

SOUTH-EAST CHINESE FORESTS

TWELVE threatened bird species breed in the subtropical forests of south-east China and Taiwan, one of which also occurs in northern Vietnam. They are all found in the three Endemic Bird Areas of this region—the Chinese subtropical forests, South-east Chinese mountains and Taiwan—other than Reeves’s Pheasant, which inhabits the forests of central China. Most of them occur in forests on hills and lower mountains slopes, and in Sichuan their ranges meet those of the threatened birds of the Sino-Himalayan mountain forests (F04).

- **Key habitats** Subtropical forest.
- **Altitude** Lowlands to 2,600 m.
- **Countries and territories** **China** (*mainland*: Gansu, Sichuan, Chongqing, Yunnan, Guizhou, Shaanxi, Henan, Hubei, Anhui, Jiangsu, Zhejiang, Fujian, Jiangxi, Hunan, Guangxi, Guangdong; *Taiwan*); **Vietnam**.

	Threatened species			Total
	CR	EN	VU	
🌿 ¹	—	1	9	10
🌿 ²	—	1	1	2
Total	—	2	10	12

Key: 🌿 = breeds only in this forest region.

¹ Brown-chested Jungle-flycatcher and Silver Oriole nest only in this forest region but migrate to other regions outside the breeding season.

🌿 = also breeds in other region(s).

² Fairy Pitta nests in this forest region and the Japanese forests (F02), and migrates to another region outside the breeding season.

The forests of the Wuyi Shan mountains of Fujian are amongst the most extensive remaining in south-east China. PHOTO: MIKE CROSBY/BIRDLIFE





Table 1. Outstanding Important Bird Areas in the south-east Chinese forests.

IBA name	Status	Territory	Threatened species and habitats
1 Wuzhi Shan	—	Sichuan	Supports all Chinese subtropical forests EBA species, notably an important population of Sichuan Partridge
2 Dongzhai NNR	PA	Henan	Important population of Reeves's Pheasant
3 Gutian Shan NR	PA	Zhejiang	Large population of Elliot's Pheasant
4 Wuyanling NNR	PA	Zhejiang	Most South-east Chinese mountains EBA species, notably Cabot's Tragopan
5 Wuyi Shan NR	PA ^{BR,WH}	Fujian; Jiangxi	Large reserve with most South-east Chinese mountains EBA species
6 Guanshan NR	PA	Jiangxi	Most South-east Chinese mountains EBA species, notably a large population of Elliot's Pheasant
7 Mao'er Shan NR	PA	Guangxi	Large area of forest, supports Silver Oriole and probably other threatened species
8 Dayao Shan NR	PA	Guangxi	Supports birds of both the Chinese subtropical forests and South-east Chinese mountains EBAs
9 Daming Shan NR	PA	Guangxi	Large area of forest, White-eared Night-heron recently recorded just outside the reserve
10 Nanling NNR	PA	Guangdong	Supports birds of both the Chinese subtropical forests and South-east Chinese mountains EBAs
11 Chebaling NNR	PA	Guangdong	Recent records of White-eared Night-heron, including of fledglings, just outside the reserve
12 Kenting NP	PA	Taiwan	Population of Taiwan Bulbul

Note that more IBAs in this region will be included in the *Important Bird Areas in Asia*, due to be published in early 2004.

Key IBA name: NP = National Park; NR = Nature Reserve; NNR = National Nature Reserve.

Status: PA = IBA is a protected area; (PA) = IBA partially protected; — = unprotected; BR = IBA is wholly or partially a Biosphere Reserve (see pp.34–35); WH = IBA is wholly or partially a World Heritage Site (see p.34).

OUTSTANDING IBAs FOR THREATENED BIRDS (see Table 1)

Twelve IBAs have been selected in south-east China, which together support populations of all of the threatened forest birds of this region, and include some of the largest and richest forests remaining in this part of China. Many other sites in the region with significant populations of threatened forest birds will be documented during BirdLife’s ongoing regional IBA Project.

