

Appendix 5B-4: Submerged Aquatic Vegetation Coverage in the Stormwater Treatment Areas

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Ground surveys have been conducted via airboat on a periodic basis to assess and monitor the coverage of submerged aquatic vegetation (SAV) taxa within Everglades Stormwater Treatment Area (STA) cells targeted for SAV communities. The periods of record (PORs) vary among cells. Assessments were made at a network of fixed geo-referenced sites arranged in a grid pattern within each cell. The coverage of SAV taxa at each site was evaluated based on the amount of SAV in the water column visible to an observer within the immediate vicinity of the airboat. Surveys were conducted by scientists from the South Florida Water Management District (SFWMD or District) and DB Environmental, Inc. Survey results are presented in this appendix as the frequency of occurrence of SAV taxa within each cell over its POR. The frequency of occurrence was calculated for each SAV taxon based on the number of survey sites at which the taxon was present relative to the total number of sites. For example, if a taxon was present at only one-half of the sites, its frequency of occurrence would be 0.5. Collectively, eight SAV taxa have been identified during surveys conducted from 2000 to 2019 (**Table 1**). The frequency data were then used to generate stacked-bar charts for all cells surveyed (**Figures 1 to 21**). Because multiple SAV taxa were usually present at multiple sites during cell surveys, stacked bars often exceed a value of 1 on the plot's y axis. Seasonal trends are evident in many cells with higher SAV frequency of occurrence generally during the wet season. Frequency of individual taxa was highly variable across all cells, though muskgrass (*Chara* sp.), southern naiad (*Najas guadalupensis*), and hydrilla (*Hydrilla verticillata*) were generally to be the most common taxa found.

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Table 1. Species name and common name of all SAV taxa identified during ground surveys conducted in the Everglades STAs over the POR.

Species Name	Common Name
<i>Ceratophyllum demersum</i>	coontail
<i>Chara</i> sp.	muskgrass
<i>Hydrilla verticillata</i>	hydrilla
<i>Najas guadalupensis</i>	southern naiad
<i>Najas marina</i>	spiny naiad
<i>Potamogeton illinoensis</i>	pondweed
<i>Utricularia</i> spp.	bladderwort
<i>Vallisneria</i> sp.	eelgrass

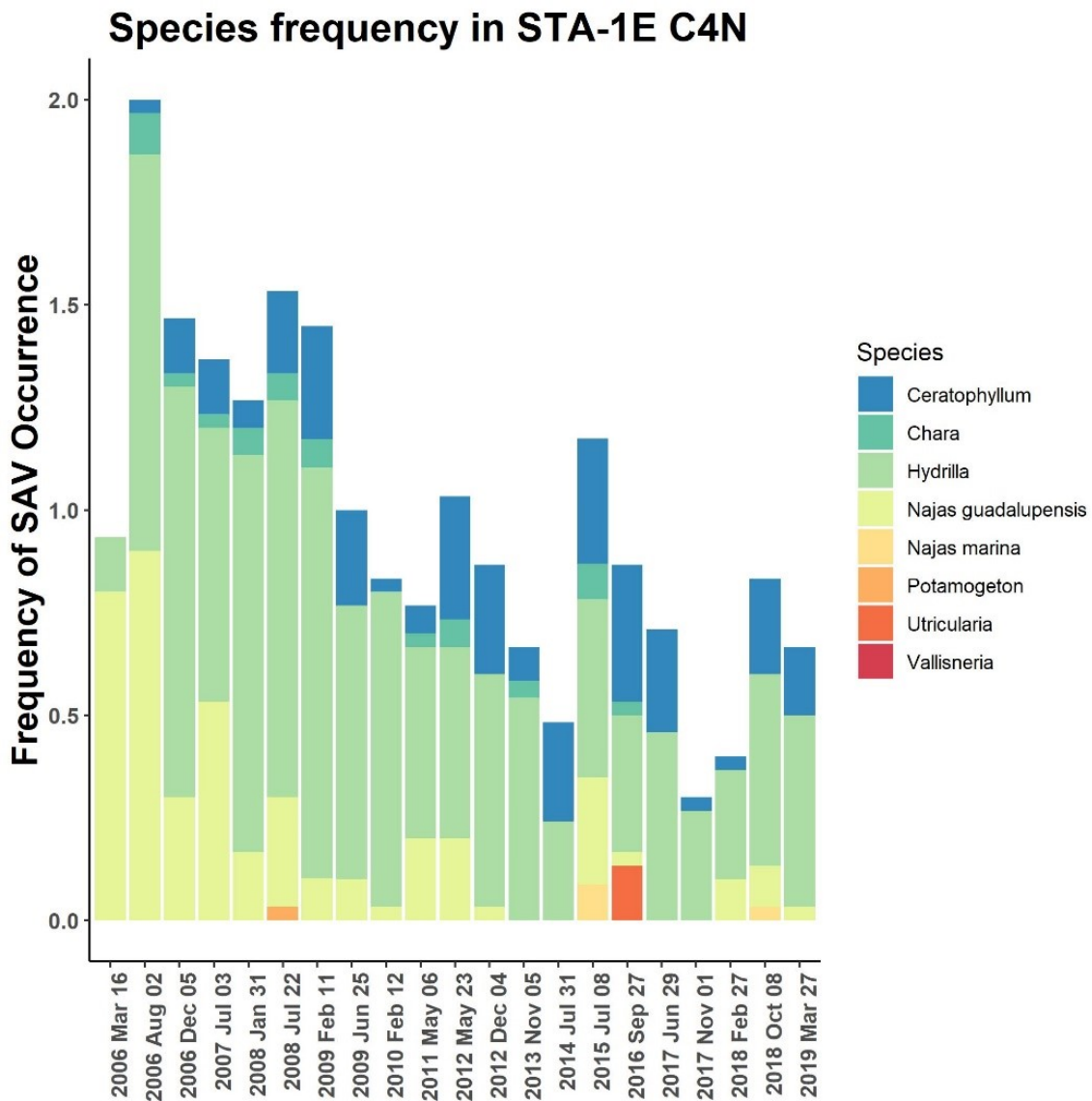


Figure 1. Frequency of SAV occurrence for all taxa in STA-1 East (STA-1E) Cell 4N throughout the POR. Higher frequency indicates that the taxon was present at more sites.

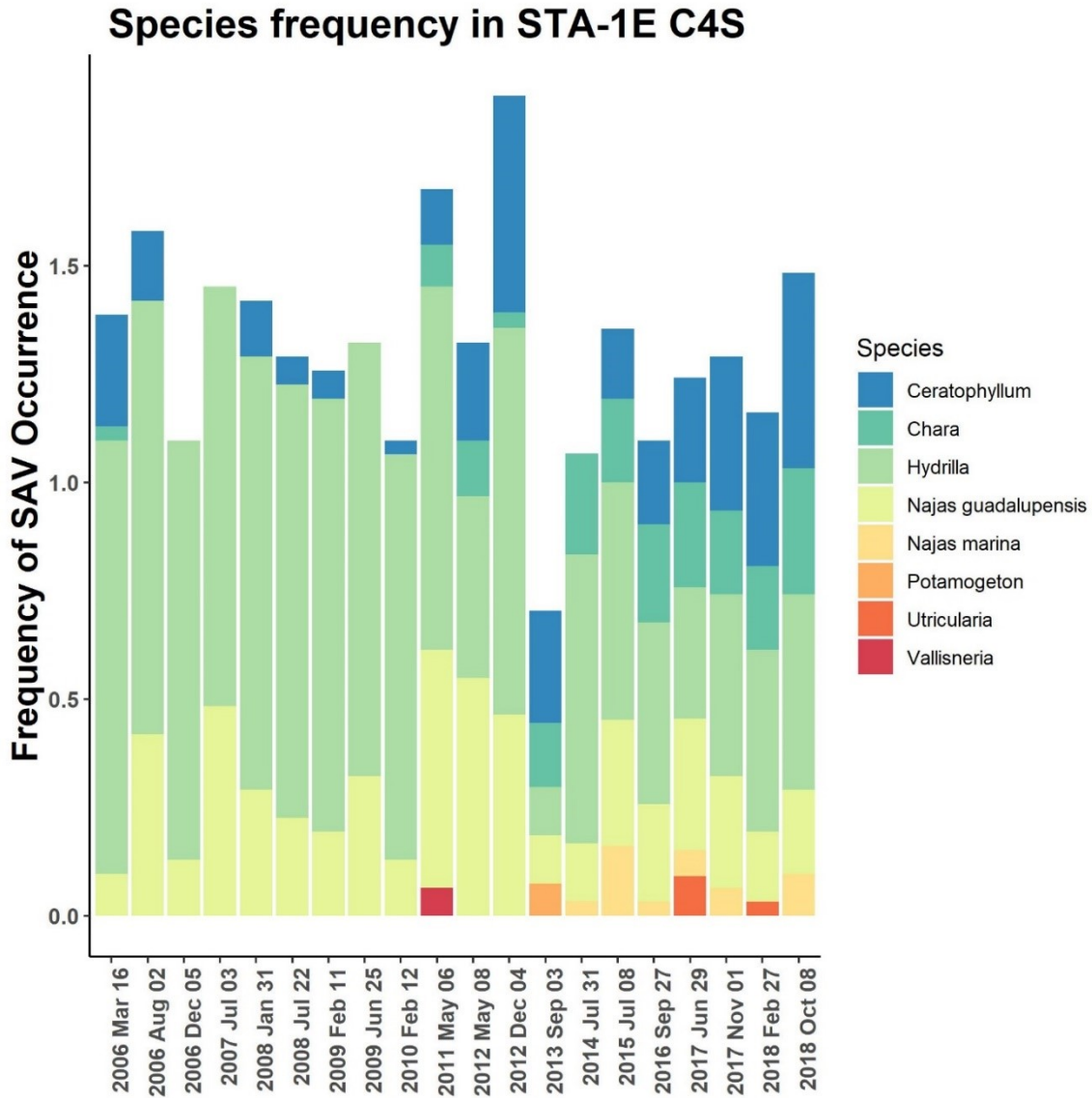


Figure 2. Frequency of SAV occurrence for all taxa in STA-1E Cell 4S throughout the POR. Higher frequency indicates that the taxon was present at more sites.

