

MIZORAM

IN-MZ



Photo: M. Zaifan-ul-Isalam

Mizoram is very rich in bird life, where 275 species of birds have been recorded so far.

Mizoram (21° 57' - 24° 30' North and 92° 15' - 93° 26' East) located in the extreme southern part of northeastern India, has a geographical area of 21,081,00 ha (0.6% of India's geographical area). Mizoram is bounded on the north by Assam and Manipur, on the east and south by Myanmar and on the west by Bangladesh and Tripura. The terrain is hilly and mostly undulating with the average altitude ranging from 500 to 800 m and the maximum reaching 2,157 m in the Blue Mountains. The Kolodyna (Chhimtuipui), Tlawng (Dhaleswari) and Tuivai (Tipai) are the major rivers in the State. A small stretch of the Barak river also passes through Mizoram.

Mizoram literally translated means 'the land of highlanders'. The Britishers used to call it the Lushai Hills District. In 1954, the name was changed to Mizo Hills District. In 1972, when it was declared a Union Territory, it was named Mizoram. It became the 23rd State of the Indian Union on February 20, 1987.

The Mizos belong to the Mongoloid race. They seem to have settled at first in the Shan State of Burma (Myanmar). The tribes left Burma and moved westwards into India. They occupied the Lushai Hills. During the British rule, the Mizos raided British territories, but the British defeated them and usurped their land. In 1898, the entire Mizo territory was formed into the Lushai Hills District and made a part of Assam and became a district of Assam. According to the Year Book, the historic Mizoram Peace Accord was signed on June 30, 1986 between the Government of India and the Mizo National Front ending the two-decade old insurgency. Missionaries helped the tribals achieve a high literacy rate and now they speak Mizo and English. The Chakmas are Buddhists and speak Chakma language. Other tribes are Pawis (Lai), Lakhers (Mara), Hmars and Reangs.

Mizoram's climate ranges from moist tropical to moist subtropical. The average annual rainfall ranges from 2,160 mm in Aizawl to 3,500 mm in Lunglei. During winter, the temperature varies from 22 °C to 24 °C and in summer from 18 °C to 29 °C. The Tropic of Cancer passes through the middle of the State.

The total human population of the State is 0.89 million of which 54% is rural (2001 Census). The tribal population constitutes about 94.7% of the total population (2001 Census). The average population density of this sparsely populated State is 42 persons per sq. km.

Vegetation

As per the Forest Survey of India report of 2001, Mizoram ranks third amongst the states both in terms of forest cover and percentage of the State's geographical area. Mizoram has three major forest types, Tropical Wet Evergreen, Tropical Moist Deciduous and Subtropical Pine Forests (Ministry of Environment and Forest 2001).

The recorded forest area of the State is 15,935,00 ha constituting 75.6% of the total geographical area of the State and 2.1% of the Indian forest Area (Ministry of Environment and Forest 2001). As per the Forest Survey of India report of 2001, the reserved forest constitutes 7,127,00 ha (44.7%), protected forest 3,568,00 ha (22.4%) and unclassified forest 5,240,00 ha (32.9%). In the same FSI report of 2001, dense forest in the State is 8,936,00 ha (42.4%), open forest is 8,558,00 ha (40.6%) and non-forested area is 17.0% (Ministry of Environment and Forest 2001).

IBAs AND PROTECTED AREAS

Mizoram is rich in wild flora and fauna, both in variety and abundance. About 88,400 ha of the forest area, constituting 3% of the geographical area of the State is under two national parks and four wildlife sanctuaries (Rodgers *et al.* 2000). Dampa is a Tiger Reserve.

Number of IBAs and IBA criteria

A1= Threatened species; A2= Restricted Range species; A3= Biome species; A4= Congregatory species

IBAs of Mizoram

IBA site code	IBA Site names	IBA criteria
IN-MZ-01	Blue Mountain (Phawngpui) National Park	A1, A2
IN-MZ-02	Dampa Tiger Reserve	A2
IN-MZ-03	Lengteng Wildlife Sanctuary	A1, A2
IN-MZ-04	Murlen National Park	A1, A2
IN-MZ-05	Ngengpui Wildlife Sanctuary	A3
IN-MZ-06	Palak Lake	A3

AVIFAUNA

Mizoram is very rich in bird life. Pradhan (2002) has listed 210 species, mainly based on his studies of the Murlen National Park and Dampa Tiger Reserve between 1991 and 1995. While the Centre for Environment Protection (undated) claims that so far 275 species of birds from 39 families have been recorded. However, A. U. Choudhury (*pers. comm.* 2003) listed 422 species and the number is increasing after every visit. Wreathed Hornbill *Aceros undulatus*, Rufous-necked Hornbill *A. nipalensis*, Great Pied Hornbill *Buceros bicornis*, Brown Hornbill *Anorrhinus tickelli*, and Oriental Pied Hornbill *Anthracoceros albirostris* are found in Mizoram.

Similar to the more famous Jatinga in Assam, where large number of birds are killed when they are attracted towards artificial lights (Gee 1964; Choudhury 1996, 2000), in the Lunglei district of Mizoram also, many birds die in the night after hitting walls of a buildings. Rao and Zoramthanga (1978) found that this occurs in September and October during the period when the area receives late rains and the sky is over-cast, with fog and mist. Annually, between 300 to 500 birds are killed just in one house. Interestingly, most of the species are resident such as Moorhen *Gallinula chloropus*, Grey-fronted Green Pigeon *Treron pompador*, Emerald Dove *Chalcophaps indica*, Indian Three-toed Kingfisher *Ceyx erithacus*, Ruddy Kingfisher *Halcyon coromanda*, Hooded Pitta *Pitta sordida*, Drongo-Cuckoo *Surniculus lugubris* and Cuckoo *Cuculus canorus*.

List of threatened birds with IBA site codes

Vulnerable		
Blyth's Tragopan	<i>Tragopan blythii</i>	IN-MZ-01
Mrs. Hume's Pheasant	<i>Symaticus humiae</i>	IN-MZ-01, 03, 04
Dark-rumped Swift	<i>Apus acuticauda</i>	IN-MZ-01, 03
Near Threatened		
White-cheeked Hill-Partridge	<i>Arborophila atrogularis</i>	IN-MZ-04



THREATENED BIRDS FOR WHICH MIZORAM IS VERY IMPORTANT

Mizoram has good habitats for many threatened species such as the Blyth’s Tragopan *Tragopan blythii*, Mrs. Hume’s Pheasant *Symaticus humiae*, Dark-rumped or Khasi Hills Swift *Apus acuticauda* and Rufous-necked Hornbill *Aceros nipalensis*.

Blyth’s Tragopan *Tragopan blythii* Vulnerable

This species qualifies as Vulnerable because its total population is believed to be small and declining, and is scattered in small subpopulations within a severely fragmented range. Widespread high levels of hunting and continuing habitat destruction will inevitably exacerbate this situation (BirdLife International 2001). In Mizoram, it has been reported from the Blue Mountain National Park (Phwangpui National Park), (Kaul *et al.* 1996, Katju 1996, Ghose and Thanga 1998).

