DOWNLOAD PDF SOCIOECOLOGY OF ADULT FEMALE PATAS MONKEYS AND VERVET IN KENYA, EAST AFRICA (PRIMATE FIELD STUDIES)

Chapter 1 : patas de los animales | Download eBook PDF/EPUB

Socioecology of Adult Female Patas Monkeys and Vervet in Kenya, East Africa provides students with a glimpse into a research project from start to finish. It discusses basic issues of studying primates and explores one of the major theories that has defined primatology for several decades.

A vervet monkey grooms another in Gaborone, Botswana Juvenile C. Often, males will move with a brother or peer, presumably for protection against aggression by males and females of the resident group. Groups that had previously transferred males show significantly less aggression upon the arrival of another male. In almost every case, males migrate to adjacent groups. This obviously increases benefits in regard to distance traveled, but also reduces the amount of genetic variance, increasing the likelihood of inbreeding. Separate dominance hierarchies are found for each sex. Male hierarchies are determined by age, tenure in the group, fighting abilities, and allies, while female hierarchies are dependent on maternal social status. A large proportion of interactions occur between individuals which are similarly ranked and closely related. Between unrelated individuals, there is female competition for grooming members of high-ranking families, presumably to gain more access to resources. These observations suggest individual recognition is possible and enables discrimination of genetic relatedness and social status. Interactions between different groups are variable, ranging from highly aggressive to friendly. Furthermore, individuals seem to be able to recognize cross-group vocalizations, and identify from and to which monkey each call is intended, even if the call is made by a subadult male which is likely to transfer groups. This suggests the members within a group are actively monitoring the activity of other groups, including the movement of individuals within a group. Once an individual is three years or older, it is considerably more likely to be involved in conflict. Conflict often arises when one group member shows aggression toward a close relative of another. Further, both males and females may redirect aggression towards individuals in which both had close relatives that were previously involved in a conflict. This suggests complex recognition not only of individuals, but also of associations between individuals. The sighting of each predator elicits an acoustically distinct alarm call. In experimentation with unreliable signalers, individuals became habituated to incorrect calls from a specific individual. Though the response was lessened for a specific predator, if an unreliable individual gives an alarm call for a different predator, group members respond as if the alarm caller is, in fact, reliable. This suggests vervet monkeys are able to recognize and to respond to not only the individual calling, but also to the semantics of what the individual is communicating. In the wild vervet monkeys have been seen giving a different call when seeing a human being approaching, leading researchers to believe that vervet monkeys may have a way of distinguishing between different land and flight predators. Further, mothers have been observed to help their offspring in conflict, yet rarely aided other juveniles. Other mothers evidently can determine to which mother the offspring belongs. Individuals have been observed to look towards the mother whose offspring is creating the scream. Within social groups, mother-offspring and sibling interactive units are distinct groups. The sibling interaction are heavily supportive and friendly, but do have some competition. Contests primarily involve postweaning resource allocation by the common mother. For example, siblings have conflict over grooming time allocated by their mother. Offspring are usually not born in extremely close proximity due to the interbirth period of the mother. This time can be reduced by use of an allomother. The clarity of the familial and sibships within a group may act as a form of alliance, which would come at relatively low cost in regards to grooming. Other alliances are shown through conflict with aggressive individuals that have acted against a closely related sibling. In groups of vervet monkeys, infants are the source of a tremendous amount of attention. Days after an infant is born, every member of the group will inspect the infant at least once by touching or sniffing. While all group members participate in infant caretaking, juvenile females which cannot yet menstruate are responsible for the majority of allomothering. The benefit is mutual for the mother and allomother. Mothers that use allomothers are able to shorten their interbirth periods, the time between

successive births. At the same time, allomothers gain experience in rearing infants, and had more success in raising their own offspring. Juvenile females discriminate in preference for the infant they choose to allomother, and will usually choose siblings or infants of high-ranking individuals. When a mother allows her juvenile daughter to become an allomother for a newborn sibling, the mother decreases her own investment in the infant, while increasing the chances of successful rearing of her immature daughter. Not only do infants approach their grandmothers more often than unrelated members, but they also prefer their grandmothers compared to other adult female kin, not including their own mothers. Additional research has shown grandmothers show no preference over the sex of their grandchild. Interest in the grandchild spurred from the rank of the grandmother within a group. Higher-ranking grandmothers showed more interest in caring for their grandchildren when compared to low-ranking grandmothers. The presence of grandmothers has been associated with a decrease in mortality of infants. While energy is being lost on destroying the food, a competitive advantage is given to the individual due to an increase in competitive gain. This would be pertinent for a male which could be displaced within his group to immigrating males. Typically, a female gives birth once a year, between September to February, after a gestation period of about days. Usually only one infant is born at a time, though twins can occur rarely. A normal infant weighs â€” g. In agricultural areas, vervets become problem animals, as they will raid bean crops, peas, young tobacco plants, vegetables, fruit, and various grain crops. Carnivorous aspects of their diet include grasshoppers and termites. Raids of cattle egrets and weaver bird nests have been observed where the vervets will eat the eggs and chicks.