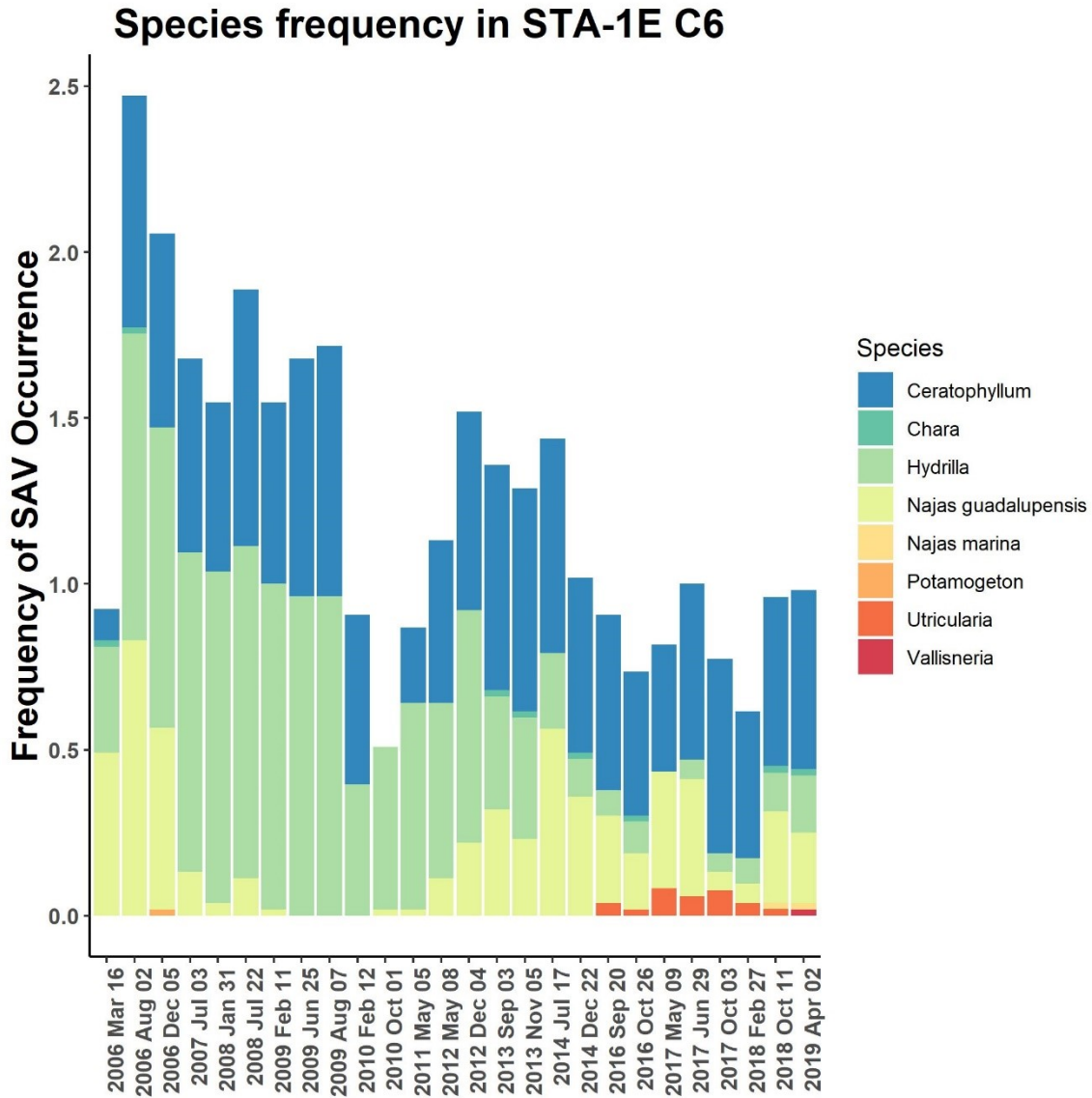


Figure 3. Frequency of SAV occurrence for all taxa in STA-1E Cell 6 throughout the POR. Higher frequency indicates that the taxon was present at more sites.

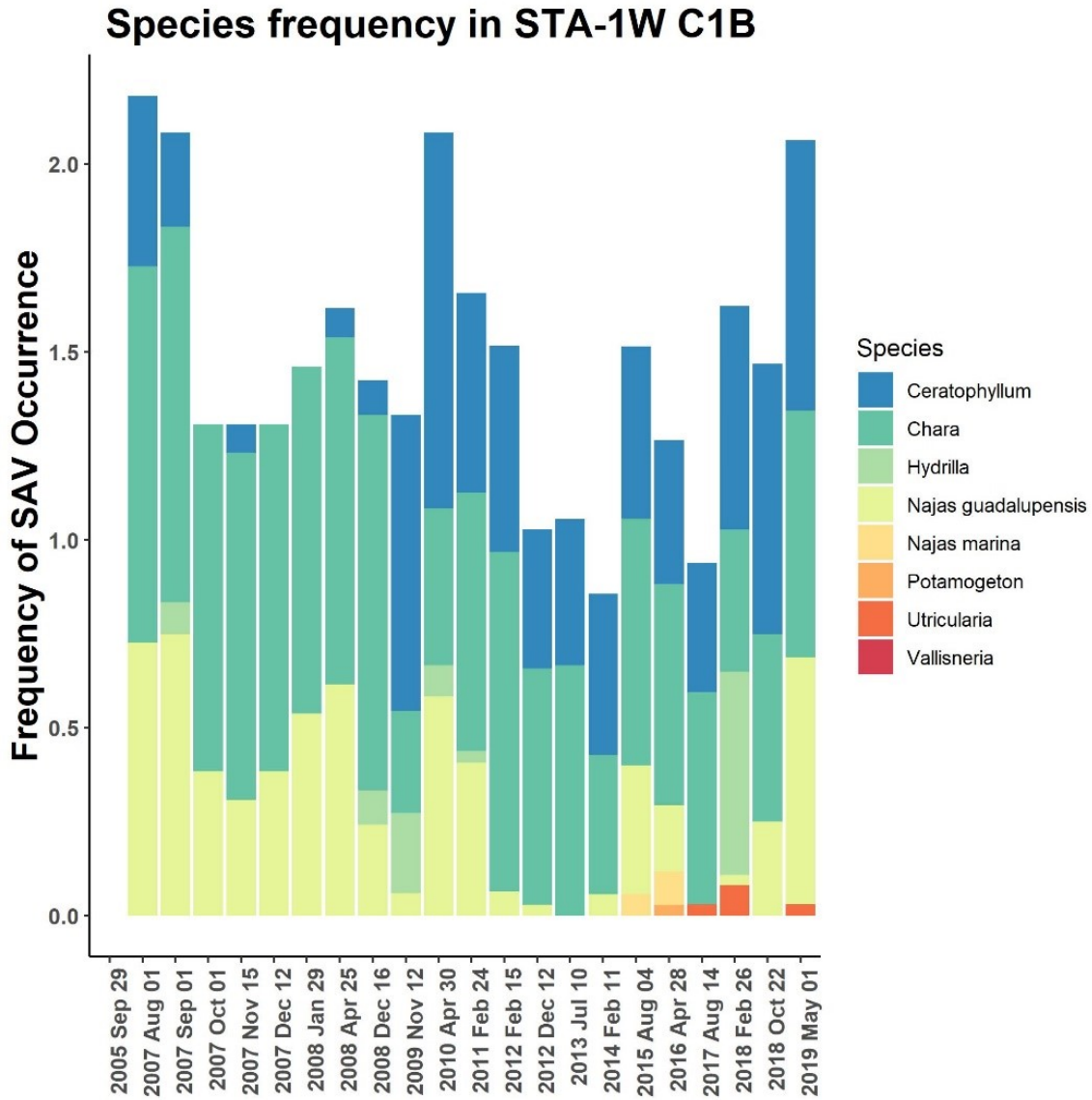


Figure 4. Frequency of SAV occurrence for all taxa in STA-1 West (STA-1W) Cell 1B throughout the POR. Higher frequency indicates that the taxon was present at more sites.

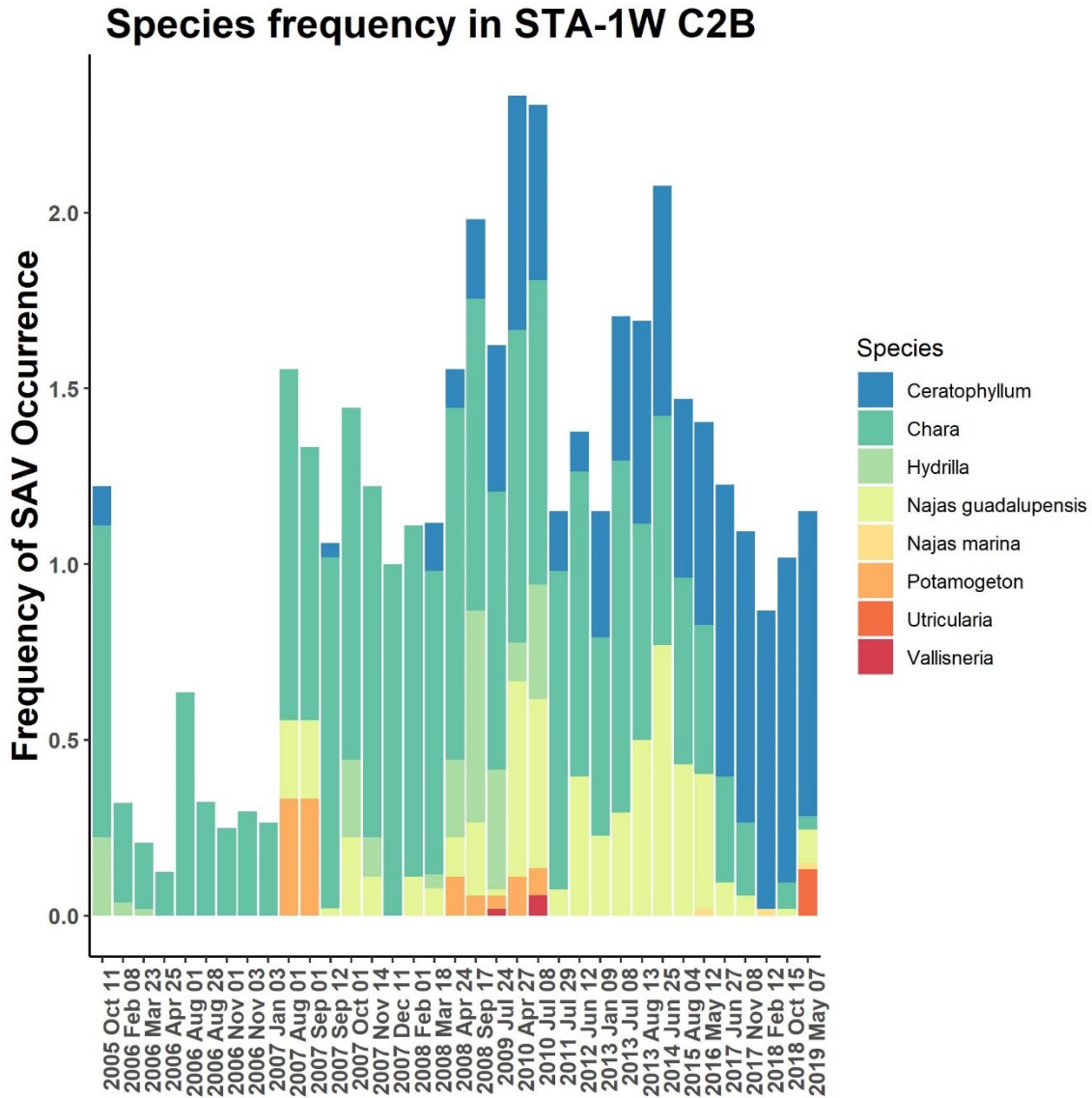


Figure 5. Frequency of SAV occurrence for all taxa in STA-1W Cell 2B throughout the POR. Higher frequency indicates that the taxon was present at more sites.

