

Appendix B: Total Catch Data from ADFG for the Tanner Crab Assessment

William Stockhausen

01 September, 2018

Contents

| | |
|--|----------|
| Introduction | 3 |
| Total catch abundance and biomass | 3 |
| Size compositions | 8 |

List of Tables

| | | |
|---|--|---|
| 1 | Total catch biomass of Tanner crab, by fishery. TCF: directed Tanner crab fisheries, SCF: snow crab fishery, RKF: BBRKC fishery. | 6 |
| 2 | Total catch abundance of Tanner crab, by fishery. TCF: directed Tanner crab fisheries, SCF: snow crab fishery, RKF: BBRKC fishery. | 7 |

List of Figures

| | | |
|----|--|----|
| 1 | Total Tanner crab catch, in millions of crab. TCF: directed Tanner crab fisheries; SCF: snow crab fishery; RKF: BBRKC fishery. | 4 |
| 2 | Total Tanner crab catch, in 1000's t. TCF: directed Tanner crab fisheries; SCF: snow crab fishery; RKF: BBRKC fishery. | 5 |
| 3 | Total catch size compositions for TCF at 1-mm bin size. | 9 |
| 4 | Total catch size compositions for TCF at 1-mm bin size. | 10 |
| 5 | Total catch size compositions for SCF at 1-mm bin size. | 11 |
| 6 | Total catch size compositions for SCF at 1-mm bin size. | 12 |
| 7 | Total catch size compositions for SCF at 1-mm bin size. | 13 |
| 8 | Total catch size compositions for SCF at 1-mm bin size. | 14 |
| 9 | Total catch size compositions for RKF at 1-mm bin size. | 15 |
| 10 | Total catch size compositions for RKF at 1-mm bin size. | 16 |
| 11 | Total catch size compositions for RKF at 1-mm bin size. | 17 |
| 12 | Total catch size compositions for RKF at 1-mm bin size. | 18 |
| 13 | Total catch size compositions for TCF at 5-mm bin size. | 19 |
| 14 | Total catch size compositions for TCF at 5-mm bin size. | 20 |
| 15 | Total catch size compositions for SCF at 5-mm bin size. | 21 |
| 16 | Total catch size compositions for SCF at 5-mm bin size. | 22 |
| 17 | Total catch size compositions for SCF at 5-mm bin size. | 23 |
| 18 | Total catch size compositions for SCF at 5-mm bin size. | 24 |
| 19 | Total catch size compositions for RKF at 5-mm bin size. | 25 |

| | | |
|----|---|----|
| 20 | Total catch size compositions for RKF at 5-mm bin size. | 26 |
| 21 | Total catch size compositions for RKF at 5-mm bin size. | 27 |
| 22 | Total catch size compositions for RKF at 5-mm bin size. | 28 |

Introduction

This report calculates total catch abundance and biomass, as well as total catch size compositions, of Tanner crab in the crab fisheries from “at sea” observer sampling.

Total catch abundance and biomass

Time series of total catch abundance and biomass, based on ADFG “at sea” observer sampling in the crab fisheries, are calculated in this section.

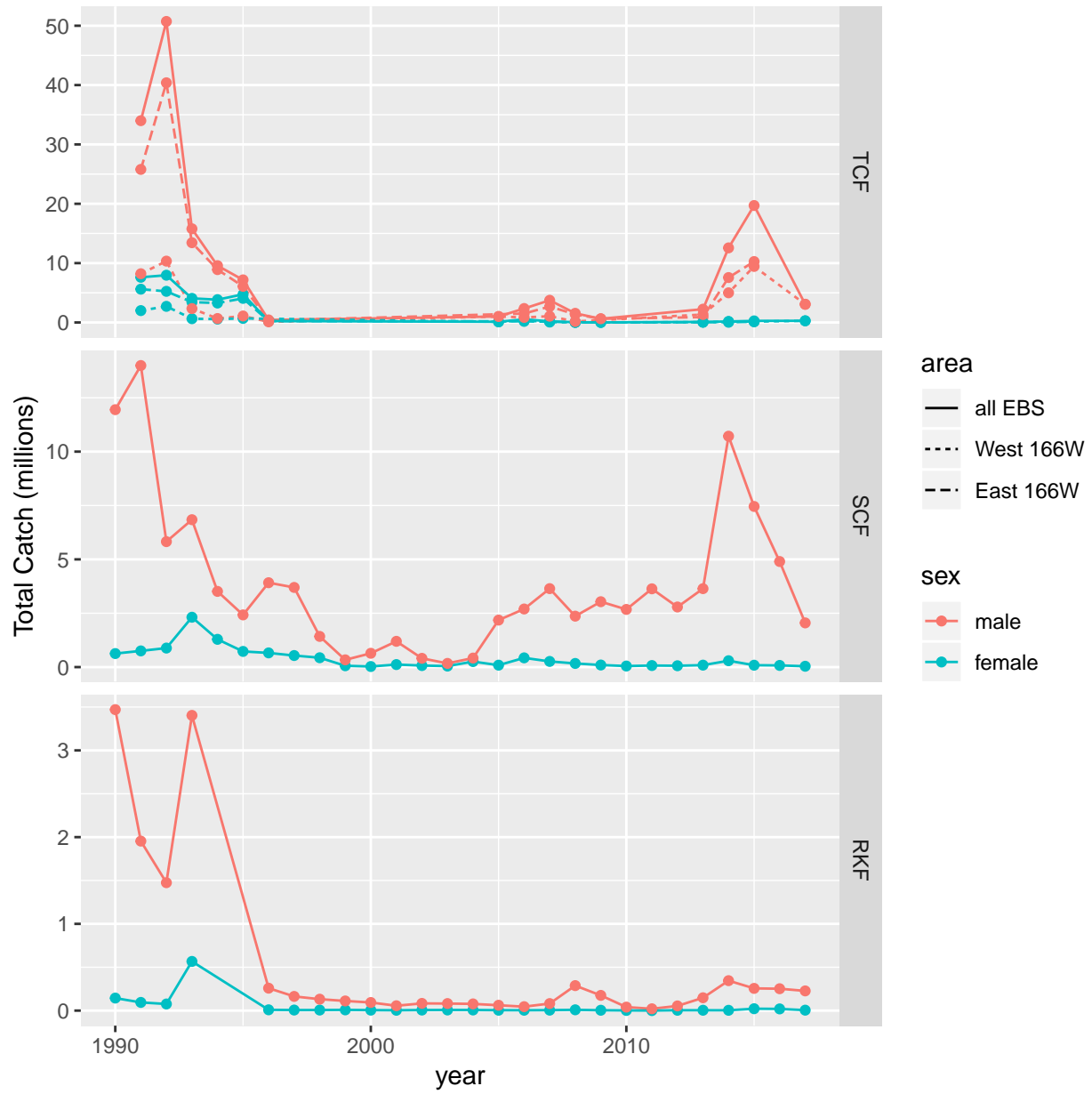


Figure 1: Total Tanner crab catch, in millions of crab. TCF: directed Tanner crab fisheries; SCF: snow crab fishery; RKF: BBRKC fishery.

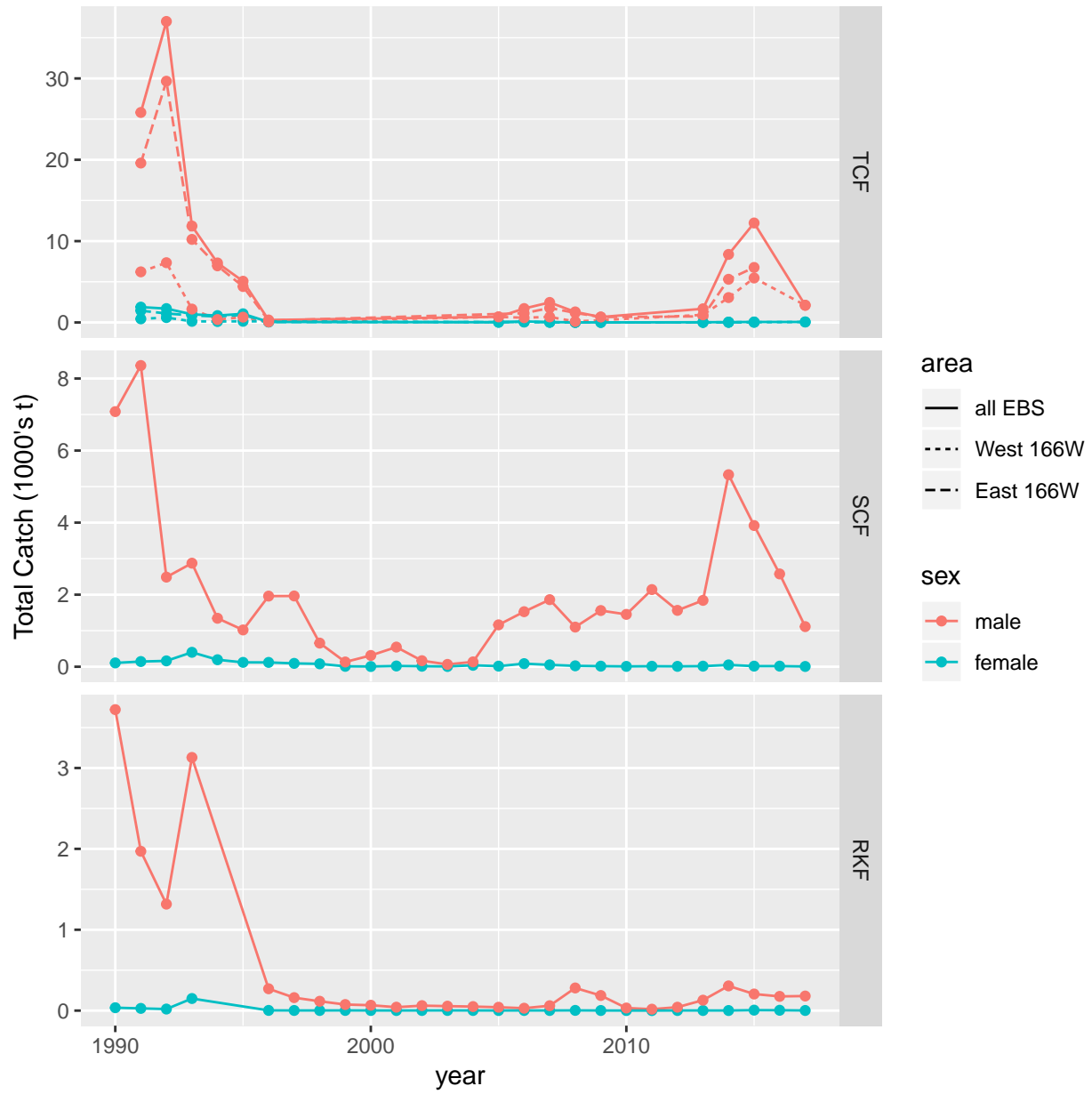


Figure 2: Total Tanner crab catch, in 1000's t. TCF: directed Tanner crab fisheries; SCF: snow crab fishery; RKF: BBRKC fishery.

