

US West Coast Stocks

v4.491 (Jan-06-2020)

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 Coast] | 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 Northern Pacific Coast] | TB SSB | ER F | TB SSB | ER F |
| 29. GRSPROCKSCAL [Greenspotted rockfish Southern Pacific Coast] | TB SSB | ER F | TB SSB | ER F |
| 30. KELPGREENLINGORECOAST [Kelp greenling Oregon Coast] | TB SSB | ER F | TB SSB | ER F |
| 31. LINGCODNPSCOAST [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. LNOSESKAPSCOAST [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. YTROCKNPCOAST [Yellowtail rockfish Northern Pacific Coast] | TB SSB | ER F | TB SSB | ER F |

Arrowtooth flounder Pacific Coast [ARFLOUDPCOAST]

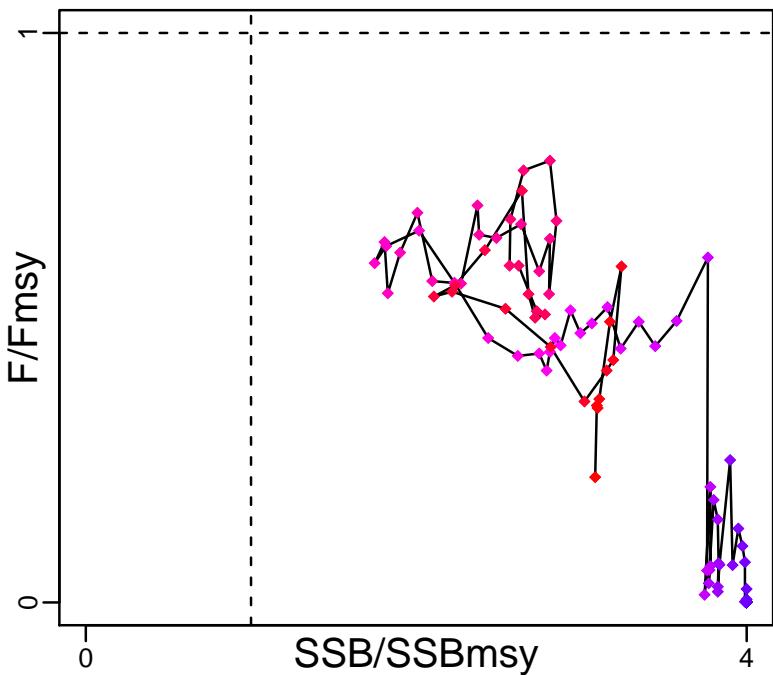
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Atheresthes stomias |
| Current Assess ID | NWFSC-ARFLOUDPCOAST-1914-2015-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US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

| Reference Points | | | |
|-------------------------|---------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2007 | 44,591 |
| SSBmsy | SSBmsy-MT | 2015 | 20,078 |
| Fmsy | Fmsy-1/yr | 2015 | 0.7 |
| ERmsy | ERmsy-ratio | 2007 | 0.131 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | SSB0-MT | 2007 | 80,313 |
| MSY | MSY-MT | 2007 | 5844 |
| M | M-1/yr | 2007 | 0.166 |
| TBlim | - | - | - |
| SSBlim | SSBlim-MT | 2015 | 10,039 |
| Flim | Flim-1/yr | 2015 | 0.7 |
| ERlim | - | - | - |

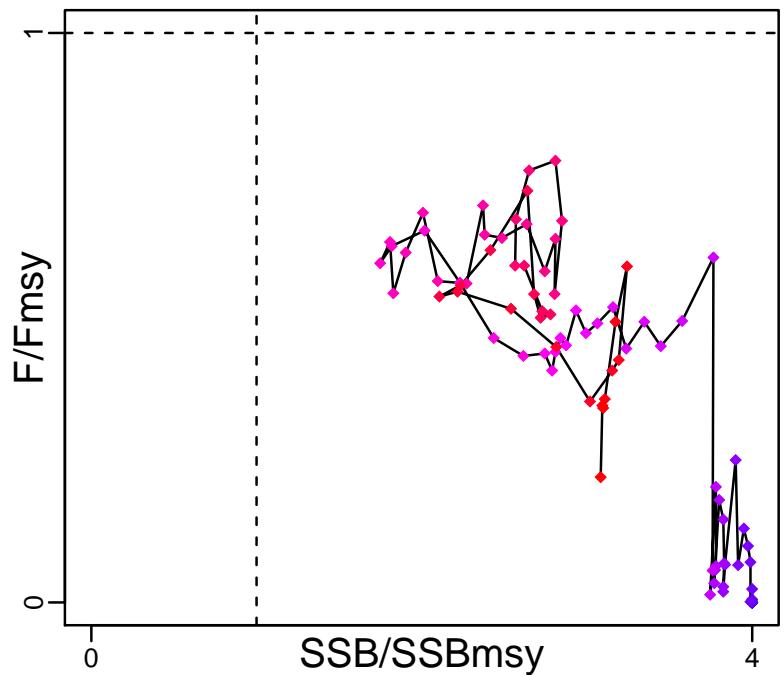
| Time Series | | | | | | |
|--------------------|----------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 79,800 | - | 3+ | |
| SSB | SSB-MT | 2015 | 62,600 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 28,300,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.154 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.018 | - | - | |
| TC | TC-MT | 2015 | 1440 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2007 | 1.868 | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2015 | 3.118 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.22 | | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2007 | 0.218 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Arrowtooth flounder Pacific Coast [ARFLOUNDPCOAST]

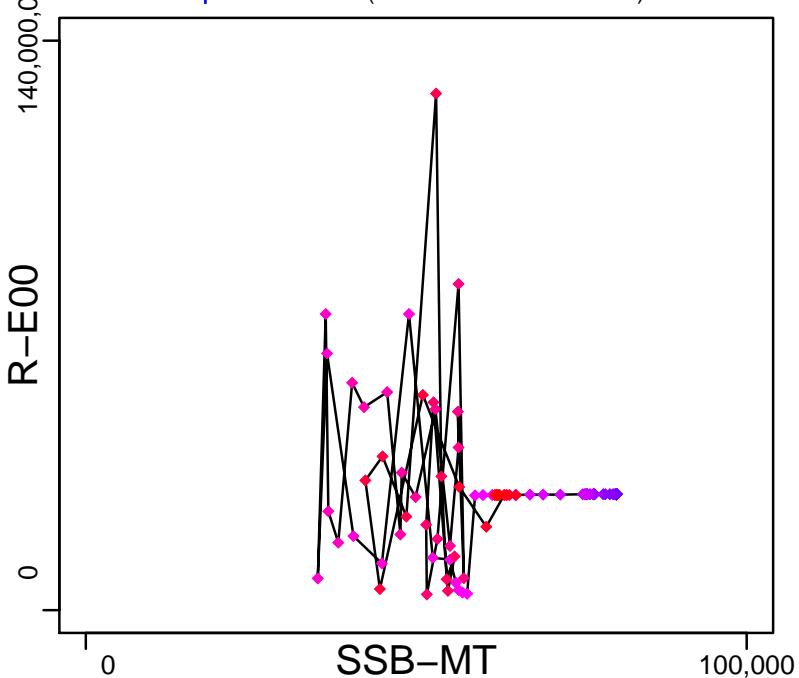
Kobe MSYpref (1914–2015–SISIMP2016)



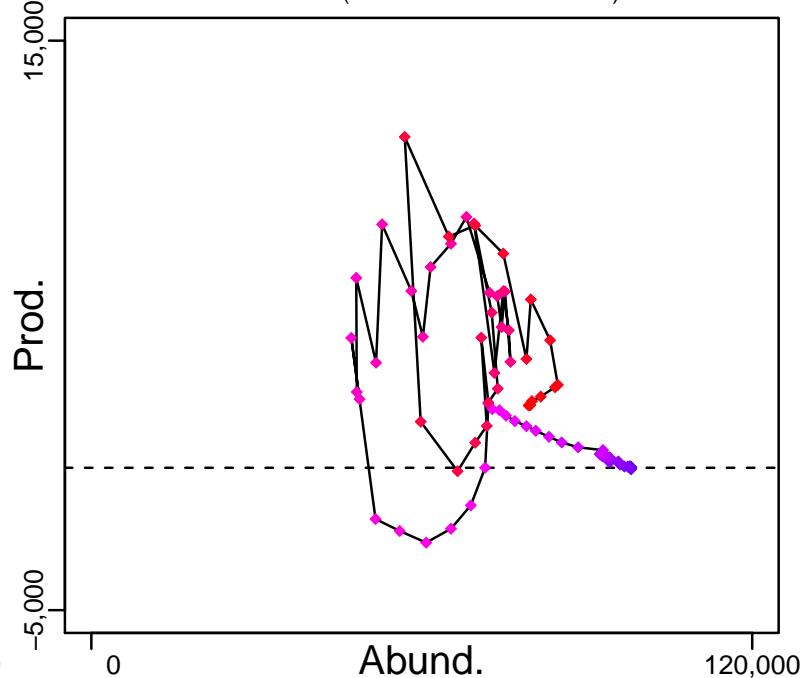
Kobe MGTpref (1914–2015–SISIMP2016)



Spawner Recruit (1914–2015–SISIMP2016)



Production (1914–2015–SISIMP2016)

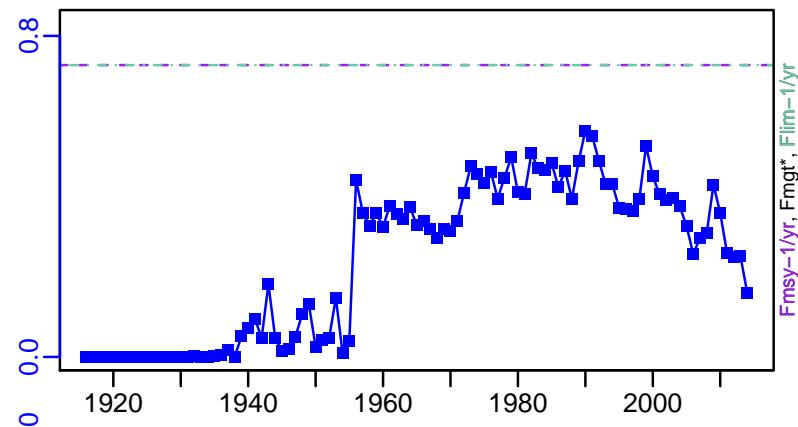
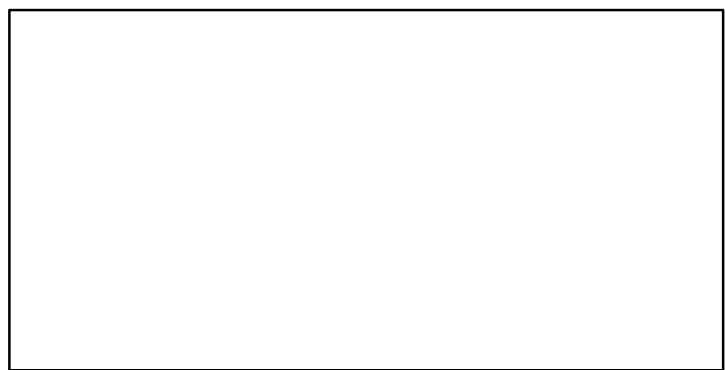
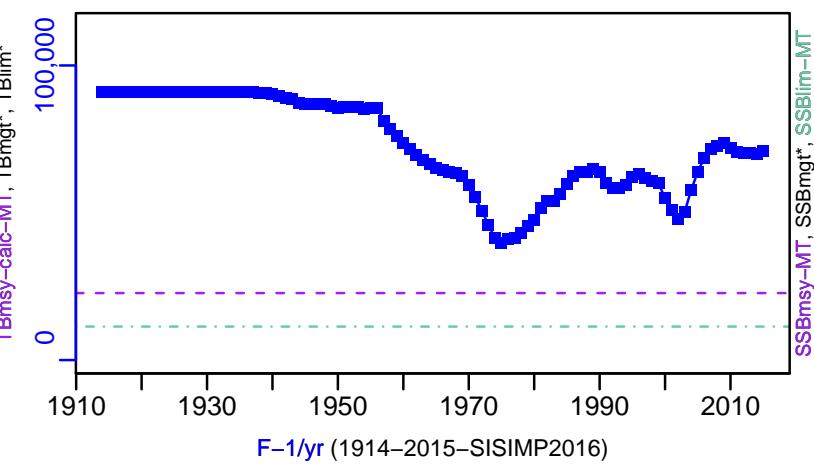
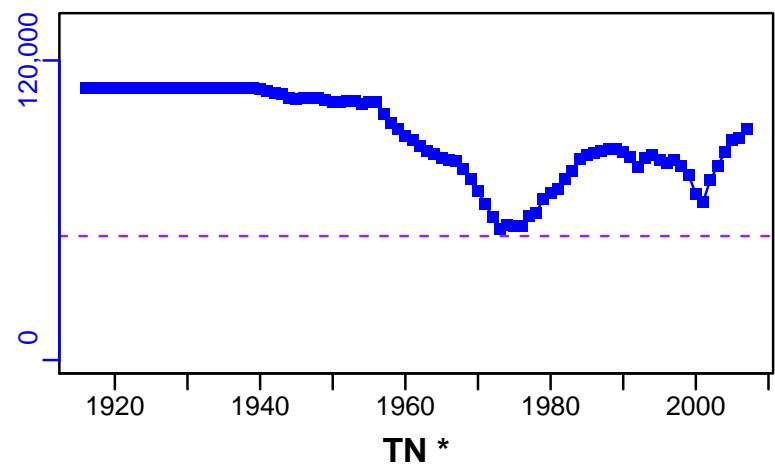


- ◆ Start Year
- ◆ End Year
- * No Data

Arrowtooth flounder Pacific Coast [ARFLOUNDPCOAST]

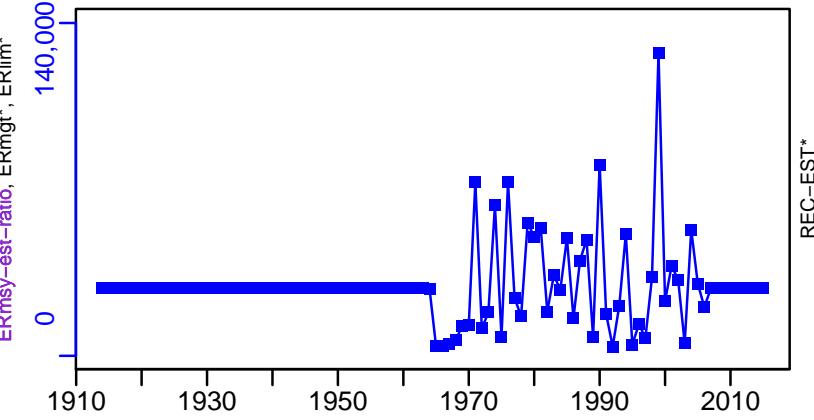
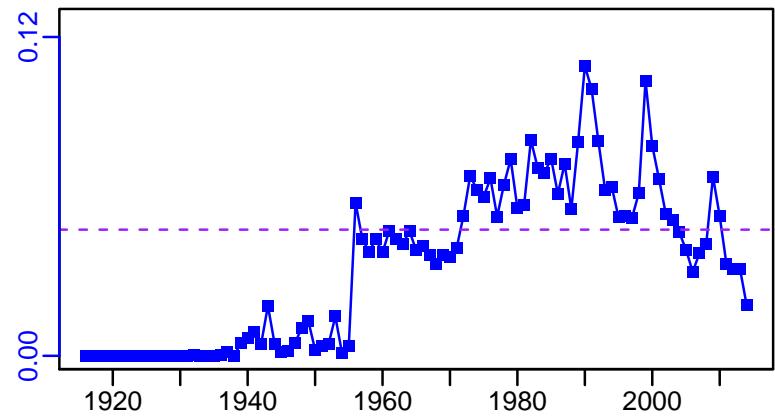
TB-MT (1916–2007–BRANCH)

SSB-MT (1914–2015–SISIMP2016)



ER-calc-ratio (1914–2015–SISIMP2016)

R-E00 (1914–2015–SISIMP2016)

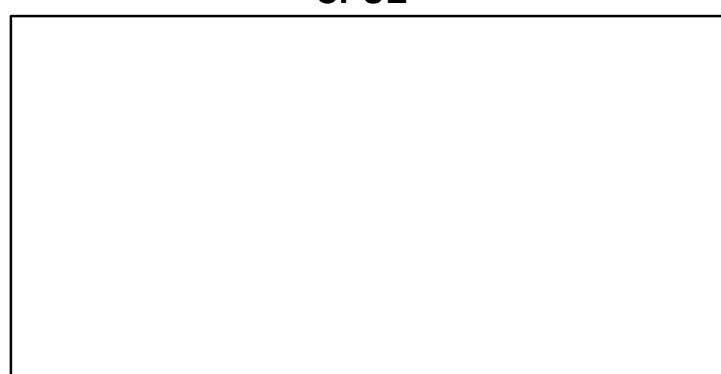
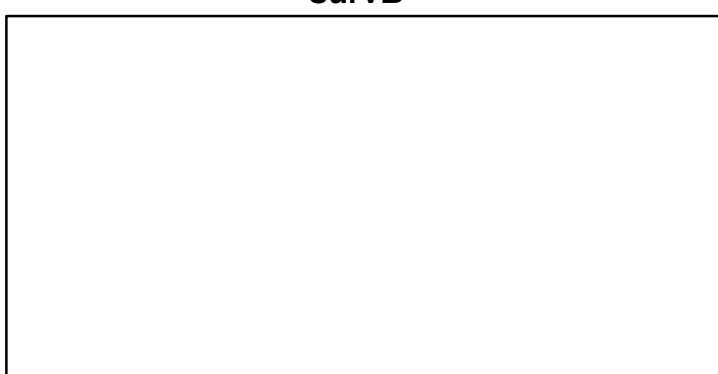
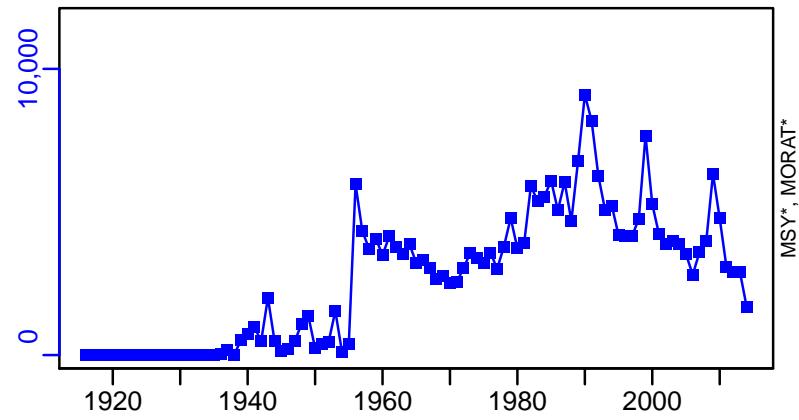


| | | | | | |
|---------------------------------------|--------------------|---------------------------------------|------------|-------------------------------------|---------|
| ■ | Listed time series | — | Target BRP | — | Rec-Est |
| — | MSY-based BRP | — | Lim BRP | * | No Data |

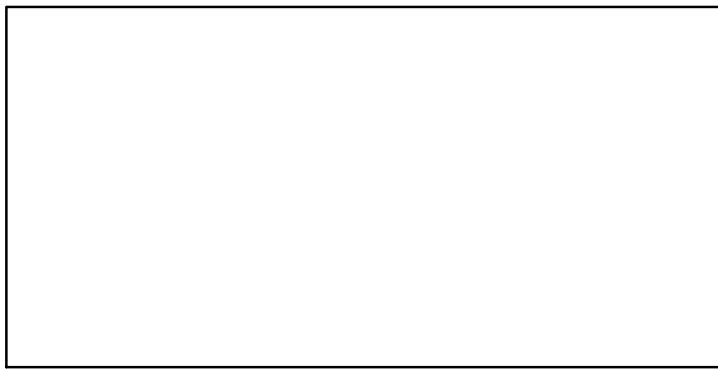
Arrowtooth flounder Pacific Coast [ARFLOUNDPCOAST]

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

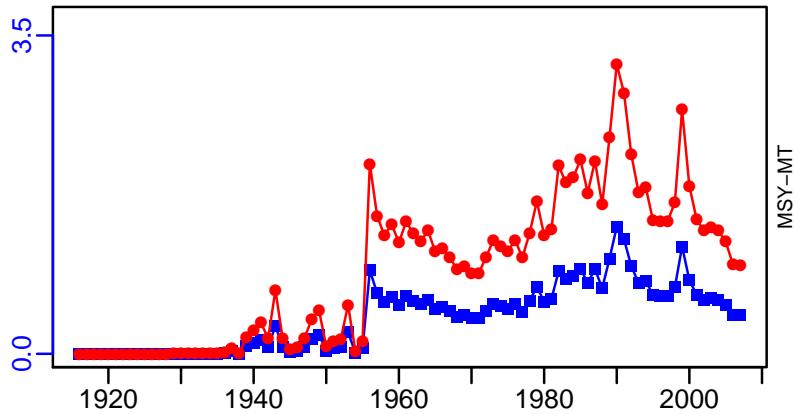
TAC*, Cpair*, Cadv*



EFFORT*



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



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

Aurora rockfish Pacific Coast [AUROCKPCOAST]

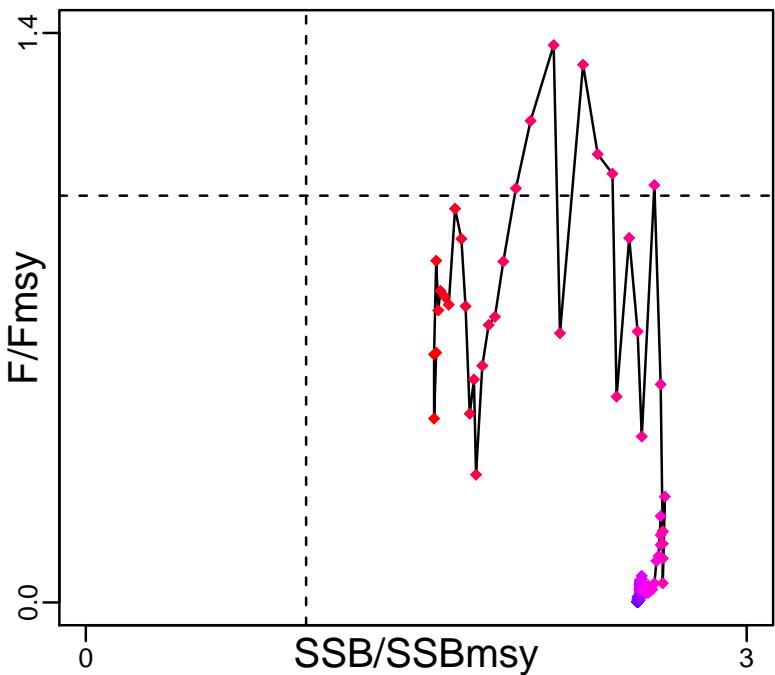
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastes aurora |
| Current Assess ID | NWFSC-AUROCKPCOAST-1916-2013-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

| Reference Points | | | |
|-------------------------|------------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | - | - | - |
| SSBmsy | SSBmsy-MT | 2013 | 1050 |
| Fmsy | Fmsy-1/yr | 2013 | 0.5 |
| ERmsy | ERmsy-conv-ratio | 2013 | 0.027 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2013 | 72 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | SSBlim-MT | 2013 | 657 |
| Flim | Flim-1/yr | 2013 | 0.5 |
| ERlim | - | - | - |

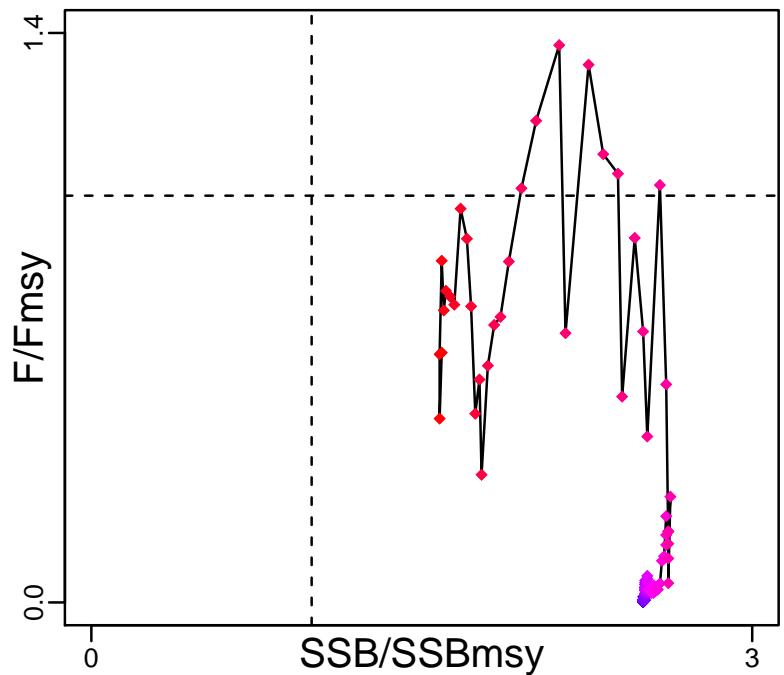
| Time Series | | | | | |
|--------------------|--------------------------------|------------------|-------------------|------------|------------|
| Type | ID | Asmt Year | Curr Value | Sex | Age |
| TB | TB-MT | 2013 | 4370 | - | 0+ |
| SSB | SSB-MT | 2013 | 1670 | Females | 12.56 |
| TN | - | - | - | - | - |
| R | R-E00 | 2013 | 736,000 | - | 0 |
| F | F-1/yr | 2013 | 0.307 | - | - |
| ER | ER-calc-ratio | 2013 | 0.01 | - | - |
| TC | TC-MT | 2013 | 43 | | |
| TL | - | - | - | | |
| TB/TBmsy | - | - | - | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2013 | 1.59 | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2013 | 0.614 | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-conv-ratio | 2013 | 0.366 | | |
| TB/TBmgt | - | - | - | | |
| SSB/SSBmgt | - | - | - | | |
| F/Fmgt | - | - | - | | |
| ER/ERmgt | - | - | - | | |

Aurora rockfish Pacific Coast [AUROCKPCOAST]

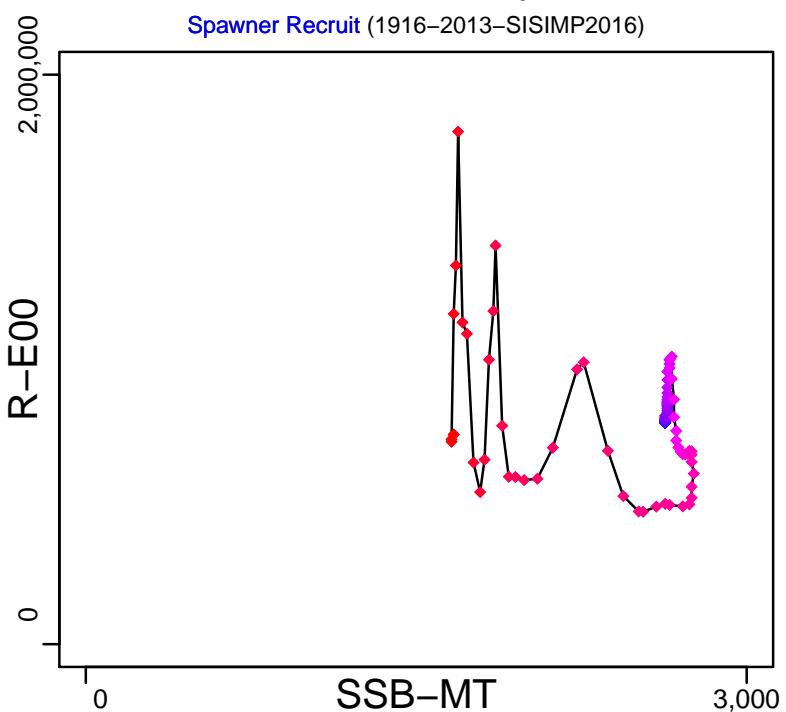
Kobe MSYpref (1916–2013–SISIMP2016)



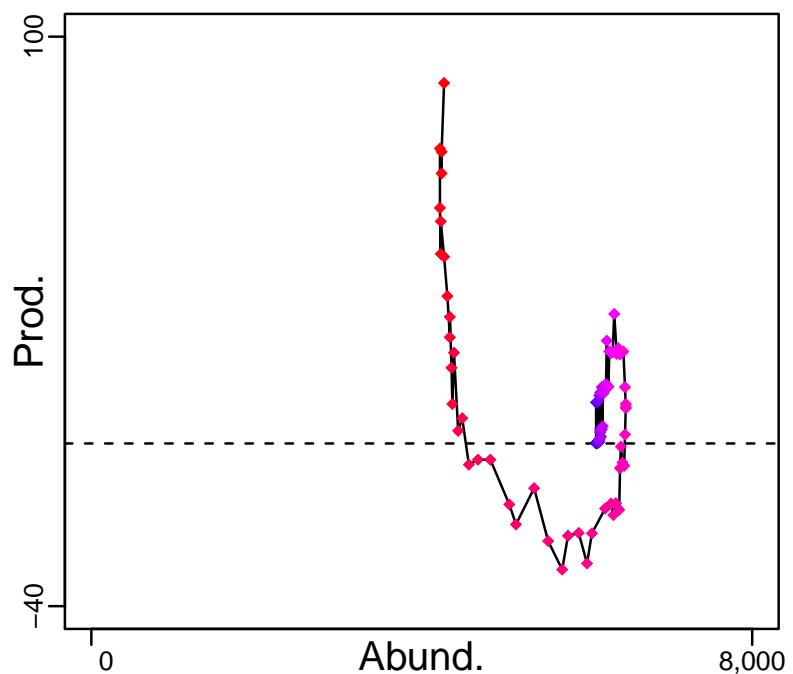
Kobe MGTpref (1916–2013–SISIMP2016)



Spawner Recruit (1916–2013–SISIMP2016)



Production (1916–2013–SISIMP2016)

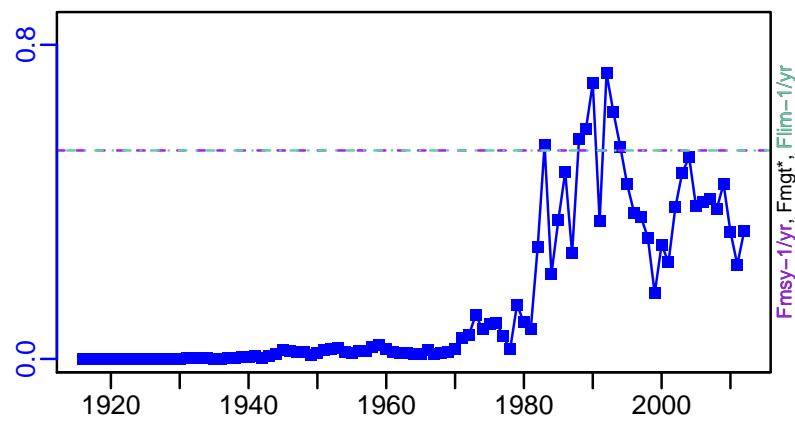
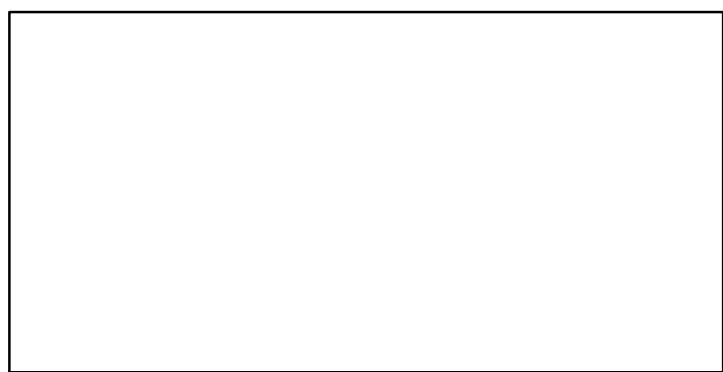
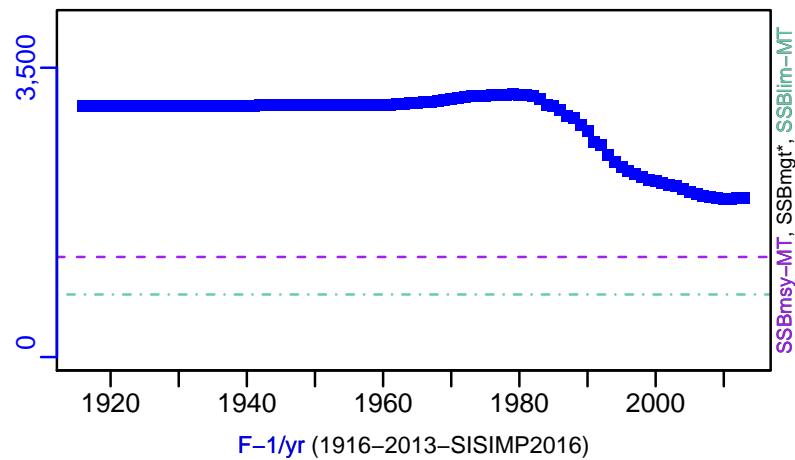
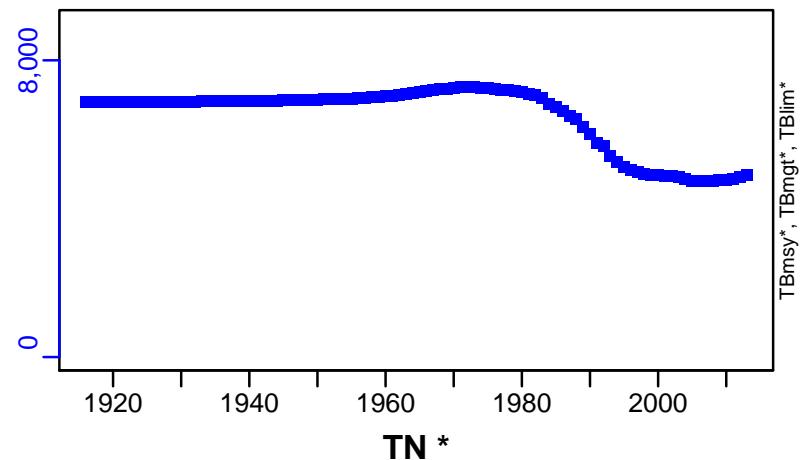


◆ Start Year ◆ End Year * No Data

Aurora rockfish Pacific Coast [AUROCKPCOAST]

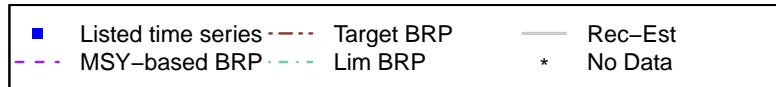
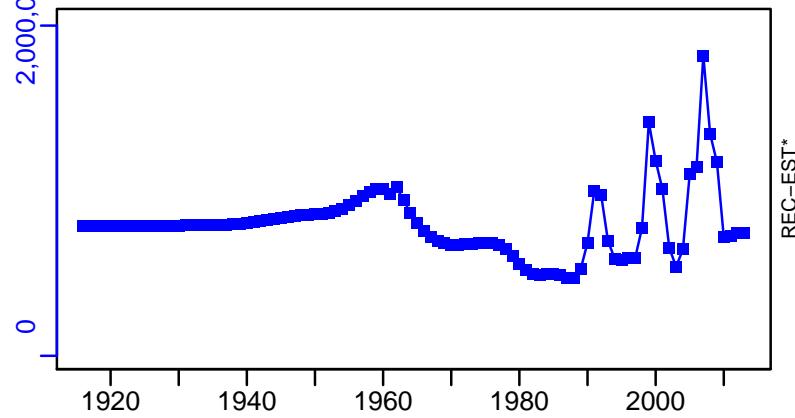
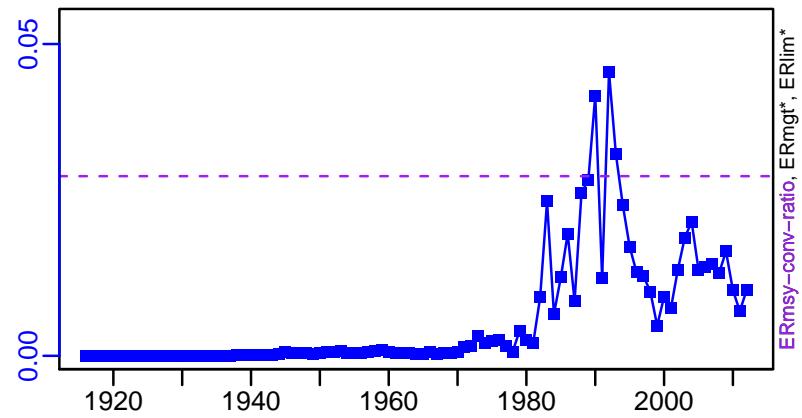
TB-MT (1916–2013–SISIMP2016)

SSB-MT (1916–2013–SISIMP2016)



ER-calc-ratio (1916–2013–SISIMP2016)

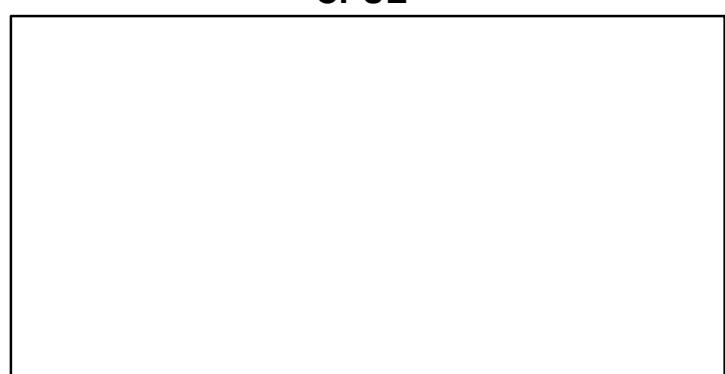
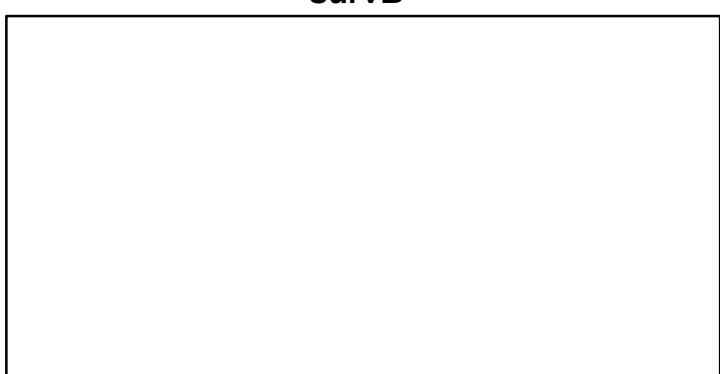
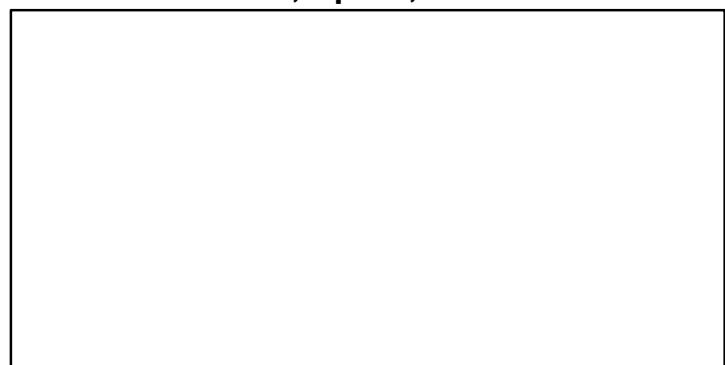
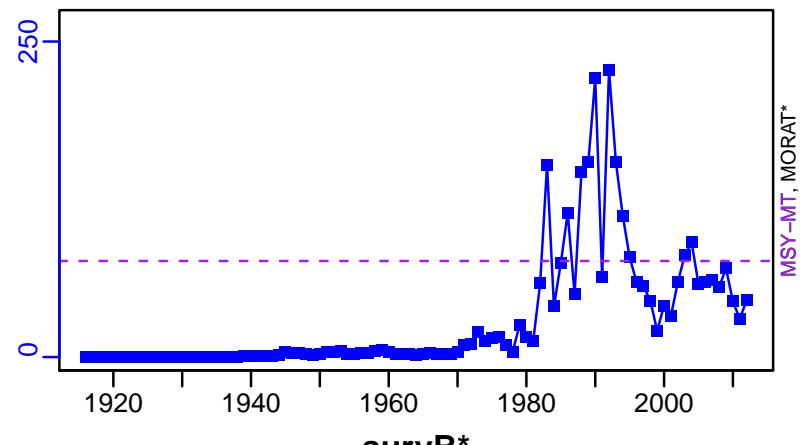
R-E00 (1916–2013–SISIMP2016)



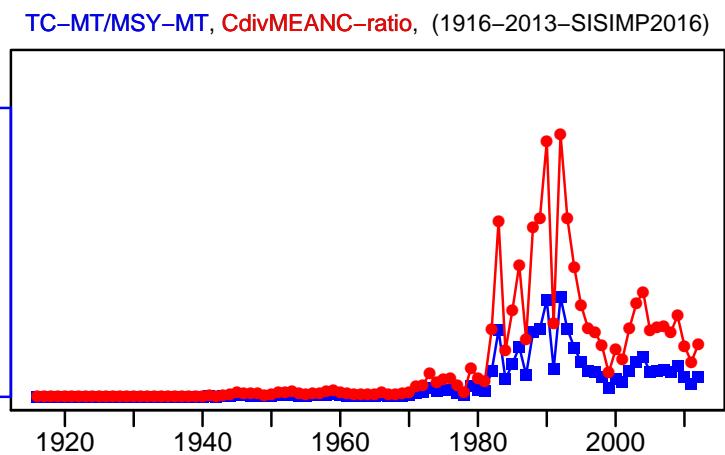
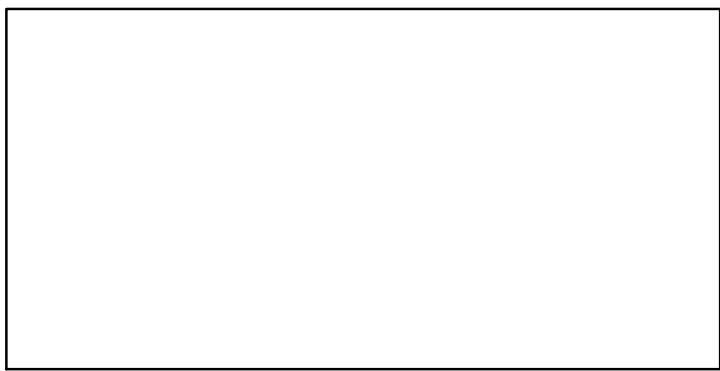
Aurora rockfish Pacific Coast [AUROCKPCOAST]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

Blackgill rockfish Pacific Coast [BGROCKPCOAST]

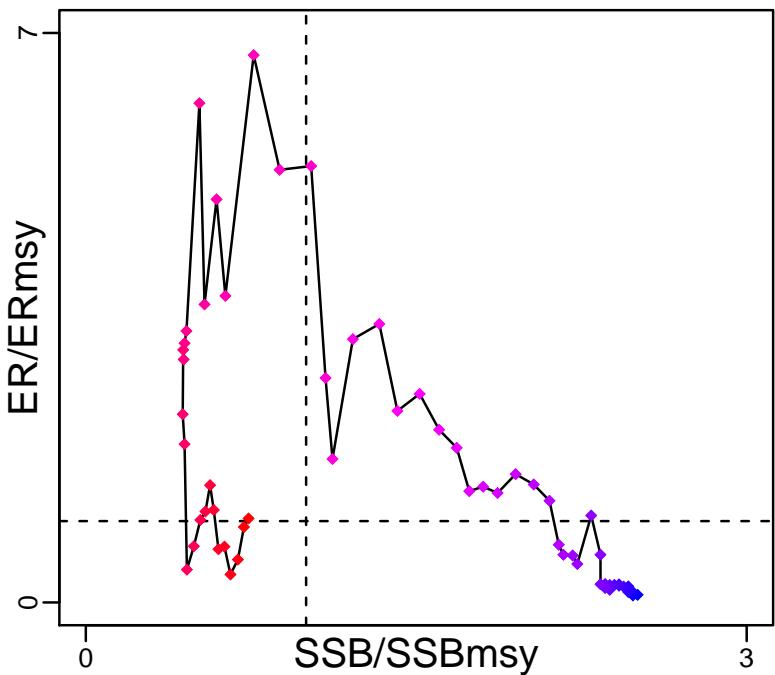
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes melanostomus |
| Current Assess ID | NWFSC-BGROCKPCOAST-1950-2011-STACHURA |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US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

| Reference Points | | | |
|-------------------------|---------------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-MT | 2011 | 5063 |
| SSBmsy | SSBmsy-pr-E00larvae | 2011 | 475,100 |
| Fmsy | - | - | - |
| ERmsy | ERmsy-pr-ratio | 2011 | 0.022 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2011 | 12,927 |
| SSB0 | SSB0-E00larvae | 2011 | 1,187,800 |
| MSY | MSY-MT | 2011 | 222 |
| M | M-1/yr | 2011 | 0.07 |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | - | - | - |
| ERlim | - | - | - |

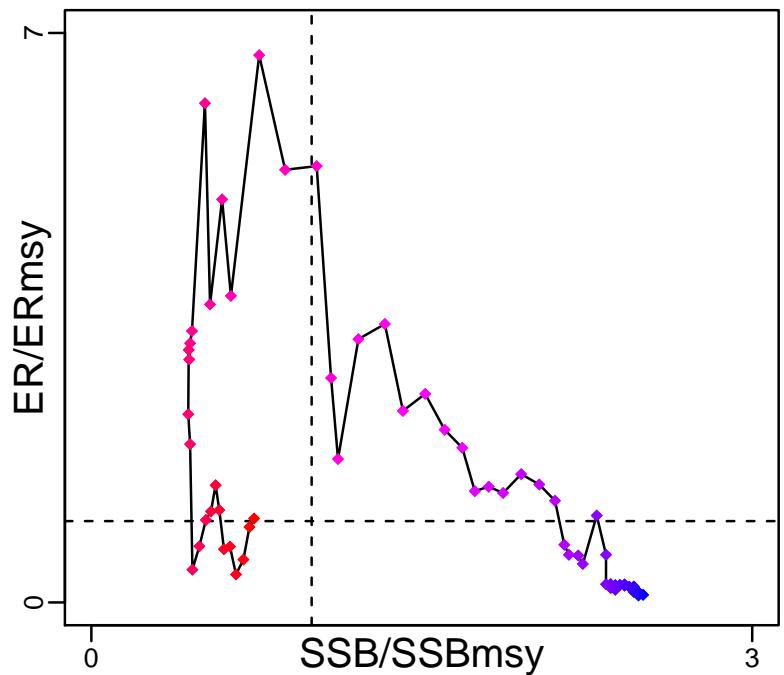
| Time Series | | | | | | |
|--------------------|-----------------------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2011 | 6590 | - | 0+ | |
| SSB | SSB-E00larvae | 2011 | 359,000 | Females | 20+ | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2011 | 1,920,000 | - | 0 | |
| F | - | - | - | - | - | |
| ER | ER-ratio | 2011 | 0.023 | Both | 1+ | |
| TC | TC-MT | 2011 | 149 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-MT | 2011 | 1.302 | | | |
| SSB/SSBmsy | SSB-E00larvae/SSBmsy-pr-E00larvae | 2011 | 0.756 | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-ratio/ERmsy-pr-ratio | 2011 | 1.032 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Blackgill rockfish Pacific Coast [BGROCKPCOAST]

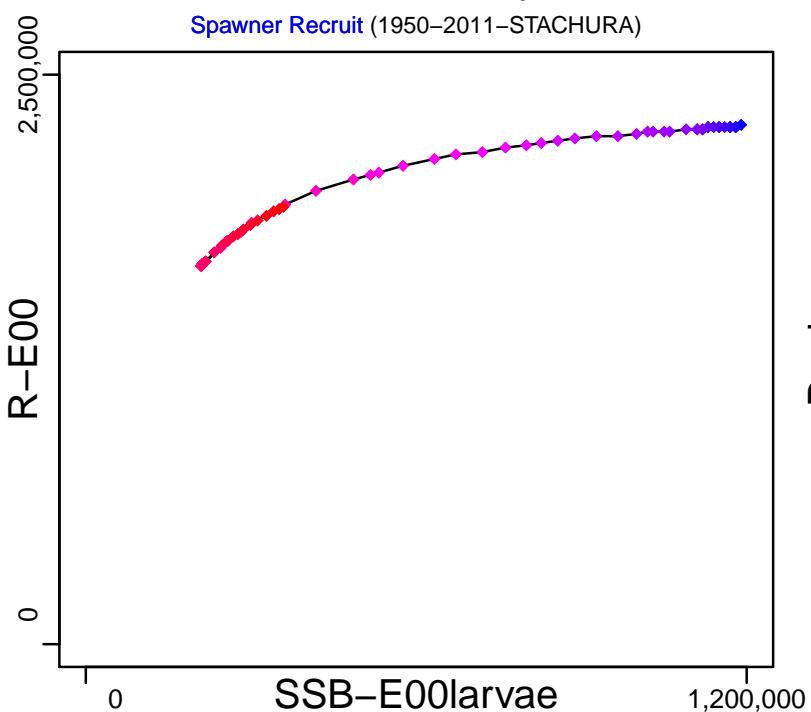
Kobe MSYpref (1950–2011–STACHURA)



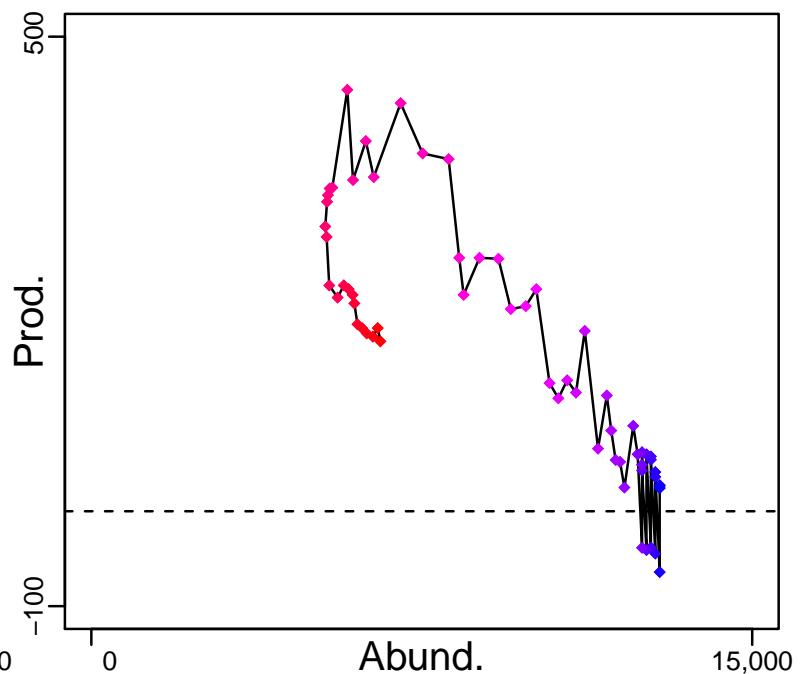
Kobe MGTpref (1950–2011–STACHURA)



Spawner Recruit (1950–2011–STACHURA)



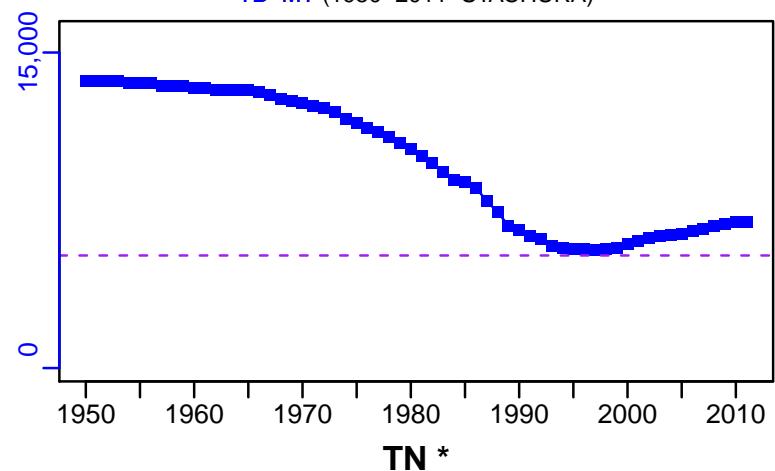
Production (1950–2011–STACHURA)



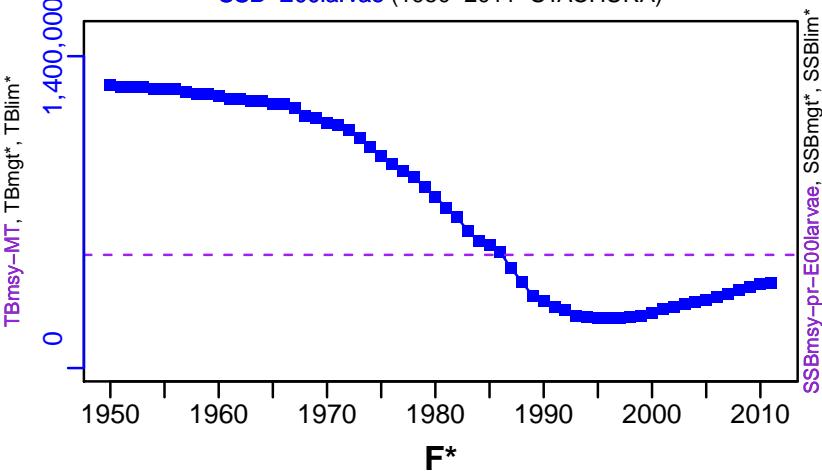
| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Blackgill rockfish Pacific Coast [BGROCKPCOAST]

TB-MT (1950–2011–STACHURA)



SSB-E00larvae (1950–2011–STACHURA)

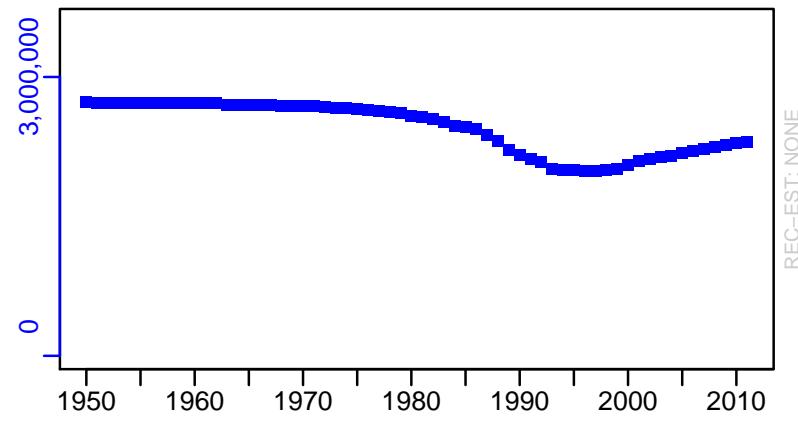
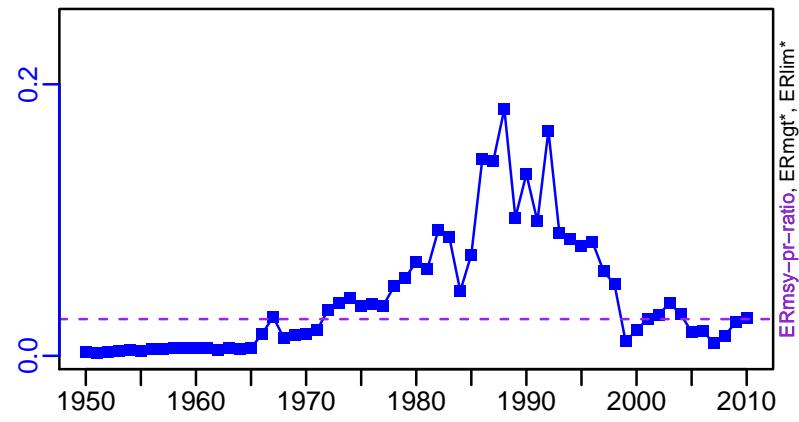


TN *

F*

ER-ratio (1950–2011–STACHURA)

R-E00 (1950–2011–STACHURA)



SSBmsy-pr-E00larvae, SSBmgt*, SSBlim*

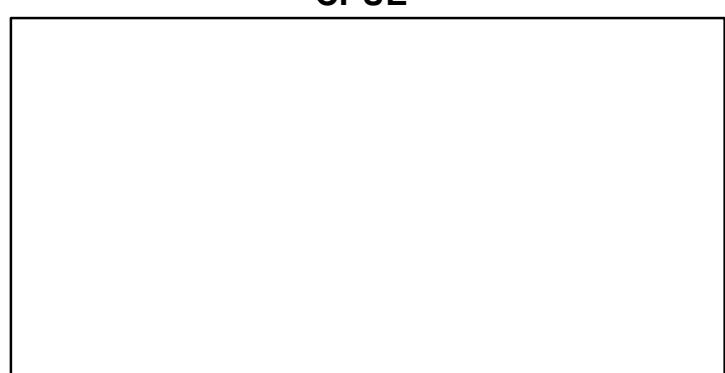
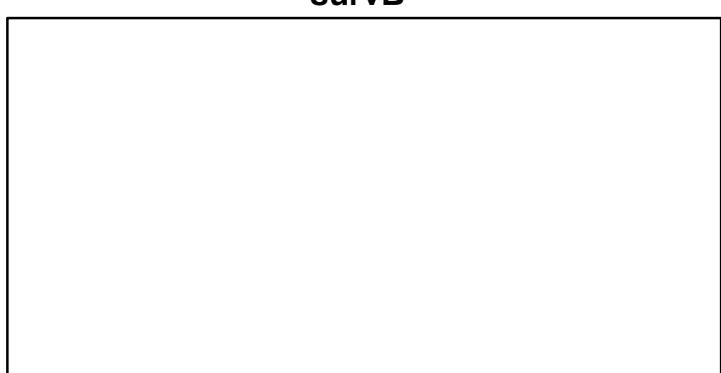
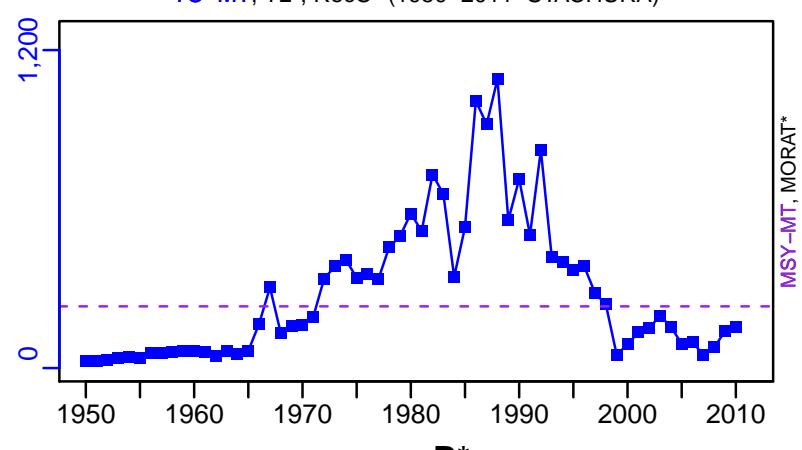
REC-EST: NONE

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

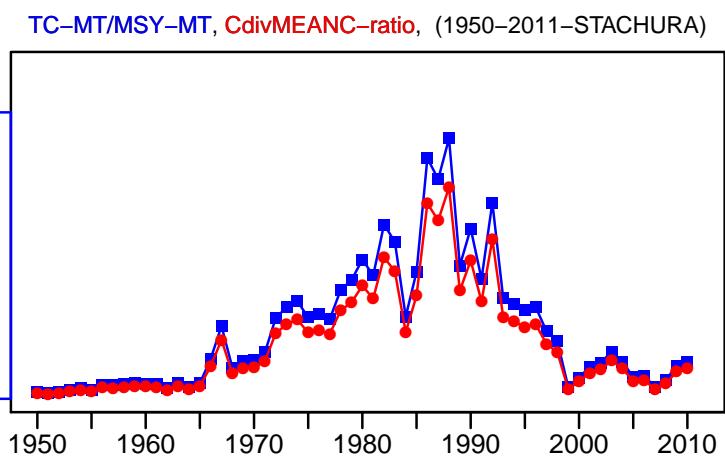
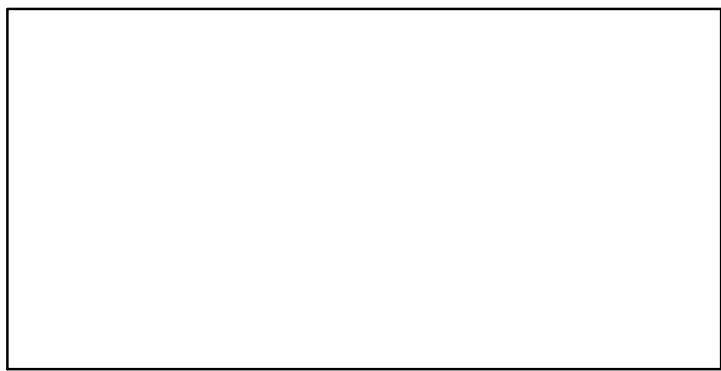
Blackgill rockfish Pacific Coast [BGROCKPCOAST]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

Black rockfish California [BLACKROCKCAL]

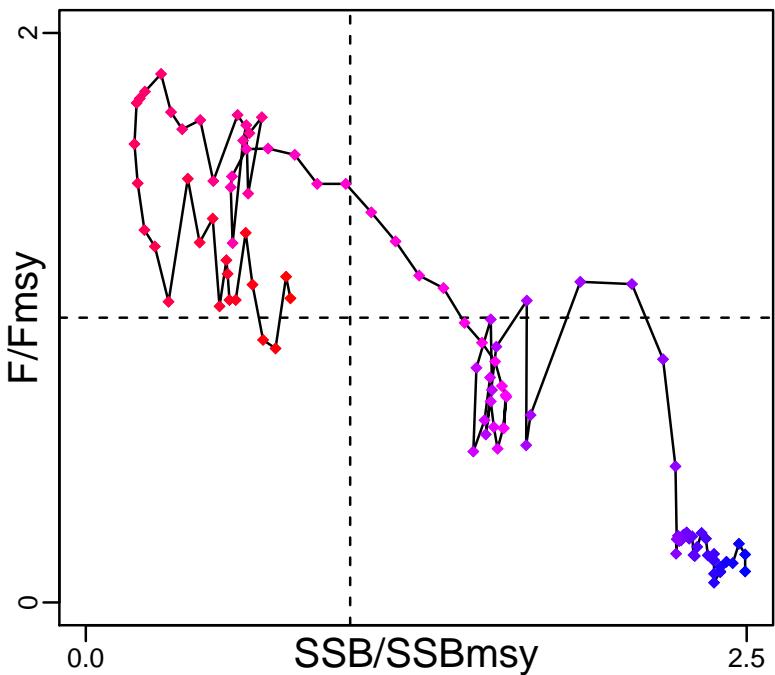
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastes melanops |
| Current Assess ID | SWFSC-BLACKROCKCAL-1916-2015-SISIMP2016 |
| Area | California |
| Management Authority | National Marine Fisheries Service, US national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

| Reference Points | | | |
|-------------------------|------------------|-----------|-------|
| Type | ID | Asmt Year | Value |
| TBmsy | - | - | - |
| SSBmsy | SSBmsy-MT | 2015 | 425 |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-conv-ratio | 2015 | 0.08 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2015 | 343 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | SSBlim-MT | 2015 | 266 |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

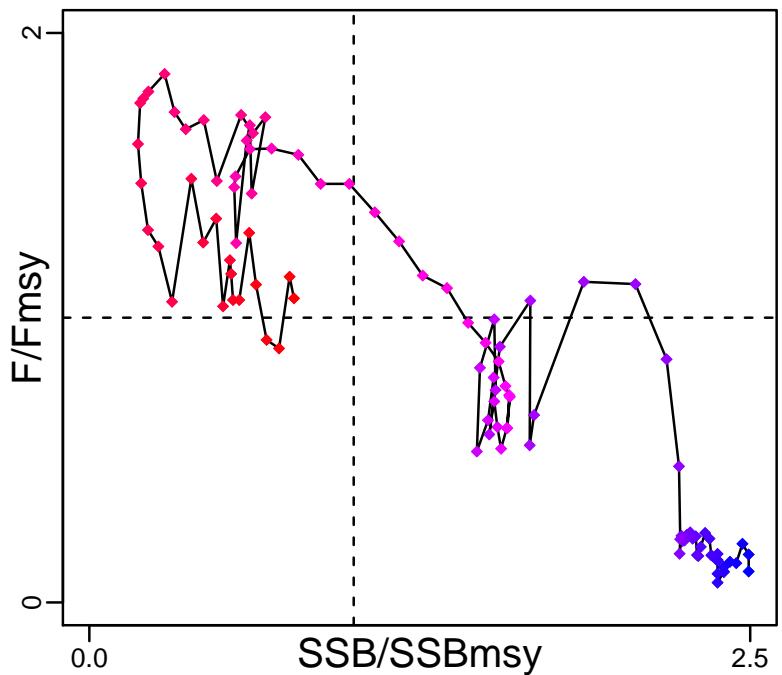
| Time Series | | | | | | |
|--------------------|--------------------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 5770 | - | 3+ | |
| SSB | SSB-MT | 2015 | 353 | Females | 7+ | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 1,750,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.534 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.068 | - | - | |
| TC | TC-MT | 2015 | 380 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | - | - | - | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2015 | 0.831 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 1.068 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-conv-ratio | 2015 | 0.847 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Black rockfish California [BLACKROCKCAL]

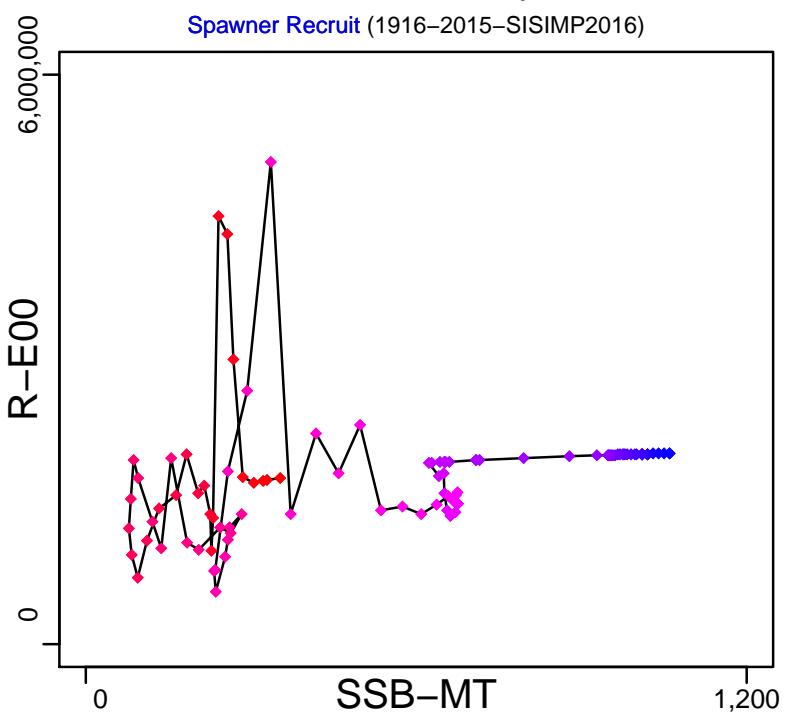
Kobe MSYpref (1916–2015–SISIMP2016)



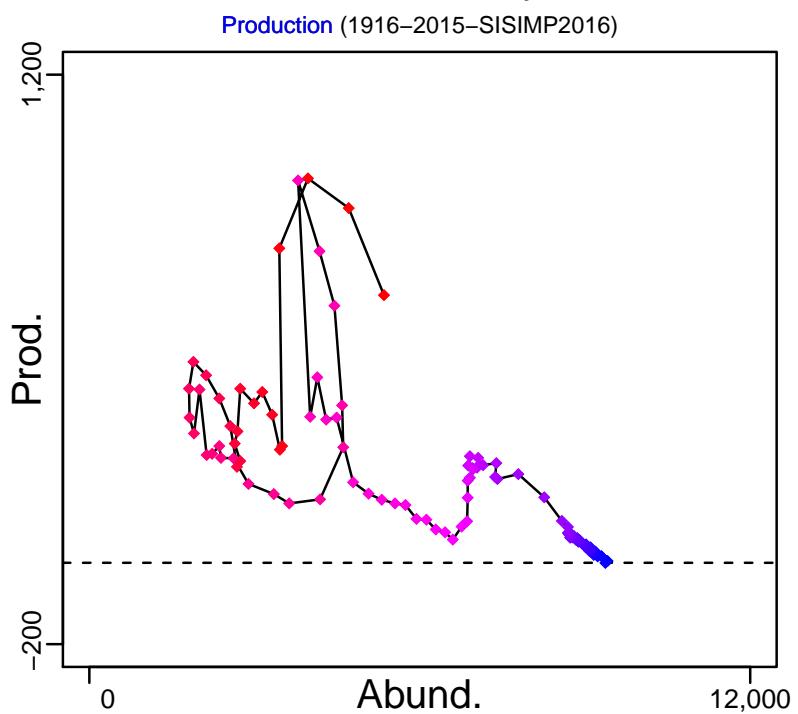
Kobe MGTPref (1916–2015–SISIMP2016)



Spawner Recruit (1916–2015–SISIMP2016)



Production (1916–2015–SISIMP2016)

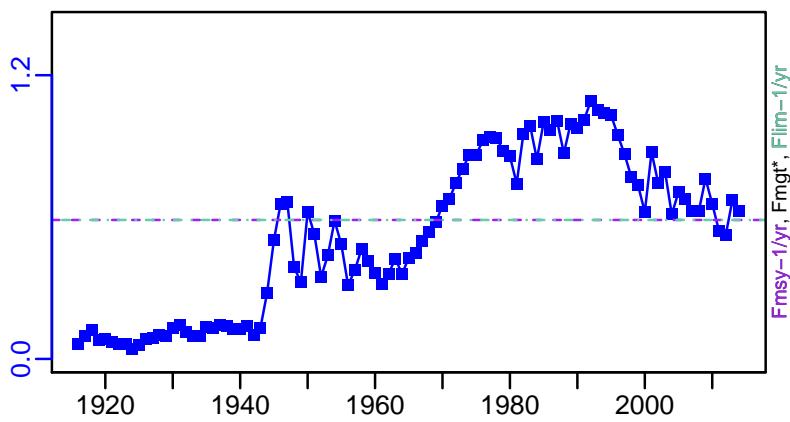
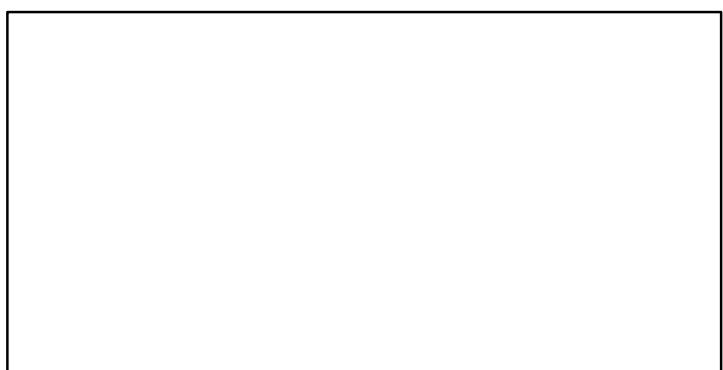
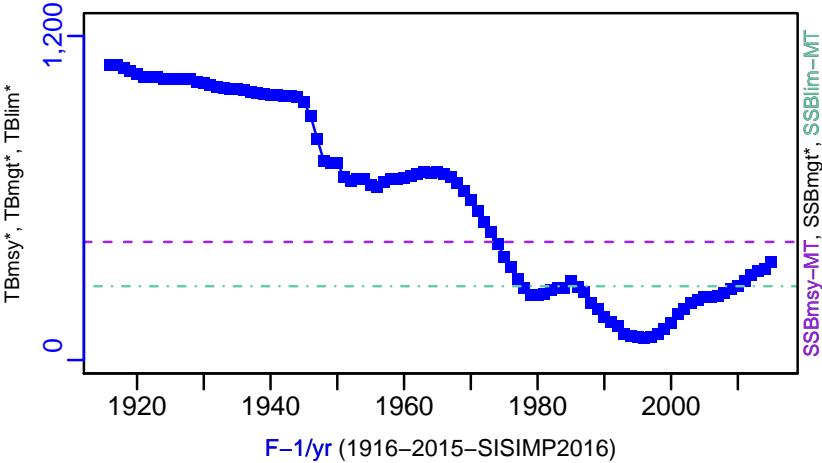
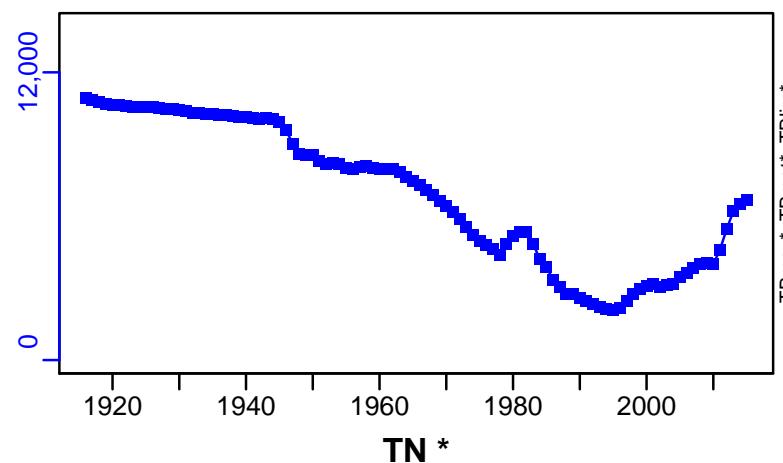


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Black rockfish California [BLACKROCKCAL]

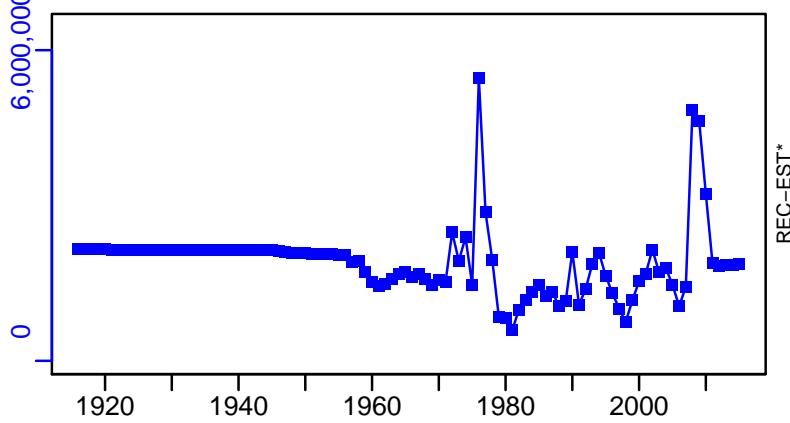
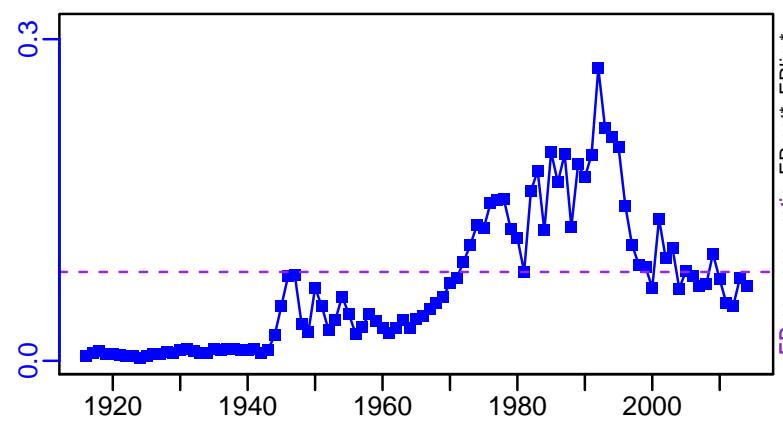
TB-MT (1916–2015–SISIMP2016)

SSB-MT (1916–2015–SISIMP2016)



ER-calc-ratio (1916–2015–SISIMP2016)

R-E00 (1916–2015–SISIMP2016)

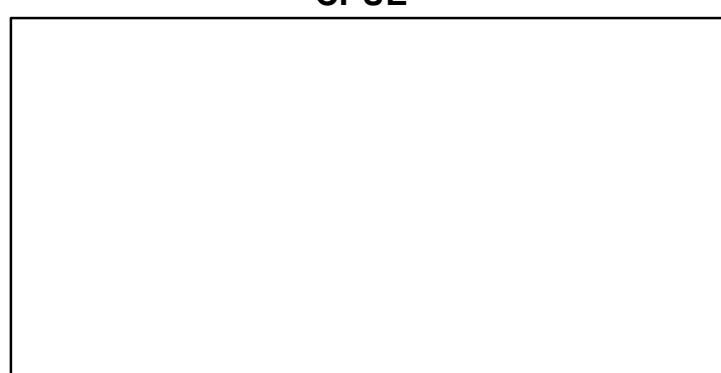
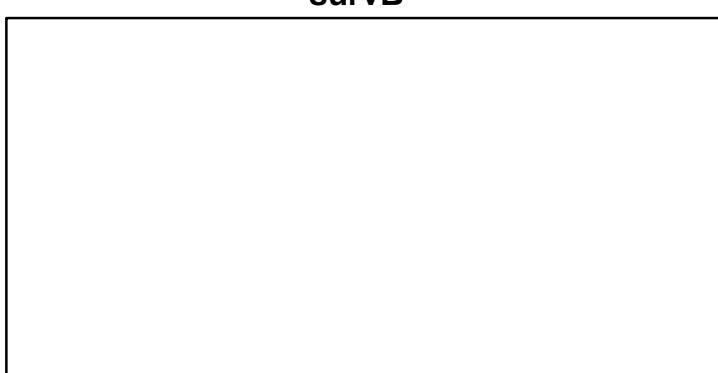
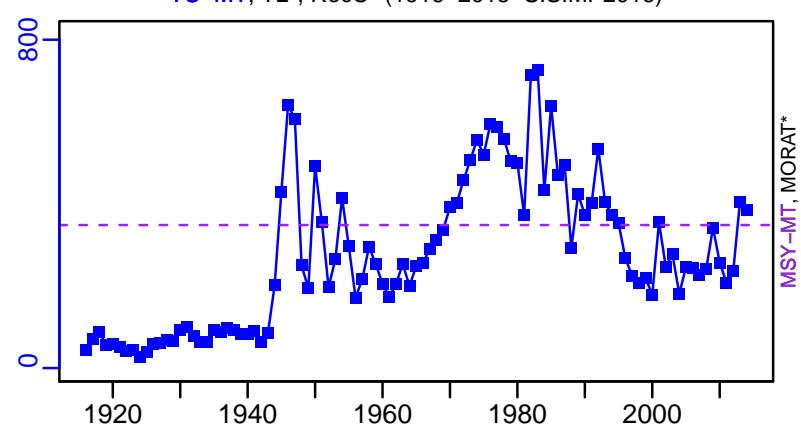


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - Lim BRP | * No Data |

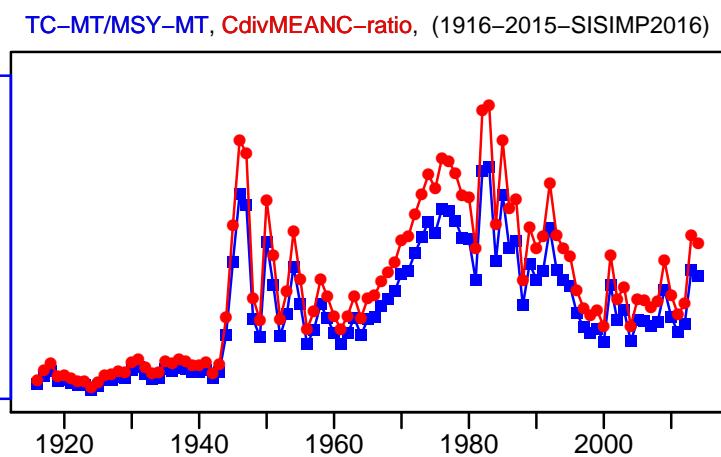
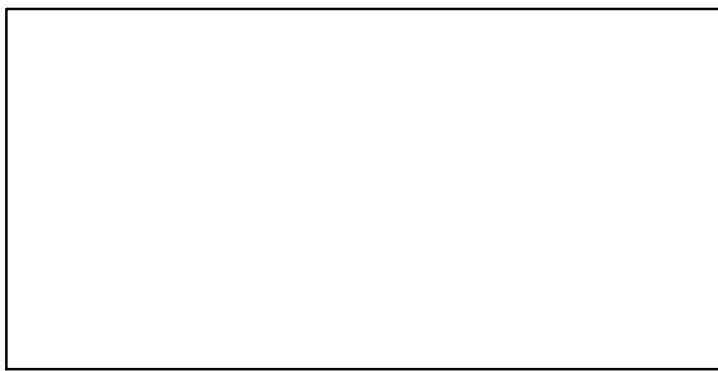
Black rockfish California [BLACKROCKCAL]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

Black rockfish Oregon Coast [BLACKROCKORECOAST]

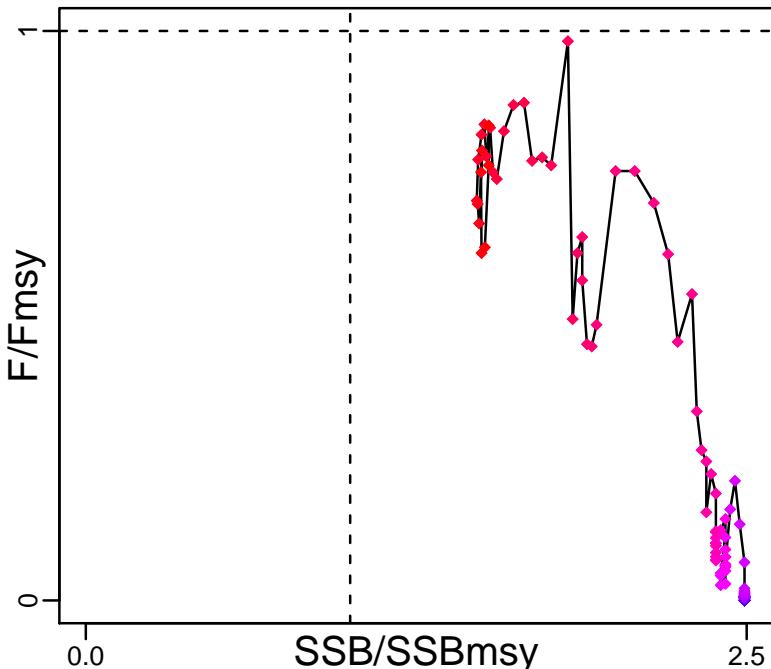
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes melanops |
| Current Assess ID | NWFSC-BLACKROCKORECOAST-1892-2015-SISIMP2016 |
| Area | Oregon Coast |
| Management Authority | National Marine Fisheries Service,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

| Reference Points | | | |
|-------------------------|------------------|-----------|-------|
| Type | ID | Asmt Year | Value |
| TBmsy | - | - | - |
| SSBmsy | SSBmsy-MT | 2015 | 554 |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-conv-ratio | 2015 | 0.093 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2015 | 518 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | SSBlim-MT | 2015 | 346 |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

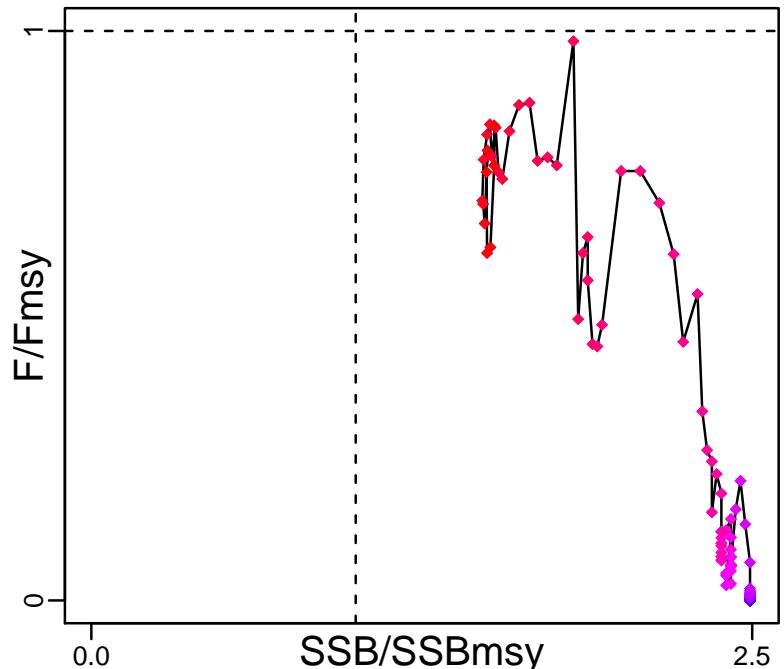
| Time Series | | | | | | |
|--------------------|--------------------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 8060 | - | 3+ | |
| SSB | SSB-MT | 2015 | 838 | Females | 7+ | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 3,510,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.417 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.06 | - | - | |
| TC | TC-MT | 2015 | 485 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | - | - | - | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2015 | 1.513 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.834 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-conv-ratio | 2015 | 0.643 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Black rockfish Oregon Coast [BLACKROCKORECOAST]

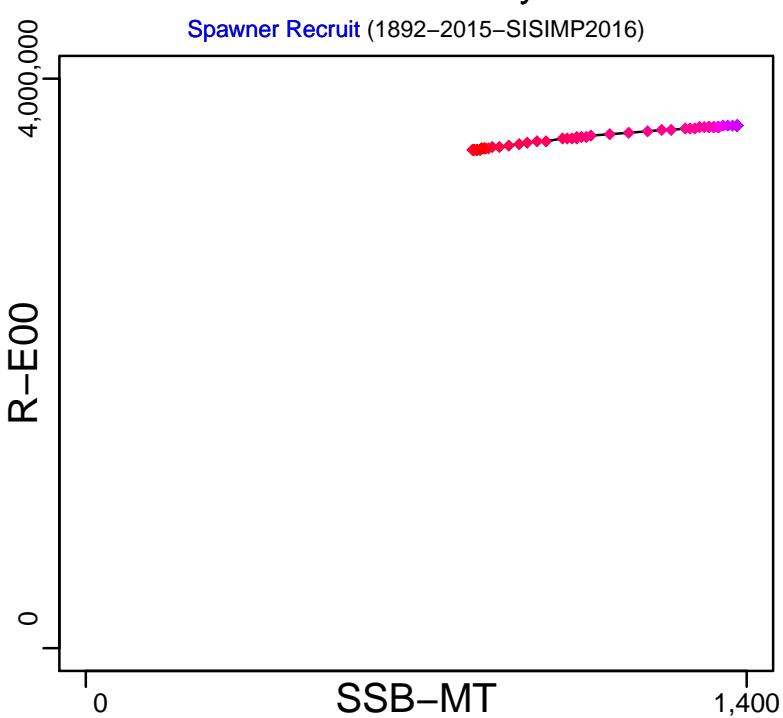
Kobe MSYpref (1892–2015–SISIMP2016)



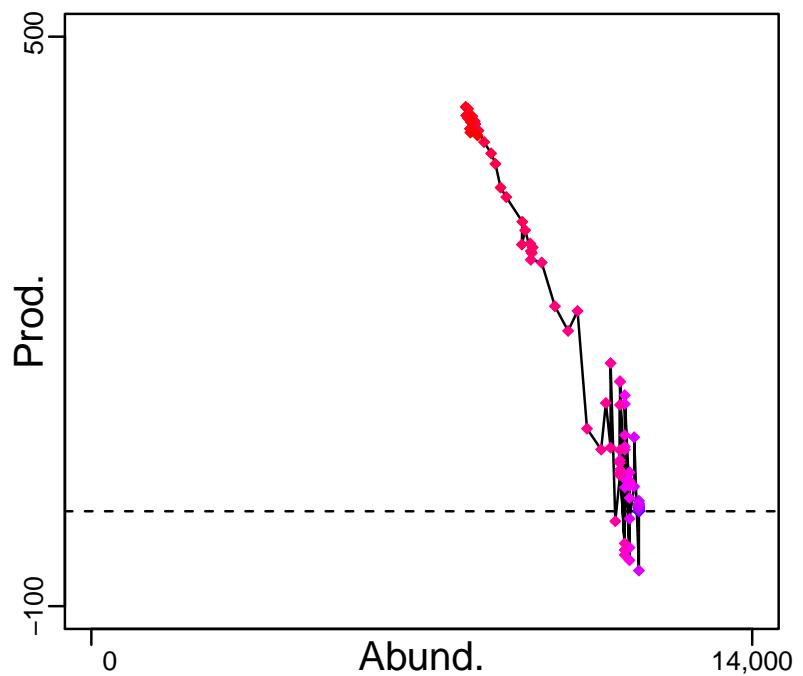
Kobe MGTPref (1892–2015–SISIMP2016)



Spawner Recruit (1892–2015–SISIMP2016)



Production (1892–2015–SISIMP2016)

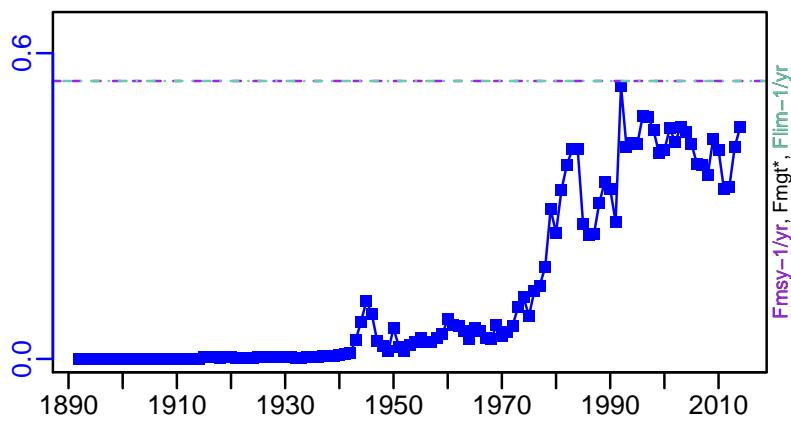
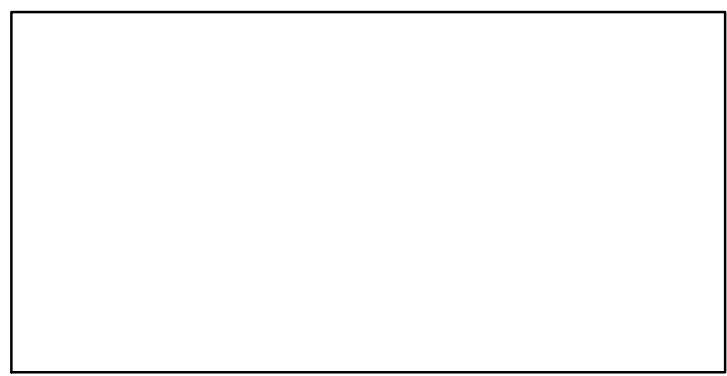
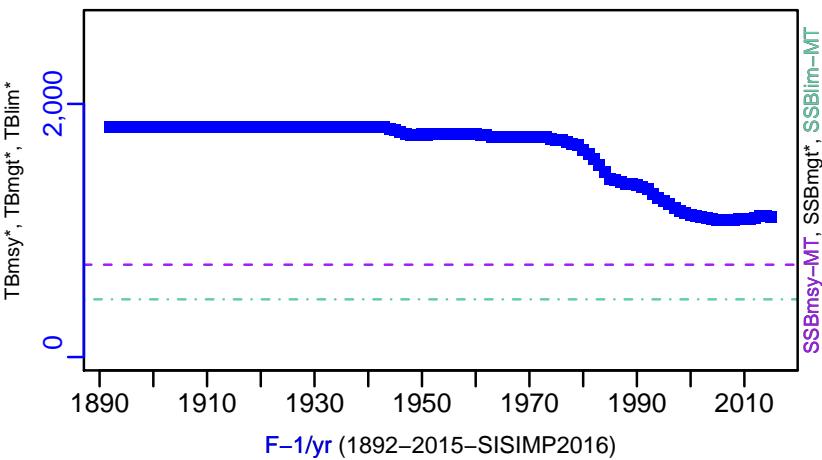
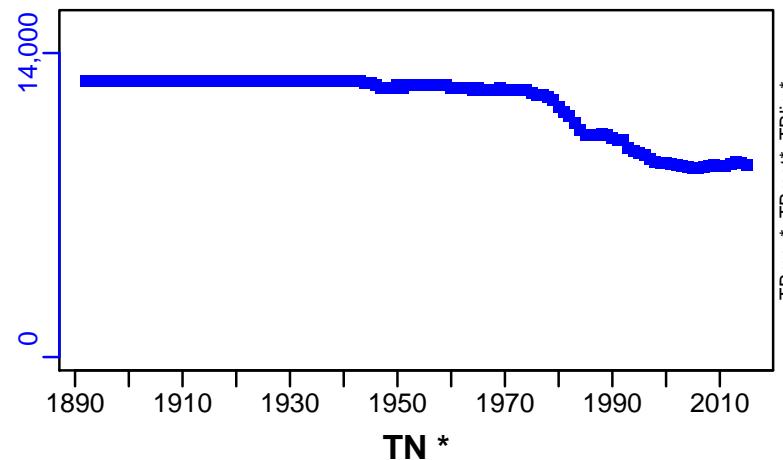


- ◆ Start Year
- ◆ End Year
- * No Data

Black rockfish Oregon Coast [BLACKROCKORECOAST]

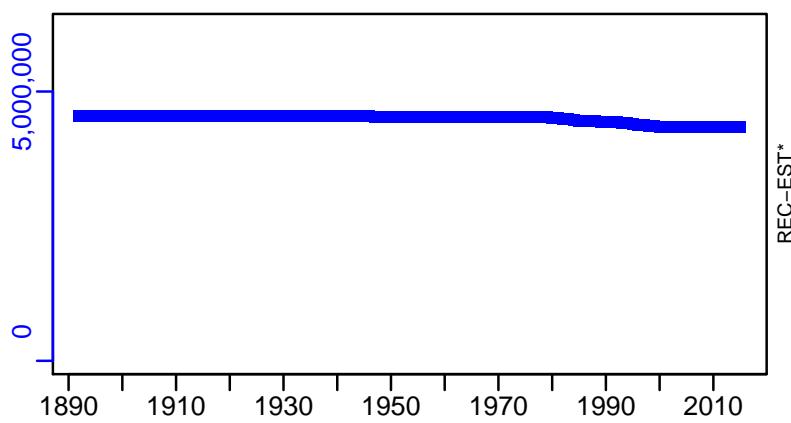
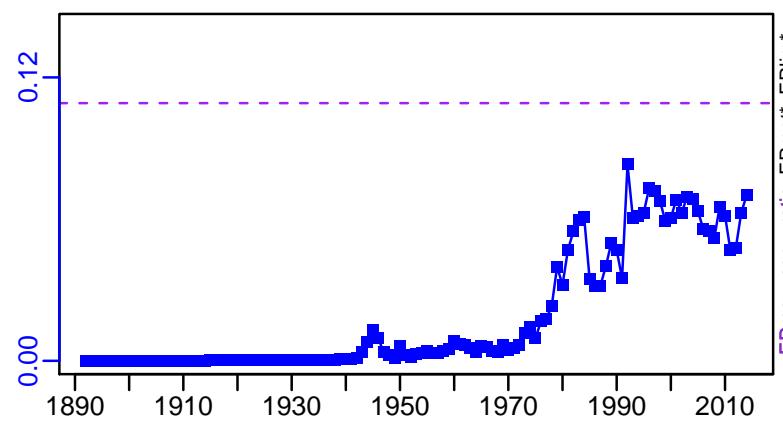
TB-MT (1892–2015–SISIMP2016)

SSB-MT (1892–2015–SISIMP2016)



ER-calc-ratio (1892–2015–SISIMP2016)

R-E00 (1892–2015–SISIMP2016)

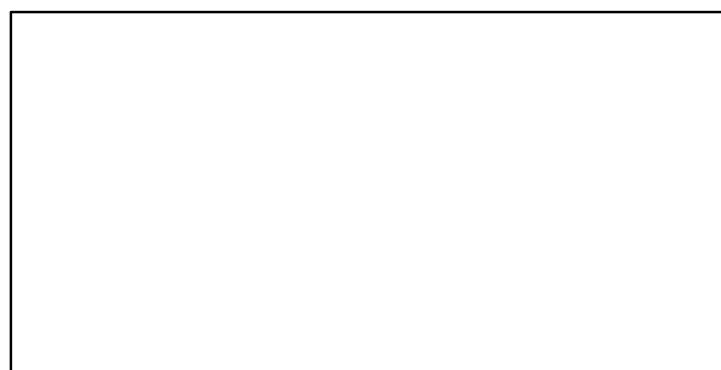
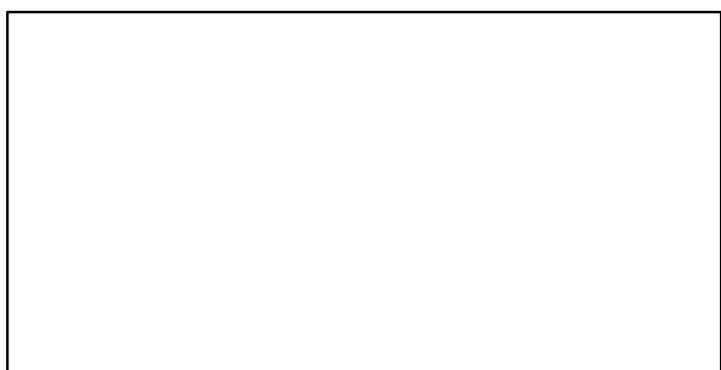
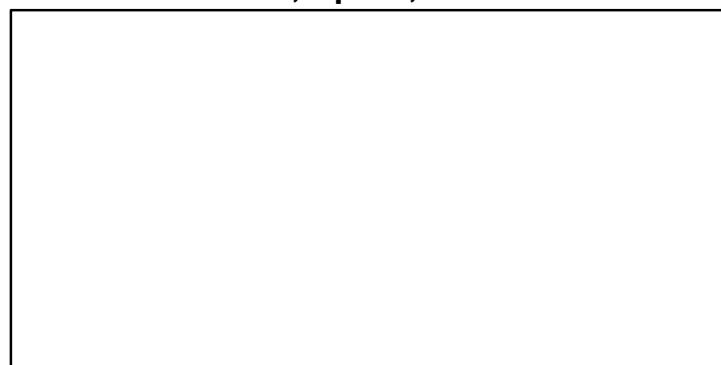
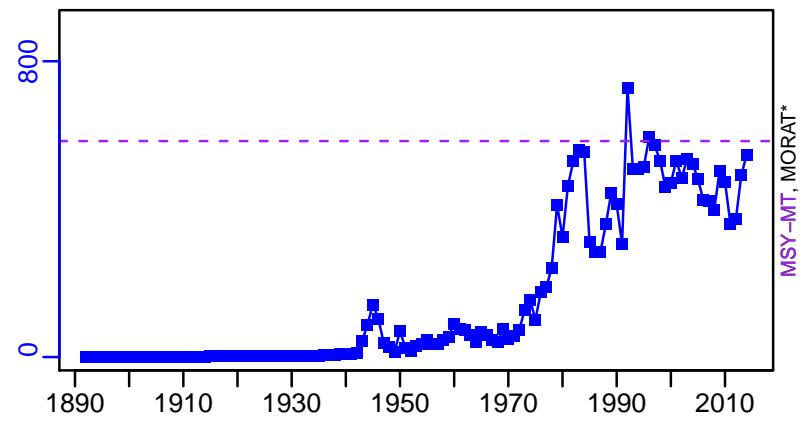


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | --- Lim BRP | * No Data |

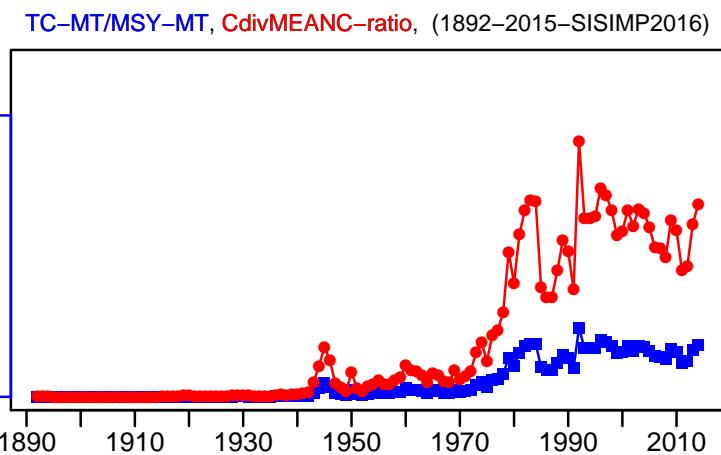
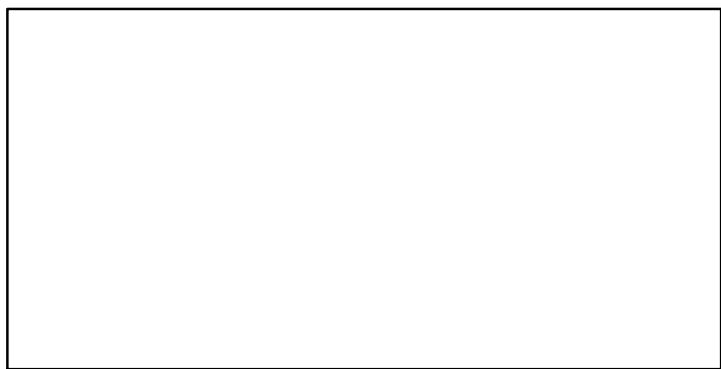
Black rockfish Oregon Coast [BLACKROCKORECOAST]

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]

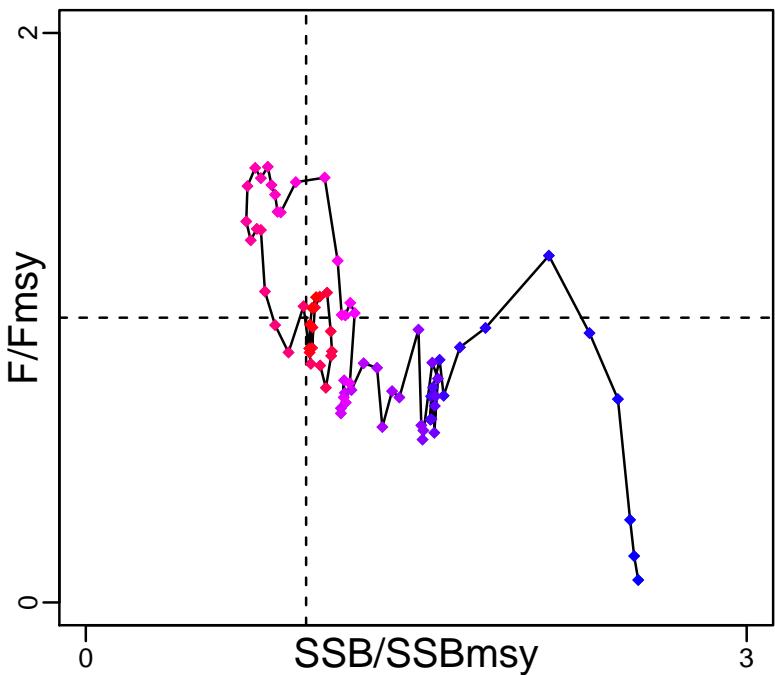
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes melanops |
| Current Assess ID | NWFSC-BLACKROCKWASH-1940-2015-SISIMP2016 |
| Area | Washington |
| Management Authority | National Marine Fisheries Service, US national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

| Reference Points | | | |
|-------------------------|-----------------|-----------|-------|
| Type | ID | Asmt Year | Value |
| TBmsy | - | - | - |
| SSBmsy | SSBmsy-MT | 2015 | 542 |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-est-ratio | 2015 | 0.05 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-est-MT | 2015 | 274 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | SSBlim-MT | 2015 | 339 |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

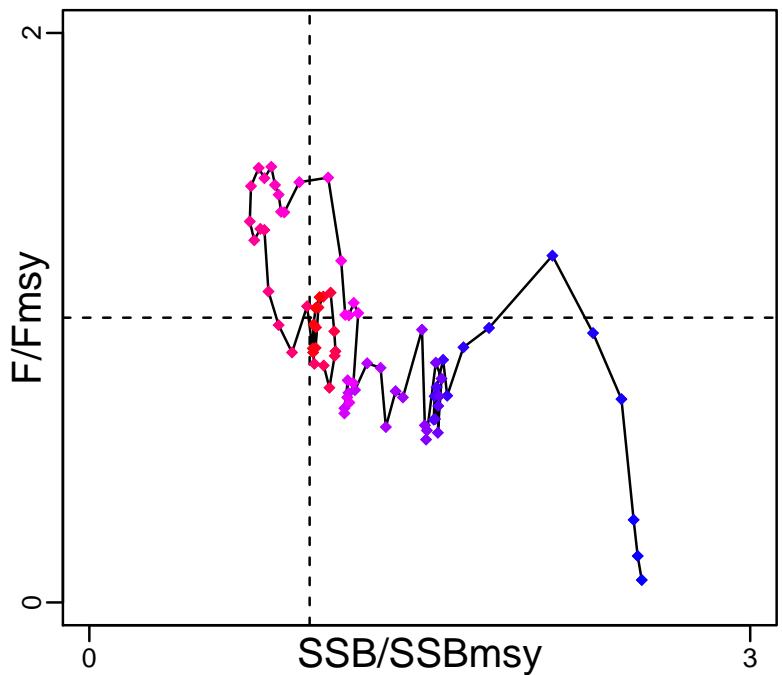
| Time Series | | | | | | |
|--------------------|-------------------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 5640 | - | 3+ | |
| SSB | SSB-MT | 2015 | 582 | Females | 7+ | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 1,910,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.536 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.063 | - | - | |
| TC | TC-MT | 2015 | 356 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | - | - | - | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2015 | 1.073 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 1.072 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-est-ratio | 2015 | 1.256 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Black rockfish Washington [BLACKROCKWASH]

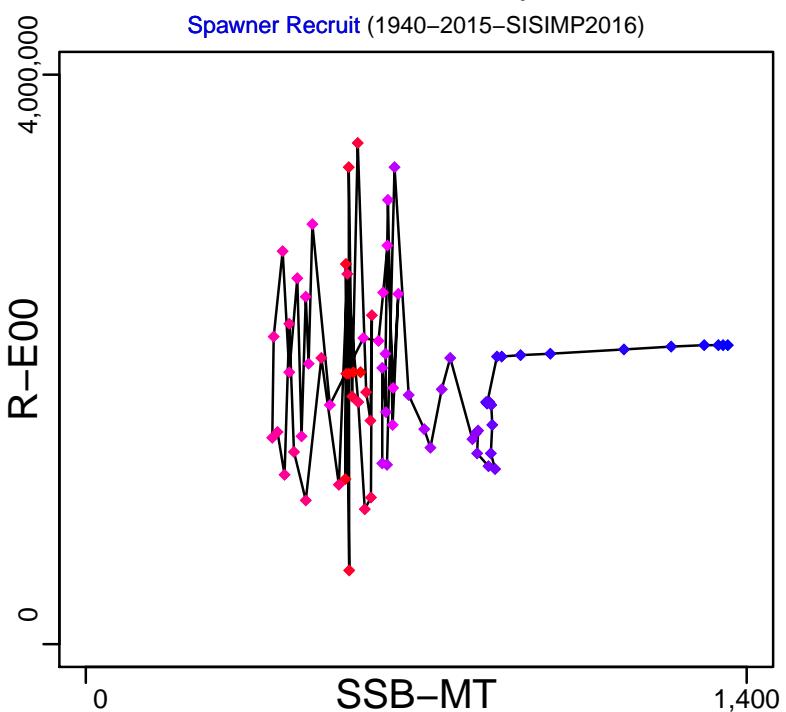
Kobe MSYpref (1940–2015–SISIMP2016)



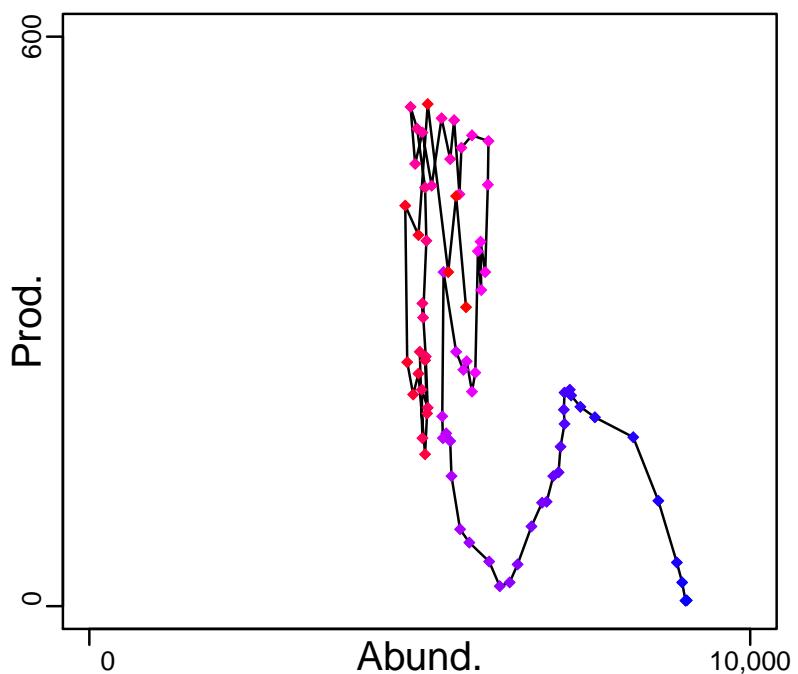
Kobe MGTpref (1940–2015–SISIMP2016)



Spawner Recruit (1940–2015–SISIMP2016)



Production (1940–2015–SISIMP2016)

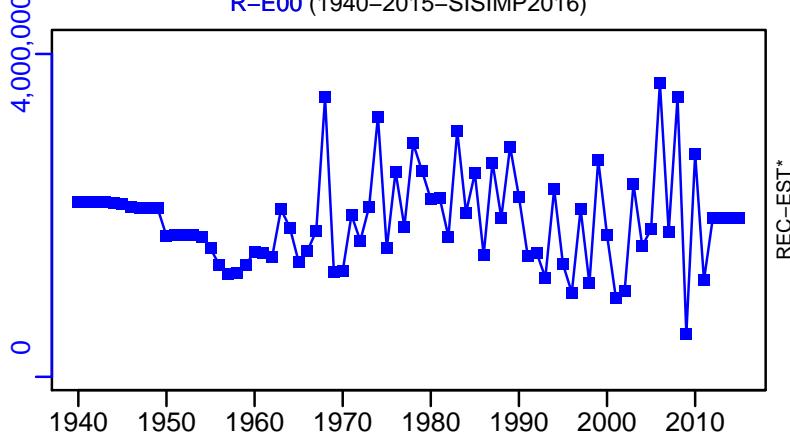
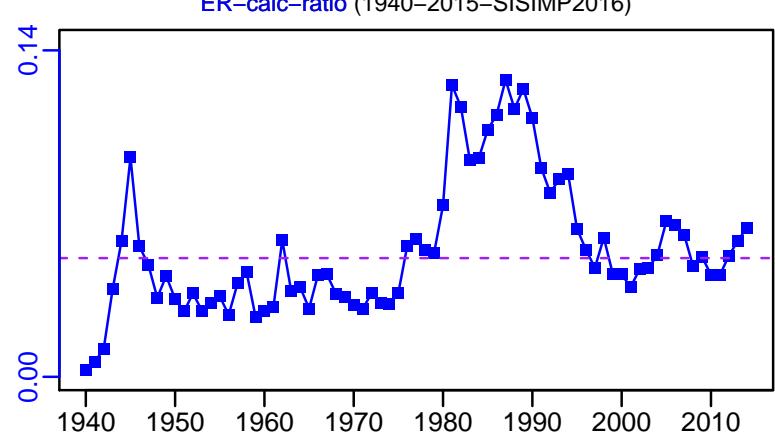
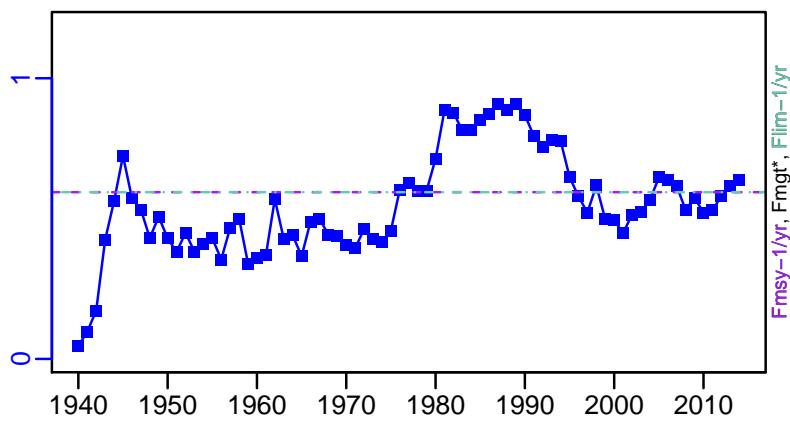
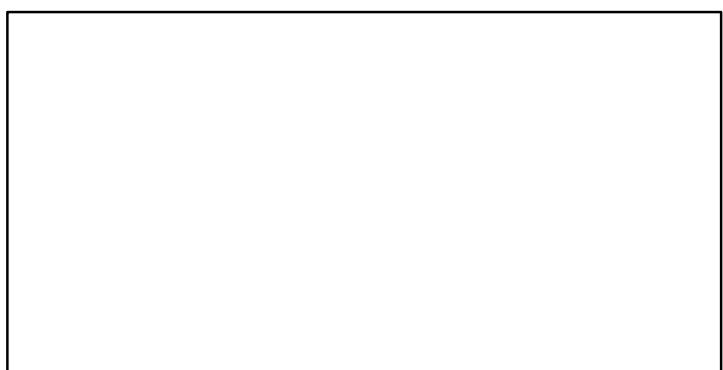
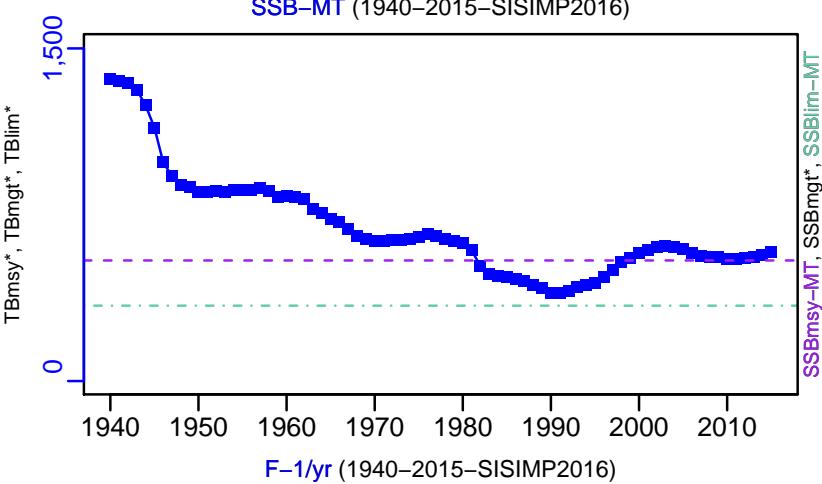
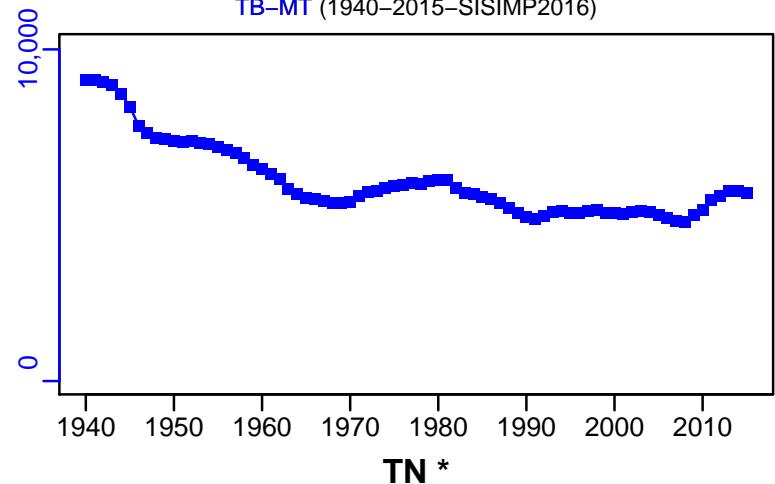


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Black rockfish Washington [BLACKROCKWASH]

TB-MT (1940–2015–SISIMP2016)

SSB-MT (1940–2015–SISIMP2016)

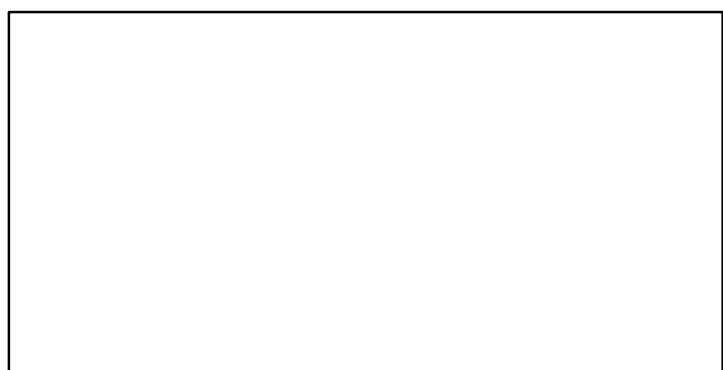
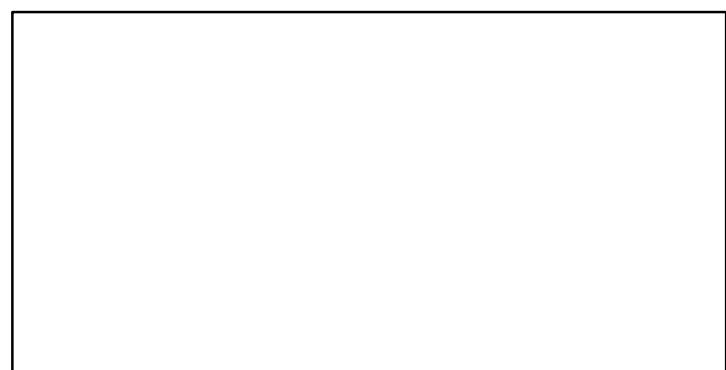
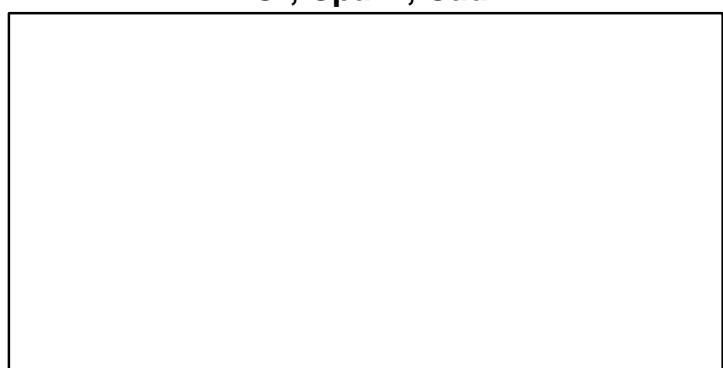
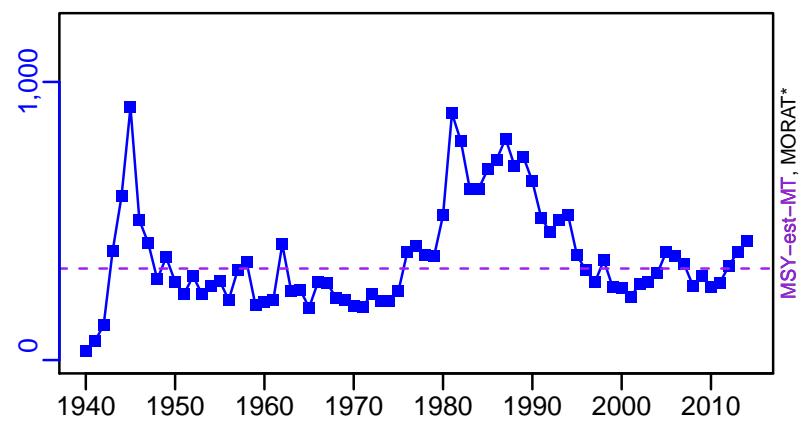


