

Introduction and Objectives

The evolution of zoos and aquariums is one that we continue to watch unfold to this very day. These institutions have slowly transformed from ones of pure captivity to spaces that allow scientific and conservation efforts to take place. A major benefit zoos offer scientists today is the ability to learn about animal behavior in detail, especially for species that are elusive in their natural habitat.



Ethogram: an inventory of well-defined behavior units, can be a complete repertoire of a species or a set of specific behaviors analyzed for a study (Pierard et al, 2019).

Ethograms can be used to study an animal's welfare. This is especially important in zoos and aquariums because it can help identify stereotypes and undesirable behaviors in captive animals, as well as what is causing them.

Methods

- Visit OdySea Aquarium to observe their bonded pair of macaws, Calypso (blue and gold macaw) and Angel (green winged macaw)
- Create an ethogram of normal behaviors to observe, specifically compare how much time the birds spend preening and allopreening

Acronym	Behavior	Description
PRE	Preening	Macaw manipulates its feathers with its beak
EAT	Eating	Macaw eats from their food bowl
DW	Drinking water	Macaw drinks from their food bowl
CHE	Using enrichment	Macaw manipulates enrichment with beak or feet
SP	Sitting on perch	Macaw is sitting on any perch in the enclosure
ALP	Allopreening	Macaw manipulates conspecifics feathers with their beak
OTH	Other	Macaw performs any other behavior not listed (behavior description is written down)

Fig. 1: List of behaviors to observe during ethogram with their acronyms and description.

Results

The most common of the tracked behaviors for Calypso were using enrichment and preening. Angel's most common behaviors were sitting on perches and chewing on enrichment. The least common behaviors overall were eating and drinking water. Calypso was the only macaw that instigated allopreening.

Ethogram results of Calypso and Angel's behaviors

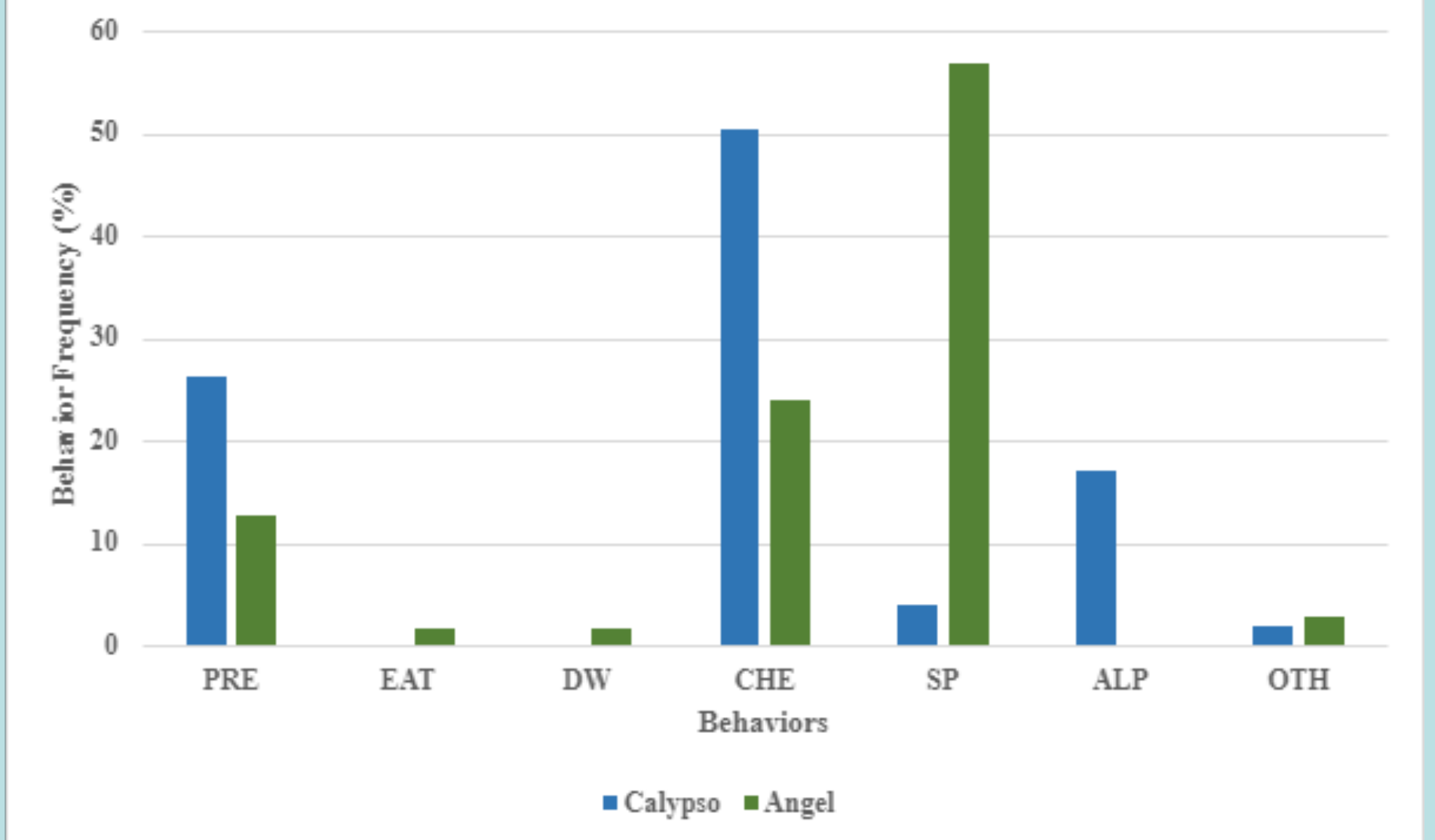


Fig. 2: Comparison of the frequency of each behavior of the two macaws

Conclusions

The high activity levels using enrichment is a strong indicator that both Angel and Calypso feel comfortable enough in their habitats to participate in play behaviors. We know Calypso and Angel are a bonded pair because they can coexist in the same habitat and allopreen each other, however, seeing that Calypso is the main instigator is an indicator that she is more invested in their relationship. Environmental enrichment is critical for promoting mental stimulation and encouraging species-specific behaviors, both crucial parts of providing animals with the highest standard of care (AZA, 2023). Overall, OdySea is doing a stellar job at ensuring this is what their macaws are experiencing

Literature Cited & Acknowledgements

"OdySea Aquarium in Scottsdale, Az - the Southwest's Largest Aquarium." *OdySea Aquarium*, OdySea Aquarium, www.odysseaquarium.com/. Accessed 11 Nov. 2023.
Marc Pierard, Paul McGreevy, Rony Geers, Reliability of a descriptive reference ethogram for equitation science, *Journal of Veterinary Behavior*, Volume 29, 2019, Pages 118-127, ISSN 1558-7878, <https://doi.org/10.1016/j.jveb.2018.10.001>.