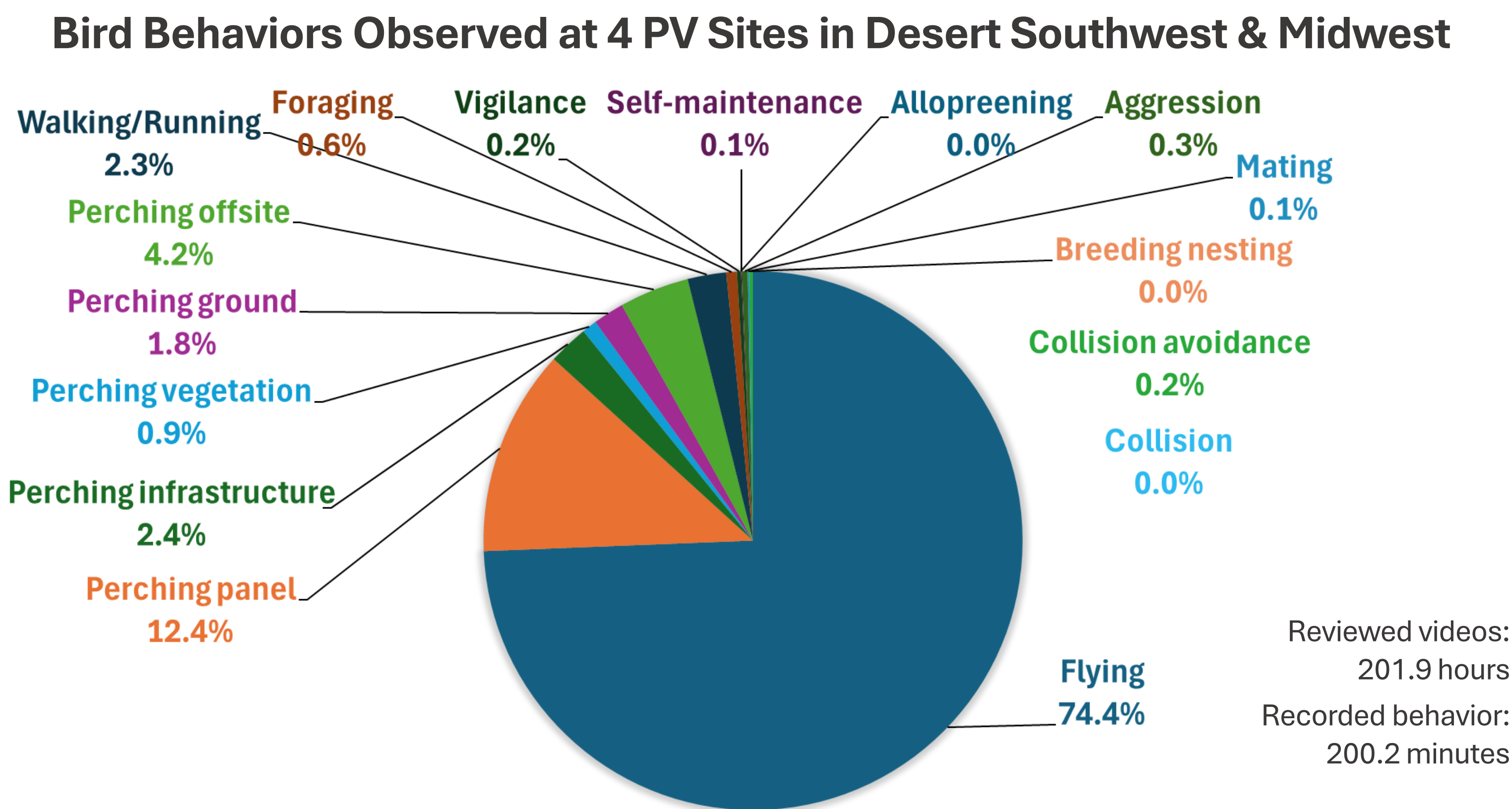


Video recorded NO bird collisions but collision avoidance behavior at PV solar facilities in the U.S.