Table 1: Total catch biomass of Tanner crab, by fishery. TCF: directed Tanner crab fisheries, SCF: snow crab fishery, RKF: BBRKC fishery.

| year | RKF | | SCF | | | TCF | | | | |
|------|-------------------|-----------------|-------------------|-----------------|----------|---------------------|-----------|-----------|-------------------|-----------|
| | female all EBS | male all EBS | female all EBS | male all EBS | all EBS | female East 166W | West 166W | all EBS | male East 166W | West 166W |
| | mt | mt | mt | mt | mt | mt | mt | mt | mt | mt |
| 1990 | 35.64 | 3,722.41 | 105.73 | 7,081.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1991 | 27.18 | 1,970.28 | 144.02 | 8,360.16 | 1,886.07 | 1,445.22 | 440.85 | 25,817.33 | 19,596.68 | 6,220.65 |
| 1992 | 19.04 | 1,316.69 | 162.54 | 2,487.22 | 1,703.58 | 1,104.00 | 599.58 | 37,007.42 | 29,660.41 | 7,347.01 |
| 1993 | 149.30 | 3,130.82 | 400.37 | 2,874.41 | 996.27 | 860.14 | 136.13 | 11,853.88 | 10,209.95 | 1,643.92 |
| 1994 | 0.00 | 0.00 | 194.21 | 1,345.11 | 841.65 | 729.27 | 112.37 | 7,315.42 | 6,958.13 | 357.29 |
| 1995 | 0.00 | 0.00 | 120.90 | 1,021.03 | 1,064.94 | 924.20 | 140.74 | 5,065.51 | 4,415.22 | 650.29 |
| 1996 | 2.42 | 269.98 | 119.63 | 1,960.72 | 56.68 | 56.68 | 0.00 | 300.43 | 228.61 | 71.82 |
| 1997 | 1.66 | 160.14 | 92.66 | 1,963.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1998 | 1.66 | 115.22 | 80.36 | 655.94 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1999 | 2.24 | 75.09 | 11.19 | 131.78 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2000 | 1.36 | 66.40 | 6.06 | 312.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2001 | 0.96 | 42.20 | 20.53 | 545.31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2002 | 1.58 | 61.25 | 13.81 | 167.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2003 | 1.85 | 54.94 | 7.01 | 64.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2004 | 1.65 | 49.76 | 39.90 | 134.62 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2005 | 0.99 | 41.42 | 16.26 | 1,162.84 | 23.75 | 0.00 | 23.75 | 684.59 | 0.00 | 684.59 |
| 2006 | 1.48 | 29.52 | 85.52 | 1,527.25 | 121.12 | 48.83 | 72.29 | 1,711.37 | 1,132.14 | 579.23 |
| 2007 | 1.42 | 60.56 | 52.06 | 1,861.59 | 44.11 | 29.30 | 14.81 | 2,458.98 | 1,779.10 | 679.88 |
| 2008 | 2.54 | 279.90 | 24.93 | 1,100.27 | 8.15 | 6.66 | 1.50 | 1,296.93 | 1,177.78 | 119.14 |
| 2009 | 1.14 | 186.51 | 15.67 | 1,559.56 | 2.27 | 2.27 | 0.00 | 664.59 | 664.59 | 0.00 |
| 2010 | 0.55 | 31.92 | 9.18 | 1,453.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2011 | 0.07 | 17.47 | 13.27 | 2,141.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2012 | 1.31 | 42.11 | 10.30 | 1,564.34 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2013 | 1.26 | 128.94 | 15.63 | 1,841.75 | 23.47 | 12.11 | 11.36 | 1,679.31 | 746.21 | 933.10 |
| 2014 | 1.00 | 305.41 | 50.67 | 5,330.04 | 39.23 | 8.77 | 30.47 | 8,363.59 | 5,306.59 | 3,057.01 |
| 2015 | 5.58 | 204.96 | 16.82 | 3,919.18 | 57.61 | 28.22 | 29.39 | 12,228.99 | 6,761.44 | 5,467.55 |
| 2016 | 4.22 | 175.69 | 16.70 | 2,575.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2017 | 1.41 | 180.09 | 7.04 | 1,113.36 | 59.68 | 0.00 | 59.68 | 2,112.81 | 0.00 | 2,112.81 |

Table 2: Total catch abundance of Tanner crab, by fishery. TCF: directed Tanner crab fisheries, SCF: snow crab fishery, RKF: BBRKC fishery.

| year | RKF | | SCF | | | TCF | | | | |
|------|--------------------------------|------------------------------|--------------------------------|------------------------------|----------------------|----------------------------------|------------------------|----------------------|--------------------------------|------------------------|
| | female all EBS abundance | male all EBS abundance | female all EBS abundance | male all EBS abundance | all EBS abundance | female East 166W abundance | West 166W abundance | all EBS abundance | male East 166W abundance | West 166W abundance |
| 1990 | 144,519 | 3,470,323 | 628,540 | 11,946,455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 94,536 | 1,954,295 | 752,183 | 13,995,237 | 7,613,128 | 5,611,845 | 2,001,283 | 34,001,956 | 25,791,525 | 8,210,431 |
| 1992 | 76,307 | 1,474,805 | 883,319 | 5,822,832 | 7,963,454 | 5,244,846 | 2,718,608 | 50,720,836 | 40,384,938 | 10,335,898 |
| 1993 | 567,133 | 3,403,707 | 2,314,901 | 6,841,229 | 4,063,605 | 3,429,524 | 634,081 | 15,784,117 | 13,437,551 | 2,346,566 |
| 1994 | 0 | 0 | 1,288,914 | 3,513,409 | 3,843,603 | 3,276,083 | 567,520 | 9,574,296 | 8,907,460 | 666,836 |
| 1995 | 0 | 0 | 727,241 | 2,422,642 | 4,741,446 | 4,057,738 | 683,708 | 7,177,419 | 6,083,963 | 1,093,456 |
| 1996 | 9,176 | 258,772 | 659,274 | 3,916,480 | 237,860 | 237,860 | 0 | 429,188 | 327,545 | 101,643 |
| 1997 | 6,484 | 163,621 | 536,997 | 3,696,981 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 6,572 | 131,814 | 435,096 | 1,424,578 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1999 | 8,495 | 111,285 | 62,286 | 336,764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2000 | 5,566 | 93,543 | 27,541 | 641,659 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 3,930 | 56,106 | 118,268 | 1,196,100 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6,551 | 83,234 | 71,990 | 407,593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7,360 | 81,335 | 46,737 | 172,053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2004 | 7,285 | 77,404 | 256,238 | 419,793 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2005 | 4,640 | 61,828 | 90,020 | 2,182,048 | 112,562 | 0 | 112,562 | 1,003,858 | 0 | 1,003,858 |
| 2006 | 4,295 | 45,446 | 429,048 | 2,696,848 | 532,434 | 187,476 | 344,958 | 2,351,931 | 1,503,408 | 848,523 |
| 2007 | 5,406 | 81,214 | 263,568 | 3,641,695 | 193,293 | 121,601 | 71,692 | 3,741,140 | 2,681,282 | 1,059,858 |
| 2008 | 9,158 | 288,275 | 169,656 | 2,363,835 | 35,497 | 28,094 | 7,403 | 1,545,746 | 1,377,918 | 167,828 |
| 2009 | 4,254 | 175,411 | 97,010 | 3,034,582 | 8,471 | 8,471 | 0 | 622,584 | 622,584 | 0 |
| 2010 | 1,949 | 40,511 | 49,219 | 2,676,927 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 260 | 21,026 | 72,766 | 3,633,089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2012 | 4,191 | 54,052 | 63,171 | 2,790,123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2013 | 4,334 | 148,057 | 90,977 | 3,640,531 | 94,077 | 42,504 | 51,573 | 2,241,471 | 898,607 | 1,342,864 |
| 2014 | 3,663 | 345,462 | 295,965 | 10,716,381 | 170,337 | 36,662 | 133,675 | 12,568,858 | 7,570,310 | 4,998,548 |
| 2015 | 21,917 | 256,287 | 87,919 | 7,455,464 | 267,821 | 119,577 | 148,244 | 19,705,314 | 10,264,176 | 9,441,138 |
| 2016 | 19,731 | 252,335 | 78,433 | 4,899,984 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2017 | 5,167 | 227,212 | 39,956 | 2,052,032 | 281,056 | 0 | 281,056 | 3,069,551 | 0 | 3,069,551 |

Size compositions

This section calculates size compositions from ADFG at-sea observer sampling for total Tanner crab in the crab fisheries.

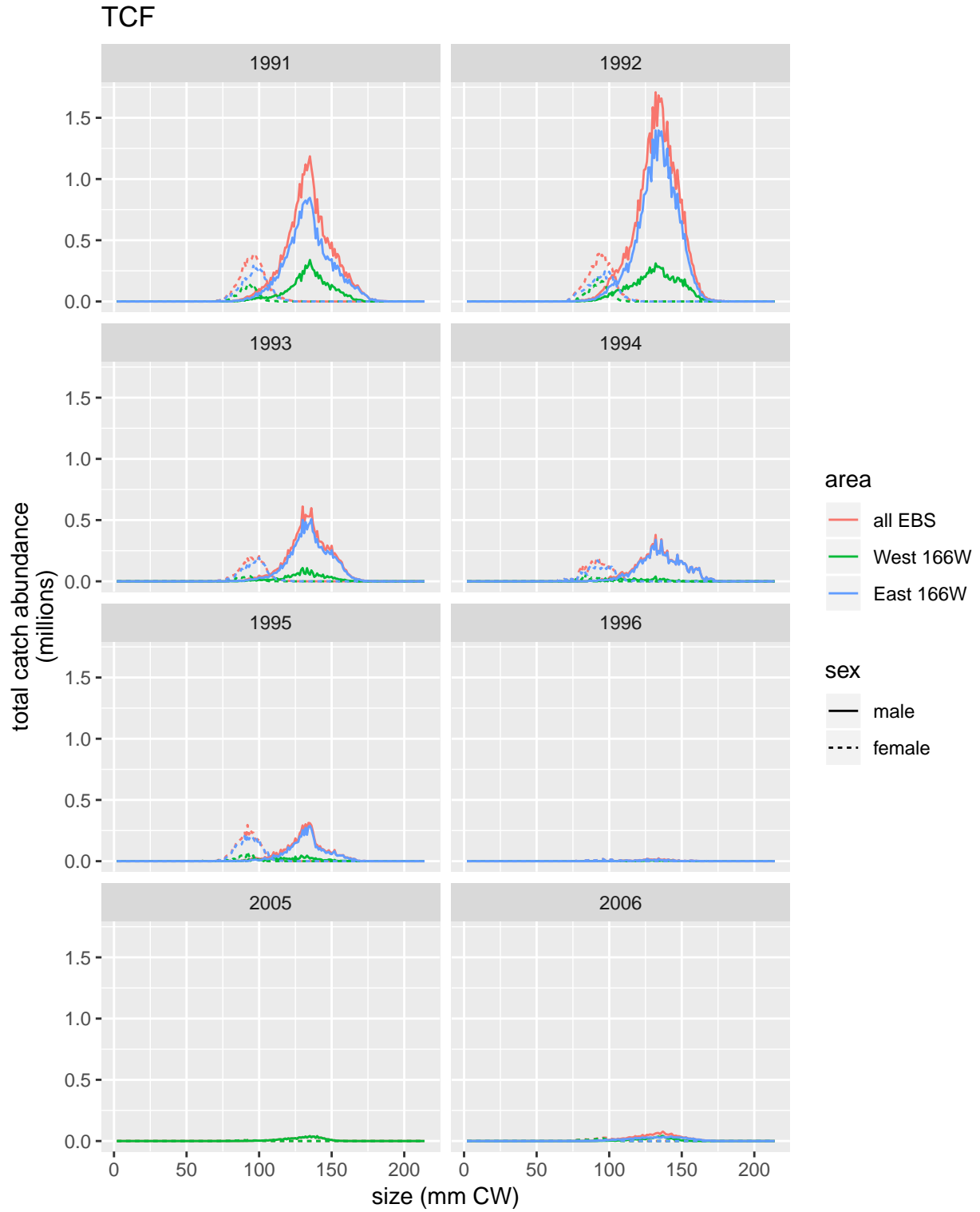


Figure 3: Total catch size compositions for TCF at 1-mm bin size.