Chapter 2 : Jill Pruetz | Iowa State University - calendrierdelascience.com

Interdisciplinary Studies; The Socioecology of Adult Female Patas Monkeys and Vervets in Kenya Jill D.E. Pruetz.

Vervet monkey Save The vervet monkey Chlorocebus pygerythrus , or simply vervet, is an Old World monkey of the family Cercopithecidae native to Africa. The term "vervet" is also used to refer to all the members of the genus Chlorocebus. The five distinct subspecies can be found mostly throughout Southern Africa, as well as some of the eastern countries. Vervets were introduced to Florida , St. Kitts , Ascension Island , and Cape Verde. In addition to behavioral research on natural populations, vervet monkeys serve as a nonhuman primate model for understanding genetic and social behaviors of humans. They have been noted for having human-like characteristics, such as hypertension , anxiety , and social and dependent alcohol use. Taxonomy The vervet monkey was previously classified as Cercopithecus aethiops. The vervet and malbrouck have often been considered conspecific , or as subspecies of the widespread grivet. Physical description The vervet monkey resembles very much like a gray langur , having a black face with a white fringe of hair, while the overall hair color is mostly grizzled-grey. Adult males weigh between 3. Adult females weigh between 3. Often, males will move with a brother or peer, presumably for protection against aggression by males and females of the resident group. Groups that had previously transferred males show significantly less aggression upon the arrival of another male. In almost every case, males migrate to adjacent groups. This obviously increases benefits in regard to distance traveled, but also reduces the amount of genetic variance, increasing the likelihood of inbreeding. Separate dominance hierarchies are found for each sex. Male hierarchies are determined by age, tenure in the group, fighting abilities, and allies, while female hierarchies are dependent on maternal social status. A large proportion of interactions occur between individuals which are similarly ranked and closely related. Between unrelated individuals, there is female competition for grooming members of high-ranking families, presumably to gain more access to resources. These observations suggest individual recognition is possible and enables discrimination of genetic relatedness and social status. Interactions between different groups are variable, ranging from highly aggressive to friendly. Furthermore, individuals seem to be able to recognize cross-group vocalizations, and identify from and to which monkey each call is intended, even if the call is made by a subadult male which is likely to transfer groups. This suggests the members within a group are actively monitoring the activity of other groups, including the movement of individuals within a group. Once an individual is three years or older, it is considerably more likely to be involved in conflict. Conflict often arises when one group member shows aggression toward a close relative of another. Further, both males and females may redirect aggression towards individuals in which both had close relatives that were previously involved in a conflict. This suggests complex recognition not only of individuals, but also of associations between individuals. The sighting of each predator elicits an acoustically distinct alarm call. In experimentation with unreliable signalers, individuals became habituated to incorrect calls from a specific individual. Though the response was lessened for a specific predator, if an unreliable individual gives an alarm call for a different predator, group members respond as if the alarm caller is, in fact, reliable. This suggests vervet monkeys are able to recognize and to respond to not only the individual calling, but also to the semantics of what the individual is communicating. In the wild vervet monkeys have been seen giving a different call when seeing a human being approaching, leading researchers to believe that vervet monkeys may have a way of distinguishing between different land and flight predators. Further, mothers have been observed to help their offspring in conflict, yet rarely aided other juveniles. Other mothers evidently can determine to which mother the offspring belongs. Individuals have been observed to look towards the mother whose offspring is creating the scream. Within social groups, mother-offspring and sibling interactive units are distinct groups. The sibling interaction are heavily supportive and friendly, but do have some competition. Contests primarily involve postweaning resource allocation by the common mother. For example, siblings have conflict over grooming time allocated by their mother. Offspring are usually not born in extremely close

proximity due to the interbirth period of the mother. This time can be reduced by use of an allomother. The clarity of the familial and sibships within a group may act as a form of alliance, which would come at relatively low cost in regards to grooming. Other alliances are shown through conflict with aggressive individuals that have acted against a closely related sibling. In groups of vervet monkeys, infants are the source of a tremendous amount of attention. Days after an infant is born, every member of the group will inspect the infant at least once by touching or sniffing. While all group members participate in infant caretaking, juvenile females which cannot yet menstruate are responsible for the majority of allomothering. The benefit is mutual for the mother and allomother. Mothers that use allomothers are able to shorten their interbirth periods, the time between successive births. At the same time, allomothers gain experience in rearing infants, and had more success in raising their own offspring. Juvenile females discriminate in preference for the infant they choose to allomother, and will usually choose siblings or infants of high-ranking individuals. When a mother allows her juvenile daughter to become an allomother for a newborn sibling, the mother decreases her own investment in the infant, while increasing the chances of successful rearing of her immature daughter. Not only do infants approach their grandmothers more often than unrelated members, but they also prefer their grandmothers compared to other adult female kin, not including their own mothers. Additional research has shown grandmothers show no preference over the sex of their grandchild. Interest in the grandchild spurred from the rank of the grandmother within a group. Higher-ranking grandmothers showed more interest in caring for their grandchildren when compared to low-ranking grandmothers. The presence of grandmothers has been associated with a decrease in mortality of infants. While energy is being lost on destroying the food, a competitive advantage is given to the individual due to an increase in competitive gain. This would be pertinent for a male which could be displaced within his group to immigrating males. Typically, a female gives birth once a year, between September to February, after a gestation period of about days. Usually only one infant is born at a time, though twins can occur rarely. A normal infant weighs â€” g. In agricultural areas, vervets become problem animals, as they will raid bean crops, peas, young tobacco plants, vegetables, fruit, and various grain crops. Carnivorous aspects of their diet include grasshoppers and termites. Raids of cattle egrets and weaver bird nests have been observed where the vervets will eat the eggs and chicks.