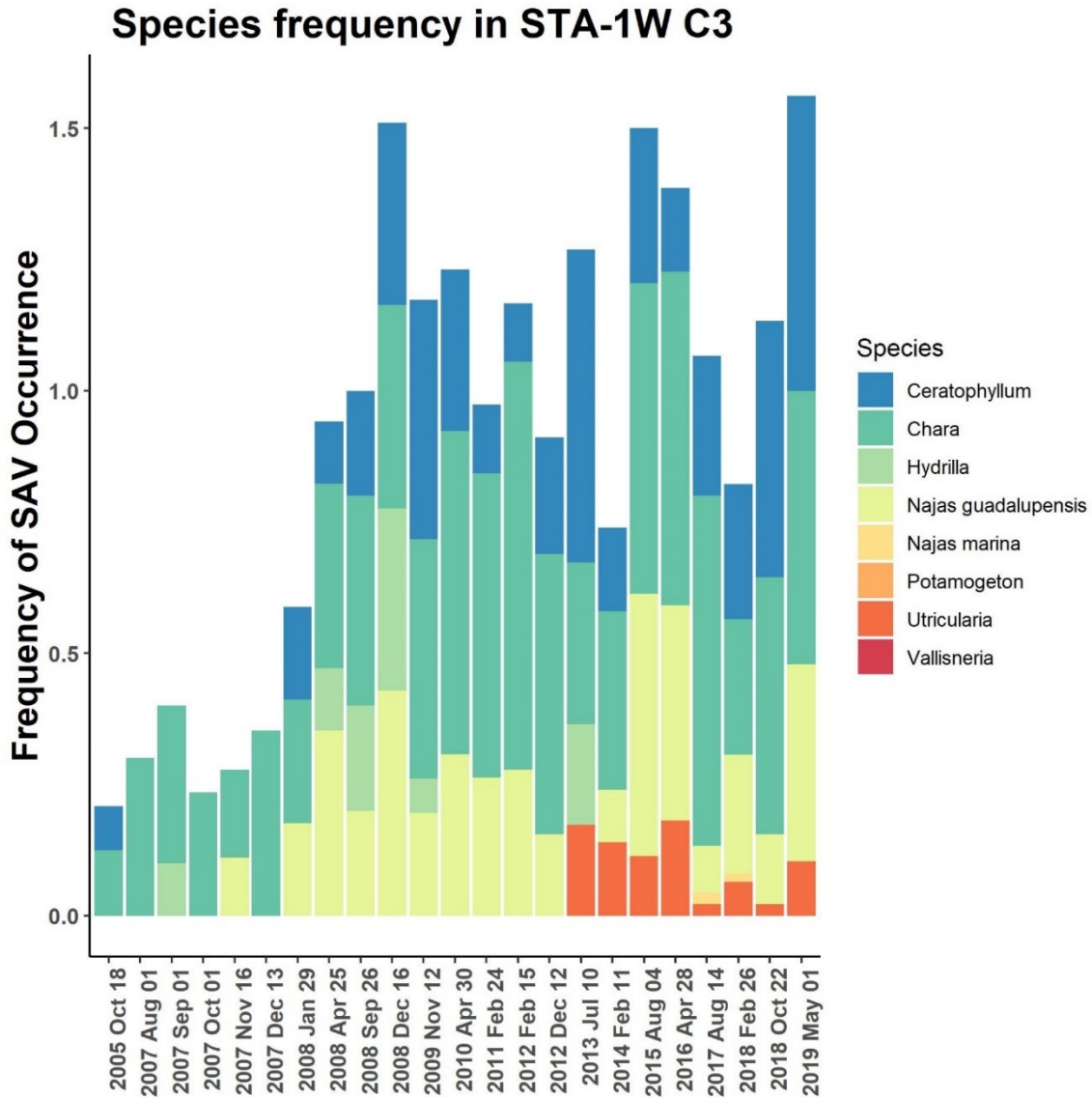


Figure 6. Frequency of SAV occurrence for all taxa in STA-1W Cell 3 throughout the POR. Higher frequency indicates that the taxon was present at more sites.

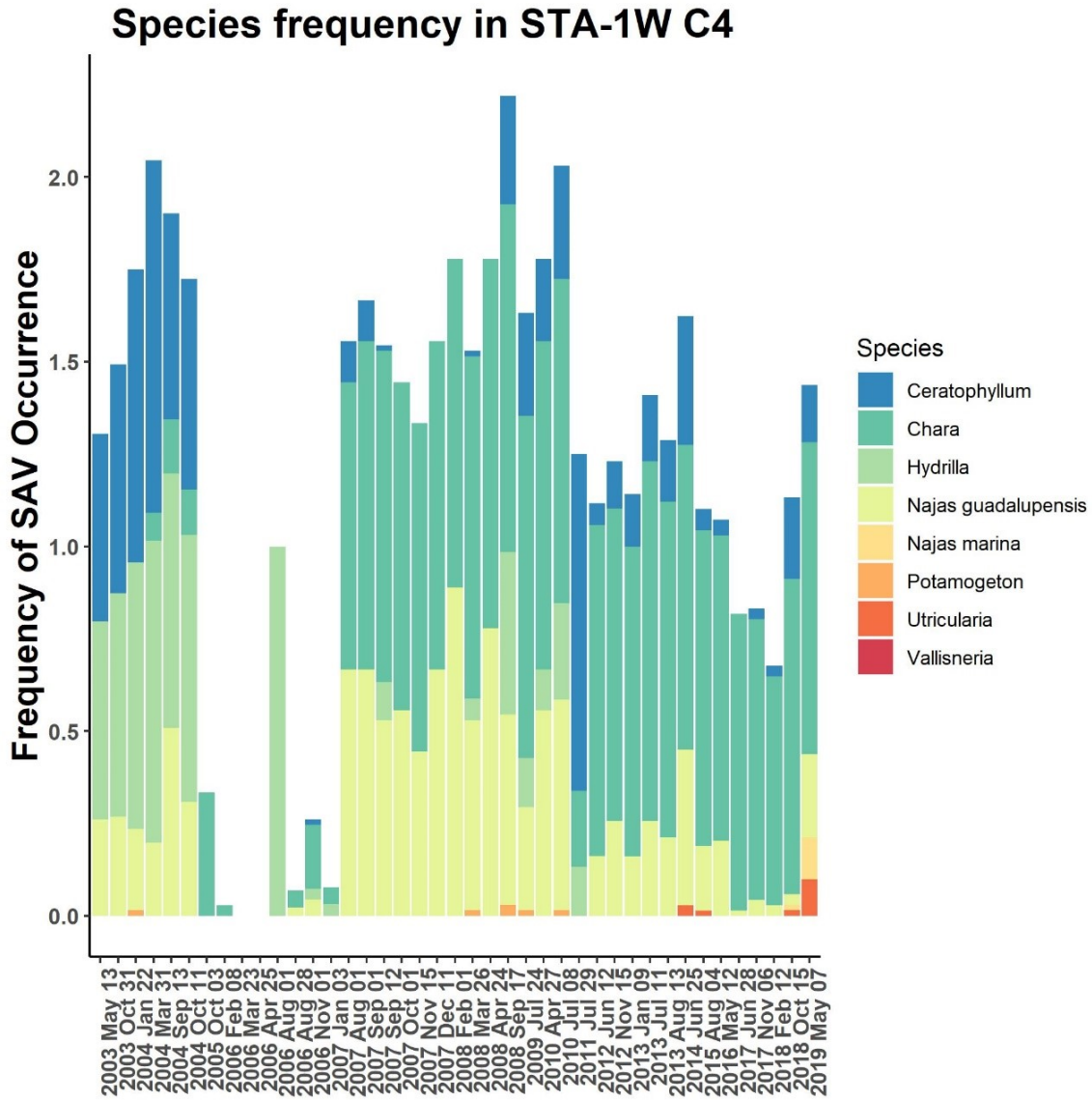


Figure 7. Frequency of SAV occurrence for all taxa in STA-1W Cell 4 throughout the POR. Higher frequency indicates that the taxon was present at more sites.

