

STREAMS IN HORTON PLAINS NATIONAL PARK

Location: 6° 47'–6° 50' N, 80° 50' E; in the central highlands, 20 km south of Nuwara Eliya, Central Province.

Area: Area of wetlands unknown; National Park 3, 162 ha.

Altitude: 2,100 – 2,200m.

Biogeographical Province: 4.13.4/4.2.1.

Wetland type: 12.

Description of site: A number of small mountain streams flowing through gently undulating grasslands at an altitude of 2,100–2,200m in the Horton Plains National Park. Tributaries of three major rivers originate from within the park, the Mahaweli and Uma flowing to the north, and the Walawe to the south, Belihul Oya, a small stream feeding the Walawe, tumbles over a cliff as a large and spectacular waterfall. The streams are generally 2–5m in width and up to 50 cm deep, with an average flow of about 75 cm per second. The water is acidic, with a pH of 5.4. Stagnant pools with muddy bottoms are subject to eutrophication.

Climatic conditions: Subtropical monsoonal climate with a mean annual temperature of 15°C. Rain occurs throughout most of the year, but there is a distinct dry season from January to March. Ground frost is common in February.

Principal vegetation: The streams support a variety of aquatic macrophytes as well as the algae *Bulbocheeta* sp. *Nitella* sp. and *Batrochospermum* sp. The surrounding grasslands are dominated by tussock grasses such as *Chrysopogon zeylanicus* and *Cymbopogon confertiflorus*, except in damp hollows where pure stands of *Chimonobambusa* (*Arundinaria*) *densifolia* have developed. A rich herbaceous flora flourishes with numerous species of both temperate and tropical origin. *Gordonia* sp. and *Rhododendron arboreum* occur in isolated patches on the plains, and high altitude cloud forest persists on the western slopes.

Land tenure: The National Park is state owned.

Conservation measures taken: The streams are protected within the Horton Plains National Park

(3,162 ha.), first established as a Nature Reserve in December 1969 and upgraded to a National park in March 1988. The area had previously received some protection as it was used as a hunting area by the British prior to Independence in 1948. The National Park adjoins the eastern edge of Peak Wilderness Sanctuary (22,380 ha.).

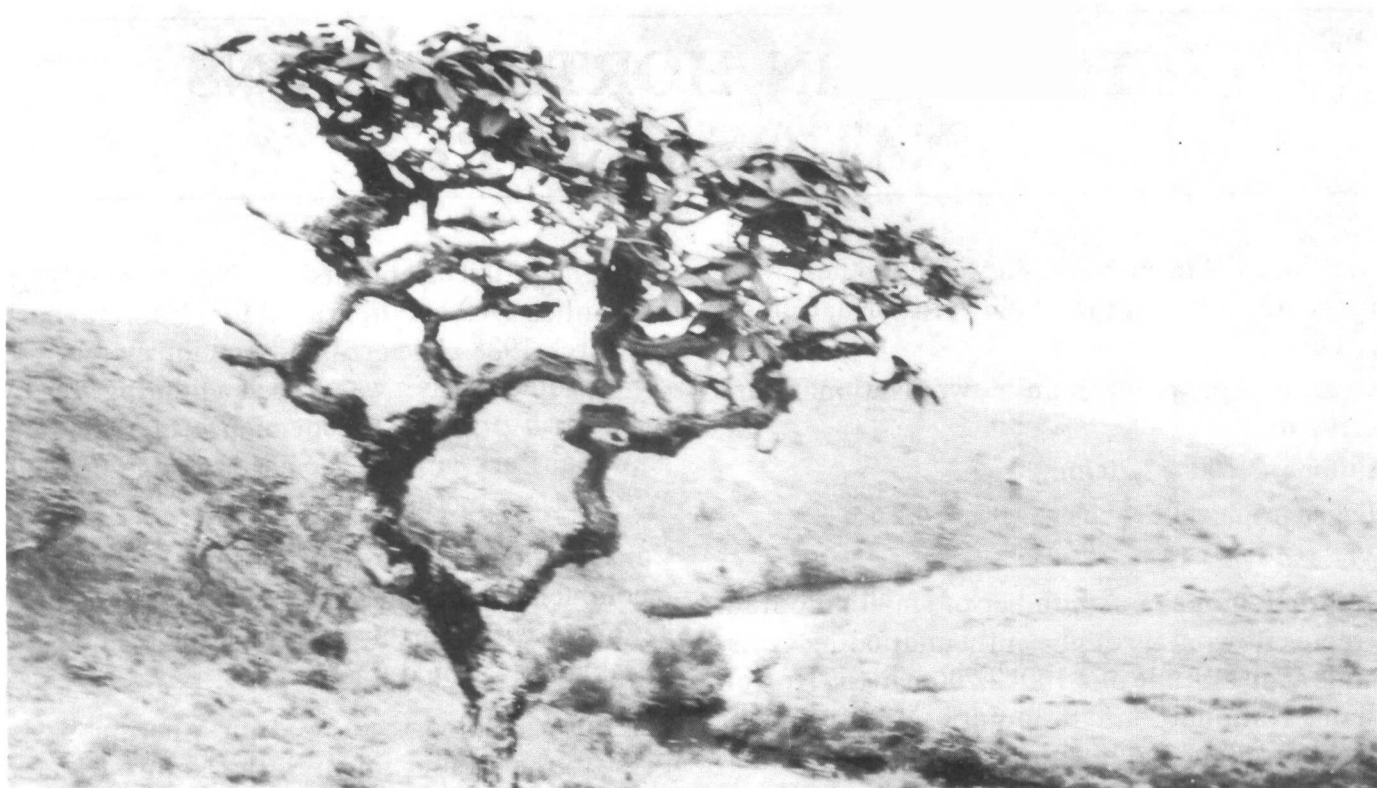
Conservation measures proposed: It has been recommended that the Peak Wilderness Sanctuary be united with Horton Plains National Park in a "Highland National Park".

