

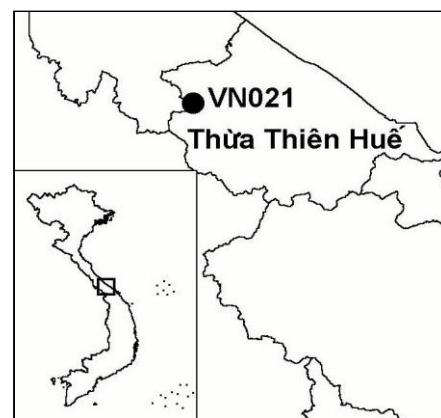
# Phong Dien

Criteria: A1, A2 & A3

**Province(s):** Thua Thien Hue  
**PA Status:** None

**Latitude:** 16°27'N  
**Longitude:** 107°12'E  
**Area:** 41,548 ha  
**Altitude Range:** 50-1,615 m asl

**EBA / SA:**  
 Annamese Lowlands EBA  
**Priority Landscape:**  
 CA 1 - Central Annamites



## General Description

The IBA comprises Phong Dien proposed nature reserve, which is situated in the Annamese lowlands. The topography of the IBA is dominated by a ridge of low mountains, extending south-east from the Annamite mountains. Prior to the Second Indochina War, the vegetation of the IBA was dominated by lowland evergreen forest and lower montane evergreen forest. Now, throughout most of the IBA, the forest has been extensively degraded, fragmented and reduced in extent through a combination of logging, shifting cultivation, wartime spraying of defoliants, napalm and forest fires<sup>1,2,3</sup>. However, the forest within the IBA forms part of one of the largest remaining areas of lowland evergreen forest in the Annamese lowlands. To the west, Phong Dien IBA is contiguous with Dakrong IBA in Quang Tri province.

## Bird Fauna: Key Features

The avifauna of Phong Dien IBA is characteristic of the Annamese Lowlands Endemic Bird Area (EBA), and the IBA supports six of the nine species that define this EBA. The species of greatest conservation importance at Phong Dien is Edwards's Pheasant *Lophura edwardsi*. Until its rediscovery in 1996, this species was believed to be extinct in the wild. Edwards's Pheasant has a very restricted range in central Vietnam but reports from hunters suggest that this species is still relatively common at the IBA. Detailed information is lacking on the status of other restricted-range species found at the IBA, such as Annam Partridge *Arborophila merlini* and Short-tailed Scimitar Babbler *Jabouilleia danjoui*, although a field survey in 1998 confirmed that Crested Argus *Rheinardia ocellata* is still common<sup>1,2</sup>.

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
Edwards's Pheasant <i>Lophura edwardsi</i>	A1, A2	EN	2	One male and one female were trapped in Phong My commune, at 300 to 400 m asl, in August 1996 <sup>2</sup> . In addition, two females, one male and four eggs were taken by rattan collectors within the watershed of the My Chanh river between 100 and 300 m asl in March 2000 <sup>4</sup> .
Crested Argus <i>Rheinardia ocellata</i>	A1, A2	VU	15	The species was recorded between June and July 1998 <sup>2</sup> .
Siamese Fireback <i>Lophura diardi</i>	A1, A3	NT	13	The species was recorded between June and July 1998 <sup>2</sup> .
Red-collared Woodpecker <i>Picus rabieri</i>	A1, A3	NT	11	The species was recorded between June and July 1998 <sup>2</sup> .
[Great Hornbill <i>Buceros bicornis</i> ]	A1	NT	14	The species was provisionally recorded between June and July 1998 <sup>2</sup> .
Brown Hornbill <i>Anorrhinus tickelli</i>	A1, A3	NT	16	The species was recorded between June and July 1998 <sup>2</sup> .
Blyth's Kingfisher <i>Alcedo hercules</i>	A1, A3	NT	8	The species was recorded between June and July 1998 <sup>2</sup> .
Short-tailed Scimitar Babbler <i>Jabouilleia danjoui</i>	A1, A2	NT	17	The species was recorded between June and July 1998 <sup>2</sup> .
Annam Partridge <i>Arborophila merlini</i>	A2		4	The species was recorded between June and July 1998 <sup>2</sup> .

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
White-cheeked laughingthrush <i>Garrulax vassali</i>	A2		8	The species was recorded between June and July 1998 <sup>2</sup> .
Grey-faced Tit Babbler <i>Macronous kelleyi</i>	A2		12	The species was recorded between June and July 1998 <sup>2</sup> .

Notes: [ ] = unconfirmed record.

**Biome Restricted Species:** The site qualifies under criterion A3 because it supports 18 species restricted to the Indochinese Tropical Moist Forests (Biome 09). See Appendix 4 for details.

### Secondary Criteria

Species	Status	Species	Status
*Northern Slow Loris <i>Nycticebus bengalensis</i> <sup>2</sup>	DD	[Indochinese Box Turtle <i>Cuora galbinifrons</i> ] <sup>2</sup>	CR
*Northern Pigtail Macaque <i>Macaca leonina</i> <sup>2</sup>	VU	[Chinese Three-striped Box Turtle <i>Cuora trifasciata</i> ] <sup>2</sup>	CR
*Rhesus Macaque <i>Macaca mulatta</i> <sup>2</sup>	NT	[Elongated Tortoise <i>Indotestudo elongata</i> ] <sup>2</sup>	EN
*Stump-tailed Macaque <i>Macaca arctoides</i> <sup>2</sup>	VU	[Wattle-necked Softshell Turtle <i>Palea steindachneri</i> ] <sup>2</sup>	EN
*Red-shanked Douc <i>Pygathrix nemaeus nemaeus</i> <sup>2</sup>	EN	[Chinese Softshell Turtle <i>Pelodiscus sinensis</i> ] <sup>2</sup>	VU
*White-cheeked Gibbon <i>Nomascus leucogenys</i> <sup>2</sup>	DD	<i>Podocarpus nerifolius</i> <sup>2</sup>	DD
[Big-headed Turtle <i>Platysternon megacephalum</i> ] <sup>2</sup>	EN	[Southern Serow <i>Naemorhedus sumatraensis</i> ] <sup>2</sup>	VU

Notes: \* = although recorded during a survey of Phong Dien and Dakrong proposed nature reserves, it is uncertain whether the species occurs within the IBA as locality data is lacking; [ ] = unconfirmed record.

### Threats to Biodiversity

The major threat to biodiversity at Phong Dien IBA is hunting, particularly the use of snares, which is indiscriminate and threatens ground bird species such as Edwards's Pheasant and Crested Argus. A recent study on hunting at Phong Dien discovered a strong association between hunting and rattan collection because rattan collectors set snares while in the forest<sup>5</sup>. Other threats to biodiversity at the IBA include over-exploitation of firewood and other NTFPs, timber extraction, and forest fires, which result from the use of fire to clear land for agriculture<sup>1</sup>.

Threat	Severity
Fire	• •
Hunting	• •
Selective logging / cutting	•
Unsustainable exploitation of NTFPs	• •

### Conservation Actions

- In 1998, following the rediscovery of Edwards's Pheasant *Lophura edwardsi* at the site, a feasibility study for the establishment of a protected area at Phong Dien was conducted<sup>2</sup>.
- In 2001, an investment plan was prepared for Phong Dien, which proposed the establishment of a 41,548 ha nature reserve<sup>3</sup>. This investment plan has since been approved by Thua Thien Hue Provincial People's Committee and the Ministry of Agriculture and Rural Development.
- Although, to date, a nature reserve management board has not been established<sup>5</sup>, two forest guard stations, in Phong Dien and A Luoi district, have been assigned the responsibility of biodiversity conservation at the site.
- During 2000 and 2001, with the support of the WWF Indochina Programme, Thua Thien Hue Provincial Forest Protection Department implemented several activities aimed at raising environmental awareness and controlling hunting at the site<sup>5</sup>.
- In 2002, a conservation strategy for Edwards's Pheasant at Phong Dien was prepared with the support of the Rufford Small Grants Scheme of the Whitley Awards Foundation<sup>5</sup>.

### Recommendations

- Phong Dien should be decreed as a nature reserve, and a management board should be established<sup>3</sup>.
- Local communities should be involved in forest protection and management<sup>5</sup>.
- Environmental awareness activities should be implemented among local communities, particularly focussing on the control of hunting<sup>5</sup>.
- Anti-hunting and logging patrols should focus on the upper watersheds of the My Chanh and O Lau rivers, which are the key areas for Edwards's Pheasant<sup>5</sup>.
- Collection of rattan and other NTFPs within the IBA should be regulated, to ensure that these activities take place at sustainable levels<sup>5</sup>.