CURRENT STATUS OF HABITATS AND THREATENED SPECIES

South-east China has a long history of human habitation, and extensive deforestation had already taken place there by the nineteenth century. Rapid forest loss has continued in most provinces in the region over the past 50 years: in Fujian timber reserves declined by 50% between 1949 and 1980, and in Sichuan forest cover was estimated to have been reduced from 19% to 12.6% between the early 1950s and 1988. The

Fairy Pitta inhabits mid-altitude forests, and some key breeding areas on Taiwan and elsewhere are under pressure for development.

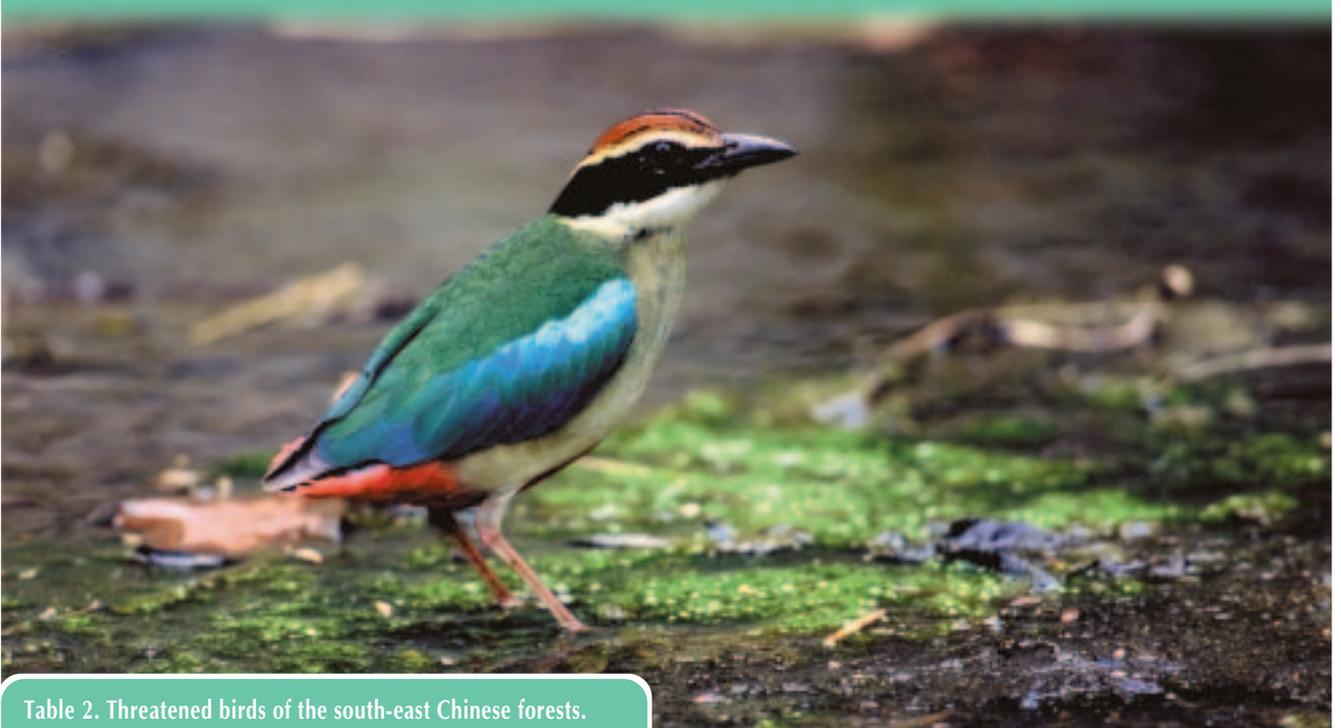


PHOTO: WEN-HSIN HUANG

Table 2. Threatened birds of the south-east Chinese forests.

