Appendix 8B: Species Distribution at High and Low Lake Elevations

This group of maps represents the distribution of species by survey period during a relatively high lake elevation year (2006) and relatively low lake elevation years (2015-17). The following areas were not surveyed in 2006: Salt Creek WMA (33), Ogden Bay North (22), and Ogden Bay Lakeside (22b). Triennially surveyed areas show data from only one survey during 2015-17, but for annually surveyed areas, data from the three years are averaged. The maps are arranged to contrast species use of the available habitat under two different sets of conditions. During 2006, mean lake elevation was 4197.8' and 4196.9' for spring (Apr 10 – May 9) and fall (Jul 18 – Aug 31), respectively. During 2015-17, mean lake elevation was 4194.4' and 4193.5' for spring and fall, respectively. Mean lake elevations were calculated based on US Geological Survey data at the Saltair Boat Harbor (Site #: 10010000). A count of zero or missed surveys for a particular area and survey period for the high or low lake elevation years are displayed as hollow polygons in the maps below.

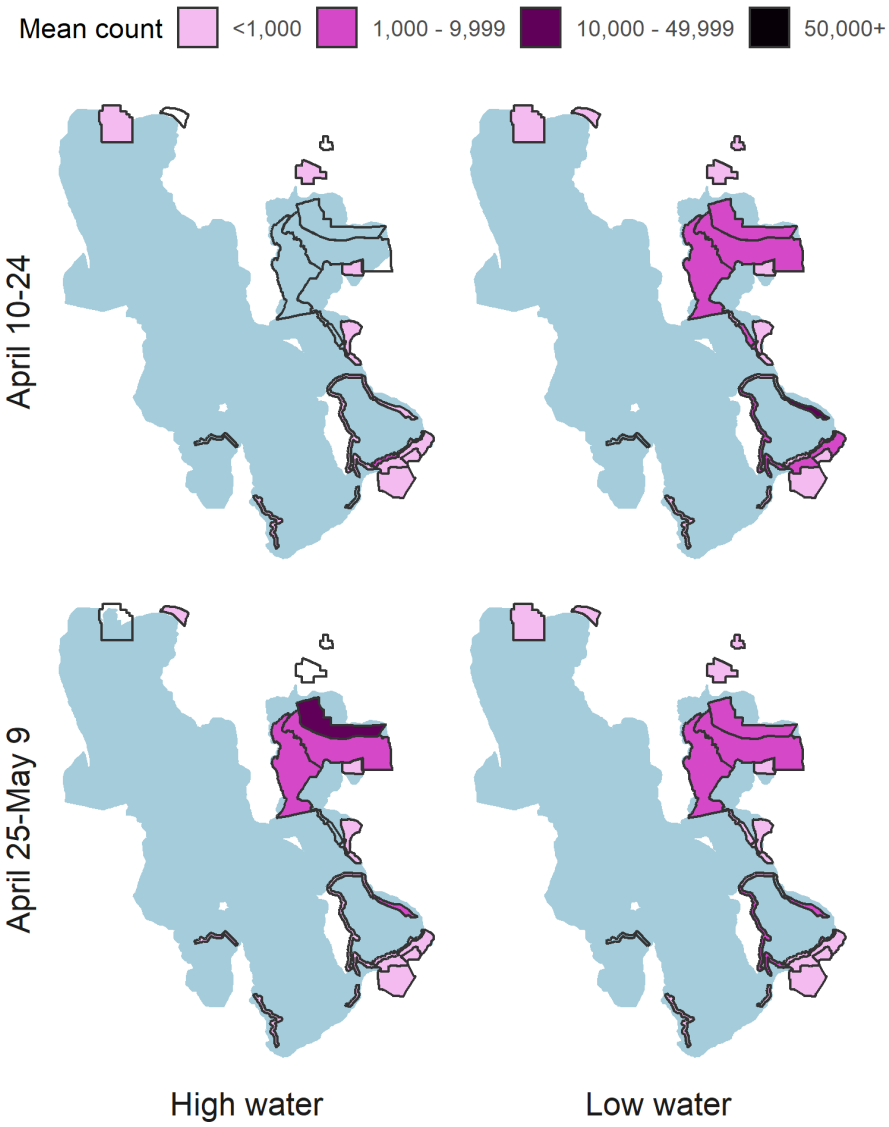
Caution Regarding Comparisons of New and Old Appendices

The new appendices (data spanning 1997 – 2017) should be considered as complementary to the ones created for the 2002 report (data spanning 1997 – 2001). The new appendices are particularly valuable in that they were generated from a dataset that spanned 21 years of observations, compared to 5 years for the old appendices. The old appendices are particularly valuable in that they were generated from a dataset that included many more survey areas and survey periods per year, compared to the new appendices. When viewed as complementary, a reader can use the two sets of appendices to gain a clearer picture about the relative abundances and distributions of waterbird species across Great Salt Lake.

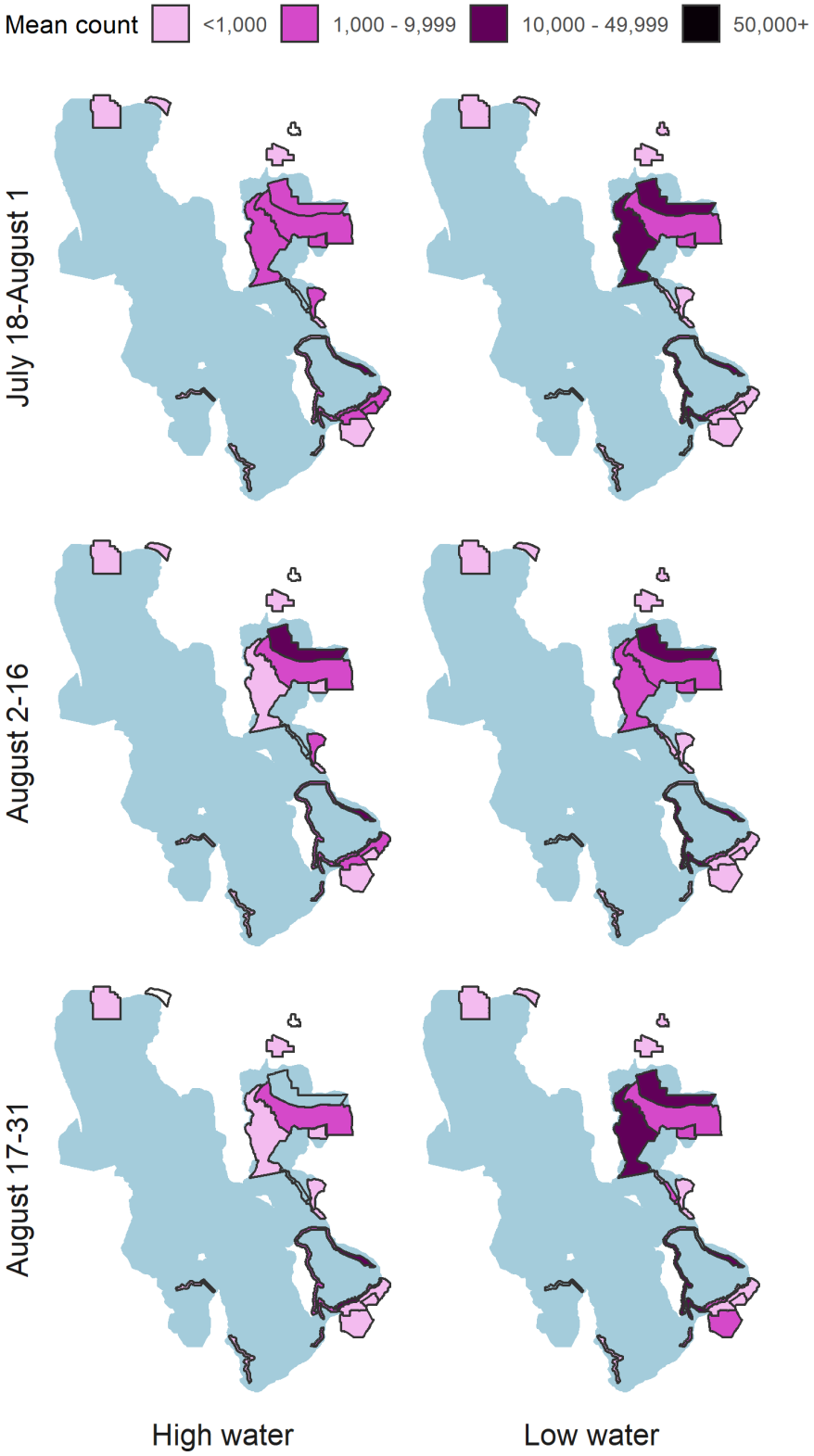
Given the superficial resemblance between the two sets of appendices, it may be tempting to compare metrics to infer something about changes in abundance or distribution across the 21 years represented by the new dataset. Literal comparisons between the two sets of appendices are generally not recommended, however, due to changes in survey areas and survey periods over the years. In Appendix 2B, we describe a case study that illustrates the pitfalls of such comparisons.

A statistically rigorous analysis of trends based on the 21-year data set has been completed and will be made publicly available pending scientific peer-review process.