Mrs. Humes Pheasant *Symaticus humiae* Vulnerable

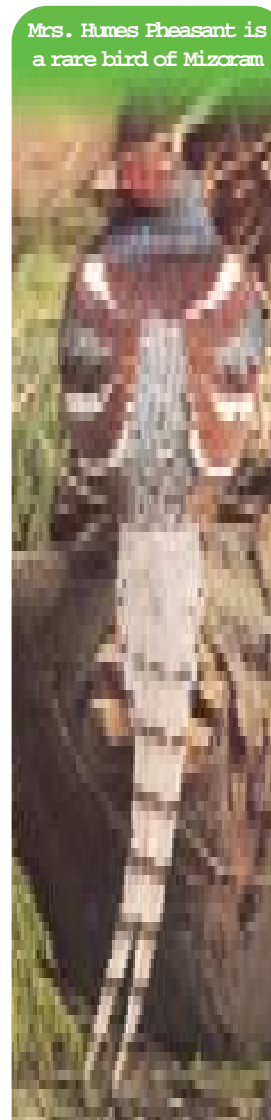
This species appears to have been reduced to a small population, which has become increasingly fragmented. Although its status remains virtually unknown across a substantial proportion of its historic range in Myanmar, habitat loss and hunting continue to be as major threats throughout. It therefore qualifies as Vulnerable (BirdLife International 2001). In Mizoram, this bird has been reported from the Lengteng Wildlife Sanctuary, Murlen National Park, (Robertson 1995, Katju 1996, Kaul *et al.* 1996) and Blue Mountain National Park (Ghose 2000).

Dark-rumped or Khasi Hills Swift *Apus acuticauda* Vulnerable

This poorly known swift qualifies as Vulnerable owing to its very small population. The discovery of new breeding colonies and identification of possible threats would necessitate a reassessment of its threatened status (BirdLife International 2001). In the recent surveys (funded by IBCN) in Mizoram and Meghalaya, a breeding population was found in the Blue Mountain National Park (Ahmed 2003).

Restricted Range species

Mizoram falls in the Endemic Bird Area of Eastern Himalayas (EBA 130), which has Subtropical Hill Forest, Temperate Forest, and Subalpine Forest, where many of the restricted range species of this EBA are found such as the Blyth’s Tragopan, Dark-rumped Swift, Grey Sibia *Heterophasia pulchella*, and White-naped Yuhina *Yuhina bakeri*. The main threats to the habitats of these birds are moderate habitat loss (e.g., due to logging, agriculture, overgrazing) and hunting (Stattersfield *et al.* 1998).



Endemic Bird Area 130: Eastern Himalayas		
Blyth’s Tragopan	<i>Tragopan blythii</i>	IN-MZ-01
Dark-rumped Swift	<i>Apus acuticauda</i>	IN-MZ-01, 03
Striped Laughingthrush	<i>Garrulax virgatus</i>	IN-MZ-01
Brown-capped Laughingthrush	<i>Garrulax austeni</i>	IN-MZ-01
Grey Sibia	<i>Heterophasia pulchella</i>	IN-MZ-01, 04
White-naped Yuhina	<i>Yuhina bakeri</i>	IN-MZ-01, 04
Black-browed Leaf Warbler	<i>Phylloscopus cantator</i>	IN-MZ-02

Biomes

They are Biome-7 (Sino-Himalayan Temperate Forest), with key habitats of Broadleaf Evergreen Forest, Broadleaf Deciduous, Mixed Broadleaf-Coniferous and Coniferous Forest and Montane Grassland, Biome-8 (Sino-Himalayan Subtropical Forest) which has Lower Montane Rain Forest, Hill Evergreen Forest and Pine Forest as key habitats, and Biome-9 (Indo-Chinese Tropical Moist Forest) which has Lowland Evergreen Rain Forest, Semi-Evergreen Rain Forest and Moist Deciduous Forest. A total of 225 species are present in these three biomes, according to the BirdLife International (undated). As we do not have a complete checklist of Mizoram, we do not know how many biome species are found in the State.

THREATS AND CONSERVATION ISSUES

Mizoram also have similar problems as the other northeastern states, such as poaching of birds and other biodiversity, tree felling, fuelwood collection, and unsustainable shifting (*jhum*) cultivations. For example, the Blue Mountain National Park is surrounded by human habitation. Secondly, its location on the international border aggravates the poaching problem as poachers from Myanmar frequently raid this area, although poaching has reduced since the area was declared a national park. All around the Park, *jhum* cultivation is practised. Villagers set fire to the vegetation, and the fires sometimes spread to the Park. Firewood collection is another age-old practice still continuing in the Park, although it is now reduced. During the IBCN-funded surveys on the Khasi Hills (or Dark-rumped) Swift, it was reported that the cliffs located inside the Park are possible breeding sites of this Swift. It is also necessary to study the ecology and habitat

Threats to IBAs

A=Agriculture intensification/expansion; B=Dams/Dykes; C=Disturbance to Birds; D=Firewood Collection;
E=Industrialisation/Urbanisation; F=Unsustainable exploitation; G=Others; H=Natural Events

requirements of this Vulnerable species, as the Blue Mountain National Park could be the second most important site in India, following Cherrapunji in Meghalaya, for this globally threatened species.

In the Dampa and Lengteng wildlife sanctuaries, all the villages surrounding these sites practice slash and burn shifting cultivation (Raman 1995), and there are always chances of the fire spreading to the sanctuaries during the burning season.

The Murlen National Park, which contains some of the higher known hills of Mizoram, constitutes an important region that has apparently not been given adequate attention by the Government. In terms of conservation of the Mrs. Hume's Pheasant and possibly the Blyth's Tragopan, this site is of high conservation value and needs better protection (Kaul *et al.* 1996).

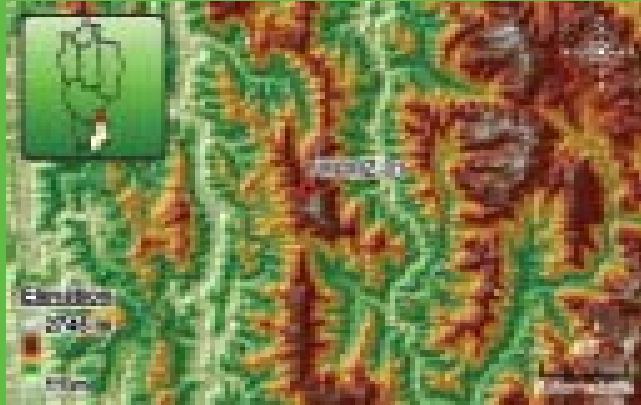
The Palak Lake also has jhum cultivation in its surrounding areas. The inter-village trail that surrounds it makes it vulnerable to disturbance. Apart from habitat degradation by *jhumming*, cane extraction, and occasional tree felling, hunting for larger vertebrates and birds are constant threats to this IBA.