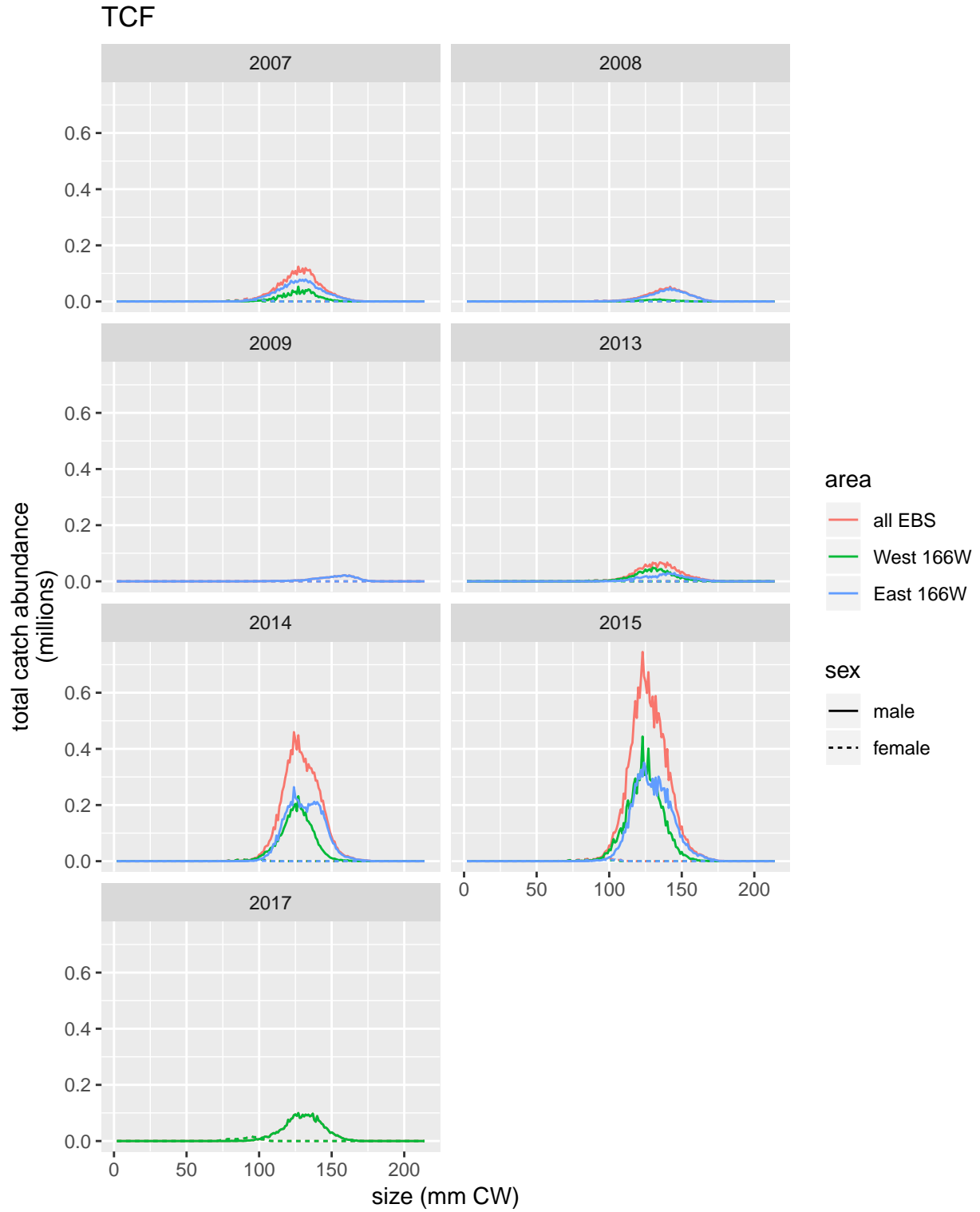


Figure 4: Total catch size compositions for TCF at 1-mm bin size.

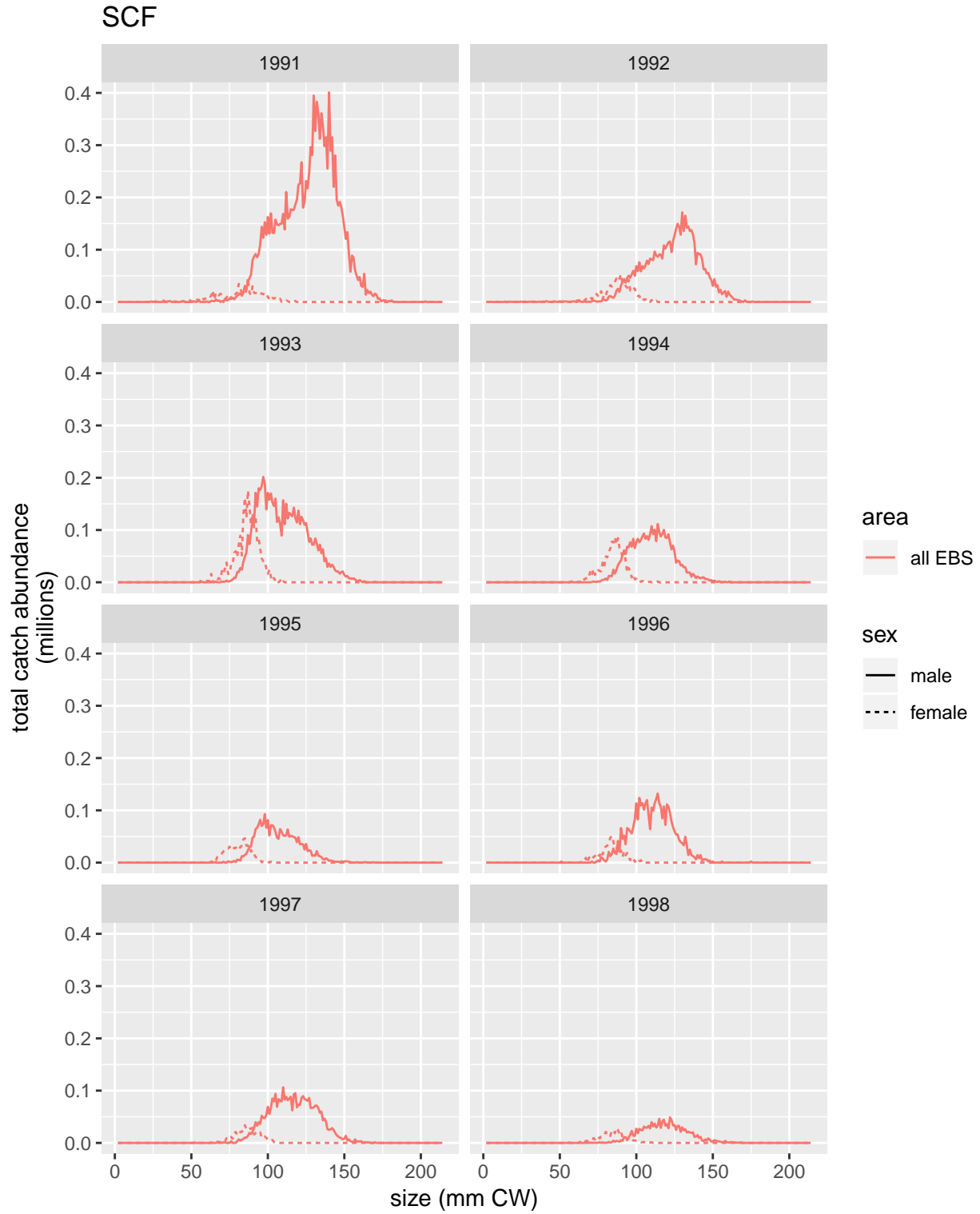


Figure 5: Total catch size compositions for SCF at 1-mm bin size.

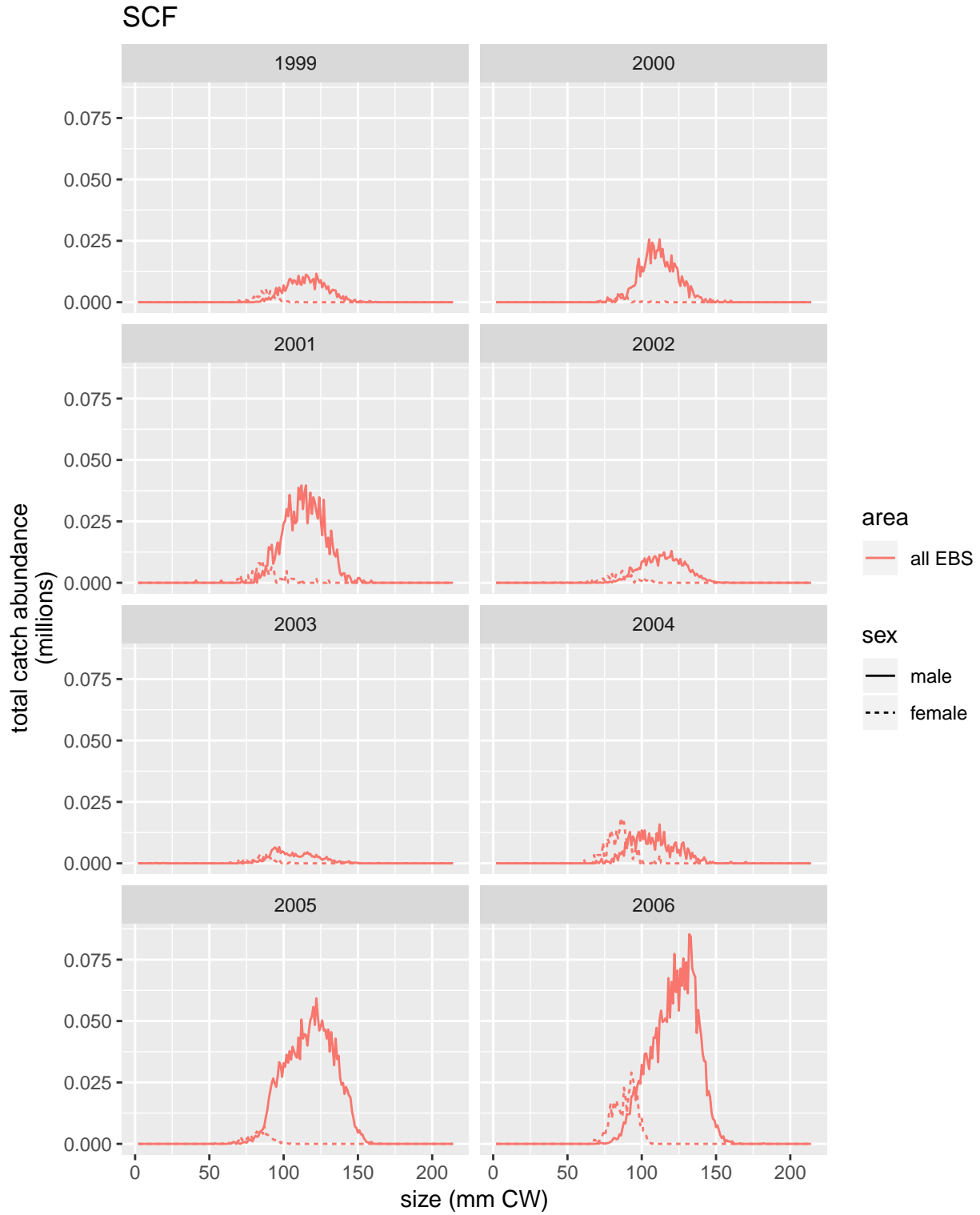


Figure 6: Total catch size compositions for SCF at 1-mm bin size.

