA]

TC-MT, TL\*, RecC\* (1980–2010-HIVELY)

TAC\*, Cpair\*, Cadv\*

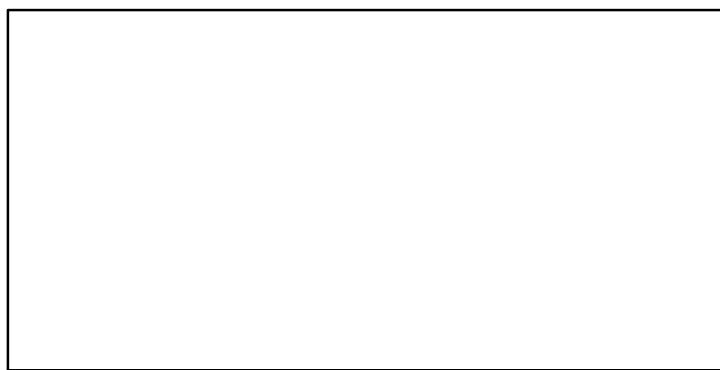


MSY\*, MORAT\*

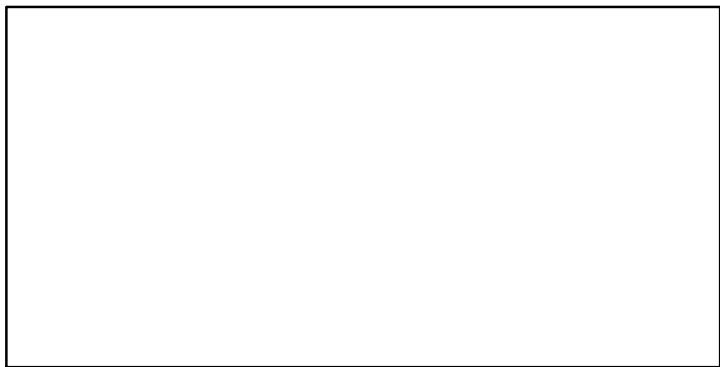
survB\*



CPUE\*



EFFORT\*



## Pacific hake Pacific Coast [PHAKEPCOAST]

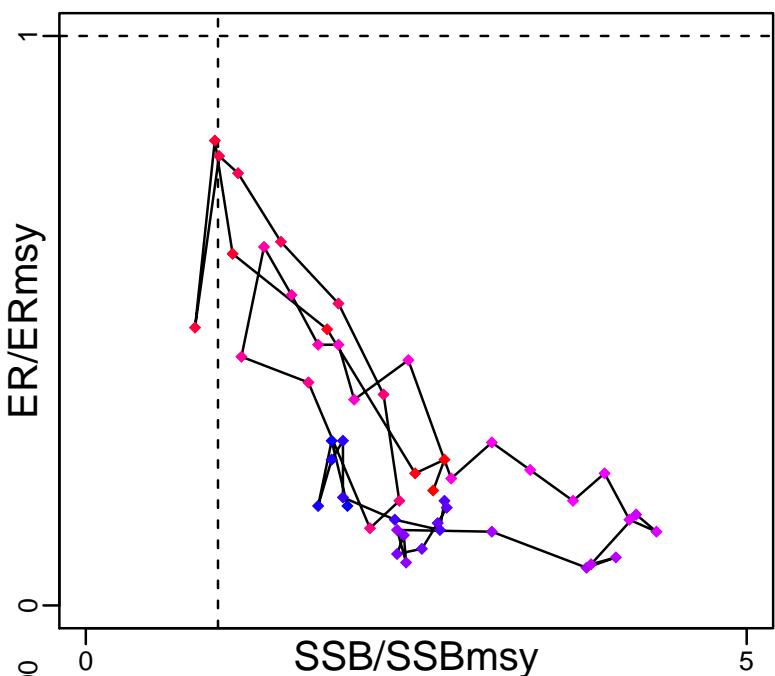
Metadata	
<b>Scientific Name</b>	Merluccius productus
<b>Current Assess ID</b>	PFMC-PHAKEPCOAST-1966-2016-WATSON
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Pacific Fishery Management Council
<b>Asmts in RAM</b>	2015, 2016

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2016	1,222,892
<b>SSBmsy</b>	SSBmsy-MT	2016	586,000
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2016	0.332
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	SSBmgt-MT	2016	959,000
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	ERmgt-ratio	2016	0.19
<b>TB0</b>	-	-	-
<b>SSB0</b>	SSB0-MT	2016	2,397,000
<b>MSY</b>	MSY-MT	2016	406,000
<b>M</b>	M-1/yr	2016	0.226
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

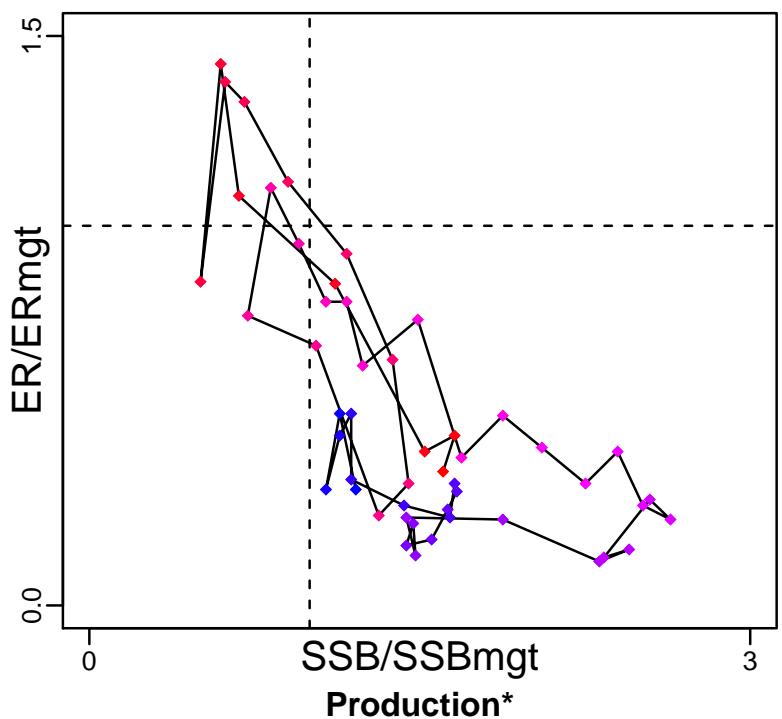
Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	-	-	-	-	-
<b>SSB</b>	SSB-MT	2016	1,890,000	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2016	$1.22 \times 10^9$	-	-
<b>F</b>	-	-	-	-	-
<b>ER</b>	ER-ratio	2016	0.067	-	-
<b>TC</b>	TC-MT	2016	191,000		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2016	3.225		
<b>F/Fmsy</b>	-	-	-		
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2016	0.202		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	SSB-MT/SSBmgt-MT	2016	1.971		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

Pacific hake Pacific Coast [PHAKEPCOAST]

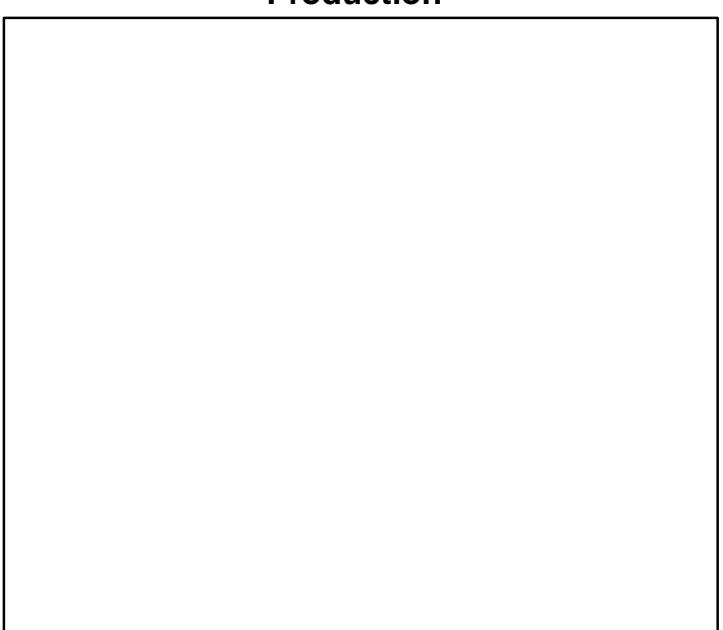
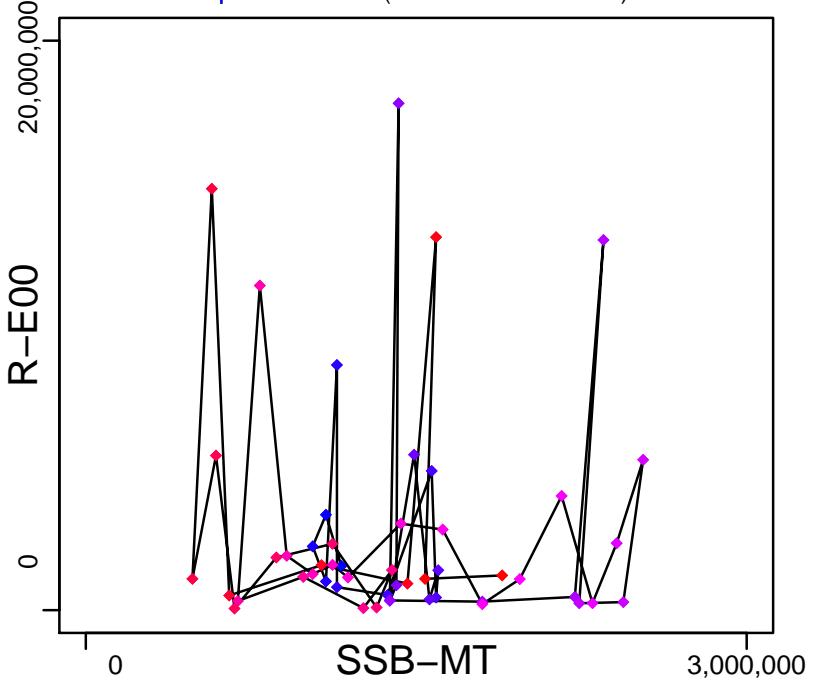
Kobe MSYpref (1966–2016–WATSON)



Kobe MGTpref (1966–2016–WATSON)



Spawner Recruit (1966–2016–WATSON)



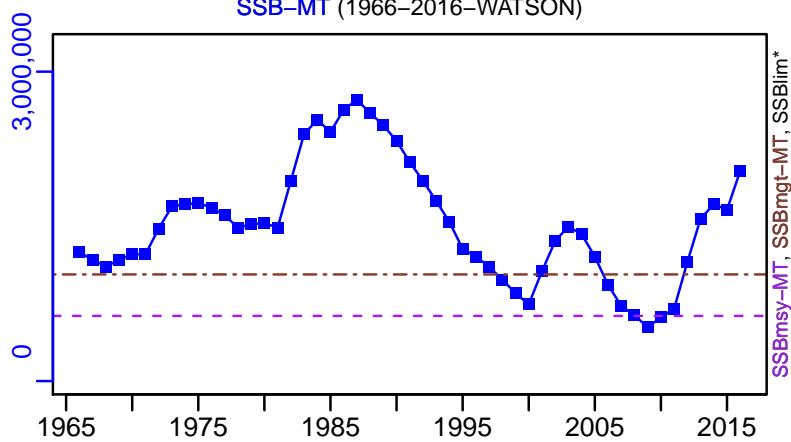
◆ Start Year ◆ End Year \* No Data

Pacific hake Pacific Coast [PHAKEPCOAST]

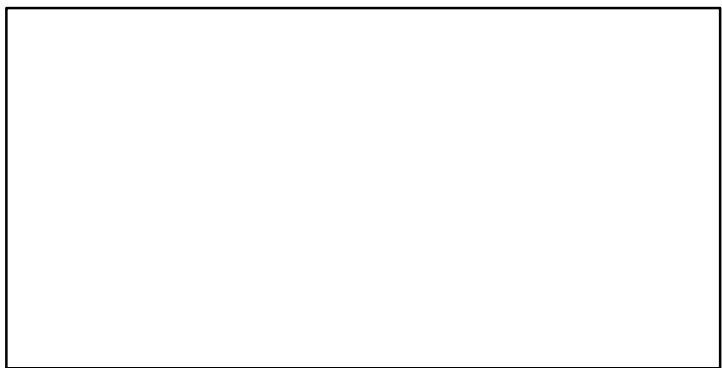
**TB\***



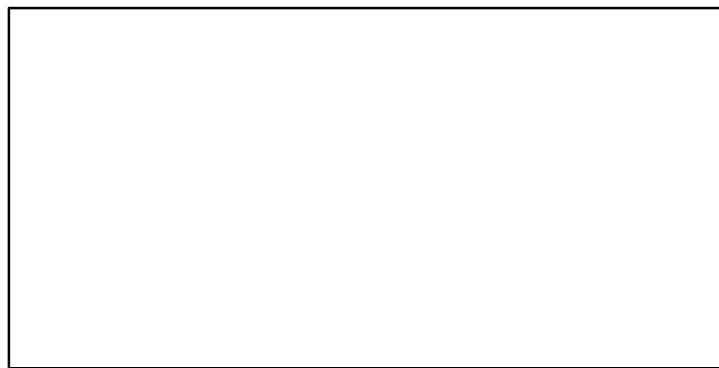
**SSB-MT (1966–2016–WATSON)**



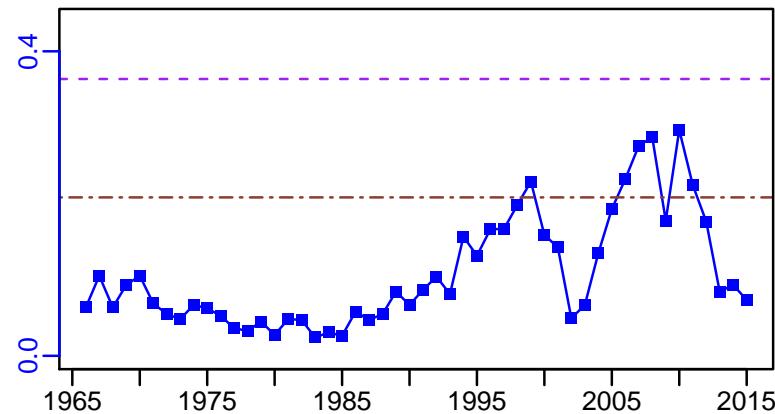
**TN \***



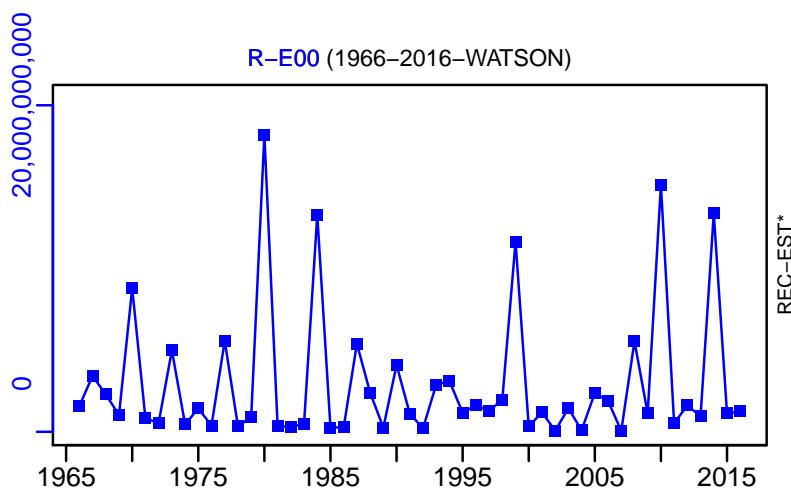
**F\***



**ER-ratio (1966–2016–WATSON)**

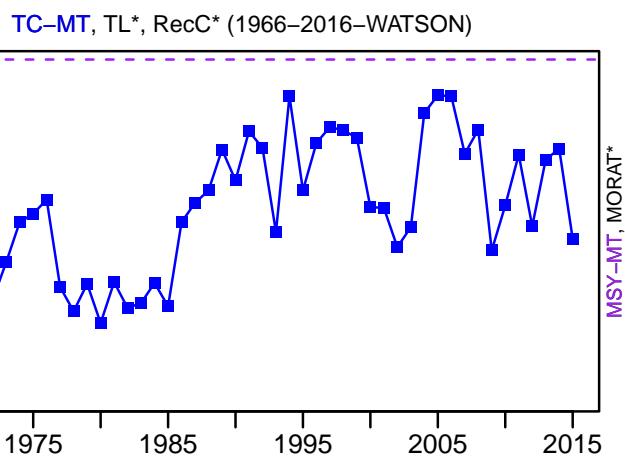


**R-E00 (1966–2016–WATSON)**

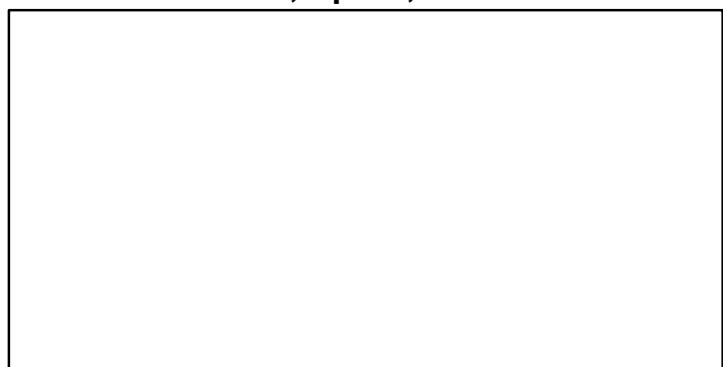


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - MSY-based BRP      | - Lim BRP    | ■ No Data |

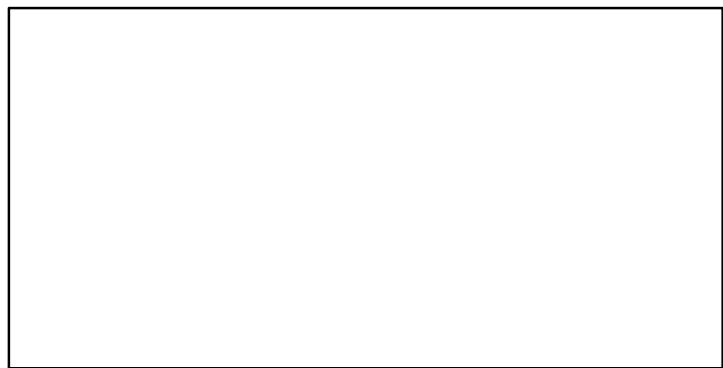
Pacific hake Pacific Coast [PHAKEPCOAST]



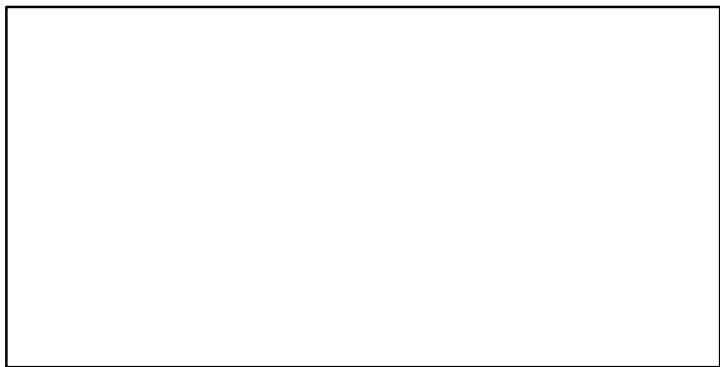
TAC\*, Cpair\*, Cadv\*



CPUE\*



EFFORT\*



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

## Pacific ocean perch Pacific Coast [POPERCHPCOAST]

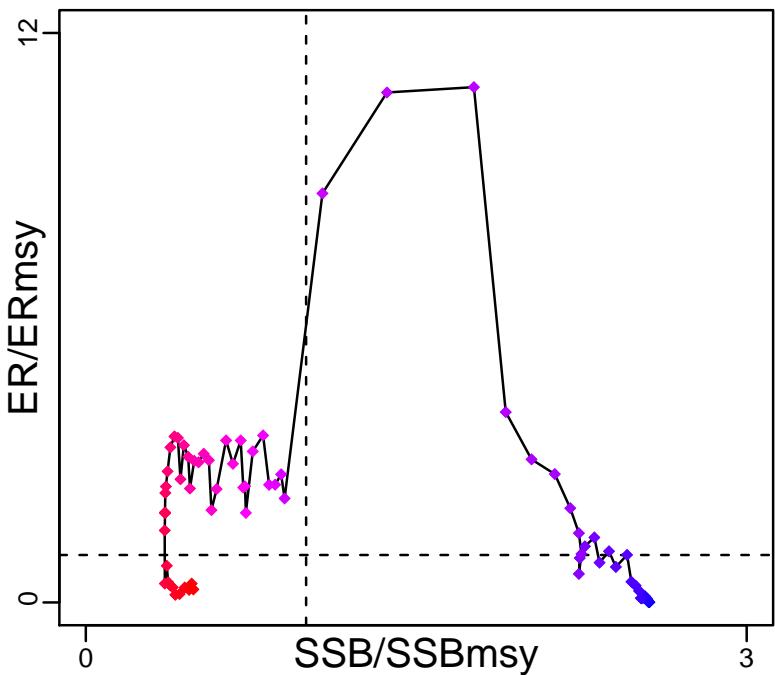
Metadata	
<b>Scientific Name</b>	Sebastodes alutus
<b>Current Assess ID</b>	NWFSC-POPERCHPCOAST-1940-2011-STACHURA
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2011	50,381
<b>SSBmsy</b>	SSBmsy-E00eggs	2011	$2.56 \times 10^{12}$
<b>Fmsy</b>	-	-	-
<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	2011	1058
<b>M</b>	M-1/yr	2011	0.05
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

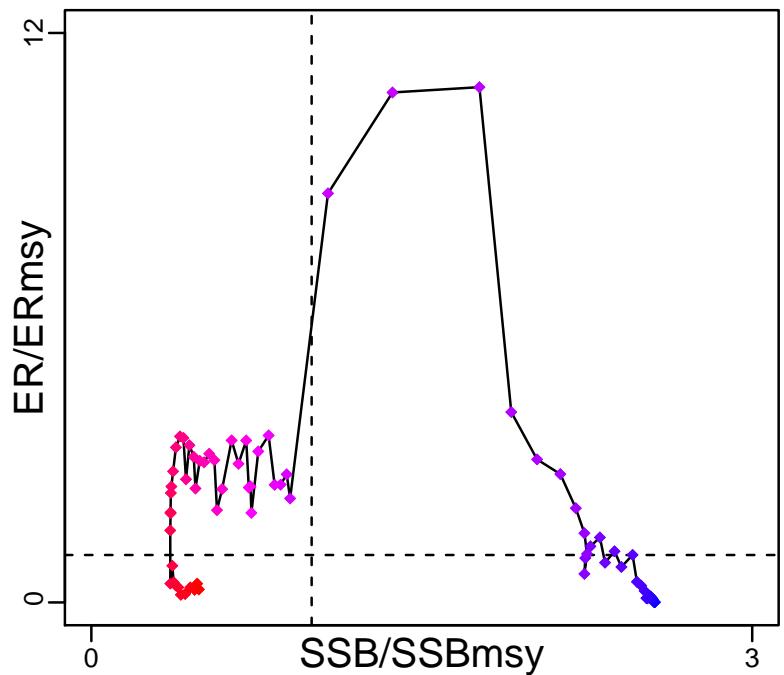
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2011	25,500	-	3+	
<b>SSB</b>	SSB-E00eggs	2011	$1.25 \times 10^{12}$	-	6+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2011	3,590,000	-	0	
<b>F</b>	F-1/yr	2011	0.01	Both	3+	
<b>ER</b>	ER-calc-ratio	2011	0.006	-	-	
<b>TC</b>	TC-MT	2011	141			
<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	2011	0.488			
<b>F/Fmsy</b>	-	-	-			
<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]

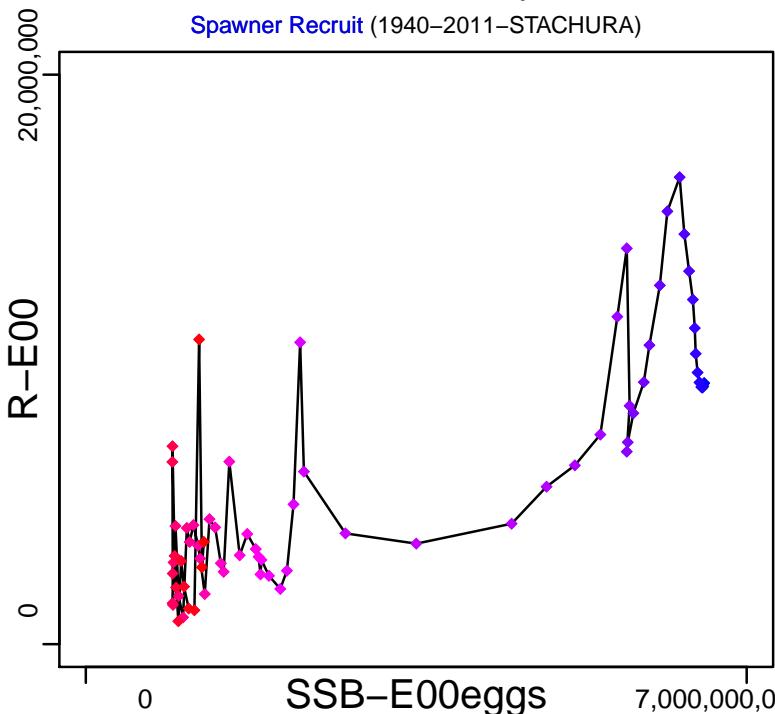
Kobe MSYpref (1940–2011–STACHURA)



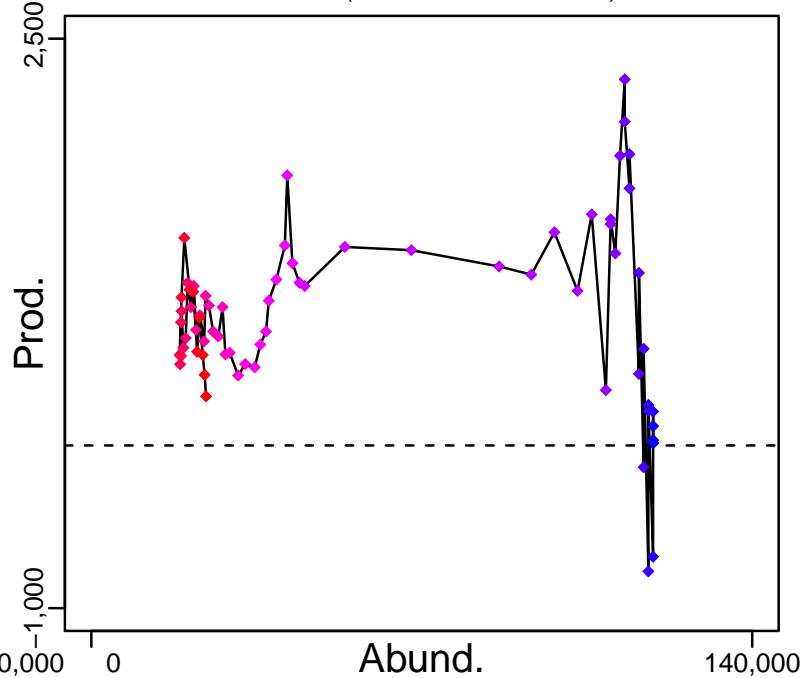
Kobe MGTpref (1940–2011–STACHURA)



Spawner Recruit (1940–2011–STACHURA)



Production (1940–2011–STACHURA)

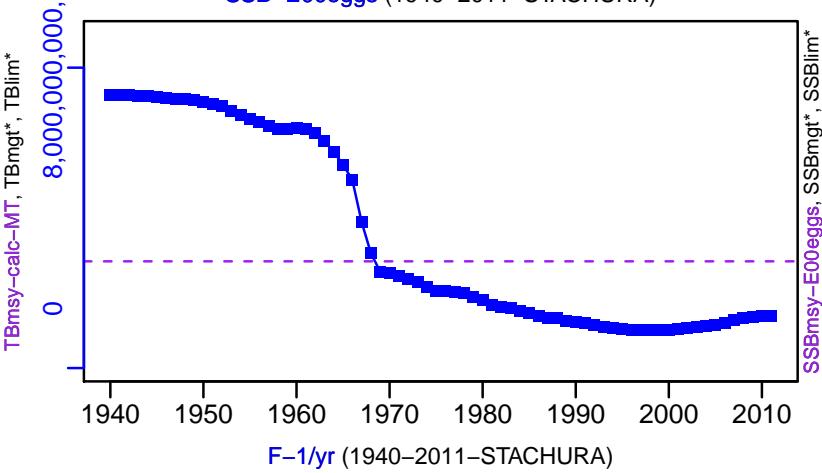
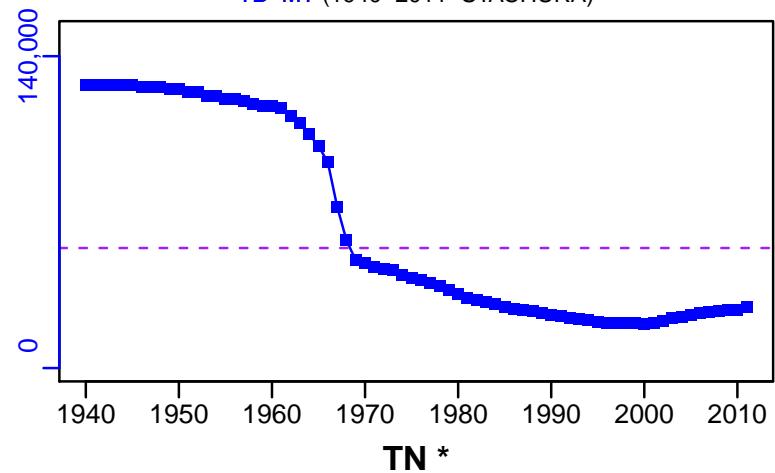


◆ Start Year ◆ End Year \* No Data

Pacific ocean perch Pacific Coast [POPERCHPCOAST]

TB-MT (1940–2011–STACHURA)

SSB-E00eggs (1940–2011–STACHURA)



TN \*

F-1/yr (1940–2011–STACHURA)

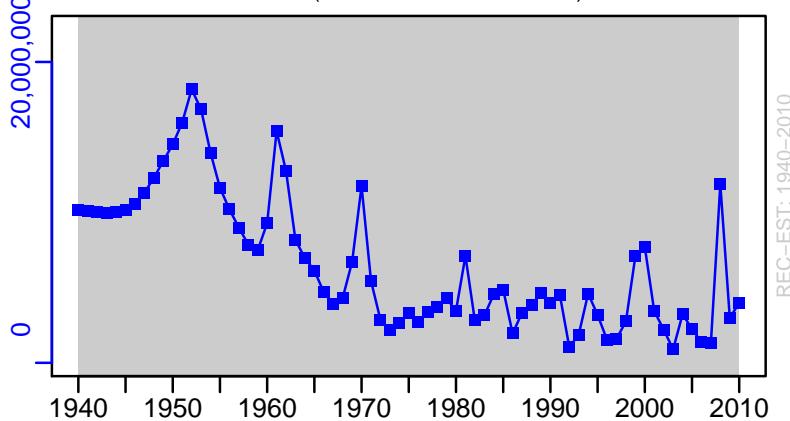
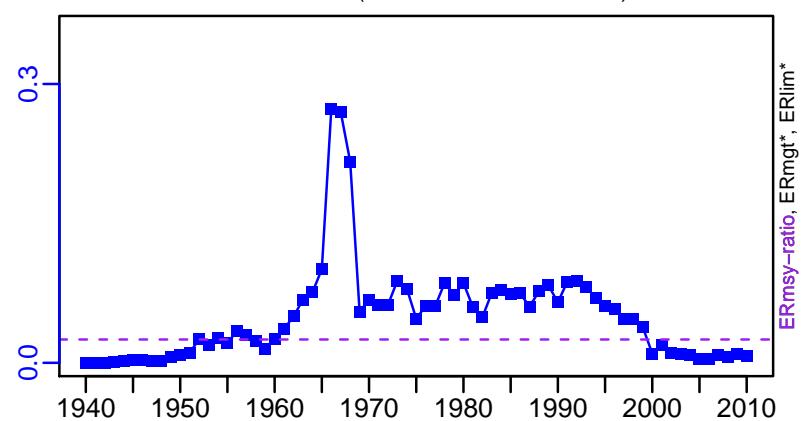
SSB<sub>MSY</sub>-E00eggs, SSB<sub>MSY</sub>, SSB<sub>BRP</sub>\*

F<sub>MSY</sub>\* , F<sub>Mgt</sub>\* , F<sub>lim</sub>\*

ER-calc-ratio (1940–2011–STACHURA)

R-E00 (1940–2011–STACHURA)

REC-EST: 1940–2010

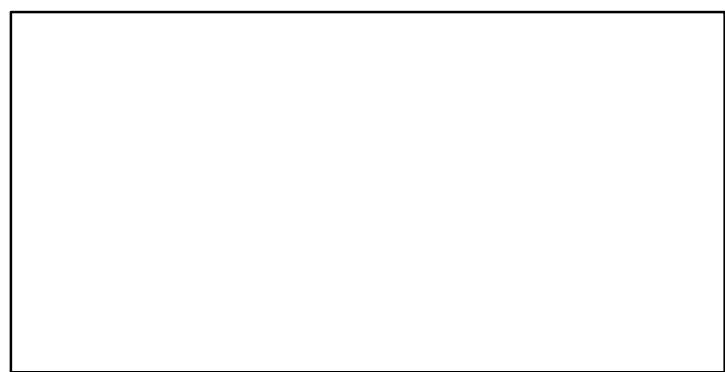
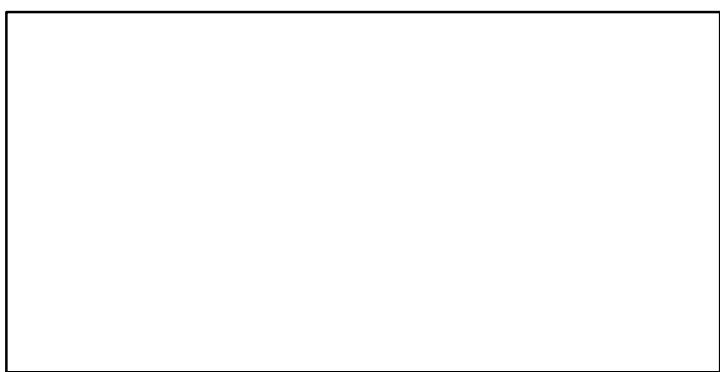
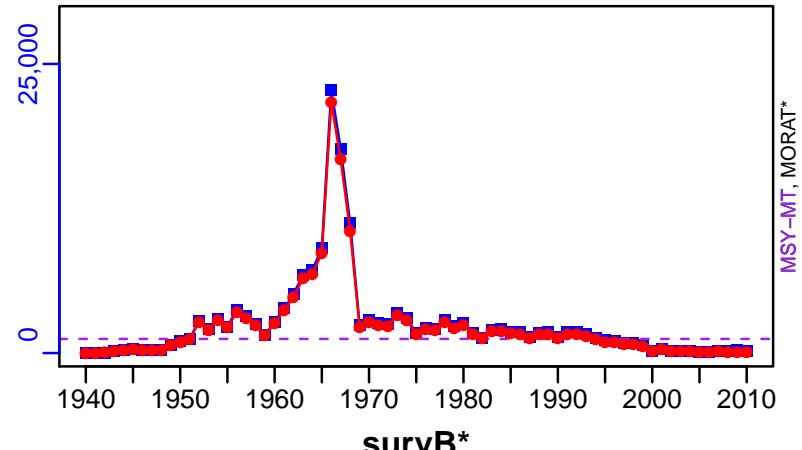