Chapter 3 : Vervet monkey | Revolvy

For upper-level and/or graduate level Primatology or Biological Anthropology courses. Socioecology of Adult Female Patas Monkeys and Vervet in Kenya, East Africa provides students with a glimpse into a research project from start to finish.

Causes and consequences of single-male and multi-male mating in free-ranging patas monkeys, Erythrocebus patas. Ecological models of female social relationships in primates: Male demography, female mating behavior, and infanticide in wild patas monkeys Erythrocebus patas. International Journal of Primatology Predator- in sensitive foraging in sympatric vervets Cercopithecus aethiops and patas monkeys Erythrocebus patas: Eat or Be Eaten: Predation-Sensitive Foraging in Primates L. Comparison of responses to alarm calls by patas Erythrocebus patas and vervet Cercopithecus aethiops monkeys in relation to habitat structure. American Journal of Physical Anthropology Why vervets live in multi-male groups. Diversity and Adaptation in African Monkeys. E, Glenn and M. Kluwer Academic, New York. Is there no place like home? Ecological bases of dispersal in primates and their consequences for the formation of kin groups. Snakes as agents of evolutionary change in primate brains. Journal of Human Evolution Effects of habitat structure on perceived risk of predation and anti-predator behavior in vervet Cercopithecus aethiops and patas Erythrocebus patas monkeys. Behavioral ecology of polyspecific associations. Primates in Perspective C. Oxford University Press, Oxford. Is friendship between adult males and lactating females a counter-strategy to infanticide? Observations and playback experiments in Kenyan olive baboons. Friendships between males and lactating females in wild olive baboons: Observations and call playback experiments. International Encylopedia of the Social Sciences, 2nd edition, W. Darity, ed , vol. Observations on a group of wild vervet monkeys Cercopithecus aethiops after a predator-induced group fusion event in Laikipia, Kenya. American Journal of Primatology 7: American Journal of Primatology Demography and life history of sympatric patas monkeys Erythrocebus patas and vervets Cercopithecus aethiops in Laikipia, Kenya. A female counterstrategy to infanticide in the Okavango chacma baboons. Sexual Coercion in Primates and Humans: Harvard University Press, Cambridge, Massachusetts. The fruit, the tree, and the serpent. Why we see so well. Patas monkeys Erythrocebus patas. The Mammals of Africa, Vol. Vervet monkeys Cercopithecus aethiops. To appear in The Mammals of Africa, Vol. The olive baboon Papio anubis. Mammals of Africa, Vol. Olive baboon Papio anubis. Conflict and bonding between the sexes. Wax-eating by African common bulbuls. Growth and yield estimates in natural stands of leleshwa Tarconanthus camphoratus. Forest Ecology and Management Nutrient composition of plants most favored by black rhinoceros Diceros bicornis in the wild. Comp Biochem Phys A Disease research in the wildlife-livestock interface in Kenya. Seasonal variation in the feeding ecology of black rhinoceros Diceros bicornis in Laikipia, Kenya. African Journal of Ecology Journal of East African Natural History Four new species of Aloe in Kenya. Cact Succ J Gr Br Coppicing of Tarconanthus camphoratus Compositae as a source of sustainable fuelwood production: Dioli, M; Fox, MI. First record of the camel tick Rhipicephalus muhsamae in Kenya on a one-humped camel Camelus dromedarius. The avifauna of an upland seasonal woodland in central Kenya: Zoologisches Forschungsmuseum Alexander Koenig, Series Bonner zoologische Monographien, No. Uptake and performance of farm-based measures for reducing crop raiding by elephants Loxodonta africana among smallholder farms in Laikipia District, Kenya. Conflict between humans and elephants on private land in northern Kenya. Long distance movements of elephants in northern Kenya. Thouless CR, Sakwa J. Shocking elephants - fences and crop raiders in Laikipia District, Kenya. Home ranges and social organization of female elephants in northern Kenya. Wildlife Service Report, Nairobi, Kenya Chemosignaling of musth by individual wild African elephants, Loxodonta africana: Proceedings of the Royal Society: The demographic status of the Samburu elephant population. The socioecology of elephants: Noninvasive genotyping and Mendelian analysis of microsatellites in African savannah elephants. Journal of Heredity Secrets of the savanna: Twenty-three years in the African wilderness