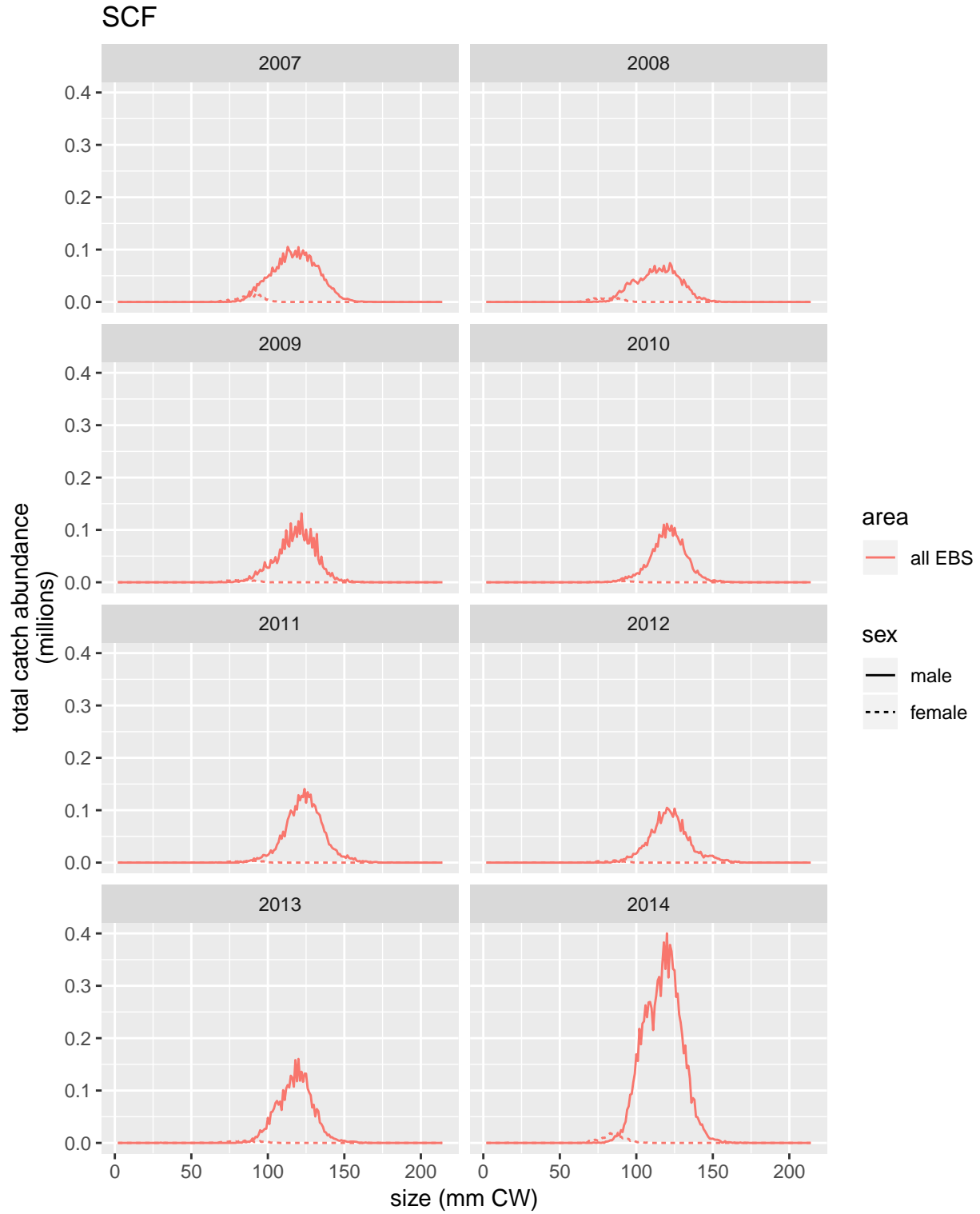


Figure 7: Total catch size compositions for SCF at 1-mm bin size.

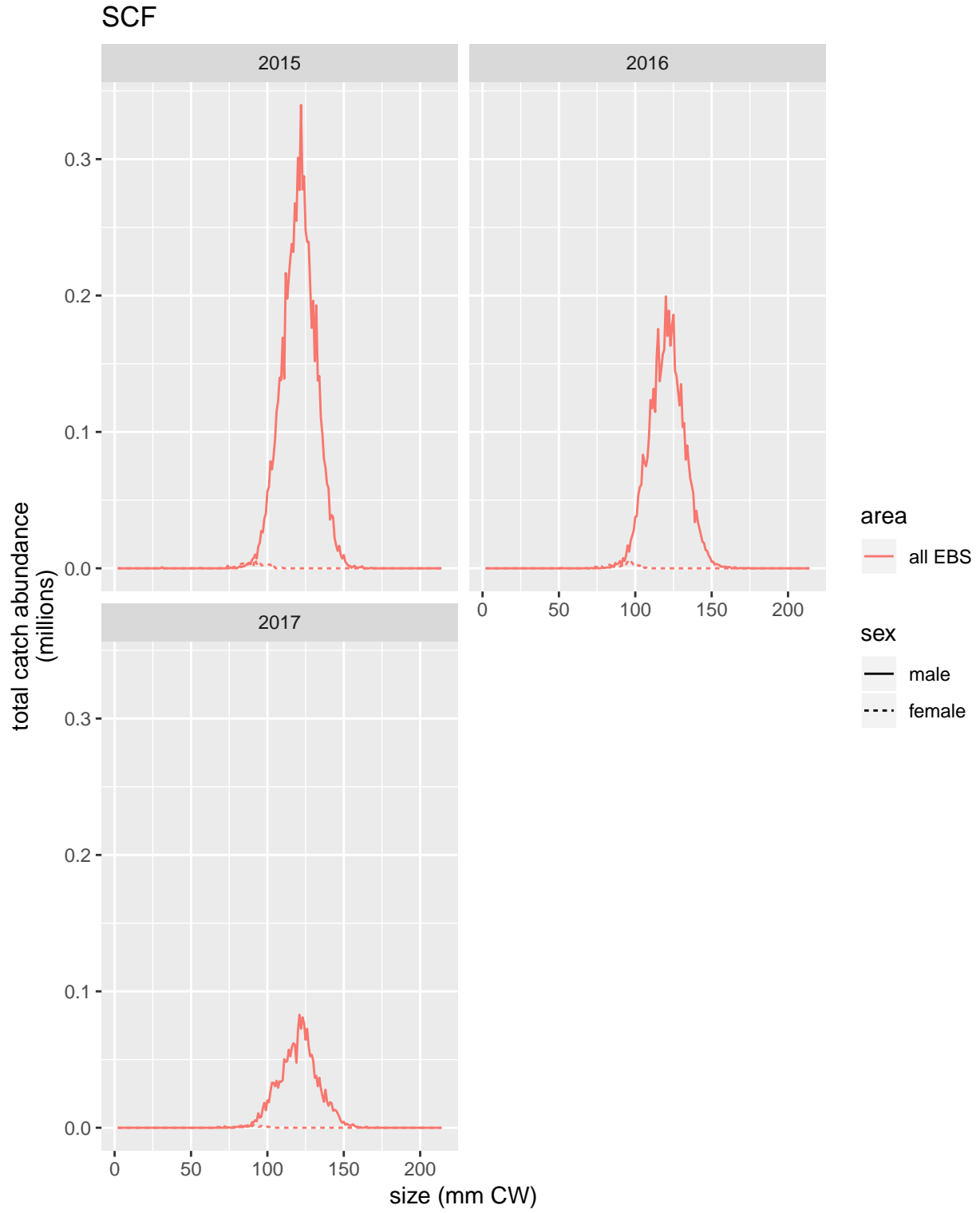


Figure 8: Total catch size compositions for SCF at 1-mm bin size.

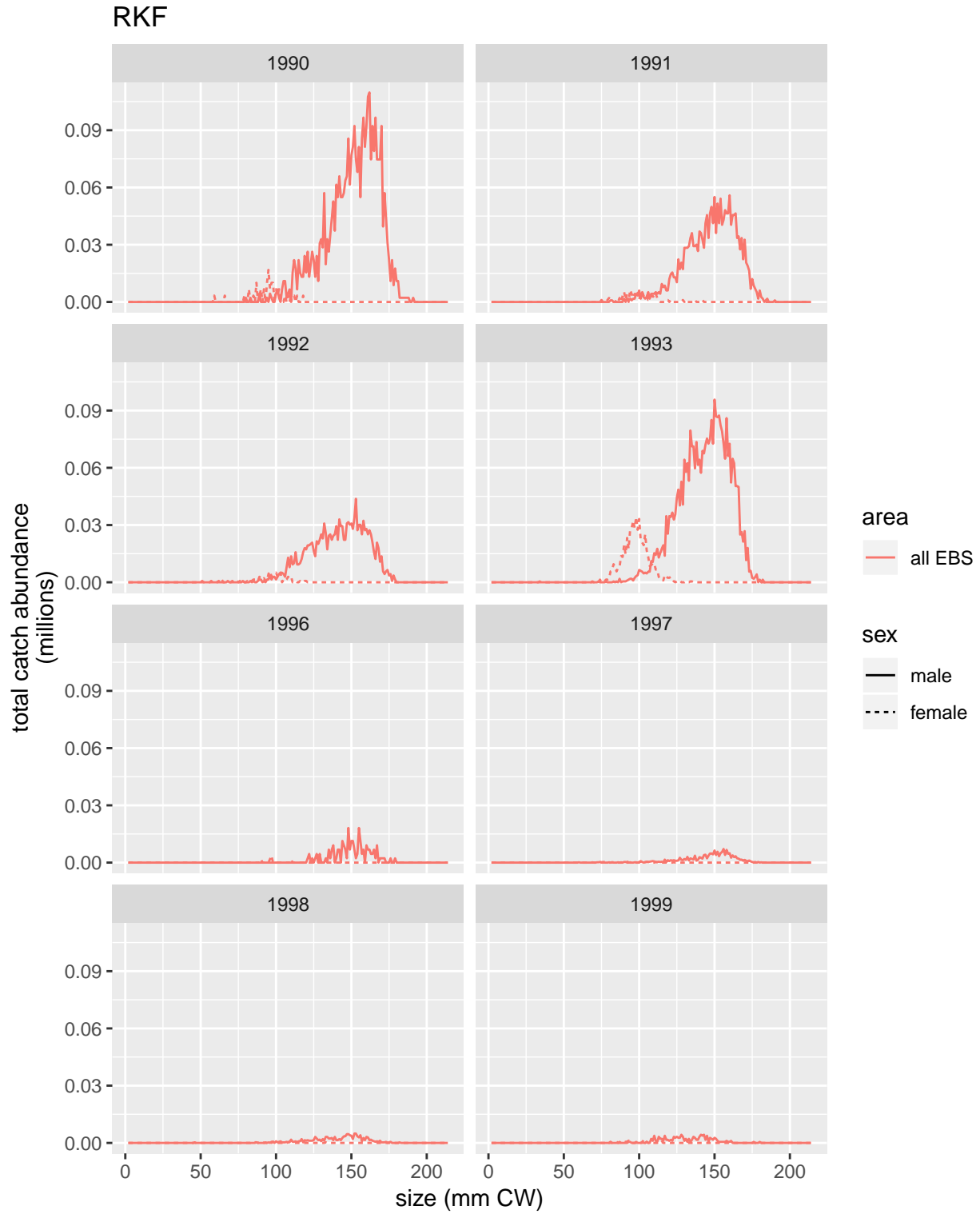


Figure 9: Total catch size compositions for RKF at 1-mm bin size.