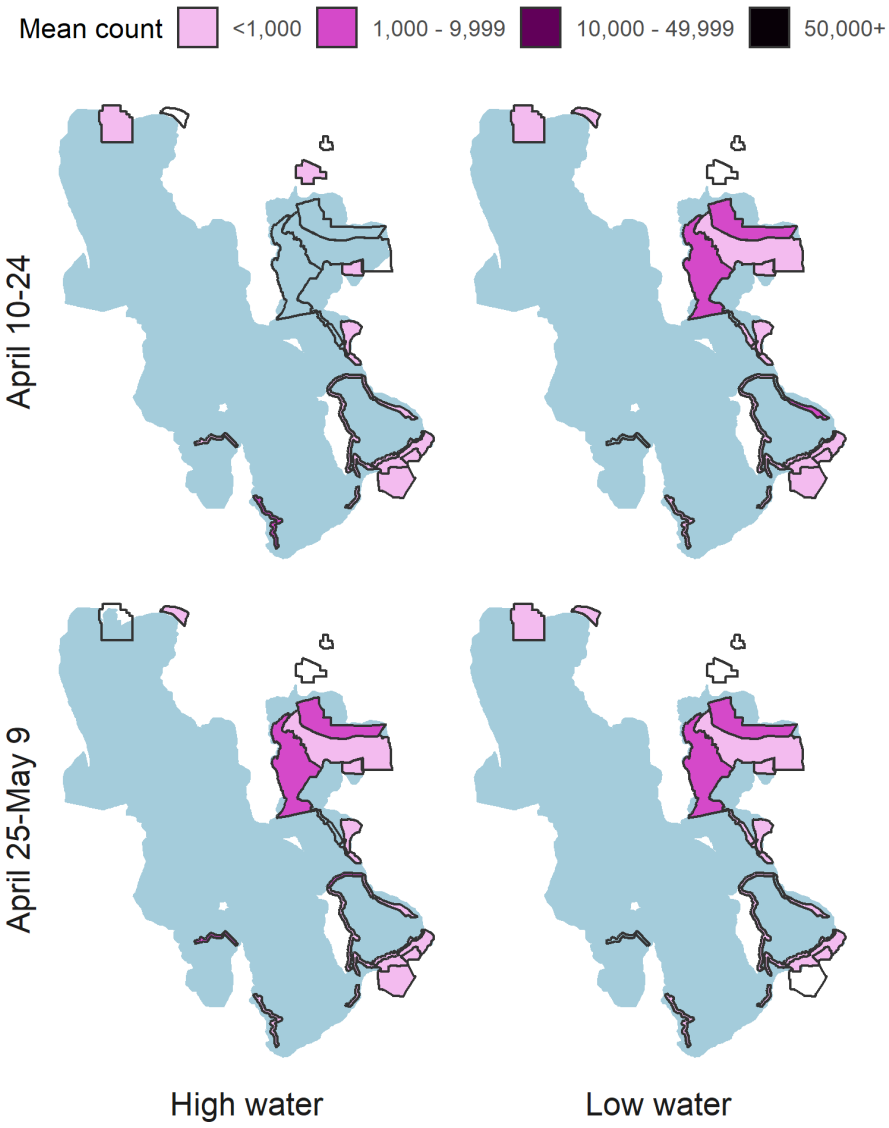
Comparison of the distribution of **American avocets and black-necked stilts** in relatively high (2006) and relatively low (2015-17) lake conditions.



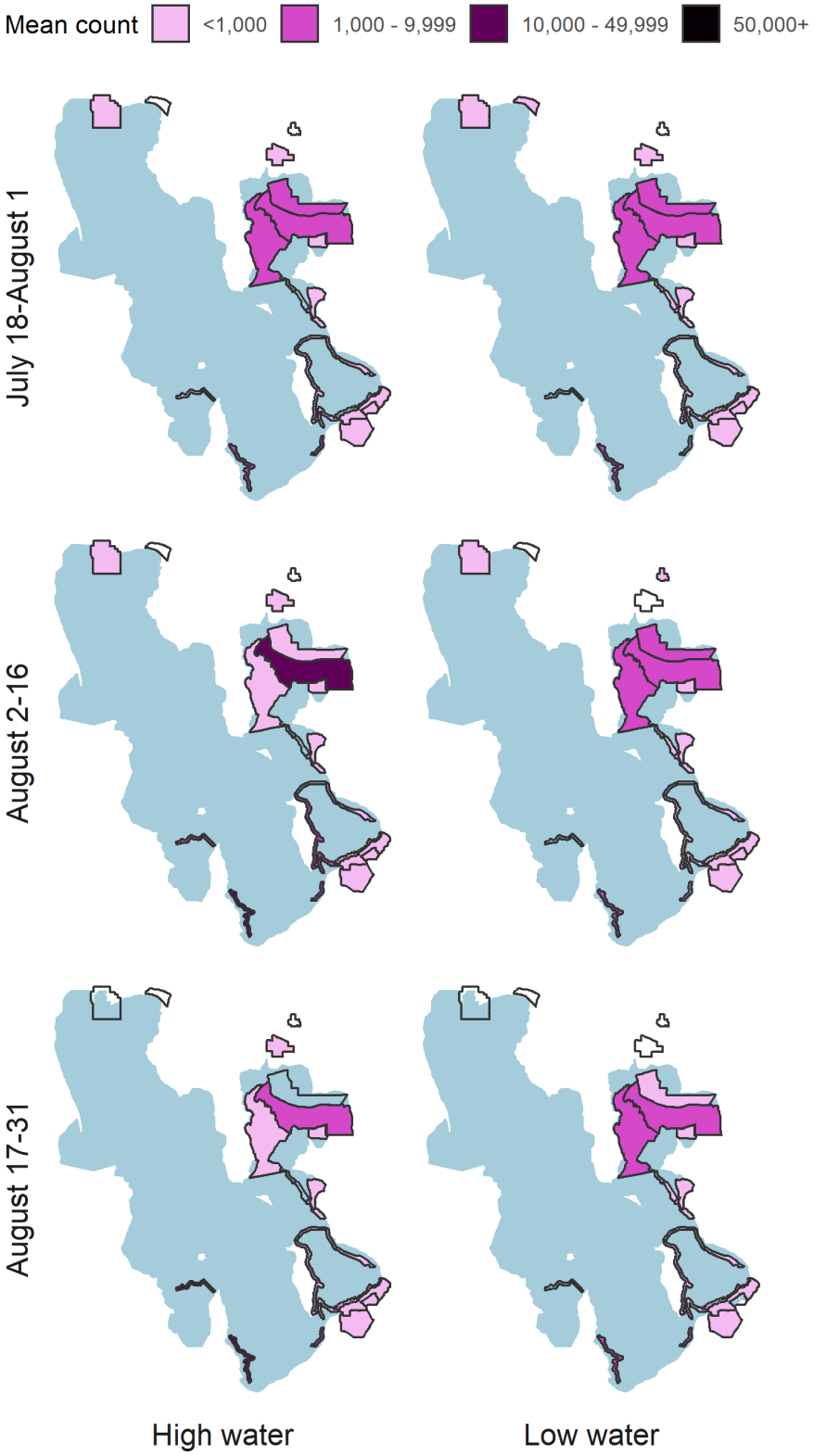
Continued … Comparison of the distribution of **American avocets and black-necked stilts** in relatively high (2006) and relatively low (2015-17) lake conditions.



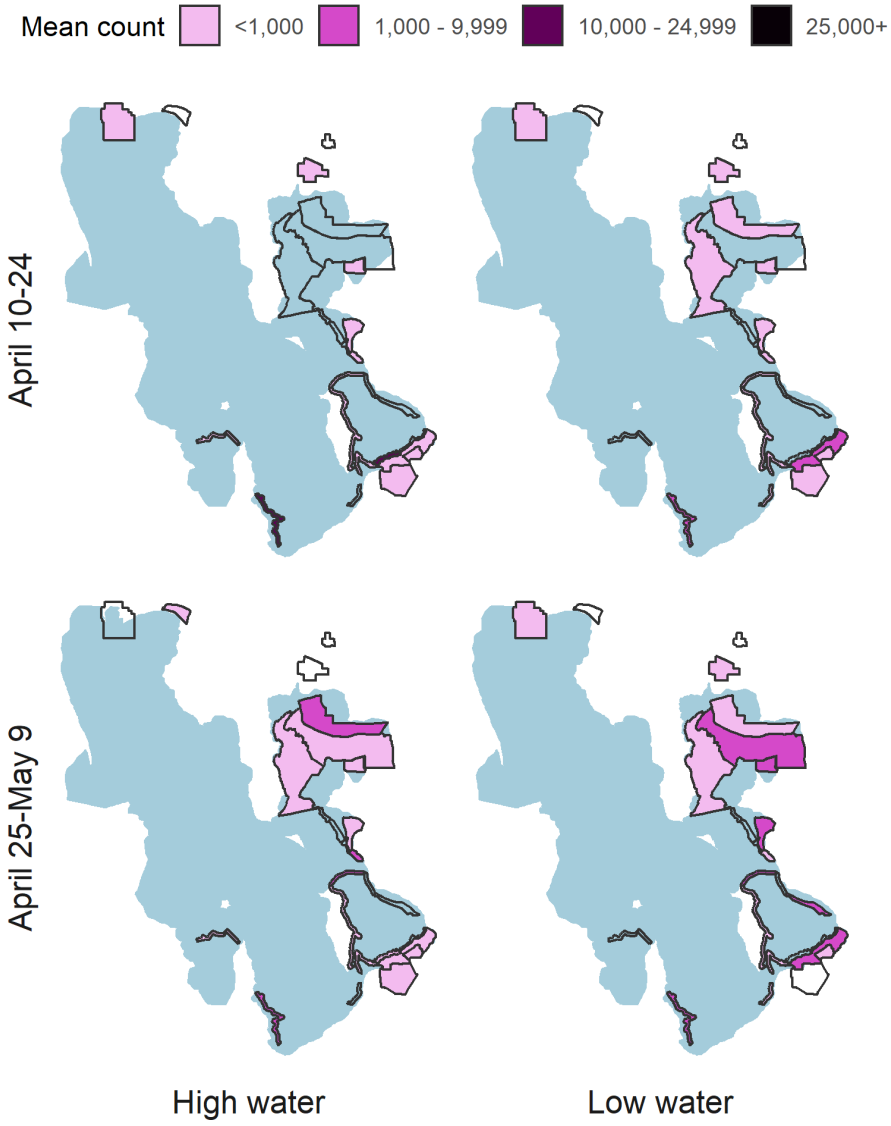
Comparison of the distribution of **California gulls** in relatively high (2006) and relatively low (2015-17) lake conditions.