unraveling the mysteries of elephants and people. Social Biology 52 Movements and corridors of African elephants in relation to protected areas. Estimating elephant densities from wells and droppings in dried out riverbeds. Stable isotopes in elephant hair document migration patterns and diet changes. Estimating age of immobilized elephants from teeth impressions using dental silicon. Behavioural reactions of elephants towards a dying and deceased matriarch. Applied Animal Behaviour Science Wittemyer G, Getz WM. A likely ranking interpolation for resolving dominance orders in systems with unknown relationships. Predicting time specific changes in demographic processes using remote sensing data. Journal of Applied Ecology Elephants avoid costly mountaineering. The impact of ecological variability on the reproductive endocrinology of wild female African elephants. Hormones and Behavior 51 3: Hierarchical dominance structure and social organization in African elephants, Loxodonta africana. African elephants run from the sound of disturbed bees. Social dominance, seasonal movements, and spatial segregation in African elephants: Behavioral Ecology and Sociobiology Population genetic structure of savannah elephants in Kenya: Conservation and management implications. Effective population size dynamics reveal impacts of historic climatic events and recent anthropogenic pressure in African elephants. A 6-year dietary history of one family of African elephants. Proceedings of the National Academy of Sciences

Chapter 4 : Pearson - The Socioecology of Adult Female Patas Monkeys and Vervets in Kenya - Jill D.E. P

"Socioecology of Adult Female Patas Monkeys and Vervet in Kenya, East Africa "provides students with a glimpse into a research project from start to finish. It discusses basic issues of studying primates and explores one of the major theories that has defined primatology for several decades. This.

Within-species differences according to rank CH. Contest competition and dominance in vervets The concept of dominance Results: Why a stable, linear dominance hierarchy on Segera? Comparing vervet and patas monkeys in the same habitat. Questions and Predictions Food contestability in vervets and patas monkeys Dominance in adult females Feeding competition and whistling-thorn foods Significance of feeding competition to vervet and patas monkeys CH. Food availability, feeding competition and dominance in vervet and patas monkeys. Female contest competition and dominance in vervets and patas monkeys on Segera How do the models rate? Summary and implications for future research About the Author s Dr. As a primatologist, Dr. Pruetz is especially interested in the influence of ecology on primate and early human feeding, ranging, and social behavior. She currently has a research project in southeastern Senegal which has been funded by National Geographic Society and the National Science Foundation. Reviews This series is a venue for the publication of PhD-level field studies of wild nonhuman primates in a format that is broadly accessible and more cohesive than the usual and sometimes artificial splicing of field study data into separately published peer-reviewed journal articles. As with other contributions to this series, both books represent a large body of data on wild primates, collected over a period of at least a year. Each monograph begins with an introductory chapter providing background material on the theoretical perspective and history of the topic, followed by information pertaining to the study population s and data collection methods. These introductory chapters are then followed by a series of "data chapters" that explore various aspects of the analyses--overall, a format very similar to but more concise than that of a PhD dissertation. Pruetz Iowa State frames her study of patas and vervet monkeys around the basic tenets of socioecological theory, which predicts that the abundance and distribution of food resources will play a significant role in shaping patterns of sociality in female primates. In an attempt to elucidate this predictive relationship, Pruetz investigated the impact of food abundance and distribution on patterns of food competition and dominance relationships among adult females in two closely related cercopithecine primates, patas monkeys and vervet monkeys. After an in-depth, sophisticated analysis of the relationships among these various factors, Pruetz concludes that most socioecological models are too broad, and the variables insufficiently quantified, to make reliable predictions about these relationships. Upper-division undergraduate through professional collections. Click on the series name to see the full list of products in the series. Pearson Higher Education offers special pricing when you choose to package your text with other student resources.

Chapter 5 : Primate - Wikipedia

The Socioecology of Adult Female Patas Monkeys and Vervets in Kenya By Jill D.E. Pruetz For upper-level and/or graduate level Primatology or Biological Anthropology calendrierdelascience.comcology of Adult Female Patas Monkeys and Vervet in Kenya, East Africa provides students with a glimpse into a research project from start to finish.