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP | - - Lim BRP | * No Data |

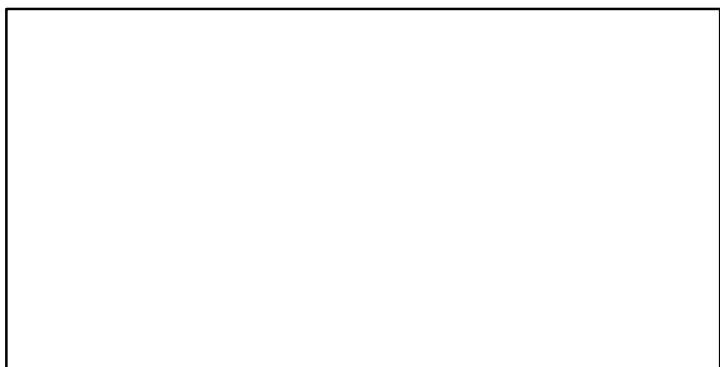
Black rockfish Washington [BLACKROCKWASH]

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

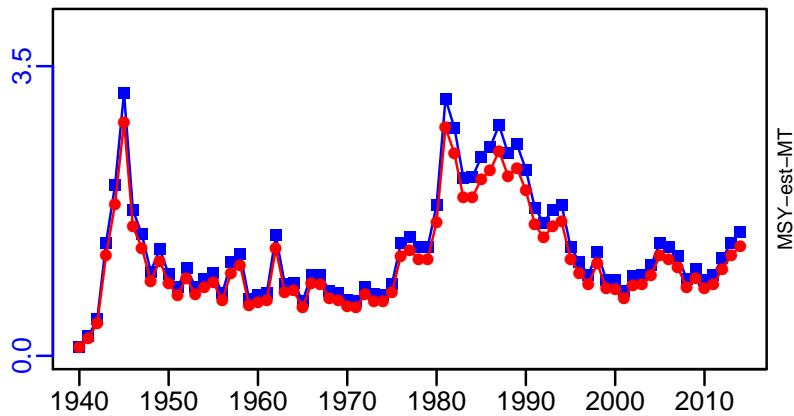
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1940–2015–SISIMP2016)



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

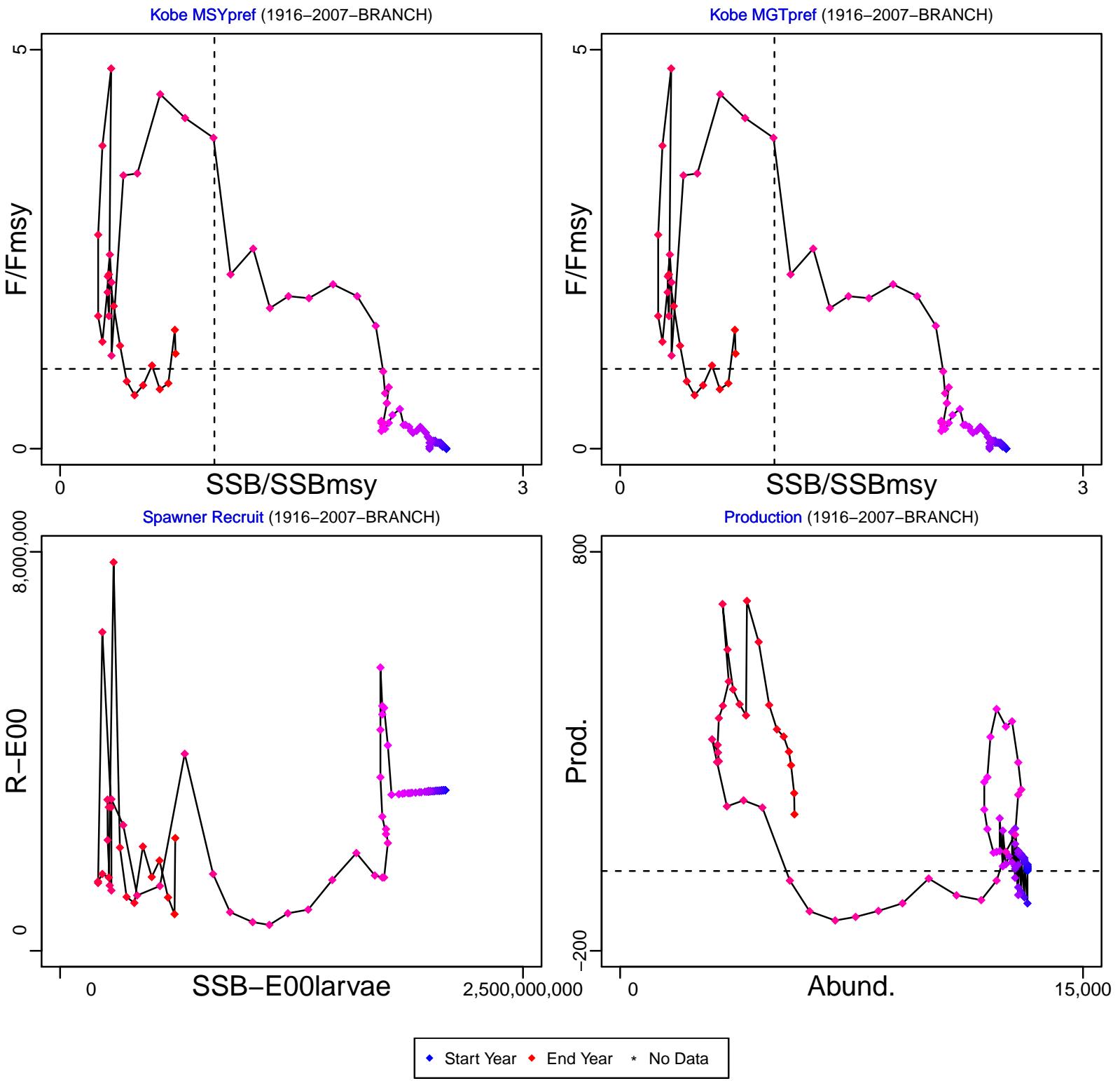
Blue rockfish California [BLUEROCKCAL]

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

| Reference Points | | | |
|-------------------------|---------------------|------------------|--------------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2007 | 5037 |
| SSBmsy | SSBmsy-pr-E00larvae | 2007 | 8.31×10^8 |
| Fmsy | Fmsy-pr-1/yr | 2007 | 0.04 |
| ERmsy | ERmsy-conv-ratio | 2007 | 0.057 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2007 | 13,223 |
| SSB0 | SSB0-MT | 2007 | 2077 |
| MSY | MSY-MT | 2007 | 275 |
| M | M-1/yr | 2007 | 0.12 |
| TBlim | TBlim-MT | 2007 | 205 |
| SSBlim | - | - | - |
| Flim | - | - | - |
| ERlim | - | - | - |

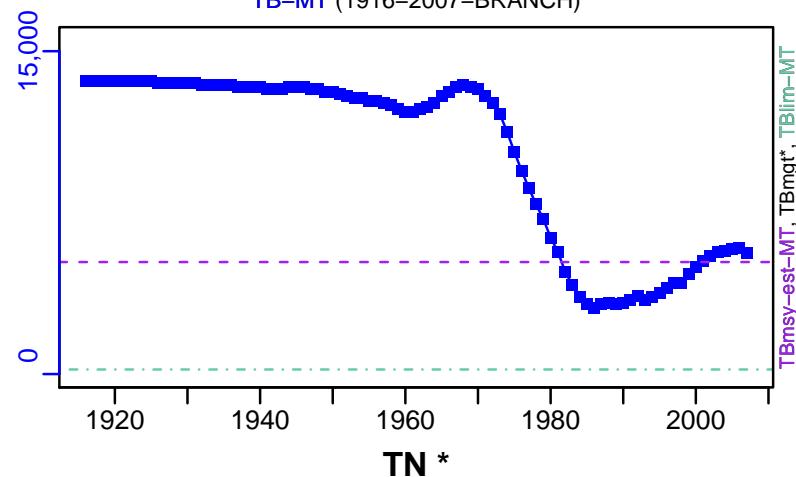
| Time Series | | | | | | |
|--------------------|-----------------------------------|------------------|--------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2007 | 5450 | - | 1+ | |
| SSB | SSB-E00larvae | 2007 | 6.22×10^8 | Females | 6+ | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2007 | 2,260,000 | - | 0 | |
| F | F-1/yr | 2007 | 0.048 | Both | 1+ | |
| ER | ER-ratio | 2007 | 0.048 | - | - | |
| TC | TC-MT | 2007 | 263 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/(TB0-MT*0.368) | 2007 | 1.12 | | | |
| SSB/SSBmsy | SSB-E00larvae/SSBmsy-pr-E00larvae | 2007 | 0.748 | | | |
| F/Fmsy | F-1/yr/Fmsy-pr-1/yr | 2007 | 1.191 | | | |
| ER/ERmsy | ER-ratio/ERmsy-conv-ratio | 2007 | 0.855 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Blue rockfish California [BLUEROCKCAL]

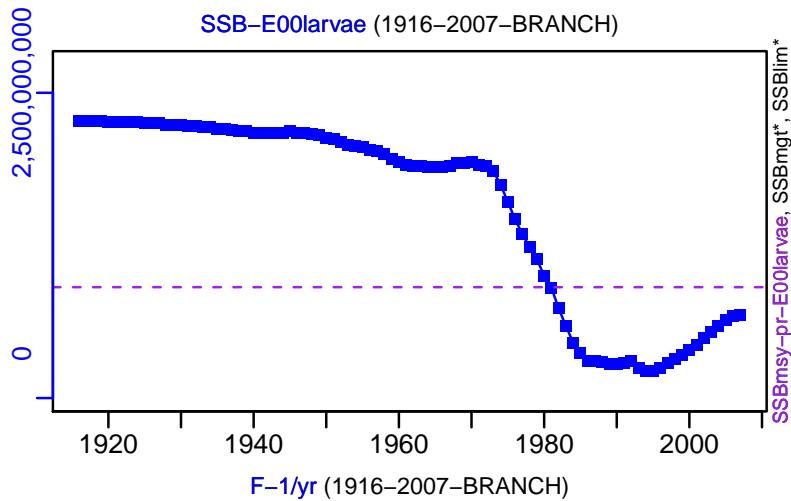


Blue rockfish California [BLUEROCKCAL]

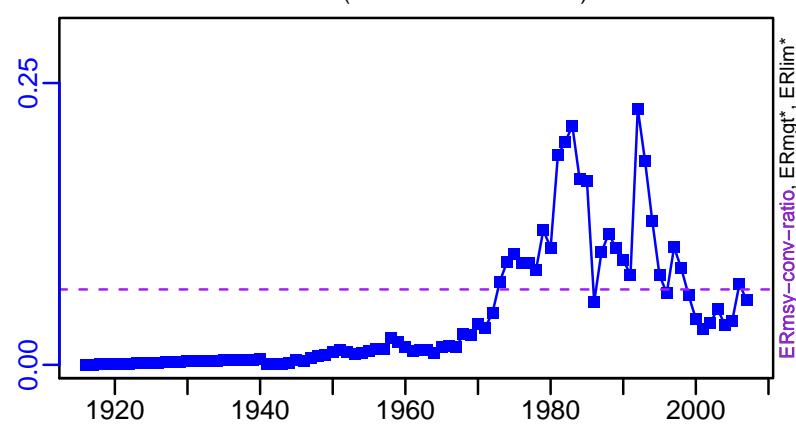
TB-MT (1916–2007–BRANCH)



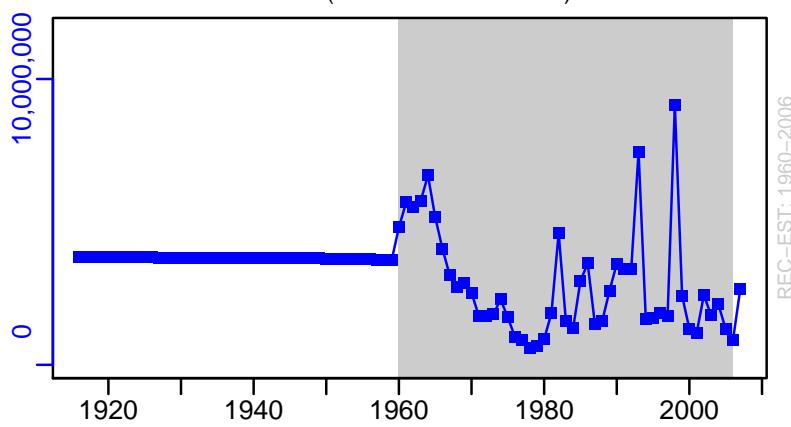
SSB-E00larvae (1916–2007–BRANCH)



ER-ratio (1916–2007–BRANCH)



R-E00 (1916–2007–BRANCH)

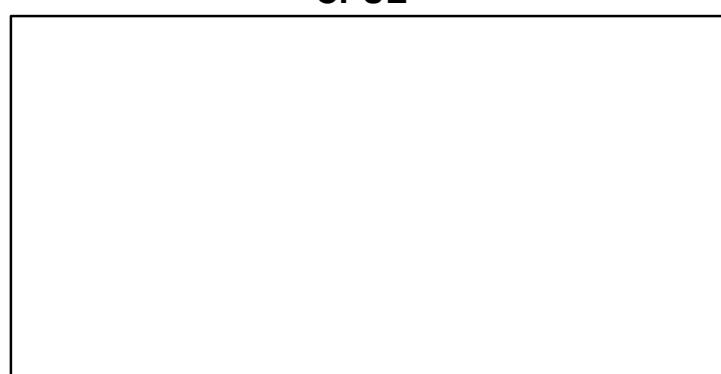
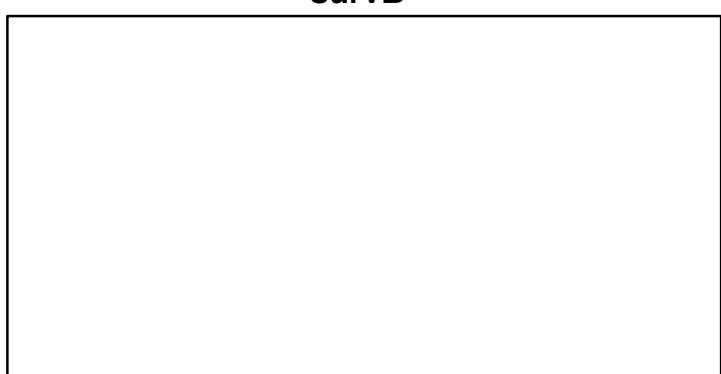
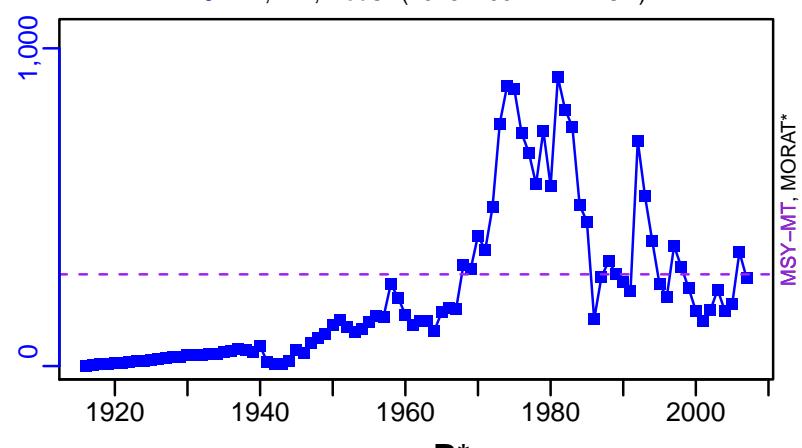


| | | |
|--------------------------------------------------------|-------------------------------------------------|----------------------------------------------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | --- Lim BRP | * No Data |

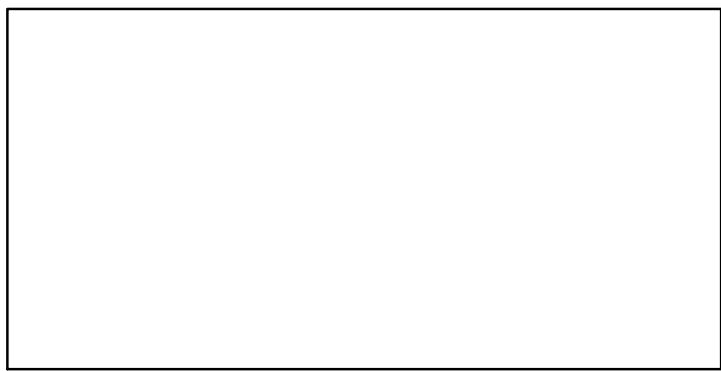
Blue rockfish California [BLUEROCKCAL]

TC-MT, TL*, RecC* (1916–2007-BRANCH)

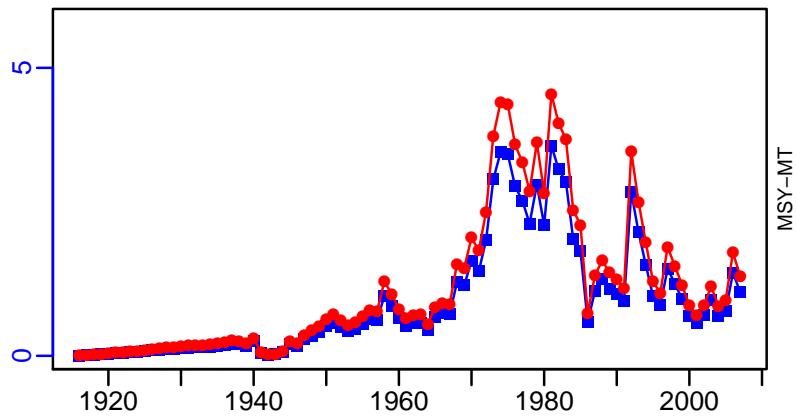
TAC*, Cpair*, Cadv*



EFFORT*



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



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

Bank rockfish California [BNKROCKCAL]

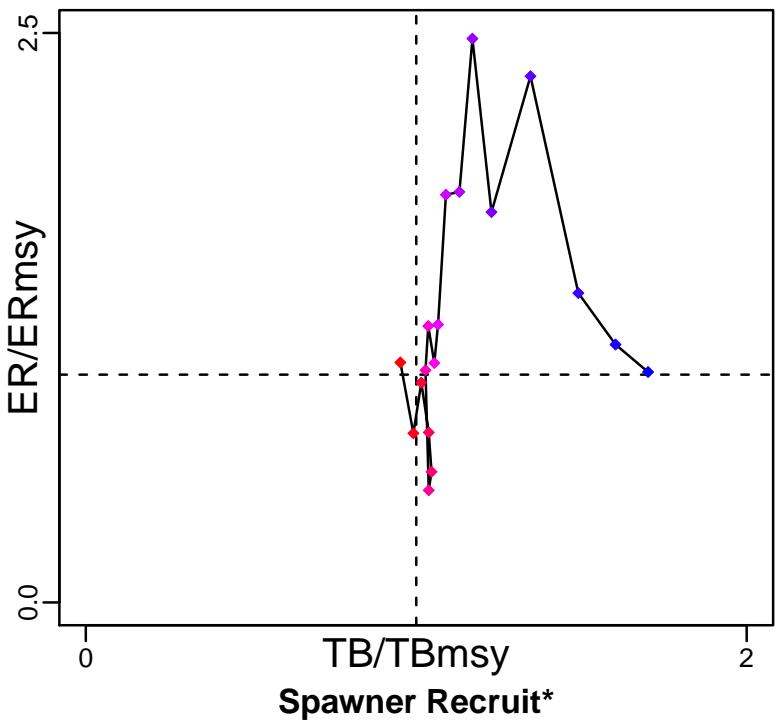
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes rufus |
| Current Assess ID | PFMC-BNKROCKCAL-1979-1999-CHING |
| Area | California |
| Management Authority | National Marine Fisheries Service, US national management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

| Reference Points | | | |
|-------------------------|-----------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 1999 | 7111 |
| SSBmsy | - | - | - |
| Fmsy | - | - | - |
| ERmsy | ERmsy-est-ratio | 1999 | 0.079 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-est-MT | 1999 | 560 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | - | - | - |
| ERlim | - | - | - |

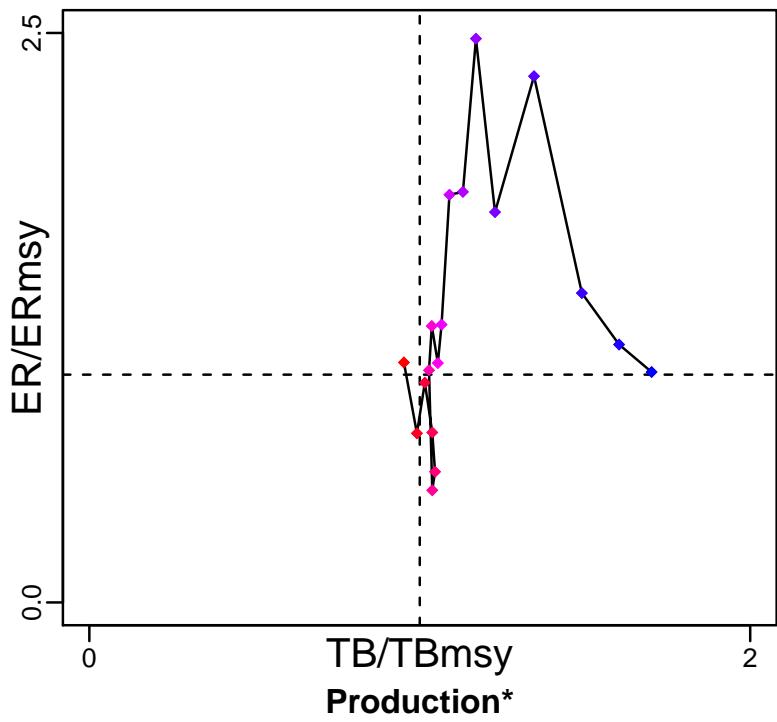
| Time Series | | | | | | |
|--------------------|--------------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 1999 | 6380 | - | - | |
| SSB | - | - | - | - | - | |
| TN | - | - | - | - | - | |
| R | - | - | - | - | - | |
| F | - | - | - | - | - | |
| ER | ER-ratio | 1999 | 0.083 | - | - | |
| TC | TC-MT | 1999 | 562 | | | |
| TL | TL-MT | 1999 | 562 | | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 1999 | 0.897 | | | |
| SSB/SSBmsy | - | - | - | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-ratio/ERmsy-est-ratio | 1999 | 1.053 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Bank rockfish California [BNKROCKCAL]

Kobe MSYpref (1979–1999–CHING)



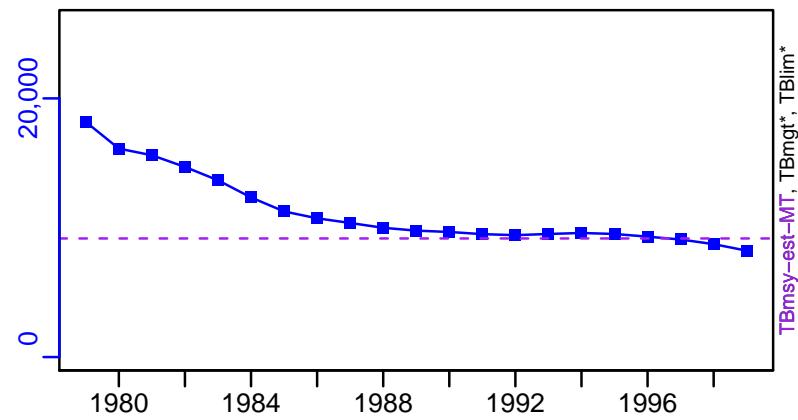
Kobe MGTPref (1979–1999–CHING)



◆ Start Year ♦ End Year * No Data

Bank rockfish California [BNKROCKCAL]

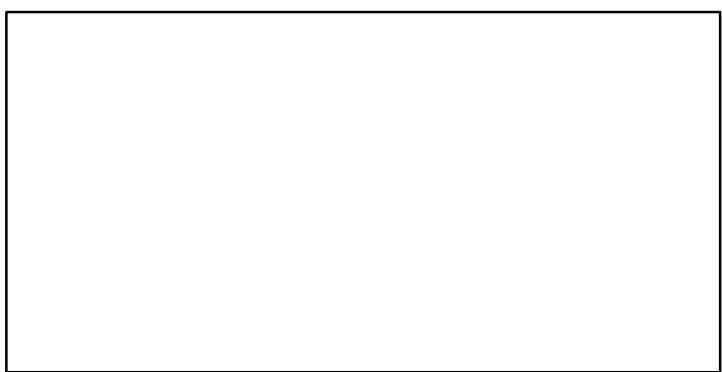
TB-MT (1979–1999–CHING)



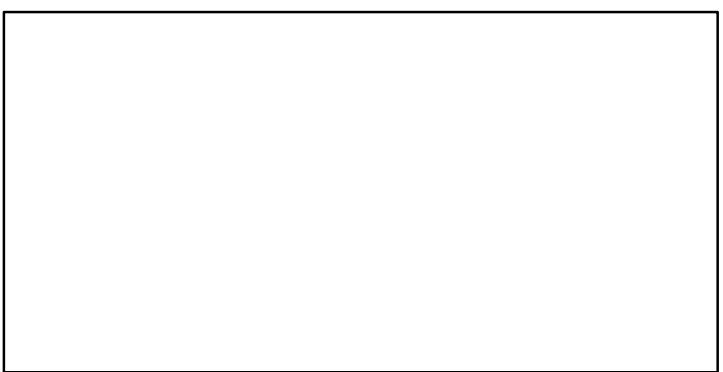
SSB*



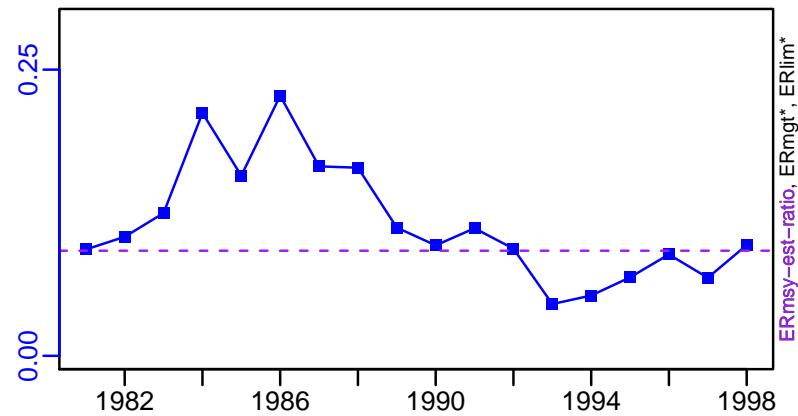
TN *



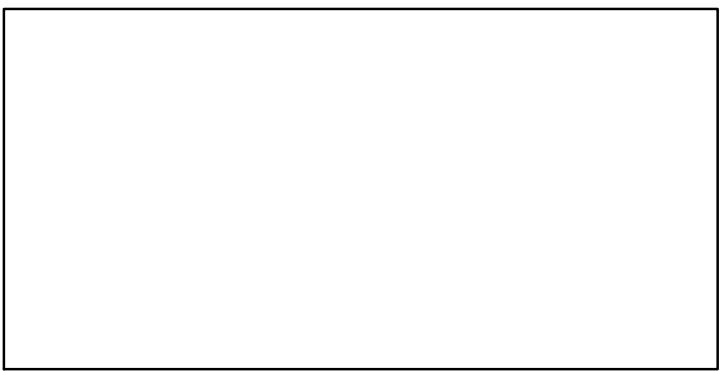
F*



ER-ratio (1979–1999–CHING)



Recruits*

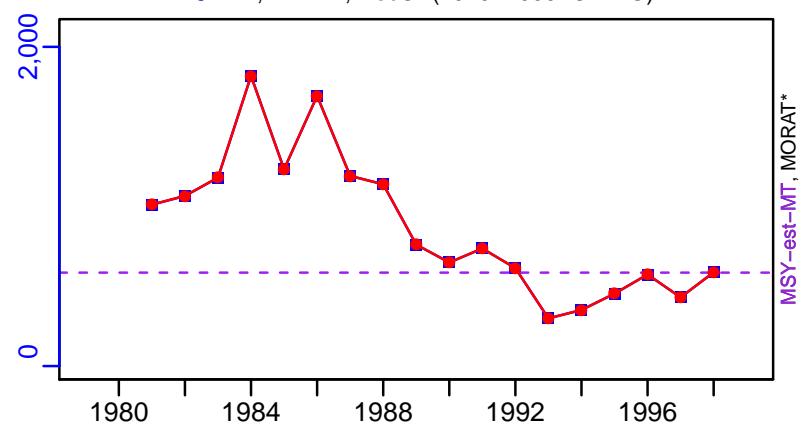


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | ··· Lim BRP | * No Data |

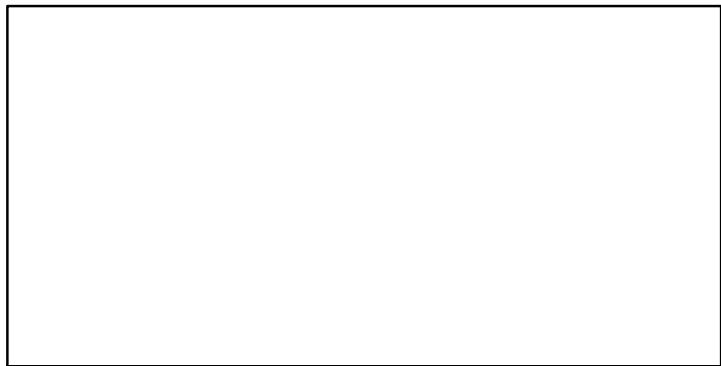
Bank rockfish California [BNKROCKCAL]

TC-MT, TL-MT, RecC* (1979–1999–CHING)

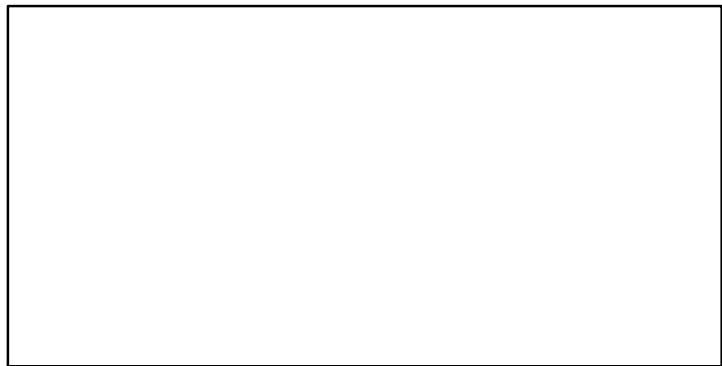
TAC*, Cpair*, Cadv*



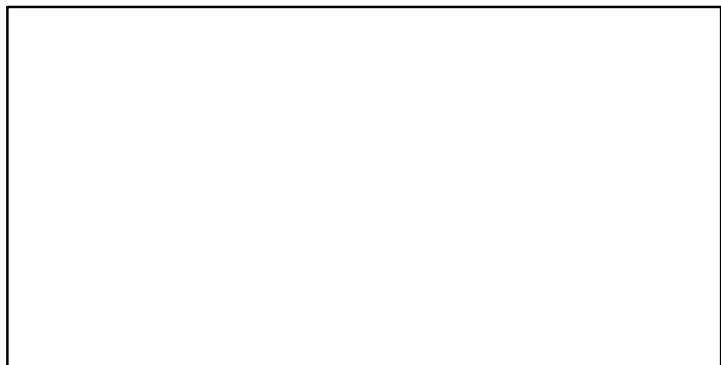
survB*



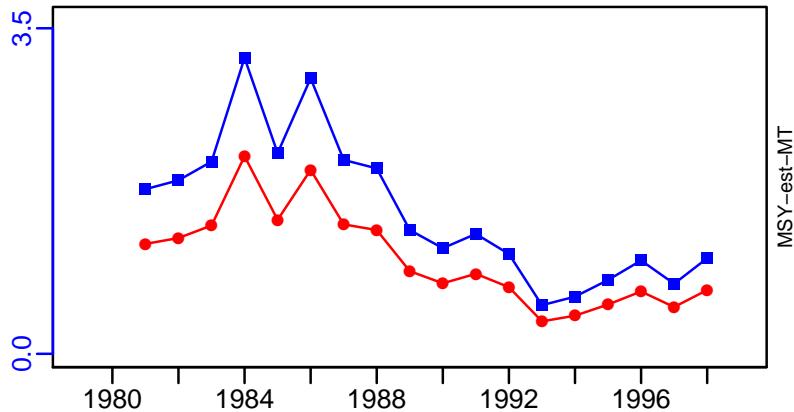
CPUE*



EFFORT*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1979–1999–CHING)



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

Bocaccio Southern Pacific Coast [BOCACCSPOAST]

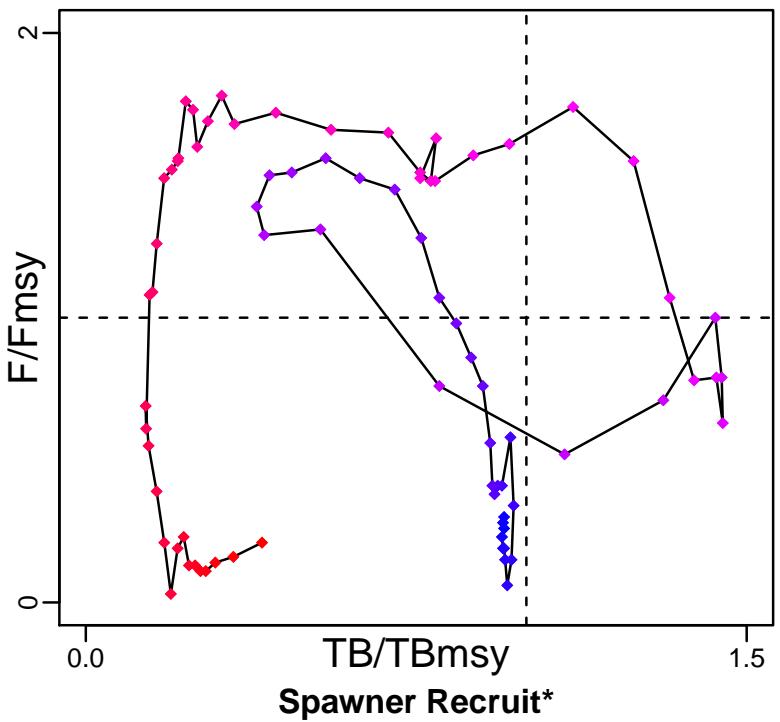
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes paucispinis |
| Current Assess ID | SWFSC-BOCACCSPOAST-1935-2013-SISIMP2016 |
| Area | Southern Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national management |
| Assessor | Southwest Fisheries Science Center |
| Asmts in RAM | 2009, 2013 |

| Reference Points | | | |
|------------------|------------------|-----------|--------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2013 | 41,502 |
| SSBmsy | - | - | - |
| Fmsy | Fmsy-1/yr | 2013 | 0.5 |
| ERrmsy | ERrmsy-est-ratio | 2013 | 0.06 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2009 | 44,070 |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2013 | 1347 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | Flim-1/yr | 2013 | 0.5 |
| ERlim | - | - | - |

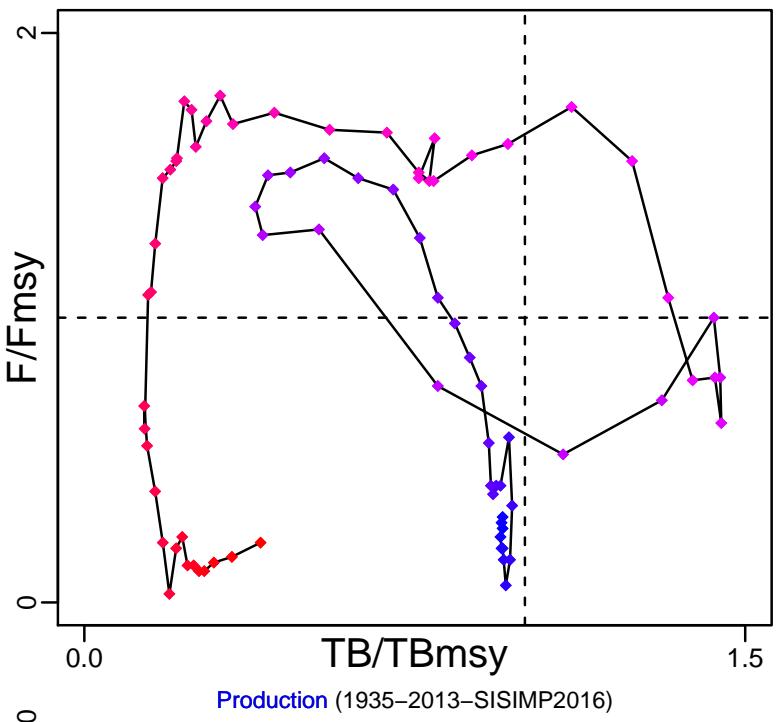
| Time Series | | | | | | |
|-------------------|--------------------------------|-----------|------------|-----|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2013 | 19,100 | - | - | |
| SSB | - | - | - | - | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2013 | 3,860,000 | - | 0 | |
| F | F-1/yr | 2013 | 0.105 | - | - | |
| ER | ER-calc-ratio | 2013 | 0.011 | - | - | |
| TC | TC-MT | 2013 | 188 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 2013 | 0.46 | | | |
| SSB/SSBmsy | - | - | - | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2013 | 0.21 | | | |
| ER/ERrmsy | ER-calc-ratio/ERrmsy-est-ratio | 2013 | 0.19 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Bocaccio Southern Pacific Coast [BOCACCSPCOAST]

Kobe MSYpref (1935–2013–SISIMP2016)

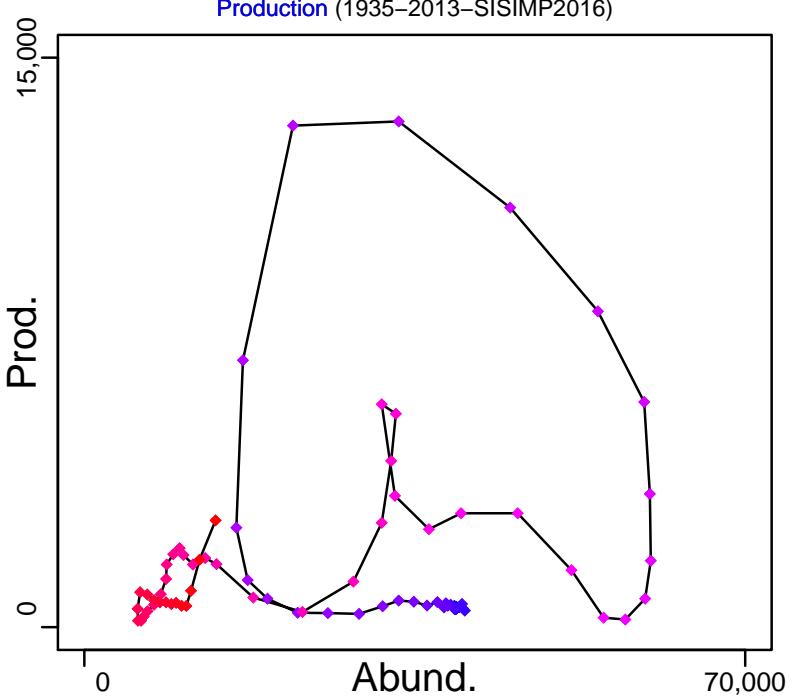
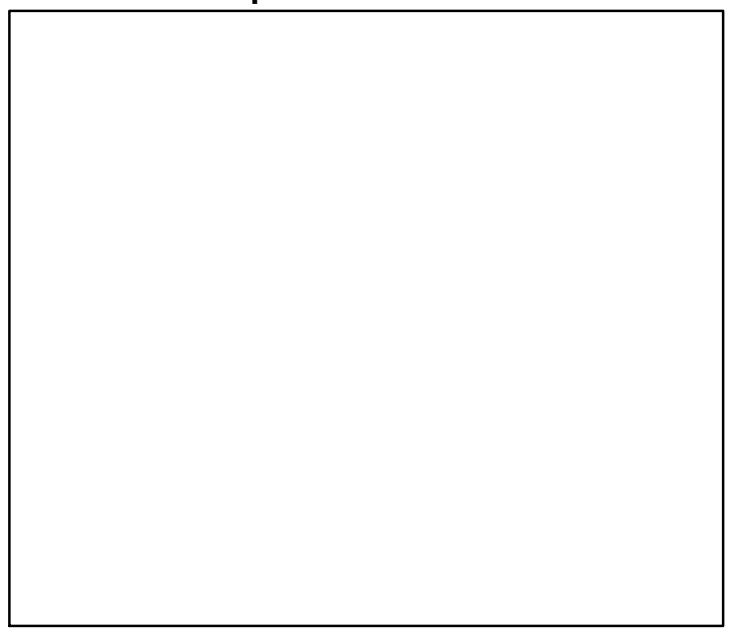


Kobe MGTpref (1935–2013–SISIMP2016)



Spawner Recruit*

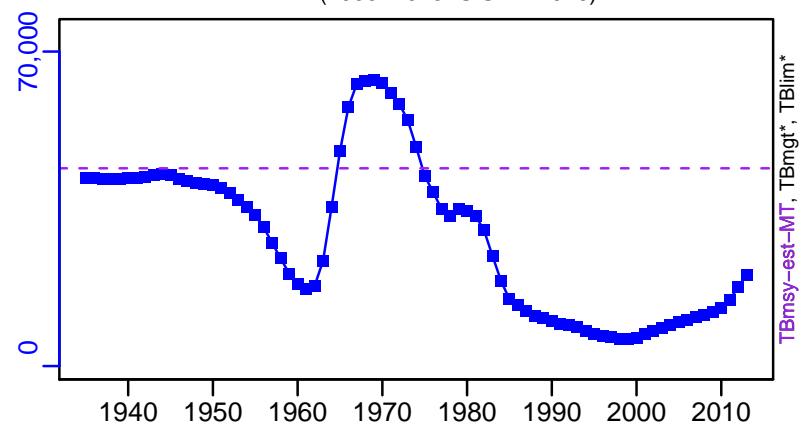
Production (1935–2013–SISIMP2016)



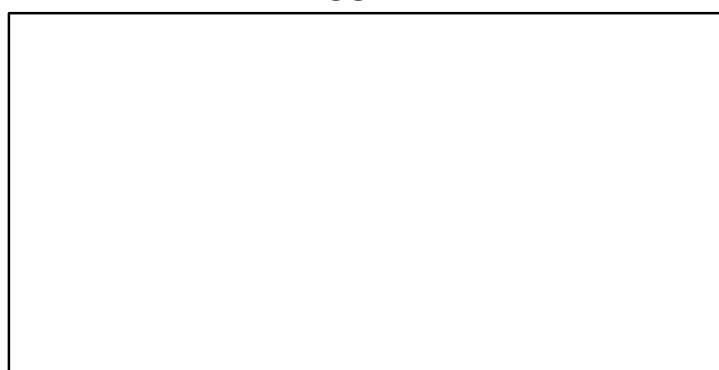
♦ Start Year ♦ End Year * No Data

Bocaccio Southern Pacific Coast [BOCACCSPOCOAST]

TB-MT (1935–2013–SISIMP2016)



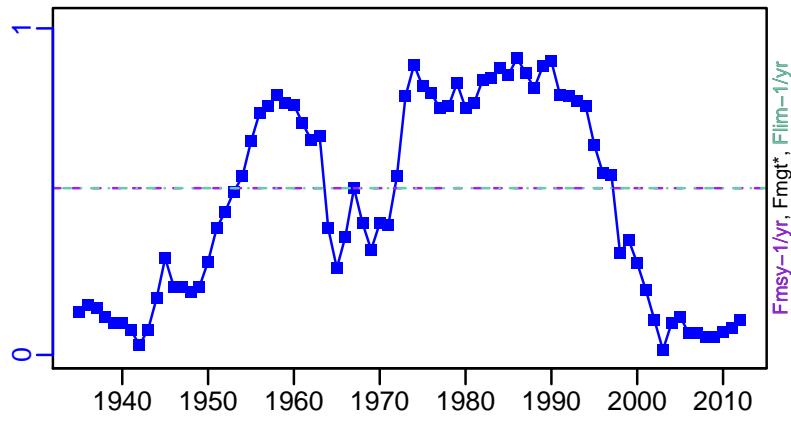
SSB*



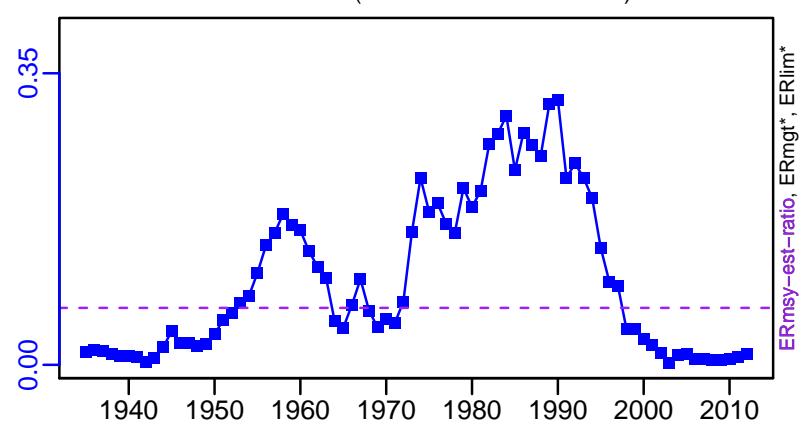
TN *



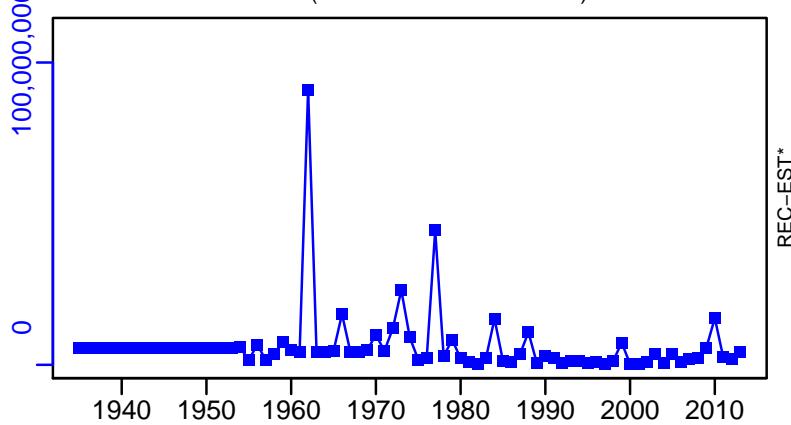
F-1/yr (1935–2013–SISIMP2016)



ER-calc-ratio (1935–2013–SISIMP2016)



R-E00 (1935–2013–SISIMP2016)

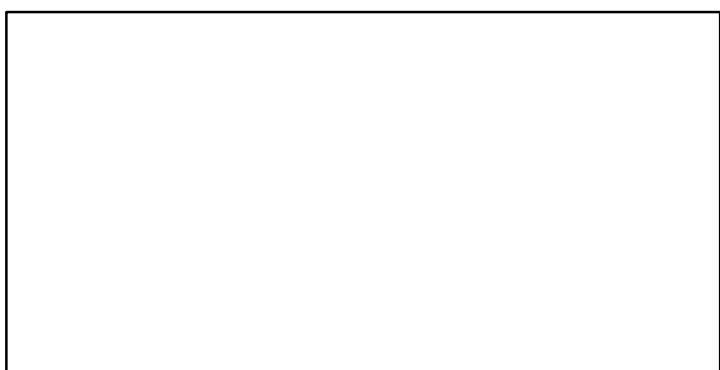
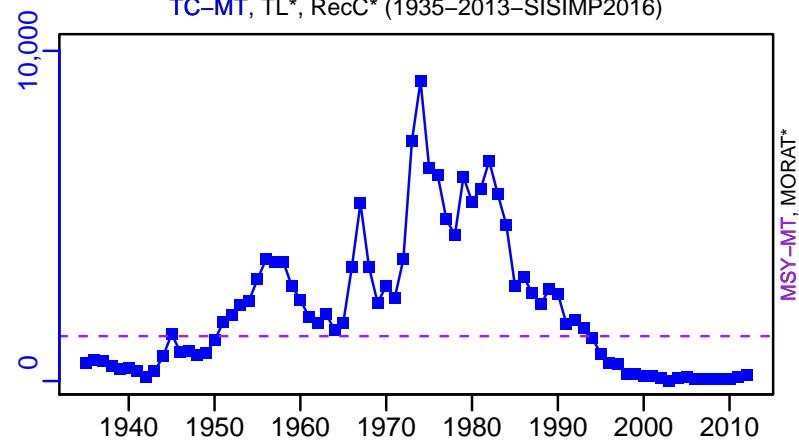


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | --- Lim BRP | * No Data |

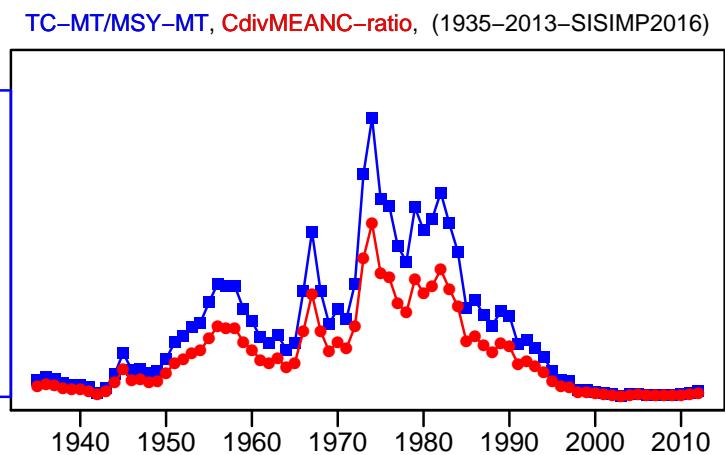
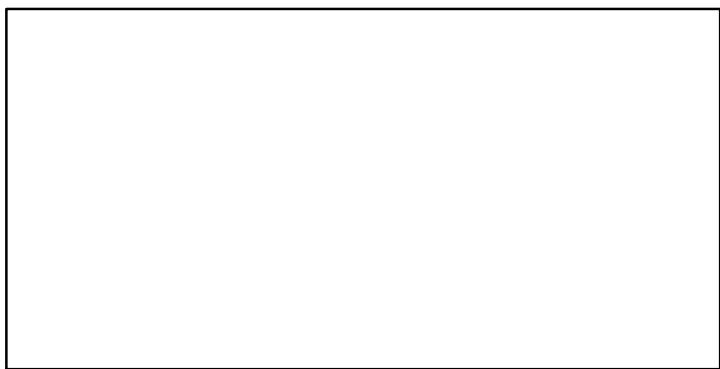
Bocaccio Southern Pacific Coast [BOCACCSPCOAST]

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]

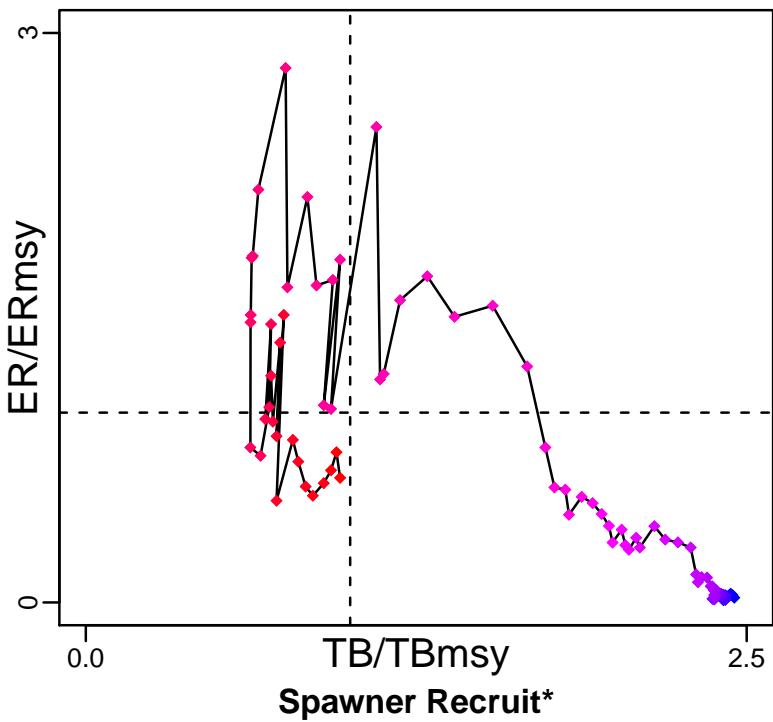
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes auriculatus |
| Current Assess ID | SWFSC-BRNROCKPCOAST-1916-2012-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

| Reference Points | | | |
|------------------|----------------|-----------|-------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2012 | 1455 |
| SSBmsy | SSBmsy-conv-MT | 2012 | 656 |
| Fmsy | - | - | - |
| ERmsy | ERmsy-ratio | 2012 | 0.103 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2012 | 150 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | - | - | - |
| ERlim | ERlim-ratio | 2012 | 0.103 |

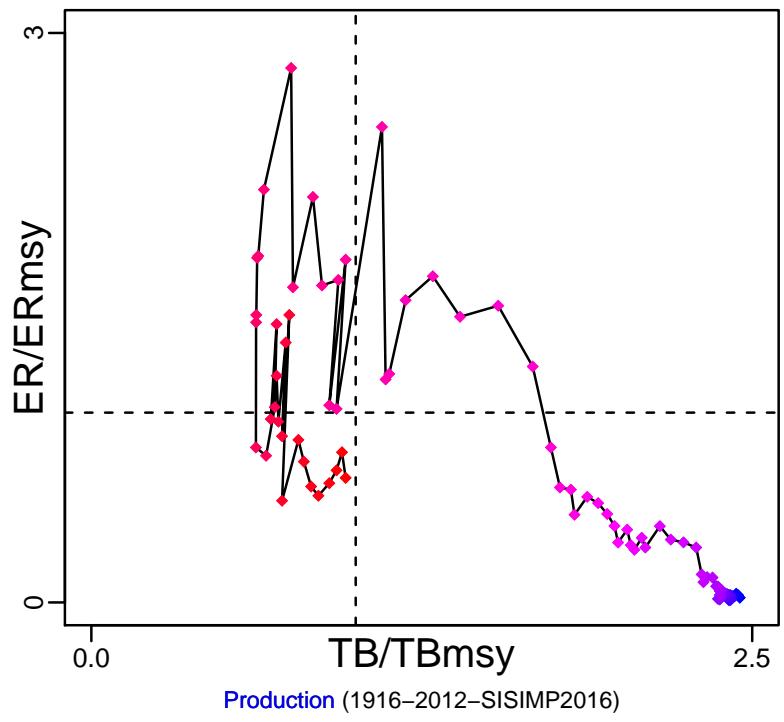
| Time Series | | | | | | |
|-------------------|----------------------|-----------|------------|-----|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2012 | 1450 | - | - | |
| SSB | - | - | - | - | - | |
| TN | - | - | - | - | - | |
| R | - | - | - | - | - | |
| F | - |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

Brown rockfish Pacific Coast [BRNROCKPCOAST]

Kobe MSYpref (1916–2012–SISIMP2016)

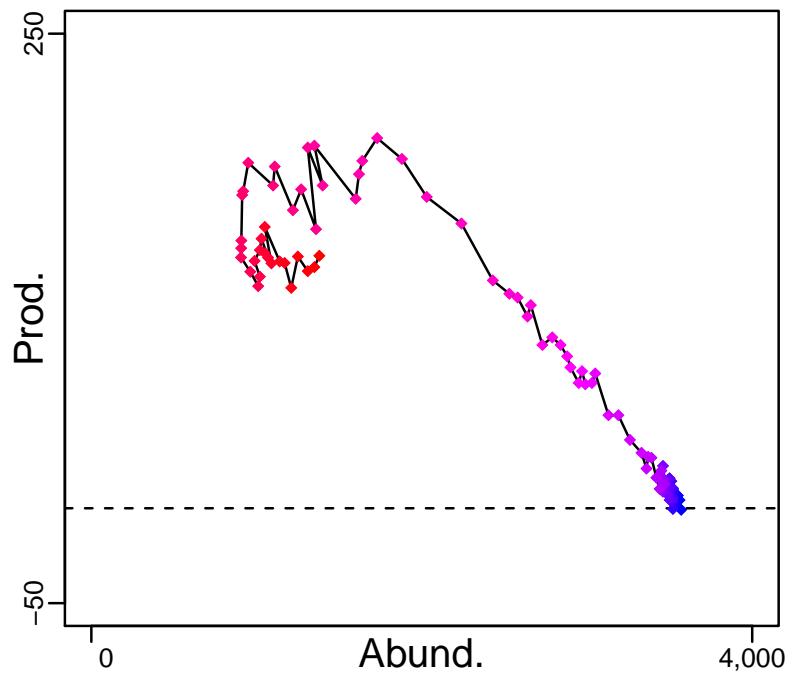


Kobe MGTpref (1916–2012–SISIMP2016)



Spawner Recruit*

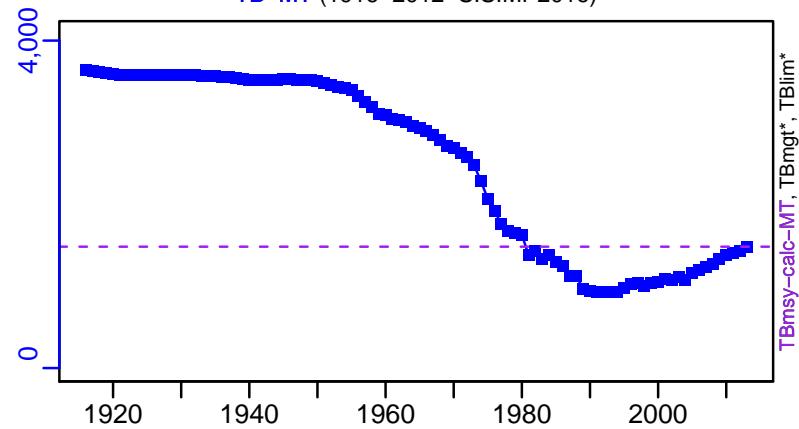
Production (1916–2012–SISIMP2016)



◆ Start Year ◆ End Year * No Data

Brown rockfish Pacific Coast [BRNROCKPCOAST]

TB-MT (1916–2012–SISIMP2016)



SSB*



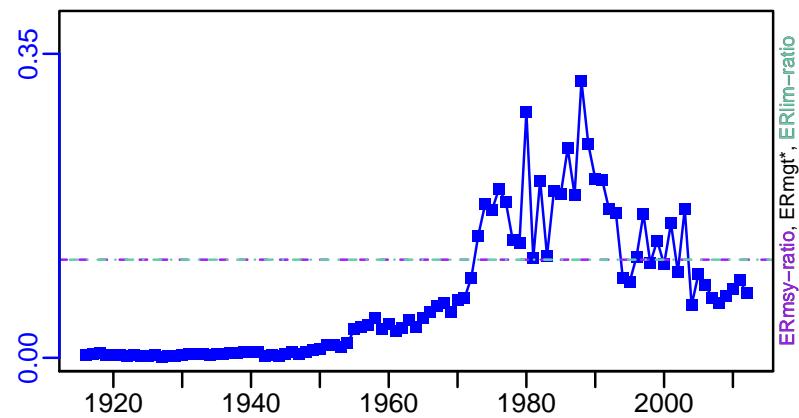
TN *



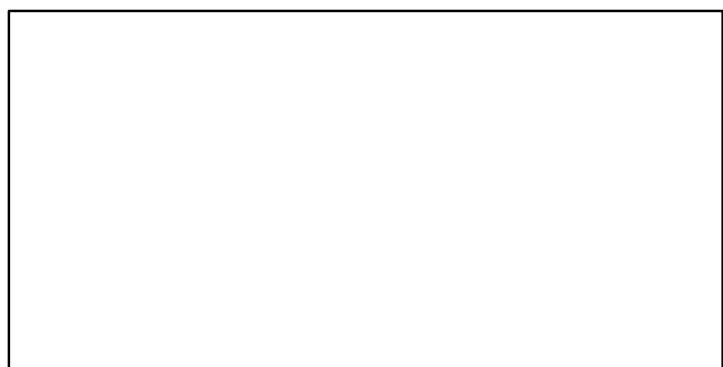
F*



ER-ratio (1916–2012–SISIMP2016)



Recruits*

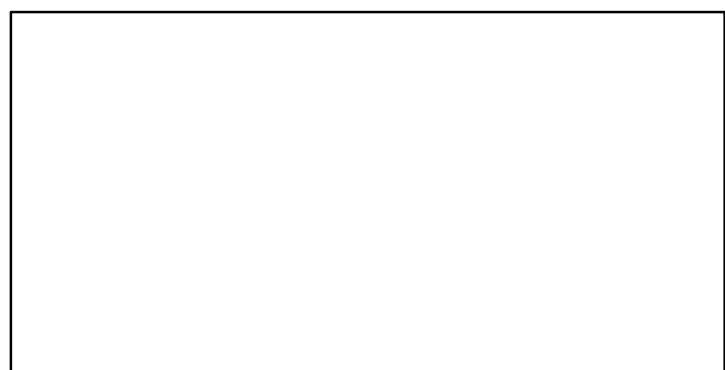
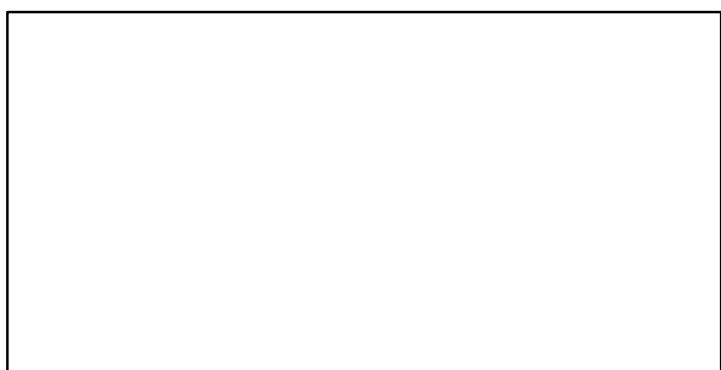
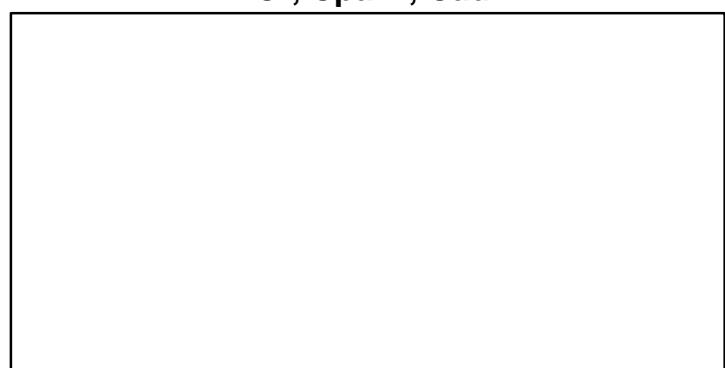
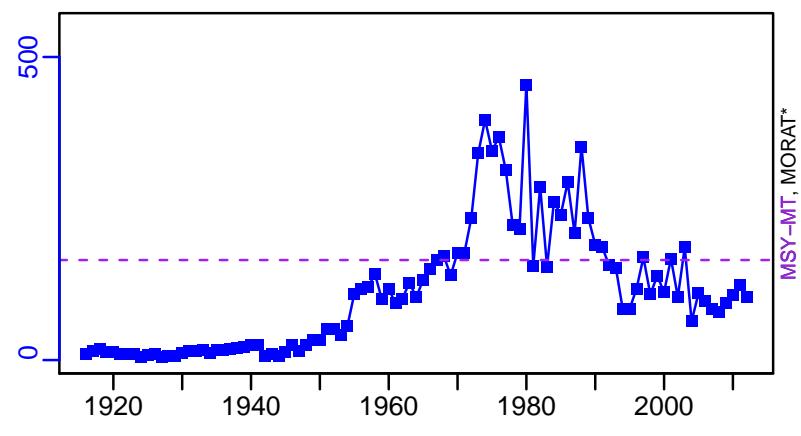


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | — Lim BRP | * No Data |

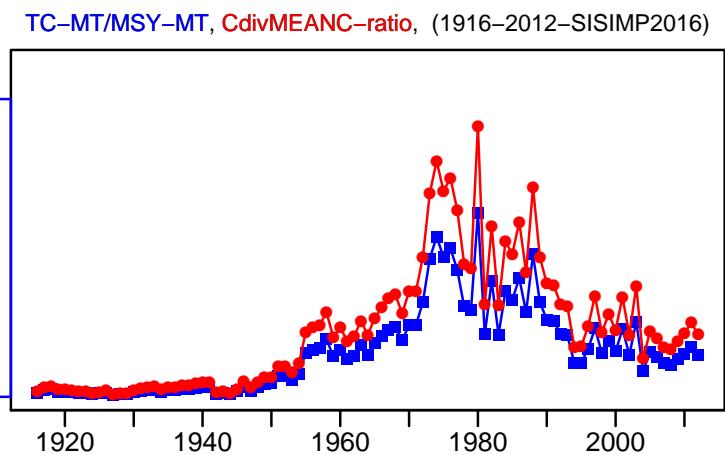
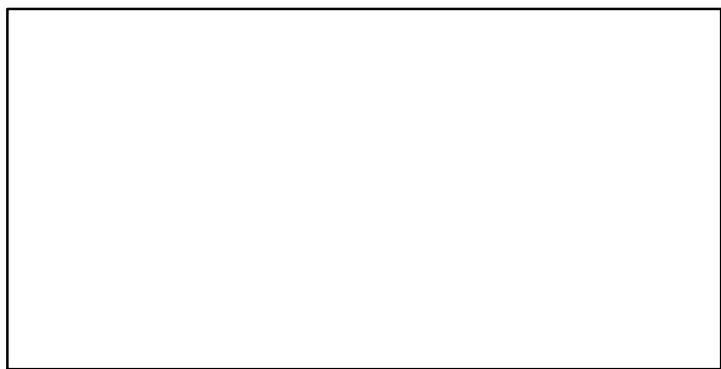
Brown rockfish Pacific Coast [BRNROCKPCOAST]

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]

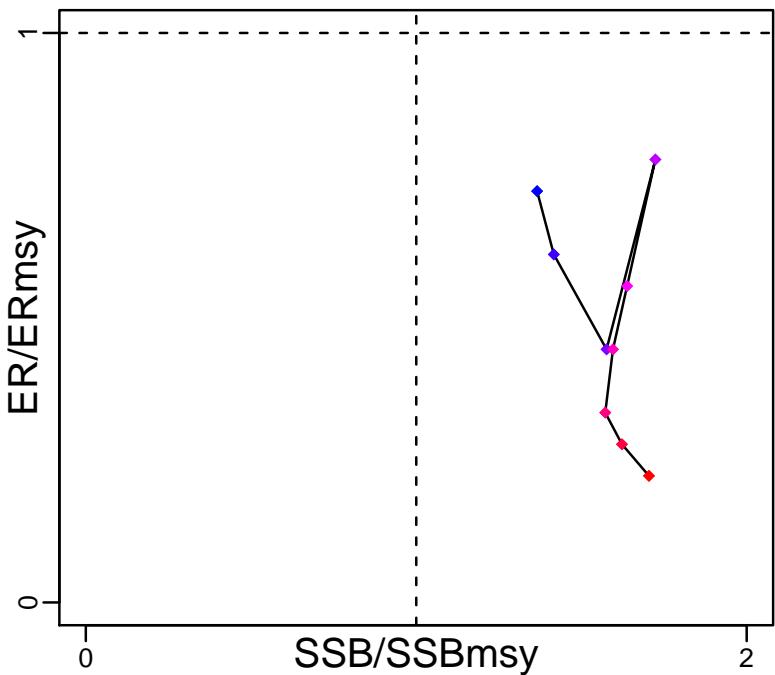
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Scorpaenichthys marmoratus |
| Current Assess ID | PFMC-CABEZNCAL-1930-2009-CHING |
| Area | Northern California |
| Management Authority | National Marine Fisheries Service,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

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

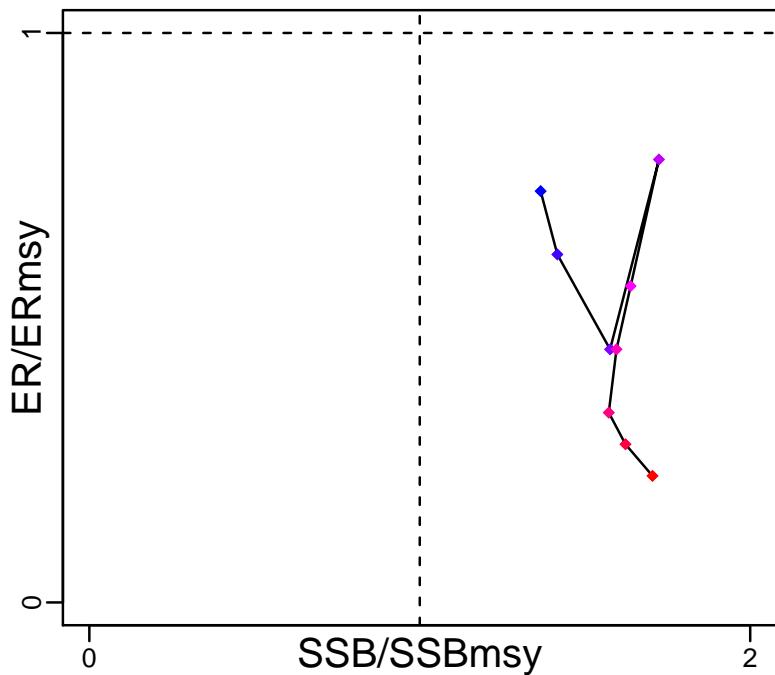
| Time Series | | | | | |
|-------------------|----------------------|-----------|------------|---------|-----|
| Type | ID | Asmt Year | Curr Value | Sex | Age |
| TB | TB-MT | 2009 | 483 | Both | 2+ |
| SSB | SSB-MT | 2009 | 469 | Females | 3+ |
| TN | - | - | - | - | - |
| R | R-E00 | 2009 | 776 |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

Cabezon Northern California [CABEZNCAL]

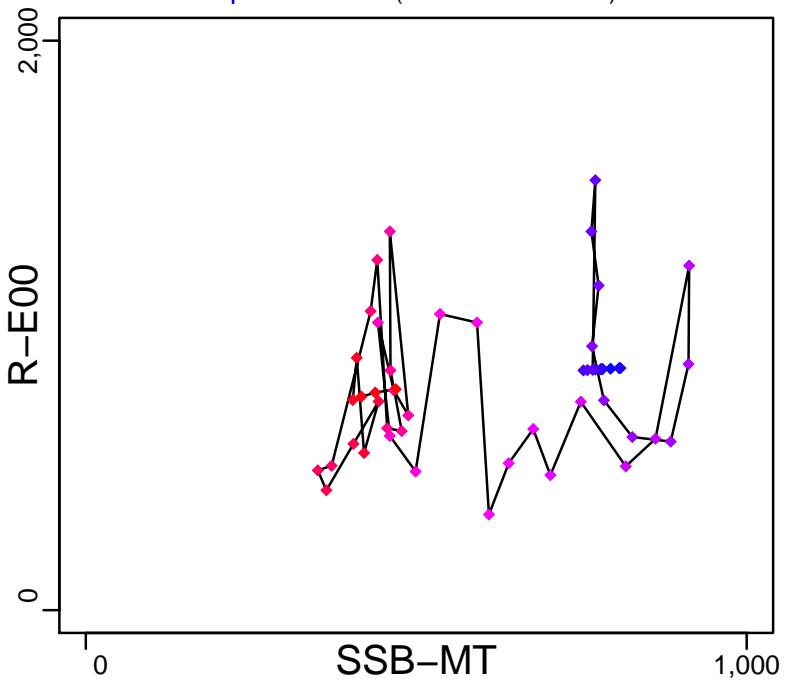
Kobe MSYpref (1930–2009–CHING)



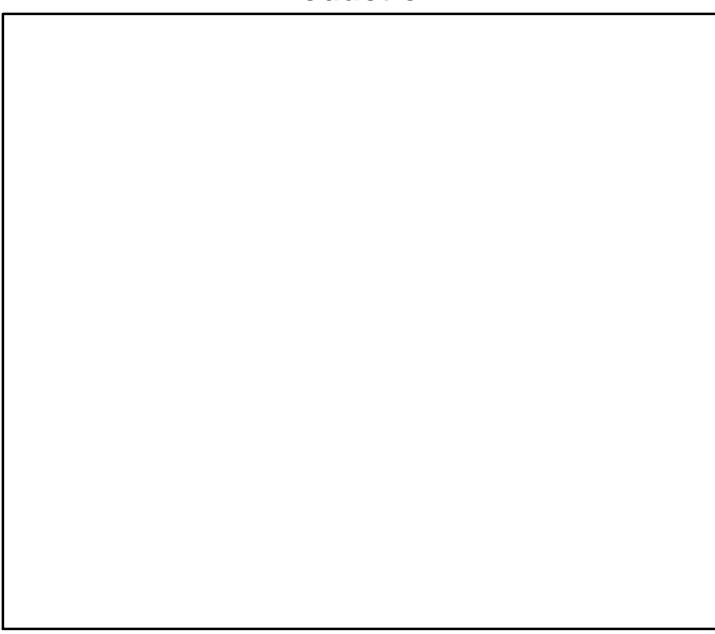
Kobe MGTPref (1930–2009–CHING)



Spawner Recruit (1930–2009–CHING)



Production*

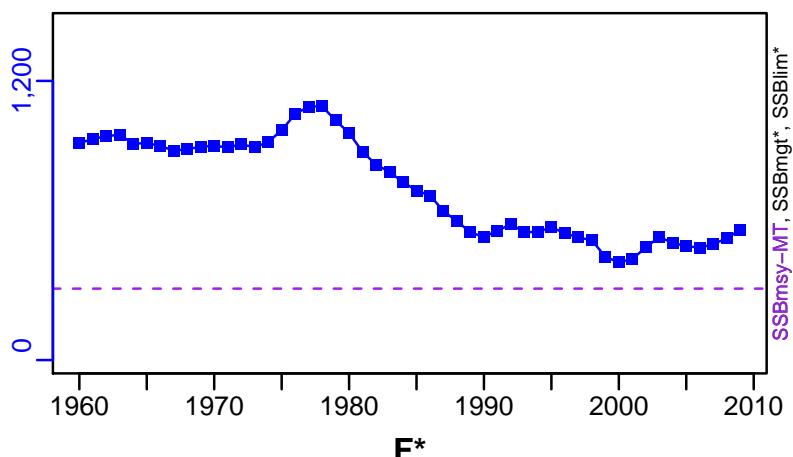
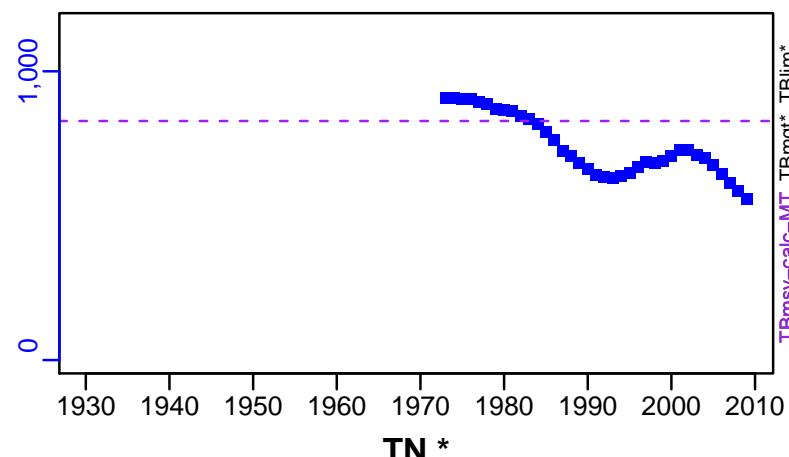


◆ Start Year ◆ End Year * No Data

Cabezon Northern California [CABEZNCAL]

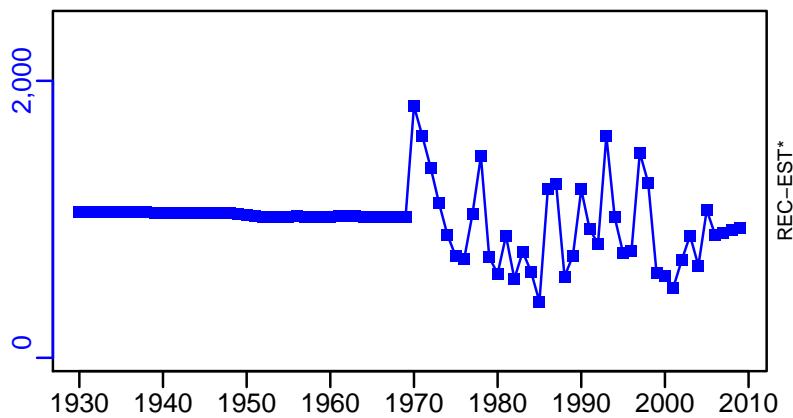
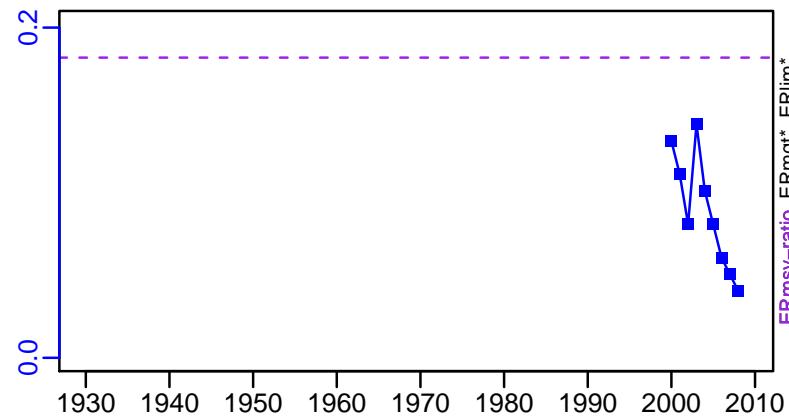
TB-MT (1930–2009–CHING)

SSB-MT (1930–2009–CHING)



ER-ratio (1930–2009–CHING)

R-E00 (1930–2009–CHING)

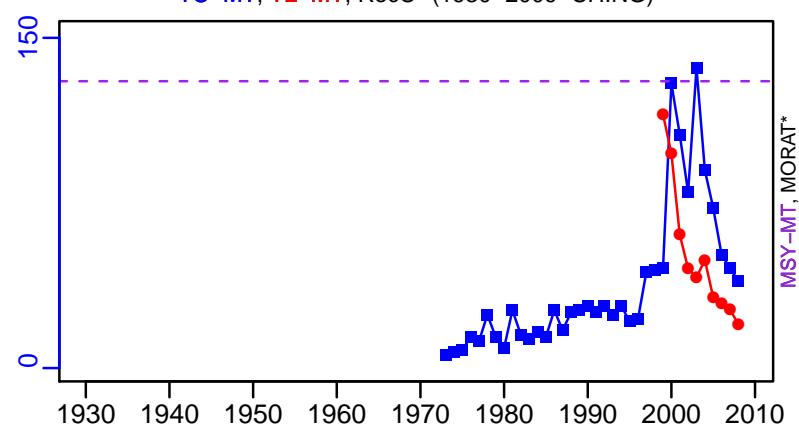


- | | | |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - - Lim BRP | * No Data |

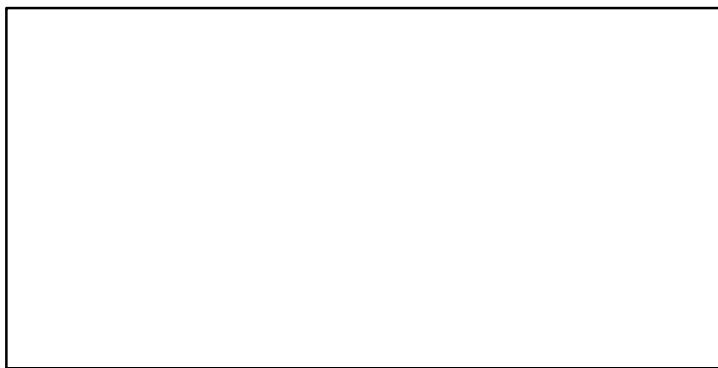
Cabezon Northern California [CABEZNCAL]

TC-MT, TL-MT, RecC* (1930–2009–CHING)

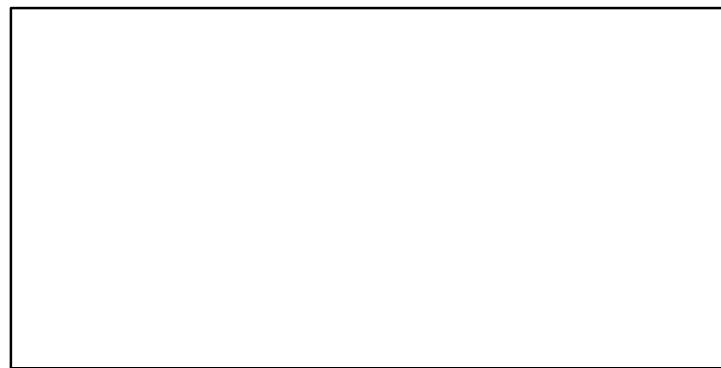
TAC*, Cpair*, Cadv*



survB*



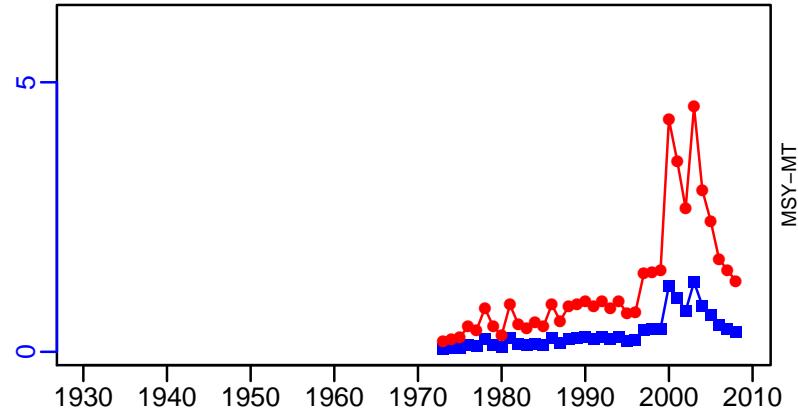
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1930–2009–CHING)



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

Cabezon Oregon Coast [CABEZORECOAST]

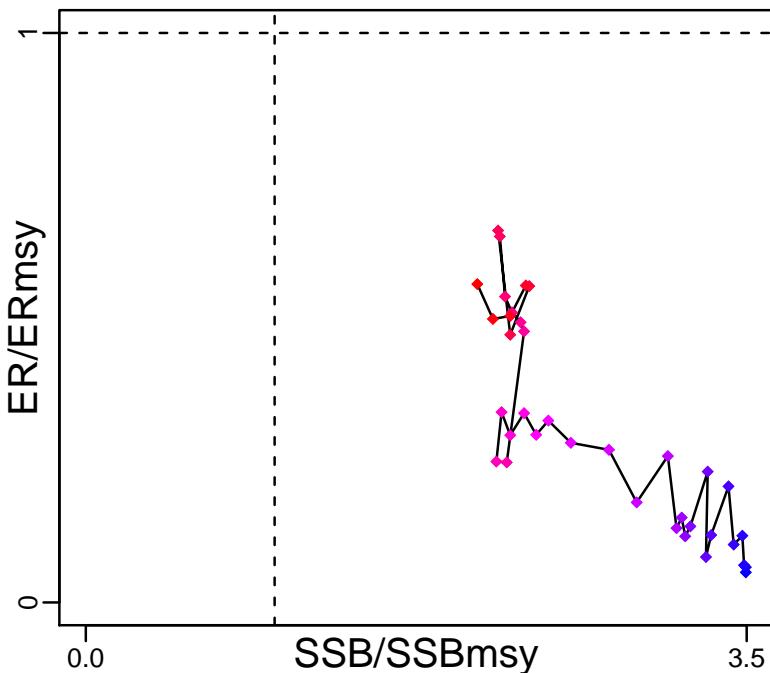
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Scorpaenichthys marmoratus |
| Current Assess ID | NWFSC-CABEZORECOAST-1973-2009-STACHURA |
| Area | Oregon Coast |
| Management Authority | National Marine Fisheries Service,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

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

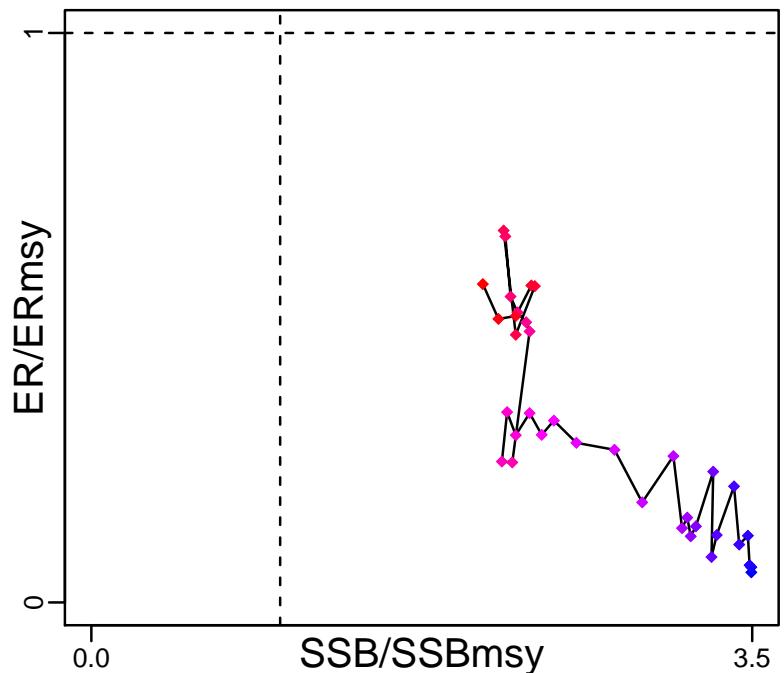
| Time Series | | | | | | |
|-------------------|---------------------------|-----------|------------|---------|------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2009 | 455 | - | 2+ | |
| SSB | SSB-MT | 2009 | 214 | Females | 3.86 | |
| TN | - | - | - | - | - | |
| R | R-E00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

Cabezon Oregon Coast [CABEZORECOAST]

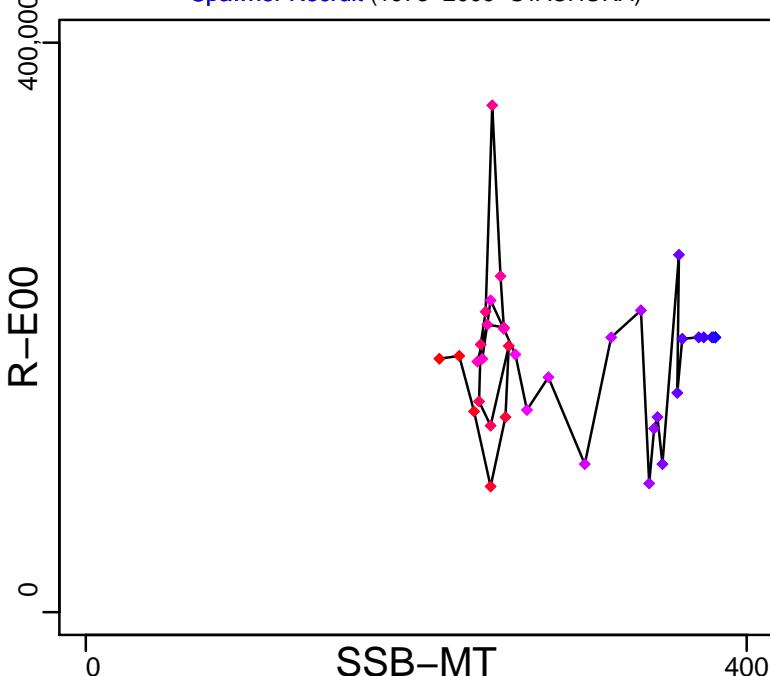
Kobe MSYpref (1973–2009–STACHURA)



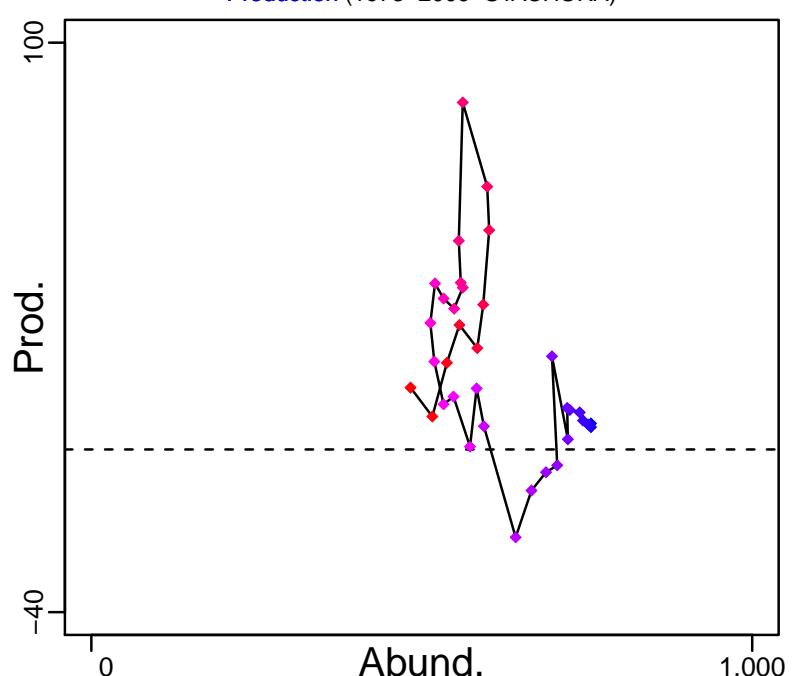
Kobe MGTpref (1973–2009–STACHURA)



Spawner Recruit (1973–2009–STACHURA)



Production (1973–2009–STACHURA)

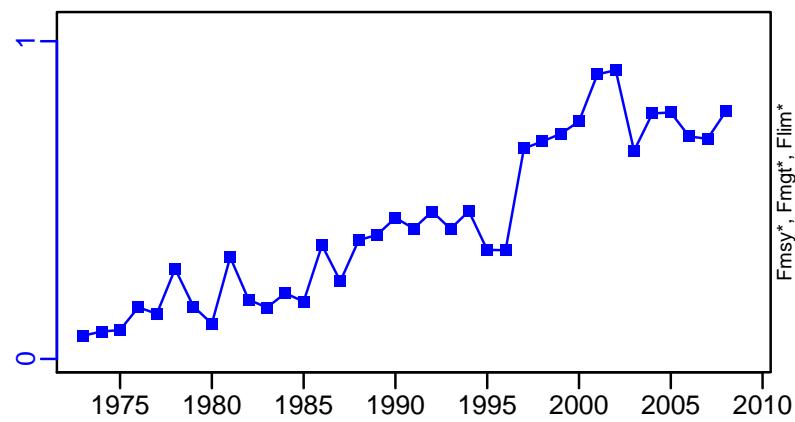
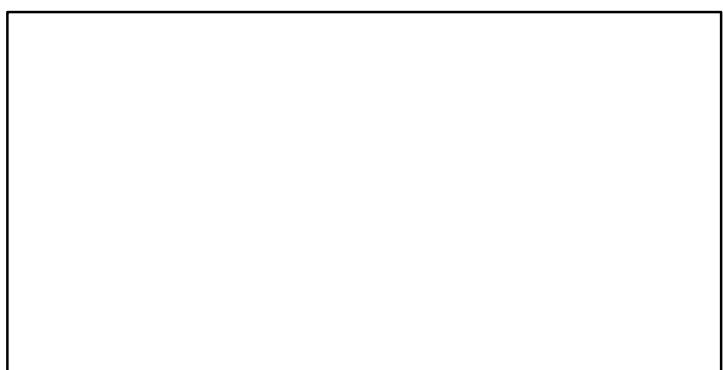
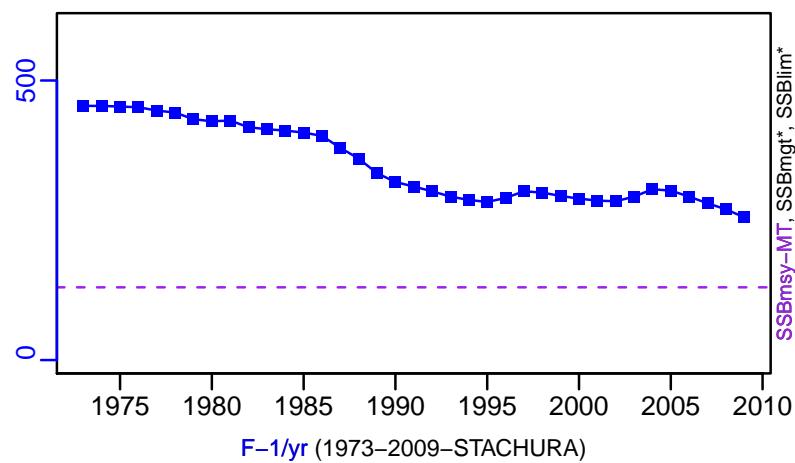
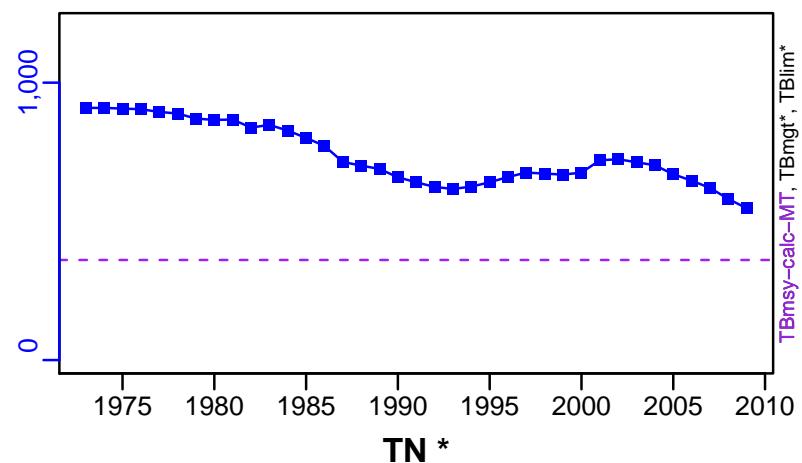


◆ Start Year ◆ End Year * No Data

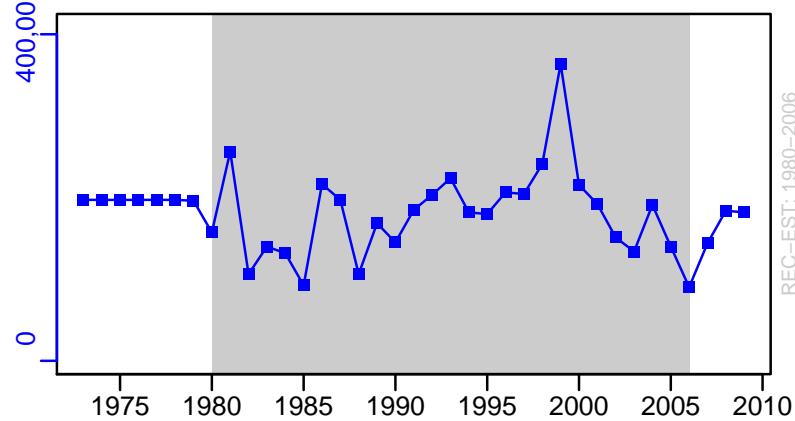
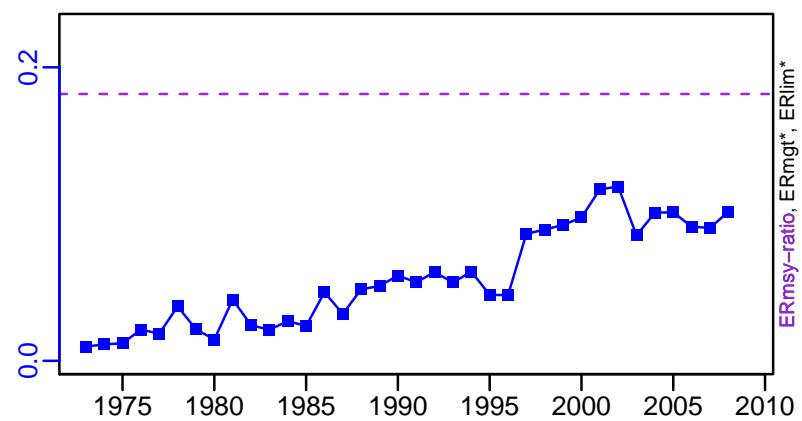
Cabezon Oregon Coast [CABEZORECOAST]

TB-MT (1973–2009–STACHURA)

SSB-MT (1973–2009–STACHURA)



ER-calc-ratio (1973–2009–STACHURA)

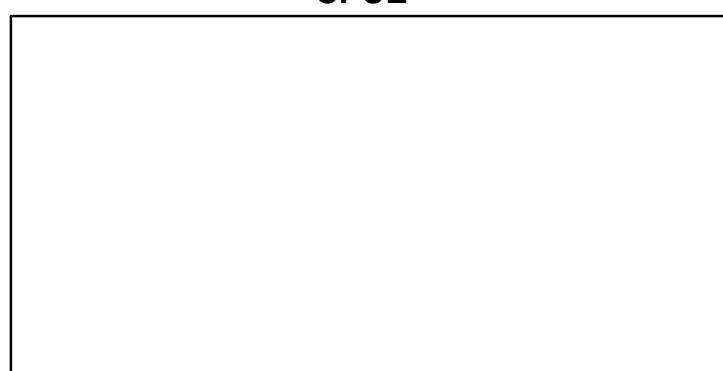
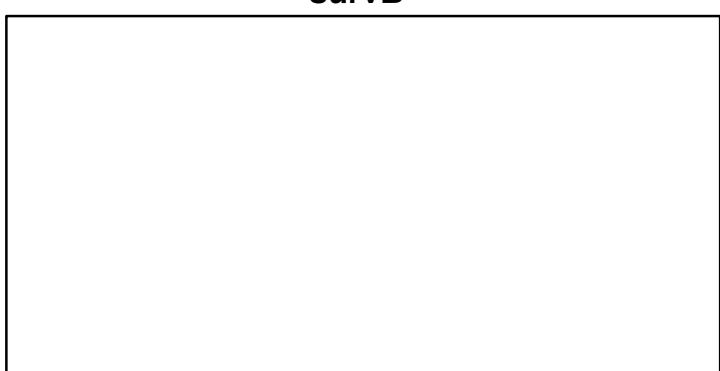
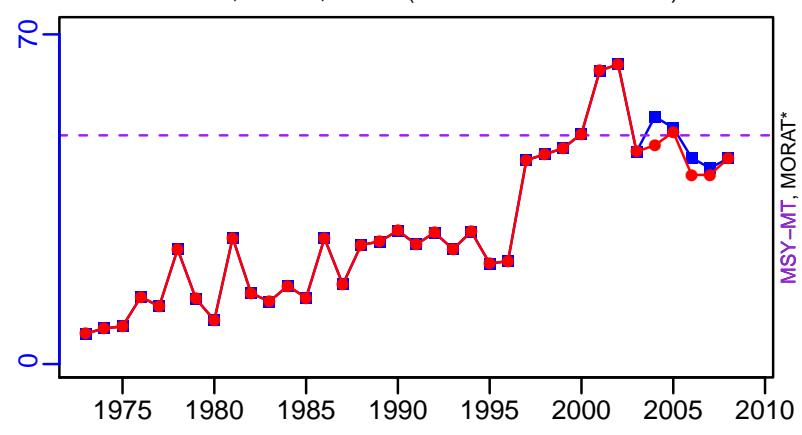


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - Lim BRP | * No Data |

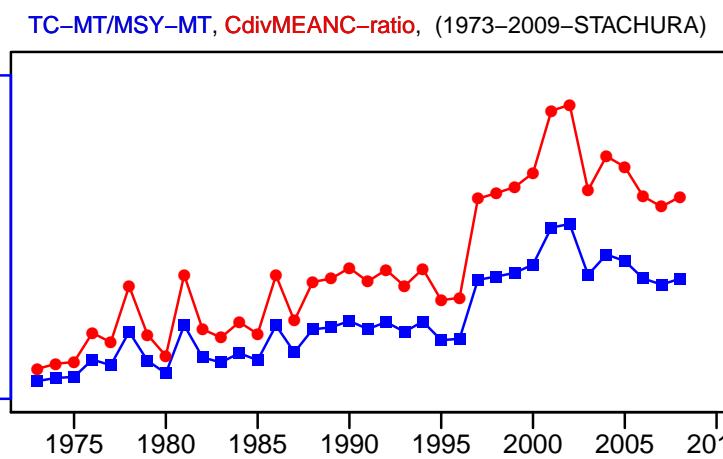
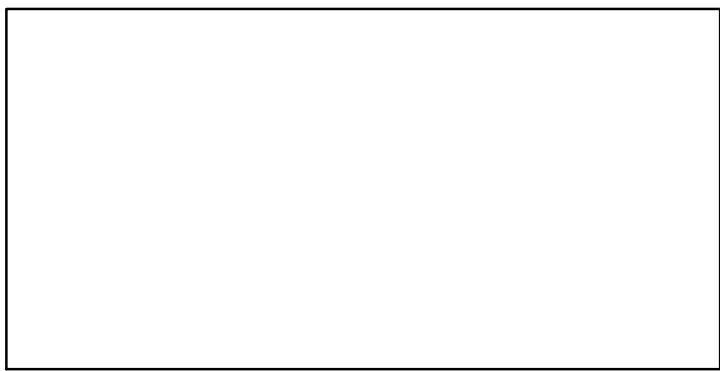
Cabezon Oregon Coast [CABEZORECOAST]

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]

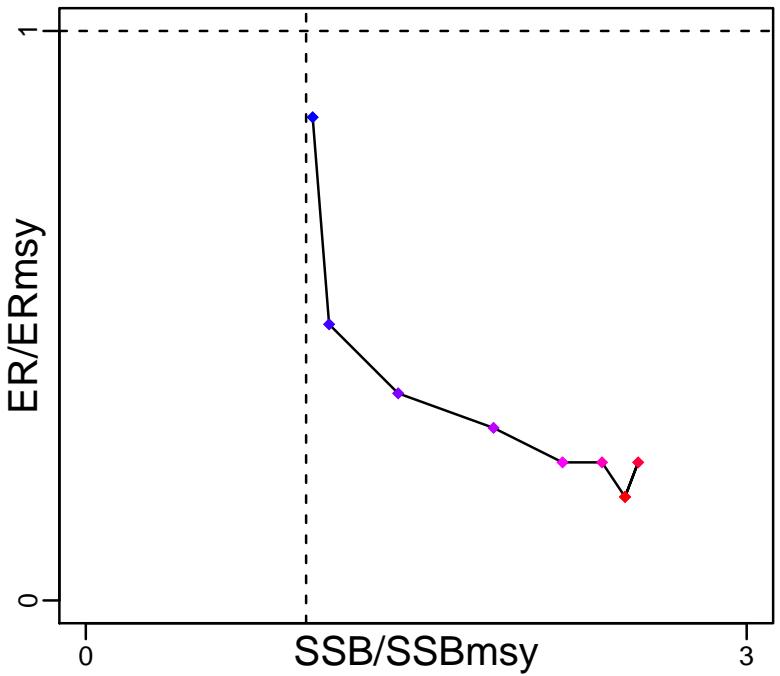
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Scorpaenichthys marmoratus |
| Current Assess ID | PFMC-CABEZSCAL-1930-2009-CHING |
| Area | Southern California |
| Management Authority | National Marine Fisheries Service,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

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

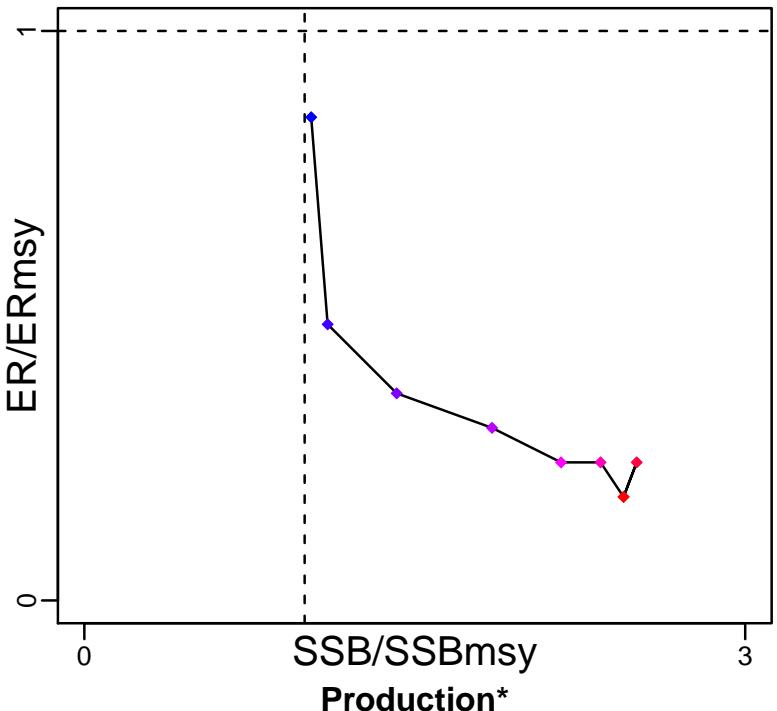
| Time Series | | | | | |
|-------------------|----------------------|-----------|------------|---------|-----|
| Type | ID | Asmt Year | Curr Value | Sex | Age |
| TB | TB-MT | 2009 | 789 | Both | 2+ |
| SSB | SSB-MT | 2009 | 158 | Females | 3+ |
| TN | - | - | - | - | - |
| R | R-E00 | 2009 | 192 |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

Cabezon Southern California [CABEZSCAL]

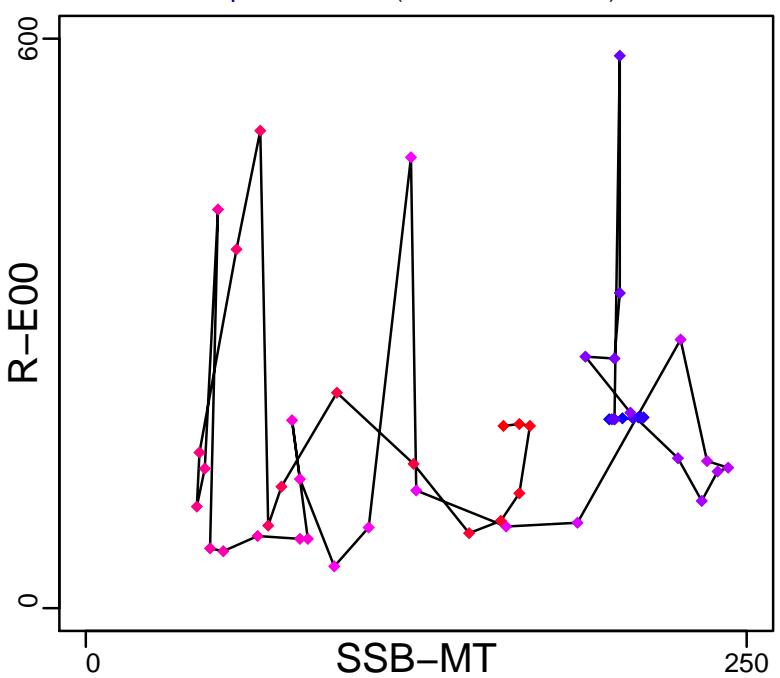
Kobe MSYpref (1930–2009–CHING)



Kobe MGTPref (1930–2009–CHING)



Spawner Recruit (1930–2009–CHING)



Production*

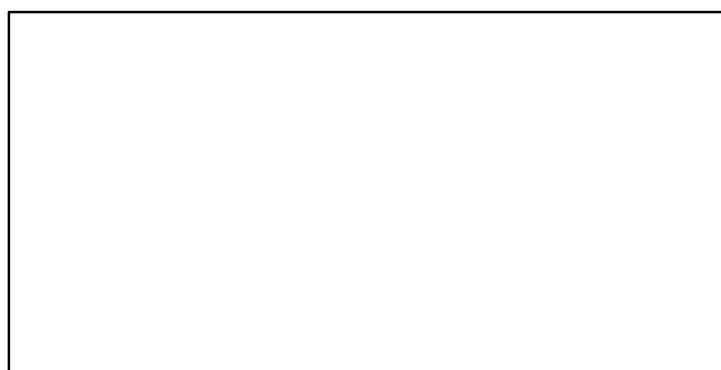
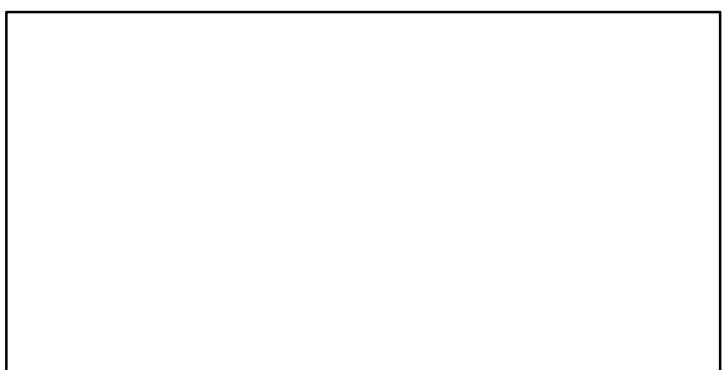
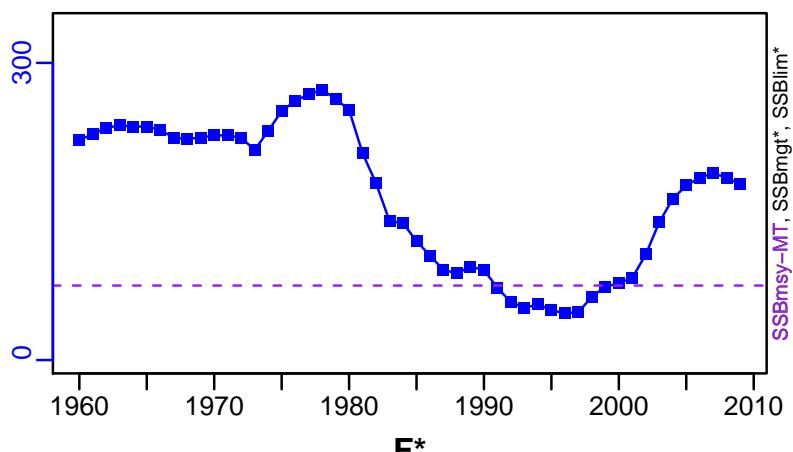
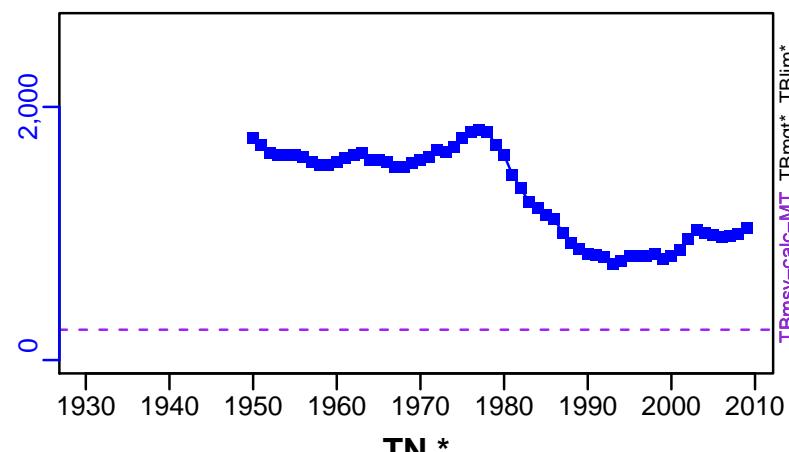


◆ Start Year ◆ End Year * No Data

Cabezon Southern California [CABEZSCAL]

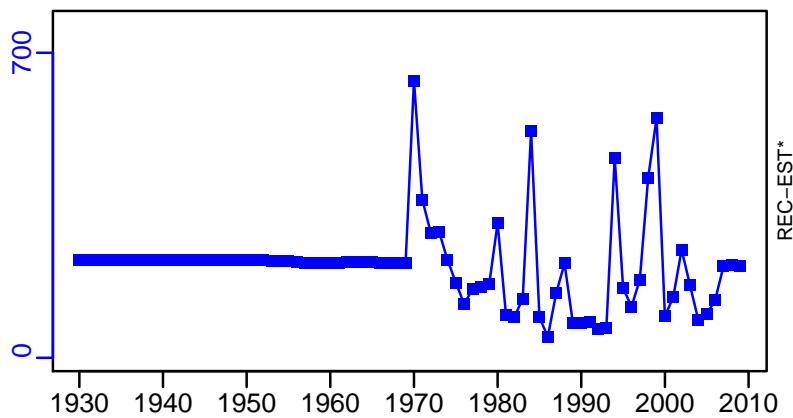
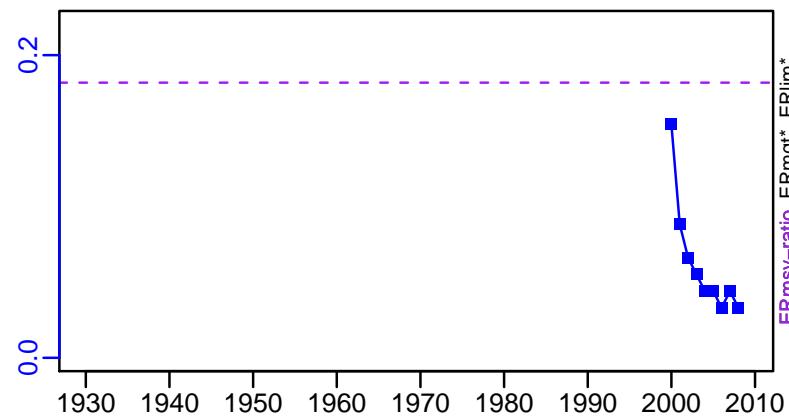
TB-MT (1930–2009–CHING)

SSB-MT (1930–2009–CHING)



ER-ratio (1930–2009–CHING)

R-E00 (1930–2009–CHING)

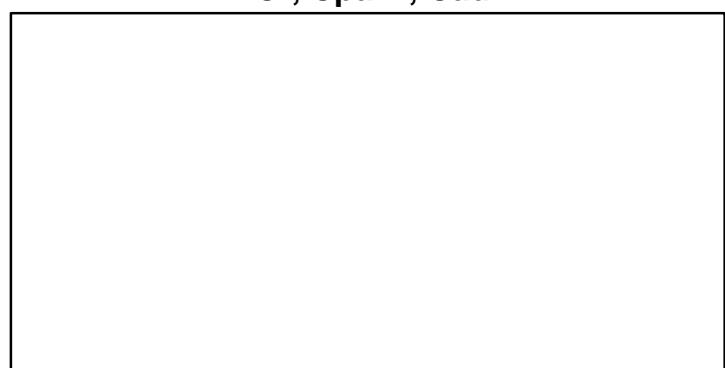
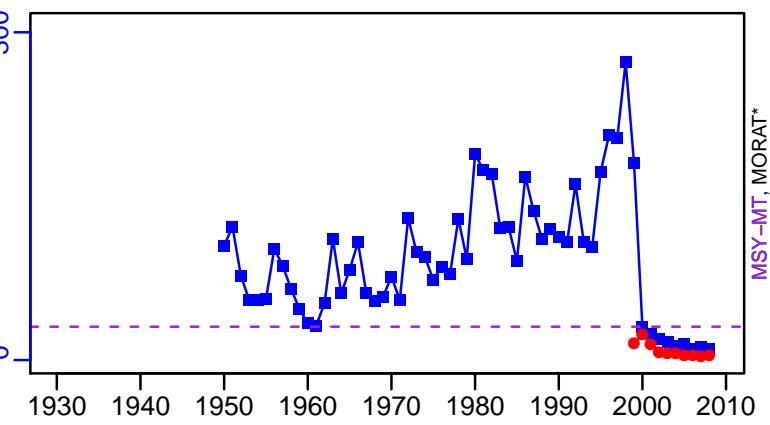


- | | | |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - - Lim BRP | * No Data |

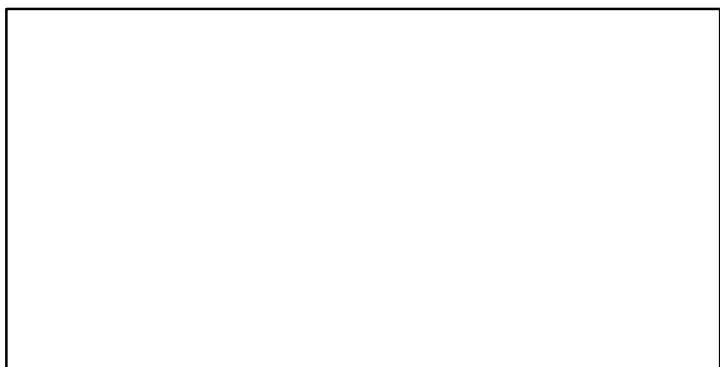
Cabezon Southern California [CABEZSCAL]

TC-MT, TL-MT, RecC* (1930–2009–CHING)

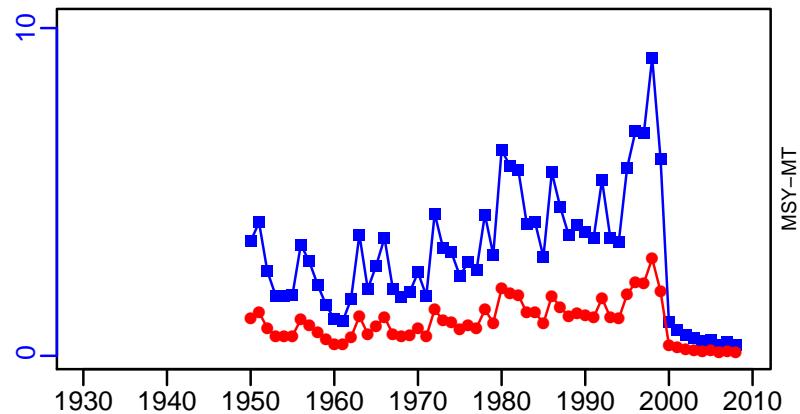
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC–ratio, (1930–2009–CHING)



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

California scorpionfish Southern California [CALSCORPSCAL]