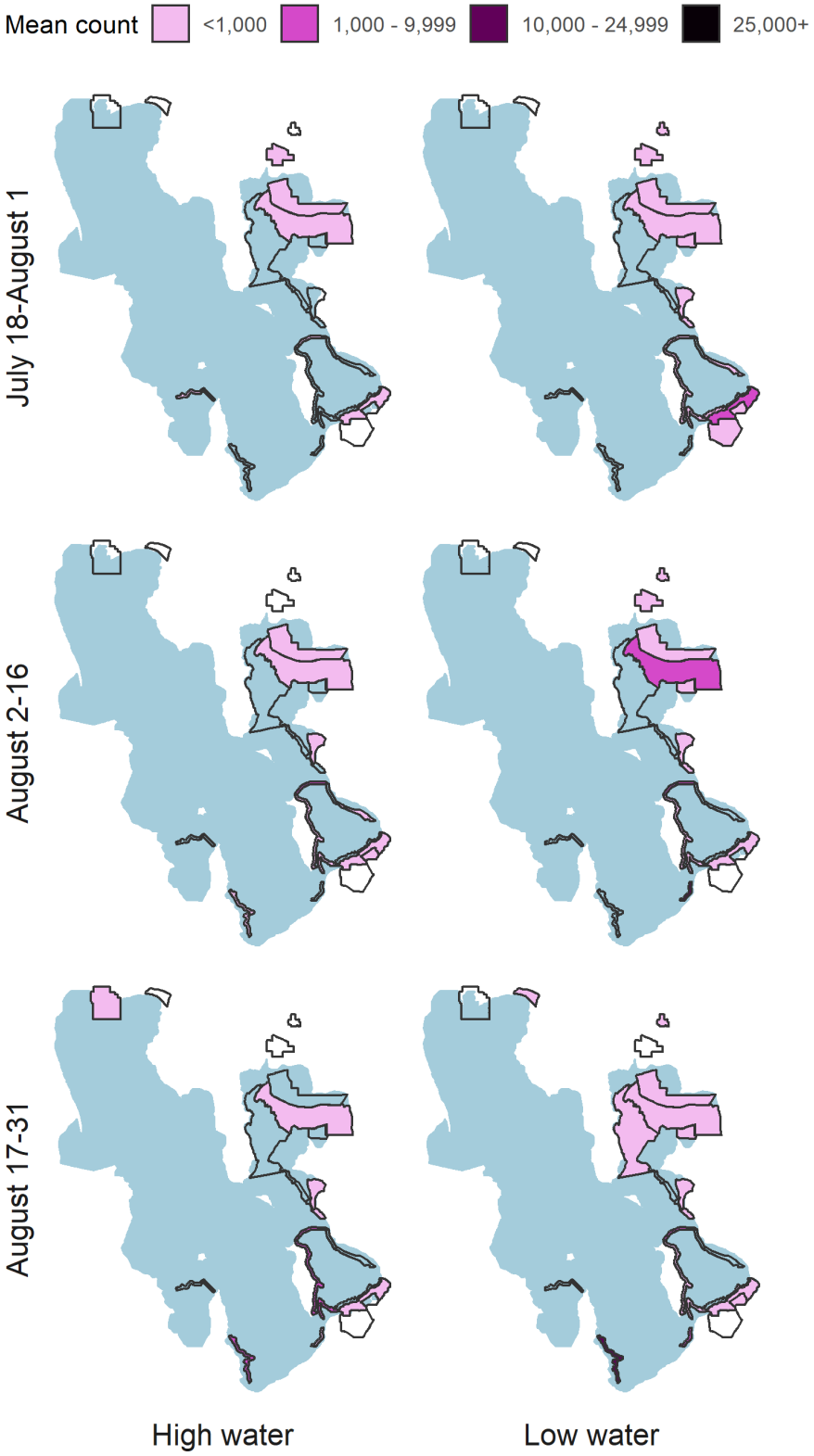
Continued … Comparison of the distribution of **California gulls** in relatively high (2006) and relatively low (2015-17) lake conditions.



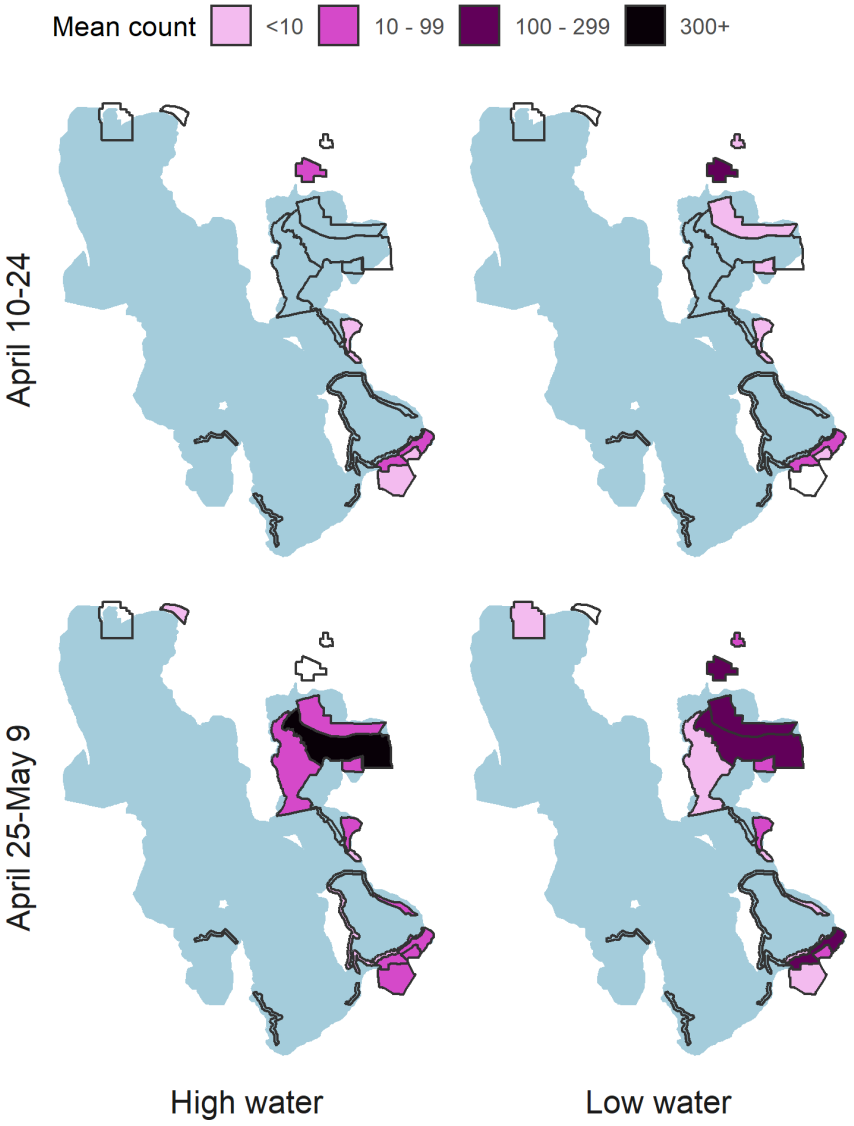
Comparison of the distribution of **eared grebes** in relatively high (2006) and relatively low (2015-17) lake conditions.



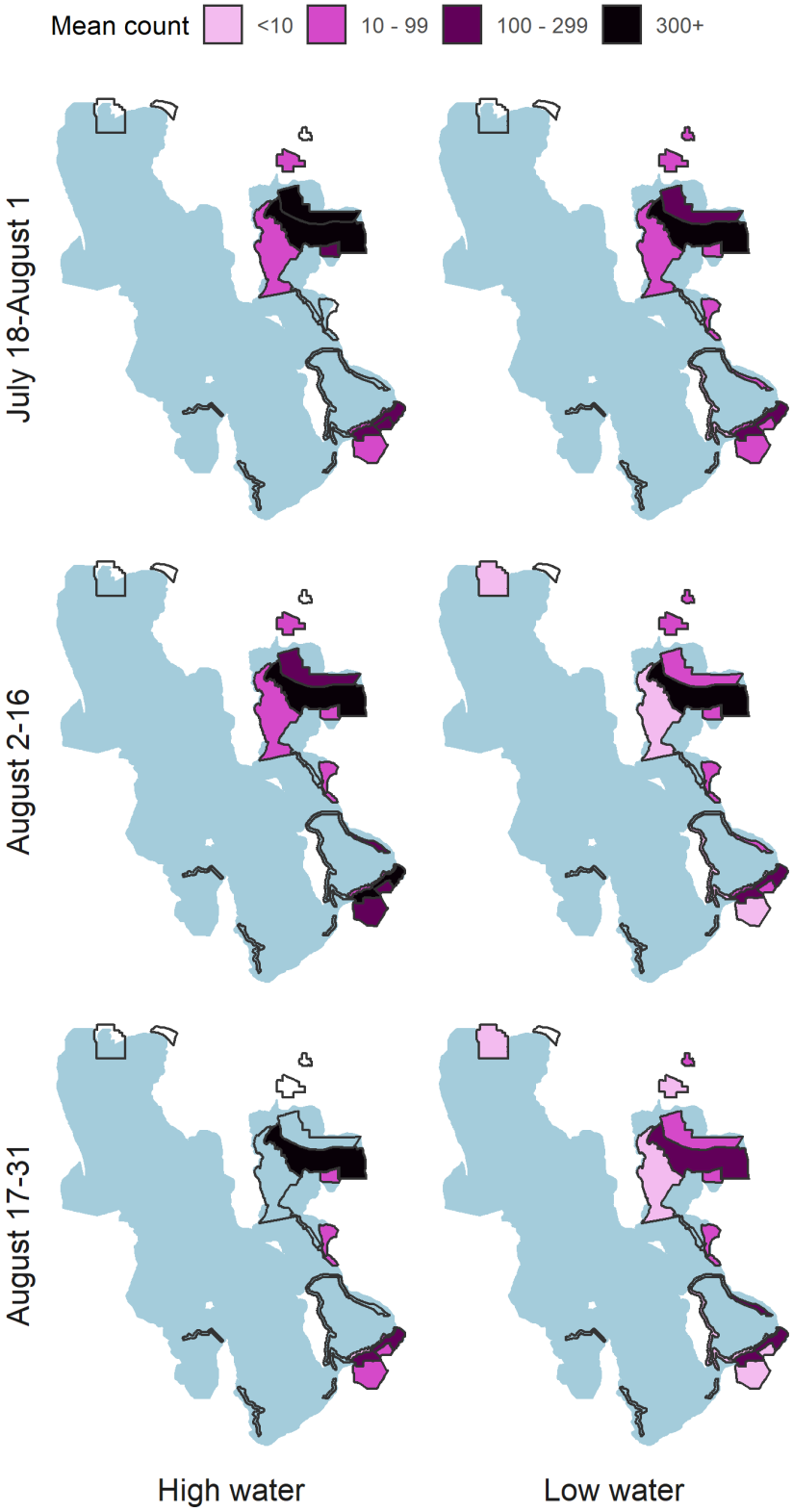
Continued … Comparison of the distribution of **eared grebes** in relatively high (2006) and relatively low (2015-17) lake conditions.