Evidence of Foraging, Mating, and Collision Avoidance Behavior of Birds at PV Solar Energy Facilities in the U.S.



Intro

To better understand avian-PV solar interactions, we need to characterize bird behaviors beyond discrete activities. Useful behaviors include collision avoidance, foraging, nesting, mating, preening, and vigilance.

Methods

Ethograms: Record bird behaviors and duration by reviewing videos, and summarize the records by site, region, season, and time of day.

Preliminary Results

- Mating, aggression, vigilance, preening, and foraging behaviors were observed in all sites but are rare (<0.6 % each).
- Birds engage in behaviors more that bring them closer to the panels in DS than in MW.
- More foraging was seen in spring than fall.

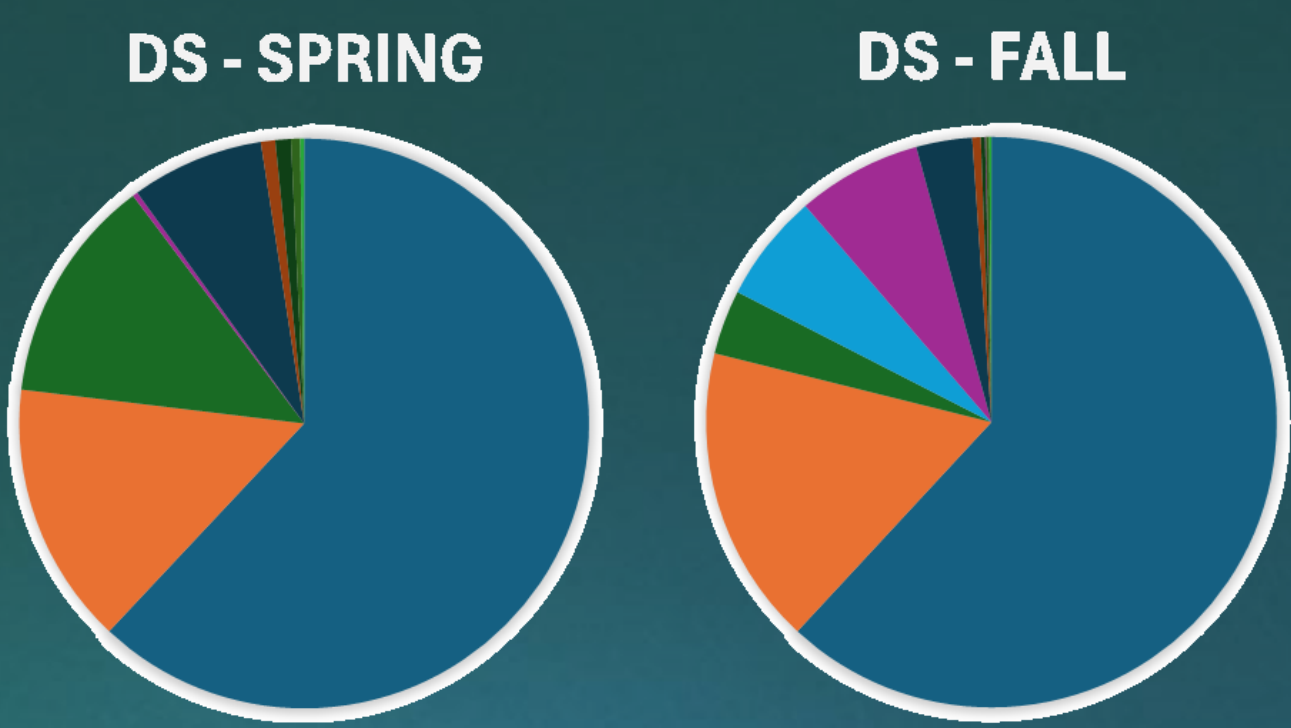
Discussion

- We expect more nesting, foraging and other behaviors as we include other regions in the analysis.
- Relative proportions of bird behaviors are similar to our machine-vision analysis.
- Ethograms show frequency and duration of birds engaging in certain behaviors that compliment our previous study.