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | ■ No Data |

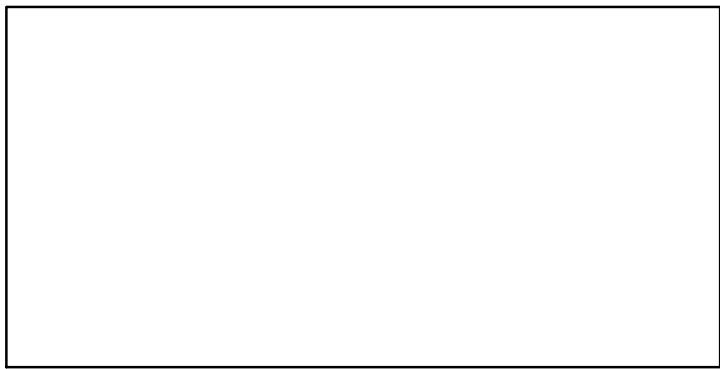
Pacific ocean perch Pacific Coast [POPERCHPCOAST]

TC-MT, TL-MT, RecC\* (1940–2011–STACHURA)

TAC\*, Cpair\*, Cadv\*



EFFORT\*



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

## Petrale sole Pacific Coast [PSOLEPCOAST]

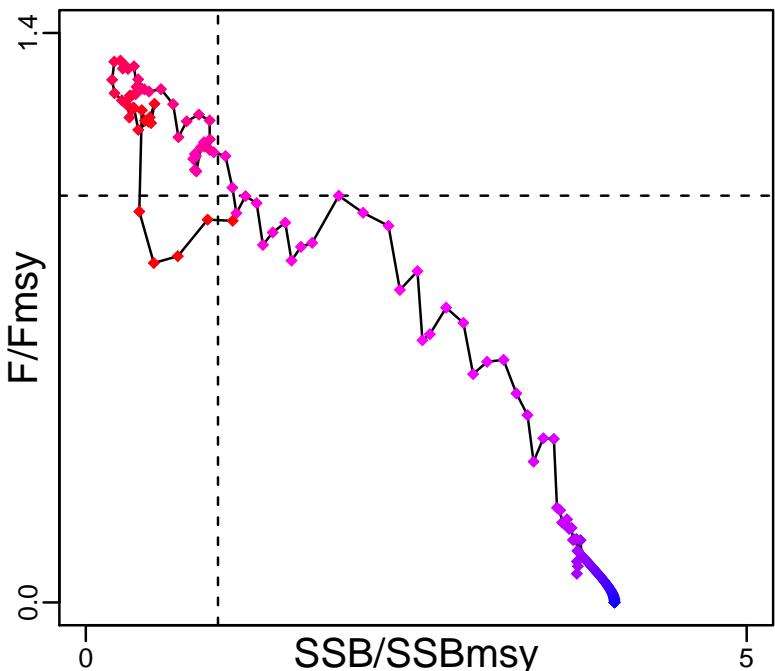
Metadata	
<b>Scientific Name</b>	Eopsetta jordani
<b>Current Assess ID</b>	NWFSC-PSOLEPCOAST-1876-2015-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2015, 2011

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2011	11,764
<b>SSBmsy</b>	SSBmsy-MT	2015	8369
<b>Fmsy</b>	Fmsy-1/yr	2015	0.7
<b>ERmsy</b>	ERmsy-ratio	2011	0.22
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2011	41,352
<b>SSB0</b>	SSB0-MT	2011	26,278
<b>MSY</b>	MSY-MT	2011	2588
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	4185
<b>Flim</b>	Flim-1/yr	2015	0.7
<b>ERlim</b>	-	-	-

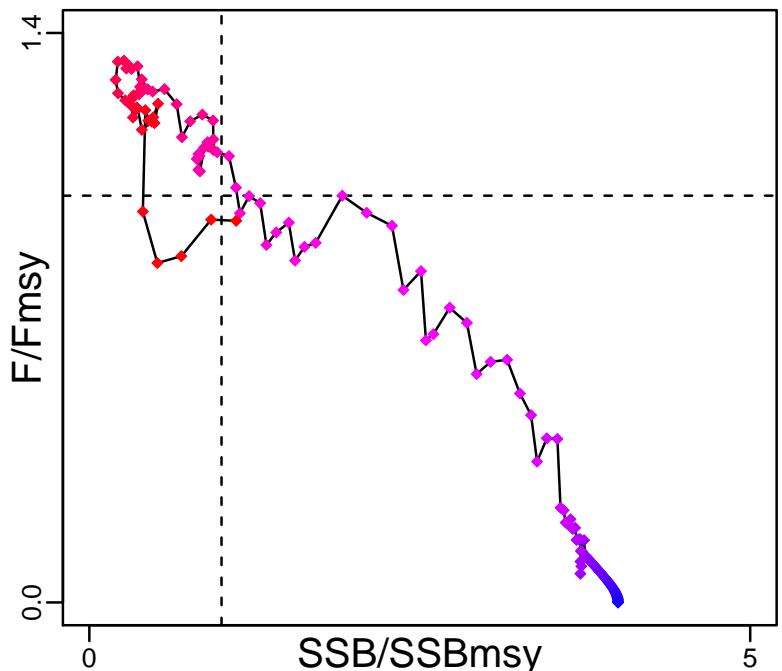
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2015	19,400	-	3+	
<b>SSB</b>	SSB-MT	2015	10,300	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	14,600,000	-	0	
<b>F</b>	F-1/yr	2015	0.657	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.127	-	-	
<b>TC</b>	TC-MT	2015	2360			
<b>TL</b>	TL-MT	2011	701			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	1.012			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2015	1.23			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.938			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2011	0.386			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

Petrale sole Pacific Coast [PSOLEPCOAST]

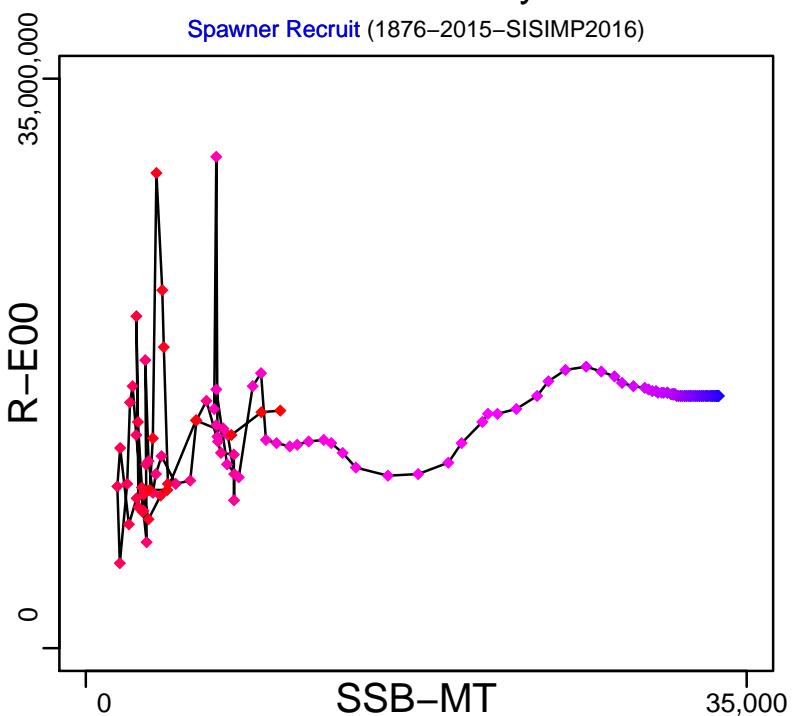
Kobe MSYpref (1876–2015–SISIMP2016)



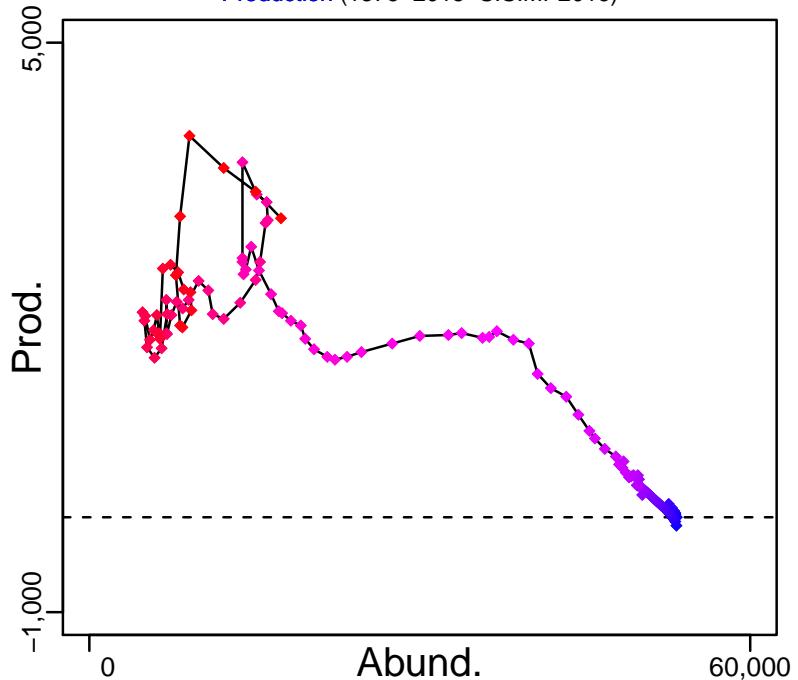
Kobe MGTpref (1876–2015–SISIMP2016)



Spawner Recruit (1876–2015–SISIMP2016)



Production (1876–2015–SISIMP2016)

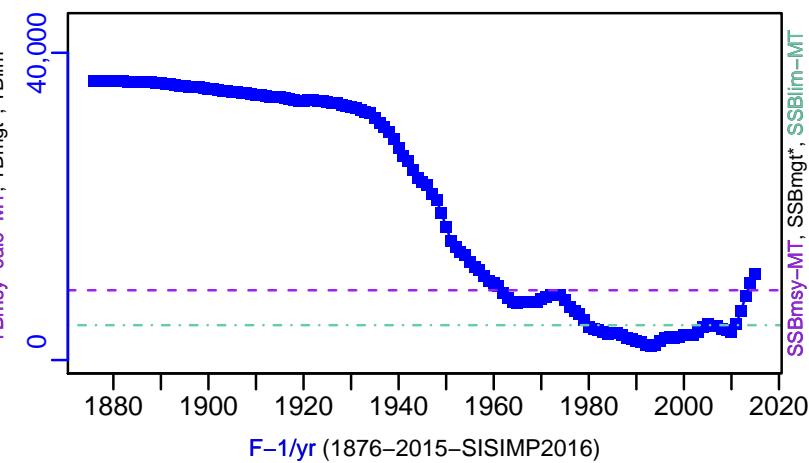
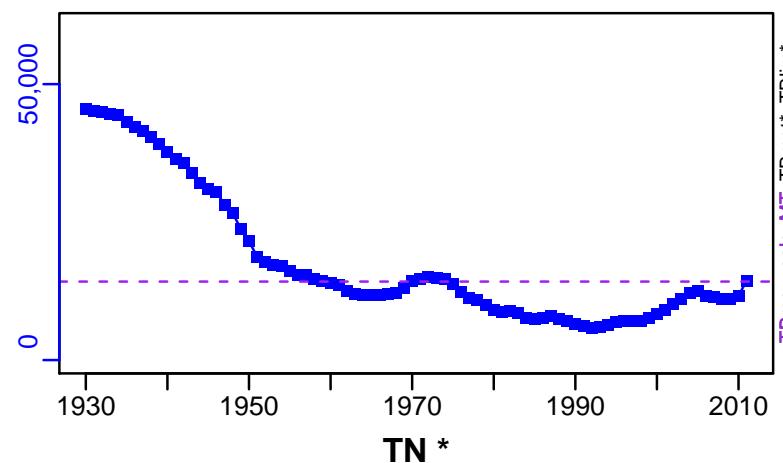


◆ Start Year	◆ End Year	*	No Data
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### Petrale sole Pacific Coast [PSOLEPCOAST]

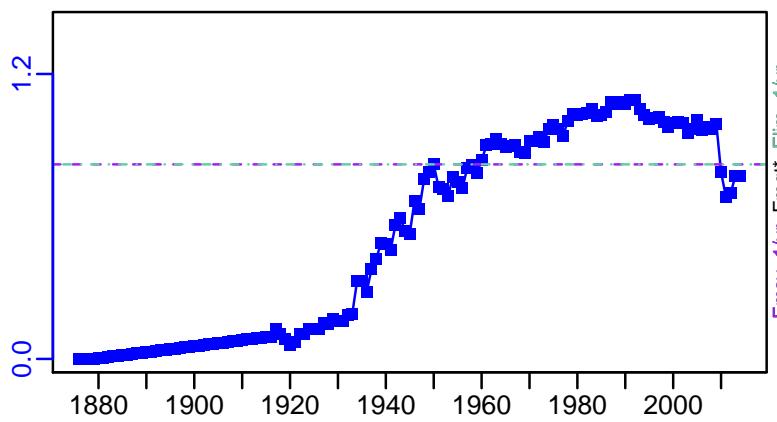
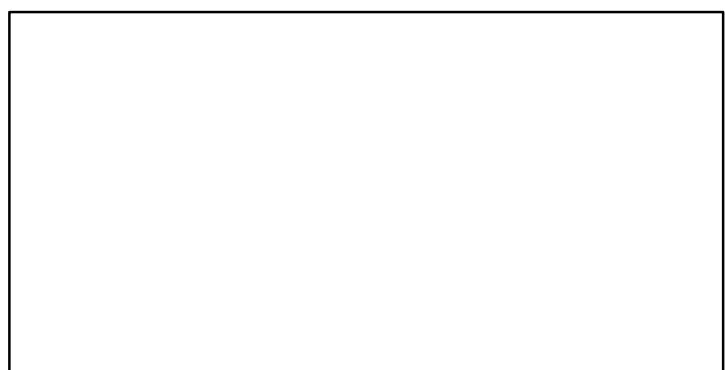
TB-MT (1930–2011–CHING)

SSB-MT (1876–2015–SISIMP2016)



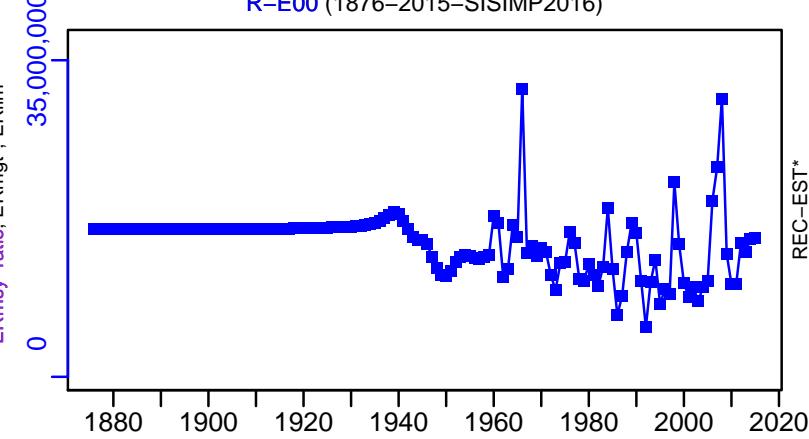
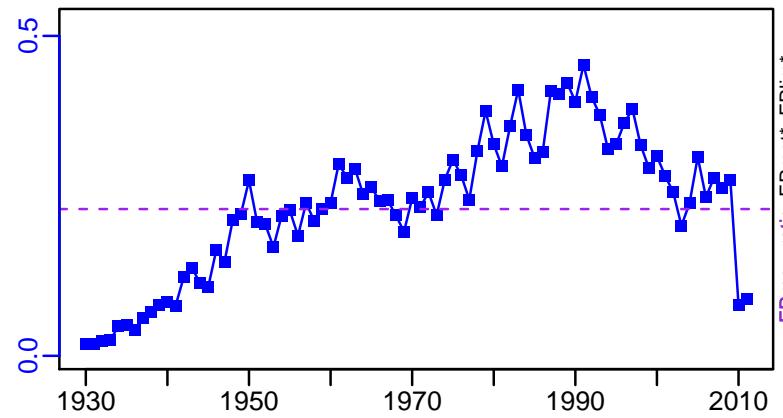
**TN \***

**F-1/yr (1876–2015–SISIMP2016)**



**ER-ratio (1930–2011–CHING)**

**R-E00 (1876–2015–SISIMP2016)**

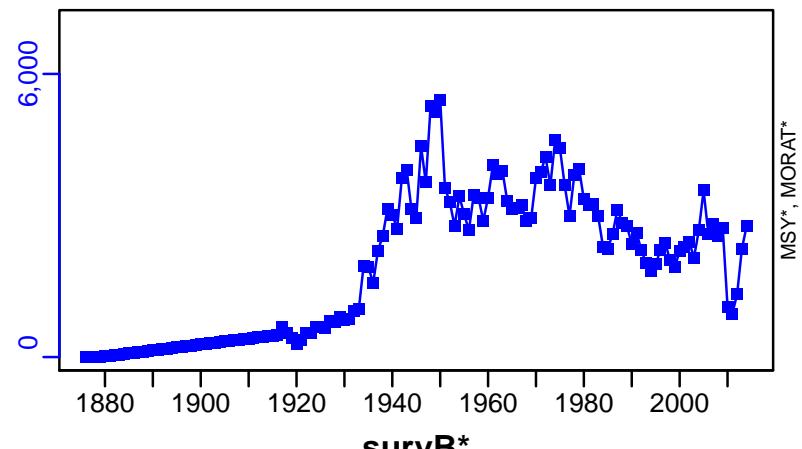


- |                      |               |           |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP  | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP | ■ No Data |

Petrale sole Pacific Coast [PSOLEPCOAST]

TC-MT, TL\*, RecC\* (1876–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*

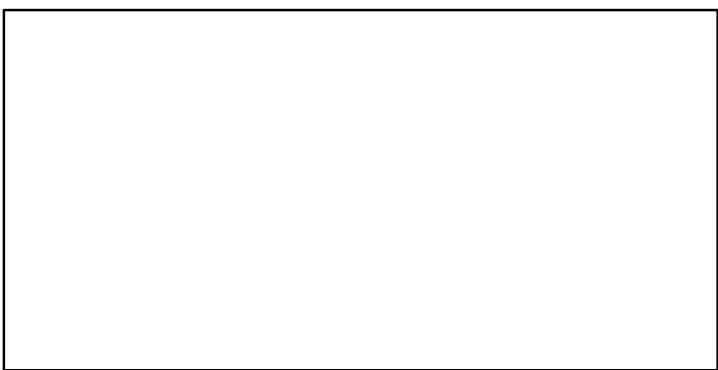


survB\*

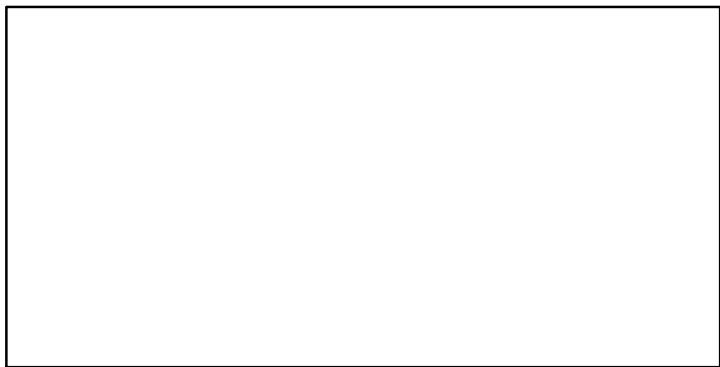
MSY\*, MORAT\*



CPUE\*



EFFORT\*



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

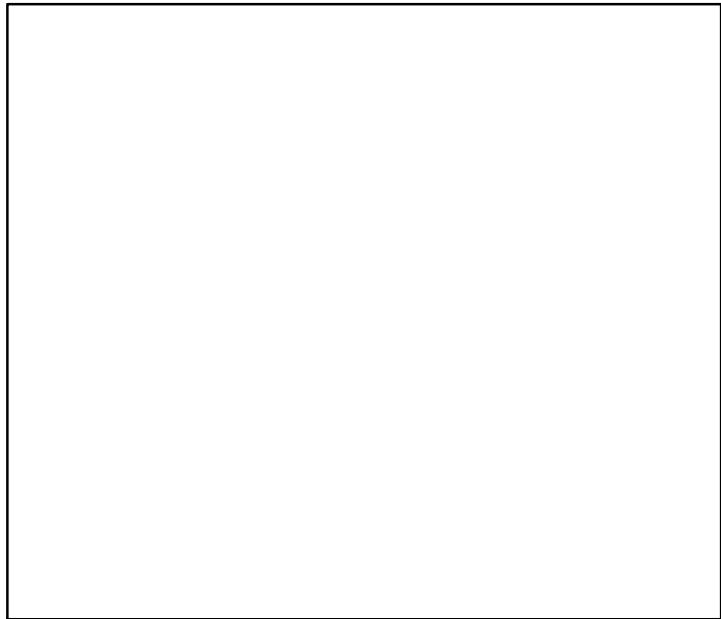
## Rex sole Pacific Coast [REXSOLEPCOAST]

Metadata	
<b>Scientific Name</b>	Glyptocephalus zachirus
<b>Current Assess ID</b>	NWFSC-REXSOLEPCOAST-1896-2012-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

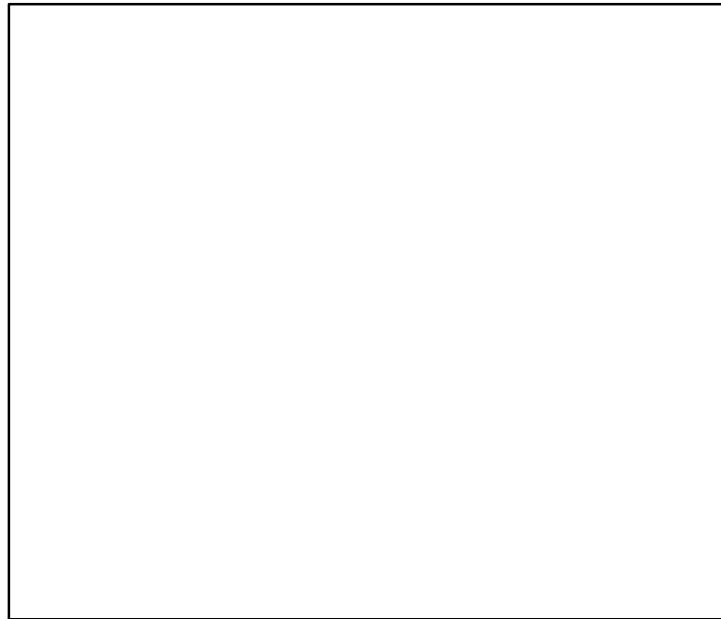
Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2012	0.7
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	-	-	-
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2012	1646
<b>M</b>	-	-	-
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-1/yr	2012	0.7
<b>ERlim</b>	-	-	-

Time Series					
Type	ID	Asmt Year	Curr Value	Sex	Age
<b>TB</b>	TB-MT	2012	18,500	-	-
<b>SSB</b>	-	-	-	-	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	-	-	-	-	-
<b>F</b>	F-1/yr	2012	0.131	-	-
<b>ER</b>	-	-	-	-	-
<b>TC</b>	-	-	-		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	-	-	-		
<b>SSB/SSBmsy</b>	-	-	-		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2012	0.187		
<b>ER/ERmsy</b>	-	-	-		
<b>TB/TBmgt</b>	-	-	-		
<b>SSB/SSBmgt</b>	-	-	-		
<b>F/Fmgt</b>	-	-	-		
<b>ER/ERmgt</b>	-	-	-		

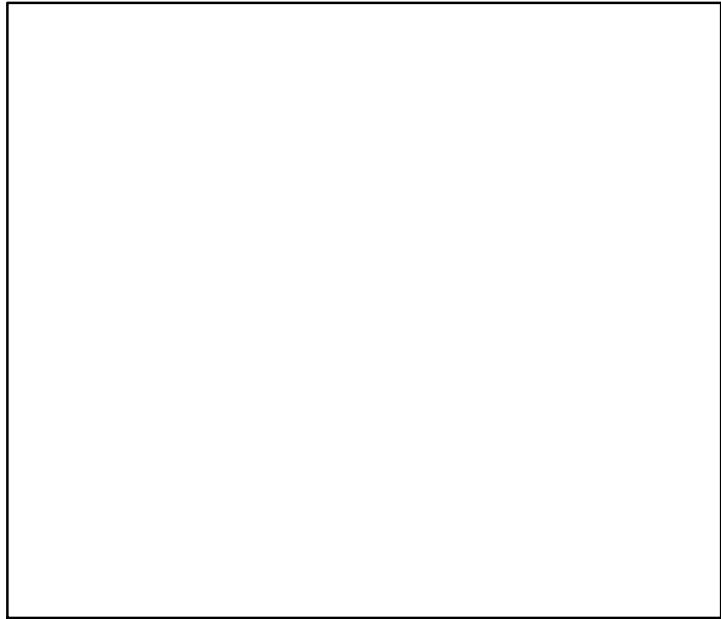
**Kobe MSY\***



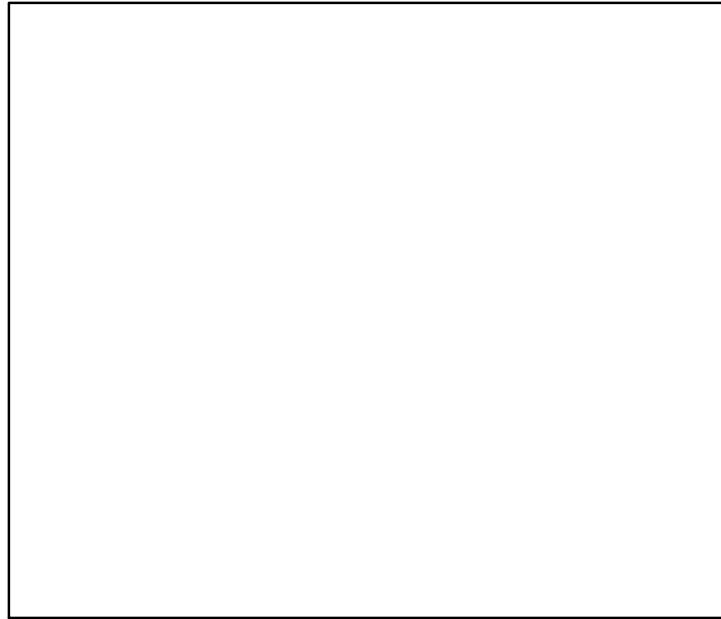
**Kobe MGT\***



**Spawner Recruit\***



**Production\***

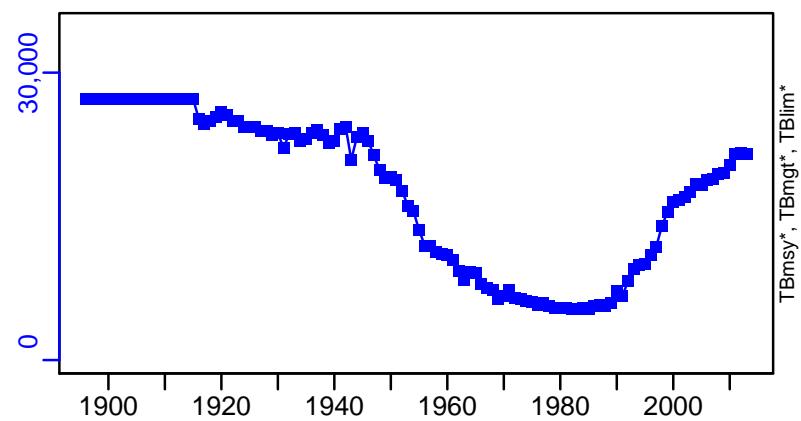


◆ Start Year ♦ End Year \* No Data

Rex sole Pacific Coast [REXSOLEPCOAST]

TB-MT (1896–2012–SISIMP2016)

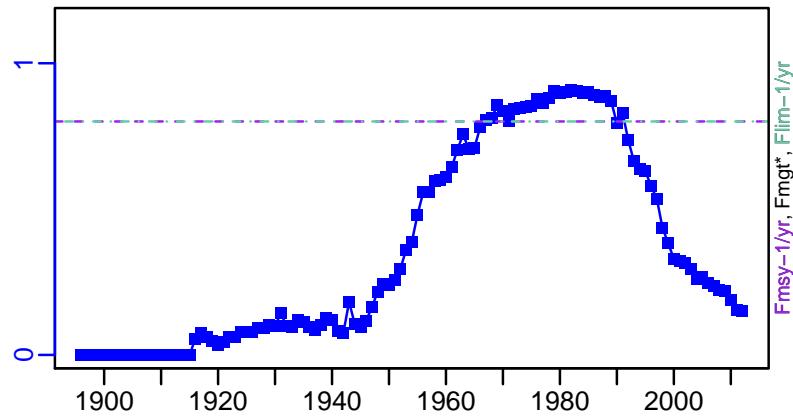
SSB\*



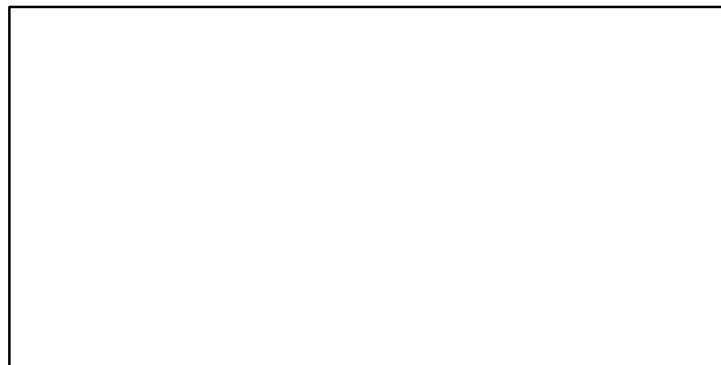
TN \*



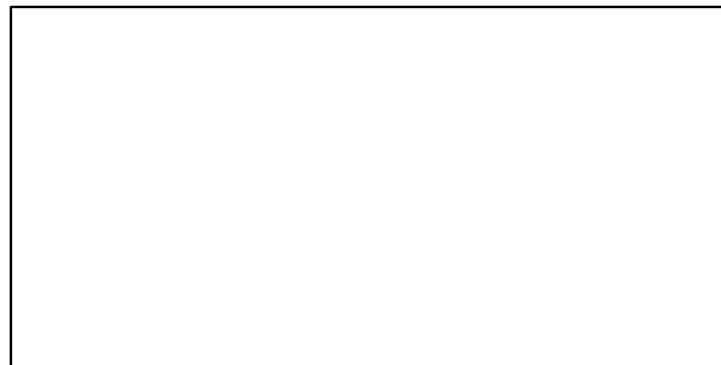
F-1/yr (1896–2012–SISIMP2016)



ER\*



Recruits\*

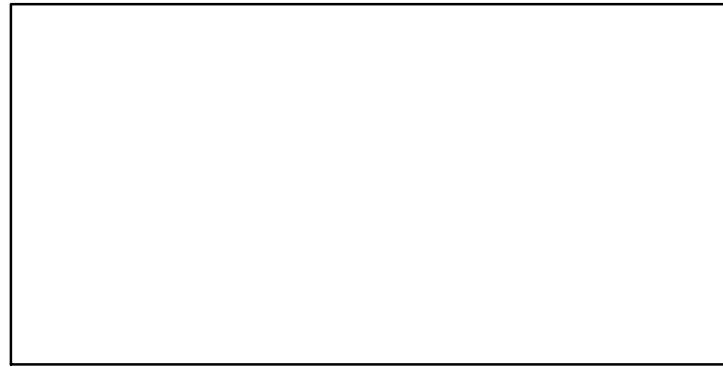
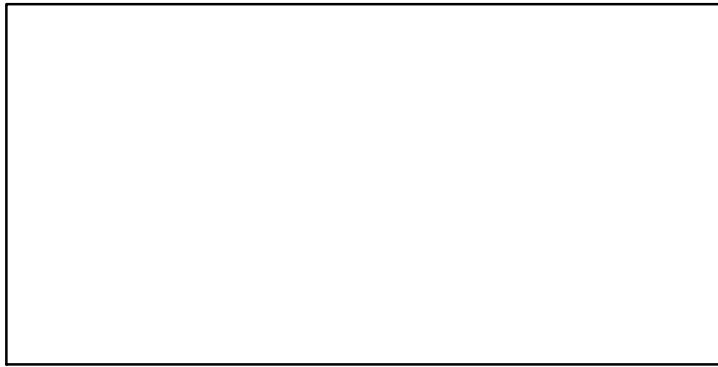


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP      | — Lim BRP    | ■ No Data |

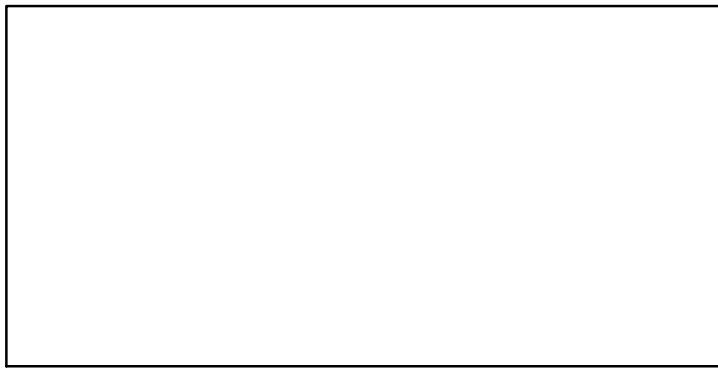
Rex sole Pacific Coast [REXSOLEPCOAST]