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MZ-01

BLUE MOUNTAIN (PHAWNGPUI) NATIONAL PARK

	IBA Site Code	: IN-MZ-01
	State	: Mizoram
	District	: Saiha
	Coordinates	: 22° 38' 60" N, 93° 01' 60" E
	Ownership	: State
	Area	: 5,000 ha
	Altitude	: 1,360 - 2,157 m
	Rainfall	: >2,000 mm
	Temperature	: 2 °C to 35 °C
	Biogeographic Zone	: North-East
	Habitats	: Tropical Wet Evergreen Forest, Sub Tropical Broadleaf Hill Forest

IBA CRITERIA: A1 (Threatened Species) , A2 (Endemic Bird Area 130: Eastern Himalayas)

PROTECTION STATUS: National Park, established in July 1997

GENERAL DESCRIPTION

The Blue Mountain (Phawngpui) National Park is located in southeastern Mizoram. The Kolodyne river flows along the eastern side of the Park and also forms the international border with Myanmar. Eastward, beyond Kolodyne River lie the Chin Hills of Myanmar. The highest point in Mizoram, Phawngpui Peak (2,157 m), is located within this Park. Most of the Park is covered with Sub-tropical Broadleaf and Tropical Evergreen forests. There are some cliffs and patches of natural grasslands on the tableland near Farpak. The Park is surrounded by villages on all sides and is an isolated refuge for wildlife.

AVIFAUNA

Though the Blue Mountain Park is a small protected area, it supports very rich bird life. Kaul *et al.* (2001) have reported more than 125 species of birds from this site, and more are likely to occur.

A survey on status of Mrs. Hume's Pheasant *Syrmaticus humiae* carried out by Choudhury (2002) reveals that this species is still widely distributed in the higher hills of eastern Mizoram. There is no report from the lower western hilly tracts. Phawngpui National Park is the known westernmost locality for this species. It is considered Vulnerable by BirdLife International (2001) as it has a small, fragmented, decreasing population. Its status remain virtually unknown across a substantial portion of its historic range in Myanmar, while habitat loss and hunting continue to be major threats all over its range. This IBA site is extremely important for the survival of Mrs. Hume's Pheasant in India. It also has good populations of Blyth's Tragopan *Tragopan blythii* (Kaul *et al.* 2001), another Vulnerable species according to BirdLife International (2001).

Perhaps the most important sighting in this Park is that of the globally threatened Dark-rumped Swift *Apus acuticauda*, also called Khasi Hill Swift. Ahmed *et al.* (2001) saw five birds in August 2001. Four individuals were sighted by Kazmierczak (quoted in BirdLife International 2001, p. 1784) in March 1998. Earlier, during March to May 1953, six specimens were collected in the Lushai hills (BirdLife International 2001). The Dark-rumped Swift is one of nine threatened members of the suite of 21 bird species that are entirely restricted to the "Eastern Himalayas Endemic Bird Area" (Stattersfield *et al.* 1998).

This site falls in the Eastern Himalayas Endemic Bird Area (Stattersfield *et al.* 1998) in which 21 restricted range species have been identified by BirdLife International (undated). Besides the Vulnerable Blyth's Tragopan, which is also endemic to this EBA, four more restricted range species have been identified from this site (Kaul *et al.* 2001): Striped Laughingthrush *Garrulax virgatus*, Brown-capped Laughingthrush *G. austeni*, Grey Sibia *Heterophasia gracilis* and White-naped Yuhina *Yuhina bakeri*. No information is available on their abundance and population estimates.

The altitude of Blue Mountain NP varies from 1,300 m to >2,000 m, covering two biomes: Sino-Himalayan Subtropical Forest

Dark-rumped Swift *Apus acuticauda* in seen in this IBA.



Photo: M. Firoz Ahmed

Grassland near Farpak on the top of Phawngpui (Blue Mountains) National Park.



MZ-01

Photo: Anwaruddin Choudhury

(Biome-8) and Indo-Chinese Tropical Moist Forest (Biome-9). Kaul *et al.* (2001) listed 19 species of Biome-8, and 12 of Biome-9. They also found White-cheeked Hill Partridge *Arborophila atrogularis* and Purple Cochoa *Cochoa purpurea* of other biomes.

Vulnerable	
Blyth's Tragopan	<i>Tragopan blythii</i>
Mrs. Hume's Pheasant	<i>Syrnaticus humiae</i>
Dark-rumped Swift	<i>Apus acuticauda</i>
Endemic Bird Area 130: Eastern Himalayas	
Blyth's Tragopan	<i>Tragopan blythii</i>
Dark-rumped Swift	<i>Apus acuticauda</i>
Striped Laughingthrush	<i>Garrulax virgatus</i>
Brown-capped Laughingthrush	<i>Garrulax austeni</i>
Grey Sibia	<i>Heterophasia gracilis</i>
White-naped Yuhina	<i>Yuhina bakeri</i>

OTHER KEY FAUNA

Despite its small size, the Park has almost all the mammals found in the forests of Mizoram, such as Slow Loris *Nycticebus coucang*, Tiger *Panthera tigris*, Leopard *P. pardus*, Leopard Cat *Prionailurus bengalensis*, Serow *Nemorhaedus sumatraensis*, Goral *N. goral* and Asiatic Black Bear *Ursus thibetanus*. Among the non-human primates, Stump-tailed Macaque *Macaca arctoides*, Hoolock Gibbon *Hylobates hoolock* and Capped Langur *Trachypithecus pileatus* are found. There is no substantial information on reptiles, amphibians, fish and invertebrates.

LAND USE

- ☐ Nature reserve
- ☐ Watershed
- ☐ *Jhum* cultivation

THREATS AND CONSERVATION ISSUES

- ☐ Poaching
- ☐ Tree felling
- ☐ *Jhum* cultivation on the fringe

Blue Mountain NP is quite small and surrounded by human habitation. Its location on the international border gives it a special status. Poaching still continues, but on a reduced scale after declaration of the area as protected.

All around the Park, *jhum* cultivation (slash-and-burn shifting cultivation) is practiced. Villagers set fire to vegetation, and the fires sometimes spread to the Park. Firewood collection is another age-old practice still continuing in the Park, although it has been reduced.

The cliffs located inside the Park need to be surveyed during summer months to confirm the existence and possible breeding of Dark-rumped Swift. It is also necessary to study the ecology and habitat requirements of this Vulnerable species, as Blue Mountains NP could be the second most important site in India, following Cherrapunji in Meghalaya, for this globally Threatened species.

KEY CONTRIBUTORS

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MZ-02

DAMPA TIGER RESERVE



IBA Site Code	: IN-MZ-02
State	: Mizoram
District	: Mamit
Coordinates	: 23° 38' 43" N, 92° 25' 02" E
Ownership	: State
Area	: 50,000 ha
Altitude	: 500 – 1,100 m
Rainfall	: 2,000 – 2,500 mm
Temperature	: 3 °C to 35 °C
Biogeographic Zone	: North-East
Habitats	: Moist Deciduous Forest, Tropical Wet Evergreen Forest, Tropical Semi-evergreen Forest, Tropical Grassland

IBA CRITERIA: A2 (Endemic Bird Area 130: Eastern Himalayas)
PROTECTION STATUS: Tiger Reserve, established in March 1985

GENERAL DESCRIPTION

Dampa Tiger Reserve is situated in Mizoram on the international border with Bangladesh. It is the largest protected area in Mizoram. The forest within the reserve is like an island surrounded by extensive bamboo tracts (Birand and Pawar 2001). The landscape is undulating, with hills running from north to south. Small, perennial rivulets flow all over the Reserve. The noteworthy rivers of the site are Teirei, Keisalam, Seling, Saza and Aivapui. The reserve consists of moist deciduous forests in the lower reaches and evergreen and semi-evergreen forests with natural grasslands at higher altitudes. There are large tracts of secondary forest in the landscape dominated by bamboo brakes and regenerating fallow *jhum* land.

