The rare and the specialized: Conservation needs of rain forest primates in Madagascar.

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Although 12 primate species are sympatric in the southeastern rain forest of Madagascar, population densities vary from 2-80/km. Ecological research over five years targets factors that determine rarity and vulnerability.

Two of three bamboo-eating species are rare (*Hapalemur aureus* and *H. simus*). *H. griseus* food is ubiquitous whereas *H. simus* and *H. aureus* eat bamboo species which need stream proximity and/or special soils. Of the two nocturnal folivorous primates, *Avahi* is abundant while *Lepilemur* is very rare. Chemicals in leaves may restrict *Lepilemur* distribution (Ganzhorn 1988). The two largest lemurs, *Varecia* and *Propithecus*, differ drastically in susceptibility to local extinction. *Propithecus* is more resistant than *Varecia* to disturbance. Home ranges of two groups of *Propithecus* were not altered by selective logging, whereas *Varecia* disappeared from these areas. *Varecia* is dependent on large trees removed by logging. These trees produce large single seeded fruits that are endozoochorially dispersed by *Varecia*. Logging both removes *Varecia* and retards regeneration by excluding important dispersers. Conservation must incorporate the needs of specialized lemurs. Species like *Hapalemur* with patchy distributions may suffer inbreeding if reserves are small or if corridors for dispersal are not provided. Selective logging may eliminate some species and increase populations of others.

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