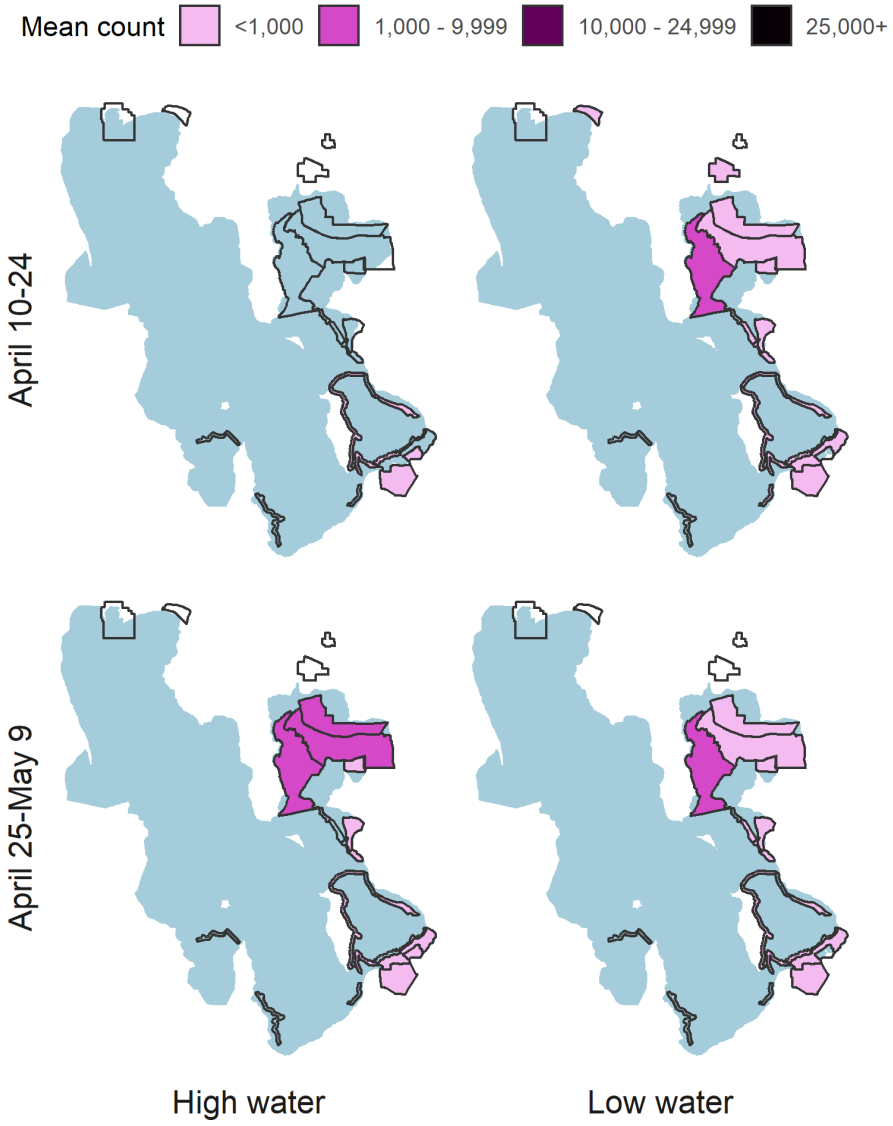
Comparison of the distribution of **Forster's terns** in relatively high (2006) and relatively low (2015-17) lake conditions.



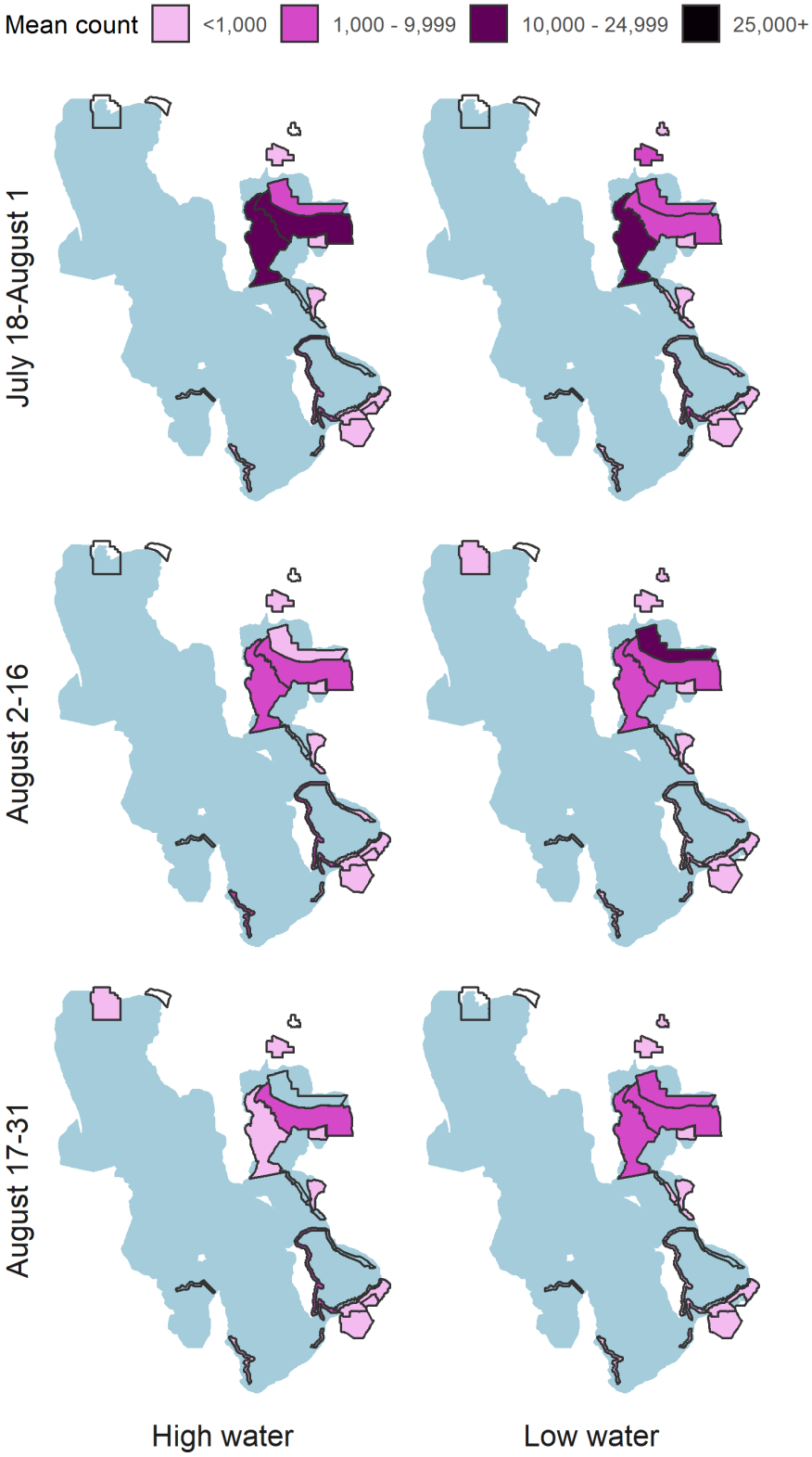
Continued … Comparison of the distribution of **Forster's terns** in relatively high (2006) and relatively low (2015-17) lake conditions.



