

SILVER ORIOLE

Oriolus mellianus



Critical —
Endangered —
Vulnerable C1

This oriole qualifies as Vulnerable because it has a small, declining population as a result of loss and fragmentation of forest in its breeding and wintering ranges.

DISTRIBUTION The Silver Oriole breeds in the subtropical forests of southern mainland China, and is a non-breeding visitor to Thailand and Cambodia.

■ **CHINA** The species is known from south-central Sichuan, Yunnan, Guizhou, northern Guangxi and northern Guangdong. A report from the Seven Finger range, Hainan, in November 1906 (Crosby 1991) was mistaken. Records (by province) are from:

■ **Sichuan Huanglianshan-Wuzhishan**, Mabian, Muchuan and Pingshan counties, three on Huanglianshan, 1,200–1,400 m, May 1986 (King 1989a), flock of c.40 birds on Huanglianshan, May 1988, in evergreen broadleaf forest (Yu Zhiwei *in litt.* 1997), two singing males, May 1997, in a small stand of trees in terraced farmland on the slopes of Wuzhishan (Dowell *et al.* 1997); **Tianba** forest area, at Caiziwan and Ranjiawan, Dianlanba township, and Dianjiping and Huangzhulin, Minzhu township, May–June 1996 (Dai Bo 1996); Dongfeng village, **Yuanjiaxi** (Yuanjia) township, May–June 1996 (Dai Bo 1996); Qingming Shan, near **Dianjiping** (Tangjiaping), Mabian county, April 1946 (Yu Zhiwei *in litt.* 1997, male in ASCN); Liangjiabore, **Mabian Dafengding** forest tract, three, 1,540 m, May 1998, in primary forest (Dai Bo 1998); Yangsibagou and the Banlixi valley, **Tongmuxi**, Xining township, May–June 1996 (Dai Bo 1996), and up to six males calling from primary forest and forest edge at Tongmuxi, May 1997 (Dowell *et al.* 1997); Jinaoke, west slope of **Wobuzucha**, one heard, 1,620 m, June 1998, in primary forest (Dai Bo 1998); Xichuangba, **Shatuo** township, May–June 1996 (Dai Bo 1996); Forest farm No. 211, **Baishuxi valley**, Leibo county, May–June 1996 (Dai Bo 1996), up to three in primary forest at Baishuxi, May 1997 (Dowell *et al.* 1997); Huoshaopeng, Huanglianping and Hualuping, **Shuanghekou** township, May–June 1996 (Dai Bo 1996); **Ledugou-Erbagou**, Leibo county, at the Erbagou valley and Xiaogou (Forest Farm No. 214) and the Xiaowangou valley (Forest Farm No. 213), May–June 1996 (Dai Bo 1996), maximum of 19 (six pairs, four single females/first summer males and three single adult males) in replanted broadleaf forest in the Erbagou valley, May 1997 (Dowell *et al.* 1997); south of the **Xining river**, Leibo county, one singing male heard in replanted broadleaf forest at Yuerba, May 1997 (Dowell *et al.* 1997);

■ **Yunnan Ximeng county**, undated (Zheng Guangmei and Wang Qishan 1998);

■ **Guizhou Tuoda** forest, Weining county, 2,000–2,400 m, September of an unspecified year (Wu Zhikang *et al.* 1992a); **Maolan National Nature Reserve**, Libo county, female collected, 500 m, May 1984 (Wu Zhikang *et al.* 1986);

■ **Guangxi Mao'ershan Nature Reserve**, Xingan and Ziyuan counties, four, 1,900 m, August 1998 (KFBG in prep. d); **Dayao Shan Nature Reserve** (Yaoshan), “breeding”, 610–915 m, June–July 1928 (Stresemann 1929, two specimens in ZMB), collected at Luoxiang (Loshiang, Lohsiang), 915 m, July 1928 and April–June 1929 (five specimens in BMNH, MNHN and ZMB), “very common”, April–June 1929–1931 (Yen 1933–1934, six specimens in AMNH and BMNH); **Ningming county**, October 1958 (male in SCICN);

■ **Guangdong Longtoushan** (Drachenkopf; type locality), May 1917 (Mell 1922, Stresemann 1922, female in ZMB); “**Yang-mei-lang**”, northern Guangdong, 610 m, April–May 1930 (Yen