Ethogram Summary by Region by Season

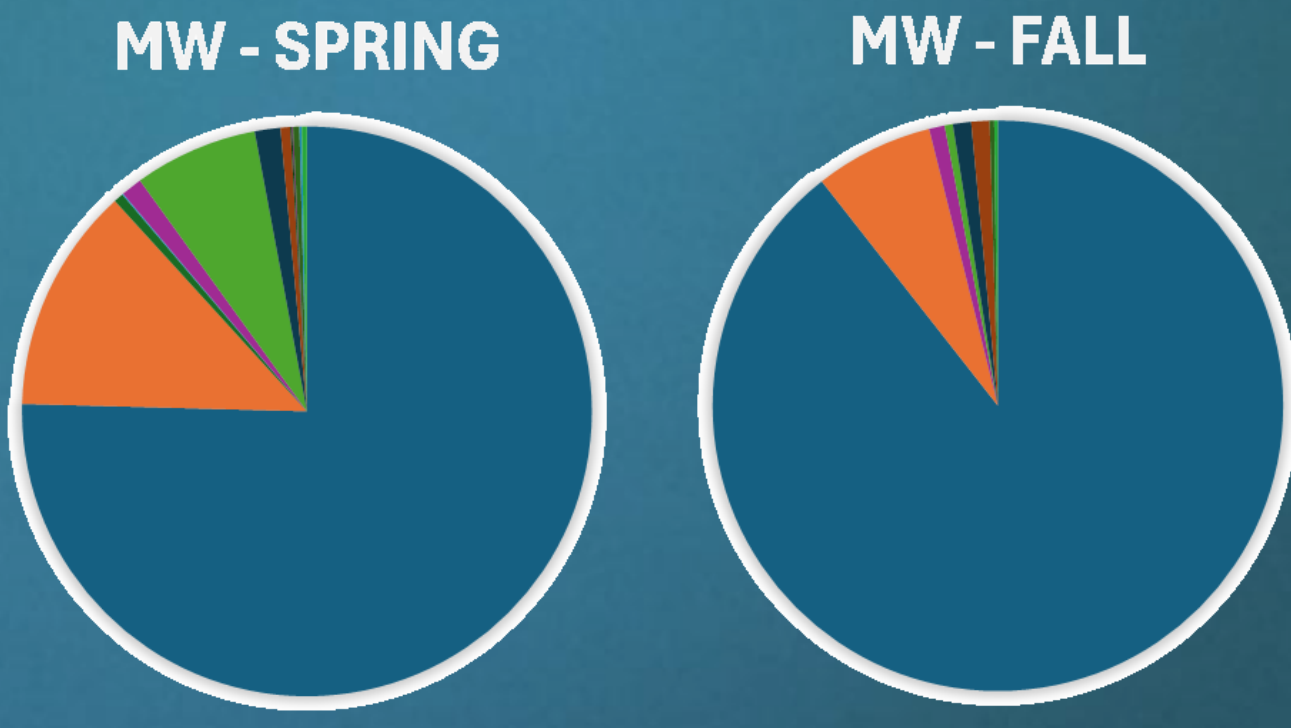
Desert Southwest (DS)

- + Site count: 2 sites
- + Landscape: 1 rural, 1 semi-industrial
- + Ground cover : 1 natural vegetation, 1 bare
- + Reviewed videos: 48.6 hours
- + Recorded behavior: 55.1 minutes



Midwest (MW)

- + Site count: 2 sites
- + Landscape: 1 cropland, 1 semi-industrial
- + Ground cover: 1 natural vegetation, 1 gravel
- + Reviewed videos: 153.3 hours
- + Recorded behavior: 145.1 minutes



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