March 10, DOl: In the tall microhabitat, focal animals climbed into trees that were significantly taller than average, indicating that th. Female patas monkeys spent more time scanning from tall trees than from short trees and detected predators only from taller than average trees, based on alarm call data. Habitats may vary in predation risk as a result of differences in predator species, predator density and habitat structure [Crook and Gartlan, ; Stanford, ; Hill and Dunbar, ; Hill and Lee,]. Specifically, prey animals may prefer habitats that provide more refuges [Stacey, ; Dunbar, ; Cowlishaw, b], increase protective cover [Treves,] or increase predator visibility [Rasmussen, ; Dunbar, ; Cowlishaw, a]. The ability to detect predators enables prey to take evasive action earlier, thus increasing their chances of escape [Pulliam, ; Bertram, ; van Schaik et a1. Here we examine microhabitat preference of patas monkeys Erythrocebus patas in relation to microhabitat structure and predation risk by comparing their use of two Acacia drepanolobium microhabitats that differ in structure. Segera is a privately owned conservation area and cattle ranch of 17, ha and supports populations of several known and potential predators of patas monkeys, including lions Panthera leo , leopards P. However, there are two distinct types of A. One group of patas monkeys was monitored regularly from August to July Females are philopatric whereas males disperse by sexual maturity and live either as extragroup males or as residents of female groups [Chism et aI. Between October and September , the period of intensive sampling for this study, the patas group declined in size from 51 to 20 individuals; much of the decline was associated with illness following unusually heavy El Nino rains [Isbell and Young, in preparation]. All adult patas monkeys were identified by natural markings and immatures by dye marks black Nyanzol D powder; Belmar Inc. Data Collection and Analysis Habitat Structure. Tree and grass height were measured in 5 paired transects in the tall and short microhabitats. Paired transects were randomly selected and set up on days when the study group was not in the area. A stake forming the beginning of a paired transect was placed on the boundary between the short and tall microhabitats, and remained fixed until the pair oftransects was completed. Transects extended into each microhabitat perpendicular to the boundary. Three of the paired transects were m in length m in each ditection , and two were m in length m in each direction , for a total of m in each microhabitat. All transects were 5 m wide. There was no significant difference between ITleasurements by eye and tangent height gauge Wilcoxon signed-rank test: Because the average tree height in the tall microhabitat was 7. We converted tree density in the transects to number of trees per hectare by multiplying the number of trees in the meter transects by 10 and the number of trees in the meter transects by Grass height was measured to the nearest centimeter using a meter stick at 5-meter intervals within the transects. During h of observation on the patas group between November and September , K. Operational definitions of activities recorded during focal samples Feed Ingestion of food Forage Searching for and manipulating food with hands or mouth before ingestion Move Any form oflocomotion e. The sampling regimes did not differ statistically Wilcoxon signed-rank test: Only focal samples that had matching ecological samples see below were used in analyses. To maximize interobserver reliability, K. To further test for interobserver reliability, we analyzed the substrate data collected by both observers in a random sample of sample points from 8 focal animals. When the focal animal was in a tree, RM. The accuracy of the estimates of height was confirmed by comparing the estimates of a subset of trees with measurements of the same trees using a tangent height gauge. There was no difference between estimated heights and heights measured with the tangent height gauge see above. When the focal animal was on the ground, RM. Analyses of the height of trees in which focal animals were found and the height of animals in these trees were taken from these ecological samples. Alarm calls were documented by all observers from to Data collected during alarm calls included date and time of the alarm call, identity of the

caller s when knoWn; the tYPe of alarm call arid its duration, and lhestimulusthat elicited the ahinn call, when known. Only alarm calls given by focal animals during simultaneous ecological and focal samples are used in analyses. During this time, K. There is no reason to suspect that we would have been less likely to detect the group from roads or tracks in the short microhabitat, if they had been there. Both approaches thus yielded 1 GPS point per observation day. We determined the area used by the patas monkeys during the study period by drawing a grid of x m squares over the map of all patas monkey GPS points. Only squares that the patas monkeys entered during GPS data collection were included in analyses. This circle included some tall microhabitat, about m from the water trough at the closest point. Superimposed plots were truncated m from the edge of the short microhabitat to ensure that the same amount of tall and short microhabitats were included in analyses, giving the study group an equal chance of moving between microhabitats between successive GPS readings. All data were imported from Excel Micosoft, version 9. When the data were normally distributed, we employed parametric statistical tests. Otherwise, we employed nonparametric tests. Results Microhabitat Structure and Preference During the 2-year intensive behavioral study, the patas monkeys used 2, ha of their entire home range approx. The average height of trees in the tall microhabitat paired transects was 2. Average tree height in the short and tall A. Bars represent 1 standard error. Trees in the short microhabitat were significantly shorter than trees in the tall microhabitat paired t test: In contrast, the average height of trees in the short microhabitat was 1. The boundary between the short and tall microhabitats was abrupt, as evidenced by the difference in tree heights in the 5 paired transects fig. Although tree height differed significantly in the two microhabitats, tree density and grass height did not [tree density: Correlation between average tree height and average height where the focal animal was found in the tall microhabitat. Focal animals climbed into trees that were significantly taller than the average tree height Mann-Whitney U test: Patas monkeys spent a greater proportion of time during focal samples scanning from tall trees and feeding and foraging in short trees. Focal animals performed different activities in trees of different heights. During concurrent focal and ecological samples between November and September , focal animals gave 7 mammalian predator alarm calls. In all 7 cases, the focal animal was in a tree in the tall microhabitat while emitting the alarm call. Height was not recorded for I focal animal. Correlation between tree height and height where the focal animal was found. Five of 6 focal animals were within 0. They were also significantly higher in these trees than the average tree height would have allowed Mann-Whitney U test: In 5 of 6 cases, the focal animal was within a half meter from the top of the tree while giving the alarm call fig. Tall trees were used more to detect predators than to escape from them. All focal animals were in the tree from which they uttered alarm calls for an average of One potential confounding factor was the presence of resident domestic dogs near the water trough on the northern edge of the short microhabitat fig. Domestic dogs are confirmed predators of patas monkeys [Chism and Rowell, ; Enstam and Isbell,], and the study group always responded to their presence by alarm calling [Enstam and Isbell,]. However, encounters between patas monkeys and dogs were not restricted to the short microhabitat; they also encountered domestic dogs in the tall microhabitat [Isbell, unpubl. Moreover, the patas group often entered the short microhabitat, despite the presence of a known predator, to drink from a water trough at the northern edge of the short microhabitat fig. The group typically waited in trees near the water trough, sca. Their microhabitat preference does not appear to be related to differences in ground cover. Although differences in ground cover can affect the ranging behavior of some primates - e. It is also unlikely that the study group avoided the short microhabitat because of reduced food availability. Swollen thorns do not appear to be less available to patas monkeys in the short microhabitat. First, the density of A. Second, swollen thorns are found on all A. Finally, and most importantly, patas monkeys typically feed on only swollen thorns per tree because the ants Crematogaster spp. Short and tall trees thus provide the patas monkeys with equally as many swollen thorns as the monkeys can tolerate taking. Previous research on the availability of A. Patas monkeys typically eat an average of only 2. As is the case with swollen thoms, both microhabitats likely provide ample gum sites for the patas monkeys. Most importantly, however, patas monkeys spend more time feeding in short trees than in tall trees. Indeed, patas monkeys may even prefer to