- A programme of community-based fire prevention, including awareness raising activities and establishment of village fire-watch groups, should be initiated.
- A monitoring programme should be established to monitor levels of hunting and illegal logging<sup>5</sup>.
- Further studies should be conducted to assess the habitat requirements of Edwards's Pheasant<sup>5</sup>.

### **References**

1. BirdLife International and the Forest Inventory and Planning Institute (2001) *Sourcebook of existing and proposed protected areas in Vietnam*. Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute.
2. Le Trong Trai, Richardson, W. J., Le Van Cham, Tran Hieu Minh, Tran Quang Ngoc, Nguyen Van Sang, Monastyrskii, A. L. and Eames, J. C. (1999) *A feasibility study for the establishment of Phong Dien (Thua Thien Hue province) and Dakrong (Quang Tri province) Nature Reserves, Vietnam*. Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute.
3. Le Trong Trai, Tran Hieu Minh, Tran Quoc Dung and Hughes, R. (2001) *An investment plan for the establishment of Phong Dien Nature Reserve, Thua Thien Hue province, Vietnam*. Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute.
4. Eames, J. C. and Tordoff, A. W. (in prep) Recent records and a conservation status review of some threatened and near-threatened bird species in Vietnam.
5. Tran Quang Ngoc, Nguyen Van Vinh, Le Trong Trai, Phan Thanh Ha, Le Ngoc Tuan and Dang Thang Long (2002) *Understanding the impacts of hunting on Edwards's Pheasant Lophura edwardsi at Phong Dien Nature Reserve, Vietnam: towards a strategy for managing hunting activities*. Unpublished report to the Whitley Awards Foundation.



Edwards's Pheasant *Lophura edwardsi*

# Bach Ma

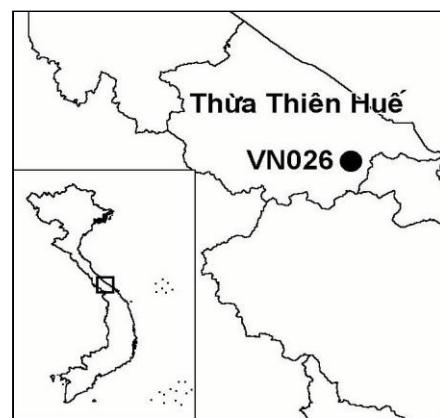
Criteria: A1, A2 & A3

**Province(s):** Thua Thien Hue  
**PA Status:** National Park

**Latitude:** 16°11'N  
**Longitude:** 107°48'E  
**Area:** 22,031 ha  
**Altitude Range:** 20-1,448 m asl

**EBA / SA:**  
 Annamese Lowlands EBA

**Priority Landscape:**  
 CA1 - Central Annamites



## General Description

The IBA comprises Bach Ma National Park, which is situated at the southern extent of the Annamese lowlands. The IBA is situated on a mountain ridge that runs between the Annamite mountains and the coast at the Hai Van pass. Consequently, the IBA has a mountainous topography and experiences some of the highest levels of rainfall in Vietnam. The IBA supports a range of habitat types, including lowland evergreen forest below 900 m asl, and montane evergreen forest above this elevation. At lower elevations, the natural forest has been extensively cleared and replaced by scrub and grassland. In the south of the IBA is the valley of the Ta Trach river<sup>1</sup>.

## Bird Fauna: Key Features

Bach Ma IBA lies at the southern extent of the Annamese Lowlands Endemic Bird Area (EBA), and five of the nine restricted-range species that define this EBA have been recorded at the site. Most notable is a recent record of Edwards's Pheasant *Lophura edwardsi* from near the IBA. This globally endangered species, endemic to central Vietnam, is known historically from Bach Ma<sup>2</sup>. However, extensive loss of forest at low elevations means that it is unlikely that the site continues to support a significant population of this species, although neighbouring sites may. In addition to Edwards's Pheasant, Bach Ma IBA supports three other galliform taxa endemic to central Vietnam: Annam Partridge *Arborophila merlini*, and subspecies of Silver Pheasant *L. nycthemera beli* and Rufous-throated Partridge *A. rufogularis guttata*. Bach Ma IBA is also of importance for the conservation of Crested Argus *Rheinardia ocellata*, a globally vulnerable species, which occurs at the site in high densities.

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
†Edwards's Pheasant <i>Lophura edwardsi</i>	A1, A2	EN	2	In May 1998, a single individual was captured at 300 m asl in regenerating forest, 1 km to the north-east of the buffer zone of the national park <sup>2</sup> . Given the small remaining area of suitable habitat, it is unlikely that the IBA regularly supports a significant population of this species.
Crested Argus <i>Rheinardia ocellata</i>	A1, A2	VU	15	During January and February 1990, at least 75 birds were heard and a single male was seen <sup>3</sup> . At least 21 birds were heard during April and May 1991 (Robson et al. 1993b). The most recent documented record of this species at Bach Ma was made in March 1999 <sup>4</sup> .
†Green Peafowl <i>Pavo muticus</i>	A1, A3	VU	8	A single male was recorded just outside the IBA in January 1990, and two or three females were reported to be present by local hunters <sup>5</sup> . This is the most recent record of this species, which may possibly have already been extirpated from the site <sup>4</sup> .
Siamese Fireback <i>Lophura diardi</i>	A1, A3	NT	13	The species has been recorded in lowland and hill evergreen forest at the site <sup>5</sup> .
Red-collared Woodpecker <i>Picus rabieri</i>	A1, A3	NT	11	Two birds were observed in January 1990 <sup>3</sup> .
Brown Hornbill <i>Anorrhinus tickelli</i>	A1, A3	NT	16	This species was recorded at the site between January and February 1990 <sup>3</sup> .

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
†Blyth's Kingfisher <i>Alcedo hercules</i>	A1, A3	NT	8	A single bird was observed to the south of the IBA in April 1991 <sup>6</sup> . It is not clear whether the site regularly supports a significant population of this species.
Grey-headed Fish Eagle <i>Ichthyophaga ichthyaetus</i>	A1	NT	8	One individual was recorded in the south of the IBA in April 1991 <sup>6</sup> .
Short-tailed Scimitar Babbler <i>Jabouilleia danjoui</i>	A1, A2	NT	17	At least two birds were seen, and another was heard, at c.700 m asl in February 1990 <sup>3</sup> .
Annam Partridge <i>Arborophila merlini</i>	A2		4	The species was found to be common during a survey in January and February 1990 <sup>3</sup> .
Grey-faced Tit Babbler <i>Macronous kelleyi</i>	A2		12	The species was found to be common during a survey in January and February 1990 <sup>3</sup> .

Notes: † = not confirmed to regularly occur in significant numbers.

**Biome Restricted Species:** The site qualifies under criterion A3 because it supports 17 species restricted to the Indochinese Tropical Moist Forests (Biome 09). See Appendix 4 for details.

### Secondary Criteria

Species	Status	Species	Status
[Pygmy Loris <i>Nycticebus pygmaeus</i> ] <sup>7</sup>	VU	[Chinese Stripe-necked Turtle <i>Ocadia sinensis</i> ] <sup>7</sup>	EN
[Rhesus Macaque <i>Macaca mulatta</i> ] <sup>7</sup>	NT	[Wattle-necked Softshell Turtle <i>Palea steindachneri</i> ] <sup>7</sup>	EN
[Long-tailed Macaque <i>Macaca fascicularis</i> ] <sup>7</sup>	NT	<i>Pinus wangii</i> <sup>7,8</sup>	EN
[Stump-tailed Macaque <i>Macaca arctoides</i> ] <sup>7</sup>	VU	[ <i>Pinus merkusii</i> ] <sup>7</sup>	VU
Red-shanked Douc <i>Pygathrix nemaeus nemaeus</i> <sup>7,9</sup>	EN	<i>Fokienia hodginsii</i> <sup>7,8</sup>	NT
White-cheeked / Buff-cheeked Gibbon <i>Nomascus leucogenys/ gabriellae</i> <sup>7,9</sup>	DD/VU	<i>Podocarpus neriifolius</i> <sup>7,8</sup>	DD
[Big-headed Turtle <i>Platysternon megacephalum</i> ] <sup>7</sup>	EN	[ <i>Cephalotaxus mannii</i> ] <sup>7</sup>	VU
[Indochinese Box Turtle <i>Cuora galbinifrons</i> ] <sup>7</sup>	CR	[Southern Serow <i>Naemorhedus sumatraensis</i> ] <sup>7</sup>	VU
		[ <i>Saola Pseudoryx nghetinhensis</i> ] <sup>7</sup>	EN

Notes: [ ] = unconfirmed record.

