



EXPLORING THE HORTON PLAINS

SRI LANKAN HIGHLANDS

Endless grasslands, gently rolling hills and mist-shrouded cloud forests at altitude showing a dazzling biodiversity and countless endangered endemisms



Tree Rhododendron *Rhododendron arboreum* along a slow-flowing, crystal-clear mountain brook in the Horton Plains National Park, Central Highlands of Sri Lanka. On the previous page, adult male Sri Lankan sambar deer *Rusa unicolor* sub. *unicolor*, in the typical gently rolling grassland landscape of the area.



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*H*orton Plains National Park is a protected area in the central highlands of Sri Lanka, covered by montane grassland and cloud forest. This plateau at an altitude of 2,100–2,300 metres (6,900–7,500 ft) is rich in biodiversity, and many species found here are endemic to the region, designated a National Park in 1988. The Horton Plains are the headwaters of three major Sri Lankan rivers - the Mahaweli, Kelani, and Walawe. Mean annual rainfall is greater than 2,000 millimetres (79 in), and frequent cloud cover limits the amount of sunlight that is available to plants. Mean annual temperature is 13 °C (55 °F) but temperature varies considerably during the course of a day, reaching as high as 27 °C (81 °F) during day time, and dipping as low as 5 °C (41 °F) at night. Ground frost is common in February and mist can persist during most of the day in the wet season. Many pools and waterfalls can be found in the Park, and Horton Plains is considered the most important watershed in Sri Lanka. The vertebrate fauna of the region includes 24 species of mammals, 87 species of birds, nine species of reptiles and eight species of amphibians. The local Sri Lankan elephant population disappeared from the region in the 1940s, massacred by the British tea planters. At present, the most commonly seen mammal is the sambar deer; some research findings estimate the population of sambar deer to be around 1500 to 2000, possibly more than the carrying capacity of the plains. Other mammal species found in the park include Kelaart's long-clawed shrews, toque macaques, purple-faced langurs, rusty-

spotted cat, Sri Lankan leopards, wild boars, stripe-necked mongooses, Sri Lankan spotted chevrotains, Indian muntjacs, and grizzled giant squirrels, with the Horton Plains slender loris *Loris tardigradus nycticeboides*, one of the world's most endangered primates, found only here. Together with the adjacent Peak Wilderness Sanctuary, Horton Plains contains 21 bird species which occur only on Sri Lanka. Four - Sri Lanka blue magpie, Dull-blue flycatcher, Sri Lanka white-eye, and Sri Lanka wood pigeon - occur only in Horton plains, while other endemic species include Sri Lanka spurfowl, Sri Lanka junglefowl, Yellow-fronted barbet, Orange-billed babbler, Sri Lanka bush warbler, and Sri Lanka whistling-thrush. Crested serpent eagle, Mountain hawk-eagle, Black-winged kite and Peregrine falcon are among the birds of prey found in Horton Plains. About 15 amphibian species inhabit the park. Among them are *Microhyla zeylanica*, *Ramanella palmata*, *Fejervarya greenii*, *Rana gracilis*, *Philautus alto*, *Philautus femoralis*, *Philautus frankenbergi*, *Philautus microtympanum*, *Philautus schmarda*, and *Polypedates eques*. Six endemic reptiles are found in the plains: *Calotes nigrilabris*, Rhino horn lizard, *Cophotis ceylanica*, *Lankascincus taprobanensis*, Common rough-sided snake, and Rat snake. Horton Plains is also home to many endemic crustaceans including *Caridina singhalensis* and *Perbrinckia* species. The former is found only in streams that have a temperature of less than 15 degrees C and is now restricted to only a stretch of 10 km of one stream. ●

Pseudophilautus frankenbergi, an endemic species of frog in the *Rhacophoridae* family with a very restricted distribution range from the cloud forest of Horton Plains.



Pygmy lizard *Cophotis ceylanica*, an endemic, slow-moving and severely endangered species with a very restricted distribution range from the cloud forest of Horton Plains National Park, in the Central Highlands of Sri Lanka. This is one of the rare lizard species with a prehensile tail.