Dampa has one of the last remaining low to mid-elevation forests in western Mizoram. There is very little contiguity of woody forest. It is a biodiversity hotspot with a variety of flora and fauna of Indo-Malayan origin.

AVIFAUNA

Kaul *et al.* (1996) recorded 92 species of birds but now the total number recorded from the area has risen to 237, of which 148 are

forest species. Over 217 species of birds were documented during an IBA survey of the area (Birand and Pawar 2001).

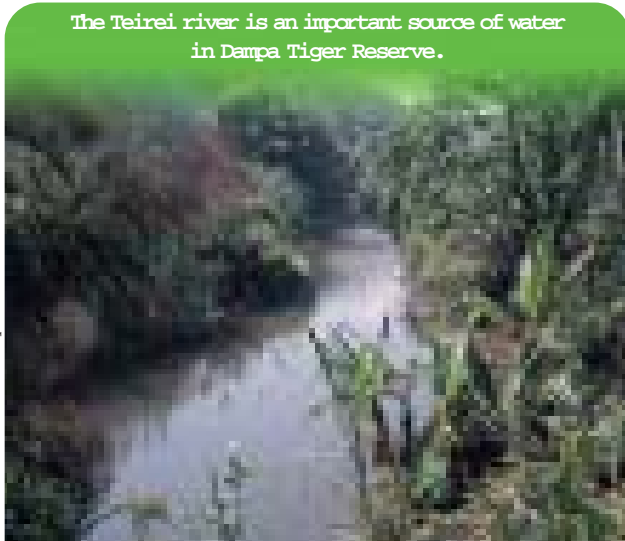
Dampa TR is the only area in the northeast where there has been an ecological study on bird communities (Raman *et al.* 1998). The forest bird community is represented by species such as the Great Hornbill *Buceros bicornis*, Wreathed Hornbill *Aceros undulatus*, Grey Peacock Pheasant *Polyplectron bicalcaratum*, Red-headed Trogon *Harpactes erythrocephalus*, Mountain Imperial Pigeon *Ducula badia*, Long-tailed Broadbill *Psarisomus dalhousiae*, White-rumped Shama *Copsychus saularis*, Striped Tit Babbler *Macronous gularis*, White-bellied Yuhina *Yuhina zantholeuca*, Nepal Fulvetta *Alcippe nipalensis*, Black-naped Monarch *Hypothymis azurea*, and Velvet-fronted Nuthatch *Sitta frontalis* (Birand and Pawar 2001). Interestingly, the Oriental Pied Hornbill *Anthracoceros albirostris*, though seen mainly along riparian and secondary forest habitats in other areas, is apparently more forest restricted here.

Although the dominant cover in these hills is bamboo, very few of the bird species are specialists of this habitat. Only Yellow-bellied Warbler *Abrosopus superciliosus*, Rufous-capped Babbler *Stachyris ruficeps*, Puff-throated Babbler *Pellorneum ruficeps* and Brown-cheeked Fulvetta *Alcippe poioicephala* were seen in bamboo (Birand and Pawar 2001).

Birand and Panwar (2001) found that in the 50,000 ha Dampa, there are proportionally higher number of forest bird species of higher altitude affinities, compared to other similar areas (e.g. Ngengpui WLS and Palak WLS – both IBAs). This is, perhaps, because the forest here has been preserved across a wider altitudinal range, which allows more species to survive in the landscape.

The Black-browed Leaf Warbler *Phylloscopus cantator*, a restricted range species, is also found here (Kaul *et al.* 1996). This species is confined to the Eastern Himalayas Endemic Bird Area (Stattersfield *et al.* 1998).

The Dampa Tiger Reserve is a good representative of the bird fauna of Indo-Chinese Tropical Moist Forest (Biome-9).



The Teirei river is an important source of water in Dampa Tiger Reserve.

Photo: Anwaruddin Choudhury

Endemic Bird Area 130: Eastern Himalayas

Black-browed Leaf-Warbler *Phylloscopus cantator*

A panoramic view of Dampa, the largest protected area in Mizoram.



MZ-02

Photo: Anwaruddin Choudhury

OTHER KEY FAUNA

As the name indicates, Dampa Tiger Reserve was established under Project Tiger to conserve Tiger *Panthera tigris* and its habitats. However, according to the census figures of the Forest Department, the Tiger population is very low. Only six were reported in 1996 (Jain 2001). The other predators are the Leopard *Panthera pardus*, Clouded Leopard *Neofelis nebulosa* and Wild Dog *Cuon alpinus*. Dampa also has a small population of Asian Elephant *Elephas maximus*. Dampa is one of the two IBAs where the highest diversity of primates in India has been recorded (Choudhury 2001). Notable ones are the Hoolock Gibbon *Hylobates hoolock*, Phayre's Leaf Monkey *Trachypitecus phayrei*, and Slow Loris *Nycticebus coucang*. Binturong or Bear Cat *Arctictis binturong* is a nocturnal animal of dense forests, hence difficult to see, but it is said to be present in Dampa.

The site is extremely important for amphibians and reptiles. Twenty species of amphibians, mainly frogs, and 43 species of reptiles, including 16 species of lizards are reported from this site (Pawar and Birand 2001). Some of the interesting species from the taxonomic, distribution or conservation point of view are Red-eyed Shortleg *Leptobrachium smithi*, Plain Tree Toad *Pedostibes kempi*, Flat-backed Japalura *Japalura planidorsata* and Keeled Box Turtle *Pyxidea mouhotii* (Pawar and Birand 2001). In forest streams of Dampa, three species of Stream Frogs are found: Daniel's Oriental Stream Frog *Rana danieli*, Brown-backed Oriental Stream Frog *Rana leptoglossa*, Greater Green-backed Oriental Stream Frog *Rana livida*.

LAND USE

- ☐ Nature conservation and research

THREATS AND CONSERVATION ISSUES

- ☐ Poaching
- ☐ Tree felling and bamboo collection
- ☐ Forest fire
- ☐ *Jhum* cultivation
- ☐ Firewood and NTFP collection

All the villages surrounding the Tiger Reserve practice slash and burn shifting cultivation (Raman 1995), and there is always the threat of fire in the Reserve during the burning season. The sudden increase in insurgency activity threatens the security of the Reserve staff. Funds and staff to manage the reserve are inadequate. There is some pressure from peripheral villagers for non-timber forest produce and firewood (Jain 2001).

The inaccessible areas are well protected. If the protection remains strong, the extensive bamboo tracts will ultimately give way to woody forests (Raman *et al.* 1998).