### Threats to Biodiversity

The biggest threat to biodiversity at Bach Ma IBA is habitat loss, particularly the loss of lowland evergreen forest, which is the preferred habitat of a number of key species. In fact, Edwards's Pheasant may have already become extinct due to loss of this habitat type. The main causes of habitat loss at the site are wartime spraying of defoliants, forest fires, past commercial logging activities and subsequent illegal timber extraction<sup>1</sup>. Over 60,000 people live in the buffer zone of the national park, and NTFP collection is a major source of income for these people. Unsustainable exploitation has resulted in supplies of certain NTFPs becoming exhausted near villages<sup>1</sup>.

Threat	Severity
Fire	• •
Infrastructure development	•
Recreation / tourism	•
Selective logging / cutting	• •
Unsustainable exploitation of NTFPs	• •

### Conservation Actions

- Bach Ma was decreed as a national park by the government of Vietnam in 1986 and a management board was established in 1987<sup>1</sup>.
- Between 1995 and 1997, the WWF Indochina Programme implemented a European Commission-funded project entitled *Participatory Development of Bach Ma National Park*<sup>1</sup>.
- With funding from the Dutch government, Thua Thien Hue Provincial Department of Agriculture and Rural Development recently initiated a four-year project entitled *Strengthening the Forestry Management Capacity of Thua Thien Hue Province*, which aims to strengthen management of the buffer zone of the national park<sup>1</sup>.
- Bach Ma will form part of a future medium-sized GEF project, currently being developed by the WWF Indochina Programme, which aims to create a "green corridor" in southern Thua Thien Hue province<sup>1</sup>.

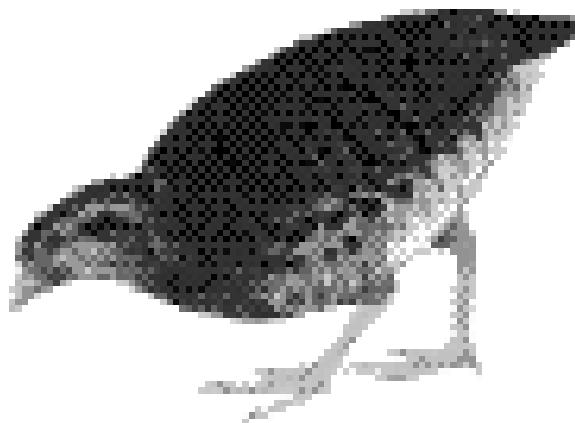
### Recommendations

- The biodiversity value of contiguous forest areas should be evaluated and, where appropriate, these should be incorporated within the national park. Priority should be given to areas of lowland evergreen forest, which is a potentially suitable habitat for Edwards's Pheasant and other endemic galliforms.

- Continued efforts should be made to reduce unsustainable exploitation of forest products, through an integrated programme of activities aimed at reducing local people's dependency on natural resources and strengthening enforcement of forest management regulations.

## **References**

1. BirdLife International and the Forest Inventory and Planning Institute (2001) *Sourcebook of existing and proposed protected areas in Vietnam*. Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute.
2. Eames, J. C. and Tordoff, A. W. (in prep.) Recent records and a conservation status review of some threatened and near-threatened bird species in Vietnam.
3. Robson, C. R., Eames, J. C., Nguyen Cu and Truong Van La (1993a) Further records of birds from Vietnam. *Forktail* 8: 25-52.
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6. Robson, C. R., Eames, J. C., Nguyen Cu and Truong Van La (1993b) Birds recorded during the third BirdLife/Forest Birds Working Group Expedition in Vietnam. *Forktail* 9: 89-119.
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8. Nguyen Tien Hiep and Vidal, J. E. (1996) *Flore du Cambodge, du Laos et du Vietnam, volume 28: Gymnospermae*. Paris: Museum National d'Histoire Naturelle. (In French.)
9. Eames, J. C., and Robson, C. R. (1993) Threatened primates in southern Vietnam. *Oryx* 27: 146-154.



Annam Partridge *Arborophila merlini*

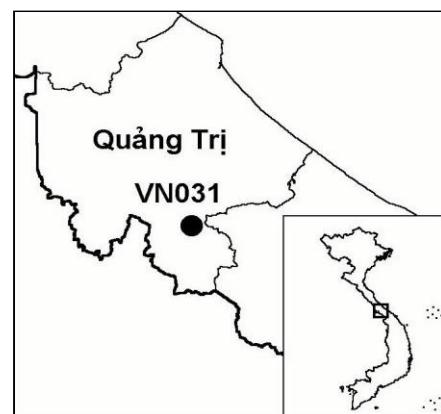
# Dakrong

Criteria: A1, A2 & A3

**Province(s):** Quang Tri  
**PA Status:** None

**Latitude:** 16°31'N  
**Longitude:** 107°01'E  
**Area:** 40,526 ha  
**Altitude Range:** 300-1,102 m asl

**EBA / SA:**  
 Annamese Lowlands EBA  
**Priority Landscape:**  
 CA 1 - Central Annamites



## General Description

The IBA is situated in the Annamese lowlands and comprises Dakrong proposed nature reserve. The topography of the IBA is characterised by hills and low mountains. Prior to the Second Indochina War, the IBA supported extensive areas of lowland evergreen forest and lower montane evergreen forest. However, wartime spraying of defoliants, the practice of shifting cultivation by local communities, and a long history of over-exploitation of natural resources have resulted in the forest becoming heavily degraded and fragmented. Currently, primary forest only covers around 60% of the IBA. However, most fragments of primary forest are relatively large and contiguous with areas of mature secondary forest<sup>1</sup>. To the east, Dakrong IBA is contiguous with Phong Dien IBA in Thua Thien Hue province.

## Bird Fauna: Key Features

Dakrong IBA supports five of the nine restricted-range species found in the Annamese Lowlands Endemic Bird Area (EBA). Most significantly, Dakrong IBA, together with the neighbouring Phong Dien IBA, supports what is possibly the largest remaining population of the globally endangered Edwards's Pheasant *Lophura edwardsi* in the world. In 2000, Imperial Pheasant *L. imperialis*, another pheasant species endemic to central Vietnam, was recorded at Dakrong IBA. However, recent taxonomic research indicates that Imperial Pheasant may not be a true species but, rather, a hybrid between Edwards's Pheasant or Vietnamese Pheasant *L. hatinhensis* and Silver Pheasant *L. nycthemera*<sup>2</sup>.

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
Edwards's Pheasant <i>Lophura edwardsi</i>	A1, A2	EN	2	A pair were trapped by local people in December 1996. Four birds were trapped by local hunters between 50 and 300 m asl in December 1997. Two individuals were caught by local hunters, who also reported seeing a flock of 8 to 10, between the end of 1997 and the beginning of 1998 <sup>1</sup> .
Crested Argus <i>Rheinardia ocellata</i>	A1, A2	VU	15	The species was recorded between June and July 1998 <sup>1</sup> .
Siamese Fireback <i>Lophura diardi</i>	A1, A3	NT	13	The species was recorded between June and July 1998 <sup>1</sup> .
[Brown Hornbill <i>Anorrhinus tickelli</i> ]	A1, A3	NT	17	The species was provisionally recorded between June and July 1998 <sup>1</sup> .
Blyth's Kingfisher <i>Alcedo Hercules</i>	A1, A3	NT	8	The species was recorded between June and July 1998 <sup>1</sup> .
Short-tailed Scimitar Babbler <i>Jabouilleia danjoui</i>	A1, A2	NT	17	The species was recorded between June and July 1998 <sup>1</sup> .
Imperial Pheasant <i>Lophura imperialis</i>	A1, A2	DD	2	A juvenile male was caught in the watershed of the Long An stream, near Mount Dong Che in February 2000 <sup>3</sup> .
Annam Partridge <i>Arborophila merlini</i>	A2		4	The species was recorded between June and July 1998 <sup>1</sup> .

Notes: [ ] = unconfirmed record.

**Biome Restricted Species:** The site qualifies under criterion A3 because it supports 14 species restricted to the Indochinese Tropical Moist Forests (Biome 09). See Appendix 4 for details.