**TC\*, TL\*, RecC\***

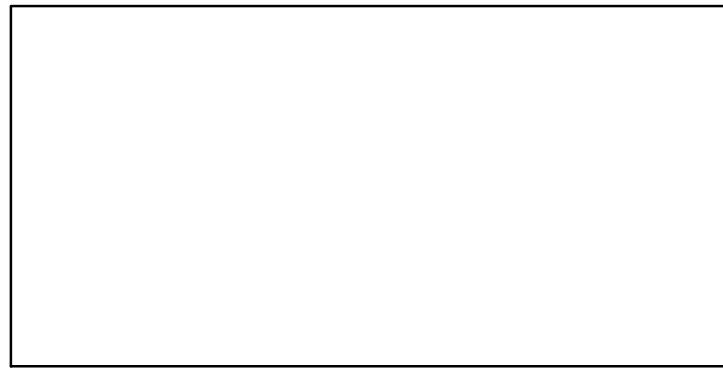
**TAC\*, Cpair\*, Cadv\***



**survB\***



**CPUE\***



**EFFORT\***



## Sablefish Pacific Coast [SABLEFPCOAST]

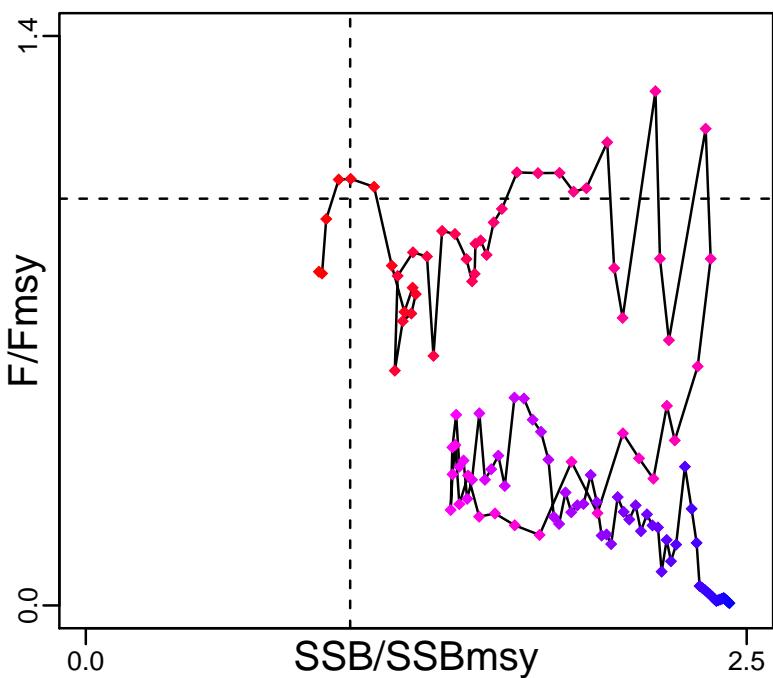
Metadata	
<b>Scientific Name</b>	Anoplopoma fimbria
<b>Current Assess ID</b>	NWFSC-SABLEFPCOAST-1900-2015-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2011, 2015

Reference Points			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	SSBmsy-MT	2015	60,249
<b>Fmsy</b>	Fmsy-1/yr	2015	0.55
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2011	537,893
<b>SSB0</b>	SSB0-MT	2011	182,136
<b>MSY</b>	MSY-MT	2015	7476
<b>M</b>	M-1/yr	2011	0.08
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	37,656
<b>Flim</b>	Flim-1/yr	2015	0.55
<b>ERlim</b>	-	-	-

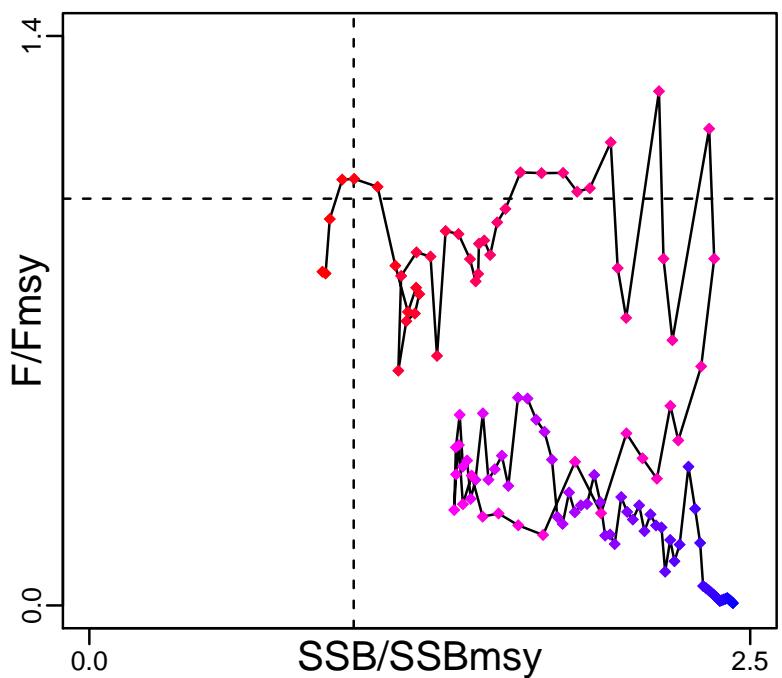
Time Series						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2015	168,000	-	4+	
<b>SSB</b>	SSB-MT	2015	52,000	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	13,100,000	-	0	
<b>F</b>	F-1/yr	2015	0.451	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.026	-	-	
<b>TC</b>	TC-MT	2015	4460			
<b>TL</b>	TL-MT	2011	6820			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2015	0.863			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.82			
<b>ER/ERmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

### Sablefish Pacific Coast [SABLEFPCOAST]

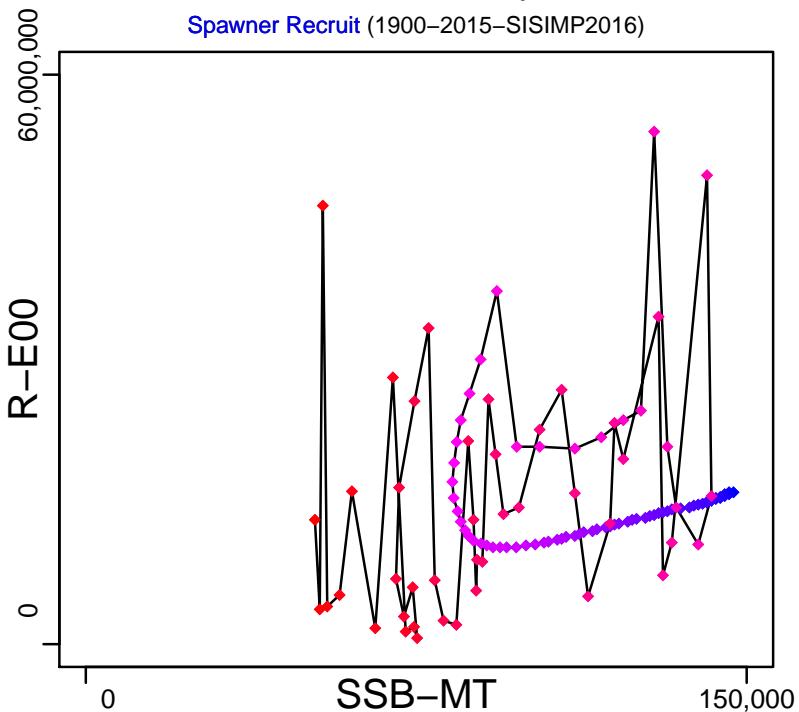
Kobe MSYpref (1900–2015–SISIMP2016)



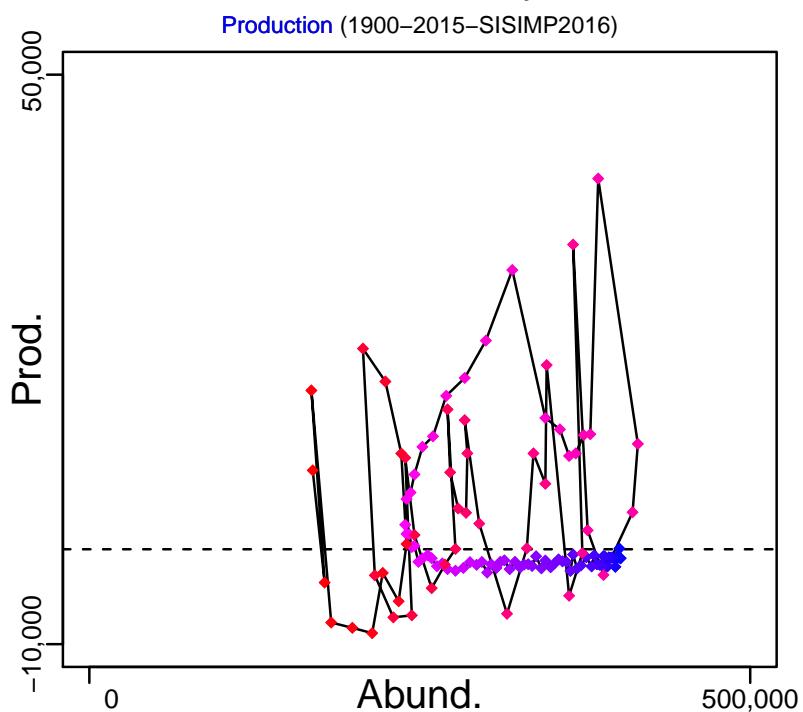
Kobe MGTpref (1900–2015–SISIMP2016)



Spawner Recruit (1900–2015–SISIMP2016)



Production (1900–2015–SISIMP2016)

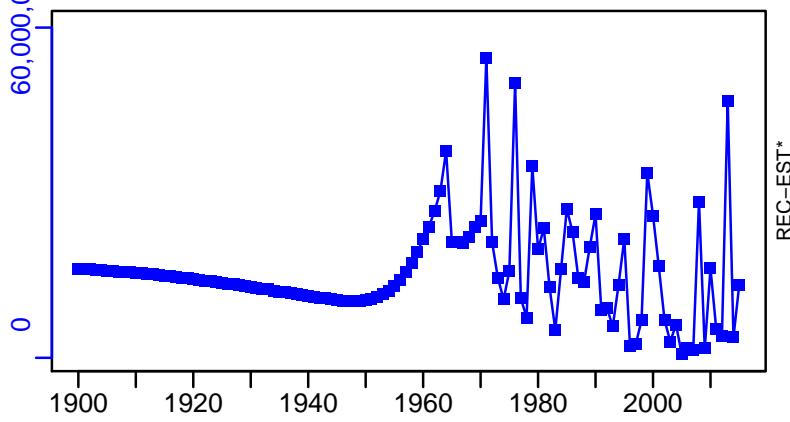
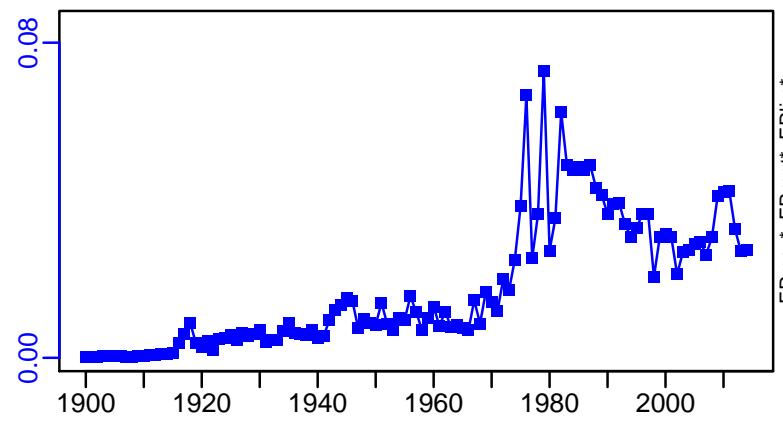
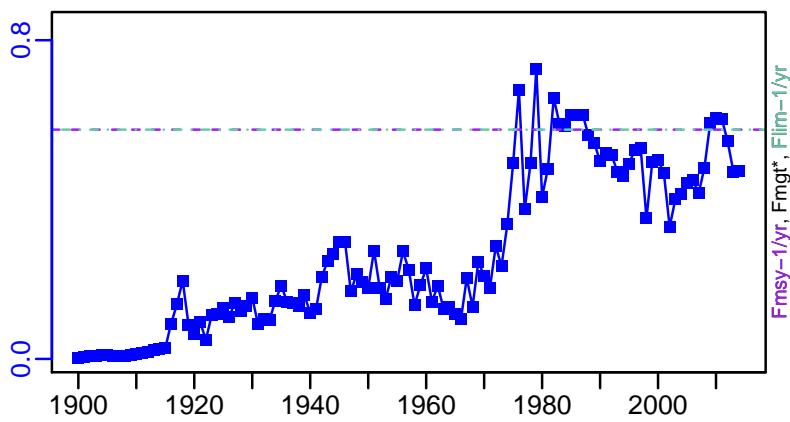
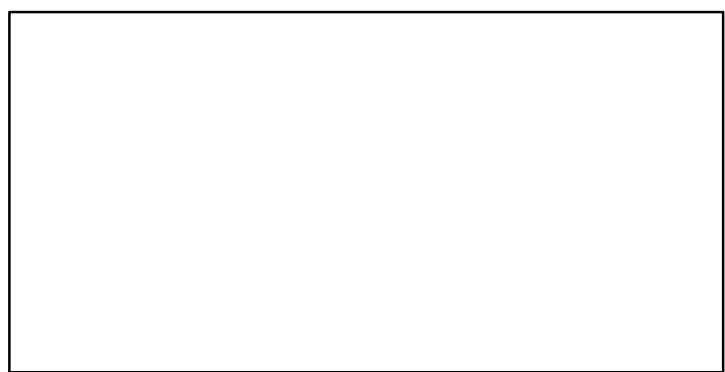
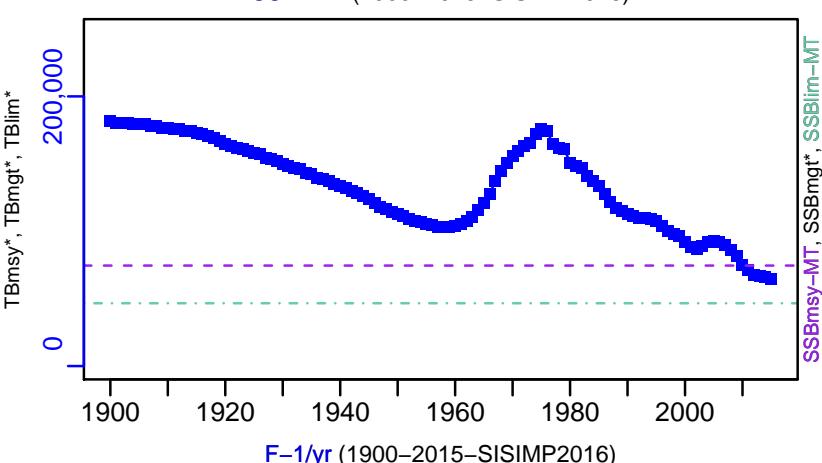
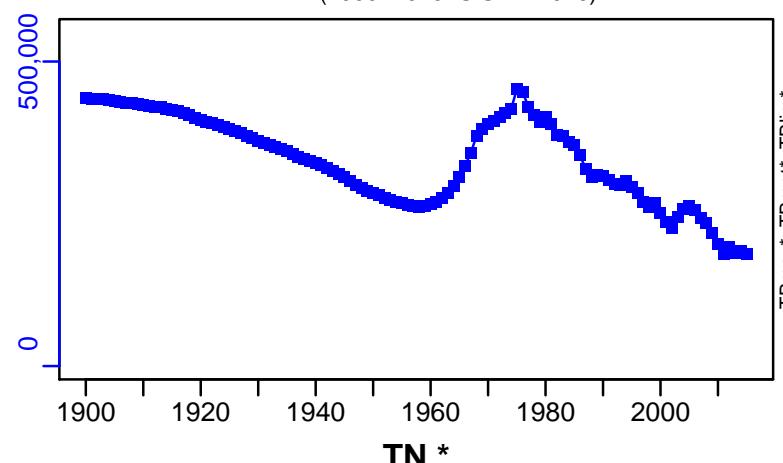


◆ Start Year ◆ End Year \* No Data

### Sablefish Pacific Coast [SABLEFPCOAST]

TB-MT (1900–2015–SISIMP2016)

SSB-MT (1900–2015–SISIMP2016)

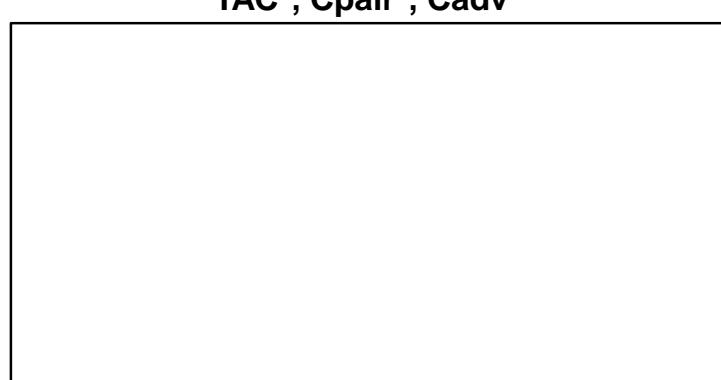
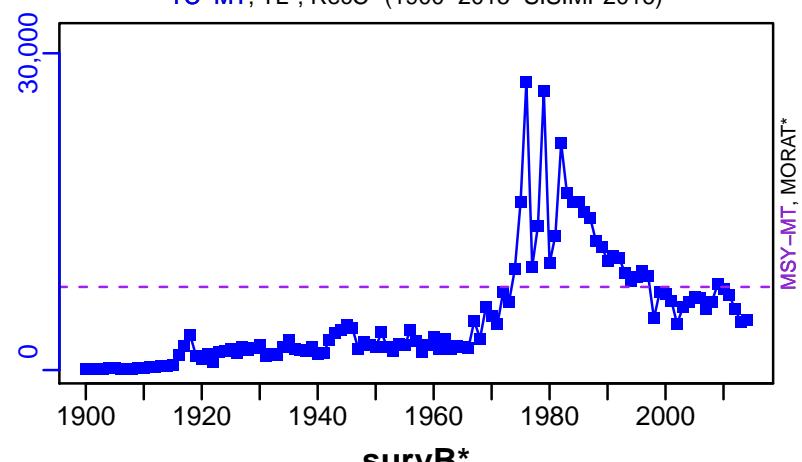


- |                      |               |           |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP  | — Rec-Est |
| - - - MSY-based BRP  | - - - Lim BRP | ■ No Data |

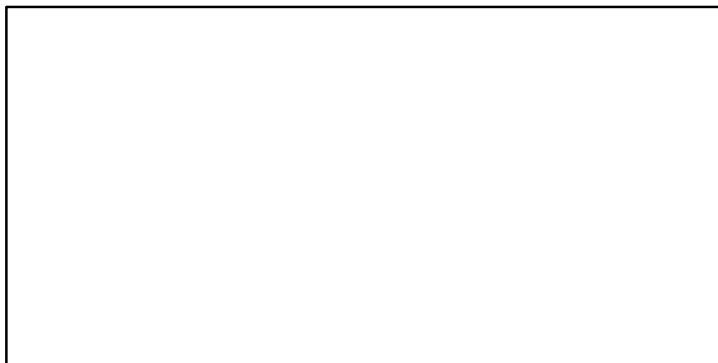
Sablefish Pacific Coast [SABLEFPCOAST]

TC-MT, TL\*, RecC\* (1900–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



EFFORT\*



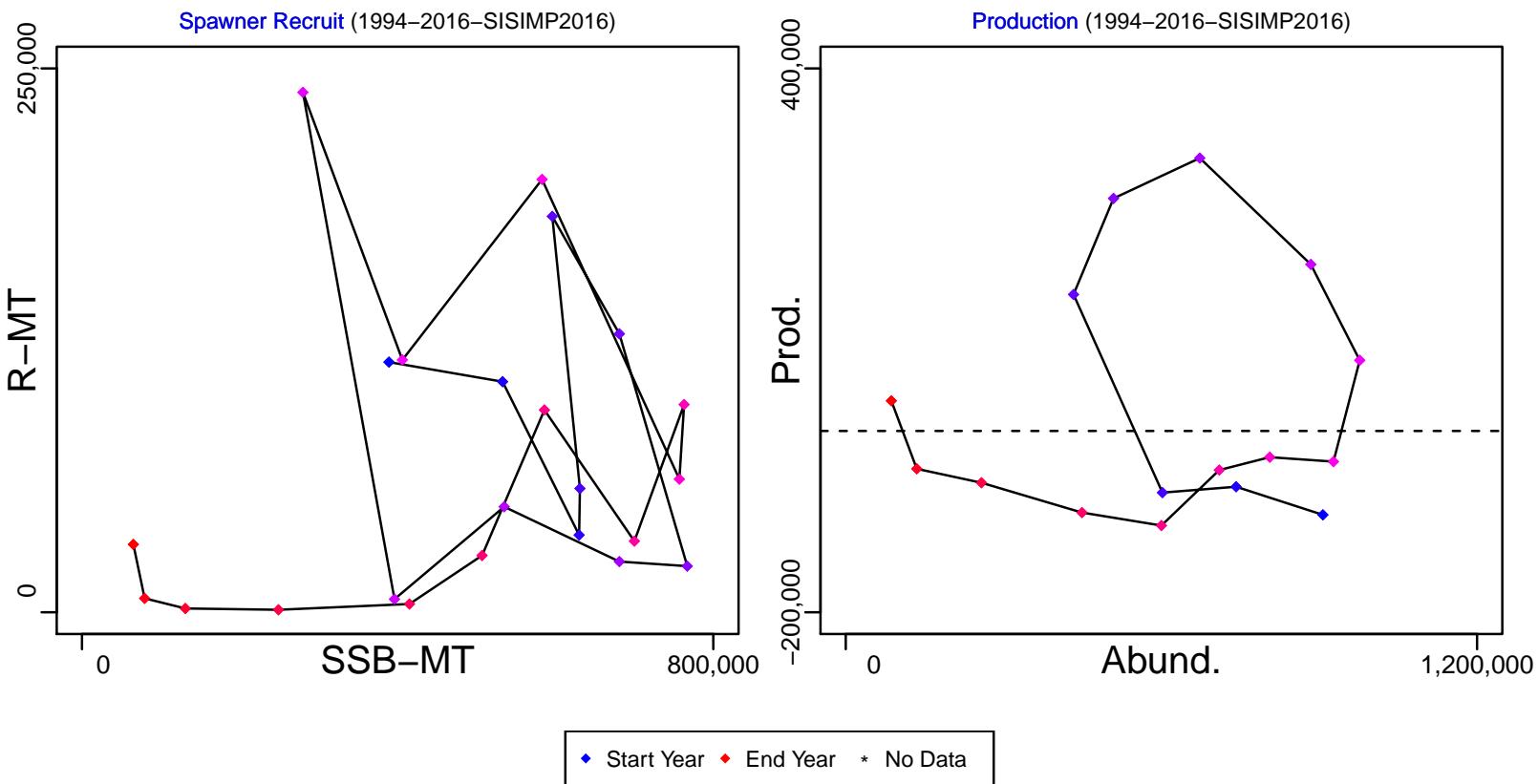
■ 1st listed time series	▲ 3rd listed time series	— MORAT
● 2nd listed time series	- - - MSY	* No Data

## Pacific sardine Pacific Coast [SARDPCOAST]

<b>Metadata</b>	
<b>Scientific Name</b>	Sardinops sagax
<b>Current Assess ID</b>	SWFSC-SARDPCOAST-1994-2016-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>	2007, 2016

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERrmsy</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	2007	0.4
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2016	50,000
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

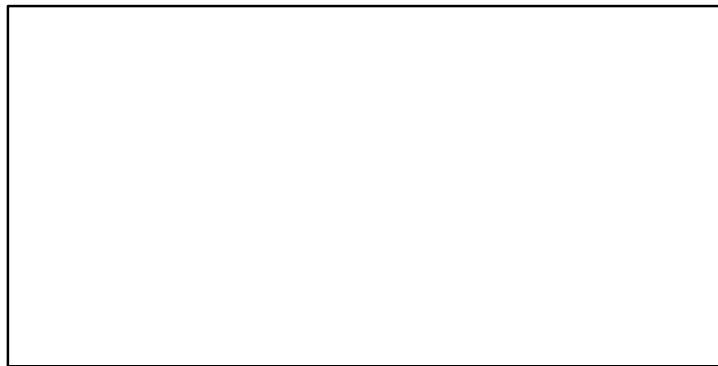
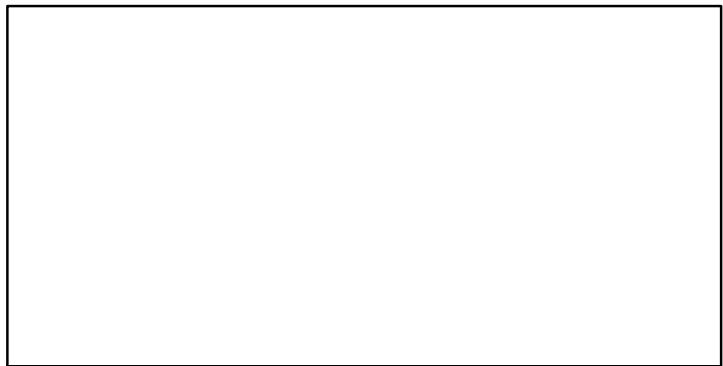
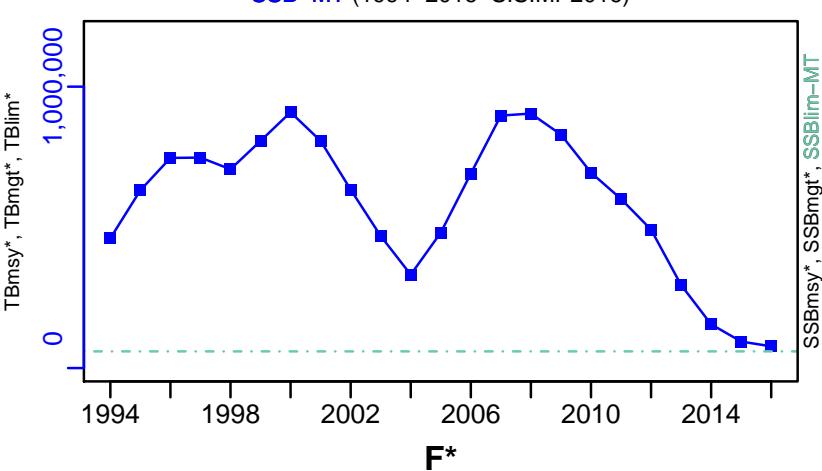
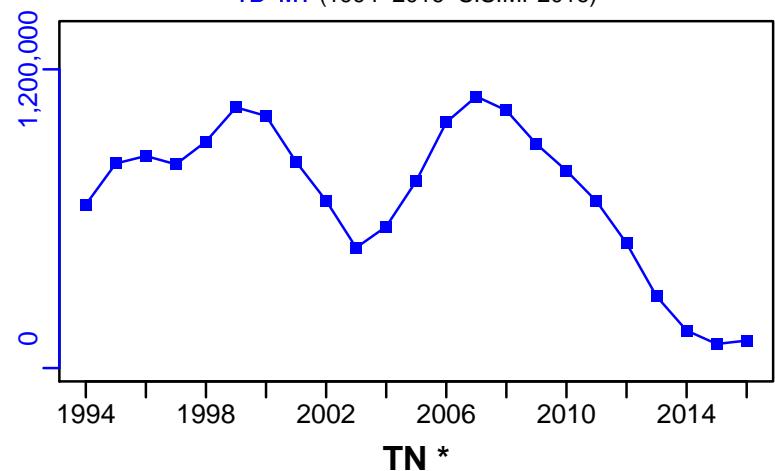
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2016	98,800	-	0+	
<b>SSB</b>	SSB-MT	2016	65,100	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-MT	2016	31,200	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-calc-ratio	2016	0.002	-	-	
<b>TC</b>	TC-MT	2016	153			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	-	-	-			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERrmsy</b>	-	-	-			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Kobe MSY\*****Kobe MGT\***

Pacific sardine Pacific Coast [SARDPCOAST]

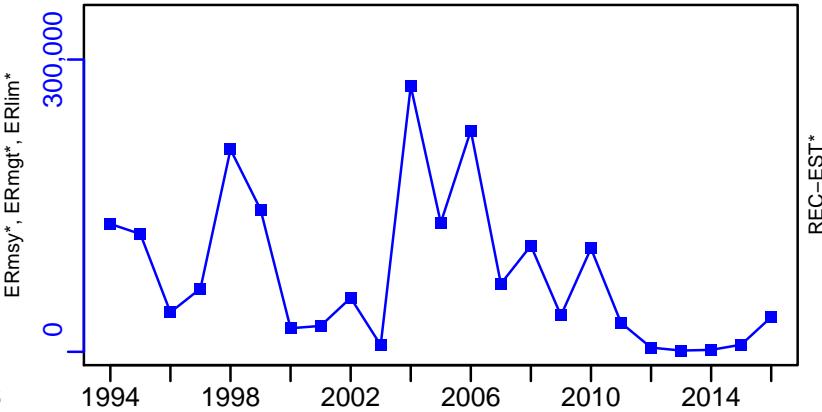
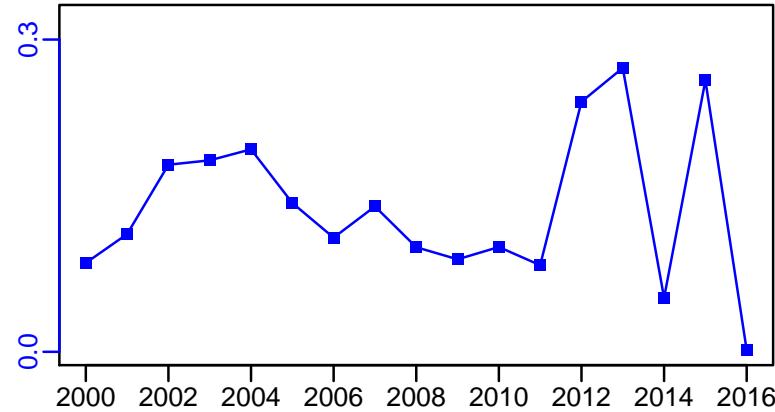
TB-MT (1994–2016–SISIMP2016)

SSB-MT (1994–2016–SISIMP2016)



ER-calc-ratio (1994–2016–SISIMP2016)

R-MT (1994–2016–SISIMP2016)

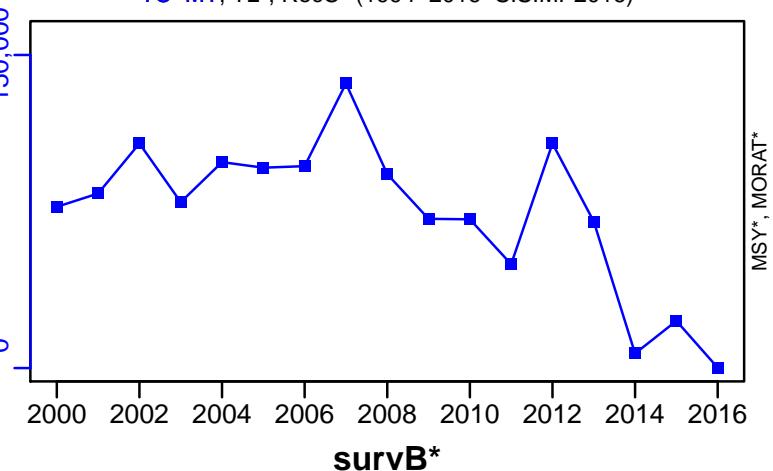


- Listed time series
- Target BRP
- - MSY-based BRP
- Lim BRP
- Rec-Est
- No Data

Pacific sardine Pacific Coast [SARDPCOAST]

TC-MT, TL\*, RecC\* (1994–2016–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



survB\*

MSY\*, MORAT\*

CPUE\*

EFFORT\*

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

## Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes 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

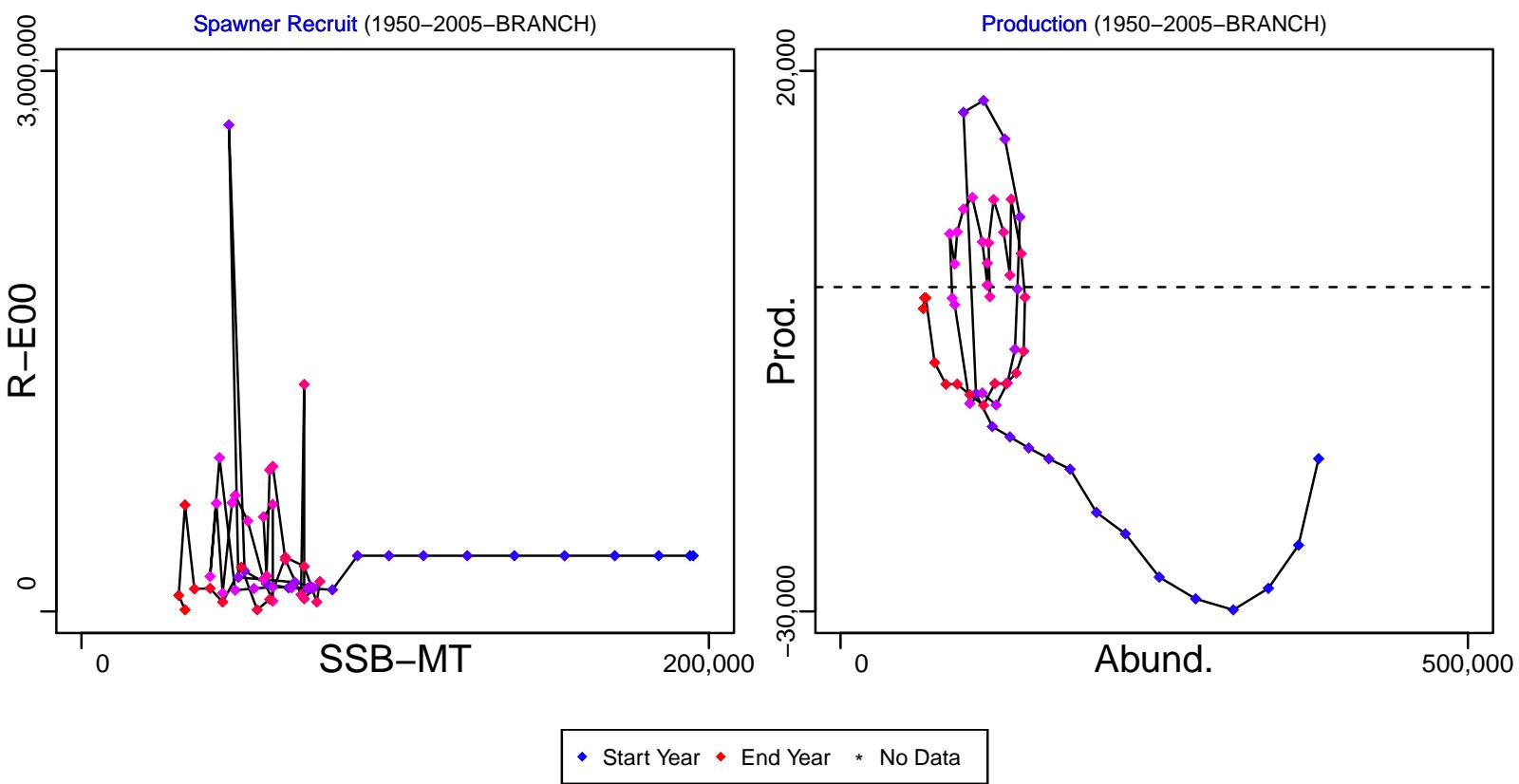
<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	-	-	-
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	-	-	-
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2005	98,400
<b>SSB0</b>	SSB0-MT	2005	49,500
<b>MSY</b>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