feed from short trees since they can feed on them from the ground. They spend most of their time feeding on A. Although patas monkeys must drink daily [Chism et ai. The study group often drank from cattle troughs, especially in the dry season [Enstam, pers. However, 80 Folia Primatol ; Patas monkeys may have preferred the tall microhabitat for greater safety from predators, rather than advantages in food acquisition. Female patas monkeys use tall trees to scan their surroundings fig. First, they may scan to keep other group members in view [Cowlishaw, ; Treves,]. We were unable to test whether females increase their conspecific detection rates from tall trees, however, because the density of patas monkeys at this site is extremely low [Enstam et aI. Certainly, male patas monkeys detect extragroup males from tall trees. Bark-grunts are associated with the presence of strange males [Hall, ; Napier, ; Enstam and Isbell,], and resident males were often observed to bark-grunt from tall trees, descend and run in the direction they were scanning [Enstam, pers. Third, they may scan to detect predators. Two lines of evidence suggest that patas monkeys may scan from tall trees to detect predators:

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Chapter 6 : Primate Field Studies - Routledge

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Within-species differences according to rank CH. Contest competition and dominance in vervets The concept of dominance Results: Contest competition and dominance in vervets Dominance patterns and feeding competition in vervets The significance of dominance to vervets Dominance style in Segera vervets "Typical" cercopithecines? Why a stable, linear dominance hierarchy on Segera? Comparing vervet and patas monkeys in the same habitat. Questions and Predictions Food contestability in vervets and patas monkeys Dominance in adult females Feeding competition and whistling-thorn foods Significance of feeding competition to vervet and patas monkeys CH. Food availability, feeding competition and dominance in vervet and patas monkeys. Female contest competition and dominance in vervets and patas monkeys on Segera How do the models rate? Summary and implications for future research show more Review quote This series is a venue for the publication of PhD-level field studies of wild nonhuman primates in a format that is broadly accessible and more cohesive than the usual and sometimes artificial splicing of field study data into separately published peer-reviewed journal articles. As with other contributions to this series, both books represent a large body of data on wild primates, collected over a period of at least a year. Each monograph begins with an introductory chapter providing background material on the theoretical perspective and history of the topic, followed by information pertaining to the study population s and data collection methods. These introductory chapters are then followed by a series of "data chapters" that explore various aspects of the analyses--overall, a format very similar to but more concise than that of a PhD dissertation. Pruetz Iowa State frames her study of patas and vervet monkeys around the basic tenets of socioecological theory, which predicts that the abundance and distribution of food resources will play a significant role in shaping patterns of sociality in female primates. In an attempt to elucidate this predictive relationship, Pruetz investigated the impact of food abundance and distribution on patterns of food competition and dominance relationships among adult females in two closely related cercopithecine primates, patas monkeys and vervet monkeys. After an in-depth, sophisticated analysis of the relationships among these various factors, Pruetz concludes that most socioecological models are too broad, and the variables insufficiently quantified, to make reliable predictions about these relationships. Upper-division undergraduate through professional collections. As a primatologist, Dr. Pruetz has studied the behavior of non-human primates such as chimpanzees, spider monkeys, howling monkeys, tamarins, patas monkeys, and vervets in various locales. Pruetz is especially interested in the influence of ecology on primate and early human feeding, ranging, and social behavior. She currently has a research project in southeastern Senegal which has been funded by National Geographic Society and the National Science Foundation.