## Secondary Criteria

Species	Status	Species	Status
*Northern Slow Loris <i>Nycticebus bengalensis</i> <sup>1</sup>	DD	[Chinese Three-striped Box Turtle <i>Cuora trifasciata</i> ] <sup>1</sup>	CR
*Northern Pigtail Macaque <i>Macaca leonina</i> <sup>1</sup>	VU	[Wattle-necked Softshell Turtle <i>Palea steindachneri</i> ] <sup>1</sup>	EN
*Rhesus Macaque <i>Macaca mulatta</i> <sup>1</sup>	NT	[Chinese Softshell Turtle <i>Pelodiscus sinensis</i> ] <sup>1</sup>	VU
*Stump-tailed Macaque <i>Macaca arctoides</i> <sup>1</sup>	VU	<i>Podocarpus neriifolius</i>	DD
*Red-shanked Douc <i>Pygathrix nemaeus nemaeus</i> <sup>1</sup>	EN	[Gaur <i>Bos gaurus</i> ] <sup>1</sup>	VU
*White-cheeked Gibbon <i>Nomascus leucogenys</i> <sup>1</sup>	VU	[Southern Serow <i>Naemorhedus sumatraensis</i> ] <sup>1</sup>	VU
[Big-headed Turtle <i>Platysternon megacephalum</i> ] <sup>1</sup>	EN	[Saola <i>Pseudoryx nghetinhensis</i> ] <sup>1</sup>	EN
[Indochinese Box Turtle <i>Cuora galbinifrons</i> ] <sup>1</sup>	CR		

Notes: [ ] = unconfirmed record; \* = recorded during a survey of Dakrong and Phong Dien IBAs but, due to a lack of locality data, it is uncertain whether the species occurs within the IBA or not.

## Threats to Biodiversity

One of the biggest threats to biodiversity at Dakrong IBA is hunting, particularly the use of snares. Snaring is an indiscriminate activity with potentially severe impacts on ground-dwelling birds, such as Edwards's Pheasant, Crested Argus *Rheinardia ocellata* and Annam Partridge *Arborophila merlini*. Recent research conducted at Phong Dien IBA revealed that snaring is often associated with rattan collection<sup>4</sup>. Other threats to biodiversity at the IBA include small-scale timber extraction, clearance of forest for agriculture, mining and livestock grazing.

Threat	Severity
Agricultural intensification / expansion	●
Forest grazing	●
Hunting	● ● ●
Selective logging / cutting	● ●
Unsustainable exploitation of NTFPs	●

## Conservation Actions

- An investment plan for Dakrong was prepared in 2000, which proposed establishing a 40,526 ha nature reserve at the site. This investment plan was approved by Quang Tri Provincial People's Committee in 2000 and by the Ministry of Agriculture and Rural Development in 2001<sup>5</sup>. To date, however, the establishment of a nature reserve at Dakrong has not been decreed by the government of Vietnam.

## Recommendations

- Dakrong should be decreed as a nature reserve, a management board should be established, and protected area management regulations should be enforced, particularly controls on hunting.
- Local communities should be involved in forest protection and management.
- Environmental awareness activities should be implemented among local communities.
- Further studies should be conducted to assess the habitat requirements of Edwards's Pheasant.

## References

1. Le Trong Trai, Richardson, W. J., Le Van Cham, Tran Hieu Minh, Tran Quang Ngoc, Nguyen Van Sang, Monastyrskii, A. L. and Eames, J. C. (1999) *A feasibility study for the establishment of Phong Dien (Thua Thien Hue province) and Dakrong (Quang Tri province) Nature Reserves, Vietnam*. Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute.
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4. Tran Quang Ngoc, Nguyen Van Vinh, Le Trong Trai, Phan Thanh Ha, Le Ngoc Tuan and Dang Thang Long (2002) *Understanding the impacts of hunting on Edwards's Pheasant Lophura edwardsi at Phong Dien Nature Reserve, Vietnam: towards a strategy for managing hunting activities*. Unpublished report to the Whitley Awards Foundation.
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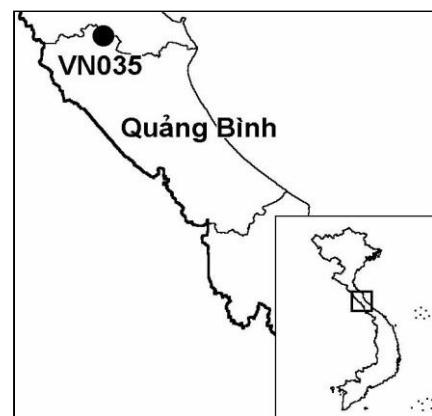
# Khe Net

Criteria: A1, A2 & A3

**Province(s):** Quang Binh  
**PA Status:** None

**Latitude:** 18°02'N  
**Longitude:** 105°58'E  
**Area:** 23,524 ha  
**Altitude Range:** 80-494 m asl

**EBA / SA:**  
 Annamese Lowlands EBA  
**Priority Landscape:**  
 NA5 - Ke Go and Khe Net Lowlands



## General Description

The IBA comprises Khe Net proposed nature reserve, which is situated in the Annamese lowlands. The topography of the IBA is characterised by low hills, which support a large area of lowland evergreen forest. The forest in the IBA is currently under the management of Tuyen Hoa Forest Enterprise, although commercial logging activities ceased in 1997<sup>1</sup>. Most of the forest in the IBA has been heavily degraded by commercial logging activities, although there remain significant areas of relatively undisturbed forest in remote and inaccessible areas and on steep slopes. In addition to the lowland evergreen forest, there are some small patches of limestone forest in the south-west and south-east of the IBA<sup>2</sup>. To the north, Khe Net IBA is contiguous with Ke Go IBA.

## Bird Fauna: Key Features

Together with the contiguous Ke Go IBA, Khe Net IBA supports one of the largest remaining areas of lowland evergreen forest in the Annamese lowlands. Most significantly, the two sites support the only known population of the globally endangered Vietnamese Pheasant *Lophura hatinhensis* in the world. In addition, Khe Net IBA supports populations of five other restricted-range species of the Annamese Lowlands Endemic Bird Area: Annam Partridge *Arborophila merlini*, Imperial Pheasant *L. imperialis*, Crested Argus *Rheinardia ocellata*, Short-tailed Scimitar Babbler *Jabouilleia danjoui* and Grey-faced Tit Babbler *Macronous kelleyi*. Recent taxonomic research, however, indicates that Imperial Pheasant may not be a true species but, rather, a hybrid between Vietnamese Pheasant or Edwards's Pheasant or *L. edwardsi* and Silver Pheasant *L. nycthemera*<sup>3</sup>.

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
Vietnamese Pheasant <i>Lophura hatinhensis</i>	A1, A2	EN	1	At least eight birds were observed during one week's fieldwork in June and July 1994 <sup>4</sup> . A further three birds were observed in lowland evergreen forest at 200 m asl in July 2000 <sup>2</sup> .
Crested Argus <i>Rheinardia ocellata</i>	A1, A2	VU	15	The species was heard calling from ridge tops in June and July 1994 <sup>4</sup> .
Chestnut-necklaced Partridge <i>Arborophila charltonii</i>	A1	NT	7	The species was recorded between June and July 1994 <sup>4</sup> . The species was heard calling on numerous occasions between June and July 2000, and a single female was caught <sup>2</sup> .
Siamese Fireback <i>Lophura diardi</i>	A1, A3	NT	13	The species was recorded between June and July 1994 <sup>4</sup> .
Red-collared Woodpecker <i>Picus rabieri</i>	A1, A3	NT	11	The species was recorded between June and July 1994, and between June and July 2000 <sup>2,4</sup> .
[Great Hornbill <i>Buceros bicornis</i> ]	A1	NT	14	The species was provisionally recorded in 2000 <sup>2</sup> .
Brown Hornbill <i>Anorrhinus tickelli</i>	A1, A3	NT	16	The species was recorded between June and July 1994 <sup>4</sup> . During July 2000, the species was observed on four days, in flocks ranging in size from 6 to 18 birds <sup>2</sup> .
Blyth's Kingfisher <i>Alcedo hercules</i>	A1, A3	NT	8	The species was recorded between June and July 1994 <sup>4</sup> , and between June and July 2000 <sup>2</sup> , along the Khe Che, Khe Mon and Khe Da Ma streams.