Land use: Fishing is allowed on a permit basis. Prior to the establishment of the Nature Reserve in 1969, the plains were cleared and terraced for the cultivation of potatoes, but this was terminated in 1979. Adjacent areas are used for tea and *Eucalyptus* plantations.

Disturbances and threats: Uncontrolled burning of grasslands by local inhabitants continues, and trees are illicitly felled, mainly for firewood. This loss of vegetation is increasing the risk of soil erosion, and threatening the water supply downstream. In recent years, the trees in the park have been dying in increasing numbers, so much so that in certain areas up to 50% of the forest cover has now disappeared. The reasons for this are unknown, but may be linked to climatic changes.

Economic and social values: No information.

Fauna: There are no indigenous fishes in the streams, but *Salmo gairdneri* has been introduced. Amphibians include the frog *Rana limnocarsis greeni*. The interesting invertebrate fauna includes abundant larvae of *Simulium* sp. and *Chironomus* sp. a variety of Ephemeroptera, Plecoptera and Odonata, the platyhelminth *Dugesia nannophallus*, the annelid *Limnodrilus hoffmeisteri*, the mollusc *Paludomus nigricans* and the crustaceans *Paratelehusa* (*Ceylonphusa*) *enodis*, *P. rugosa* and *Caridina singhalensis*. The endemic freshwater shrimp *C. singhalensis* is believed to be confined to a 10 km stretch of stream within the park (de Silva, 1982).



The National Park supports a rich mammalian fauna including Kelaart's Long-clawed Shrew *Feroculus feroculus* (a monotypic genus endemic to the montane regions of Sri Lanka), Slender *Lotis Laris tardigradus*, Purple-faced Langur *Presbytis vetulus* and Fishing Cat *Felis viverrina*. The avifauna includes several of Sri Lanka's endemic forest birds.

Special floral values: No information.

Research and facilities: Limnological investigations have been carried out by Costa (1974), and some work has been conducted on the endemic fresh-water shrimp (de Silva, 1982). Accommodation is available in the reserve, and camping is permitted. **References:** Costa (1974); IUCN (in prep); de Silva (1982).

Criteria for inclusion: In, 2b, 2d.

Source: Leonard Pinto and T.W. Hoffmann.

