

careers to executive-level leaders well-versed in environmental challenges. Some programmes are still in the early stages of development and eager to gather insights from those more established, whereas others have evolved over time and aspire to expand and coordinate their offerings. Although symposium participants represented diverse views and experiences gained from teaching and training, all who gathered were united by their belief in the value of leadership for conservation.

The symposium generated discussion on why and how conservation leadership can be taught, including through programmes providing pragmatic, real-world learning opportunities. Development of personal and professional leadership skills is needed for addressing increasingly complex and challenging conservation problems. In addition to fostering structured learning environments at individual, team and organizational scales, conservation practitioners and educators can increase their impact by drawing on leadership development tools and frameworks from the business and social sectors.

Participants noted that professionals at all levels in conservation organizations must be versed in leadership skills to serve the collective conservation mission. This could be facilitated by integrating complementary programmes in which, for example, more senior leaders participating in short-term training could mentor younger leaders enrolled in postgraduate courses—the intergenerational leadership approach. Shared training modules could be developed so that learning can continue more rapidly. Alumni networks, collective training, or learning exchange events could also facilitate leadership at different scales. As the number of programmes expands, participants agreed that cross-organizational mentoring relationships should be established and maintained to share skills across sectors, professional experiences and generations of graduates.

The symposium also recognized the need for tailored programmes that reach a greater constituency of environmental workers. An important new direction for conservation leadership training is the inclusion of diverse leaders and context-specific skills that reflect diversity in gender, age, generation, language, indigeneity, culture and process. Participants noted the value of leadership learning communities that are connected for professional lifetimes, in which investments of personal and paid time are rewarded with relationships that provide acquisition and sharing of skills and support for career-long leadership development. Empowerment, especially for marginalized communities and those in traditional modes of governance, is of particular importance to achieve diverse leadership and effective outcomes. As leadership programmes are often utilized by participants who have a combination of English language skills, access to funding streams, and prior leadership training experiences, we recommend increased and diversified training opportunities for greater impact.

Although this symposium highlighted several established conservation leadership programmes, the current array of

learning opportunities, particularly in terms of the content they provide and the audiences they serve, is insufficient to prepare the conservation sector for a demanding future. We see an urgent need for innovation and partnerships, oriented around a collaborative model (such as agreeing to share course materials and lessons learned), as an essential response to the biodiversity crisis.

The symposium gave us the chance to share our vision of new pathways for building leadership in conservation. We believe offering leadership training that is timely, targeted and long-term will allow us to achieve conservation sooner, more efficiently and more effectively than in its absence. Given the limitations of geographical, cultural and linguistic participation in the symposium, we welcome greater collaboration with a diversity of stakeholders as we continue exploring insights on programmatic design, impact, evaluation and new directions for conservation leadership.

COLLEEN CORRIGAN (orcid.org/0000-0002-0552-4159)
University of Queensland, Brisbane, Australia
E-mail c.corrigan@uq.edu.au

MEGAN JONES Colorado State University, Fort Collins, USA,
and WE Africa

CHRIS SANDBROOK University of Cambridge, Cambridge, UK

FRED NELSON Maliasili, Essex Junction, USA

JAMIESON COPSEY IUCN Species Survival Commission
Conservation Planning Specialist Group, Apple Valley, USA

NAOMI DOAK The Royal Foundation, London, UK

Taita Mountain dwarf galago is extant in the Taita Hills of Kenya

The Taita Mountain dwarf galago *Paragalago sp.* was reported in 2002 from the Taita Hills, Kenya (Perkin et al., 2002, *Journal of East African Natural History*, 91, 1–13). Identification was not possible, but it appeared to represent an undescribed taxon. The Taita Hills are part of the Eastern Arc Mountains, which support many endemic animal and plant species. As 98% of moist montane forests of the Taita Hills have been destroyed by conversion to agricultural lands, the fate of this unidentified dwarf galago has hitherto been unknown. We searched for dwarf galagos during January–March and June–August 2019 in the five largest forest fragments of the Taita Hills, but found them only in Ngangao (1 km²) and Mbololo (2 km²) Forests.