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
Short-tailed Scimitar Babbler <i>Jabouilleia danjoui</i>	A1, A2	NT	17	The species was recorded between June and July 1994, and between June and July 2000 <sup>2,4</sup> .
Imperial Pheasant <i>Lophura imperialis</i>	A1, A2	DD	2	In February 1990, an immature male was trapped by rattan collectors, 12 km to the west of Cat Bin <sup>5</sup> . While the precise locality is not certain, it appears to lie on the border between Ke Go Nature Reserve and Khe Net proposed nature reserve.
Annam Partridge <i>Arborophila merlini</i>	A2		4	Three birds were observed in June 2000 <sup>2</sup> .
Grey-faced Tit Babbler <i>Macronous kelleyi</i>	A2		12	The species was recorded between June and July 1994, and between June and July 2000 <sup>2,4</sup> .

Notes: [ ] = unconfirmed record.

**Biome Restricted Species:** The site qualifies under criterion A3 because it supports 18 species restricted to the Indochinese Tropical Moist Forests (Biome 09). See Appendix 4 for details.

### Secondary Criteria

Species	Status	Species	Status
[Northern Slow Loris <i>Nycticebus bengalensis</i> ] <sup>2</sup>	DD	[Red-shanked Douc <i>Pygathrix nemaeus nemaeus</i> ] <sup>2</sup>	EN
Northern Pigtail Macaque <i>Macaca leonina</i> <sup>2</sup>	VU	[White-cheeked Gibbon <i>Nomascus leucogenys</i> ] <sup>2</sup>	DD
[Assamese Macaque <i>Macaca assamensis</i> ] <sup>2</sup>	VU	<i>Podocarpus neriifolius</i> <sup>2</sup>	DD
[Rhesus Macaque <i>Macaca mulatta</i> ] <sup>2</sup>	NT	[Gaur <i>Bos gaurus</i> ] <sup>2</sup>	VU
Stump-tailed Macaque <i>Macaca arctoides</i> <sup>2</sup>	VU	Southern Serow <i>Naemorhedus sumatraensis</i> <sup>2</sup>	VU
Hatinh Langur <i>Trachypithecus francoisi hatinhensis</i> <sup>2</sup>	EN		

Notes: [ ] = unconfirmed record.

### Threats to Biodiversity

Past commercial logging activities by Tuyen Hoa Forest Enterprise have led to the degradation of large areas of natural habitat within the IBA, including the key habitat for Vietnamese Pheasant: lowland evergreen forest. While commercial logging largely ceased in 1997, many households in the buffer zone of the proposed nature reserve are dependent on natural resources, and continue to extract timber and other forest products on a small scale. In addition to habitat degradation, hunting is a major threat to biodiversity at Khe Net. Snaring is widespread within the IBA, and threatens the populations of a number of key bird species, especially galliformes, such as Vietnamese Pheasant and Crested Argus.

Threat	Severity
Agricultural intensification / expansion	•
Hunting	• •
Selective logging / cutting	•

### Conservation Actions

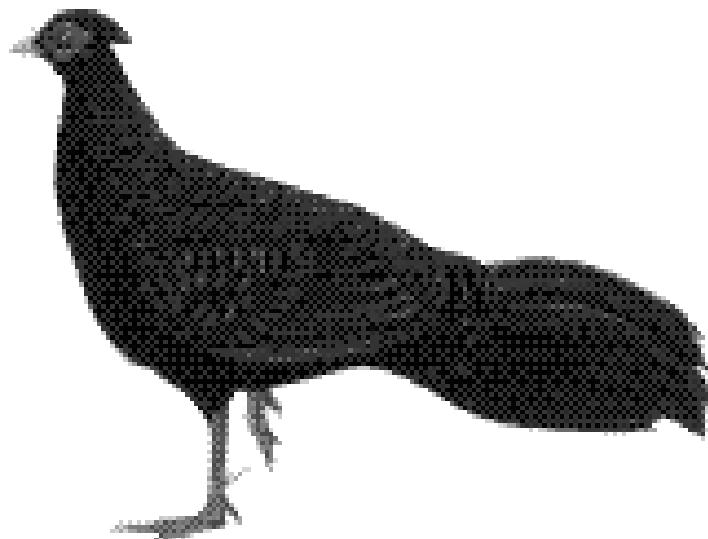
- In 2001, a feasibility study for the establishment of a protected area at Khe Net was prepared, and proposed establishing a 23,524 ha nature reserve<sup>2</sup>.

### Recommendations

- Khe Net should be decreed as a nature reserve by the government of Vietnam, and a management board should be established.
- Protected area management regulations, particularly controls on hunting, timber extraction and NTFP collection, should be strictly enforced, particularly controls on snaring.
- A programme of environmental awareness activities should be initiated in the surrounding area to raise awareness among local communities and decision makers about the values of the IBA and to promote sustainable natural resource use.
- Further studies should be conducted to assess the status and distribution of Vietnamese Pheasant and other restricted-range species at the IBA.

## References

1. BirdLife International and the Forest Inventory and Planning Institute (2001) *Sourcebook of existing and proposed protected areas in Vietnam*. Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute.
2. Le Trong Trai, Tran Hieu Minh, Do Tuoc and Nguyen Van Sang (2001) [Feasibility study for the establishment of Khe Net Nature Reserve, Quang Binh province, Vietnam]. Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute. (In Vietnamese.)
3. Garson, P. (2001) Pheasant taxonomy: a cunning way to remove species from the Red List! *OBC Bulletin* 33: 52.
4. Eames, J. C., Lambert, F. R. and Nguyen Cu (1994) A survey of the Annamese lowlands, Vietnam and its implications for the conservation of Vietnamese and Imperial Pheasants *Lophura hatinhensis* and *L. imperialis*. *Birdlife Conservation International* 4(4): 343-382.
5. Robson, C. R., Eames, J. C., Newman, M., Nguyen Cu and Truong Van La (1990) *Forest bird surveys in Vietnam 1989/90: final report*. Unpublished report to the International Council for Bird Preservation.



Imperial Pheasant *Lophura imperialis*

# Phong Nha

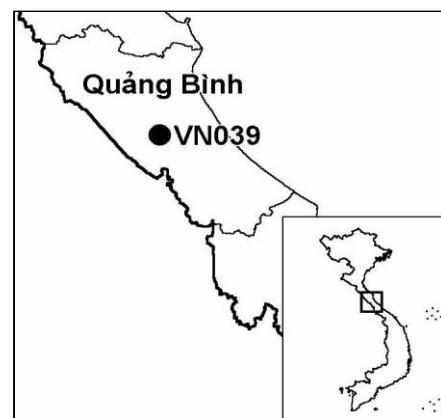
Criteria: A1, A2 & A3

**Province(s):** Quang Binh  
**PA Status:** National Park

**Latitude:** 17°29'N  
**Longitude:** 106°16'E  
**Area:** 41,132 ha  
**Altitude Range:** 150-400 m asl

**EBA / SA:**  
 Annamese Lowlands EBA

**Priority Landscape:**  
 NA 6 - Central Indochina Limestone



## General Description

The IBA comprises the Phong Nha sector of Phong Nha-Ke Bang National Park, which, prior to 2001, was designated as Phong Nha Nature Reserve. The IBA is situated within the largest area of contiguous limestone forest in Indochina, which also includes Hin Namno National Biodiversity Conservation Area in Laos, and the Ke Bang limestone area in Vietnam. The IBA has a limestone karst topography, as a result of which human encroachment into the site has been limited. Consequently, the limestone karst is almost entirely forested, apart from steep cliff faces. At the foot of the limestone karst, the natural vegetation is lowland evergreen forest, although some areas have been cleared for cultivation. There are a number of major cave systems at Phong Nha, and the site attracts large numbers of domestic tourists every year. Phong Nha is one of the most important sites in Vietnam for the conservation of globally threatened primate species, including at least one taxon endemic to limestone karst areas in central Indochina: Hatinh Langur *Trachypithecus francoisi hatinhensis*<sup>1</sup>. In addition, the IBA supports an all-black langur, the precise taxonomic affinities of which are currently undetermined<sup>1</sup>. To the north-west, Phong Nha IBA is contiguous with Ke Bang IBA.

## Bird Fauna: Key Features

Phong Nha IBA is situated within the Annamese Lowlands Endemic Bird Area (EBA), and supports at least two of the nine restricted-range species that define this EBA. Notably, the IBA is one of only two sites in Vietnam known to support Sooty Babbler *Stachyris herberti*, a species that went unrecorded for over 70 years between its discovery in Laos around 1920 and its rediscovery at Phong Nha in 1994<sup>2</sup>. In addition to Sooty Babbler, Phong Nha IBA supports a population of a form of leaf warbler that is endemic to limestone karst areas in central Indochina. This form, which resembles Sulphur-breasted Warbler *Phylloscopus ricketti* in external appearance but differs in terms of vocalisations, may represent an undescribed species<sup>3</sup>.

