

LITTLE-KNOWN AREA

Jinfo Shan Nature Reserve— a hidden Chinese treasure

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Introduction

Jinfo Shan (Golden Buddha Mountain), the highest peak in the Dalou mountains located on the upper reaches of the Yangtze River, is situated in the Nanchuan district of the municipality of Chongqing and lies between the Yunnan–Guizhou plateau and the eastern edge of the Sichuan basin. It is an isolated mountain with upper terraces composed of Permian limestone, and the relatively flat 2,000 m top that peaks at 2,238 m is surrounded by limestone cliffs up to 300 m high (Plates 1 & 2). The major vegetation types include subtropical broadleaf forest below 1,500 m, broadleaf evergreen forest from 1,500 to 1,900 m and alpine

meadows above 1,900 m. Besides the typical karst topography of gorges, stone forests and cave systems, Jinfo Shan is well known for its exceptional botanical diversity, and the Jinfo Shan Nature Reserve (JSNR), some 41,850 ha in area, was established in 1979 as a provincial nature reserve to conserve subtropical ecosystems and plants—4,768 seed plants (Yi *et al.* 2007) are known from this area, but JSNR was primarily created to protect *Cathaya argrophylla*, an endemic Pinaceae found only in Chongqing, Guangxi, Guizhou and Hunan. It is also a refuge for endangered animals confined to karst regions such as the François Langur *Presbytis francoisi*, although sadly this



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Plate 1. Mountain top of Jinfo Shan Nature Reserve viewed from Beipo route, August 2007.

Plate 2. North face of Mt Jinfo, August 2010.



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animal is confined to the core area of the park and is seldom seen by visitors. With its outstanding karst features and superb biodiversity, Jinfo Shan was upgraded to a national nature reserve in 2000 and was added to the list of tentative World Heritage Sites by UNESCO in 2001.

Once a remote site, JSNR is now easily accessible from Chongqing (about 110 km) thanks to the completion of the Bao-Mao Expressway (route G65) in 2007. The new accessibility has brought with it a wide spectrum of problems in the wake of uncontrolled development of tourism. We hope that this article will introduce this interesting but little-known site to birdwatchers worldwide, and raise awareness of conservation issues in JSNR.

Avifauna

According to Liu (2007), there are 228 bird species in JSNR. However, it should be borne in mind that few detailed ornithological studies have been carried out in the reserve and the published list contains some minor mistakes. It is also far from comprehensive and, for example, Fork-tailed Sunbird *Aethopyga christinae* (Plates 3 & 4) and Rufous-breasted Accentor *Prunella strophiata* have been photographed in JSNR, although not included on Liu's list. A reasonable estimate of the number of bird species in JSNR is thought to be nearer

300, so more new records should be expected. Located in the transition region between central and south-west China, JSNR holds few Chinese endemic bird species, although the type specimen of the race *nanchuanensis* of Bar-winged Wren Babbler *Spelaornis troglodytoides*, found only here and the nearby Wuling mountains, was first collected at this site (Li & Yang 1992). However, the reserve has been designated an Important Bird Area (Code CN229) by BirdLife International (2011a), thanks to the presence of the Vulnerable Reeves's Pheasant *Syrmaticus reevesii* (Plate 5). Besides this species, JSNR is home to another six Chinese endemics: Chinese Bamboo Partridge *Bambusicola thoracicus*, Golden Pheasant *Chrysolophus pictus*, Yellow-bellied Tit *Parus venustulus*, Rufous-tailed Babbler *Chrysomma poecilotis*, Elliot's Laughingthrush *Garrulax elliotii* (Plate 6), and Buffy Laughingthrush *G. berthemyi* (Collar 2006). The Chinese subtropical forest Endemic Bird Area (BirdLife International 2011b) does not include JSNR but this could be largely due to the current poor avifaunal data for the reserve and it may ultimately be listed as more reliable/comprehensive data becomes available.

In addition to the above, a mixture of both Oriental and Palearctic (especially Himalayan) elements is an interesting feature of the JSNR

Plate 3. Male Fork-tailed Sunbird *Aethopyga christinae*, JSNR, August 2010.



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Plate 4. Female Fork-tailed Sunbird *Aethopyga christinae*, JSNR, June 2009.



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Plate 5. Reeves's Pheasant *Syrmaticus reevesii*, Xinyang, Henan province, June 2011. (Image added by the editors)

avifauna. JSNR is the northernmost known area in the range of Red-tailed Laughingthrush *G. milnei* in the heartland of China. In the upper parts of the reserve, the high-elevation avifauna is similar to that of the eastern Himalaya and Hengduan mountains. Species they have in common include Elliot's Laughingthrush, Rufous-breasted Accentor

Plate 6. Elliot's Laughingthrush *Garrulax elliotii*, JSNR, June 2009.