<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2005	64,000	-	1+
<b>SSB</b>	SSB-MT	2005	33,000	Females	2+
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2005	9000	-	0
<b>F</b>	F-1/yr	2005	0	Both	1+
<b>ER</b>	ER-ratio	2005	0	-	-
<b>TC</b>	TC-MT	2005	0		
<b>TL</b>	-	-	-		
<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>	-	-	-		

Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

**Kobe MSY\***

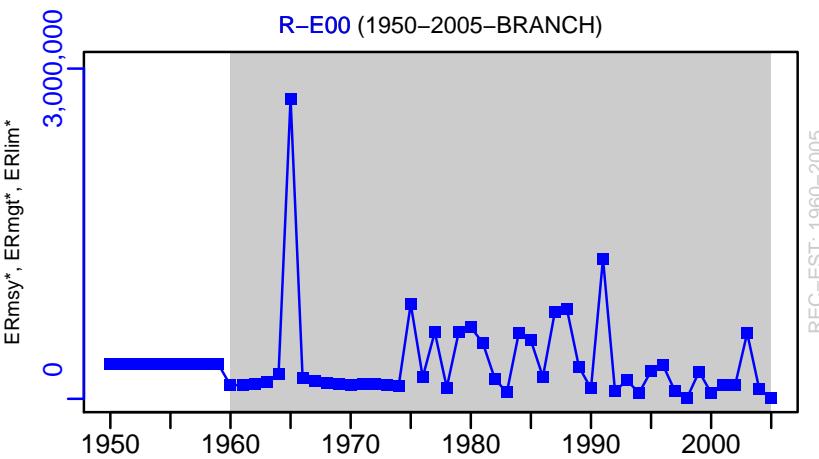
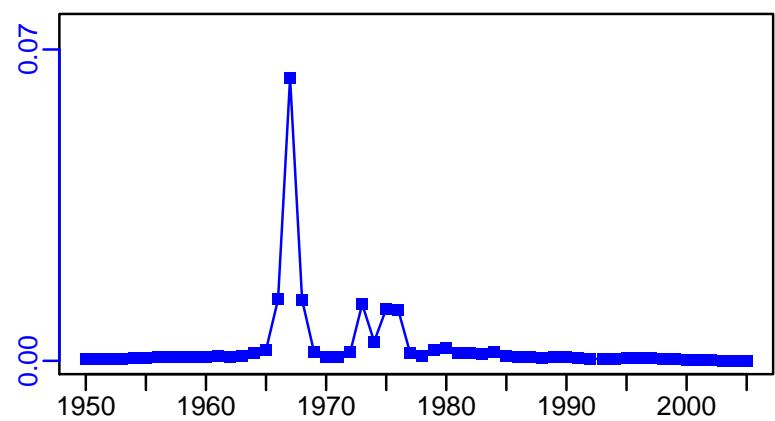
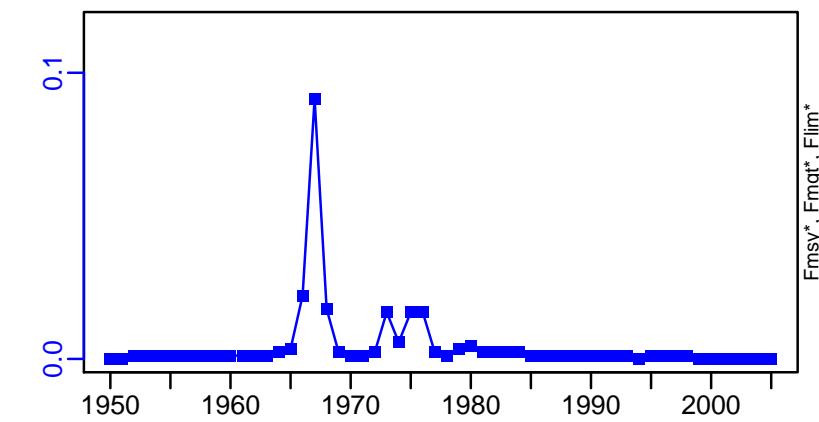
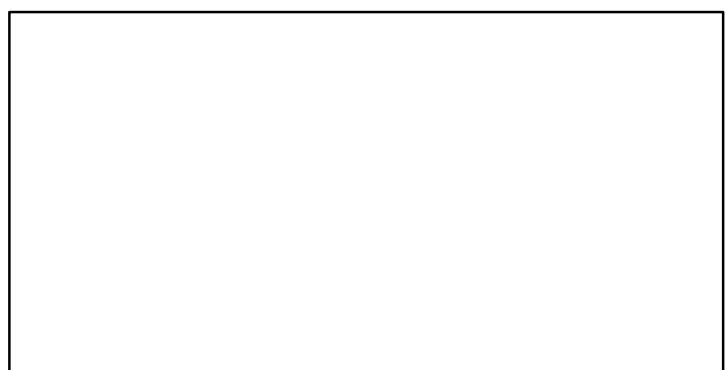
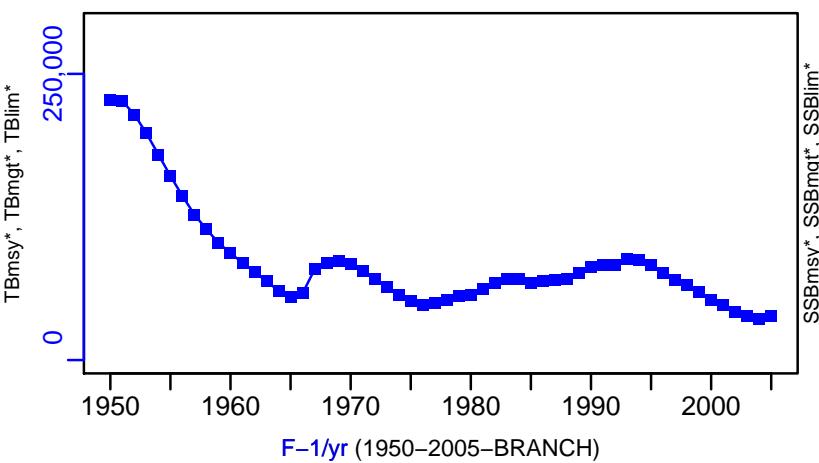
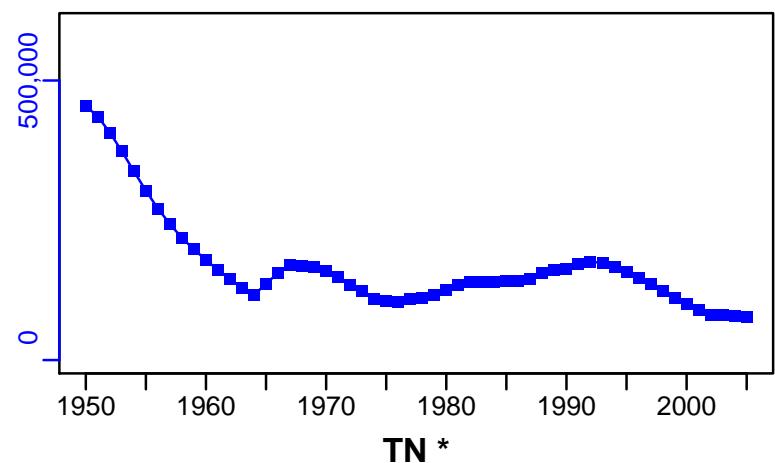
**Kobe MGT\***



**Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]**

TB-MT (1950–2005–BRANCH)

SSB-MT (1950–2005–BRANCH)



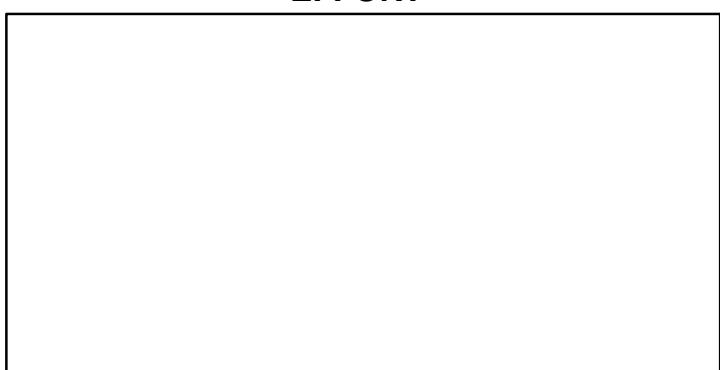
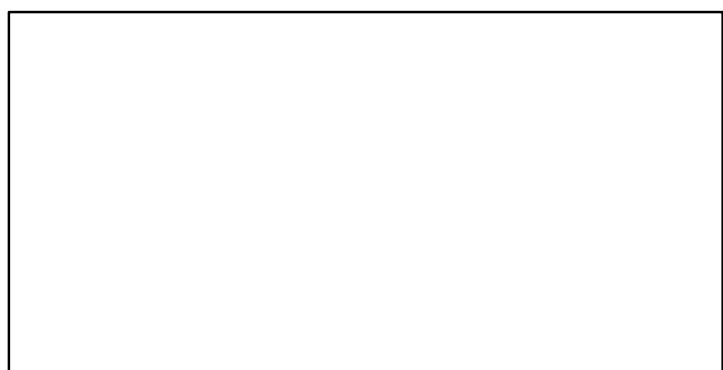
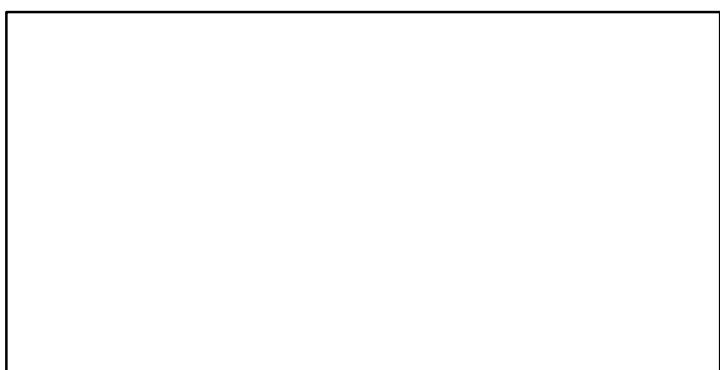
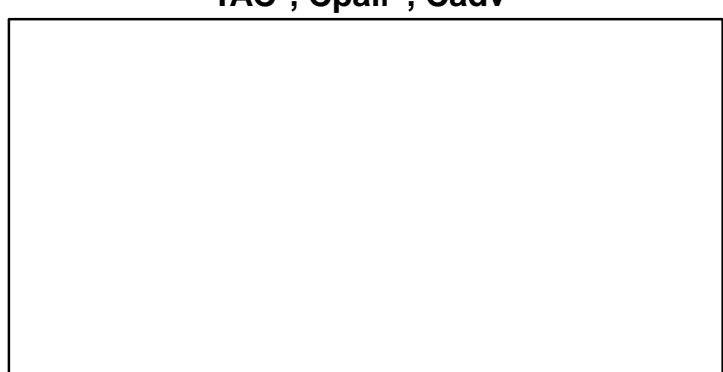
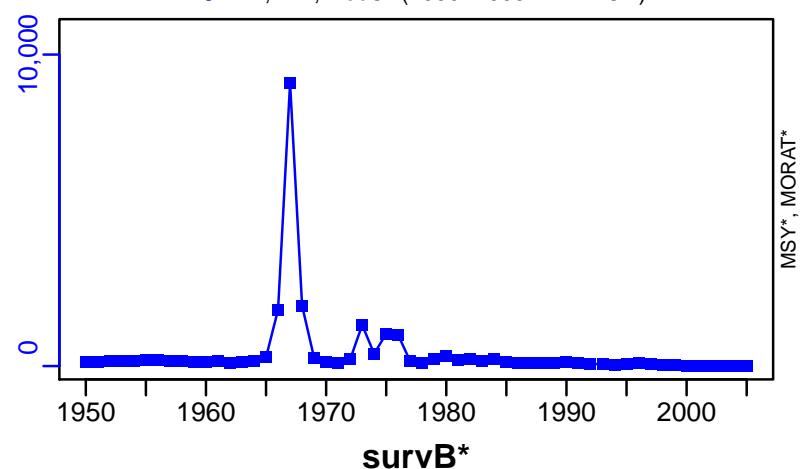
REC-EST: 1960–2005

- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP    | ·· Lim BRP   | ■ No Data |

**Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]**

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

TAC\*, Cpair\*, Cadv\*



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

## Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

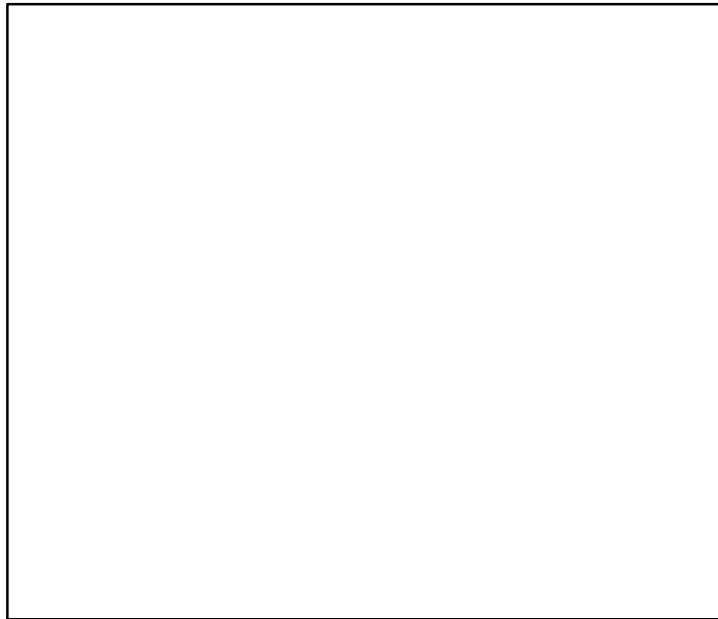
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes zacentrus
<b>Current Assess ID</b>	NWFSC-SHCROCKPCOAST-1892-2012-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<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>	-	-	-

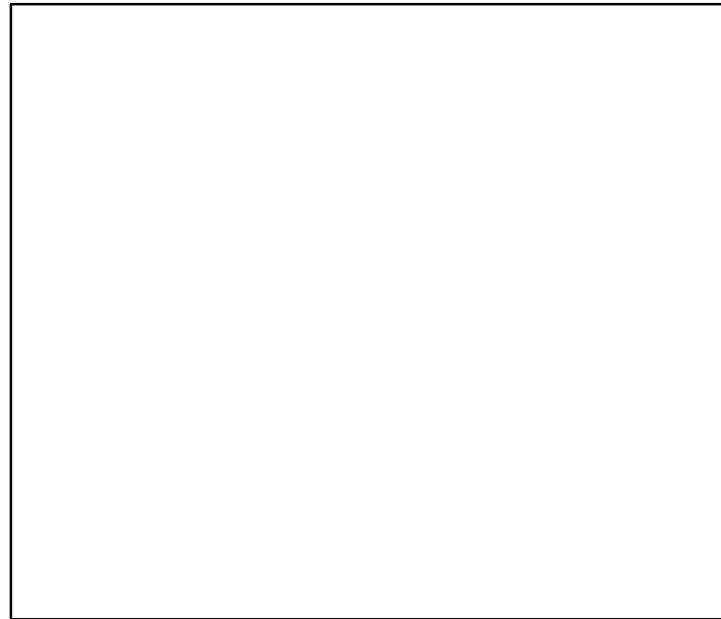
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2012	12,800	-	-	
<b>SSB</b>	-	-	-	-	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	-	-	-	-	-	
<b>F</b>	F-1/yr	2012	0.03	-	-	
<b>ER</b>	-	-	-	-	-	
<b>TC</b>	-	-	-			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</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 [SHCROCKCOAST]

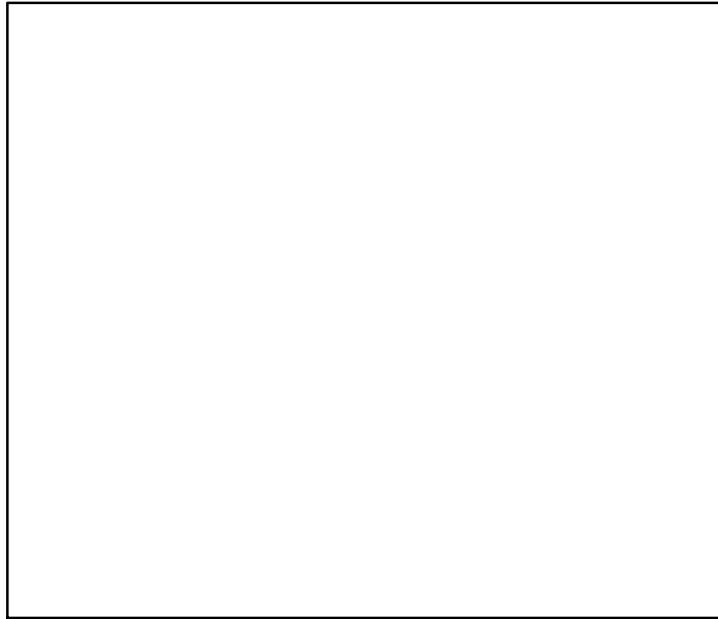
**Kobe MSY\***



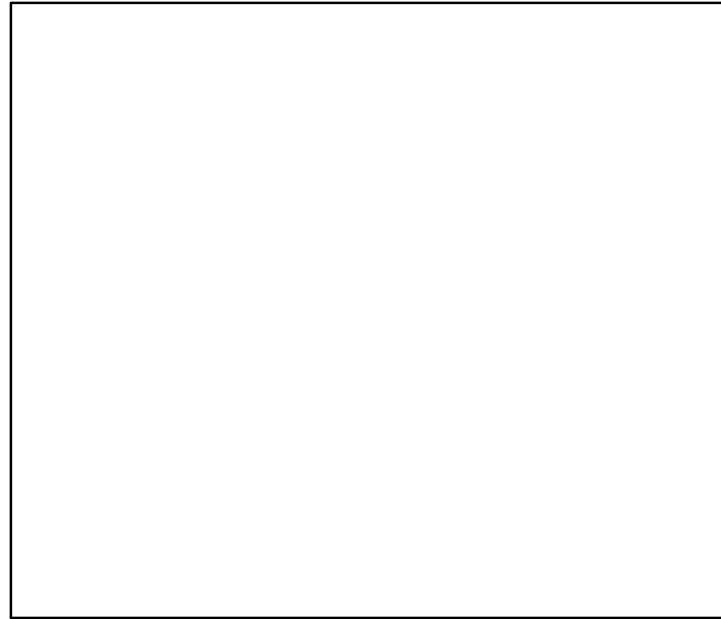
**Kobe MGT\***



**Spawner Recruit\***



**Production\***

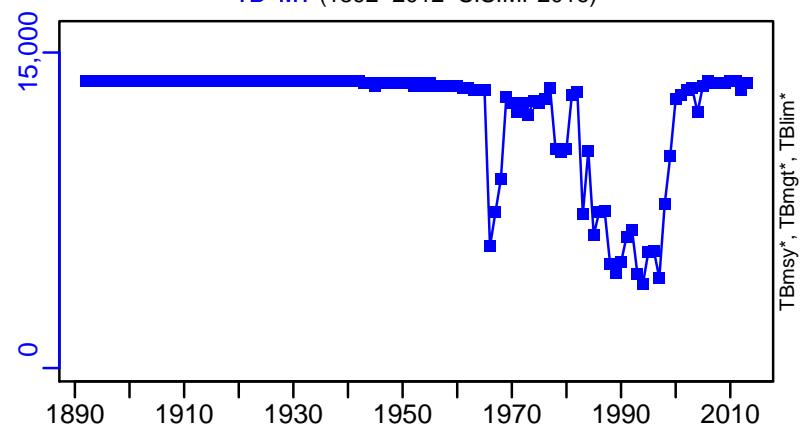


◆ Start Year ♦ End Year \* No Data

Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

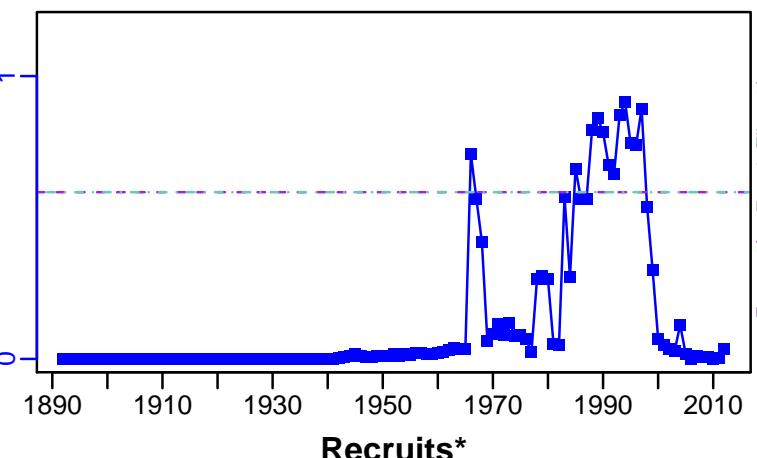
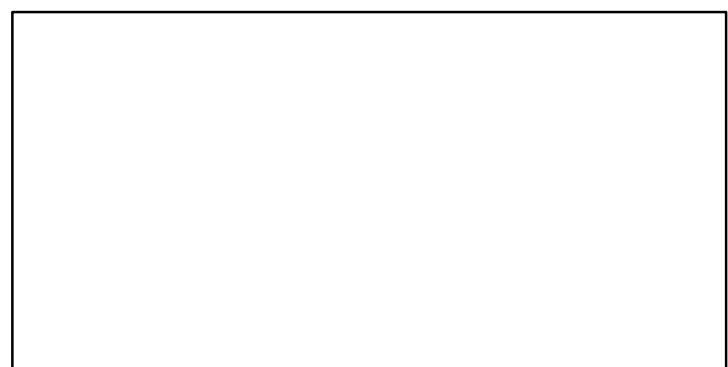
TB-MT (1892–2012–SISIMP2016)

SSB\*



F-1/yr (1892–2012–SISIMP2016)

Fmsy-1/yr, Fmg\*, Flim-1/yr



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

Sharpchin rockfish Pacific Coast [SHCROCKCOAST]

TC\*, TL\*, RecC\*

TAC\*, Cpair\*, Cadv\*



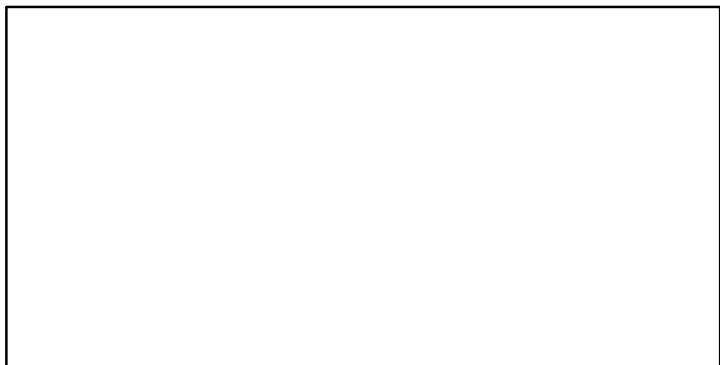
survB\*



CPUE\*



EFFORT\*



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

## Splitnose Rockfish Pacific Coast [SNROCKPCOAST]

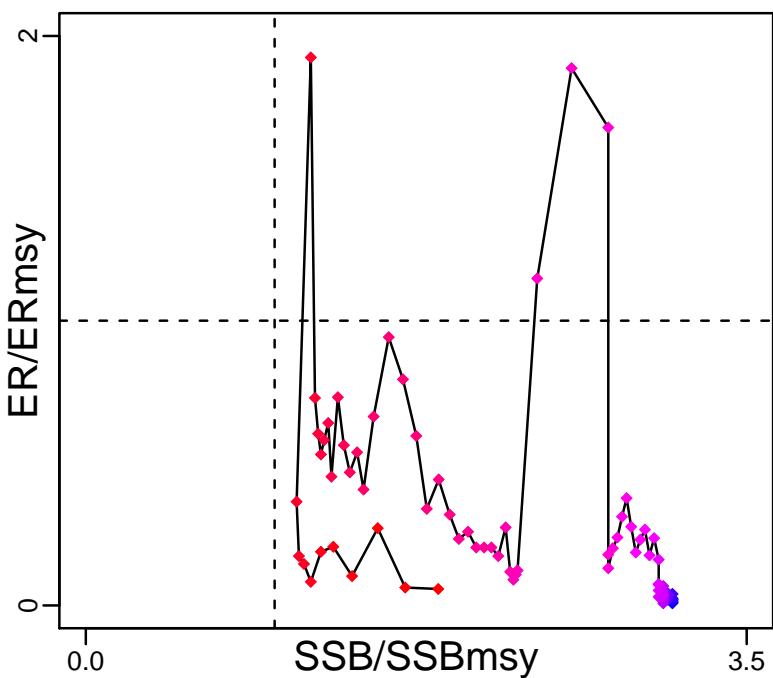
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes diploproa
<b>Current Assess ID</b>	NWFSC-SNROCKPCOAST-1905-2009-STANTON
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM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

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<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>	-	-	-

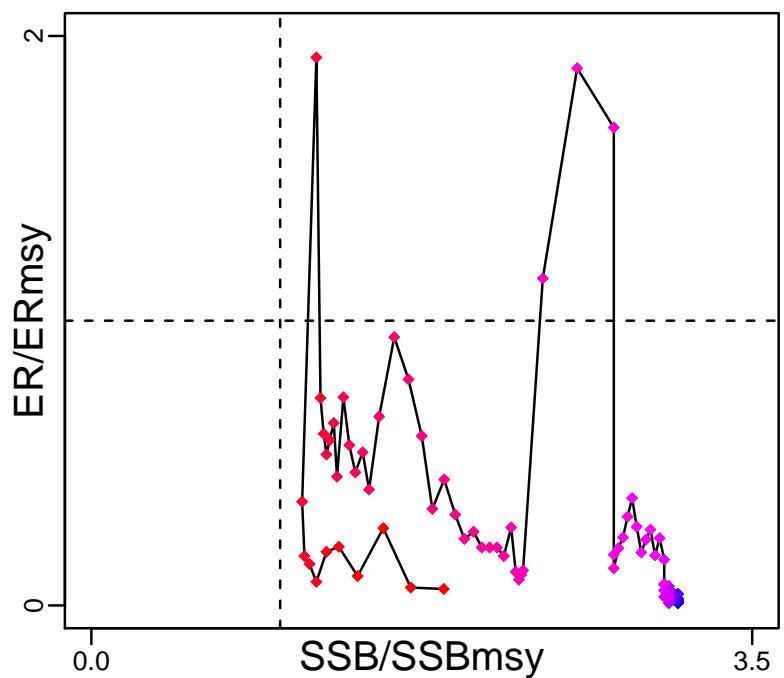
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2009	70,200	-	4+	
<b>SSB</b>	SSB-E00eggs	2009	$8.43 \times 10^9$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2009	12,700,000	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2009	0.002	-	-	
<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]**

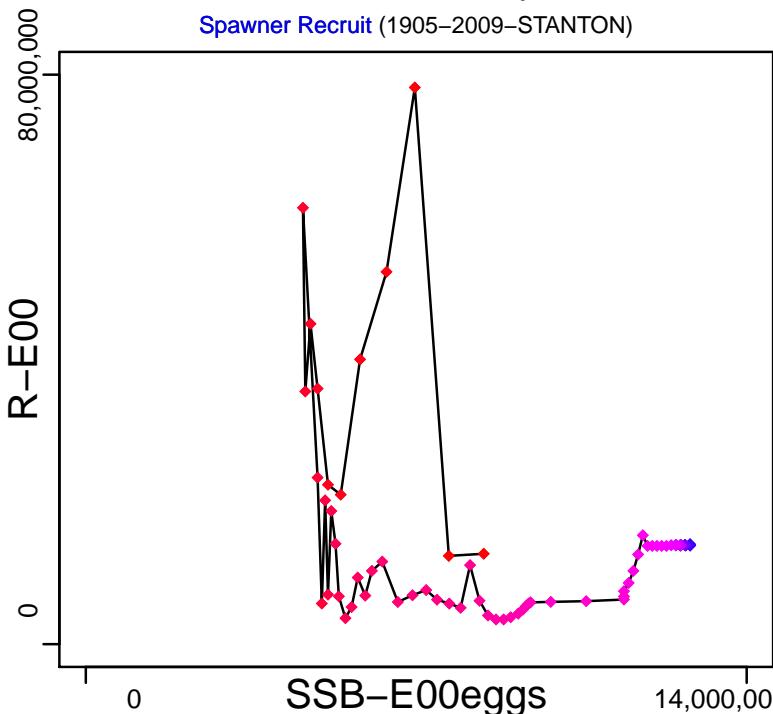
Kobe MSYpref (1905–2009–STANTON)



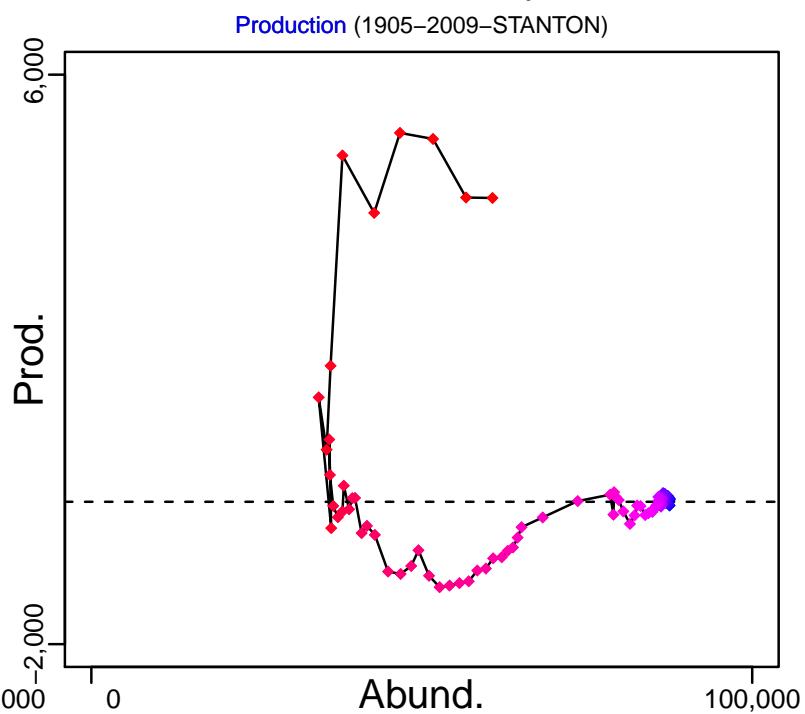
Kobe MGTpref (1905–2009–STANTON)



Spawner Recruit (1905–2009–STANTON)



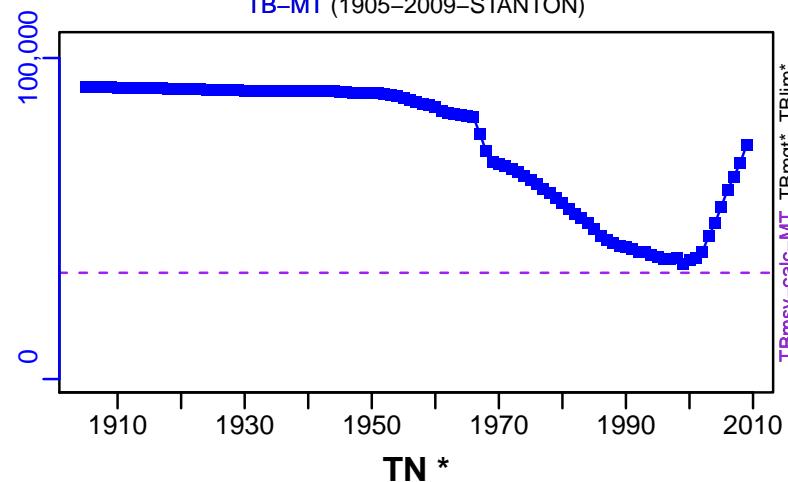
Production (1905–2009–STANTON)



