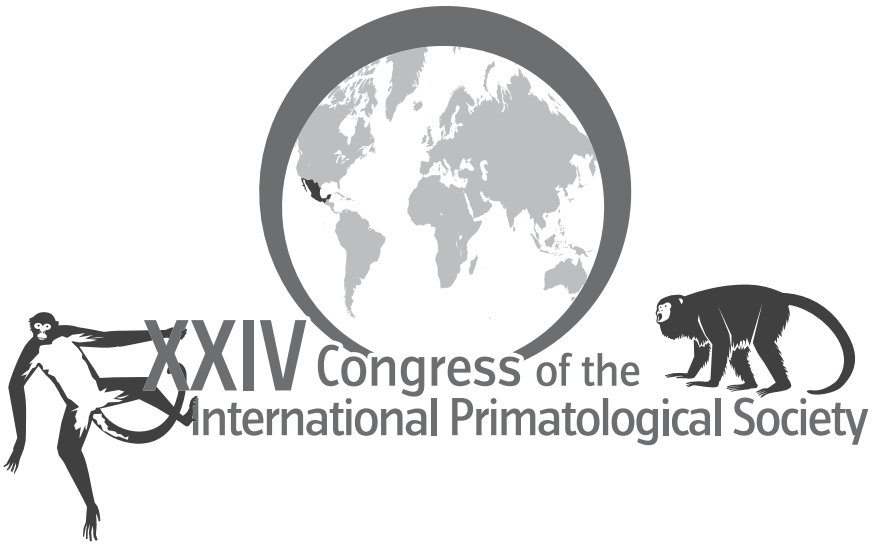

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salt-water inundated communities are subject to habitat loss from construction, oil pollution and industrial shrimp production. Considering this, priority areas for protection are ranked and requirements discussed.

Abstract # 277

FISSION-FUSION DYNAMICS AND SPATIO-TEMPORAL VARIATIONS IN RESOURCE DISTRIBUTIONS: AN AGENT-BASED MODELING APPROACH

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How animal groups with high levels of fission-fusion dynamics respond to resource variations in space and time is still unclear. The size and spatial distribution of resource patches are expected to affect the size of subgroups and inter-individual cohesion, but observed patterns are often contradictory or may not show clear trends. Approaches that rely on computer simulations of agent-based models can represent a useful tool to study the combined effects of ecological factors, cognitive mechanisms and social interactions on movement and association patterns. In a previous model based on the society of spider monkeys, we found a non-monotonic dependence between resource heterogeneity/abundance and subgroup size. We now extend this work to a more realistic model where individuals constantly update their knowledge as they forage in a dynamical environment with variations in fruiting patterns that more closely mimic the ecology of spider monkeys at the Punta Laguna study site. We investigate how subgroup size and inter-individual cohesion vary with respect to food abundance and the proportion of trees of the same species that are fruiting. The results are contrasted with field observations from the same study site.

Abstract # 278

FEMALE RELATIONSHIPS IN GOLDEN MONKEYS

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Forest dwelling guenons are under-represented in current socio-ecological models, which examine the relationship between feeding ecology and female social interactions. *Cercopithecus* species are generally classified as having agonistically undifferentiated relationships, but their diet often includes clumped, defendable food resources that have been shown to produce high within group contest competition in other taxonomic groups. To further our understanding of factors influencing female *Cercopithecus* relationships, we monitored adult female golden monkeys (*Cercopithecus mitis kandti*), a forest dwelling species endemic to the Albertine Rift that feeds primarily on leaves but also rely on clumped, defendable bamboo shoots when produced. We used scan sampling to collect data on 45 adult females, focusing on social behaviors and proximity patterns. Overall, aggression rates were low (0.001 aggressions/hour). This rate is comparable to what has been observed in the closely-related but frugivorous blue monkey (Pazol and Cords, 2005). However, unlike blue monkeys we observed significantly higher rates of aggression when food resources were clumped (Wilcoxon 2 sample test: Z=2.50, p=0.01). Neighboring individuals were unlikely to feed within 0.5 meters of a feeding adult female, which suggests that individuals may prefer to spread out while feeding rather than engaging in direct aggression. We suggest that additional factors such as seasonal agonistic behaviors and alternate feeding strategies should be as well considered in the socio-ecological models.

Abstract # 279

THE EVOLUTION OF BODY SIZE IN THE CARIBBEAN PRIMATES

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Amongst the living platyrrhines, body sizes range from 100 grams for *Cebuella pygmaea* to 12,000 grams for Brachyteles arachnoides, but the distribution of mass is uneven with atelids weighing over 5000 grams and the remainder of the radiation falling under roughly 3500 grams. Regression equations based on the area of the lower second molars indicate the Caribbean fossils *Antillothrix bernensis*, *Insulacebus toussaintiana*, and *Xenothrix mcgregori* all have body masses ranging from 4000 to 6000 g. *Paralouatta varonai* is larger with an estimated mass of 7000-9500 g. It has been shown that dental and postcranial body mass estimates vary. This project uses