KEY CONTRIBUTORS

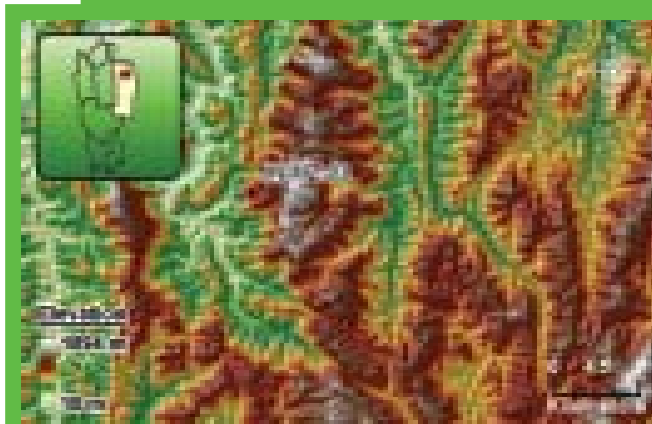
Ayeshgul Birand, Samrat Pawar, and Anwaruddin Choudhury

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MZ-03

LENGTENG WILDLIFE SANCTUARY



IBA Site Code	: IN-MZ-03
State	: Mizoram
District	: Champhai
Coordinates	: 23° 49' 60" N, 93° 13' 00"E
Ownership	: State
Area	: 12,000 ha
Altitude	: 400 - 2,141 m
Rainfall	: >2,000 mm
Temperature	: 2 °C to 35 °C
Biogeographic Zone	: North-East
Habitats	: Tropical Wet Evergreen Forest, Tropical Semi-evergreen Forest, Subtropical Broadleaf Hill Forests

IBA CRITERIA: A1 (Threatened Species), A2 (Endemic Bird Area 130: Eastern Himalayas)

PROTECTION STATUS: Wildlife Sanctuary, established in April 1999

GENERAL DESCRIPTION

Lengteng Wildlife Sanctuary lies in the eastern part of Mizoram, north of Murlen National Park (another IBA). The total area of the Sanctuary is 8,000 ha, and the elevation ranges from 400 m to 2,141 m. The second highest peak in Mizoram is in this IBA. Intact Tropical Evergreen and Sub-tropical Broadleaf Forests are found. This IBA is the habitat for many species of Indo-Malayan origin.

The Sanctuary lies close to the Indo-Myanmar border and is significant because of its proximity to the Chin Hills. The nearest town is Ngopa.

AVIFAUNA

Information on the avifauna of this Sanctuary is inadequate. The Sanctuary is close to the Murlen National Park, so most of the common species found in Murlen are also found here.

This site falls in the Eastern Himalayas Endemic Bird Area in which 21 restricted range species have been identified. In the adjoining Murlen NP, two restricted range species (Grey Sibia *Heterophasia gracilis* and White-naped Yuhina *Yuhina bakeri*) were identified by Kaul *et al.* (2001). These species are likely to occur in this IBA also.

As the habitat in Lengteng WLS is relatively intact, large numbers of Biome-8 (Sino-Himalayan Subtropical) and Biome-9 (Indo-Chinese Tropical Moist Forest) bird species are likely to occur, as they occur in the adjoining Murlen NP. There are cliffs, which are haunt of Dark-rumped Swift *Apus acuticauda* and also mammals such as Goral *Nemorhaedus goral*.

Four species of pheasants are found in this IBA: Grey Peacock Pheasant *Polyplectron bicalcaratum*, Red Junglefowl *Gallus gallus* Mrs. Hume's Pheasant *Syrmaticus humiae* and Kaleej Pheasant *Lophura leucomelanos*. Only Mrs. Hume's Pheasant is globally threatened (BirdLife International 2001). Its status remains virtually unknown across its historic range in Myanmar, while hunting and habitat loss continue to be major threats throughout its range. According to Choudhury (2002), this bird is still widely distributed in Lengteng, above 850 m. In Mizoram, its habitat is largely secondary evergreen forest with grass. It occurs from Tropical Wet Evergreen Rain Forests to Subtropical Broadleaf Forests. Because of lower latitude in Mizoram, the tropical forest occurs up to 1500 m elevation. Between Lamzawl and Lengteng,

Mrs. Hume's Pheasant haunts the edges of abandoned *jhum* (shifting) cultivation (Choudhury 2002). Lengteng Wildlife Sanctuary and Murlen National Park are perhaps the most important protected areas for this species in India (Choudhury, A. U. *pers. comm.* 2003).

The Mountain Bamboo Partridge *Bambusicola fytchii* is very common, sometimes seen near villages also (Choudhury 2002). Lengteng is one of the last remaining strongholds of the Great Pied Hornbill *Buceros bicornis* in Mizoram.

Vulnerable	
Mrs. Hume's Pheasant	<i>Syrmaticus humiae</i>
Dark-rumped Swift	<i>Apus acuticauda</i>
Endemic Bird Area 130: Eastern Himalayas	
Dark-rumped Swift	<i>Apus acuticauda</i>

OTHER KEY FAUNA

Almost all mammal elements found in the forest of Mizoram are seen in Lengteng, such as Slow Loris *Nycticebus coucang*, Tiger *Panthera tigris*, Leopard *Panthera pardus*, Leopard Cat *Prionailurus bengalensis*, Serow *Nemorhaedus sumatraensis* and Asiatic Black Bear *Ursus thibetanus*. Among the non-human primates, Stump-tailed Macaque *Macaca arctoides*, Assamese Macaque *M. assamensis*, Hoolock Gibbon *Hylobates hoolock* and Capped Langur *Trachypithecus pileatus* are found.

Asian Brown Tortoise *Manouria emys* is becoming rare due to over-harvesting (Choudhury 2004).

LAND USE

- ☐ Nature conservation
- ☐ Cultivation (*jhum*)
- ☐ Water catchment

THREATS AND CONSERVATION ISSUES

- ☐ Poaching
- ☐ Tree felling
- ☐ *Jhum* on fringes

The major problem of this Sanctuary is that the staff strength is very low, resulting in tree cutting and poaching on the fringes.

Lengteng is the second highest peak in Mizoram after the Blue Mountains.
The *jhum* in the foreground is a major conservation issue in the IBAs of Mizoram.



MZ-03

Jhum cultivation is practiced all around the Sanctuary. Villagers burn the forests to clear land for cultivation. Sometimes, these fires spread to the Sanctuary. Poaching of large mammals and birds is a persistent problem. The original area of the Sanctuary was 120,000 ha but due to pressure from the community, it was reduced to 8,000 ha. The remaining area is equally rich with primary forest and efforts should be made to include the same in the Sanctuary (A. U. Choudhury *pers. comm.* 2003).

KEY CONTRIBUTOR

Anwaruddin Choudhury

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MZ-04

MURLEN NATIONAL PARK



IBA Site Code	: IN-MZ-04
State	: Mizoram
District	: Champhai
Coordinates	: 23° 41' 20" N, 93° 19' 53" E
Ownership	: State
Area	: 20,000 ha
Altitude	: 400 - 1,700 m
Rainfall	: >2,000 mm
Temperature	: 5 °C to 35 °C
Biogeographic Zone	: North-East
Habitats	: Tropical Wet Evergreen and Tropical Semi-evergreen Forest

IBA CRITERIA: A1 (Threatened Species), A2 (Endemic Bird Area 130: Eastern Himalayas)
PROTECTION STATUS: National Park, established in July 1991

GENERAL DESCRIPTION

The Murlen National Park is situated c. 220 km east of Aizawl, the capital of Mizoram. This Park lies close to the Indo-Myanmar border and is significant for its proximity to the Chin Hills. Large tracts of relatively undisturbed Tropical Evergreen/Semi-evergreen forests are to be found in the Park. Some areas of primary and secondary forest growth also lie outside the Park boundary. A jeepable track links the Park (Kaul *et al.* 2001) to Champai, the nearest town. There are two main villages, Vapar and Murlen, close to the Park border. Although the original proposed sanctuary areas was 20,000 ha, it was reduced to 15,000 ha at the time of finalisation due to opposition from villagers of Murlen (A. U. Choudhury *pers. comm.* 2003).