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
Crested Argus <i>Rheinardia ocellata</i>	A1, A2	VU	15	One bird was heard in November 1994 and one or two birds were heard in June 1996 <sup>4</sup> .
Chestnut-necklaced Partridge <i>Arborophila charltonii</i>	A1	NT	7	A pair was heard duetting in November 1994 <sup>4</sup> .
Siamese Fireback <i>Lophura diardi</i>	A1, A3	NT	13	The species was recorded between June and July 1994 <sup>2</sup> .
Red-collared Woodpecker <i>Picus rabieri</i>	A1, A3	NT	11	The species was recorded between June and July 1994 <sup>2</sup> . A family group of four was seen in June 1996 and two birds were observed in December 1996 <sup>4</sup> .
Great Hornbill <i>Buceros bicornis</i>	A1	NT	13	The species was recorded between June and July 1994 <sup>2</sup> .
Brown Hornbill <i>Anorrhinus tickelli</i>	A1, A3	NT	16	The species was recorded between June and July 1994 <sup>2</sup> . Three birds were observed and up to eight were heard in June 1996 <sup>4</sup> .
[Short-tailed Scimitar Babbler <i>Jabouilleia danjoui</i> ]	A1, A2	NT	18	Although the species has not yet been recorded at the IBA, it was recorded in the neighbouring Rao Bong watershed between June and July 1994 <sup>2</sup> . While it is likely to occur at the IBA, this is currently unconfirmed.

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
Sooty Babbler <i>Stachyris herbeti</i>	A1, A2	NT	1	After a gap of over 70 years since the species's discovery, it was rediscovered at Phong Nha between June and July 1994 <sup>2</sup> . During two subsequent visits, four small flocks were seen in November 1995 and several flocks, one of which numbered more than 20 birds, were observed in June 1996 <sup>4</sup> .

Notes: [ ] = unconfirmed record.

**Biome Restricted Species:** The site qualifies under criterion A3 because it supports 14 species restricted to the Indochinese Tropical Moist Forests (Biome 09). See Appendix 4 for details.

### Secondary Criteria

Species	Status	Species	Status
Northern Slow Loris <i>Nycticebus bengalensis</i> <sup>5</sup>	DD	Hatinh Langur <i>Trachypithecus francoisi hatinhensis</i> <sup>5,6</sup>	EN
Pygmy Loris <i>Nycticebus pygmaeus</i> <sup>5</sup>	VU	Red-shanked Douc <i>Pygathrix nemaeus nemaeus</i> <sup>5</sup>	EN
Northern Pigtail Macaque <i>Macaca leonina</i> <sup>5</sup>	VU	Buff-cheeked Gibbon <i>Nomascus gabriellae</i> <sup>5</sup>	VU
Assamese Macaque <i>Macaca assamensis</i> <sup>5</sup>	VU	*[Gaur <i>Bos gaurus</i> ] <sup>5</sup>	VU
Rhesus Macaque <i>Macaca mulatta</i> <sup>5</sup>	NT	Southern Serow <i>Naemorhedus sumatraensis</i> <sup>5</sup>	VU
Stump-tailed Macaque <i>Macaca arctoides</i> <sup>5</sup>	VU		

Notes: [ ] = unconfirmed record; \* = possibly extinct at the site.

### Threats to Biodiversity

Currently, the biggest threat to biodiversity at Phong Nha IBA is hunting, which is widespread at the site and represents a particular threat to populations of primates and large mammals. Levels of hunting are high in response to high demand from the wildlife trade. In addition to hunting, illegal timber extraction is also a major threat to biodiversity, and, again, occurs largely in response to commercial demand<sup>1</sup>.

Due to the unsuitability of the limestone karst terrain, the rate of habitat loss to date at Phong Nha has been relatively low<sup>5</sup>. However, a road, which is currently being constructed through the IBA, may result in increased rates of habitat loss and disturbance to key species, especially globally threatened primates<sup>1</sup>. The on-going construction of National Highway 2 close to the IBA is also a cause for concern, as this may facilitate human settlement in the surrounding area, thereby increasing human pressure on natural resources.

Another potential threat to biodiversity at the site is tourism development. To date, however, tourism development at the site has been concentrated on the cave systems, and impacts on forest habitats have been limited.

Threat	Severity
Agricultural intensification / expansion	●
Hunting	● ●
Infrastructure development	● ●
Recreation / tourism	●
Selective logging / cutting	● ●

### Conservation Actions

- In 1986, the government of Vietnam decreed the establishment of a cultural and historical site at Phong Nha<sup>1</sup>.
- In 1993, Phong Nha Cultural and Historical Site was upgraded to nature reserve status and a management board was established<sup>1</sup>.
- In 1998, with funding from the UK Department for International Development, WWF initiated a transboundary conservation project at Phong Nha, entitled *Linking Hin Namno and Phong Nha through Parallel Conservation*<sup>1</sup>.
- In 1998, Fauna and Flora International initiated a conservation project at Phong Nha-Ke Bang, comprising capacity building and field survey components<sup>1</sup>.
- In December 2001, the government of Vietnam decreed the establishment of Phong Nha-Ke Bang National Park, comprising Phong Nha Nature Reserve and part of the Ke Bang limestone area.
- Koln Zoo is currently developing plans to undertake capacity building activities and further biological surveys at the site<sup>1</sup>.

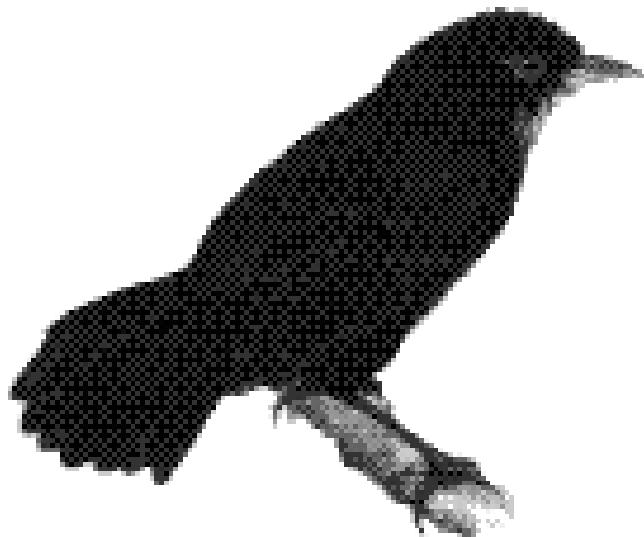
### Recommendations

- National park management regulations, particularly controls on hunting and timber extraction should be effectively enforced.

- Strict controls on human settlement along the route of National Highway 2 should be introduced, in order to minimise increased pressures on the natural resources of the IBA following construction of this road.
- All proposed infrastructure developments at the national park, particularly those involving road construction, should be subjected to careful Environmental Impact Assessment, and appropriate mitigation measures should be implemented.
- A tourism management board, including representatives of the national park management board, the provincial tourism company and other local stakeholders, should be established as a basis for environmentally sustainable tourism development at the site.

### **References**

1. BirdLife International and the Forest Inventory and Planning Institute (2001) *Sourcebook of existing and proposed protected areas in Vietnam*. Hanoi: BirdLife International Vietnam Programme and the Forest Inventory and Planning Institute.
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5. Nguyen Xuan Dang, Pham Nhat, Pham Trong Anh, Hendrichsen, D. (1998) *Results of surveys on mammal fauna in Phong Nha – Ke Bang area, Quang Binh, Vietnam: July 1-August 21, 1998*. Unpublished report to the Fauna & Flora International Indochina Programme, Hanoi.
6. Timmins, R. J., Do Tuoc, Trinh Viet Cuong and Hendrichsen, D. K. (1999) *A preliminary assessment of the conservation importance and conservation priorities of the Phong Nha-Ke Bang proposed national park, Quang Binh province, Vietnam*. Hanoi: Fauna & Flora International Indochina Programme.



