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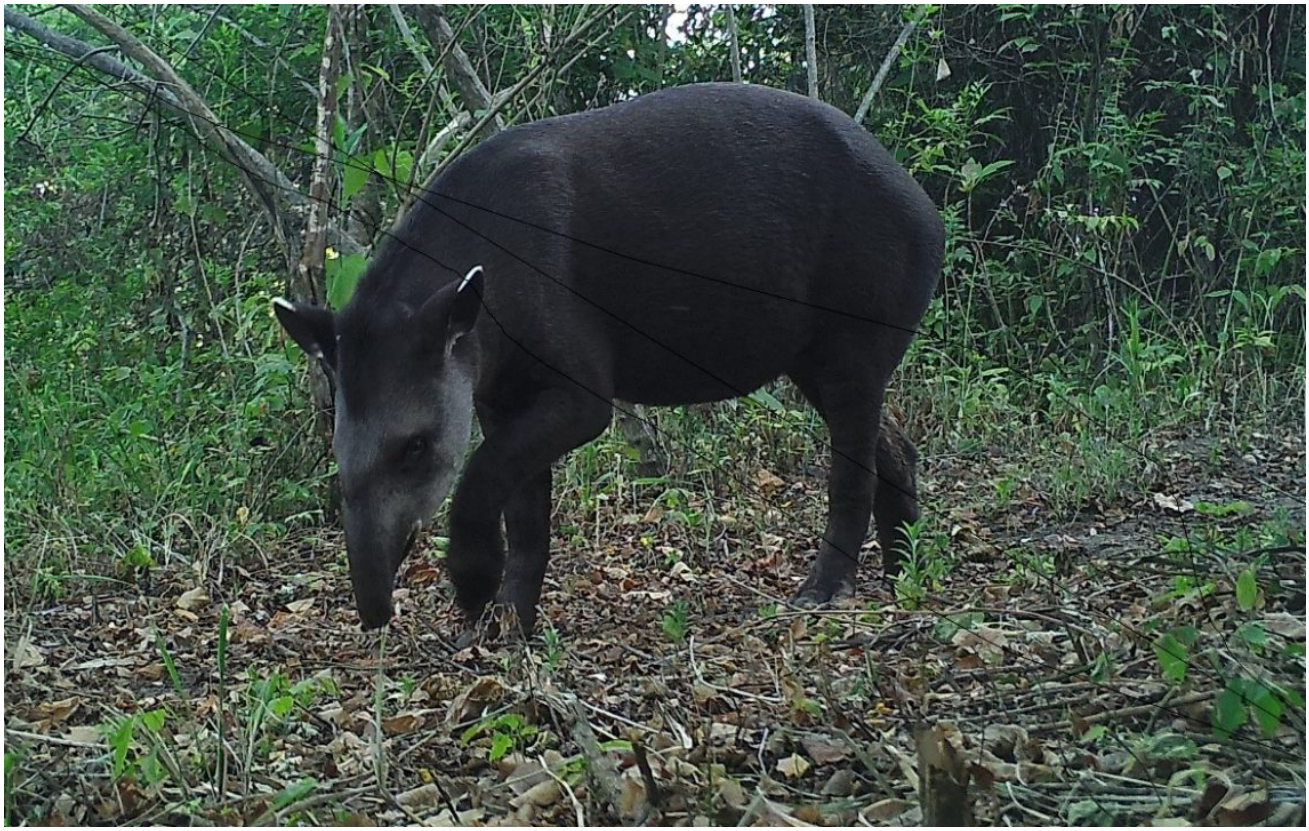
National Parks revisited: their importance for the conservation of the lowland tapir in a mosaic of different ownership lands

By Luis Rivera, 15th April 2020

The lowland tapir *Tapirus terrestris* is the largest native terrestrial mammal of the Neotropics. It is considered a keystone species because of its role as a disperser and predator of tree seeds, thereby engineering the structure and diversity of forests. The lowland tapir is a charismatic species that is categorized as Vulnerable on the IUCN Red List, with a declining population. The distribution of the species in Argentina has been reduced by 60% in the last two centuries as a result of habitat loss, illegal hunting, and competition with livestock. Lowland tapirs are sensitive to forest loss and human influence because they avoid open areas, human infrastructure and high human densities. Hunting and poaching can severely affect lowland tapir populations because of their low productivity and reproductive rate, with females producing one young every 18 months at most.



Lowland tapir recorded by a camera trap in the Southern Yungas of Argentina.

