Supplementary Material

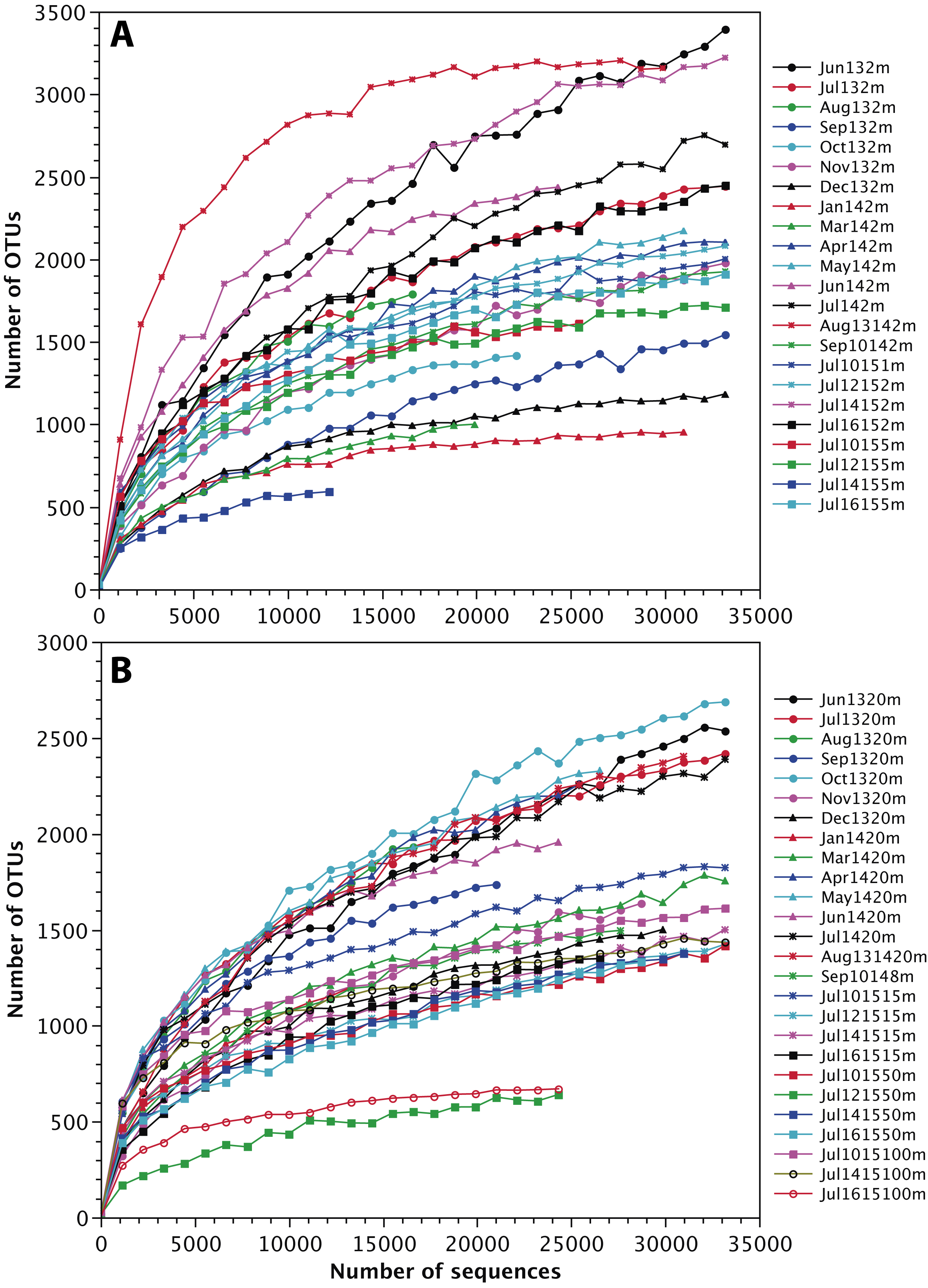
Linking seasonal pattern of microbial diversity to long-term increase in winter temperature in waters of a Patagonia fjord