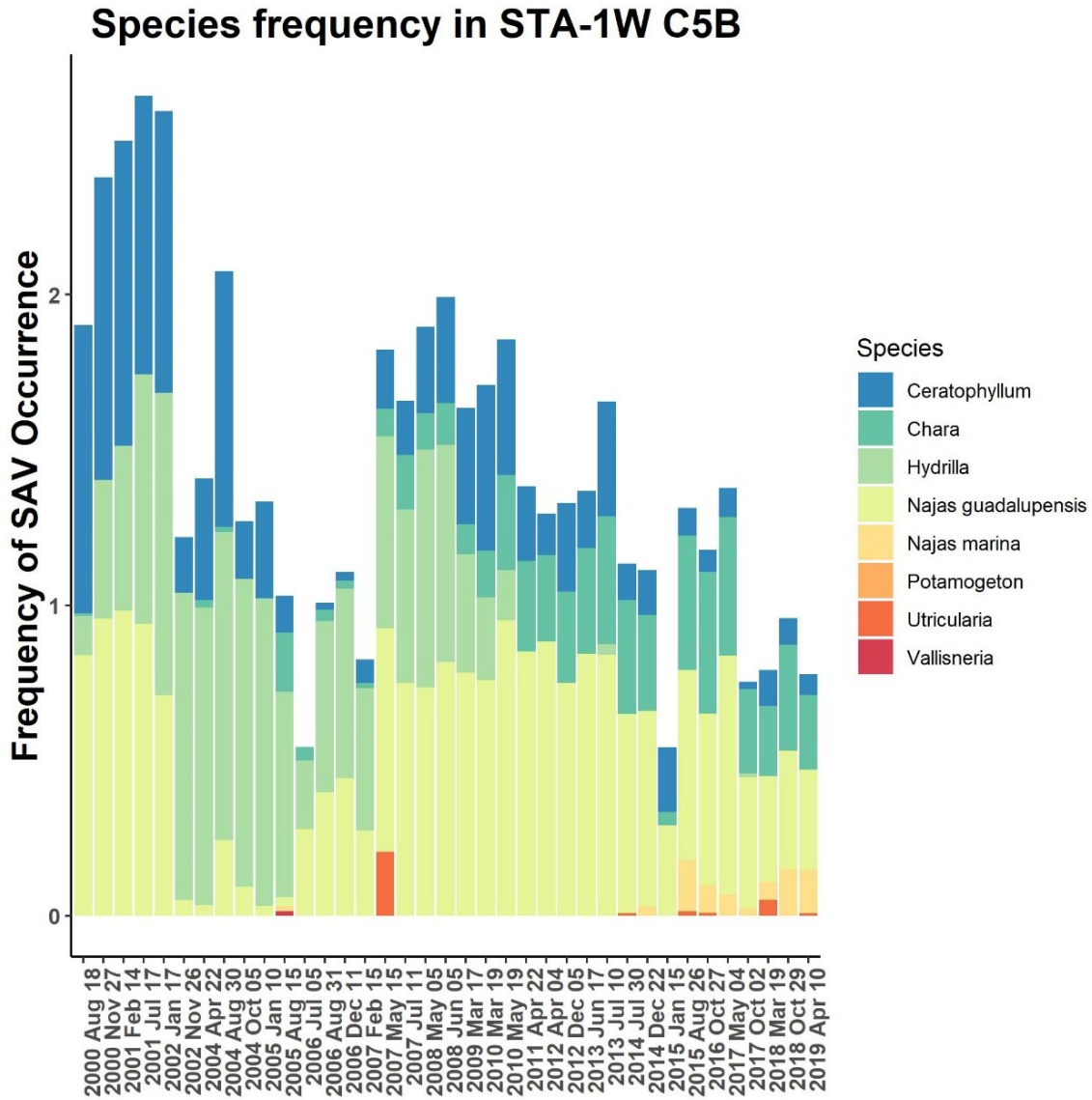


Figure 8. Frequency of SAV occurrence for all taxa in STA-1W Cell 5B throughout the POR. Higher frequency indicates that the taxon was present at more sites.

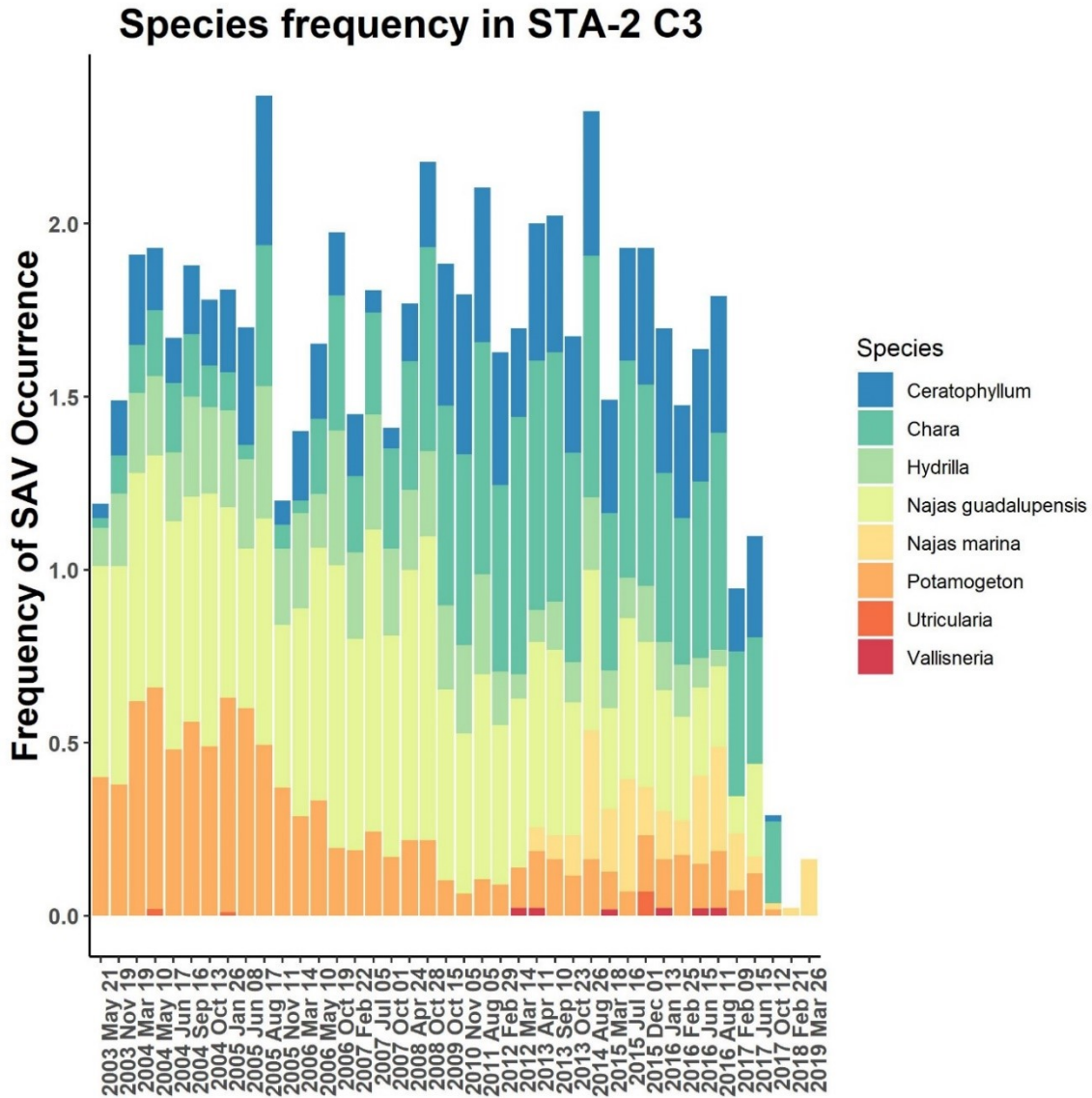


Figure 9. Frequency of SAV occurrence for all taxa in STA-2 Cell 3 throughout the POR. Higher frequency indicates that the taxon was present at more sites.

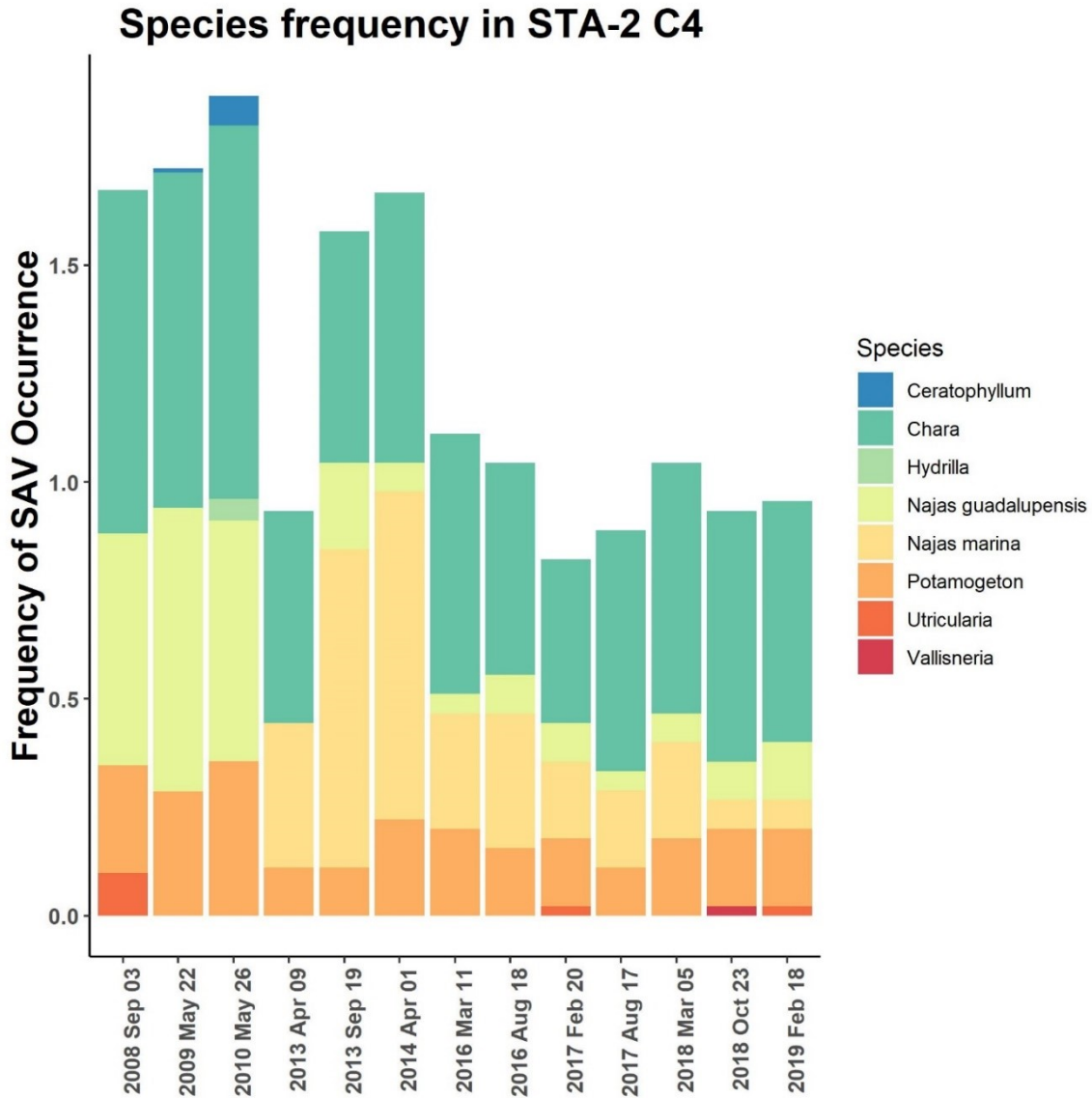


Figure 10. Frequency of SAV occurrence for all taxa in STA-2 Cell 4 throughout the POR. Higher frequency indicates that the taxon was present at more sites.