1932a, two specimens in MNHN and ZMB); **Babao Shan Nature Reserve**, Ruyuan county, up to three, July 1987 (Kennerley *et al.* 1987), up to nine, 1,200–1,300 m, June 1987 (Viney 1987), and in the 1990s up to three seen in May–July, mostly at 1,000–1,300 m, breeding proved in June (Lewthwaite 1996), female on a nest, May 1999 (*Oriental Bird Club Bull.* 31 [2000]: 49–57); **Nankun Shan Nature Reserve**, Longmen county, female or immature, presumably a migrant, with a flock of Hair-crested Drongos *Dicrurus hottentottus*, August 1995 (Lewthwaite 1996).

■ **THAILAND** The species is a non-breeding visitor which occurs annually at Kaeng Krachan, and probably also at Khao Yai and Khao Soi Dao (P. D. Round *in litt.* 1998). Records are from: **Mae Yom National Park**, male, March 1996 (*Oriental Bird Club Bull.* 24 [1996]: 59–65); **Huai Kha Khaeng Wildlife Sanctuary**, Uthai Thani province, 1,300 m, male, February 1993 (P. Poonswad *per* P. D. Round *in litt.* 1998); **Khao Yai National Park**, headquarters area, c.700–750 m: male, February 1983 (S. Aspinall and G. Hinchon *per* P. D. Round *in litt.* 1998), male, March 1983 (J. Madsen *per* P. D. Round *in litt.* 1998), one, December 1983 (V. Chantrasmee *per* P. D. Round *in litt.* 1998), male and female at two separate localities, October 1985 (P. D. Round *in litt.* 1998), immature male, December 1985 (P. D. Round *in litt.* 1998),



The distribution of Silver Oriole *Oriolus mellianus*: (1) Huanglianshan-Wuzhishan; (2) Tianba; (3) Yuanjiaxi; (4) Dianjiping; (5) Mabian Dafengding; (6) Tongmuxi; (7) Wobuzucha; (8) Shatuo; (9) Baishuxi valley; (10) Shuanghekou; (11) Ledugou-Erbagou; (12) Xining river; (13) Ximeng county; (14) Tuoda; (15) Maolan National Nature Reserve; (16) Mao'ershan Nature Reserve; (17) Dayao Shan Nature Reserve; (18) Ningming county; (19) Longtoushan; (20) Yang-mei-lang; (21) Babao Shan Nature Reserve; (22) Nankun Shan Nature Reserve; (23) Mae Yom National Park; (24) Huai Kha Khaeng Wildlife Sanctuary; (25) Khao Yai National Park; (26) Khao Ang Ru Nai Wildlife Sanctuary; (27) Khao Soi Dao Wildlife Sanctuary; (28) Kaeng Krachan National Park; (29) Ban Thung Luang; (30) Khao Sabap; (31) Trat; (32) Krat; (33) Prachuap Khirikhan; (34) Bokor.

○ Historical (pre-1950) ● Fairly recent (1950–1979) ● Recent (1980–present) □ Undated