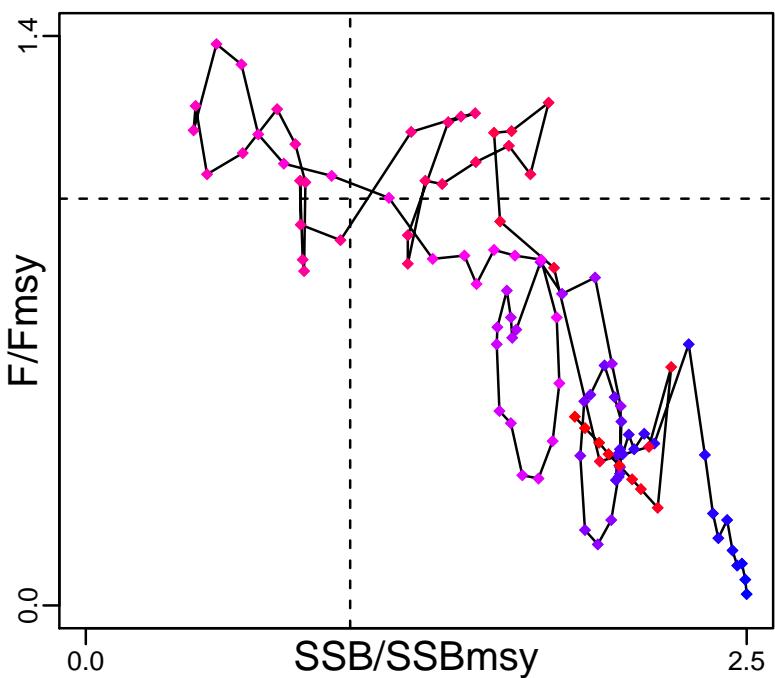
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Scorpaena guttata |
| Current Assess ID | SWFSC-CALSCORPSCAL-1914-2015-SISIMP2016 |
| Area | Southern California |
| Management Authority | National Marine Fisheries Service,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

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

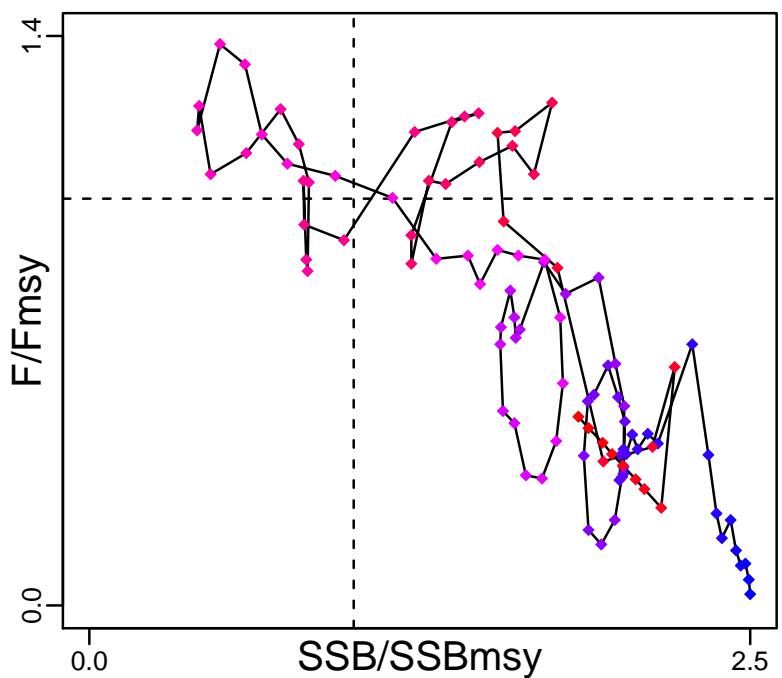
| Time Series | | | | | | |
|--------------------|----------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 1550 | - | 2+ | |
| SSB | SSB-MT | 2015 | 708 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 1900 | - | 0 | |
| F | F-1/yr | 2015 | 0.232 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.078 | - | - | |
| TC | TC-MT | 2015 | 124 | | | |
| TL | TL-MT | 2005 | 81 | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2005 | 2.371 | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2015 | 1.804 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.464 | | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2005 | 0.441 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

California scorpionfish Southern California [CALSCORPSCAL]

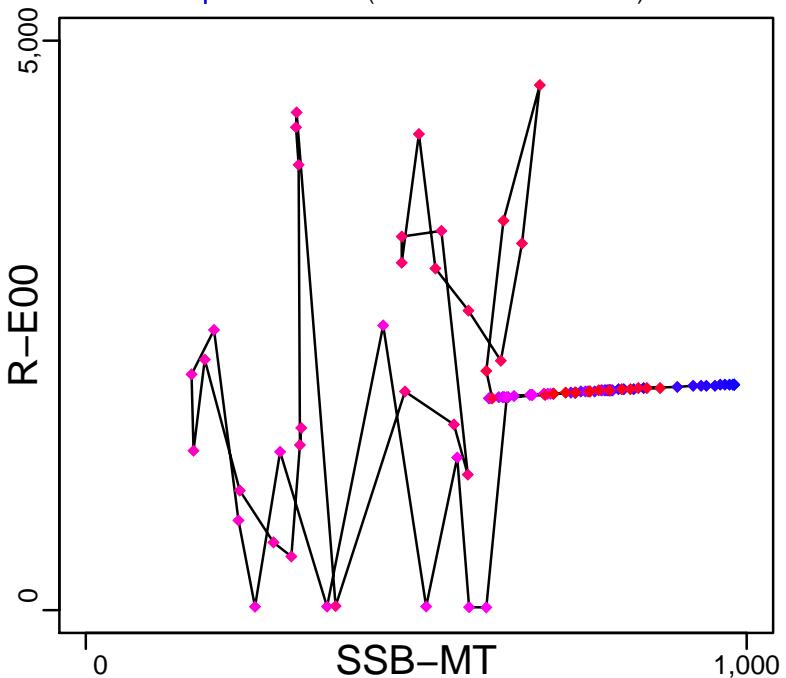
Kobe MSYpref (1914–2015–SISIMP2016)



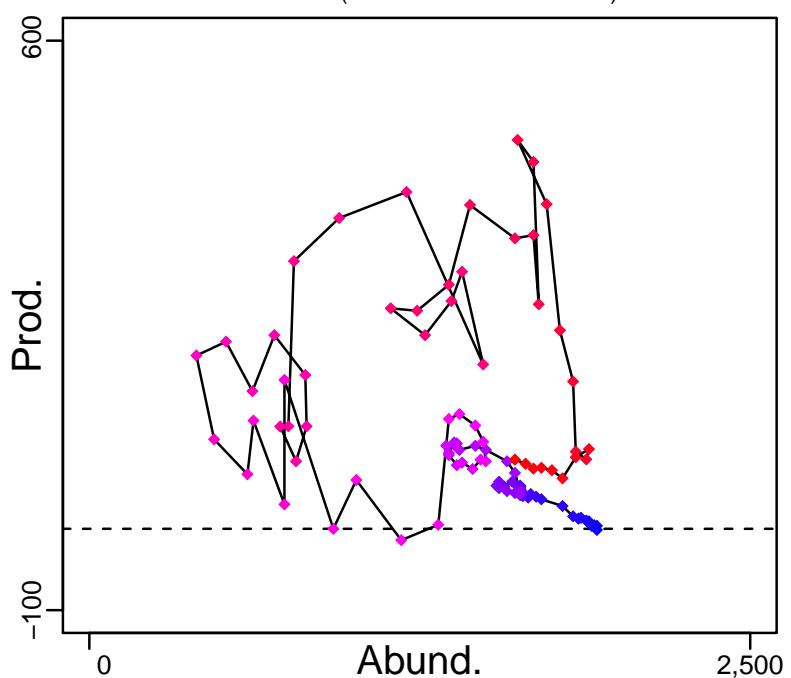
Kobe MGTpref (1914–2015–SISIMP2016)



Spawner Recruit (1914–2015–SISIMP2016)



Production (1914–2015–SISIMP2016)

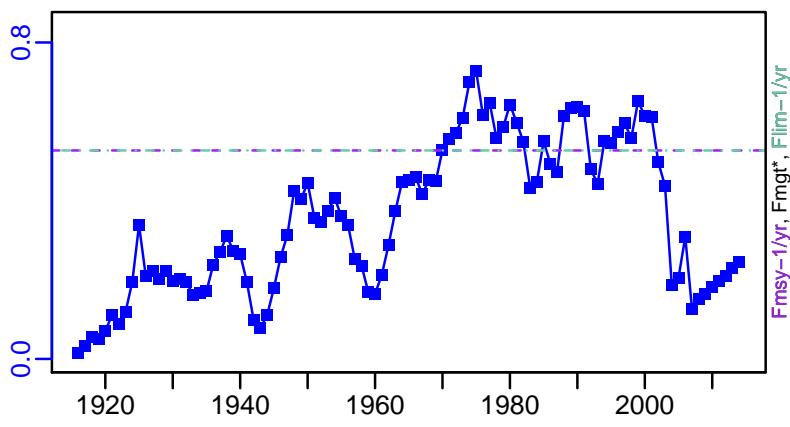
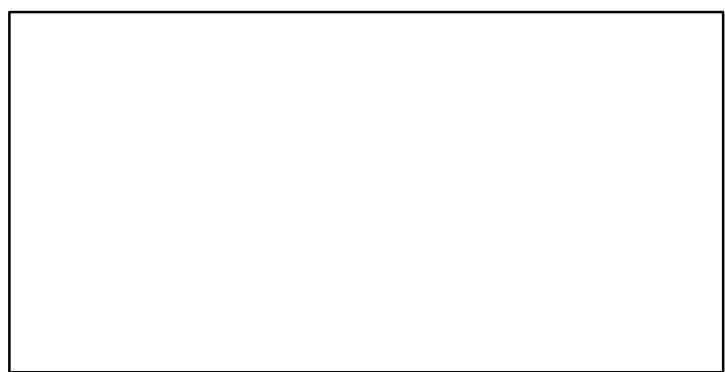
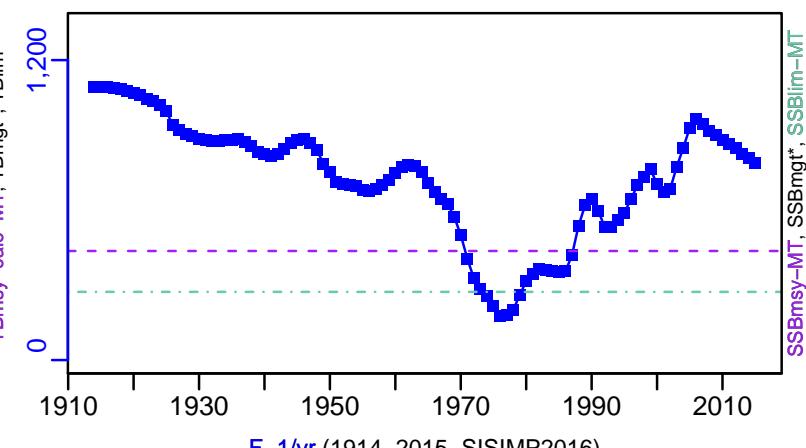
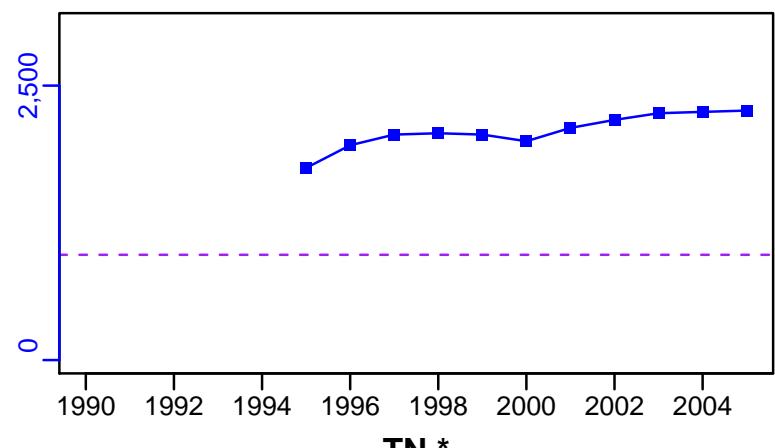


◆ Start Year ◆ End Year * No Data

California scorpionfish Southern California [CALSCORPSCAL]

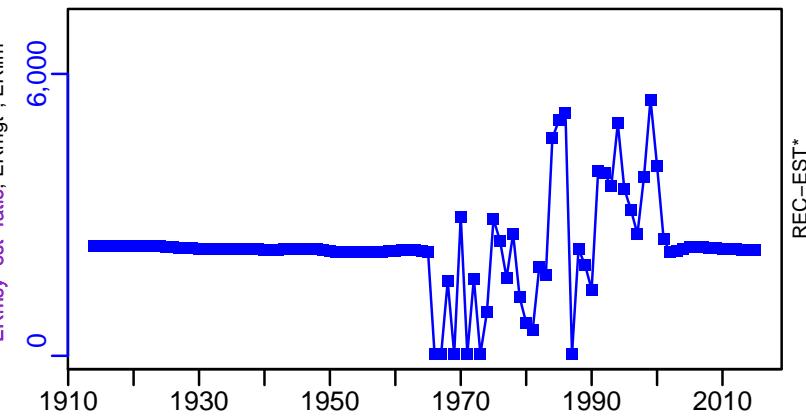
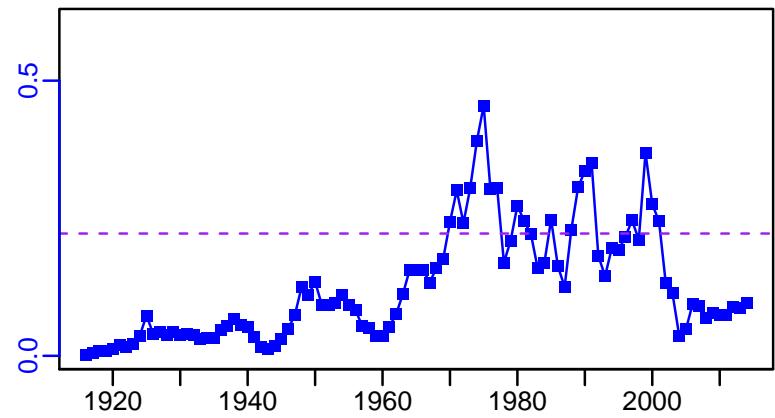
TB-MT (1990–2005-STANTON)

SSB-MT (1914–2015-SISIMP2016)



ER-calc-ratio (1914–2015-SISIMP2016)

R-E00 (1914–2015-SISIMP2016)

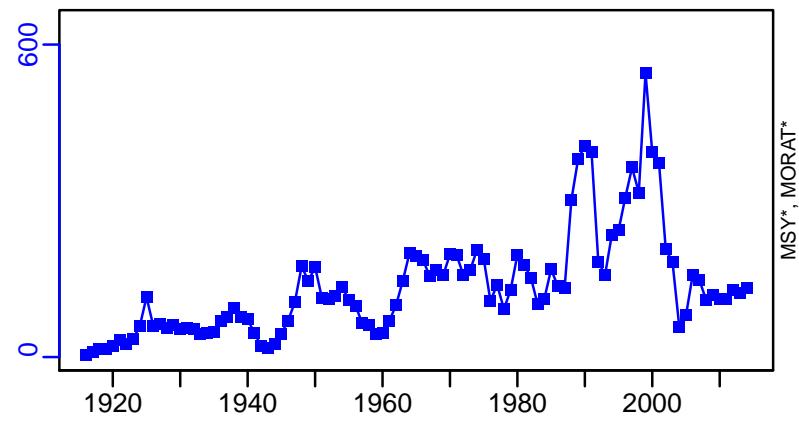


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | --- Lim BRP | * No Data |

California scorpionfish Southern California [CALSCORPSCAL]

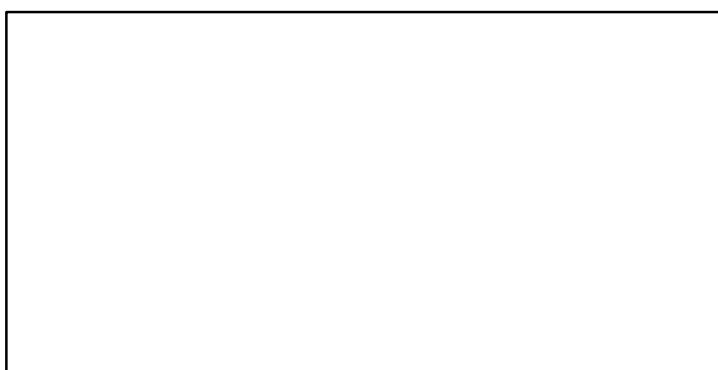
TC-MT, TL*, RecC* (1914–2015–SISIMP2016)

TAC*, Cpair*, Cadv*



survB*

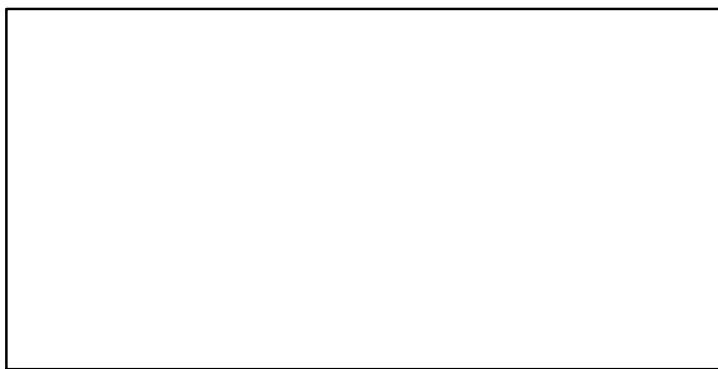
MSY*, MORAT*



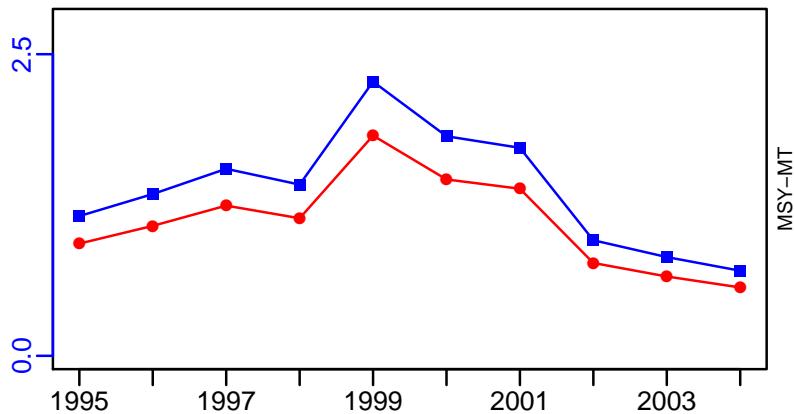
CPUE*



EFFORT*



TL-MT/MSY-MT, CdivMEANC-ratio, (1990–2005–STANTON)



MSY-MT

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

Chilipepper Southern Pacific Coast [CHILISPSCOAST]

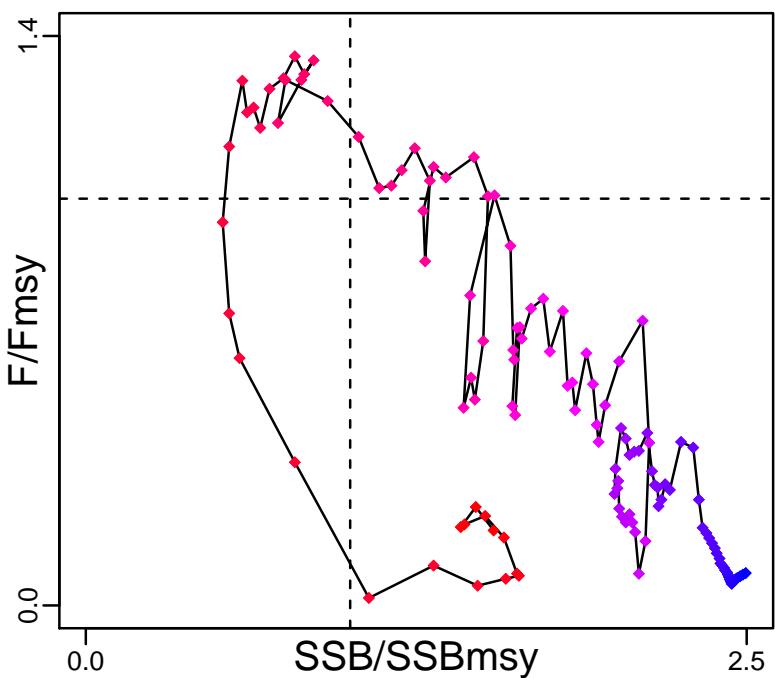
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes goodei |
| Current Assess ID | SWFSC-CHILISPSCOAST-1892-2015-SISIMP2016 |
| Area | Southern Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

| Reference Points | | | |
|-------------------------|------------------|------------------|--------------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2007 | 19,321 |
| SSBmsy | SSBmsy-E00larvae | 2015 | 2.82×10^9 |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-ratio | 2007 | 0.112 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2007 | 45,057 |
| SSB0 | SSB0-MT | 2007 | 33,390 |
| MSY | MSY-MT | 2015 | 2133 |
| M | M-1/yr | 2007 | 0.16 |
| TBlim | TBlim-MT | 2007 | 8666 |
| SSBlim | SSBlim-E00larvae | 2015 | 1.76×10^9 |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

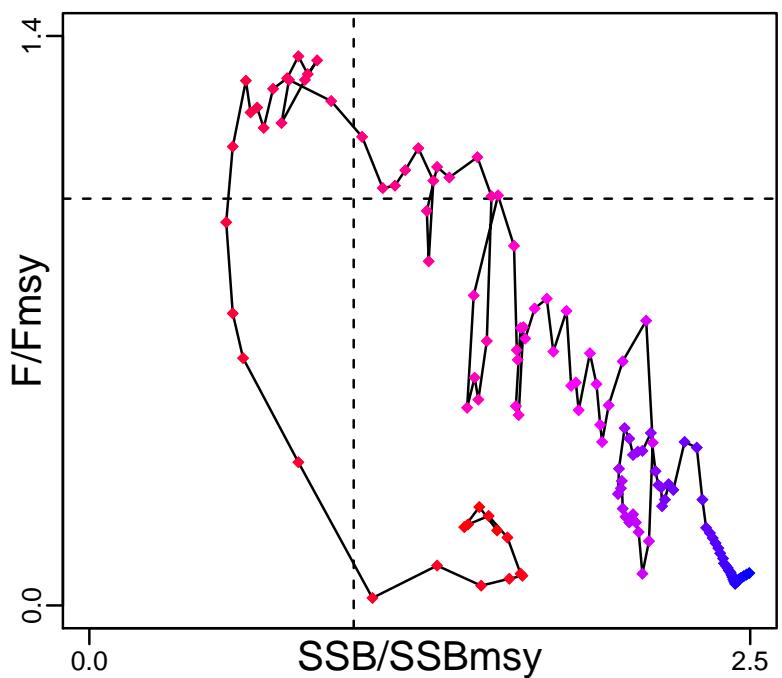
| Time Series | | | | | | |
|--------------------|--------------------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 36,700 | - | 2+ | |
| SSB | SSB-E00larvae | 2015 | 4.5×10^9 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 37,700,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.092 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.009 | - | - | |
| TC | TC-MT | 2015 | 325 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2007 | 1.739 | | | |
| SSB/SSBmsy | SSB-E00larvae/SSBmsy-E00larvae | 2015 | 1.596 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.184 | | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2007 | 0.035 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Chilipepper Southern Pacific Coast [CHILISPSCOAST]

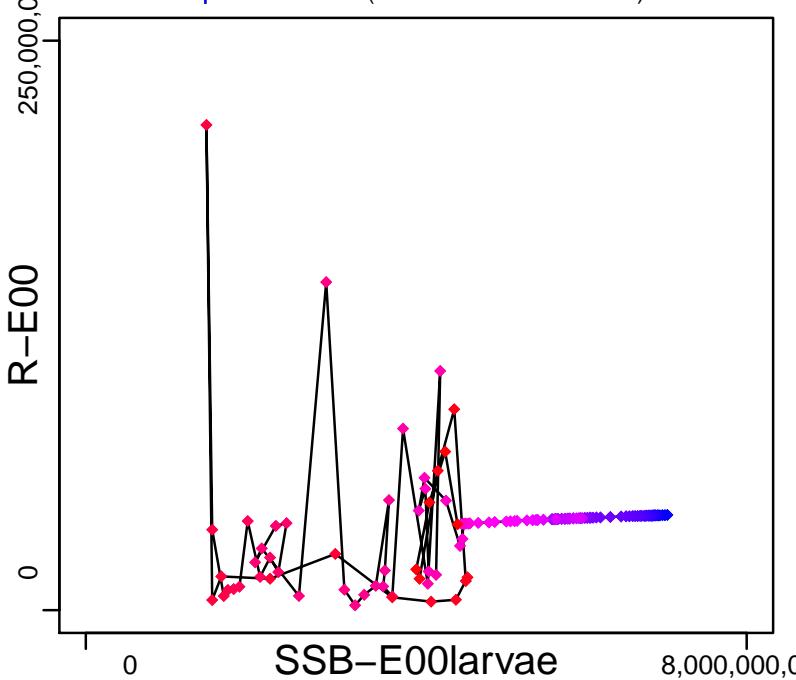
Kobe MSYpref (1892–2015–SISIMP2016)



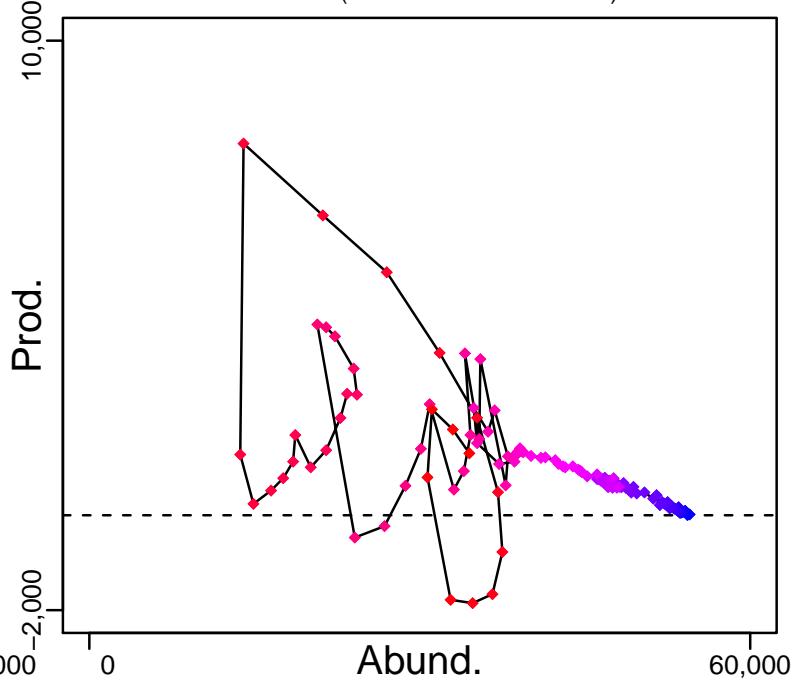
Kobe MGTpref (1892–2015–SISIMP2016)



Spawner Recruit (1892–2015–SISIMP2016)



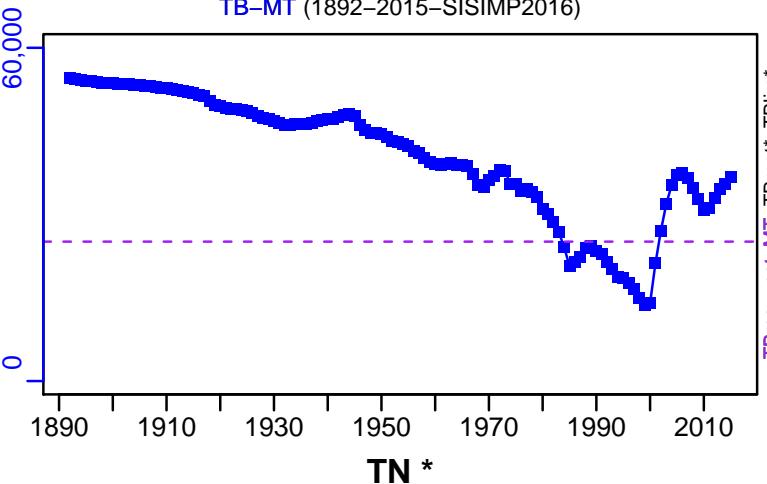
Production (1892–2015–SISIMP2016)



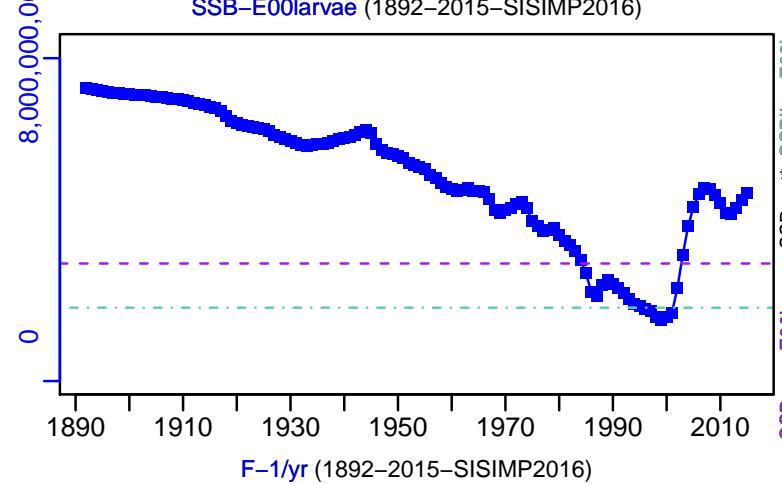
◆ Start Year ◆ End Year * No Data

Chilipepper Southern Pacific Coast [CHILISPSCOAST]

TB-MT (1892–2015–SISIMP2016)

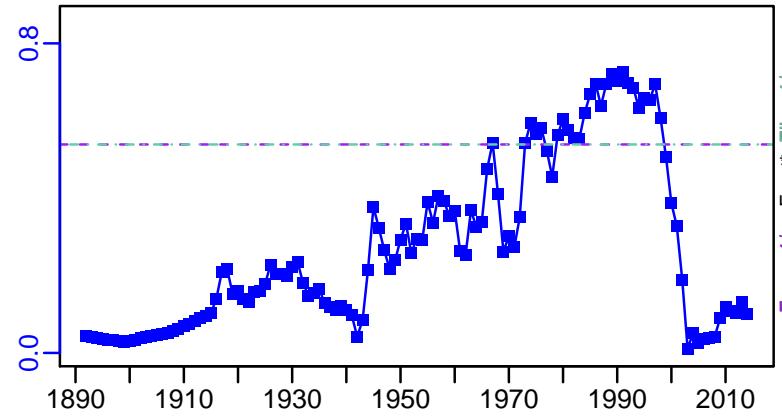


SSB-E00larvae (1892–2015–SISIMP2016)



TN *

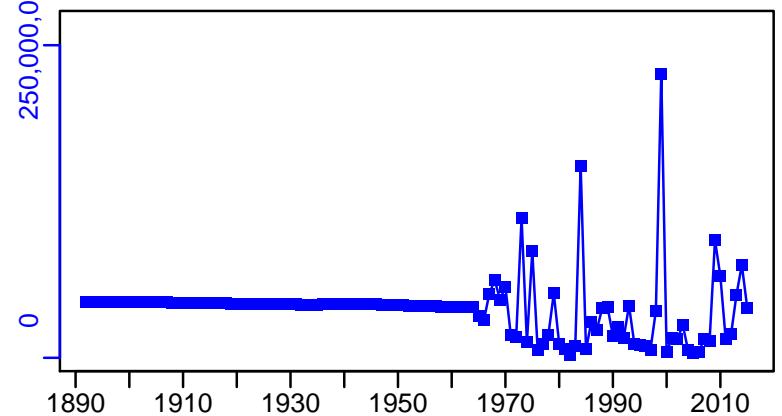
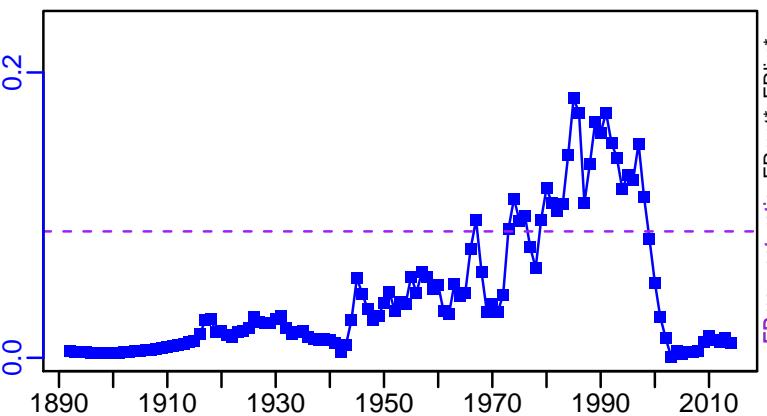
SSBmsy-E00larvae, SSBmgt*, SSBlim-E00larvae



ER-calc-ratio (1892–2015–SISIMP2016)

Fmgt*-1/yr, Fmgt*, Filmgt*-1/yr

REC-EST*

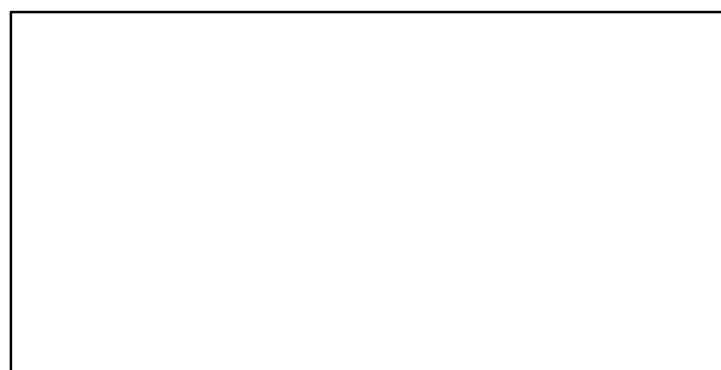
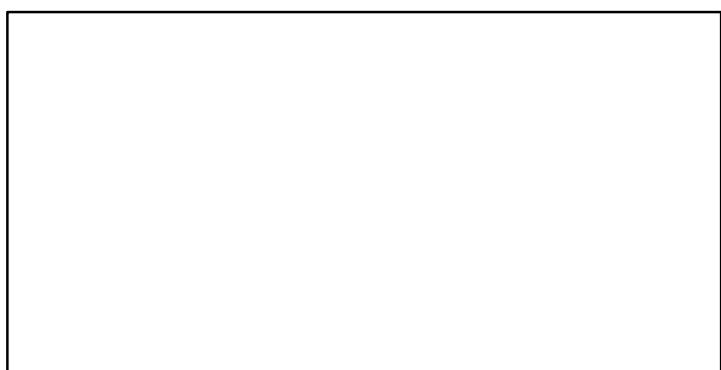
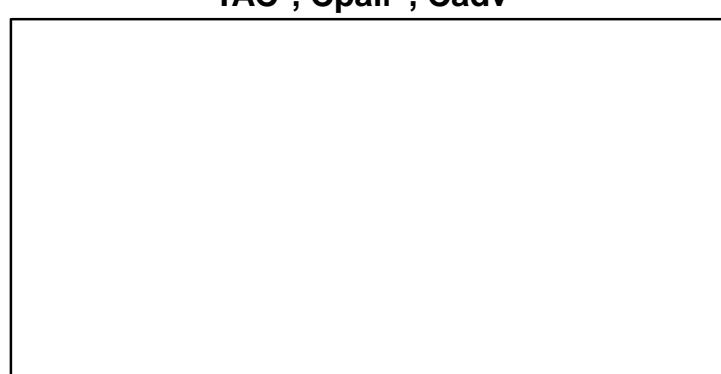
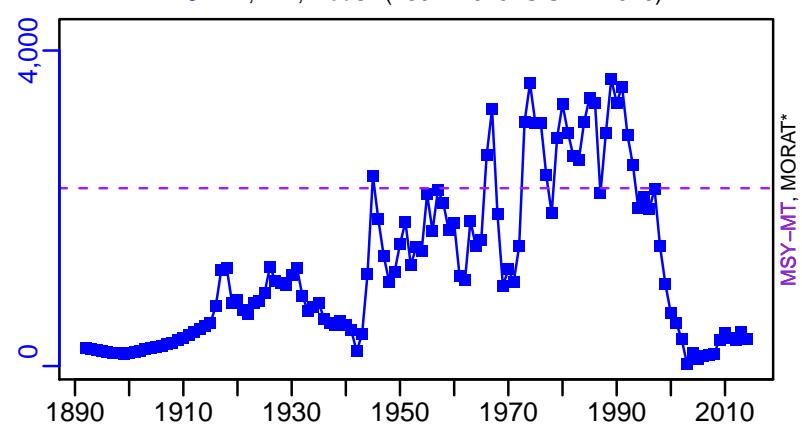


- | | | |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - - Lim BRP | * No Data |

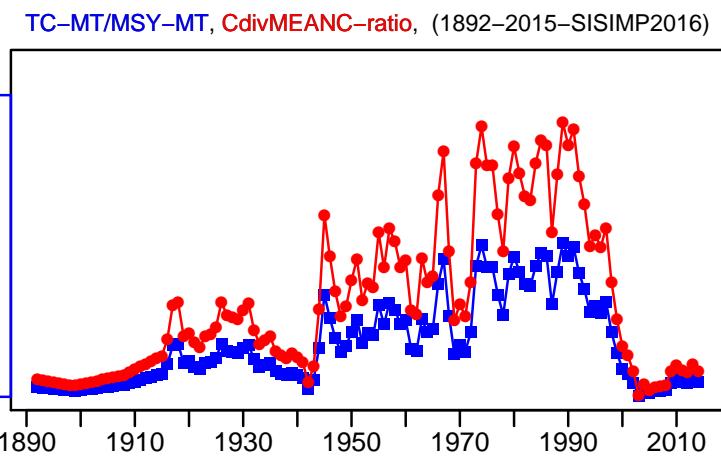
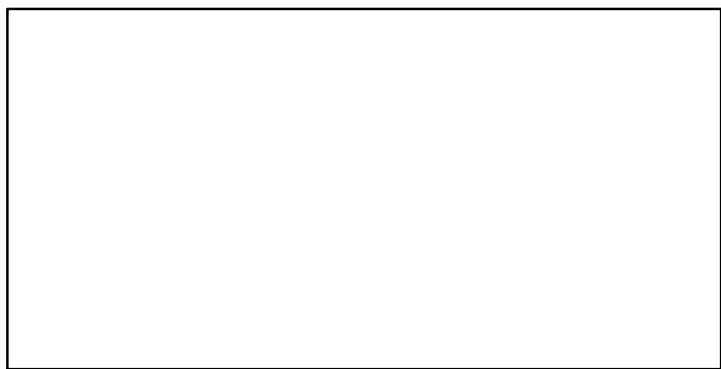
Chilipepper Southern Pacific Coast [CHILISPSCOAST]

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]

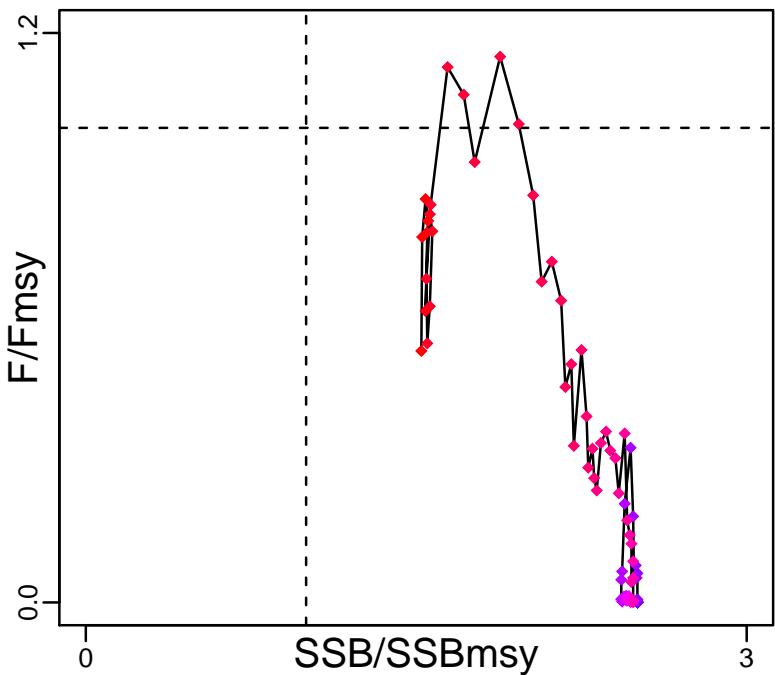
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes nebulosus |
| Current Assess ID | NWFSC-CHROCKCPCOAST-1900-2015-SISIMP2016 |
| Area | Central Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

| Reference Points | | | |
|-------------------------|-----------------|------------------|-----------------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2015 | 272 |
| SSBmsy | SSBmsy-E00eggs | 2015 | 2.6×10^{10} |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-est-ratio | 2015 | 0.047 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2015 | 16 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | SSBlim-E00eggs | 2015 | 1.63×10^{10} |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

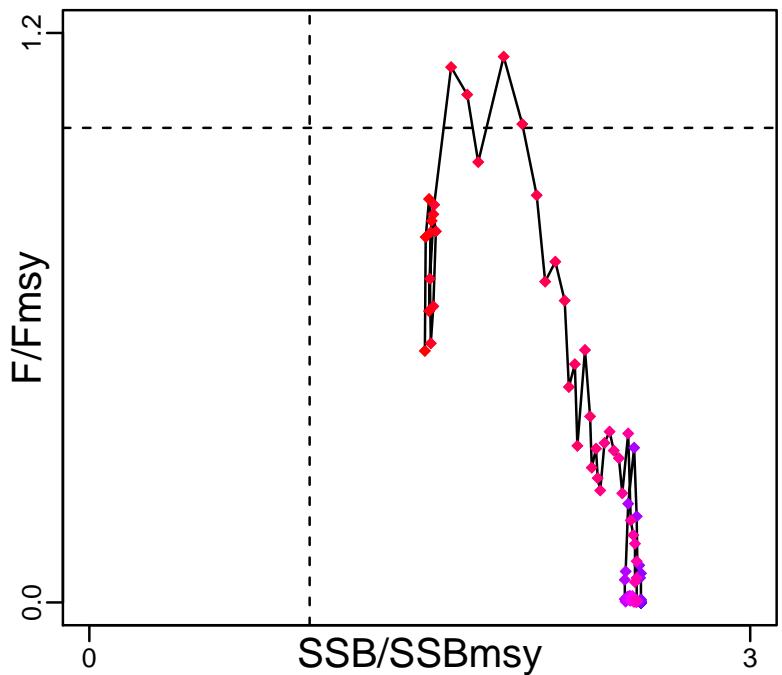
| Time Series | | | | | | |
|--------------------|-------------------------------|------------------|--------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 381 | - | 5+ | |
| SSB | SSB-E00eggs | 2015 | 4×10^{10} | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 68,200 | - | 0 | |
| F | F-1/yr | 2015 | 0.265 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.019 | - | - | |
| TC | TC-MT | 2015 | 7 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 2015 | 1.4 | | | |
| SSB/SSBmsy | SSB-E00eggs/SSBmsy-E00eggs | 2015 | 1.538 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.53 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-est-ratio | 2015 | 0.397 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

China rockfish Central Pacific Coast [CHROCKCPCOAST]

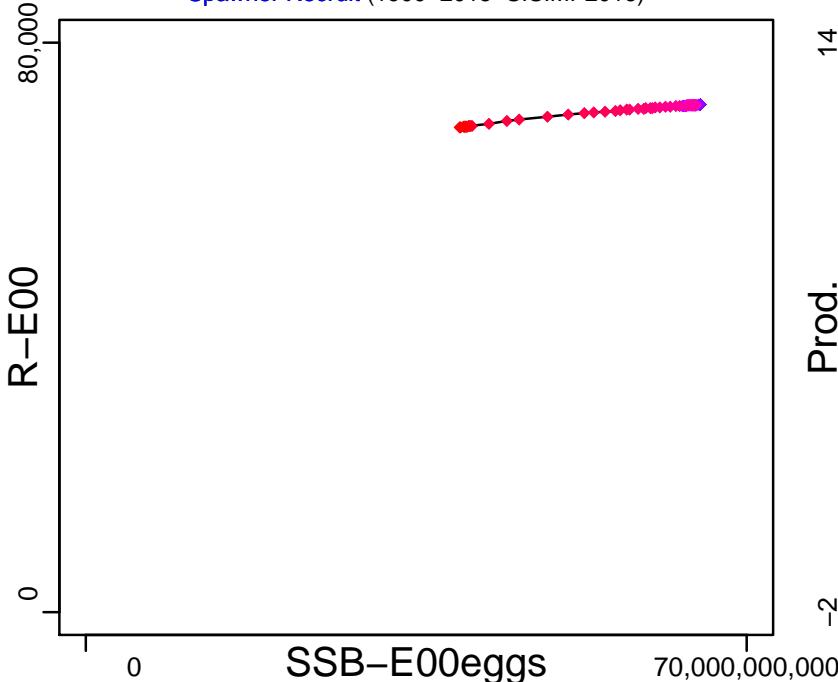
Kobe MSYpref (1900–2015–SISIMP2016)



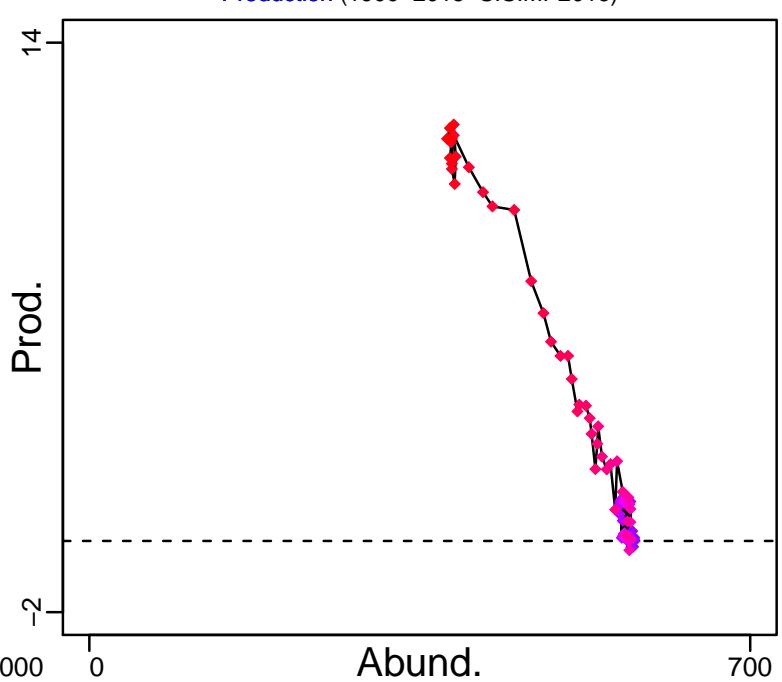
Kobe MGTpref (1900–2015–SISIMP2016)



Spawner Recruit (1900–2015–SISIMP2016)



Production (1900–2015–SISIMP2016)

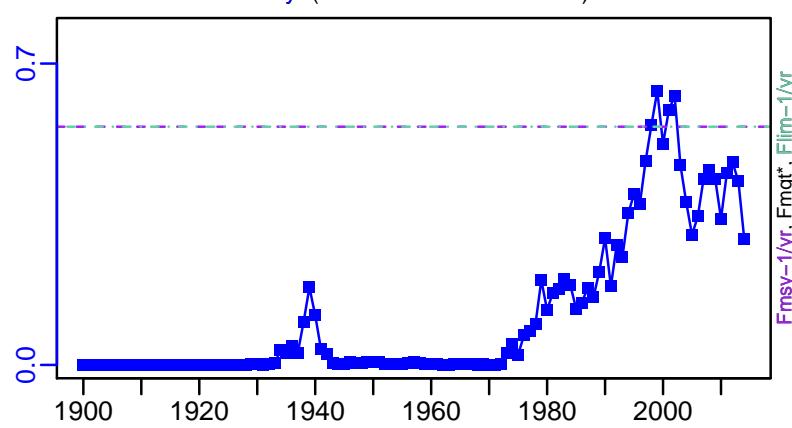
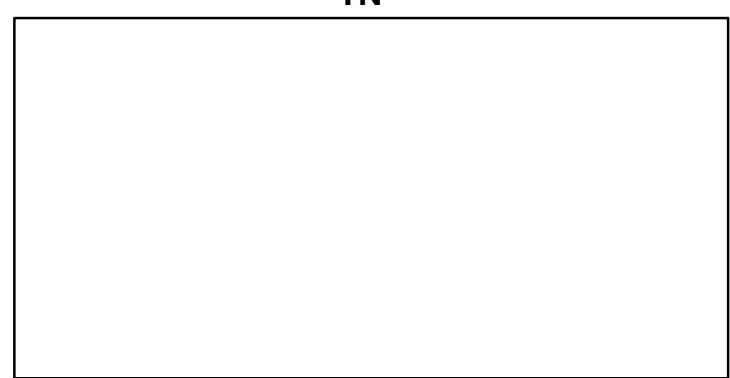
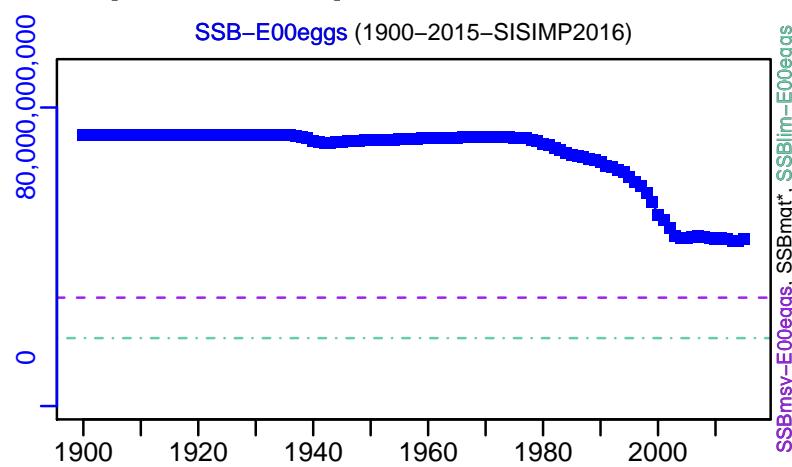
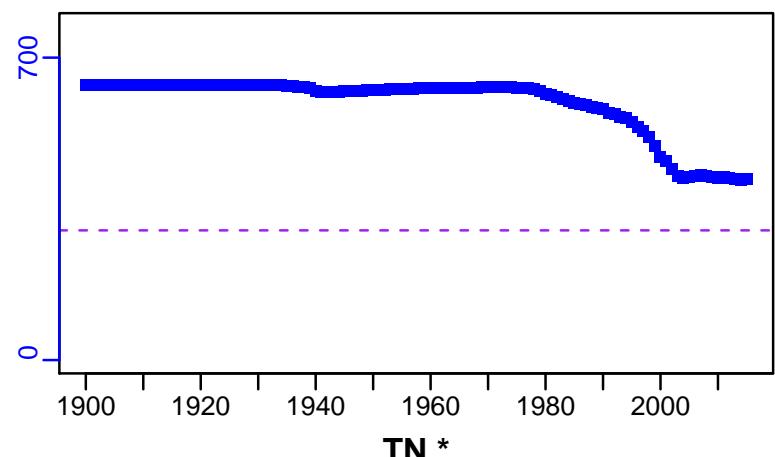


◆ Start Year ◆ End Year * No Data

China rockfish Central Pacific Coast [CHROCKCPCOAST]

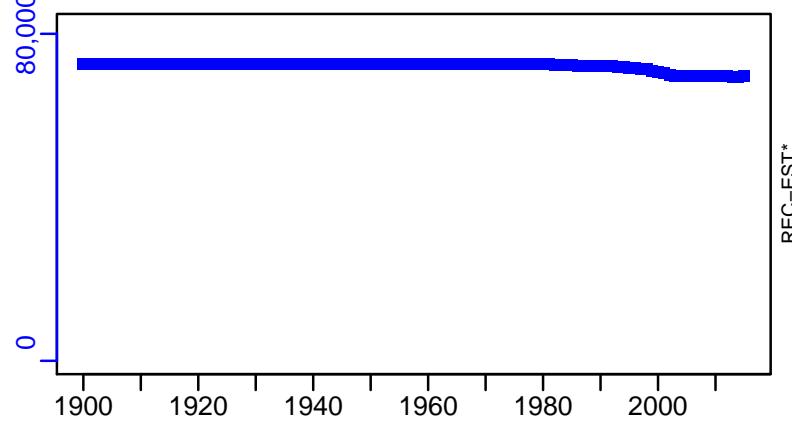
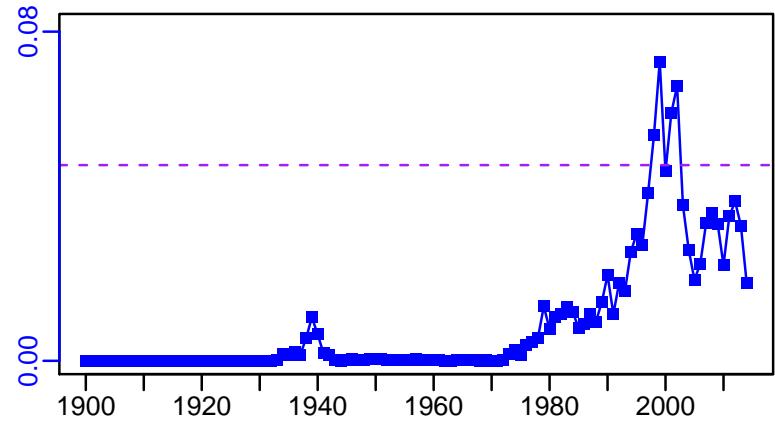
TB-MT (1900–2015–SISIMP2016)

SSB-E00eggs (1900–2015–SISIMP2016)



ER-calc-ratio (1900–2015–SISIMP2016)

R-E00 (1900–2015–SISIMP2016)

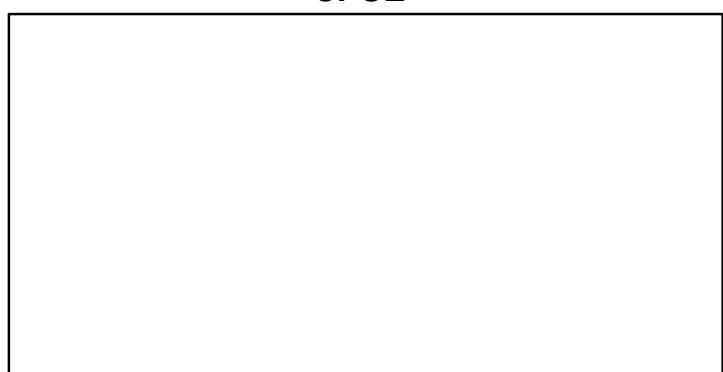
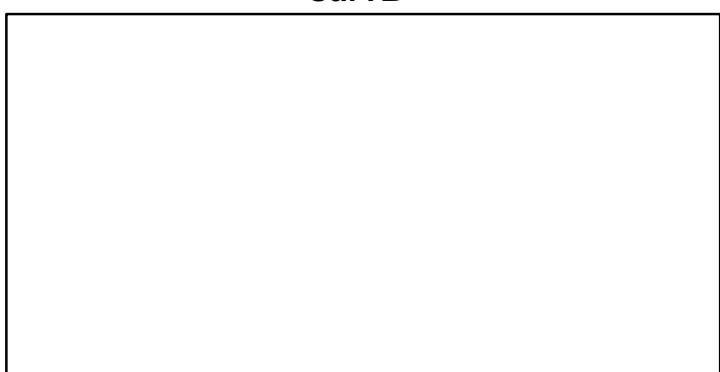
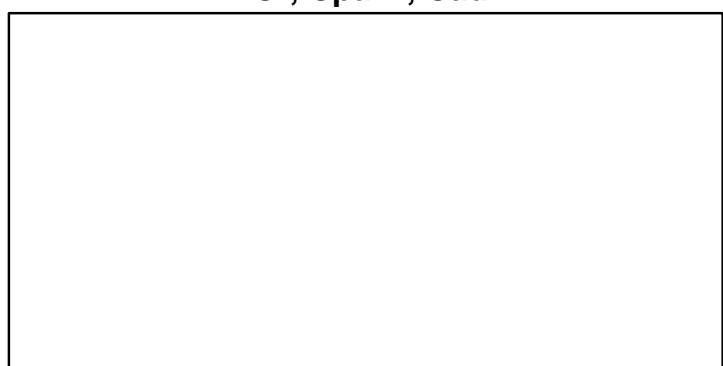
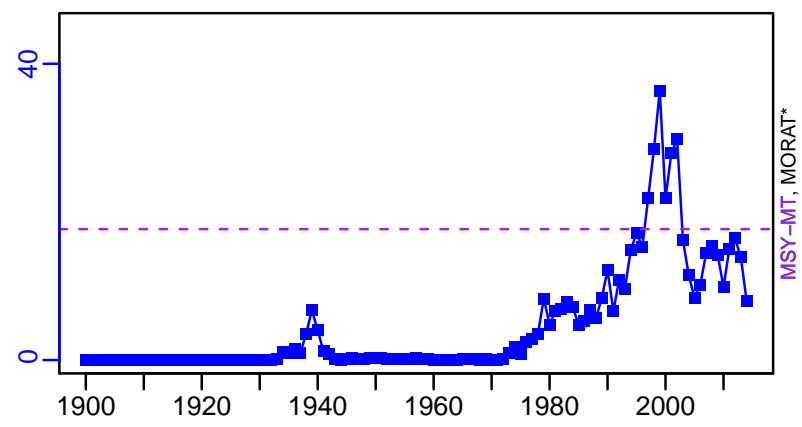


| | | |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - - Lim BRP | * No Data |

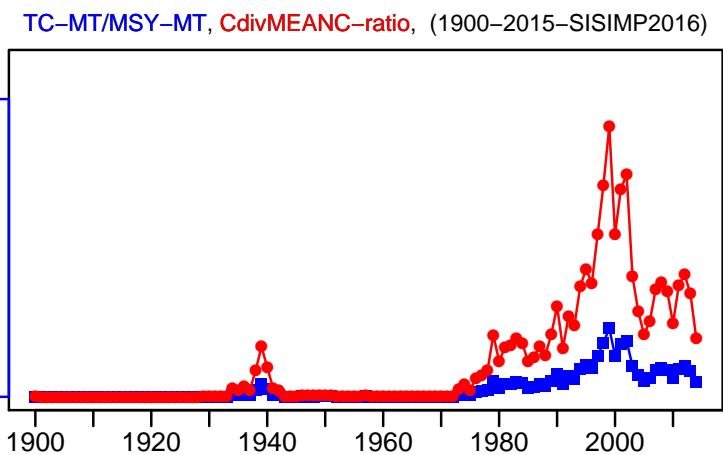
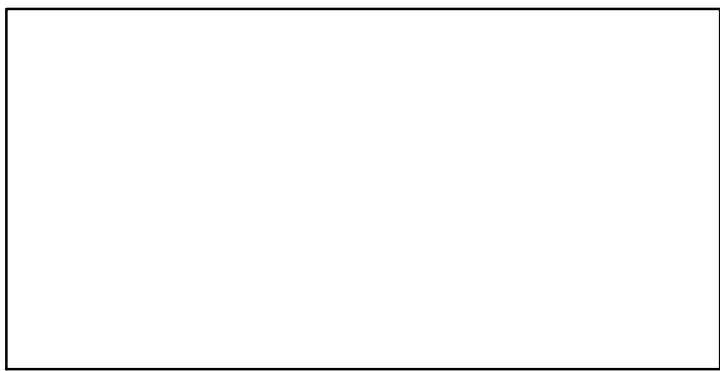
China rockfish Central Pacific Coast [CHROCKCPCOAST]

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 |

China rockfish Northern Pacific Coast [CHROCKNPCOAST]

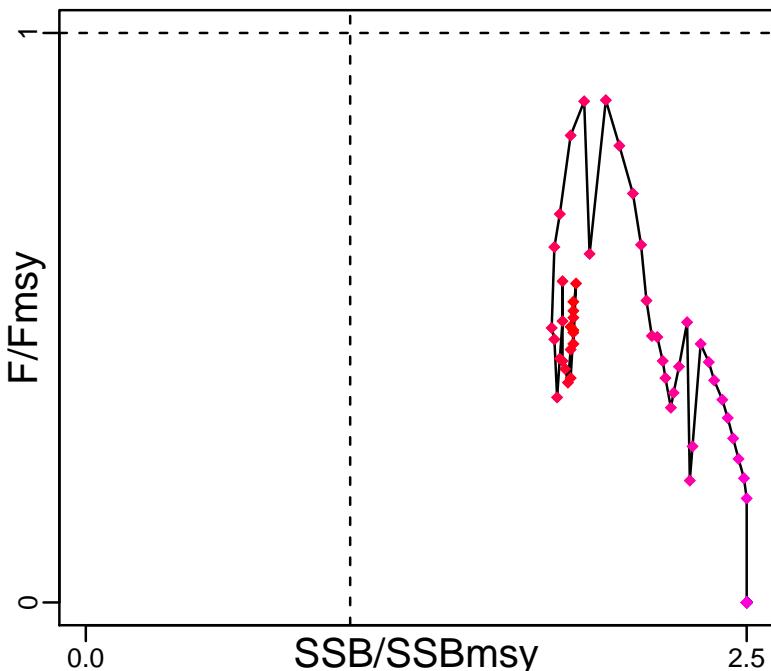
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes nebulosus |
| Current Assess ID | SWFSC-CHROCKNPCOAST-1900-2015-SISIMP2016 |
| Area | Northern Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

| Reference Points | | | |
|-------------------------|-----------------|------------------|--------------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2015 | 111 |
| SSBmsy | SSBmsy-E00eggs | 2015 | 9.76×10^9 |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-est-ratio | 2015 | 0.043 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-est-MT | 2015 | 4.804 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | SSBlim-E00eggs | 2015 | 6.13×10^9 |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

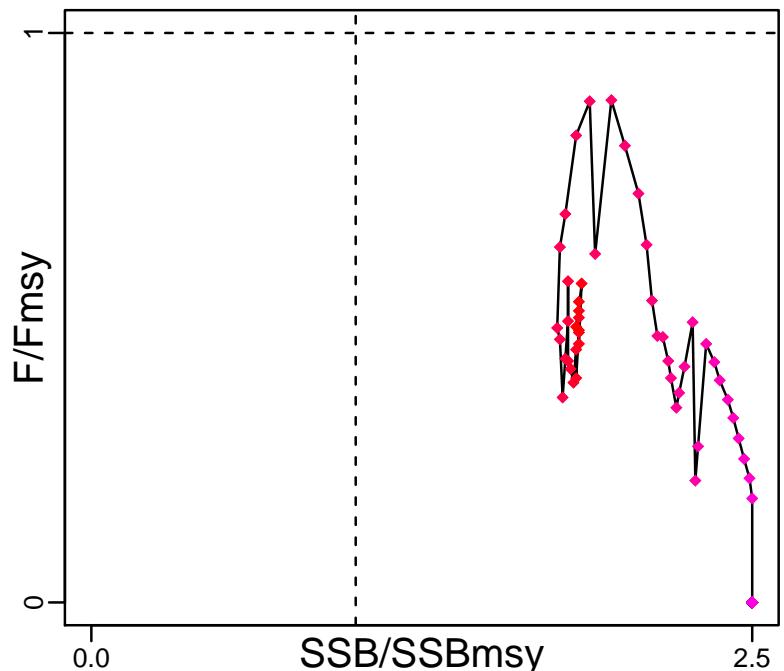
| Time Series | | | | | | |
|--------------------|-------------------------------|------------------|-----------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 183 | - | 5+ | |
| SSB | SSB-E00eggs | 2015 | 1.79×10^{10} | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 33,300 | - | 0 | |
| F | F-1/yr | 2015 | 0.242 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.017 | - | - | |
| TC | TC-MT | 2015 | 3.02 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 2015 | 1.646 | | | |
| SSB/SSBmsy | SSB-E00eggs/SSBmsy-E00eggs | 2015 | 1.834 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.484 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-est-ratio | 2015 | 0.382 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

China rockfish Northern Pacific Coast [CHROCKNPCOAST]

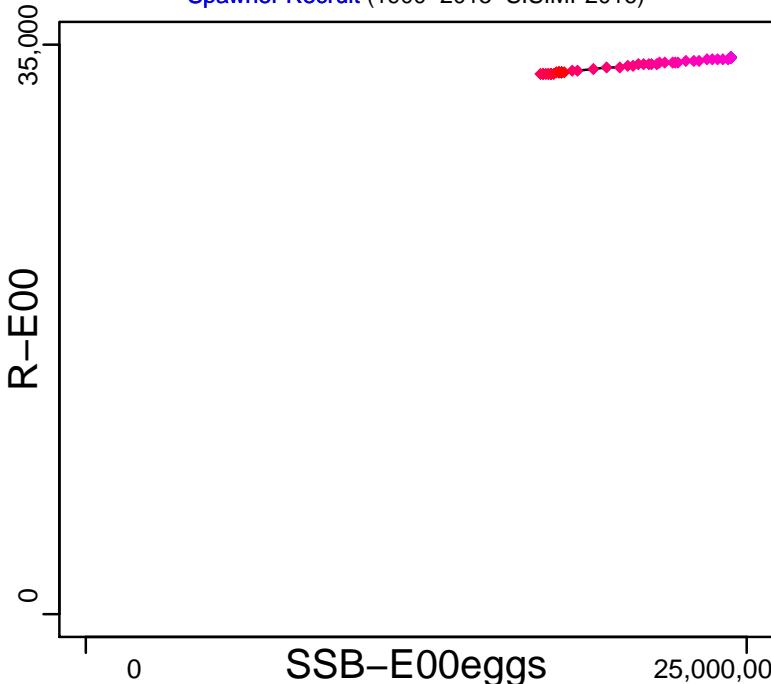
Kobe MSYpref (1900–2015–SISIMP2016)



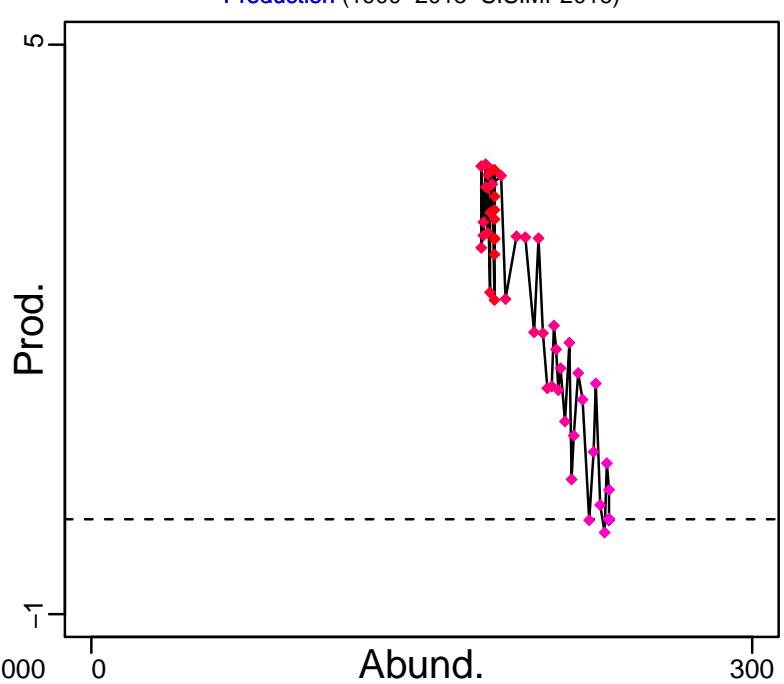
Kobe MGTpref (1900–2015–SISIMP2016)



Spawner Recruit (1900–2015–SISIMP2016)



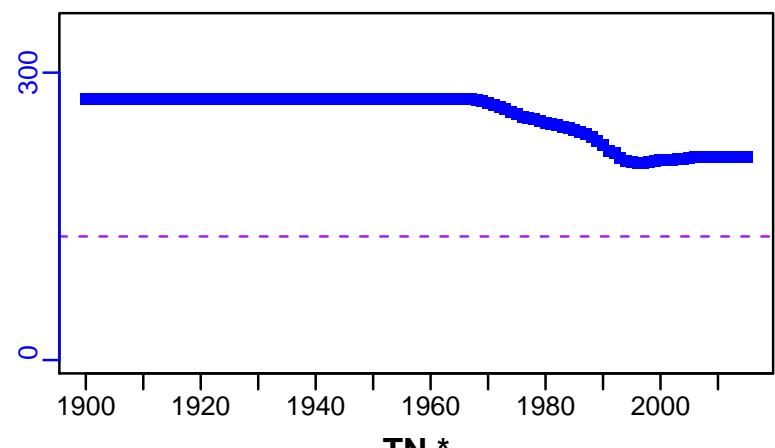
Production (1900–2015–SISIMP2016)



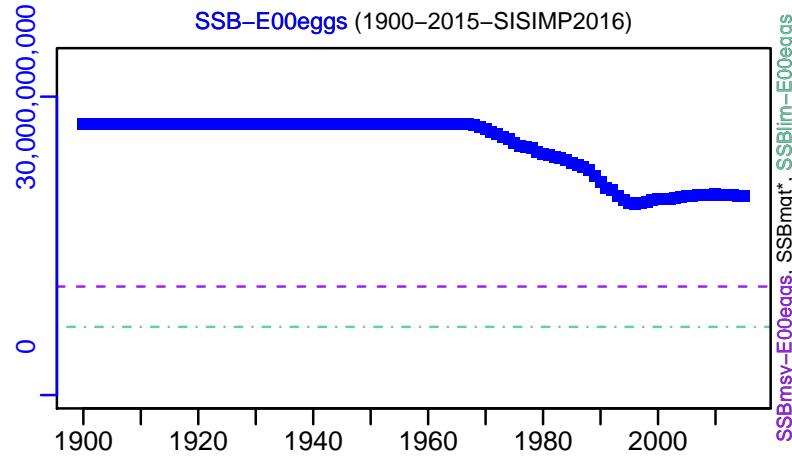
◆ Start Year ◆ End Year * No Data

China rockfish Northern Pacific Coast [CHROCKNPCOAST]

TB-MT (1900–2015–SISIMP2016)

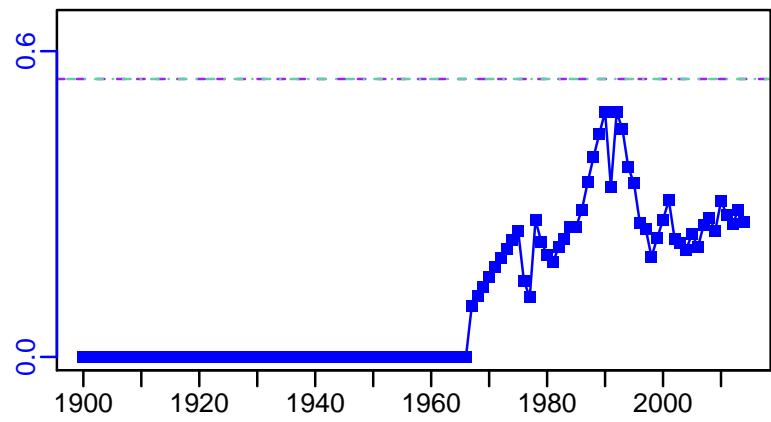


SSB-E00eggs (1900–2015–SISIMP2016)



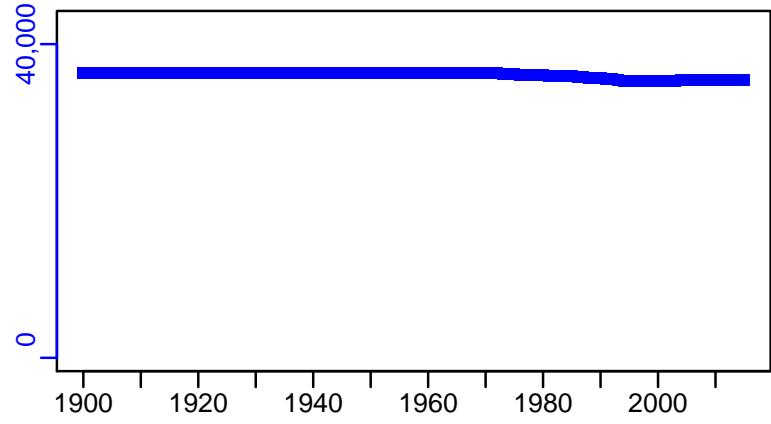
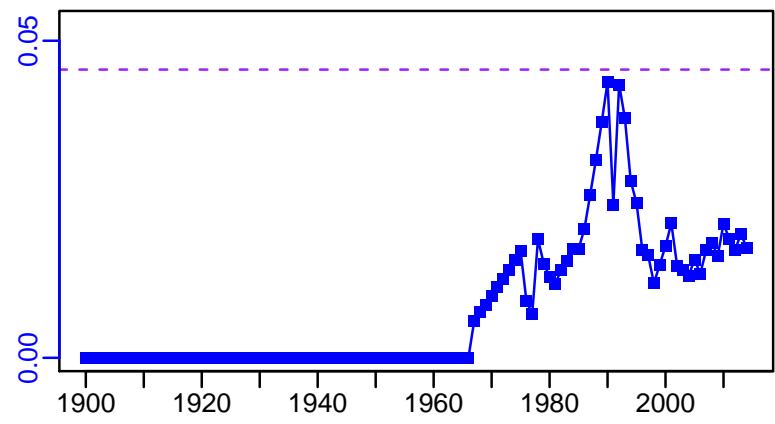
TN *

F-1/yr (1900–2015–SISIMP2016)



ER-calc-ratio (1900–2015–SISIMP2016)

R-E00 (1900–2015–SISIMP2016)

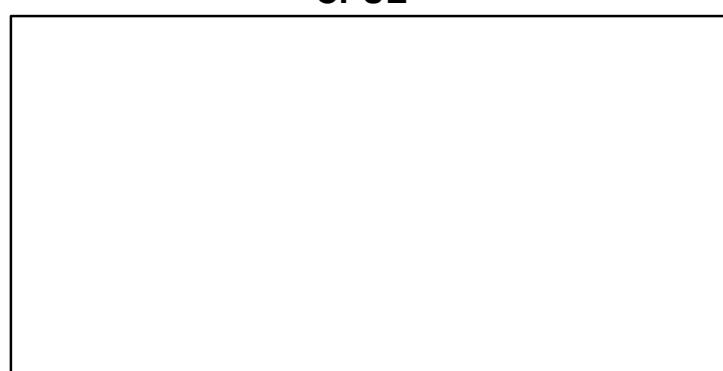
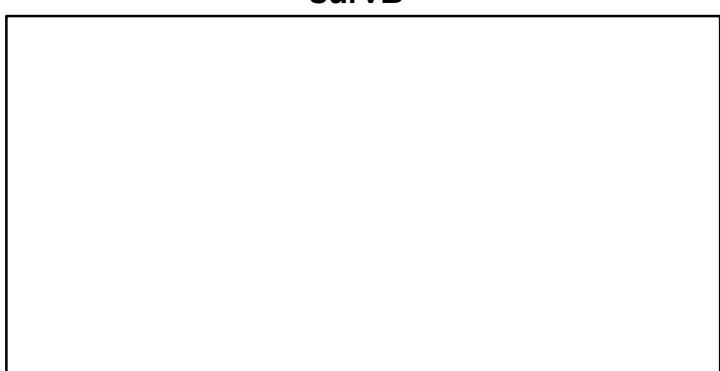
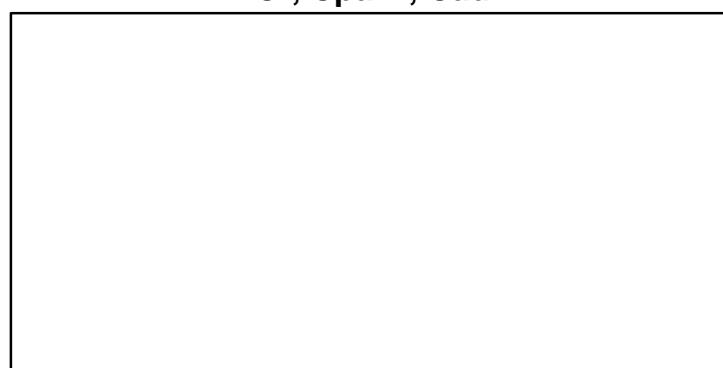
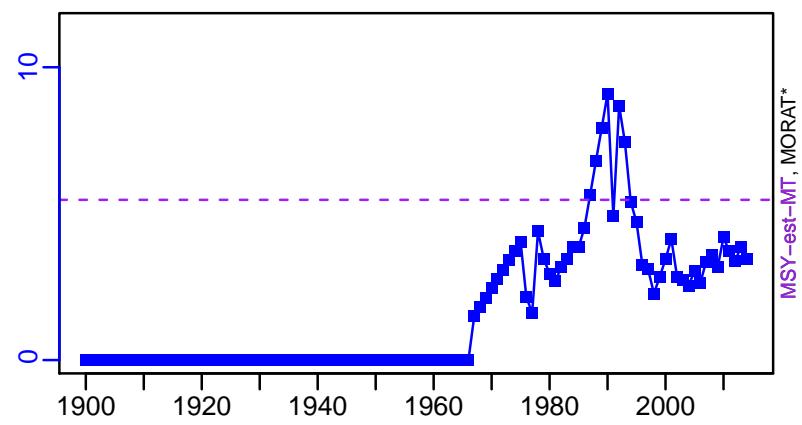


- | | | | |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------|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

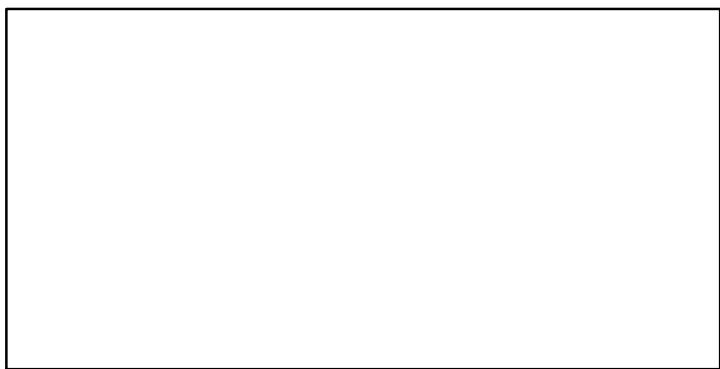
China rockfish Northern Pacific Coast [CHROCKNPCOAST]

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

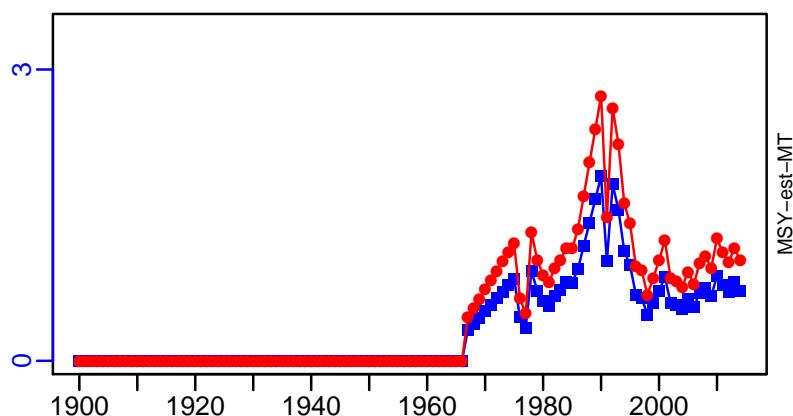
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1900–2015–SISIMP2016)



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

China rockfish Southern Pacific Coast [CHROCKSPCOAST]

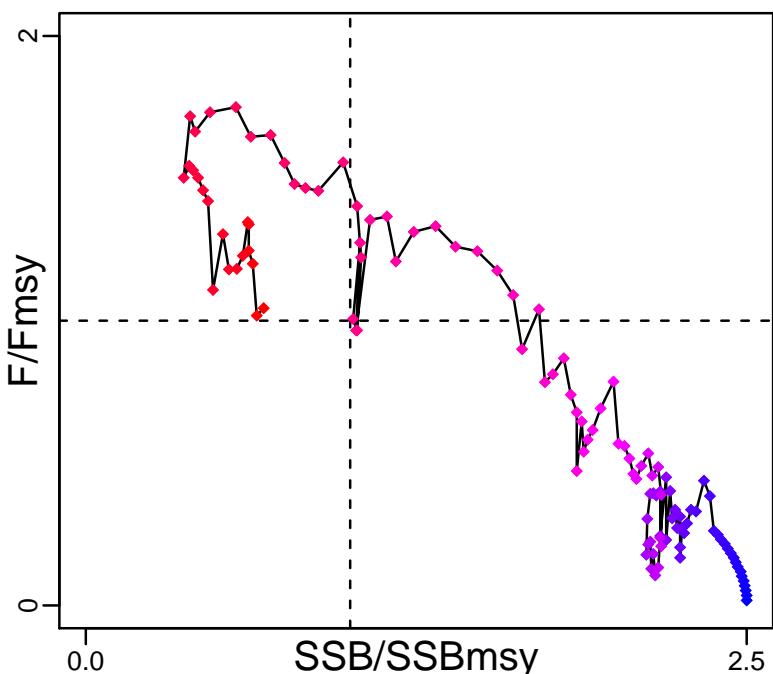
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes nebulosus |
| Current Assess ID | NWFSC-CHROCKSPCOAST-1900-2015-SISIMP2016 |
| Area | Southern Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

| Reference Points | | | |
|-------------------------|-----------------|------------------|-----------------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2015 | 343 |
| SSBmsy | SSBmsy-E00eggs | 2015 | 2.66×10^{10} |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-est-ratio | 2015 | 0.073 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2015 | 21 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | SSBlim-E00eggs | 2015 | 1.66×10^{10} |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

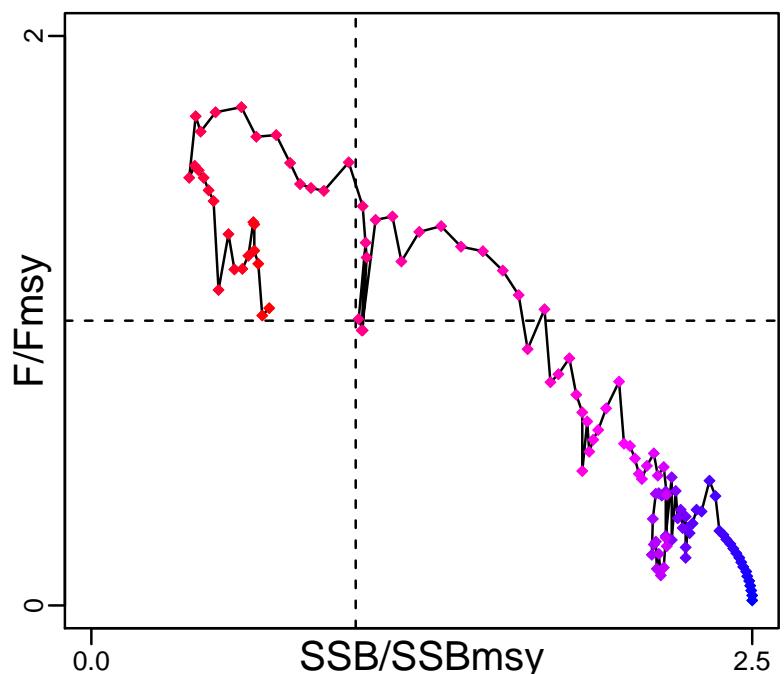
| Time Series | | | | | | |
|--------------------|-------------------------------|------------------|-----------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 280 | - | 5+ | |
| SSB | SSB-E00eggs | 2015 | 1.86×10^{10} | - | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 130,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.522 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.046 | - | - | |
| TC | TC-MT | 2015 | 12 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 2015 | 0.817 | | | |
| SSB/SSBmsy | SSB-E00eggs/SSBmsy-E00eggs | 2015 | 0.699 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 1.044 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-est-ratio | 2015 | 0.621 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

China rockfish Southern Pacific Coast [CHROCKSPCOAST]

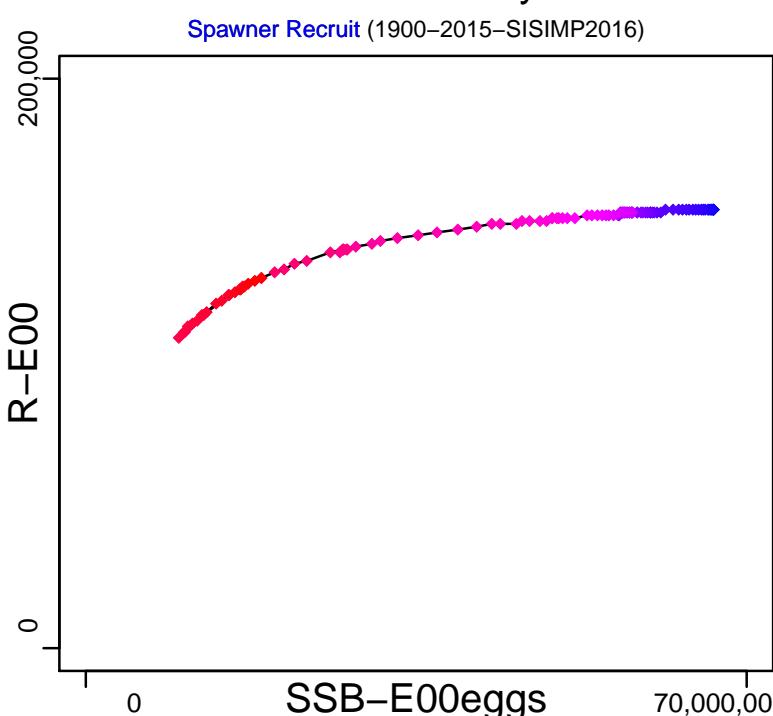
Kobe MSYpref (1900–2015–SISIMP2016)



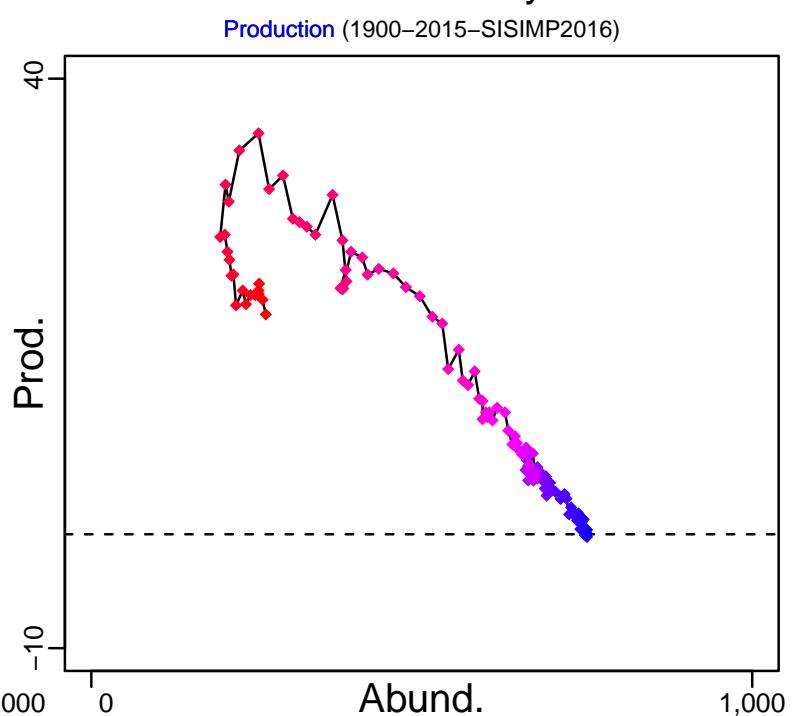
Kobe MGTpref (1900–2015–SISIMP2016)



Spawner Recruit (1900–2015–SISIMP2016)



Production (1900–2015–SISIMP2016)

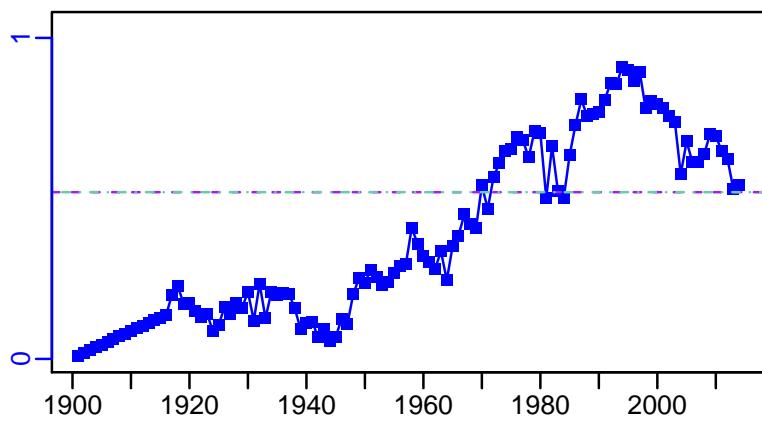
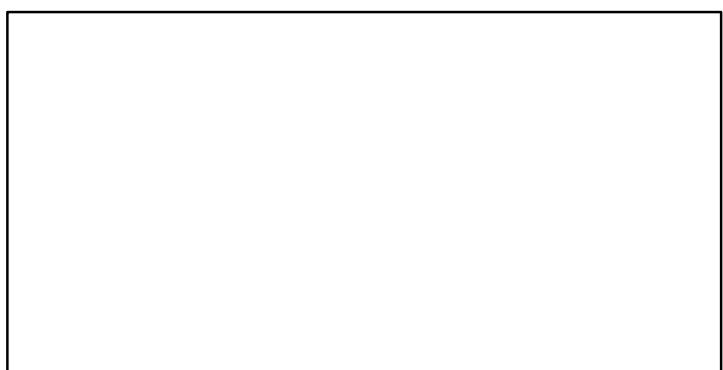
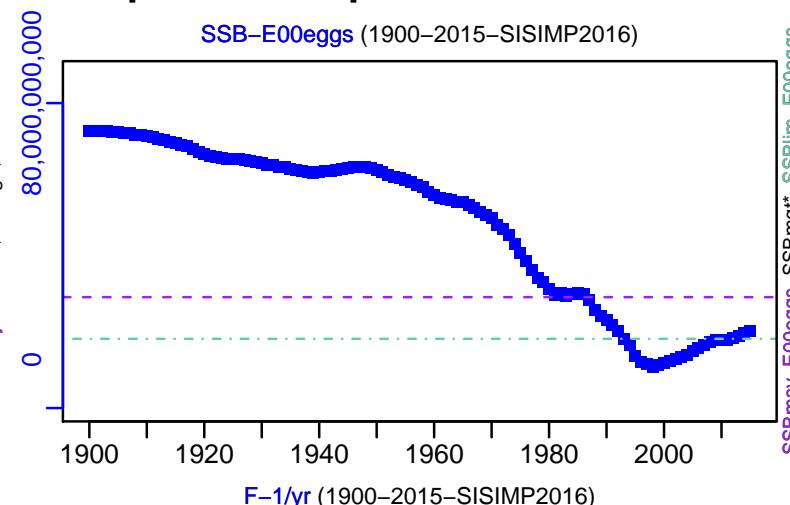
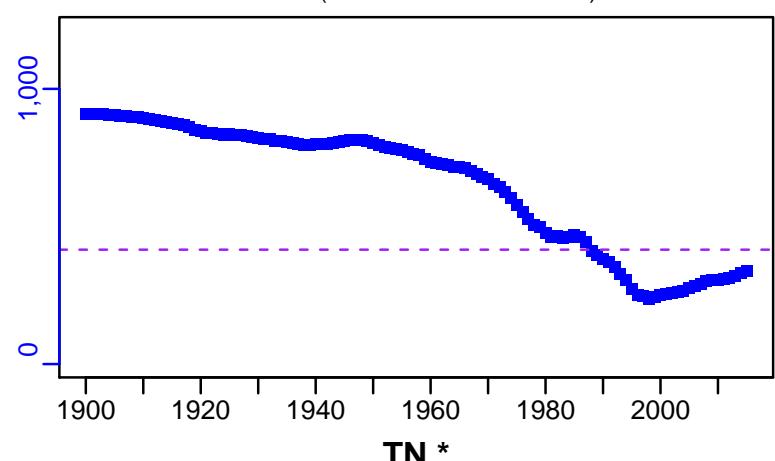


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

China rockfish Southern Pacific Coast [CHROCKSPCOAST]

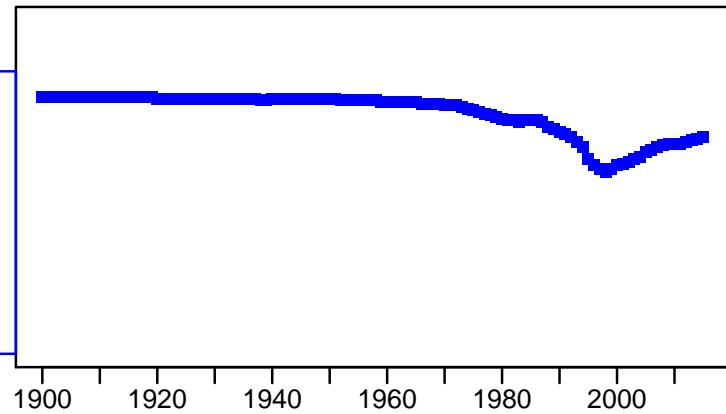
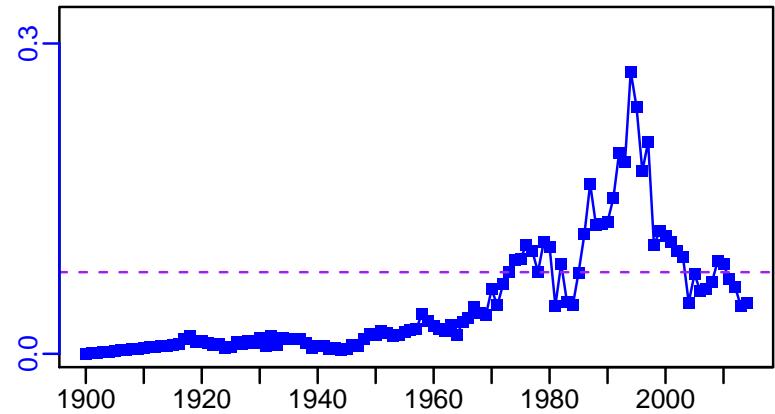
TB-MT (1900–2015–SISIMP2016)

SSB-E00eggs (1900–2015–SISIMP2016)



ER-calc-ratio (1900–2015–SISIMP2016)

R-E00 (1900–2015–SISIMP2016)

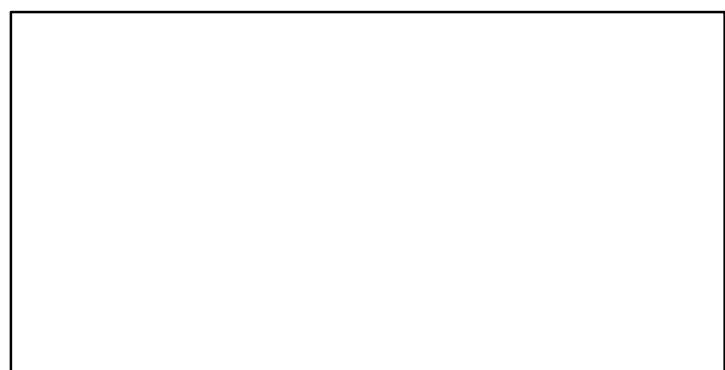
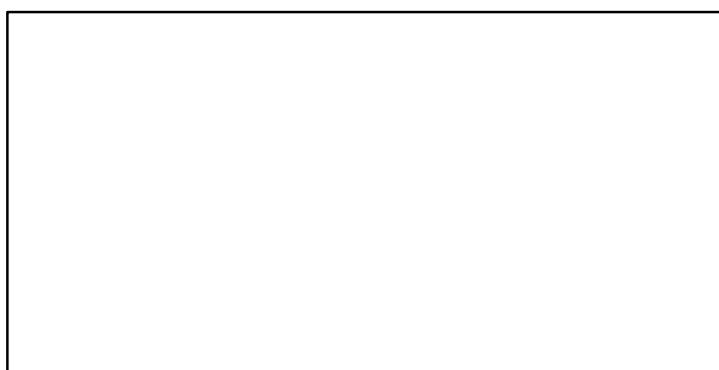
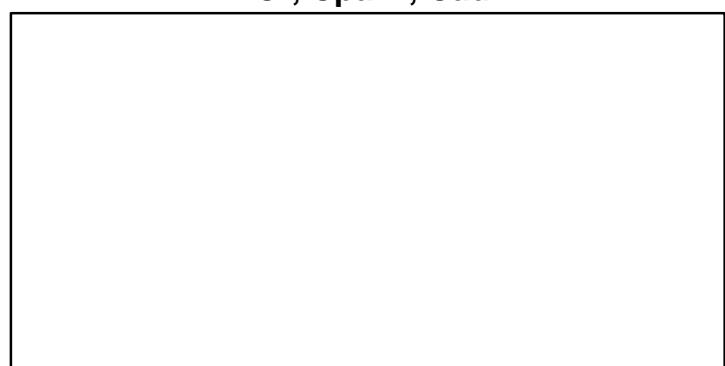
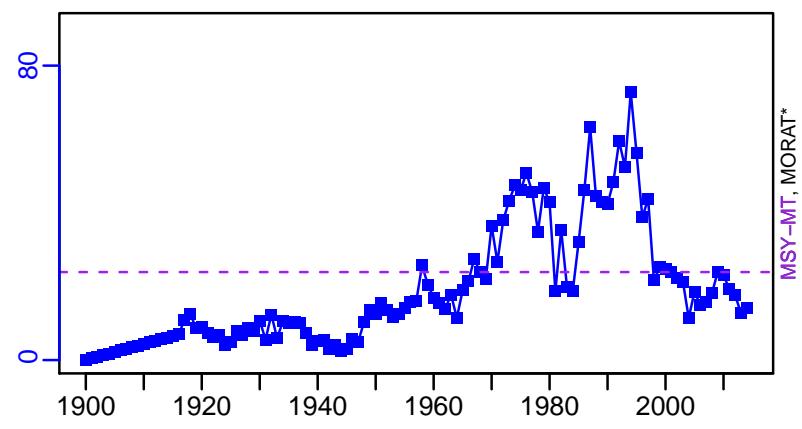


| | | |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - - Lim BRP | * No Data |

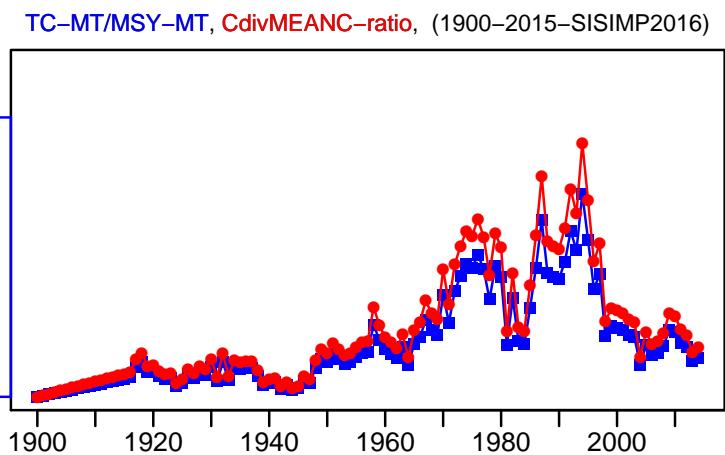
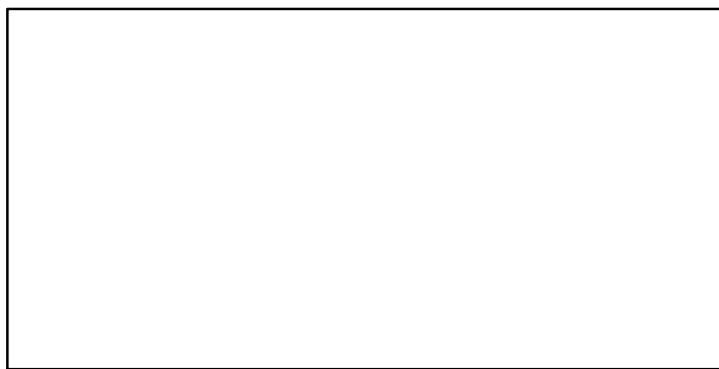
China rockfish Southern Pacific Coast [CHROCKSPCOAST]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

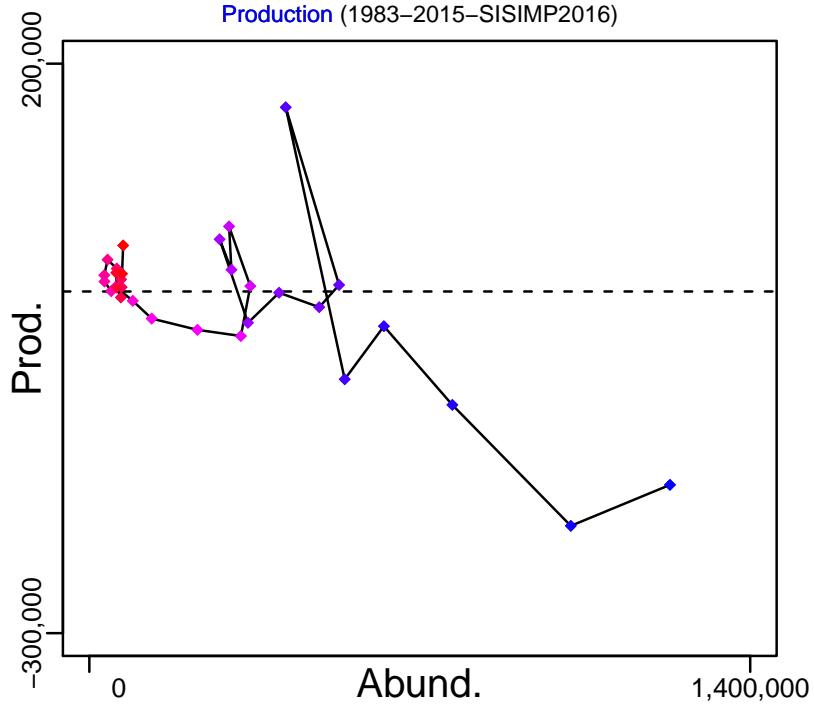
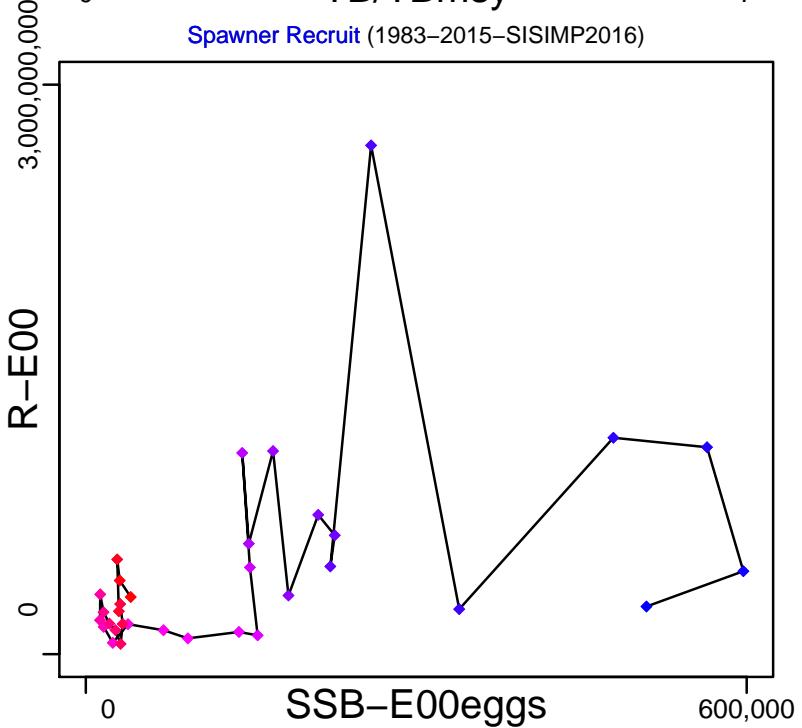
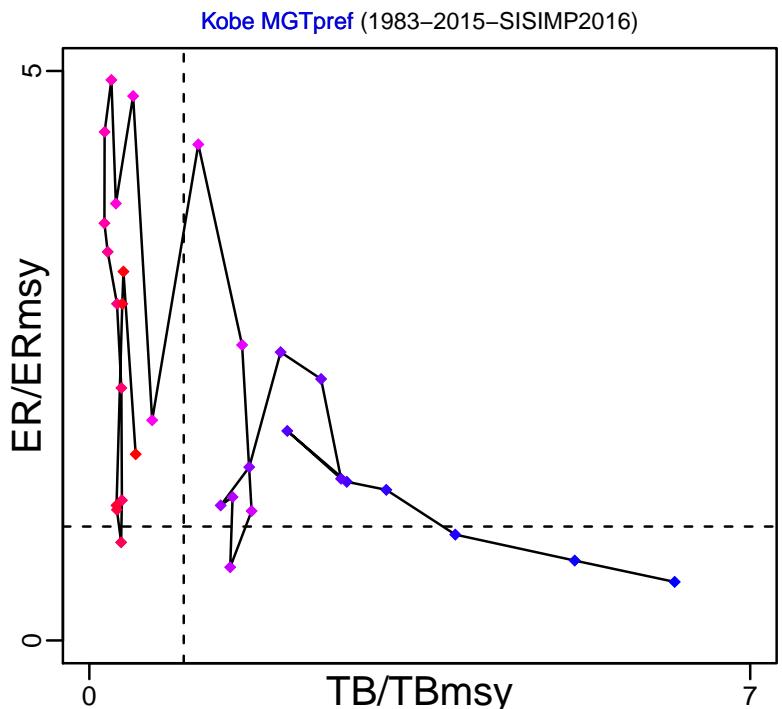
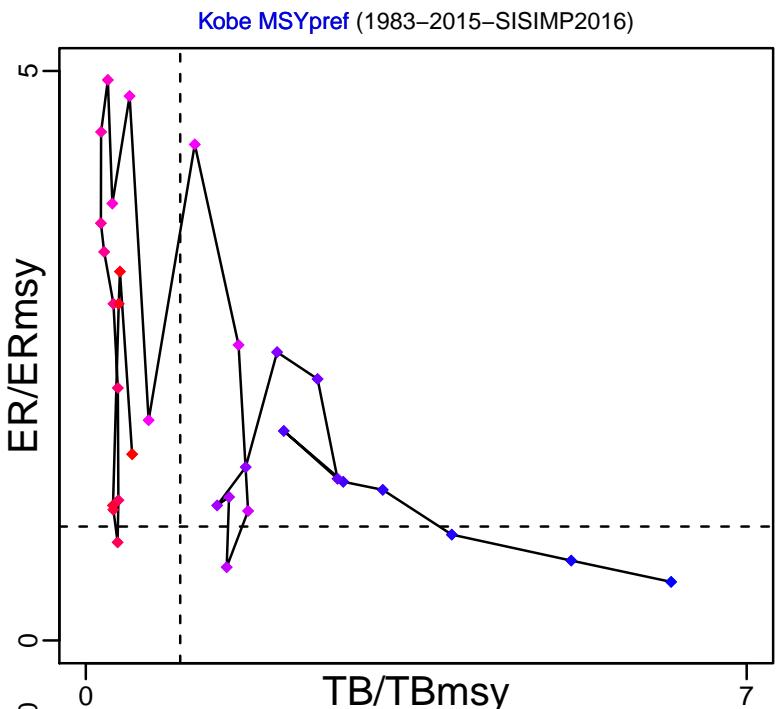
Pacific chub mackerel Pacific Coast [CMACKPCOAST]

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

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

| Time Series | | | | | |
|-------------------|----------------------|-----------|--------------------|---------|-----|
| Type | ID | Asmt Year | Curr Value | Sex | Age |
| TB | TB-MT | 2015 | 120,000 | Both | 1+ |
| SSB | SSB-E00eggs | 2015 | 40,800 | Females | - |
| TN | - | - | - | - | - |
| R | R-E00 | 2015 | 3.01×10^8 | - | 0 |
| F | F-1/yr | 2008 | 0.087 | - | - |
| ER | ER-ratio | 2015 | 0.104 | - | - |
| TC | TC-MT | 2015 | 10,100 | | |
| TL | TL-MT | 2008 | 13,700 | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 2015 | 0.605 | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2008 | 0.68 | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2008 | 0.633 | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2008 | 0.39 | | |
| TB/TBmgt | - | - | - | | |
| SSB/SSBmgt | - | - | - | | |
| F/Fmgt | - | - | - | | |
| ER/ERmgt | - | - | - | | |

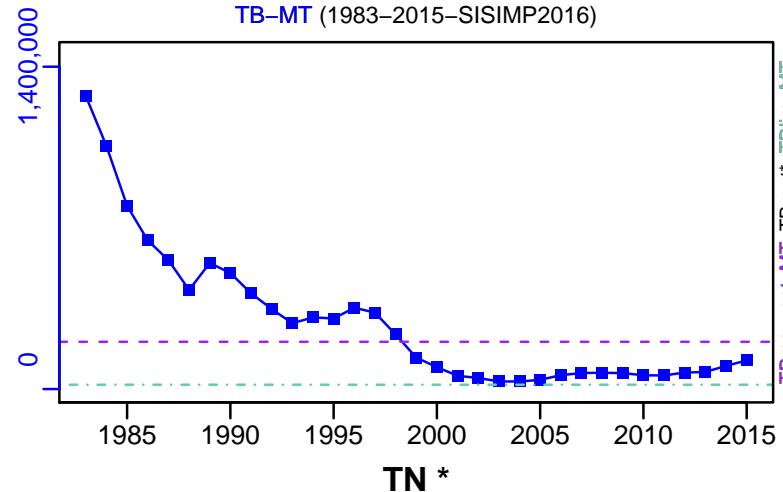
Pacific chub mackerel Pacific Coast [CMACKPCOAST]



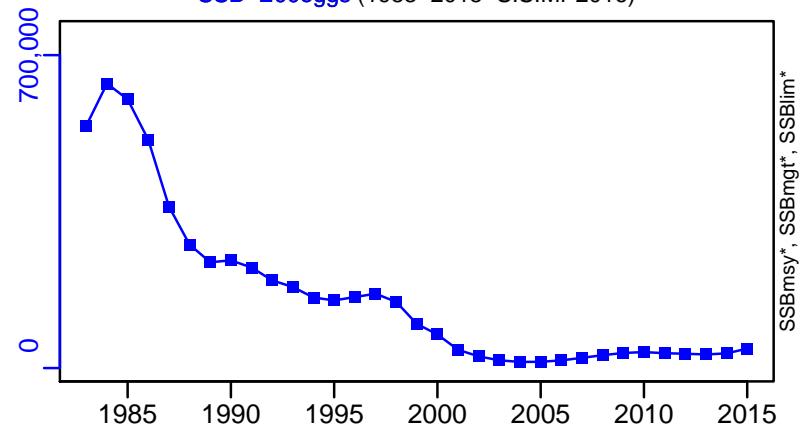
◆ Start Year ◆ End Year * No Data

Pacific chub mackerel Pacific Coast [CMACKPCOAST]

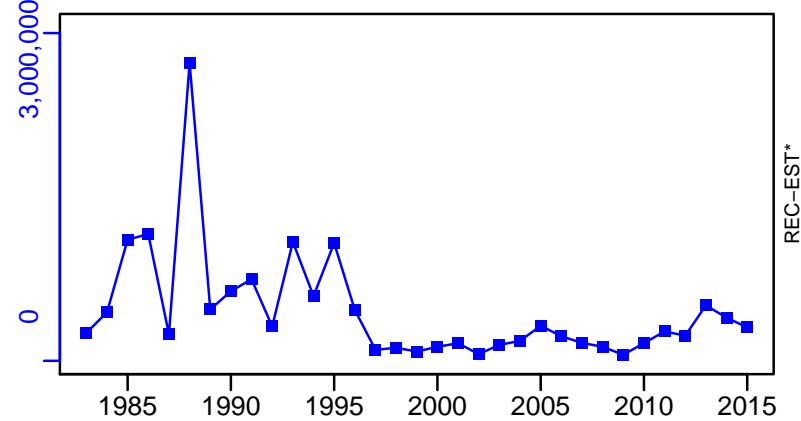
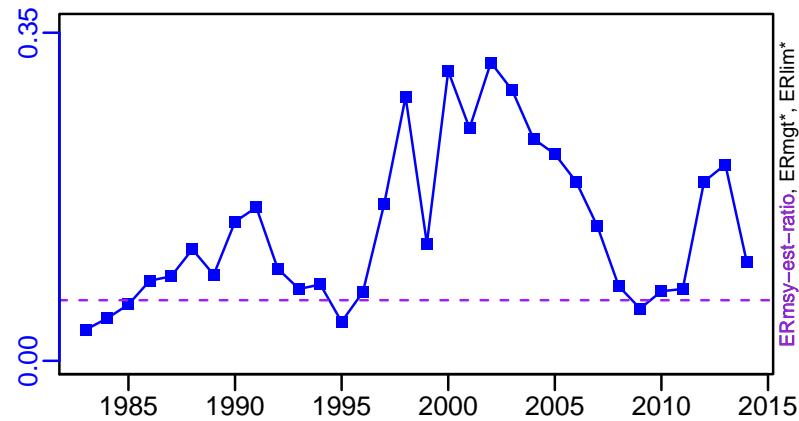
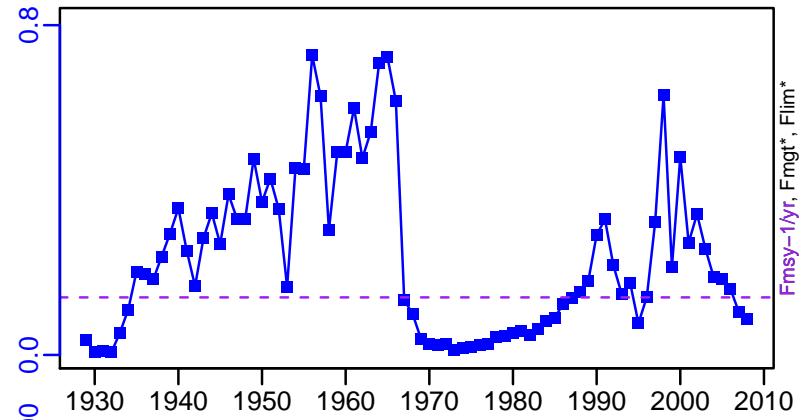
TB-MT (1983–2015–SISIMP2016)



SSB-E00eggs (1983–2015–SISIMP2016)



ER-ratio (1983–2015–SISIMP2016)

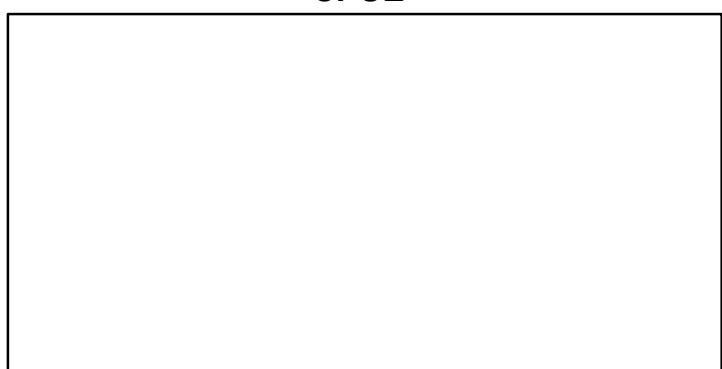
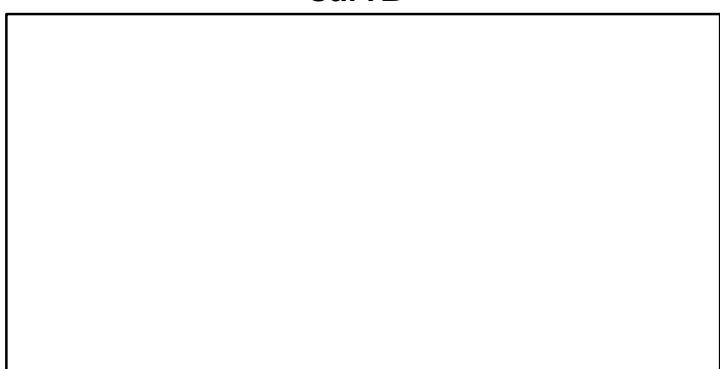
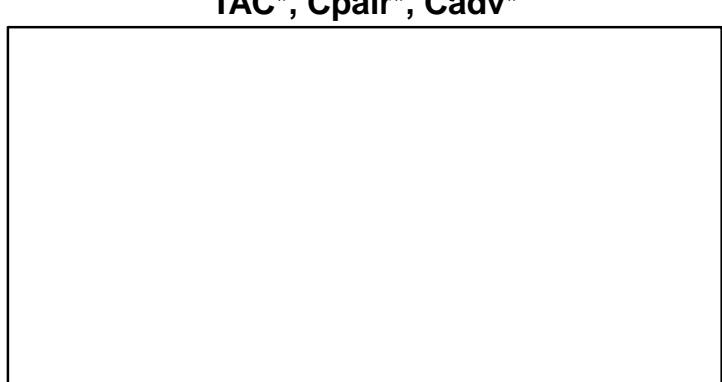
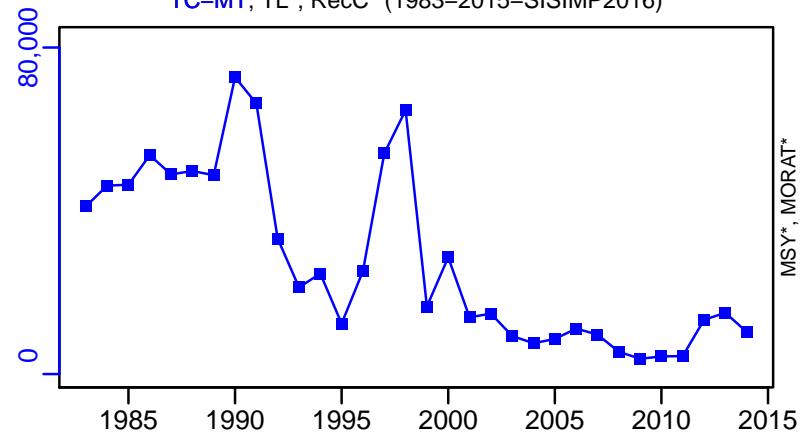


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | --- Lim BRP | * No Data |

Pacific chub mackerel Pacific Coast [CMACKPCOAST]

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

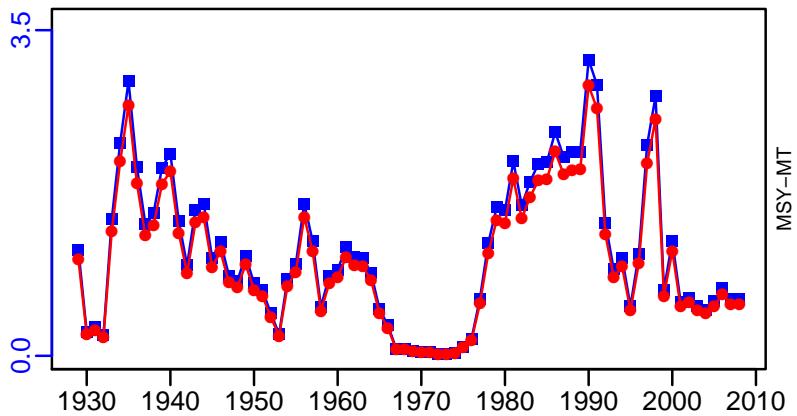
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1929–2008–PINSKY)



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

Cowcod Southern California [COWCODSCAL]