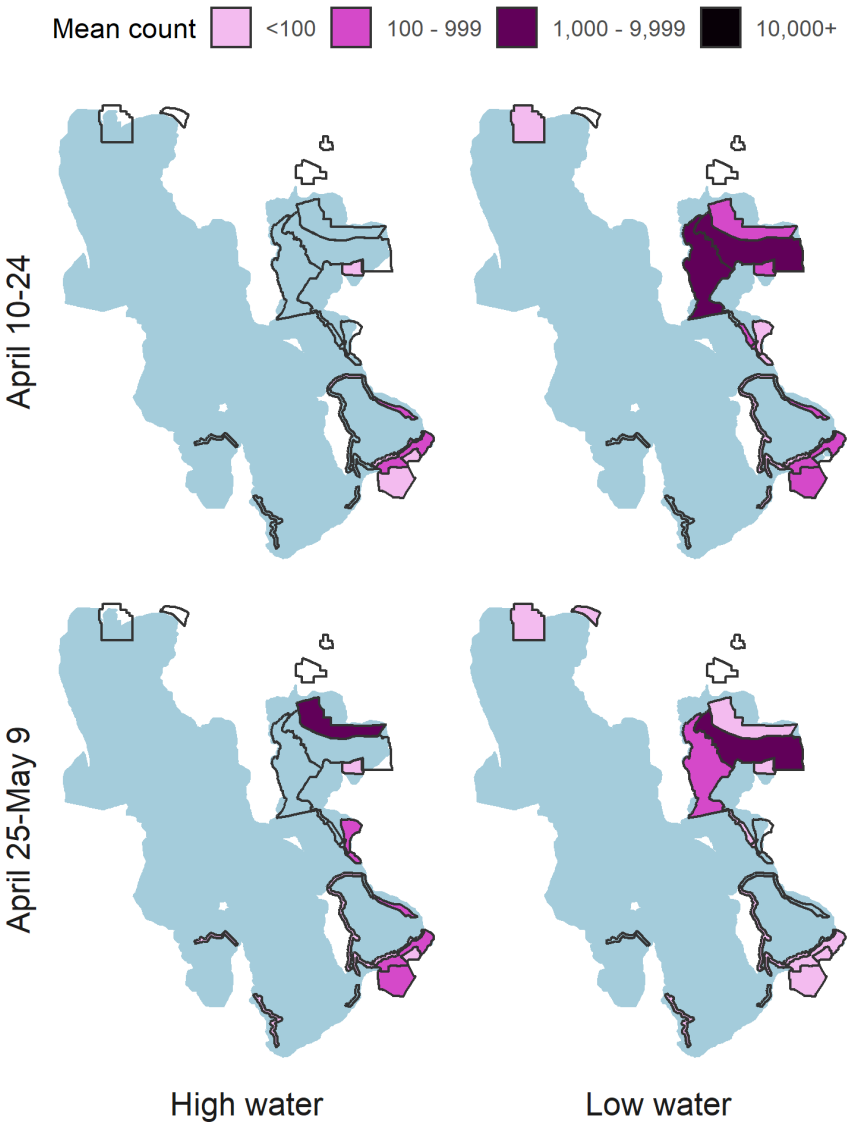
Comparison of the distribution of **Franklin's gulls** in relatively high (2006) and relatively low (2015-17) lake conditions.



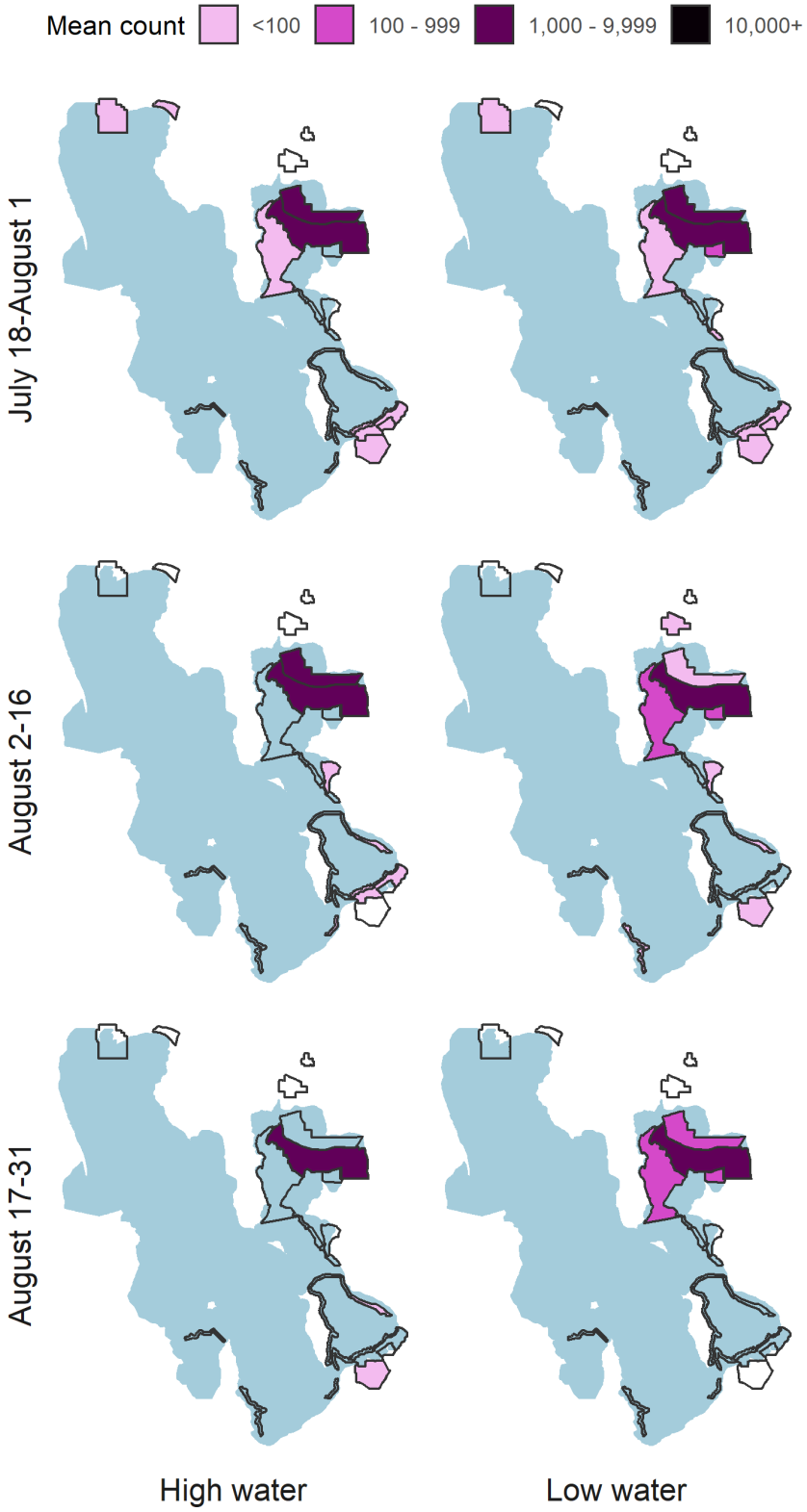
Continued … Comparison of the distribution of **Franklin's gulls** in relatively high (2006) and relatively low (2015-17) lake conditions.



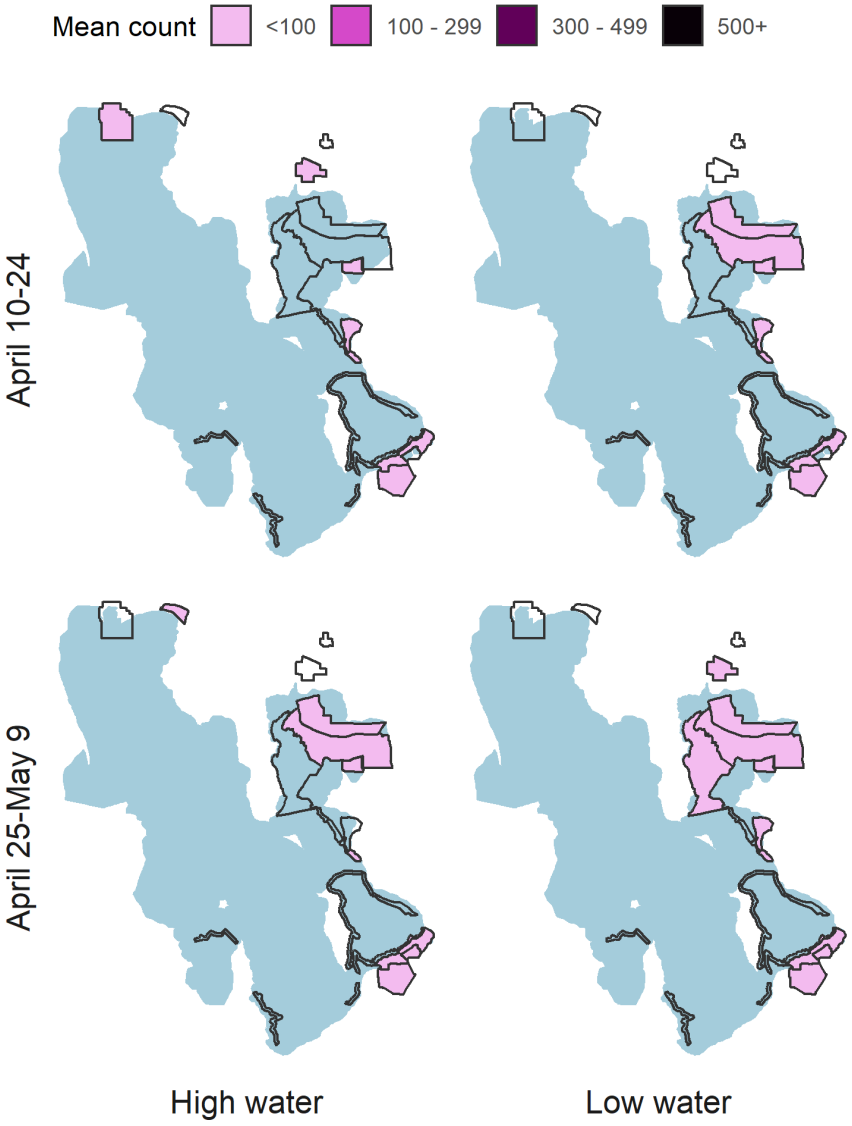
Comparison of the distribution of **marbled godwits** in relatively high (2006) and relatively low (2015-17) lake conditions.



