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We have been conducting large-scale "natural experiments" in five landscapes in south-eastern Australia over the past 5-22 years. These landscapes span wood production native forests, exotic pine plantations, remnant woodland/agricultural production areas, and a nature reserve dominated by forests, woodlands and heath. Extensive empirical data have been gathered on the response of birds, mammals, reptiles and frogs to natural and human disturbances in these landscapes. A wide range of responses within and among different vertebrate groups have been identified - including novel responses to patch size, matrix conditions only rarely been observed in other studies in modified landscapes. In the vast majority of cases, species-specific responses were recorded - with few responses shared widely among large numbers of species - findings which pose real challenges for management strategies that aim to promote the biodiversity conservation. The results are interpreted in terms of existing models of landscape cover and species response such as the Island Model, Corridor-Patch-Matrix model. In addition, a new hybrid model, termed the landscape continuum model, is presented for improving the understanding of how biota can be best conserved in naturally disturbed areas as well as landscapes subject to human uses and landscape modification.

491. THE GREATER MASAI MARA COMMUNITY SCOUT PROGRAMME. LINKIE, MATTHEW; Walpole, Matthew; Kisoru, Stephen; Hartley, Richard; Leader-Williams, Nigel. Durrell Institute of Conservation & Ecology, University of Kent, Canterbury, Kent CT2 7NS, UK, m.linkie@kent.ac.uk (ML, SK, NLW). Fauna and Flora International, Great Eastern House, Tenison Road, Cambridge CB1 2TT, UK (MW). Friends of Conservation, P.O. Box 74901 Nairobi, Kenya (RH).

Some 70% of Kenya's wildlife exists outside protected areas, and its survival depends on continued tolerance, and sustainable natural resource management, by surrounding local communities. Yet competition for space and resources between wildlife and local communities often results in conflict such as crop raiding by elephants or livestock depredation by lions and leopards. These economic costs threaten the livelihood security of local communities, who may kill these animals in retribution. Part of the solution to mitigating this human-wildlife conflict involves prudent wildlife management that incorporates reliable data on the location, abundance and movement of these species. Here, we present a community-driven wildlife and threat monitoring programme for the Greater Masai Mara ecosystem. We use a newly developed detection/non-detection survey method, implemented by trained community members themselves, to investigate the landscape factors salient to wildlife abundance and to monitor wildlife population trends. We also present a novel model developed for this ecosystem that aims to secure the sustainability of the programme with financial support from responsible ecotourism operators in an innovative public-private conservation partnership.

492. BLACK RHINOCEROS OLFATORY COMMUNICATION AND POST-RELEASE BEHAVIOURAL MANAGEMENT. LINKLATER, WAYNE L.; Swaisgood, Ron R. School of

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Seventy-three of 435 translocations of endangered black rhinoceroses (*Diceros bicornis*) resulted in death, particularly from fighting and accident (12% of reintroductions, 27% for genetic and demographic rescue). We investigated scent broadcasting for facilitating post-release habitat and conspecific familiarization. Dung presentation tests (256 presentations, 44 rhino, 126 hours) determined that dung conveys relevant information that persists long enough to serve as the media for scent broadcasting. Dung, field-aged up to 32 days, elicited a measurable behavioral response (cf. control substrates), and rhino discriminated between dung from other rhino of different sex, age class, and familiarity. Horn-implant transmitters were installed in 33 rhino released at 12 reserves (8-450 km²) and monitored after release. Six reserves served as treatment- and 6 as control-sites. At treatment sites we spread the dung of half the rhino subsequently released. Dung broadcasting changed rhino post-release movements (e. g., initial travel distance per unit reserve size; treatment 0.85±0.14, control 1.27±0.34), but the response was not specific to those rhino whose own dung was spread (own dung, 0.84±0.21; other rhino's dung, 0.82±0.17). Results indicate that dung broadcasting shows promise as a tool for facilitating novel habitat exploration, site fidelity, and social relationships in black rhinoceros post-release.

493. USE OF A FRAGMENTED LANDSCAPE BY MARSUPIALS IN SOUTHEASTERN BRAZIL. LIRA, PAULA K.; Carlos, Henrique S. A.; Curzio, Patricia L.; Fernandez, Fernando A. S. Departamento de Ecologia, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ, 21941-590, Brazil, rodentia@biologia.ufrj.br (PKL, PLC, FASF). Instituto de Ciências Biológicas, Universidade Federal de Minas Gerais, Belo Horizonte, MG, 31270-901, Brazil (HSAC).

Space use patterns are important to understand species response to fragmentation. Spatial patterns of the opossums *Caluromys philander* (four individuals), *Micoureus demerarae* (four) and *Philander frenata* (eight) were studied, through radio-tracking, in eight Atlantic Forest fragments surrounded by a grassland matrix in southeastern Brazil. Individuals were fitted with radio-collar transmitters and fixes were obtained by the "homing in on the animal" method. Numbers of locations of each individual varied from six to 117. Home ranges sizes, estimated through the minimum convex polygon method, were larger than those estimated in capture-mark-recapture studies and ranged from 2.54 to 6.97ha for *C. philander*, 0.77 to 1.71ha for *M. demerarae* and 0.63 to 7.43ha for *P. frenata*. *M. demerarae* moved shorter distances than *C. philander* and *P. frenata*. Five movements between fragments were carried out by two male *P. frenata* and three other individuals visited the matrix. For *C. philander* and *M. demerarae* no interfragment movement was detected, but a female of *C. philander* was found in the matrix. Fragments, both edges and interiors, were used more often than matrix; they are the primary habitat for these marsupials in the landscape, although the matrix is used for foraging and occasionally traversed in longer movements.

494. STATUS AND CONSERVATION OF CHIHUAHUA'S WILD BISON (*Bison bison*). LIST, RURIK; Ceballos, Gerardo; Pacheco, Jesús. Instituto de Ecología, UNAM, 3er Circuito Ex-