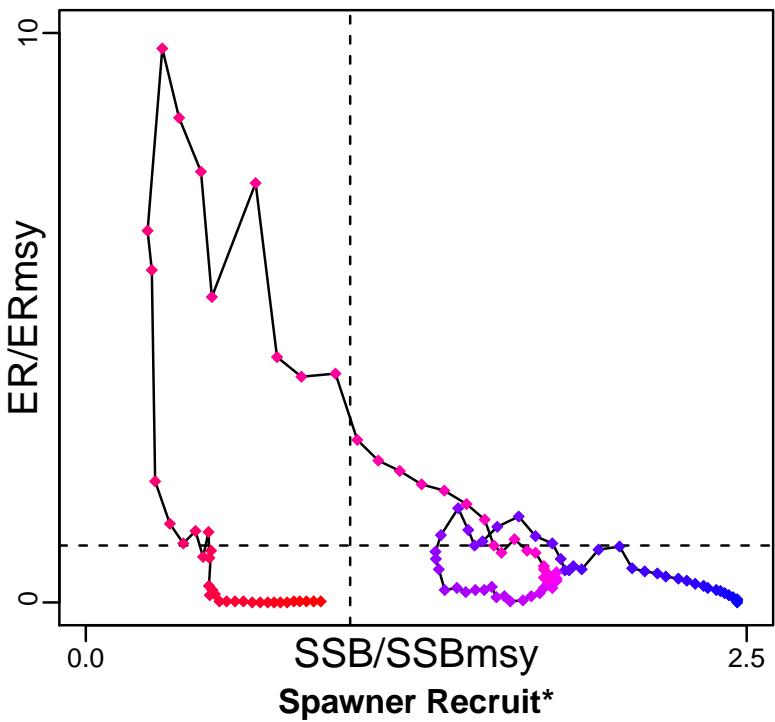
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes levis |
| Current Assess ID | PFMC-COWCODSCAL-1900-2015-HIVELY |
| Area | Southern California |
| Management Authority | National Marine Fisheries Service, US national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

| Reference Points | | | | |
|------------------|---------------|-----------|-------|--|
| Type | ID | Asmt Year | Value | |
| TBmsy | TBmsy-calc-MT | 2015 | 1255 | |
| SSBmsy | SSBmsy-MT | 2015 | 629 | |
| Fmsy | - | - | - | |
| ERmsy | ERmsy-ratio | 2015 | 0.055 | |
| TBmgt | - | - | - | |
| SSBmgt | SSBmgt-MT | 2015 | 620 | |
| Fmgt | - | - | - | |
| ERmgt | ERmgt-ratio | 2015 | 0.05 | |
| TB0 | TB0-MT | 2015 | 3099 | |
| SSB0 | SSB0-MT | 2015 | 1549 | |
| MSY | MSY-MT | 2015 | 69 | |
| M | M-1/yr | 2015 | 0.06 | |
| TBlim | - | - | - | |
| SSBlim | - | - | - | |
| Flim | - | - | - | |
| ERlim | ERlim-ratio | 2012 | 0.05 | |

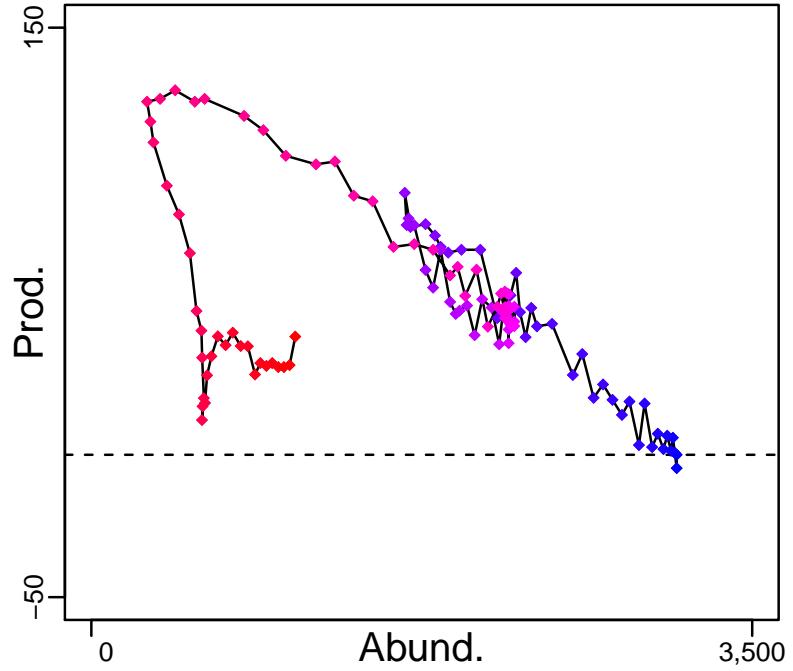
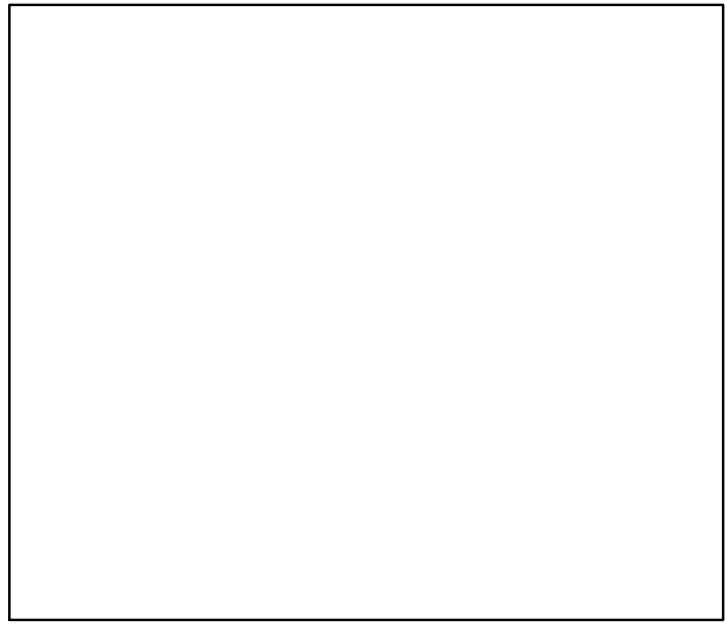
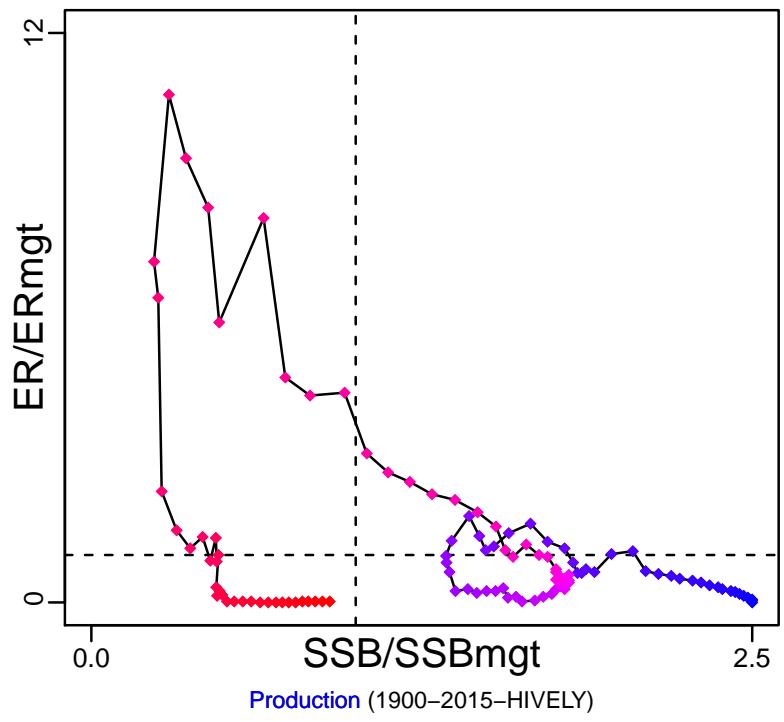
| Time Series | | | | | | |
|-------------------|----------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 1120 | - | 11+ | |
| SSB | SSB-MT | 2015 | 559 | Females | - | |
| TN | - | - | - | - | - | |
| R | - | - | - | - | - | |
| F | - | - | - | - | - | |
| ER | ER-ratio | 2015 | 0.001 | - | - | |
| TC | TC-MT | 2015 | 1.5 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2015 | 0.893 | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2015 | 0.889 | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2015 | 0.018 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | SSB-MT/SSBmgt-MT | 2015 | 0.902 | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Cowcod Southern California [COWCODSCAL]

Kobe MSYpref (1900–2015–HIVELY)



Kobe MGTPref (1900–2015–HIVELY)

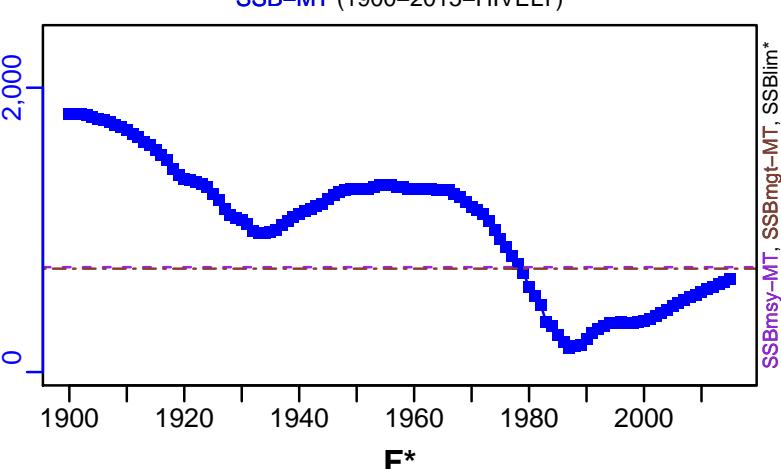
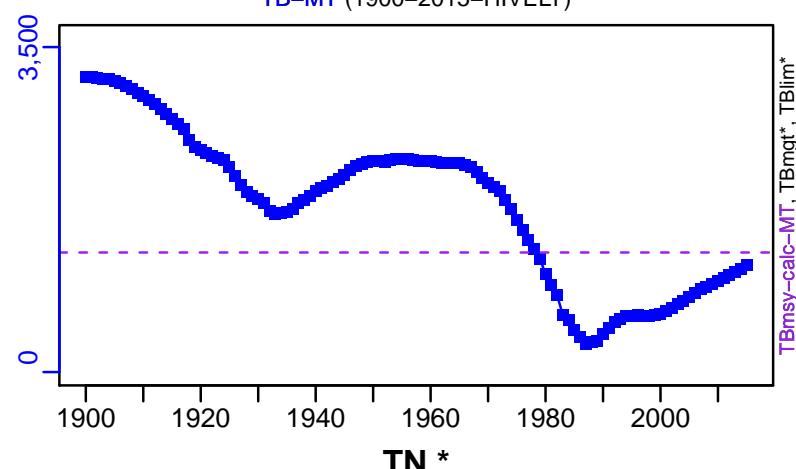


| | | |
|--------------|------------|-----------|
| ◆ Start Year | ◆ End Year | * No Data |
|--------------|------------|-----------|

Cowcod Southern California [COWCODSCAL]

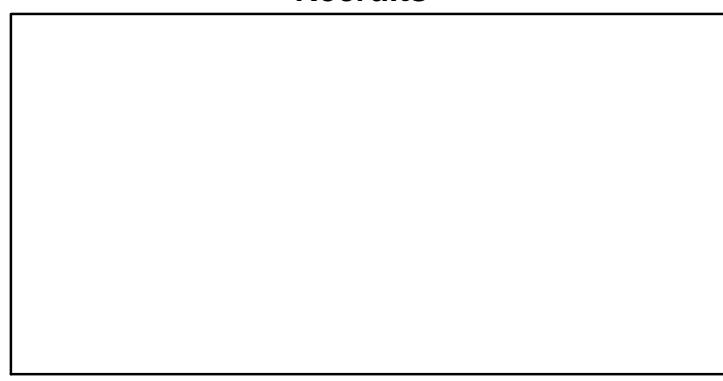
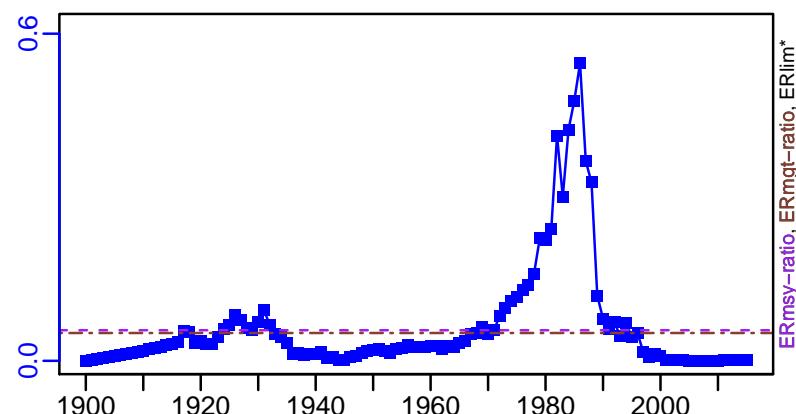
TB-MT (1900–2015–HIVELY)

SSB-MT (1900–2015–HIVELY)



ER-ratio (1900–2015–HIVELY)

Recruits*

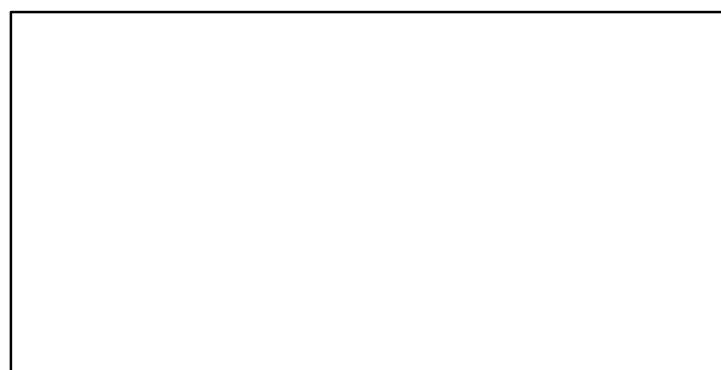
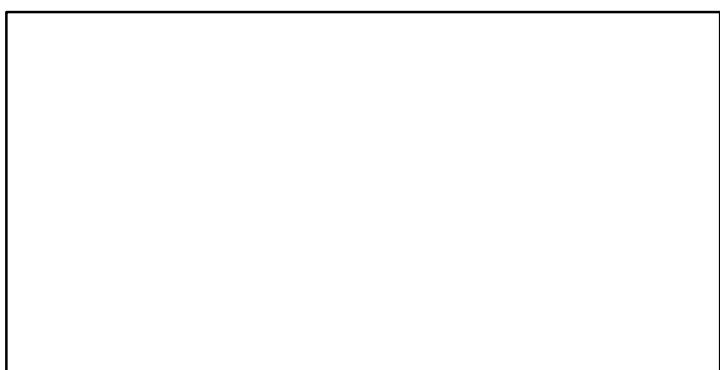
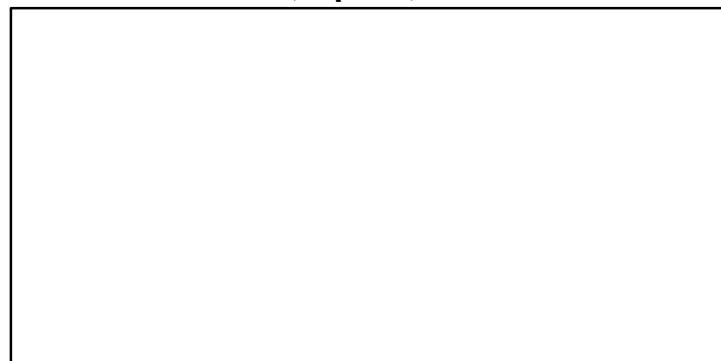
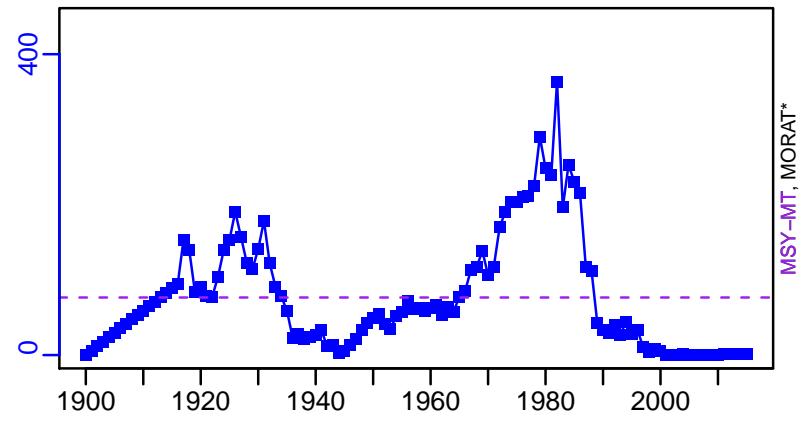


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP | - - Lim BRP | * No Data |

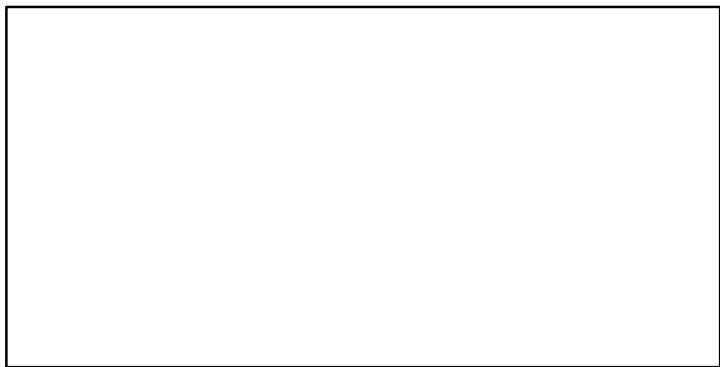
Cowcod Southern California [COWCODSCAL]

TC-MT, TL*, RecC* (1900–2015-HIVELY)

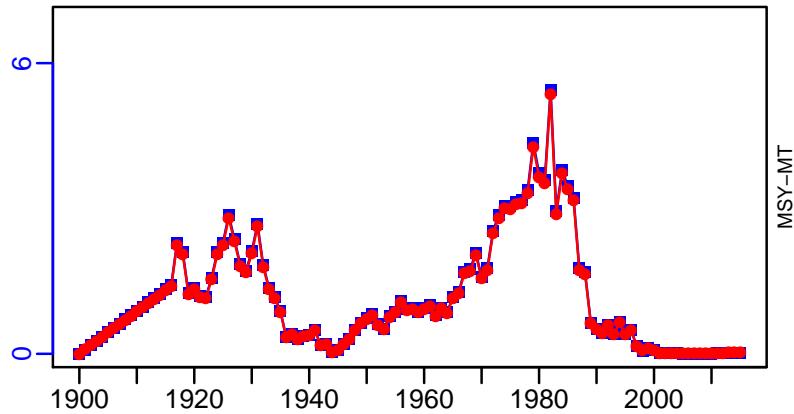
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1900–2015-HIVELY)



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

Copper rockfish Pacific Coast [CPRROCKPCOAST]

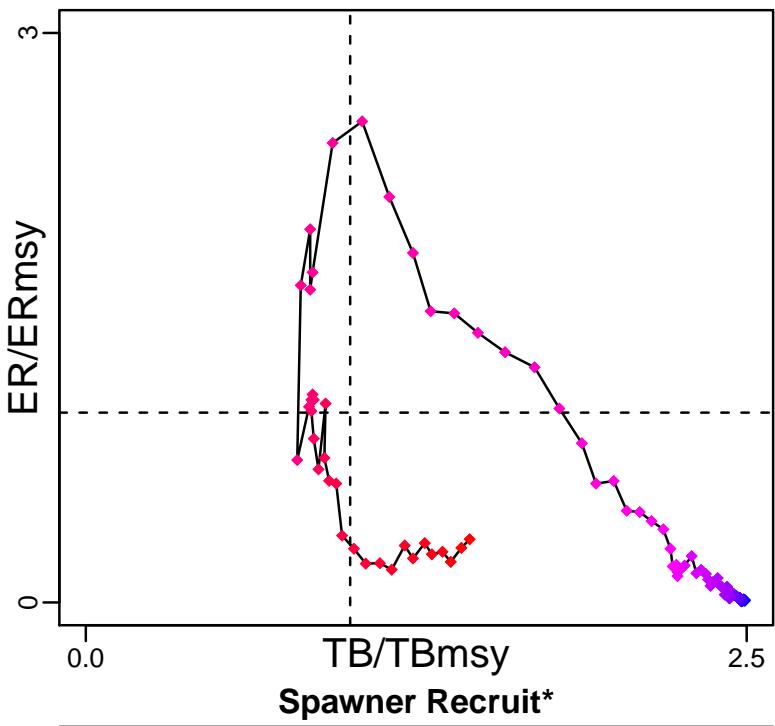
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes caurinus |
| Current Assess ID | SWFSC-CPRROCKPCOAST-1916-2012-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US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

| Reference Points | | | |
|-------------------------|----------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2012 | 2238 |
| SSBmsy | SSBmsy-conv-MT | 2012 | 1085 |
| Fmsy | - | - | - |
| ERmsy | ERmsy-ratio | 2012 | 0.088 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2012 | 197 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | - | - | - |
| ERlim | ERlim-ratio | 2012 | 0.088 |

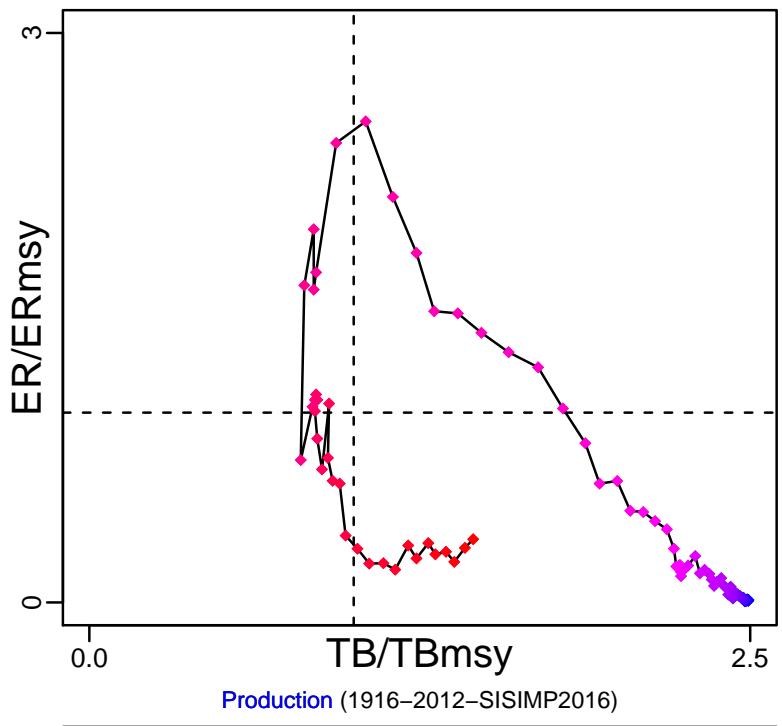
| Time Series | | | | | |
|--------------------|----------------------|------------------|-------------------|------------|------------|
| Type | ID | Asmt Year | Curr Value | Sex | Age |
| TB | TB-MT | 2012 | 3290 | - | 6+ |
| SSB | - | - | - | - | - |
| TN | - | - | - | - | - |
| R | - | - | - | -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

Copper rockfish Pacific Coast [CPRROCKPCOAST]

Kobe MSYpref (1916–2012–SISIMP2016)

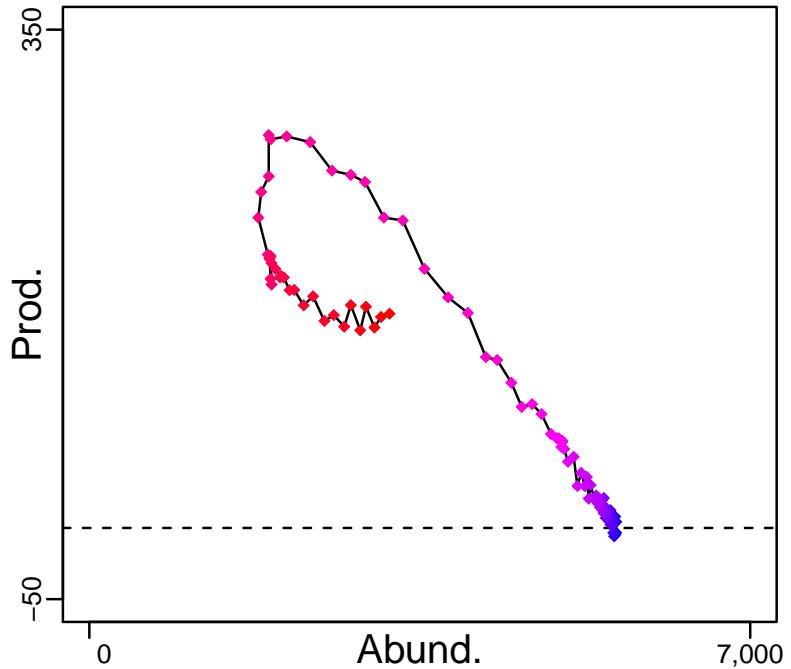


Kobe MGTpref (1916–2012–SISIMP2016)



Spawner Recruit*

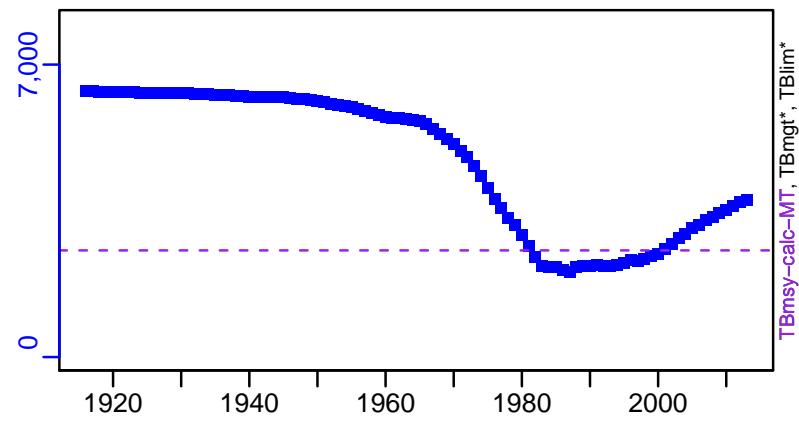
Production (1916–2012–SISIMP2016)



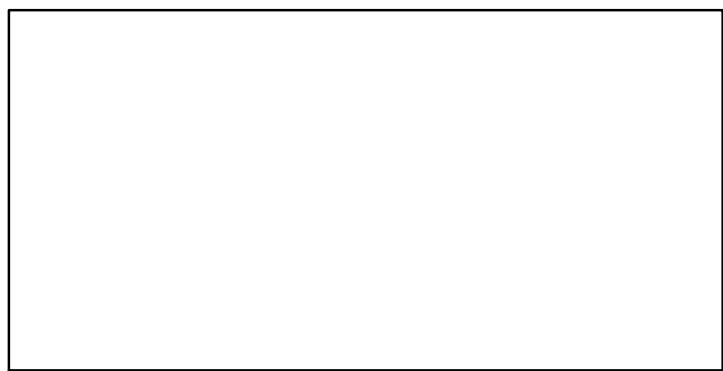
◆ Start Year ♦ End Year * No Data

Copper rockfish Pacific Coast [CPRROCKPCOAST]

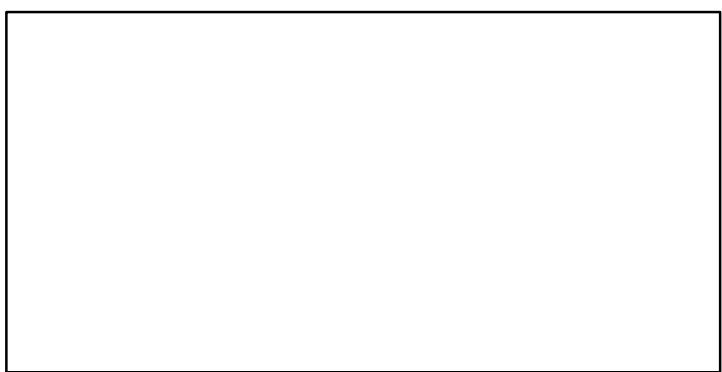
TB-MT (1916–2012–SISIMP2016)



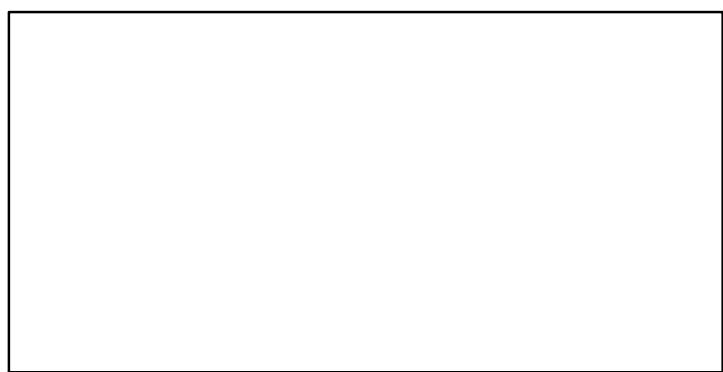
SSB*



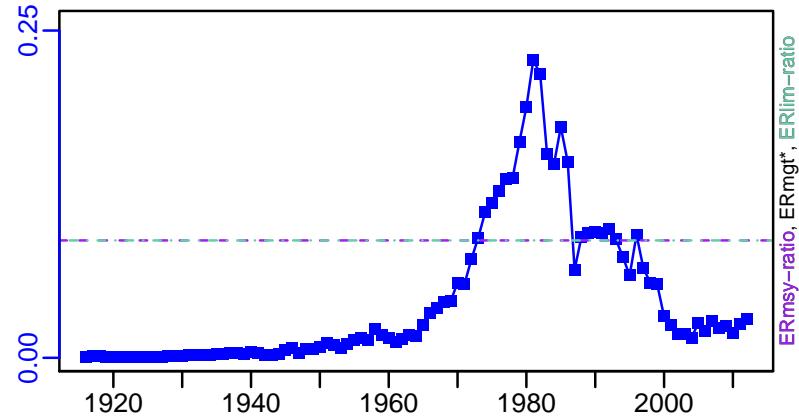
TN *



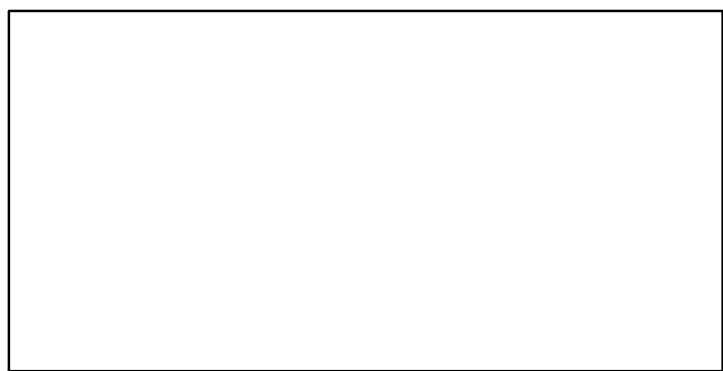
F*



ER-ratio (1916–2012–SISIMP2016)



Recruits*

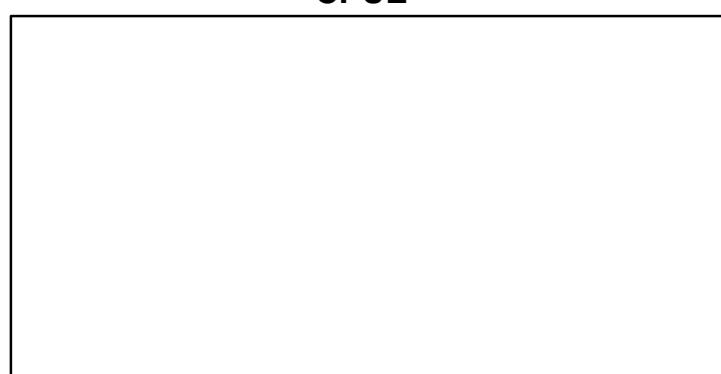
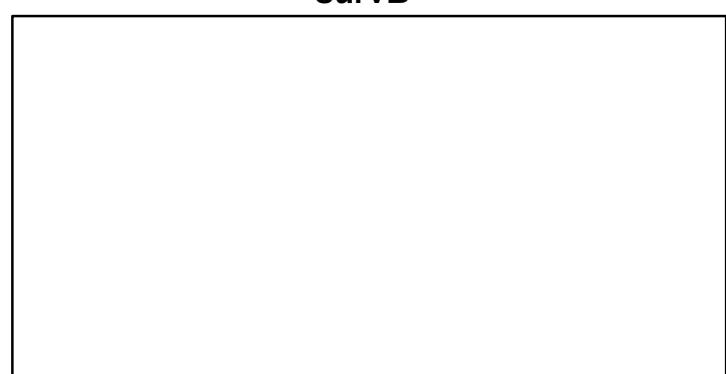
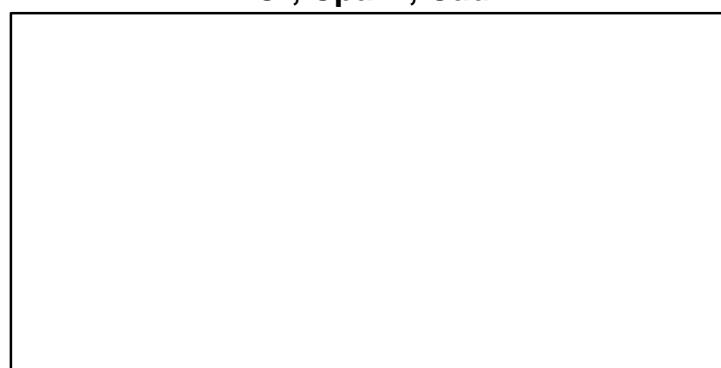
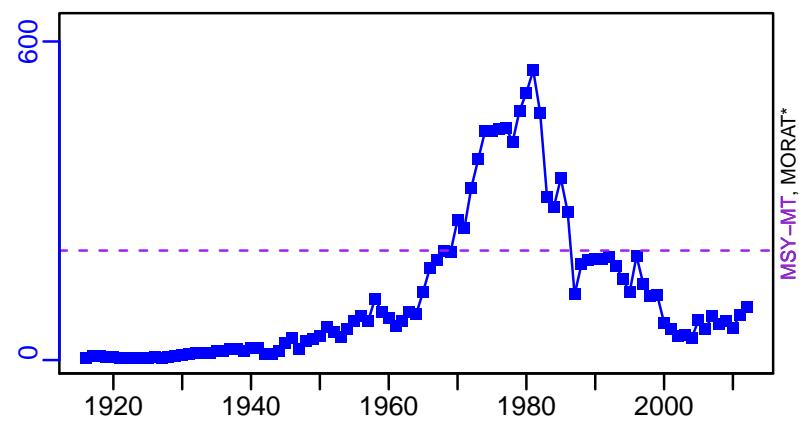


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | — Lim BRP | * No Data |

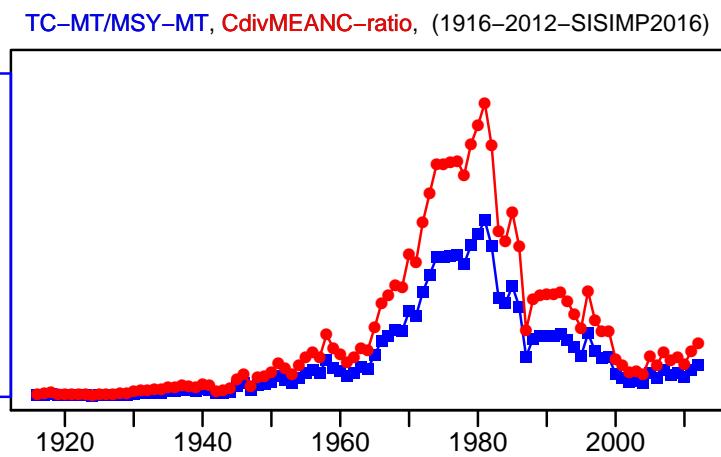
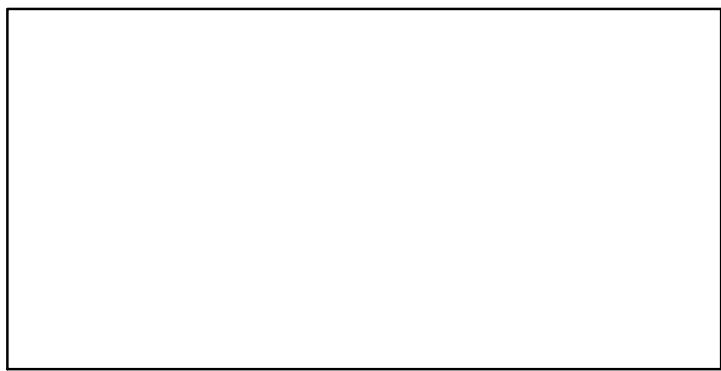
Copper rockfish Pacific Coast [CPRROCKPCOAST]

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 |

Canary rockfish Pacific Coast [CROCKPCOAST]

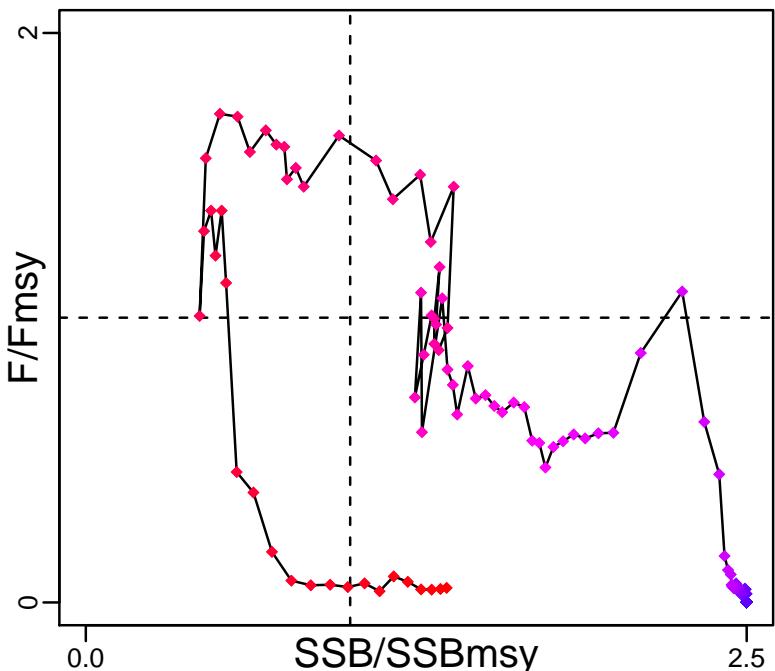
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes pinniger |
| Current Assess ID | NWFSC-CROCKPCOAST-1892-2015-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

| Reference Points | | | |
|-------------------------|----------------|------------------|---------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2011 | 26,414 |
| SSBmsy | SSBmsy-E00eggs | 2015 | 2,996,400,000 |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-ratio | 2011 | 0.03 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2011 | 70,664 |
| SSB0 | SSB0-MT | 2011 | 27,846 |
| MSY | MSY-MT | 2015 | 1226 |
| M | M-1/yr | 2011 | 0.06 |
| TBlim | - | - | - |
| SSBlim | SSBlim-E00eggs | 2015 | 1,872,750,000 |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

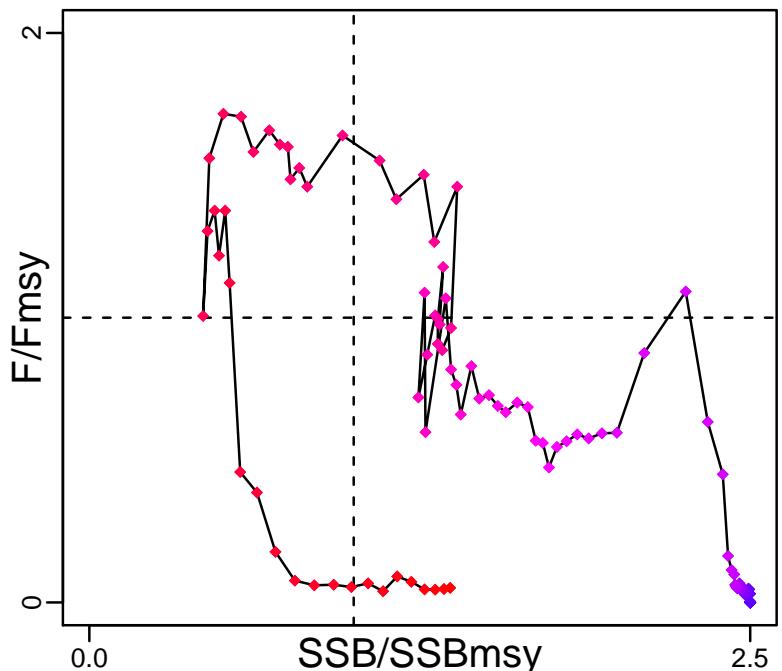
| Time Series | | | | | | |
|--------------------|----------------------------|------------------|--------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 36,000 | - | 5+ | |
| SSB | SSB-E00eggs | 2015 | 4.16×10^9 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 2,700,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.026 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.001 | - | - | |
| TC | TC-MT | 2015 | 42 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2011 | 0.61 | | | |
| SSB/SSBmsy | SSB-E00eggs/SSBmsy-E00eggs | 2015 | 1.388 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.051 | | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2011 | 0.171 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Canary rockfish Pacific Coast [CROCKPCOAST]

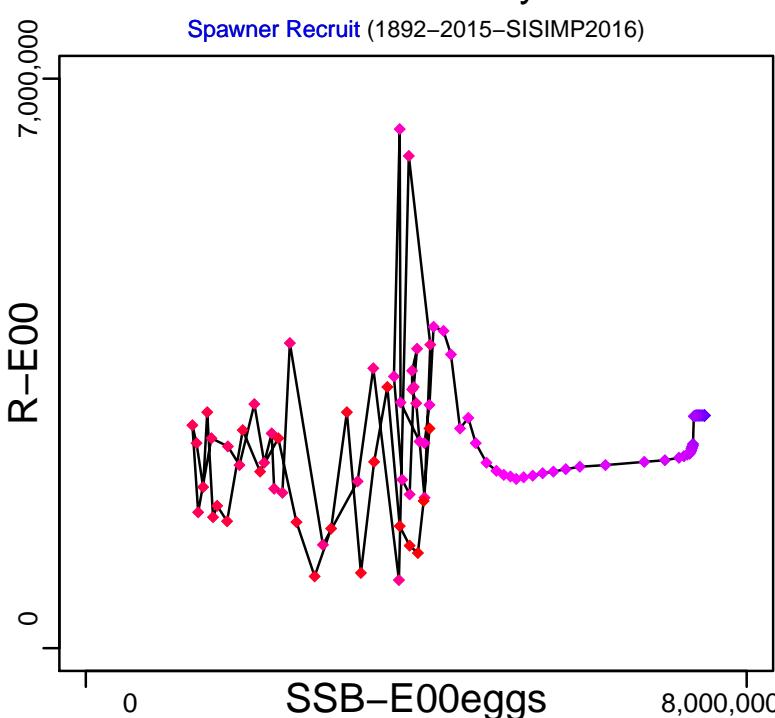
Kobe MSYpref (1892–2015–SISIMP2016)



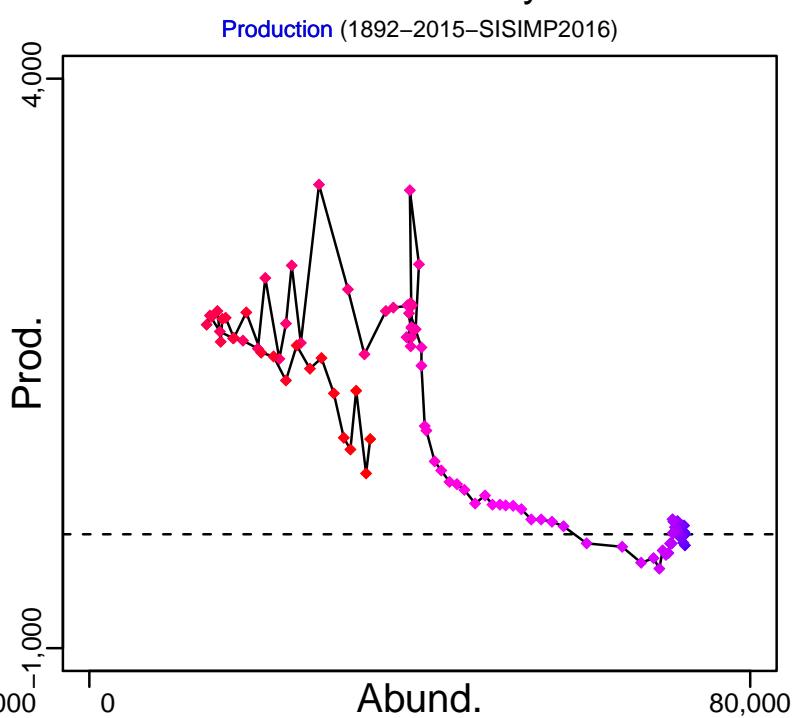
Kobe MGTpref (1892–2015–SISIMP2016)



Spawner Recruit (1892–2015–SISIMP2016)



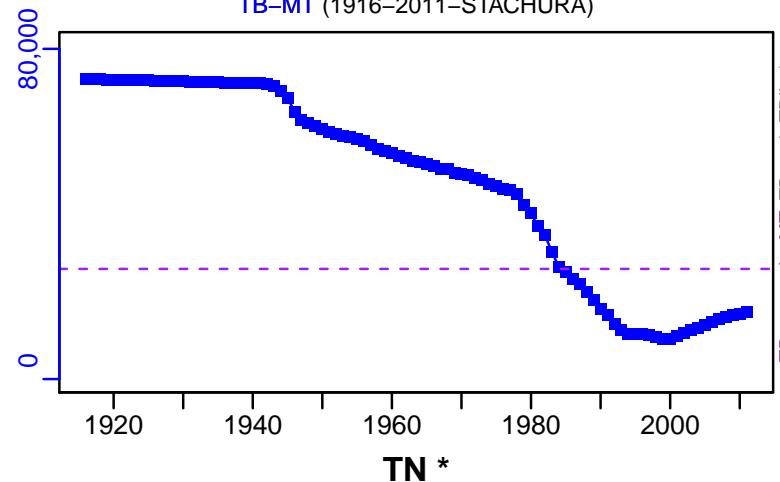
Production (1892–2015–SISIMP2016)



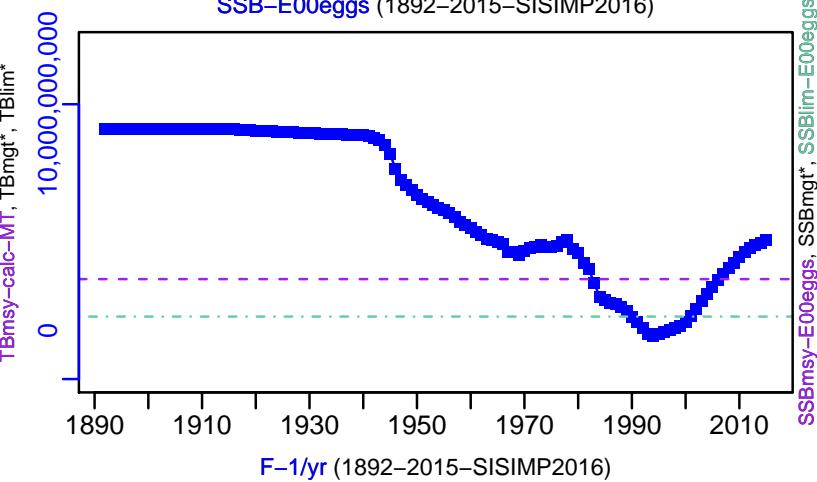
| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Canary rockfish Pacific Coast [CROCKPCOAST]

TB-MT (1916–2011–STACHURA)



SSB-E00eggs (1892–2015–SISIMP2016)



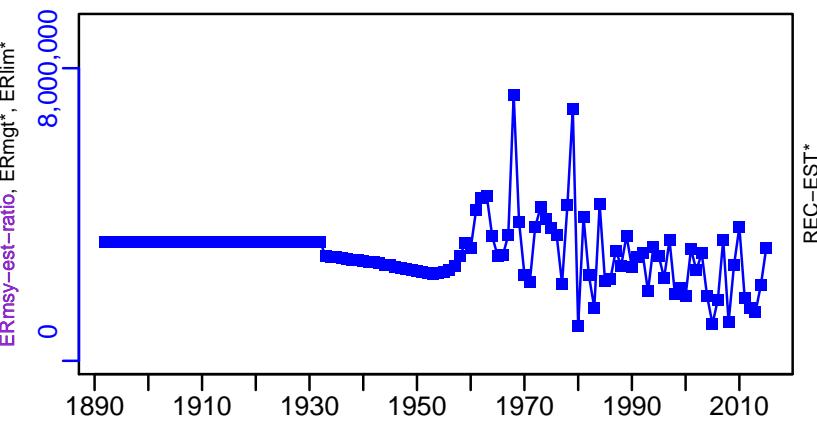
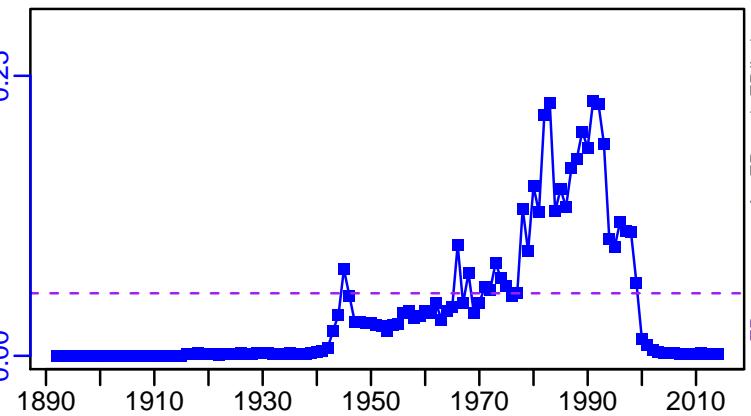
TN *

F_{mgt*}-1/yr, F_{lim}-1/yr

REC-EST*

ER-calc-ratio (1892–2015–SISIMP2016)

R-E00 (1892–2015–SISIMP2016)

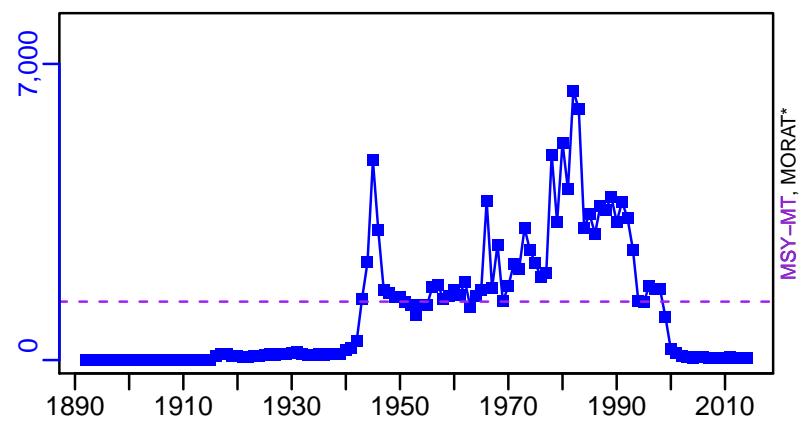


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | --- Lim BRP | * No Data |

Canary rockfish Pacific Coast [CROCKPCOAST]

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

TAC*, Cpair*, Cadv*



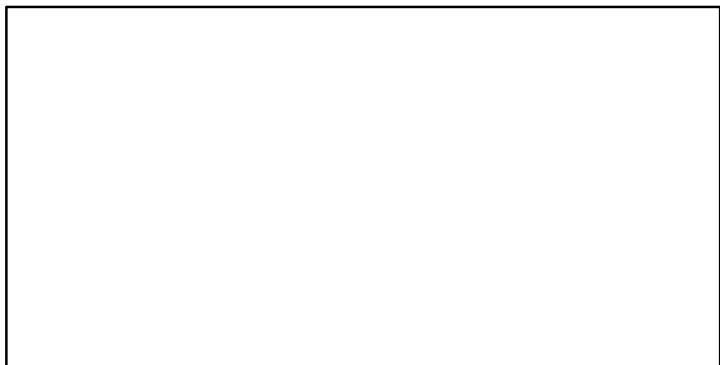
survB*



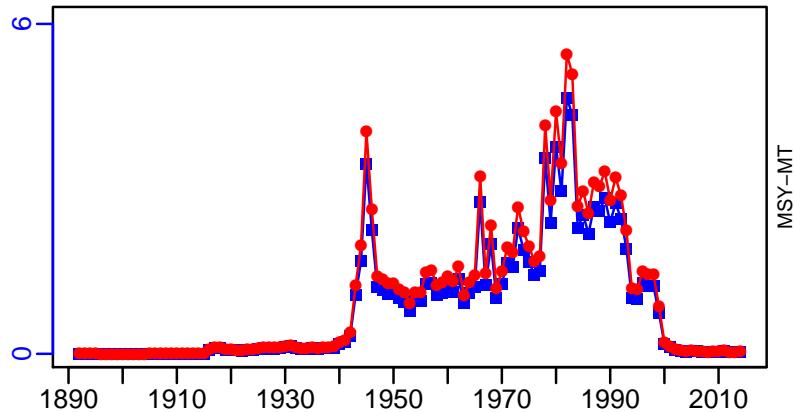
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1892–2015–SISIMP2016)



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

Darkblotched rockfish Pacific Coast [DKROCKPCOAST]

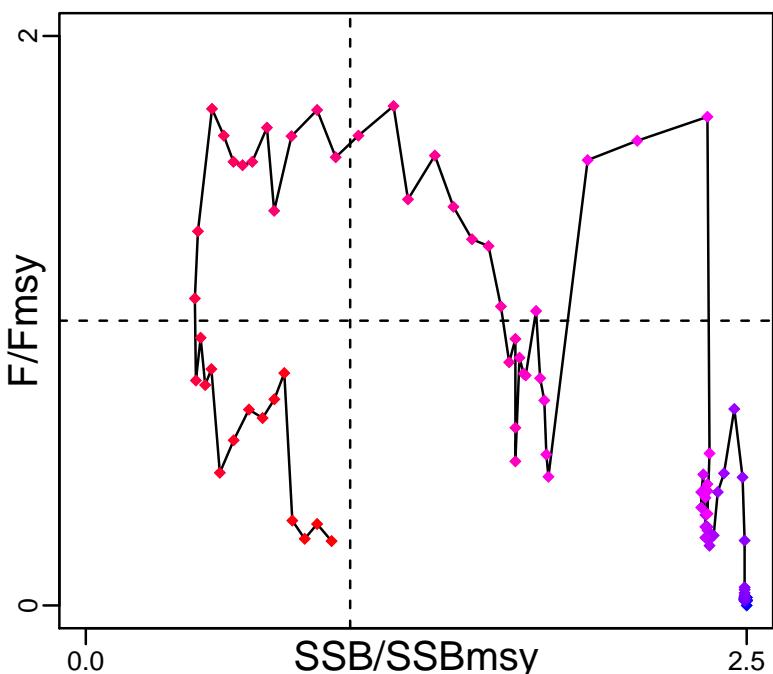
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes crameri |
| Current Assess ID | NWFSC-DKROCKPCOAST-1915-2015-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

| Reference Points | | | |
|-------------------------|-----------------|------------------|-----------------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2015 | 17,789 |
| SSBmsy | SSBmsy-E00eggs | 2015 | 1.28×10^9 |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-est-ratio | 2015 | 0.033 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2011 | 32,710 |
| SSB0 | SSB0-E00eggs | 2011 | 2.92×10^{12} |
| MSY | MSY-MT | 2015 | 674 |
| M | M-1/yr | 2011 | 0.07 |
| TBlim | - | - | - |
| SSBlim | SSBlim-E00eggs | 2015 | 8×10^8 |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

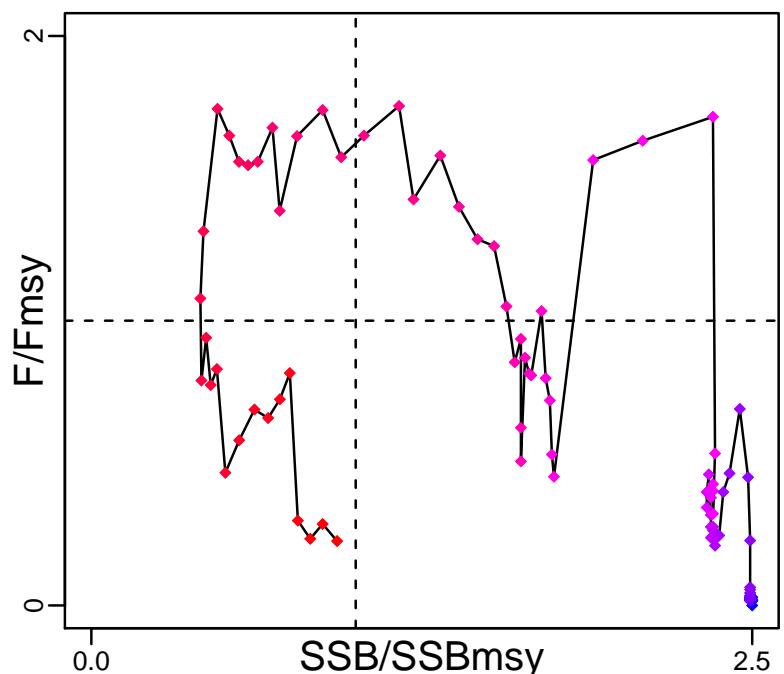
| Time Series | | | | | | |
|--------------------|-------------------------------|------------------|--------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 17,900 | - | 1+ | |
| SSB | SSB-E00eggs | 2015 | 1.26×10^9 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 2,490,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.113 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.006 | - | - | |
| TC | TC-MT | 2015 | 104 | | | |
| TL | TL-MT | 2011 | 183 | | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 2015 | 1.006 | | | |
| SSB/SSBmsy | SSB-E00eggs/SSBmsy-E00eggs | 2015 | 0.984 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.226 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-est-ratio | 2015 | 0.186 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Darkblotched rockfish Pacific Coast [DKROCKPCOAST]

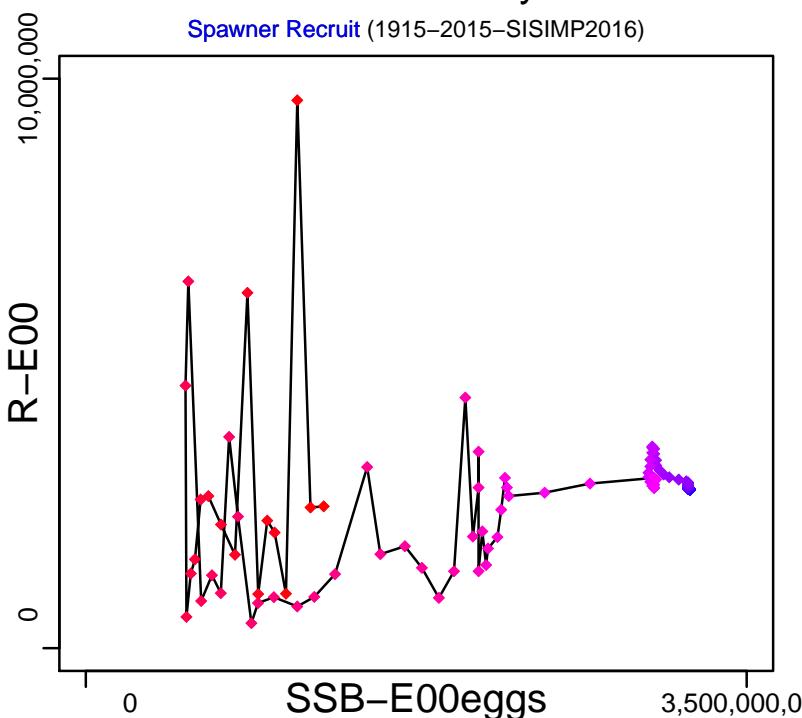
Kobe MSYpref (1915–2015–SISIMP2016)



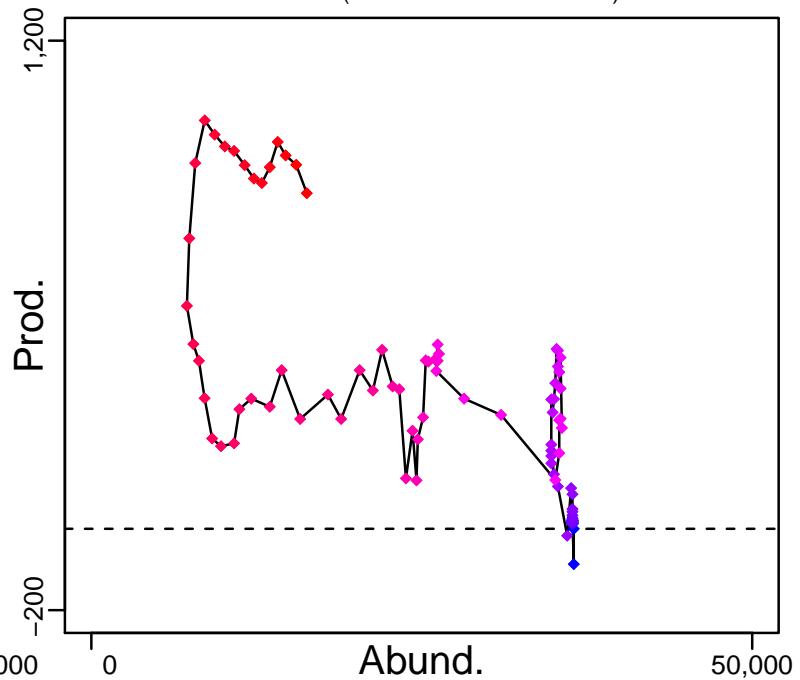
Kobe MGTpref (1915–2015–SISIMP2016)



Spawner Recruit (1915–2015–SISIMP2016)



Production (1915–2015–SISIMP2016)

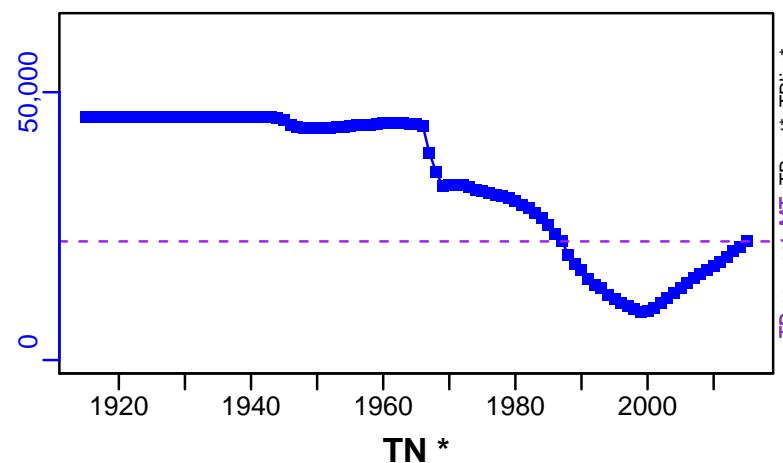


◆ Start Year ◆ End Year * No Data

Darkblotched rockfish Pacific Coast [DKROCKPCOAST]

TB-MT (1915–2015–SISIMP2016)

SSB-E00eggs (1915–2015–SISIMP2016)



TB_{mgt}^*, TB_{lim}^*

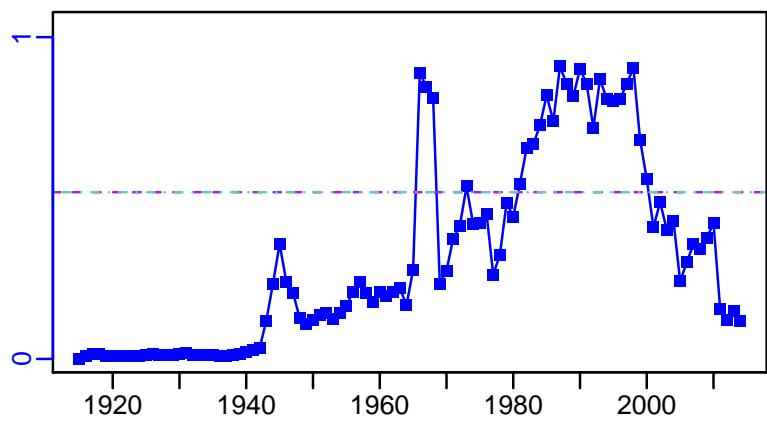
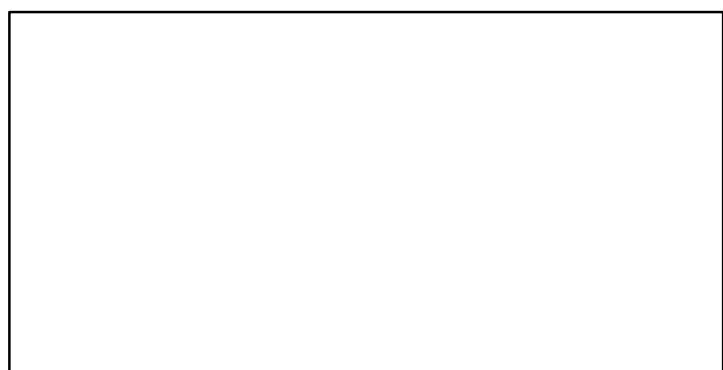
SSB_{mgt}^*, SSB_{lim}^*

SSB_{mgt}^*, SSB_{lim}^*

F_{mgt}^*, F_{lim}^*

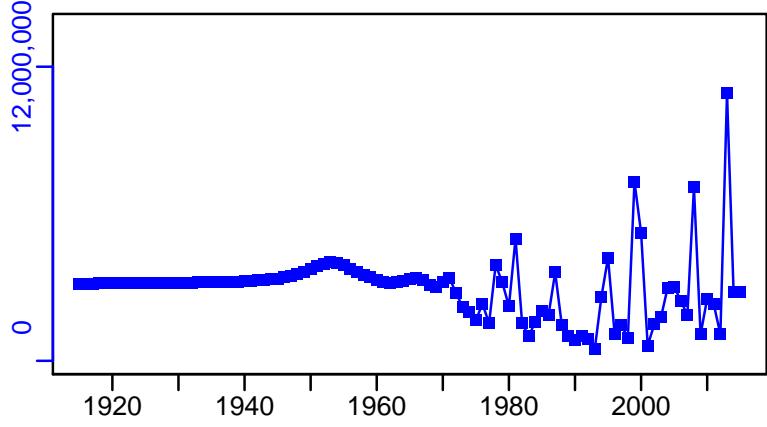
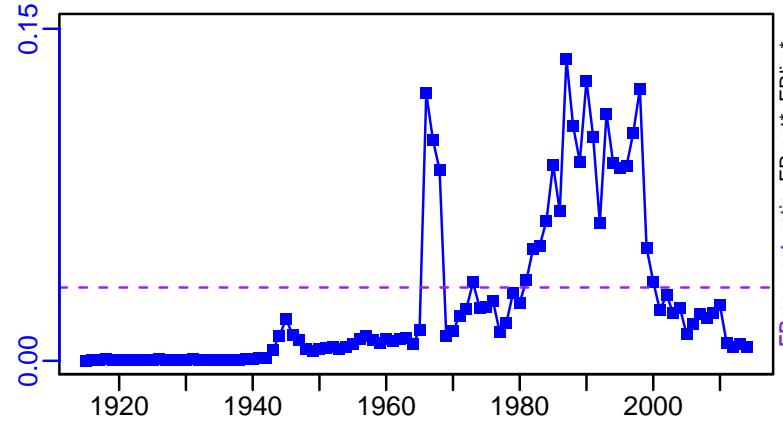
F_{mgt}^*, F_{lim}^*

$F-1/yr$ (1915–2015–SISIMP2016)



ER-calc-ratio (1915–2015–SISIMP2016)

R-E00 (1915–2015–SISIMP2016)

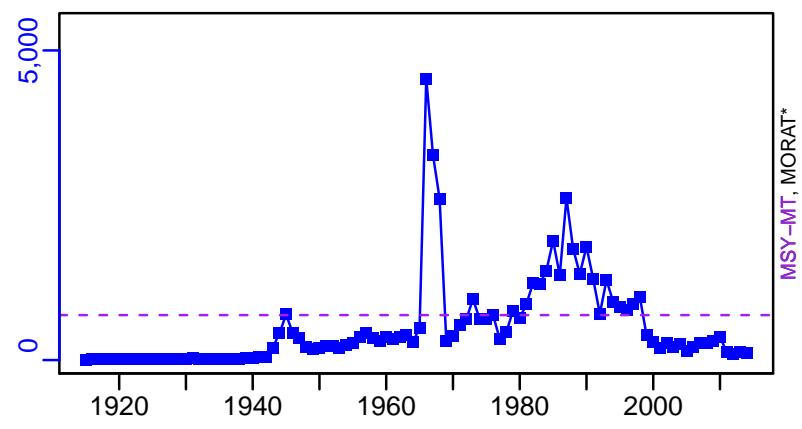


- | | | |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - - Lim BRP | * No Data |

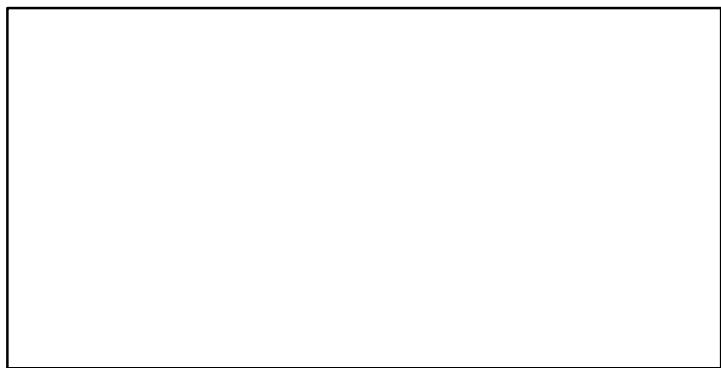
Darkblotched rockfish Pacific Coast [DKROCKPCOAST]

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

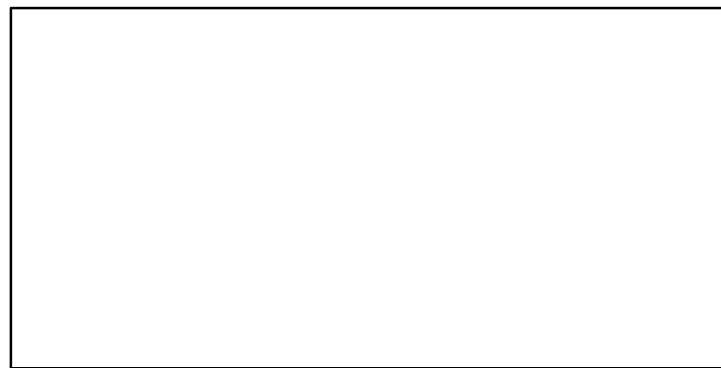
TAC*, Cpair*, Cadv*



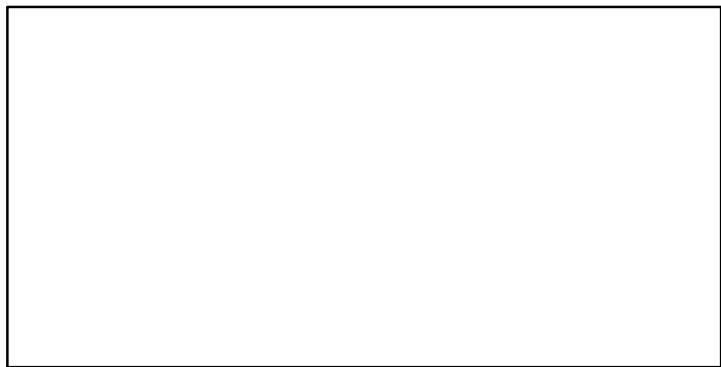
survB*



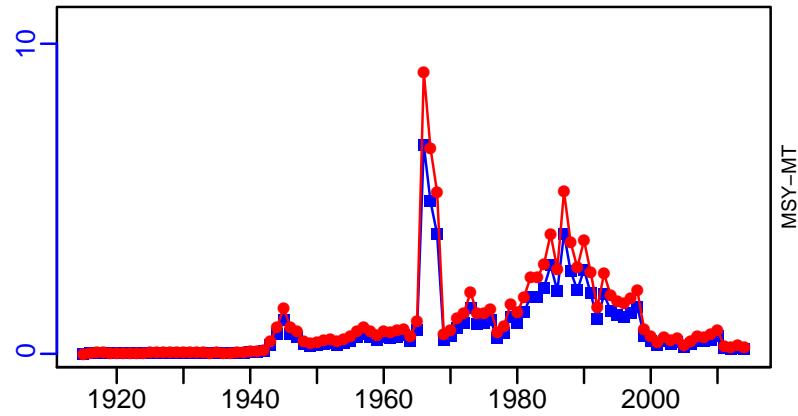
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1915–2015–SISIMP2016)



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

Dover sole Pacific Coast [DSOLEPCOAST]

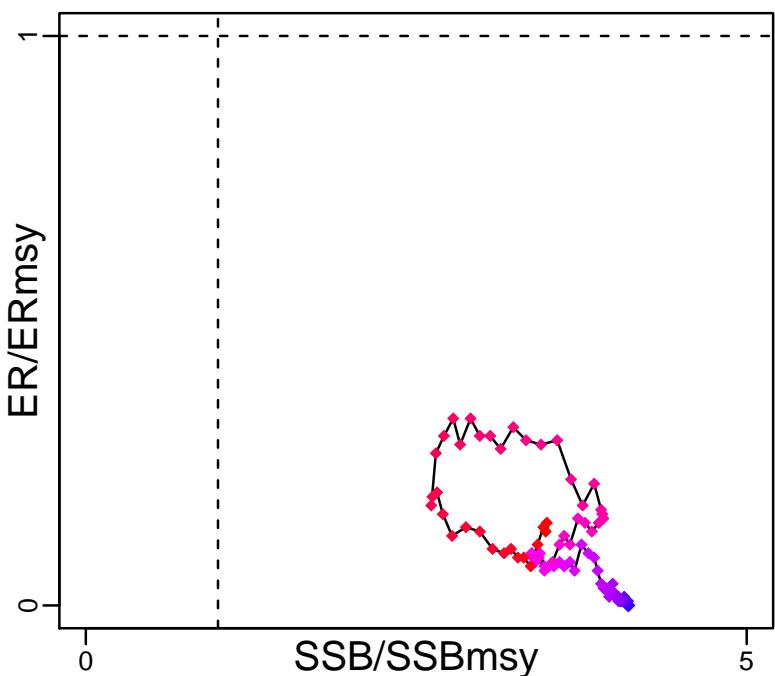
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Microstomus pacificus |
| Current Assess ID | SWFSC-DSOLEPCOAST-1910-2011-STACHURA |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national management |
| Assessor | Southwest Fisheries Science Center |
| Asmts in RAM | 2011 |

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

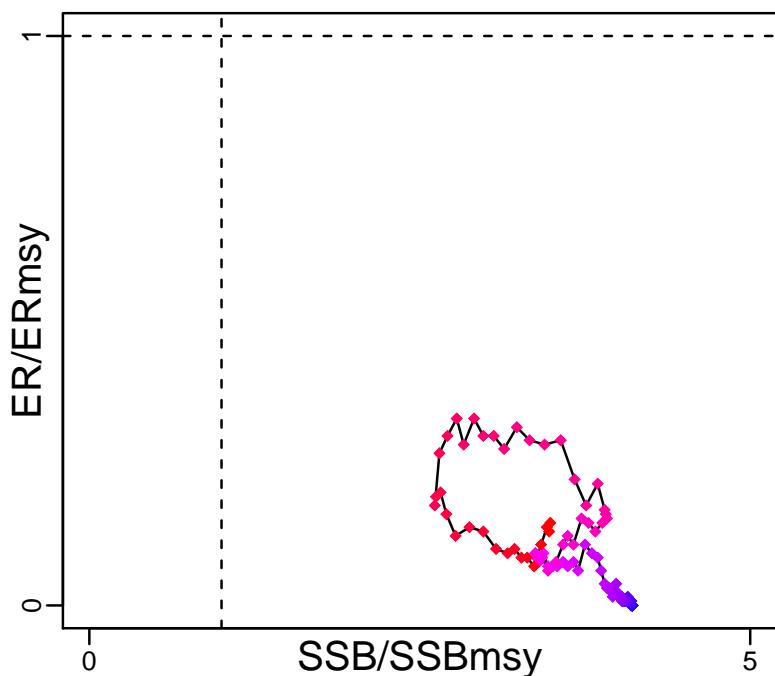
| Time Series | | | | | | |
|--------------------|----------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2011 | 685,000 | - | 0+ | |
| SSB | SSB-MT | 2011 | 394,000 | Females | 5+ | |
| TN | - | -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

Dover sole Pacific Coast [DSOLEPCOAST]

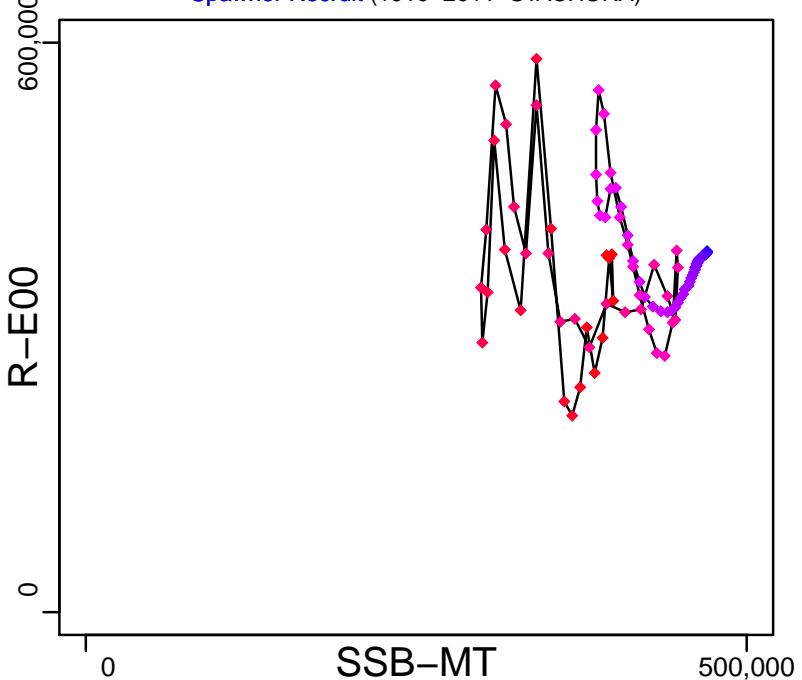
Kobe MSYpref (1910–2011–STACHURA)



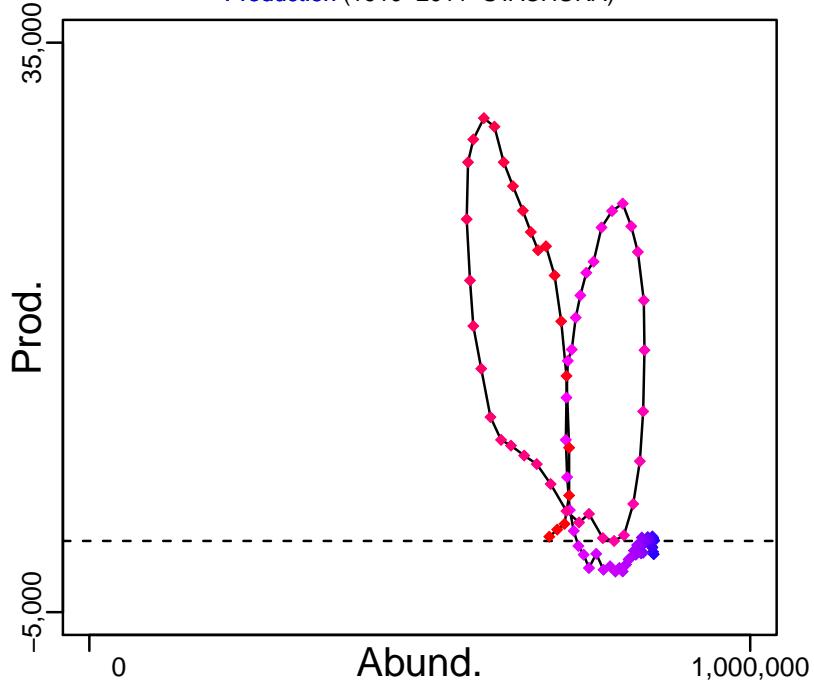
Kobe MGTpref (1910–2011–STACHURA)



Spawner Recruit (1910–2011–STACHURA)



Production (1910–2011–STACHURA)

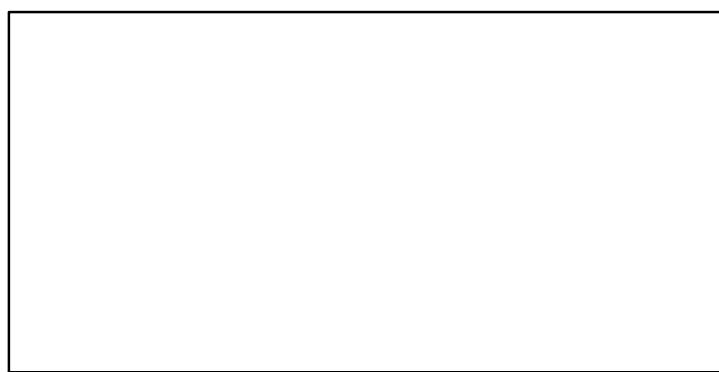
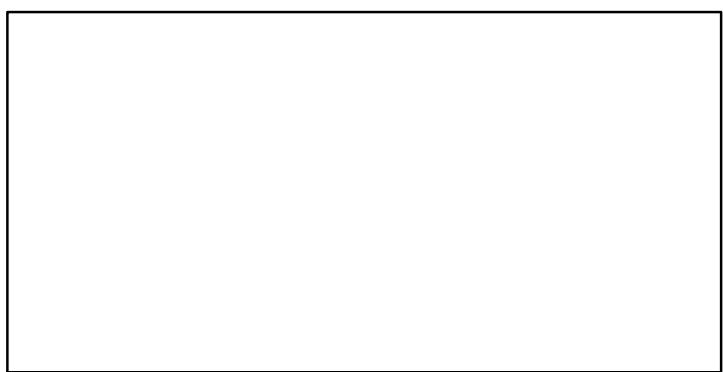
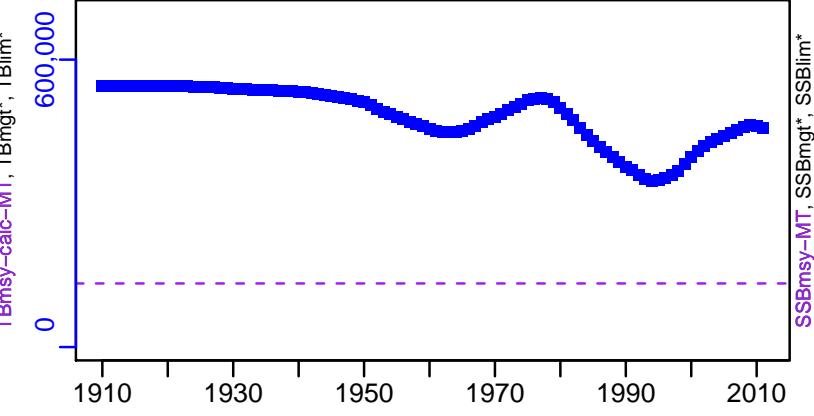
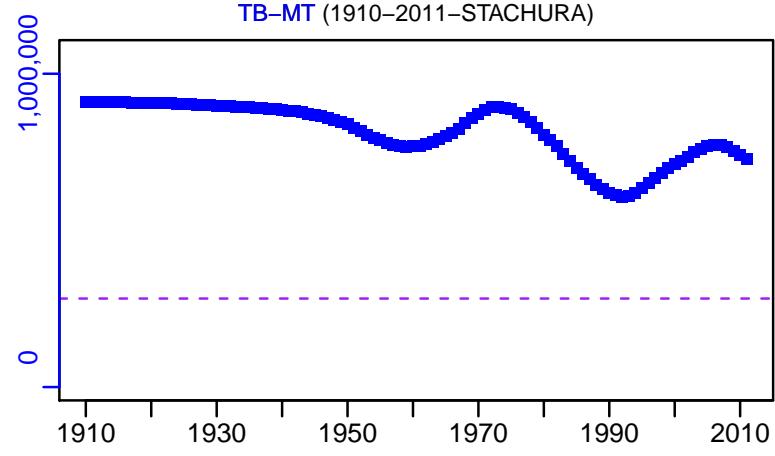


- ◆ Start Year
- ◆ End Year
- * No Data

Dover sole Pacific Coast [DSOLEPCOAST]

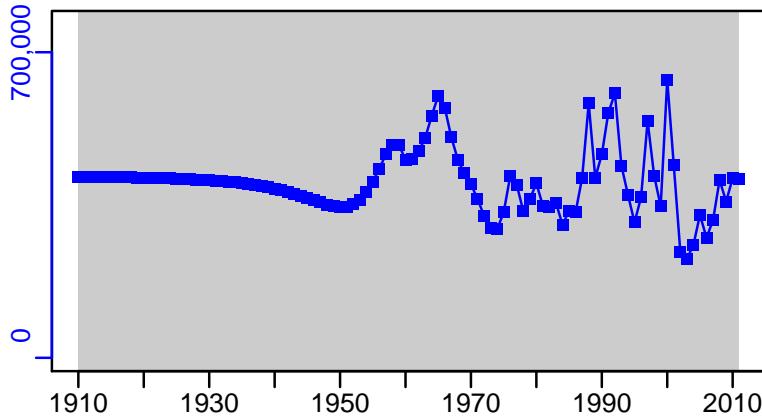
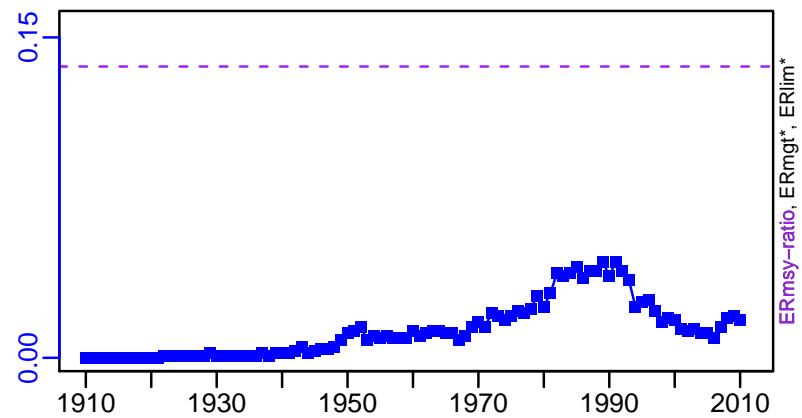
TB-MT (1910–2011–STACHURA)

SSB-MT (1910–2011–STACHURA)



ER-ratio (1910–2011–STACHURA)

R-E00 (1910–2011–STACHURA)

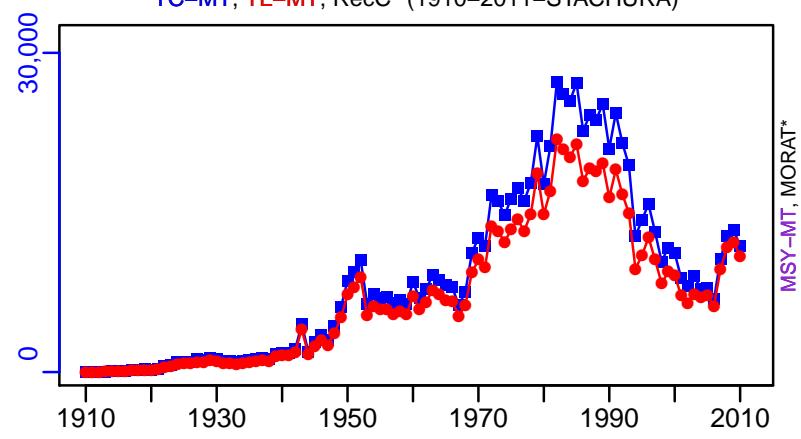


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | ··· Lim BRP | * No Data |

Dover sole Pacific Coast [DSOLEPCOAST]

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

TAC*, Cpair*, Cadv*



MSY-MT, MORAT*

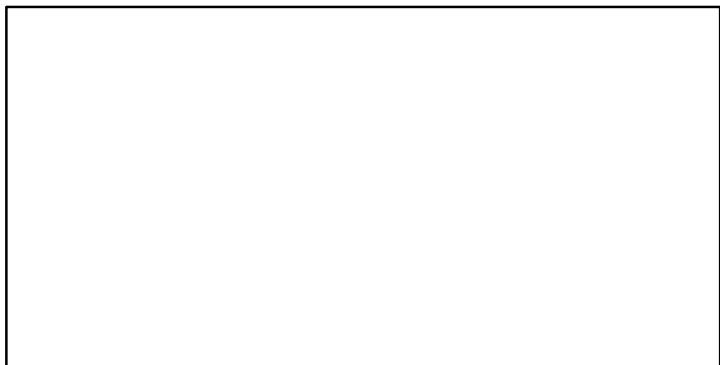
survB*



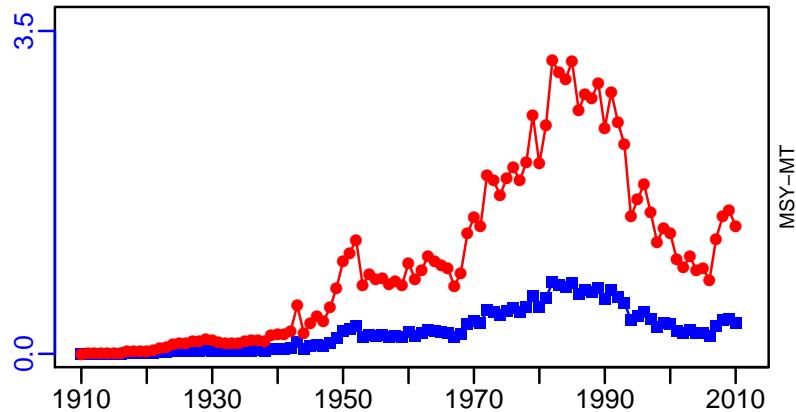
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1910–2011–STACHURA)



MSY-MT

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

English sole Pacific Coast [ESOLEPCOAST]

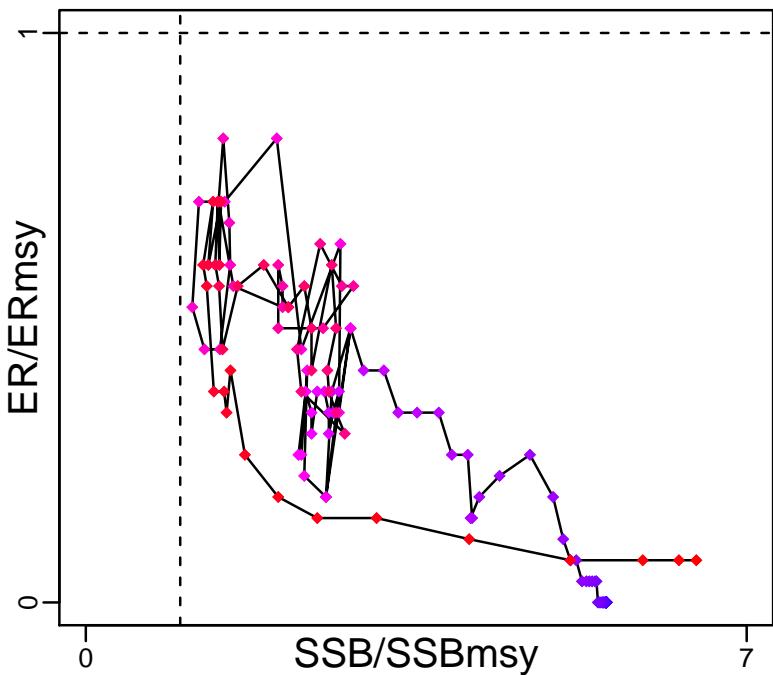
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Parophrys vetulus |
| Current Assess ID | NWFSC-ESOLEPCOAST-1876-2012-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

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

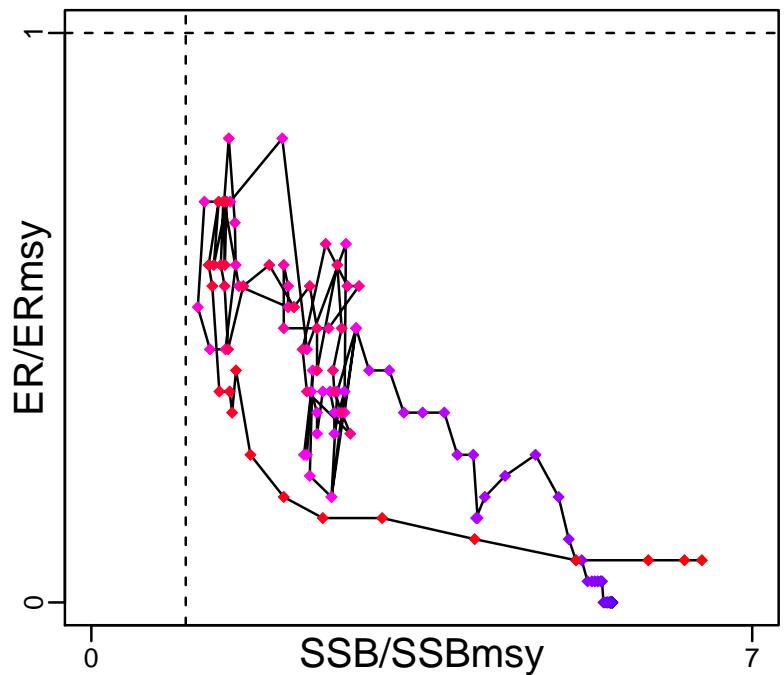
| Time Series | | | | | | |
|--------------------|----------------------|------------------|--------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2007 | 69,900 | - | 7.7+ | |
| SSB | SSB-MT | 2007 | 41,900 | Females | 3+ | |
| TN | - |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

English sole Pacific Coast [ESOLEPCOAST]

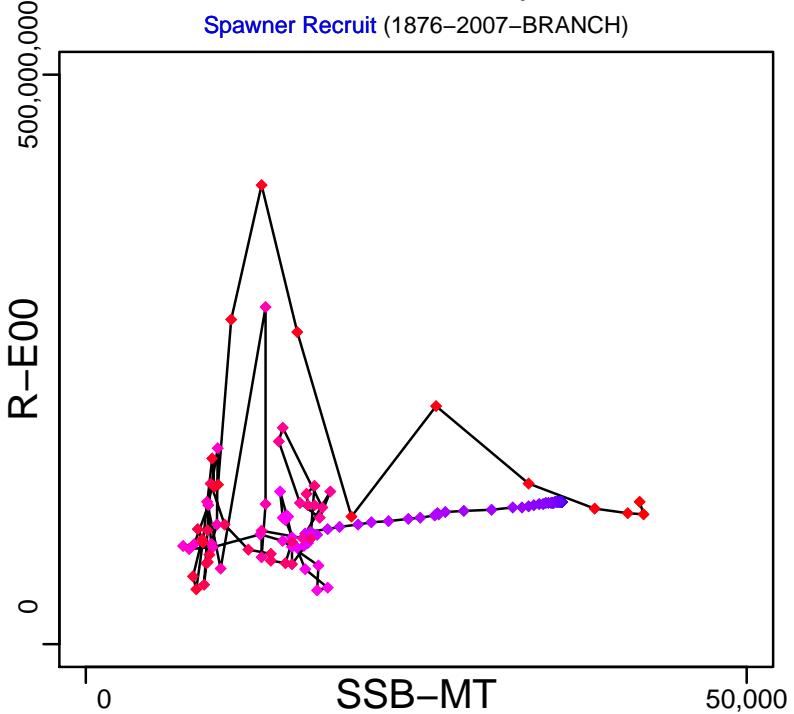
Kobe MSYpref (1876–2007–BRANCH)



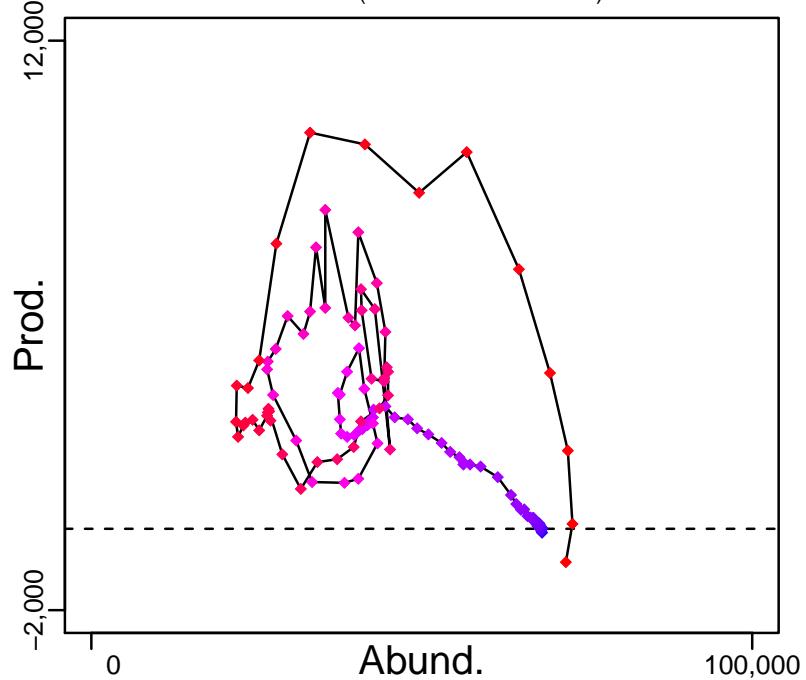
Kobe MGTpref (1876–2007–BRANCH)



Spawner Recruit (1876–2007–BRANCH)



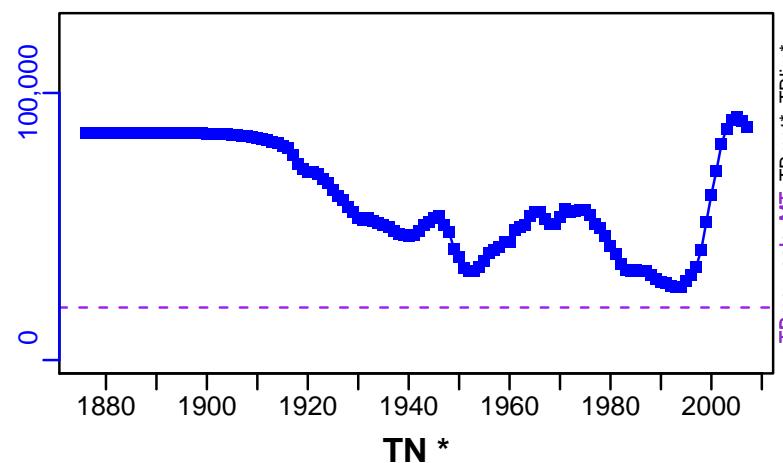
Production (1876–2007–BRANCH)



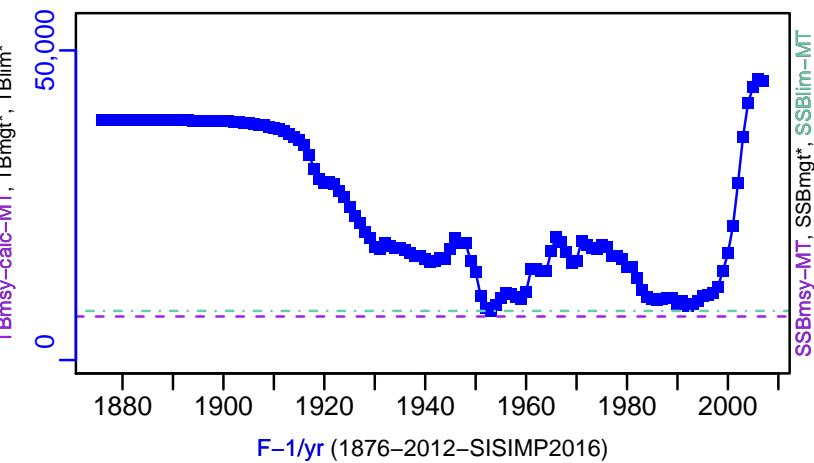
◆ Start Year ◆ End Year * No Data

English sole Pacific Coast [ESOLEPCOAST]

TB-MT (1876–2007–BRANCH)



SSB-MT (1876–2007–BRANCH)

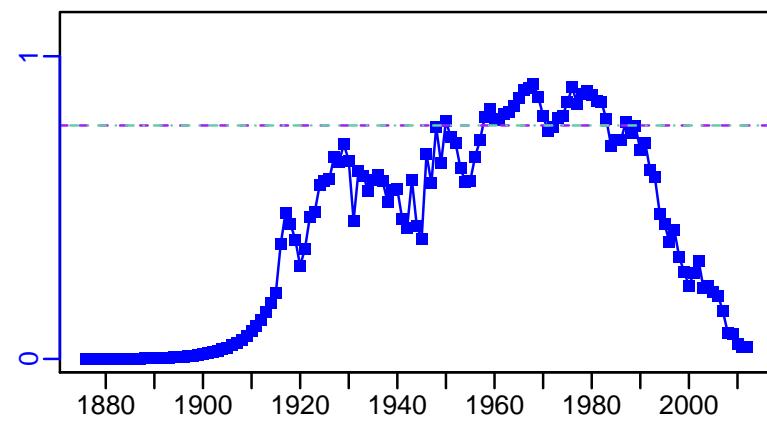
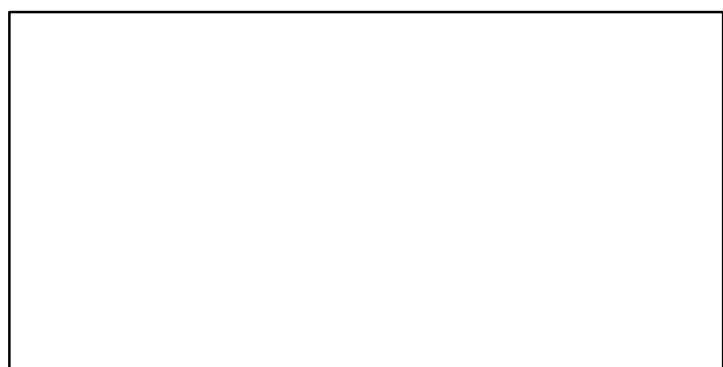


TN *

TB_{msy}-calc-MT, TB_{mgt*}, TB_{lim*}

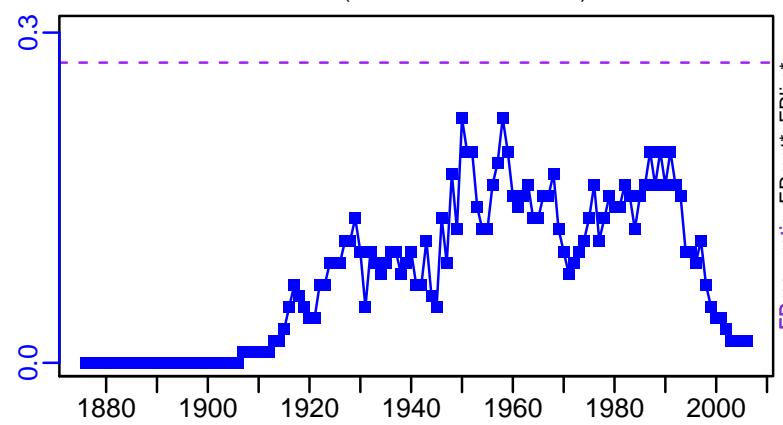
SSB_{msy}-MT, SSB_{mgt*}, SSB_{lim}-MT

F-1/yr (1876–2012-SISIMP2016)



F_{msy}-1/yr, F_{mgt*}, F_{lim}-1/yr

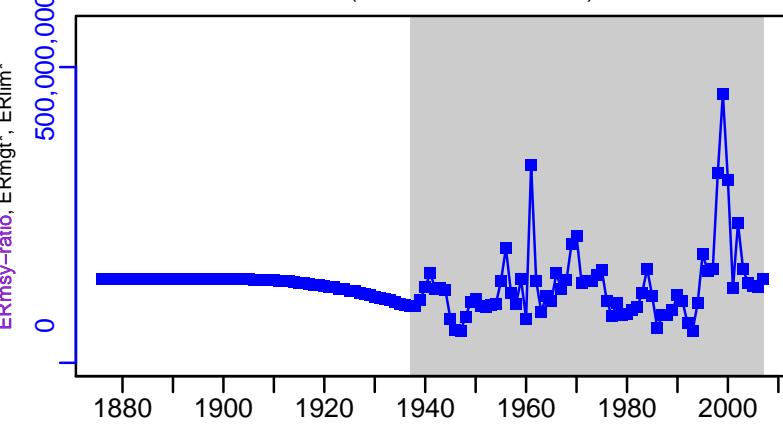
ER-ratio (1876–2007–BRANCH)



ER_{msy}-ratio, ER_{mgt*}, ER_{lim*}

REC-EST: 1937–2007

R-E00 (1876–2007–BRANCH)

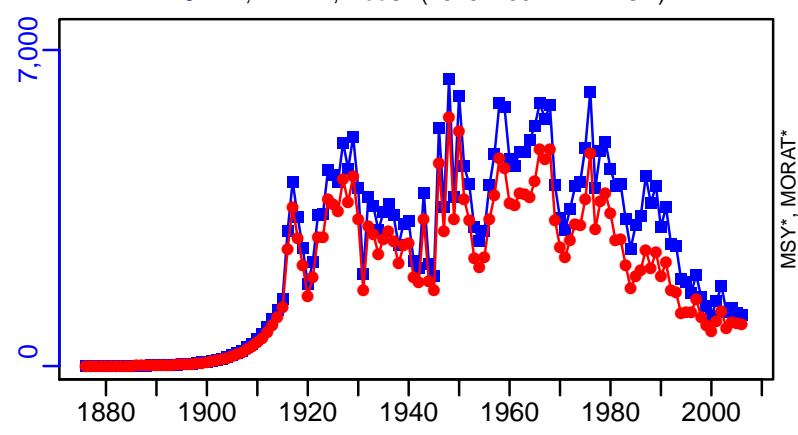


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | --- Lim BRP | * No Data |

English sole Pacific Coast [ESOLEPCOAST]

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

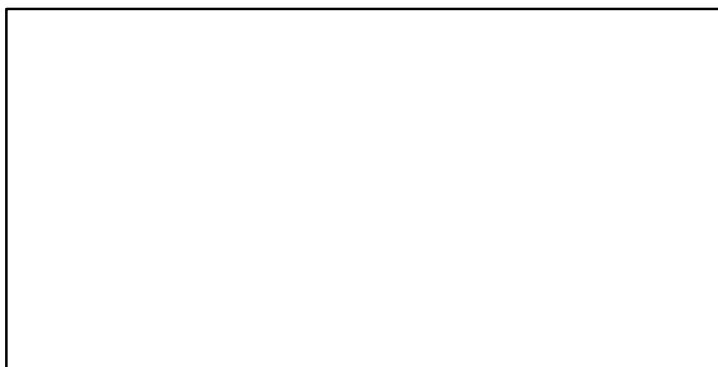
TAC*, Cpair*, Cadv*



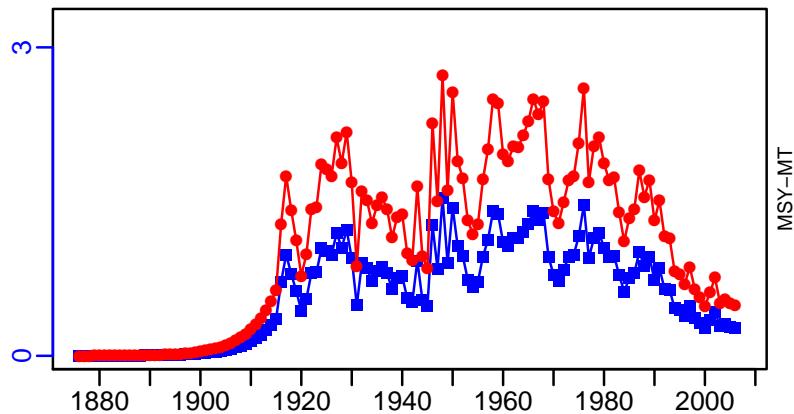
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1876–2007-BRANCH)



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

Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

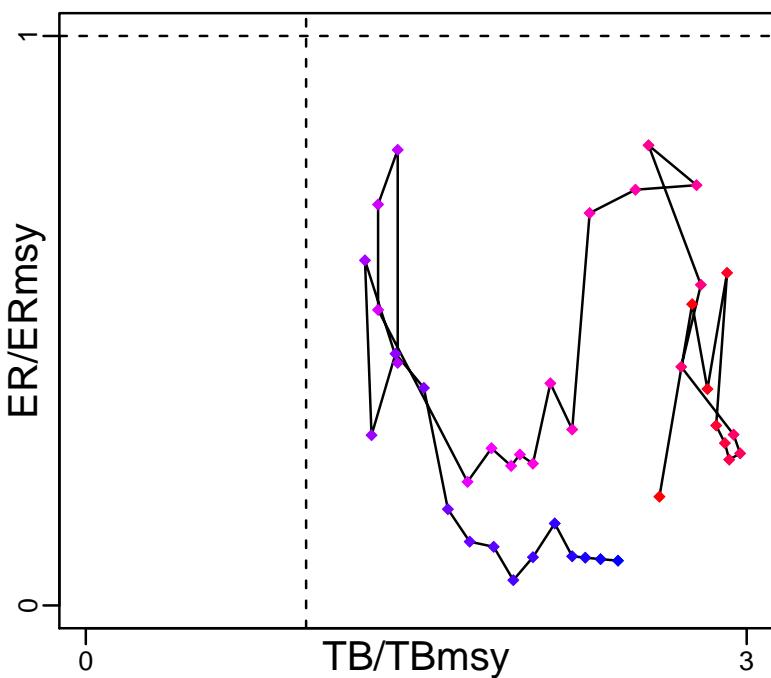
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes carnatus |
| Current Assess ID | SWFSC-GOPHERSPCOAST-1965-2005-STANTON |
| Area | Southern Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

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

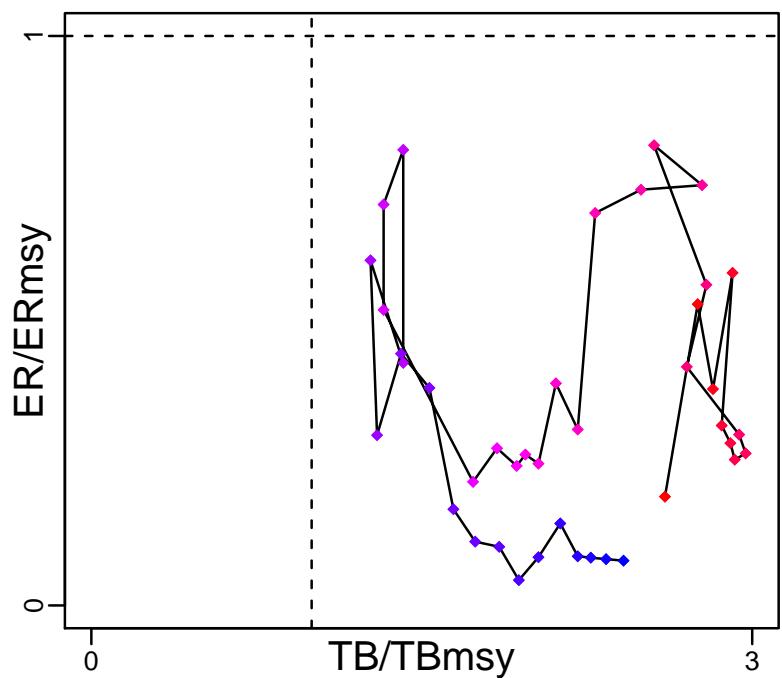
| Time Series | | | | | | |
|-------------------|---------------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2005 | 2570 | - | 1+ | |
| SSB | SSB-MT | 2005 | 1900 | Females | 3+ | |
| TN | - | - | - | - | - | |
| R | R-MT | 2005 | 2730 | - | 0 | |
| F | - | - | - | - | - | |
| ER | ER-ratio | 2005 | 0.019 | - | - | |
| TC | TC-MT | 2005 | 50 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-MT | 2005 | 2.545 | | | |
| SSB/SSBmsy | SSB-MT/(SSB0-MT*0.368) | 2005 | 2.588 | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-ratio/ERmsy-calc-ratio | 2005 | 0.191 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

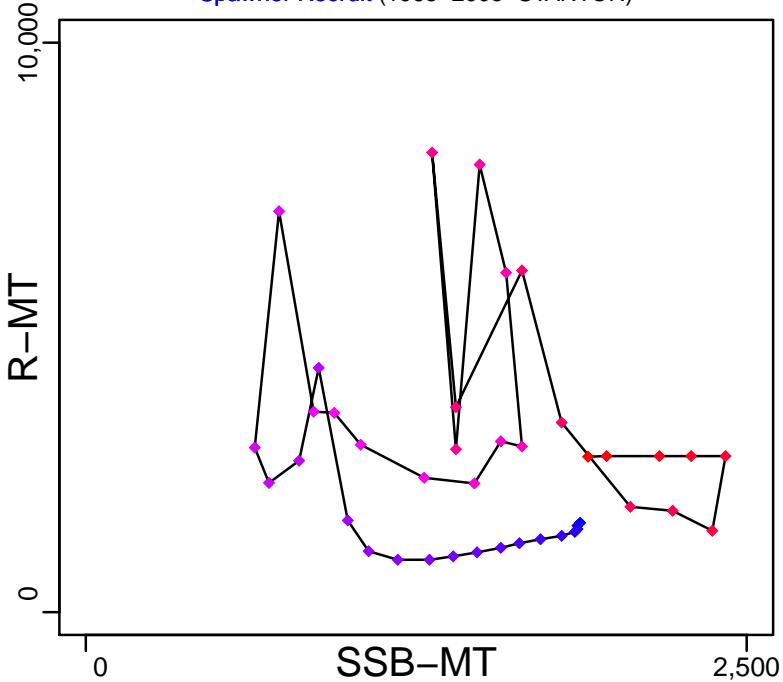
Kobe MSYpref (1965–2005-STANTON)



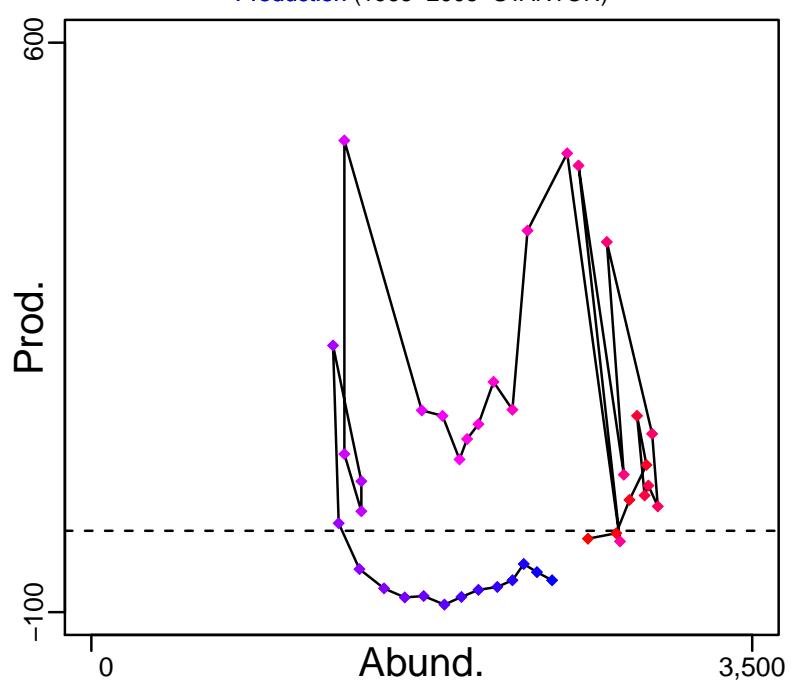
Kobe MGTpref (1965–2005-STANTON)



Spawner Recruit (1965–2005-STANTON)



Production (1965–2005-STANTON)

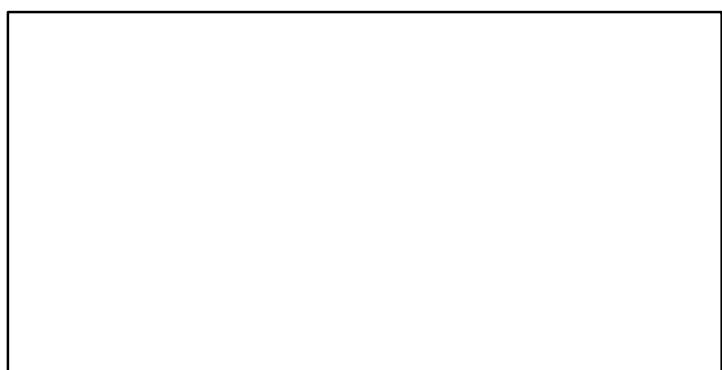
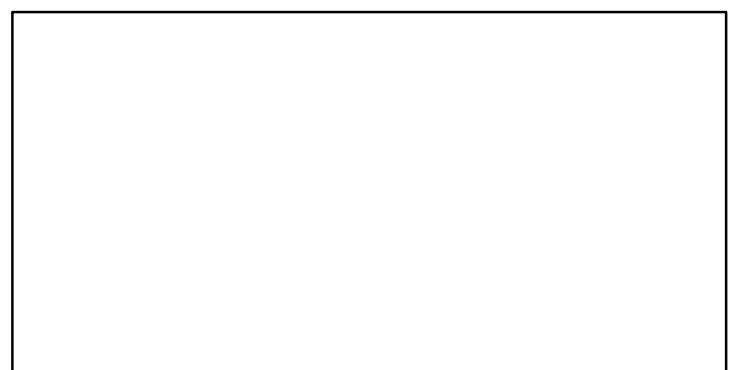
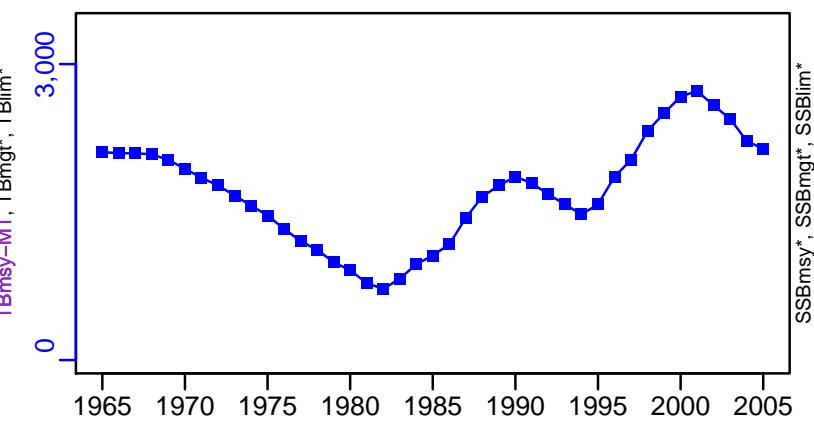
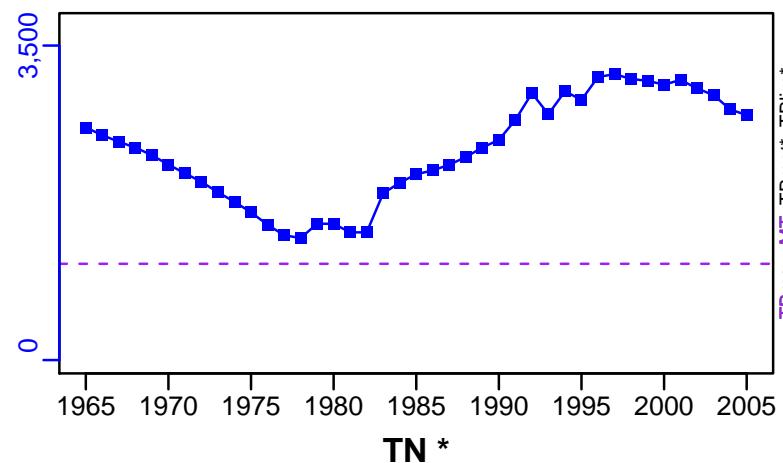


