

Ngoc Linh (Quang Nam) Proposed Nature Reserve

Alternative site name(s)

Ngoc Linh

Province(s)

Quang Nam

Status

Proposed

Management board established

No

Latitude

15°00' - 15°15'N

Longitude

107°56' - 108°07'E

Bio-unit

Ma - Central Annam Mountains



Conservation status

Ngoc Linh (Quang Nam) proposed nature reserve is located in Tra Leng, Tra Don, Tra Tap, Tra Cang and Tra Linh communes, Tra My district, Quang Nam province. Ngoc Linh (Quang Nam) proposed nature reserve is situated on the eastern face of Mount Ngoc Linh, the western face of which is included within Ngoc Linh (Kon Tum) Nature Reserve, Kon Tum province (Tordoff *et al.* 2000).

The first official recommendation relating to Mount Ngoc Linh was included in Decision No. 194/CT of the Chairman of the Council of Ministers, dated 9 August 1986, which proposed establishing a 20,000 ha nature reserve in Gia Lai-Kon Tum province (now Gia Lai and Kon Tum provinces) (MARD 1997). However, this decree did not extend to Quang Nam province. In 1994, North-western Sub-FIPI produced an investment plan for Ngoc Linh Nature Reserve in Quang Nam-Da Nang (now Quang Nam province and Da Nang city) and Kon Tum provinces (Anon. 1994). However, this investment plan was not ratified at the ministerial level (Anon. 1998). In 1997, a proposal to establish Ngoc Linh as a 50,000 ha nature reserve in Quang Nam and Kon Tum provinces was included on the 2010 list (FPD 1998). In December 1998, an investment plan for a 41,420 ha nature reserve in Kon Tum province was published by FIPI and BirdLife International (Anon.

1998), and, in October 1999, Ngoc Linh (Kon Tum) Nature Reserve was established (Tordoff *et al.* 2000).

Following the establishment of Ngoc Linh (Kon Tum) Nature Reserve, FIPI and BirdLife International prepared a feasibility study for Ngoc Linh (Quang Nam) Nature Reserve, which recommended a total area of 18,430 ha for the nature reserve (Tordoff *et al.* 2000). This feasibility study was published in January 2000 and approved by Quang Nam Provincial People's Committee in April 2000. An investment plan will be prepared by FIPI and BirdLife in January 2001. If this investment plan is approved by the provincial people's committee and MARD, Ngoc Linh (Quang Nam) Nature Reserve will be established.

Topography and hydrology

Ngoc Linh (Quang Nam) proposed nature reserve is situated on the Kon Tum plateau, a montane isolate, which is separated by relatively long distances from other high altitude areas. The highest point in the proposed nature reserve is Mount Ngoc Linh (2,598 m), the highest point in the Central Highlands. Mount Ngoc Linh and surrounding mountains are connected to the Annamite (or Truong Son) Mountains by the Nam-Ngai-Dinh ridge, which forms the border between Kon Tum and Quang Nam provinces (Tordoff *et al.* 2000).

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There are two main river systems at the site: the Tranh river and the Leng river. The Tranh river, which originates in the south of the proposed nature reserve, flows north, becoming the Thu Bon river, one of the most important rivers in Quang Nam province. The Leng river, which originates in the north-west of the proposed nature reserve, is a tributary of the Tranh river. The river systems at the site are short, narrow, steep and fast flowing, and are, therefore, subject to erosion if forest cover is lost. In the rainy season, there are many sudden floods, which cause erosion of river banks and damage to irrigation schemes and other infrastructure. During the dry season, most watercourses are dry, with the exception of some larger streams and rivers. This presents a serious problem for local people with regard to agricultural production and domestic use of water (Tordoff *et al.* 2000).

Biodiversity value

Ngoc Linh (Quang Nam) proposed nature reserve supports high levels of endemism in plants and animals. The proposed nature reserve supports populations of several plant species that are endemic to Vietnam, including *Pinus dalatensis* and *Panax vietnamensis*. Also, Ngoc Linh (Quang Nam) supports a population of the recently discovered, endemic mammal species, Truong Son Muntjac *Muntiacus truongsonensis*, which is currently known from only two other protected areas in Vietnam. Furthermore, the known global range of one bird species, Golden-winged Laughingthrush *Garrulax ngoclinhensis*, is confined to Mount Ngoc Linh. As a result of the presence of Golden-winged Laughingthrush and three other restricted-range bird species, Ngoc Linh (Quang Nam) proposed nature reserve qualifies for inclusion in the Kon Tum Plateau Endemic Bird Area (EBA), the most recently discovered of Vietnam's four EBAs (Tordoff *et al.* 2000).

Ngoc Linh (Quang Nam) proposed nature reserve supports a continuum of natural habitat types from c.150 to 2,598 m, which is the longest altitudinal gradient of natural habitat types remaining in Vietnam. From 150 to 1,000 m, the proposed nature reserve supports lowland evergreen forest, with high diversity of tree species. Large areas of this vegetation type have been cleared for agriculture, particularly in the south of the proposed nature reserve, although levels of

disturbance in remaining areas are low. Between 1,000 and 1,700 m, lower montane evergreen forest is distributed. The tree flora is dominated by members of the Fagaceae, Lauraceae and Magnoliaceae, although several species of conifer are found in this vegetation type, including *Podocarpus imbricatus*, *P. neriifolius* and *Dacrydium elatum*. This vegetation type exhibits low levels of disturbance, with human impact limited to hunting and non-timber forest product (NTFP) collection. Above 1,700 m, upper montane evergreen forest is distributed. This vegetation type is characterised by members of the Fagaceae, Lauraceae and Ericaceae. In addition to these major vegetation types, small areas of mixed coniferous and broadleaf forest containing *Pinus dalatensis* are distributed above 1,700 m; elfin forest is distributed at the highest elevations along mountain ridges; and a range of secondary vegetation types are distributed close to human habitation (Tordoff *et al.* 2000).