Sooty Babbler *Stachyris herberti*

# Ke Bang

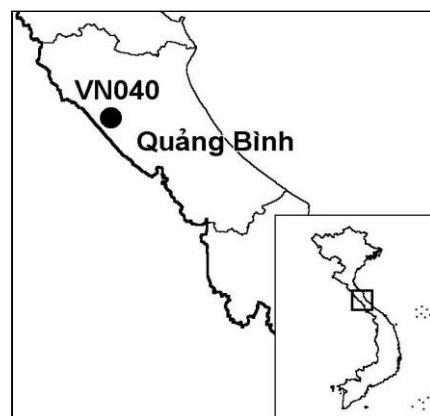
**Criteria: A1, A2 & A3**

**Province(s):** Quang Binh  
**PA Status:** National Park

**Latitude:** 17°35'N  
**Longitude:** 106°01'E  
**Area:** 106,813 ha  
**Altitude Range:** 500-1,174 m asl

**EBA / SA:**  
 Annamese Lowlands EBA

**Priority Landscape:**  
 NA 6 - Central Indochina Limestone



## General Description

The IBA comprises the Ke Bang limestone area, which forms part of the largest area of contiguous limestone forest in Indochina. The topography of the IBA is characterised by limestone karst formations, interspersed by narrow valleys. The IBA is almost entirely covered by forest, which, due to the inaccessible terrain is largely in a good condition. Although limestone forest is the dominant habitat type, covering around 90% of the IBA, lowland evergreen forest, which is distributed in low elevation valleys, is also of high conservation significance<sup>1</sup>. Together with the adjacent Phong Nha IBA, Ke Bang IBA is one of the most important sites for the conservation of globally threatened primates in Vietnam. Around 40% of the IBA is included within the recently decreed Phong Nha-Ke Bang National Park. To the south-east, Ke Bang IBA is contiguous with Phong Nha IBA, while, to the south-west, it is contiguous with Phou Chuang and Central Hin Namno IBAs in Laos.

## Bird Fauna: Key Features

The avifauna of Ke Bang IBA is very similar to that of Phong Nha IBA, which can be explained by the proximity of the two sites and the similar habitats at each. Ke Bang supports three of the nine restricted-range species that define the Annamese Lowlands Endemic Bird Area, including Sooty Babbler *Stachyris herbeti*, a species restricted to limestone forest habitats in central Vietnam and Laos. At Khe Bang IBA, Sooty Babbler is relatively common in areas of primary limestone forest. As well as restricted-range species, Ke Bang IBA also supports a number of globally near-threatened species, including Great Hornbill *Buceros bicornis* and Brown Hornbill *Anorrhinus tickelli*. Given the inaccessible terrain and the large area of primary forest, Ke Bang IBA is an important site for the conservation of these two hornbill species, which have declined severely in Vietnam in recent decades as a result of habitat loss and hunting.

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
Crested Argus <i>Rheinardia ocellata</i>	A1, A2	VU	15	The species was heard on four days in October 1998 <sup>1</sup> . A single individual was recorded and feathers were found with local hunters in March 1999 <sup>2</sup> .
Chestnut-necklaced Partridge <i>Arborophila charltonii</i>	A1	NT	7	The species was recorded on numerous occasions between July and October 1998 <sup>1</sup> .
Red-collared Woodpecker <i>Picus rabieri</i>	A1, A3	NT	11	Single individuals were observed on four occasions between September and October 1998 <sup>1</sup> . The species was recorded regularly at four localities between March and April 1999 <sup>2</sup> .
Great Hornbill <i>Buceros bicornis</i>	A1	NT	13	The species was occasionally recorded between July and October 1998 <sup>1</sup> . The species was also recorded between March and April 1999 <sup>2</sup> .
Brown Hornbill <i>Anorrhinus tickelli</i>	A1, A3	NT	16	Observations of flocks were made on several occasions in September 1998, which were thought to refer to one or two groups in total <sup>1</sup> . The species was also recorded on numerous occasions in March and April 1999 <sup>2</sup> .
[Japanese Paradise-flycatcher <i>Terpsiphone atrocaudata</i> ]	A1	NT	2	A single unconfirmed record was made in October 1998 <sup>1</sup> .
Short-tailed Scimitar Babbler <i>Jabouilleia danjoui</i>	A1, A2	NT	16	Between July and October 1998, one or two groups were observed on a near daily basis <sup>1</sup> .

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
Sooty Babbler <i>Stachyris herbeti</i>	A1, A2	NT	1	Between July and October 1998, one or two groups were observed on a near daily basis <sup>1</sup> . A pair with fledglings was observed north of Yen Hop village in April 1999 <sup>2</sup> .

Notes: [ ] = unconfirmed record.

**Biome Restricted Species:** The site qualifies under criterion A3 because it supports 15 species restricted to the Indochinese Tropical Moist Forests (Biome 09). See Appendix 4 for details.

### Secondary Criteria

Species	Status	Species	Status
[Northern Slow Loris <i>Nycticebus bengalensis</i> ] <sup>3</sup>	DD	Red-shanked Douc <i>Pygathrix nemaeus nemaeus</i> <sup>3</sup>	EN
[Pygmy Loris <i>Nycticebus pygmaeus</i> ] <sup>3</sup>	VU	White-cheeked / Buff-cheeked Gibbon <i>Nomascus leucogenys / gabriellae</i> <sup>1,3</sup>	DD/VU
Northern Pigtail Macaque <i>Macaca leonina</i> <sup>1,3</sup>	VU	Keeled Box Turtle <i>Pyxidea mouhotii</i> <sup>1</sup>	EN
[Assamese Macaque <i>Macaca assamensis</i> ] <sup>1,3</sup>	VU	*[Gaur <i>Bos gaurus</i> ] <sup>3</sup>	VU
Rhesus Macaque <i>Macaca mulatta</i> <sup>3</sup>	NT	Southern Serow <i>Naemorhedus sumatraensis</i> <sup>1,2</sup>	VU
Stump-tailed Macaque <i>Macaca arctoides</i> <sup>1,3</sup>	VU	*Saola <i>Pseudoryx nghetinhensis</i> <sup>1,3</sup>	EN
Hatinh Langur <i>Trachypithecus francoisi hatinhensis</i> <sup>1,3</sup>	EN		

Notes: [ ] = unconfirmed record; \* = possibly locally extinct.

### Threats to Biodiversity

Due to the unsuitability of the limestone karst terrain, conversion of forest to agriculture is not currently a major threat to biodiversity at Ke Bang IBA, although it is a potential threat to lowland evergreen forest, which is a habitat type of high conservation concern<sup>1</sup>. Another potential cause of habitat degradation and loss is selective timber extraction. However, the results of a recent survey indicated that this is currently taking place at low levels<sup>1</sup>.

Currently, the biggest threat to biodiversity at Ke Bang IBA is hunting. Although hunting takes place throughout the site, it is concentrated in areas within a day's walk of villages<sup>1</sup>. Widespread snaring is a particular concern as it is indiscriminate and threatens populations of ground-dwelling birds, such as Crested Argus *Rheinardia ocellata*. Hunting with guns is also of concern, as it threatens populations of globally threatened primates. The ongoing construction of National Highway 2, the route of which runs close to the IBA, may lead to increased human pressure on natural resources, if it increases access to outside markets and facilitates human settlement in surrounding areas.

Threat	Severity
Agricultural intensification / expansion	●
Commercial timber extraction	●
Hunting	● ● ●
Infrastructure development	●
Selective logging / cutting	● ●

### Conservation Actions

- In 1998, with funding from the UK Department for International Development, WWF initiated a transboundary conservation project at Phong Nha, entitled *Linking Hin Namno and Phong Nha through Parallel Conservation*<sup>4</sup>.
- In 1998, Fauna & Flora International initiated a conservation project at Phong Nha-Ke Bang, comprising capacity building and field survey components<sup>4</sup>.
- In December 2001, the government of Vietnam decreed the establishment of Phong Nha-Ke Bang National Park, comprising Phong Nha Nature Reserve and part of the Ke Bang limestone area.

### Recommendations

- National park management regulations, particularly controls on hunting and timber extraction should be effectively enforced.
- Strict controls on human settlement along the route of National Highway 2 should be introduced in order to minimise increased pressures on the natural resources of the IBA following construction of this road.
- All proposed infrastructure developments at the national park, particularly those involving road construction, should be subjected to careful environmental impact assessment, and appropriate mitigation measures should be implemented.

- Those parts of the Ke Bang limestone area outside of Phong Nha-Ke Bang National Park should be designated as special-use forest or protection forest, or, if designated as production forest, placed under sustainable forest management. In addition, controls on hunting should be introduced throughout these areas and effectively enforced.