◆ Start Year ◆ End Year * No Data

Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

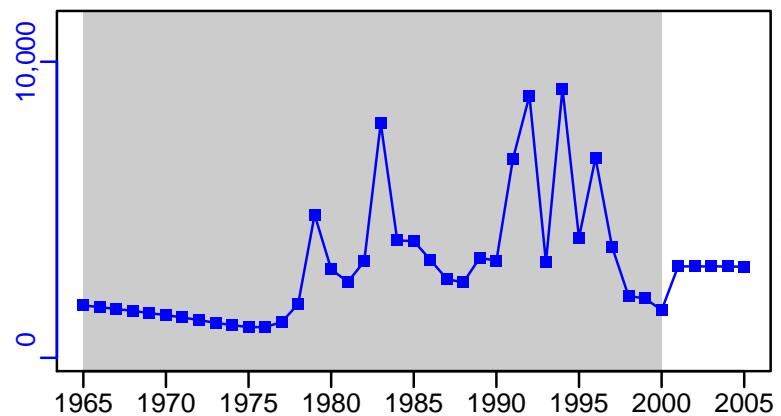
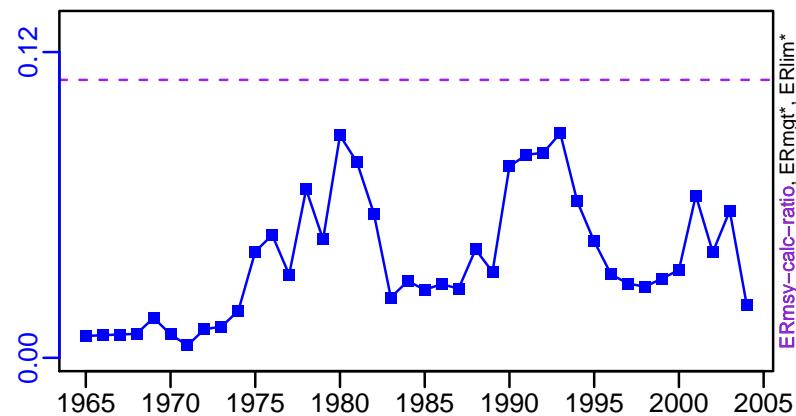
TB-MT (1965–2005-STANTON)

SSB-MT (1965–2005-STANTON)



ER-ratio (1965–2005-STANTON)

R-MT (1965–2005-STANTON)

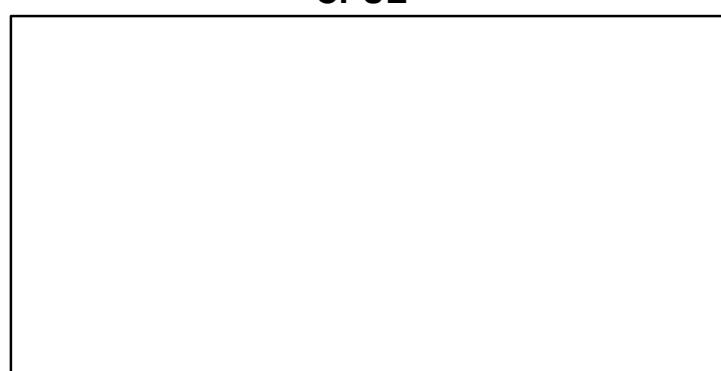
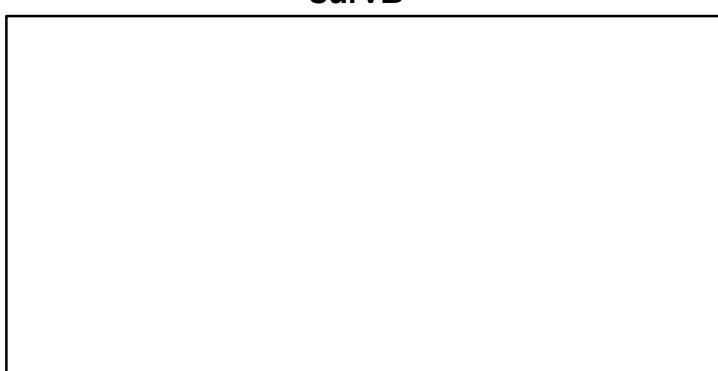
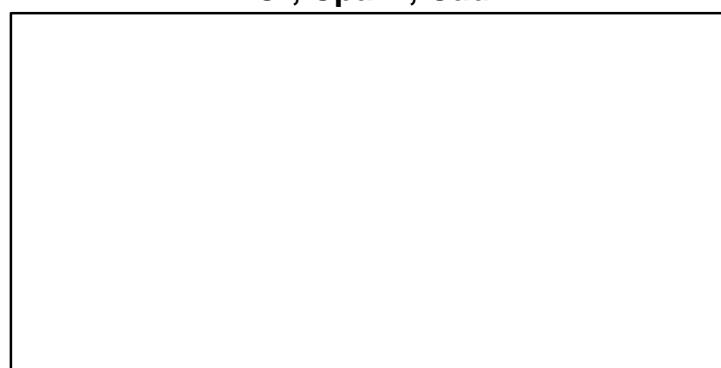
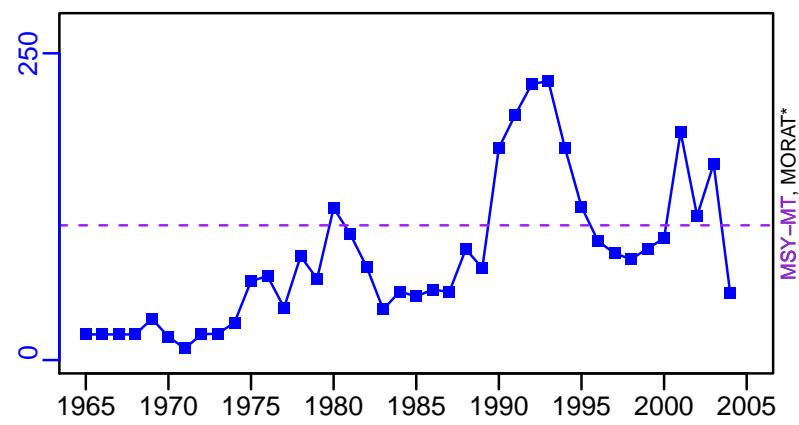


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - Lim BRP | * No Data |

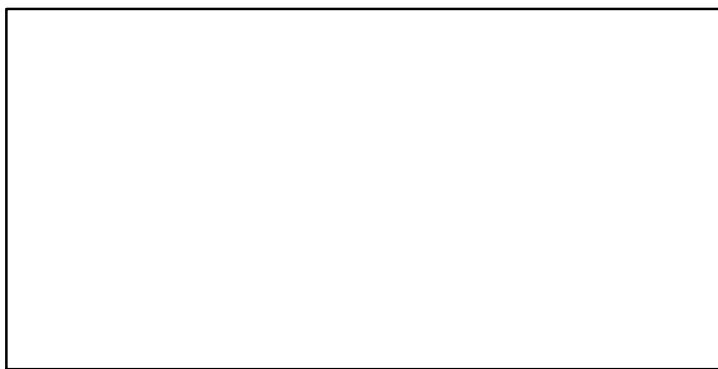
Gopher rockfish Southern Pacific Coast [GOPHERSPCOAST]

TC-MT, TL*, RecC* (1965–2005-STANTON)

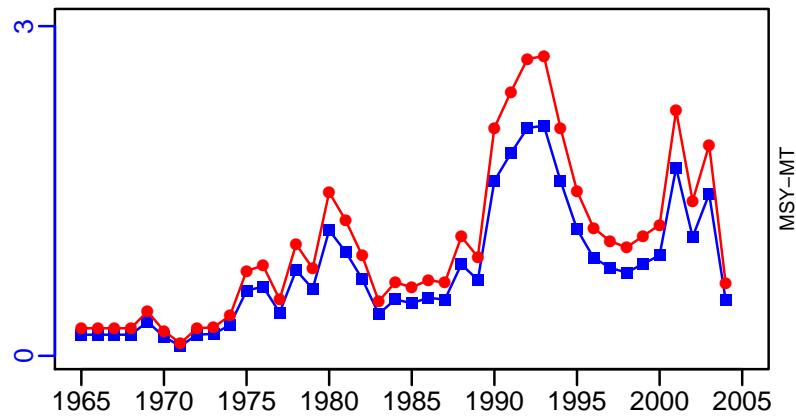
TAC*, Cpair*, Cadv*



EFFORT*



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



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

Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

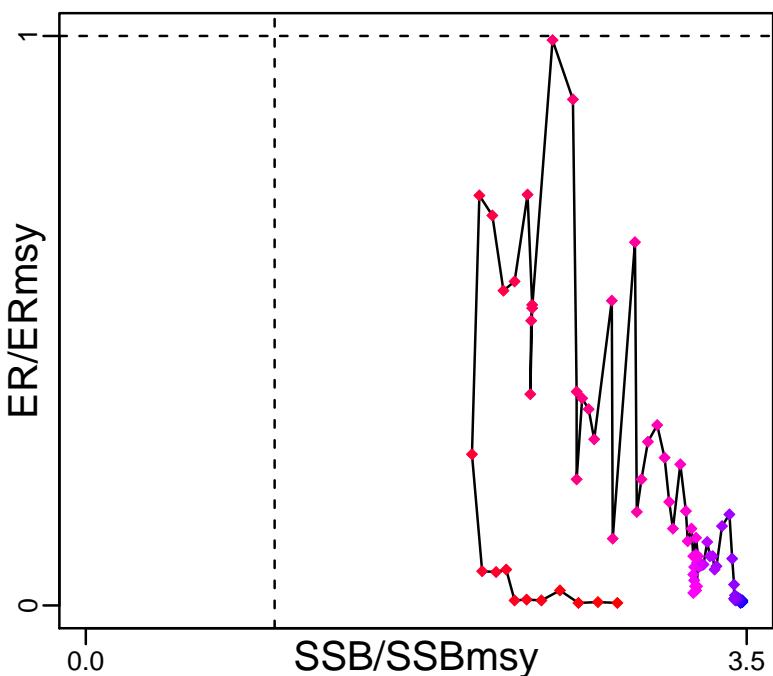
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes elongatus |
| Current Assess ID | PFMC-GRNSTROCKPCOAST-1916-2009-STANTON |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US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

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

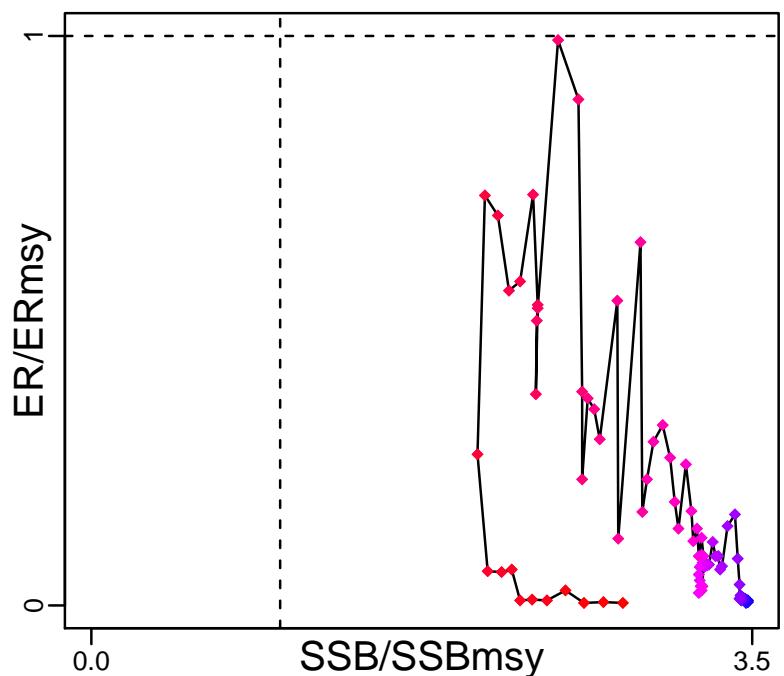
| Time Series | | | | | | |
|--------------------|----------------------------|-----------|--------------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2009 | 29,200 | - | 2+ | |
| SSB | SSB-E00eggs | 2009 | 5.74×10^9 | Females | - | |
| TN | - | - | -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

Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

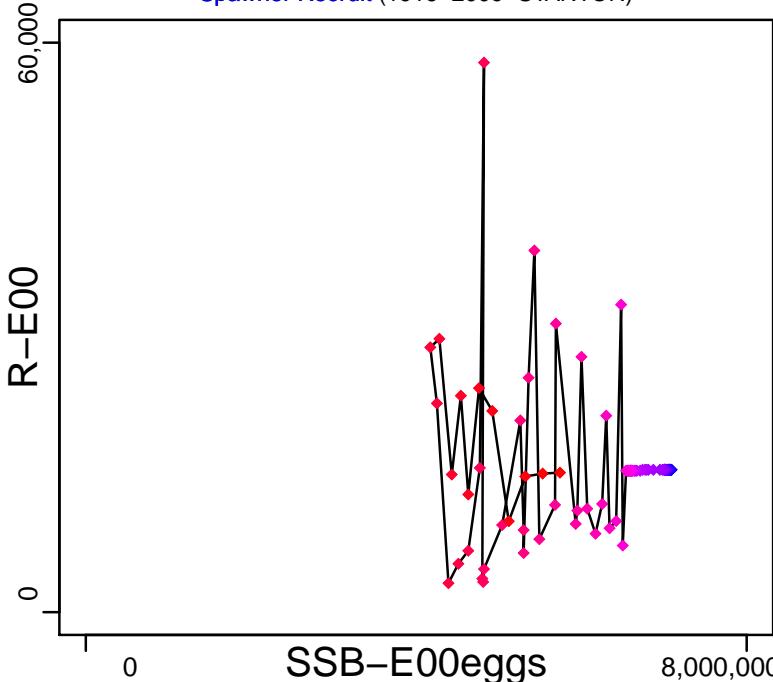
Kobe MSYpref (1916–2009–STANTON)



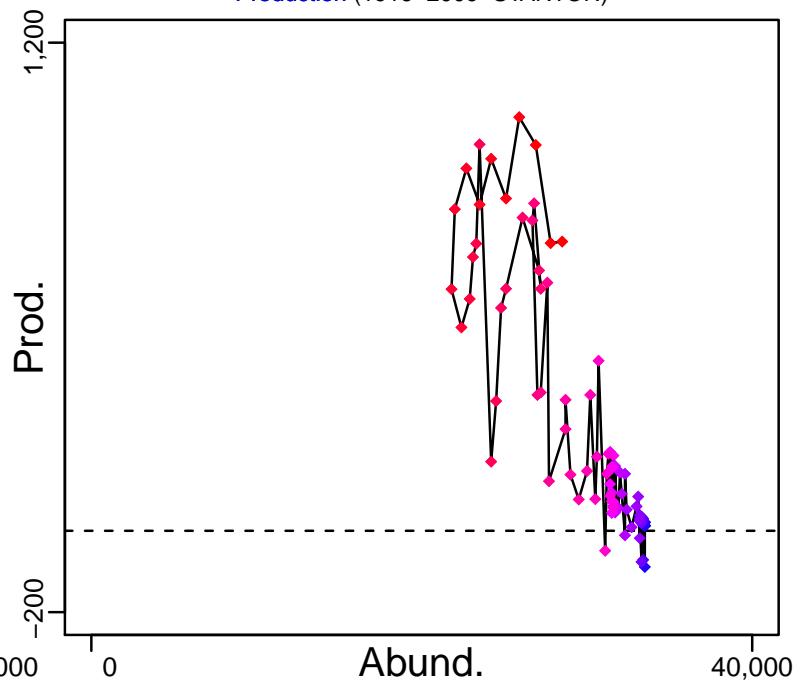
Kobe MGTpref (1916–2009–STANTON)



Spawner Recruit (1916–2009–STANTON)



Production (1916–2009–STANTON)

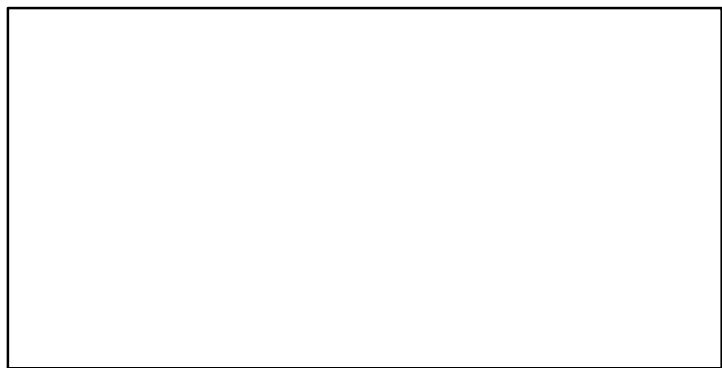
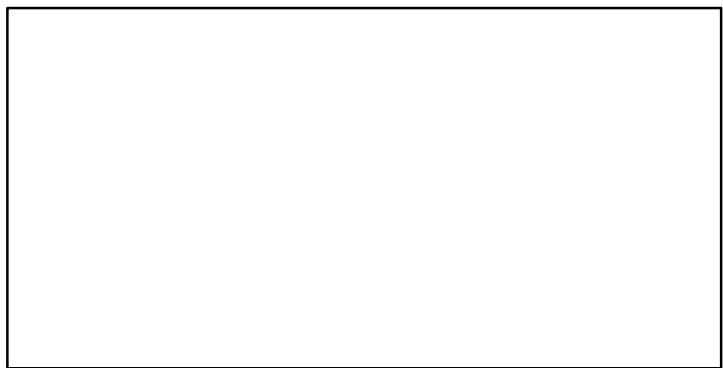
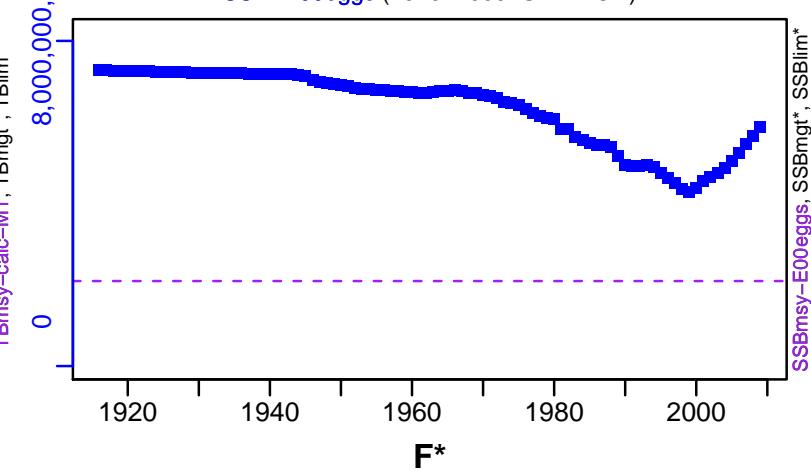
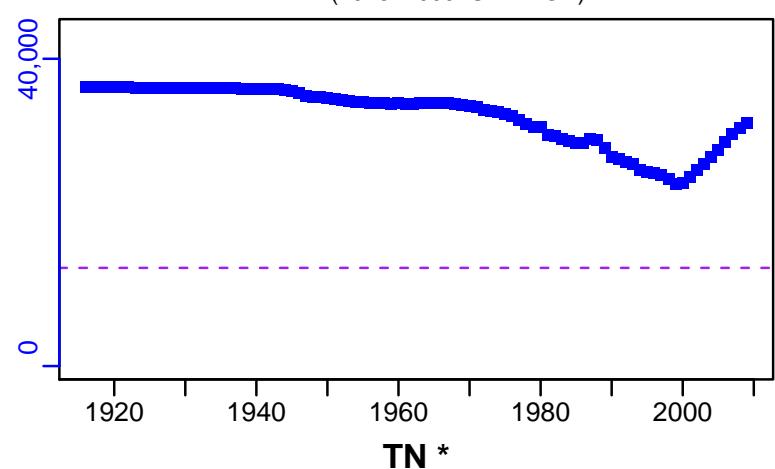


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

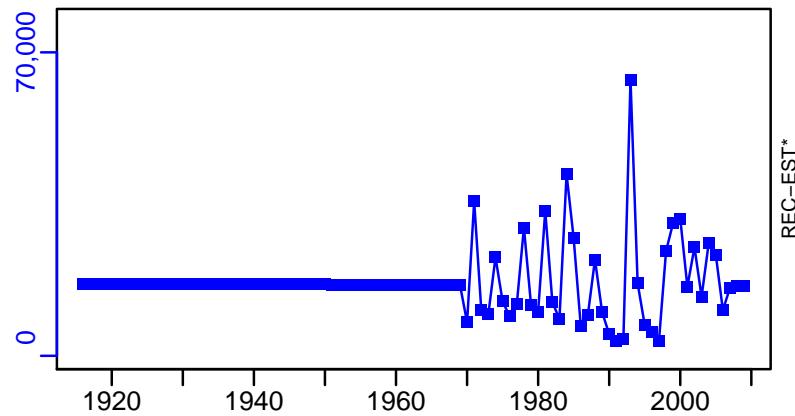
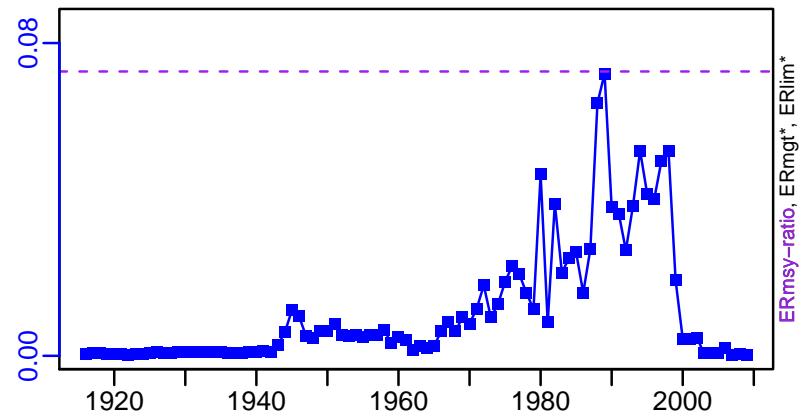
TB-MT (1916–2009–STANTON)

SSB-E00eggs (1916–2009–STANTON)



ER-ratio (1916–2009–STANTON)

R-E00 (1916–2009–STANTON)

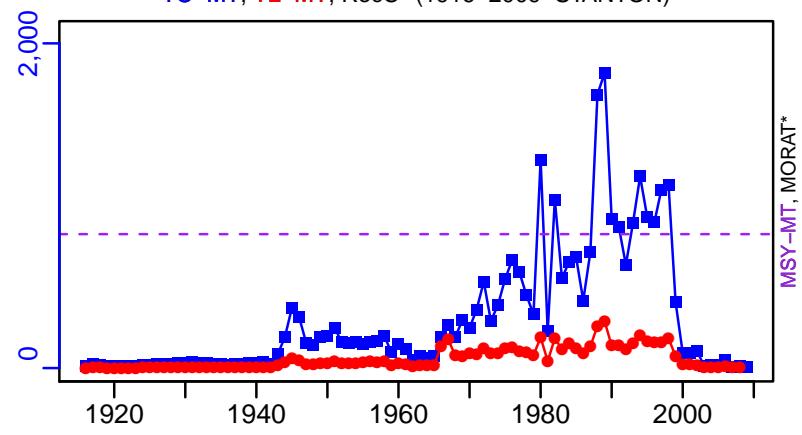


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | ··· Lim BRP | * No Data |

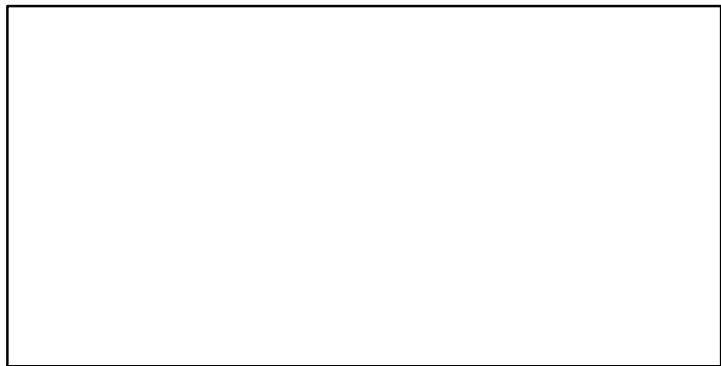
Greenstriped rockfish Pacific Coast [GRNSTROCKPCOAST]

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

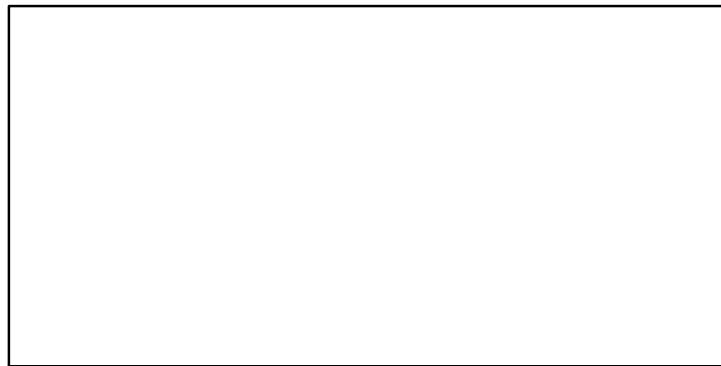
TAC*, Cpair*, Cadv*



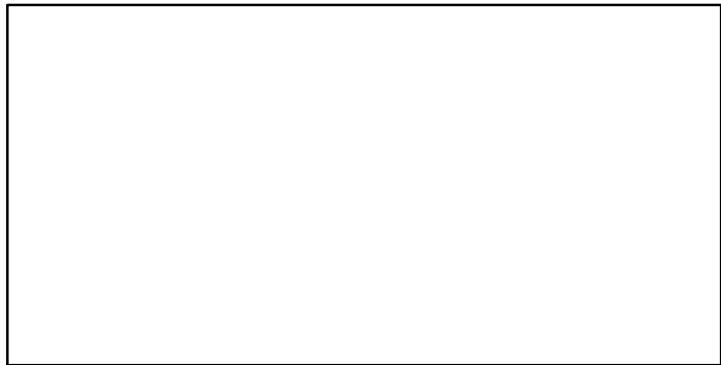
survB*



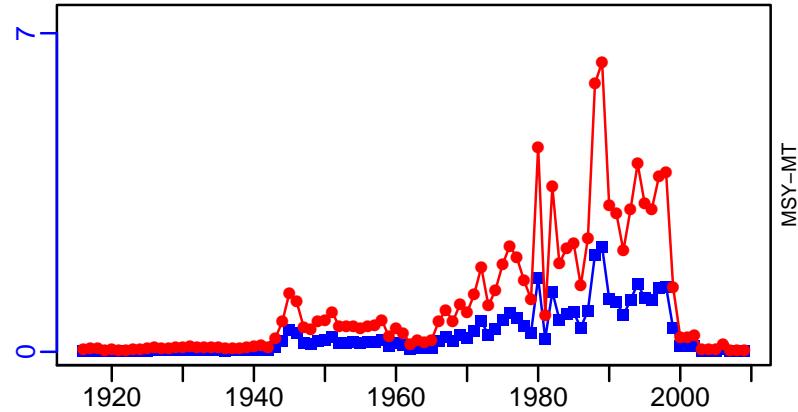
CPUE*



EFFORT*



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



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

Greenspotted rockfish Northern Pacific Coast [GRSPROCKNCAL]

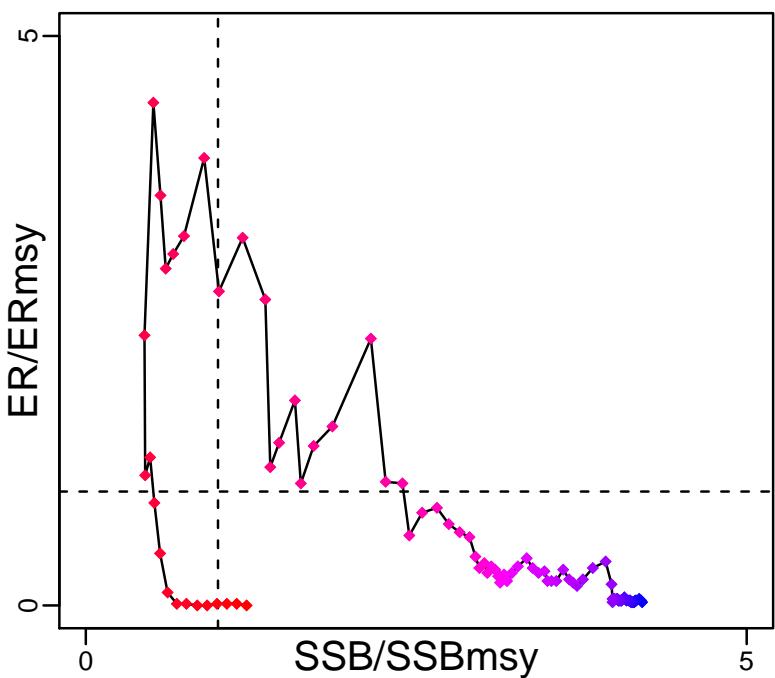
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes chlorostictus |
| Current Assess ID | SWFSC-GRSPROCKNCAL-1916-2010-STACHURA |
| Area | Northern Pacific Coast |
| Management Authority | National Marine Fisheries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

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

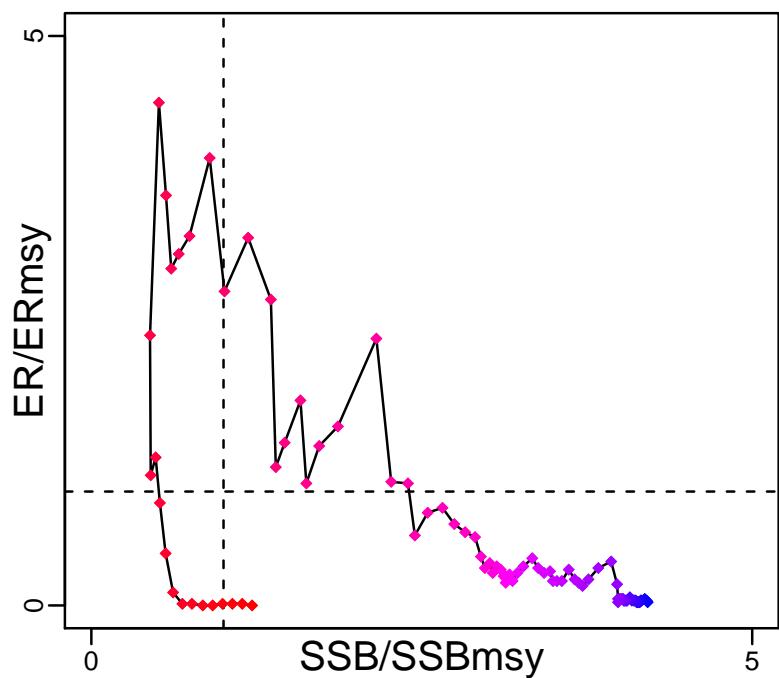
| Time Series | | | | | | |
|--------------------|----------------------------|------------------|-----------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2010 | 1190 | - | 0+ | |
| SSB | SSB-E00eggs | 2010 | 1.63×10^{11} | Females | -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

Greenspotted rockfish Northern Pacific Coast [GRSPROCKNCAL]

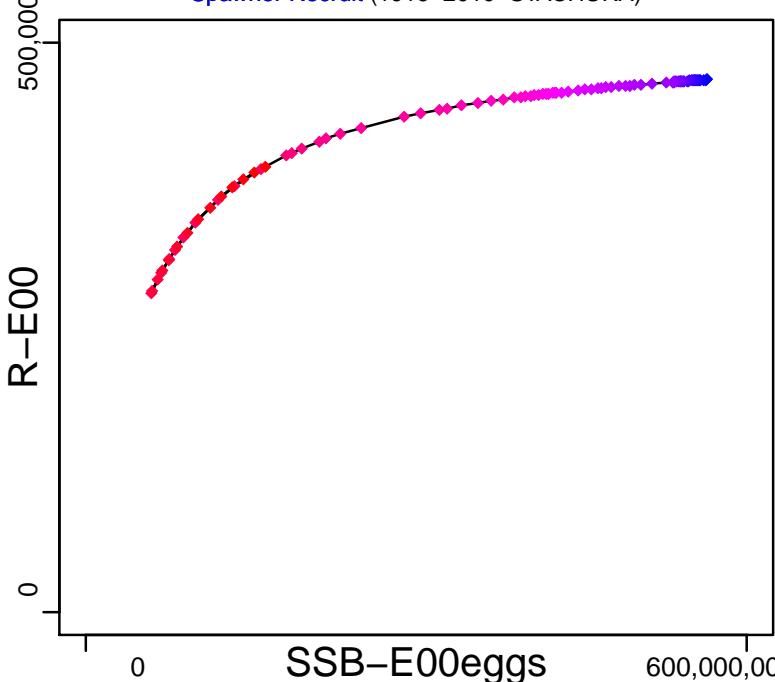
Kobe MSYpref (1916–2010–STACHURA)



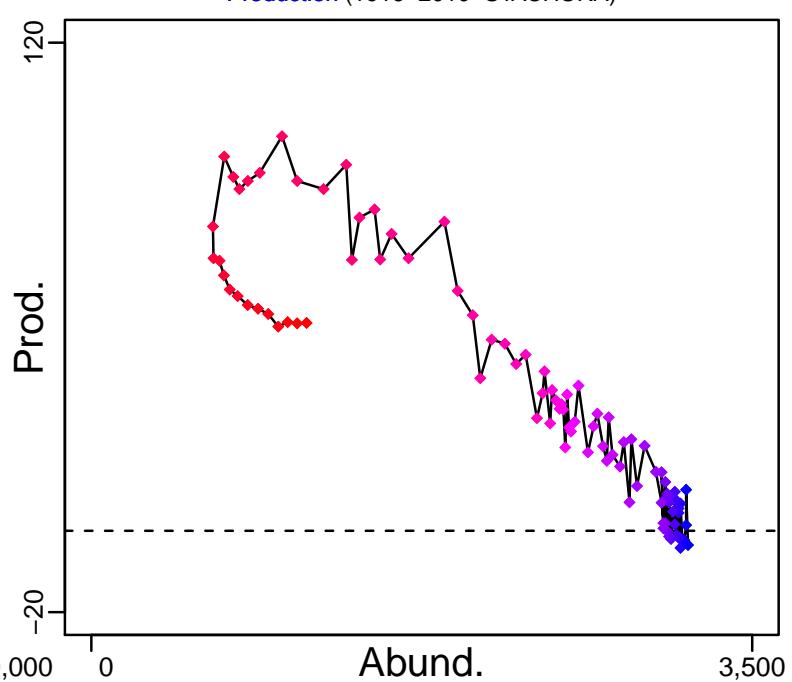
Kobe MGTpref (1916–2010–STACHURA)



Spawner Recruit (1916–2010–STACHURA)



Production (1916–2010–STACHURA)

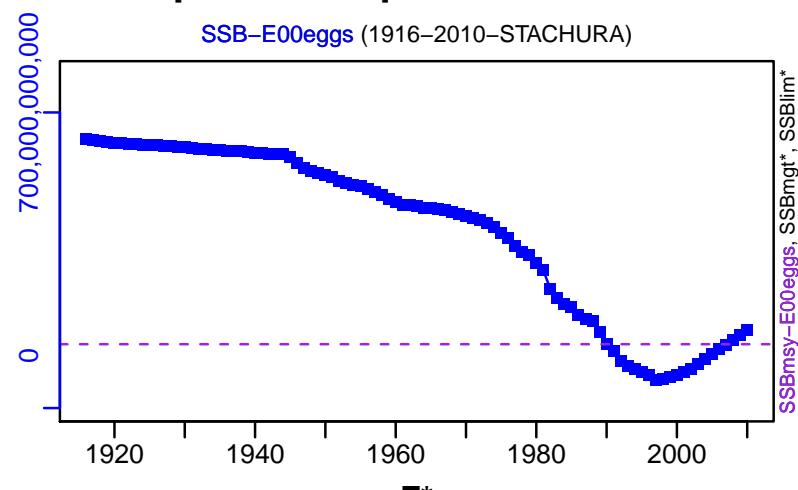
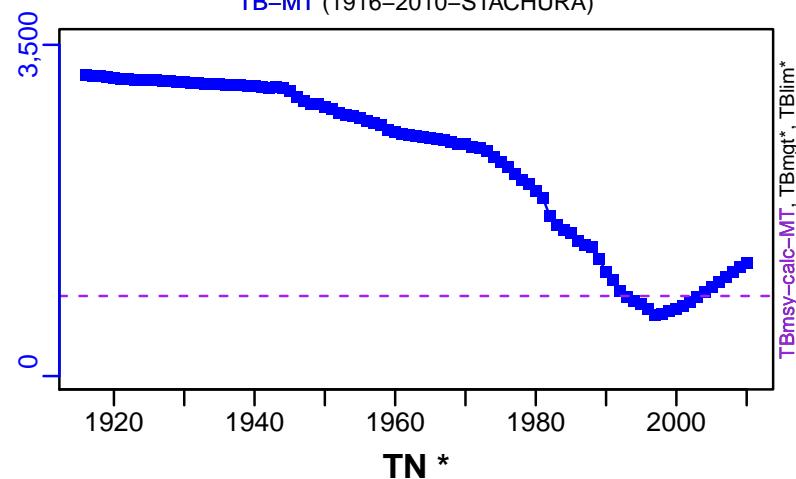


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Greenspotted rockfish Northern Pacific Coast [GRSPROCKNCAL]

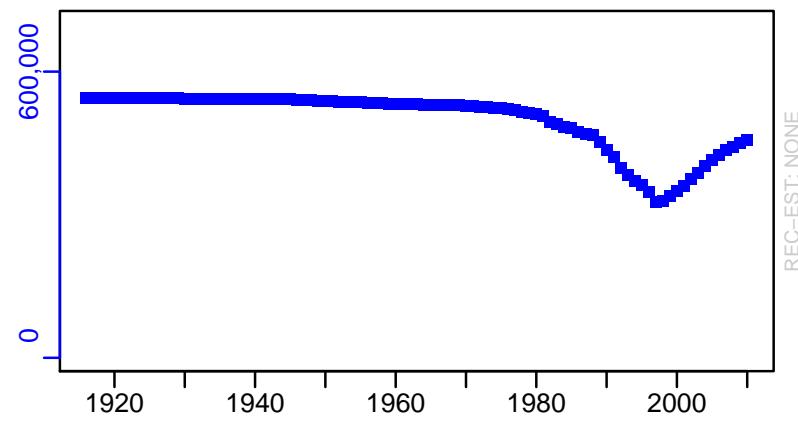
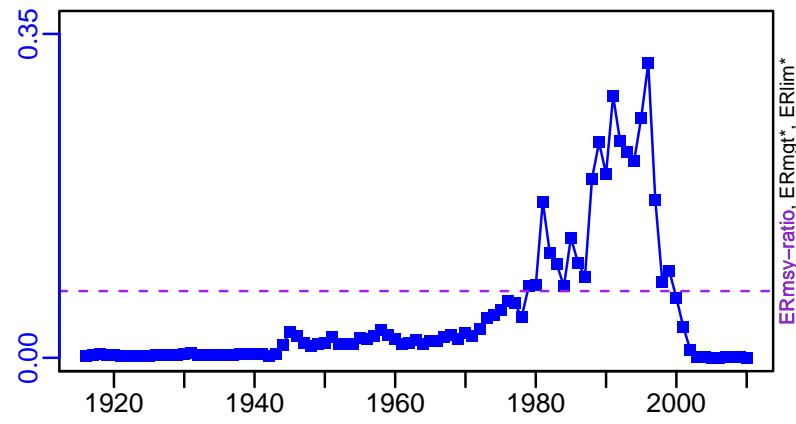
TB-MT (1916–2010–STACHURA)

SSB-E00eggs (1916–2010–STACHURA)



ER-ratio (1916–2010–STACHURA)

R-E00 (1916–2010–STACHURA)

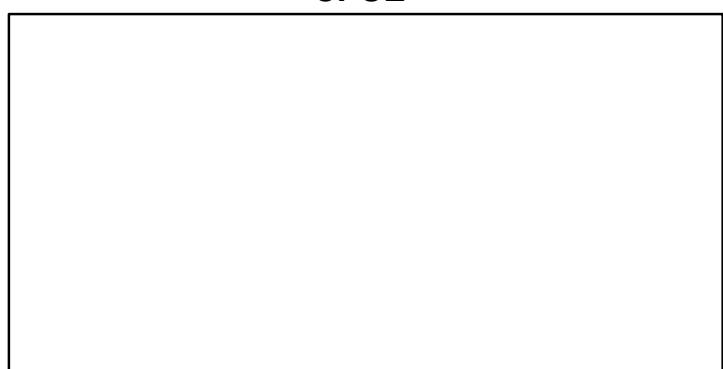
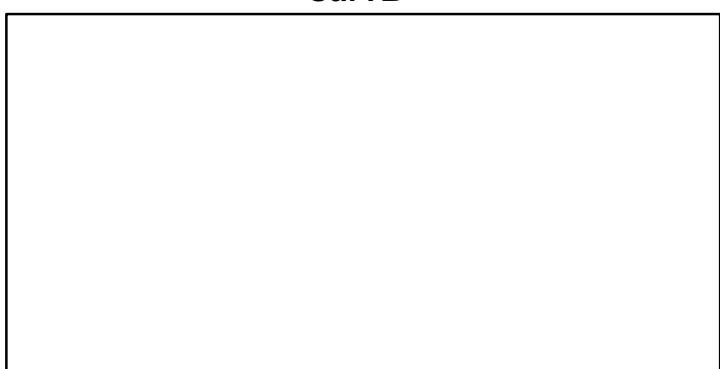
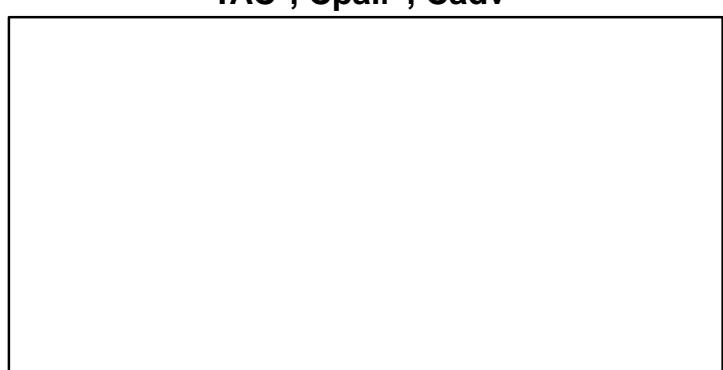
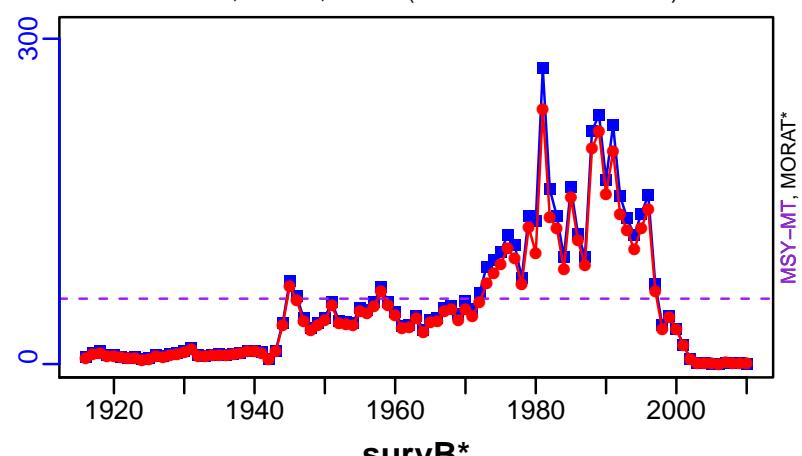


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP | - - Lim BRP | * No Data |

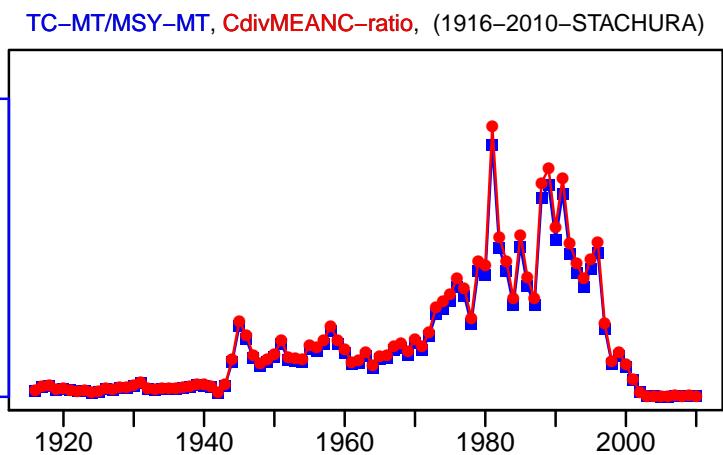
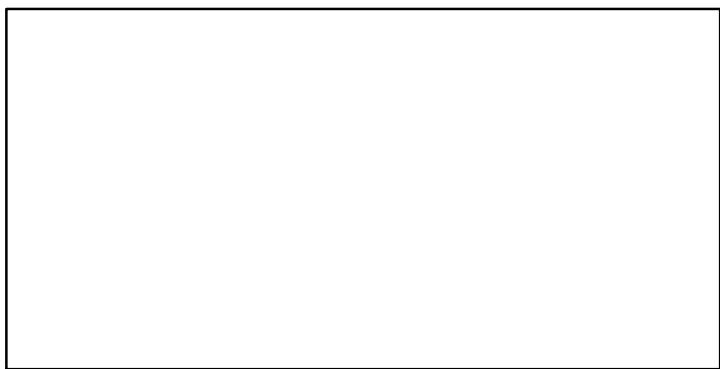
Greenspotted rockfish Northern Pacific Coast [GRSPROCKNCAL]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

Greenspotted rockfish Southern Pacific Coast [GRSPROCKSCAL]

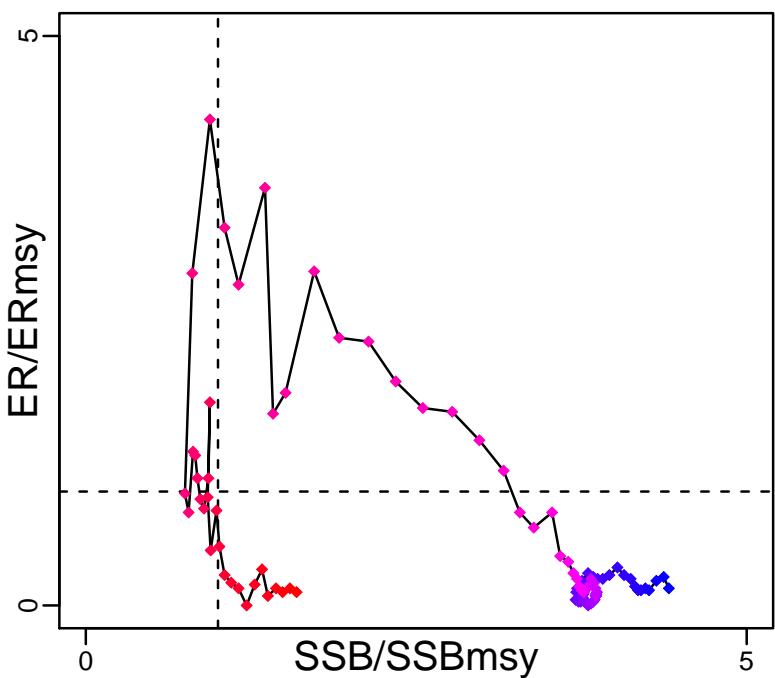
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes chlorostictus |
| Current Assess ID | SWFSC-GRSPROCKSCAL-1916-2010-STACHURA |
| Area | Southern Pacific Coast |
| Management Authority | National Marine Fisheries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

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

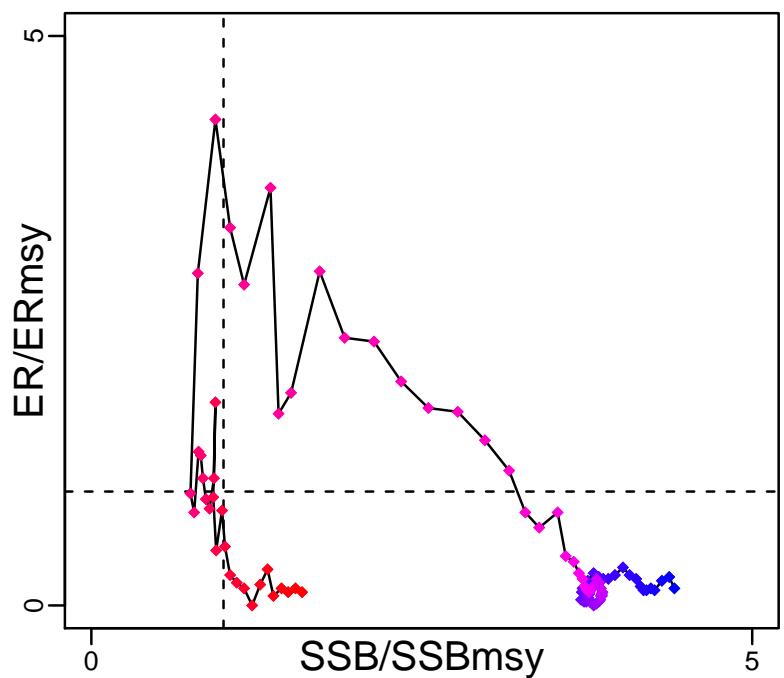
| Time Series | | | | | | |
|--------------------|----------------------------|------------------|-----------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2010 | 1920 | - | 0+ | |
| SSB | SSB-E00eggs | 2010 | 2.87×10^{11} | Females | -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

Greenspotted rockfish Southern Pacific Coast [GRSPROCKSCAL]

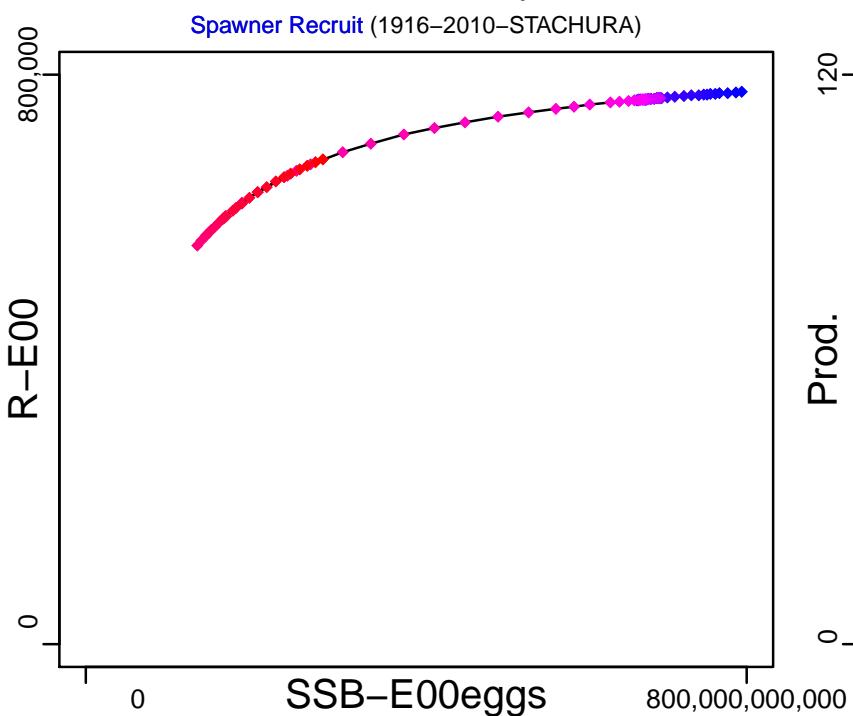
Kobe MSYpref (1916–2010–STACHURA)



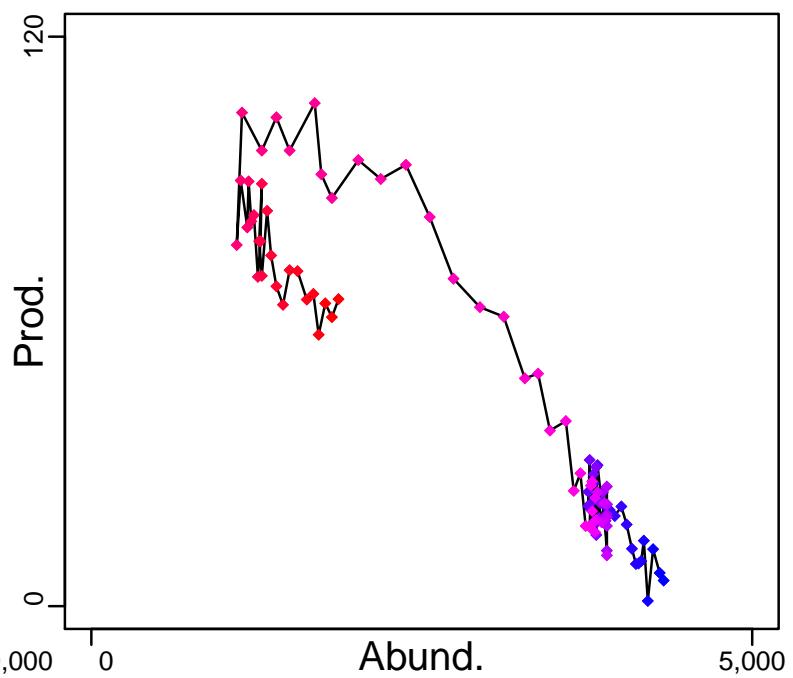
Kobe MGTpref (1916–2010–STACHURA)



Spawner Recruit (1916–2010–STACHURA)



Production (1916–2010–STACHURA)

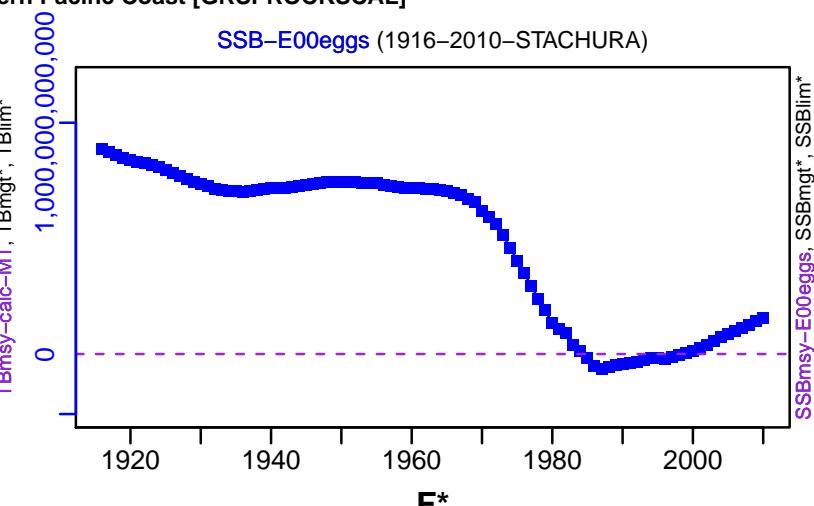
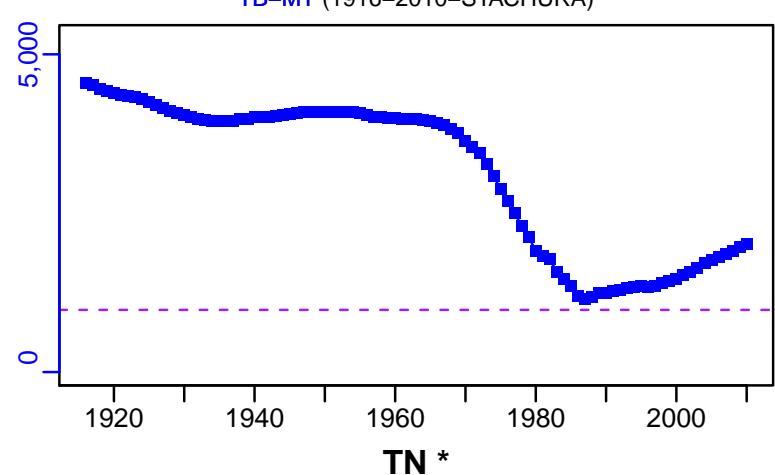


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Greenspotted rockfish Southern Pacific Coast [GRSPROCKSCAL]

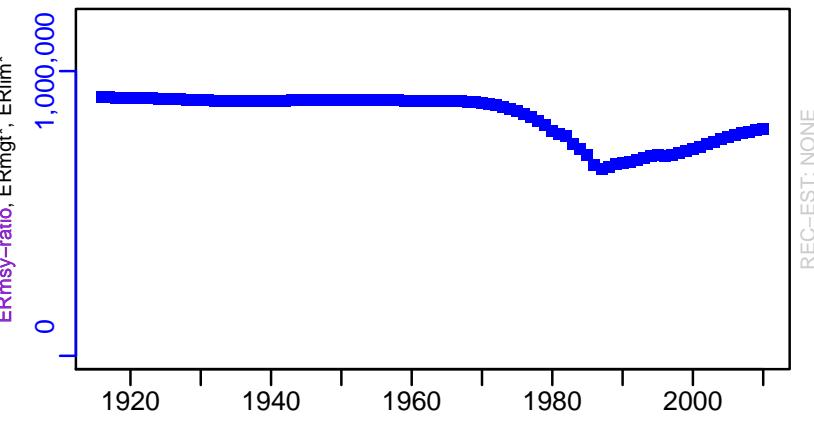
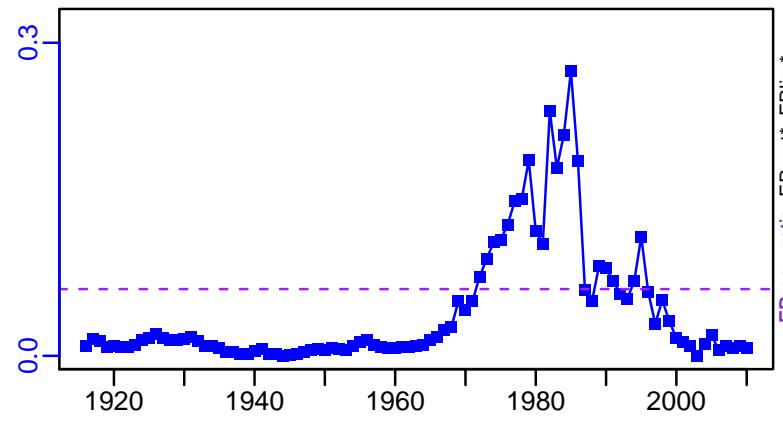
TB-MT (1916–2010–STACHURA)

SSB-E00eggs (1916–2010–STACHURA)



ER-ratio (1916–2010–STACHURA)

R-E00 (1916–2010–STACHURA)

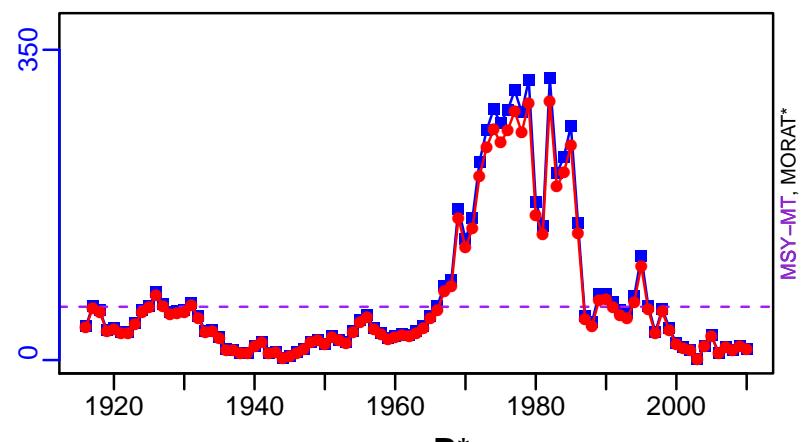


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP | --- Lim BRP | * No Data |

Greenspotted rockfish Southern Pacific Coast [GRSPROCKSCAL]

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

TAC*, Cpair*, Cadv*

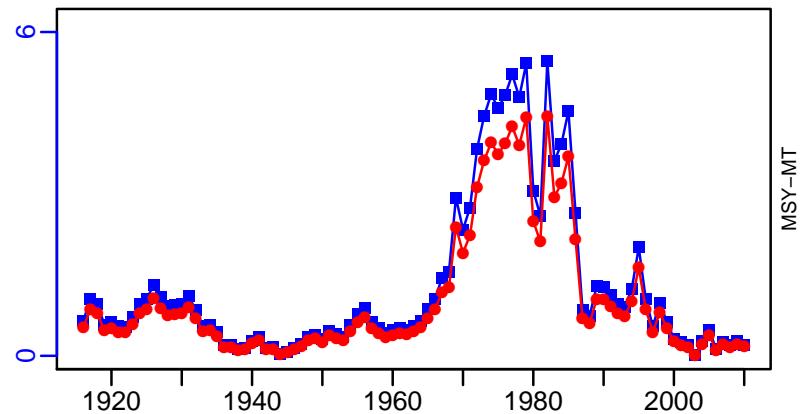


survB*

CPUE*

EFFORT*

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



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

Kelp greenling Oregon Coast [KELPGREENLINGORECOAST]

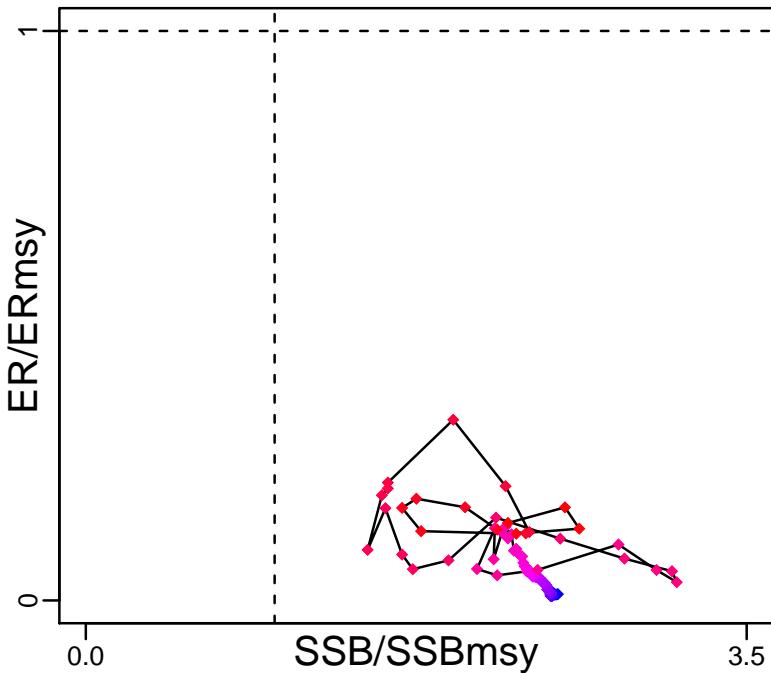
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Hexagrammos decagrammus |
| Current Assess ID | NWFSC-KELPGREENLINGORECOAST-1915-2015-SISIMP2016 |
| Area | Oregon Coast |
| Management Authority | National Marine Fisheries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

| Reference Points | | | |
|-------------------------------------|------------------------------------------|-----------|-------|
| Type | ID | Asmt Year | Value |
| TB_ms_y | TB _m s _y -calc-MT | 2005 | 656 |
| SSB_ms_y | SSB _m s _y -MT | 2015 | 159 |
| F_ms_y | - | - | - |
| ER_ms_y | ER _m s _y -pr-ratio | 2005 | 0.125 |
| TB_mgt | - | - | - |
| SSB_mgt | - | - | - |
| F_mgt | - | - | - |
| ER_mgt | - | - | - |
| TB₀ | TB ₀ -MT | 2005 | 1295 |
| SSB₀ | SSB ₀ -MT | 2005 | 321 |
| MSY | MSY-MT | 2015 | 130 |
| M | M-1/yr | 2005 | 0.26 |
| TB_{lim} | - | - | - |
| SSB_{lim} | SSB _{lim} -MT | 2015 | 99 |
| F_{lim} | - | - | - |
| ER_{lim} | - | - | - |

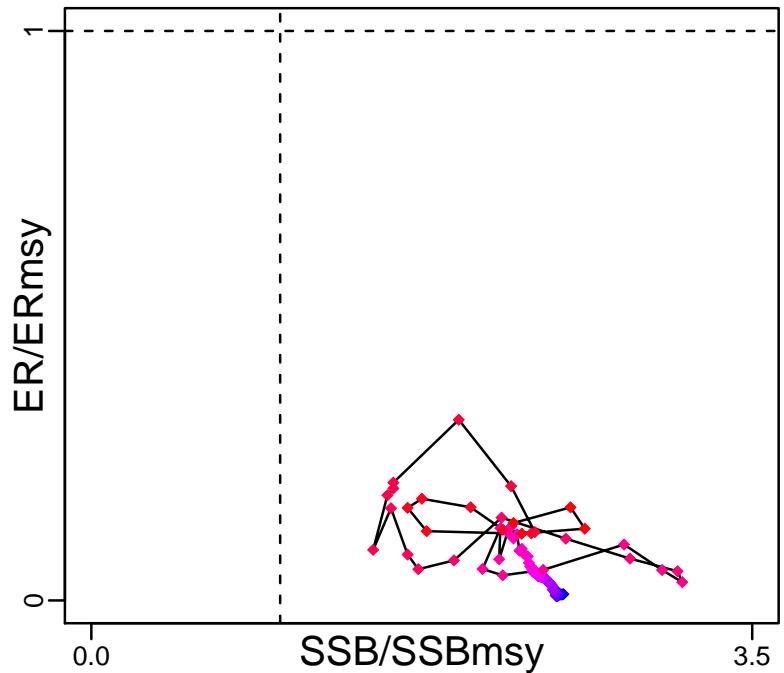
| Time Series | | | | | | |
|-----------------------------------------|--------------------------------------------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 1130 | - | 0+ | |
| SSB | SSB-MT | 2015 | 316 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 1,410,000 | - | 0 | |
| F | - | - | - | - | - | |
| ER | ER-calc-ratio | 2015 | 0.03 | - | - | |
| TC | TC-MT | 2015 | 33 | | | |
| TL | TL-MT | 2005 | 52 | | | |
| TB/TB_ms_y | TB-MT/TB _m s _y -calc-MT | 2005 | 0.951 | | | |
| SSB/SSB_ms_y | SSB-MT/SSB _m s _y -MT | 2015 | 1.99 | | | |
| F/F_ms_y | - | - | - | | | |
| ER/ER_ms_y | ER-calc-ratio/ER _m s _y -pr-ratio | 2005 | 0.594 | | | |
| TB/TB_mgt | - | - | - | | | |
| SSB/SSB_mgt | - | - | - | | | |
| F/F_mgt | - | - | - | | | |
| ER/ER_mgt | - | - | - | | | |

Kelp greenling Oregon Coast [KELPGREENLINGORECOAST]

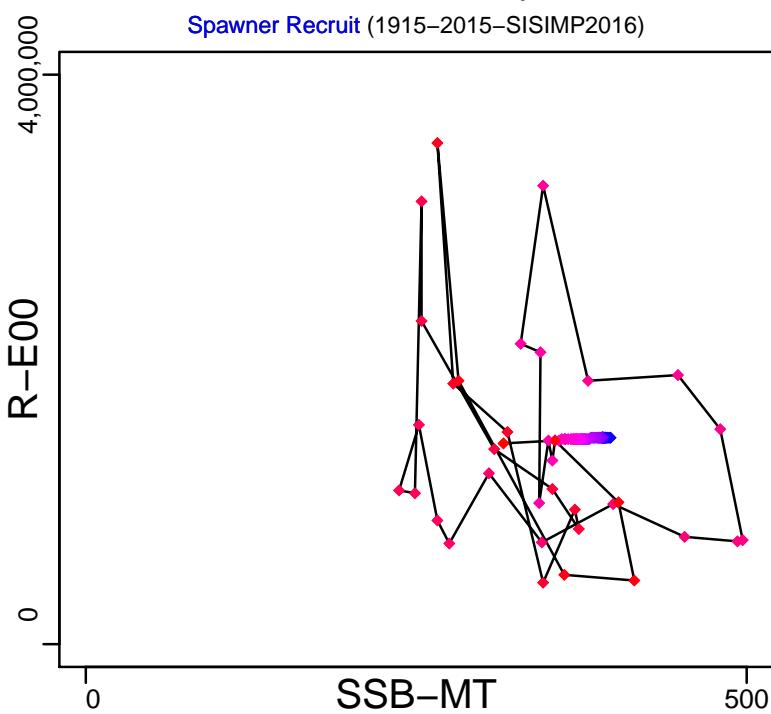
Kobe MSYpref (1915–2015–SISIMP2016)



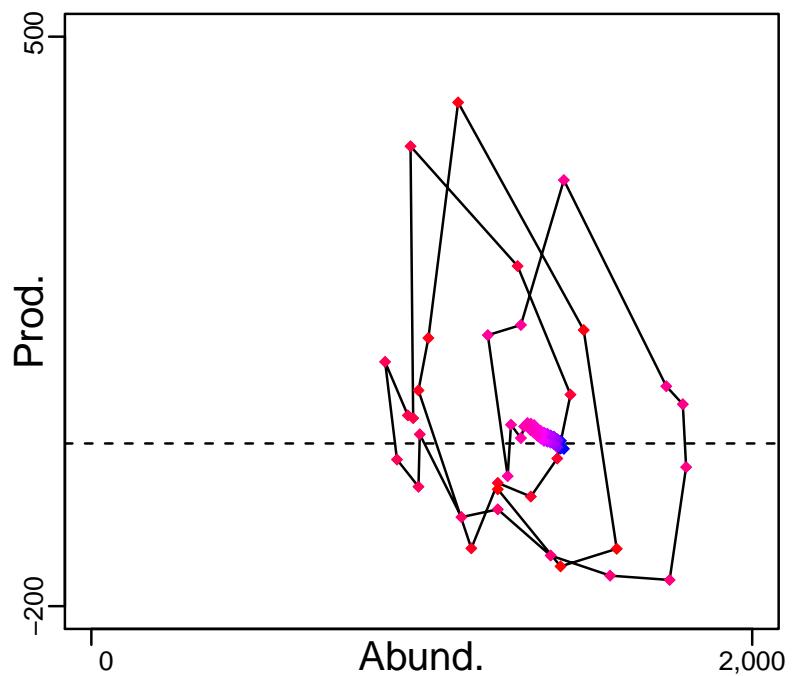
Kobe MGTpref (1915–2015–SISIMP2016)



Spawner Recruit (1915–2015–SISIMP2016)



Production (1915–2015–SISIMP2016)

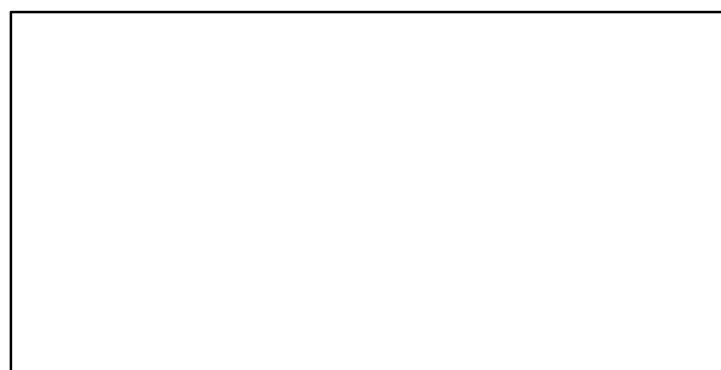
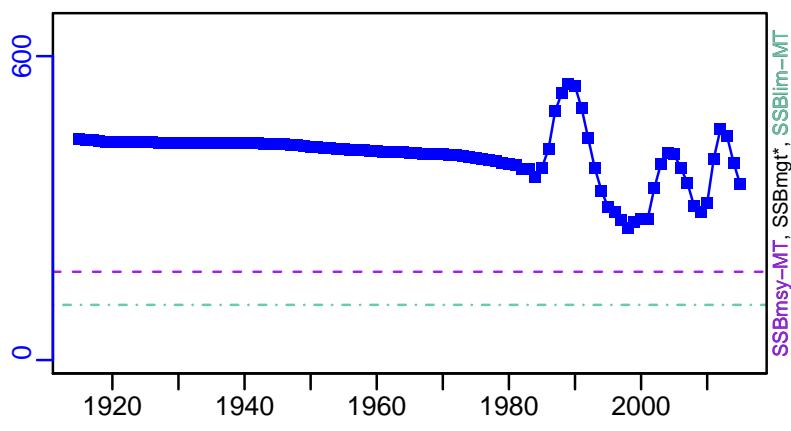
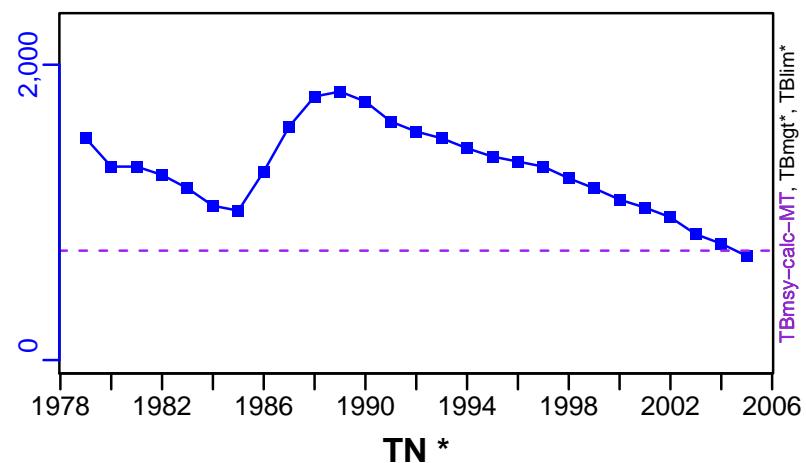


- ◆ Start Year
- ◆ End Year
- * No Data

Kelp greenling Oregon Coast [KELPGREENLINGORECOAST]

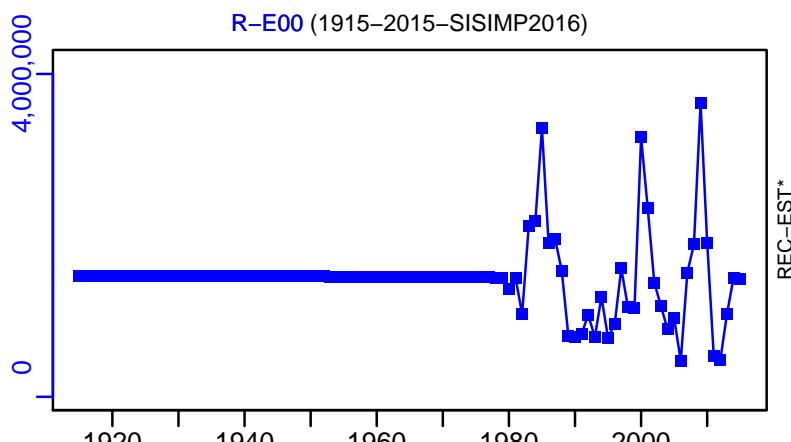
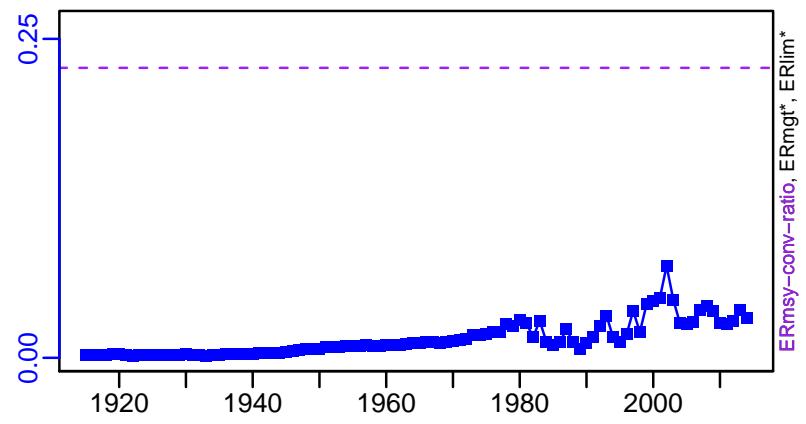
TB-MT (1979–2005-STANTON)

SSB-MT (1915–2015-SISIMP2016)



ER-calc-ratio (1915–2015-SISIMP2016)

R-E00 (1915–2015-SISIMP2016)

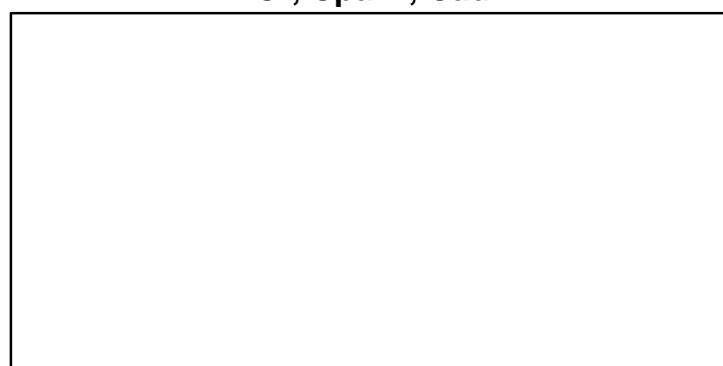
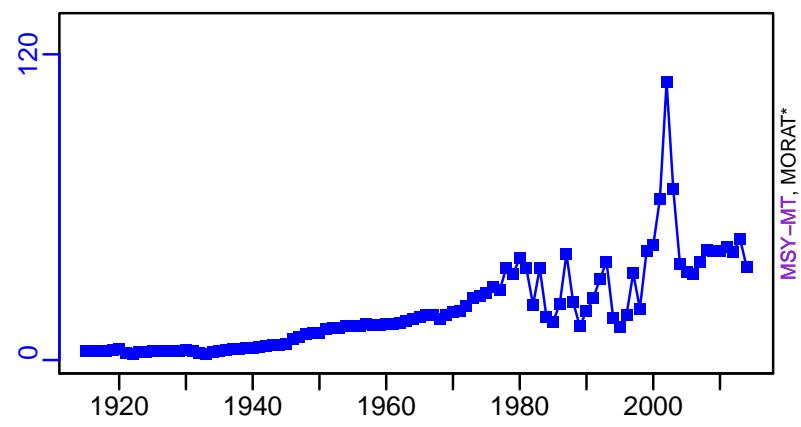


- | | | |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - - Lim BRP | * No Data |

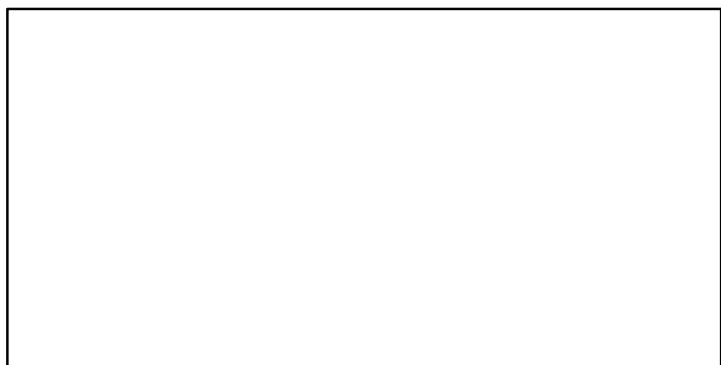
Kelp greenling Oregon Coast [KELPGREENLINGORECOAST]

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

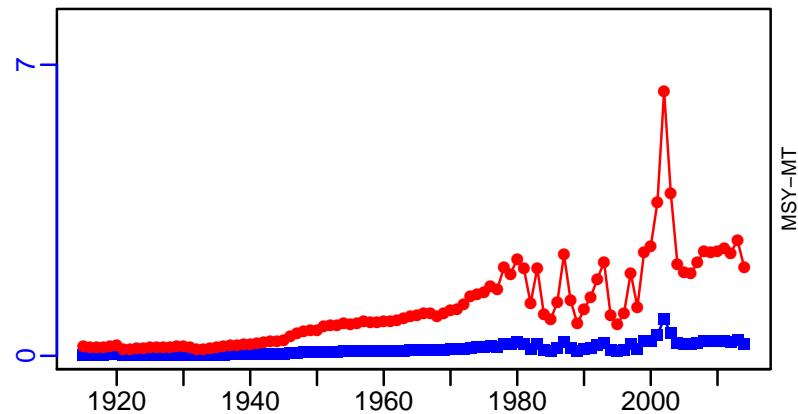
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1915–2015–SISIMP2016)



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

Lingcod Northern Pacific Coast [LINGCODNPOCOAST]

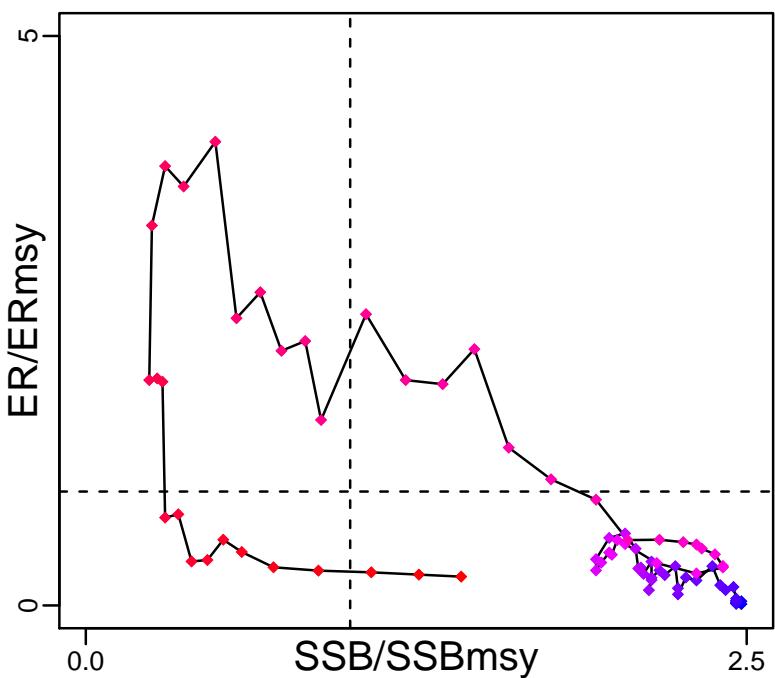
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Ophiodon elongatus |
| Current Assess ID | NWFSC-LINGCODNPOCOAST-1928-2009-STACHURA |
| Area | Northern Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

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

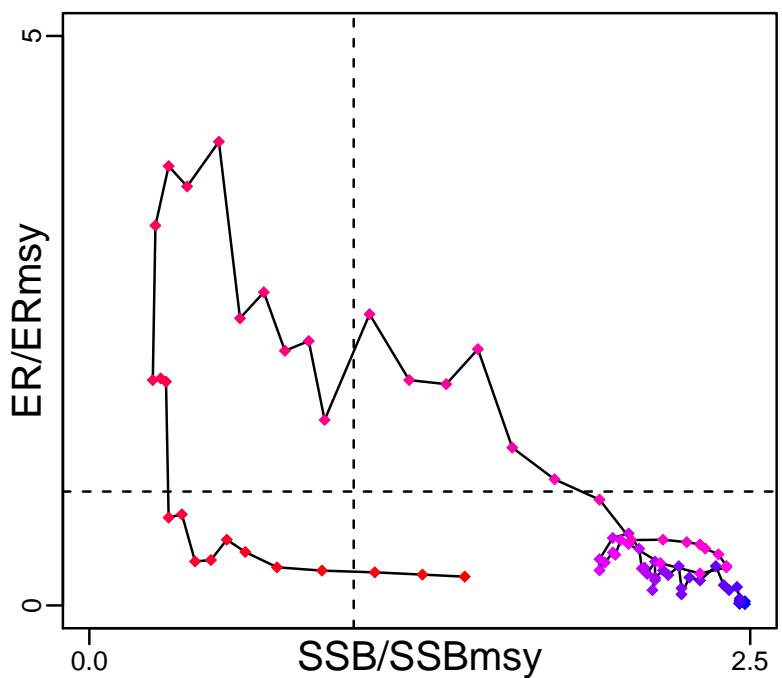
| Time Series | | | | | | |
|-------------------|----------------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2009 | 31,800 | - | 2+ | |
| SSB | SSB-MT | 2009 | 20,500 | Females | 4.6 | |
| TN | - | - | - | - | - | |
| R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

Lingcod Northern Pacific Coast [LINGCODNPSCOAST]

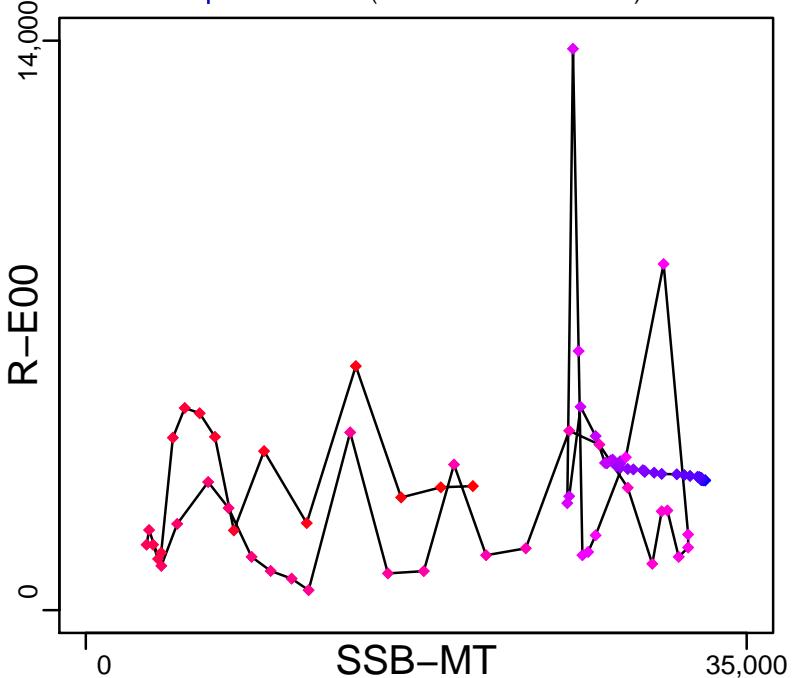
Kobe MSYpref (1928–2009–STACHURA)



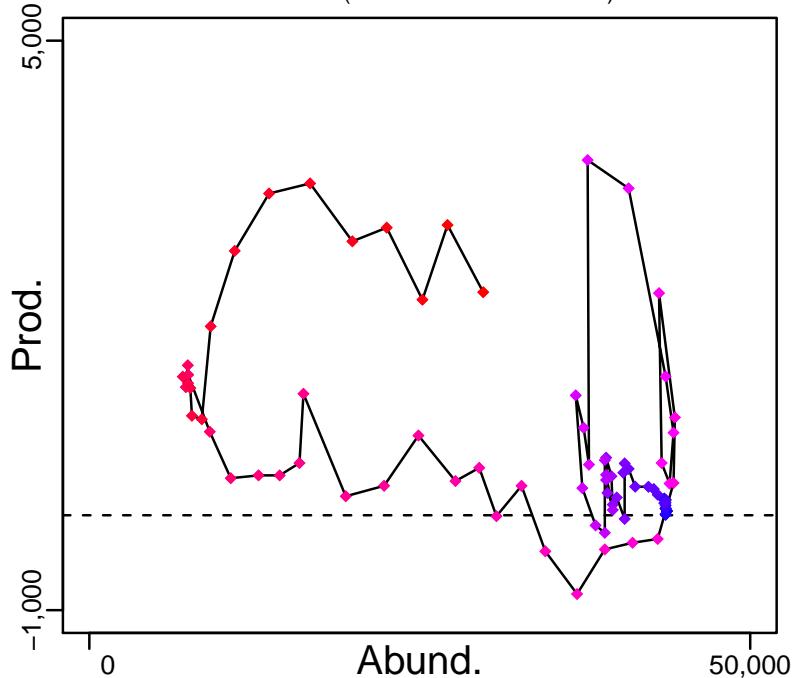
Kobe MGTpref (1928–2009–STACHURA)



Spawner Recruit (1928–2009–STACHURA)



Production (1928–2009–STACHURA)

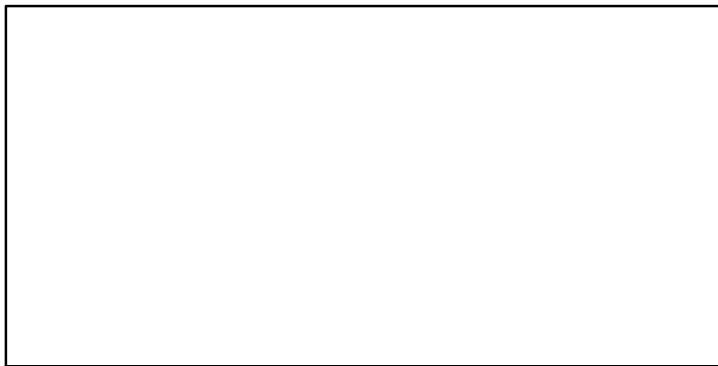
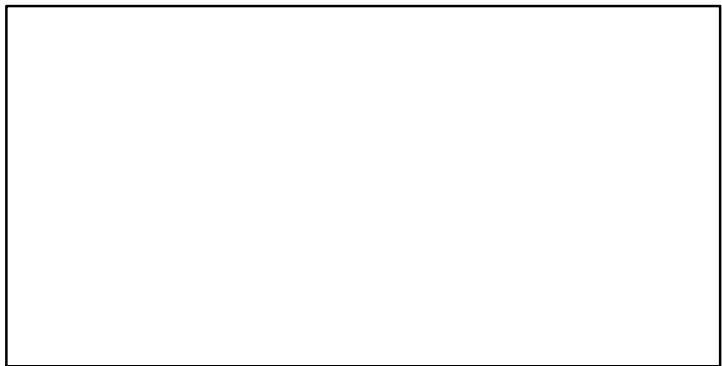
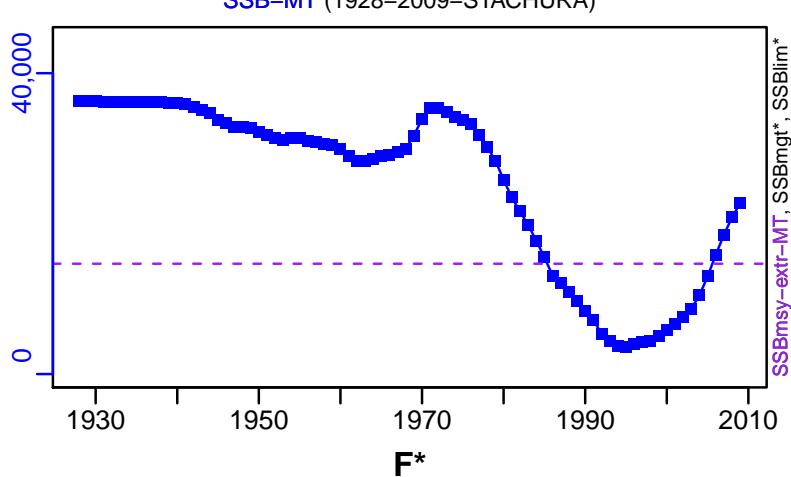
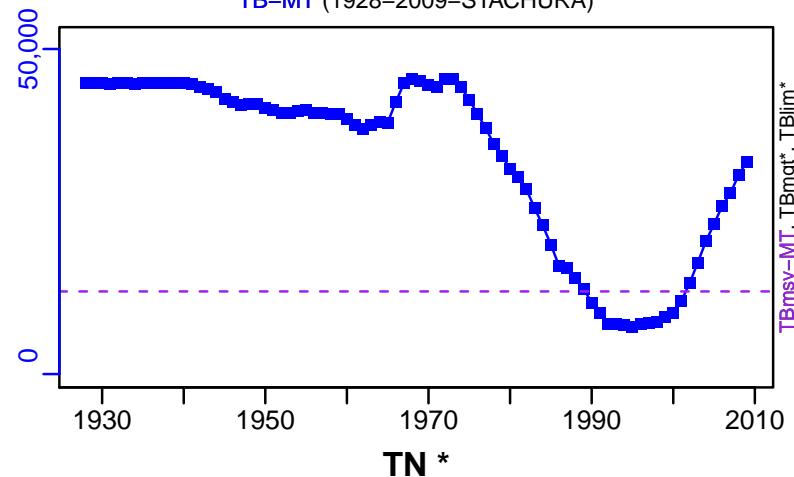


♦ Start Year ♦ End Year * No Data

Lingcod Northern Pacific Coast [LINGCODNPSCOAST]

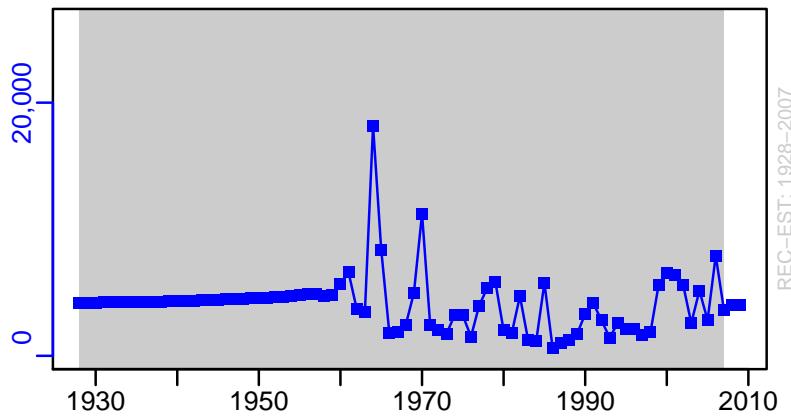
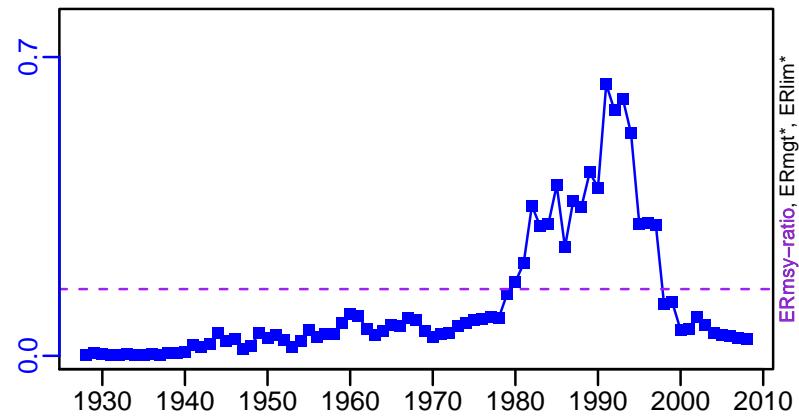
TB-MT (1928–2009–STACHURA)

SSB-MT (1928–2009–STACHURA)



ER-ratio (1928–2009–STACHURA)

R-E00 (1928–2009–STACHURA)

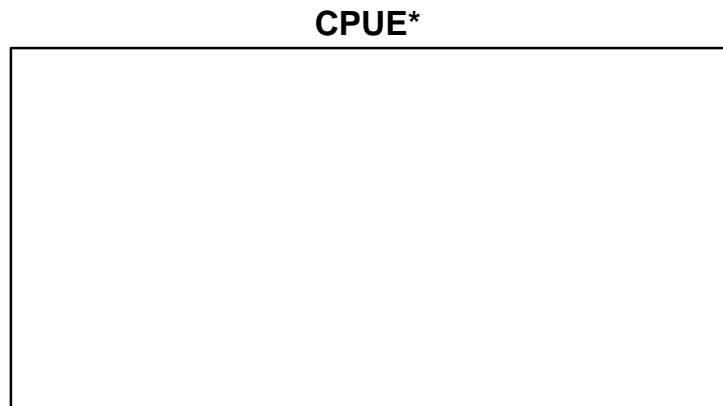
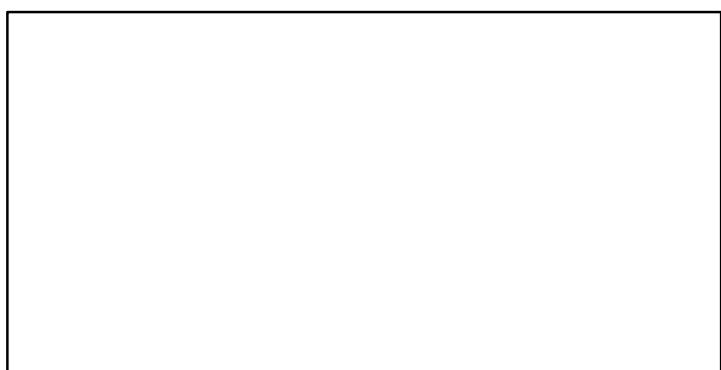
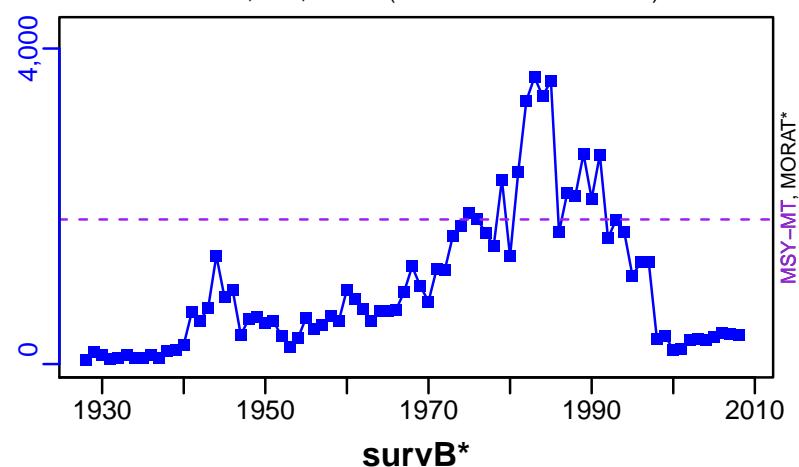


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | --- Lim BRP | * No Data |

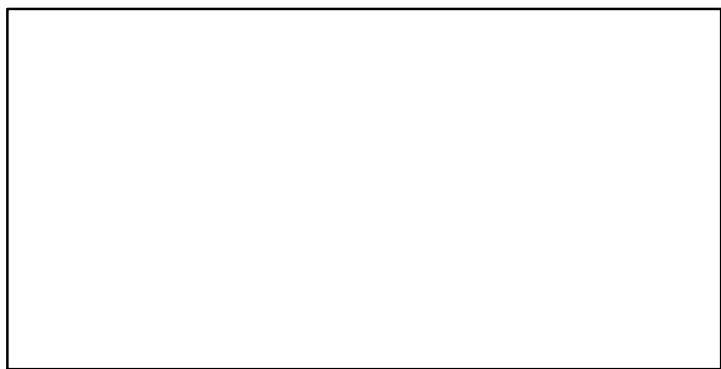
Lingcod Northern Pacific Coast [LINGCODNPSCOAST]

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

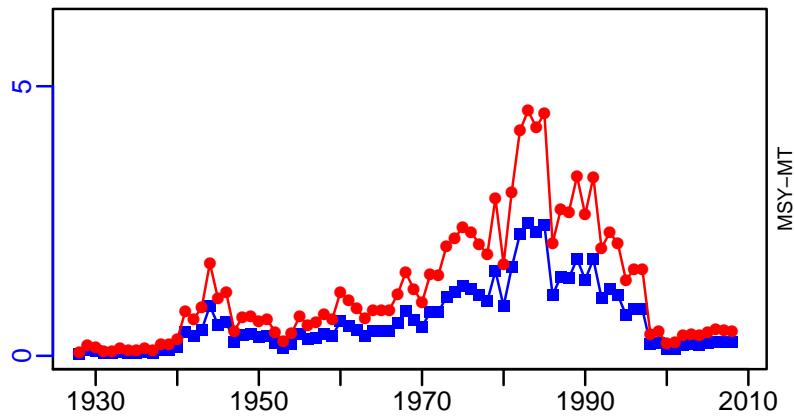
TAC*, Cpair*, Cadv*



EFFORT*



TL-MT/MSY-MT, CdivMEANC-ratio, (1928–2009-STACHURA)



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

Lingcod Southern Pacific Coast [LINGCODSPCOAST]

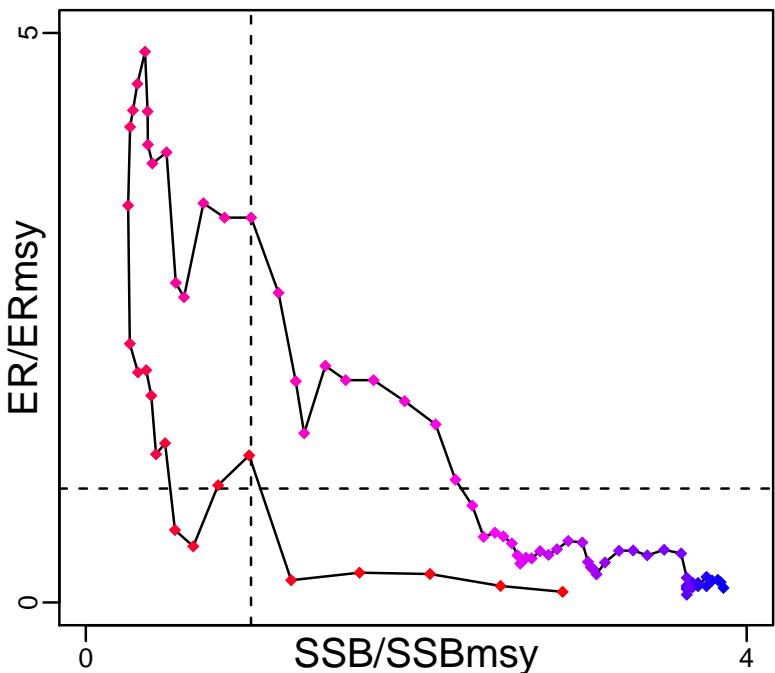
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Ophiodon elongatus |
| Current Assess ID | NWFSC-LINGCODSPCOAST-1928-2009-STACHURA |
| Area | Southern Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

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

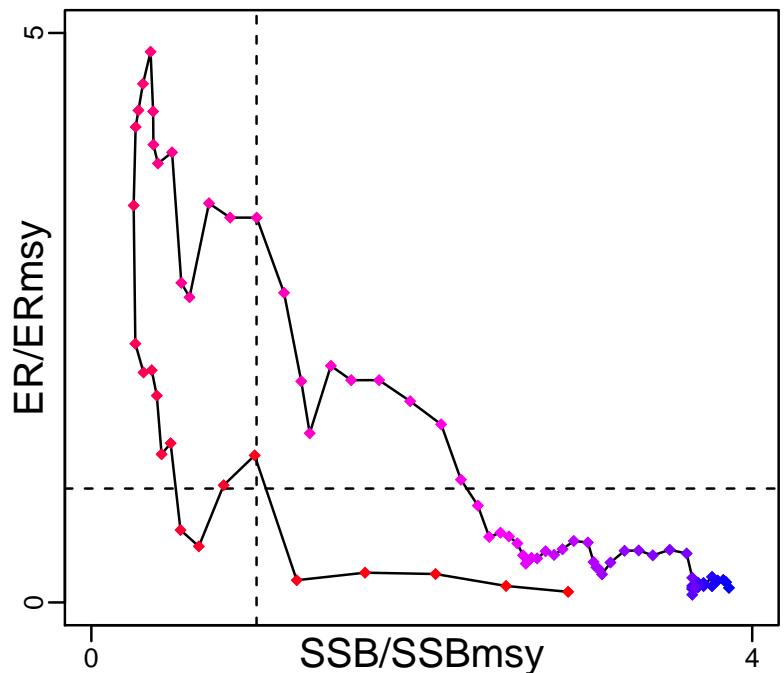
| Time Series | | | | | | |
|-------------------|----------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2009 | 30,900 | - | 2+ | |
| SSB | SSB-MT | 2009 | 18,700 | Females | 5 | |
| TN | - | - | - | - | - | |
| R | R-E00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

Lingcod Southern Pacific Coast [LINGCODSPCOAST]

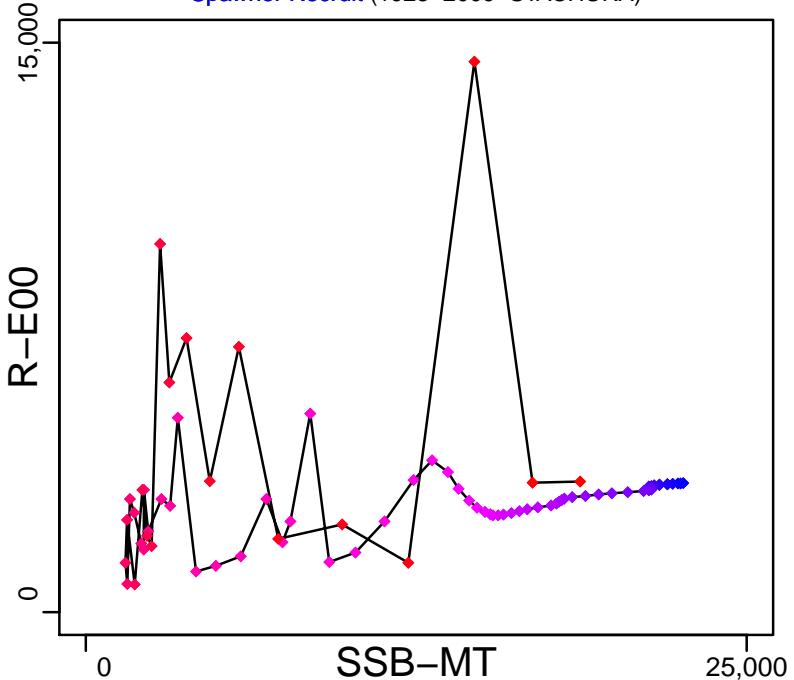
Kobe MSYpref (1928–2009–STACHURA)



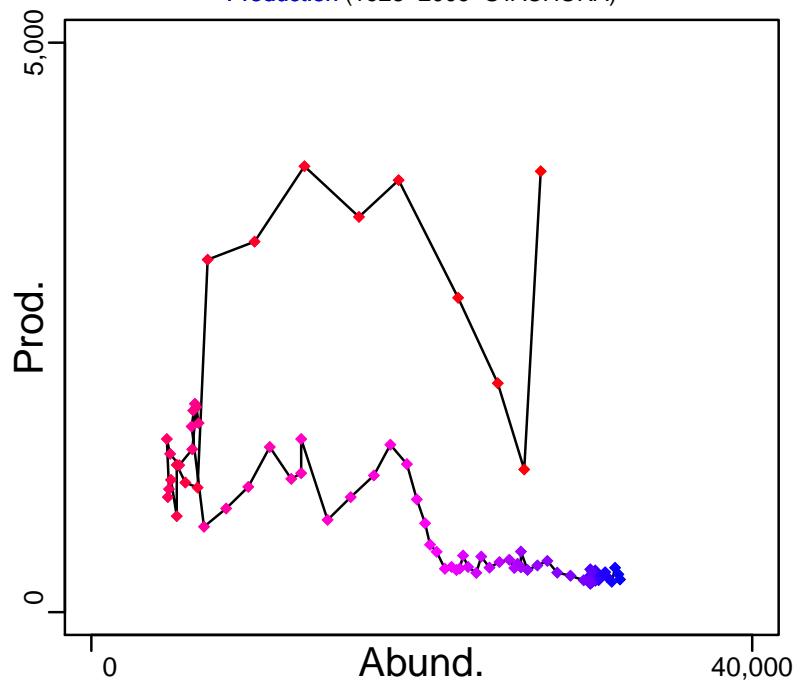
Kobe MGTpref (1928–2009–STACHURA)



Spawner Recruit (1928–2009–STACHURA)



Production (1928–2009–STACHURA)

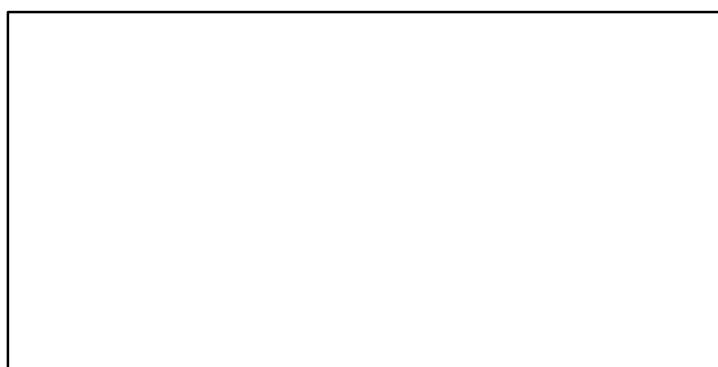
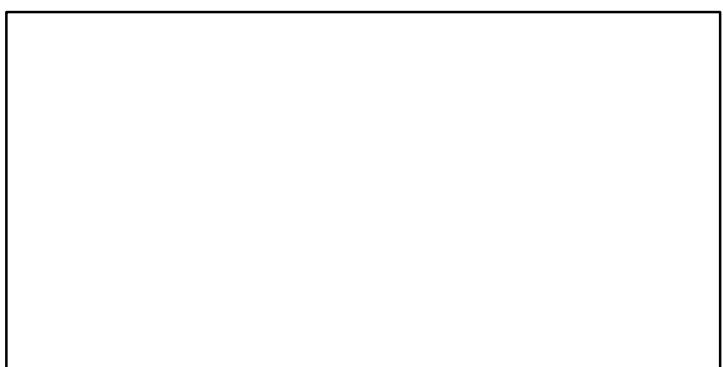
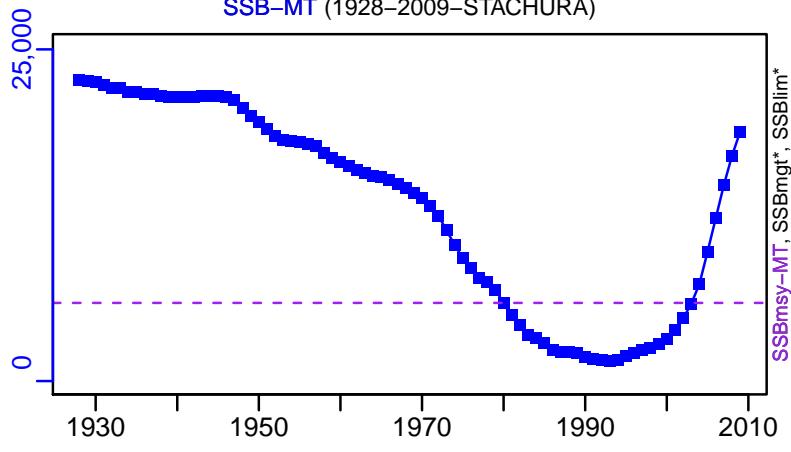
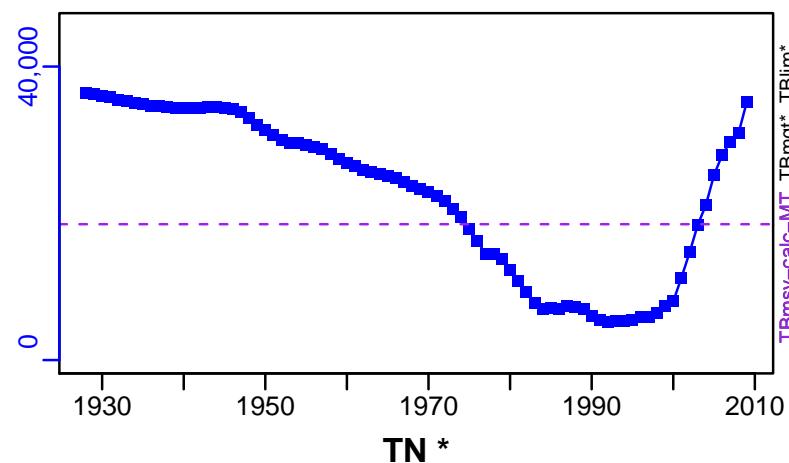


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Lingcod Southern Pacific Coast [LINGCODSPCOAST]

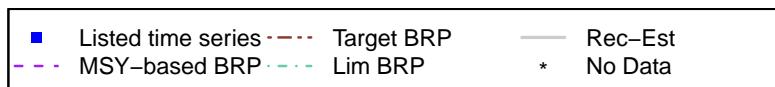
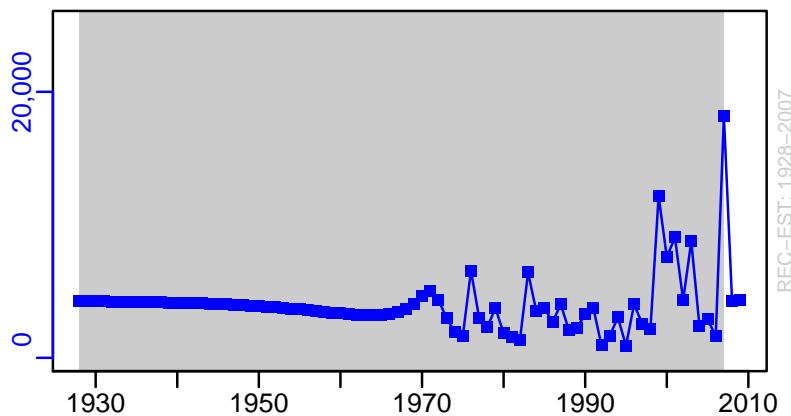
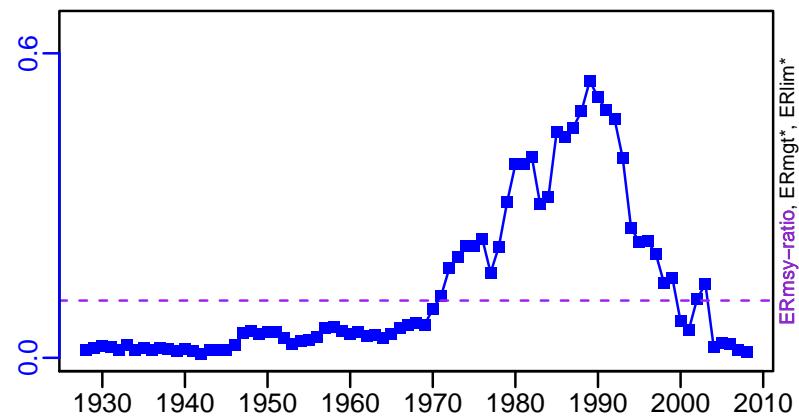
TB-MT (1928–2009–STACHURA)

SSB-MT (1928–2009–STACHURA)



ER-ratio (1928–2009–STACHURA)

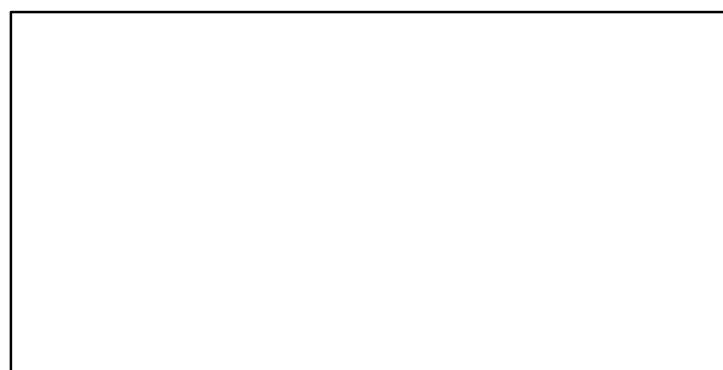
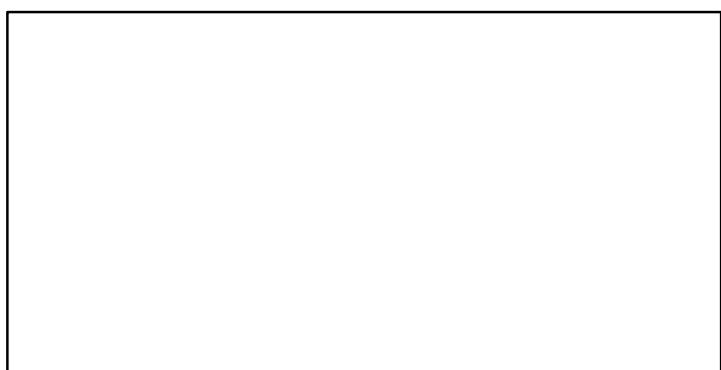
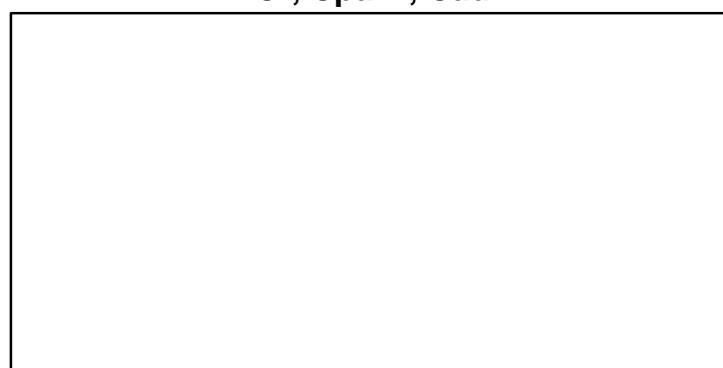
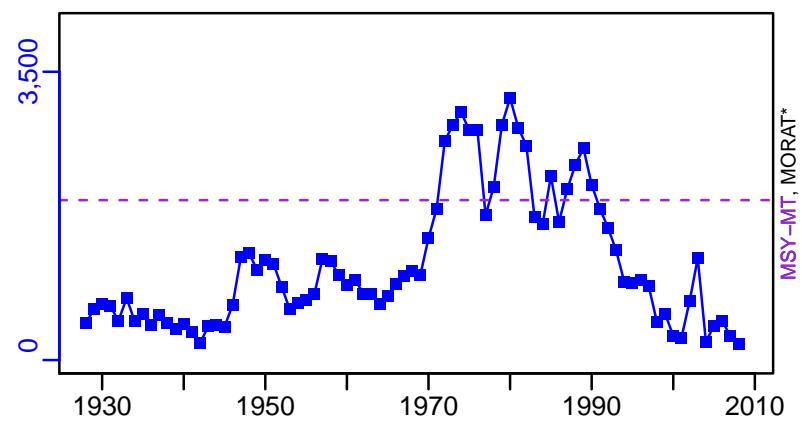
R-E00 (1928–2009–STACHURA)



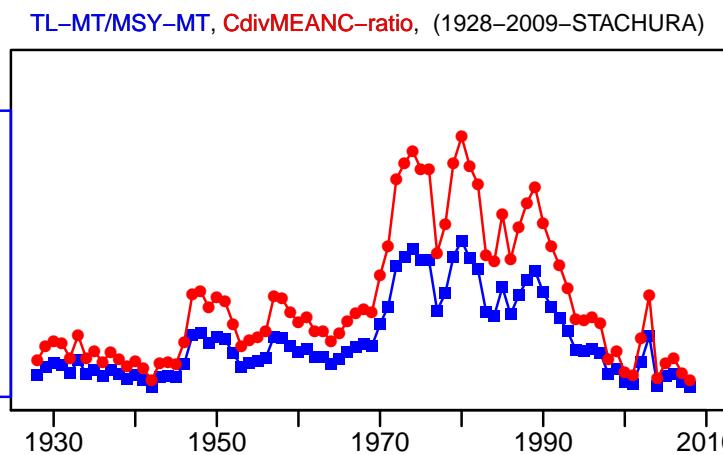
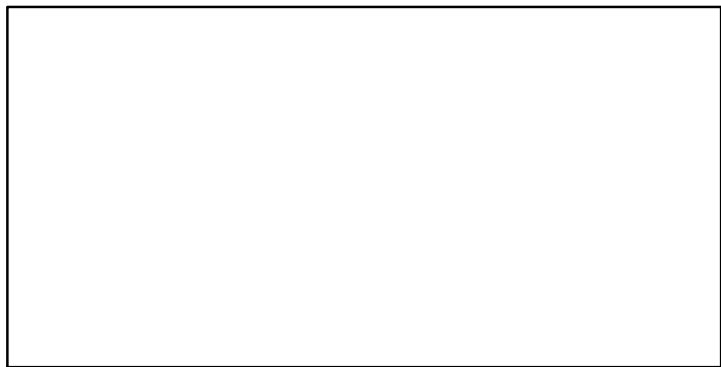
Lingcod Southern Pacific Coast [LINGCODSPCOAST]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

Longnose skate Pacific Coast [LNOSESKAPCOAST]

