

747-S

COPING WITH RESOURCE SCARCITY: DIVERSITY IN PRIMATE ADAPTATIONS

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This symposium proposes an overview of how selected non-human primate taxa respond to resource scarcity in their natural environments. If food, mates, or other resources are in short supply, then selection should favor adaptations such as behavioral plasticity to help meet the demands of survival and reproduction. For instance, in primates, responses to low food availability include dietary, ranging, and physiological changes, allowing animals to cope with their energetic and nutrient needs in the face of resource shortages. Larger-scale changes at the group and population level have also been documented and may include adjustments in group size and composition, alterations in the nature of social relationships, modifications in overall biomass and population density, as well as shifts in dietary overlap with sympatric species. Intrinsic factors such as body size and dental or digestive features, coupled with an organism's social structure, are predicted to influence the range of possible responses and the specific strategy employed in response to scarcity. Contributors to this symposium will examine a sampling of populations representing species from several major primate radiations that differ in body size, feeding adaptations, and social structure; these include catarrhines, platyrrhines, and strepsirrhines. Specific topics to be addressed will relate to oral adaptations and seasonal dietary shifts—including the role of “fallback” resources and mechanical food properties; population movements among forest types; foraging and mating strategies; and social dynamics. Understanding the diversity of responses to resource scarcity informs us about the major selective pressures shaping primate adaptation and evolution.

Keywords: scarcity, adaptation, flexibility, primates