AVIFAUNA

More than 150 species of bird have been identified by Kaul *et al.* (2001) from this site. Murlen NP is located in a region which is considered Eastern Himalayas Endemic Bird Area. In this EBA, 21 restricted range or endemic species have been identified by BirdLife International (undated). The Grey Sibia *Heterophasia gracilis* and White-naped Yuhina *Yuhina bakeri*, two restricted range species, have been seen (Kaul *et al.* 2001) but more are likely to occur. Therefore, this IBA qualifies A2 criteria.

However, the most important species for which this site has been selected is the Mrs. Hume's Pheasant *Syrnaticus humiae*. According to Choudhury (2002), Champhai and Saiha are the main districts in Mizoram where this species occurs. Champhai district alone accounts for about 61% (about 800 sq. km) of the total potential habitat. Choudhury (2002) recorded this species from 12 new sites in Mizoram.

Kaleej Pheasant *Lophura leucomelanos* and Grey Peacock Pheasant *Polyplectron bicalcaratum* are the two common pheasants in this IBA. Kaul *et al.* (1996) encountered them frequently all over the Park. The Hill Partridge *Arborophila torqueola* and Rufous-throated Partridge *A. rufogularis* are also common. The Mountain Bamboo Partridge *Bambusicola fytchii* (Choudhury 2002) is very common, sometimes seen near villages also.

A globally threatened species that is likely to occur in this IBA is the Dark-rumped or Khasi Hills Swift *Apus acuticauda*. Although none were seen during a recent survey, Ahmed *et al.* (2001) found good potential habitats for this species. They found a number of

Apus pacificus and *Apus apus*, but no *Apus acuticauda*. A cliff located inside the evergreen patch of forest, however, needs to be surveyed during April-May as it seems to be a potential habitat for Dark-rumped Swift (Ahmed *et al.* 2001). The name Murlen means *place of swifts* in the Mizo language.

BirdLife International (undated) has listed 95 bird species in Biome-8 (Sino-Himalayan Subtropical Forest). According to Kaul *et al.* (2001), 34 species of Biome-8 are found here. However detailed study may reveal more species of this biome, and other biomes. For example, in Biome-9 (Indo-Chinese Tropical Moist Forest), BirdLife International (undated) has listed 19 species, of which four have been identified from this IBA.

Vulnerable	
Mrs. Hume's Pheasant	<i>Syrnaticus humiae</i>
Near Threatened	
White-cheeked Hill-Partridge	<i>Arborophila atrogularis</i>
Endemic Bird Area 130: Eastern Himalayas	
Grey Sibia	<i>Heterophasia gracilis</i>
White-naped Yuhina	<i>Yuhina bakeri</i>

OTHER KEY FAUNA

The major mammals of Murlen NP are the Barking Deer *Muntiacus muntjak*, Sambar *Cervus unicolor*, Wild Boar *Sus scrofa*, Malayan Giant Squirrel *Ratufa bicolor*, Hoary-bellied Squirrel *Callosciurus pygerythrus*, Pallas's Squirrel *C. erythraeus*, Capped Langur *Trachypithecus pileatus*, Assamese Macaque *Macaca assamensis*, Stump-tailed Macaque *M. arctoides*, Hoolock Gibbon *Hylobates hoolock* and Yellow-throated Marten *Martes flavigula*.

LAND USE

☐ Nature conservation

THREATS AND CONSERVATION ISSUES

- ☐ Poaching
- ☐ Illegal tree cutting
- ☐ *Jhum* cultivation on the fringes

Poaching and timber cutting are the major problems. The villagers exert tremendous pressure on the Park. However, there is an

The Murlen forest as seen from Vapar Tlang. This IBA is important for Mrs. Hume's Pheasant.



MZ-04

Photo: Anwaruddin Choudhury

opportunity to change their attitude by awareness programmes and by showing them the benefits of the Park. Environmental education is urgently required, along with proper long-term studies on the general biodiversity inventory, along with specific projects (e.g. on Mrs. Hume's Pheasant and Dark-rumped Swift).

Owing to its location close to the Indo-Myanmar border, trade in Asiatic Black Bear parts, including flesh, is prevalent and the products go to Myanmar.

Murlen NP, which contains some of the higher known hills of Mizoram constitutes an important region that has apparently not been given adequate attention by the Government. In terms of conservation of Mrs. Hume's Pheasant and possibly the Blyth's Tragopan, this site is of high conservation value and needs better protection (Kaul *et al.* 1996).

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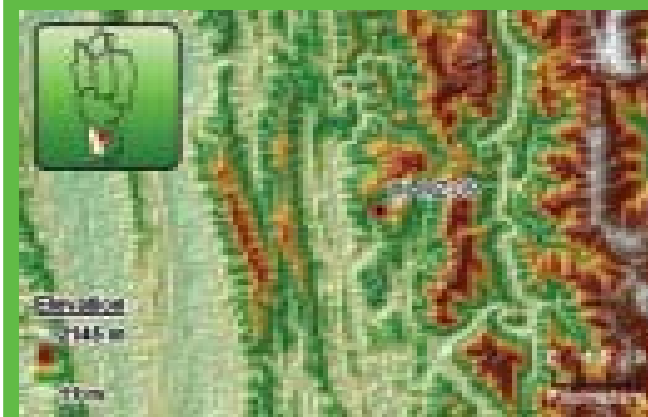
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MZ-05

NGENGPUI WILDLIFE SANCTUARY



IBA Site Code	: IN-MZ-05
State	: Mizoram
District	: Lawngtlai
Coordinates	: 22° 28' 00" N, 92° 49' 13" E
Ownership	: State
Area	: c. 11,000 ha
Altitude	: 170 – 550 m
Rainfall	: >2,000 mm
Temperature	: 7 °C to 32 °C
Biogeographic Zone	: North-East
Habitats	: Tropical Wet Evergreen Forest, Tropical Semi-evergreen Forest

IBA CRITERIA: A3 (Biome-9: Indo-Chinese Tropical Moist Forest); Data Deficient
PROTECTION STATUS: Wildlife Sanctuary, established in July 1997

GENERAL DESCRIPTION

Ngengpui Wildlife Sanctuary is situated in the valley of the Ngengpui river, which flows through the Sanctuary, joining the Kolodyne in the south. The area is situated in the 'ridge and valley' province of southwestern Mizoram. The largest river in this area is the Chhimtuipei (Kolodyne).

The terrain is undulating to hilly, with a series of parallel north-south ridges, well drained by numerous streams with rocky as well as silted streambeds. The climate is tropical. Some of the finest patches of tropical rainforests in Mizoram with mature Gurjan *Dipterocarpus turbinatus* are found in this IBA. Major secondary landscape elements are fallow *jhum* fields, bamboo brakes, plantations and village gardens (Birand and Pawar 2001).

Rainfall is fairly high, with distinct and predictable periods without rain. However, due to the relatively low-lying location of the site and high moisture retention capacity of the soil, conditions remain humid even in the rainless periods between November-December and April (Panwar 1999).