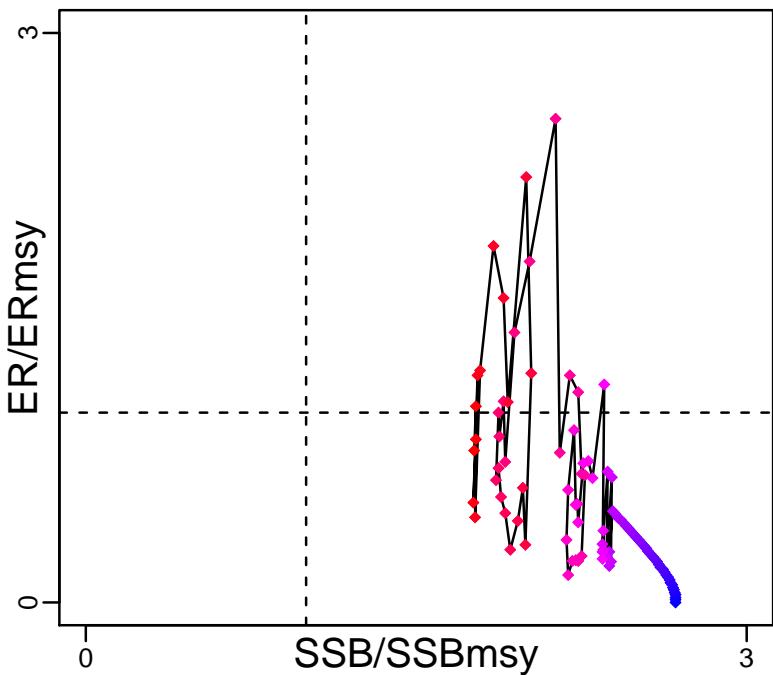
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Raja rhina |
| Current Assess ID | NWFSC-LNOSESKAPCOAST-1915-2007-BRANCH |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national management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

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

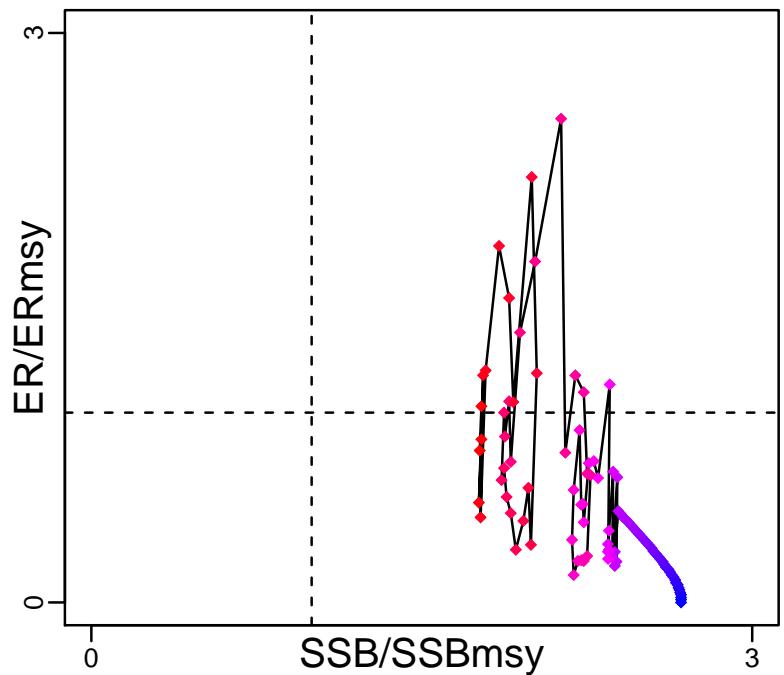
| Time Series | | | | | | |
|--------------------|----------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2007 | 71,200 | - | 0+ | |
| SSB | SSB-MT | 2007 | 4630 | Females | - | |
| TN | - | - | -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

Longnose skate Pacific Coast [LNOSESKAPCOAST]

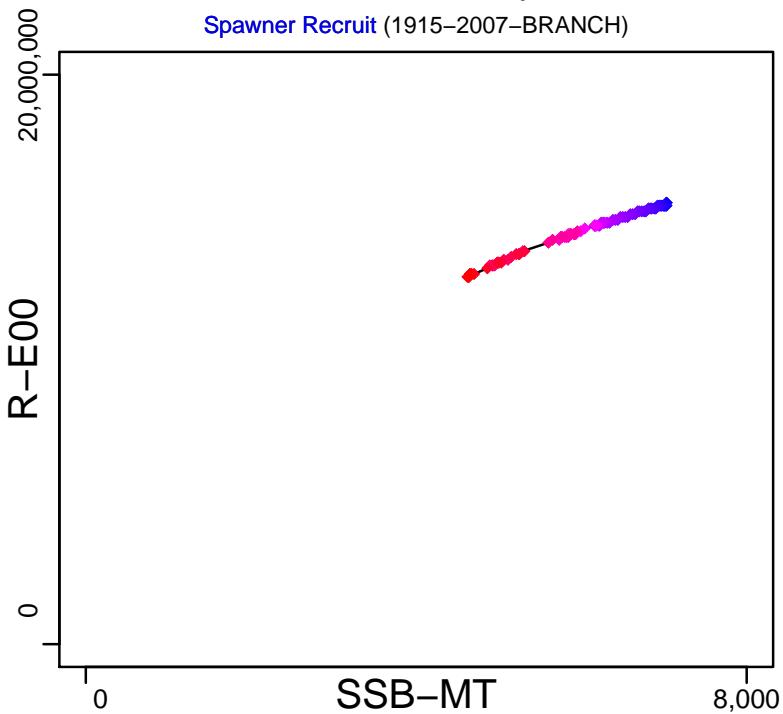
Kobe MSYpref (1915–2007–BRANCH)



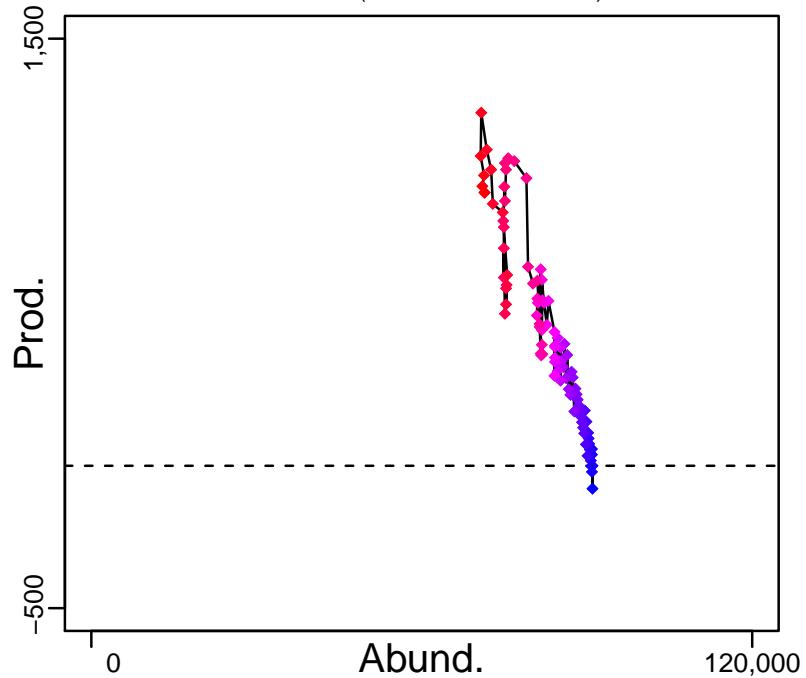
Kobe MGTPref (1915–2007–BRANCH)



Spawner Recruit (1915–2007–BRANCH)



Production (1915–2007–BRANCH)

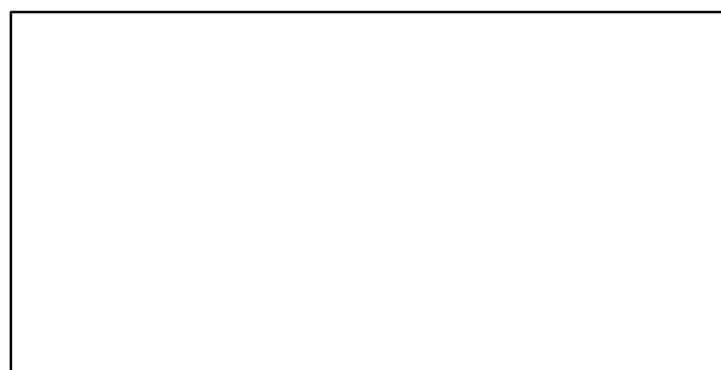
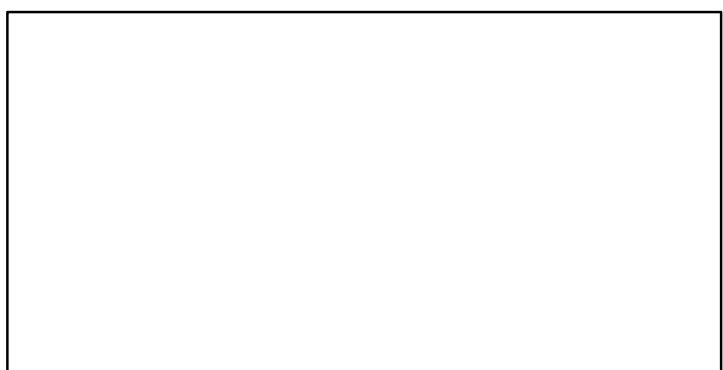
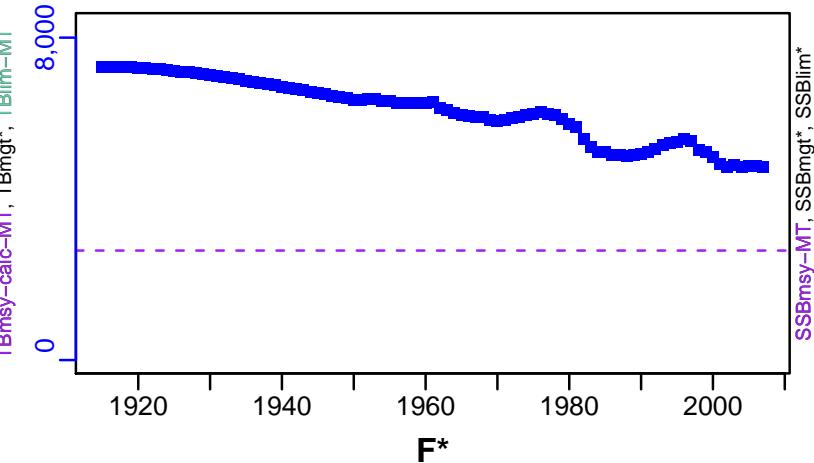
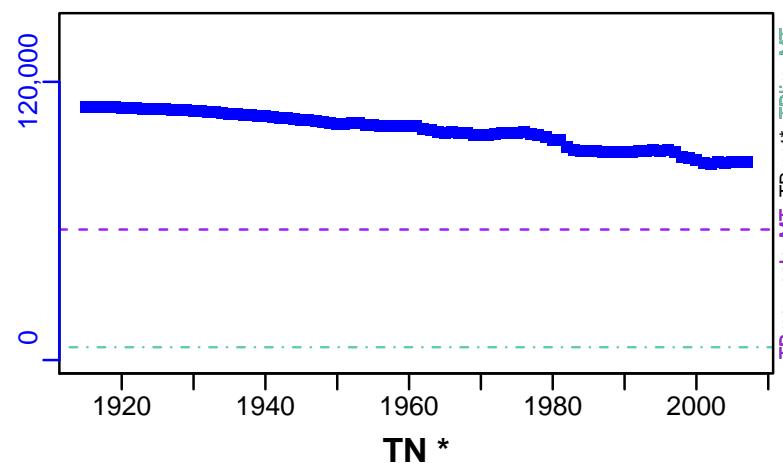


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Longnose skate Pacific Coast [LNOSESKAPCOAST]

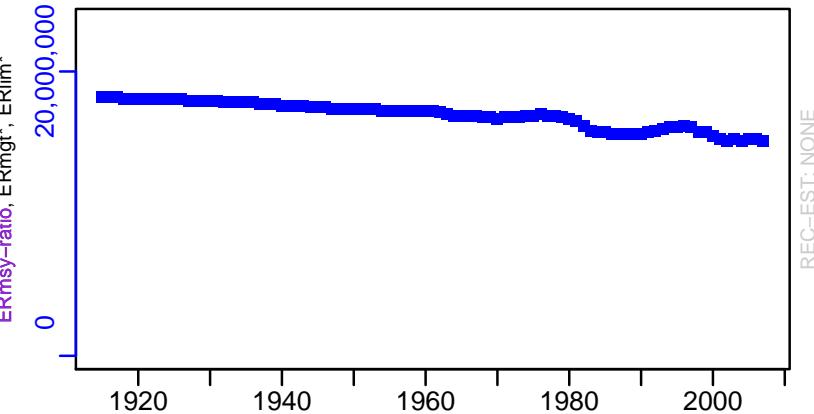
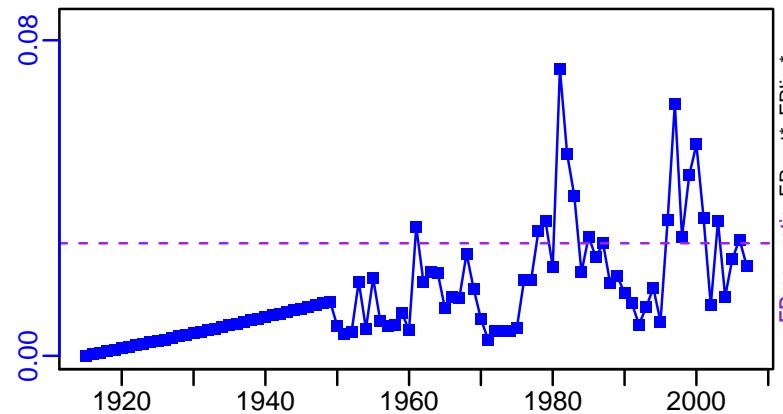
TB-MT (1915–2007–BRANCH)

SSB-MT (1915–2007–BRANCH)



ER-ratio (1915–2007–BRANCH)

R-E00 (1915–2007–BRANCH)

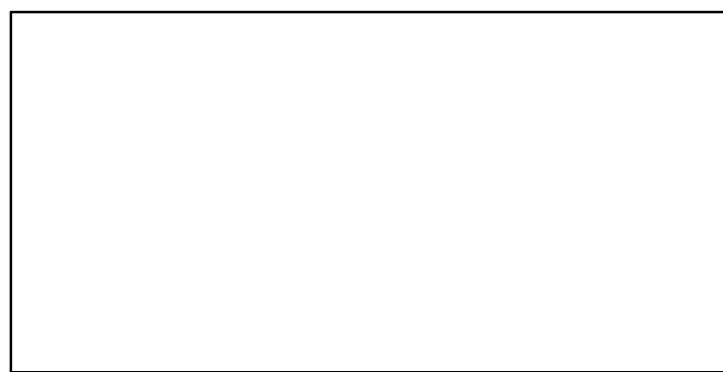
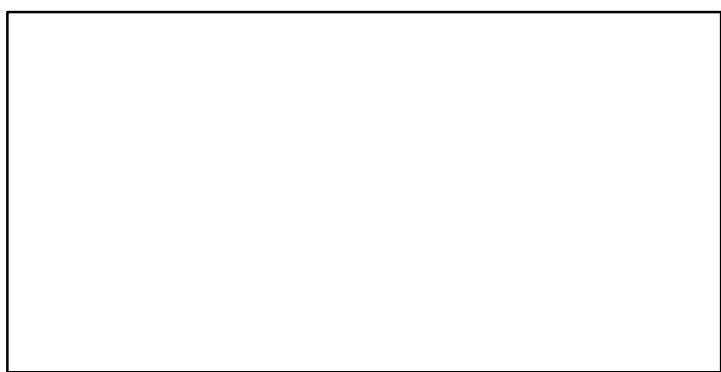
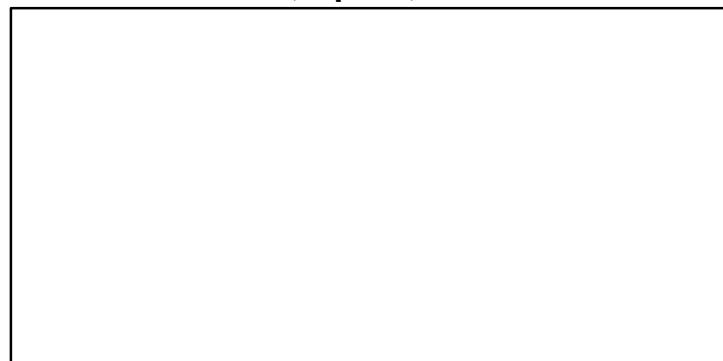
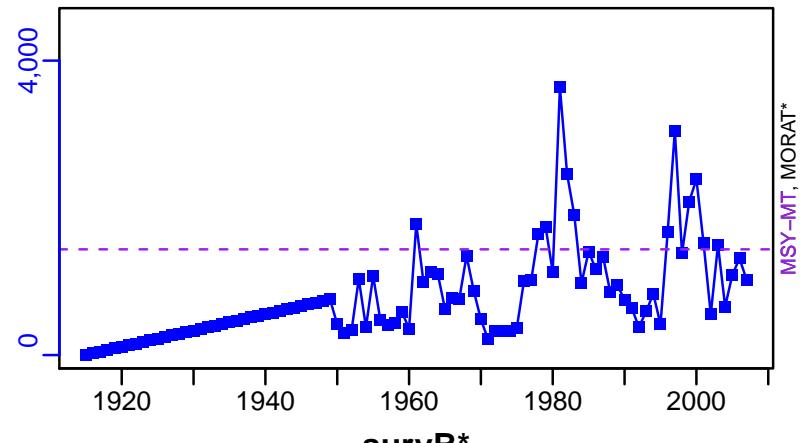


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | --- Lim BRP | * No Data |

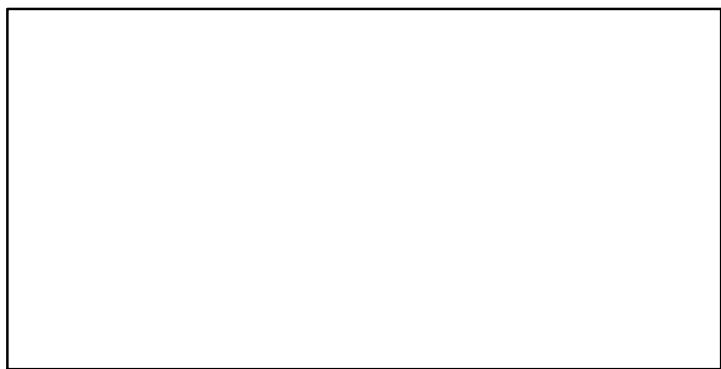
Longnose skate Pacific Coast [LNOSESKAPCOAST]

TC-MT, TL*, RecC* (1915–2007-BRANCH)

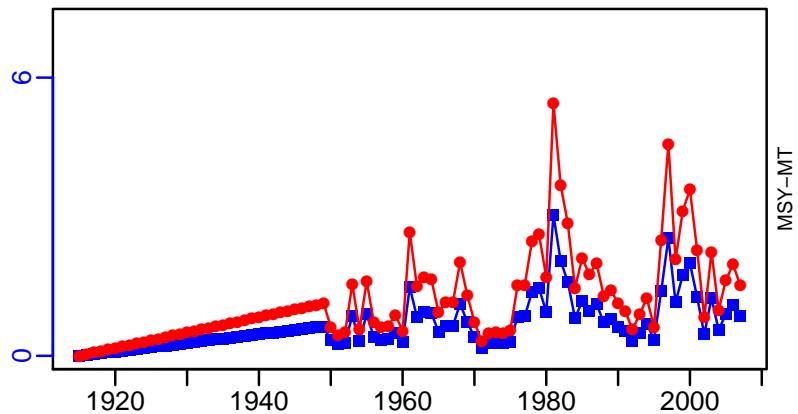
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1915–2007-BRANCH)



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

Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]

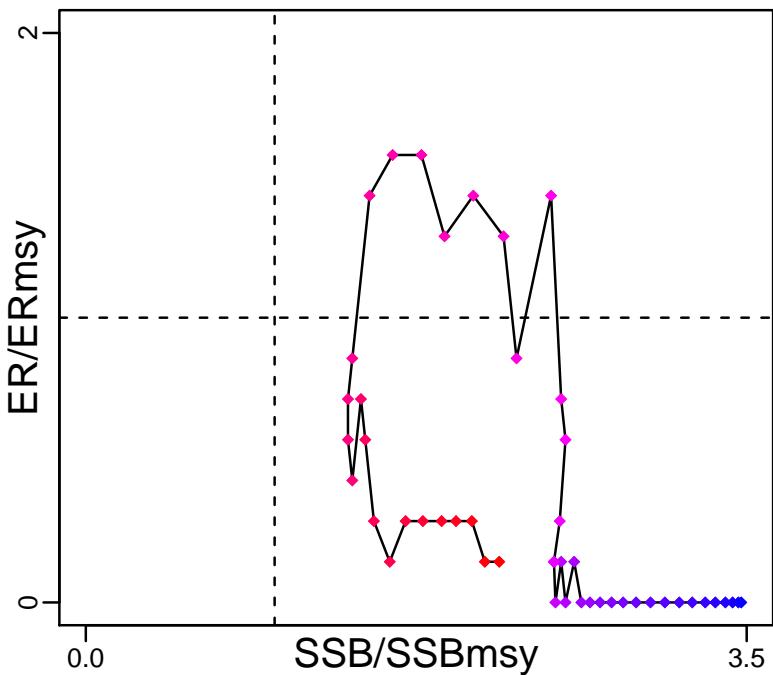
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastolobus altivelis |
| Current Assess ID | NWFSC-LSTHORNHPCOAST-1964-2012-HIVELY |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US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

| Reference Points | | | |
|-------------------------|---------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2012 | 36,129 |
| SSBmsy | SSBmsy-MT | 2012 | 13,108 |
| Fmsy | - | - | - |
| ERmsy | ERmsy-ratio | 2012 | 0.07 |
| TBmgt | - | - | - |
| SSBmgt | SSBmgt-MT | 2012 | 15,654 |
| Fmgt | - | - | - |
| ERmgt | ERmgt-ratio | 2012 | 0.06 |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2012 | 2529 |
| M | M-1/yr | 2012 | 0.11 |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | - | - | - |
| ERlim | - | - | - |

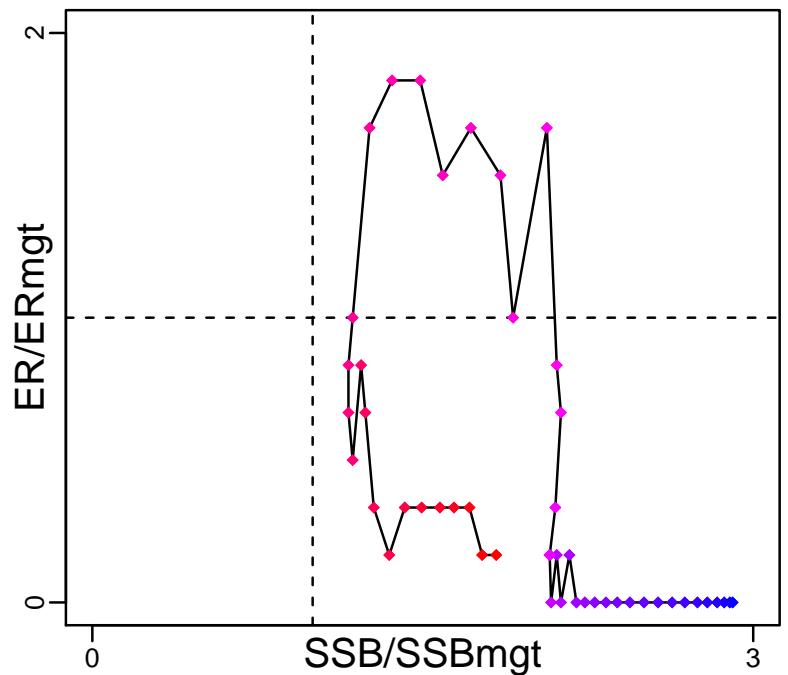
| Time Series | | | | | | |
|--------------------|----------------------|------------------|--------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2012 | 68,300 | - | 2+ | |
| SSB | SSB-MT | 2012 | 28,700 | Females | 12 to 15 | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2012 | 1.33×10^8 | - | 0 | |
| F | - | - | - | - | - | |
| ER | ER-ratio | 2012 | 0.01 | - | - | |
| TC | TC-MT | 2012 | 871 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2012 | 1.89 | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2012 | 2.19 | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2012 | 0.143 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | SSB-MT/SSBmgt-MT | 2012 | 1.833 | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]

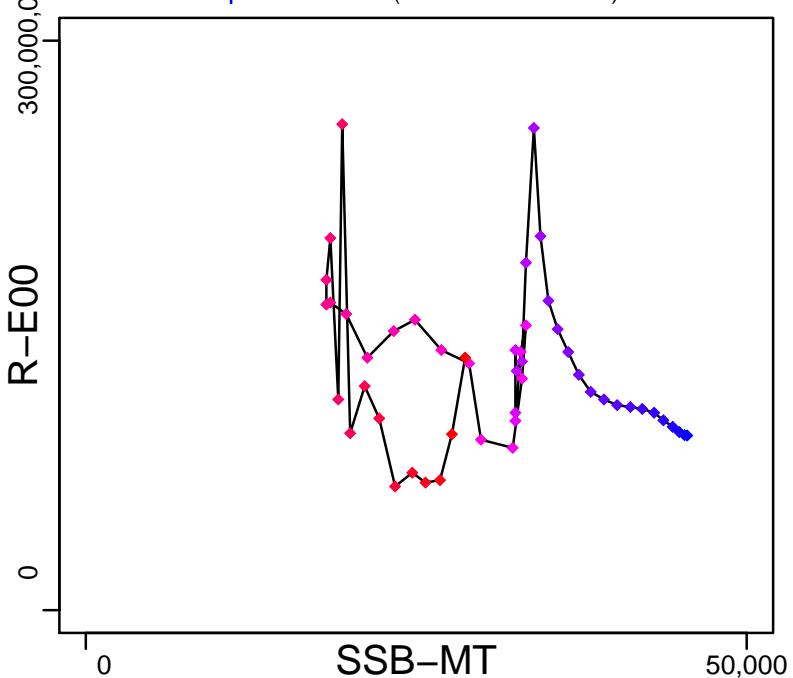
Kobe MSYpref (1964–2012–HIVELY)



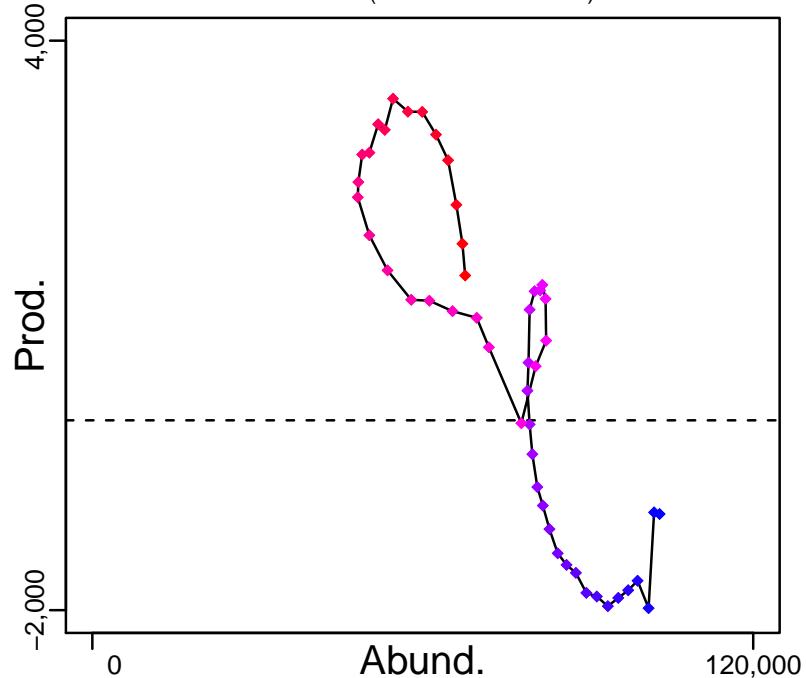
Kobe MGTPref (1964–2012–HIVELY)



Spawner Recruit (1964–2012–HIVELY)



Production (1964–2012–HIVELY)

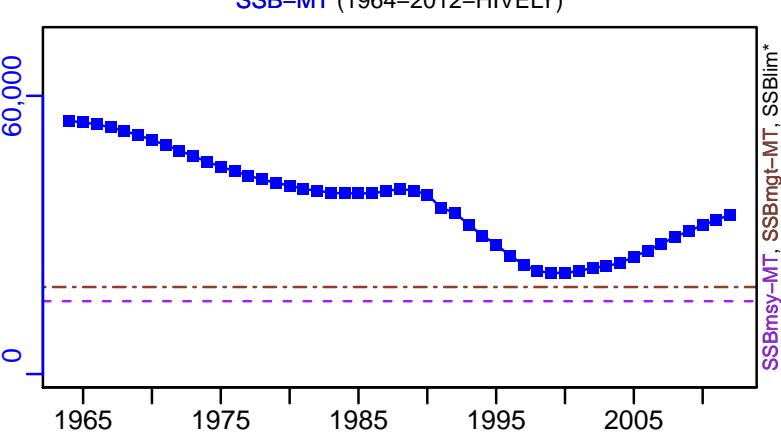
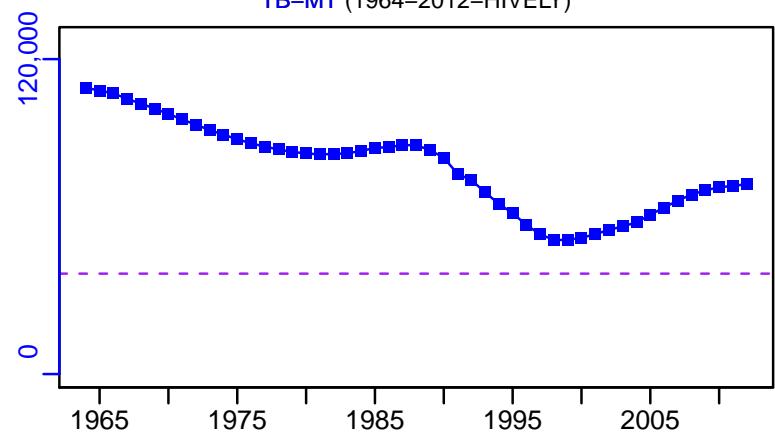


◆ Start Year ◆ End Year * No Data

Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]

TB-MT (1964–2012-HIVELY)

SSB-MT (1964–2012-HIVELY)



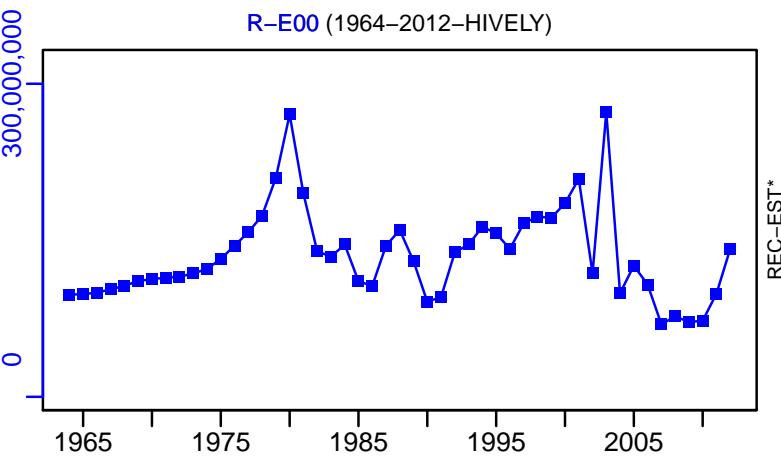
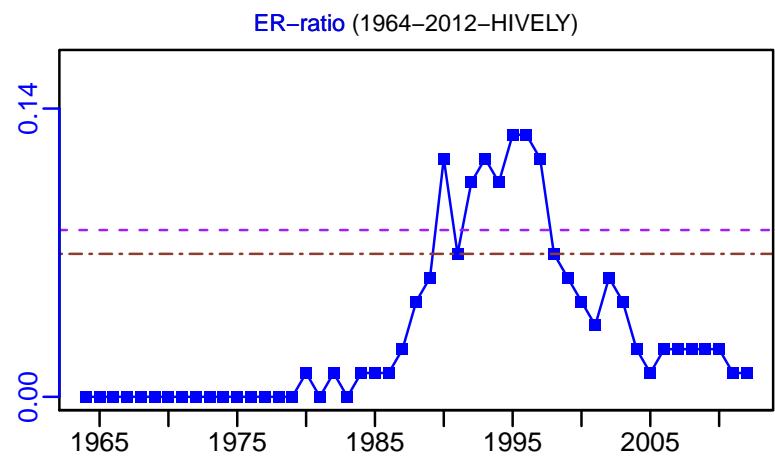
TN *

F*



ER-ratio (1964–2012-HIVELY)

R-E00 (1964–2012-HIVELY)

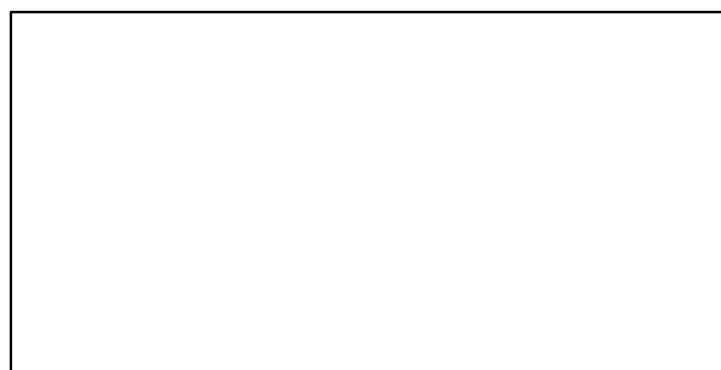
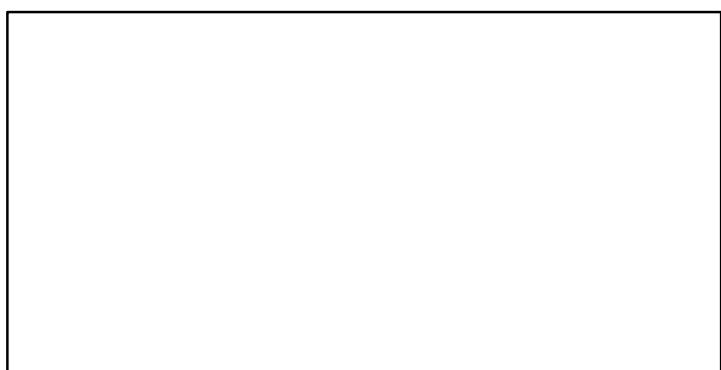
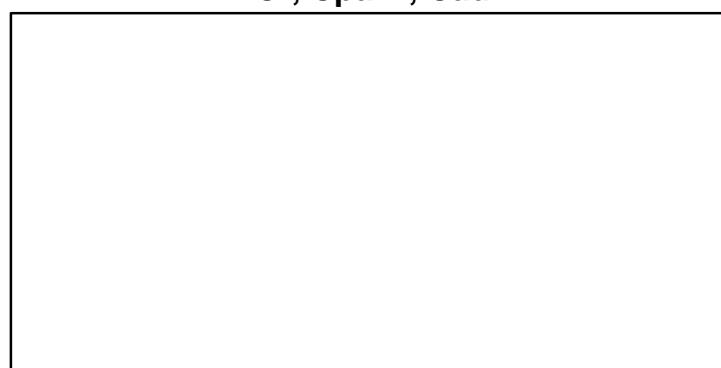
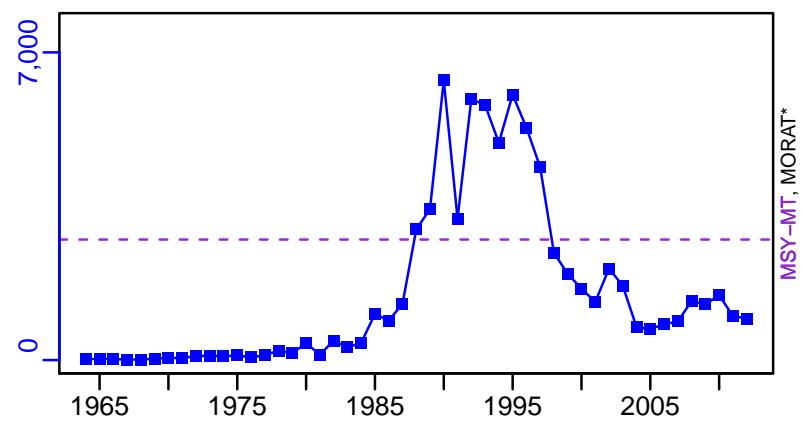


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - Lim BRP | * No Data |

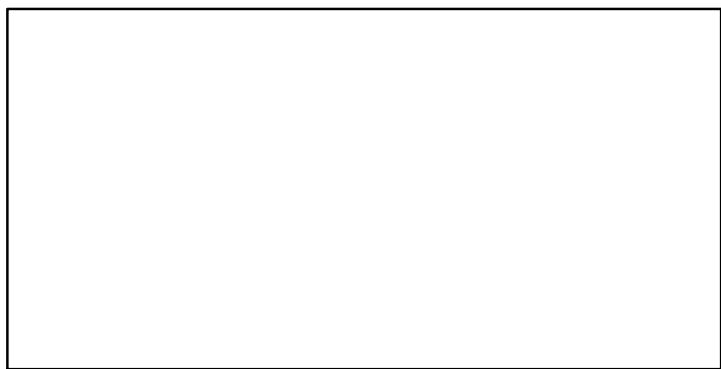
Longspine thornyhead Pacific Coast [LSTHORNHPCOAST]

TC-MT, TL*, RecC* (1964–2012-HIVELY)

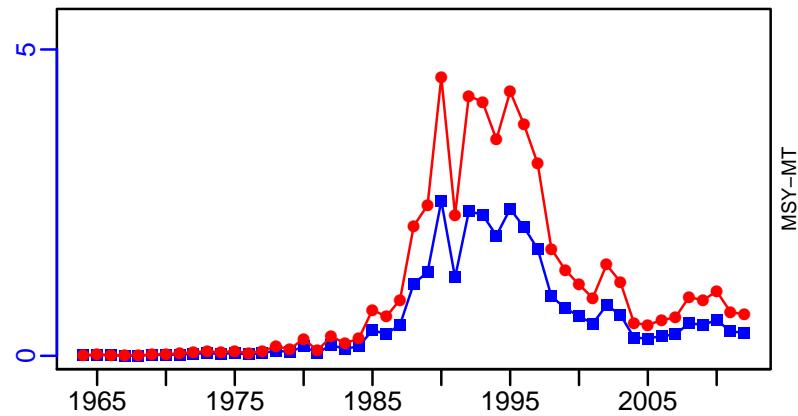
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1964–2012-HIVELY)



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

Pacific geoduck Washington [PGEODWA]

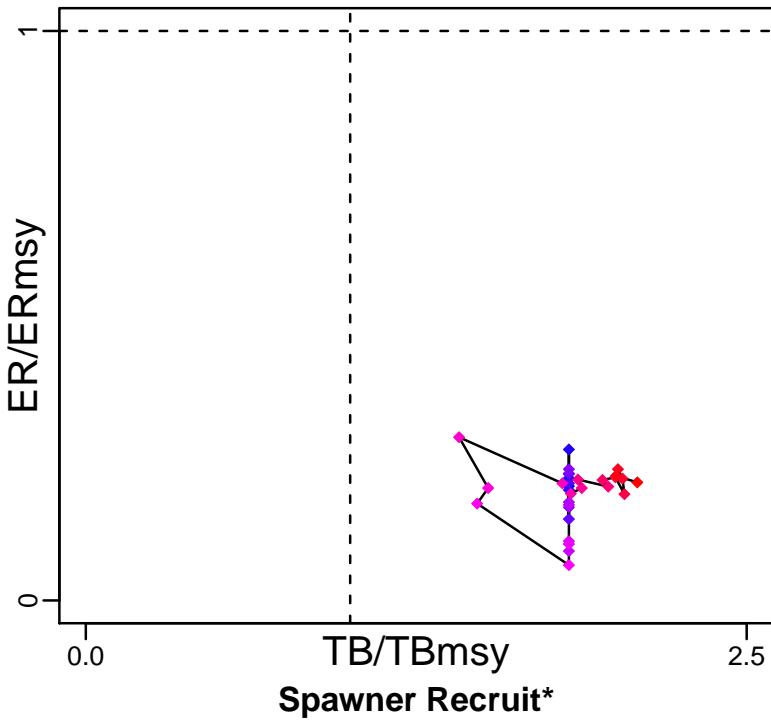
| Metadata | |
|-----------------------------|--------------------------------------------|
| Scientific Name | Panopea generosa |
| Current Assess ID | WDFW-PGEODWA-1980-2010-HIVELY |
| Area | Washington |
| Management Authority | State of Washington |
| Assessor | Washington Department of Fish and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

| Reference Points | | | |
|------------------|-----------------|-----------|--------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2010 | 40,932 |
| SSBmsy | - | - | - |
| Fmsy | - | - | - |
| ERmsy | ERmsy-est-ratio | 2010 | 0.121 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-est-MT | 2010 | 4956 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | - | - | - |
| ERlim | - | - | - |

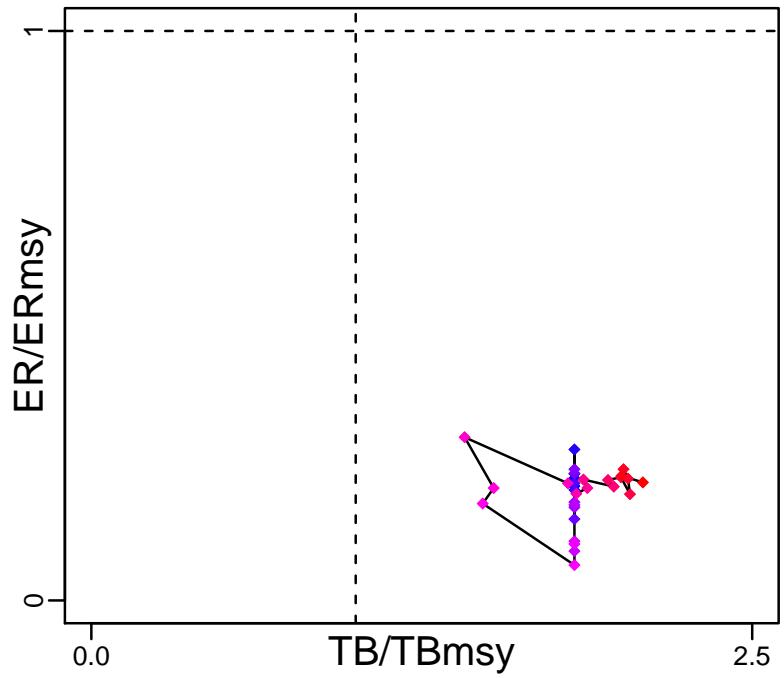
| Time Series | | | | | | |
|-------------------|--------------------------|-----------|------------|-----|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2010 | 85,400 | - | - | |
| SSB | - | - | - | - | - | |
| TN | - | - | - | - | - | |
| R | - | - | - | - | - | |
| F | - | - | - | - | - | |
| ER | ER-ratio | 2010 | 0.025 | - | - | |
| TC | TC-MT | 2010 | 2150 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 2010 | 2.086 | | | |
| SSB/SSBmsy | - | - | - | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-ratio/ERmsy-est-ratio | 2010 | 0.207 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Pacific geoduck Washington [PGEODWA]

Kobe MSYpref (1980–2010–HIVELY)

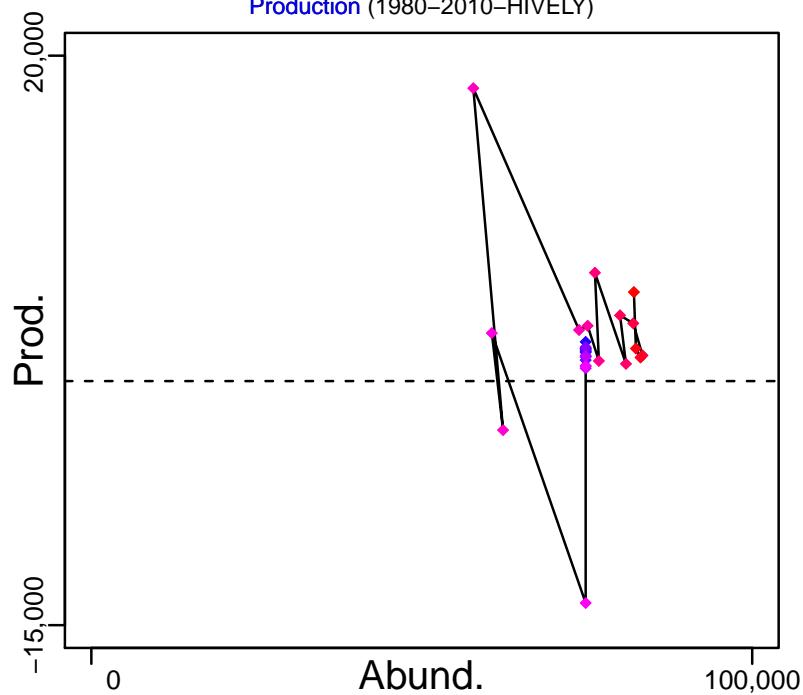
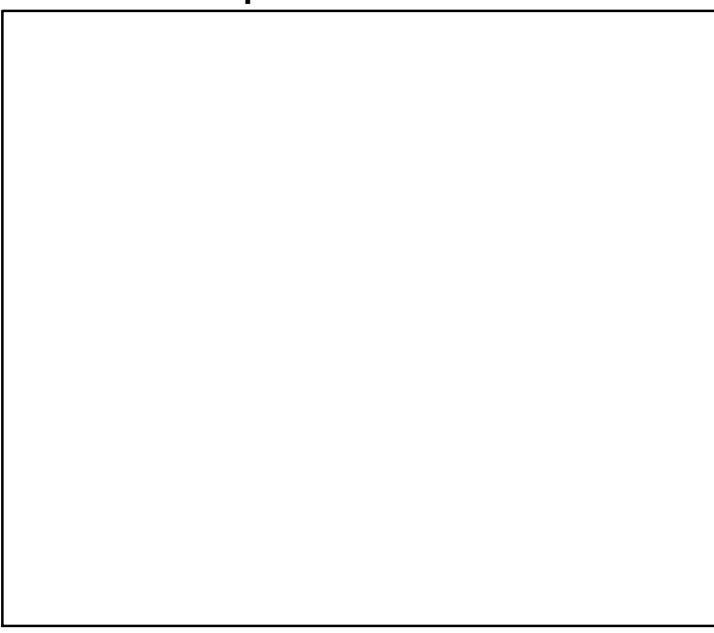


Kobe MGTPref (1980–2010–HIVELY)



Spawner Recruit*

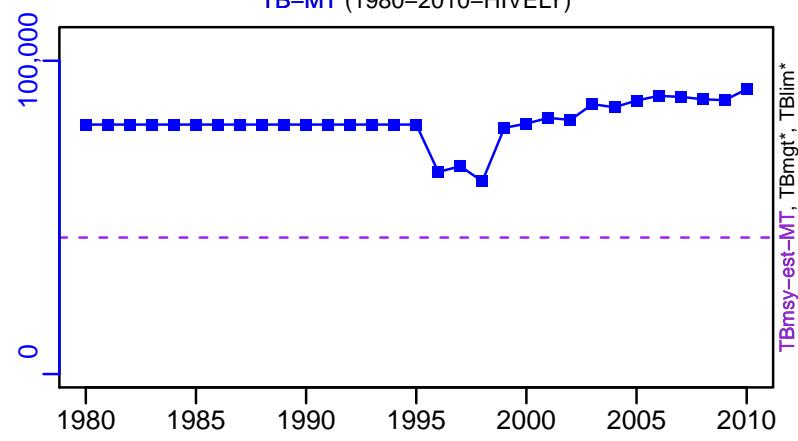
Production (1980–2010–HIVELY)



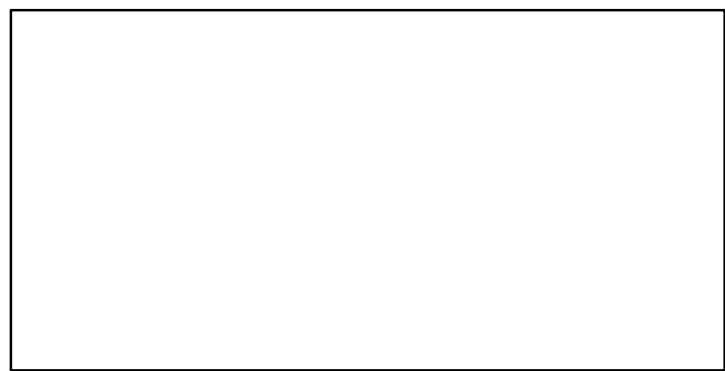
◆ Start Year ◆ End Year * No Data

Pacific geoduck Washington [PGEODWA]

TB-MT (1980–2010-HIVELY)



SSB*



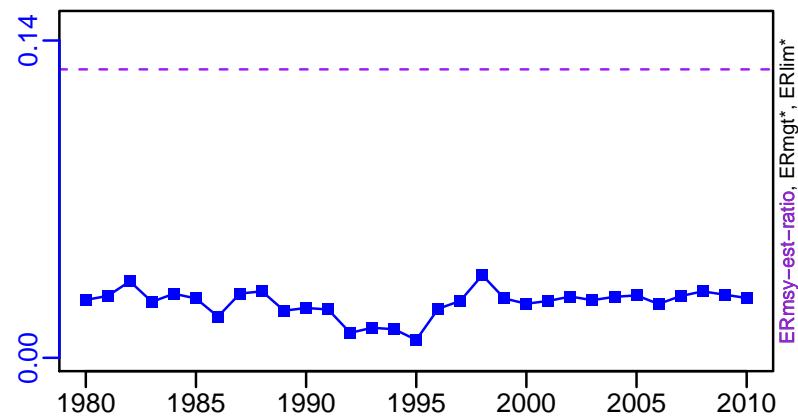
TN *



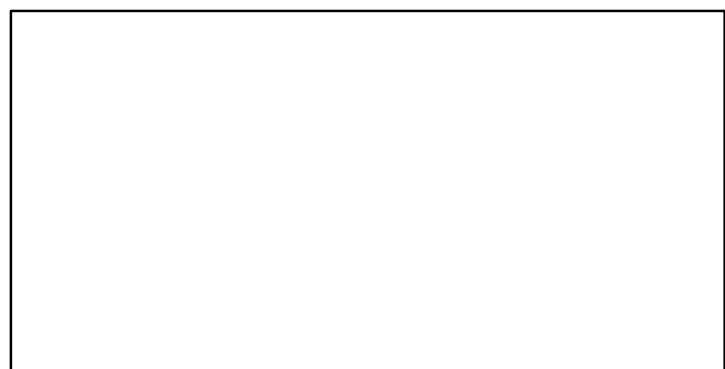
F*



ER-ratio (1980–2010-HIVELY)



Recruits*

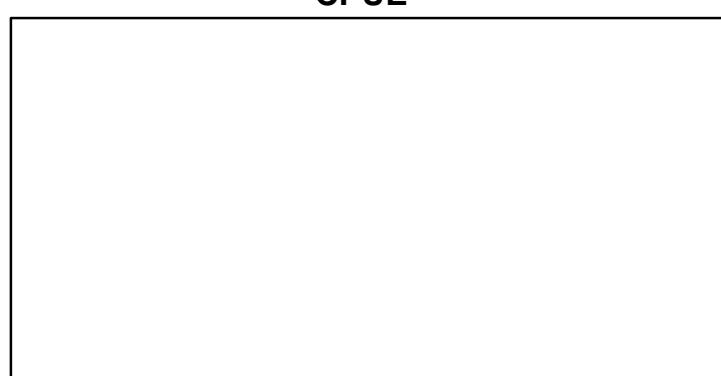
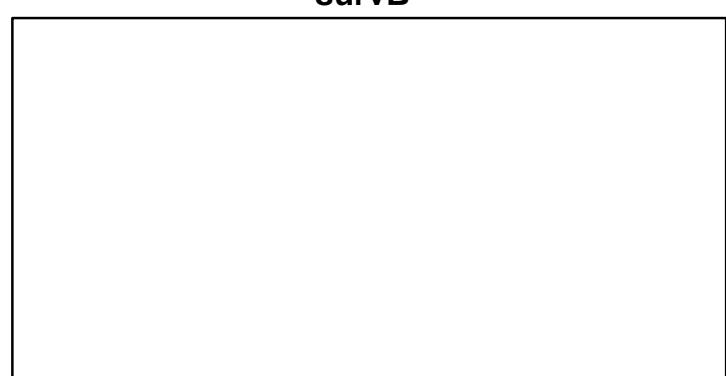
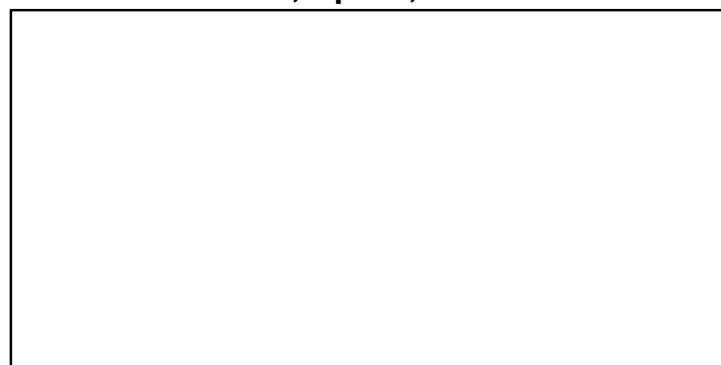
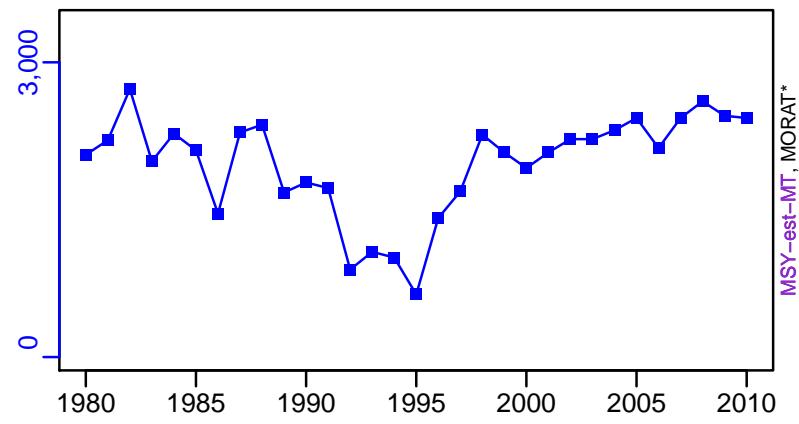


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | --- Lim BRP | * No Data |

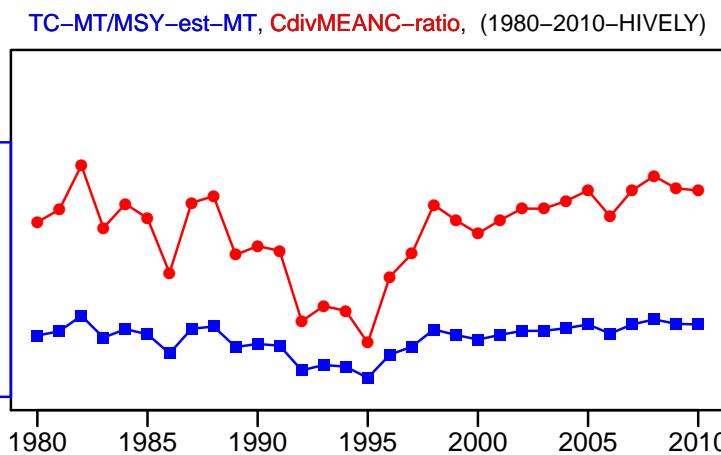
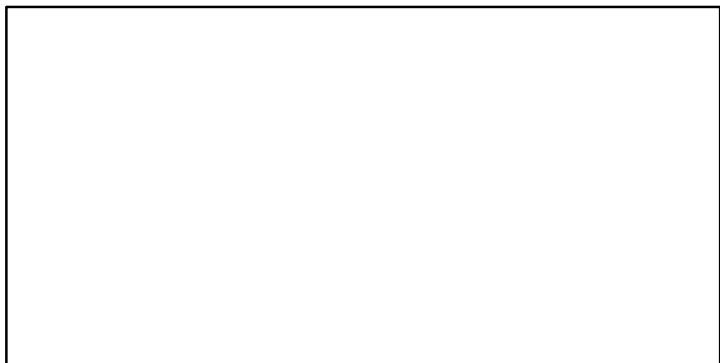
Pacific geoduck Washington [PGEODWA]

TC-MT, TL*, RecC* (1980–2010-HIVELY)

TAC*, Cpair*, Cadv*



EFFORT*



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

Pacific hake Pacific Coast [PHAKEPCOAST]

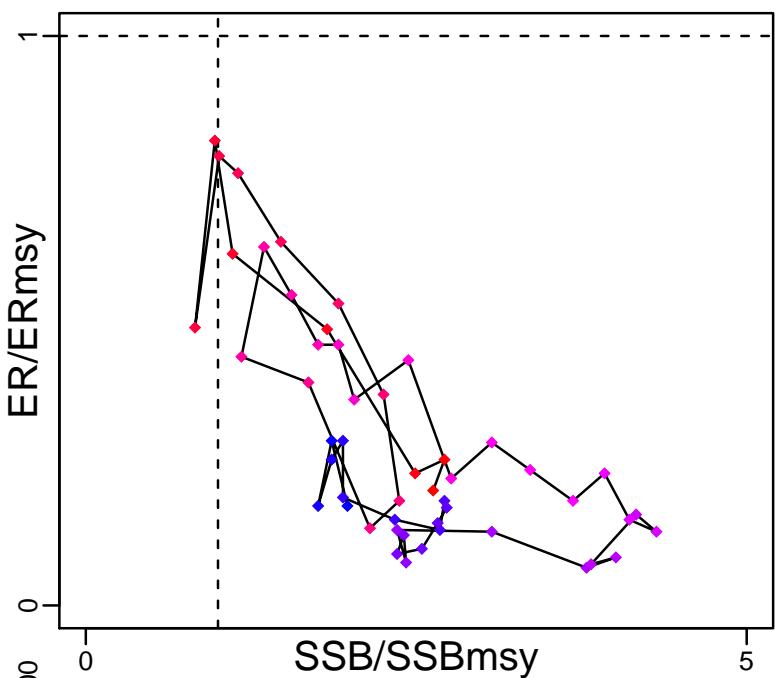
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Merluccius productus |
| Current Assess ID | PFMC-PHAKEPCOAST-1966-2016-WATSON |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

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

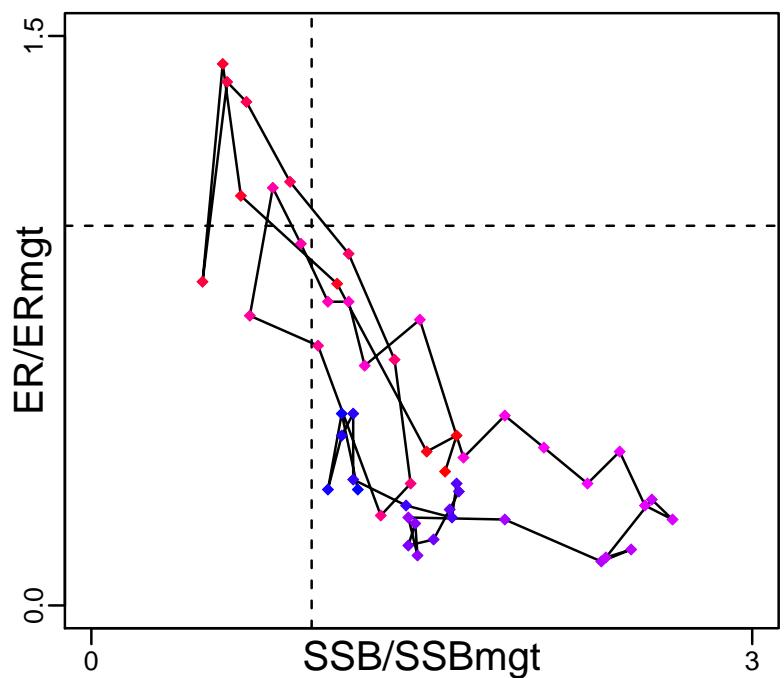
| Time Series | | | | | |
|-------------------|----------------------|-----------|--------------------|-----|-----|
| Type | ID | Asmt Year | Curr Value | Sex | Age |
| TB | - | - | - | - | - |
| SSB | SSB-MT | 2016 | 1,890,000 | - | - |
| TN | - | - | - | - | - |
| R | R-E00 | 2016 | 1.22×10^9 | - |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

Pacific hake Pacific Coast [PHAKEPCOAST]

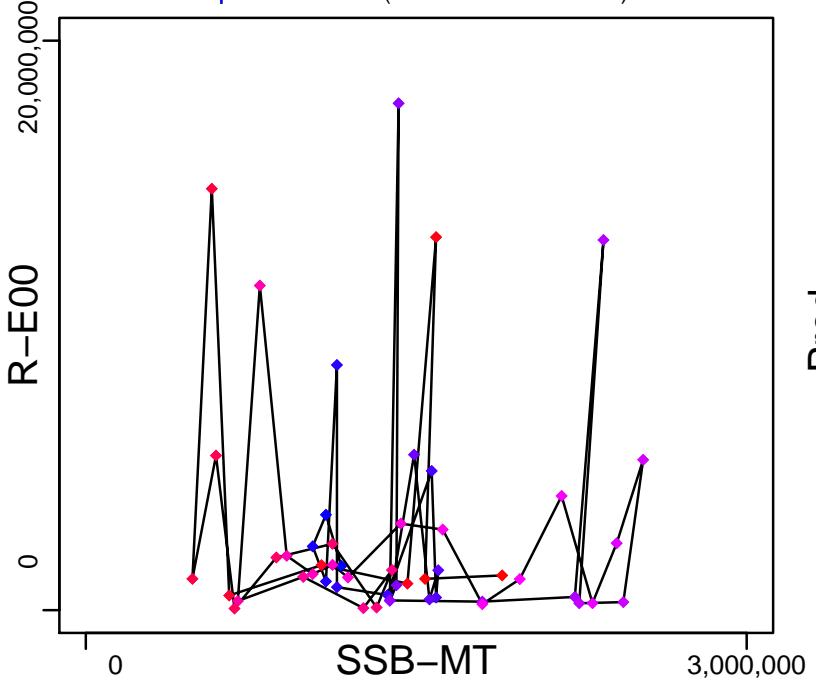
Kobe MSYpref (1966–2016–WATSON)



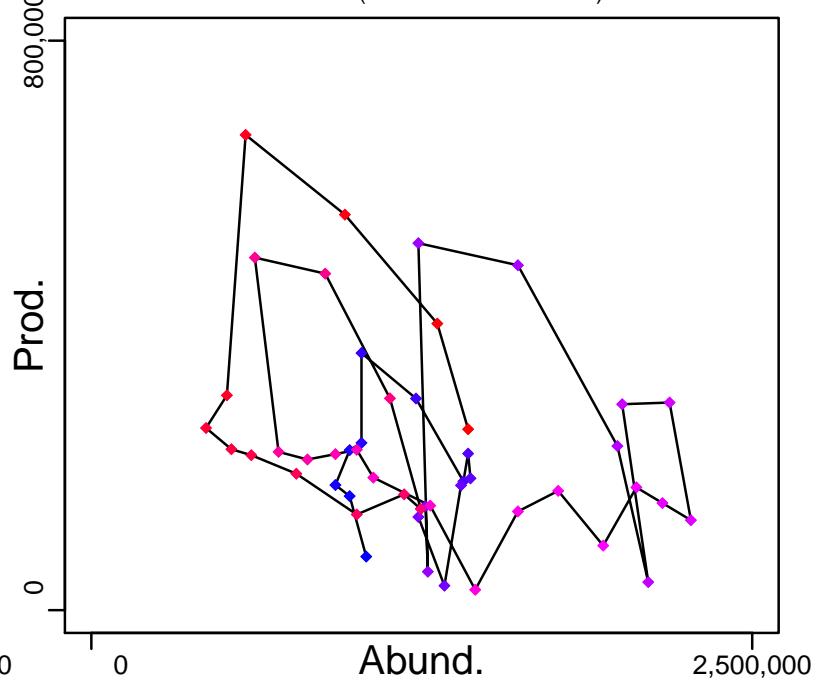
Kobe MGTPref (1966–2016–WATSON)



Spawner Recruit (1966–2016–WATSON)



Production (1966–2016–WATSON)



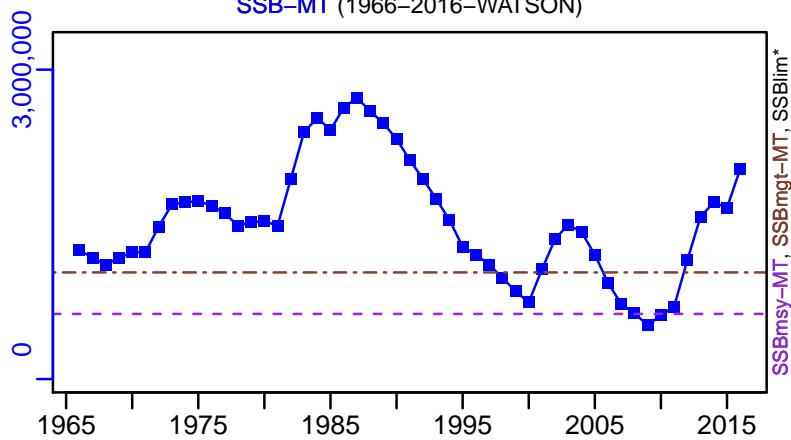
◆ Start Year ◆ End Year * No Data

Pacific hake Pacific Coast [PHAKEPCOAST]

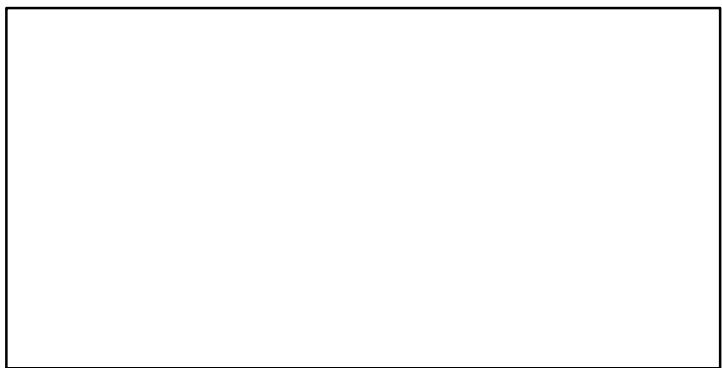
TB*



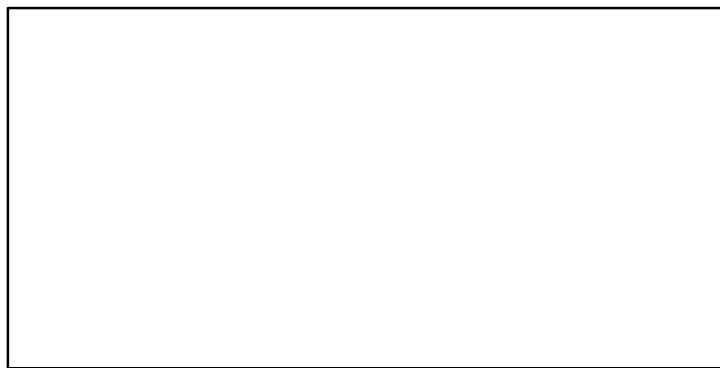
SSB-MT (1966–2016–WATSON)



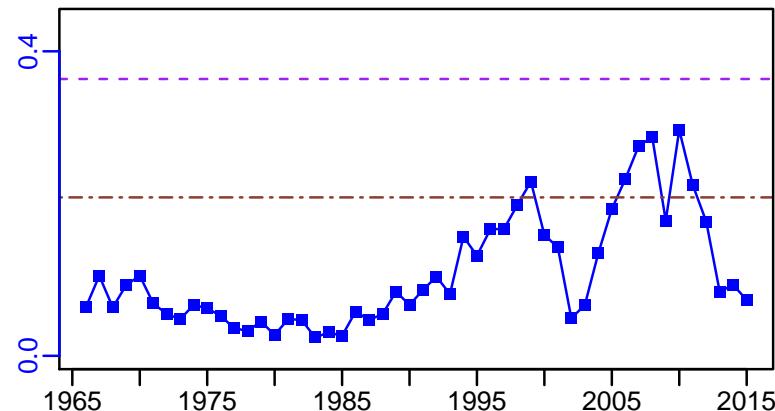
TN *



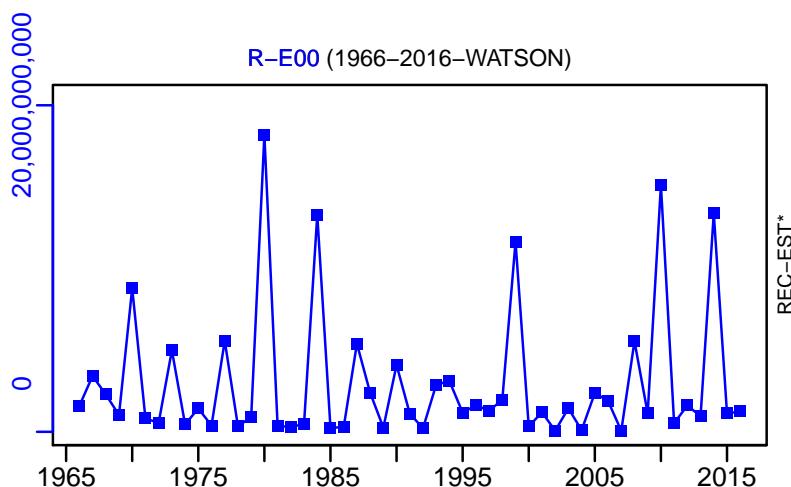
F*



ER-ratio (1966–2016–WATSON)



R-E00 (1966–2016–WATSON)

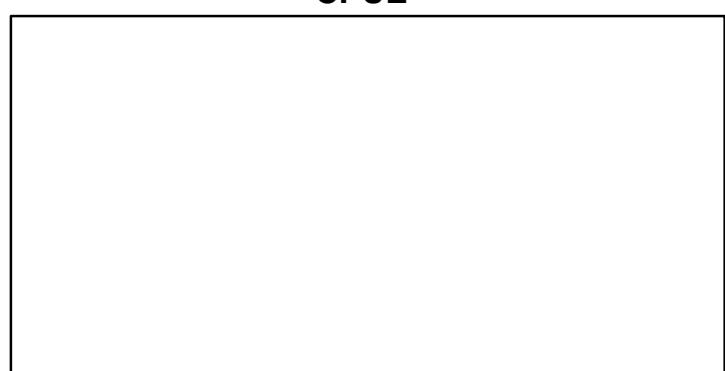
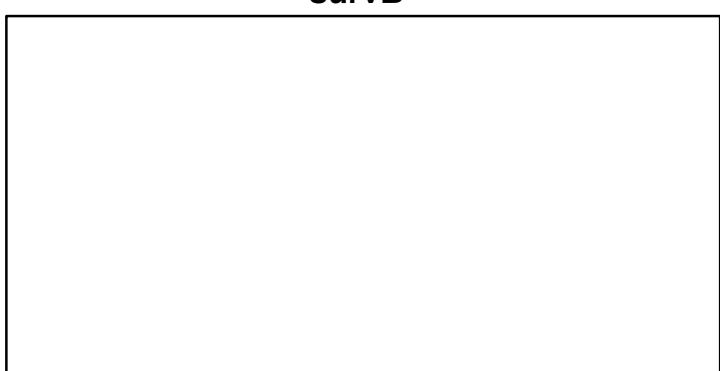
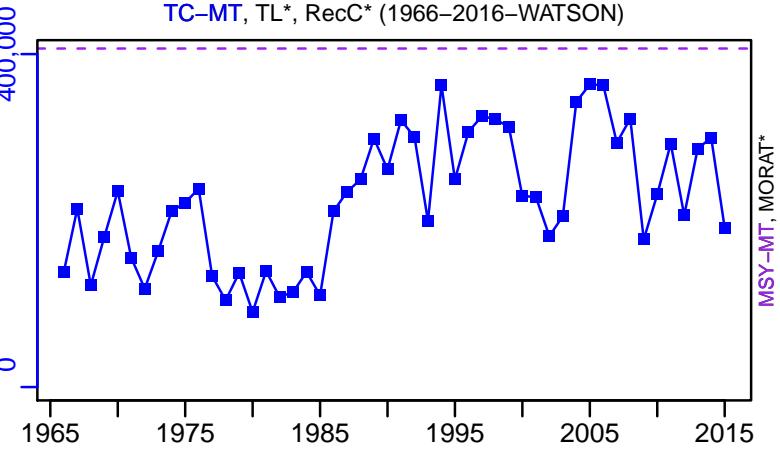


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | — Lim BRP | * No Data |

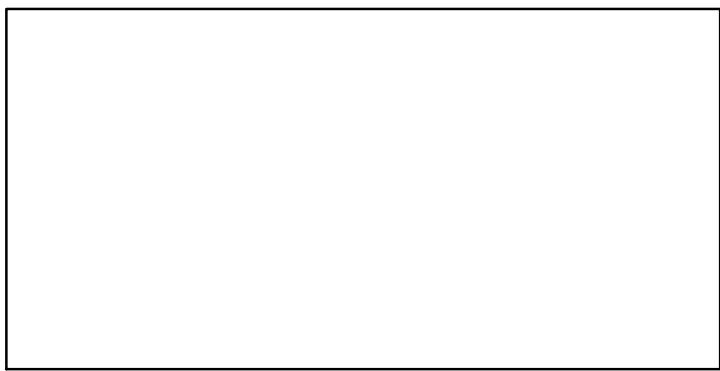
Pacific hake Pacific Coast [PHAKEPCOAST]

TC-MT, TL*, RecC* (1966–2016–WATSON)

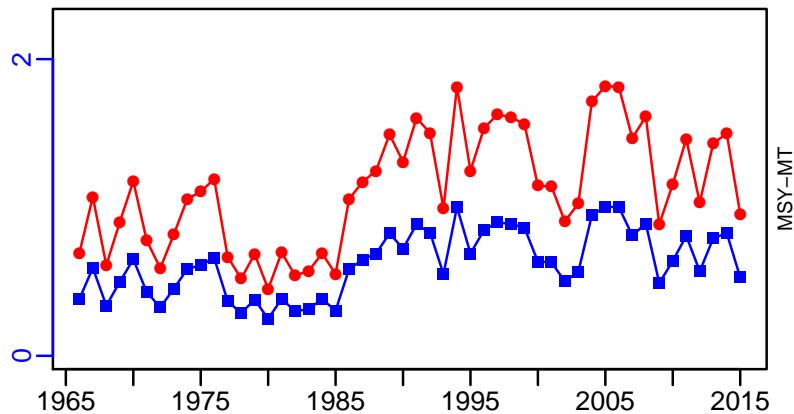
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1966–2016–WATSON)



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

Pacific ocean perch Pacific Coast [POPERCHPCOAST]

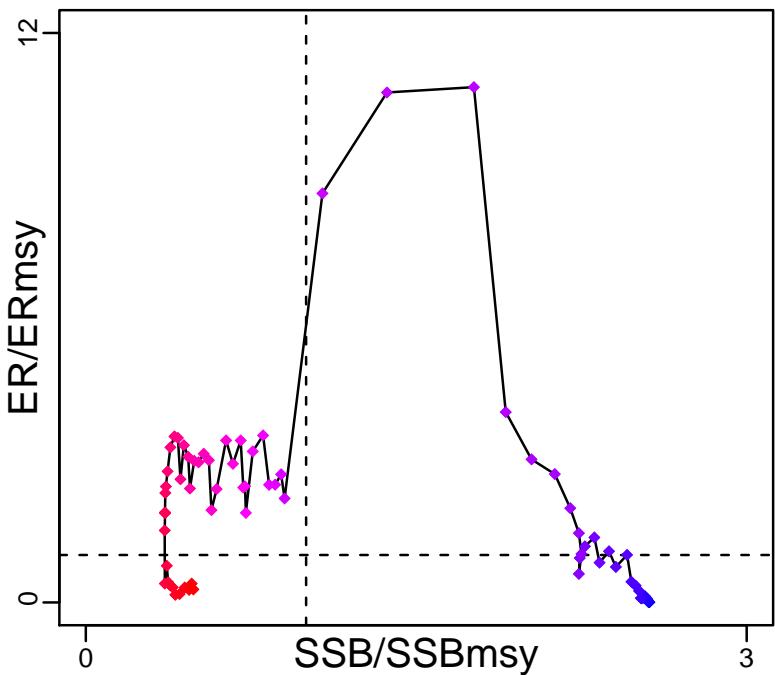
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastes alutus |
| Current Assess ID | NWFSC-POPERCHPCOAST-1940-2011-STACHURA |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

| Reference Points | | | |
|------------------|----------------|-----------|-----------------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2011 | 50,381 |
| SSBmsy | SSBmsy-E00eggs | 2011 | 2.56×10^{12} |
| Fmsy | - | - | - |
| ERmsy | ERmsy-ratio | 2011 | 0.021 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | SSB0-E00eggs | 2011 | 6.56×10^{12} |
| MSY | MSY-MT | 2011 | 1058 |
| M | M-1/yr | 2011 | 0.05 |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | - | - | - |
| ERlim | - | - | - |

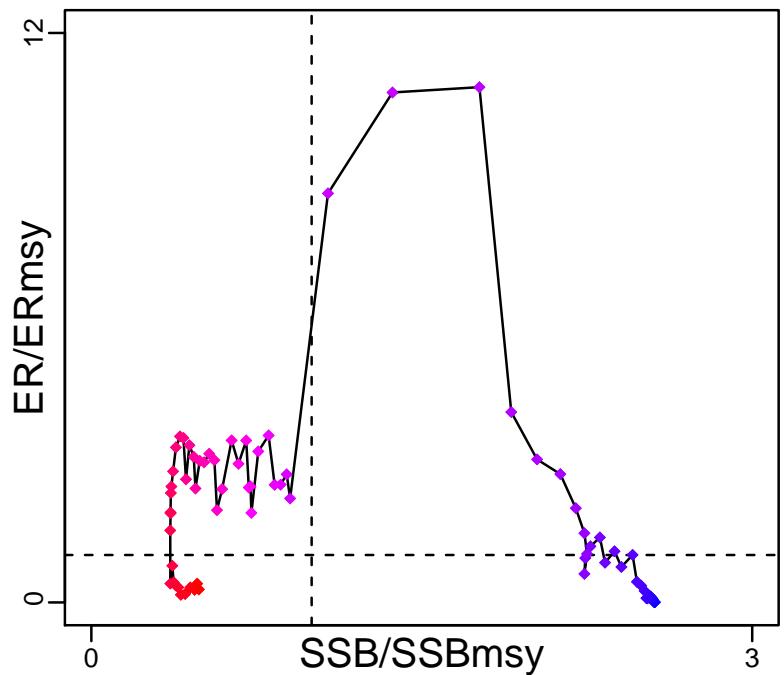
| Time Series | | | | | | |
|-------------------|----------------------------|-----------|-----------------------|------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2011 | 25,500 | - | 3+ | |
| SSB | SSB-E00eggs | 2011 | 1.25×10^{12} | - | 6+ | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2011 | 3,590,000 | - | 0 | |
| F | F-1/yr | 2011 | 0.01 | Both | 3+ | |
| ER | ER-calc-ratio | 2011 | 0.006 | - | - | |
| TC | TC-MT | 2011 | 141 | | | |
| TL | TL-MT | 2011 | 91 | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2011 | 0.506 | | | |
| SSB/SSBmsy | SSB-E00eggs/SSBmsy-E00eggs | 2011 | 0.488 | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-ratio | 2011 | 0.275 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Pacific ocean perch Pacific Coast [POPERCHPCOAST]

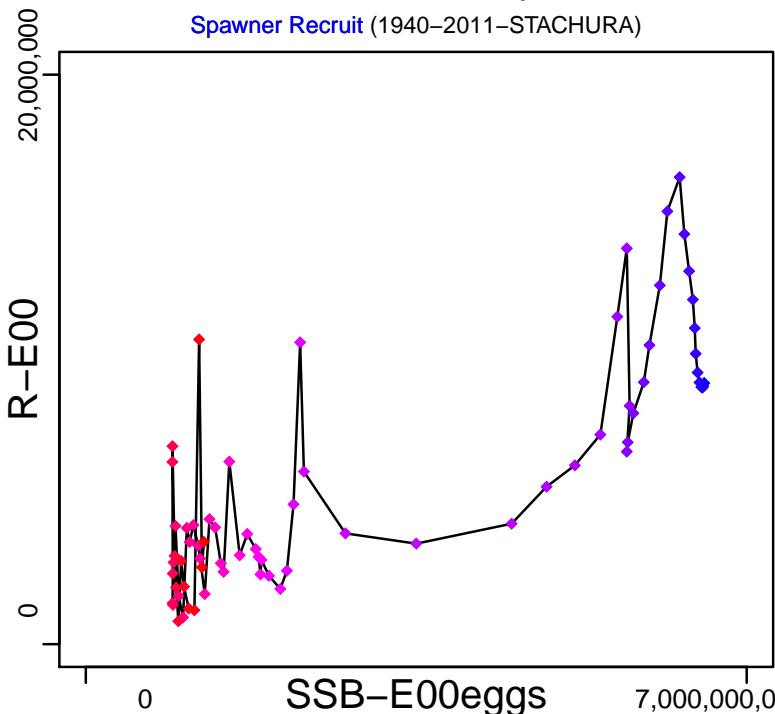
Kobe MSYpref (1940–2011–STACHURA)



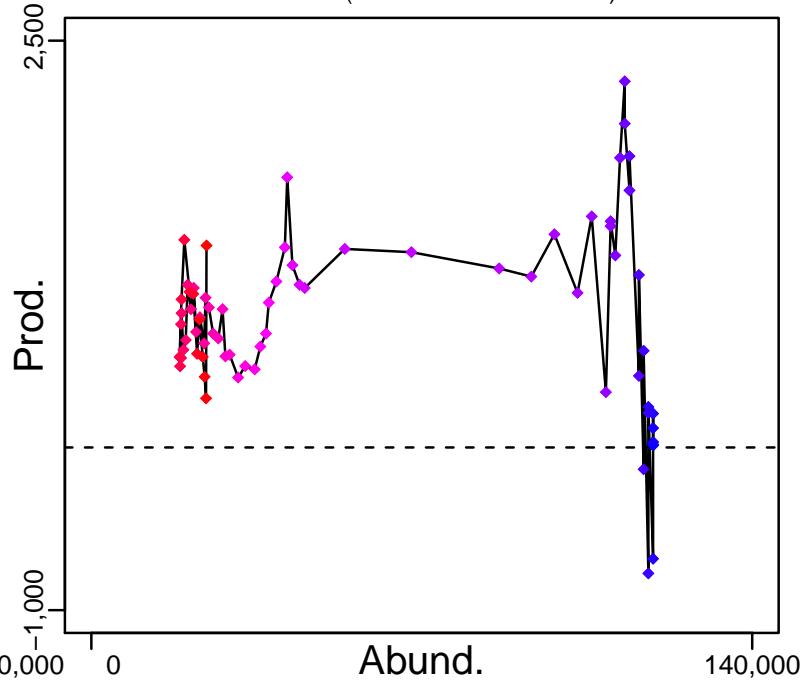
Kobe MGTpref (1940–2011–STACHURA)



Spawner Recruit (1940–2011–STACHURA)



Production (1940–2011–STACHURA)

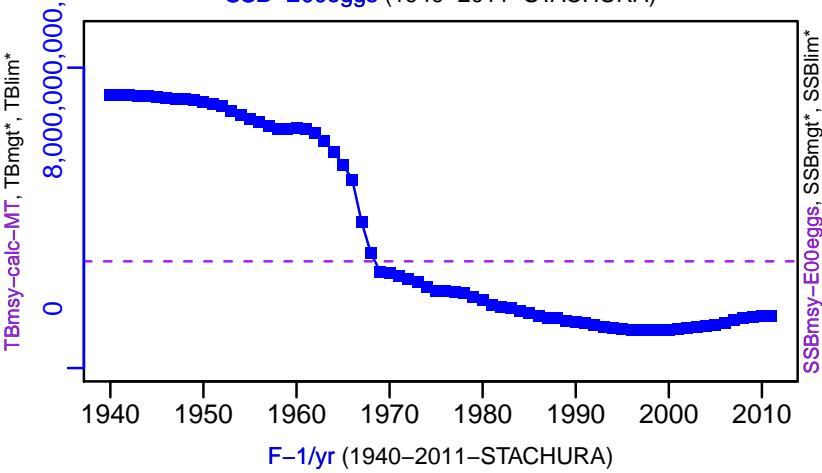
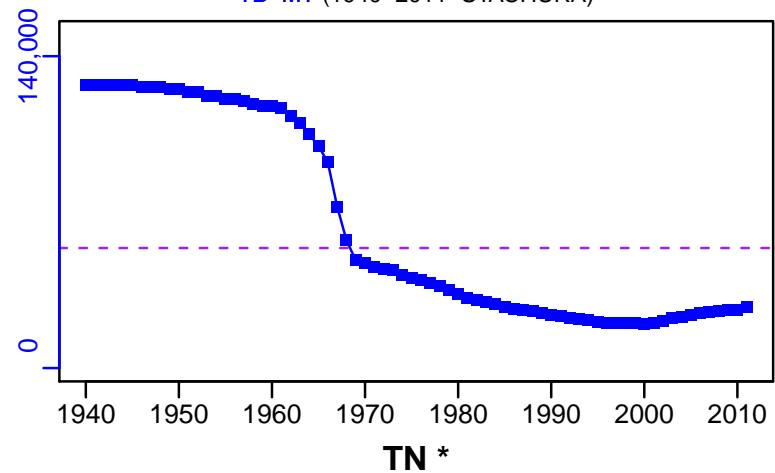


◆ Start Year ◆ End Year * No Data

Pacific ocean perch Pacific Coast [POPERCHPCOAST]

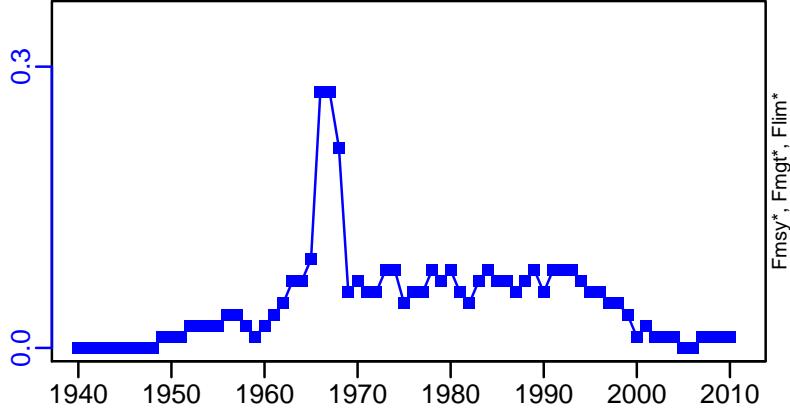
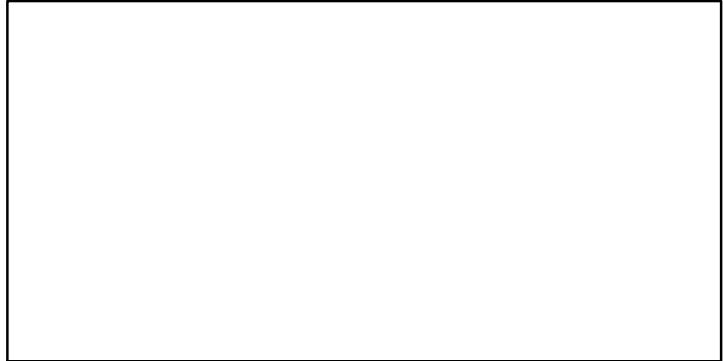
TB-MT (1940–2011–STACHURA)

SSB-E00eggs (1940–2011–STACHURA)



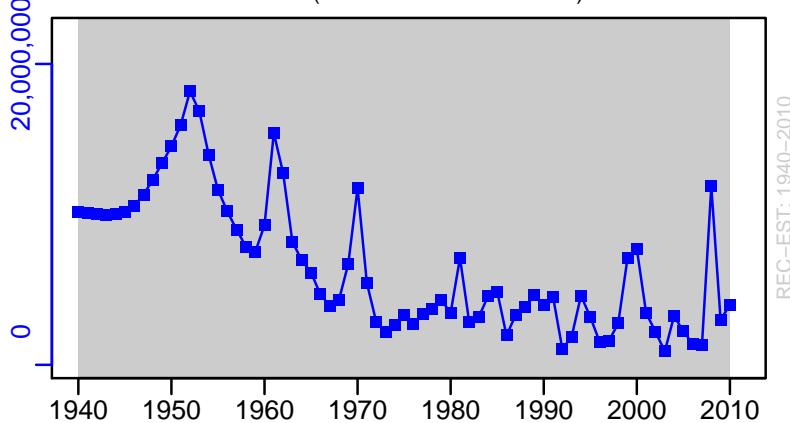
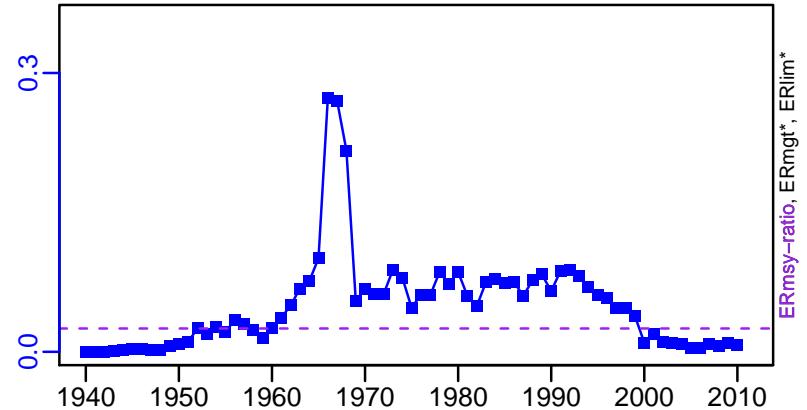
TN *

F-1/yr (1940–2011–STACHURA)

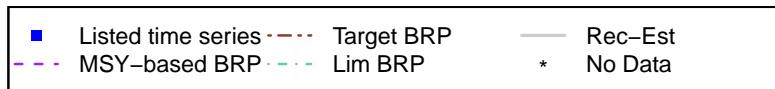


ER-calc-ratio (1940–2011–STACHURA)

R-E00 (1940–2011–STACHURA)



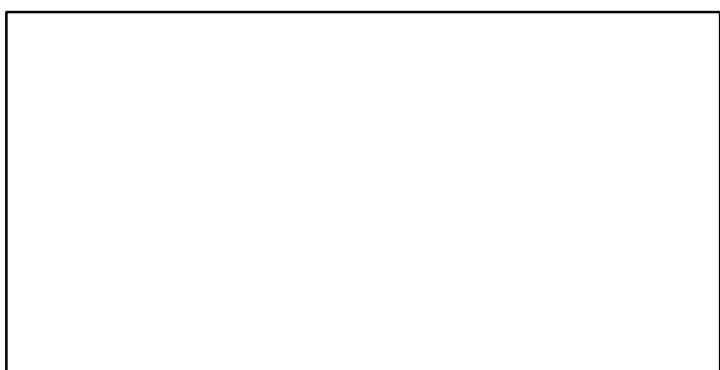
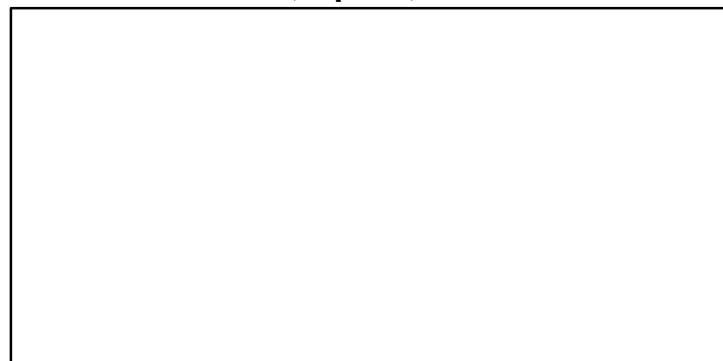
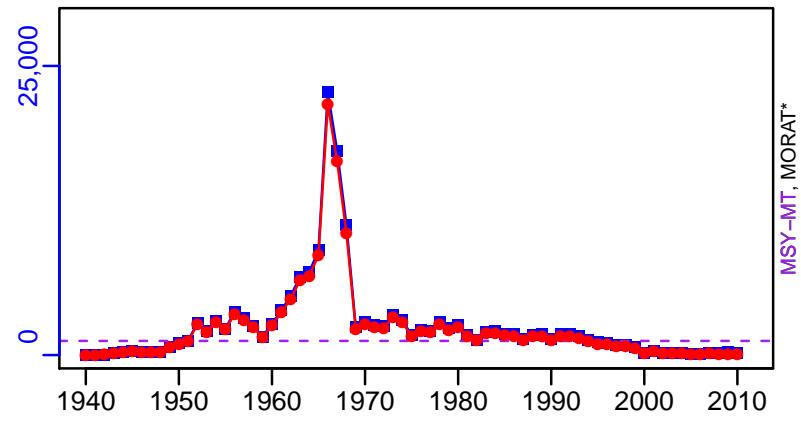
REC-EST: 1940–2010



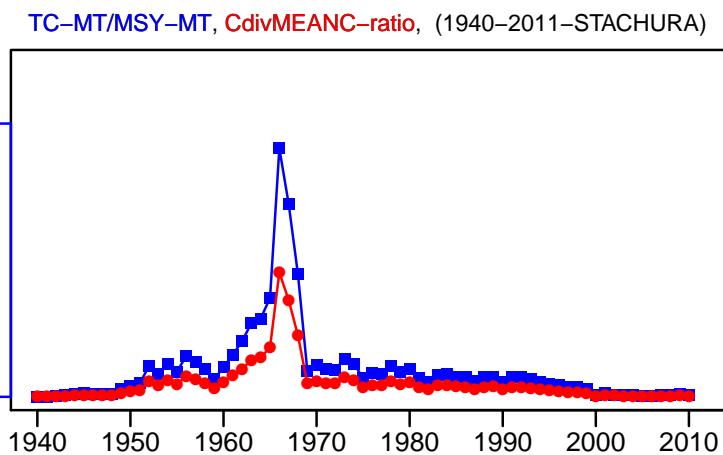
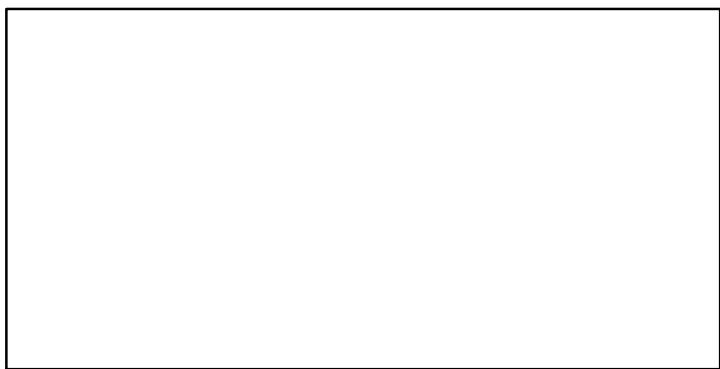
Pacific ocean perch Pacific Coast [POPERCHPCOAST]

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]

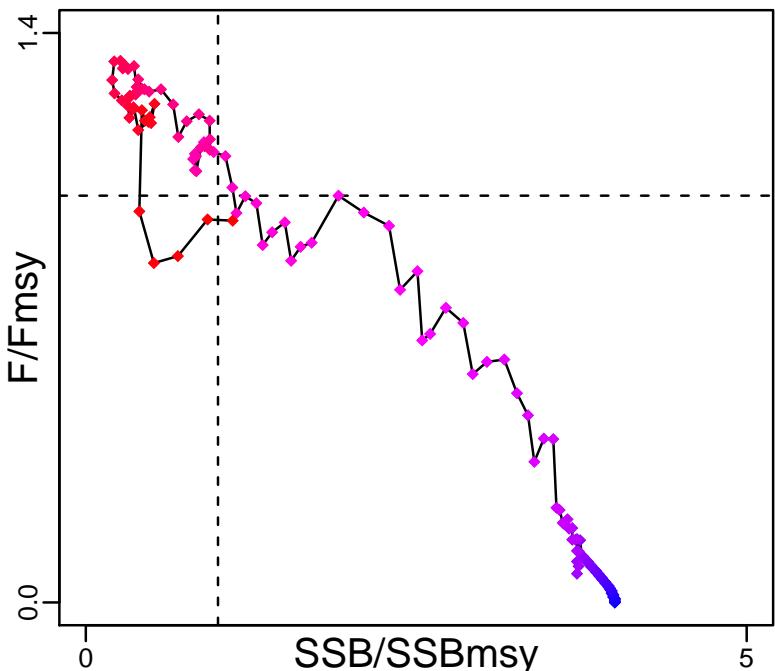
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Eopsetta jordani |
| Current Assess ID | NWFSC-PSOLEPCOAST-1876-2015-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

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

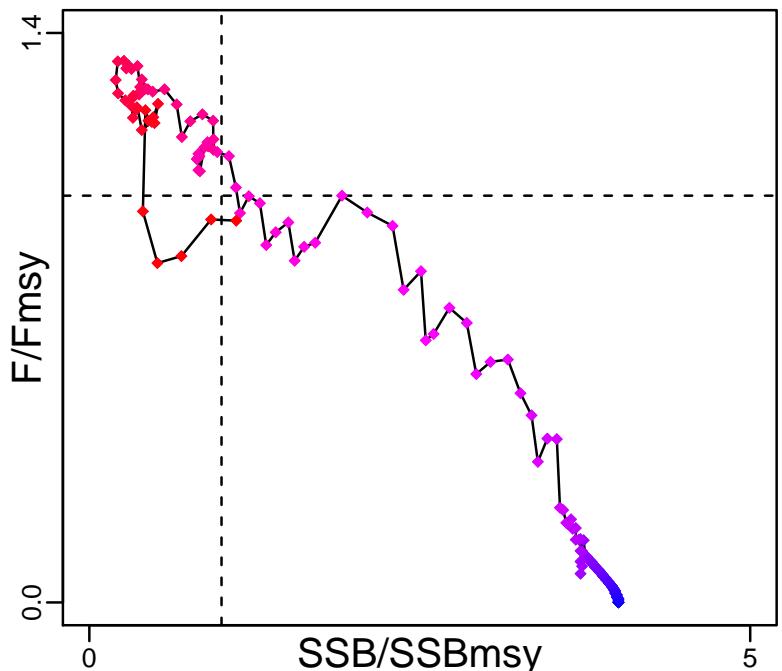
| Time Series | | | | | | |
|-------------------|----------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 19,400 | - | 3+ | |
| SSB | SSB-MT | 2015 | 10,300 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 14,600,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.657 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.127 | - | - | |
| TC | TC-MT | 2015 | 2360 | | | |
| TL | TL-MT | 2011 | 701 | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2011 | 1.012 | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2015 | 1.231 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.939 | | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2011 | 0.386 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Petrale sole Pacific Coast [PSOLEPCOAST]

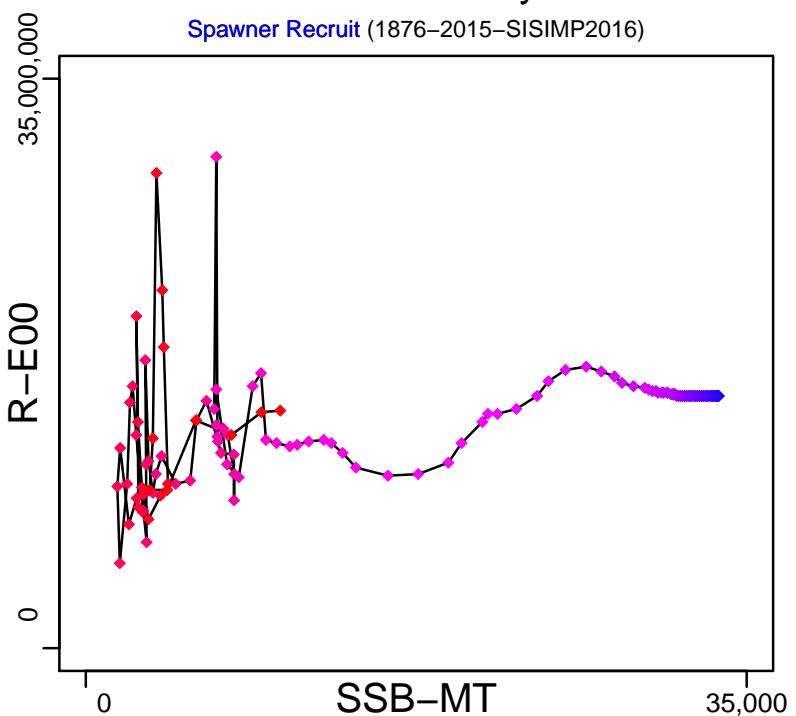
Kobe MSYpref (1876–2015–SISIMP2016)



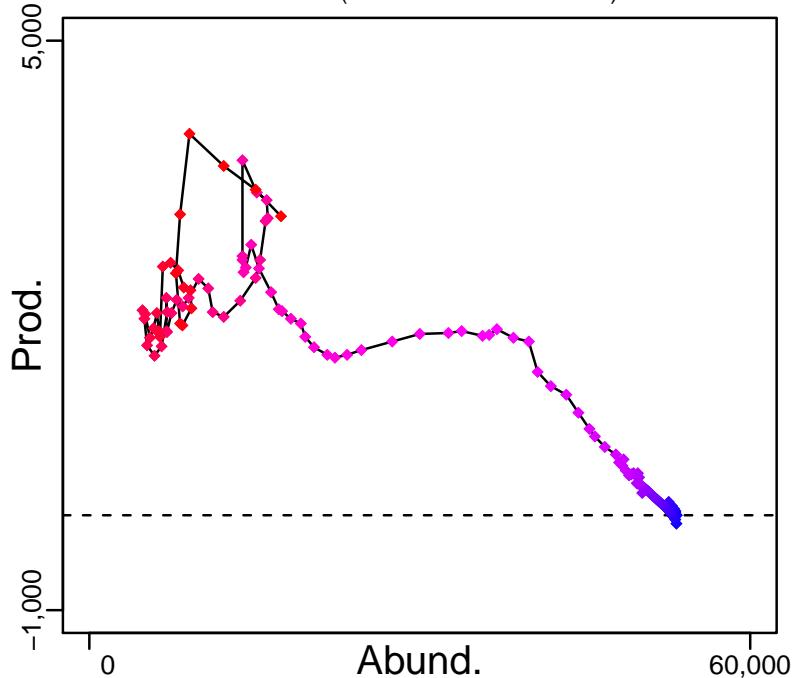
Kobe MGTpref (1876–2015–SISIMP2016)



Spawner Recruit (1876–2015–SISIMP2016)



Production (1876–2015–SISIMP2016)

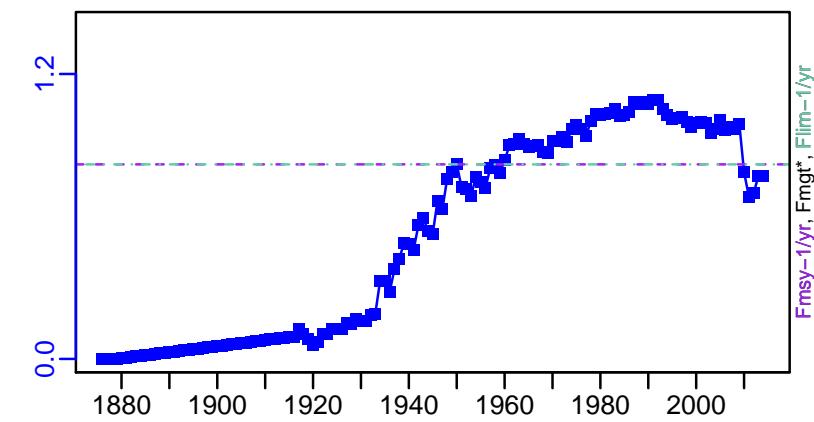
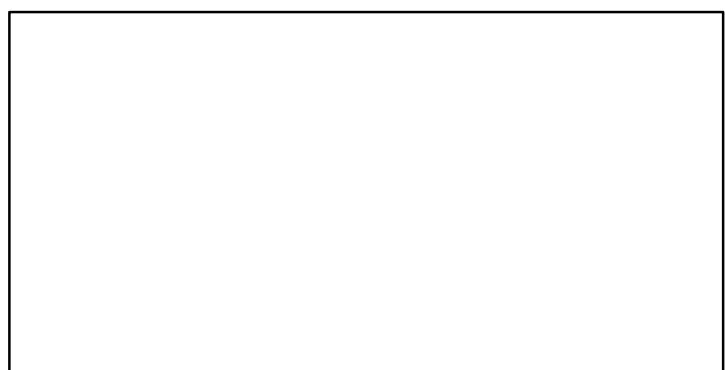
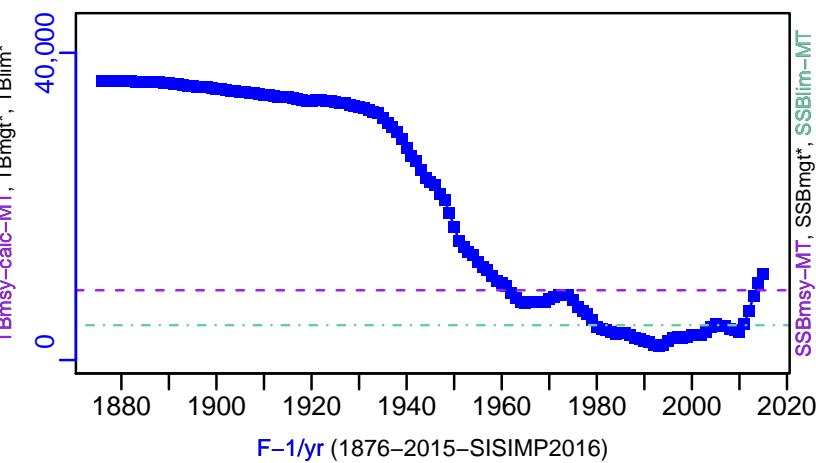
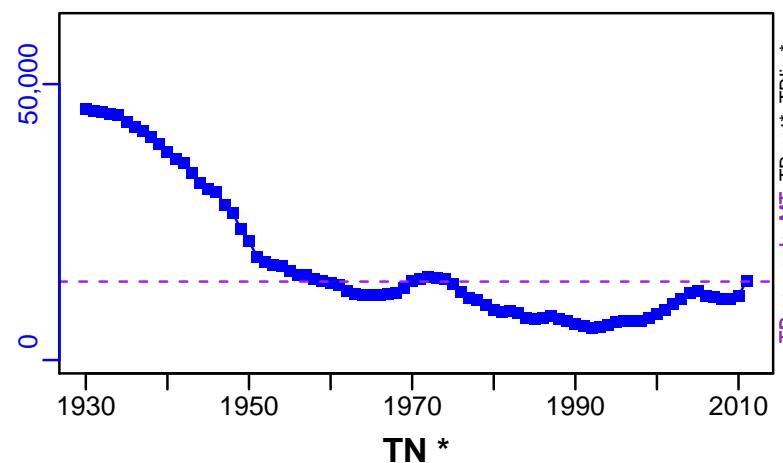


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Petrale sole Pacific Coast [PSOLEPCOAST]

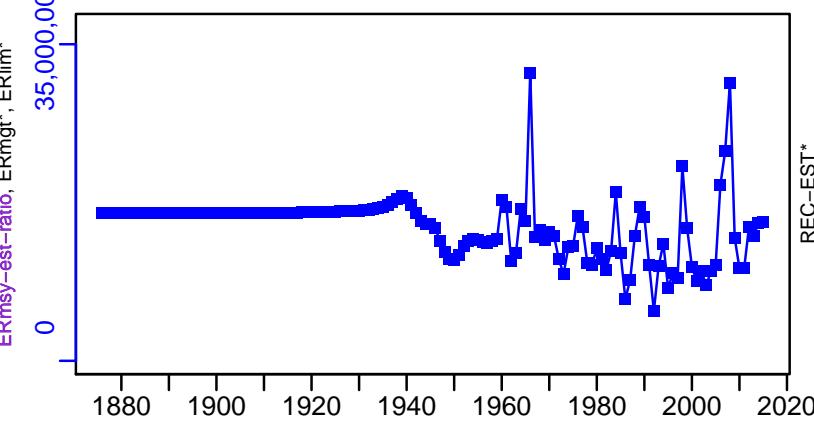
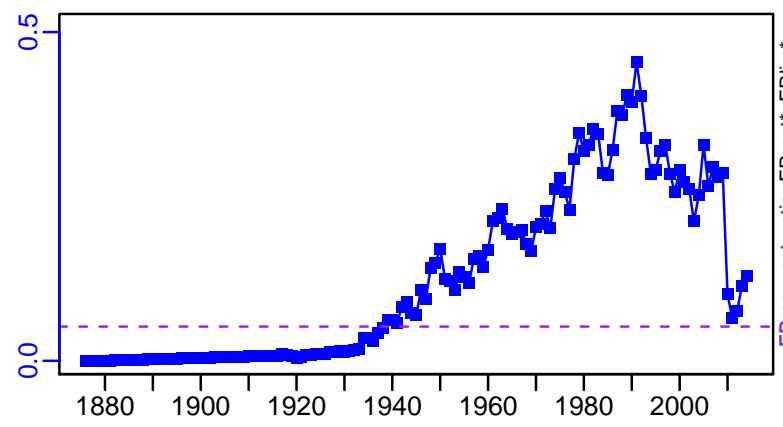
TB-MT (1930–2011–CHING)

SSB-MT (1876–2015–SISIMP2016)



ER-calc-ratio (1876–2015–SISIMP2016)

R-E00 (1876–2015–SISIMP2016)

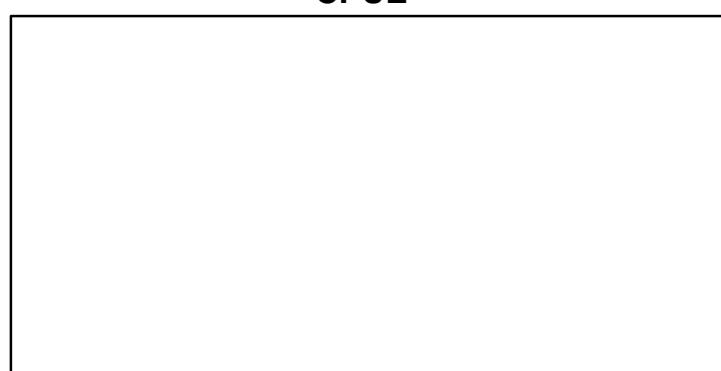
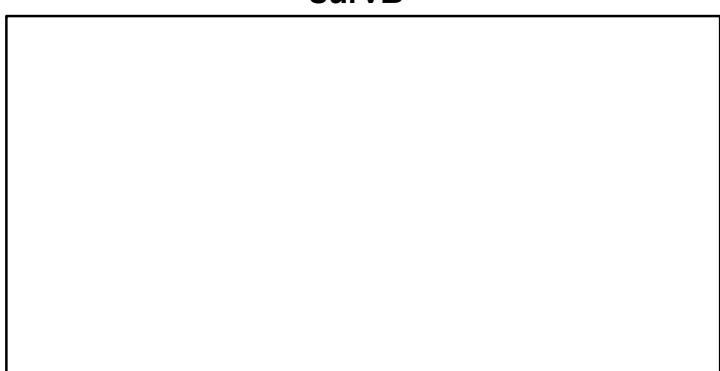
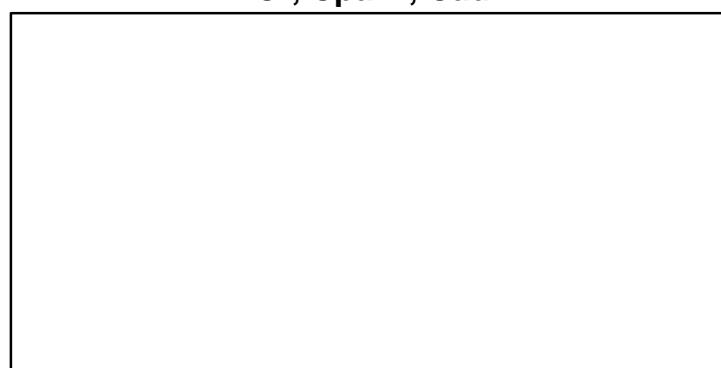
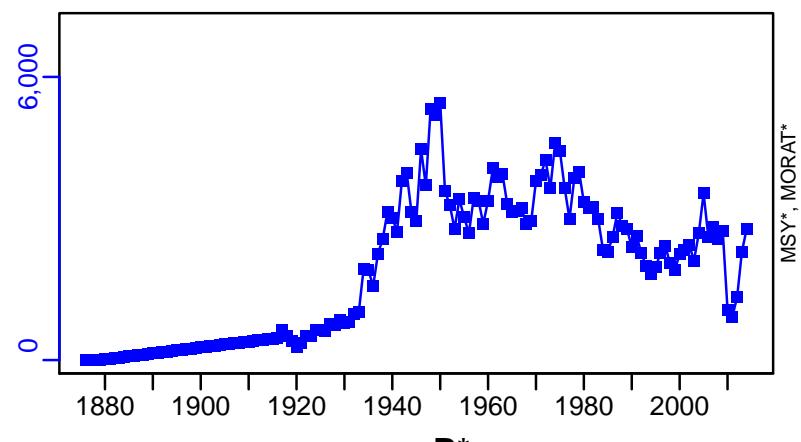


- | | | |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - - Lim BRP | * No Data |

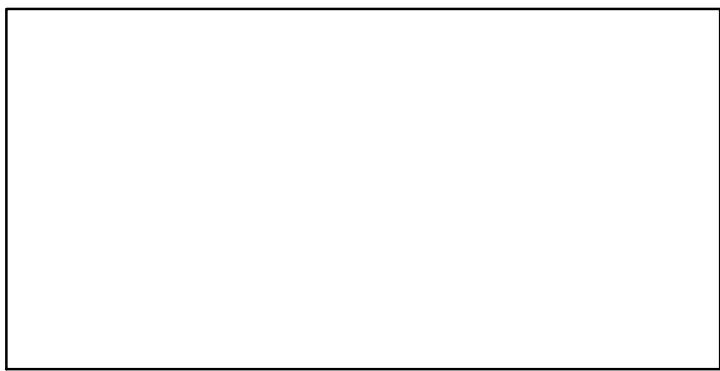
Petrale sole Pacific Coast [PSOLEPCOAST]

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

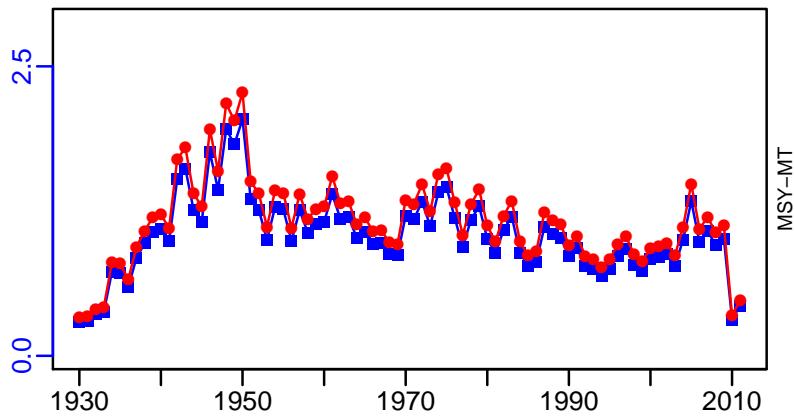
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1930–2011–CHING)



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

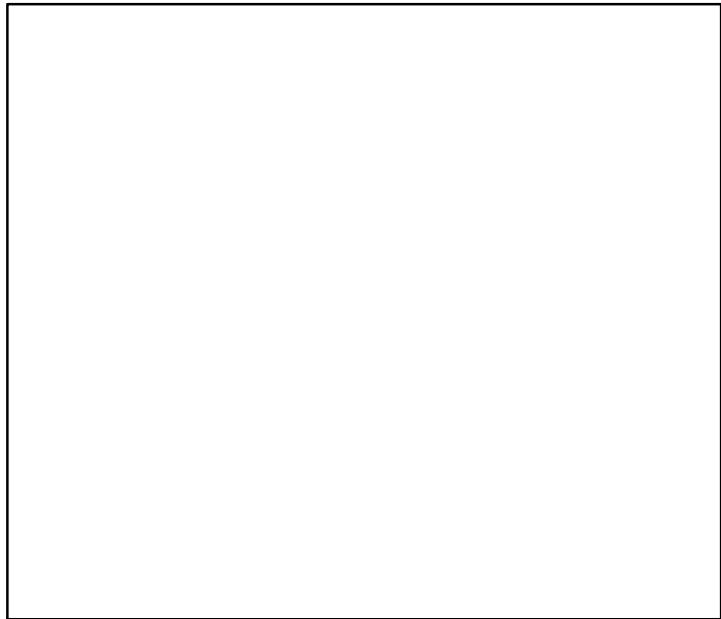
Rex sole Pacific Coast [REXSOLEPCOAST]

| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Glyptocephalus zachirus |
| Current Assess ID | NWFSC-REXSOLEPCOAST-1896-2012-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national management |
| Assessor | Northwest Fisheries Science Center |
| Asmts in RAM | 2012 |

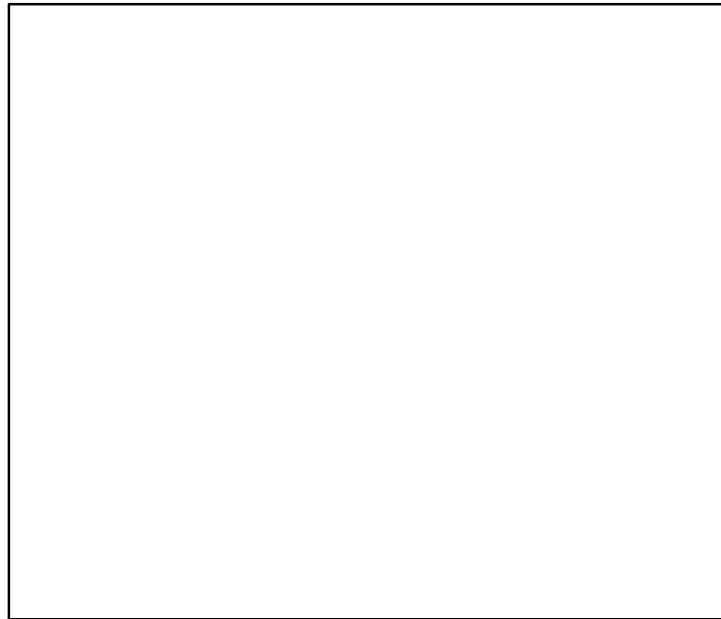
| Reference Points | | | |
|------------------|-----------|-----------|-------|
| Type | ID | Asmt Year | Value |
| TBmsy | - | - | - |
| SSBmsy | - | - | - |
| Fmsy | Fmsy-1/yr | 2012 | 0.7 |
| ERmsy | - | - | - |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | -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

