Pu Huong Nature Reserve

Alternative site name(s)
Bu Huong, Phu Huong
Province(s)
Nghe An
Status
Decreed
Management board established
No
Latitude
19º15' - 19º29'N
Longitude
104º43' - 105º00'E
Bio-unit
10b - Northern Indochina

Conservation status

Pu Huong was included on Decision 194/CT of the Chairman of the Council of Ministers, dated 9 August 1986 (MARD 1997), which proposed establishing a 5,000 ha nature reserve for the conservation of forest containing the conifer *Fokienia hodginsii* (Cao Van Sung 1995). Pu Huong Nature Reserve is located in Que Phong, Quy Chau, Quy Hop, Tuong Duong and Con Cuong districts in central Nghe An province. The provincial land-use plan for 1993 classified an area of 34,409 ha in these five districts as Special-use and Watershed Protection Forest. Following a field survey in March 1995, FIPI and Nghe An Provincial FPD proposed incorporating this area within a 49,845 ha nature reserve (Anon. 1995). According to FPD (1998), an investment plan was prepared for the nature reserve and approved by Nghe An Provincial People's Committee in 1995. Pu Huong Nature Reserve is included on the 2010 list, which gives the area as 50,075 ha, including 35,939 ha of forest (FPD 1998).

Topography and hydrology

Pu Huong lies at the northern extent of the Annamite mountain range. The geology of Pu Huong is not known, although is likely to be made up of a mixture of the granite, rhyolite, schist and sandstone rocks found more widely within the area. Also, low-lying limestone hills are found to the north, east and south of the reserve. The topography of the nature reserve itself is steep and mountainous, and ranges in altitude from around 200 to 1,560 m. The nature reserve is dominated by a ridge of mountains, 950 to 1,560 m in elevation, which runs from north-west to south-east. The highest point in the nature reserve, Mount Phu Lon (1,560 m), is found at the north-western end of the ridge.

The ridge of mountains forms the border between the three districts to the north-east of the nature reserve and the two in the south-west. It also forms the boundary between the watershed of the Con (also called Hieu) river to the north and the Ca river to the south. These rivers eventually meet in southern Nghe An province, and form the main Vietnamese component of the greater Ca river basin, which also covers three provinces in Laos. Vietnam's fourth largest river basin by area, the Ca river drains into the sea near Vinh city.

Biodiversity value

Pu Huong Nature Reserve supports two main forest types, both of which have a small deciduous element: lowland evergreen forest and lower montane evergreen forest (Kemp and Dilger 1996). Lowland evergreen forest is distributed from 400 to 750 m. The forest edge

is heavily disturbed and dominated by members of the dipterocarps *Hopea mollissima* and *Vatica fleuryana*, while areas that were previously subjected to commercial timber extraction have now regenerated into mature forest. Lower montane evergreen forest is distributed at elevations above 750 m. In this forest type, disturbance is restricted to more accessible areas at lower elevations. With increasing altitude, tree species composition is increasingly dominated by members of the Juglandaceae, Fagaceae and Lauraceae. To date, 612 species of vascular plants have been recorded at Pu Huong, 30 of which are listed in the *Red Data Book of Vietnam*.

The fauna of Pu Huong is not well known, reflecting the relatively small amount of survey effort to date. The known butterfly fauna is small in comparison with that of nearby Pu Mat Nature Reserve: 117 species compared with 236 species (Kemp and Dilger 1996, Eve *et al.* 1998). Similarly, only five amphibian and 18 reptile species are known from the nature reserve (Kemp and Dilger 1996).

Kemp and Dilger (1996) recorded 148 bird species at Pu Huong, of which 10 are listed in the *Red Data Book of Vietnam*, and five are listed in *Birds to Watch 2*. Eighty four percent of the species recorded at Pu Huong have also been recorded at Pu Mat Nature Reserve, indicating a high degree of similarity between the avifaunas of the two areas (Round 1999).

Kemp and Dilger (1996) recorded a number of globally threatened large mammal species at Pu Huong, including Gaur *Bos gaurus* and Asian Elephant *Elephas maximus*. However, given the high hunting pressure in the area, and the fact that Pu Huong is isolated from other areas of natural habitat, any populations of these species that do remain are likely to be small, fragmented and of doubtful viability. Of more importance for conservation is the population of White-cheeked Gibbon *Hylobates leucogenys*, the occurrence of which was confirmed by Kemp and Dilger (1996). Providing that hunting of this species can be controlled, Pu Huong Nature Reserve contains sufficient suitable habitat to support a viable population of this species. Also of high conservation importance is the occurrence of Saola *Pseudoryx nghetinhensis*, recorded in 1995 on the basis of interviews and identification of specimens (Kemp *et al.* 1997).

Conservation issues

Like many other protected areas in Vietnam, much of the forest at Pu Huong Nature Reserve has been cleared or degraded by human activities. In the case of Pu Huong, this has been a result of selective timber extraction by local communities and clearance for agriculture. Commercial logging, which took place from the 1960s, also contributed to forest disturbance and loss, but this activity has since been halted. Timber extraction is now predominantly for household use, mostly construction (Kemp and Dilger 1996). Kemp *et al.* (1997) estimate that the total remaining area of dense forest at the site is less than 20,000 ha.

Hunting represents a major threat to biodiversity at Pu Huong, particularly to any populations of large mammal species that remain. Kemp and Dilger (1996) report that species of conservation concern, such as Saola and White-cheeked Gibbon, are regularly hunted.

Research on the wildlife trade in Pu Mat Nature Reserve suggests that regular road blocks and random stop checks on the main road east from Pu Huong (provincial road 548) has encouraged wildlife smugglers to begin taking animals out to the south, along National Highway 7 (K. Blazeby, pers. comm.). While it is not possible to conclusively determine the origin of wildlife confiscated along this road, it is highly likely that many animals are being collected in Pu Huong to meet the demand of national and international markets (Blazeby *et al.* 1999). Certainly, Kemp and Dilger (1996) reported the trapping of several reptile species, and that the area is "noted by locals for its abundance [of these animals]". They also reported the collection of Hill Myna *Gracula religiosa* chicks for the caged bird trade.

A management board for Pu Huong Nature Reserve has not been established, and there are currently no conservation activities taking place in the area apart from the normal activities of the district FPDs.

Other documented values

Pu Huong Nature Reserve has an important role in protecting the catchments of the Ca and Con rivers. The watershed protection functions of the forest at Pu Huong may have particular importance for local

communities with regard to reducing seasonality of stream flow, because the Pu Huong area receives considerably less precipitation than nearby areas. For instance, the Pu Huong area receives 800 to 1,000 mm of rainfall per year, while the Pu Mat area, 30 km to the south, receives 1,268 to 1,791 mm (Kemp *et al.* 1997).

Related projects

No information.

Literature sources

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