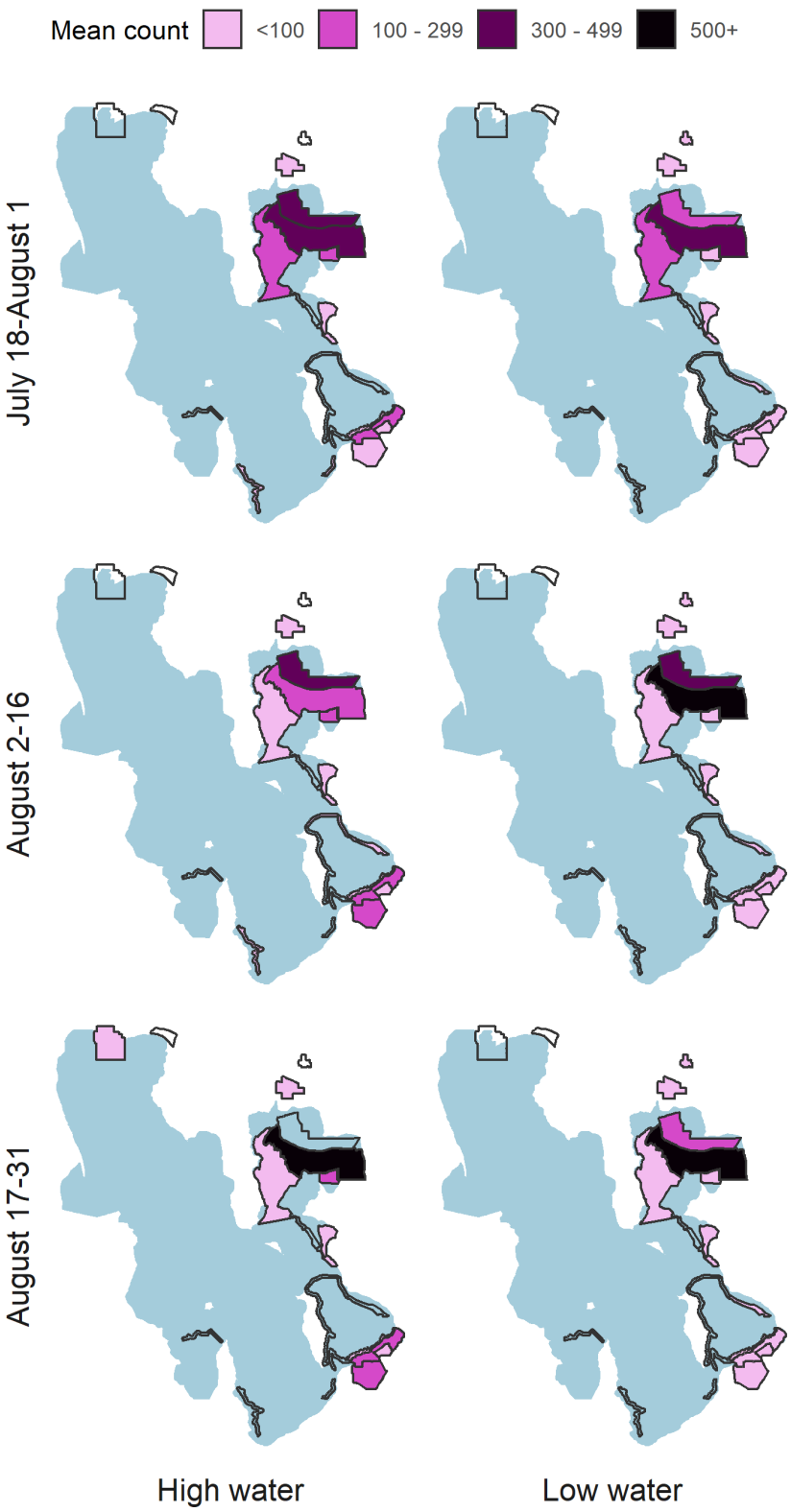
Continued … Comparison of the distribution of **marbled godwits** in relatively high (2006) and relatively low (2015-17) lake conditions.



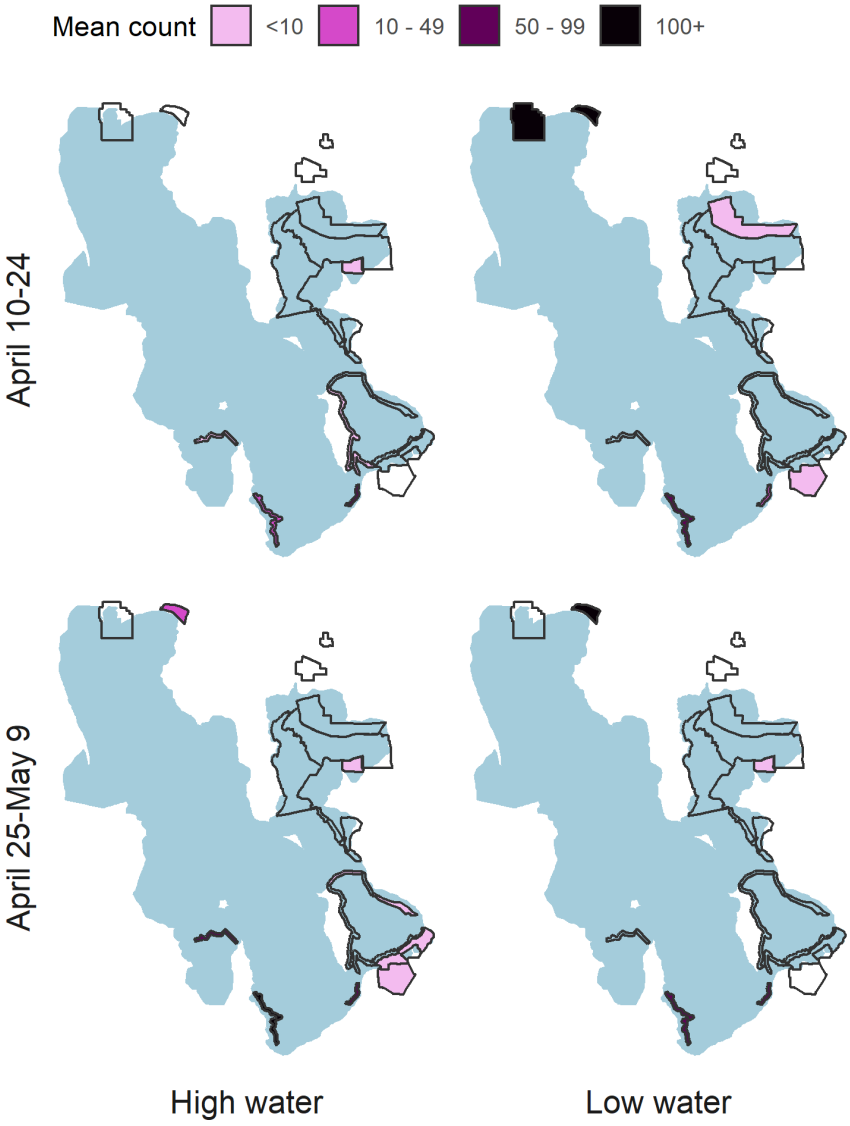
Comparison of the distribution of **snowy egrets** in relatively high (2006) and relatively low (2015-17) lake conditions.



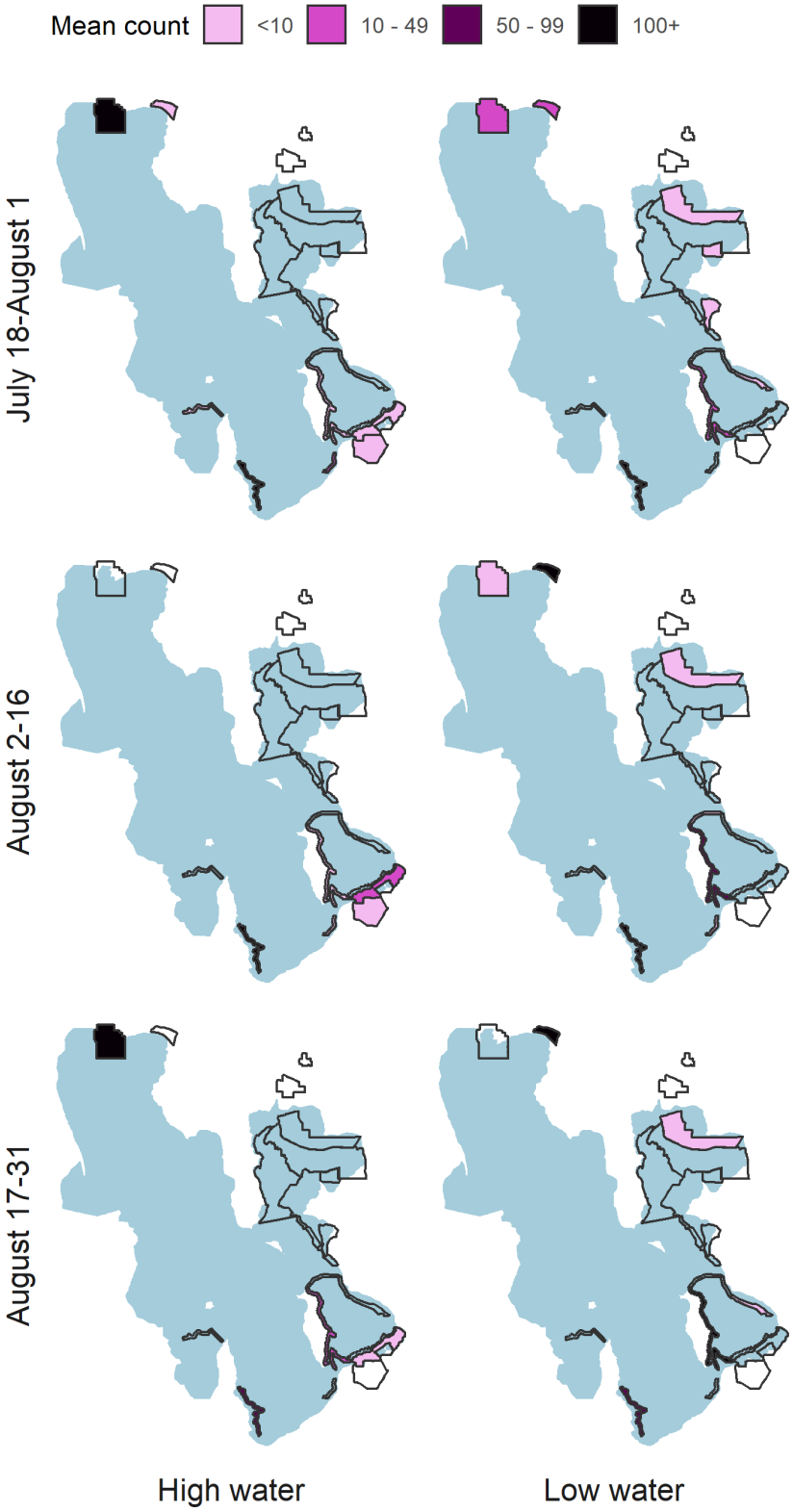
Continued … Comparison of the distribution of **snowy egrets** in relatively high (2006) and relatively low (2015-17) lake conditions.