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

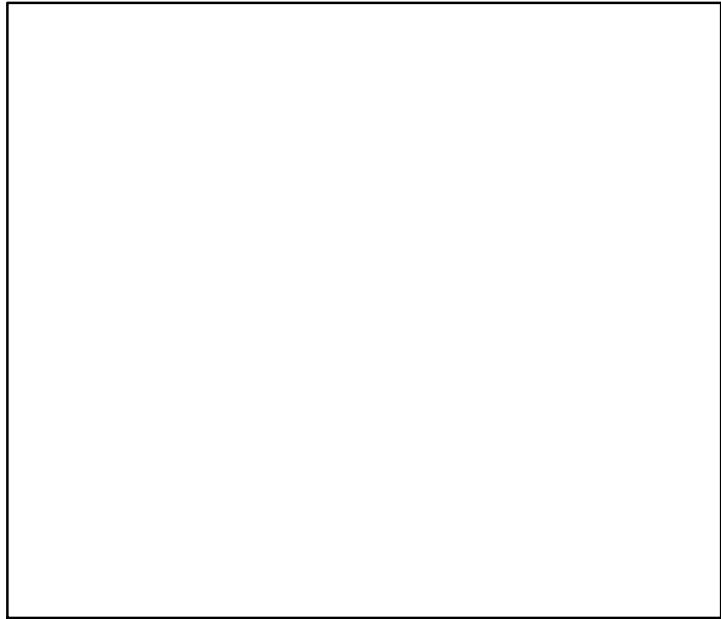
Kobe MSY*



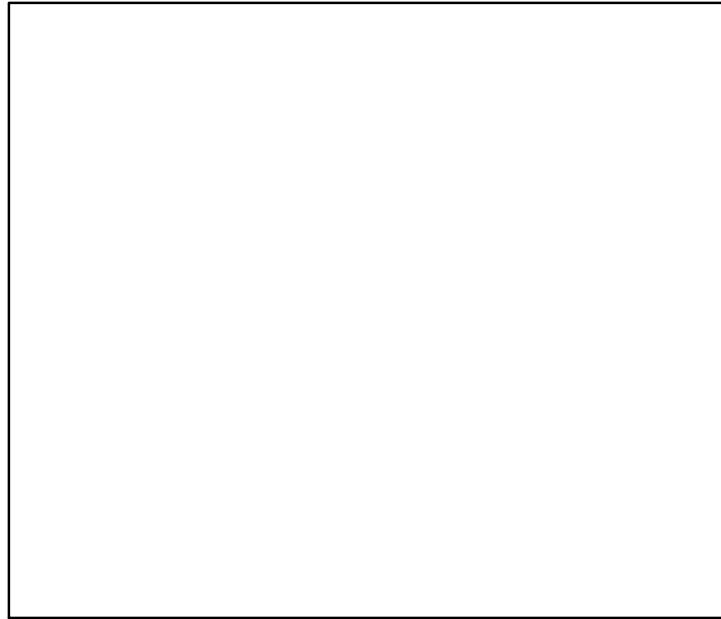
Kobe MGT*



Spawner Recruit*



Production*

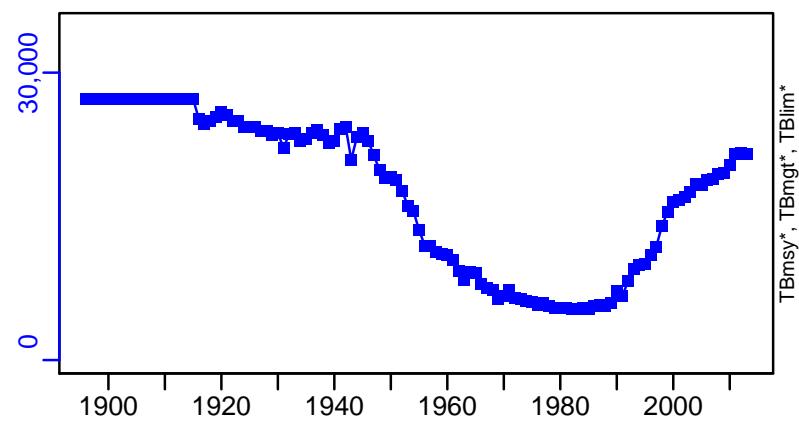


◆ Start Year ♦ End Year * No Data

Rex sole Pacific Coast [REXSOLEPCOAST]

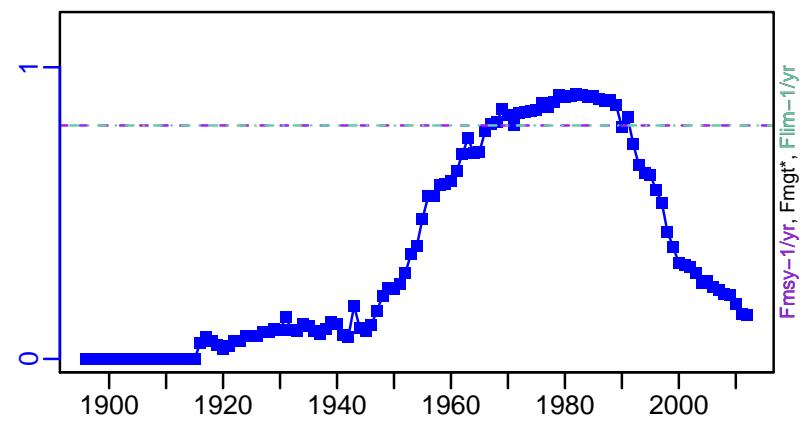
TB-MT (1896–2012–SISIMP2016)

SSB*



TN *

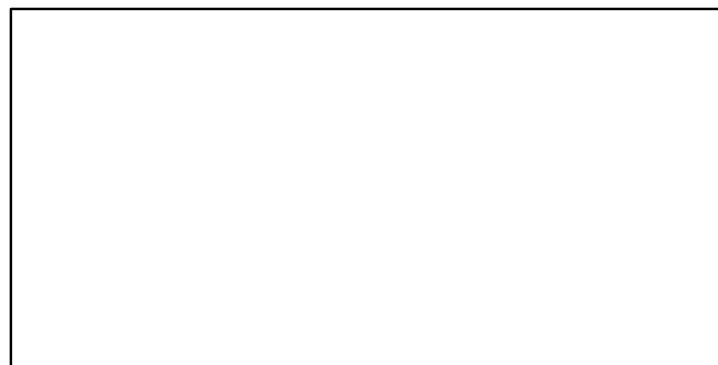
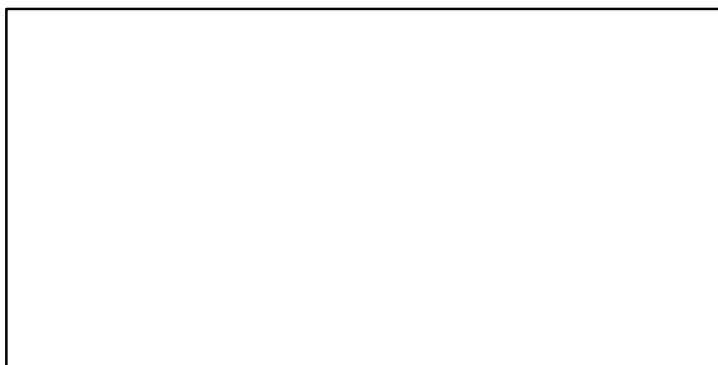
F-1/yr (1896–2012–SISIMP2016)



F_{msy}-1/yr , F_{mgt}* , F_{lim}-1/yr

ER*

Recruits*



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

TC*, TL*, RecC*

TAC*, Cpair*, Cadv*



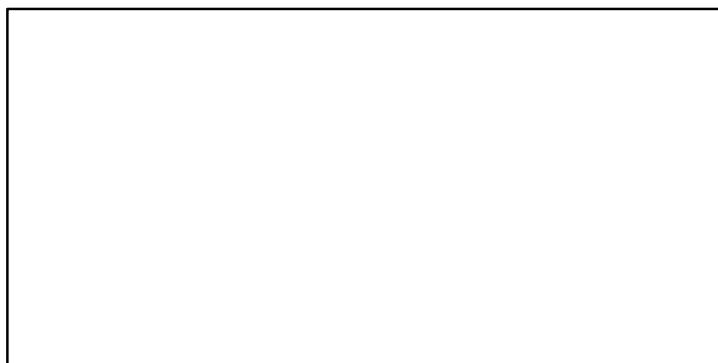
survB*



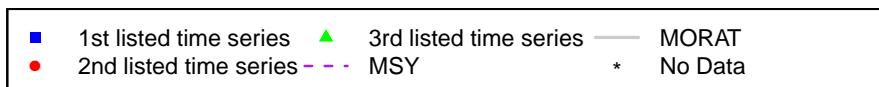
CPUE*



EFFORT*



CdivMSY*



Sablefish Pacific Coast [SABLEFPCOAST]

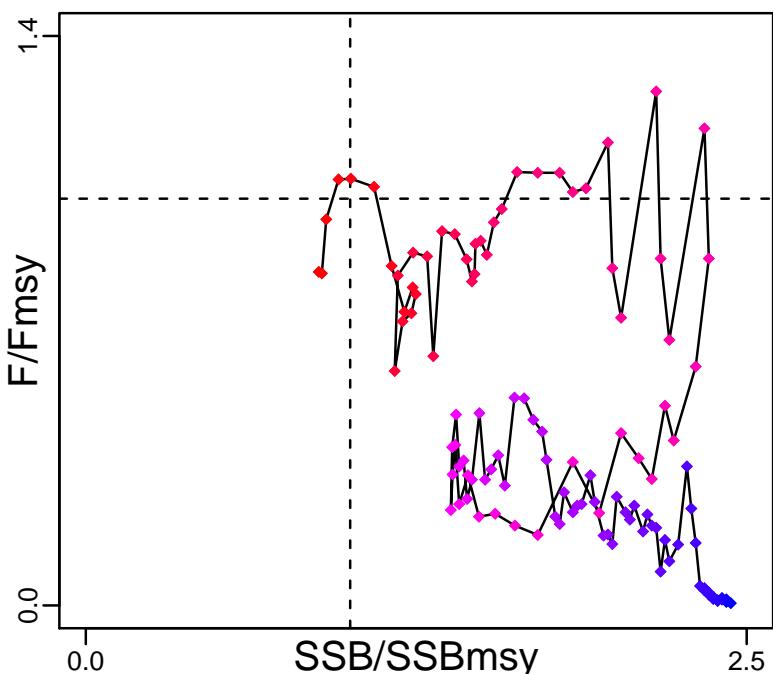
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Anoplopoma fimbria |
| Current Assess ID | NWFSC-SABLEFPCOAST-1900-2015-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

| Reference Points | | | |
|------------------|------------------|-----------|---------|
| Type | ID | Asmt Year | Value |
| TBmsy | - | - | - |
| SSBmsy | SSBmsy-MT | 2015 | 60,249 |
| Fmsy | Fmsy-1/yr | 2015 | 0.55 |
| ERmsy | ERmsy-conv-ratio | 2015 | 0.056 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2011 | 537,893 |
| SSB0 | SSB0-MT | 2011 | 182,136 |
| MSY | MSY-MT | 2015 | 7476 |
| M | M-1/yr | 2011 | 0.08 |
| TBlim | - | - | - |
| SSBlim | SSBlim-MT | 2015 | 37,656 |
| Flim | Flim-1/yr | 2015 | 0.55 |
| ERlim | - | - | - |

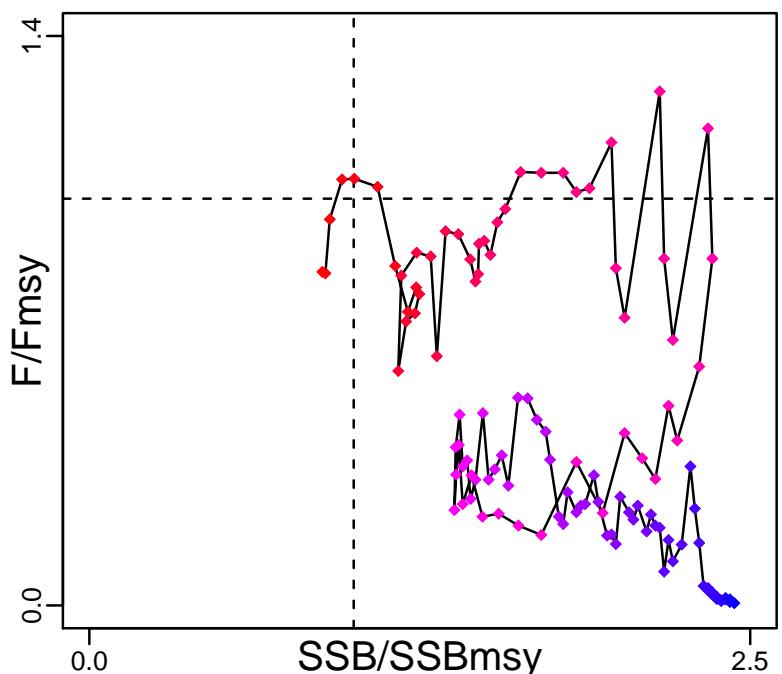
| Time Series | | | | | | |
|-------------------|--------------------------------|-----------|------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 168,000 | - | 4+ | |
| SSB | SSB-MT | 2015 | 52,000 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 13,100,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.451 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.026 | - | - | |
| TC | TC-MT | 2015 | 4460 | | | |
| TL | TL-MT | 2011 | 6820 | | | |
| TB/TBmsy | TB-MT/(TB0-MT*0.368) | 2011 | 1.041 | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2015 | 0.863 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.82 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-conv-ratio | 2015 | 0.458 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Sablefish Pacific Coast [SABLEFPCOAST]

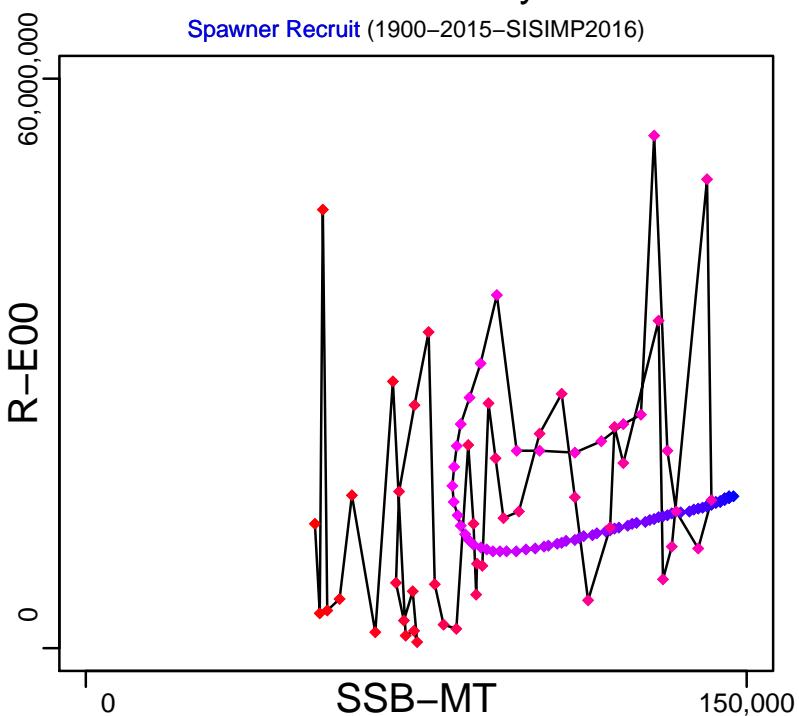
Kobe MSYpref (1900–2015–SISIMP2016)



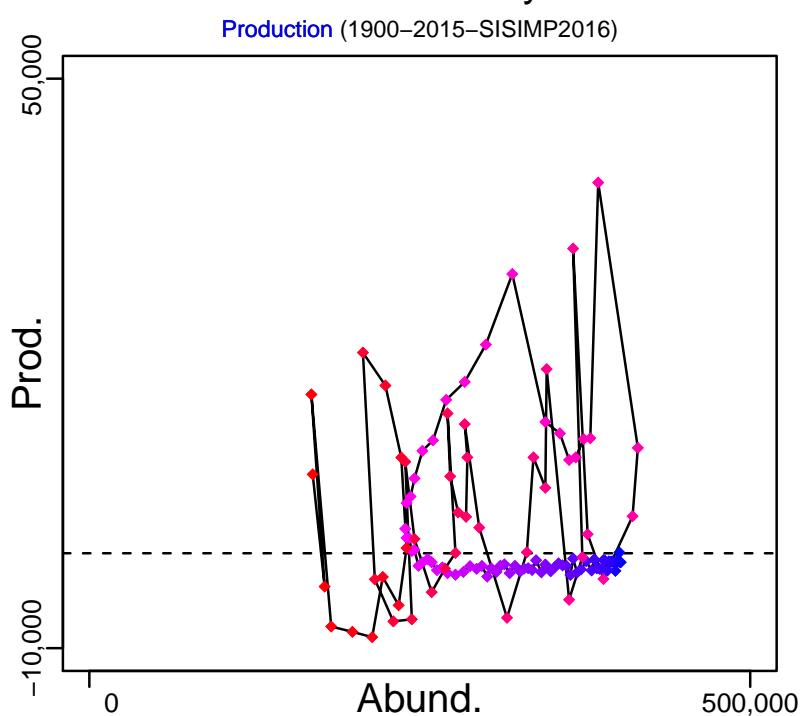
Kobe MGTpref (1900–2015–SISIMP2016)



Spawner Recruit (1900–2015–SISIMP2016)



Production (1900–2015–SISIMP2016)

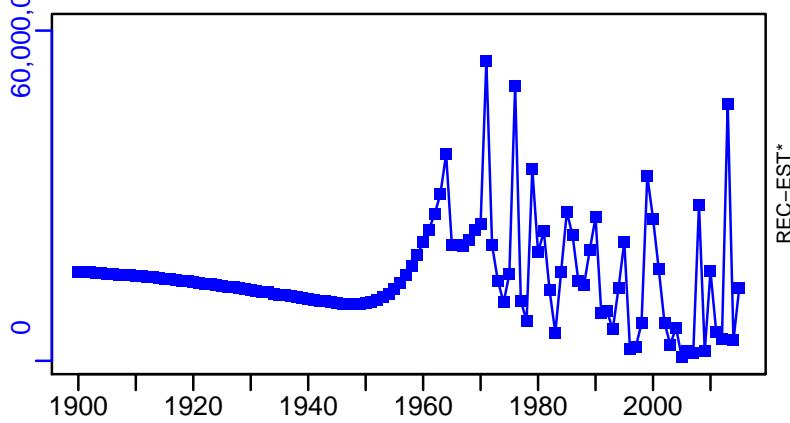
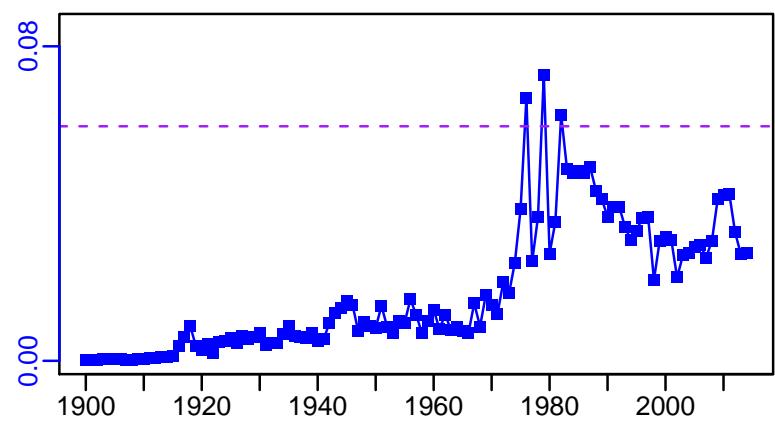
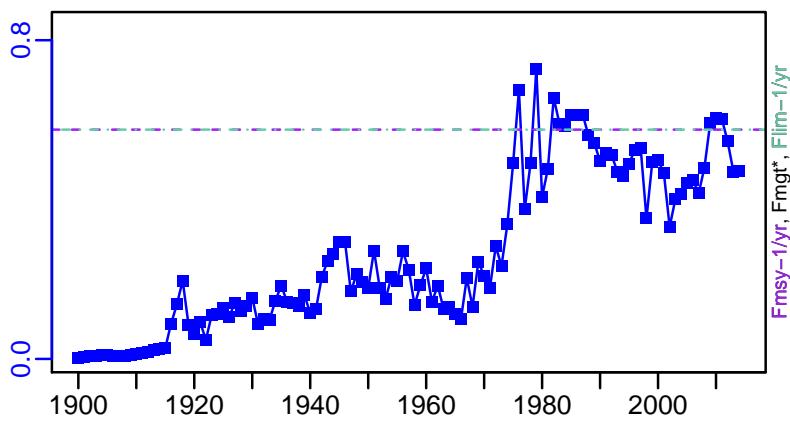
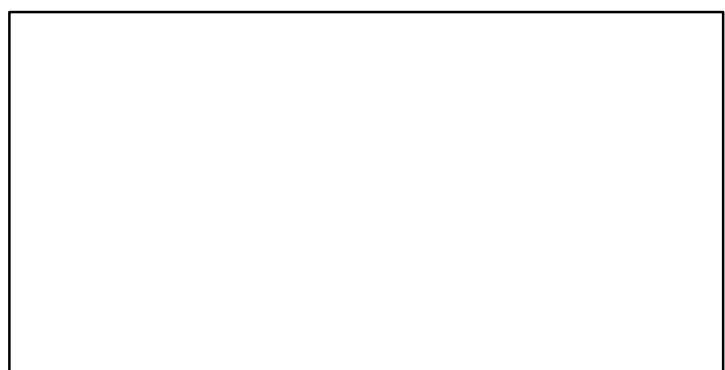
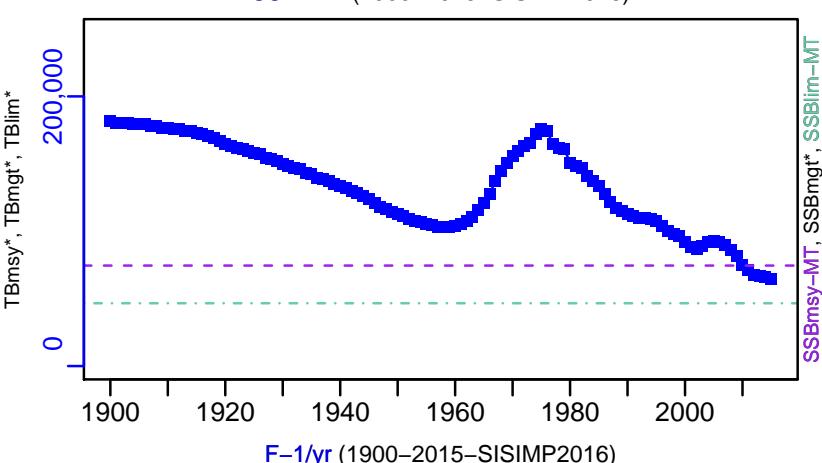
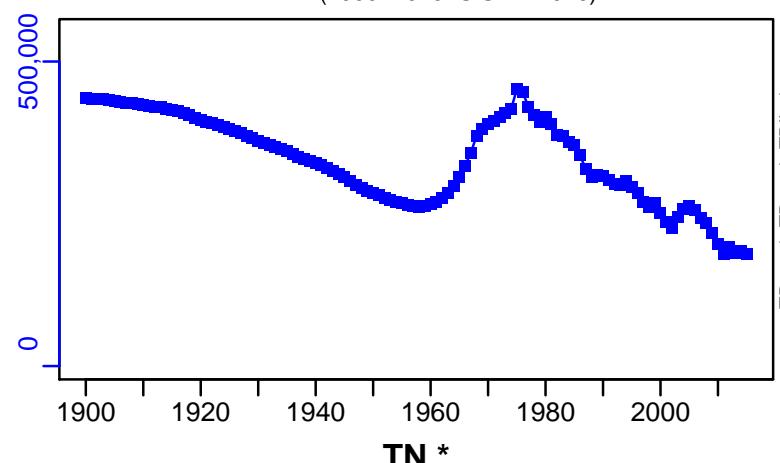


◆ Start Year ♦ End Year * No Data

Sablefish Pacific Coast [SABLEFPCOAST]

TB-MT (1900–2015–SISIMP2016)

SSB-MT (1900–2015–SISIMP2016)

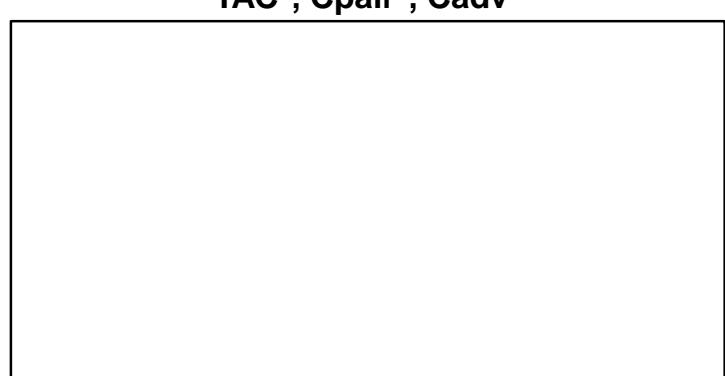
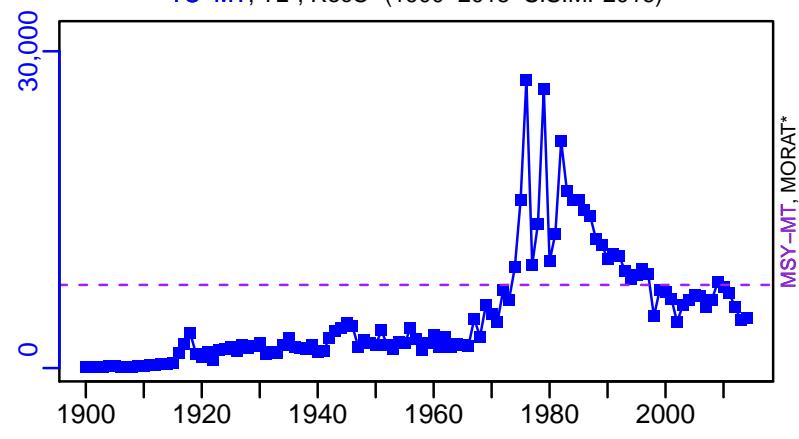


| | | |
|----------------------|---------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - - Lim BRP | * No Data |

Sablefish Pacific Coast [SABLEFPCOAST]

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

TAC*, Cpair*, Cadv*



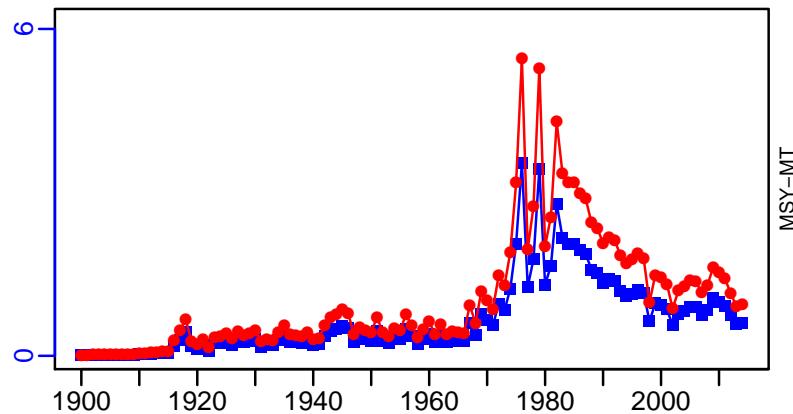
survB*

CPUE*



EFFORT*

TC-MT/MSY-MT, CdivMEANC-ratio, (1900–2015–SISIMP2016)



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

Pacific sardine Pacific Coast [SARDPCOAST]

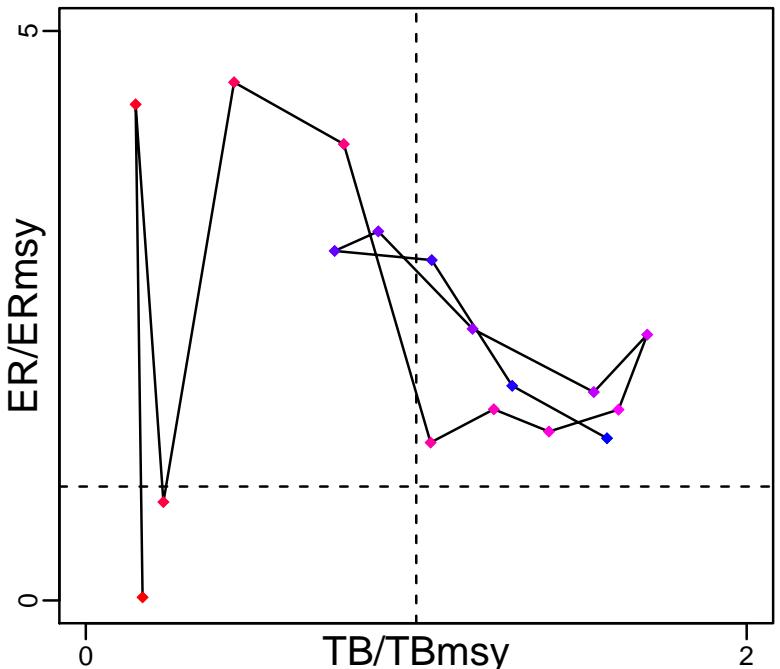
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sardinops sagax |
| Current Assess ID | SWFSC-SARDPCOAST-1994-2016-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national management |
| Assessor | Southwest Fisheries Science Center |
| Asmts in RAM | 2007, 2016 |

| Reference Points | | | |
|------------------|-----------------|-----------|---------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2016 | 575,022 |
| SSBmsy | - | - | - |
| Fmsy | - | - | - |
| ERmsy | ERmsy-est-ratio | 2016 | 0.056 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-est-MT | 2016 | 32,285 |
| M | M-1/yr | 2007 | 0.4 |
| TBlim | - | - | - |
| SSBlim | SSBlim-MT | 2016 | 50,000 |
| Flim | - | - | - |
| ERlim | - | - | - |

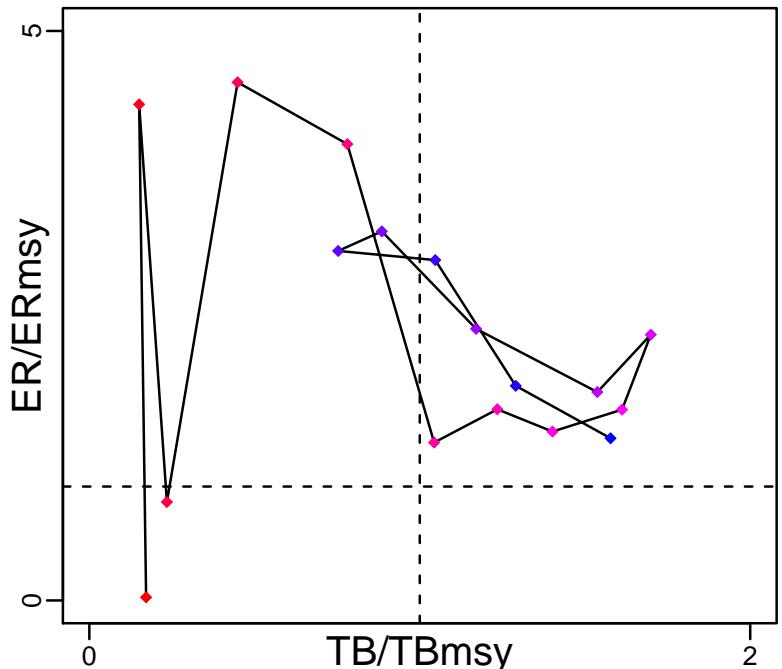
| Time Series | | | | | | |
|-------------------|-------------------------------|-----------|------------|-----|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2016 | 98,800 | - | 0+ | |
| SSB | SSB-MT | 2016 | 65,100 | - | - | |
| TN | - | - | - | - | - | |
| R | R-MT | 2016 | 31,200 | - | 0 | |
| F | - | - | - | - | - | |
| ER | ER-calc-ratio | 2016 | 0.002 | - | - | |
| TC | TC-MT | 2016 | 153 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 2016 | 0.172 | | | |
| SSB/SSBmsy | - | - | - | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-est-ratio | 2016 | 0.028 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Pacific sardine Pacific Coast [SARDPCOAST]

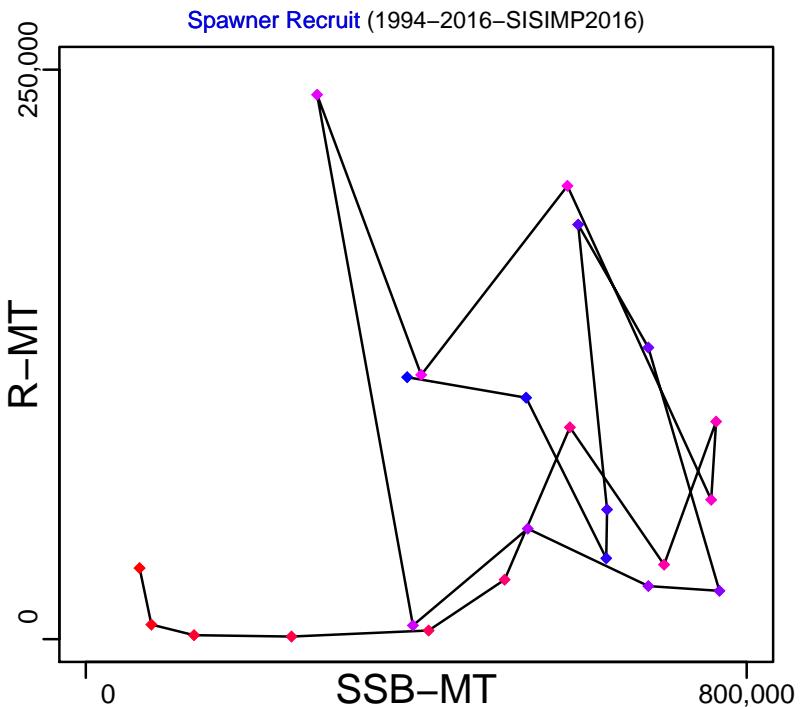
Kobe MSYpref (1994–2016–SISIMP2016)



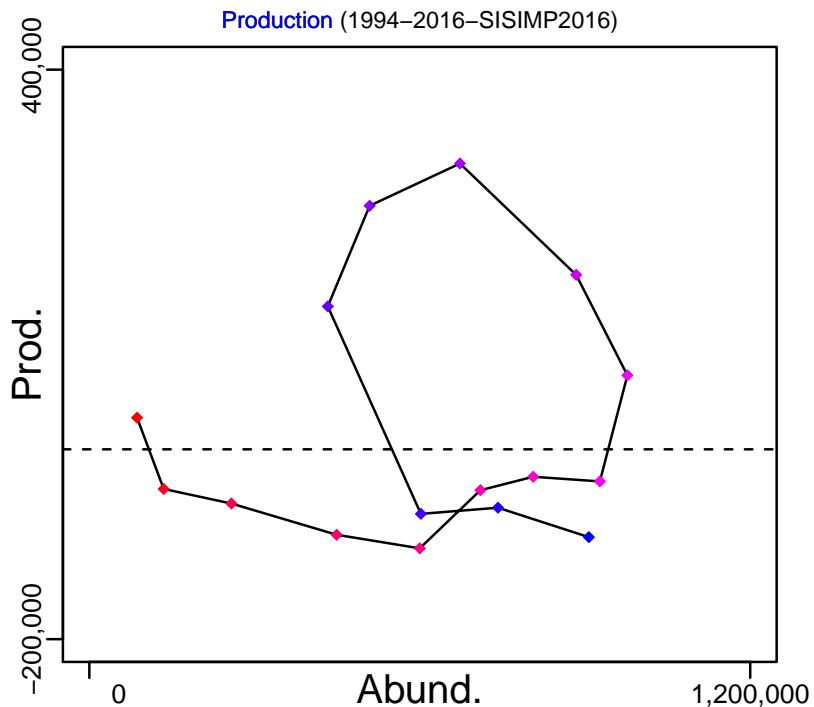
Kobe MGTpref (1994–2016–SISIMP2016)



Spawner Recruit (1994–2016–SISIMP2016)



Production (1994–2016–SISIMP2016)

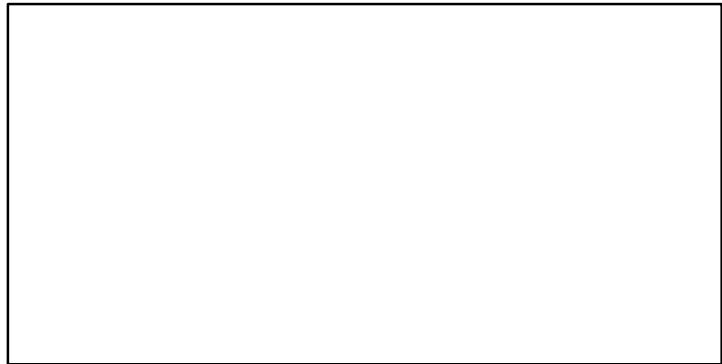
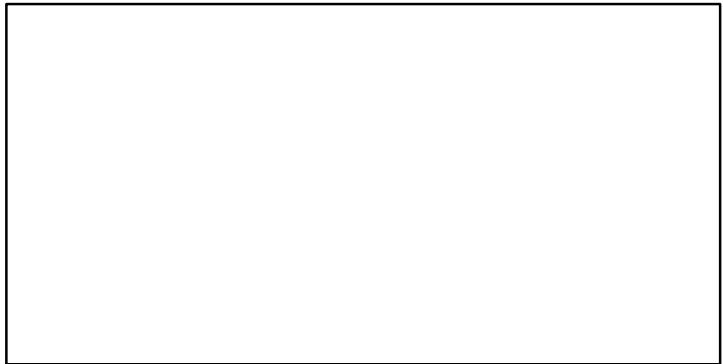
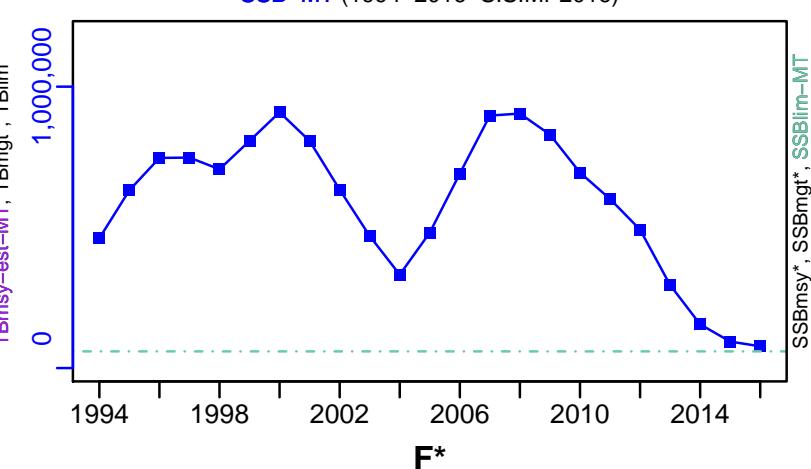
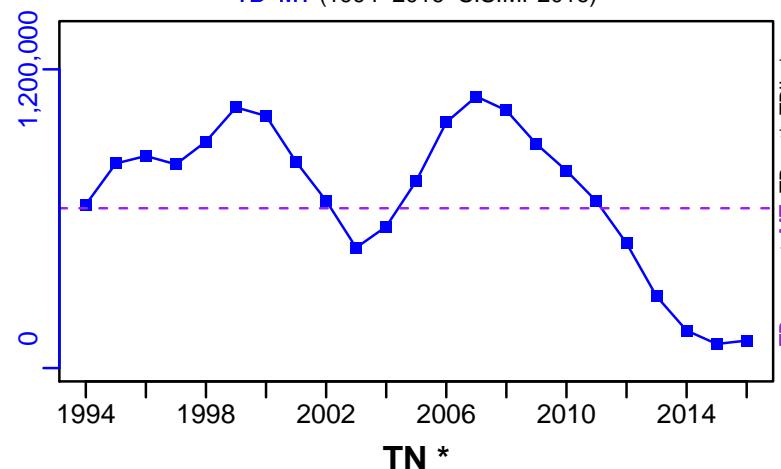


◆ Start Year ◆ End Year * No Data

Pacific sardine Pacific Coast [SARDPCOAST]

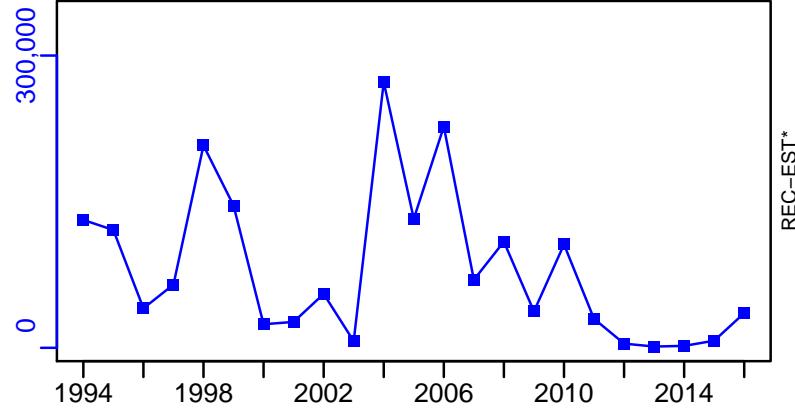
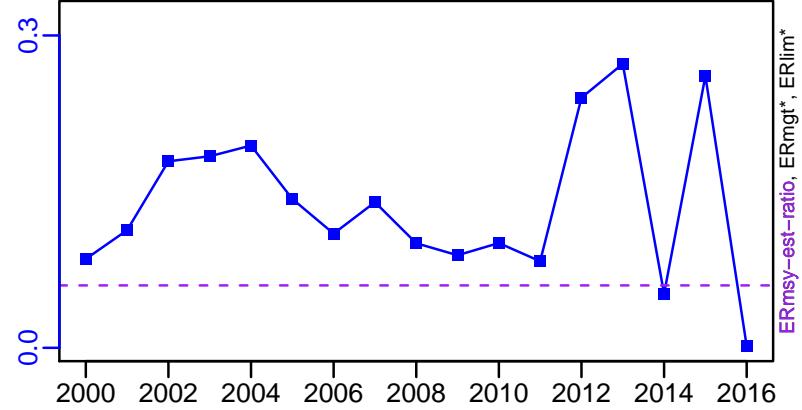
TB-MT (1994–2016–SISIMP2016)

SSB-MT (1994–2016–SISIMP2016)



ER-calc-ratio (1994–2016–SISIMP2016)

R-MT (1994–2016–SISIMP2016)

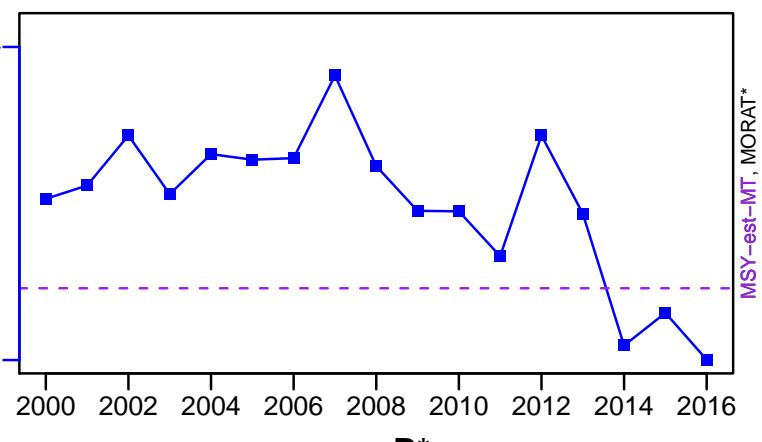


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP | - - Lim BRP | * No Data |

Pacific sardine Pacific Coast [SARDPCOAST]

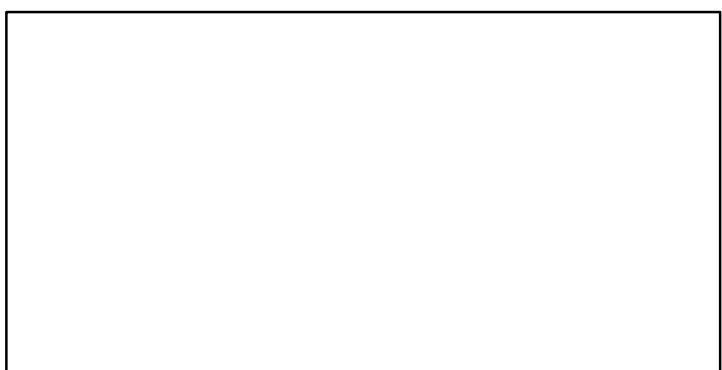
TC-MT, TL*, RecC* (1994–2016–SISIMP2016)

TAC*, Cpair*, Cadv*

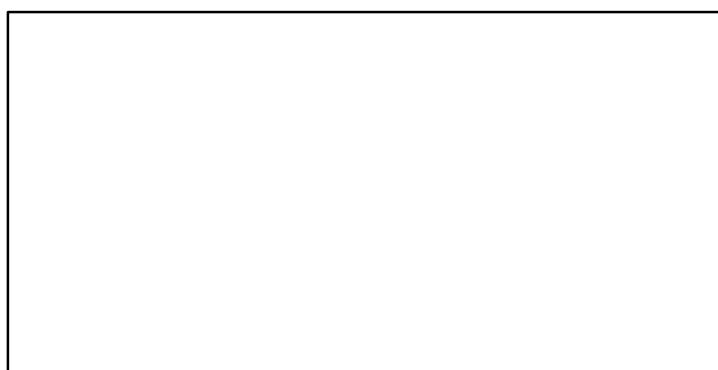


survB*

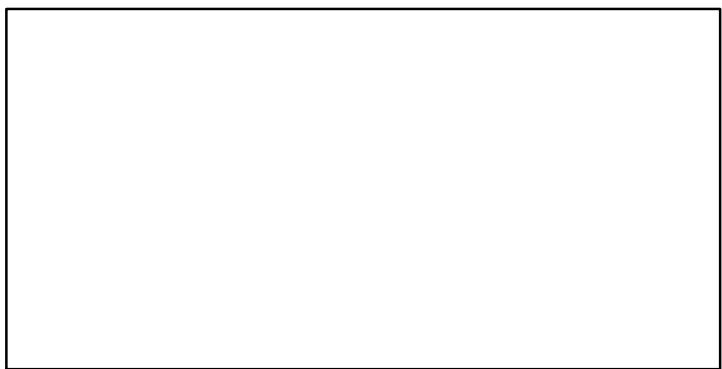
MSY-est-MT, MORAT*



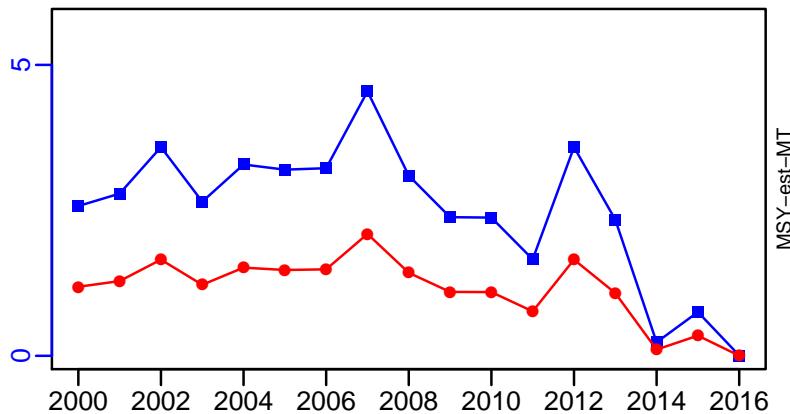
CPUE*



EFFORT*



TC-MT/MSY-est-MT, CdivMEANC-ratio, (1994–2016–SISIMP2016)



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

Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

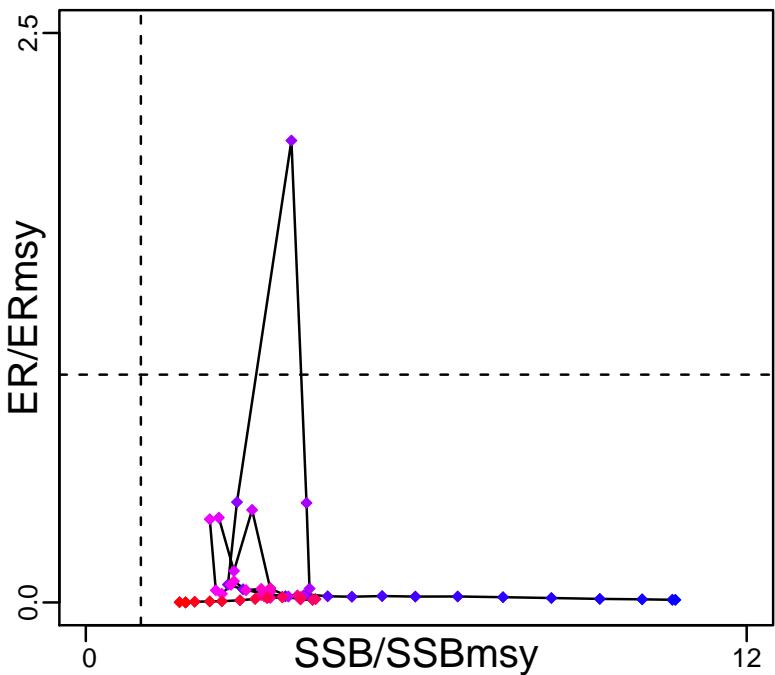
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes jordani |
| Current Assess ID | SWFSC-SBELLYROCKPCOAST-1950-2005-BRANCH |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

| Reference Points | | | |
|-------------------------|-----------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2005 | 26,948 |
| SSBmsy | - | - | - |
| Fmsy | - | - | - |
| ERmsy | ERmsy-est-ratio | 2005 | 0.029 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2005 | 98,400 |
| SSB0 | SSB0-MT | 2005 | 49,500 |
| MSY | MSY-est-MT | 2005 | 789 |
| M | M-1/yr | 2005 | 0.26 |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | - | - | - |
| ERlim | - | - | - |

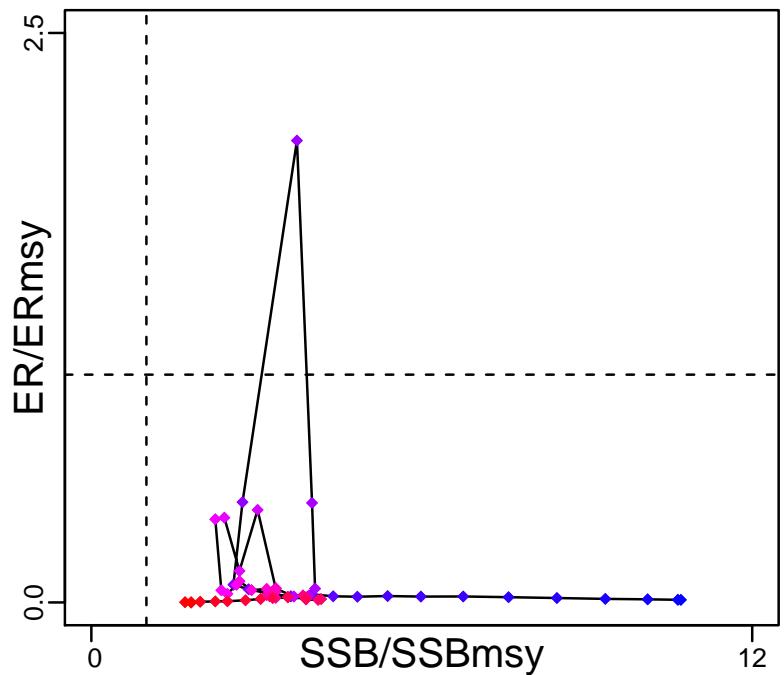
| Time Series | | | | | | |
|--------------------|--------------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2005 | 64,000 | - | 1+ | |
| SSB | SSB-MT | 2005 | 33,000 | Females | 2+ | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2005 | 9000 | - | 0 | |
| F | F-1/yr | 2005 | 0 | Both | 1+ | |
| ER | ER-ratio | 2005 | 0 | - | - | |
| TC | TC-MT | 2005 | 0 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/(TB0-MT*0.368) | 2005 | 1.767 | | | |
| SSB/SSBmsy | SSB-MT/(SSB0-MT*0.368) | 2005 | 1.812 | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-ratio/ERmsy-est-ratio | 2005 | 0 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

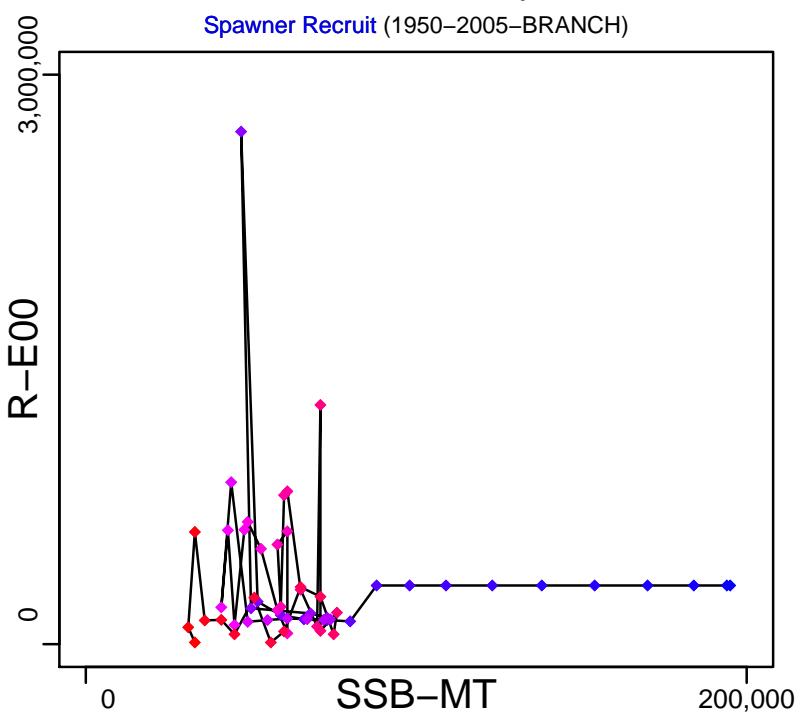
Kobe MSYpref (1950–2005–BRANCH)



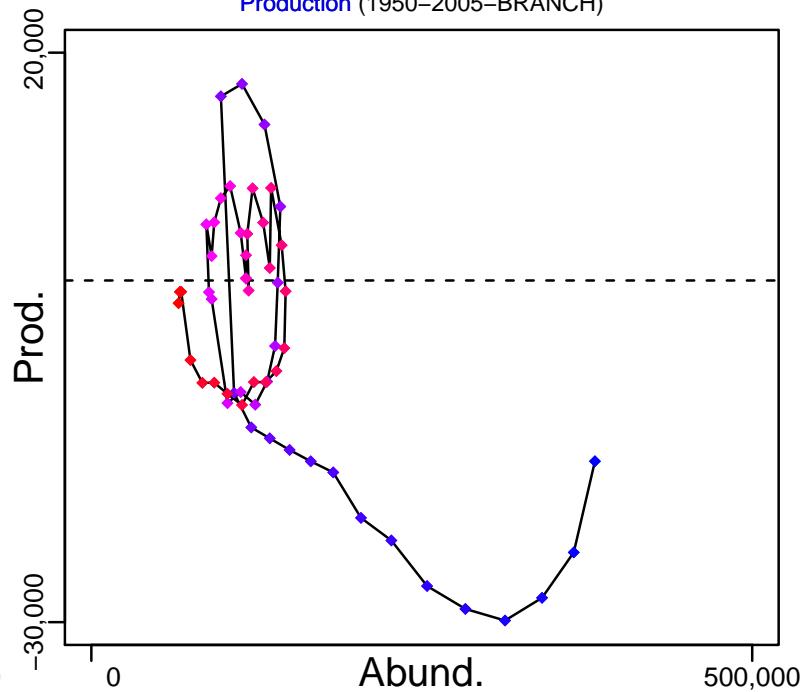
Kobe MGTpref (1950–2005–BRANCH)



Spawner Recruit (1950–2005–BRANCH)



Production (1950–2005–BRANCH)

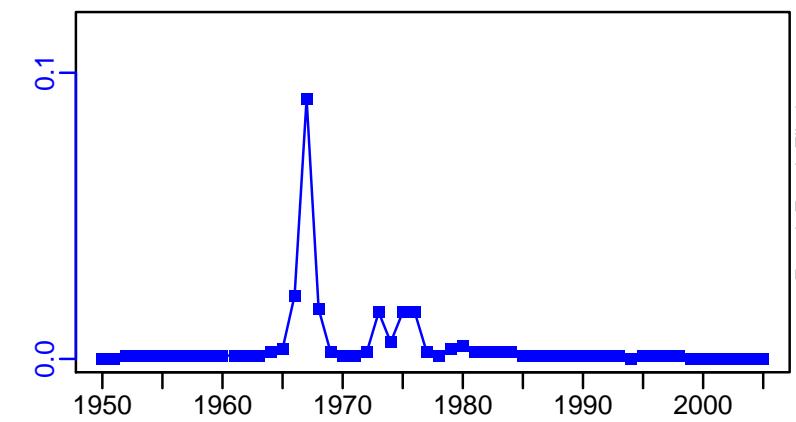
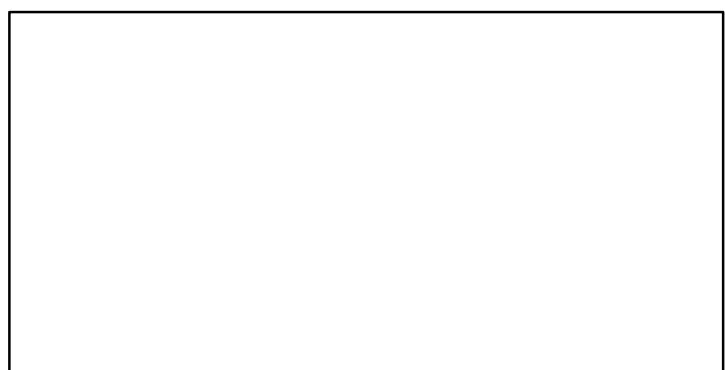
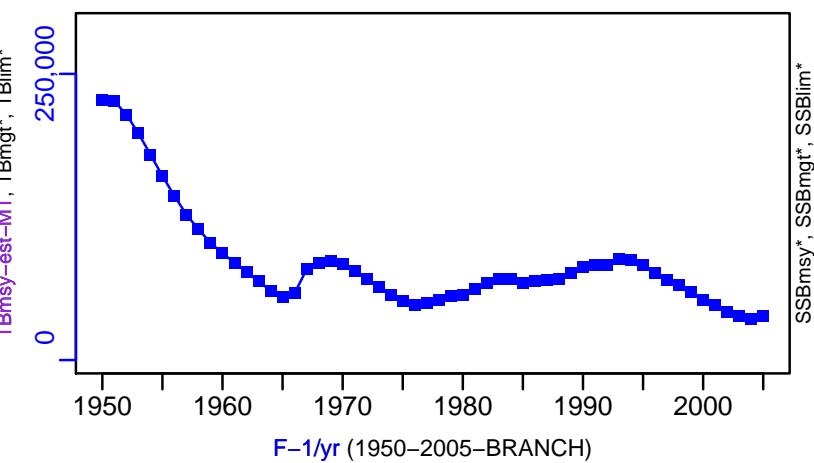
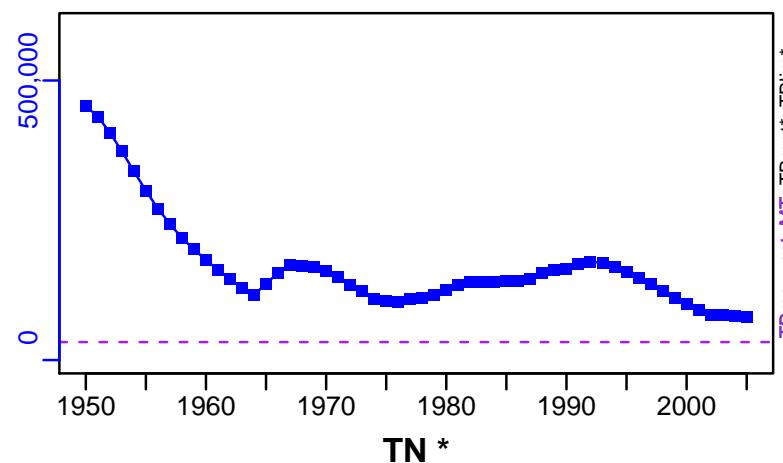


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

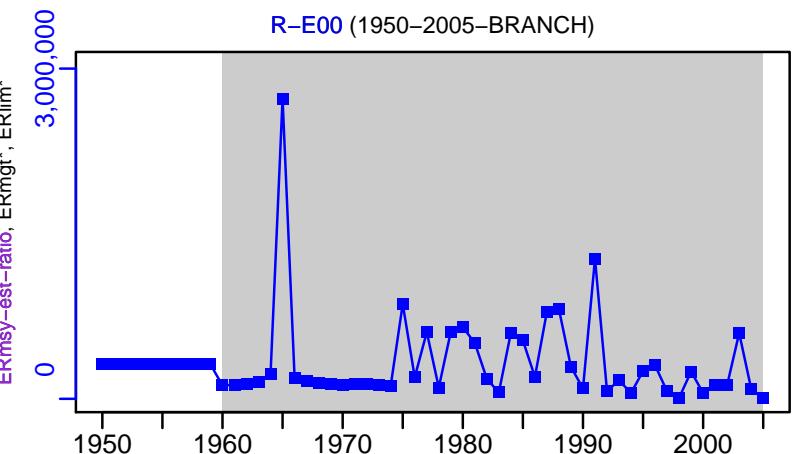
Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

TB-MT (1950–2005–BRANCH)

SSB-MT (1950–2005–BRANCH)



ER-ratio (1950–2005–BRANCH)



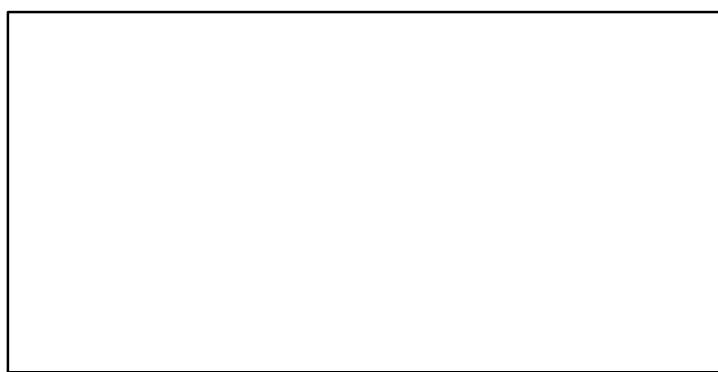
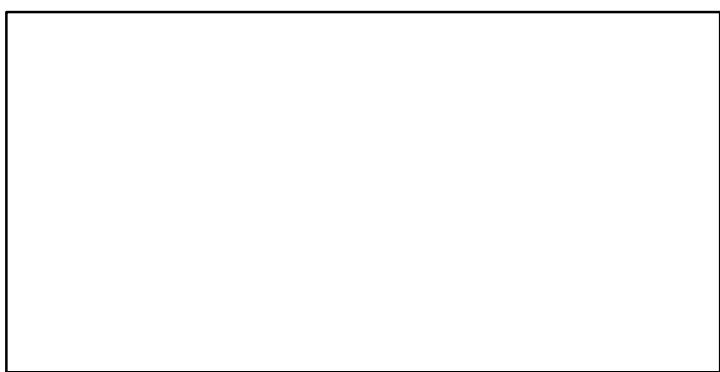
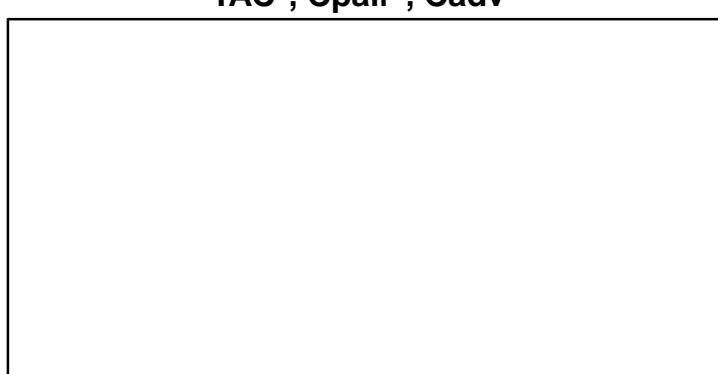
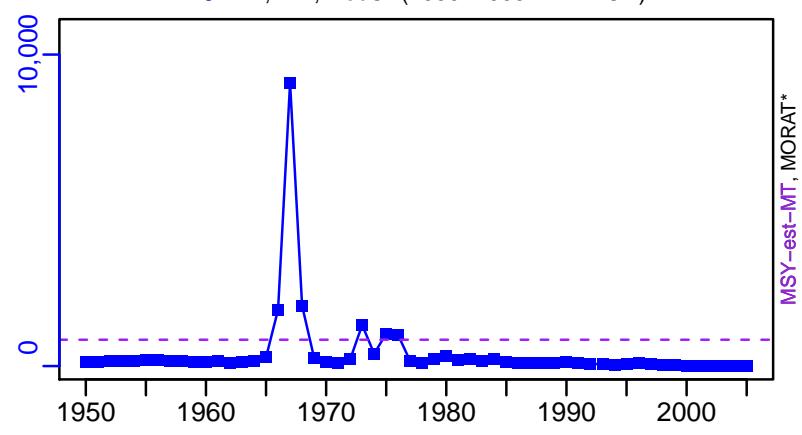
REC-EST: 1960–2005

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

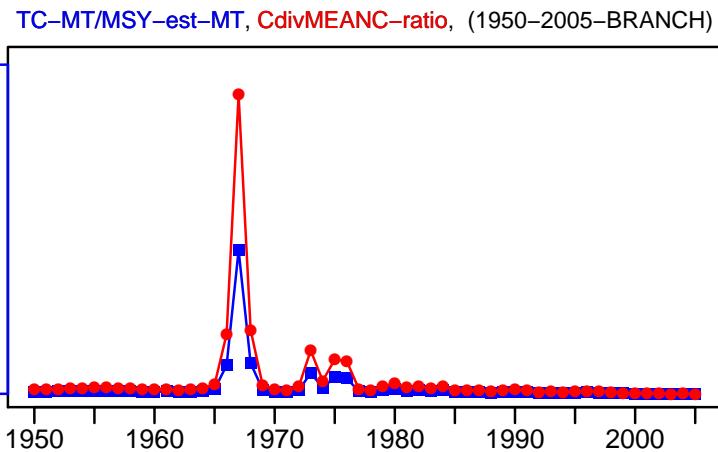
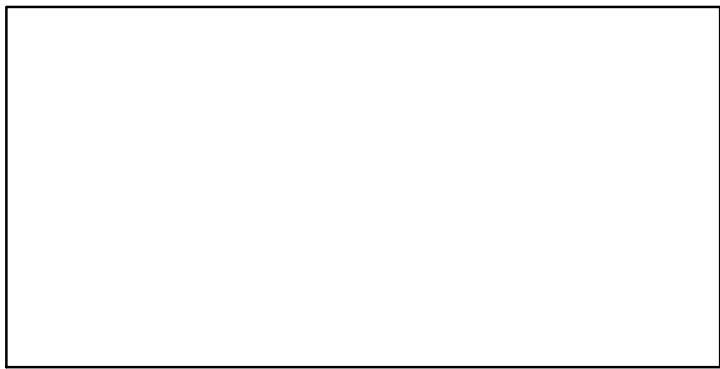
Shortbelly rockfish Pacific Coast [SBELLYROCKPCOAST]

TC-MT, TL*, RecC* (1950–2005-BRANCH)

TAC*, Cpair*, Cadv*



EFFORT*



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

Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

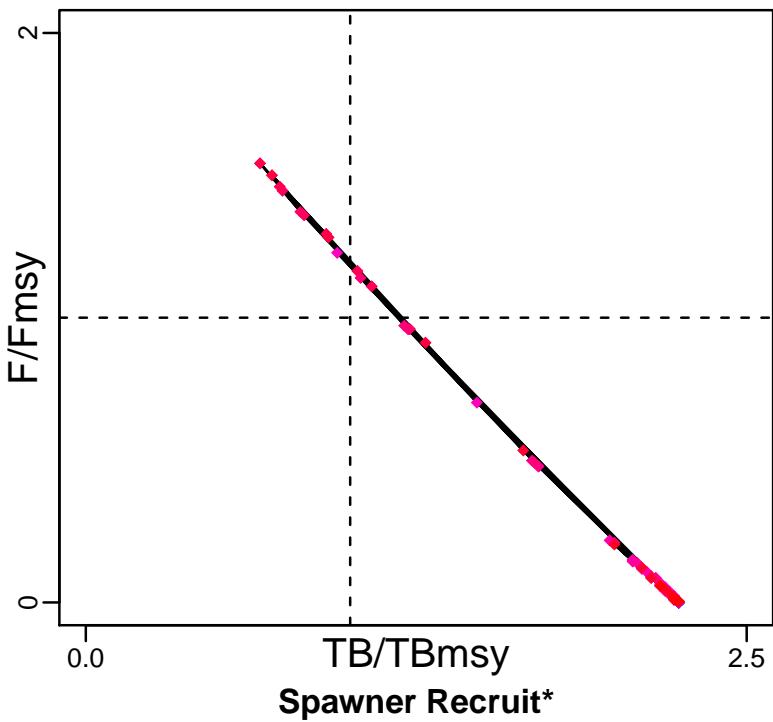
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes zacentrus |
| Current Assess ID | NWFSC-SHCROCKPCOAST-1892-2012-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US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

| Reference Points | | | |
|-------------------------|-----------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-est-MT | 2012 | 5752 |
| SSBmsy | - | - | - |
| Fmsy | Fmsy-1/yr | 2012 | 0.5 |
| ERmsy | ERmsy-est-ratio | 2012 | 0.209 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | - | - | - |
| MSY | MSY-MT | 2012 | 270 |
| M | - | - | - |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | Flim-1/yr | 2012 | 0.5 |
| ERlim | - | - | - |

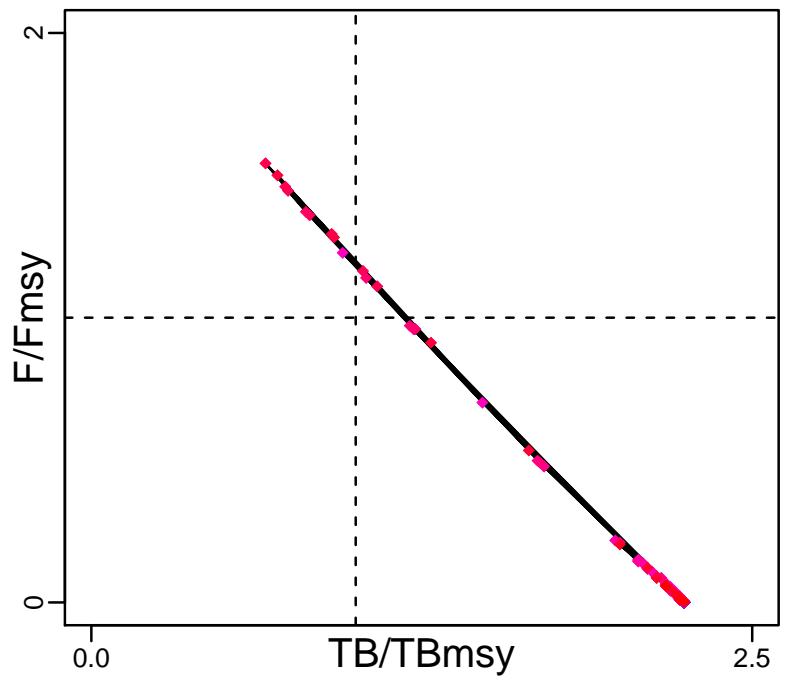
| Time Series | | | | | | |
|--------------------|-------------------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2012 | 12,800 | - | - | |
| SSB | - | - | - | - | - | |
| TN | - | - | - | - | - | |
| R | - | - | - | - | - | |
| F | F-1/yr | 2012 | 0.03 | - | - | |
| ER | ER-calc-ratio | 2012 | 0.001 | - | - | |
| TC | TC-MT | 2012 | 14 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-est-MT | 2012 | 2.225 | | | |
| SSB/SSBmsy | - | - | - | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2012 | 0.06 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-est-ratio | 2012 | 0.005 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

Kobe MSYpref (1892–2012–SISIMP2016)

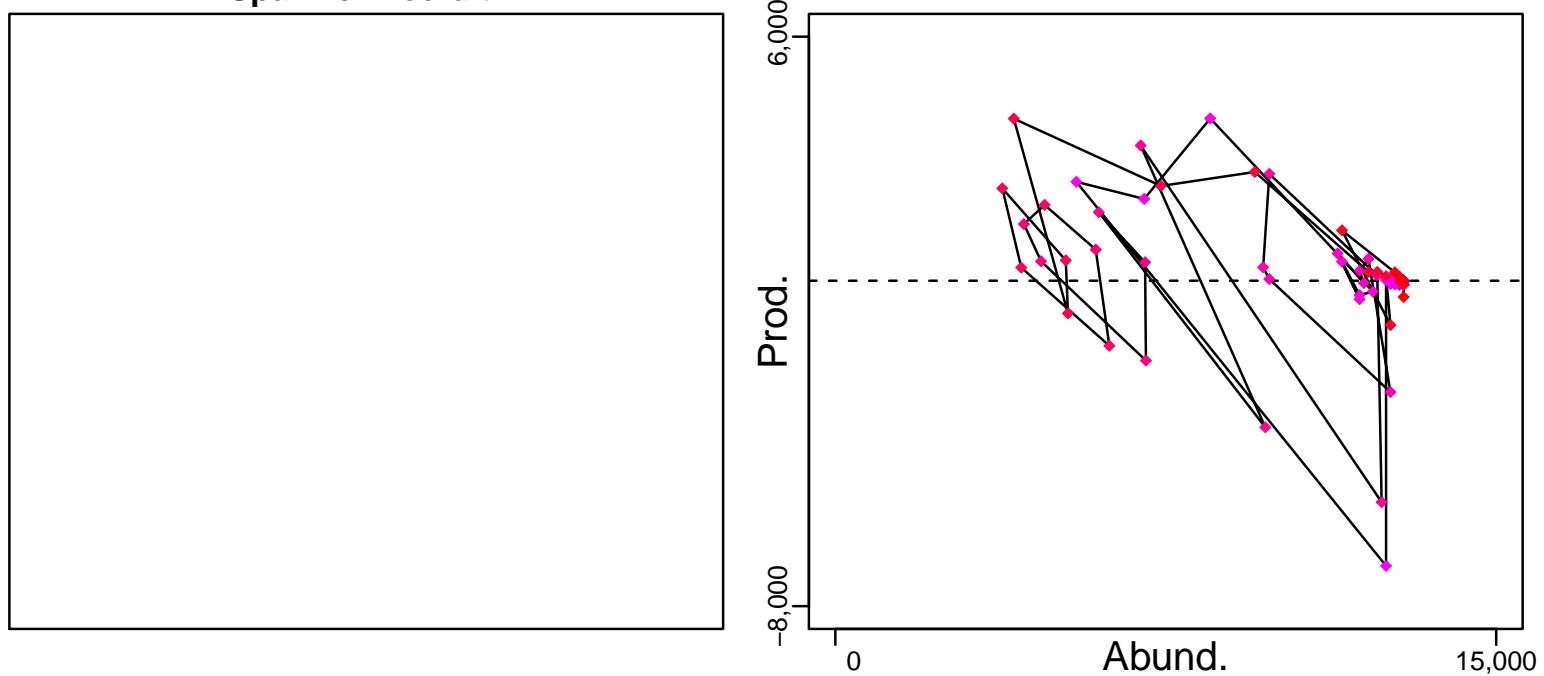


Kobe MGTpref (1892–2012–SISIMP2016)



Spawner Recruit*

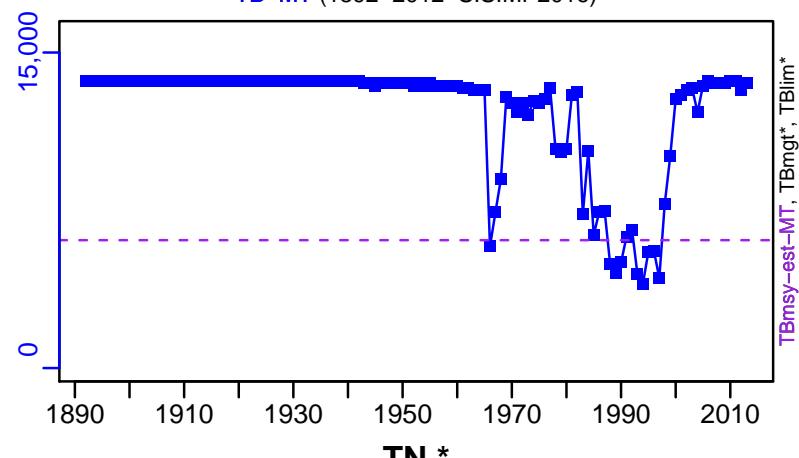
Production (1892–2012–SISIMP2016)



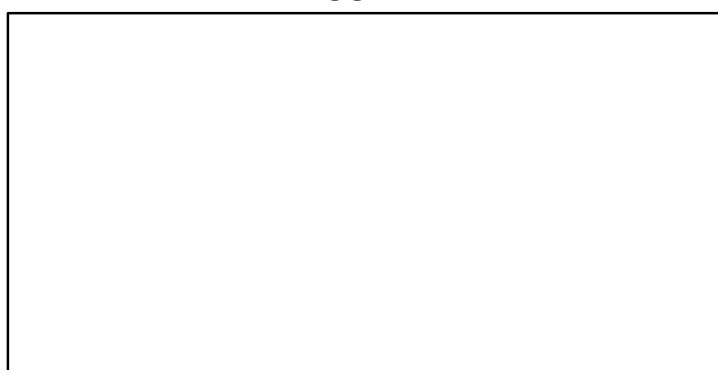
◆ Start Year ◆ End Year * No Data

Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

TB-MT (1892–2012–SISIMP2016)



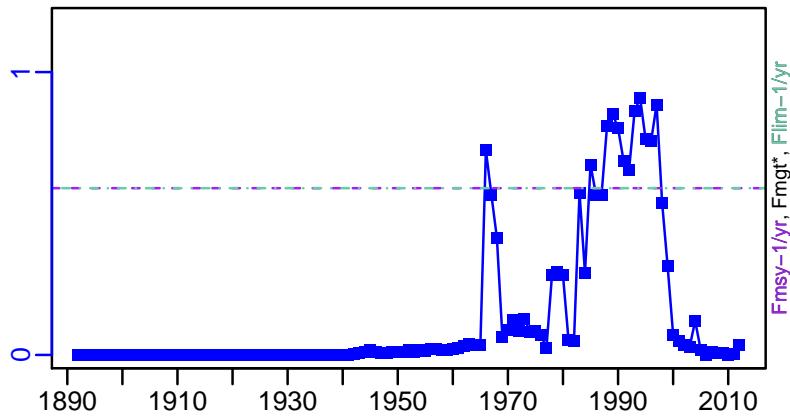
SSB*



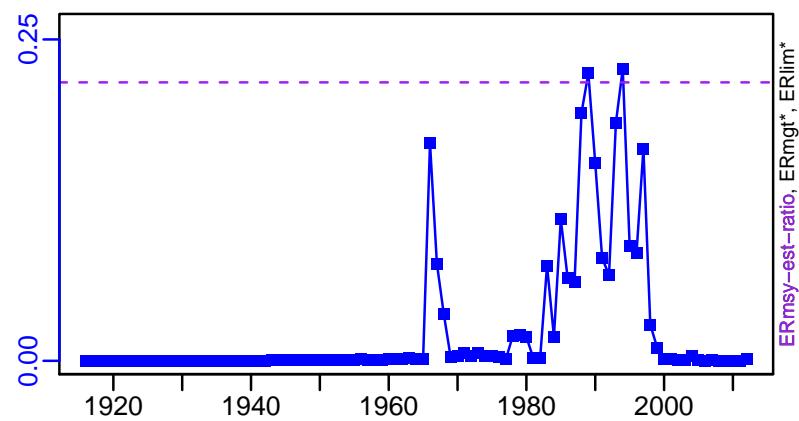
TN *



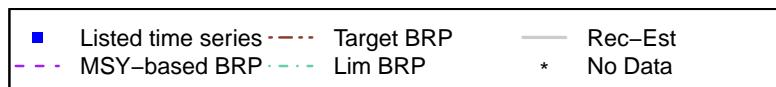
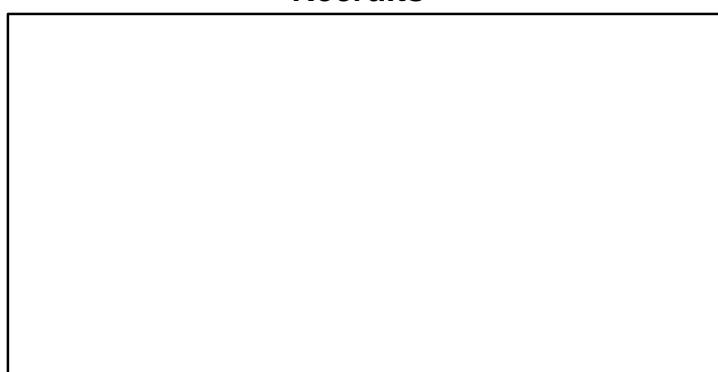
F-1/yr (1892–2012–SISIMP2016)



ER-calc-ratio (1892–2012–SISIMP2016)



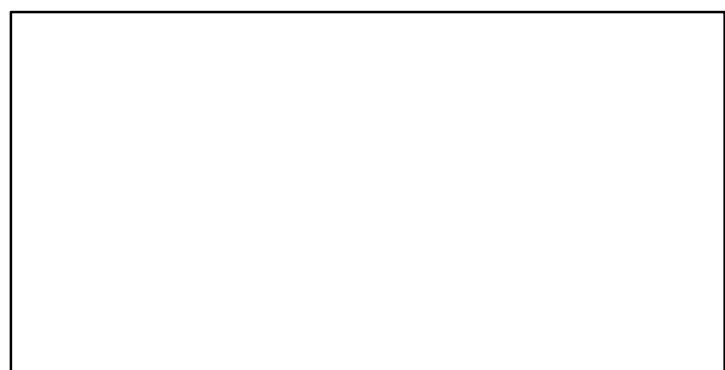
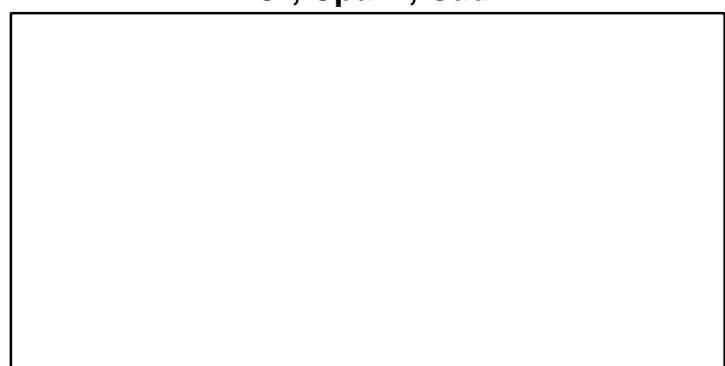
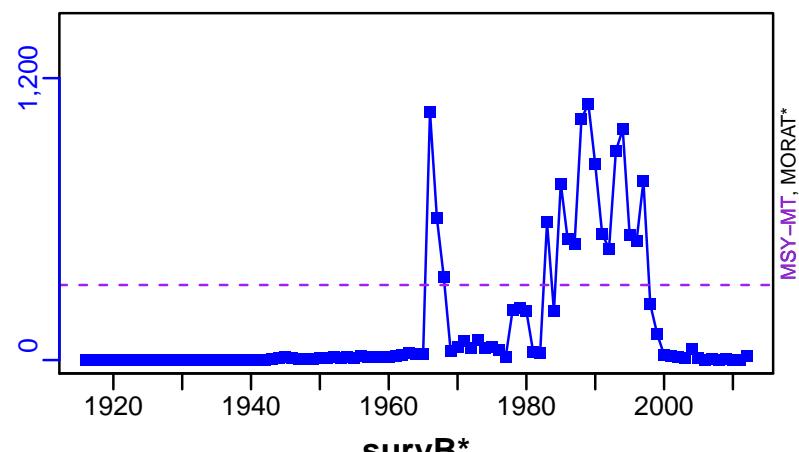
Recruits*



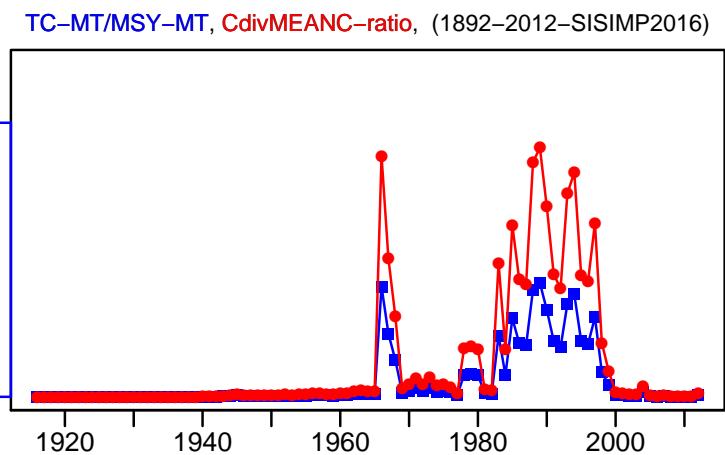
Sharpchin rockfish Pacific Coast [SHCROCKPCOAST]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

Splitnose rockfish Pacific Coast [SNROCKPCOAST]

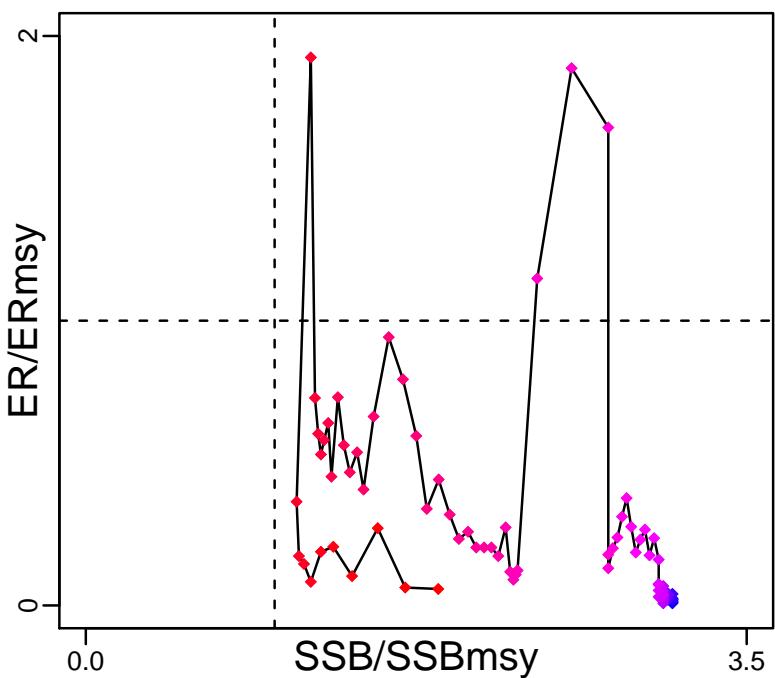
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes diploproa |
| Current Assess ID | NWFSC-SNROCKPCOAST-1905-2009-STANTON |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

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

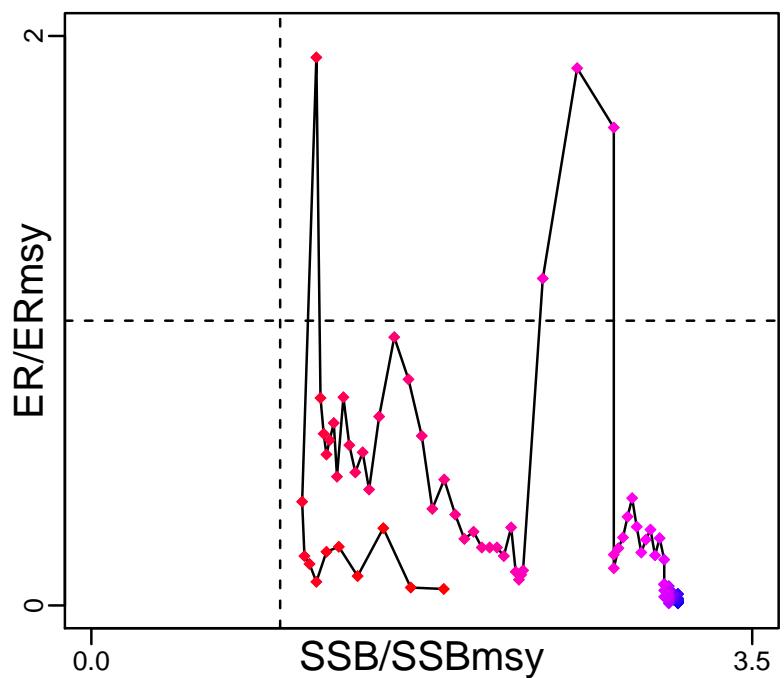
| Time Series | | | | | | |
|--------------------|----------------------------|------------------|--------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2009 | 70,200 | - | 4+ | |
| SSB | SSB-E00eggs | 2009 | 8.43×10^9 | Females | - | |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

Splitnose rockfish Pacific Coast [SNROCKPCOAST]

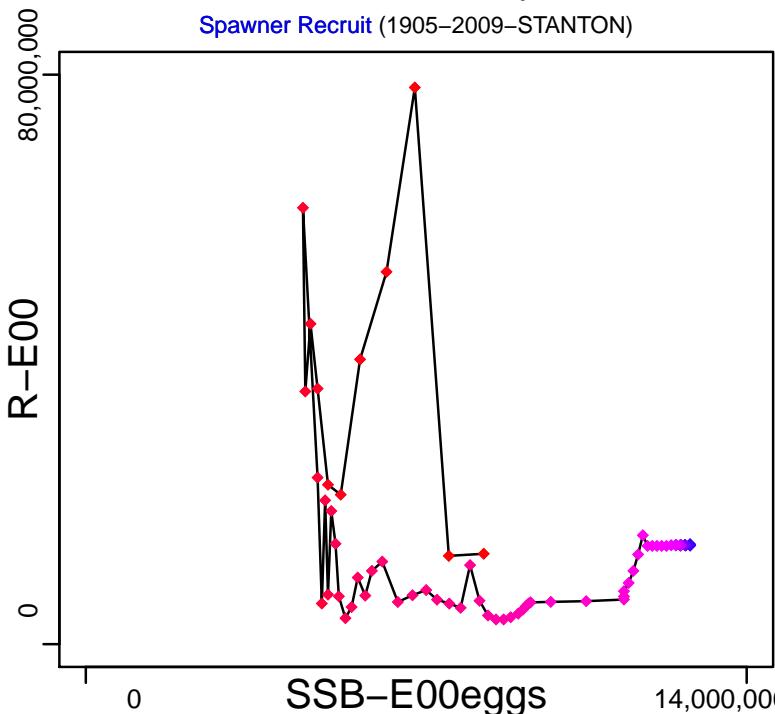
Kobe MSYref (1905–2009–STANTON)



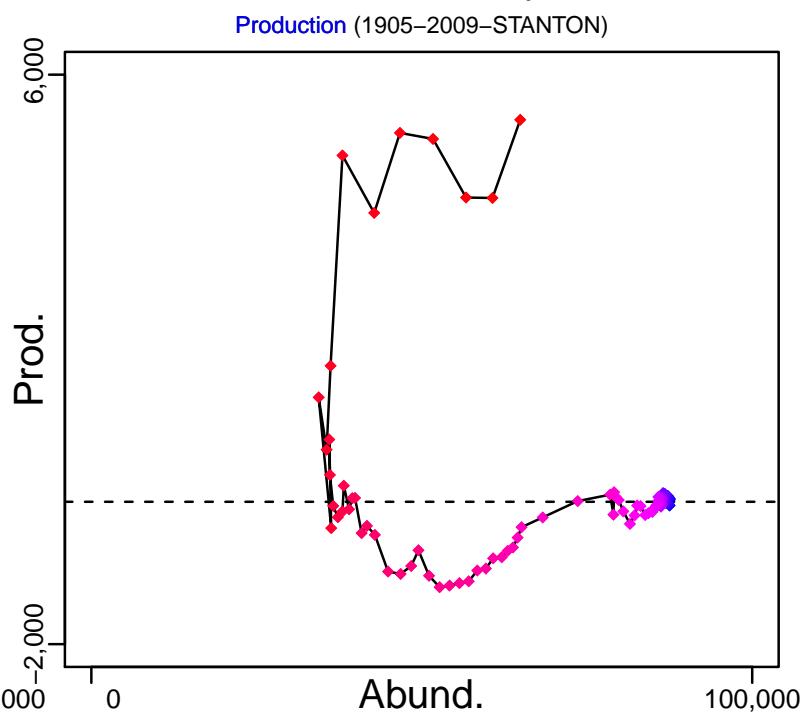
Kobe MGTref (1905–2009–STANTON)



Spawner Recruit (1905–2009–STANTON)



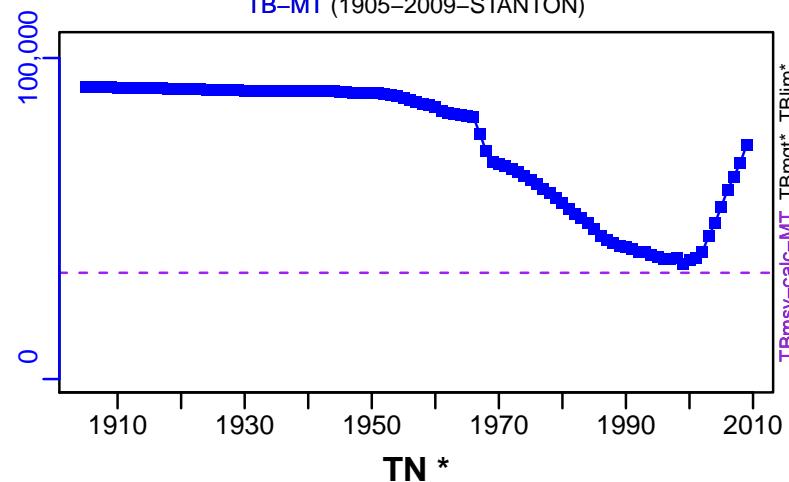
Production (1905–2009–STANTON)



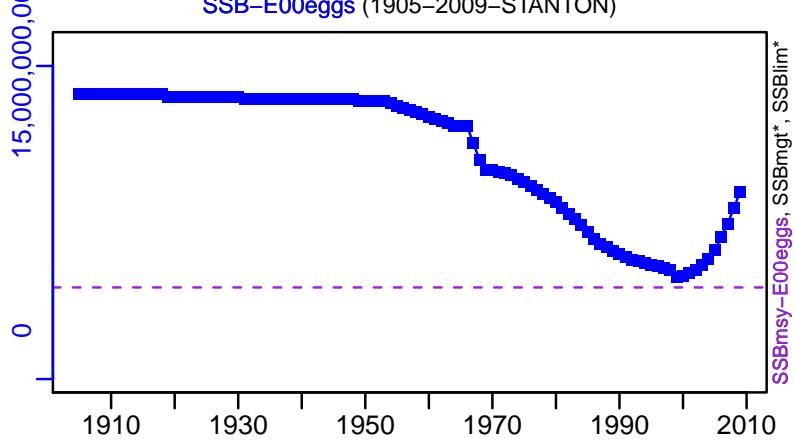
| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Splitnose rockfish Pacific Coast [SNROCKPCOAST]

TB-MT (1905–2009–STANTON)



SSB-E00eggs (1905–2009–STANTON)

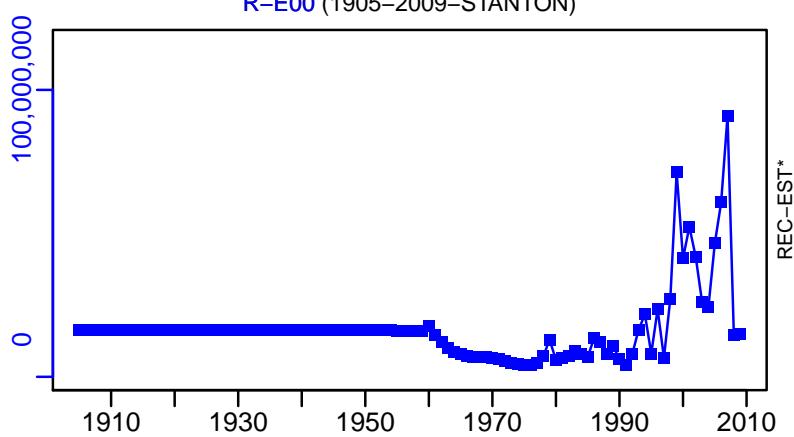
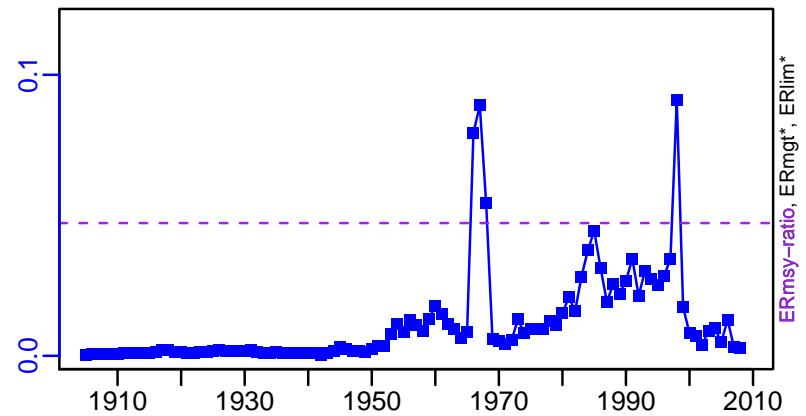


TN *

F*

ER-ratio (1905–2009–STANTON)

R-E00 (1905–2009–STANTON)

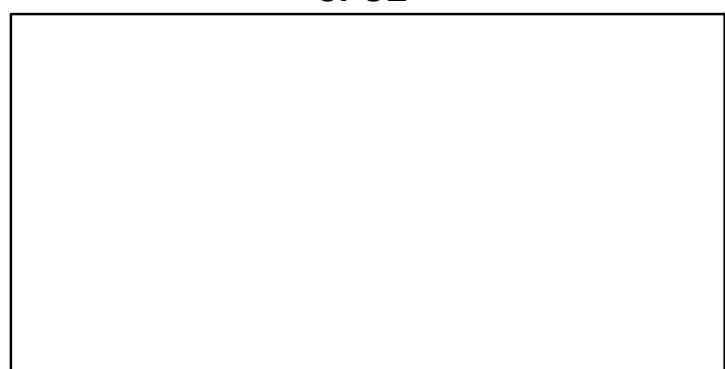
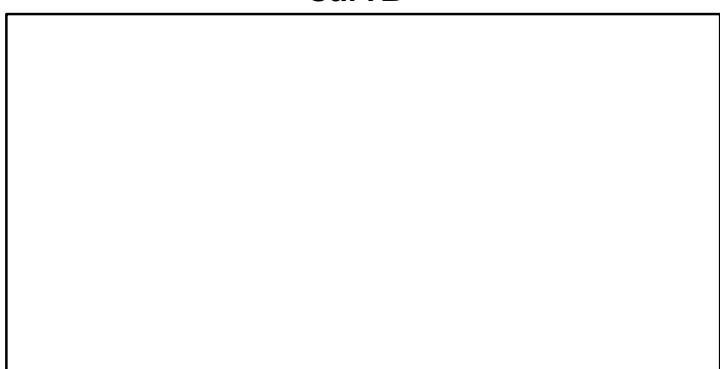
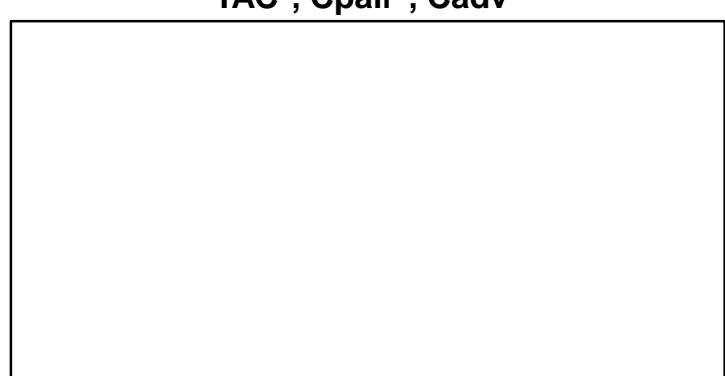
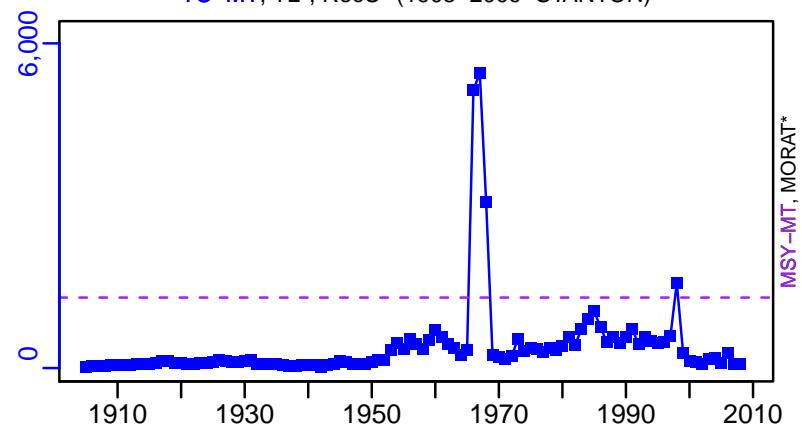


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - MSY-based BRP | - - Lim BRP | * No Data |

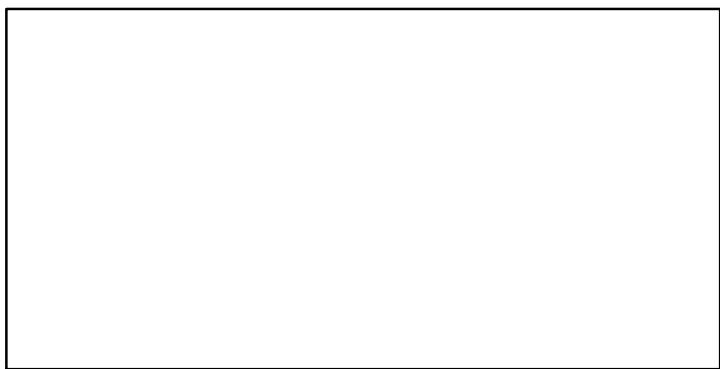
Splitnose rockfish Pacific Coast [SNROCKPCOAST]

TC-MT, TL*, RecC* (1905–2009-STANTON)

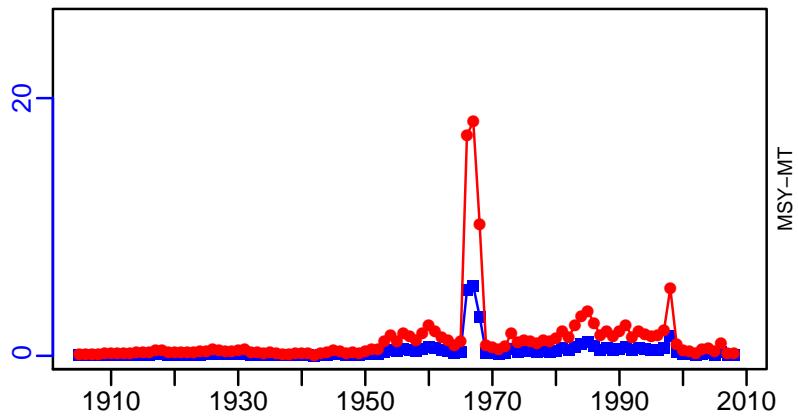
TAC*, Cpair*, Cadv*



EFFORT*



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



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

Spotted spiny dogfish Pacific Coast [SPSDOGPCOAST]

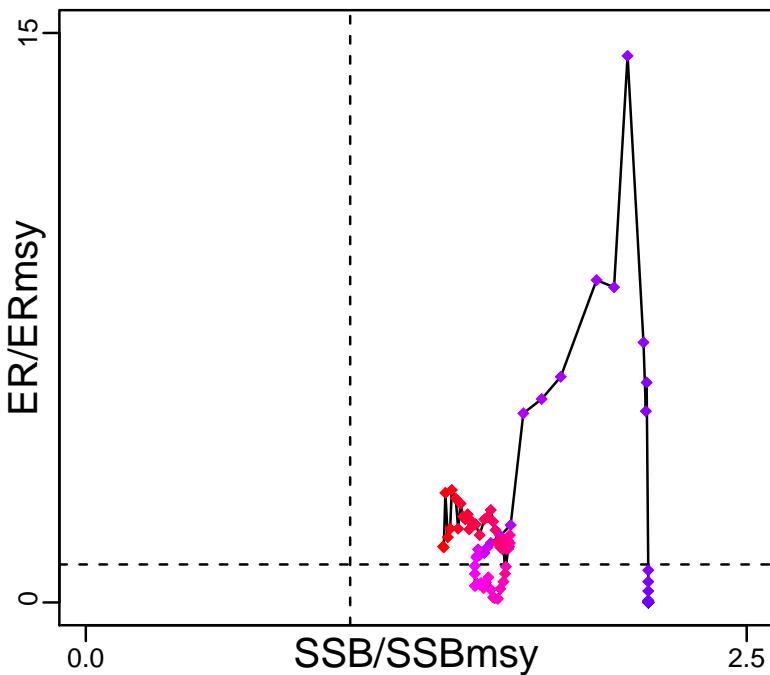
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Squalus suckleyi |
| Current Assess ID | NWFSC-SPSDOGPCOAST-1916-2011-STACHURA |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US national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

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

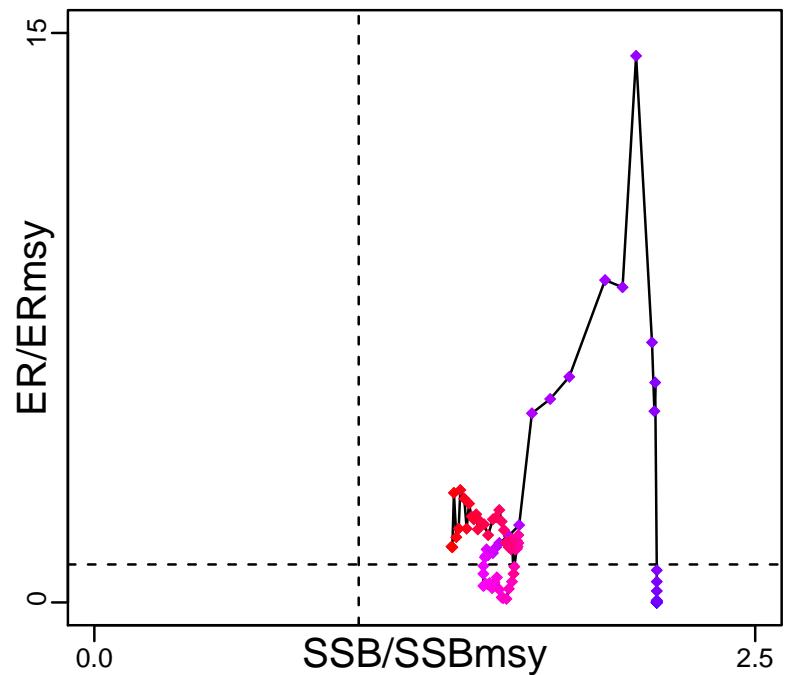
| Time Series | | | | | | |
|--------------------|----------------------|-----------|------------|---------|-------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2011 | 217,000 | - | 1+ | |
| SSB | SSF-E00 | 2011 | 44,600,000 | Females | 35.5+ | |
| TN | - | - | - | - | - |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

Spotted spiny dogfish Pacific Coast [SPSDOGPCOAST]

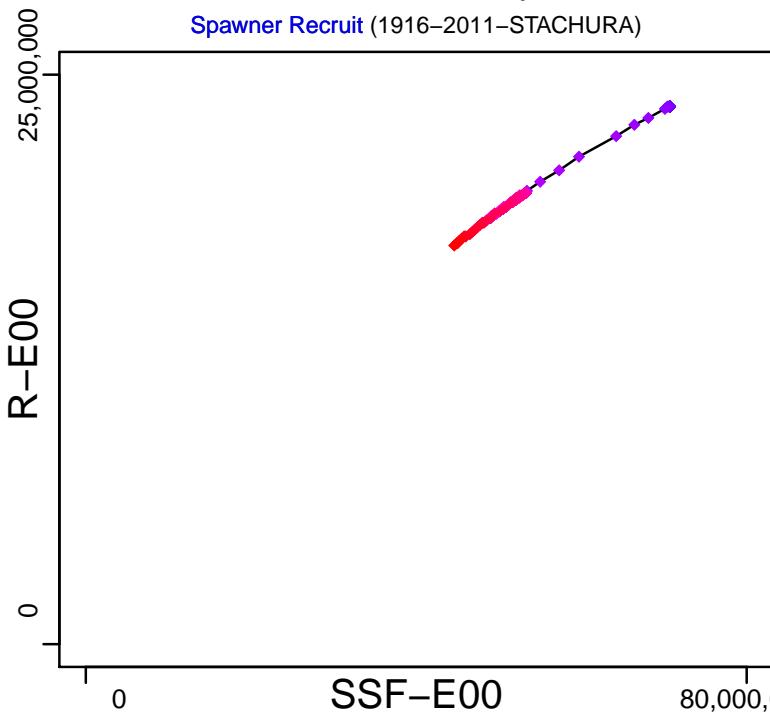
Kobe MSYpref (1916–2011–STACHURA)



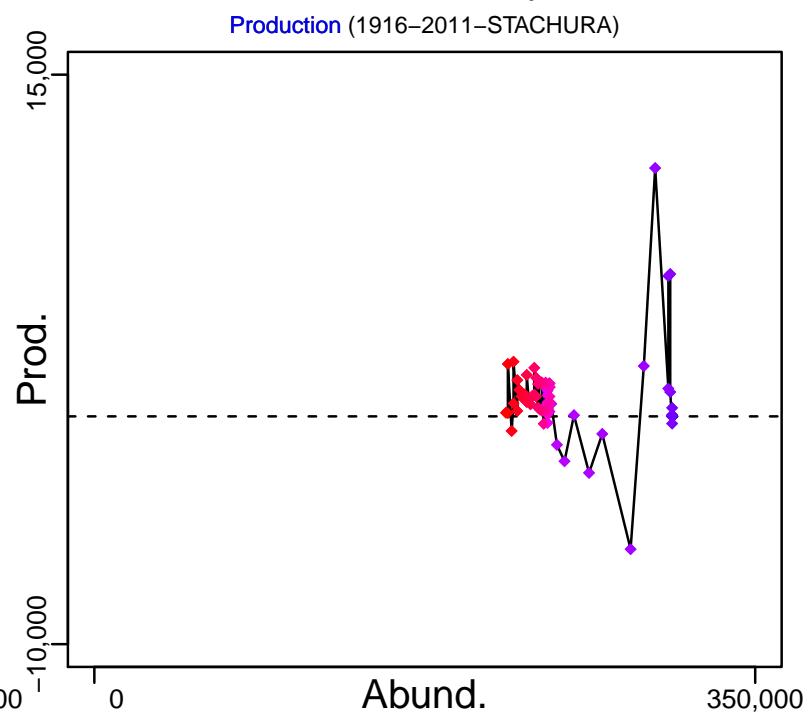
Kobe MGTpref (1916–2011–STACHURA)



Spawner Recruit (1916–2011–STACHURA)



Production (1916–2011–STACHURA)

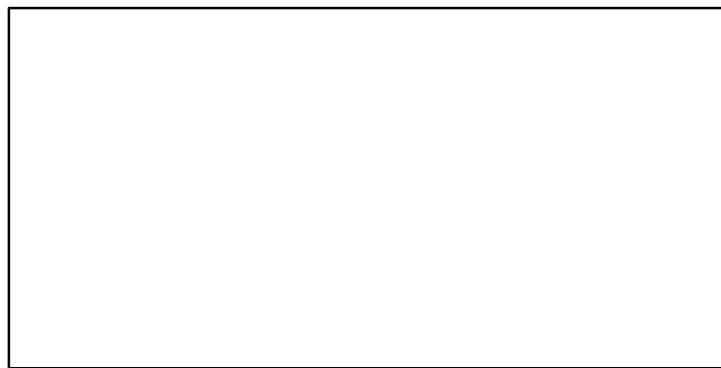
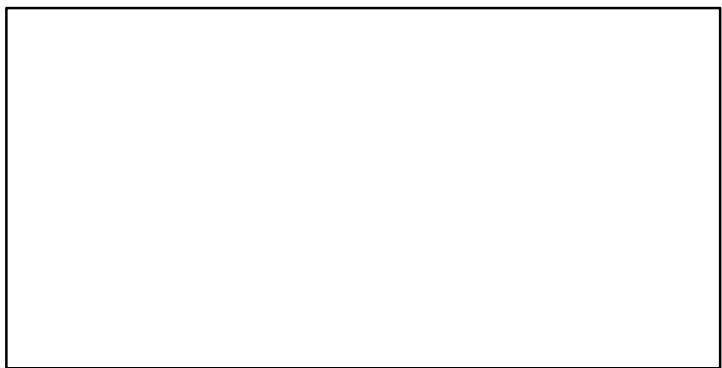
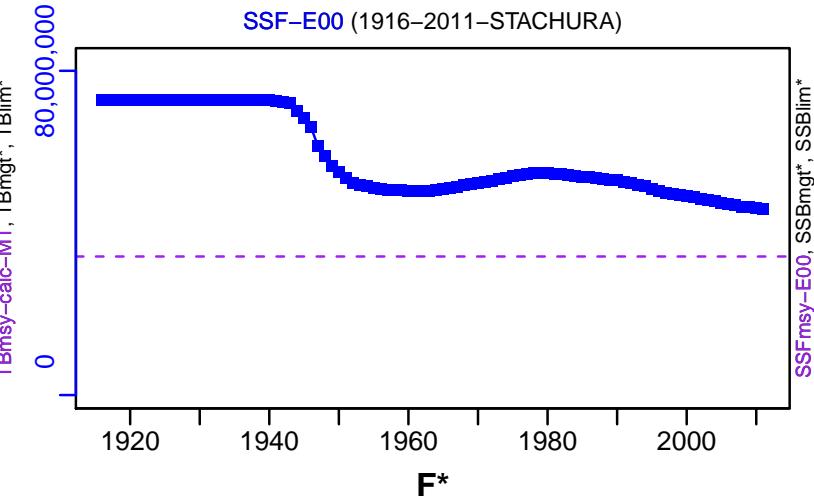
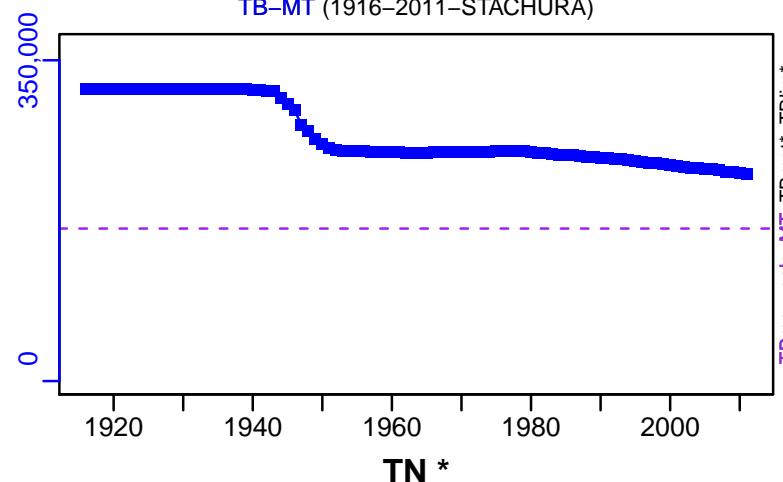


| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Spotted spiny dogfish Pacific Coast [SPSDOGPCOAST]

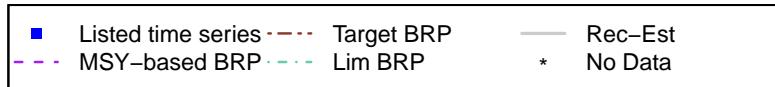
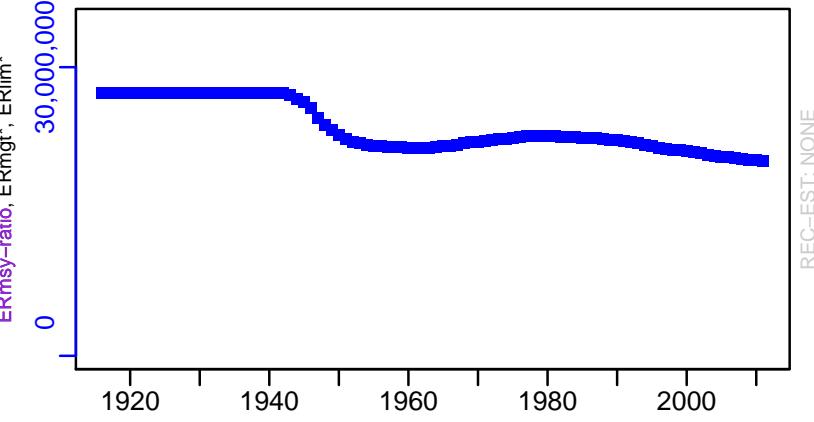
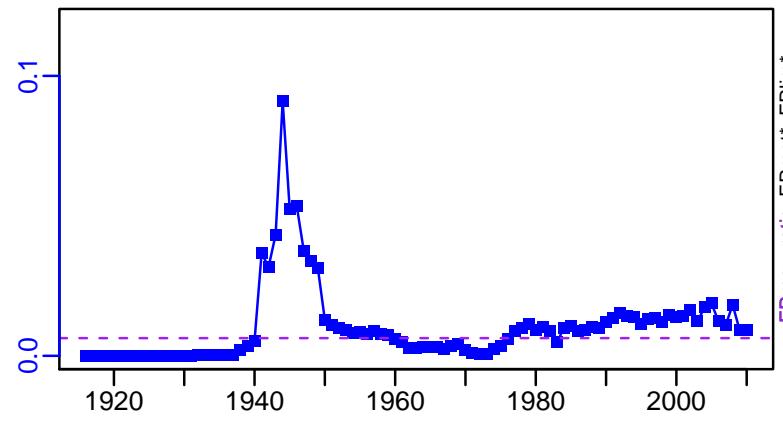
TB-MT (1916–2011–STACHURA)

SSF-E00 (1916–2011–STACHURA)



ER-ratio (1916–2011–STACHURA)

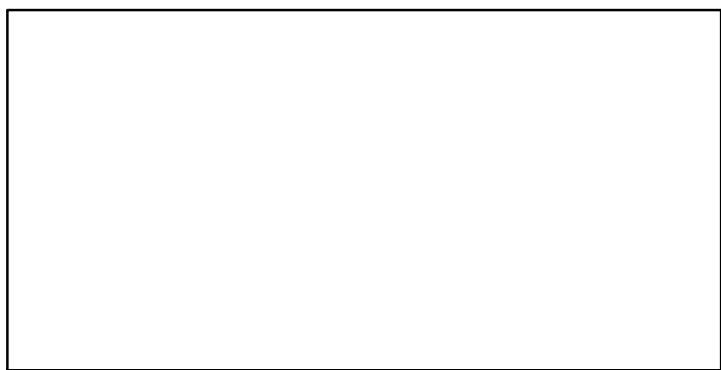
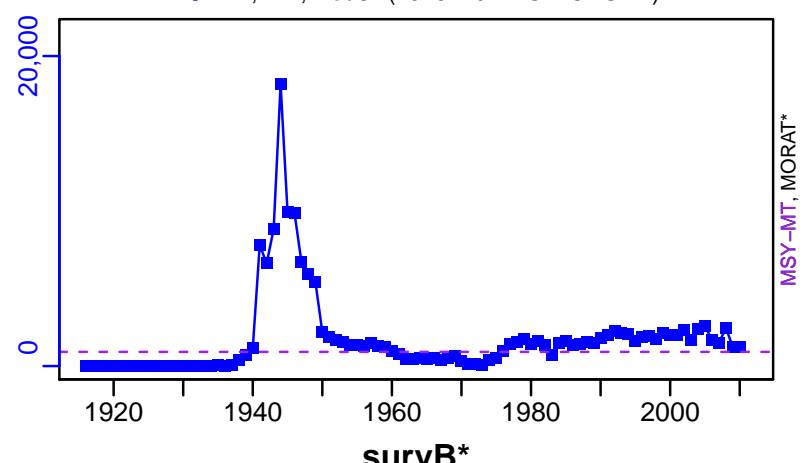
R-E00 (1916–2011–STACHURA)



