Management Methods for Aggression in Hamadryas Baboons

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- Aggression is a normal occurrence within most primate social groups and can often result in wounding and injury
- “Normal" is different between species, individuals and also institutions

- It is important to know the natural history of the species.
- How much aggression is normal?
- How much wounding is normal or acceptable?
- How much aggression/ wounding is your institution willing to accept?
- Are there acceptable ways to manage the aggression and wounding?

Natural History of Hamadryas

- Troop- the largest baboon grouping consisting of well over 100 individuals. The troop assembles at night on sleeping cliffs and disassembles each morning in bands to search for food.
- Band- contains two to four clans consisting of approximately 50 individuals. Members of the band will search for limited resources together and are often observed utilizing watering holes together.
- Clan- two to four one male units (OMUs) consisting of approximately 15 individuals. The OMU leaders are often related to one another. Members of the clan often search for food together and utilize the same small feeding sites.
- OMU- the core of the hamadryas baboon society. The OMU contains a sexually mature adult male, one or more “follower” males, and up to 9 adult females with their young.

Natural History (Continued)

- Within the OMU- males have almost exclusive reproductive access to the females.
- When establishing the OMUs, males herd the females, through coercion involving physical aggression and threats.
- After this period of conditioning, female hamadryas remain very close to their male consorts with little prompting.
- Male-male aggression in suppressed in hamadryas society because males typically respect the bond another male has with his females.
- The most severe aggression is observed when a male is taking over a female. This may be an adolescent male forming his first OMU or an adult male observing weakness in another male and will take advantage of stealing a female.

How Much Wounding is "Normal?"

- Significant wounds are not uncommon in socially housed troops.
- These injuries can result from normal hierarchy disputes as juveniles mature, during introductions of new group members, or in groups with stable membership.

Management Styles to Reduce Aggression within Hamadryas Troops

- Aggression displacement using enrichment.
- Contraception to prevent estrus swelling.
- During physical exams or separation, entire OMUs are separated until all individuals in OMU can be reintroduced back into the troop.
- Same philosophy when introducing new animals- introduce to each OMU never separating individuals from OMU.

Aggression Displacement

- Providing large and light weight enrichment items for displacement of aggression.
- Individuals will displace aggression on items rather than one another.
- Decreased wounding.

Aggression Displacement

- Hanging items.
- Move-able items.
- Items that make noise.

Introducing New Individuals to the Troop- Males

- When introducing adult males it is best to create OMUs prior to introducing to entire troop.

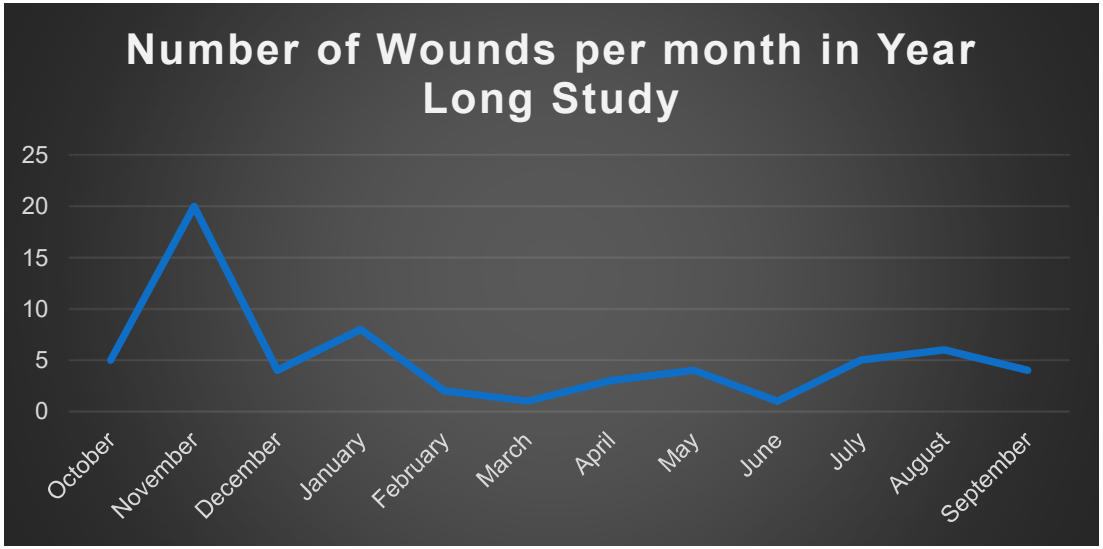
Introducing New Individuals to the Troop- Males

- Once a male forms a OMU other males typically respect those bonds and aggression should be reduced.

Introducing New Individuals to the Troop- Females

- Often the Species Survival Plan (SSP) will recommend females to be paired with a certain male based on genetics and this is the OMU the female should be introduced to 1st .
- The female should remain with the OMU with visual access to the other OMUs. Once bonds are formed then introductions of the other OMUs can begin.
- Using this method reduces competition which reduces aggression between the males.

Manipulating OMUs for Sub Adult Males



- A wounding study for hamadryas baboons was conducted across AZA facilities
- This data represents wounding instances for one facility
- In November a sub adult male was establishing his first OMU

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Manipulating OMUs for Sub Adult Males

Significant aggression and wounding is typically observed when a male is taking over a female. This may be a sub adult male forming his first OMU or an adult male observing weakness in another male and will take advantage of stealing a female

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Manipulating OMUs During Male Take Overs

- During male takeovers in a troop with healthy individuals, it is typically advised not to intervene and allow the period of conditioning to take place.
- During this time there may be aggression and wounding (mostly neck and tail biting, herding and mounting).
- There are instances of male takeovers with geriatric females and intervention may be necessary.
- The newly established OMU is separated with visual access, until the period of conditioning is complete. Then the newly formed OMU is introduced back with the troop. This period of conditioning can take anywhere between 1 day to several weeks.

Management of Hamadryas Populations

Historically, hamadryas baboon troops in Association of Zoos and Aquariums (AZA) institutions have been housed primarily in single OMUs. Given the intensity of male-male competition within the species, single OMU were thought to be optimal for managing aggression and wounding in zoo populations, as well as allowing for groups to be managed in smaller spaces.

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Management of Hamadryas Populations

- Within the past several years, the hamadryas Species Survival Plan (SSP®) has been promoting more natural social groups consisting of multiple OMUs which more closely resemble clans and in some cases, bands.

Management of Hamadryas Populations for Healthy Male: Female Ratio

- In addition, several institutions have also begun to house bachelor (i.e., all male) troops as a means to manage “surplus” males
- Bachelor troops have proven to be a successful means of managing male gorillas in many AZA facilities

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Wounding Study Conducted Comparing Different Social Groups

- We found no significant difference in wounding rates between group types (single OMUs, multiple OMUs and bachelor troops).
- This data provides evidence that managing hamadryas in multi-male and bachelor groups is an effective husbandry practice that does not negatively impact the welfare of the individuals, in addition to providing a more species-appropriate social setting for hamadryas in zoos.

Wounding Study Conducted Comparing Different Social Groups

Bachelor Troops

Given the findings of this study housing similarly aged males together, which has been found to be beneficial in gorillas, may be the best starting point for reevaluating this management strategy.

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Questions?

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