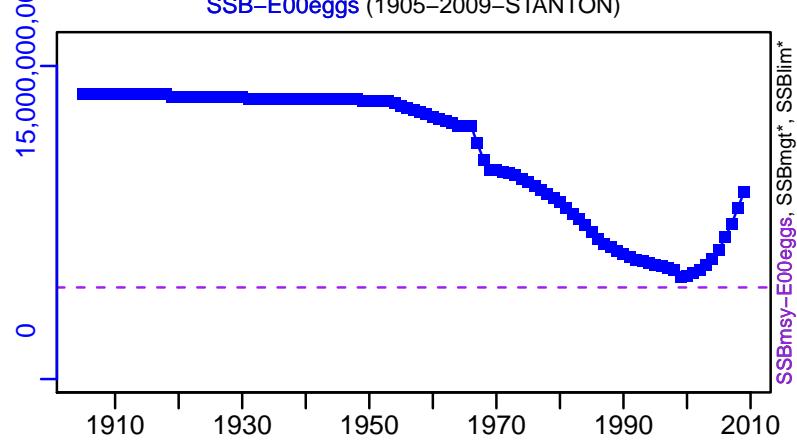
◆ Start Year ♦ End Year \* No Data

**Splitnose Rockfish Pacific Coast [SNROCKPCOAST]**

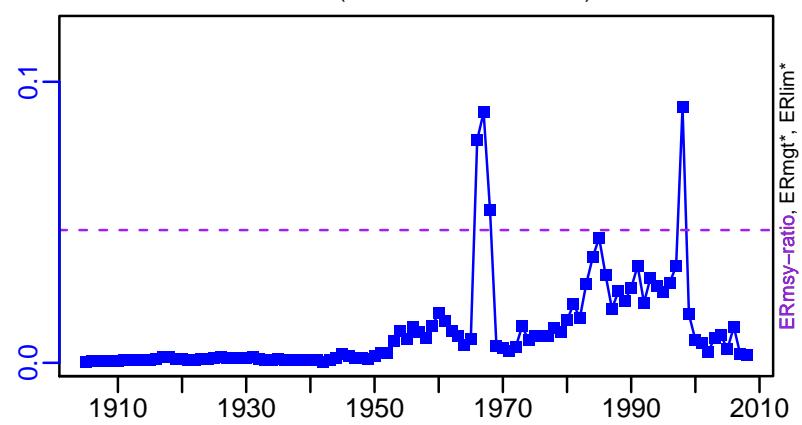
**TB-MT (1905–2009–STANTON)**



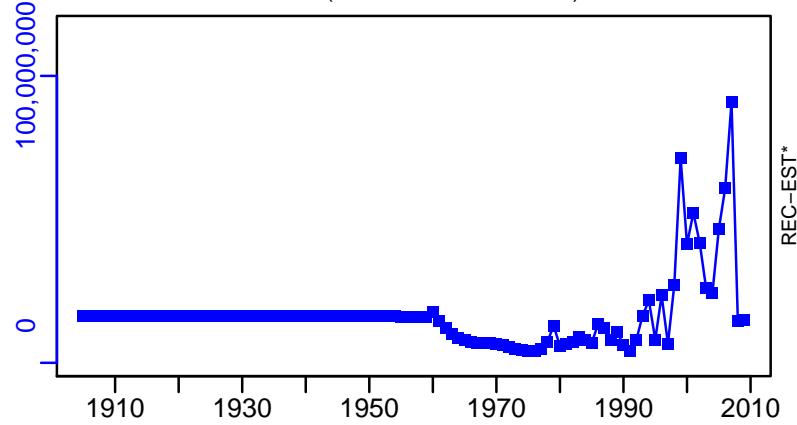
**SSB-E00eggs (1905–2009–STANTON)**



**ER-ratio (1905–2009–STANTON)**



**R-E00 (1905–2009–STANTON)**

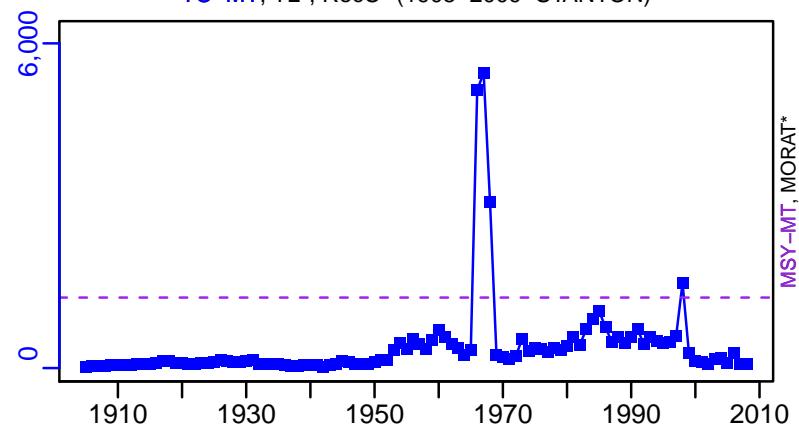


- |                      |              |           |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP  | - - Lim BRP  | ■ No Data |

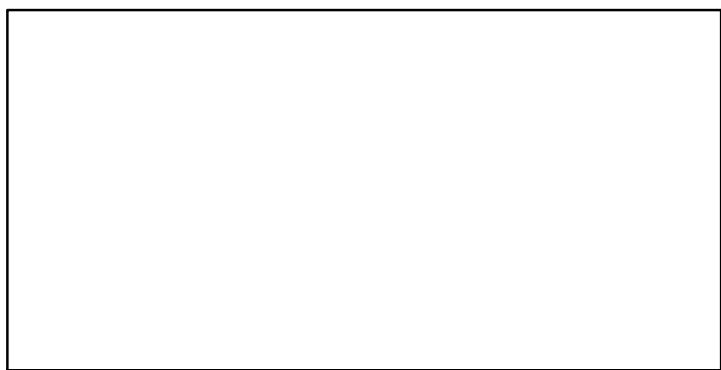
**Splitnose Rockfish Pacific Coast [SNROCKPCOAST]**

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

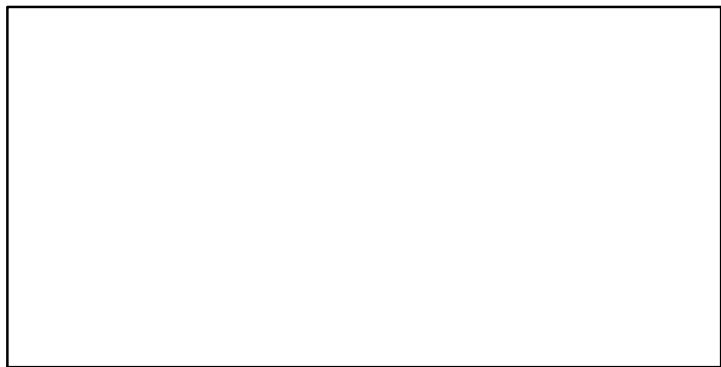
TAC\*, Cpair\*, Cadv\*



TAC\*, Cpair\*, Cadv\*



**EFFORT\***



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

## Spotted spiny dogfish Pacific Coast [SPSDOGPCOAST]

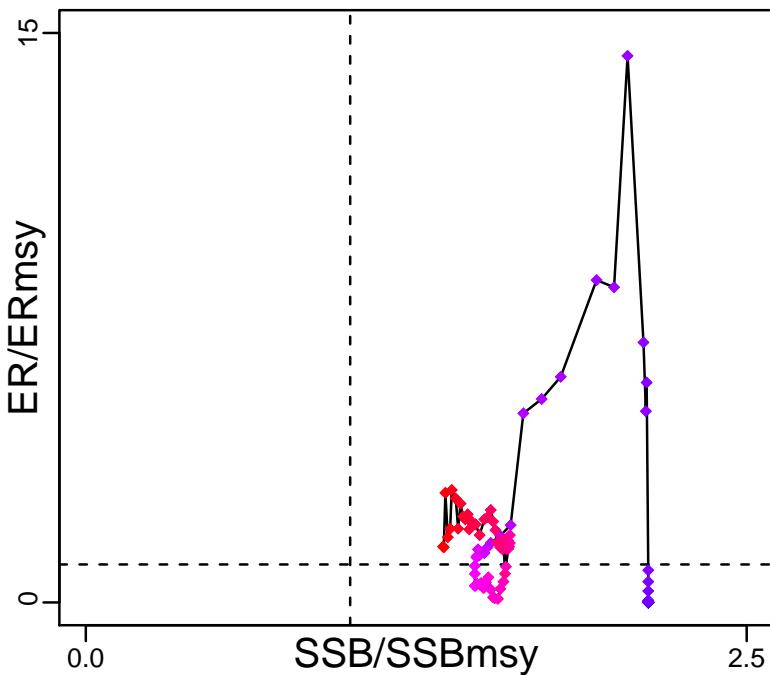
<b>Metadata</b>	
<b>Scientific Name</b>	Squalus suckleyi
<b>Current Assess ID</b>	NWFSC-SPSDOGPCOAST-1916-2011-STACHURA
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2011

<b>Reference Points</b>			
Type	ID	Asmt Year	Value
<b>TBmsy</b>	TBmsy-calc-MT	2011	160,000
<b>SSBmsy</b>	SSFmsy-E00	2011	33,229,000
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-ratio	2011	0.005
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2011	304,105
<b>SSB0</b>	-	-	-
<b>MSY</b>	MSY-MT	2011	848
<b>M</b>	M-1/yr	2011	0.064
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

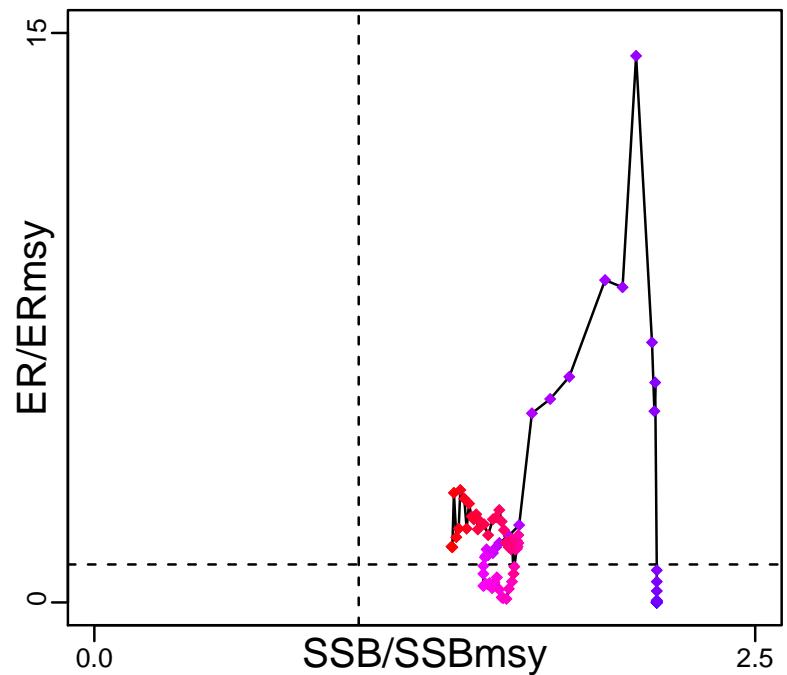
<b>Time Series</b>						
Type	ID	Asmt Year	Curr Value	Sex	Age	
<b>TB</b>	TB-MT	2011	217,000	-	1+	
<b>SSB</b>	SSF-E00	2011	44,600,000	Females	35.5+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2011	17,500,000	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2011	0.008	-	-	
<b>TC</b>	TC-MT	2011	1160			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	1.356			
<b>SSB/SSBmsy</b>	SSF-E00/SSFmsy-E00	2011	1.342			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-ratio	2011	1.472			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Spotted spiny dogfish Pacific Coast [SPSDOGPCOAST]**

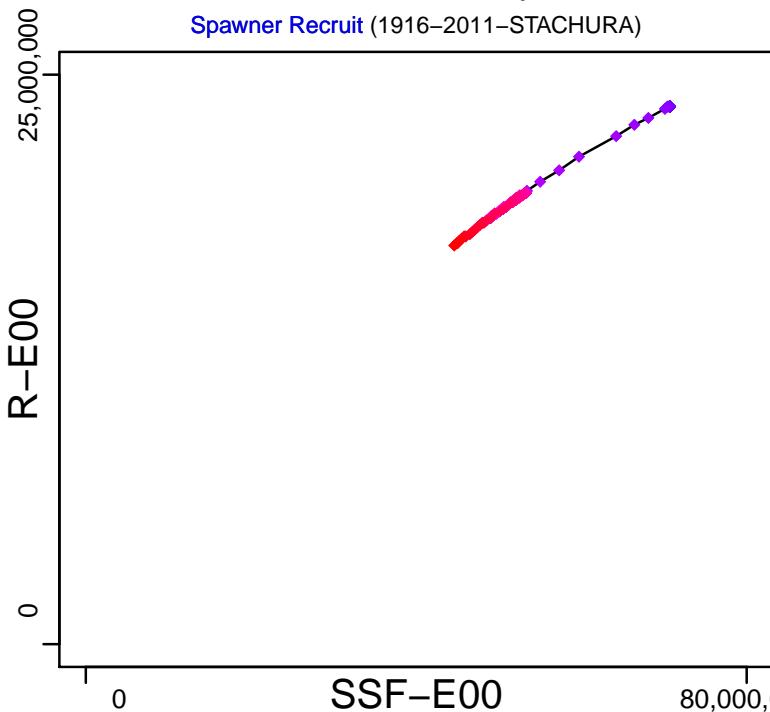
Kobe MSYpref (1916–2011–STACHURA)



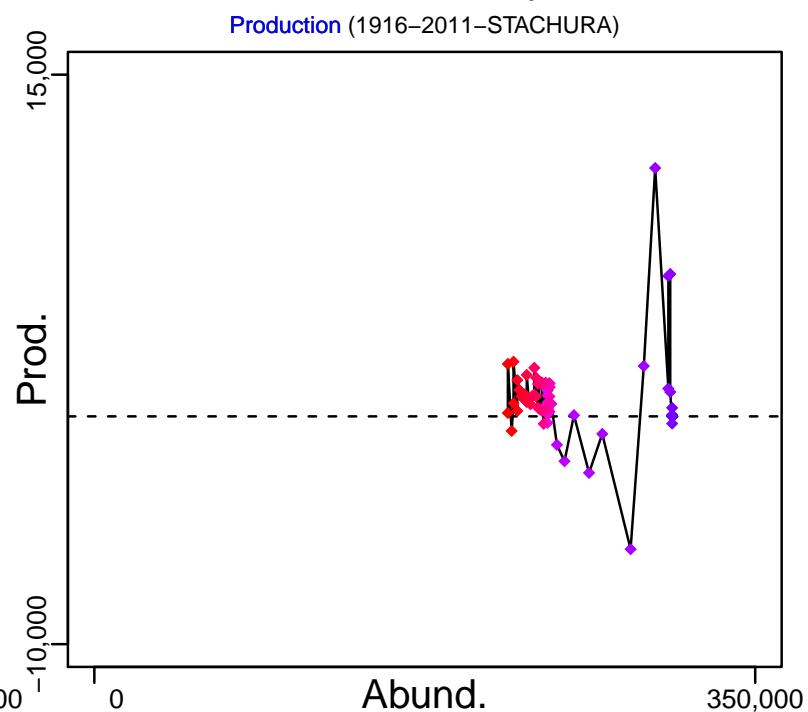
Kobe MGTpref (1916–2011–STACHURA)



Spawner Recruit (1916–2011–STACHURA)



Production (1916–2011–STACHURA)

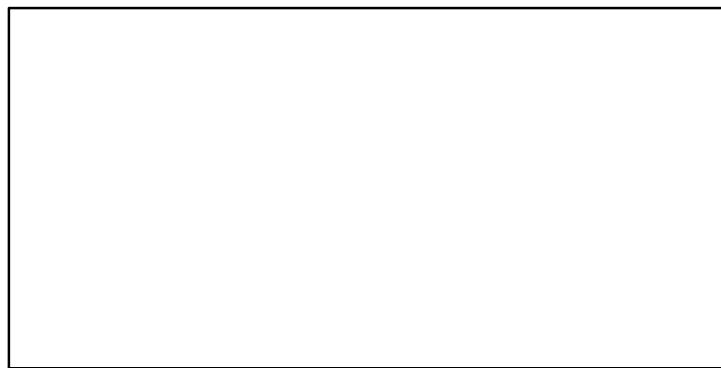
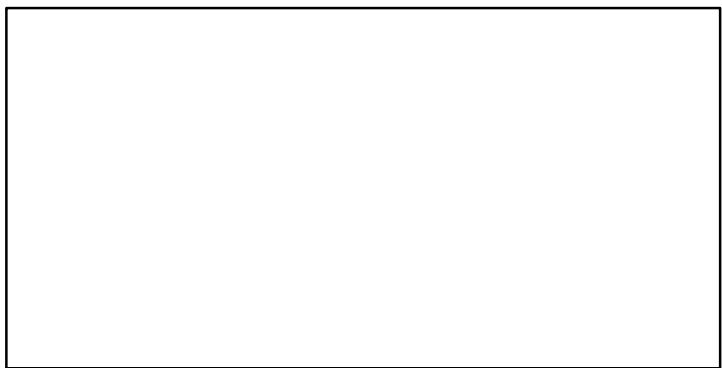
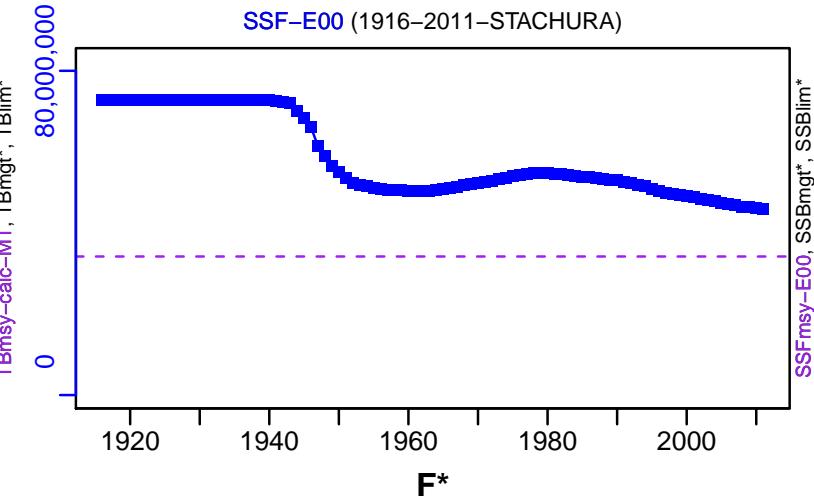
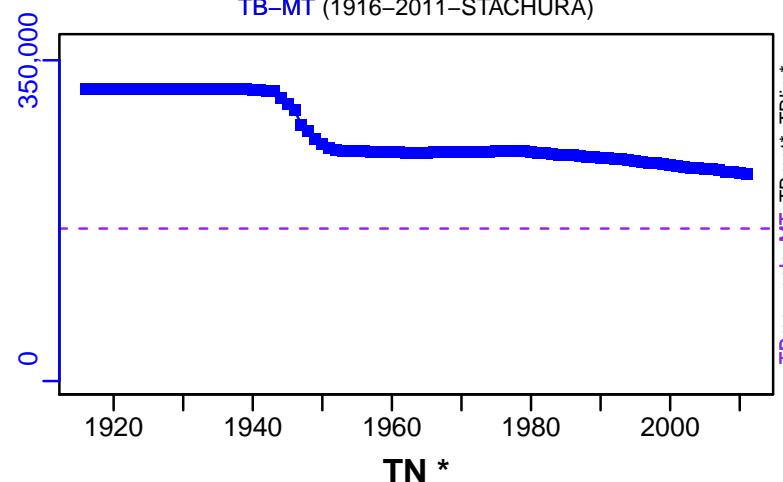


◆ Start Year   ◆ End Year   \* No Data

**Spotted spiny dogfish Pacific Coast [SPSDOGPCOAST]**

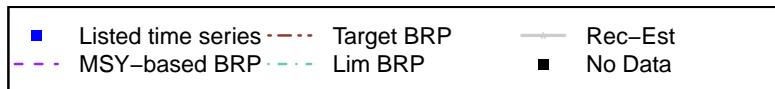
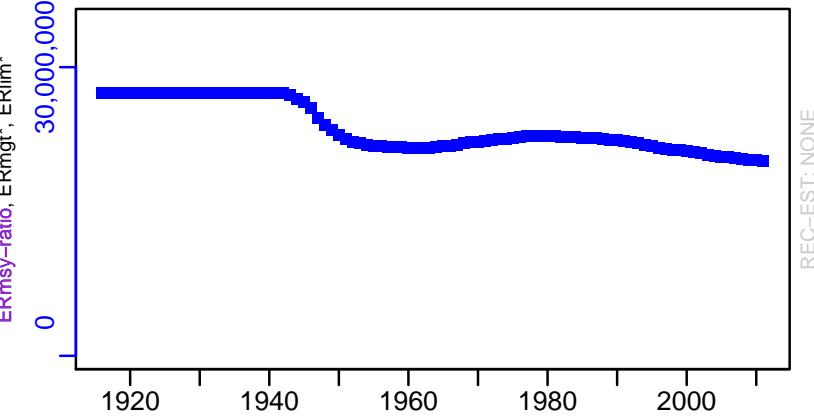
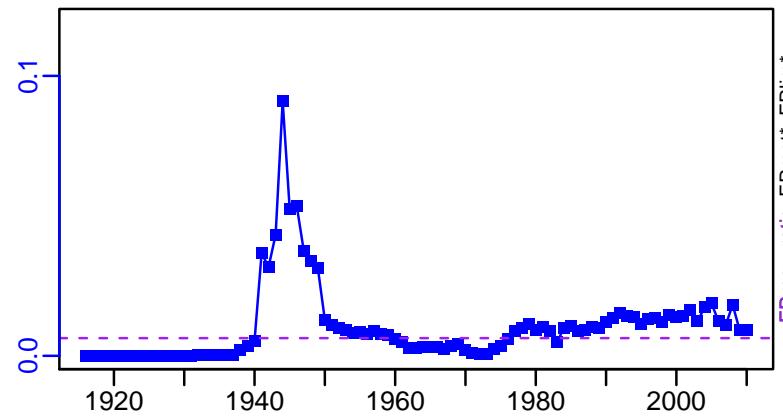
TB-MT (1916–2011–STACHURA)

SSF-E00 (1916–2011–STACHURA)



ER-ratio (1916–2011–STACHURA)

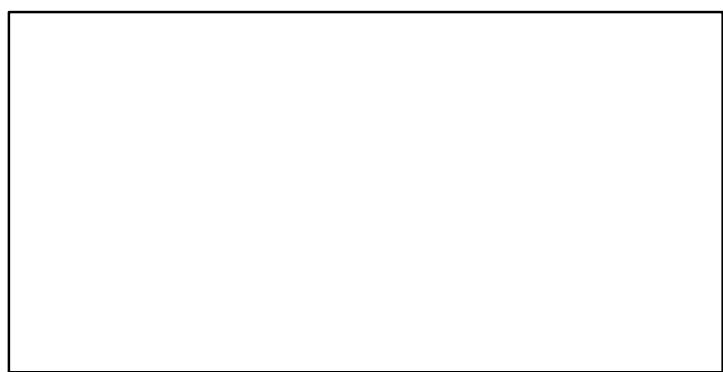
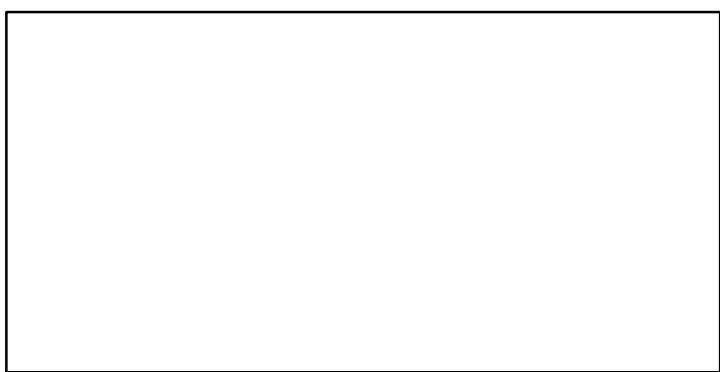
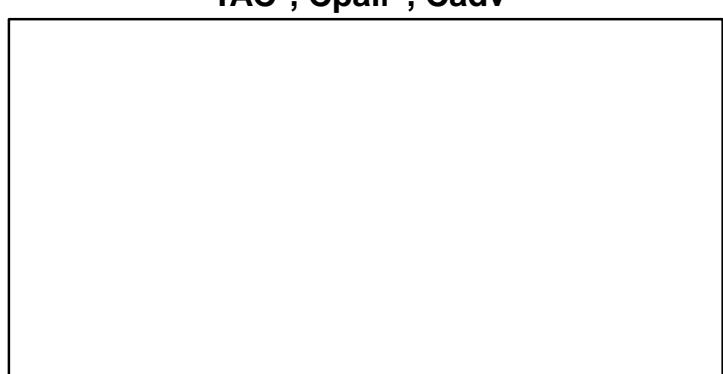
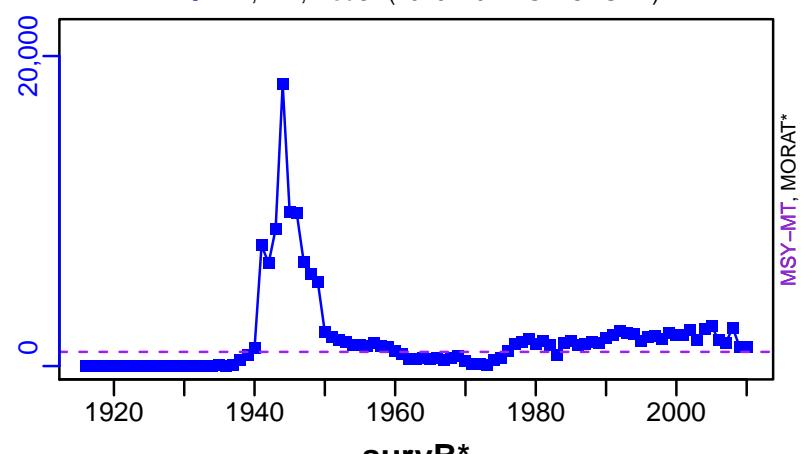
R-E00 (1916–2011–STACHURA)



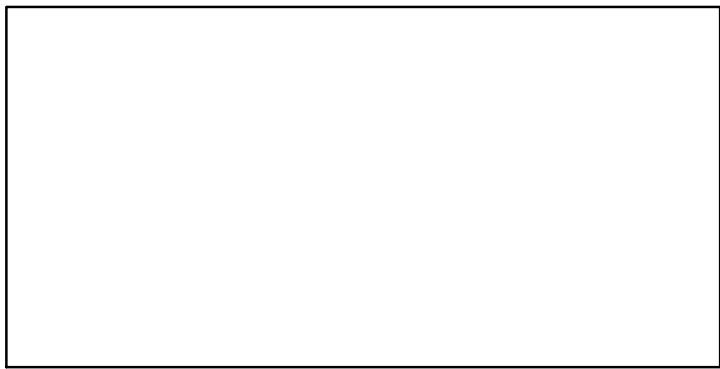
**Spotted spiny dogfish Pacific Coast [SPSDOGPCOAST]**

TC-MT, TL\*, RecC\* (1916–2011-STACHURA)

TAC\*, Cpair\*, Cadv\*



**EFFORT\***



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

## Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]

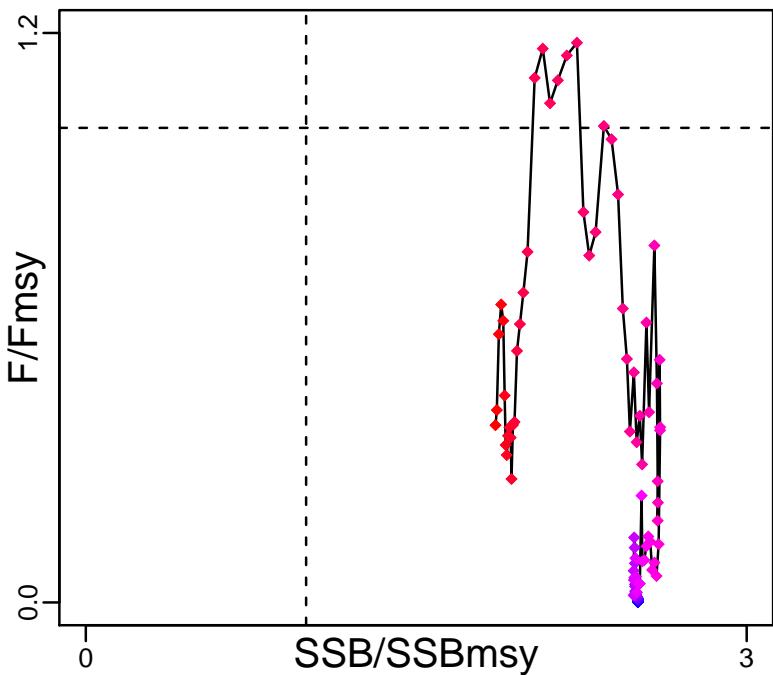
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastolobus alascanus
<b>Current Assess ID</b>	NWFSC-SSTHORNHPCOAST-1901-2013-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2005, 2013

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-MT	2005	86,000
<b>SSBmsy</b>	SSBmsy-MT	2013	75,906
<b>Fmsy</b>	Fmsy-1/yr	2013	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	2013	2034
<b>M</b>	M-1/yr	2005	0.05
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2013	47,441
<b>Flim</b>	Flim-1/yr	2013	0.5
<b>ERlim</b>	-	-	-

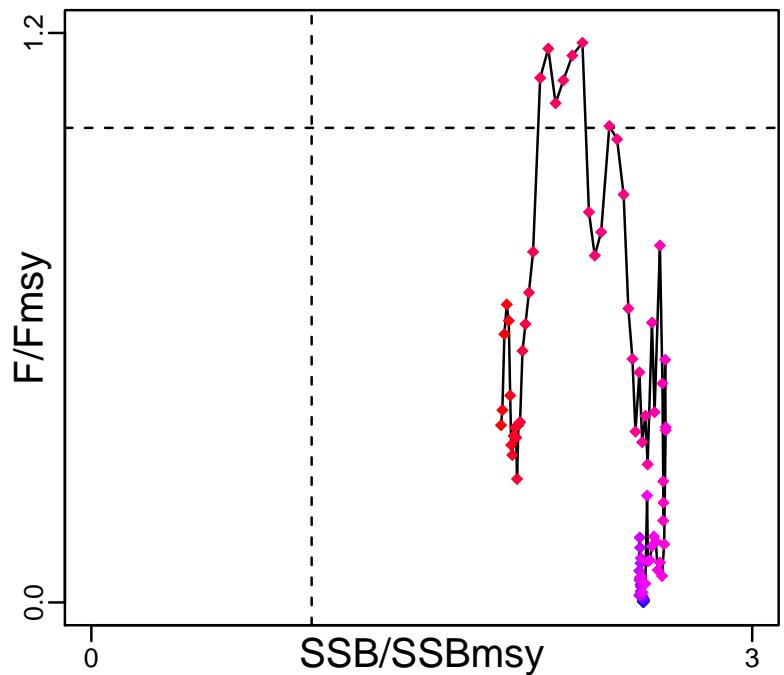
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2013	244,000	-	1+	
<b>SSB</b>	SSB-MT	2013	141,000	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2013	28,800,000	-	0	
<b>F</b>	F-1/yr	2013	0.187	-	-	
<b>ER</b>	ER-calc-ratio	2013	0.004	-	-	
<b>TC</b>	TC-MT	2013	911			
<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	2013	1.854			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2013	0.374			
<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]**

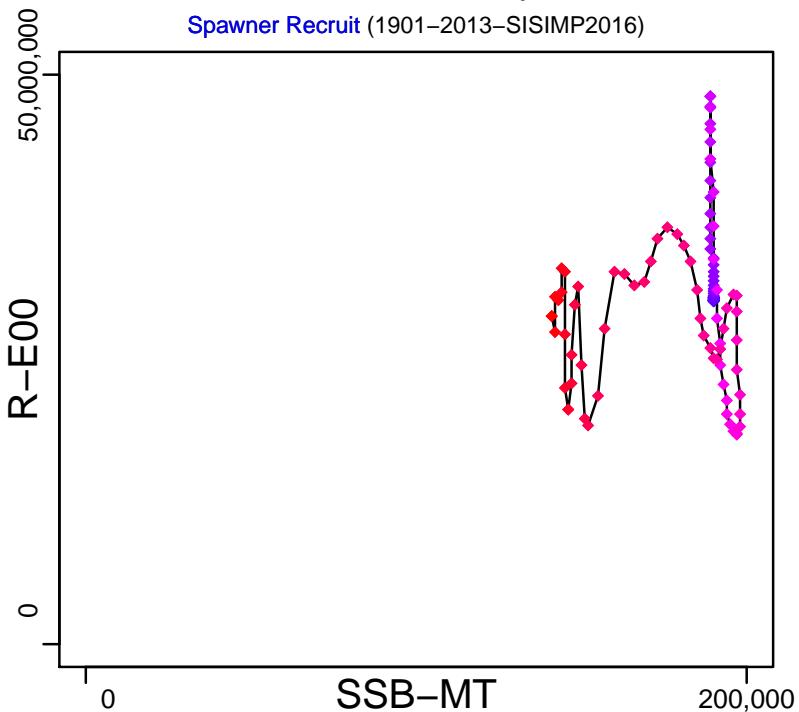
Kobe MSYpref (1901–2013–SISIMP2016)



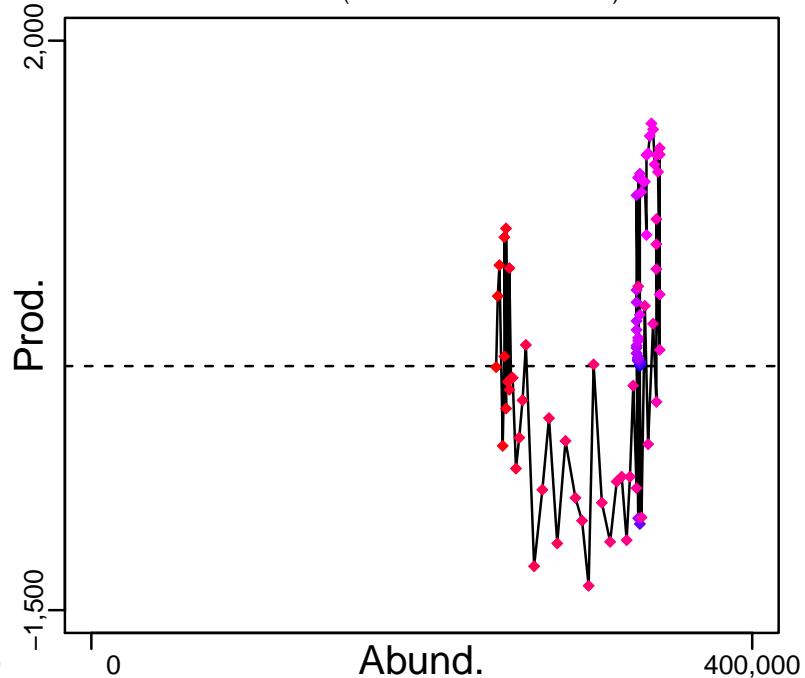
Kobe MGTpref (1901–2013–SISIMP2016)



Spawner Recruit (1901–2013–SISIMP2016)



Production (1901–2013–SISIMP2016)