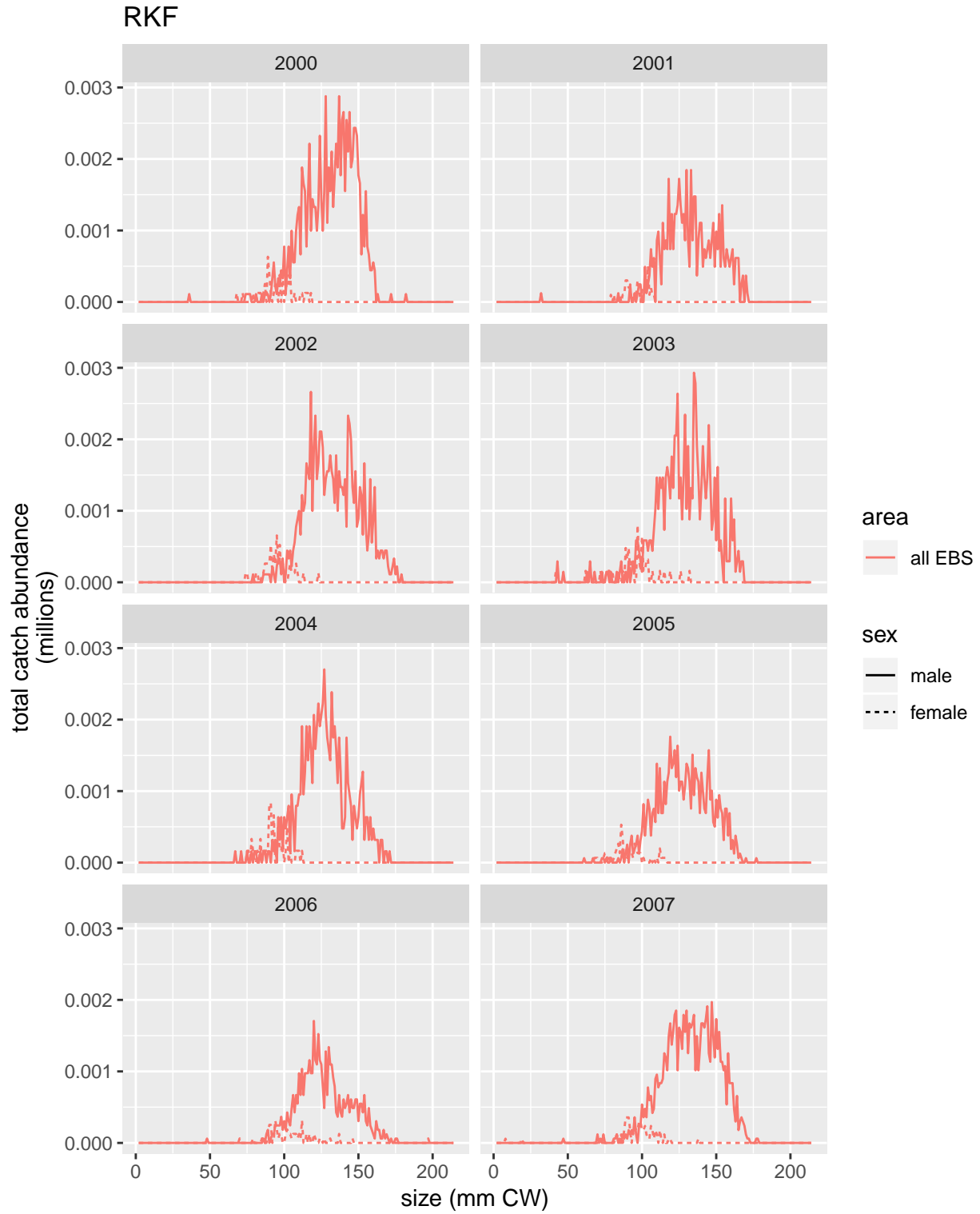


Figure 10: Total catch size compositions for RKF at 1-mm bin size.

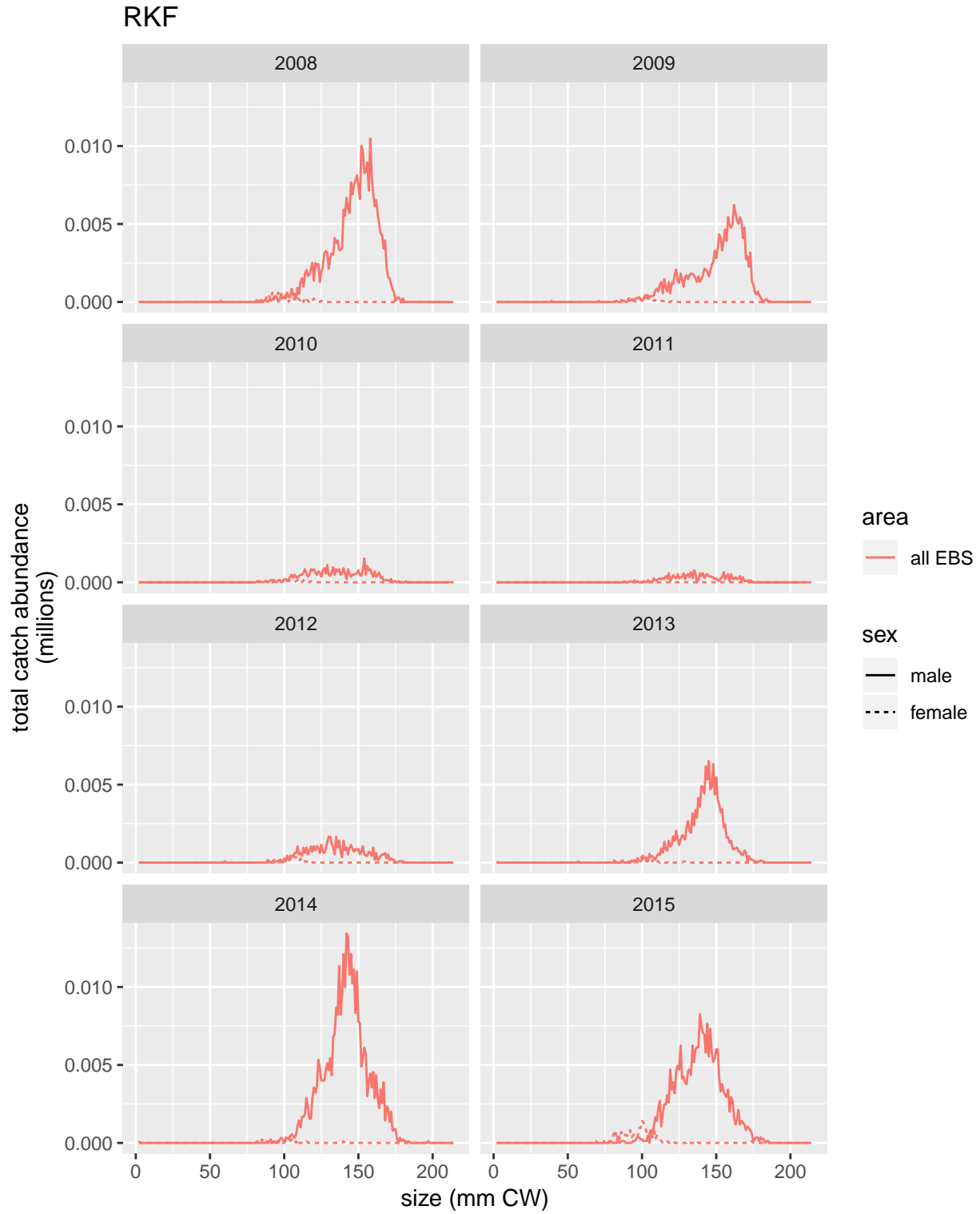


Figure 11: Total catch size compositions for RKF at 1-mm bin size.

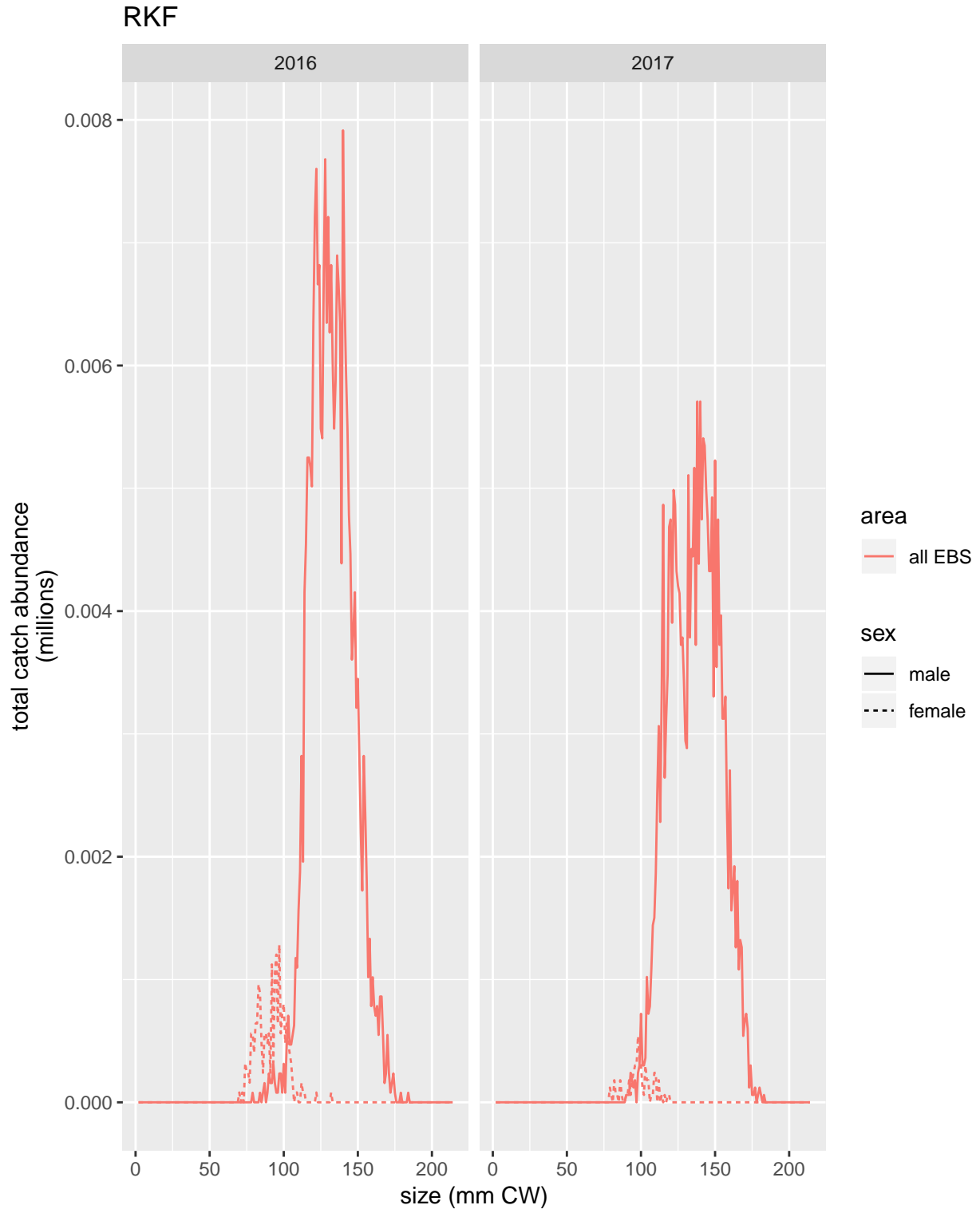


Figure 12: Total catch size compositions for RKF at 1-mm bin size.

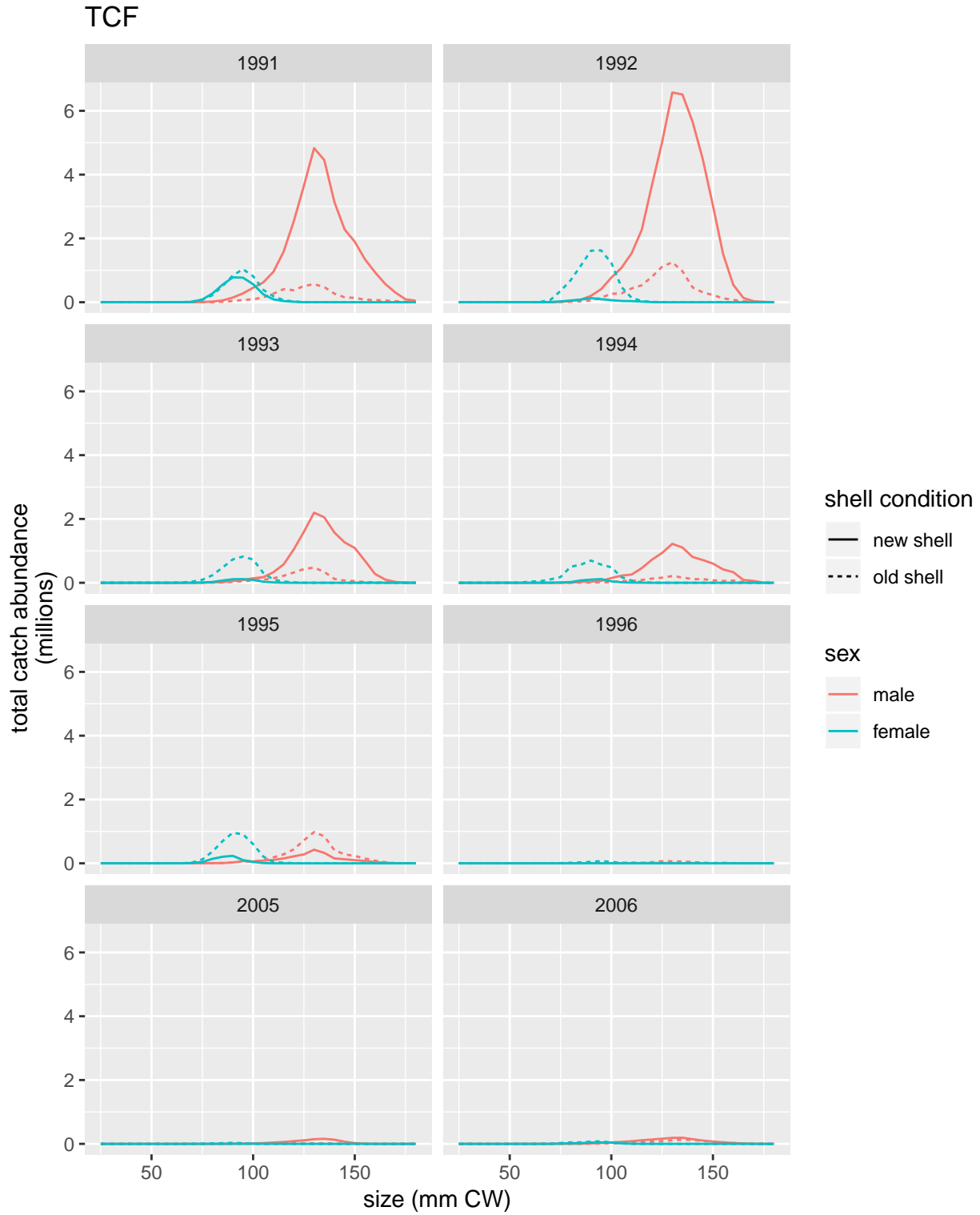


Figure 13: Total catch size compositions for TCF at 5-mm bin size.