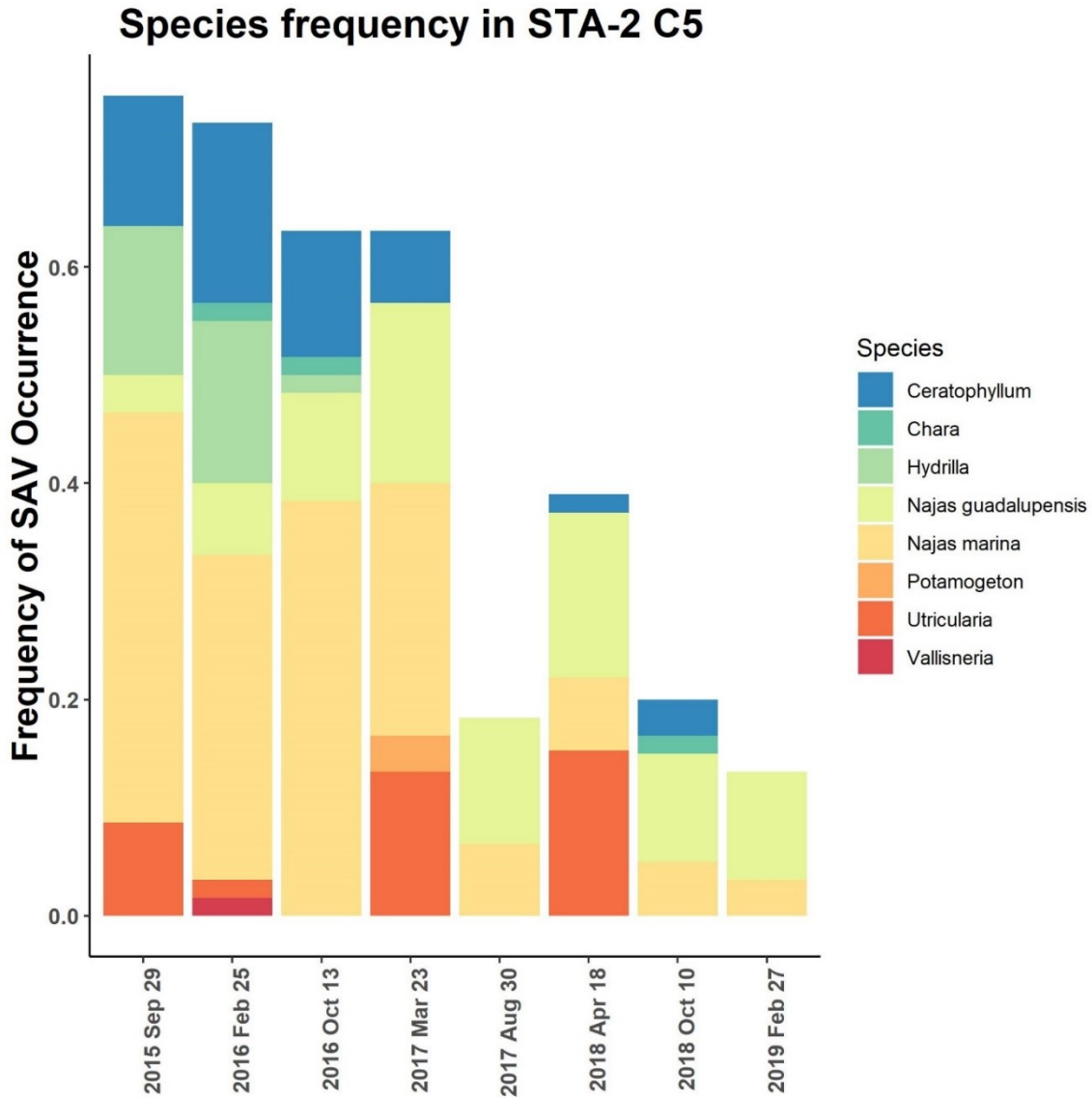


Figure 11. Frequency of SAV occurrence for all taxa in STA-2 Cell 5 throughout the POR. Higher frequency indicates that the taxon was present at more sites.

Species frequency in STA-2 C6

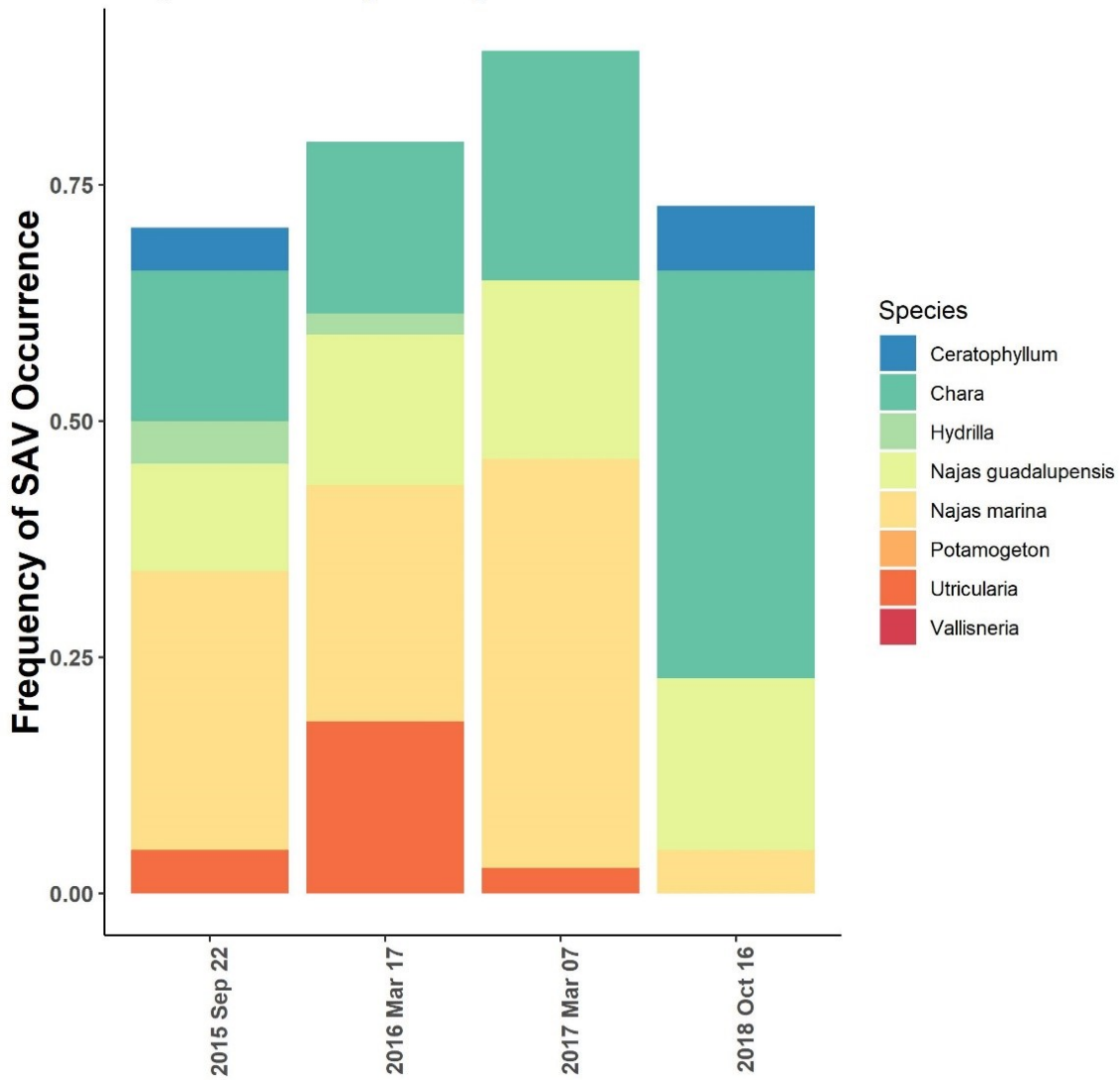


Figure 12. Frequency of SAV occurrence for all taxa in STA-2 Cell 6 throughout the POR. Higher frequency indicates that the taxon was present at more sites.

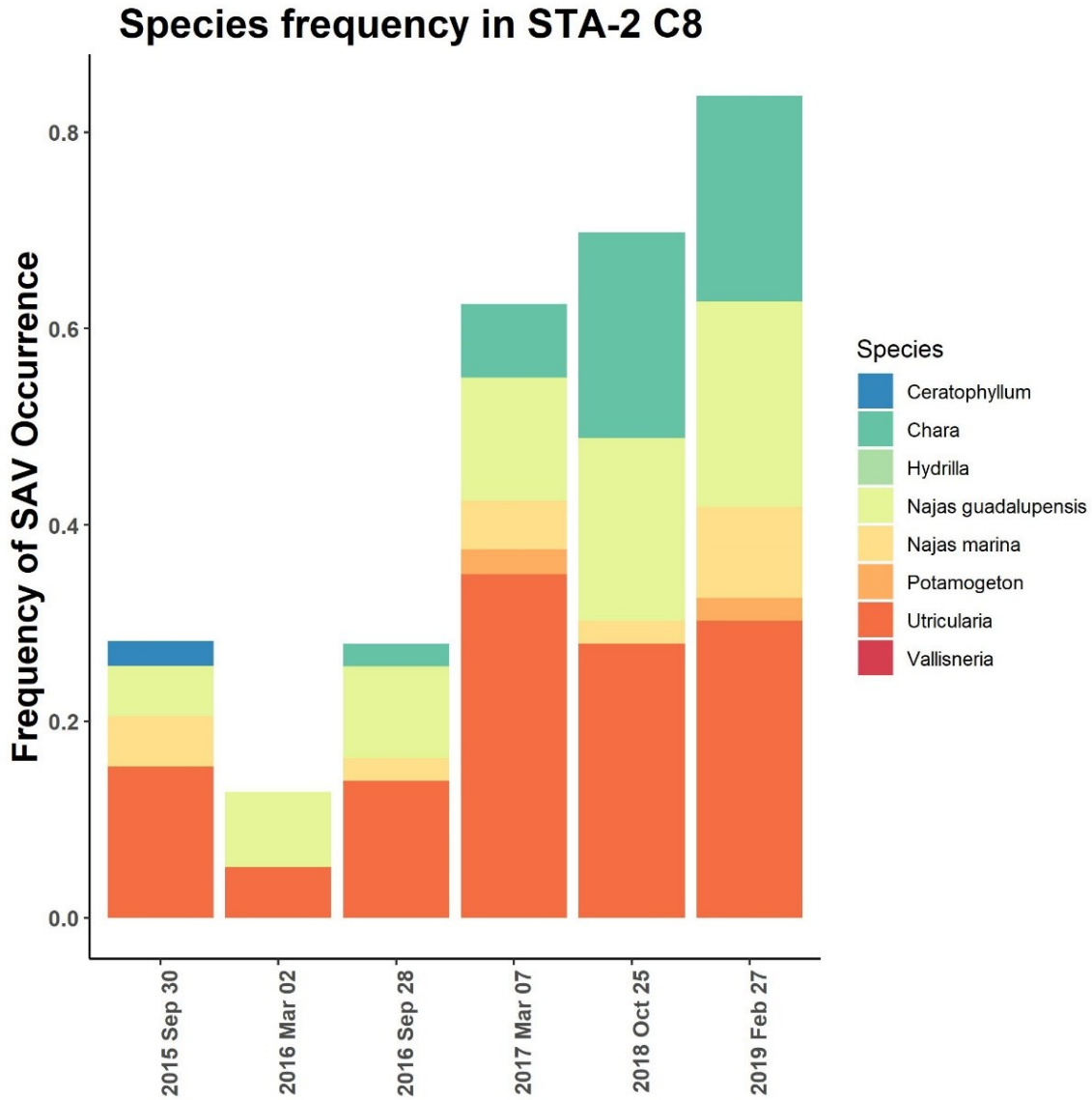


Figure 13. Frequency of SAV occurrence for all taxa in STA-2 Cell 8 throughout the POR. Higher frequency indicates that the taxon was present at more sites.