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and Spotted Laughingthrush *G. ocellatus* (Plate 7), to name just a few. China is well known for its great diversity of laughingthrushes, and at present JSNR is known to harbour seven species in all (Liu *et al.* 2007). The significant change in altitude from the foothills at about 500 m to the mountain top at 2,238 m make it easy to observe species

Plate 7. Spotted Laughingthrush *Garrulax ocellatus*, JSNR, July 2010.



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displacement: the widely distributed White-browed Laughingthrush *G. sannio* lives in low-elevation areas, Moustached Laughingthrush *G. cineraceus* and White-throated Laughingthrush *G. albogularis* are most commonly encountered on the mountainsides, whilst other subalpine species such as Spotted Laughingthrush dominate the mountain top. In China, few sites so close to a major city provide a better opportunity to see this phenomenon than does JSNR.

Logistics

JSNR is about a half-hour's drive from the town of Nanchuan, which is easily reached via the Yu-Xiang Expressway from Chongqing in less than one hour. Chongqing is a major city with flights to China's gateways such as Beijing, Hong Kong and Shanghai

(all within two and a half hours). Both Chongqing and Nanchuan provide a wide range of accommodation. From Nanchuan, birders have two convenient alternative routes (Figure 1) to explore JSNR; via the 'Beipo' (north slope) route or the 'Xipo' (west slope) route, both having good roads and cable cars to the mountain top. If you do not have your own transportation, they may be reached either by taxi or public transport from Nanchuan. Although an entrance fee is charged, there is no mandatory guide service. Areas and trails open to visitors in JSNR are well marked and easy to follow, and you can simply explore them on your own. JSNR is so conveniently located that a one-day birding trip from Chongqing could be made with ease if time is short. You can also stay a few more days at the mountain top or foot to further explore its avifauna and botanical and geological wonders. If you choose the Beipo route, it is a 37 km drive from Nanchuan to the lower cable car station, and to get to the mountain top you must take the cable car. However, it is only 21 km from Nanchuan to the start of the Xipo route and from here you can either walk to the top (about six hours) or board a park bus to the terminus of another cable car. The temperature at the mountain top is generally about 10°C lower than in the foothills, and it is usually more windy, so you should dress accordingly. There is a visitor centre at Yaochiba near the upper Beipo route cable car station, and decent accommodation and local food are also available here. A shuttle bus links the two upper cable car stations, so you may use one route to ascend and the other to descend. You can also take the park bus to one of the two entrances to Shengtaishilin ('stone forest covered by vegetation' in Chinese) to walk the trails there (allow two hours or more).

Figure 1. Access routes to Jinfo Shan Nature Reserve mountain top.

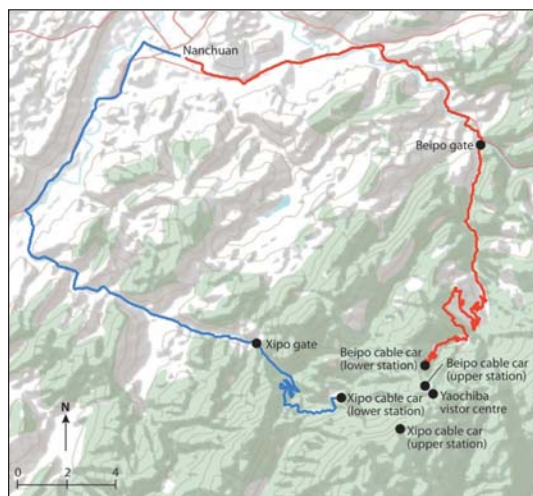


Plate 8. Subalpine meadow at Yaochiba, June 2006.



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Plate 9. Limestone outcrops and dwarf forest in Shengtaishilin, June 2006.

Plate 10. Karst gorge in Wolongtan off Beipo route, July 2006.



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Plate 11. Daurian Redstart *Phoenicurus aureus*, JSNR, June 2009.



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Plate 12. Plumbeous Water Redstart *Rhyacornis fuliginosa*, JSNR, October 2009.

Plate 13. Slaty-backed Forktail *Enicurus schistaceus*, JSNR, July 2009.



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Plate 14. Brown Dipper *Cinclus pallasii*, JSNR, July 2009.

Plate 15. Blue Whistling Thrush *Myophonus caeruleus*, JSNR, July 2009.

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The best time to visit JSNR is from late April to early July, although visiting at other times can also be rewarding. The scenery in the spring is spectacular when the rhododendrons on the mountain top are in full bloom. In the winter, the upper part of the mountain is often covered by snow and ice, and occasionally the whole area may be closed due to heavy snow.