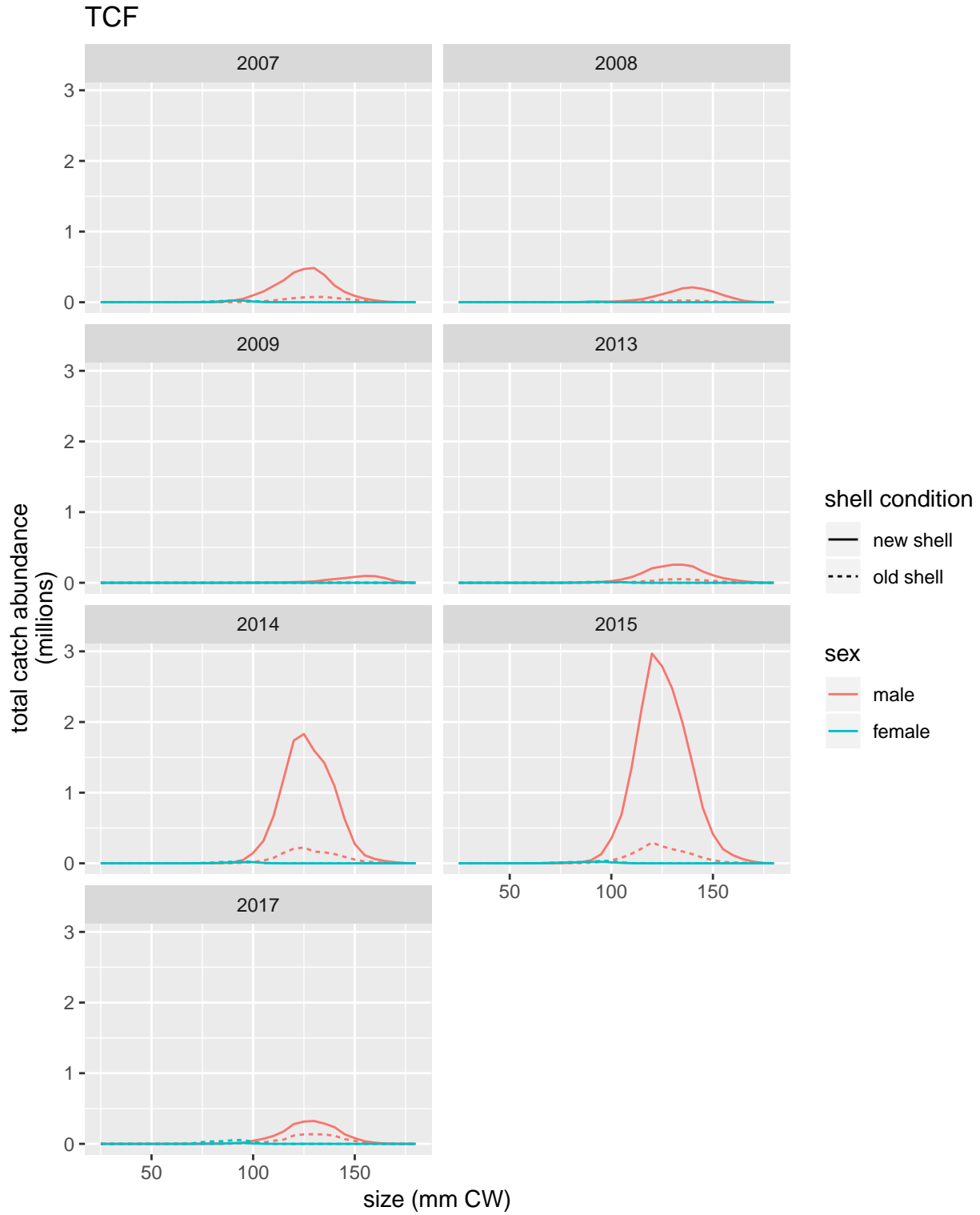


Figure 14: Total catch size compositions for TCF at 5-mm bin size.

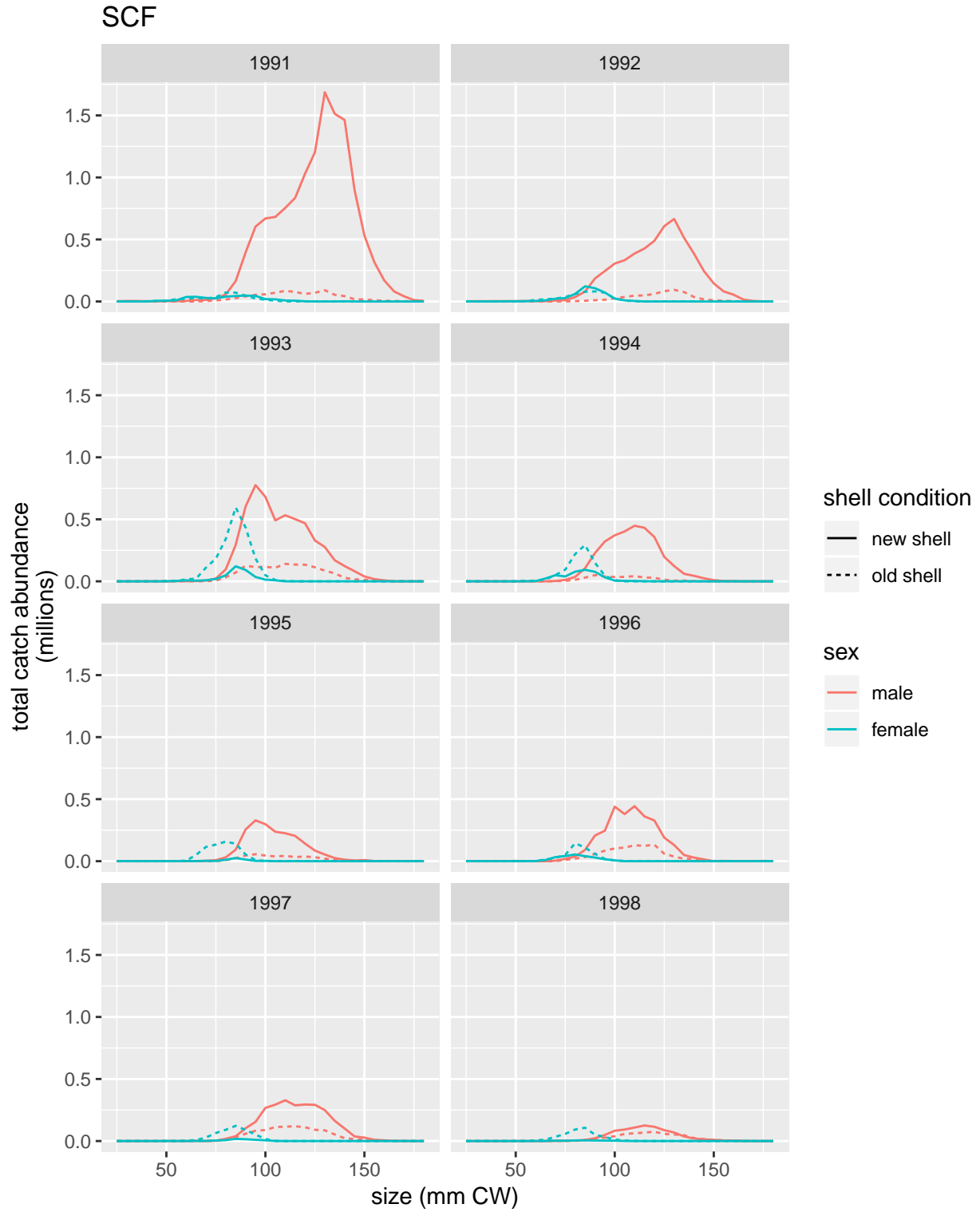


Figure 15: Total catch size compositions for SCF at 5-mm bin size.

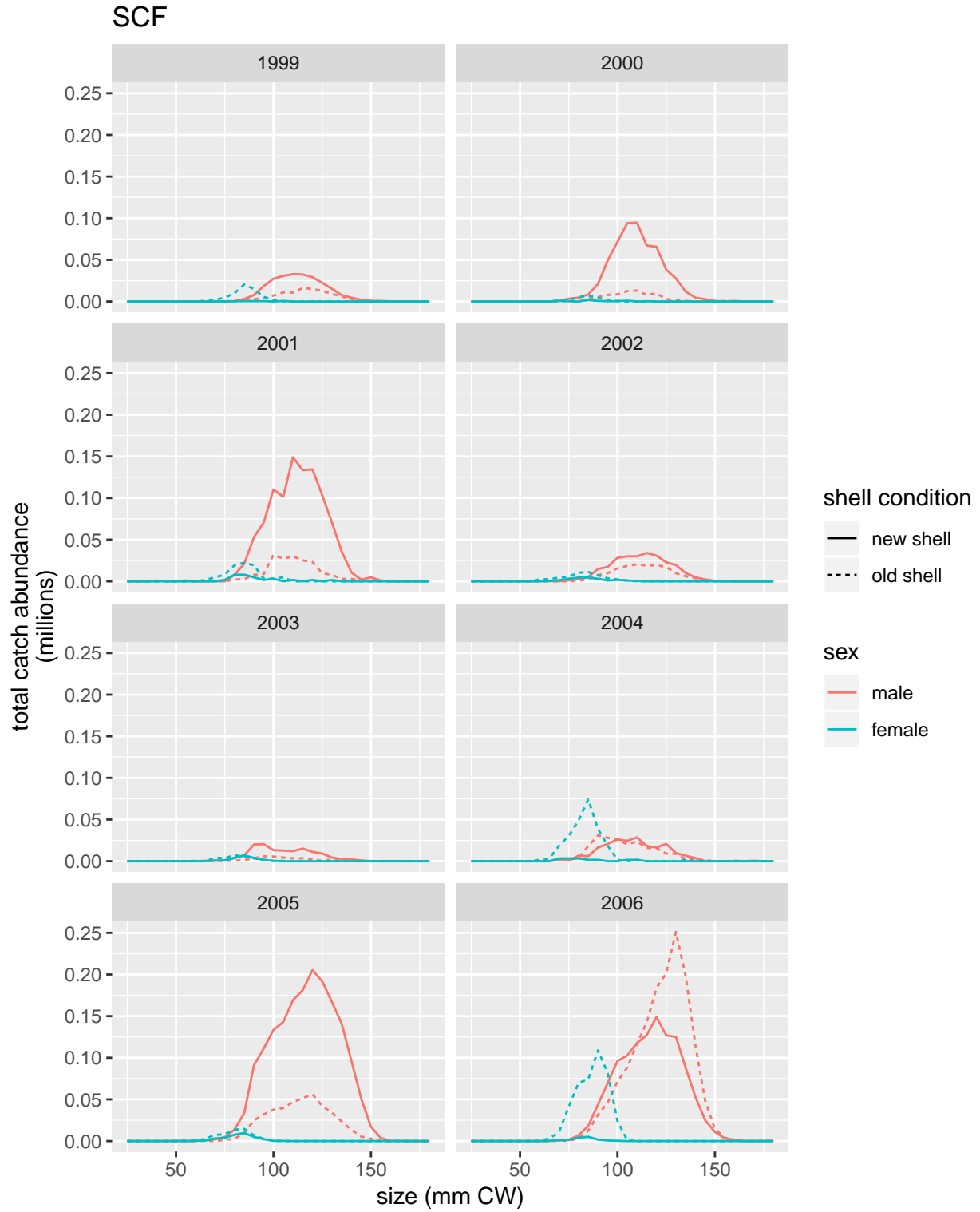


Figure 16: Total catch size compositions for SCF at 5-mm bin size.