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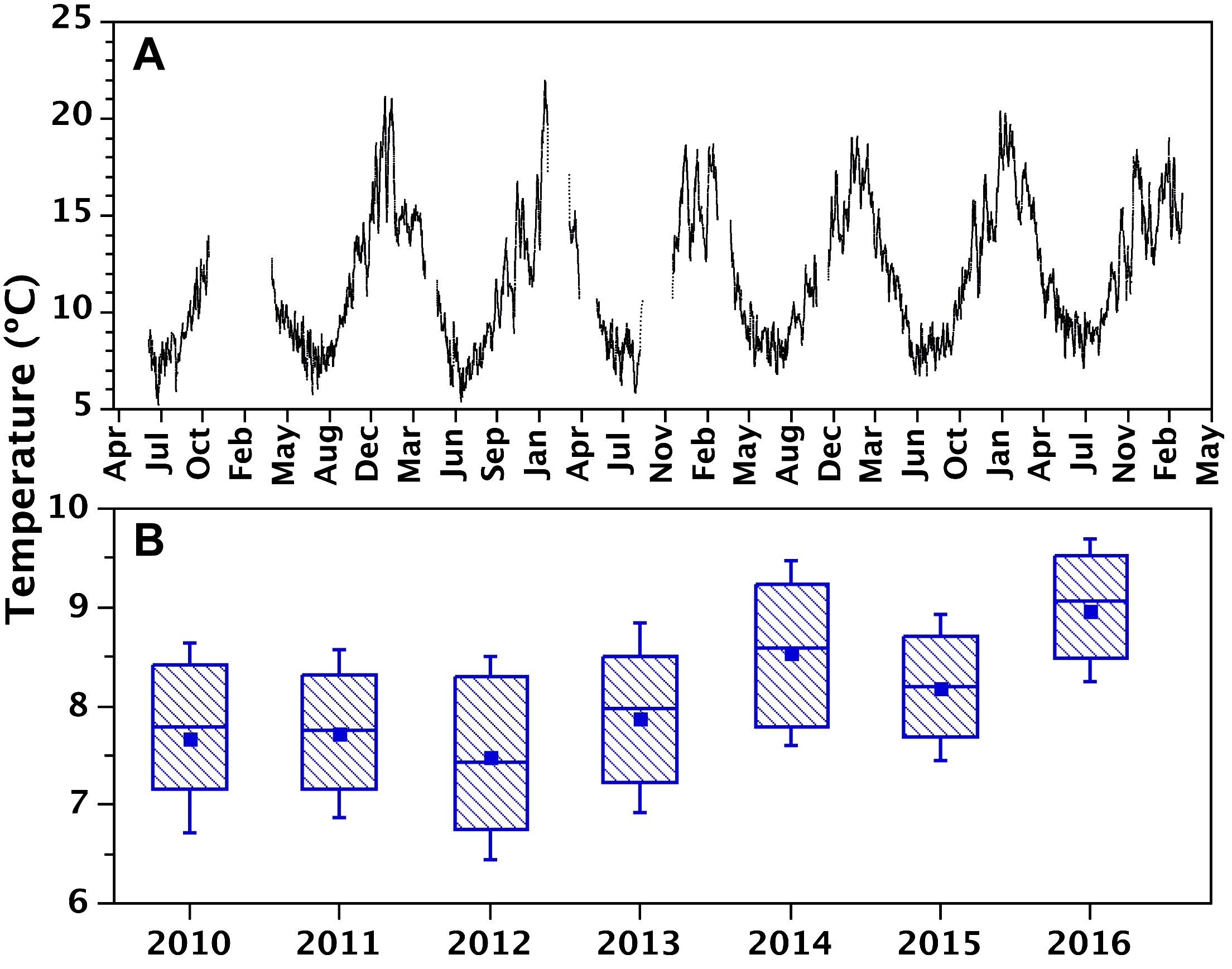
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# Supplementary Figures and Tables

## Supplementary Figures



**Supplementary Figure 1.** Rarefaction curves for prokaryote assemblages from surface (A) and subsurface and deeper (B) waters for each sampling dates and depths in the Puyuhuapi fjord.