Species		Distribution and habitat
CENTRAL CHINESE FORESTS		
Reeves’s Pheasant <i>Symaticus reevesii</i>	☉ VU	Forest at 400–2,600 m (optimum elevation c.1,000 m)
CHINESE SUBTROPICAL FORESTS (EBA 140)		
Sichuan Partridge <i>Arborophila rufipectus</i>	☉ EN	Subtropical broadleaf forest at c.1,100–2,250 m in Sichuan and probably extreme north-east Yunnan
Omei Shan Liocichla <i>Liocichla omeiensis</i>	☉ VU	Subtropical broadleaf forest, scrub and bamboo at c.1,000–2,400 m in Sichuan and north-east Yunnan
Gold-fronted Fulvetta <i>Alcippe variegaticeps</i>	☉ VU	Subtropical broadleaf forest, usually with bamboo, at c.700–2,000 m in Sichuan and Guangxi
Silver Oriole <i>Oriolus mellianus</i>	☉ ^m VU	Subtropical broadleaf forest at c.600–1,700 m in Sichuan, Yunnan, Guizhou, Guangxi and Guangdong
SOUTH-EAST CHINESE MOUNTAINS (EBA 141)		
White-eared Night-heron <i>Gorsachius magnificus</i>	☉ EN	Forest on lower and middle mountain slopes, usually near water
White-necklaced Partridge <i>Arborophila gingica</i>	☉ VU	Broadleaf and mixed broadleaf-coniferous forest, bamboo and scrub at c.500–1,900 m
Cabot’s Tragopan <i>Tragopan caboti</i>	☉ VU	Evergreen broadleaf and mixed broadleaf-coniferous forest at c.600–1,800 m
Elliot’s Pheasant <i>Symaticus ellioti</i>	☉ VU	Broadleaf and mixed broadleaf-coniferous forest, bamboo and scrub at c.200–1,900 m
Fairy Pitta <i>Pitta nympha</i>	☉ ^{ms} VU	Broadleaf and mixed broadleaf-coniferous forest at c.400–1,900 m
Brown-chested Jungle-flycatcher <i>Rhinomyias brunneata</i>	☉ ^m VU	Bamboo undergrowth in evergreen broadleaf forest at c.600–1,600 m
TAIWAN (EBA 149)		
Fairy Pitta <i>Pitta nympha</i>	☉ ^{ms} VU	Subtropical forest in the lowlands and foothills
Taiwan Bulbul <i>Pycnonotus taivanus</i>	☉ VU	Secondary forest, scrub, agricultural land and gardens in the lowlands of southern and eastern Taiwan

☉ = breeds only in this forest region; ☉ = also breeds in other region(s); m = migrates to other region(s); s = also occurs in another EBA in the south-east Chinese forests

Much of lowland south-east China has long been cleared for cultivation, principally of rice.



PHOTO: MIKE CROSBY/BIRDLIFE

relatively accessible, low- to mid-altitude subtropical forests have been disproportionately badly affected, so the remaining habitat of the threatened forest birds of this region is severely fragmented, and their populations have been subdivided into ever smaller and more isolated groups of birds. In the past, the main causes of deforestation were conversion of forest to agricultural land, and clear-felling for timber. In many areas, particularly rapid forest loss took place to fuel steel furnaces during the 'Great Leap Forward' in the 1950s, and at a few sites uncontrolled fires have destroyed large blocks of forest. In recent decades, the rate of forest loss has slowed considerably, although some localised losses of natural forest still occur.

The national and provincial governments of mainland China have recently designated many new protected areas, and there are now several hundred in south-east China which officially protect many of the largest and richest areas of natural forest in the region. On Taiwan, the lowlands have long been cleared for agriculture and habitations, but the hills and mountains retain extensive forest cover with large areas protected inside nature reserves.