The montane forests of the Andes are iconic and unique: their cloud-covered slopes are considered

a hotspot for biodiversity conservation because of their high species richness and endemism. The Southern Yungas forest is the southernmost montane forest, stretching from the Andes of north-west Argentina to southern Bolivia, where many South American mammals have the southernmost of their distribution range. A large proportion of these forests has been transformed to other land use, and the remaining large tracts of continuous forests are under increasing human pressure. In these continuous forests some strictly protected areas (e.g. national parks) have been established to protect this unique ecosystem and its species, but the protected areas are not large enough to sustain populations of large mammals that require extensive habitats, and are surrounded by unprotected private lands.

Private lands have long been recognized as essential for large mammal conservation because protected areas are often limited in area and representation of habitats, which can hinder long-term conservation of populations and species. However, increasing human populations, agricultural expansion and infrastructure development around protected areas reduce wildlife habitat, limit species movements, and expose wildlife to hunting, poaching, invasive exotic species and diseases. These factors potentially limit the conservation value of protected areas. On the other hand, protected areas may act as refugia that sustain wildlife populations in the surrounding landscapes, especially for large mammals.

Juvenile lowland tapir recorded by a camera trap in the Southern Yungas.

Wildlife conservation at a landscape level thus requires a clear understanding of the interactions between protected areas and the surrounding unprotected lands. Here, we used presence records of the lowland tapir to determine its potential habitat distribution in the Southern Yungas of Argentina. We also used camera traps to assess the influence of small human settlements, roads and rivers, and protection status of private lands on tapir habitat use in properties adjacent to

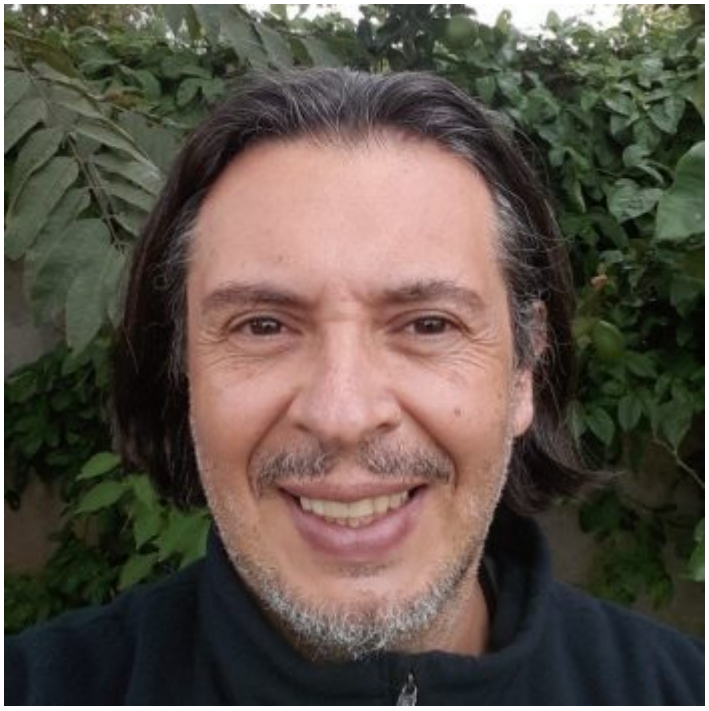
national parks. We found that the probability of habitat use was higher in the vicinity of national parks than further away from them. We conclude that national parks play a key role in ensuring the persistence of lowland tapir populations on adjacent private lands.

Because most of the land in the Southern Yungas is privately owned it is essential to include landowners and other stakeholders in the conservation strategy for the lowland tapir in these landscapes that still contain large continuous forests. The identification of potential habitat for the lowland tapir can help to delineate more precisely the priority conservation areas for the species. Some landowners have registered their properties as private reserves, but these reserves need support to be adequately implemented. A joint partnership among National Park managers, provincial authorities, private landowners, and local people is key for tackling threats and human pressures on wildlife populations in the Southern Yungas of Argentina.

Montane forest of north-west Argentina, the Southern Yungas.

All photos: Fundación CEBio

The article National parks influence habitat use of lowland tapirs in adjacent private lands in the Southern Yungas of Argentina is available in *Oryx—The International Journal of Conservation.*



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Luis Rivera currently works at Instituto de Ecoregiones Andinas CONICET/UNJu, Jujuy, Argentina where he leads a Conservation Biology lab. Luis' interests include studying habitat requirements and population ecology of threatened species; understanding effects of human influence at local and landscape on birds and mammals, species and assemblages; identifying priority conservation areas, and the role of protected areas on conserving biodiversity.