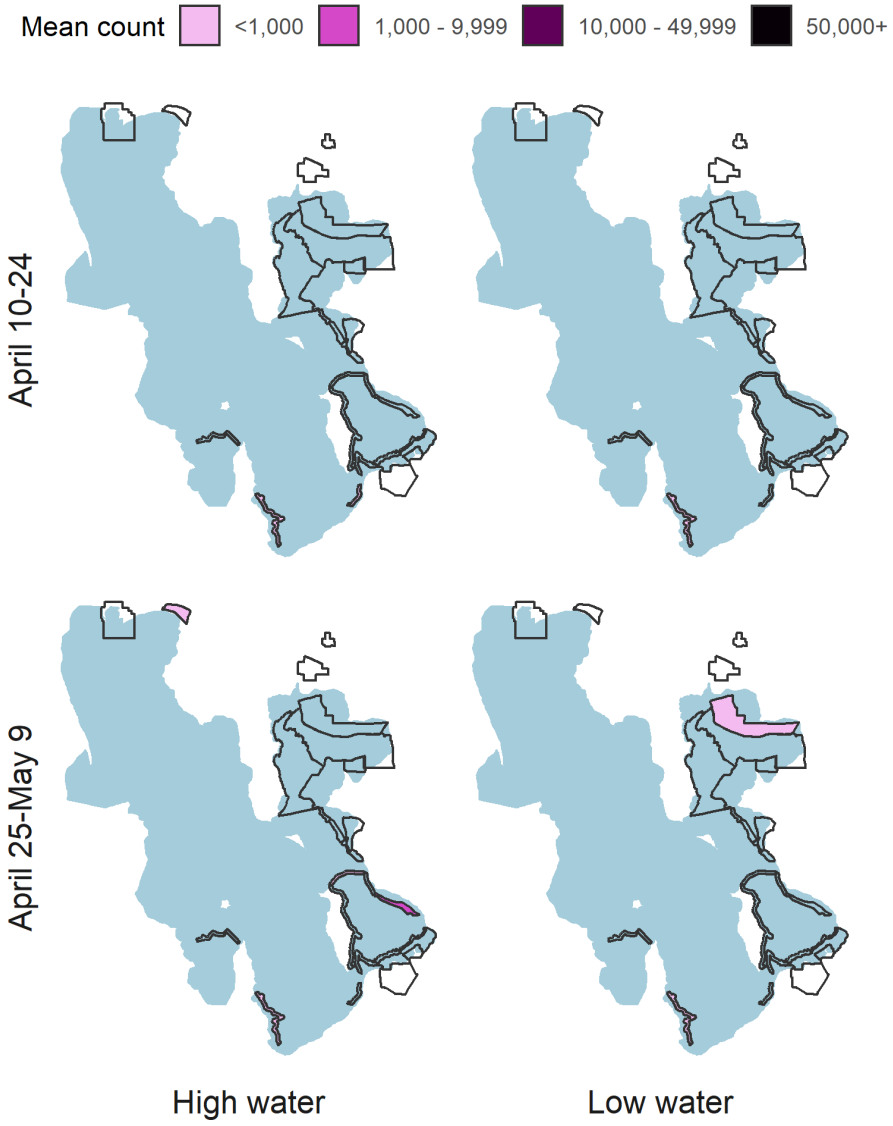
Comparison of the distribution of **snowy plovers** in relatively high (2006) and relatively low (2015-17) lake conditions.



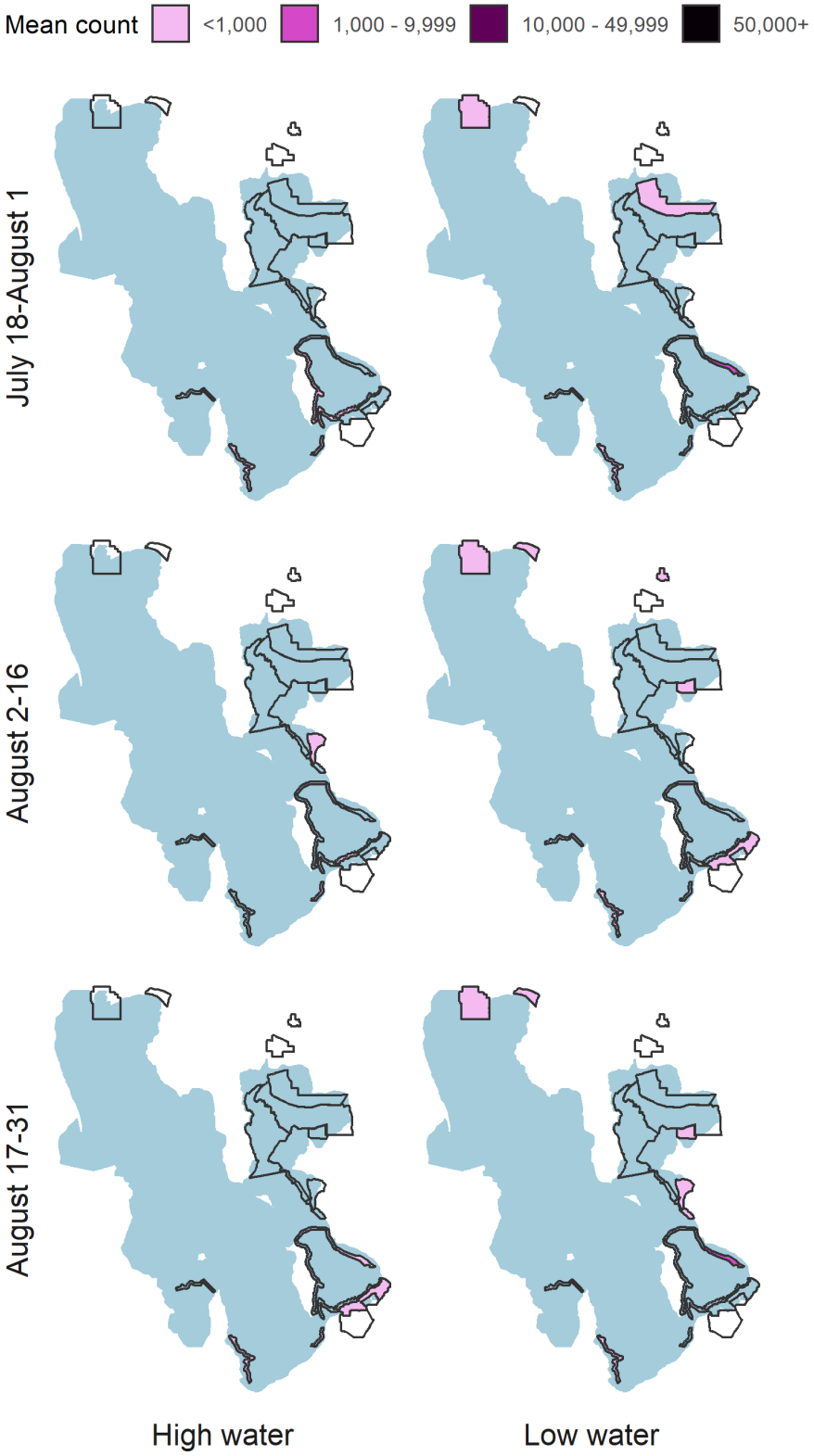
Continued … Comparison of the distribution of **snowy plovers** in relatively high (2006) and relatively low (2015-17) lake conditions.