CONSERVATION ISSUES AND STRATEGIC SOLUTIONS (summarised in Table 3)

Forest loss and degradation

■ FORESTRY AND ILLEGAL LOGGING

Until recently, commercial logging by state-run enterprises was a major reason for the diminution of natural forests in south-east China. However, in 1998 a national logging ban (following catastrophic flooding in the lower Yangtze basin, and linked to concerns over siltation of the Three Gorges Dam) was enacted under the National Forest Protection Program (NFPP), which limits logging to local subsistence needs. Although this measure has been largely effective, a

significant level of illegal logging has been reported, and subsistence logging can have a major local impact. The ban provides an opportunity for the forestry authorities in China to work together with local communities, NGOs and conservationists to develop sustainable forestry under the NFPP; this would protect primary forest and forests inside nature reserves, whilst allowing sustainable exploitation of forest resources by local people. Since the ban, forestry workers in southern Sichuan have been redeployed in replanting some of the steeper denuded slopes, mainly using seeds from local broadleaf trees. However, similar schemes elsewhere in south-east China often use monocultures and exotic species; instead, reforestation using appropriate mixtures of native species is needed.

■ CONVERSION TO AGRICULTURE AND PLANTATIONS

Forestland conversion for agriculture has greatly reduced, fragmented and degraded natural habitats in much of south-east China. Although deforestation for agriculture is now illegal, small-scale encroachment still occurs. Clearance of forest is often linked to uncertainty over land tenure, which makes resource management difficult. Boundary disputes therefore need to be urgently resolved, and land ownership and land-use rights clarified, to help strengthen forest management and prevent illegal conversion. Although plantations may be locally important where natural forest has been destroyed, for example at a site in southern Guangxi where suspected White-eared Night-heron nests have been found, they are rarely as rich as natural forest and are highly susceptible to invasive diseases, e.g. pinewood nematode.

■ EXPLOITATION OF FOREST PRODUCTS

The collection of fuelwood from collective forests by local people is permitted under the NFPP, but poses a threat to

forest ecosystems, particularly as logging waste is no longer available for fuel. Sustainable alternatives to fuelwood should be promoted, including the use of biogas (produced from livestock manure) and solar power.

■ **DEVELOPMENT (URBAN, INDUSTRIAL, ETC.)**

New roads, dams, power grids, tourism facilities and other developments strongly contribute to habitat loss in south-east China and Vietnam, and the impact of these projects on biodiversity is not usually evaluated properly. Habitat loss linked to economic development is also a threat on Taiwan: an area of forest in Yünlin county supporting a large population of Fairy Pittas was recently scheduled for clearance to allow gravel extraction, although this was suspended following a high-profile media campaign. At Na Hang Nature Reserve, the only locality where White-eared Night-heron has recently been recorded in Vietnam, the government has proceeded with a major dam project which will flood some of the last primary forest in this area, despite the existence of an ongoing, full-size GEF project at the site. Environmental impact assessments should be conducted for development projects that have the potential to damage forested areas; these need to address the potential impact on the ecology of the area, and make appropriate mitigation plans. New developments should be avoided near protected areas and other sites of high biodiversity value. Information on important areas of forest for threatened birds should be provided to local governments, so that protection measures can be incorporated into county development plans.

■ **DISTURBANCE**

The collection of forest products is a major source of disturbance, for example by large numbers of bamboo-

shoot collectors in the Daliang Shan in southern Sichuan, where livestock passing through forests to grazing areas is also a problem. Quotas are needed to control such movements, and to limit and regulate bamboo-shoot collecting.

Protected areas coverage and management

■ **GAPS IN PROTECTED AREAS SYSTEM**

Since 1990, China has rapidly expanded its protected areas system, and by 2002 a total of 1,757 nature reserves covered 13.2% of the nation's land. Several hundred of these are in south-east China, many harbouring important populations of threatened forest birds. However, it is important to note that many of these are county reserves with little funding or management infrastructure. Moreover, some significant gaps remain, which need to be addressed by establishing new reserves or modifying the boundaries of existing reserves, to improve coverage of key forest types or create 'green corridors' to link isolated reserves. County reserves with important populations of threatened species should be upgraded to provincial or national reserves, so that they receive more resources.