## References

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Brown Hornbill *Anorrhinus tickelli*

# Truong Son

Criteria: A1, A2 & A3

**Province(s):** Quang Binh  
**PA Status:** None

**Latitude:** 17°07'N  
**Longitude:** 106°30'E  
**Area:** 50,000 ha  
**Altitude Range:** 100-1,350 m asl

**EBA / SA:**  
 Annamese Lowlands EBA

**Priority Landscape:**  
 None



## General Description

Truong Son IBA is situated in the Annamese lowlands, close to the international border with Laos. Although the precise boundaries of the IBA have yet to be defined, due to limited information on the status and distribution of key bird species in the area, available information indicates that the IBA will encompass areas of forest in western Le Thuy and Quang Ninh districts. The topography of the area is dominated by the foothills of the Annamite mountains but rises in the west to elevations of over 1,000 m asl. A large proportion of Le Thuy district is covered by natural forest, and significant areas of relatively undisturbed lowland evergreen forest remain in the south of the district. In contrast, forest in the north and east of the district are more heavily disturbed, with large areas of secondary vegetation present. Quang Ninh district, which adjoins Le Thuy district to the north, supports a large area of limestone forest, as well as larger areas of lowland evergreen forest. The IBA is currently under the management of Khe Giua, Ba Ren and Truong Son State Forest Enterprises<sup>1</sup>. To the west, Truong Son IBA is contiguous with Upper Xe Banfai IBA in Laos.

## Bird Fauna: Key Features

Truong Son IBA supports an avifauna typical of the Annamese Lowlands Endemic Bird Area (EBA). To date, three of the nine restricted-range species characteristic of the EBA, have been recorded at the site: Annam Partridge *Arborophila merlini*, Crested Argus *Rheinardia ocellata* and Short-tailed Scimitar Babbler *Jabouilleia danjoui*. In addition, a fourth restricted-range species, the globally endangered Edwards's Pheasant *Lophura edwardsi*, has been provisionally recorded, based on a single specimen record from an unknown locality in western Quang Ninh district<sup>2</sup>. A rapid survey of the IBA during June 2002 was unable to obtain equivocal evidence regarding the status of this species at the site<sup>1</sup>. In addition, the IBA supports suitable habitat for three other restricted-range species, Imperial Pheasant *L. imperialis*, Sooty Babbler *Stachyris herberti* and White-cheeked Laughingthrush *Garrulax vassali*, although none have been confirmed to occur at the site to date<sup>1</sup>.

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
[Edwards's Pheasant <i>Lophura edwardsi</i> ]	A1, A2	EN	3	In 1998 or 1999, a specimen of a juvenile Edwards's Pheasant was collected at an unknown locality in western Quang Ninh district <sup>2</sup> .
Crested Argus <i>Rheinardia ocellata</i>	A1, A2	VU	15	At least three, four and five Crested Argus were heard calling on separate days in June 2002 in lowland evergreen forest in the Khe Nuoc Trong area of Le Thuy district <sup>1</sup> . Tail feathers, reportedly from birds captured within the IBA, were observed in two villages in Le Thuy district and one village in Quang Ninh district during June 2002 <sup>1</sup> .
[Siamese Fireback <i>Lophura diardi</i> ]	A1, A3	NT	14	According to the local forest protection department, a single captive bird was confiscated in Le Thuy district in July 1999 <sup>1</sup> . Local hunters affirmed the presence of this species in western Le Thuy district <sup>1</sup> .
Red-collared Woodpecker <i>Picus rabieri</i>	A1, A3	NT	11	A single bird was seen at 200 m asl in lowland evergreen forest in the Nuoc Trong area of Le Thuy district in June 2002 <sup>1</sup> .

Species	IBA Criteria	Global Threat Status	Other IBAs	Notes
[Great Hornbill <i>Buceros bicornis</i> ]	A1	NT	14	One skull of a bird reportedly hunted in 1976 was observed at a village in Le Thuy district in June 2002 <sup>1</sup> . Local hunters report the continued occurrence of the species <sup>1</sup> .
Brown Hornbill <i>Anorrhinus tickelli</i>	A1, A3	NT	16	A single bird and a group of least six were observed on separate days in June 2002 at 200 m asl in lowland evergreen forest in the Khe Nuoc Trong area of Le Thuy district <sup>1</sup> . Five captive juveniles were observed at three villages in Quang Ninh district in June 2002 <sup>1</sup> .
Lesser Fish Eagle <i>Ichthyophaga humilis</i>	A1	NT	6	In June 2002, a single adult was observed flying along a narrow, forested river in the Khe Nuoc Trong area of Le Thuy district <sup>1</sup> .
Short-tailed Scimitar Babbler <i>Jabouilleia danjoui</i>	A1, A2	NT	16	Two pairs, probably the same birds, were observed on separate occasions at 200 m asl in a forested gully in the Khe Nuoc Trong area of Le Thuy district in June 2002 <sup>1</sup> .
Annam Partridge <i>Arborophila merlini</i>	A1, A2		4	A single male specimen was captured in a snare line placed at 200 m asl in lowland evergreen forest in the Khe Nuoc Trong area of Le Thuy district in June 2002 <sup>1</sup> . <i>Arborophila</i> partridge calls, thought probably to be this species, were frequently heard in the same area during June 2002 <sup>1</sup> .

Notes: [ ] = unconfirmed record.

**Biome Restricted Species:** The site qualifies under criterion A3 because it supports nine species restricted to the Indochinese Tropical Moist Forests (Biome 09). See Appendix 4 for details.

### Secondary Criteria

Species	Status	Species	Status
[Red-shanked Douc <i>Pygathrix nemaeus nemaeus</i> ] <sup>1</sup>	EN	Southern Serow <i>Naemorhedus sumatraensis</i> <sup>1</sup>	VU
White-cheeked / Buff-cheeked Gibbon <i>Nomascus leucogenys / gabriellae</i> <sup>1</sup>	DD/VU	Saola <i>Pseudoryx nghetinhensis</i> <sup>1</sup>	EN

Notes: [ ] = unconfirmed record.

### Threats to Biodiversity

The natural forest in Truong Son IBA has been reduced in extent and fragmented as a result of several factors, including the effects of the Second Indochina War and commercial logging operations. Habitat degradation and loss continue at the site, as a result of on-going commercial logging operations. However, as a result of a reduction in logging operations and the zoning of significant areas of good quality forest as watershed protection forest (where timber extraction is prohibited), rates of habitat degradation and loss have declined in recent years. In addition, the rate of conversion of forest to agricultural land is relatively low, due to the low human population density<sup>1</sup>.

In addition to habitat loss, another major threat to biodiversity at Truong Son IBA is hunting. This threat is particularly severe to large mammal populations, most notably that of the globally endangered Saola *Pseudoryx nghetinhensis*, but also affects hornbills and galliformes. Without effective conservation action, hunting pressure and rates of habitat loss are likely to intensify following the completion of the western branch of National Highway 2, which is currently being constructed through the IBA. The completion of this highway may facilitate human settlement within the IBA and open up the area to outside economic forces, including the wildlife trade<sup>1</sup>.

Threat	Severity
Agricultural intensification / expansion	●
Commercial timber extraction	● ●
Hunting	● ● ●
Infrastructure development	● ● ●

### Conservation Actions

- None to date.

### Recommendations

- The feasibility of establishing a protected area including all or part of the IBA should be assessed, and, if appropriate, such a protected area should be established under the management of Quang Binh Provincial FPD<sup>1</sup>.

- Further studies should be conducted to assess the distribution and status of all species of conservation concern in the area, as a basis for targeted conservation interventions and integration of biodiversity considerations into state forest enterprise management plans and other land-use plans<sup>1</sup>.
- Appropriate anti-hunting regulations should be developed and enforced within forest compartments that support species of conservation concern<sup>1</sup>.
- Community-based conservation initiatives should be developed in communities adjacent to forest compartments supporting species of conservation concern<sup>1</sup>.
- Human settlement along the route of the western branch of National Highway 2 should be strictly controlled and no settlement should be permitted adjacent to forest compartments supporting species of conservation concern<sup>1</sup>.
- State forest enterprise management plans should be modified so that forest compartments supporting Saola, gibbon, Brown Hornbill *Anorrhinus tickelli* or Great Hornbill *Buceros bicornis* are zoned as watershed protection forest, where timber extraction is prohibited<sup>1</sup>.

### **References**

1. Le Manh Hung, Pham Duc Tien, Tordoff, A. W. and Nguyen Dinh Dung (2002) *A rapid field survey of Le Thuy and Quang Ninh districts, Quang Binh province, Vietnam*. Unpublished report to the Birdlife International Vietnam Programme and the Institute of Ecology and Biological Resources.
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Short-tailed Scimitar Babbler *Jabouilleia danjoui*