Conservation issues

The overall level of human impact on the proposed nature reserve is moderately low. The average population density in the buffer zone communes is only 18 people per square kilometre, compared with 232 people per square kilometre for Vietnam as a whole. Agricultural practices appear to be largely sustainable: rates of conversion of forest to agriculture over the last 10 years are very low compared with other areas in the Central Highlands. However, clearance of forest for agriculture is likely to pose a formidable challenge to conservation in the future. This is likely to be driven by both natural population growth (based on the available data, the population growth rate in the buffer zone is 2.9% per annum) and settlement of migrants from other areas. If conservation is to be effective, strategies will need to be developed to address both of these factors. Therefore, conservation measures must focus on limiting natural population growth, and controlling the settlement of migrants into the south of Tra My district, particularly in the area of a new economic zone at Tac Po village, just outside of the buffer zone (Tordoff *et al.* 2000).

Other threats to biodiversity are hunting and over-exploitation of NTFPs. Rapid rural appraisal (RRA) data indicates that abundances of forest products, such

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as muntjacs, wild pigs and rattans, have declined over the past 10 years, suggesting that these products are being exploited at unsustainable levels. These threats could be mitigated by such measures as cultivating NTFPs, controlling the wildlife trade, promoting alternative sources of income and conducting conservation awareness activities (Tordoff *et al.* 2000).

Currently the site is under the management of Tra My District Forest Protection Department, and there is one forest guard station at the site. It is expected that the investment plan for Ngoc Linh (Quang Nam) will be completed and approved in early 2001 and that the nature reserve will be established before the end of 2001.

Other documented values

The principal economic value of the proposed nature reserve is watershed protection. Loss of forest cover could result in increased periods of drought, with negative repercussions for downstream communities, which depend upon rivers originating within the proposed nature reserve for irrigation and potable water. Forest at high elevations in the proposed nature reserve has a particularly important hydrological function as it can 'capture' moisture by condensation and contribute this to the total yield of the watershed. Conversely, the forests of Ngoc Linh (Quang Nam) are also likely to play an important role in alleviating the severity of flooding, by slowing surface water run-off. The importance of this function is highlighted by the two bouts of severe flooding that devastated parts of Quang Nam province in November and December 1999 (Tordoff *et al.* 2000).

Related projects

The United Nations Development Programme (UNDP), the United Nations Capital Development Fund (UNCDF), Quang Nam Provincial People's Committee and the Australian Agency for International Development (AusAID) are currently providing assistance for a rural infrastructure development project in Tra My district. The RIDU project is providing US\$50,000 of commune-level assistance to each of 14 participating communes, in the form of infrastructure development selected by local communities. Two communes (Tra Don and Tra Leng)

in the buffer zone of the proposed nature reserve are included in the project. Three other communes (Tra Linh, Tra Cang and Tra Tap) in the buffer zone are included in the 1,715 Poorest Communes Programme of the government of Vietnam (Tordoff *et al.* 2000).

Literature sources

Anon. (1994) [Investment plan for Ngoc Linh Nature Reserve, Kon Tum and Quang Nam-Da Nang provinces]. Hanoi: Forest Inventory and Planning Institute. In Vietnamese.

Anon. (1998) [Investment plan for Ngoc Linh Nature Reserve, Kon Tum province]. Hanoi: Forest Inventory and Planning Institute. In Vietnamese.

Eames, J. C., Le Trong Trai and Nguyen Cu (1999) A new species of laughingthrush (Passeriformes: Garrulacinae) from the Western Highlands of Vietnam. *Bull. Brit. Orn. Club* 119(1): 4-15.

Pham Mong Giao, Do Tuoc, Vu Van Dung, Wikramanayake, E. D., Amato, G., Arcander, P. and MacKinnon, J. R. (1998) Description of *Muntiacus truongsongensis*, a new species of muntjac (Artiodactyla: Muntiacidae) from central Vietnam. *Animal Conservation* 1: 61-68.

Quang Nam Provincial FPD (2000) [FPD questionnaire]. Tam Ky: Quang Nam Provincial Forest Protection Department. In Vietnamese.

Tordoff, A. W., Tran Hieu Minh and Tran Quang Ngoc (2000) [A feasibility study for the establishment of Ngoc Linh Nature Reserve, Quang Nam province, Vietnam](#). Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute. In Vietnamese.

Tordoff, A. W., Tran Hieu Minh and Tran Quang Ngoc (2000) [A feasibility study for the establishment of Ngoc Linh Nature Reserve, Quang Nam province, Vietnam](#). Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute.

Vietnam News (2000) Tra Mi bridges development gap with help from Australian govt. Vietnam News 31 October 2000.