The most important gap in coverage of the threatened birds of this region is in the Daliang Shan mountains in Sichuan, where very little of the known range of Sichuan Partridge is protected inside nature reserves. The Wildlife Division of the Sichuan Forestry Department is now implementing a long-term plan to improve the protection of its habitat, by extending Mabian Dafengding Nature Reserve (the only reserve known to support the species) and by establishing several new protected areas. On Taiwan, montane habitats are relatively well protected, but more reserves are needed to protect the lower-altitude forests inhabited by the threatened birds. A special refuge is needed

Table 3. Conservation issues and strategic solutions for birds of the south-east Chinese forests.

Conservation issues	Strategic solutions
Forest loss and degradation	
<ul style="list-style-type: none"> ■ FORESTRY AND ILLEGAL LOGGING ■ CONVERSION TO AGRICULTURE AND PLANTATIONS ■ EXPLOITATION OF FOREST PRODUCTS ■ DEVELOPMENT (URBAN, INDUSTRIAL, ETC.) ■ DISTURBANCE 	<ul style="list-style-type: none"> ➤ Develop a sustainable forestry strategy under the Chinese National Forest Protection Program ➤ Promote reforestation using mixtures of native tree species ➤ Reduce illegal forest conversion and cutting by clarifying administrative boundaries, land ownership and land-use rights ➤ Develop sustainable alternatives to wood as a source of fuel ➤ Assess the environmental impact of development projects in forest areas, and incorporate forest protection in local development plans ➤ Control human disturbance at key sites for threatened birds
Protected areas coverage and management	
<ul style="list-style-type: none"> ■ GAPS IN PROTECTED AREAS SYSTEM ■ WEAKNESSES IN RESERVE MANAGEMENT 	<ul style="list-style-type: none"> ➤ Improve coverage of threatened birds by extending the boundaries or upgrading the status of existing reserves, or establishing new reserves ➤ Establish new reserves in the Daliang Shan in Sichuan, and extend Mabian Dafengding Nature Reserve ➤ Create a special refuge to protect a genetically pure population of Taiwan Bulbuls ➤ Revise inadequate or outdated protected area management plans ➤ Strengthen reserve management through improved funding, infrastructure and staff training
Exploitation of birds	
<ul style="list-style-type: none"> ■ HUNTING ■ WILD BIRD TRADE 	<ul style="list-style-type: none"> ➤ Strengthen enforcement of hunting laws in China, including through improved training for law enforcers and conservation education programmes ➤ List Omei Shan Liocichla as a nationally protected species in China
Gaps in knowledge	
<ul style="list-style-type: none"> ■ INADEQUATE DATA ON THREATENED BIRDS 	<ul style="list-style-type: none"> ➤ Conduct a review of forest cover in south-east China, to help identify sites for survey and protection ➤ Survey the poorly known birds of the Chinese subtropical forests EBA
Other conservation issues	
<ul style="list-style-type: none"> ■ HYBRIDIZATION OF TAIWAN BULBUL 	<ul style="list-style-type: none"> ➤ Study the distribution and spread of hybrid bulbuls on Taiwan ➤ Establish a genetically pure captive population of Taiwan Bulbuls ➤ Conduct awareness campaigns to discourage releases of Chinese Bulbuls for religious purposes

for the Taiwan Bulbul where a genetically pure population survives; the feasibility of strictly enforcing buffer zones from which all Chinese Bulbuls *Pycnonotus sinensis* and hybrids are removed could be tested, although such a drastic measure could prove difficult to implement.