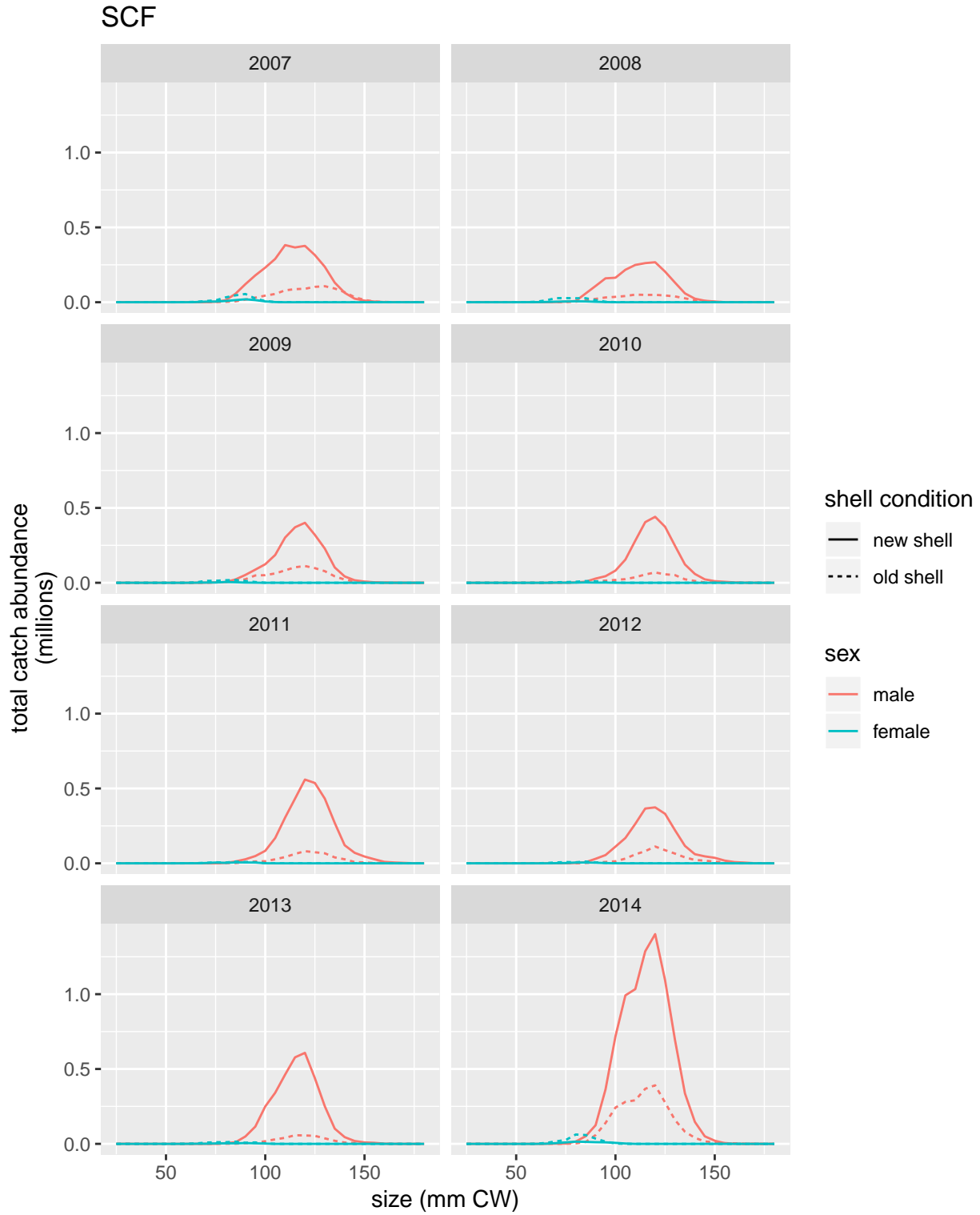


Figure 17: Total catch size compositions for SCF at 5-mm bin size.

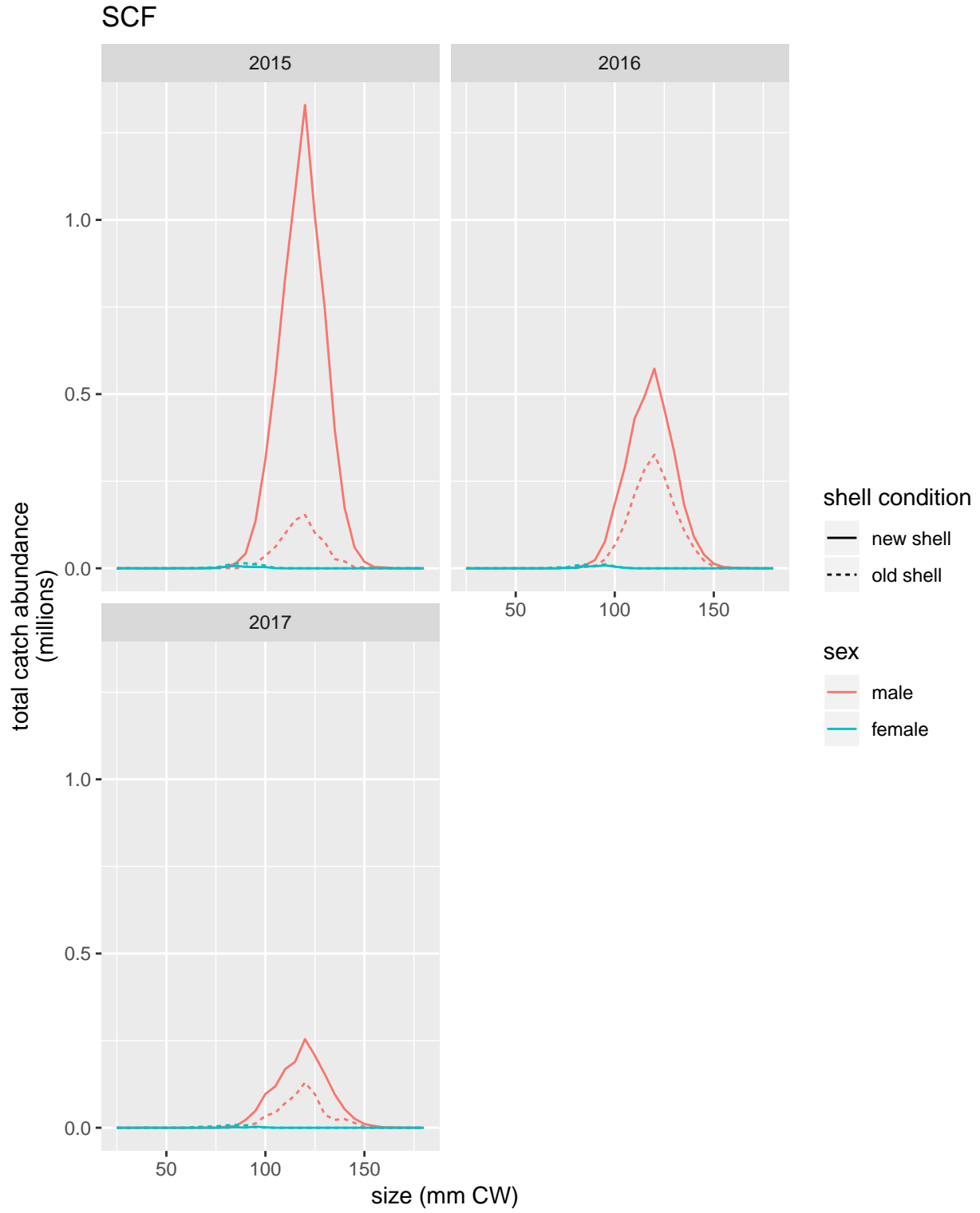


Figure 18: Total catch size compositions for SCF at 5-mm bin size.

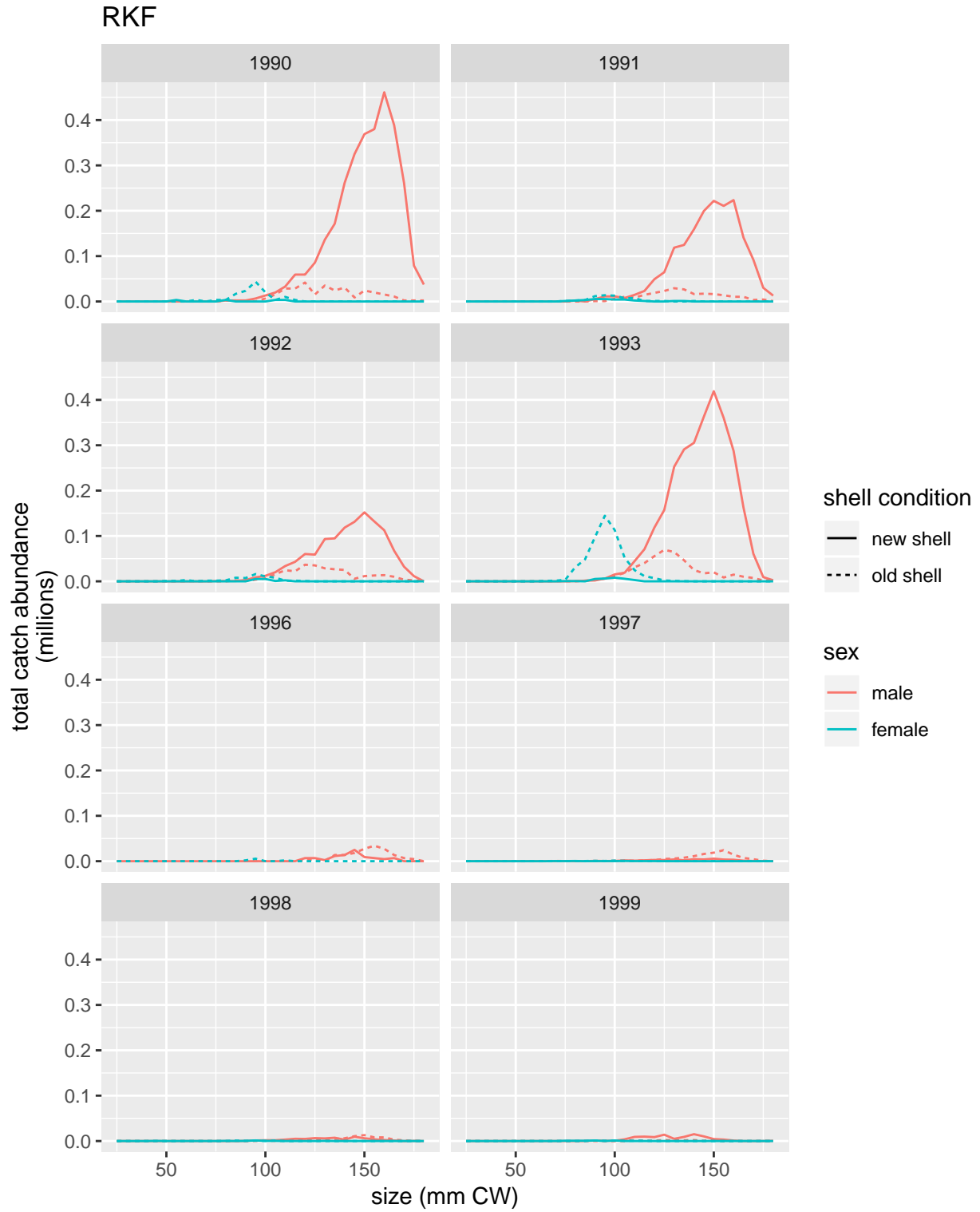


Figure 19: Total catch size compositions for RKF at 5-mm bin size.

