Beaufort Report Tables

Jonah Bacon

Oct 01, 2022

This document produces tables for the Beaufort Report then outputs it to MS Word. The tables from the Word doc can then be copied into Excel for final formatting to remain consistent. If you are looking at this in RStudio, press the “Knit” button to create the Word document.

First is Table 3, which is actually a combination of two tables: catch totals and a diversity summary.

| Species | 214 | 218 | 220 | 230 | Total Catch |
| --- | --- | --- | --- | --- | --- |
| Arctic Cod | 78 | 494 | 237 | 34 | 843 |
| Arctic Cisco | 3,399 | 976 | 281 | 1,810 | 6,466 |
| Arctic Flounder | 3,423 | 990 | 221 | 566 | 5,200 |
| Broad Whitefish | 3,562 | 577 | 460 | 2,951 | 7,550 |
| Capelin | - | 15 | - | - | 15 |
| Dolly Varden | 478 | 203 | 111 | 88 | 880 |
| Fourhorn Sculpin | 2,495 | 945 | 213 | 763 | 4,416 |
| Arctic Grayling | 98 | 1 | - | 79 | 178 |
| Humpback Whitefish | 325 | 916 | 274 | 83 | 1,598 |
| Least Cisco | 1,195 | 1,357 | 563 | 258 | 3,373 |
| Ninespine Stickleback | 3 | 20 | 7 | 6 | 36 |
| Pacific Herring | 1 | 4 | 1 | - | 6 |
| Pink Salmon | - | 1 | 1 | 1 | 3 |
| Rainbow Smelt | 3,068 | 1,367 | 104 | 4,070 | 8,609 |
| Round Whitefish | 13 | - | - | 10 | 23 |
| Saffron Cod | 431 | 512 | 83 | 150 | 1,176 |
| Threespine Stickleback | 4 | 10 | 2 | 2 | 18 |
| Total Catch | 18,573 | 8,388 | 2,558 | 10,871 | 40,390 |

The following is the same table but formatted using a different package, and this time the diversity table follows.

| Species | 214 | 218 | 220 | 230 | Total Catch |
| --- | --- | --- | --- | --- | --- |
| Arctic Cod | 78 | 494 | 237 | 34 | 843 |
| Arctic Cisco | 3,399 | 976 | 281 | 1,810 | 6,466 |
| Arctic Flounder | 3,423 | 990 | 221 | 566 | 5,200 |
| Broad Whitefish | 3,562 | 577 | 460 | 2,951 | 7,550 |
| Capelin | - | 15 | - | - | 15 |
| Dolly Varden | 478 | 203 | 111 | 88 | 880 |
| Fourhorn Sculpin | 2,495 | 945 | 213 | 763 | 4,416 |
| Arctic Grayling | 98 | 1 | - | 79 | 178 |
| Humpback Whitefish | 325 | 916 | 274 | 83 | 1,598 |
| Least Cisco | 1,195 | 1,357 | 563 | 258 | 3,373 |
| Ninespine Stickleback | 3 | 20 | 7 | 6 | 36 |
| Pacific Herring | 1 | 4 | 1 | - | 6 |
| Pink Salmon | - | 1 | 1 | 1 | 3 |
| Rainbow Smelt | 3,068 | 1,367 | 104 | 4,070 | 8,609 |
| Round Whitefish | 13 | - | - | 10 | 23 |
| Saffron Cod | 431 | 512 | 83 | 150 | 1,176 |
| Threespine Stickleback | 4 | 10 | 2 | 2 | 18 |
| Total Catch | 18,573 | 8,388 | 2,558 | 10,871 | 40,390 |

|  | X1 | X2 | X3 | X4 | X5 |
| --- | --- | --- | --- | --- | --- |
| **ntot** | 15 | 16 | 14 | 15 | 17 |
| **shan** | 1.994635 | 2.231855 | 2.168013 | 1.651531 | 2.087187 |
| **even** | 0.6900962 | 0.7721690 | 0.7500809 | 0.5713907 | 0.7221171 |

## `summarise()` has grouped output by 'Net'. You can override using the `.groups`  
## argument.

| Station | Start\_Date | End\_Date | NetNights |
| --- | --- | --- | --- |
| 214 | 2022-06-28 | 2022-08-24 | 52 |
| 218 | 2022-07-08 | 2022-08-23 | 40 |
| 220 | 2022-07-08 | 2022-08-23 | 40 |
| 230 | 2022-06-30 | 2022-08-24 | 74 |