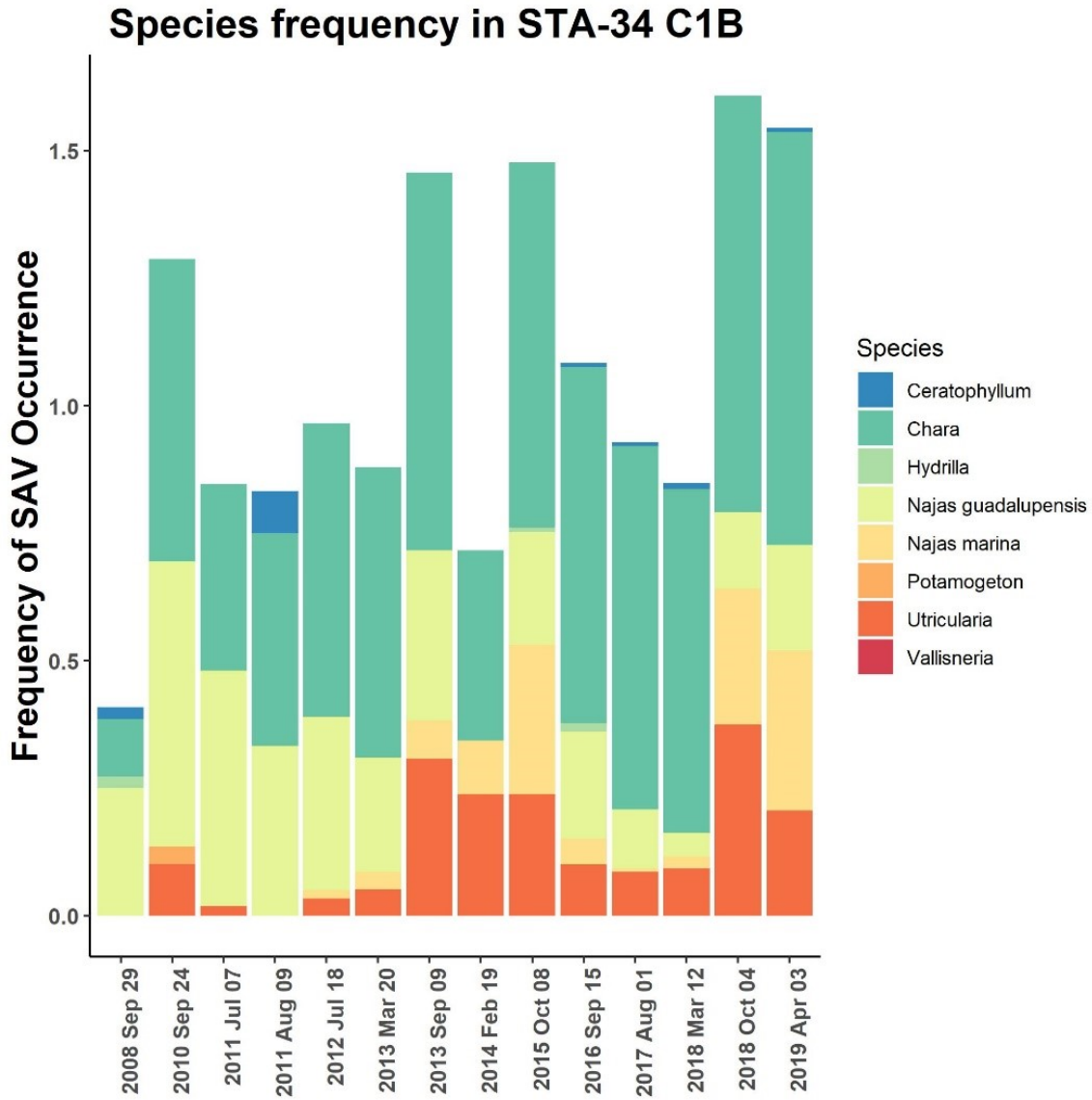


Figure 14. Frequency of SAV occurrence for all taxa in STA-3/4 Cell 1B throughout the POR. Higher frequency indicates that the taxon was present at more sites.

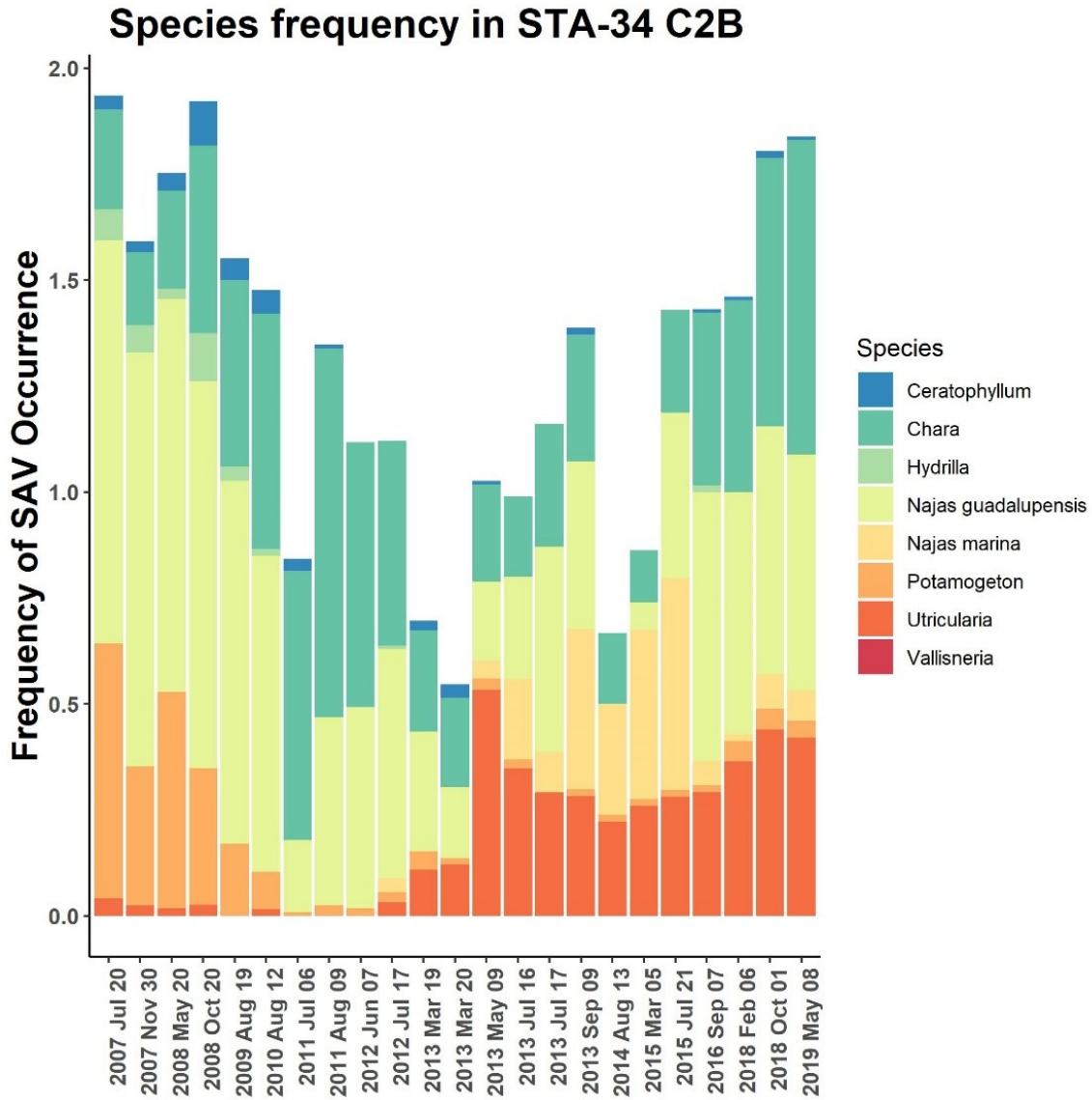


Figure 15. Frequency of SAV occurrence for all taxa in STA-3/4 Cell 2B throughout the POR. Higher frequency indicates that the taxon was present at more sites.

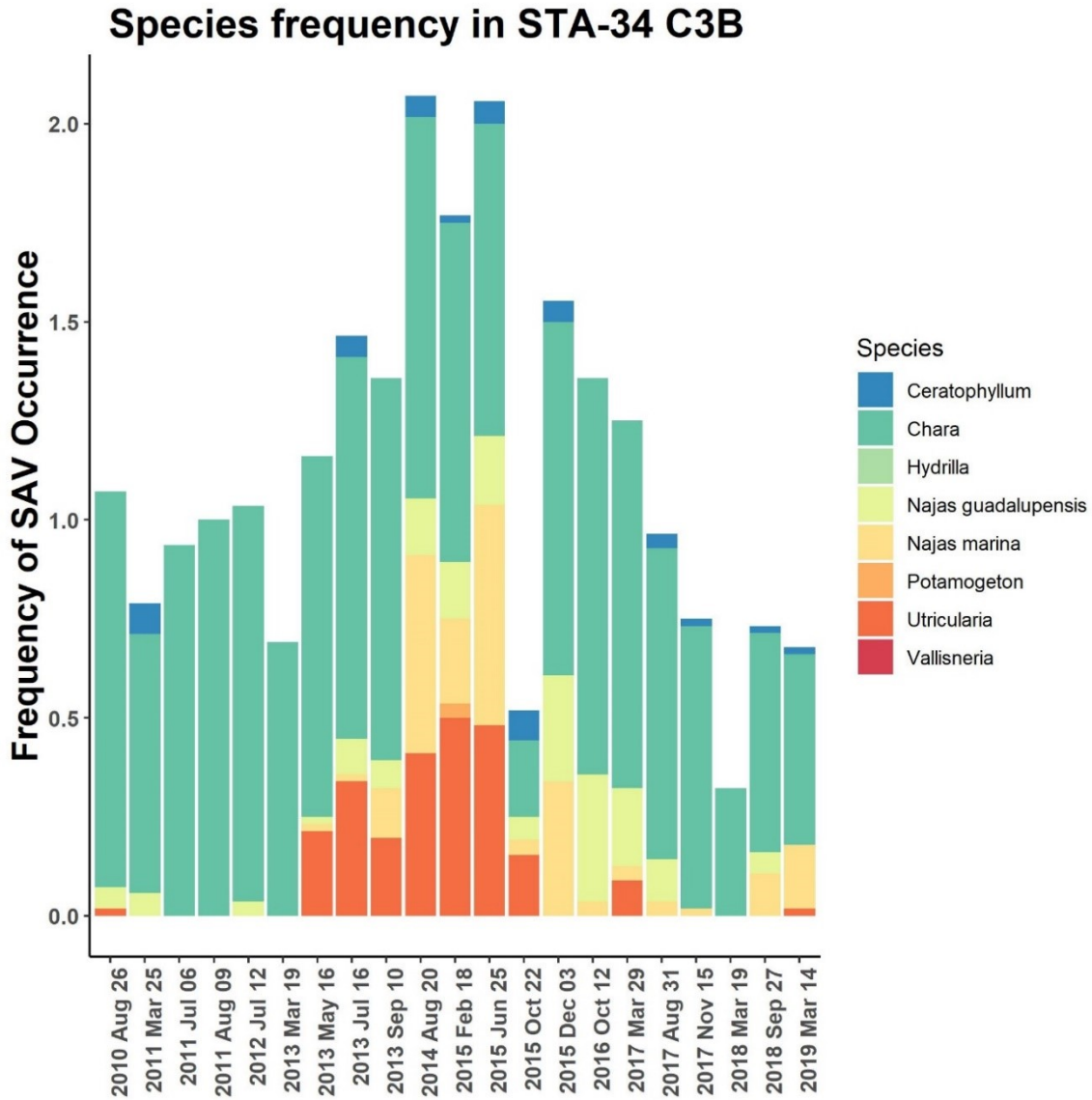


Figure 16. Frequency of SAV occurrence for all taxa in STA-3/4 Cell 3B throughout the POR. Higher frequency indicates that the taxon was present at more sites.