AVIFAUNA

The Sanctuary lies within a biodiversity hotspot, with a variety of flora and fauna of Indo-Malayan origin. Over 85 species of birds were recorded from the region during a short IBA survey (Birand

and Pawar 2001), though the bird life is certainly much richer, consequently it is listed here as a Data Deficient site.

Some notable bird species recorded in this IBA are the White-cheeked Partridge *Arborophila atrogularis*, Great Pied Hornbill *Buceros bicornis*, Malayan Night Heron *Gorsachius melanolophus*, Spot-breasted Scimitar Babbler *Pomatorhinus erythrogastrus*, Oriental Dwarf Kingfisher *Ceyx erithacus*, White-crested Laughingthrush *Garrulax leucolophus*, Great-eared Nightjar *Eurostopodus macrotis*, Nepal Babbler *Pnoepyga immaculata*, Red-headed Trogon *Harpactes erythrocephalus*, Black-backed Forktail *Enicurus immaculatus*, Vernal Hanging Parrot *Loriculus vernalis* and Great Slaty Woodpecker *Mulleripicus pulverulentus*. The Oriental Pied Hornbill *Anthracoceros albirostris* appeared to be particularly common, especially around the forest edges and in disturbed and secondary forest (Birand and Pawar 2001). Other species recorded was Black Bazar *Aviceda leuphotes*.

This IBA has a high proportion of typical low elevation evergreen/semi-evergreen forest birds. As a dipterocarp dominated area, it would be interesting to compare its bird fauna with similar areas in nearby Myanmar and other dipterocarp forests as far north as Namdapha (an IBA). However, this area seemed to be poor in avifauna compared to other low altitudinal areas (Birand and Pawar 2001). Much of this disparity may be due to the apparent paucity of high altitude species. However, this needs further investigation across a wider area, and areas with habitat contiguity. The site appeared deficient in small insectivores, and the most common species in the forests were the Striped Tit Babbler *Macronous gularis*, Nepal Fulvetta *Alcippe nipalensis* and the White-bellied Yuhina *Yuhina zantholeuca*.

Ngengpui is located in the region which is considered Eastern Himalaya Endemic Bird Area. In this EBA, 21 restricted range or endemic species have been identified. As we do not have sufficient data, we do not know how many restricted range species are found here.

OTHER KEY FAUNA

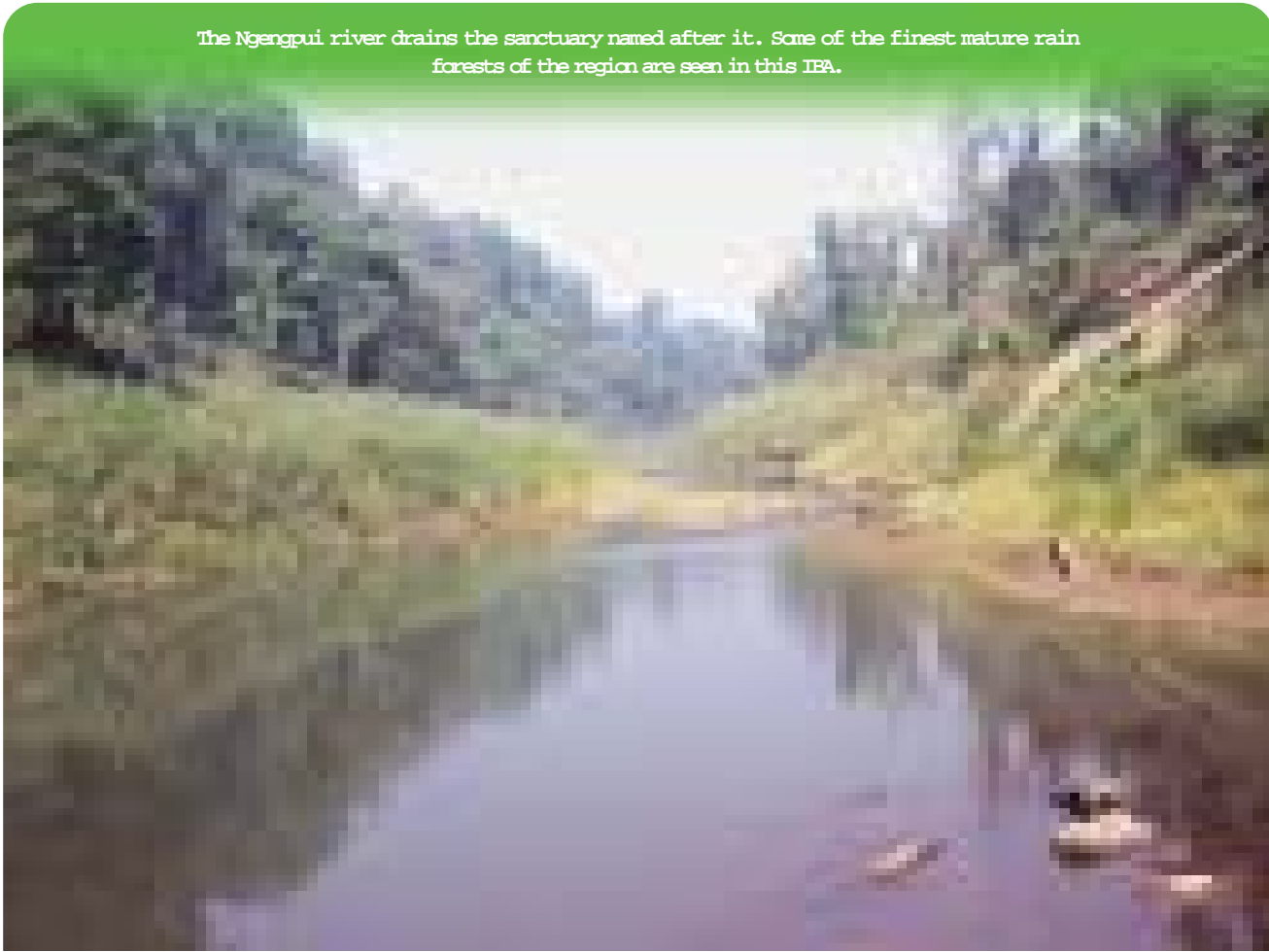
This wildlife sanctuary is extremely rich in mammals, reptiles and amphibian fauna. It has all the typical mammals found in northeast India, such as the Slow Loris *Nycticebus coucang*, Hoolock Gibbon *Hylobates hoolock*, Oriental Small-clawed Otter *Amblonyx cinereus*, and Hairyfooted Flying Squirrel *Belomys pearsoni*



Ngengpui Wildlife Sanctuary has rain forest that harbours a large number of birds.

Photo: Anwaruddin Chowdhury

The Ngengpui river drains the sanctuary named after it. Some of the finest mature rain forests of the region are seen in this IBA.



MZ-05

Photo: Anwaruddin Choudhury

(Birand and Pawar 2001), Asian Elephant *Elephas maximus*, Gaur *Bos frontalis*, Phayre's Leaf Monkey *Trachypithecus phayrei* (Choudhury 2002b) and many others.