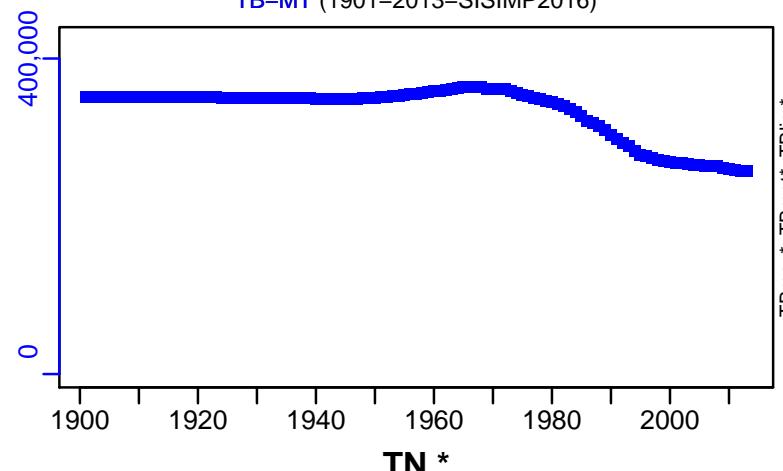


◆ Start Year	◆ End Year	*	No Data
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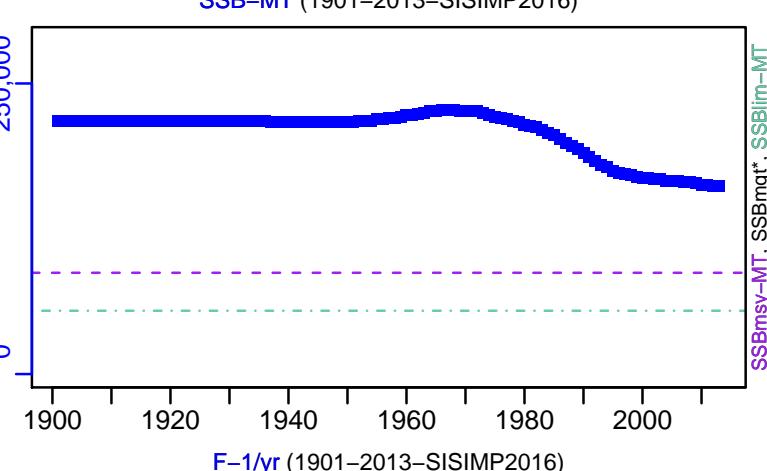
**Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]**

TB-MT (1901–2013–SISIMP2016)

SSB-MT (1901–2013–SISIMP2016)

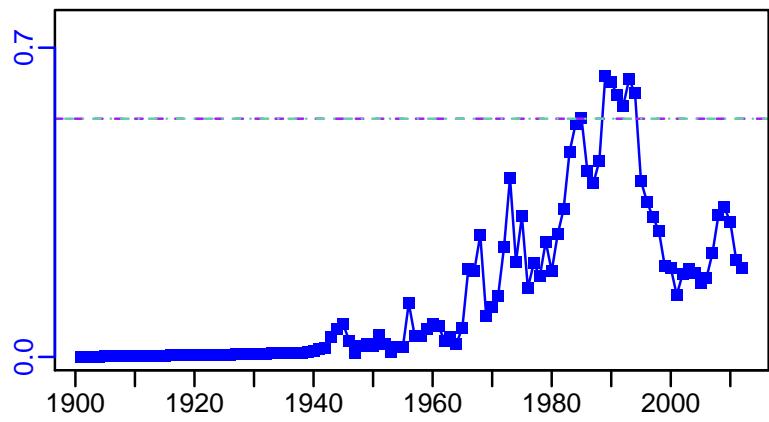


TB<sub>m</sub>s<sub>y</sub>\* , TB<sub>m</sub>g<sub>t</sub>\* , TB<sub>l</sub>im\*



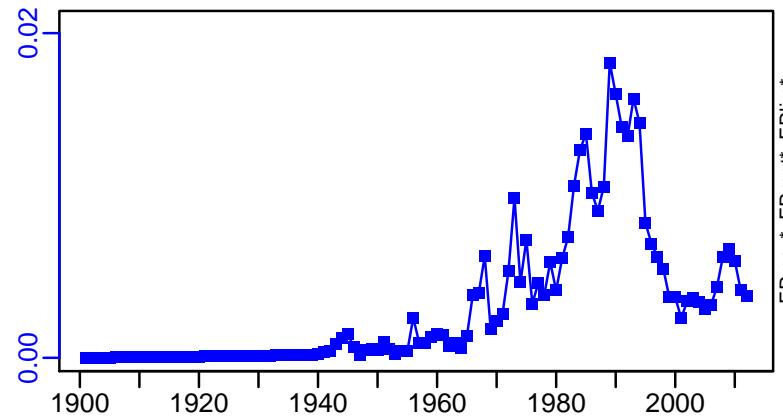
F-1/yr (1901–2013–SISIMP2016)

F<sub>m</sub>s<sub>y</sub>-1/yr , F<sub>m</sub>g<sub>t</sub>\* , F<sub>l</sub>im-1/yr

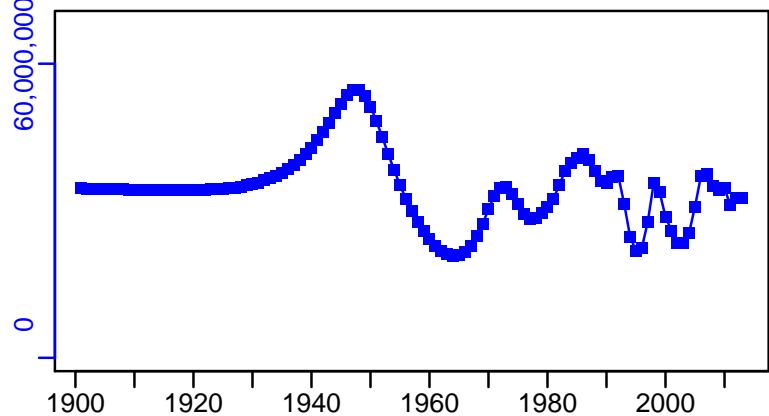


ER-calc-ratio (1901–2013–SISIMP2016)

R-E00 (1901–2013–SISIMP2016)



ER<sub>m</sub>s<sub>y</sub>\* , ER<sub>m</sub>g<sub>t</sub>\* , ER<sub>l</sub>im\*



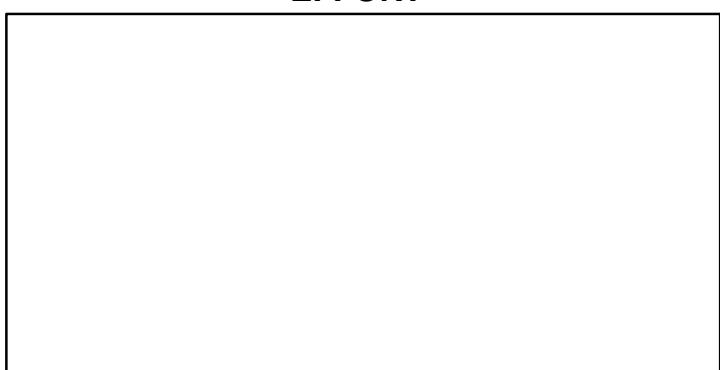
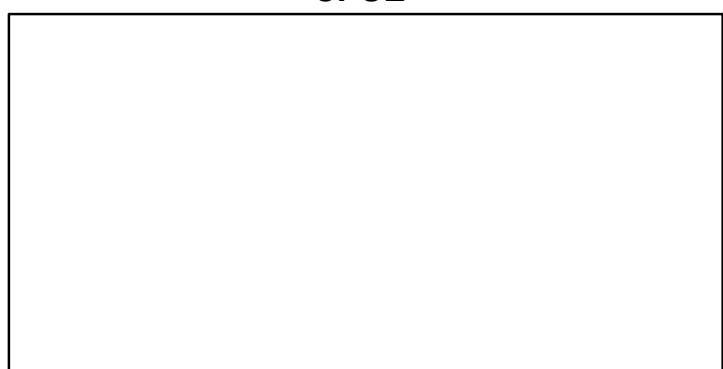
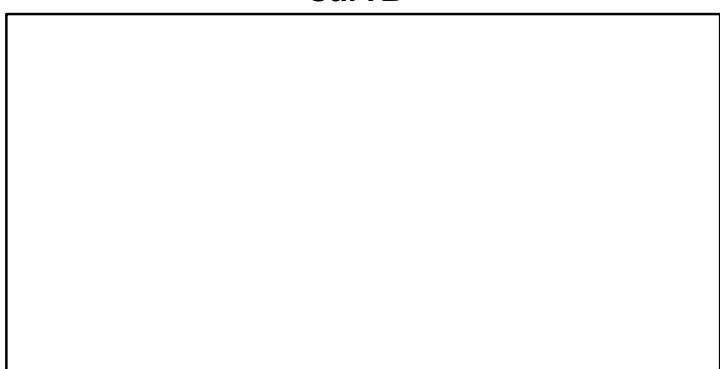
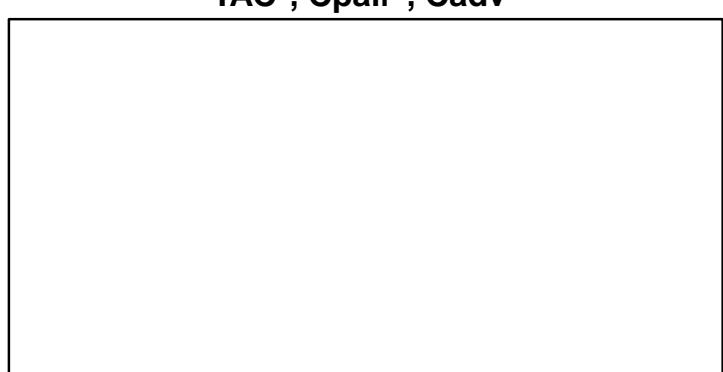
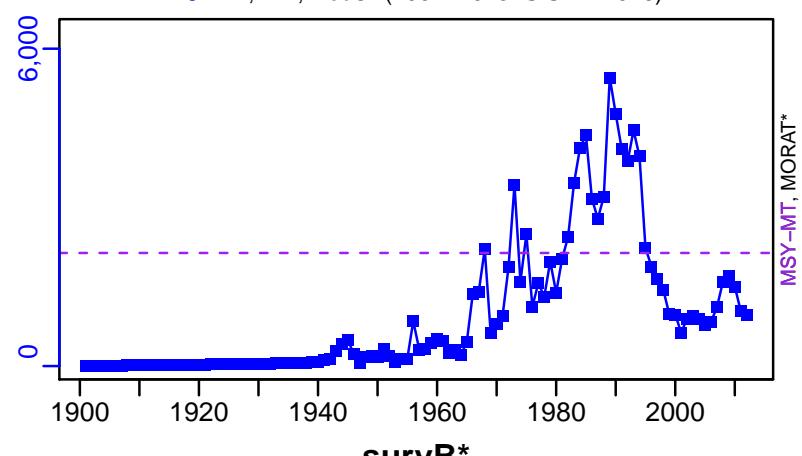
REC-EST\*

- |                                       |                    |                                      |            |                                      |         |
|---------------------------------------|--------------------|--------------------------------------|------------|--------------------------------------|---------|
| <span style="color: blue;">■</span>   | Listed time series | <span style="color: brown;">—</span> | Target BRP | <span style="color: gray;">—</span>  | Rec-Est |
| <span style="color: purple;">—</span> | MSY-based BRP      | <span style="color: green;">—</span> | Lim BRP    | <span style="color: black;">■</span> | No Data |

**Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]**

TC-MT, TL\*, RecC\* (1901–2013–SISIMP2016)

TAC\*, Cpair\*, Cadv\*



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

## Starry flounder Northern Pacific Coast [STFLOUNNPOCOAST]

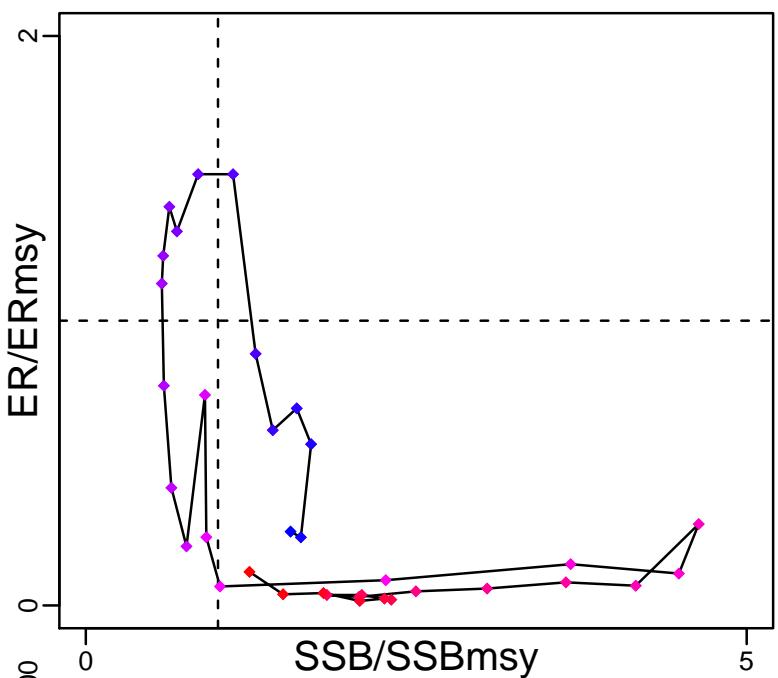
<b>Metadata</b>	
<b>Scientific Name</b>	Platichthys stellatus
<b>Current Assess ID</b>	SWFSC-STFLOUNNPOCOAST-1970-2005-STANTON
<b>Area</b>	Northern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2005

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2005	4840
<b>SSBmsy</b>	SSBmsy-pr-MT	2005	1930
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-pr-ratio	2005	0.169
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2005	12,102
<b>SSB0</b>	SSB0-MT	2005	4824
<b>MSY</b>	MSY-MT	2005	818
<b>M</b>	M-1/yr	2005	0.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

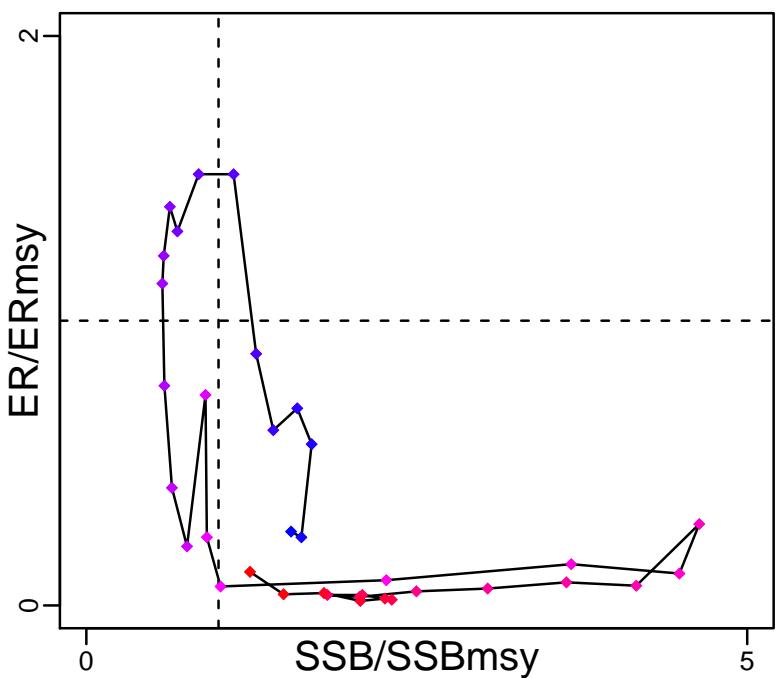
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2005	5440	-	2+	
<b>SSB</b>	SSB-MT	2005	2120	Females	3+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2005	$1.6 \times 10^9$	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-calc-ratio	2005	0.02	-	-	
<b>TC</b>	TC-MT	2005	104			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2005	1.124			
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-pr-MT	2005	1.098			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-calc-ratio/ERmsy-pr-ratio	2005	0.118			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Starry flounder Northern Pacific Coast [STFLOUNNPOCOAST]**

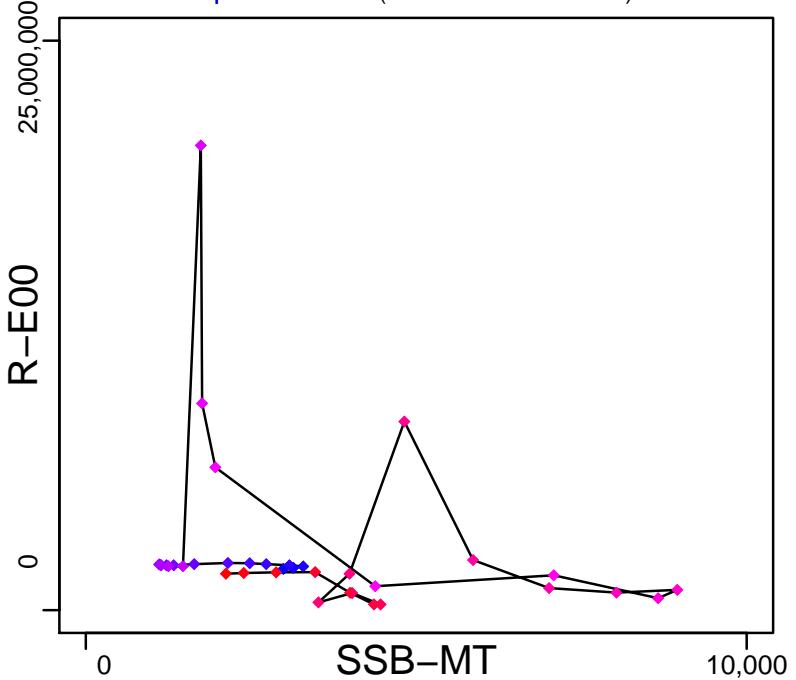
Kobe MSYref (1970–2005-STANTON)



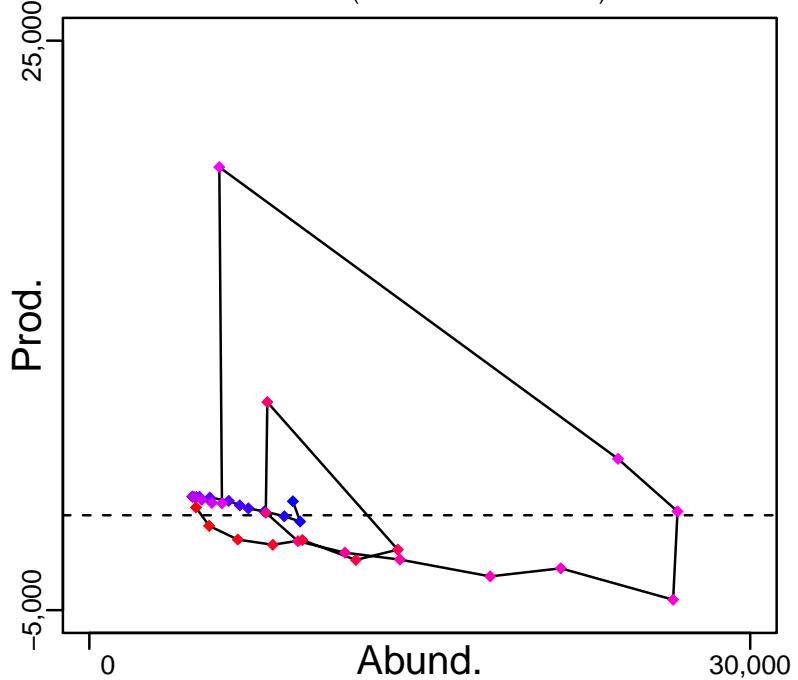
Kobe MGTref (1970–2005-STANTON)



Spawner Recruit (1970–2005-STANTON)



Production (1970–2005-STANTON)

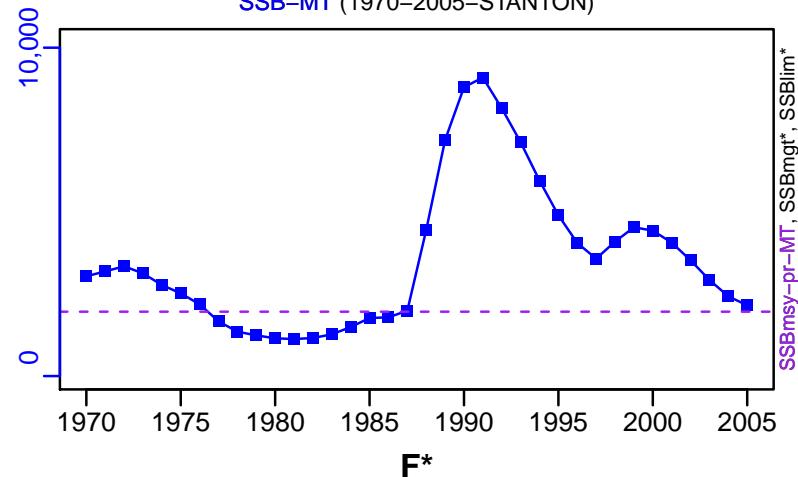
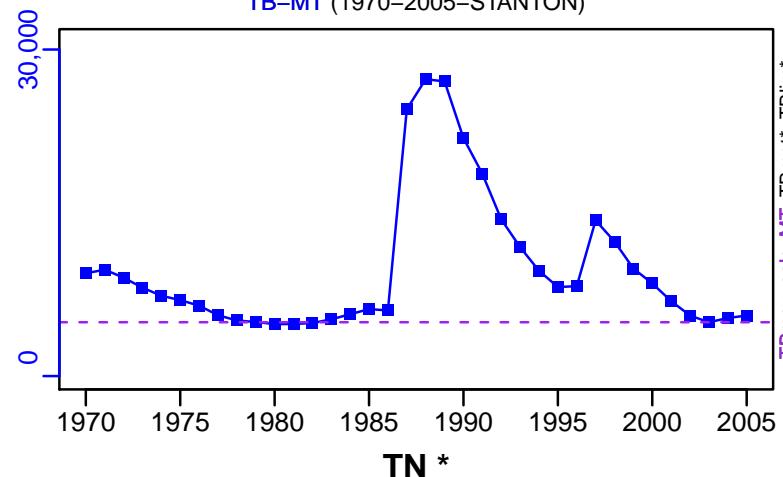


◆ Start Year   ◆ End Year   \* No Data

**Starry flounder Northern Pacific Coast [STFLOUNNPOCOAST]**

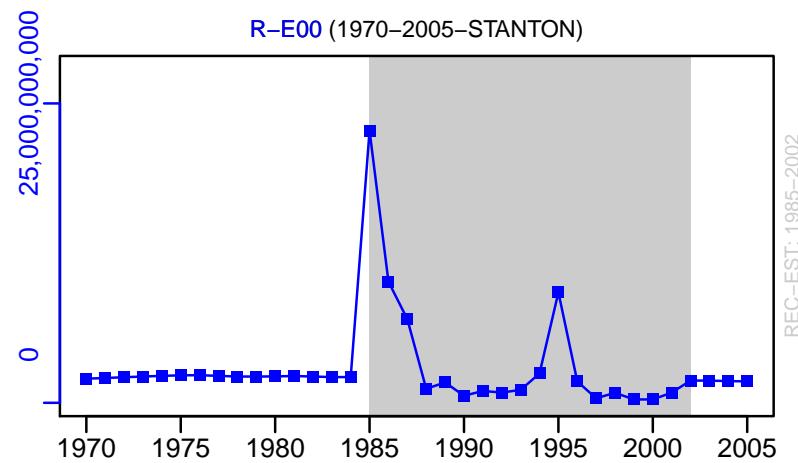
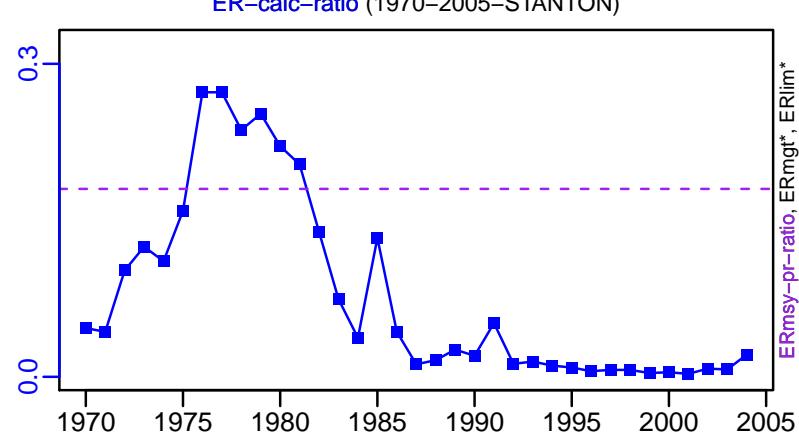
TB-MT (1970–2005-STANTON)

SSB-MT (1970–2005-STANTON)



ER-calc-ratio (1970–2005-STANTON)

R-E00 (1970–2005-STANTON)

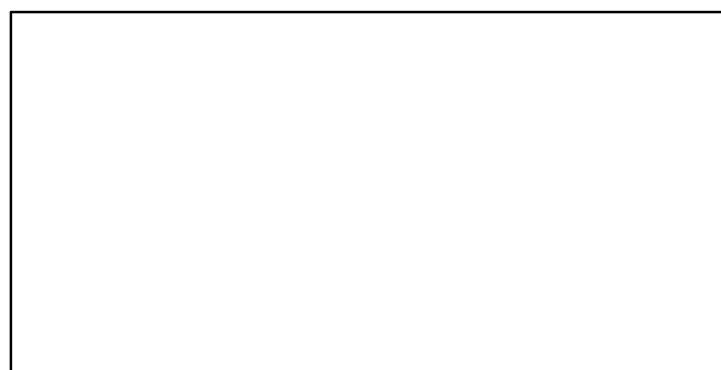
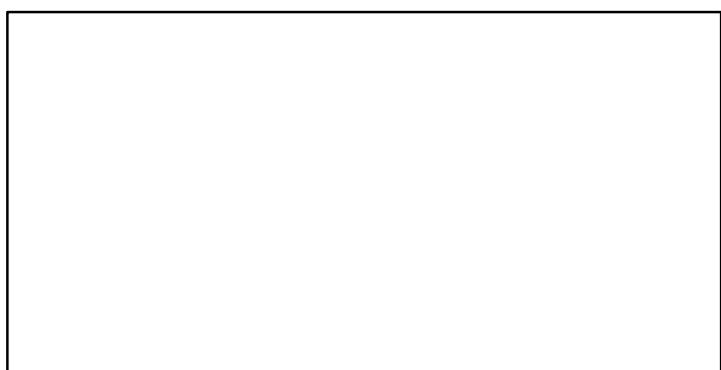
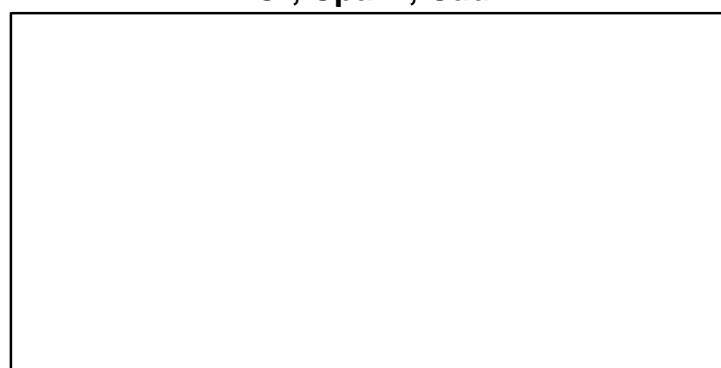
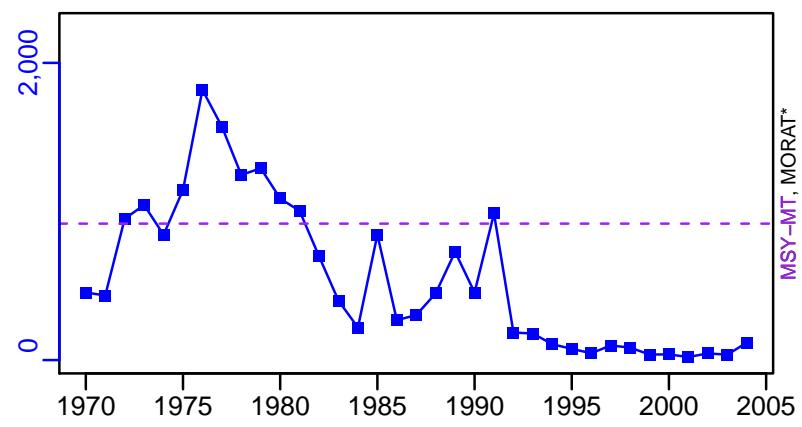


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	--- Lim BRP	■ No Data

**Starry flounder Northern Pacific Coast [STFLOUNNPOAST]**

TC-MT, TL\*, RecC\* (1970–2005-STANTON)

TAC\*, Cpair\*, Cadv\*



**EFFORT\***

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

## Starry flounder Southern Pacific Coast [STFLOUNSPCOAST]

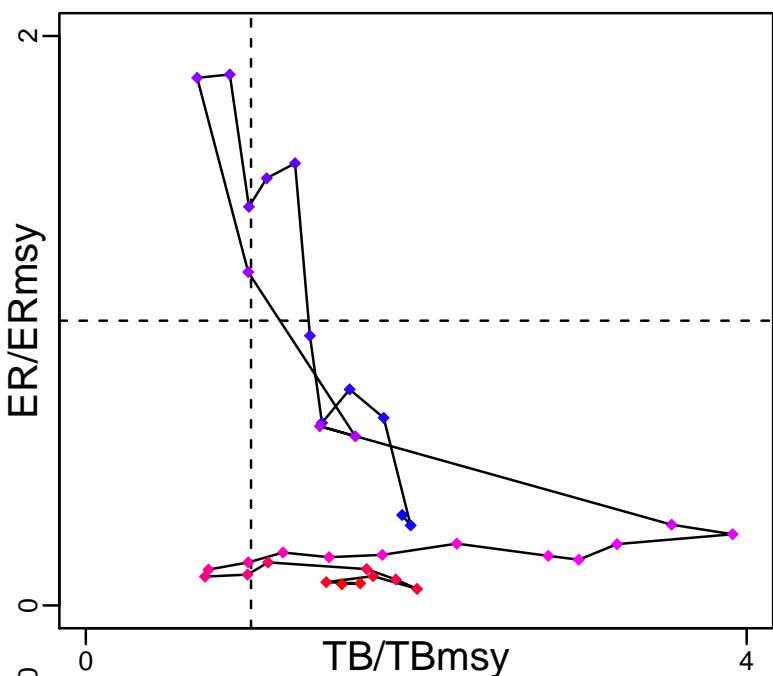
<b>Metadata</b>	
<b>Scientific Name</b>	Platichthys stellatus
<b>Current Assess ID</b>	SWFSC-STFLOUNSPCOAST-1970-2005-STANTON
<b>Area</b>	Southern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Southwest Fisheries Science Center
<b>Asmts in RAM</b>	2005

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-MT	2005	2329
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	-	-	-
<b>ERmsy</b>	ERmsy-calc-ratio	2005	0.17
<b>TBmgt</b>	-	-	-
<b>SSBmgt</b>	-	-	-
<b>Fmgt</b>	-	-	-
<b>ERmgt</b>	-	-	-
<b>TB0</b>	TB0-MT	2005	5854
<b>SSB0</b>	SSB0-MT	2005	2334
<b>MSY</b>	MSY-MT	2005	396
<b>M</b>	M-1/yr	2005	0.3
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	-	-	-
<b>ERlim</b>	-	-	-

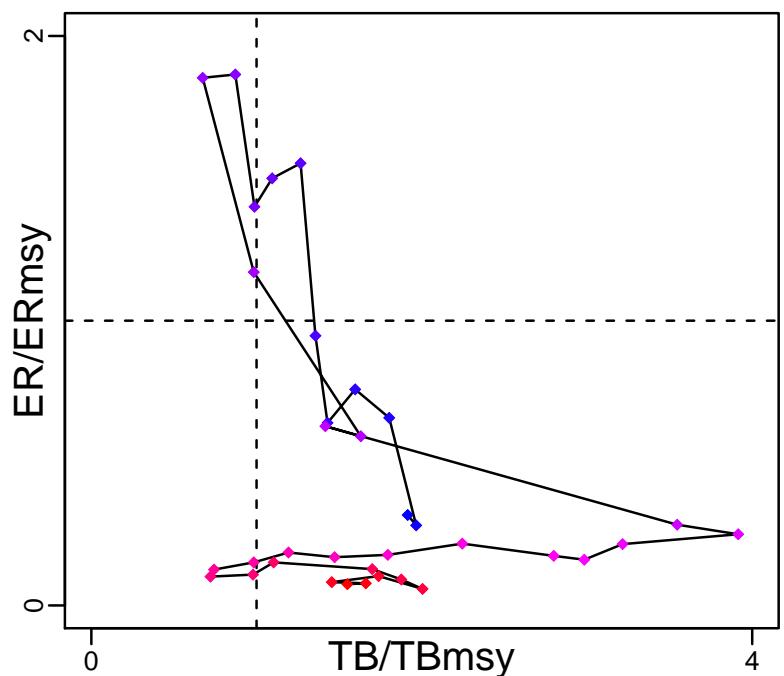
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2005	3460	-	2+	
<b>SSB</b>	SSB-MT	2005	1450	Females	3+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2005	$8.07 \times 10^8$	-	0	
<b>F</b>	-	-	-	-	-	
<b>ER</b>	ER-ratio	2005	0.013	-	-	
<b>TC</b>	TC-MT	2005	46			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-MT	2005	1.485			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	-	-	-			
<b>ER/ERmsy</b>	ER-ratio/ERmsy-calc-ratio	2005	0.075			
<b>TB/TBmgt</b>	-	-	-			
<b>SSB/SSBmgt</b>	-	-	-			
<b>F/Fmgt</b>	-	-	-			
<b>ER/ERmgt</b>	-	-	-			

**Starry flounder Southern Pacific Coast [STFLOUNSPCOAST]**

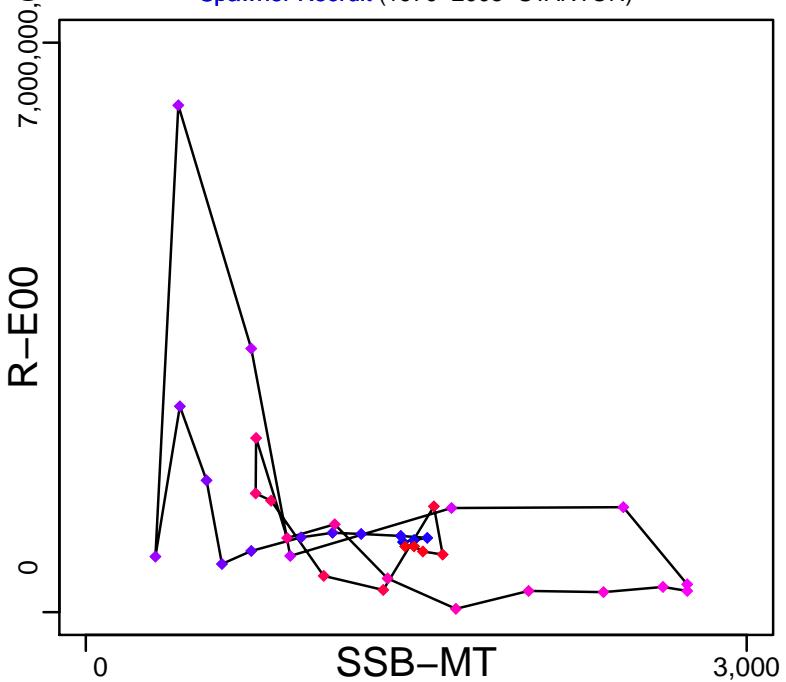
Kobe MSYref (1970–2005-STANTON)