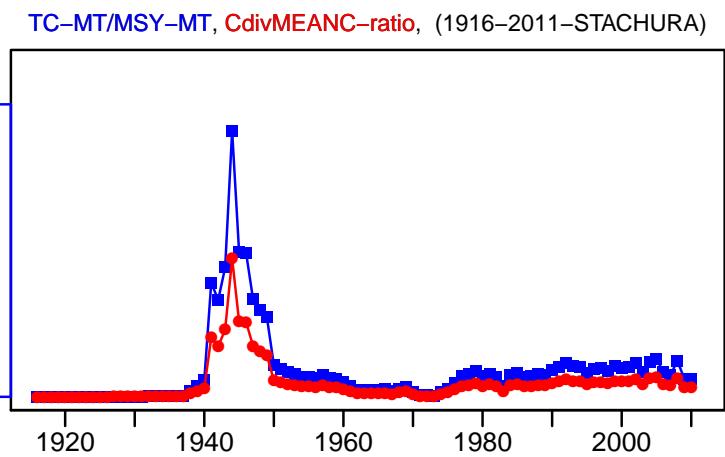
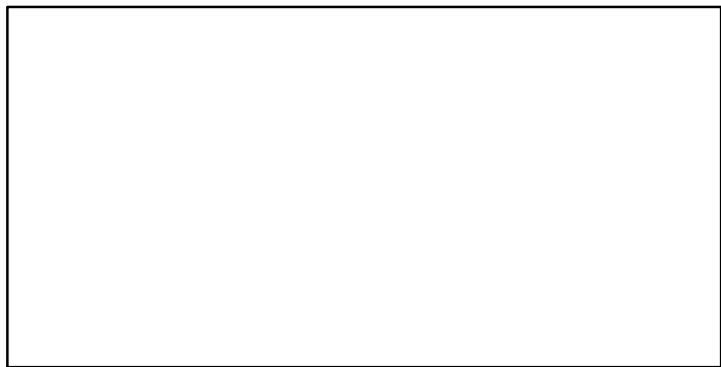
Spotted spiny dogfish Pacific Coast [SPSDOGPCOAST]

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]

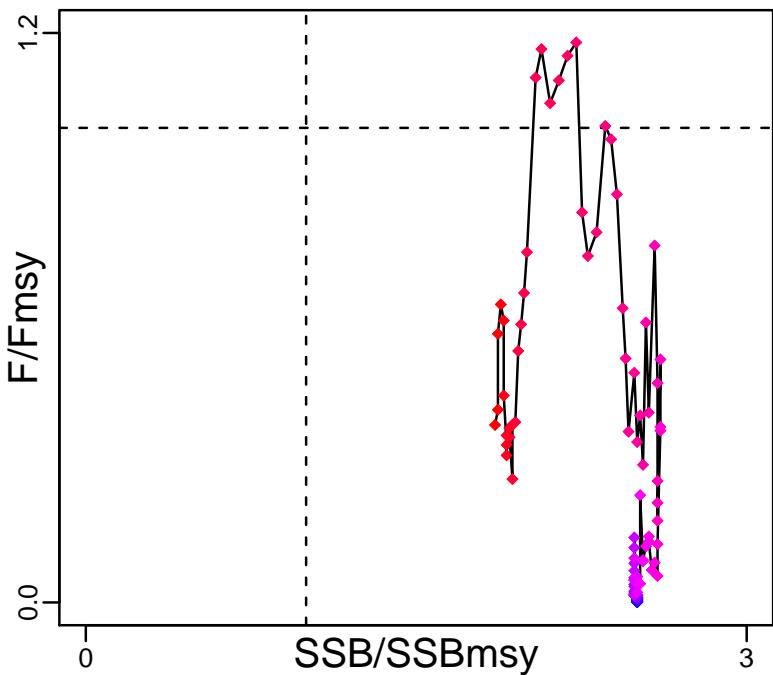
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastolobus alascanus |
| Current Assess ID | NWFSC-SSTHORNHPCOAST-1901-2013-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

| Reference Points | | | |
|-------------------------|-------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-MT | 2005 | 86,000 |
| SSBmsy | SSBmsy-MT | 2013 | 75,906 |
| Fmsy | Fmsy-1/yr | 2013 | 0.5 |
| ERmsy | ERmsy-ratio | 2005 | 0.018 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2005 | 230,500 |
| SSB0 | SSB0-MT | 2005 | 130,646 |
| MSY | MSY-MT | 2013 | 2034 |
| M | M-1/yr | 2005 | 0.05 |
| TBlim | - | - | - |
| SSBlim | SSBlim-MT | 2013 | 47,441 |
| Flim | Flim-1/yr | 2013 | 0.5 |
| ERlim | - | - | - |

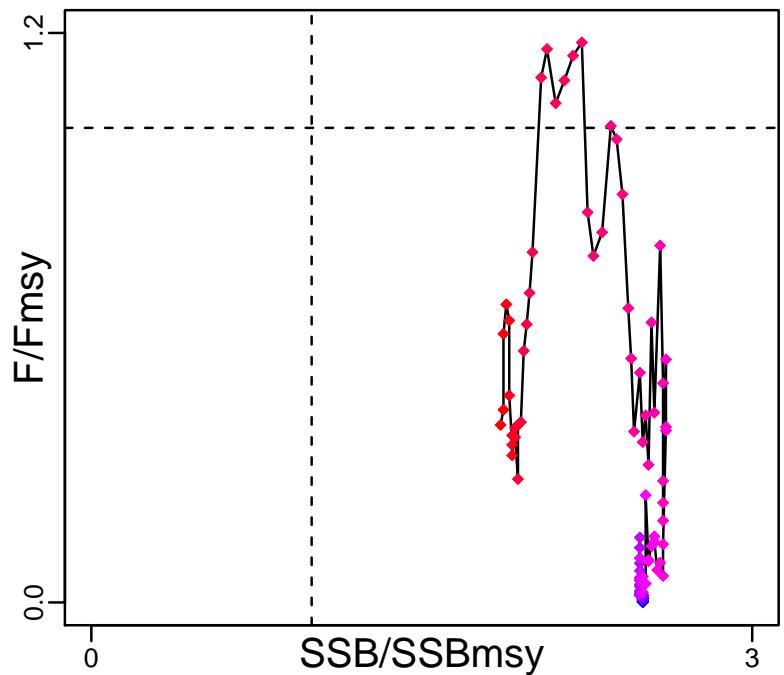
| Time Series | | | | | | |
|--------------------|----------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2013 | 244,000 | - | 1+ | |
| SSB | SSB-MT | 2013 | 141,000 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2013 | 28,800,000 | - | 0 | |
| F | F-1/yr | 2013 | 0.187 | - | - | |
| ER | ER-calc-ratio | 2013 | 0.004 | - | - | |
| TC | TC-MT | 2013 | 911 | | | |
| TL | TL-MT | 2005 | 867 | | | |
| TB/TBmsy | TB-MT/TBmsy-MT | 2005 | 1.686 | | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2013 | 1.858 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2013 | 0.374 | | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2005 | 0.265 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]

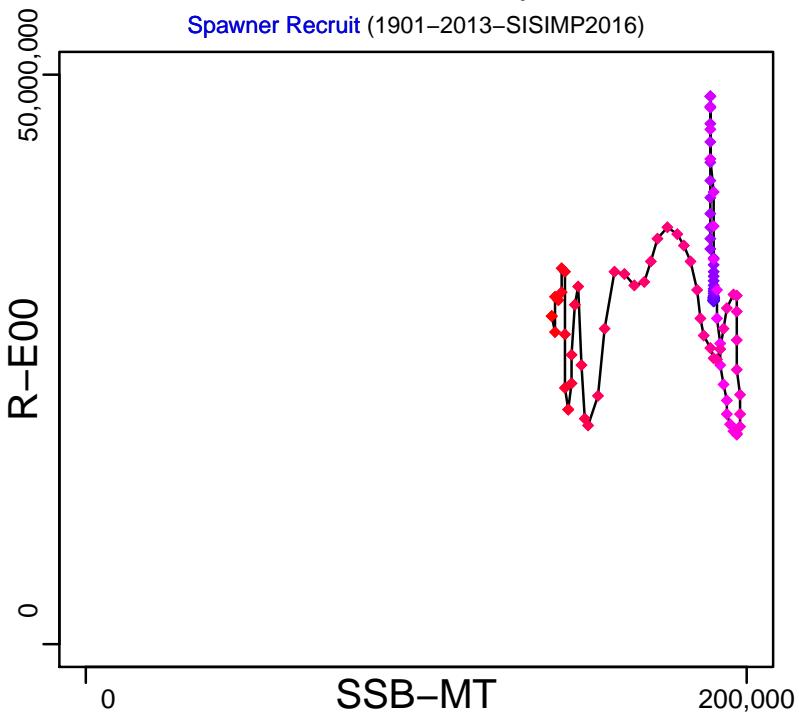
Kobe MSYpref (1901–2013–SISIMP2016)



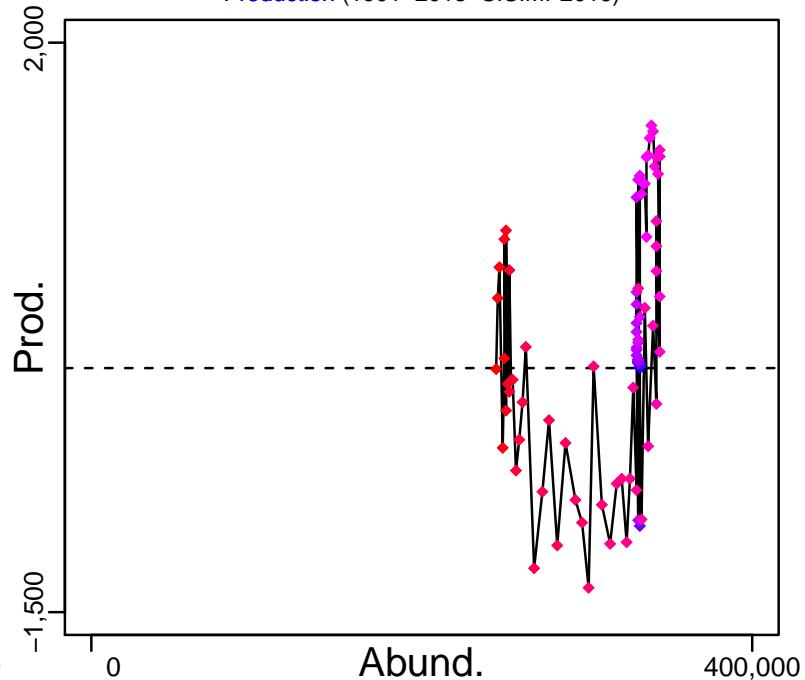
Kobe MGTpref (1901–2013–SISIMP2016)



Spawner Recruit (1901–2013–SISIMP2016)



Production (1901–2013–SISIMP2016)

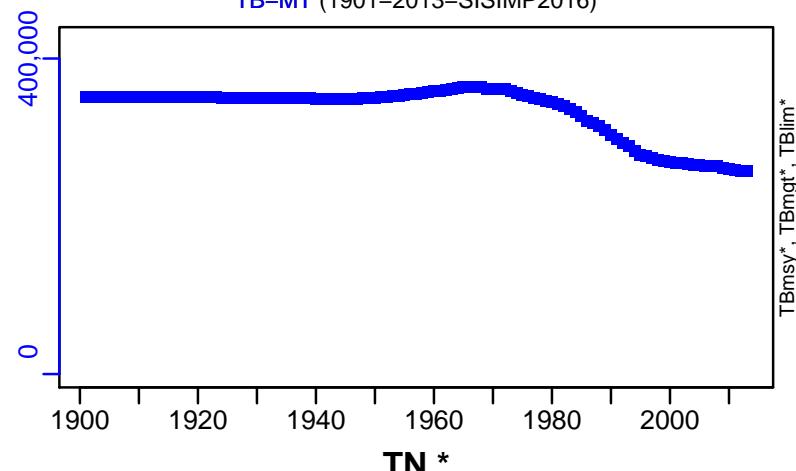


◆ Start Year ◆ End Year * No Data

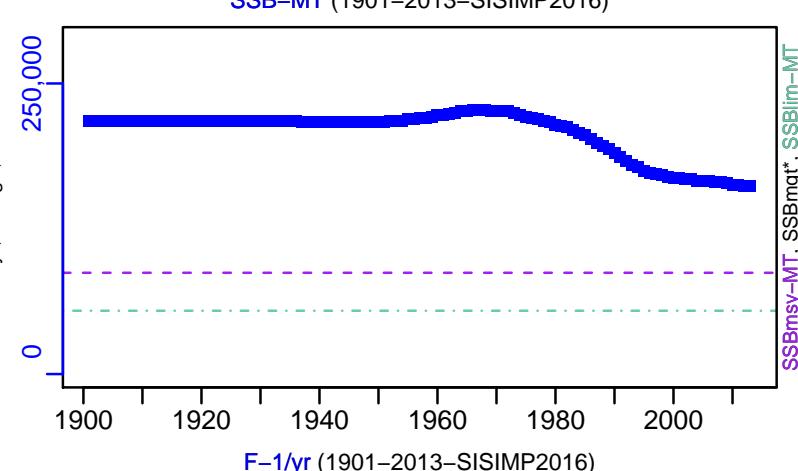
Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]

TB-MT (1901–2013–SISIMP2016)

SSB-MT (1901–2013–SISIMP2016)



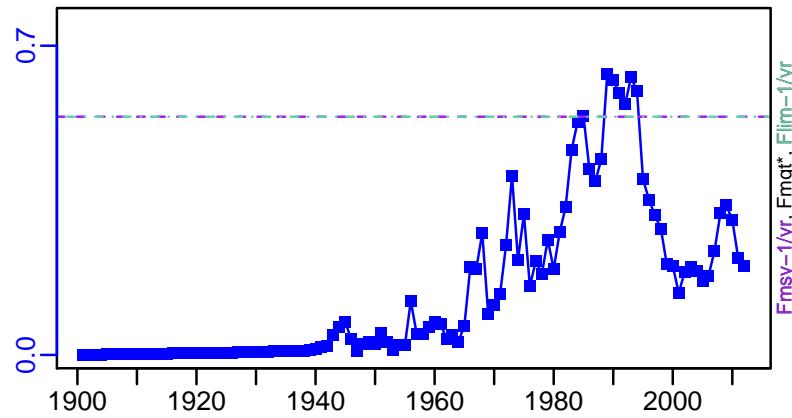
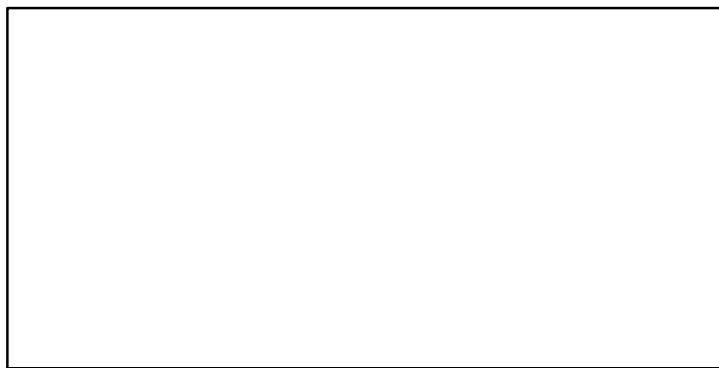
TB_ms_y* , TB_mg_t, TB_lim*



SSB_ms_y-MT, SSB_lim-MT

TN *

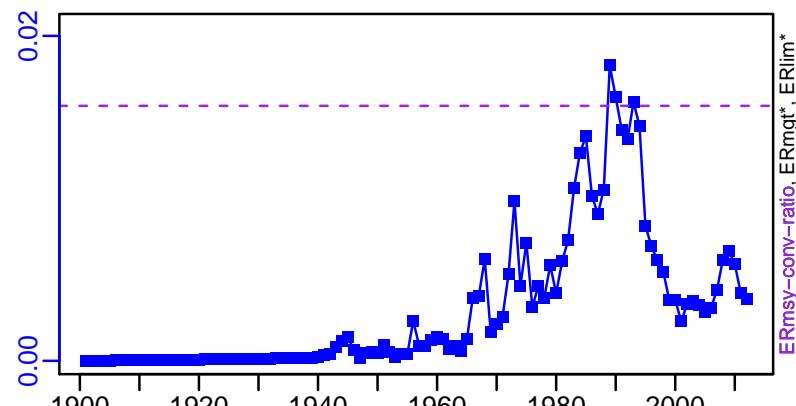
F-1/yr (1901–2013–SISIMP2016)



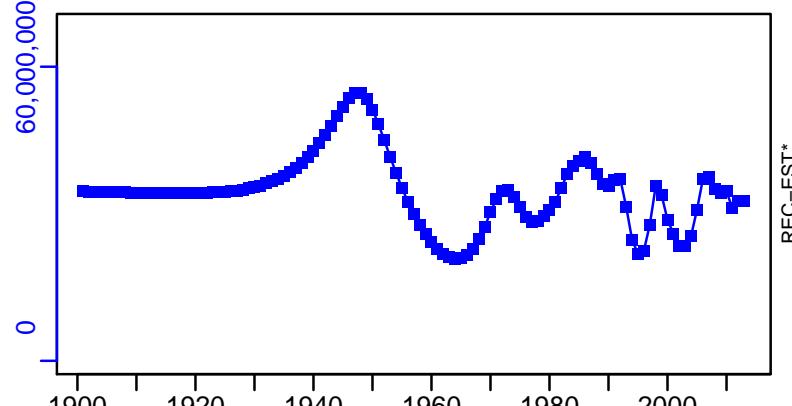
F_ms_y-1/yr, F_mg_t, F_lim-1/yr

ER-calc-ratio (1901–2013–SISIMP2016)

R-E00 (1901–2013–SISIMP2016)



ER_ms_y-conv-ratio, ER_mg_t, ER_lim*



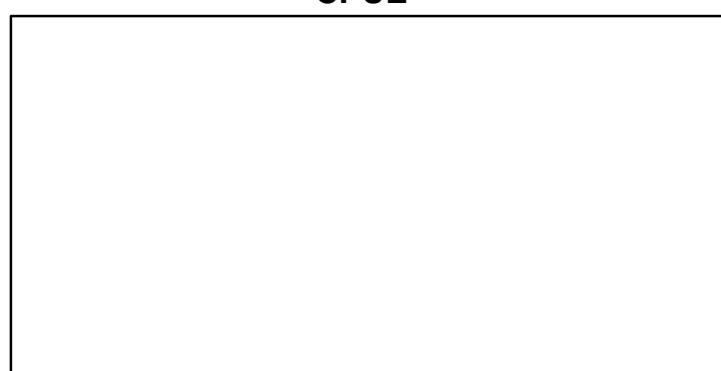
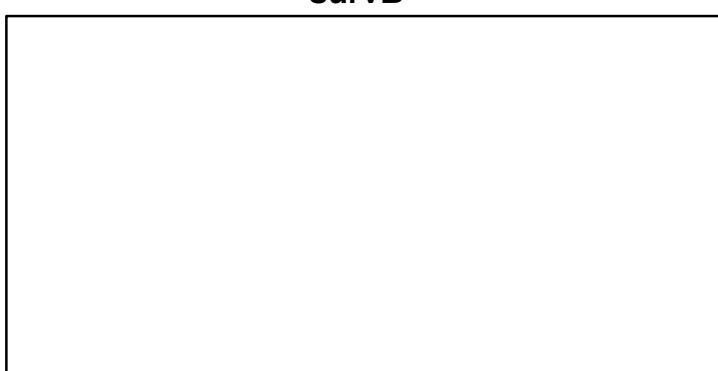
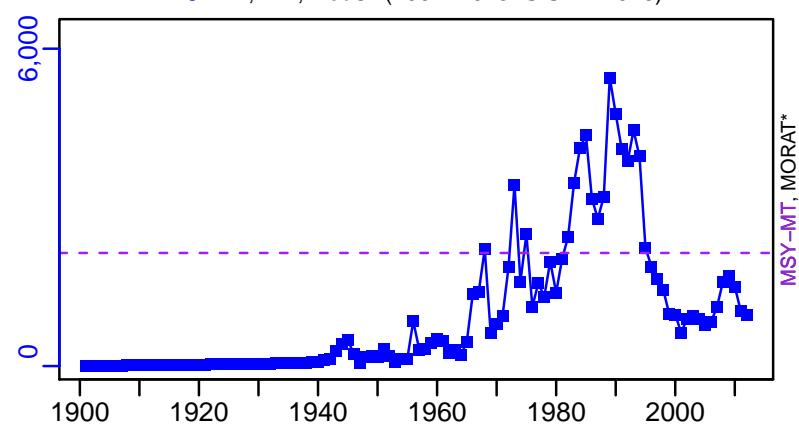
REC-EST*

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

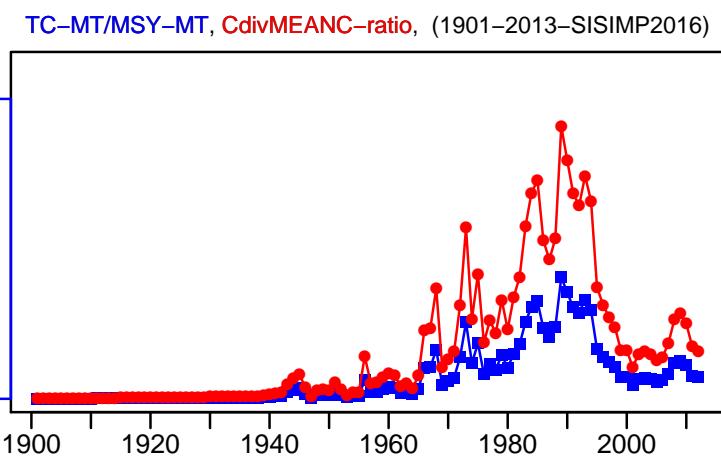
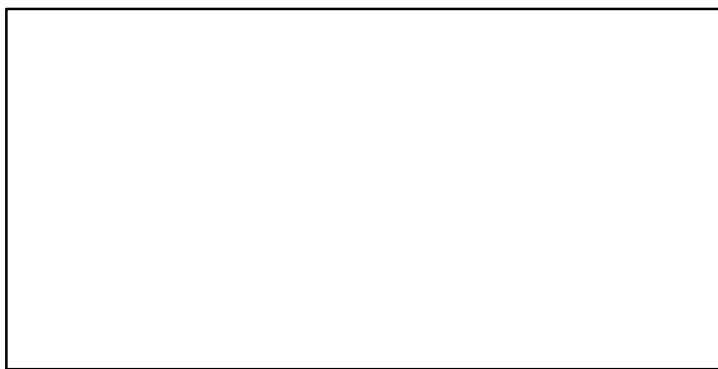
Shortspine thornyhead Pacific Coast [SSTHORNHPCOAST]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

Starry flounder Northern Pacific Coast [STFLOUNNPOCOAST]

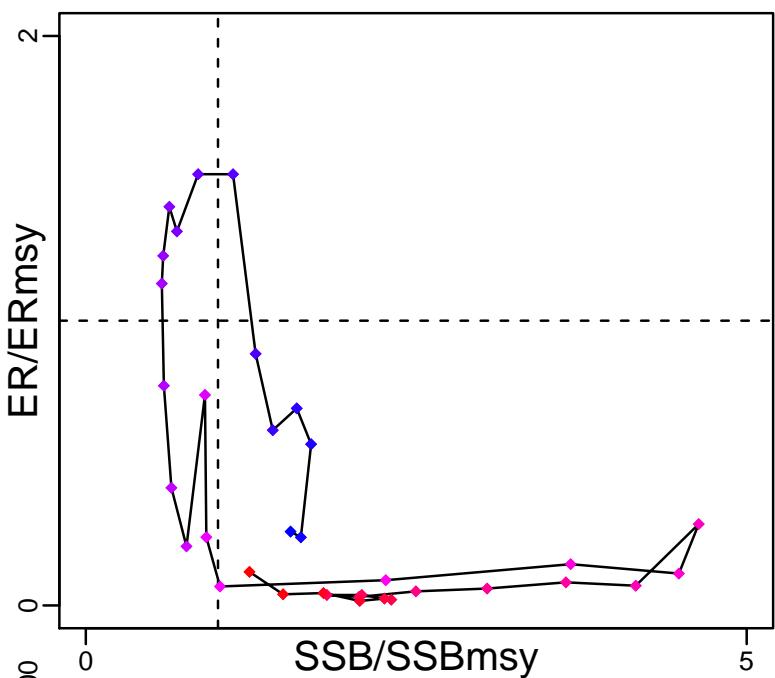
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Platichthys stellatus |
| Current Assess ID | SWFSC-STFLOUNNPOCOAST-1970-2005-STANTON |
| Area | Northern Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

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

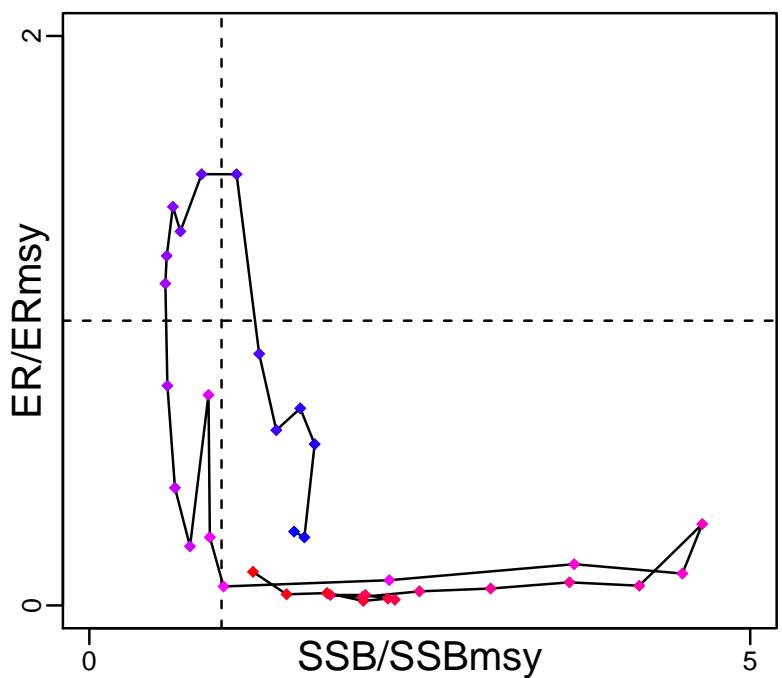
| Time Series | | | | | | |
|--------------------|------------------------------|------------------|-------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2005 | 5440 | - | 2+ | |
| SSB | SSB-MT | 2005 | 2120 | Females | 3+ | |
| TN | - |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

Starry flounder Northern Pacific Coast [STFLOUNNPOCOAST]

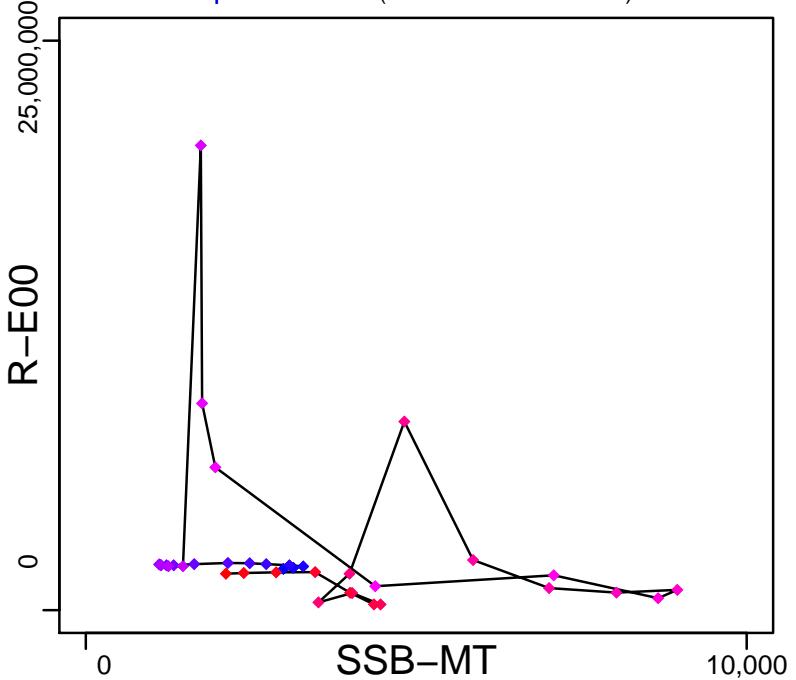
Kobe MSYpref (1970–2005-STANTON)



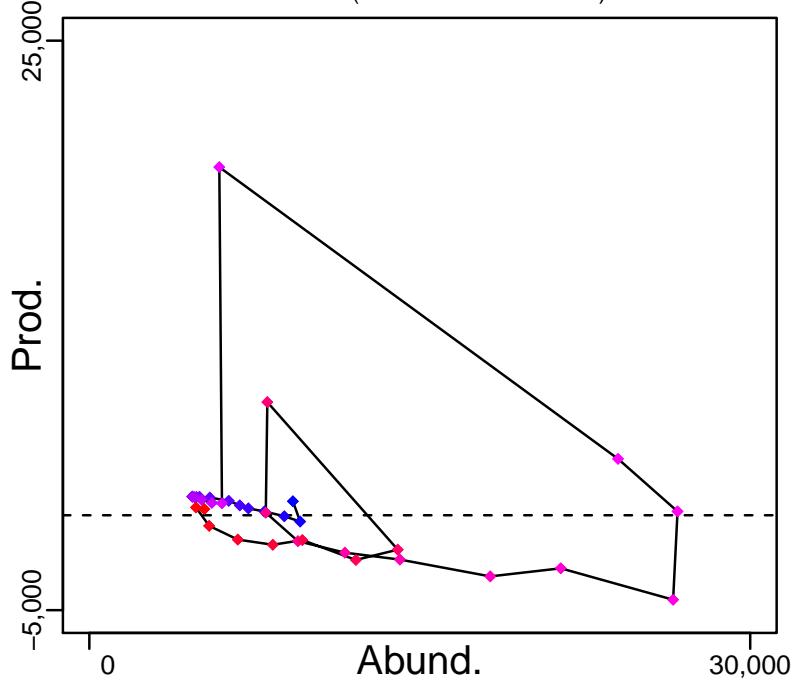
Kobe MGTpref (1970–2005-STANTON)



Spawner Recruit (1970–2005-STANTON)



Production (1970–2005-STANTON)

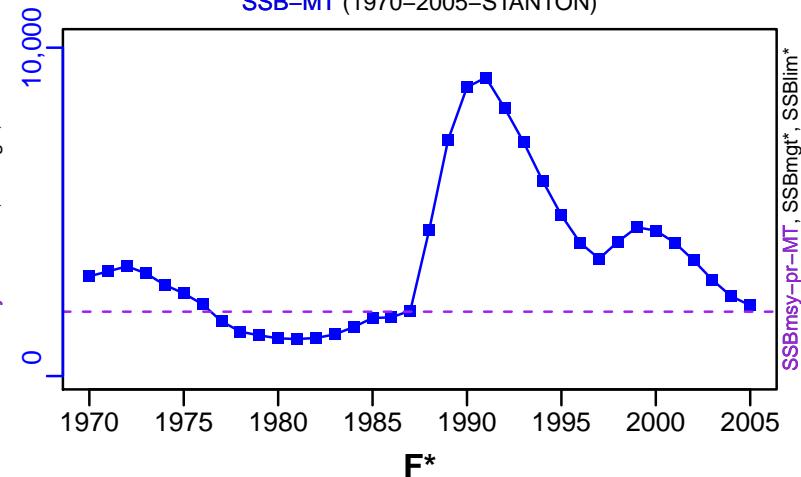
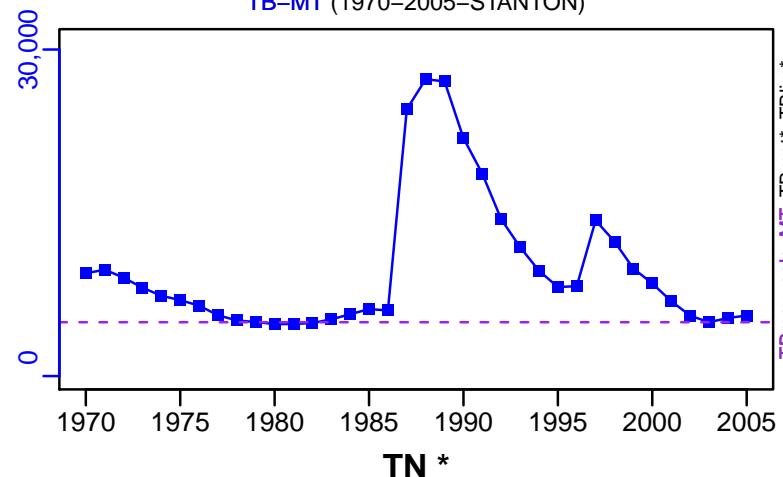


◆ Start Year ◆ End Year * No Data

Starry flounder Northern Pacific Coast [STFLOUNNPOCOAST]

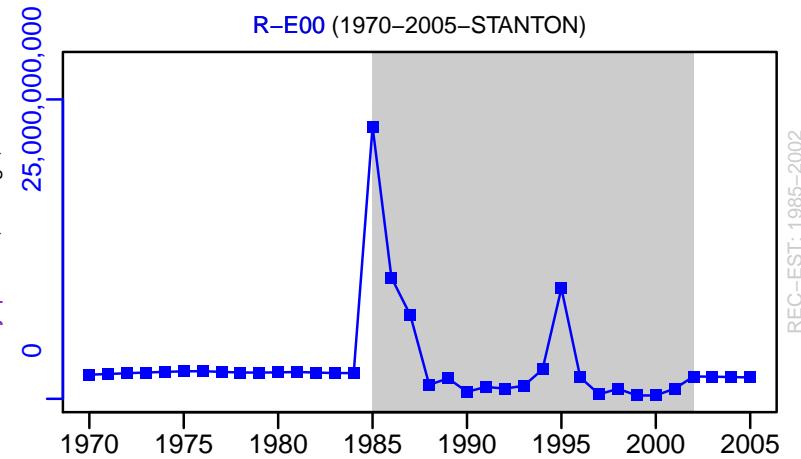
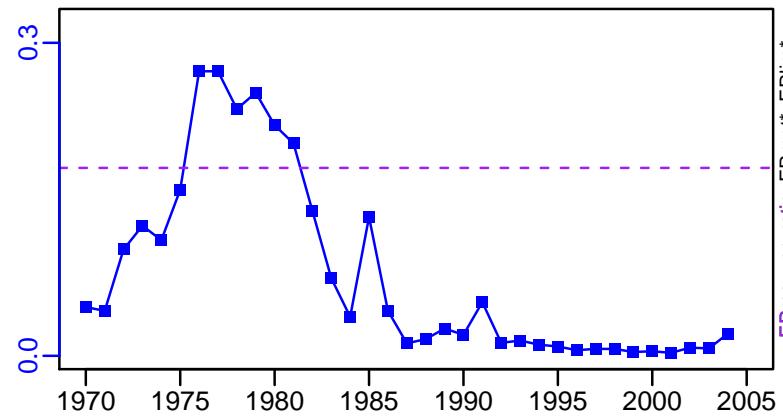
TB-MT (1970–2005-STANTON)

SSB-MT (1970–2005-STANTON)



ER-calc-ratio (1970–2005-STANTON)

R-E00 (1970–2005-STANTON)

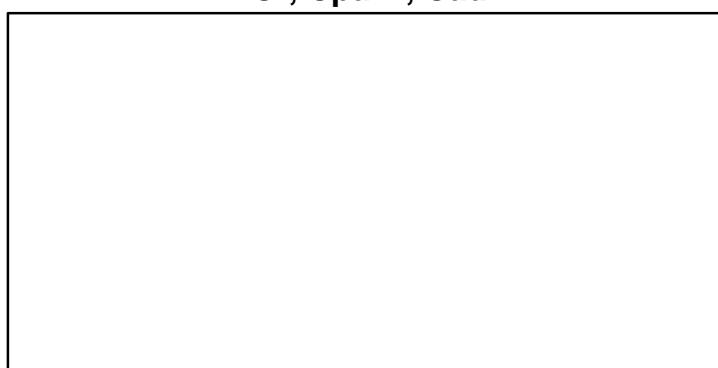
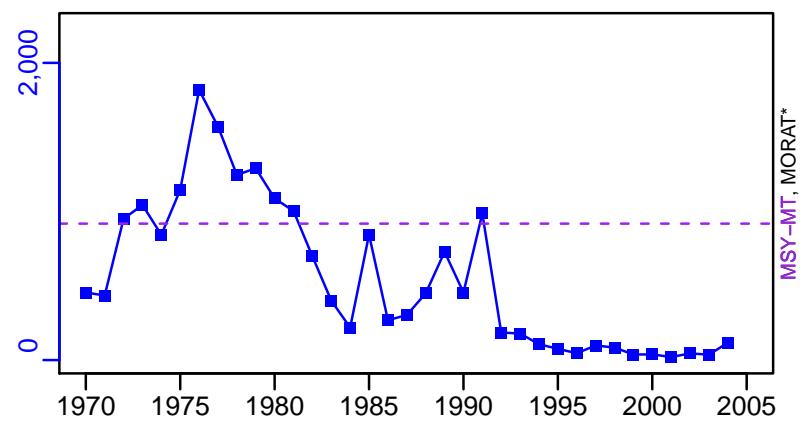


- | | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - Lim BRP | * No Data |

Starry flounder Northern Pacific Coast [STFLOUNNPOCOAST]

TC-MT, TL*, RecC* (1970–2005-STANTON)

TAC*, Cpair*, Cadv*



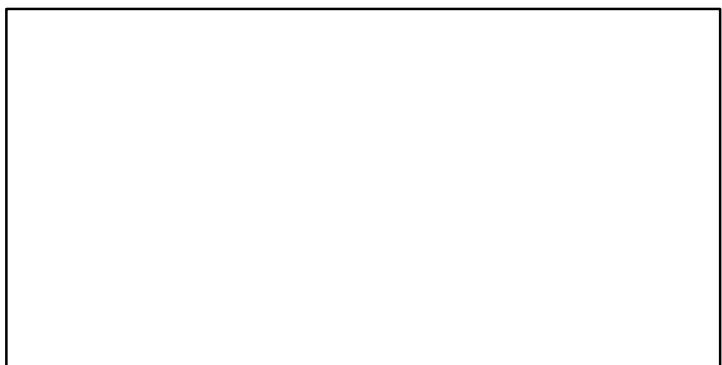
survB*



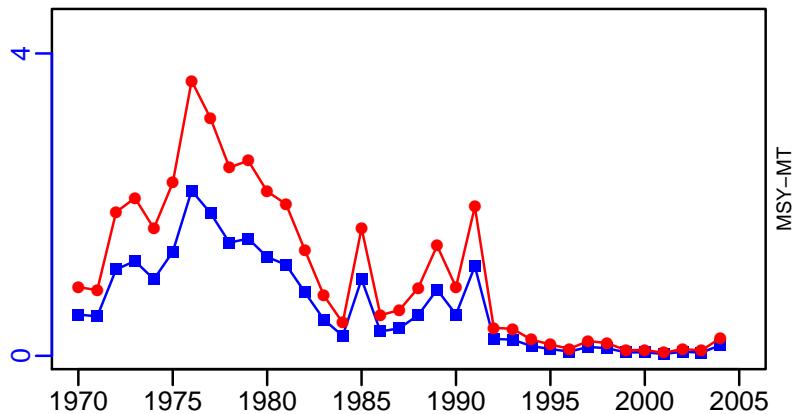
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1970–2005-STANTON)



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

Starry flounder Southern Pacific Coast [STFLOUNSPCOAST]

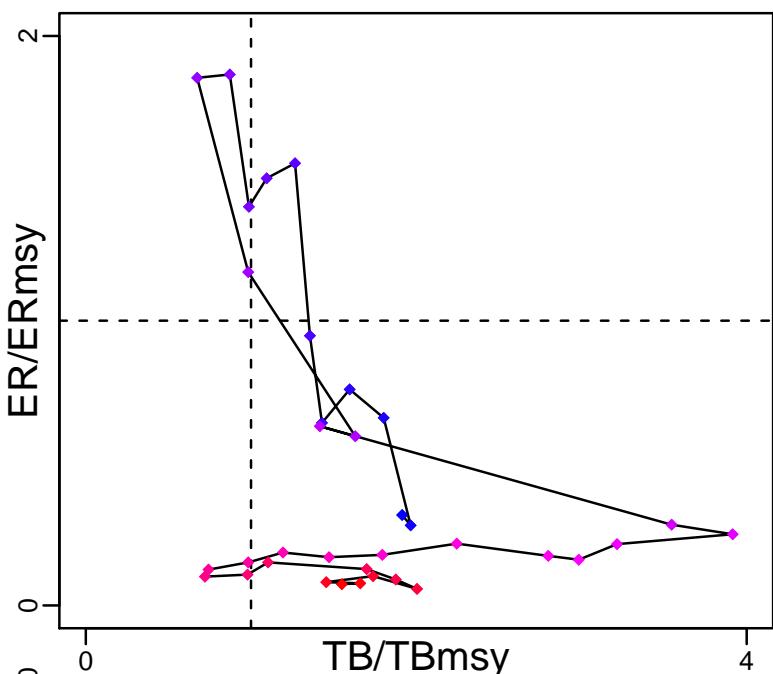
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Platichthys stellatus |
| Current Assess ID | SWFSC-STFLOUNSPCOAST-1970-2005-STANTON |
| Area | Southern Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

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

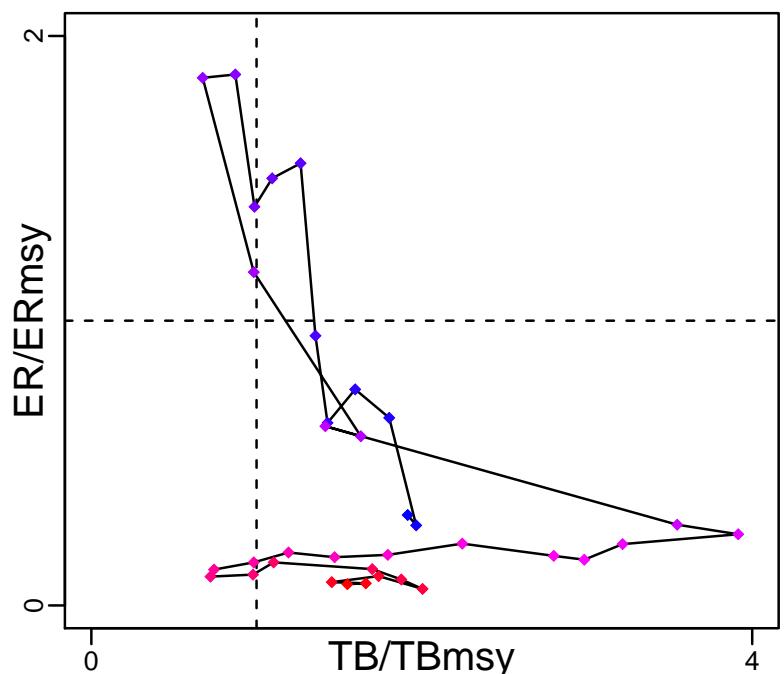
| Time Series | | | | | | |
|--------------------|---------------------------|-----------|--------------------|---------|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2005 | 3460 | - | 2+ | |
| SSB | SSB-MT | 2005 | 1450 | Females | 3+ | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2005 | 8.07×10^8 | - | 0 | |
| F | - | - | - | - | - | |
| ER | ER-ratio | 2005 | 0.013 | - | - | |
| TC | TC-MT | 2005 | 46 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-MT | 2005 | 1.485 | | | |
| SSB/SSBmsy | SSB-MT/(SSB0-MT*0.368) | 2005 | 1.688 | | | |
| F/Fmsy | - | - | - | | | |
| ER/ERmsy | ER-ratio/ERmsy-calc-ratio | 2005 | 0.075 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Starry flounder Southern Pacific Coast [STFLOUNSPCOAST]

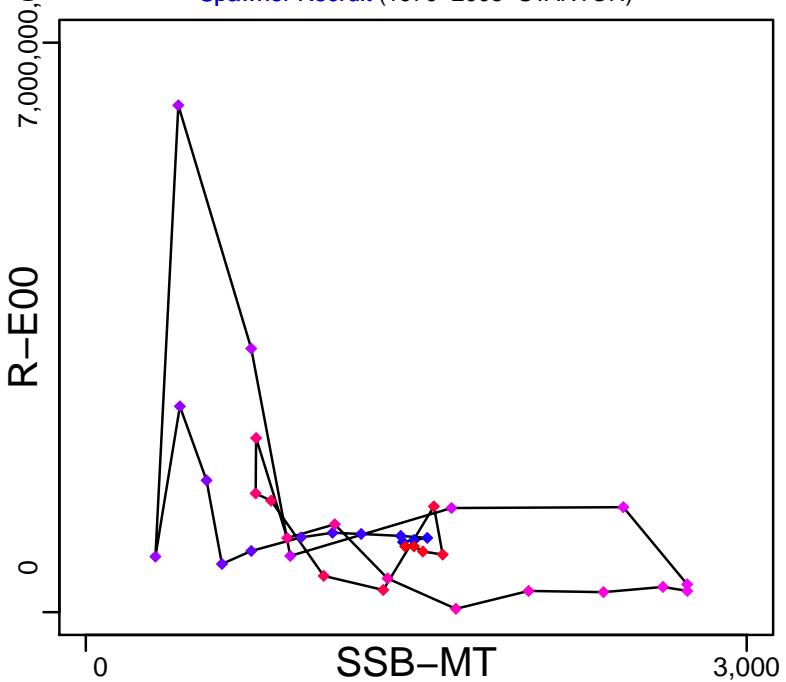
Kobe MSYref (1970–2005-STANTON)



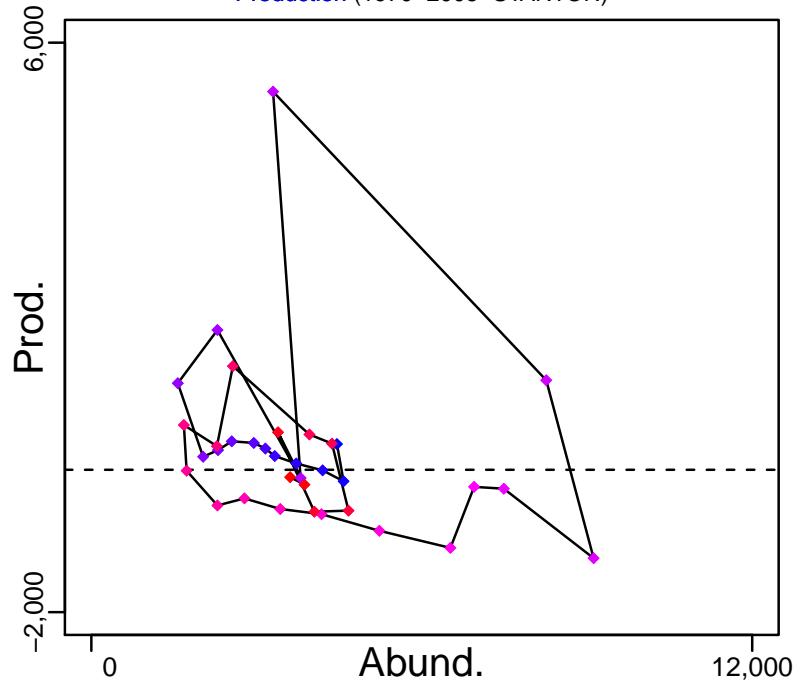
Kobe MGTref (1970–2005-STANTON)



Spawner Recruit (1970–2005-STANTON)



Production (1970–2005-STANTON)

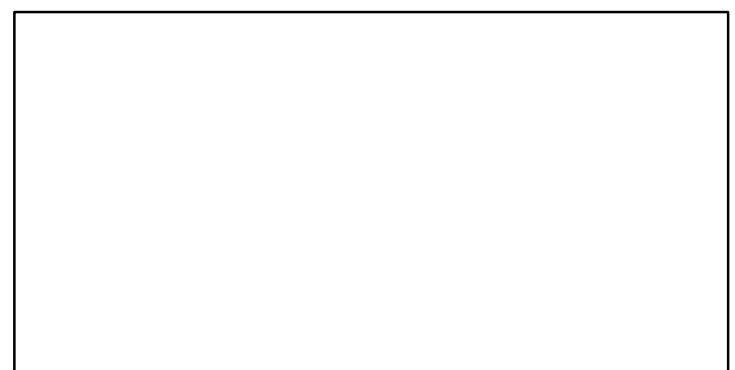
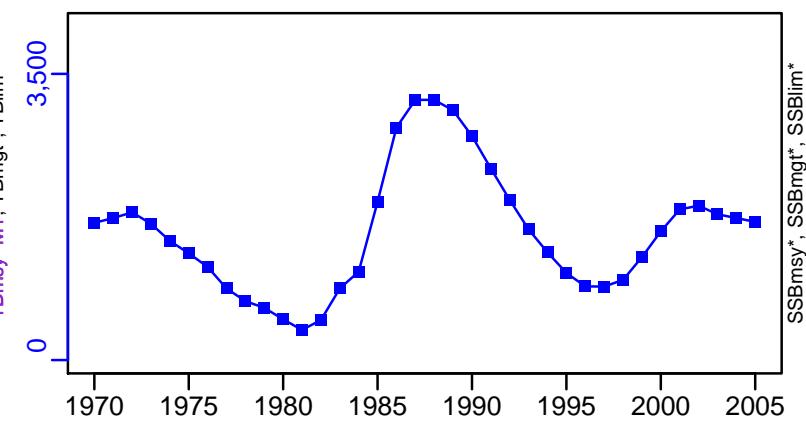
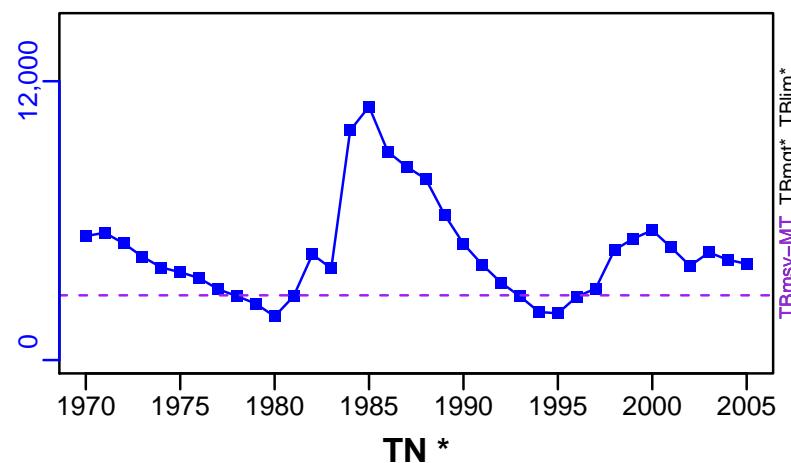


◆ Start Year ◆ End Year * No Data

Starry flounder Southern Pacific Coast [STFLOUNSPCOAST]

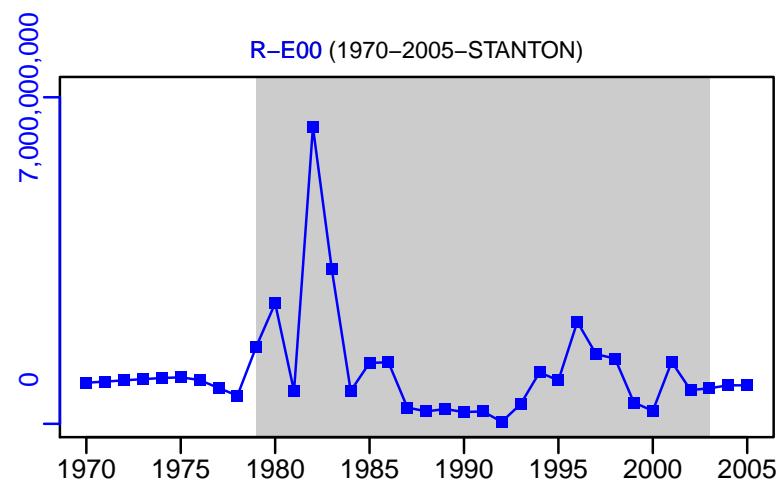
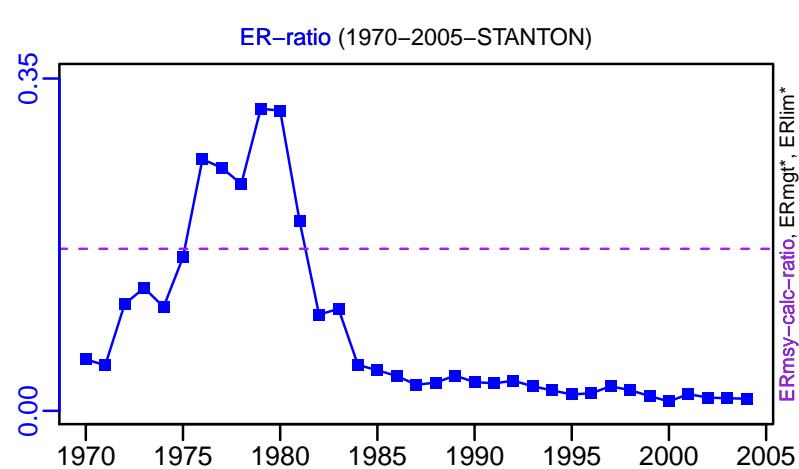
TB-MT (1970–2005-STANTON)

SSB-MT (1970–2005-STANTON)



ER-ratio (1970–2005-STANTON)

R-E00 (1970–2005-STANTON)

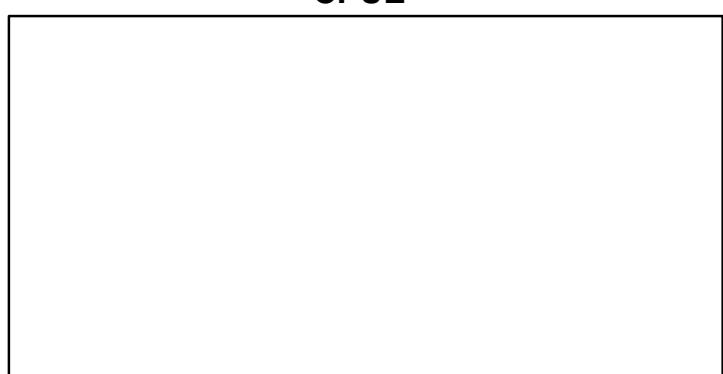
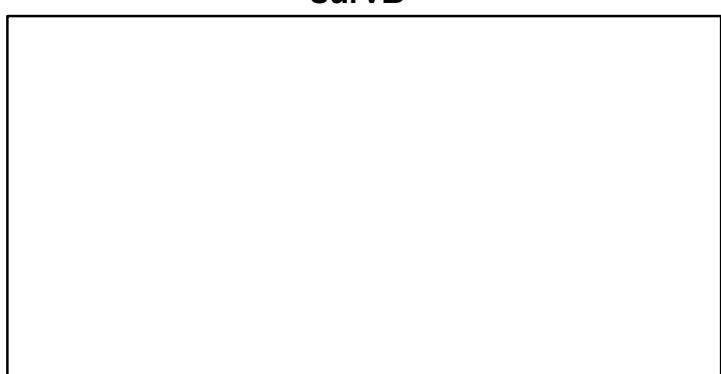
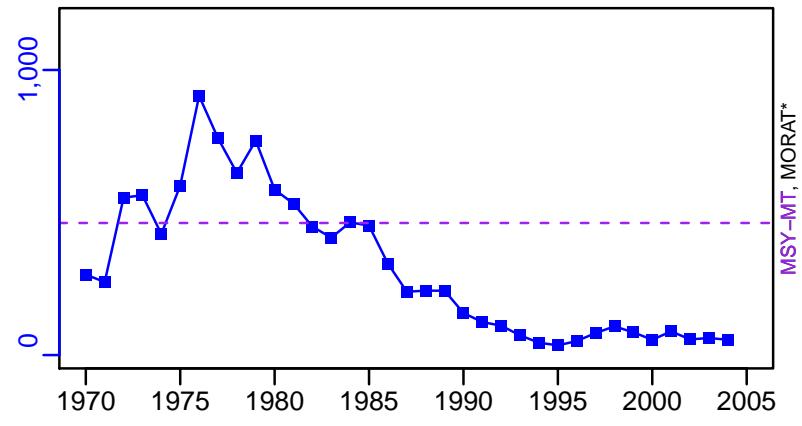


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | --- Lim BRP | * No Data |

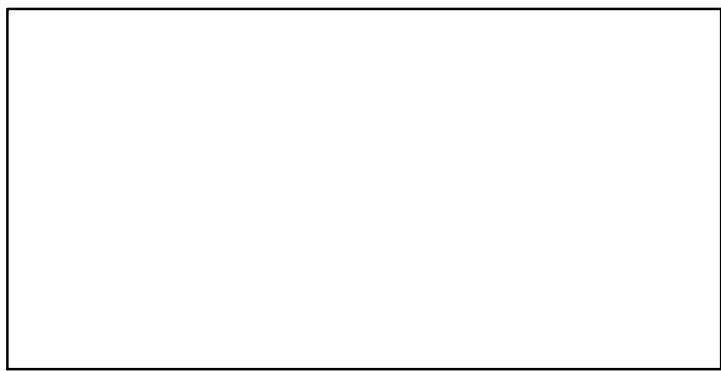
Starry flounder Southern Pacific Coast [STFLOUNSPCOAST]

TC-MT, TL*, RecC* (1970–2005-STANTON)

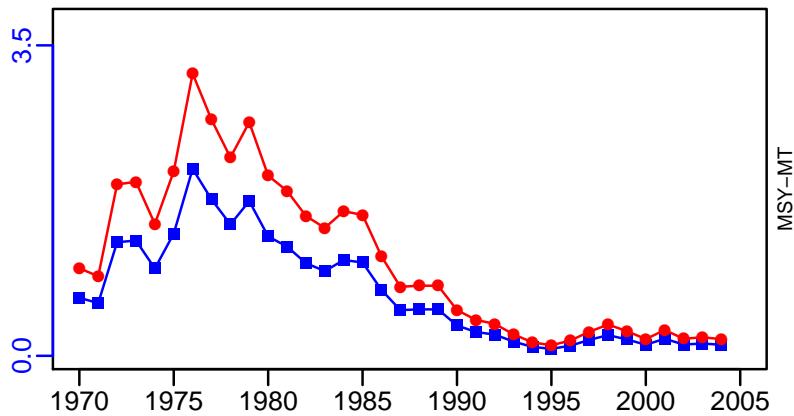
TAC*, Cpair*, Cadv*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1970–2005-STANTON)



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

Widow rockfish Pacific Coast [WROCKPCOAST]

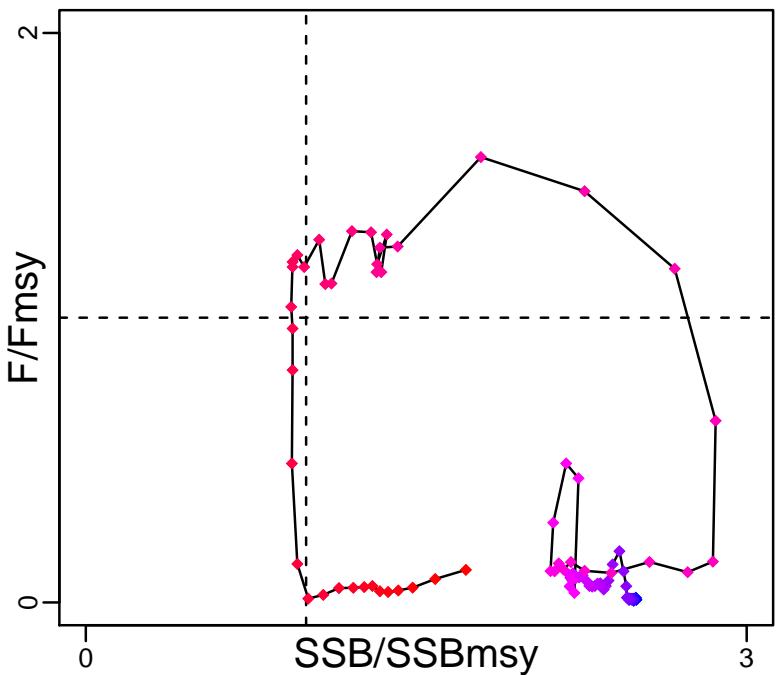
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes entomelas |
| Current Assess ID | NWFSC-WROCKPCOAST-1916-2015-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service, US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

| Reference Points | | | |
|-------------------------|---------------|------------------|--------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2011 | 45,750 |
| SSBmsy | SSBmsy-MT | 2015 | 32,283 |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-ratio | 2011 | 0.12 |
| TBmgt | - | - | - |
| SSBmgt | SSBmgt-MT | 2011 | 28,451 |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | - | - | - |
| SSB0 | SSB0-MT | 2011 | 71,126 |
| MSY | MSY-MT | 2015 | 7776 |
| M | M-1/yr | 2011 | 0.12 |
| TBlim | - | - | - |
| SSBlim | SSBlim-MT | 2015 | 20,177 |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

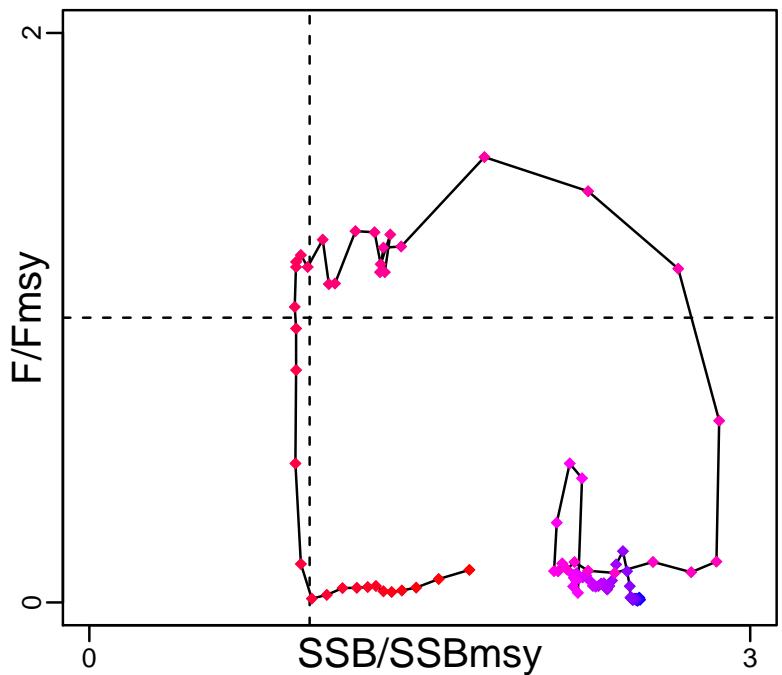
| Time Series | | | | | |
|--------------------|----------------------|------------------|-------------------|------------|------------|
| Type | ID | Asmt Year | Curr Value | Sex | Age |
| TB | TB-MT | 2015 | 132,000 | Both | 4+ |
| SSB | SSB-MT | 2015 | 60,600 | Females | - |
| TN | - | - | - | - | - |
| R | R-E00 | 2015 | 53,400,000 | - | 0 |
| F | F-1/yr | 2015 | 0.057 | - | - |
| ER | ER-calc-ratio | 2015 | 0.006 | - | - |
| TC | TC-MT | 2015 | 726 | | |
| TL | - | - | - | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2011 | 1.491 | | |
| SSB/SSBmsy | SSB-MT/SSBmsy-MT | 2015 | 1.877 | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.114 | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2011 | 0.019 | | |
| TB/TBmgt | - | - | - | | |
| SSB/SSBmgt | SSB-MT/SSBmgt-MT | 2011 | 1.276 | | |
| F/Fmgt | - | - | - | | |
| ER/ERmgt | - | - | - | | |

Widow rockfish Pacific Coast [WROCKPCOAST]

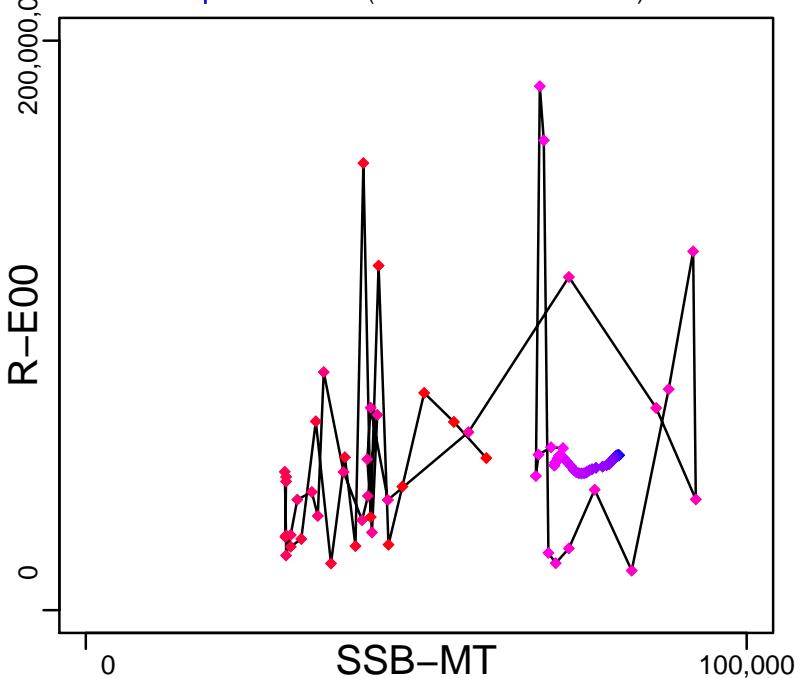
Kobe MSYpref (1916–2015–SISIMP2016)



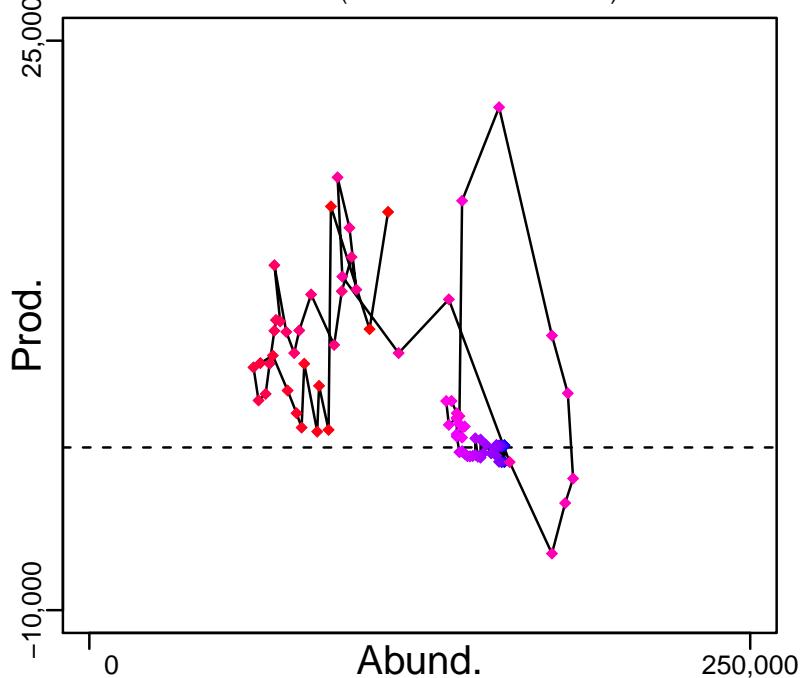
Kobe MGTpref (1916–2015–SISIMP2016)



Spawner Recruit (1916–2015–SISIMP2016)



Production (1916–2015–SISIMP2016)

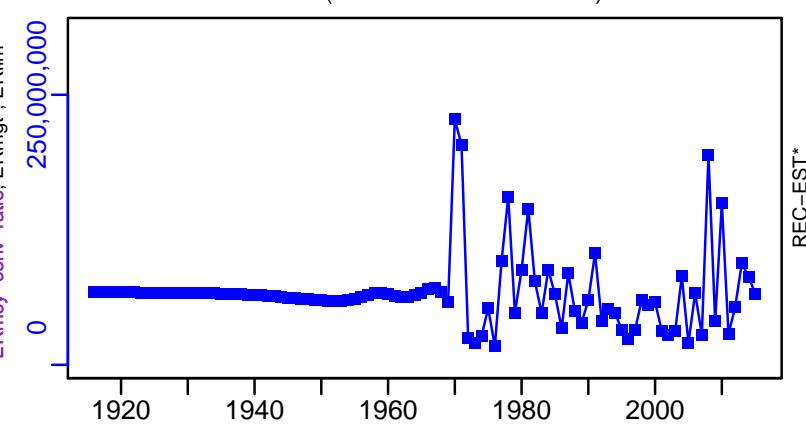
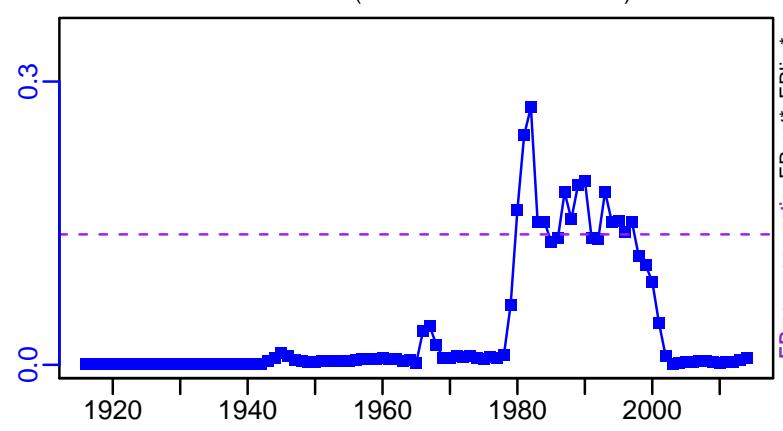
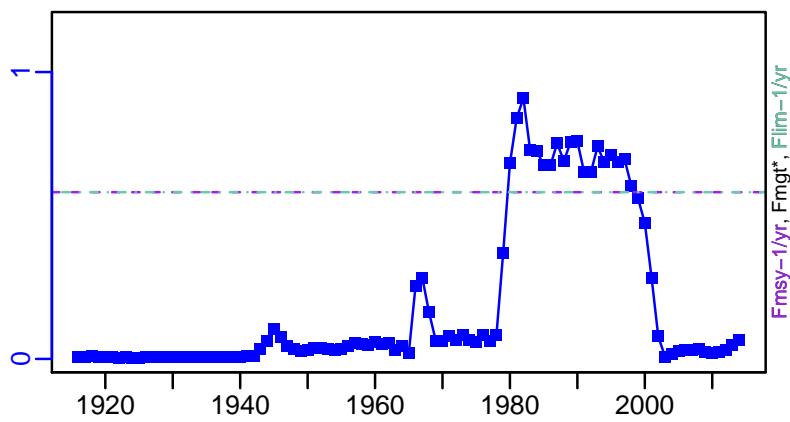
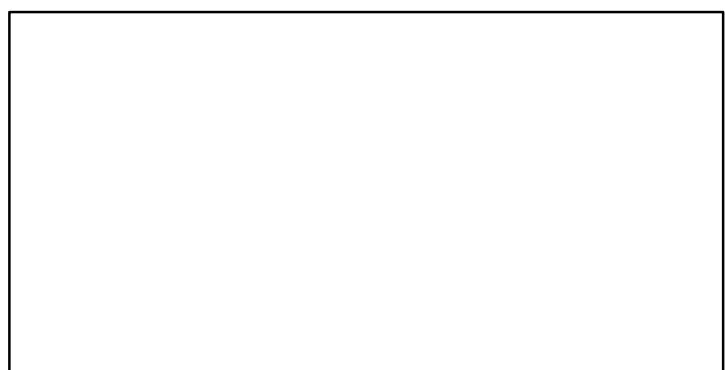
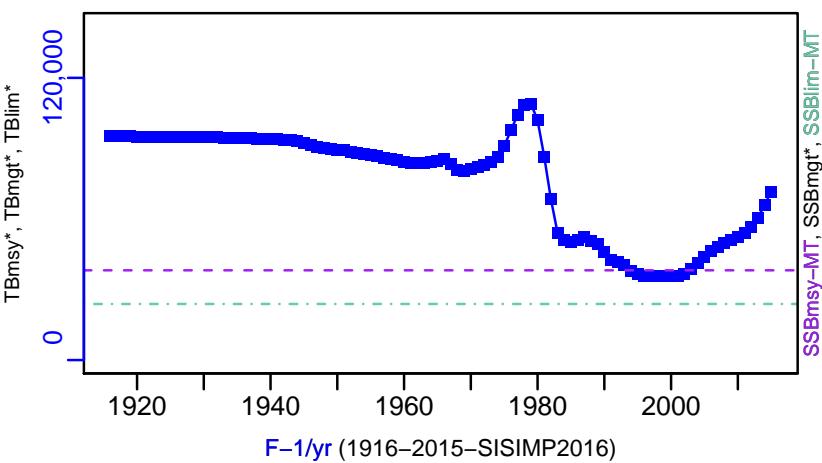
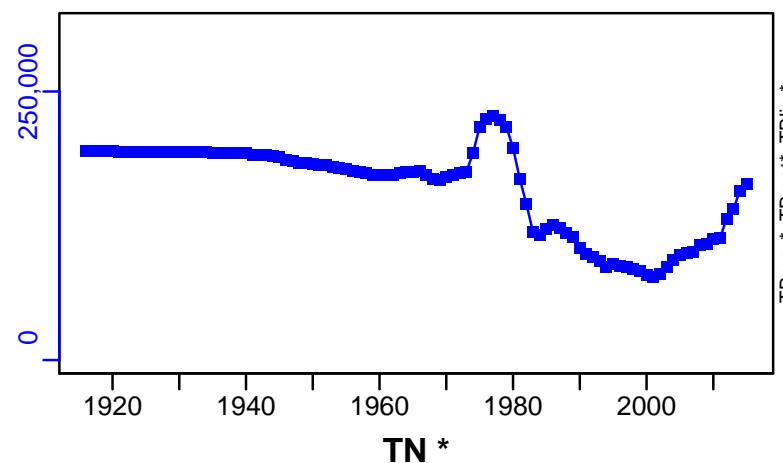


◆ Start Year ◆ End Year * No Data

Widow rockfish Pacific Coast [WROCKPCOAST]

TB-MT (1916–2015–SISIMP2016)

SSB-MT (1916–2015–SISIMP2016)

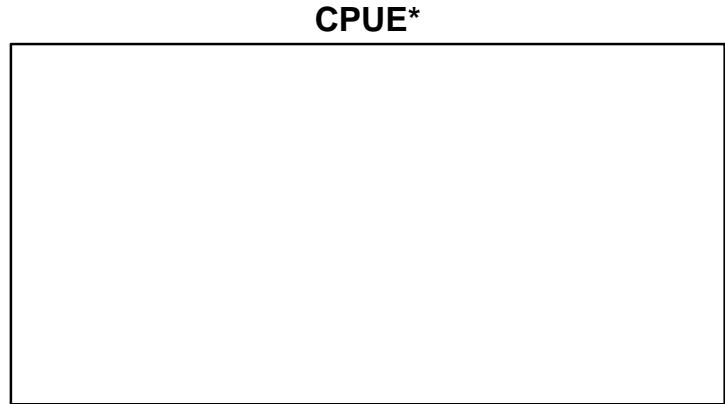
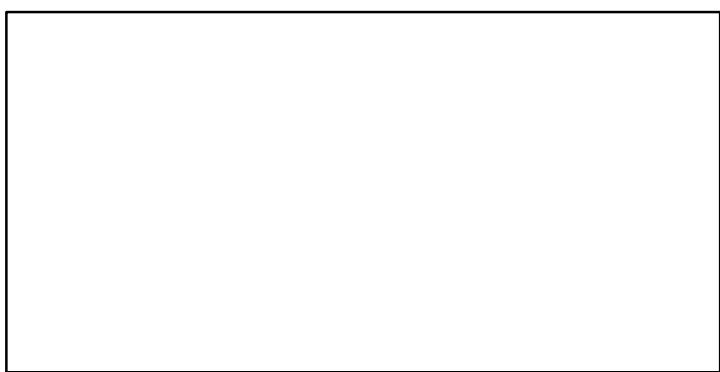
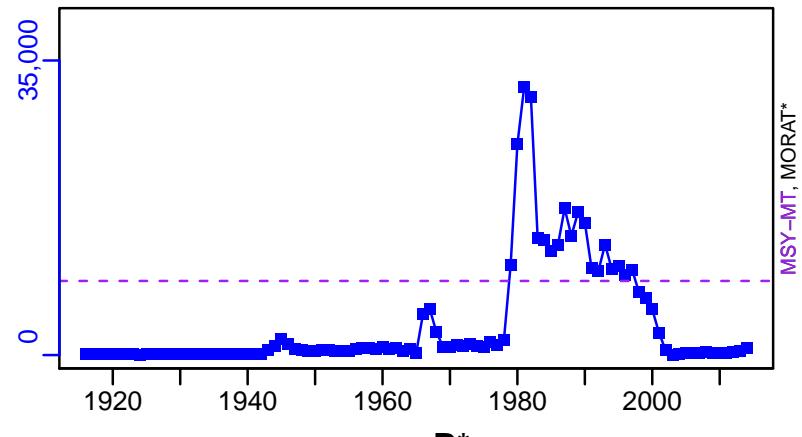


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| — MSY-based BRP | --- Lim BRP | * No Data |

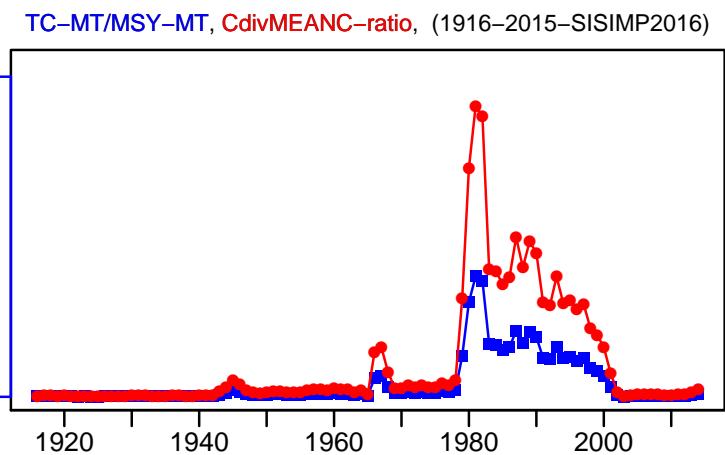
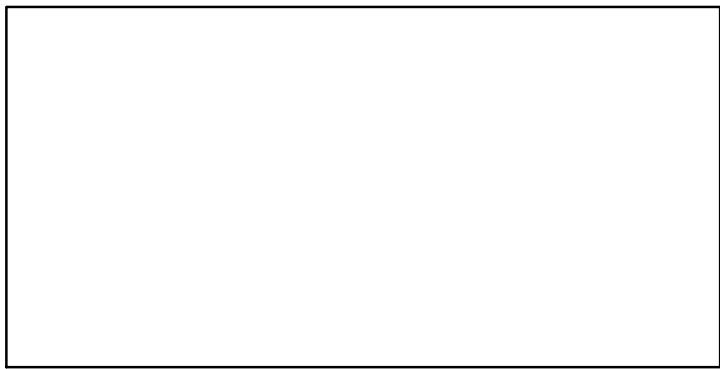
Widow rockfish Pacific Coast [WROCKPCOAST]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]

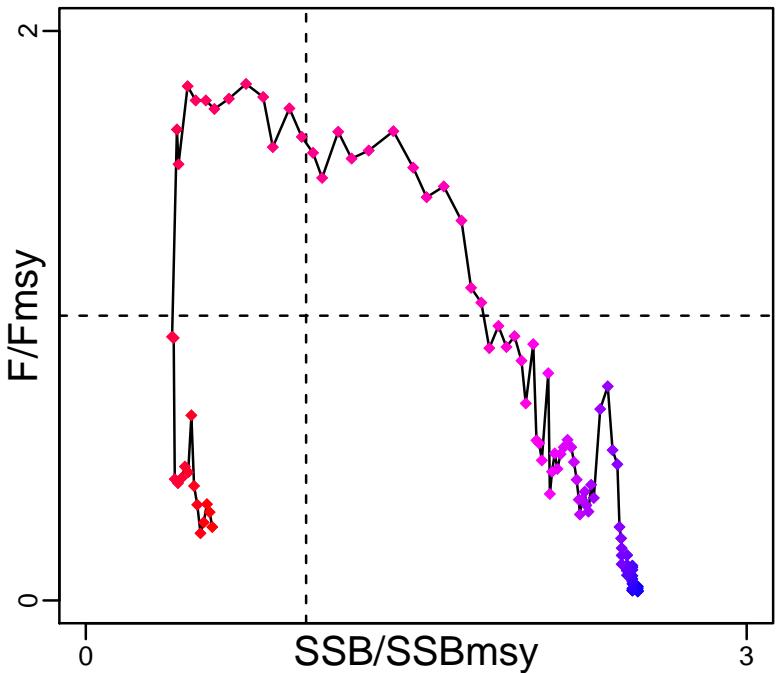
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes ruberrimus |
| Current Assess ID | NWFSC-YEYEROCKPCOAST-1916-2015-SISIMP2016 |
| Area | Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

| Reference Points | | | |
|-------------------------|----------------|------------------|--------------------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2011 | 3706 |
| SSBmsy | SSBmsy-E00eggs | 2015 | 411,100,000 |
| Fmsy | Fmsy-1/yr | 2015 | 0.5 |
| ERmsy | ERmsy-ratio | 2011 | 0.017 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2011 | 8882 |
| SSB0 | SSB0-E00eggs | 2011 | 1.03×10^9 |
| MSY | MSY-MT | 2011 | 63 |
| M | M-1/yr | 2011 | 0.046 |
| TBlim | - | - | - |
| SSBlim | SSBlim-E00eggs | 2015 | 256,900,000 |
| Flim | Flim-1/yr | 2015 | 0.5 |
| ERlim | - | - | - |

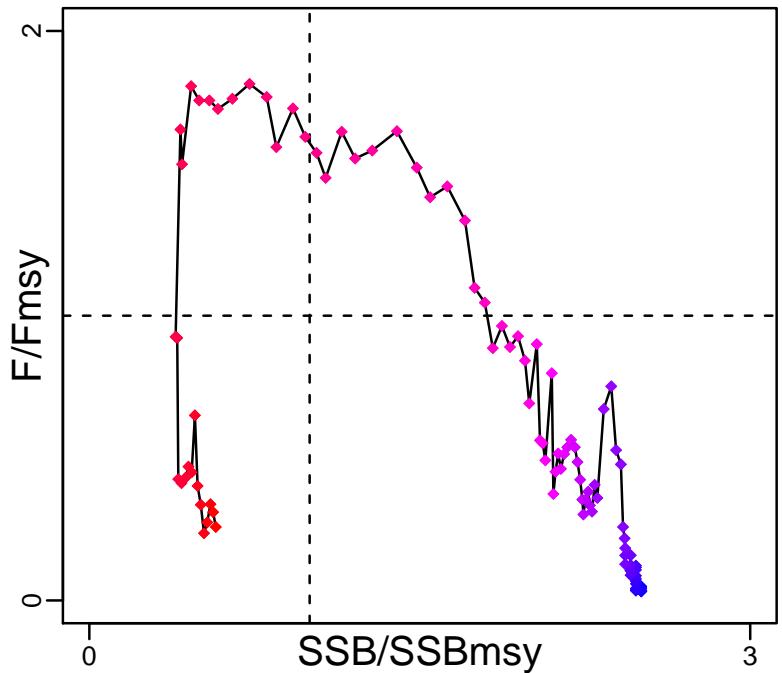
| Time Series | | | | | | |
|--------------------|----------------------------|------------------|--------------------|------------|------------|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2015 | 2350 | - | 8+ | |
| SSB | SSB-E00eggs | 2015 | 2.41×10^8 | Females | - | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2015 | 112,000 | - | 0 | |
| F | F-1/yr | 2015 | 0.129 | - | - | |
| ER | ER-calc-ratio | 2015 | 0.004 | - | - | |
| TC | TC-MT | 2015 | 9 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2011 | 0.591 | | | |
| SSB/SSBmsy | SSB-E00eggs/SSBmsy-E00eggs | 2015 | 0.586 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2015 | 0.258 | | | |
| ER/ERmsy | ER-calc-ratio/ERmsy-ratio | 2011 | 0.312 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]

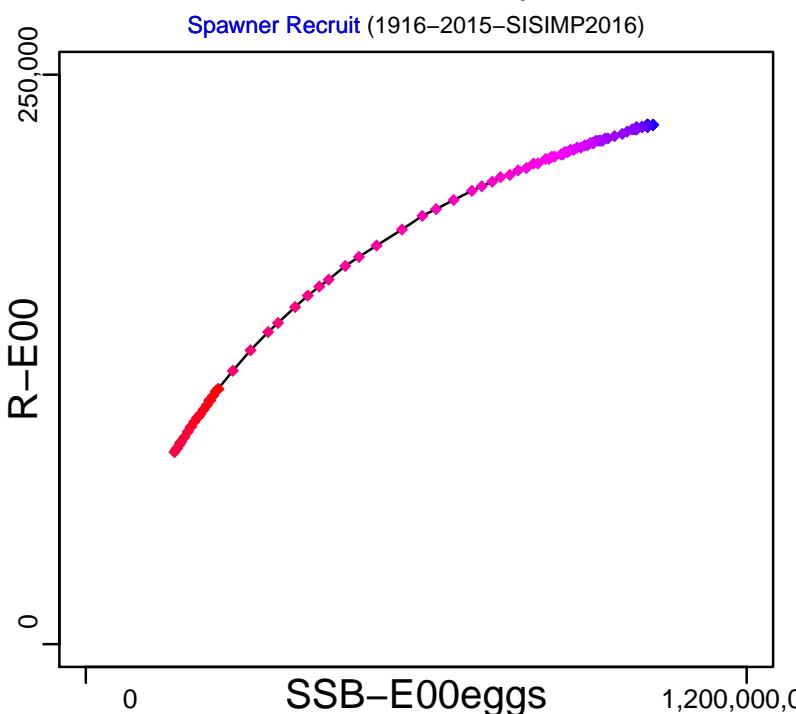
Kobe MSYpref (1916–2015–SISIMP2016)



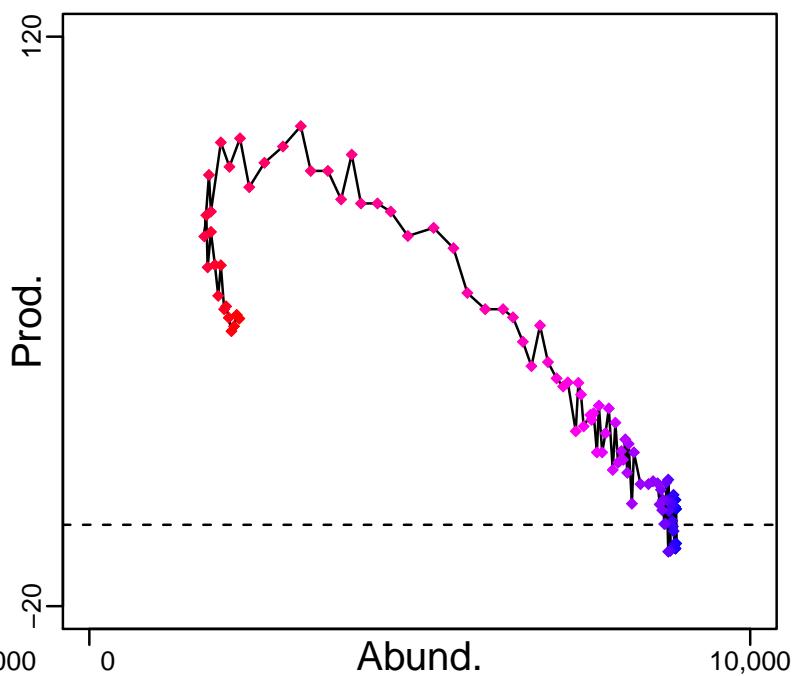
Kobe MGTpref (1916–2015–SISIMP2016)



Spawner Recruit (1916–2015–SISIMP2016)



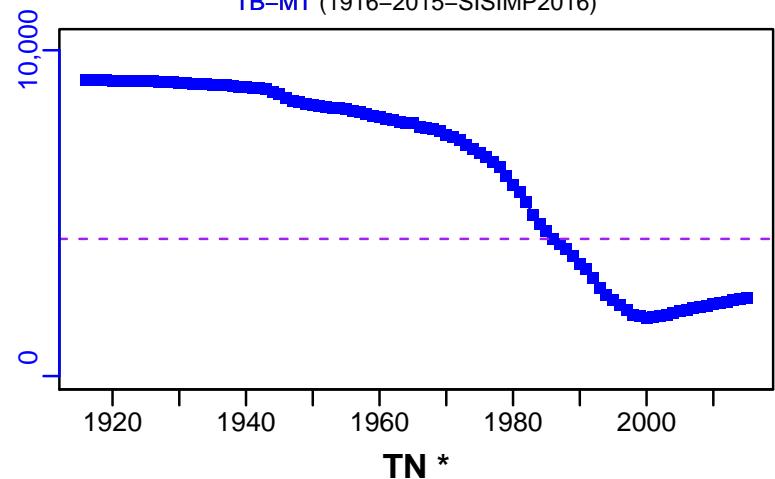
Production (1916–2015–SISIMP2016)



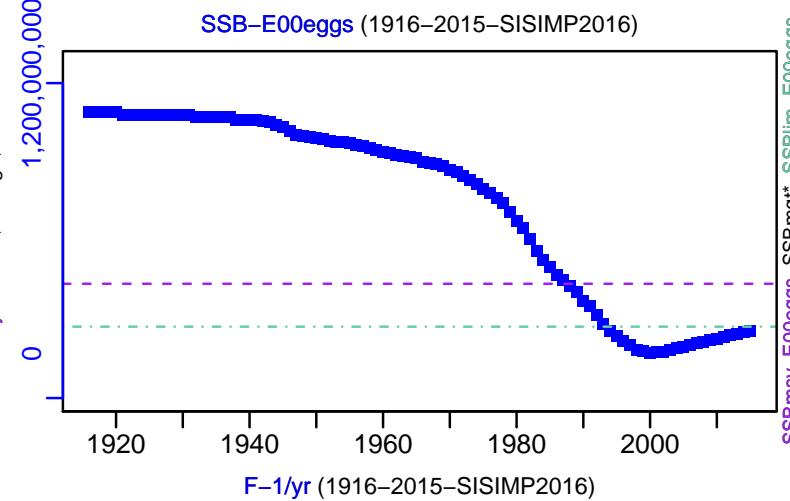
| | | | |
|--------------|------------|---|---------|
| ◆ Start Year | ◆ End Year | * | No Data |
|--------------|------------|---|---------|

Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]

TB-MT (1916–2015–SISIMP2016)



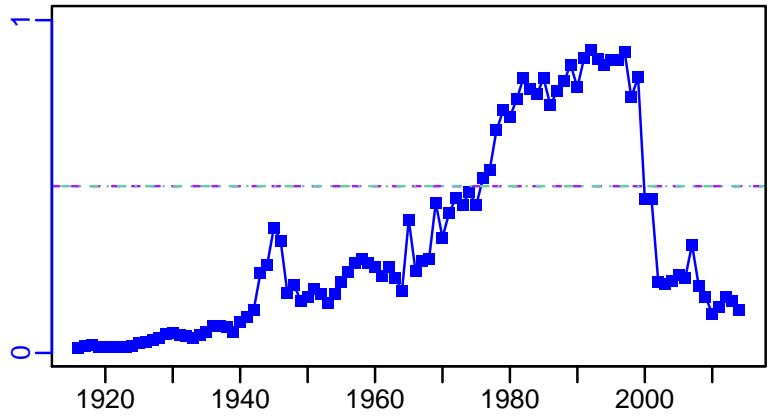
SSB-E00eggs (1916–2015–SISIMP2016)



TN *

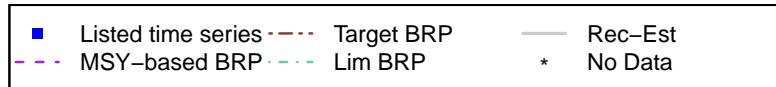
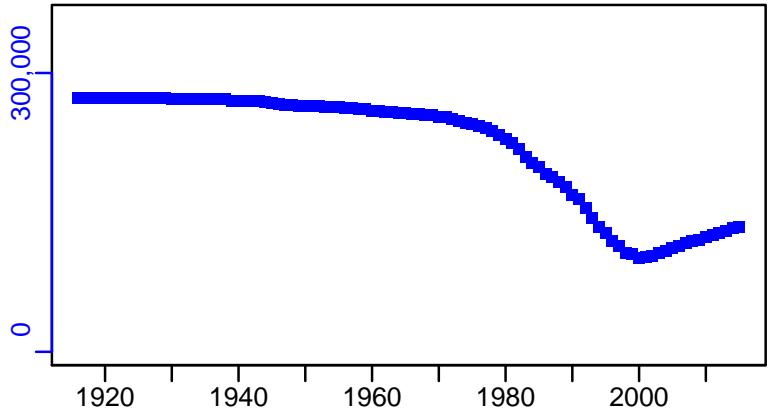
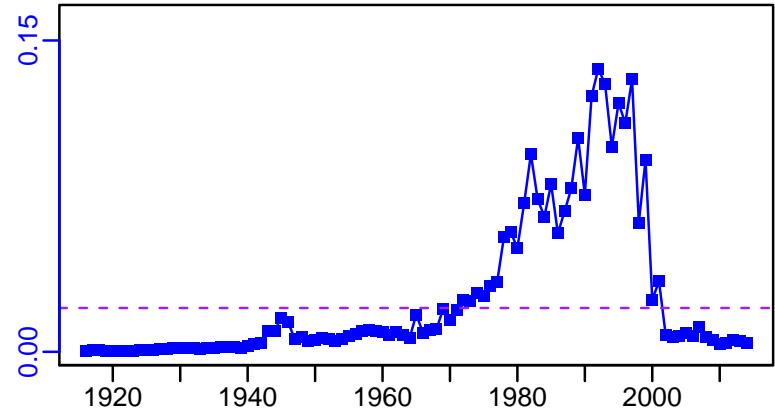


F-1/yr (1916–2015–SISIMP2016)



ER-calc-ratio (1916–2015–SISIMP2016)

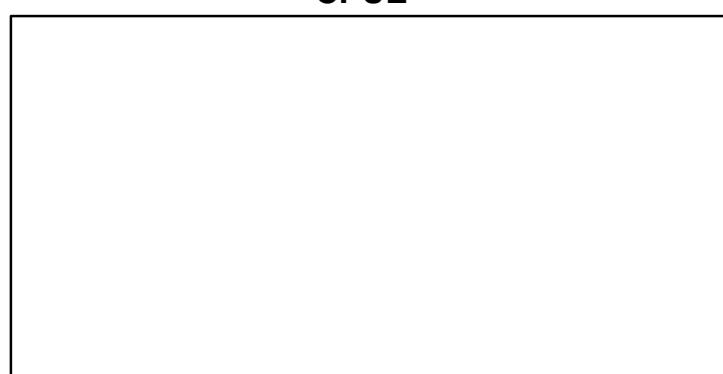
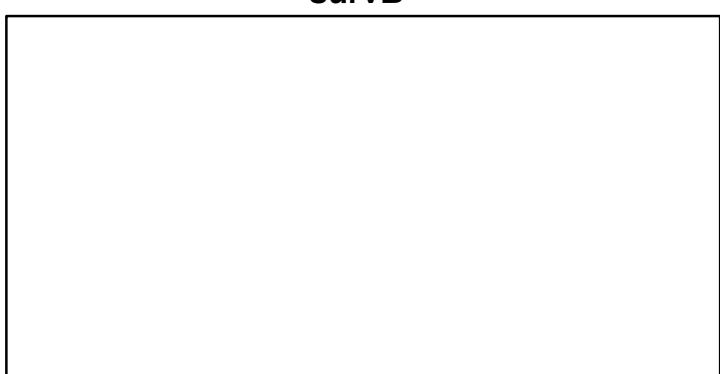
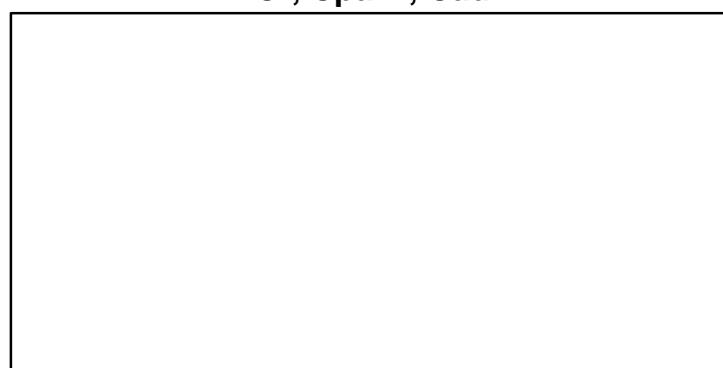
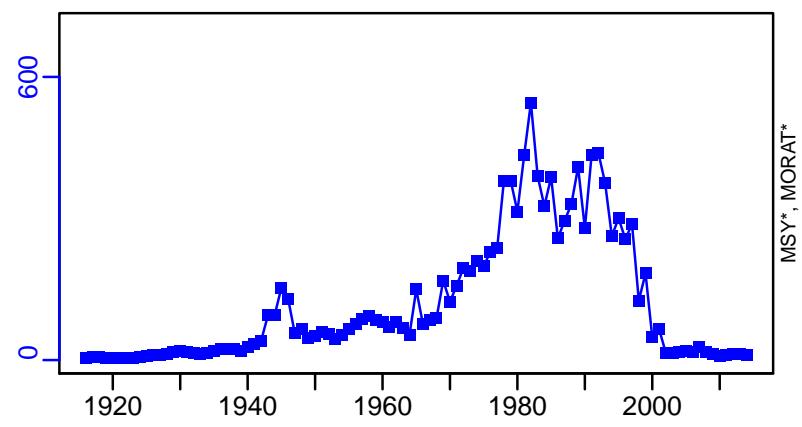
R-E00 (1916–2015–SISIMP2016)



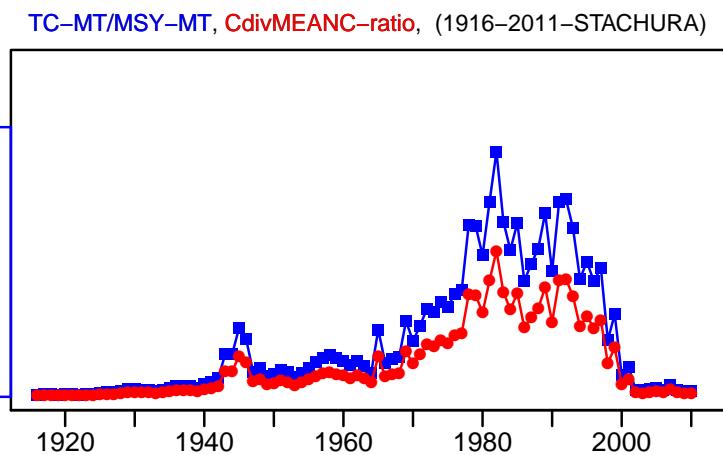
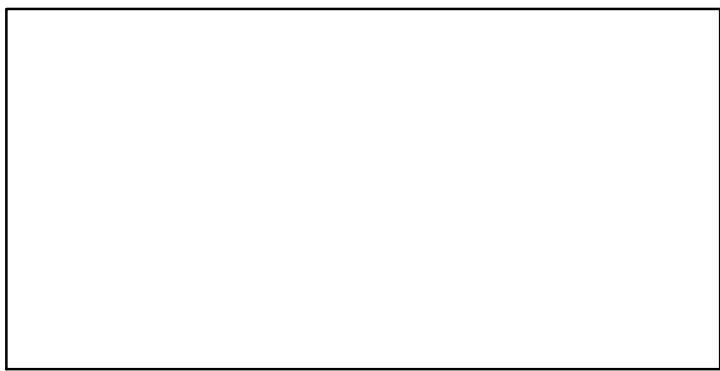
Yelloweye rockfish Pacific Coast [YEYEROCKPCOAST]

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

TAC*, Cpair*, Cadv*



EFFORT*



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

Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

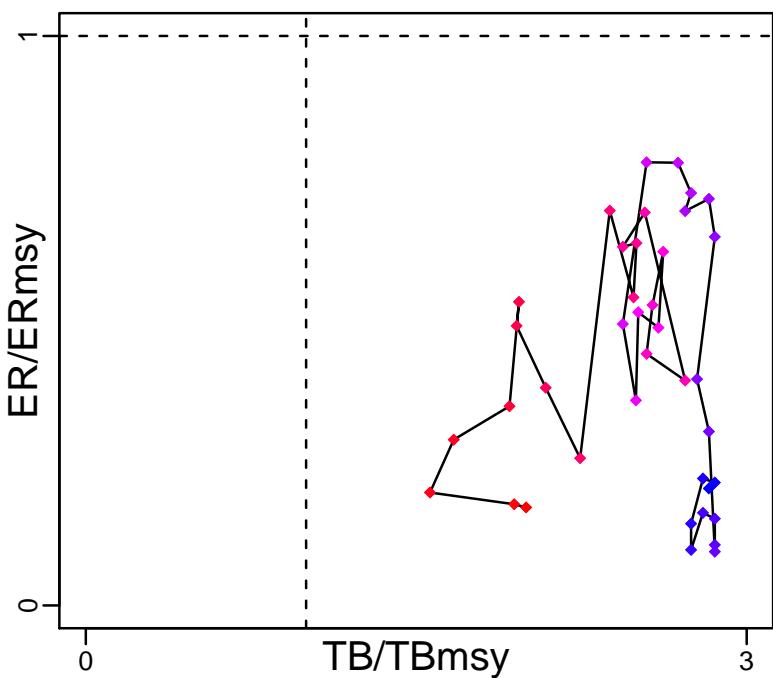
| Metadata | |
|-----------------------------|-----------------------------------------------------------|
| Scientific Name | Sebastodes flavidus |
| Current Assess ID | NWFSC-YTROCKNPCOAST-1892-2012-SISIMP2016 |
| Area | Northern Pacific Coast |
| Management Authority | National Marine Fisheries Service,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

| Reference Points | | | |
|-------------------------|----------------|-----------|---------|
| Type | ID | Asmt Year | Value |
| TBmsy | TBmsy-calc-MT | 2005 | 37,123 |
| SSBmsy | SSBmsy-conv-MT | 2005 | 7974 |
| Fmsy | Fmsy-1/yr | 2012 | 0.5 |
| ERmsy | ERmsy-ratio | 2005 | 0.126 |
| TBmgt | - | - | - |
| SSBmgt | - | - | - |
| Fmgt | - | - | - |
| ERmgt | - | - | - |
| TB0 | TB0-MT | 2005 | 120,024 |
| SSB0 | SSB0-MT | 2005 | 31,016 |
| MSY | MSY-MT | 2012 | 4805 |
| M | M-1/yr | 2005 | 0.11 |
| TBlim | - | - | - |
| SSBlim | - | - | - |
| Flim | Flim-1/yr | 2012 | 0.5 |
| ERlim | - | - | - |

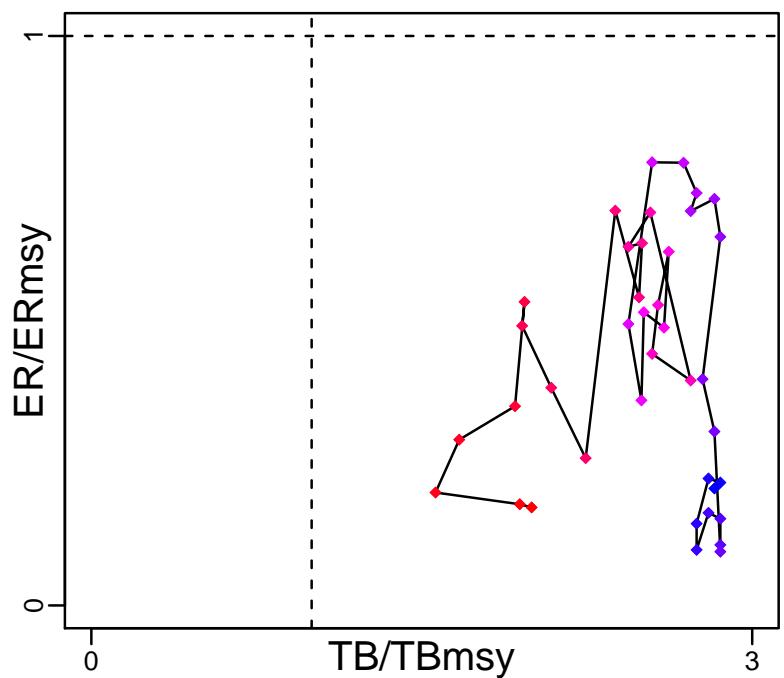
| Time Series | | | | | | |
|--------------------|------------------------|-----------|------------|-----|-----|--|
| Type | ID | Asmt Year | Curr Value | Sex | Age | |
| TB | TB-MT | 2012 | 143,000 | - | - | |
| SSB | SSB-MT | 2005 | 16,900 | - | 4+ | |
| TN | - | - | - | - | - | |
| R | R-E00 | 2005 | 12,100,000 | - | 4 | |
| F | F-1/yr | 2012 | 0.182 | - | - | |
| ER | ER-ratio | 2005 | 0.022 | - | - | |
| TC | TC-MT | 2005 | 1610 | | | |
| TL | - | - | - | | | |
| TB/TBmsy | TB-MT/TBmsy-calc-MT | 2005 | 1.999 | | | |
| SSB/SSBmsy | SSB-MT/(SSB0-MT*0.368) | 2005 | 1.481 | | | |
| F/Fmsy | F-1/yr/Fmsy-1/yr | 2012 | 0.364 | | | |
| ER/ERmsy | ER-ratio/ERmsy-ratio | 2005 | 0.172 | | | |
| TB/TBmgt | - | - | - | | | |
| SSB/SSBmgt | - | - | - | | | |
| F/Fmgt | - | - | - | | | |
| ER/ERmgt | - | - | - | | | |

Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

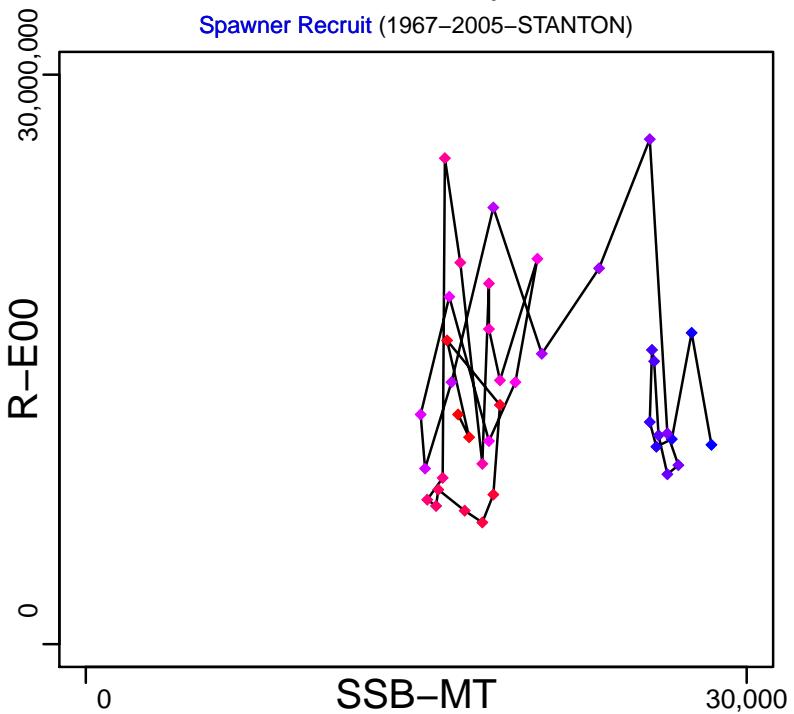
Kobe MSYpref (1967–2005–STANTON)



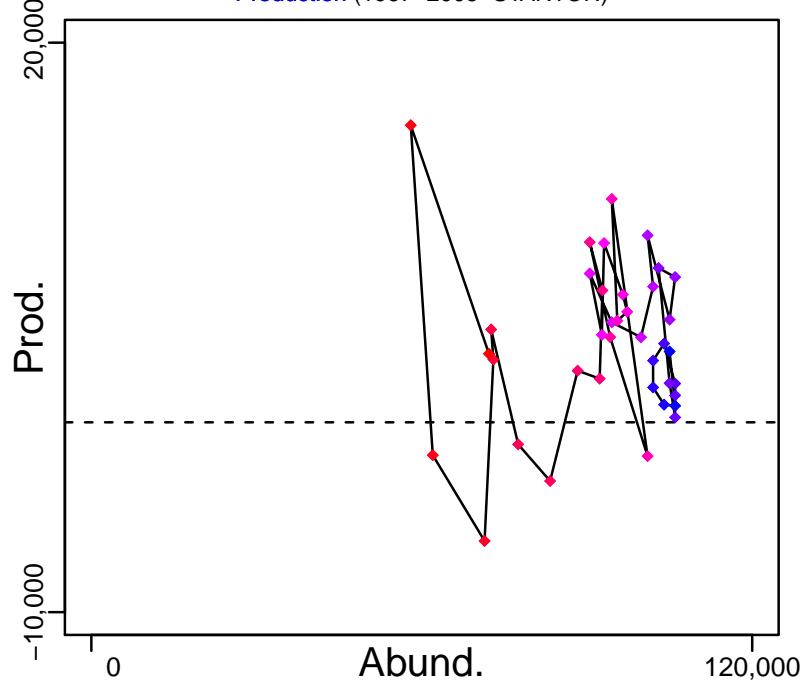
Kobe MGTpref (1967–2005–STANTON)



Spawner Recruit (1967–2005–STANTON)



Production (1967–2005–STANTON)

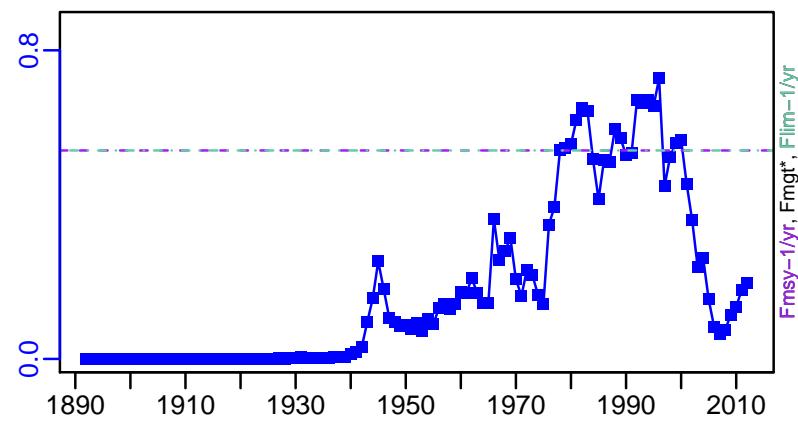
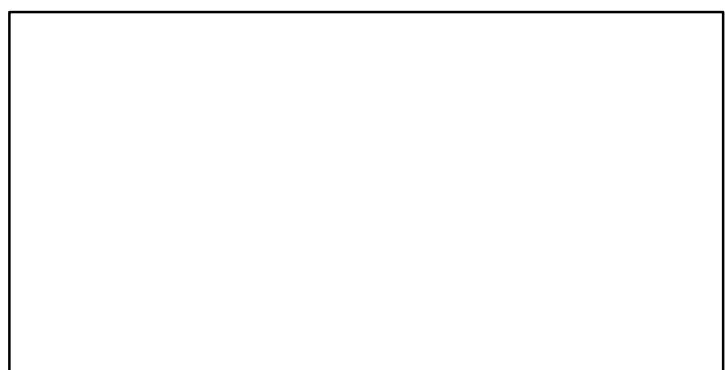
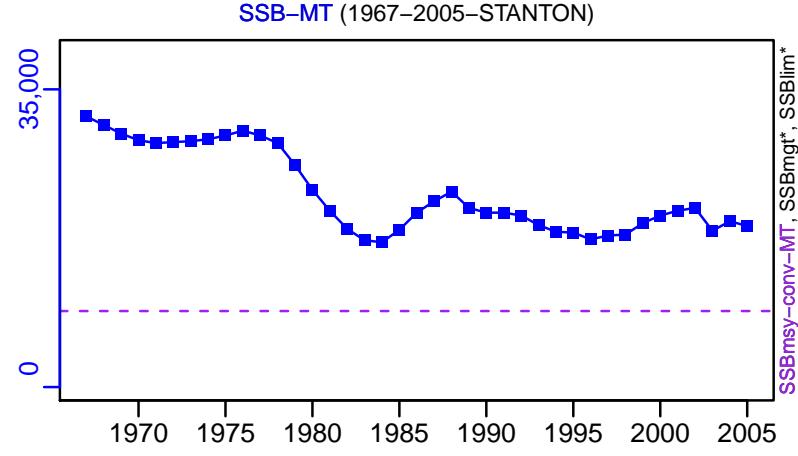
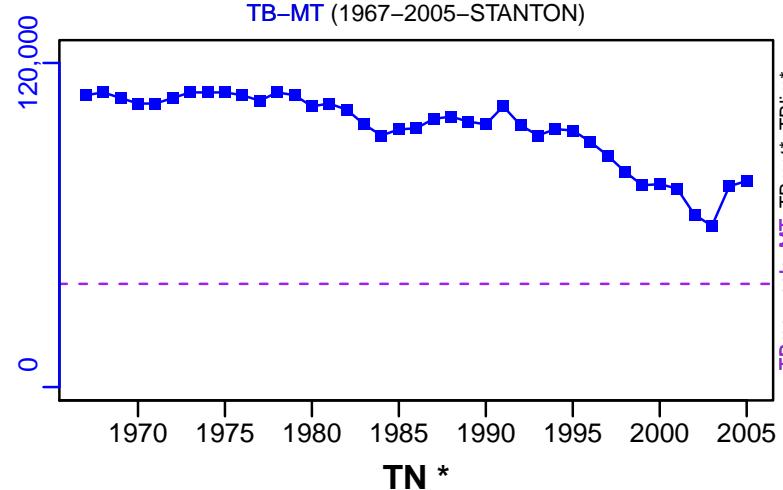


◆ Start Year ◆ End Year * No Data

Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

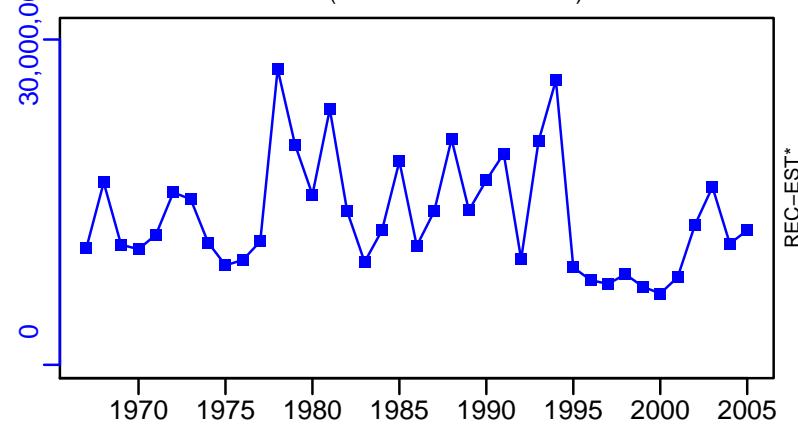
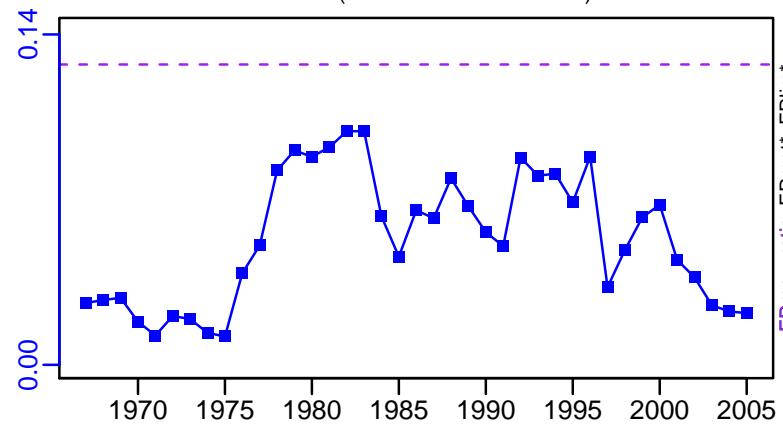
TB-MT (1967–2005-STANTON)

SSB-MT (1967–2005-STANTON)



ER-ratio (1967–2005-STANTON)

R-E00 (1967–2005-STANTON)

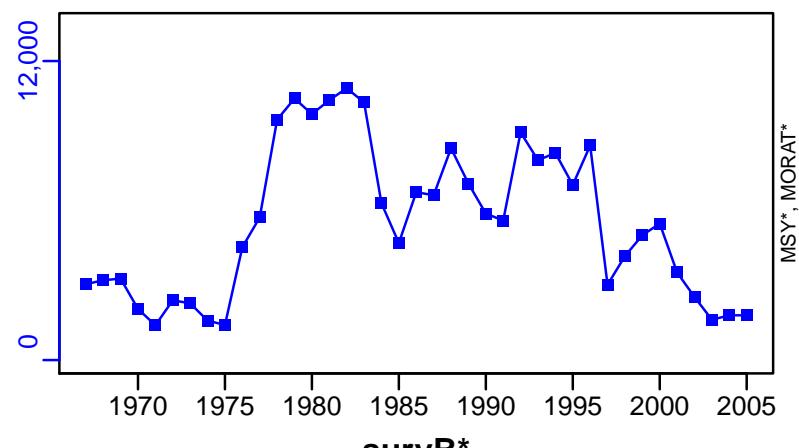


| | | |
|----------------------|--------------|-----------|
| ■ Listed time series | — Target BRP | — Rec-Est |
| - - - MSY-based BRP | - - Lim BRP | * No Data |

Yellowtail rockfish Northern Pacific Coast [YTROCKNPCOAST]

TC-MT, TL*, RecC* (1967–2005-STANTON)

TAC*, Cpair*, Cadv*



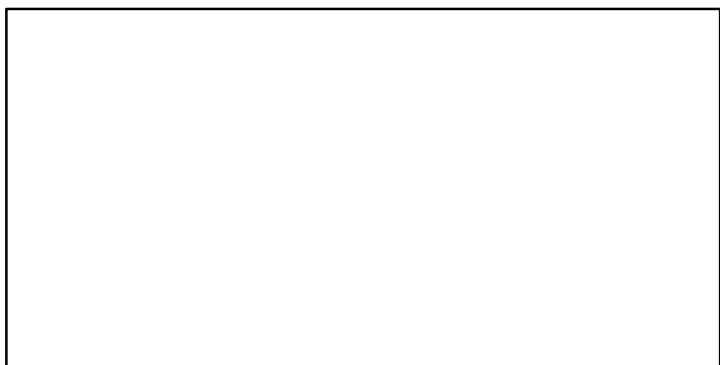
survB*



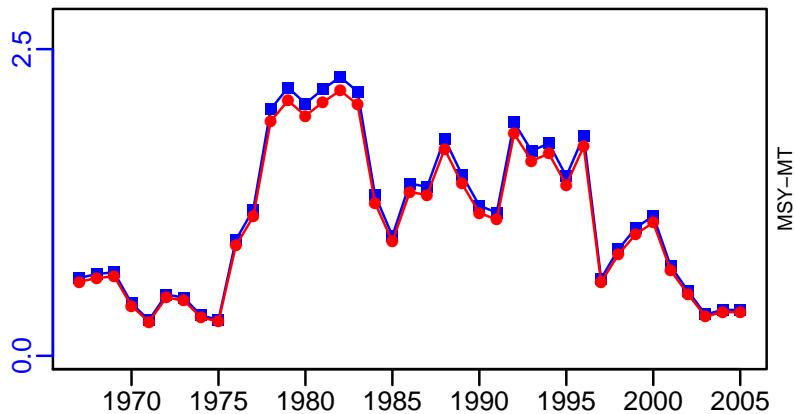
CPUE*



EFFORT*



TC-MT/MSY-MT, CdivMEANC-ratio, (1967–2005-STANTON)



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