Chapter 7 : Truman Young - Mpala Publications - Other Laikipia ecology/behavior research

The patas monkey (Erythrocebus patas), also known as the wadi monkey or hussar monkey, is a ground-dwelling monkey distributed over semi-arid areas of West Africa, and into East Africa. It is the only species classified in the genus Erythrocebus.

Jill Pruetz Behav Ecol Sociobiol Isbell Correlations of food distribution and patch size with agonistic interactions in female vervets Chlorocebus aethiops and patas monkeys Erythrocebus patas living in simple habitats Received: When food limits fe- higher rate of agonistic interactions over food. The co- male reproductive success, spatially clumped foods are variation of agonistic interactions with patch size is dis- expected to produce strong, linear dominance hierarchies cussed in relation to depletion time, another characteris- within groups, whereas more spatially dispersed foods tic that may covary with food distribution, and resource are expected to produce weaker or non-existent domi- renewal rate, an important determinant of agonistic inter- nance hierarchies. The association between food distri- actions in insectivorous birds, fishes, insects, and mam- bution and competitive relationships presumably occurs mals. Food patches of both patas monkeys Introduction and vervets were small in size and randomly distributed in Acacia drepanolobium habitat. In contrast, in A. A potential cost of living in groups is competition with xanthophloea woodland, the habitat type that was exclu- group members over food resources Alexander ; sively used by vervets, food patches were larger and Wrangham ; Pulliam and Caraco Interfer- more spatially clumped. These similarities and differ- ence, or contest competition, in which dominant individ- ences between and within species were correlated with uals usurp resources from others i. Patas monkeys and ver- plantation or aggression Schjelderupp-Ebbe ; vets in A. By tion from behavioral ecologists. For group-living ani- mals, agonistic interactions that are sufficiently frequent Communicated by P. Kappeler and consistent between competitors allow observers to L. When agonistic interactions are infrequent or in- Davis, CA , USA consistent between competitors, however, it becomes e-mail: In such cases, hierarchies are considered to be weaker and J. Pruetz less linear or even non-existent. Pruetz, Department of Zoology, taxa ranging from plants to primates, the underlying eco- Miami University, Oxford, OH , USA logical factors that elicit competition have become a e-mail: Despite For females, access to food is often critical to reproduc- their close evolutionary history, female vervets have tive success. In many taxa, females avoid direct, or inter- clearly defined, linear dominance hierarchies that are ference, competition for food by living solitarily. None- stable over long periods of time Seyfarth ; Whitten theless, stable groups of females do occur in many taxa, ; Isbell and Pruetz whereas unprovisioned including mammalian taxa such as viverrids, carnivores, patas monkeys have weaker, non-linear dominance hier- cetaceans, and primates. Living in such groups can inter- archies that are unstable over long periods of time Isbell fere with gaining access to food. Females in groups are and Pruetz This difference cannot be explained thus expected to compete with each other over foods easily by phylogenetic inertia. Although vervets and when it is worth doing so. The relative lack of familiarity with non- ; Grant and Kramer ; Bryant and Grant , kin has also been suggested to result in weak or non-ex- or more slowly depleted Janson ; Isbell et al. This does not apply to patas monkeys, however. The explana- fact of increased depletion time see Isbell et al. Both natural monkeys is likely to be found in their ecology. This Monaghan and Metcalfe ; capuchins, Cebus cap- combination of shared and exclusive use of two habitats ucinus: Phillips ; bonnet macaques, Macaca radi- offers the opportunity to compare foods of the two spe- ata: Moreover, unlike most primate habitats, tailed macaques, M. Sterck and Steenbeek which have a high diversity of food species and are ; Japanese macaques, M. Saito ; ver- therefore exceedingly difficult habitats in which to mea- vets, Chlorocebus aethiops: Wrangham ; baboons, sure the distribution of foods, the Acacia habitats of ver- Papio anubis: Barton ; Johnson Variation in vets and patas monkeys are low in food species diversity. Knowing pears to have a strong phylogenetic component in pri- that patas monkeys and vervets differ in the strength of mates. Within the family Cercopithecidae, for example, their dominance hierarchies, we predicted that the