■ WEAKNESSES IN RESERVE MANAGEMENT

Although many new protected areas have recently been designated in China, there is no stable financial mechanism in the national budget to support the provincial- and county-level reserves, and many reserves have to generate income for their own operating budget. Weak institutional capabilities and poor staff morale often hamper reserve management, and some reserves are managed by several different government departments, undermining administrative coherence. As a result, illegal activities are widespread in many protected areas, including logging, mining, forest grazing, agricultural encroachment and hunting, and tourism is often a problem. The preparation of management plans is the responsibility of nature reserve staff, subject to government approval, but many existing plans are inadequate or outdated, and require revision. The National Endangered Plant and Wildlife Protection and Nature Reserve Construction Program is a new government initiative to improve the existing protected area system, mainly focused on national (rather than provincial and county) reserves. It could fund the establishment of new reserves to address gaps in coverage, and help resolve management problems by providing stable funding for reserves to improve their infrastructure, staff training and working conditions, and the livelihood of local communities.

Exploitation of birds

■ HUNTING

Although a ban on gun ownership in China in 1995 may have helped to reduce the pressure, the hunting of birds for food is widespread, despite being illegal in protected areas and for certain protected species. This is believed to be negatively affecting several threatened birds, especially in areas where their habitats have already been fragmented. The larger forest species are probably most seriously affected, notably the partridges and pheasants, but even small birds such as Fairy Pitta are hunted. Stronger enforcement of existing hunting laws is needed both inside and outside protected areas. Forest conservation education

programmes are required in south-east China, possibly using threatened forest birds as flagships, with the aim of reducing hunting pressure.

■ WILD BIRD TRADE

Trapping for the national and international cagebird trade may be a significant threat to Omei Shan Liocichla (and possibly other threatened species), which has appeared in trade in Europe, and which should now be listed as a nationally protected (i.e. untradeable) species in China. There is also a need for improved training and capacity-building for inspectors and enforcers of wildlife legislation.

Gaps in knowledge

■ INADEQUATE DATA ON THREATENED BIRDS

Apart from the pheasants and partridges, the distributions of most threatened forest birds of south-east China are poorly known, notably the passerines. A regional forest review, using forest-cover maps and possibly satellite images and GIS data, should be conducted to select potentially suitable areas for threatened birds, to guide surveys to identify key sites for their conservation. This will help determine the location of new nature reserves, and the modifications needed to the boundaries of existing reserves. The distributions of the four species of the Chinese subtropical forests EBA are particularly poorly known: they all occur in south-central Sichuan, with breeding records of Gold-fronted Fulvetta and Silver Oriole several hundred kilometres to the south-east in Guangxi and Guangdong, and it is possible that some of them also occur in the intervening areas. Surveys targeting these species are required in southern Sichuan, north-west Yunnan, Guizhou, southern Hunan, Guangxi and Guangdong. White-eared Night Heron was rediscovered in northern Vietnam during the only recent ornithological surveys of the Na Hang area, and it is likely that further surveys in that area would locate other sites for the heron, or possibly other threatened birds of the South-East Chinese mountains EBA. Several threatened species appear to be very local, presumably reflecting specialised habitat requirements, and ecological studies are required to improve understanding of their needs and future management.

Other conservation issues

■ HYBRIDISATION OF TAIWAN BULBUL

The ranges of Taiwan Bulbul and the closely related Chinese Bulbul have changed on Taiwan, presumably because of alterations to the original habitats there, and they now overlap and hybridise in several areas. The problem has been exacerbated by releases of Chinese Bulbuls for religious purposes. Hybrids are now widespread, with genetically pure populations of Taiwan Bulbul remaining in only a few isolated parts of its range. More field studies are required to clarify the distribution and spread of hybrids within the wild population of the Taiwan Bulbul, to help develop the most appropriate conservation measures. If genetically pure Taiwan Bulbuls can be obtained, a rigorously managed captive breeding programme should be initiated by Taiwan's zoos to maintain pure stocks while the problem in the wild is being resolved. An awareness campaign should be used to alert the Taiwan government and public to the plight of one of the island's endemic species, particularly to discourage any further releases of Chinese Bulbuls for religious purposes.

The Sichuan Partridge is virtually confined to the Daliang Shan mountains of south-central Sichuan.



PHOTO: DAI BO