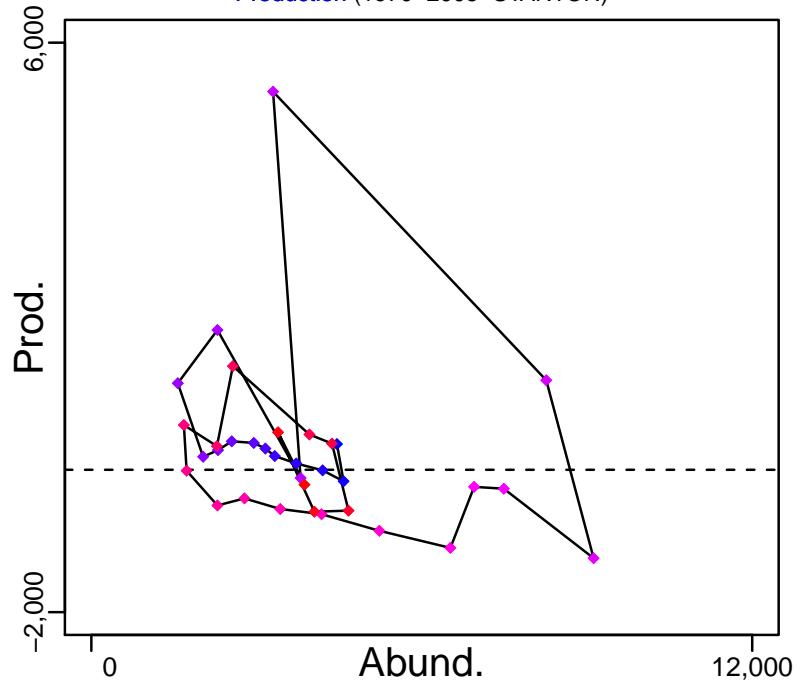
Kobe MGTref (1970–2005-STANTON)



Spawner Recruit (1970–2005-STANTON)



Production (1970–2005-STANTON)

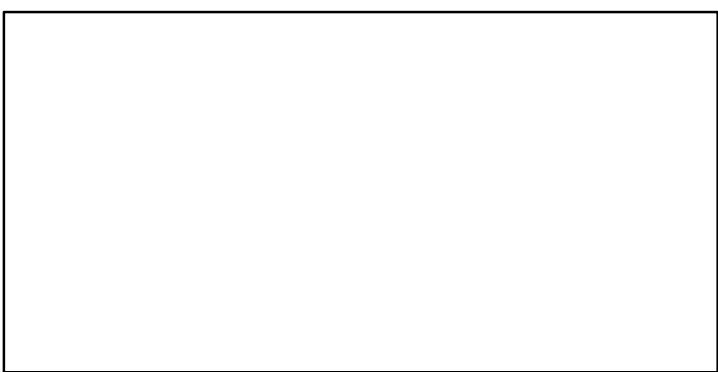
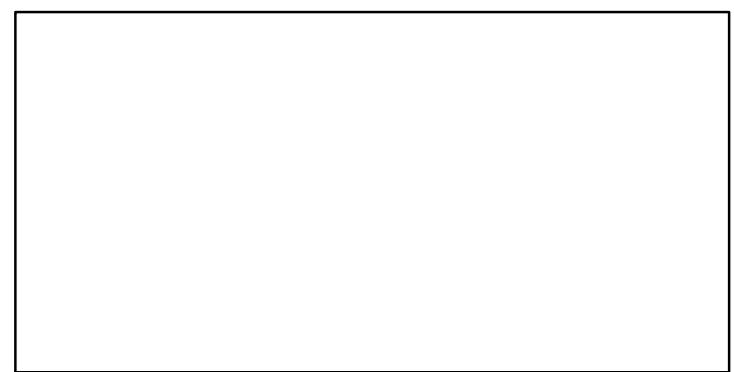
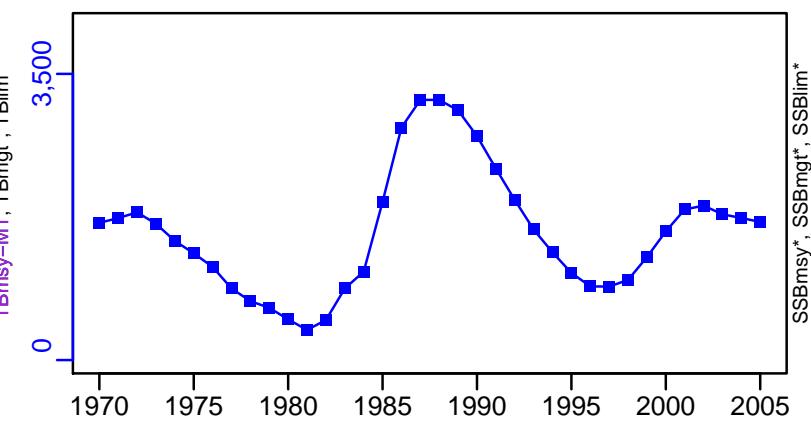
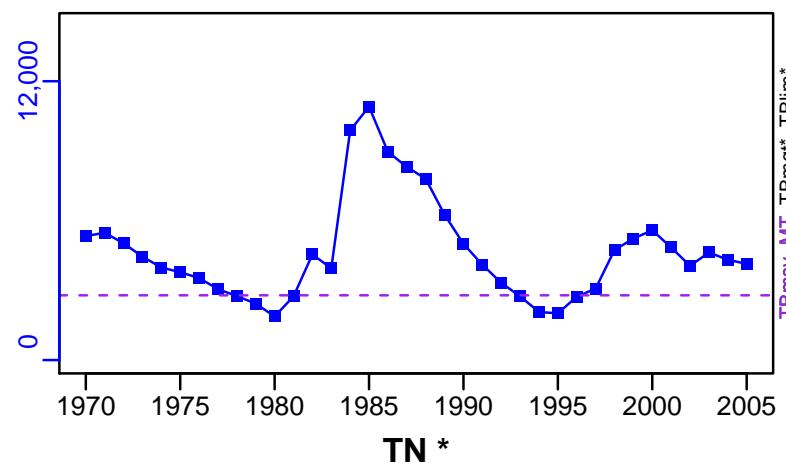


◆ Start Year   ◆ End Year   \* No Data

**Starry flounder Southern Pacific Coast [STFLOUNSPCOAST]**

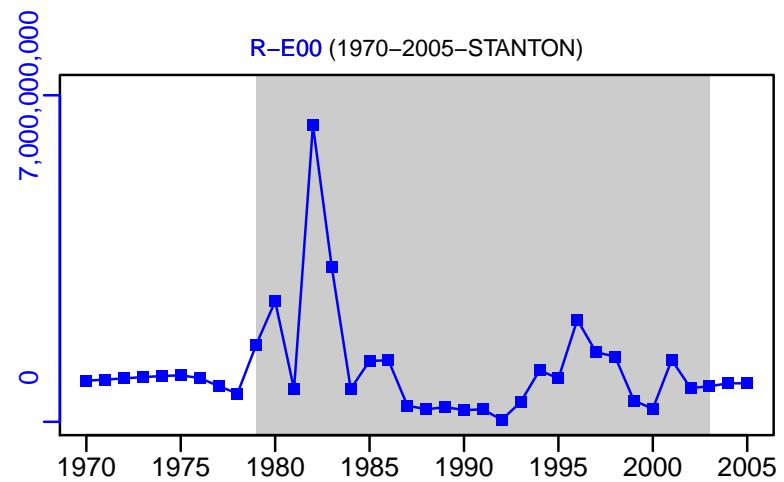
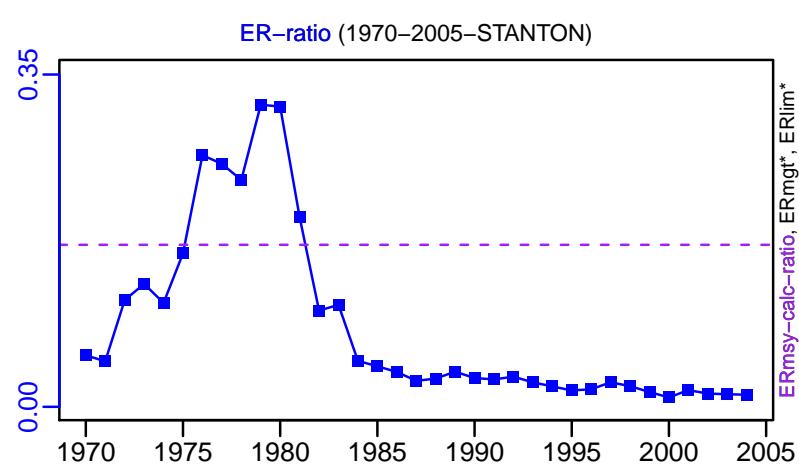
TB-MT (1970–2005-STANTON)

SSB-MT (1970–2005-STANTON)



ER-ratio (1970–2005-STANTON)

R-E00 (1970–2005-STANTON)

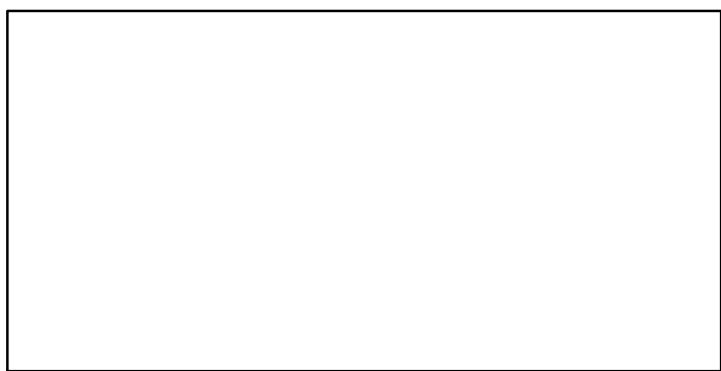
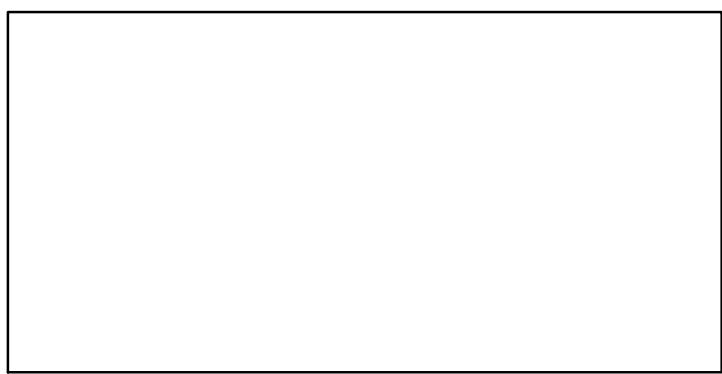
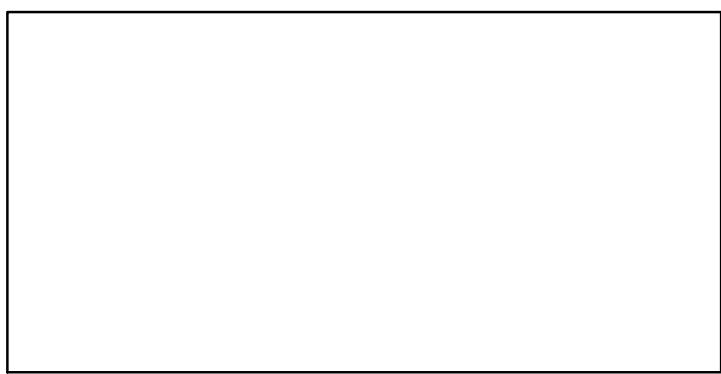
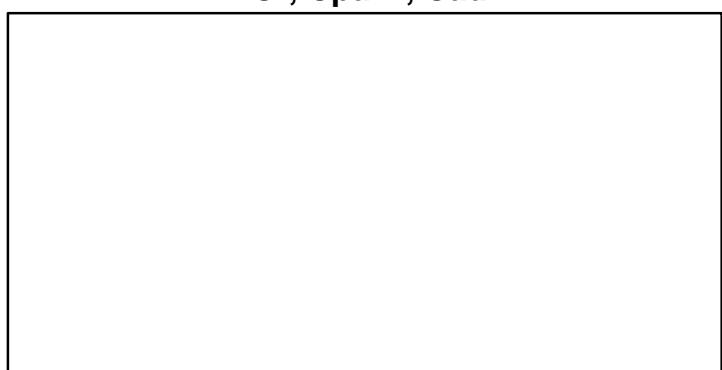
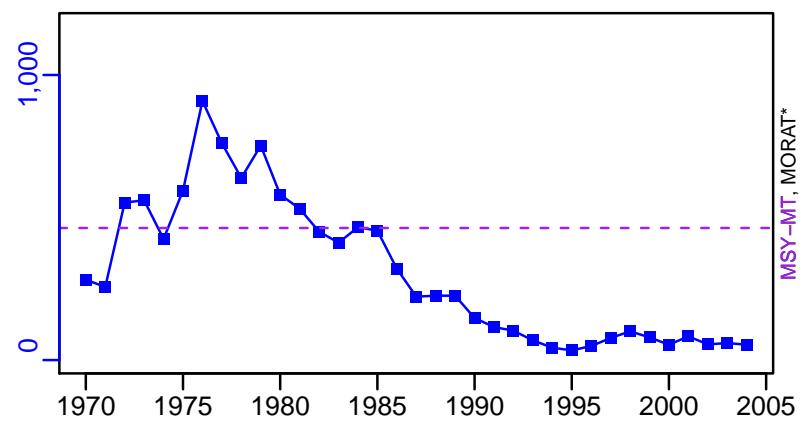


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	--- Lim BRP	■ No Data

**Starry flounder Southern Pacific Coast [STFLOUNSPCOAST]**

TC-MT, TL\*, RecC\* (1970–2005-STANTON)

TAC\*, Cpair\*, Cadv\*



## Widow rockfish Pacific Coast [WROCKPCOAST]

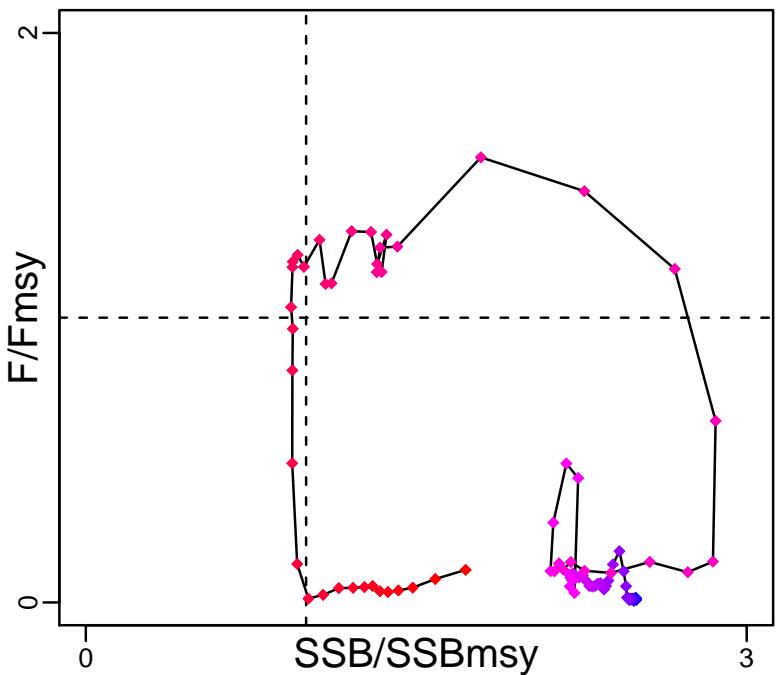
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes entomelas
<b>Current Assess ID</b>	NWFSC-WROCKPCOAST-1916-2015-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2011, 2015

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2011	45,750
<b>SSBmsy</b>	SSBmsy-MT	2015	32,283
<b>Fmsy</b>	Fmsy-1/yr	2015	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	2015	7776
<b>M</b>	M-1/yr	2011	0.12
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-MT	2015	20,177
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

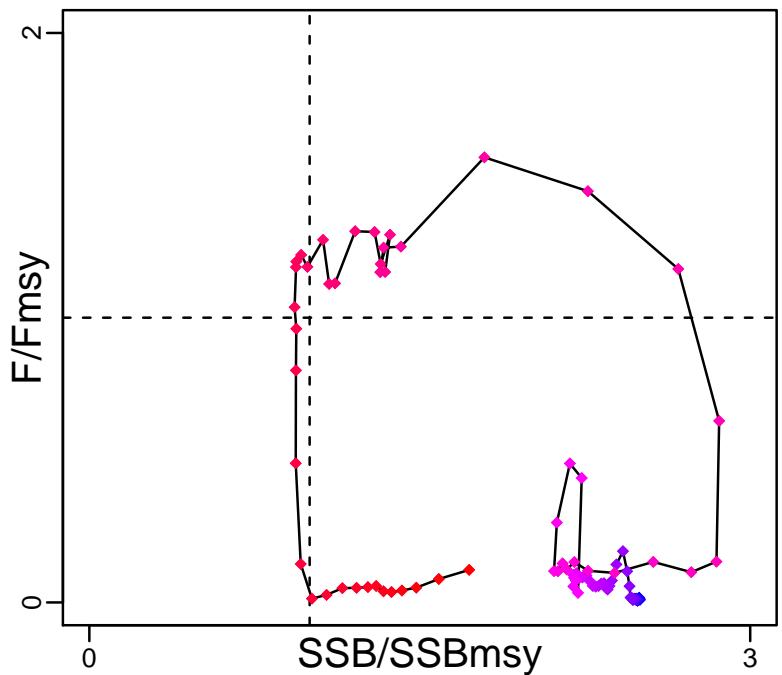
<b>Time Series</b>					
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>
<b>TB</b>	TB-MT	2015	132,000	Both	4+
<b>SSB</b>	SSB-MT	2015	60,600	Females	-
<b>TN</b>	-	-	-	-	-
<b>R</b>	R-E00	2015	53,400,000	-	0
<b>F</b>	F-1/yr	2015	0.057	-	-
<b>ER</b>	ER-calc-ratio	2015	0.006	-	-
<b>TC</b>	TC-MT	2015	726		
<b>TL</b>	-	-	-		
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	1.491		
<b>SSB/SSBmsy</b>	SSB-MT/SSBmsy-MT	2015	1.877		
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.114		
<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]**

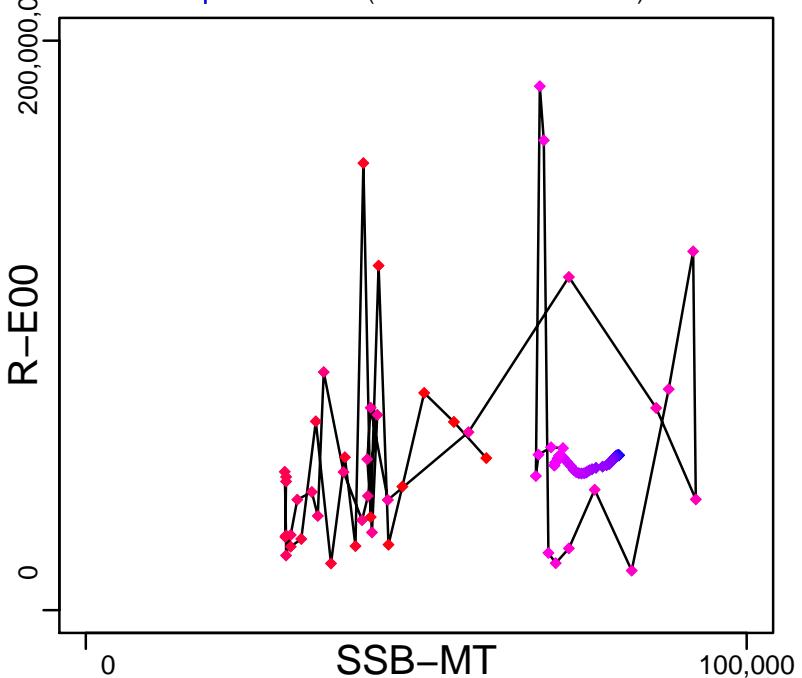
Kobe MSYpref (1916–2015–SISIMP2016)



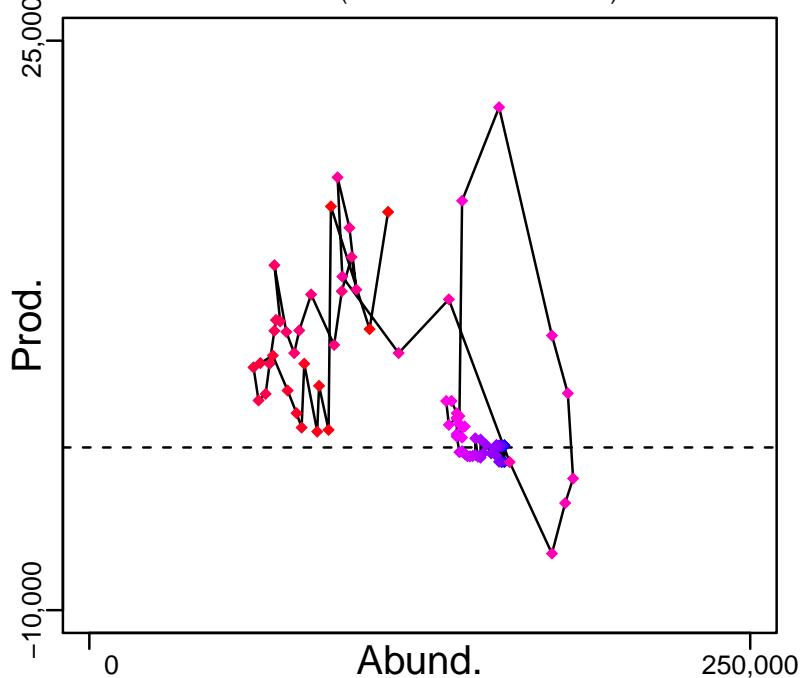
Kobe MGTpref (1916–2015–SISIMP2016)



Spawner Recruit (1916–2015–SISIMP2016)



Production (1916–2015–SISIMP2016)

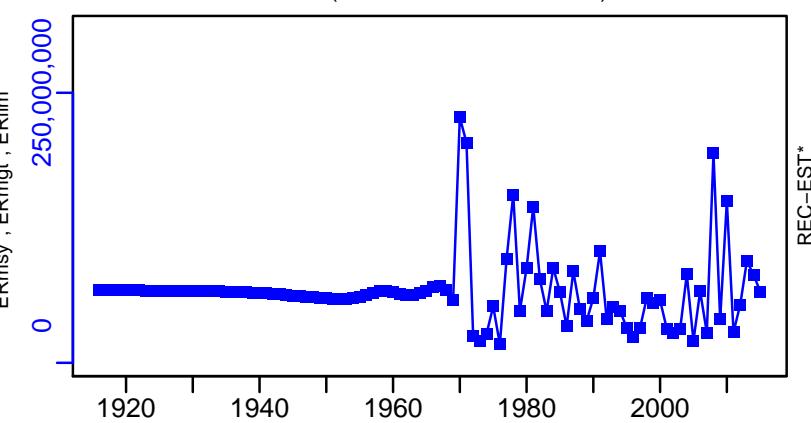
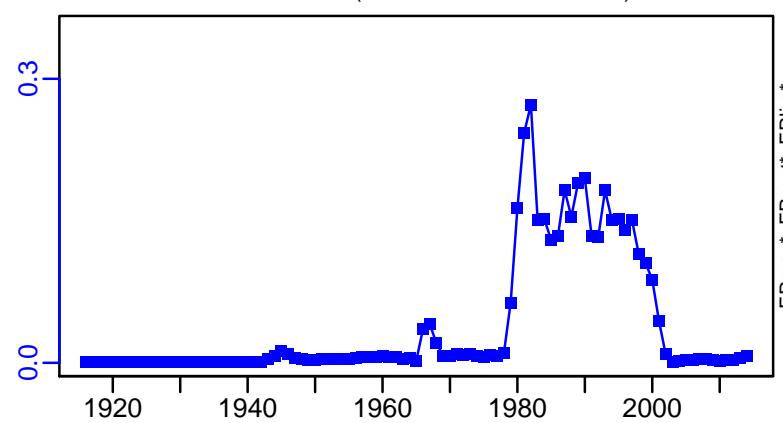
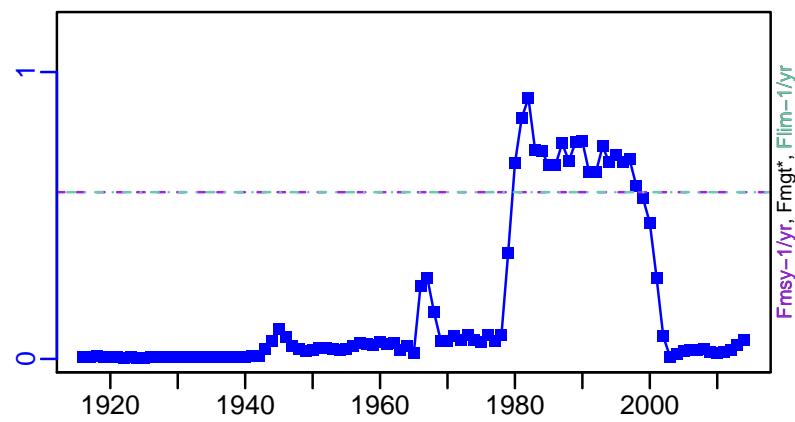
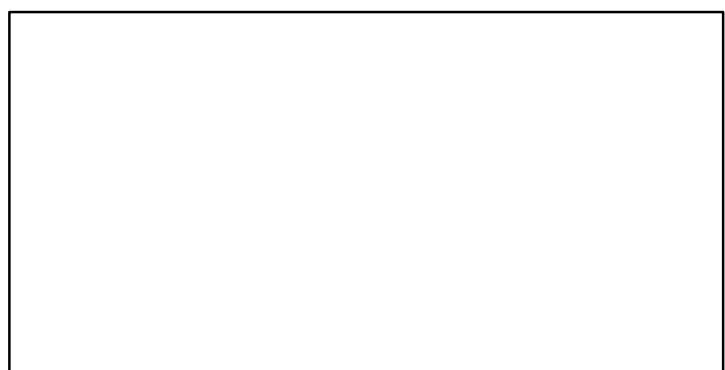
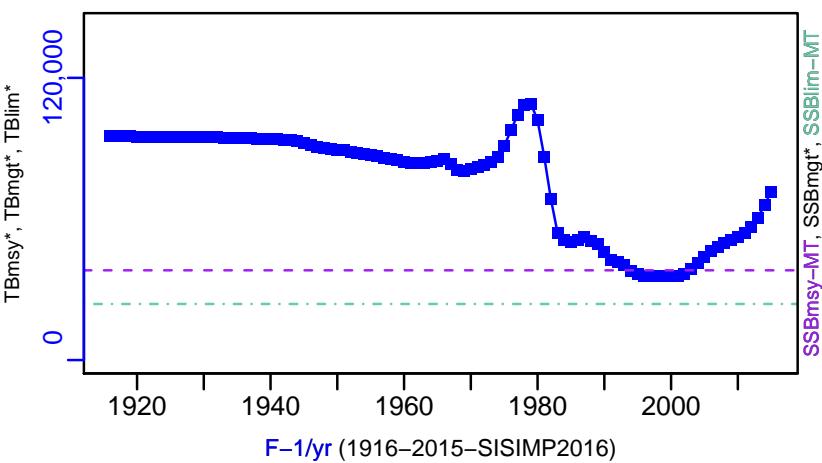
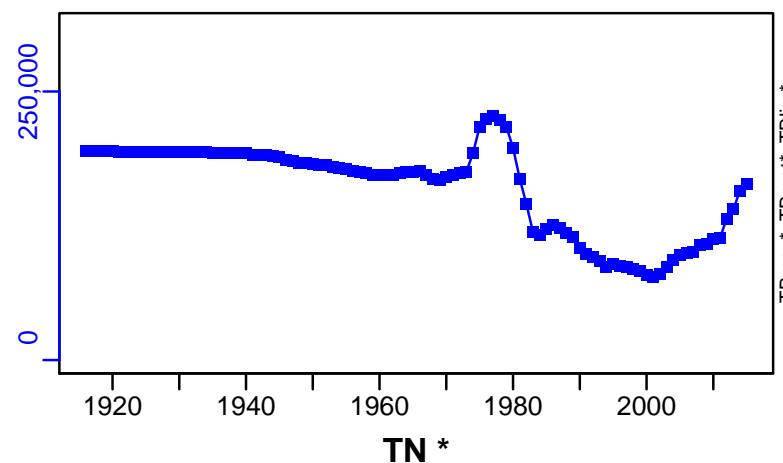


◆ Start Year ◆ End Year \* No Data

### Widow rockfish Pacific Coast [WROCKPCOAST]

TB-MT (1916–2015–SISIMP2016)

SSB-MT (1916–2015–SISIMP2016)

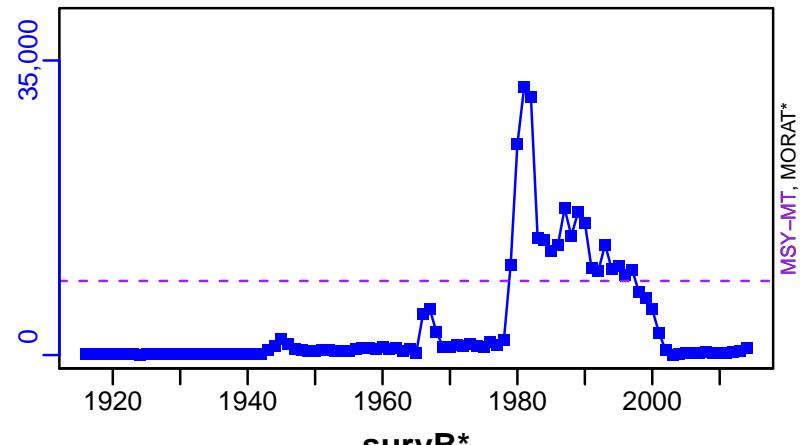


■ Listed time series	— Target BRP	— Rec-Est
— MSY-based BRP	- - - Lim BRP	■ No Data

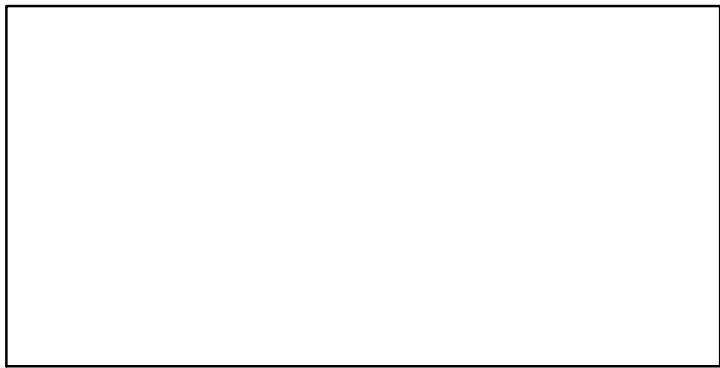
**Widow rockfish Pacific Coast [WROCKPCOAST]**

TC-MT, TL\*, RecC\* (1916–2015–SISIMP2016)

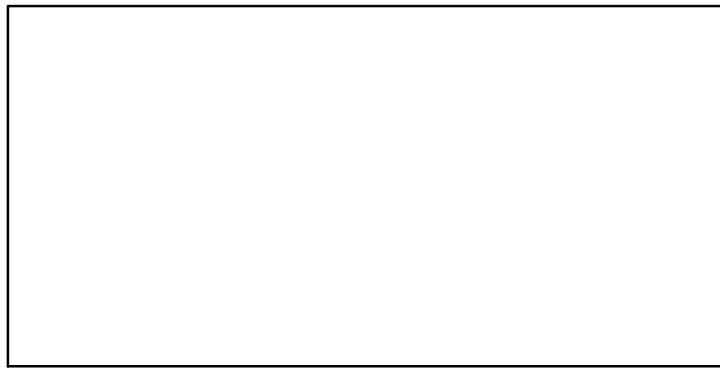
TAC\*, Cpair\*, Cadv\*



**survB\***



**CPUE\***



**EFFORT\***



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

## Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]

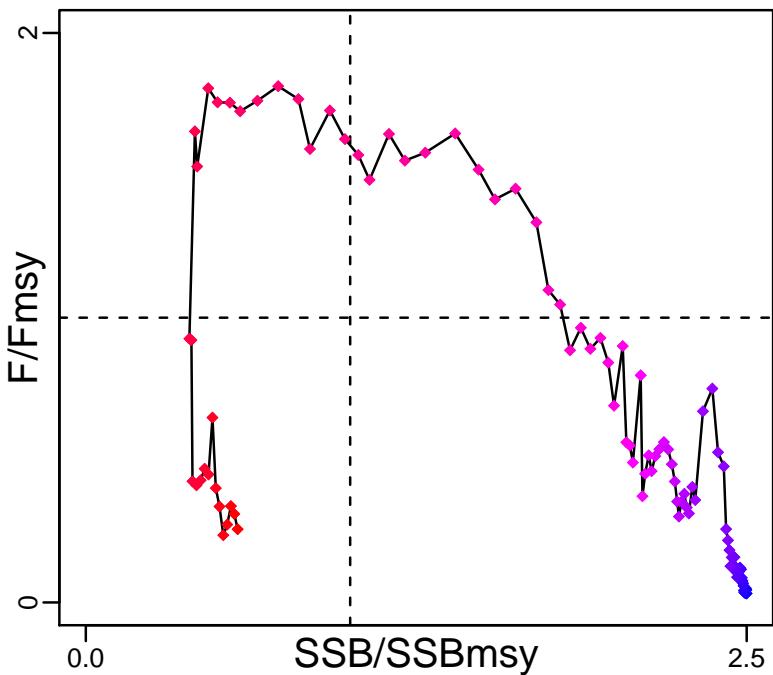
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes ruberrimus
<b>Current Assess ID</b>	NWFSC-YEYEROCKPCOAST-1916-2015-SISIMP2016
<b>Area</b>	Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2011, 2015

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2011	3706
<b>SSBmsy</b>	SSBmsy-E00eggs	2015	411,100,000
<b>Fmsy</b>	Fmsy-1/yr	2015	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	2011	63
<b>M</b>	M-1/yr	2011	0.046
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	SSBlim-E00eggs	2015	256,900,000
<b>Flim</b>	Flim-1/yr	2015	0.5
<b>ERlim</b>	-	-	-