Typical landscape with grasslands and Tree Rhododendron *Rhododendron arboreum*, Horton Plains National Park, Central Highlands of Sri Lanka.



Pseudophilautus microtympaum, an endemic and very tiny species of frog in the *Rhacophoridae* family from the cloud forest of Horton Plains National Park, showing its extraordinarily effective camouflage on a quartzite sand and pebble substrate.



Rhino-horned lizard *Ceratophora stoddartii*, an endemic species with a very restricted distribution range from the cloud forest of Horton Plains National Park.



Pseudophilautus frankenbergi, an endemic species of frog of the Horton Plains, here seen perching on Antonella's fingertip and showing its very small size.



Pseudophilautus frankenbergi, an endemic species. We are greatly indebted for all Horton Plains frog identifications to the kindness of Madhava Meegaskumbura, Ph.D., Evolution, Ecology and Systematics Lab, Department of Molecular Biology & Biotechnology, Faculty of Science, University of Peradeniya, Sri Lanka.



Pseudophilautus frankenbergi, an endemic species in the *Rhacophoridae* family with a very restricted distribution range from the cloud forest of Horton Plains.



Günther's whipping frog or Montane hour-glass tree-frog *Taruga eques*, an endemic species with a very restricted distribution range from the Horton Plains.



Sri Lanka white-eye *Zosterops ceylonensis*, an endemic species, Horton Plains National Park, in the Central Highlands of Sri Lanka.



Adult male Sri Lankan sambar deer *Rusa unicolor* sub. *unicolor*, Horton Plains National Park, Central Highlands, Sri Lanka. Notice the heavy, thick coat typical of deer living in the cool tropical highlands climate.



Top, Sri Lankan sambar deer *Rusa unicolor* sub. *unicolor*; bottom left, Yellow-eared Bulbul *Pycnonotus penicillatus*, an endemic species; bottom right, Eastern jungle crow *Corvus leuallantii*, sitting in a drizzle, cloud forest of Horton Plains National Park, in the Central Highlands of Sri Lanka.



Pied bush chat *Saxicola caprata* from the cloud forest of Horton Plains National Park, in the Central Highlands of Sri Lanka.



Top,
Pseudophilautus frankenbergi; left,
Pseudophilautus microtypanum;
 right,
Pseudophilautus alto. All these small-
 sized frog species show a very
 restricted range and are currently
 threatened.



Rhino-horned lizard *Ceratophora stoddartii*, an endemic species from the cloud forest of Horton Plains National Park, in the Central Highlands of Sri Lanka.



Black-lipped lizard *Calotes nigrilabris*, another endemic species with a very restricted distribution range from the cloud forest of Horton Plains National Park.



A typical, atmospheric image of the mist-shrouded cloud forest of Horton Plains National Park, in the Central Highlands of Sri Lanka.



Sri Lanka Dusky-blue or Dull-blue Flycatcher *Eumyias sordidus*, Horton Plains National Park, in the Central Highlands of Sri Lanka.



Günther's whipping frog or Montane hour-glass tree-frog *Taruga eques*, an endemic species of the Horton Plains.



Pygmy lizard *Cophotis ceylanica*, an endemic species.



Black-lipped lizard *Calotes nigrilabris*, an endemic species.



Sri Lankan sambar deer *Rusa unicolor* sub. *unicolor*, Horton Plains National Park, Central Highlands, Sri Lanka.



Pseudophilautus alto, an endemic species of frog in the *Rhacophoridae* family with a very restricted distribution range from the cloud forest of Horton Plains National Park, in the Central Highlands of Sri Lanka.



Tree Rhododendron *Rhododendron arboreum*, Horton Plains National Park, Central Highlands of Sri Lanka.



Fern detail, cloud forest at lower elevations of Horton Plains National Park, in the Central Highlands of Sri Lanka.



Cloud mountain or elfin forest of Horton Plains National Park, at a higher altitude in the Central Highlands of Sri Lanka.



Sri Lankan sambar deer *Rusa unicolor* sub. *unicolor*, Horton Plains National Park, Central Highlands, Sri Lanka.