LAND USE

- ☐ Nature conservation and research
- ☐ Water management
- ☐ Agriculture

THREATS AND CONSERVATION ISSUES

- ☐ Agricultural intensification and expansion
- ☐ Forest fires
- ☐ Habitat deterioration
- ☐ Unsustainable exploitation of forest resources

The protected status of the Sanctuary has saved it to some extent, but the forests around it continue to deteriorate and the Sanctuary is increasingly becoming a fragmented patch of primary forest. There are several villages close by, and the fringes of the Sanctuary are under anthropogenic pressure. There has been a long standing scheme to relocate Khawmawi village which lies on the sanctuary

border, but various impediments have prevented its execution (Birand and Pawar 2001). This is the southernmost protected area in northeast India and is relatively remote, hence monitoring is not easy.

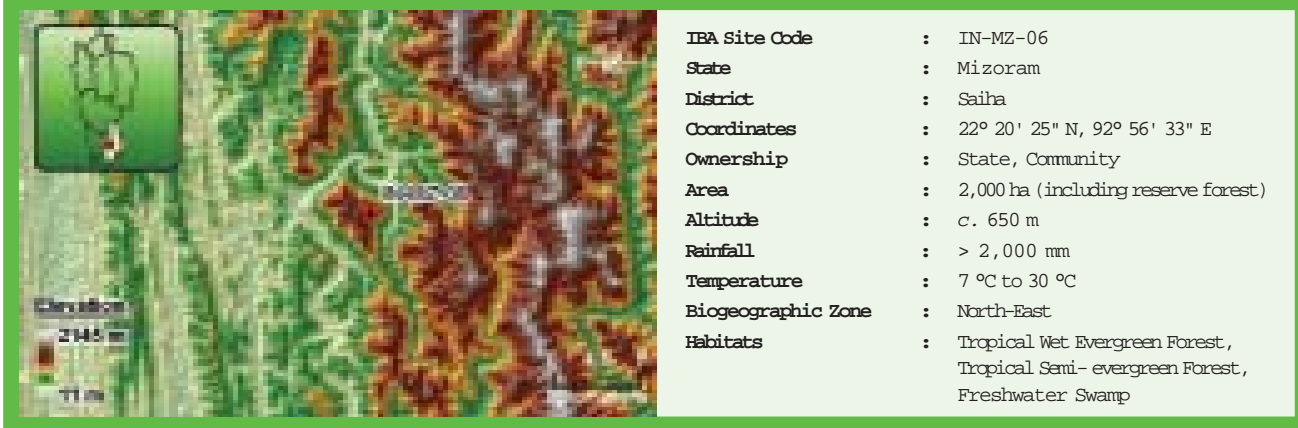
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PALAK DIL



IBA Site Code	: IN-MZ-06
State	: Mizoram
District	: Saiha
Coordinates	: 22° 20' 25" N, 92° 56' 33" E
Ownership	: State, Community
Area	: 2,000 ha (including reserve forest)
Altitude	: c. 650 m
Rainfall	: > 2,000 mm
Temperature	: 7 °C to 30 °C
Biogeographic Zone	: North-East
Habitats	: Tropical Wet Evergreen Forest, Tropical Semi-evergreen Forest, Freshwater Swamp

IBA CRITERIA: A3 (Biome-9: Indo-Chinese Tropical Moist Forest)
PROTECTION STATUS: Not officially protected

GENERAL DESCRIPTION

The Mizoram state has three types of (natural) lakes: valley lakes, tectonic/landslide lakes and artificial reservoirs, but the only lake of significance is Palak Dil, which is a natural lake in a depression in the hills. Palak Dil may possibly be a combination of valley and tectonic lakes. Locally in Mizoram, lakes are called *dils*. There are many such *dils* scattered all over the state, but they are tiny pools or marshy depressions such as Rengdil, Tamdil and Mampui Dil (Choudhury 2002).

Palak Dil, the largest lake in Mizoram is situated about 20 km southeast of Ngengpui Wildlife Sanctuary. The forest around the lake is Tropical Wet Evergreen. Many of the nearby hills are covered by *jhum* (slash and burn cultivation) and bamboo brakes. The eastern shore and at least the first hill chain behind it are forested. The lake is surrounded by moderately steep hills. The area has dipterocarp dominated Tropical Evergreen Forest. The forests are rich in palms, rattans, dense cane-brakes and reeds along the lake margin (Birand and Pawar 2001). Except for stray records of White-winged Duck *Cairina scutulata*, there is no globally threatened species.

AVIFAUNA

Over 70 species of birds were recorded from the region during an IBA survey (Birand and Pawar 2001), though the bird life is certainly much richer. Species recorded include the Chestnut-winged Cuckoo *Clamator jacobinus*, White-rumped Shama *Copsychus saularis*, Red-headed Trogon *Harpactes erythrocephalus*, Long-tailed Broadbill *Psarisomus dalhousiae*, Silver-breasted Broadbill *Serilophus lunatus*, Greater Necklaced Laughingthrush *Garrulax pectoralis* and Lesser Necklaced Laughingthrush *G. monileger*.

Palak Dil and its forests occur in Biome-9, i.e. Indo-Chinese Tropical Moist Forest. Of the 19 species listed for this biome in India, Grey Peacock Pheasant *Polyplectron bicalcaratum*, Pale-chinned Flycatcher *Cyornis poliogenys*, Black-backed Forktail *Enicurus immaculatus*, and Lesser Necklaced Laughingthrush *Garrulax monileger* have been seen by Birand and Pawar (2001) but more species are likely to occur. Some birds of Sino-Himalayan Subtropical Forest (Biome-8) are also seen here during winter, such as the Bay Woodpecker *Blythipicus pyrrhotis*, Orange-bellied Chloropsis *Chloropsis hardwickii*, White-throated Bulbul *Alophoixus flaveolus* and Nepal Fulvetta *Alcippe nipalensis*.

OTHER KEY FAUNA

Mammals include the Oriental Small-clawed Otter *Amblonyx cinereus* and Hairyfooted Flying Squirrel *Belomys pearsoni* (Birand and Pawar 2001). Other species are the Hoolock Gibbon *Hylobates hoolock*, Dhole *Cuon alpinus*, Asian Black Bear *Ursus thibetanus*, Fishing Cat *Prionailurus viverrina*, Tiger *Panthera tigris*, Asian Elephant *Elephas maximus* and Gaur *Bos frontalis*.

LAND USE

☐ Forestry

THREATS AND CONSERVATION ISSUES

☐ Exploitation of forest resources

☐ *Jhum* cultivation and invasive species

Though significant forest cover still exists outside the lake area, the forests around it continue to deteriorate. The actual reserve forest around Palak Dil is very small (about 10.5 sq. km). The inter-village trail that surrounds it makes it vulnerable to disturbance. There are three main villages in the vicinity of the lake. Of these, Phura with 150 houses is the largest village (Birand and Pawar 2001). Apart from habitat degradation by *jhumming*, cane extraction, occasional tree felling and hunting for larger vertebrates and birds are constant threats to this IBA site.

There is a plan to declare this lake as a sanctuary, but government approval is still pending. Meanwhile, there is a plan to make it a tourist attraction by converting it into a boating resort. This would involve clearing some forest to make rest houses and hotels.

The lake also faces danger from invasive species such as the African Cichlid fish *Tilapia*, introduced in the 1980s. Though the lake yields a steady supply of the introduced fish now, most of the local fish fauna has apparently disappeared.

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