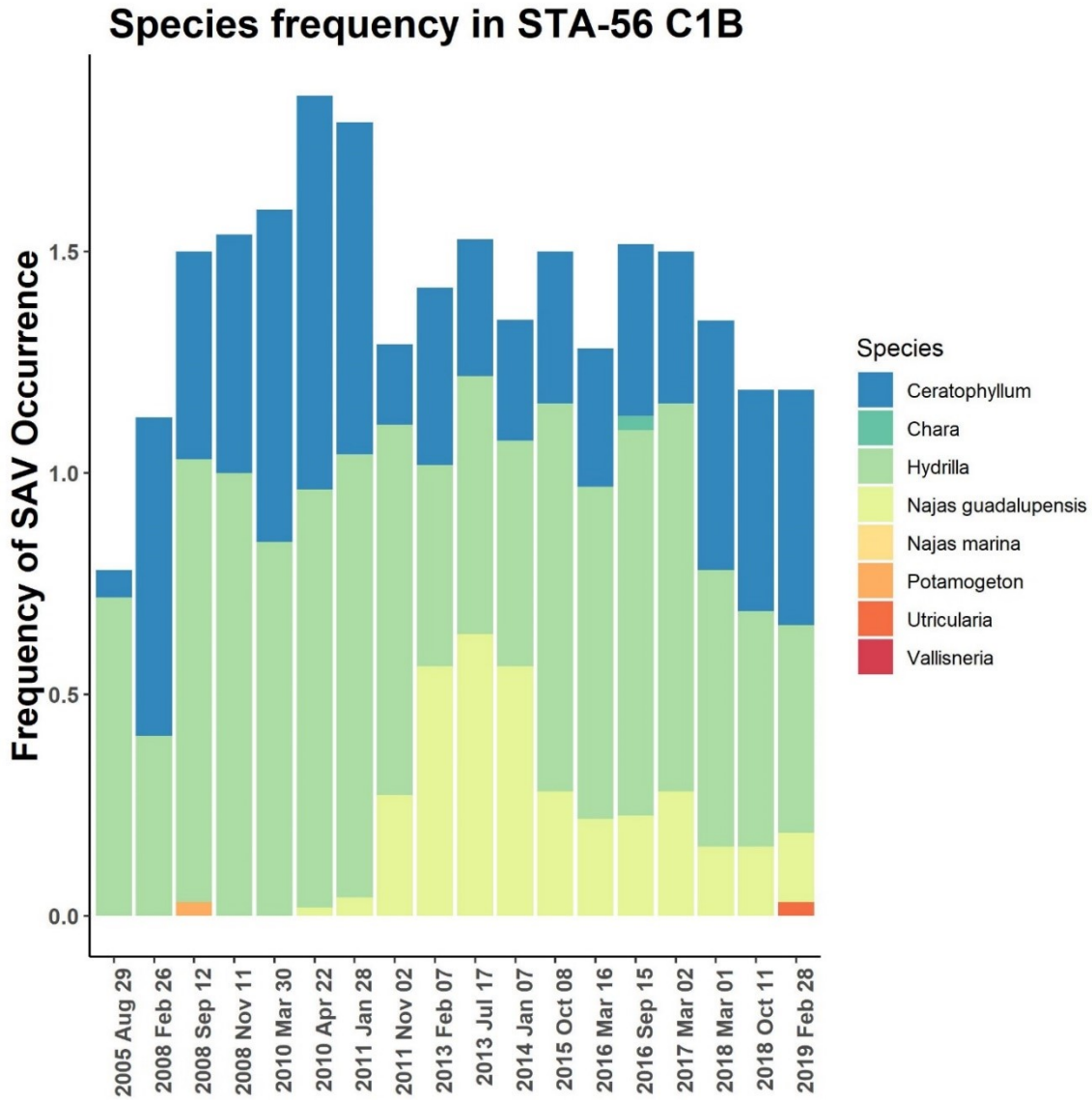


Figure 17. Frequency of SAV occurrence for all taxa in STA-5/6 Cell 1B throughout the POR. Higher frequency indicates that the taxon was present at more sites.

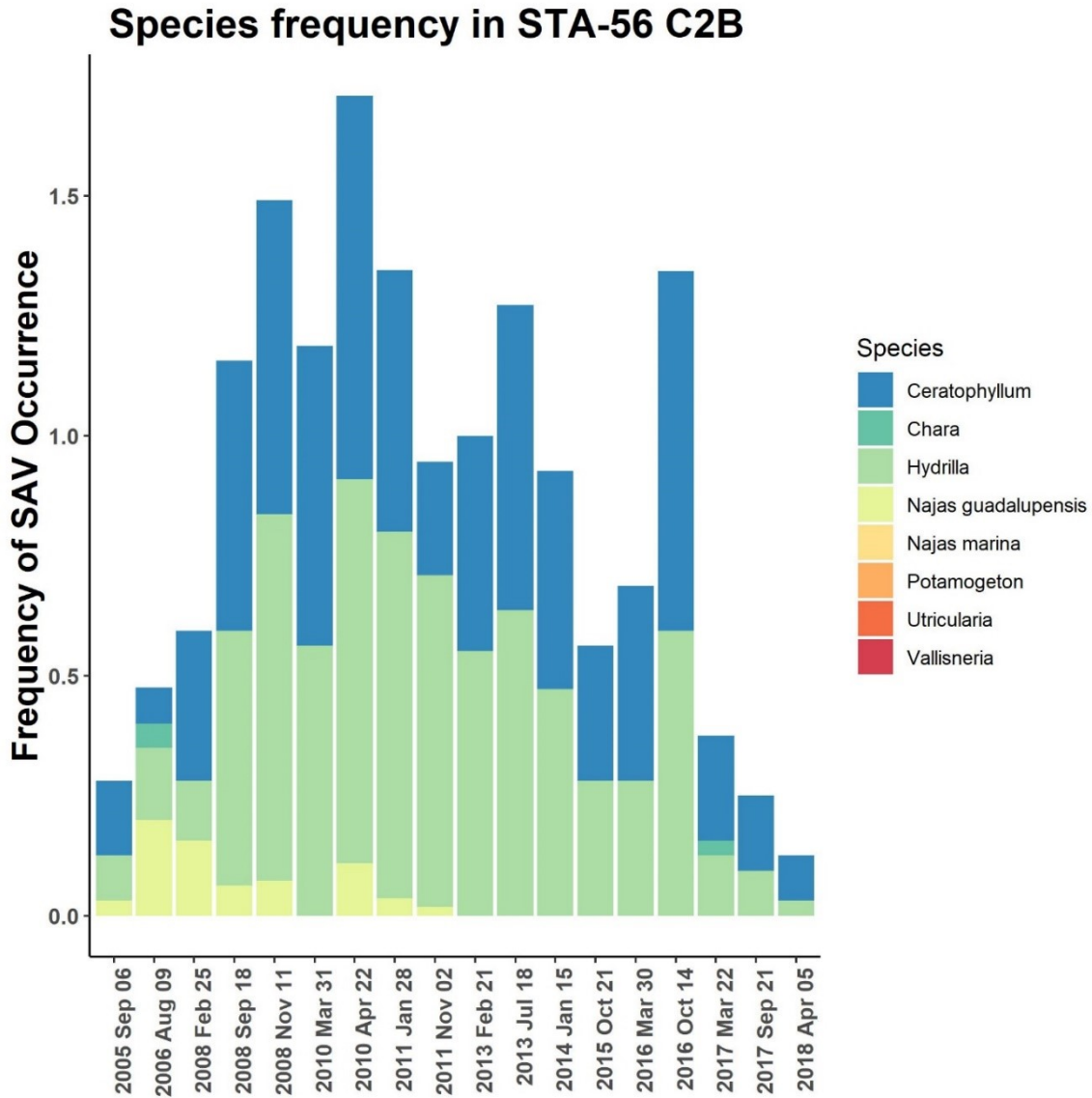


Figure 18. Frequency of SAV occurrence for all taxa in STA-5/6 Cell 2B throughout the POR. Higher frequency indicates that the taxon was present at more sites