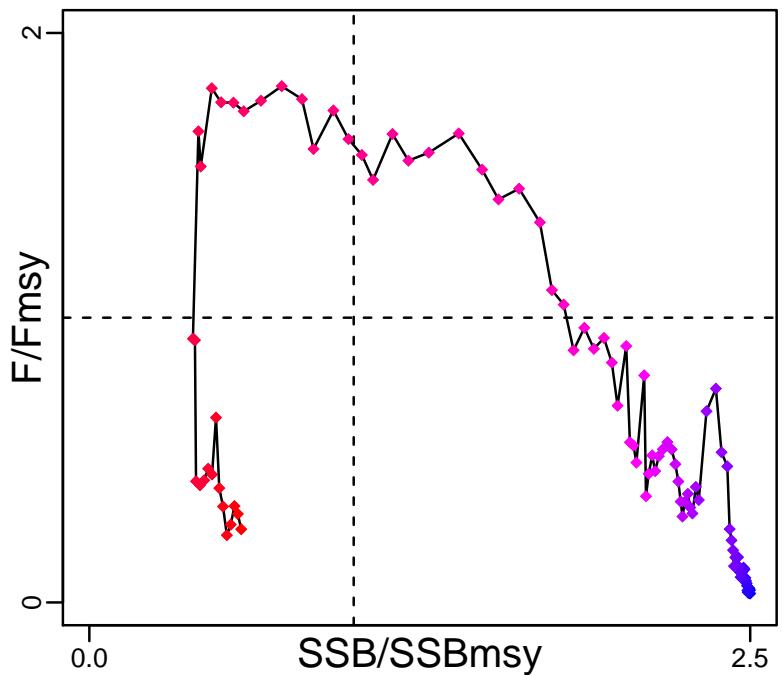
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2015	2350	-	8+	
<b>SSB</b>	SSB-E00eggs	2015	$2.41 \times 10^8$	Females	-	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2015	112,000	-	0	
<b>F</b>	F-1/yr	2015	0.129	-	-	
<b>ER</b>	ER-calc-ratio	2015	0.004	-	-	
<b>TC</b>	TC-MT	2015	9			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2011	0.591			
<b>SSB/SSBmsy</b>	SSB-E00eggs/SSBmsy-E00eggs	2015	0.587			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2015	0.257			
<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]**

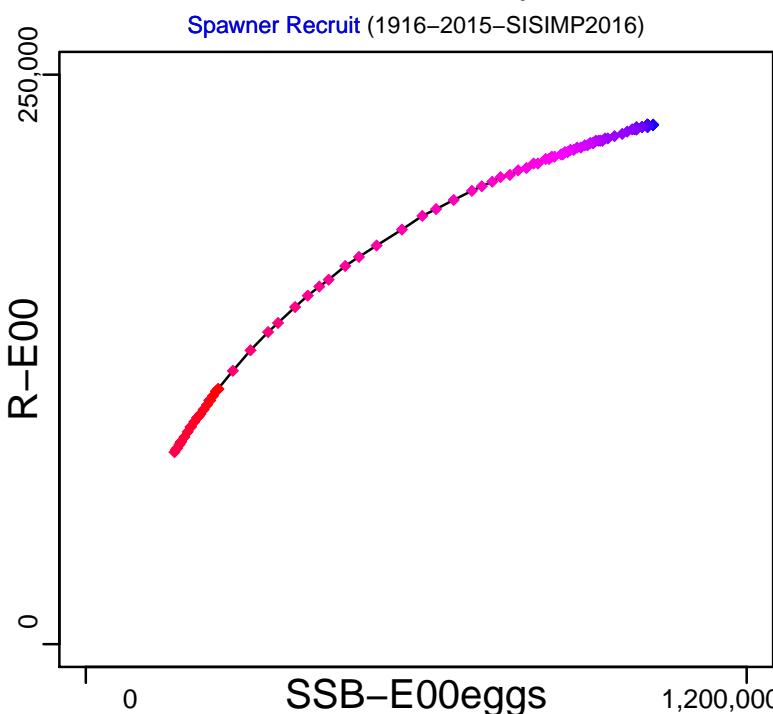
Kobe MSYpref (1916–2015–SISIMP2016)



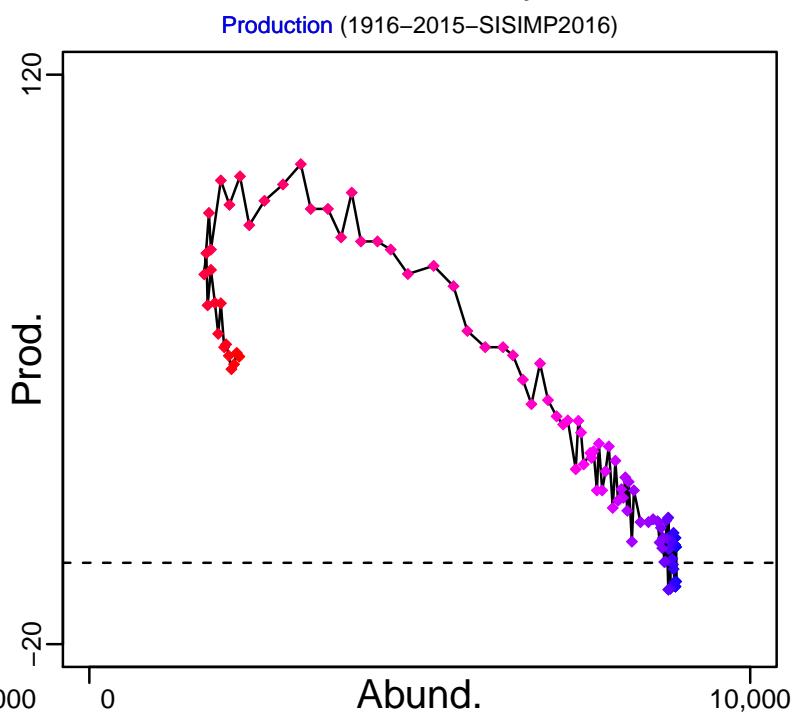
Kobe MGTpref (1916–2015–SISIMP2016)



Spawner Recruit (1916–2015–SISIMP2016)



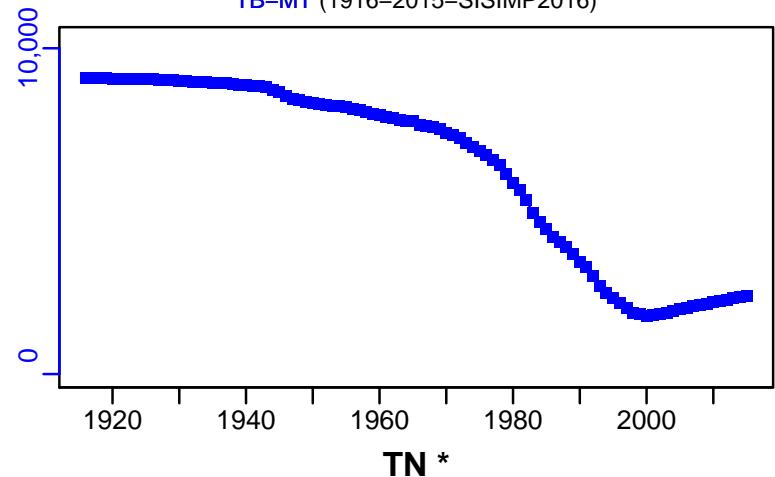
Production (1916–2015–SISIMP2016)



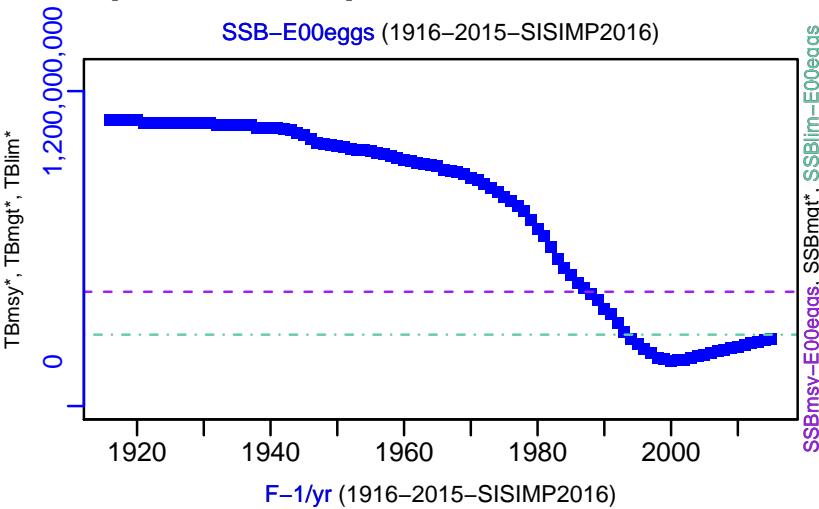
◆ Start Year	◆ End Year	*	No Data
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### Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]

TB-MT (1916–2015–SISIMP2016)



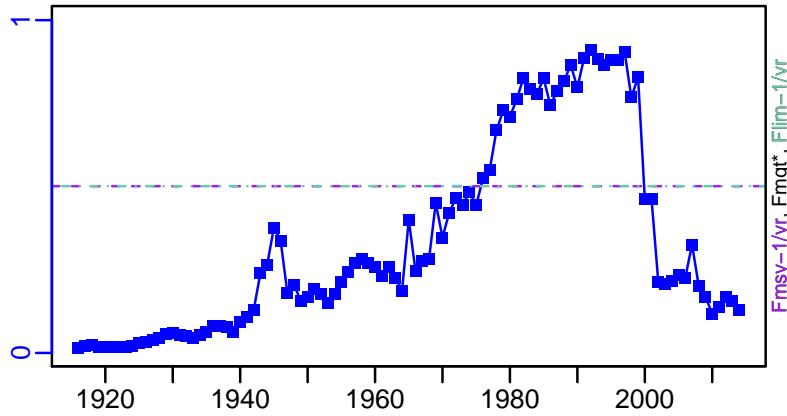
SSB-E00eggs (1916–2015–SISIMP2016)



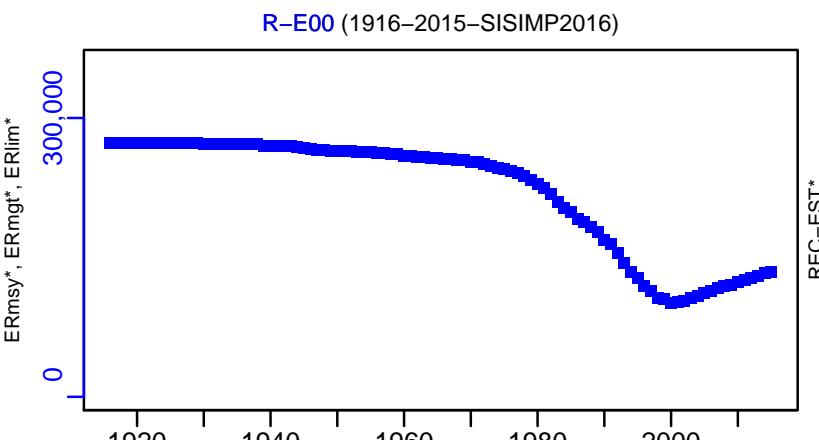
TN \*



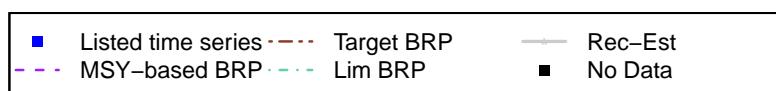
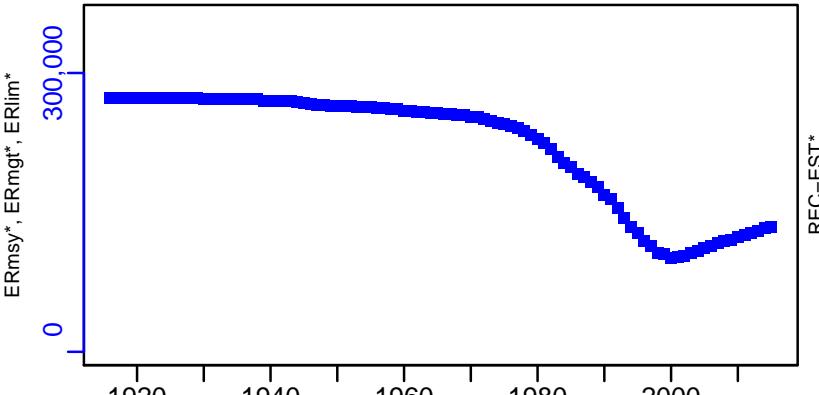
F-1/yr (1916–2015–SISIMP2016)



ER-calc-ratio (1916–2015–SISIMP2016)



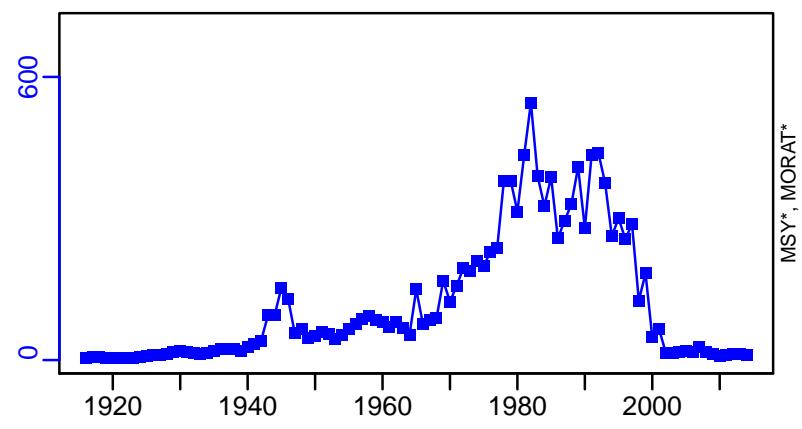
R-E00 (1916–2015–SISIMP2016)



**Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]**

TC-MT, TL\*, RecC\* (1916–2015–SISIMP2016)

TAC\*, Cpair\*, Cadv\*

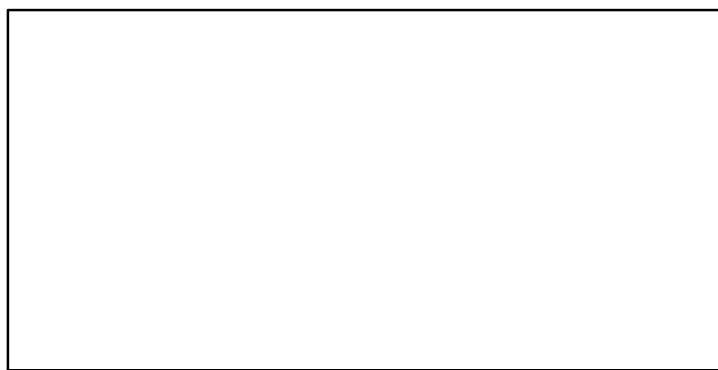


**survB\***

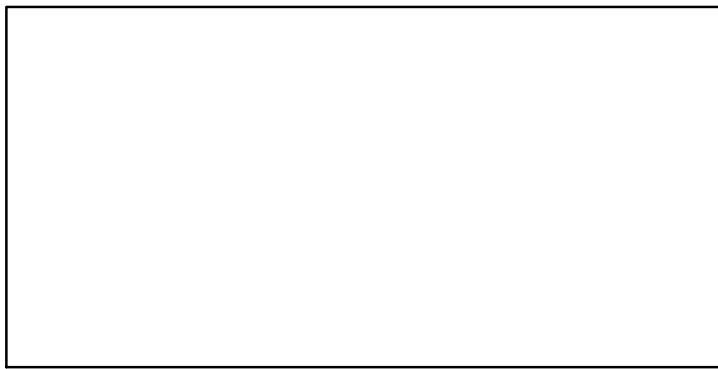
MSY\*, MORAT\*



**CPUE\***



**EFFORT\***



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

## Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

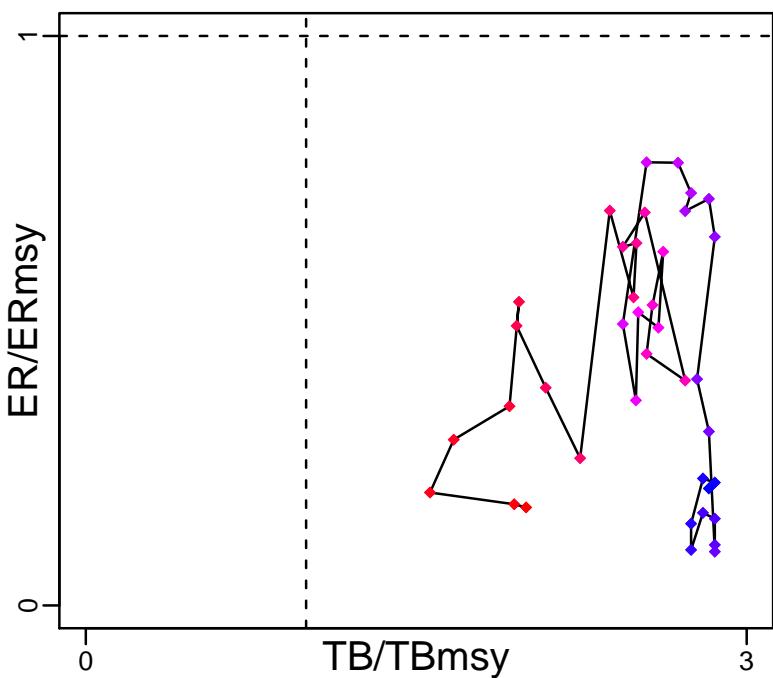
<b>Metadata</b>	
<b>Scientific Name</b>	Sebastodes flavidus
<b>Current Assess ID</b>	NWFSC-YTROCKNPCOAST-1892-2012-SISIMP2016
<b>Area</b>	Northern Pacific Coast
<b>Management Authority</b>	National Marine Fisheries Service, US national management
<b>Assessor</b>	Northwest Fisheries Science Center
<b>Asmts in RAM</b>	2012, 2005

<b>Reference Points</b>			
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Value</b>
<b>TBmsy</b>	TBmsy-calc-MT	2005	37,123
<b>SSBmsy</b>	-	-	-
<b>Fmsy</b>	Fmsy-1/yr	2012	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	2012	4805
<b>M</b>	M-1/yr	2005	0.11
<b>TBlim</b>	-	-	-
<b>SSBlim</b>	-	-	-
<b>Flim</b>	Flim-1/yr	2012	0.5
<b>ERlim</b>	-	-	-

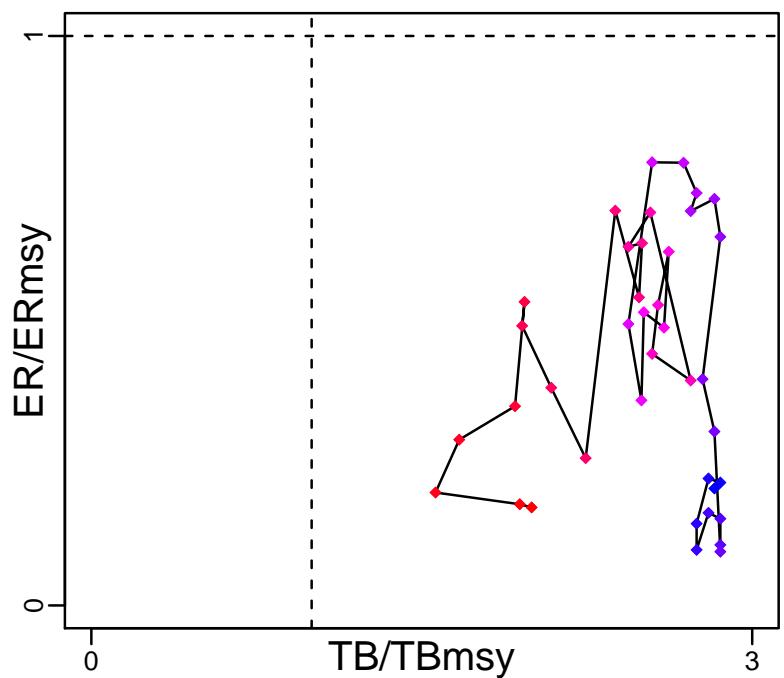
<b>Time Series</b>						
<b>Type</b>	<b>ID</b>	<b>Asmt Year</b>	<b>Curr Value</b>	<b>Sex</b>	<b>Age</b>	
<b>TB</b>	TB-MT	2012	143,000	-	-	
<b>SSB</b>	SSB-MT	2005	16,900	-	4+	
<b>TN</b>	-	-	-	-	-	
<b>R</b>	R-E00	2005	12,100,000	-	4	
<b>F</b>	F-1/yr	2012	0.182	-	-	
<b>ER</b>	ER-ratio	2005	0.022	-	-	
<b>TC</b>	TC-MT	2005	1610			
<b>TL</b>	-	-	-			
<b>TB/TBmsy</b>	TB-MT/TBmsy-calc-MT	2005	1.999			
<b>SSB/SSBmsy</b>	-	-	-			
<b>F/Fmsy</b>	F-1/yr/Fmsy-1/yr	2012	0.364			
<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]**

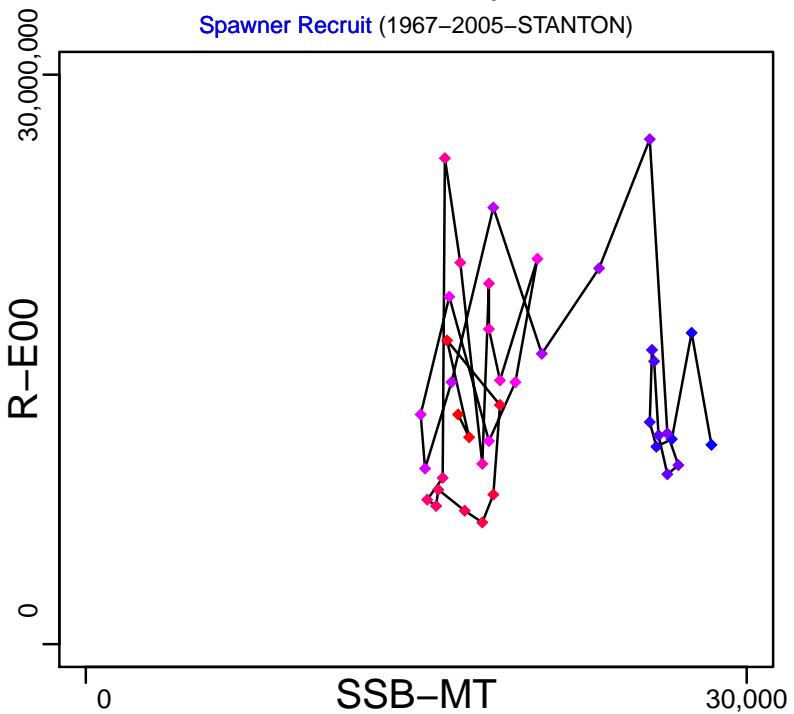
**Kobe MSYpref** (1967–2005–STANTON)



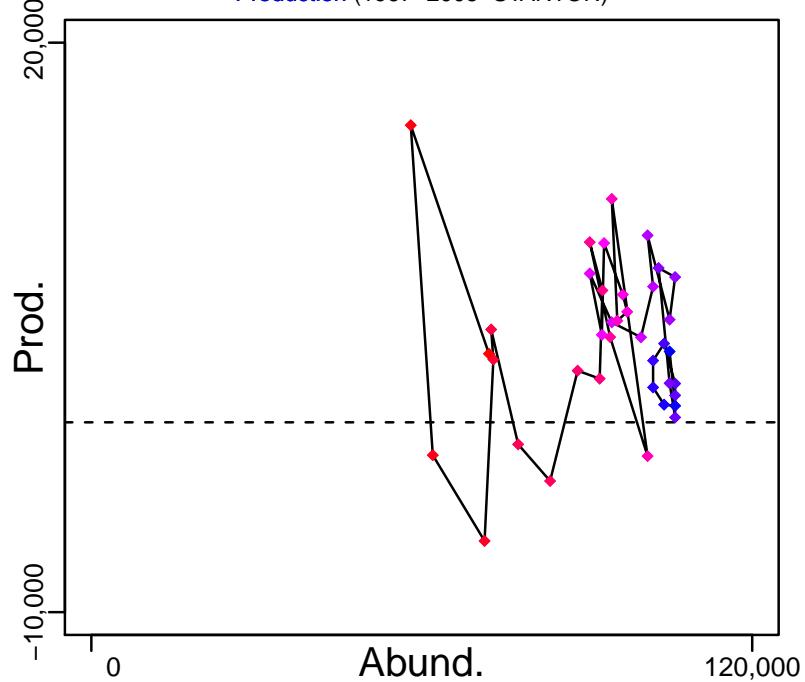
**Kobe MGTpref** (1967–2005–STANTON)



**Spawner Recruit** (1967–2005–STANTON)



**Production** (1967–2005–STANTON)

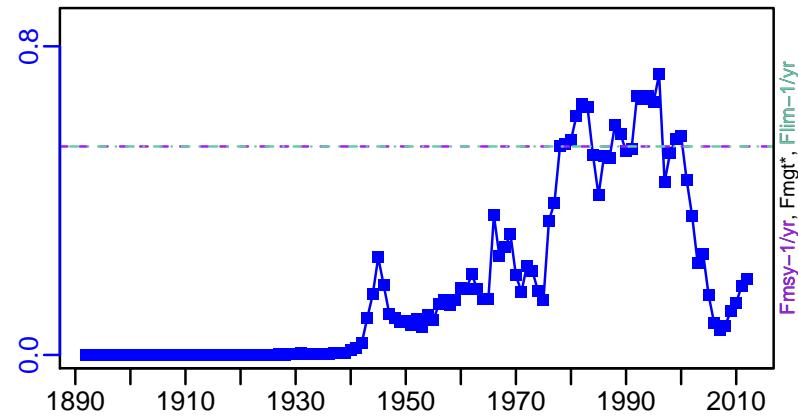
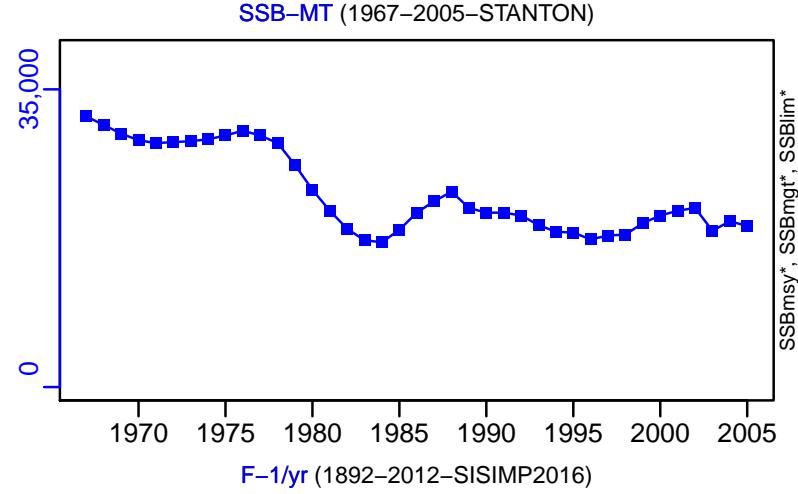
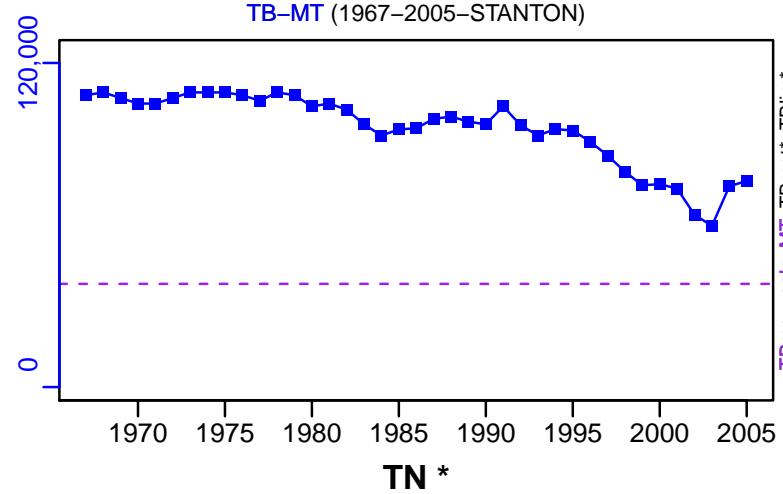


◆ Start Year   ◆ End Year   \* No Data

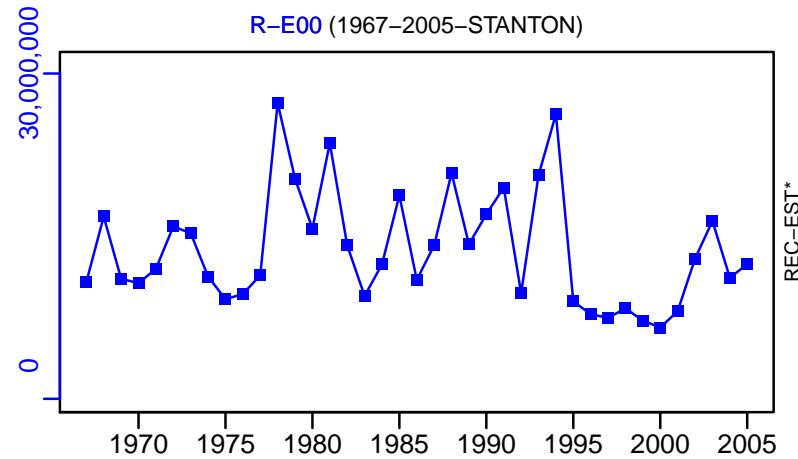
### Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

TB-MT (1967–2005-STANTON)

SSB-MT (1967–2005-STANTON)



ER-ratio (1967–2005-STANTON)

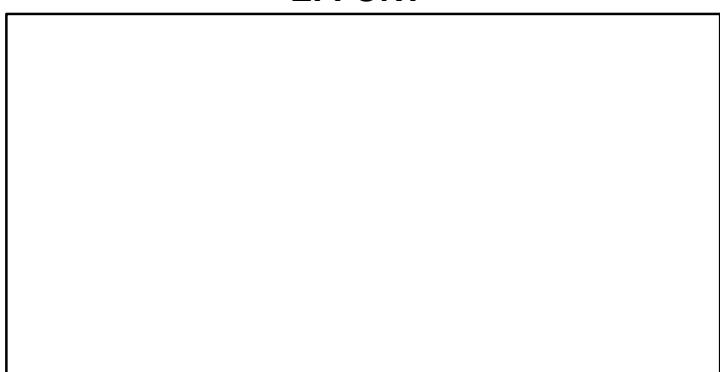
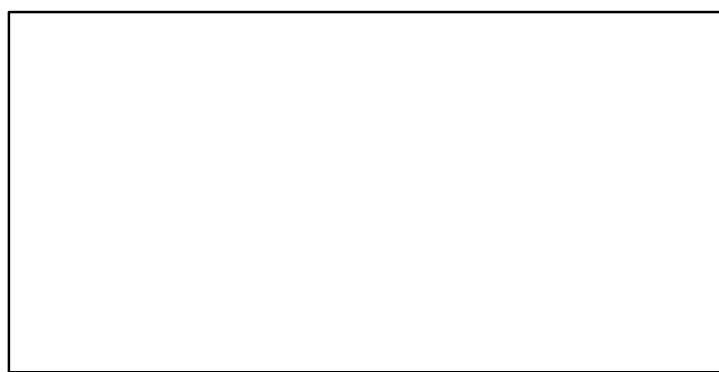
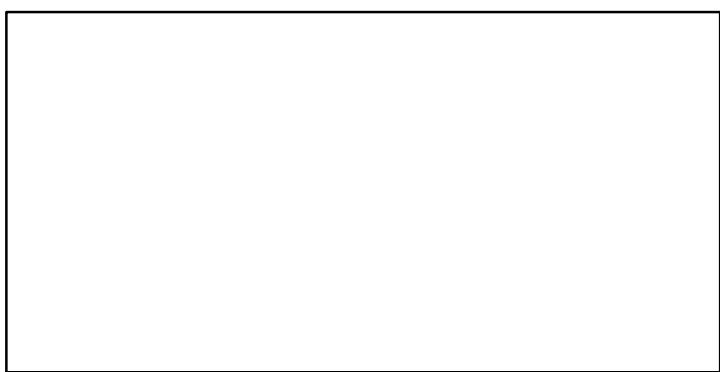
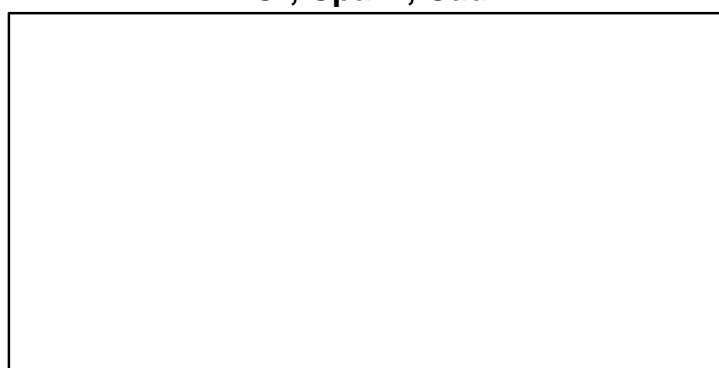
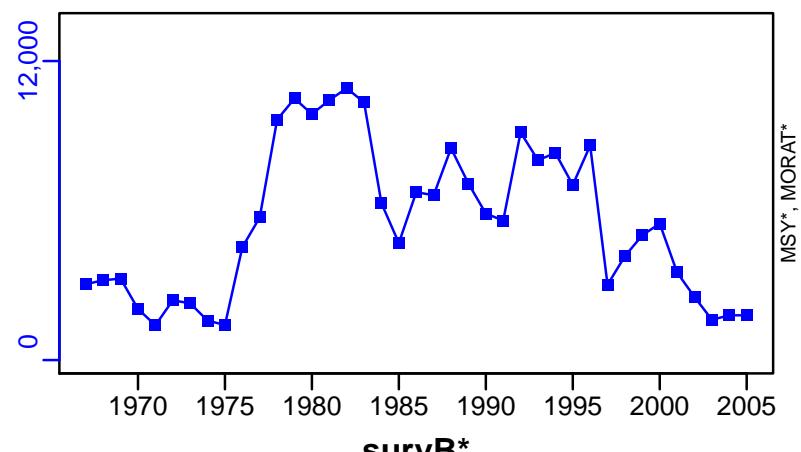


■ Listed time series	— Target BRP	— Rec-Est
- - - MSY-based BRP	- - - Lim BRP	■ No Data

Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

TC-MT, TL\*, RecC\* (1967–2005-STANTON)

TAC\*, Cpair\*, Cadv\*



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