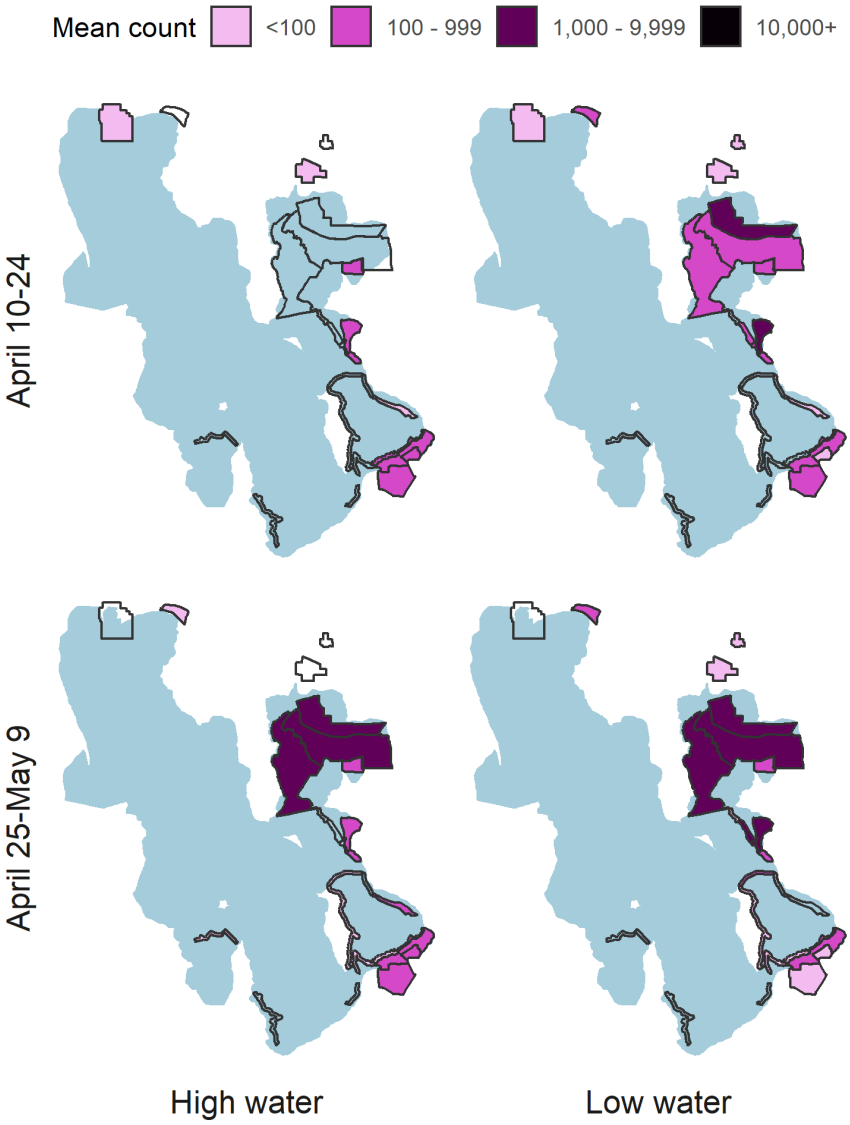
Comparison of the distribution of **western sandpipers** in relatively high (2006) and relatively low (2015-17) lake conditions.



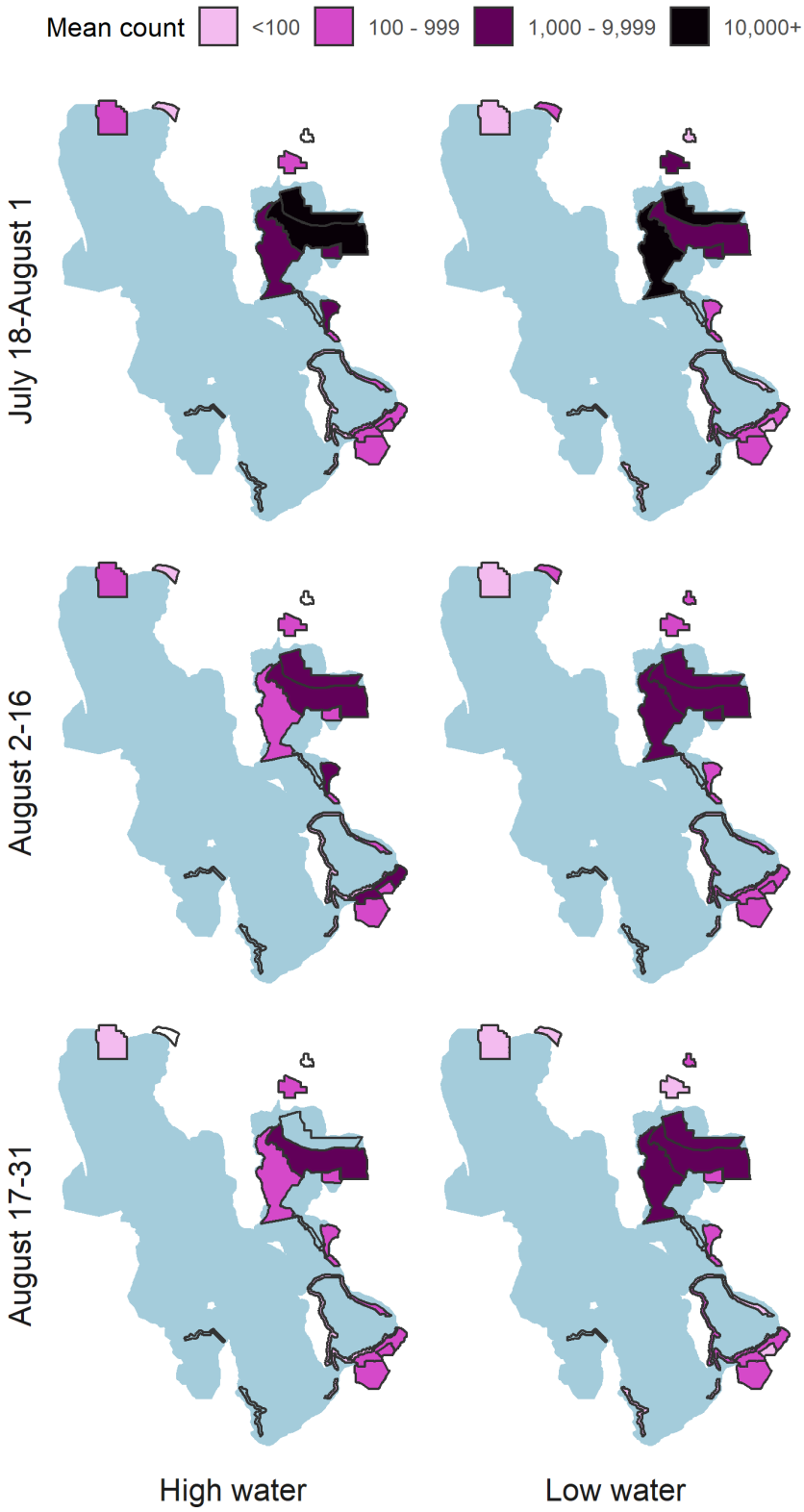
Continued … Comparison of the distribution of **western sandpipers** in relatively high (2006) and relatively low (2015-17) lake conditions.



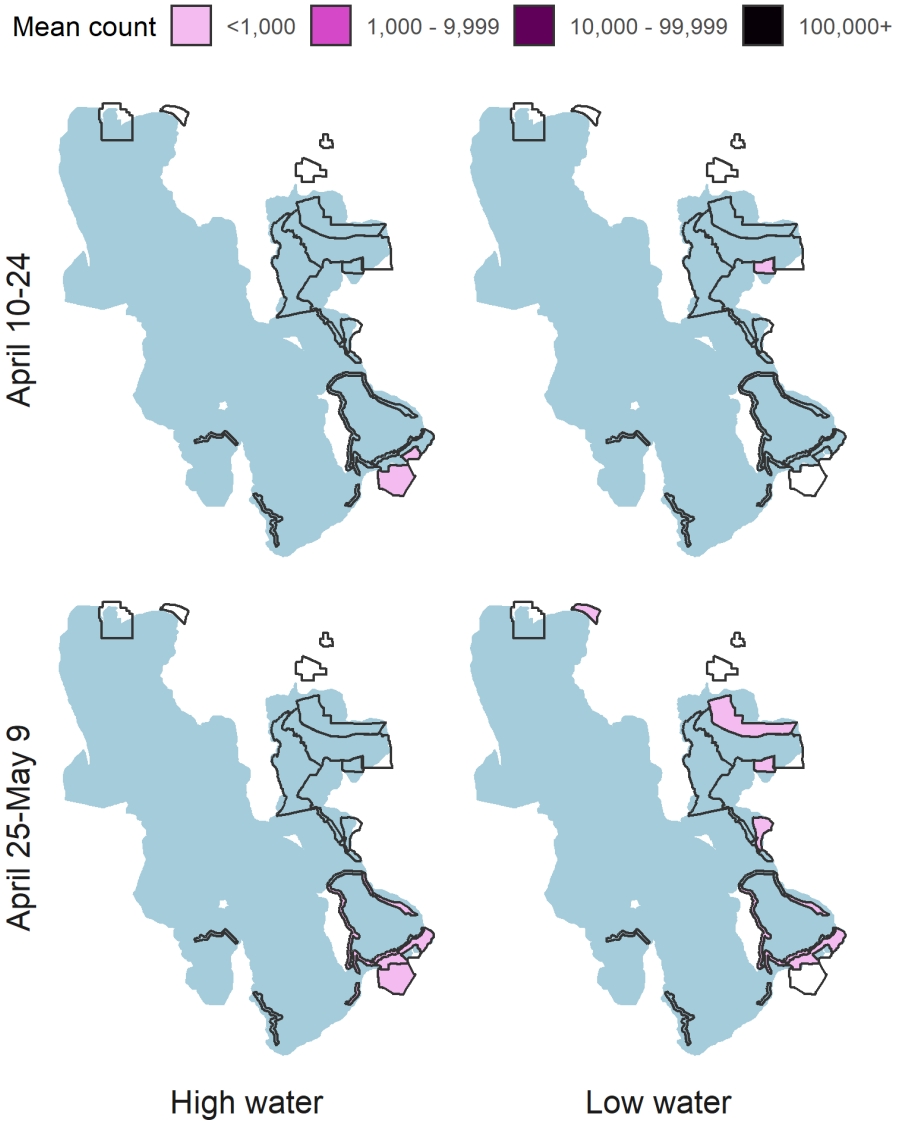
Comparison of the distribution of **white-faced ibis** in relatively high (2006) and relatively low (2015-17) lake conditions.



Continued … Comparison of the distribution of **white-faced ibis** in relatively high (2006) and relatively low (2015-17) lake conditions.



Comparison of the distribution of **Wilson's phalaropes** in relatively high (2006) and relatively low (2015-17) lake conditions.



Continued … Comparison of the distribution of **Wilson's phalaropes** in relatively high (2006) and relatively low (2015-17) lake conditions.