The following two tables (Table 2) will need to be united together in Excel

| Year | MeanSalin | Range | SD |
| --- | --- | --- | --- |
| 2001 | 5.8528 | 0.1–36 | 6.3053 |
| 2002 | 12.9716 | 0.1–30.2 | 7.4842 |
| 2003 | 9.4232 | 0.1–25.9 | 7.5330 |
| 2004 | 13.1041 | 0.1–29.9 | 8.6615 |
| 2005 | 6.8957 | 0.1–24 | 6.9608 |
| 2006 | 10.2201 | 0.1–26.9 | 6.0983 |
| 2007 | 16.3175 | 0.2–30.1 | 9.1899 |
| 2008 | 14.7894 | 0.1–29.1 | 9.1623 |
| 2009 | 19.0924 | 0.1–32.6 | 9.6128 |
| 2010 | 10.0523 | 0.1–27.2 | 7.5720 |
| 2011 | 19.1123 | 0.2–32.1 | 7.9650 |
| 2012 | 15.0974 | 0.1–27.5 | 8.1697 |
| 2013 | 12.9943 | 0.1–31.1 | 9.3099 |
| 2014 | 9.1917 | 0.1–28.8 | 8.4932 |
| 2015 | 11.9135 | 0.1–25.9 | 7.0906 |
| 2016 | 12.8139 | 0.1–26.8 | 7.8726 |
| 2018 | 7.2519 | 0.1–28.9 | 7.3919 |
| 2019 | 14.1602 | 0.2–30 | 9.3022 |
| 2020 | 18.2245 | 0.3–29.1 | 7.9188 |
| 2021 | 9.6686 | 0–29.5 | 8.2993 |

| Year | MeanTemp | Range | SD |
| --- | --- | --- | --- |
| 2001 | 6.6803 | 0.5–14.9 | 3.4057 |
| 2002 | 6.9107 | 0.7–18.8 | 2.4975 |
| 2003 | 7.1424 | 0.3–15.2 | 2.7335 |
| 2004 | 8.0453 | 1.7–15.2 | 2.6651 |
| 2005 | 7.0540 | 1.6–13.5 | 2.0237 |
| 2006 | 8.9185 | 0.1–17.9 | 2.2147 |
| 2007 | 8.4791 | 3.7–12.5 | 1.4513 |
| 2008 | 8.3819 | 0.4–19.1 | 2.0772 |
| 2009 | 8.0338 | 4.3–22.1 | 2.0928 |
| 2010 | 8.1869 | 3.7–14.2 | 1.9536 |
| 2011 | 8.8068 | 3.7–14.2 | 2.0993 |
| 2012 | 9.8868 | 3.6–17.1 | 2.2658 |
| 2013 | 9.2912 | 2.1–15.2 | 2.8878 |
| 2014 | 7.6222 | 2.2–13.3 | 2.1657 |
| 2015 | 7.4330 | 2.3–15 | 2.0647 |
| 2016 | 8.1513 | 2.9–17.8 | 2.3134 |
| 2018 | 7.2601 | 1.3–15.7 | 3.3492 |
| 2019 | 9.0085 | 4.2–16.9 | 1.9390 |
| 2020 | 8.2687 | 6.2–10.6 | 0.8624 |
| 2021 | 8.6724 | 1.4–16.1 | 2.6528 |

Now Table 4:

| Species | NumberSampled | MeanLengthmm | LengthRangemm | StandardDeviation |
| --- | --- | --- | --- | --- |
| Arctic Cisco | 4,289 | 168.1 | 48–414 | 74.2293 |
| Arctic Cod | 714 | 97.7 | 54–208 | 21.7269 |
| Broad Whitefish | 4,565 | 163.6 | 40–503 | 101.7055 |
| Dolly Varden | 801 | 275.1 | 94–650 | 140.2867 |
| Humpback Whitefish | 1,292 | 346.2 | 145–475 | 40.0828 |
| Least Cisco | 2,887 | 276.7 | 79–425 | 63.3752 |
| Pink Salmon | 3 | 310.0 | 108–411 | 174.9371 |
| Rainbow Smelt | 2,485 | 100.4 | 33–265 | 29.2471 |
| Saffron Cod | 1,062 | 179.8 | 39–501 | 48.0345 |