Birdwatching

From lowland sunbirds to subalpine laughingthrushes, JSNR has much to offer birders, even if you just make a day trip. It has well-developed visitor facilities, and few places in China



Plate 16. Yellowish-bellied Bush Warbler *Cettia acanthizoides*, JSNR, July 2009.

Plate 17. Olive-backed Pipit *Anthus hodgsoni*, JSNR, June 2009.



provide a more convenient opportunity to see such a diverse avifauna.

In the lowland areas of the reserve, the water-side birds are one of the prizes. If you head for the Xipo route, focus on the river around the entrance gate area. For those who use the Beipo route, the entrance gate is in a narrow karst gorge (Plate 10), and the road leading to the cable car station goes through the gorge, making it a perfect site for roadside birding. Daurian Redstart *Phoenicurus auroreus* (Plate 11), Plumbeous Water Redstart *Rhyacornis fuliginosa* (Plate 12), Slaty-backed Forktail *Enicurus schistaceus* (Plate 13) and White-capped Water Redstart *Chaimarrornis leucocephalus* often fly over the water or perch on stones in the stream. During the summer, small and energetic Fork-tailed Sunbirds are active in the gorge; they often feed on cultivated flowering maple *Abutilon striatum* at the roadside. In other parts of the lowland area, Brown-breasted Bulbul *Pycnonotus xanthorrhous*, Red-billed Blue Magpie *Urocissa erythrorhyncha* and White-browed Laughingthrush are among the most common species.

Birding sites in mid-altitude areas include Huangcaoping ('yellow grass slope' in Chinese) on the Beipo route and the lower cable car stations on both routes. Huangcaoping is a small village along the Beipo route with a combination of dwellings, farmland, forests and shrubs. Brown-breasted Bulbul, Collared Finchbill *Spizixos semitorques*, Vinous-throated Parrotbill *Paradoxornis webbiana* and Yellow-bellied Tit may be seen at these sites. Beside the parking lot at the lower Beipo cable car station, there are concrete steps leading to the forests—take this trail and look for Streak-breasted Scimitar Babbler *Pomatorhinus ruficollis*—but leave time to return to the cable car station to go to the mountain top!

To some extent, the avifauna on the isolated mountain top is similar to that of the eastern Himalaya–Hengduan mountains, thus offering much to interest birders. There is a major subalpine meadow at Yaochiba whilst other vegetation types include scrub, bamboo grove and dwarf forest. Throughout the area, look for over-flying Himalayan Swiftlet *Collocalia brevirostris* flocks in the spring and summer. This species nests in medium-high elevation limestone crannies and caves, although no nests have been found in Gufodong ('ancient buddha cave' in Chinese), the only commercial cave. The uncommon species of the area include the *nanchuanensis* race of Bar-winged Wren Babbler, one of JSNR's specialties. This race has rufous rather than grey upperparts, and its throat and underparts are purely orange-rufous. [Editors' note: This species is thought to

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Plate 18. White-collared Yuhina *Yuhina diademata*, JSNR, July 2010.

Plate 19. Vinaceous Rosefinch *Carpodacus vinaceus*, JSNR, July 2010.

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Plate 20. Chinese Babax *Babax lanceolatus*, JSNR, July 2009.

Plate 21. Chinese Babax *Babax lanceolatus*, JSNR, June 2009.



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be dimorphic and there is more to be learnt about the range and authenticity of the various races described throughout its extensive range (Rasmussen & Anderton 2005)]. It is usually to be found on the ground or among scrub on the mountain top (Li & Yang 1992). Himalayan species such as Red-tailed Minla *Minla ignotincta* and Rufous-breasted Accentor may also be seen from time to time in scrub just off the trails.

In the bamboo groves and scrub near Gufodong and many other places on the mountain top, White-collared Yuhina *Yuhina diademata* frequently appears (Plate 18). The Vinaceous Rosefinch *Carpodacus vinaceus* (Plate 19) is generally an uncommon species, but it is quite common in JSNR. It usually stays close to the ground and also occurs in mid-altitude areas. Around Yaochiba and Shengtaishilin, the handsome Chinese Babax *Babax lanceolatus* (Plates 20 & 21), Elliot's Laughingthrush and Spotted Laughingthrush are very commonly found foraging in the understorey and scrub, even feeding on the trail. You are unlikely to miss them even on a foggy day.

Conservation

Before the completion of the Bao-Mao Expressway in 2007, the JSNR was hardly accessible to tourists, which is partly why in the past it was little exploited. As tourism has boomed in recent years, invasion by exotic plants, extensive development and the unfettered drive to develop tourism are among major threats to JSNR (Sun *et al.* 2009). Interpretation, education and awareness programmes for both tourists and local residents are still lacking and urgently needed. Local authorities should turn to promoting eco-tourism involving local families in JSNR rather than turning its buffer zone into a leisure destination.

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