major most species of baboons and macaques have stable, lin- foods of patas monkeys would be more dispersed than ear dominance hierarchies Hausfater ; Seyfarth the major foods of vervets, but only relative to the habi- ; Deag ; Samuels et al. In the habitat that Barton and Whiten , whereas within the Colobidae the two species share, we predicted that the major foods most species of colobus monkeys and langurs do not of both species would be distributed similarly. We also Struhsaker ; Hrdy and Hrdy ; Borries ; predicted that if food distribution influences female Sterck Vervets and patas monkeys Erythrocebus patas are phylogenetically closely related primate species Disotell 40 Patch distribution and size Methods Individual A. A wide diversity of ungula- trees, or patches, in the home range of the patas monkey group. Spa- tes and a full complement of potential predators on primates occur tial distribution was calculated by the T-square index of spatial pat- on Segera, including lions Panthera leo , leopards Panthera tern Ludwig and Reynolds , p. While this method was ap- pardus , cheetahs Acinonyx jubatus , black-backed jackals Canis propriate for the habitat of the patas monkeys, it was not appropriate mesomelas , and martial eagles Polemaetus bellicosus. Rainfall for the A. Mean monthly rainfall dur- ophloea trees in the home range of the vervet group by counting all ing the study was The distribution of A. The other vegetation be used in both habitats. For patas monkeys, transects were chosen type is A. The distribution of trees in the home A. For vervets, transects were and sleeping sites, both vervets and patas monkeys feed in sampled in a stratified manner, with transects oriented perpendicu- A. Detailed descriptions of the study site lar to the river along which vervets travelled each month. The dis- can be found in Isbell , Isbell et al. Along the This study includes data collected from adult females in one transects, J. All vervets and all adult patas In other words, the space around the center point was divided into monkeys were individually identified by wounds, scars, differ- four equal and infinite sections in which the distances to the ences in the color of the pelage, differences in the shape and nearest trees in each of the height categories were measured. Sam- length of nipples, and body size. Individuals were habituated to ples within the different height categories i. Patch size was calculated from average crown width and crown height for each of the two tree species. Data collection and analyses Feeding behavior Agonistic interactions between adult females Data on feeding behavior of individual adult females in each group were collected by J. Vervets were sampled in a predeter- contact in which one animal bit, grappled with, or slapped another, mined random order without replacement to allow each female to 2 unidirectional chasing, 3 supplantation, in which an individu- be sampled at a different hour each day during each month and on- al replaced another in its exact location and engaged in the same ly once per day. De- All agonistic interactions were, by definition, unidirectional, and tailed methods are presented in Isbell et al. Whenever a focal adult female was observed feeding during a Each agonistic interaction was recorded along with the identi- focal sample, J. Time spent feed- processing food at the onset of the interaction. Small sample sizes ing was calculated as an overall mean based on means per female precluded analyzing individual rates of agonistic interactions; during focal samples collected from September to December Statistical significance of the linearity of dominance hierarchies and the degrees of linearity, K, were de- 0. For the larger Among vervets, A. In that habitat, chy. The strength of the dominance hierarchy describes only the foods on A. Thus, weak dominance hierarchies are those in As with patas in A. By inference, individuals in groups with weak dominance hierarchies have few opportunities or little incentive to compete with each other. In contrast, strong dominance hierarchies are those in which the number of unknown relationships is low, re- flecting the occurrence of agonistic interactions between individu- als in most, if not all, dyads. By inference, individuals in groups with strong dominance hierarchies frequently take opportunities to compete with each other. Two females GEO and MND, one from each species were excluded from analyses because they died be- fore being observed in more than two agonistic interactions. Ana- lyses of feeding behavior and female agonistic behavior were con- ducted with the Systat statistical program. All tests are two-tailed. Results Feeding behavior Among patas monkeys, foods on A. In contrast, the spatial distribution of A. The mean height of A. Mean height was 1. Per dyad sites within them 2. Food-related interactions accounted for 75 Vervets fed in 2. Weighted by the time A. The dominance hierarchy of adult female patas mon- By itself, A. The spatial distribution of A. Of these interactions, 55

Weight- ed by the percentage of time spent feeding The rate for food-related interactions was female vervets had 29 decided agonistic interactions in weighted by the percentage of time spent feeding in each habitat; the rate for non-food-related interactions was weighted by the re- A. Total numbers of interactions are giv- actions in A. However, vervets en above the bars spent less time in A. Weighted by the percentage of time spent in each of these habi- of patas monkeys when they were in A. Of the total number of context-determined agonistic interactions in each Both vervets and patas monkeys fed heavily on acacia of the two habitats, 18 In these simple habi- over food in A. Weighted by tats, foods from A. Unidentified foods were often small and accom- than in A. Coalitions were not observed in reversal. In contrast, their dominance hierarchy in vervets during this study, but this is an artifact of both A. There as in other populations e.

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Socioecology of Adult Female Patas Monkeys and Vervet in Kenya, East Africa provides students with a glimpse into a research project from start to finish. It discusses basic issues of studying primates and explores one of the major theories that has defined primatology for several.

Chapter 9 : Vervet monkey - WikiVisually

The vervet monkey (Chlorocebus pygerythrus), or simply vervet, is an Old World monkey of the family Cercopithecidae native to calendrierdelascience.com term "vervet" is also used to refer to all the members of the genus Chlorocebus.