In Ngangao Forest we found only one group of dwarf galagos, comprising < 10 individuals. We saw African wood owls *Strix woodfordii* hunting dwarf galagos on three occasions, one



The Taita Mountain dwarf galago *Paragalago sp.* photographed in Ngangao Forest in 2019. Photo: Hanna Rosti.

of which was successful. We regularly observed dwarf galagos hunting insects on small trees with a trunk diameter of 2–4 cm. We also observed galagos both descending to the ground and ascending to the forest canopy at c. 50 m. In the morning group members made loud incremental calls close to their nest site. The Ngangao group used several tree hollows as daytime sleeping sites, moving every few days. We heard and recorded incremental contact calls irregularly throughout the night. Because of the small size of this population, and predation pressure, its future in Ngangao Forest is bleak. In the larger Mbololo Forest we heard dwarf galagos throughout the fragment, although they were shy and our visual observations were few and brief. Recordings of calls were inconclusive as a diagnostic taxonomic tool as we did not hear incremental calls (a screech was used as a contact call).

The taxonomy of the Taita Mountain dwarf galago remains unclear. Dwarf galagos are cryptic, nocturnal species that are most easily recognized from their vocalizations. Our photographs and recordings of vocalizations suggest that the galago of the Taita Hills is related to the Kenya coast dwarf galago *Paragalago cocos* (Simon Bearder, Thomas Butynski, Yvonne de Yong, Andrew Perkin and Magdalena Svensson, pers. comms). The Kenya coast dwarf galago *Paragalago cocos* is known only from low elevations (< 250 m), however, and not from montane forests. Our observations suggest the taxon is highly dependent on hollow trees for refuge and as daytime sleeping sites. The remaining forest fragments must be protected to ensure the survival of the Taita Mountain dwarf galago and other endemic animal species. Molecular analysis, ecology and estimates of population size are needed urgently, to facilitate full identification and an assessment of the taxon for the IUCN Red List. This taxon appears to be already on the brink of extinction.

HANNA ROSTI (orcid.org/0000-0003-4495-4183),
JOUKO RIKKINEN (orcid.org/0000-0002-4615-6639) and
PETRI PELLIKKA* University of Helsinki, Helsinki, Finland
E-mail hanna.z.rosti@helsinki.fi

SIMON BEARDER Nocturnal Primates Research Group, Oxford
Brookes University, Oxford, UK

JAMES MWANG'OMBE MWAMODENYI Kenya Forest Service,
Kenya

*Also at: Taita Research Station, Wundanyi, Kenya

Privately funded land purchase programme in Pushpagiri Wildlife Sanctuary, India

Habitat fragmentation and loss are the most serious threats to biodiversity and ecological integrity. In this context, privately held land enclaves within the biologically rich Western Ghats of India have negative impacts on biodiversity, including within protected areas. These impacts include persecution of wildlife arising from negative human–wildlife interactions, and overgrazing, firewood collection and illegal hunting.

To address this issue, the Wildlife Conservation Society–India is using an innovative habitat consolidation project to facilitate the voluntary relinquishment of such privately owned land to the state government, for the specific purpose of amalgamating such land with adjacent protected areas. The compensation to the land owner is paid directly by Wildlife Conservation Society–India (WCS–India) on mutually agreed terms. This facilitates the consolidation and intactness of critical wildlife habitats while ensuring that people willing to sell (often so that they can avoid conflict with wildlife, or secure improved access to basic amenities, healthcare and markets) are able to get a fair market value for their property.

To increase support for this programme, the State Government of Karnataka has issued a Government Order that allows civil society organizations to raise funds, buy land in important biodiversity areas or critical corridor sites, and transfer the land to the government. Since 2004 (WCS–India) has purchased property from a total of 75 willing families in Nagarahole Tiger Reserve, Brahmagiri Wildlife Sanctuary, Pushpagiri Wildlife Sanctuary, Kudremukh National Park and Kali Tiger Reserve in Karnataka. A total area of 137 acres (c. 55 ha) has been added to these protected areas.

During September 2019 (WCS–India) negotiated with a society that, as a private land owner, held 5.45 acres (c. 2.2 ha) inside the Pushpagiri Wildlife Sanctuary. On 9 September the society relinquished their rights over this property to the Government of Karnataka. Eventually this land will become part of Pushpagiri Wildlife Sanctuary.

PRAKRITI SRIVASTAVA, P.M. MUTHANNA and SAHILA KUDALKAR
(orcid.org/0000-0002-9762-1537) Wildlife Conservation
Society–India, Bengaluru, Karnataka, India
E-mail psrivastava@wcs.org