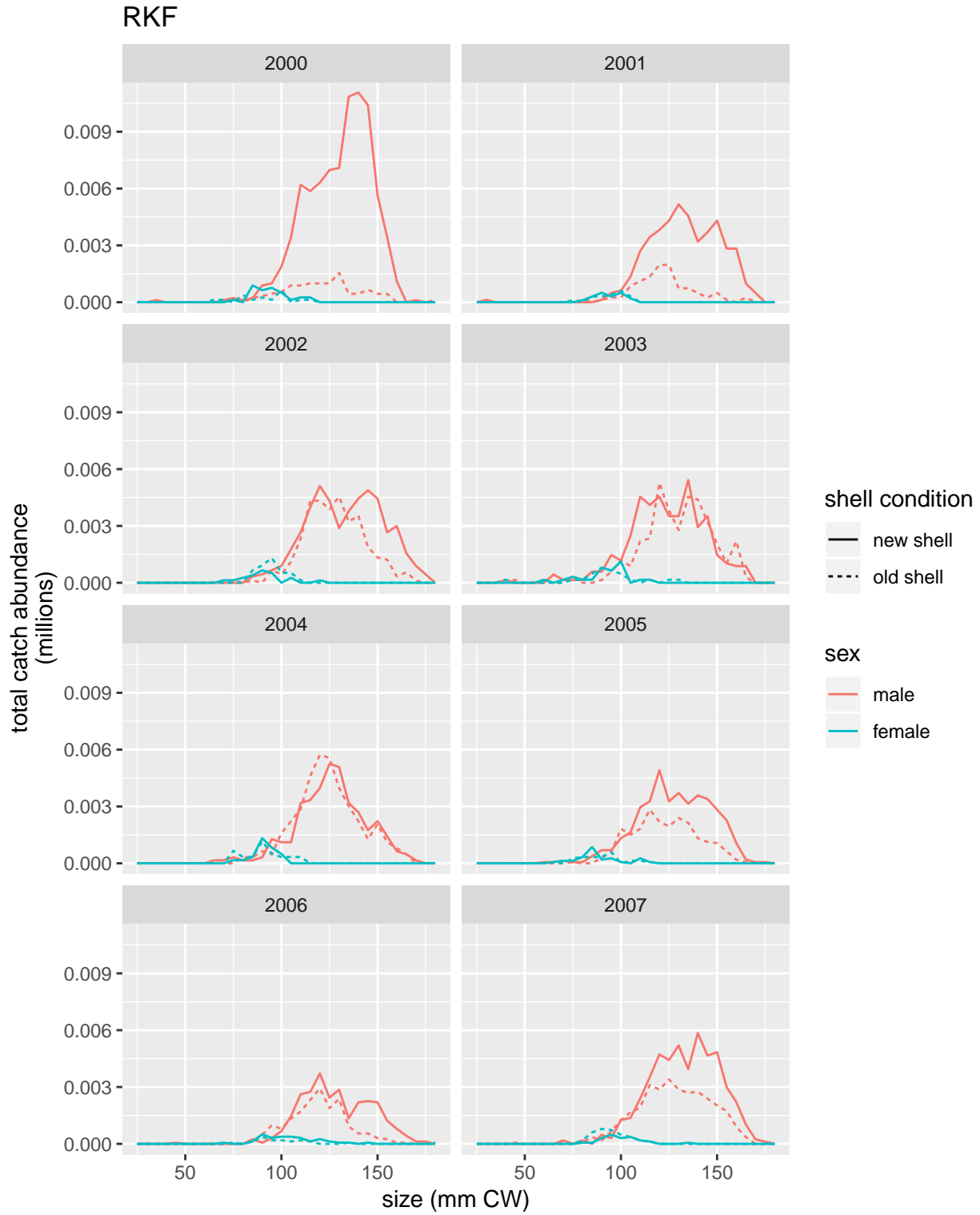


Figure 20: Total catch size compositions for RKF at 5-mm bin size.

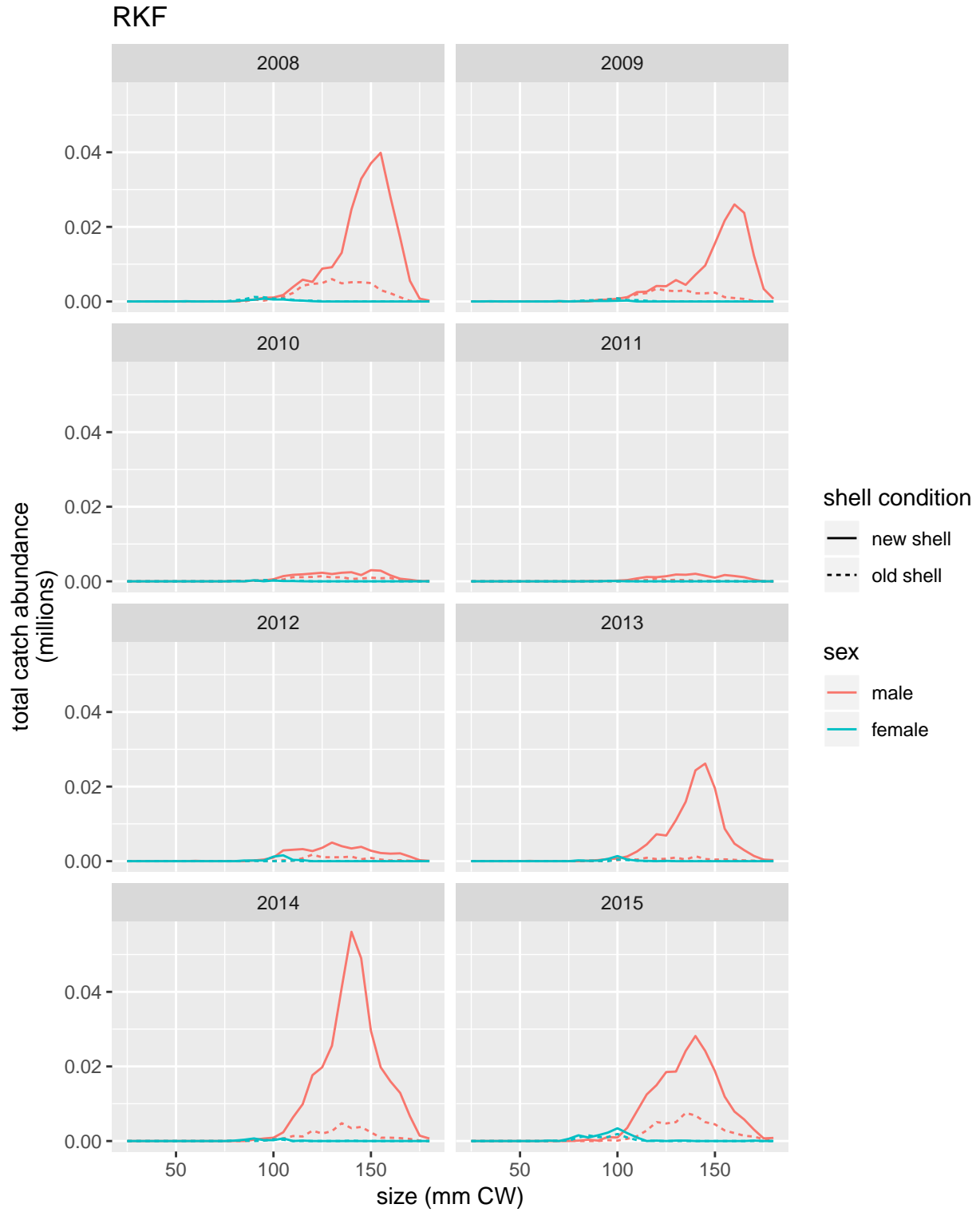


Figure 21: Total catch size compositions for RKF at 5-mm bin size.

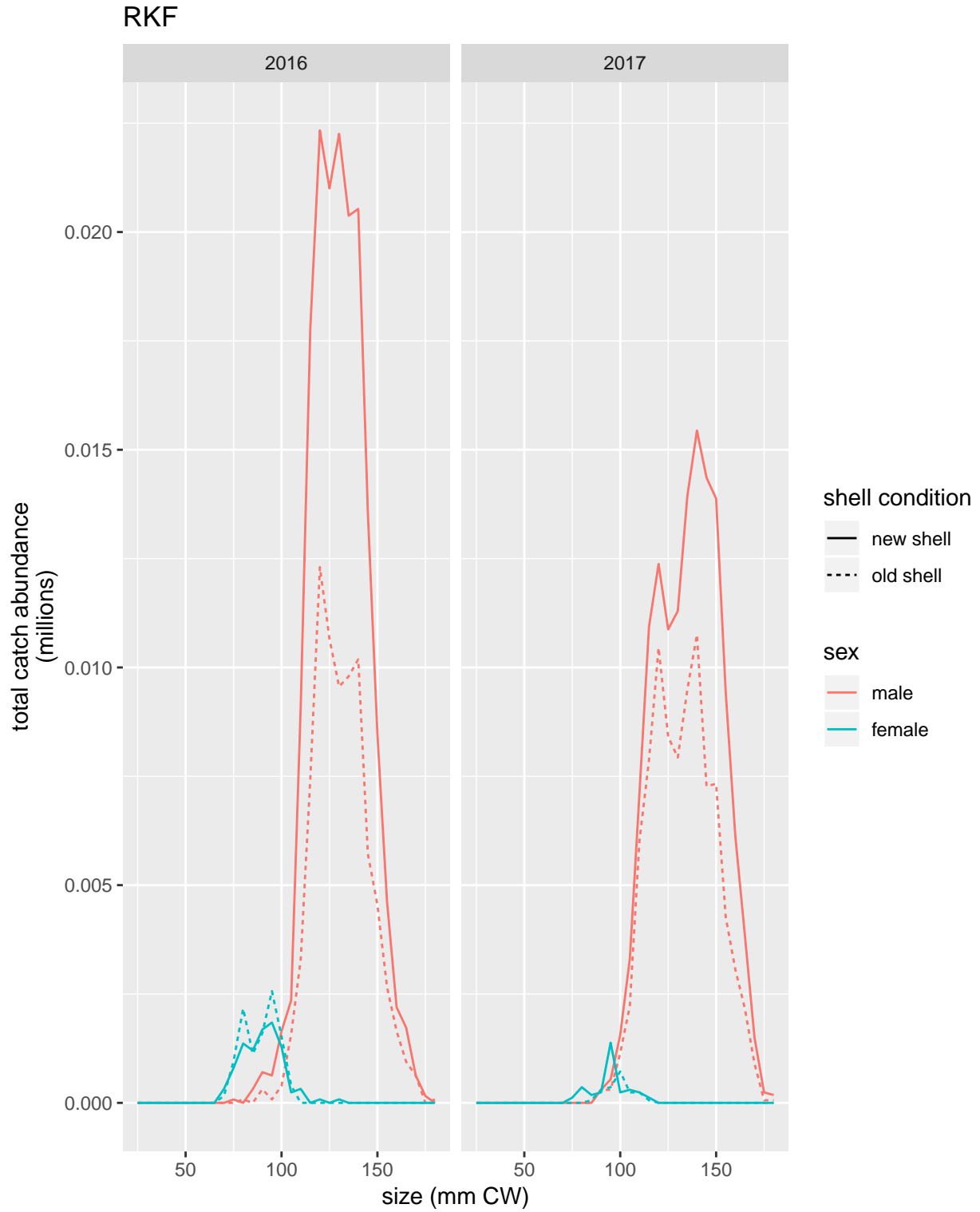


Figure 22: Total catch size compositions for RKF at 5-mm bin size.