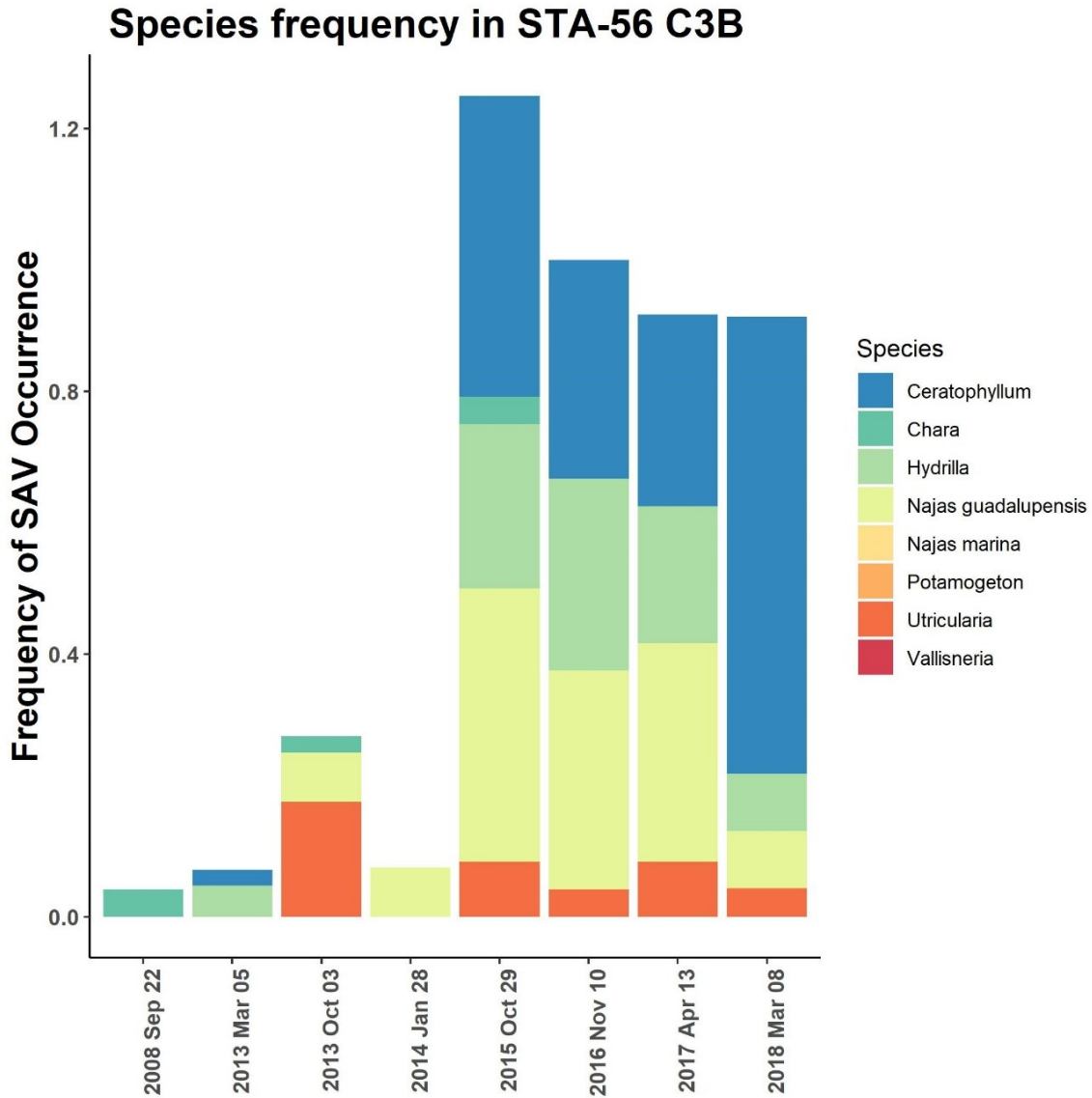


Figure 19. Frequency of SAV occurrence for all taxa in STA-5/6 Cell 3B throughout the POR. Higher frequency indicates that the taxon was present at more sites.

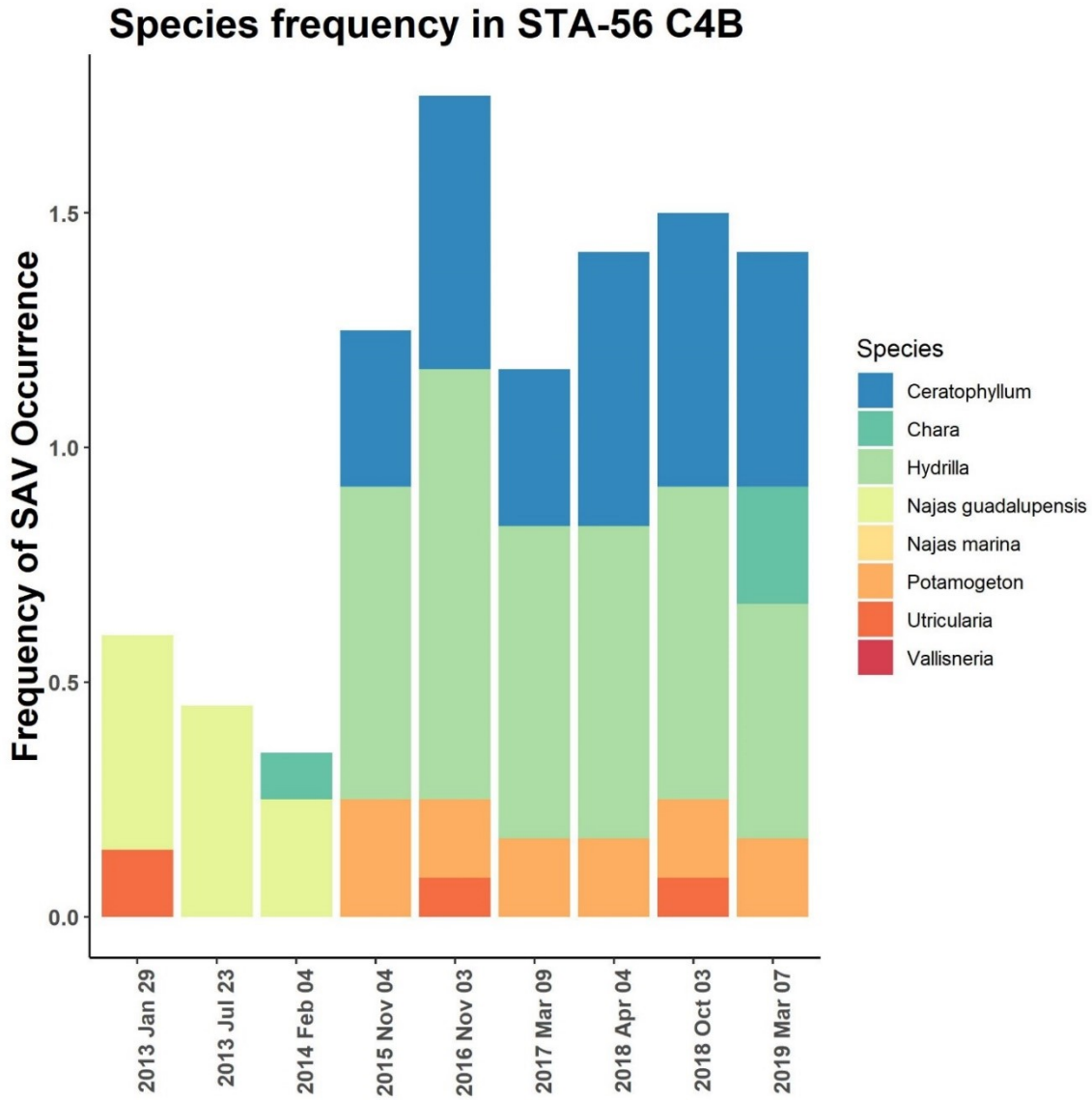


Figure 20. Frequency of SAV occurrence for all taxa in STA-5/6 Cell 4B throughout the POR. Higher frequency indicates that the taxon was present at more sites.

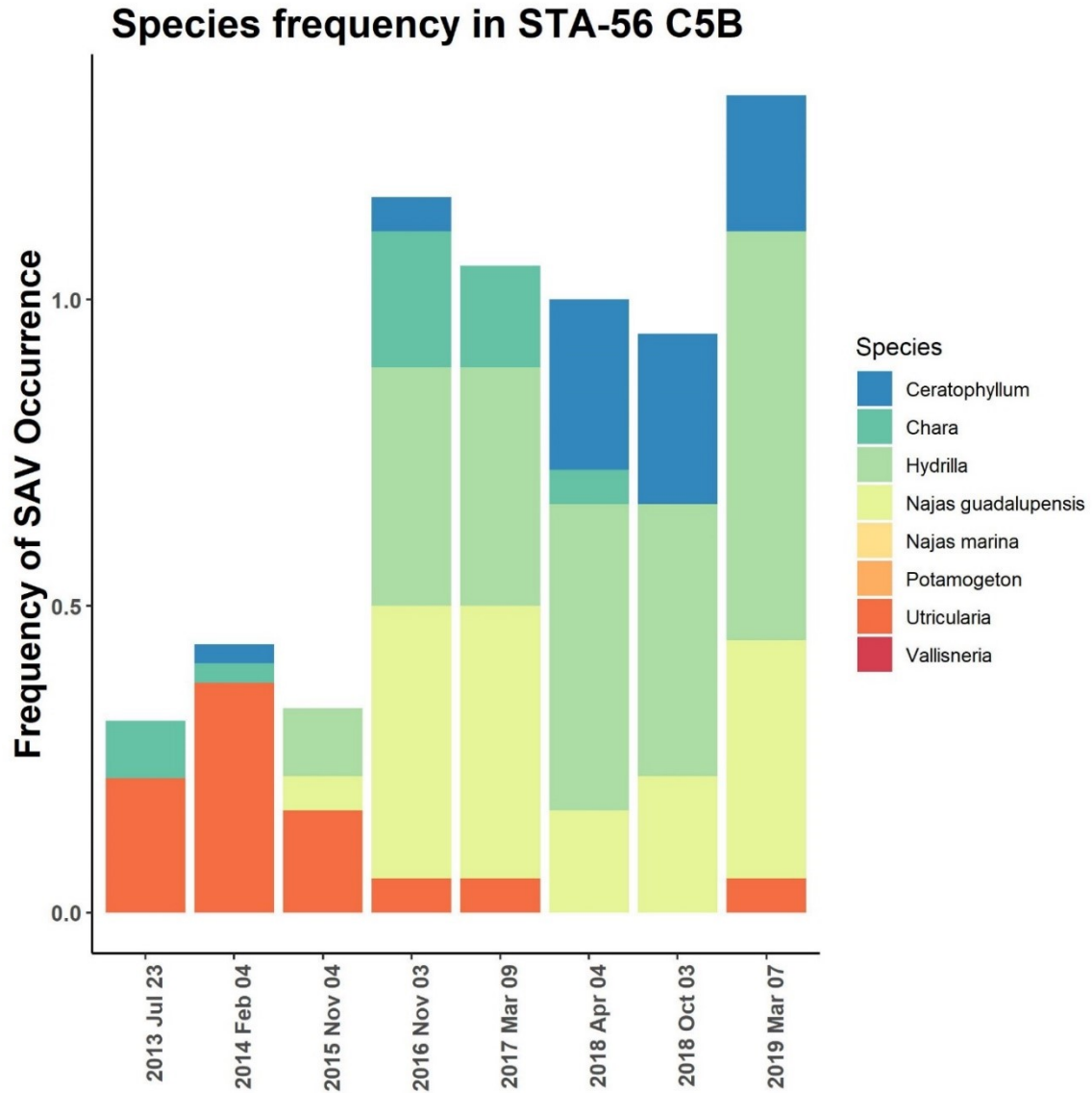


Figure 21. Frequency of SAV occurrence for all taxa in STA-5/6 Cell 5B throughout the POR. Higher frequency indicates that the taxon was present at more sites.