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**Supplementary Figure 2.** Time series of surface water temperature (A) and boxplots of average winter temperature (June-September) in the time series of surface water temperature in Puyuhuapi Fjord (B). Winter temperatures of 2013, 2014, 2015 and 2016 were significantly different (Mann-Whitney U test, *p < 0.05*) of those of 2010, 2011 and 2012. Significant differences were also found between temperatures of successive winters from 2012 to 2016.

## Supplementary Tables

**Supplementary Table 1.** Abundance of diatoms and dinoflagellates in waters sampled between June 2013 and September 2014, and during July 2015, at the fixed station located in Puyuhuapi fjord.

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Depth (m)** | **Diatoms (cell mL-1)** | **Dinoflagellates (cell mL-1)** |
| 1-Jun-13 | 2 | 234 | 2864 |
| 6-Jul-13 | 2 | 167 | 142 |
| 8-Aug-13 | 2 | 15631 | 241 |
| 28-Sep-13 | 2 | 7882 | 72 |
| 29-Oct-13 | 2 | 3283 | 97 |
| 24-Nov-13 | 2 | 2535 | 0 |
| 18-Dec-13 | 2 | 2052 | 60 |
| 22-Jan-14 | 2 | 2776 | 48 |
| 5-Mar-14 | 2 | 2281 | 121 |
| 28-Apr-14 | 2 | 3150 | 676 |
| 13-May-14 | 2 | 2197 | 72 |
| 17-Jun-14 | 2 | 92 | 483 |
| 9-Jul-14 | 2 | 94 | 157 |
| 13-Aug-14 | 2 | 52 | 144 |
| 10-Sep-14 | 2 | 3278 | 6 |
| 10-Jul-15 | 1 | 32 | 3167 |
| 12-Jul-15 | 2 | 646 | 7950 |
| 14-Jul-15 | 2 | 194 | 3975 |
| 16-Jul-15 | 2 | 549 | 3200 |
| 10-Jul-15 | 5 | 549 | 614 |
| 12-Jul-15 | 5 | 194 | 4719 |
| 14-Jul-15 | 5 | 323 | 4201 |
| 16-Jul-15 | 5 | 162 | 3135 |
| 1-Jun-13 | 20 | 256 | 19 |
| 6-Jul-13 | 20 | 82 | 51 |
| 8-Aug-13 | 20 | 7556 | 97 |
| 28-Sep-13 | 20 | 193 | 145 |
| 29-Oct-13 | 20 | 1931 | 24 |
| 24-Nov-13 | 20 | 1074 | 0 |
| 18-Dec-13 | 20 | 616 | 36 |
| 22-Jan-14 | 20 | 591 | 36 |
| 5-Mar-14 | 20 | 2511 | 133 |
| 28-Apr-14 | 20 | 1255 | 84 |
| 13-May-14 | 20 | 724 | 12 |
| 17-Jun-14 | 20 | 31 | 181 |
| 9-Jul-14 | 20 | 17 | 84 |
| 13-Aug-14 | 20 | 0 | 0 |
| 10-Sep-14 | 8 | 465 | 6 |
| 10-Jul-15 | 15 | 0 | 32 |
| 12-Jul-15 | 15 | 194 | 32 |
| 14-Jul-15 | 15 | 0 | 388 |
| 16-Jul-15 | 15 | 162 | 582 |
| 10-Jul-15 | 50 | 0 | 0 |
| 12-Jul-15 | 50 | 0 | 19 |
| 14-Jul-15 | 50 | 32 | 52 |
| 16-Jul-15 | 50 | 6 | 58 |
| 10-Jul-15 | 100 | 0 | 0 |
| 12-Jul-15 | 100 | 0 | 0 |
| 14-Jul-15 | 100 | 0 | 0 |
| 16-Jul-15 | 100 | 368 | 1306 |