male, January 1986 (J. A. Wolstencroft *per* P. D. Round *in litt.* 1998), female, November 1986 (B. F. King verbally 1998), three, March 1990 (K. Komolphalin *per* P. D. Round *in litt.* 1998), one, April 1990 (S. Supparatvikorn *per* P. D. Round *in litt.* 1998, B. Gee *in litt.* 1999), two (including a male), October 1992 (N. Pomankul *per* P. D. Round *in litt.* 1998), pair, February 1998 (H. Hendriks *in litt.* 1999); **Khao Ang Ru Nai Wildlife Sanctuary**, at Bor Tong waterfall, male, November 1991 (*Bird Conserv. Soc. Thailand Bull.* 9, 3 [1992]: 10–11, A. Liukiratiyutkul *per* P. D. Round *in litt.* 1998); **Khao Soi Dao Wildlife Sanctuary**, male collected, undated (P. D. Round *in litt.* 1998), female, December 1980 (R. Fairbank *in litt.* 1999), male, December 1983 (P. Flint *per* P. D. Round *in litt.* 1998), female, March 1984 (R. Eve *per* P. D. Round *in litt.* 1998), female, October 1992 (R. Harwood *per* P. D. Round *in litt.* 1998); **Kaeng Krachan National Park**, pair, January 1993 (I. S. Robertson *per* P. D. Round *in litt.* 1998), female, January 1994 (*Bird Conserv. Soc. Thailand Bull.* 11, 3 [1994]: 11, K. Wongkornwutthi *per* P. D. Round *in litt.* 1998), female, March 1994 (P. D. Round *in litt.* 1998), male, December 1995 (S. Suthibut *per* P. D. Round *in litt.* 1998), female, February 1996 (J. N. Dymond *in litt.* 1999), male, March 1997 (*Bird Conserv. Soc. Thailand Bull.* 14, 7 [1997]: 14, W. Charoenjai *per* P. D. Round *in litt.* 1998); **Ban Thung Luang**, Prachuap Khirikhan province, immature male, January 1934 (Smith 1934, Meyer de Schauensee 1946); **Khao Sabap**, part of Khao Sabap-Namtok Phliu National Park, Chanthaburi province, six, 600–900 m, January 1930 (Riley 1933), November 1933 (seven specimens in MCZ, USNM; Riley 1938), one, January–February 1986 (R. Filby and S. Dalziel *per* P. D. Round *in litt.* 1998); Khao Seming, **Trat** province, one, December 1933 (Smith 1934); **Krat** (Kratt), two females, December 1933 (Meyer de Schauensee 1946); Ban Khlua Klang, **Prachuap Khirikhan** (Prachuap Khiri Khan) province, December 1952 (specimen in USNM).

■ **CAMBODIA** The species is known by a single record: **Bokor**, Kampot, December 1927 (specimen in BMNH; Delacour 1929b,c).

POPULATION In the early 1930s, the Silver Oriole was described as “very common” at Dayao Shan in Guangxi (Yen 1933–1934), and as “fairly common” at one locality in Thailand (Smith 1934). It was found to be locally common in south-central Sichuan during surveys in 1996–1998 (Dai Bo 1996, 1998, Dowell *et al.* 1997, Dai Bo *et al.* 1998), and the 1997 survey resulted in population density estimates of 1.5 birds per km² in primary forest and 15.6 birds per km² in secondary and replanted forest (Dowell *et al.* 1997). A record of a flock of c.40 birds in Sichuan in 1988 (Yu Zhiwei *in litt.* 1997) is particularly notable. Small numbers (up to a maximum of nine birds) have recently been recorded at several localities in Guangxi and Guangdong (see Distribution). Given the limited area of suitable broadleaf forest that remains in its breeding range, and the pressures on this habitat (see Threats), its total population is likely to be both rather small and declining.

ECOLOGY The species tends to be found singly or in pairs in the canopy of tall trees in both the breeding and wintering areas (Smith 1934, Dai Bo 1996), although it sometimes forms flocks or associates with flocks of other bird species (see Distribution), presumably when on migration.

Habitat In its breeding range in China, the Silver Oriole is found in evergreen broadleaf forest, mainly between about 600 and 1,700 m (Crosby 1991, Dai Bo 1996). In Sichuan it was recently recorded in primary, secondary and replanted forest, with considerably higher densities in secondary and replanted forest than in primary forest, and singing males were even recorded in lightly wooded agricultural land, suggesting that the species may not be totally dependent on continuous forest; in areas of mature forest, it was found in isolated emergents or dead trees, which it used as song posts or for loafing, and most records were from near the forest edge (Dai Bo 1996, Dowell *et al.* 1997). However, these surveys were

conducted early in the breeding season, so some records may have involved newly arrived migrants in habitats where they do not breed, and the species may be easier to locate in secondary habitats and on the forest edge than in the interior of primary forest (MJC). In Sichuan, it occurs at higher altitudes than Black-naped Oriole *Oriolus chinensis* (Dai Bo 1996). In the non-breeding range in Thailand, it frequents the tops of the tallest trees in evergreen forest between about 600 and 1,300 m (Smith 1934, Lekagul and Round 1991).

Food There is little information available on the food of the species, but it presumably feeds on insects and fruit like other members of its genus (see Campbell and Lack 1985). It has been recorded taking nectar from an *Erythrina* tree in Thailand (P. Poonswad *per* P. D. Round *in litt.* 1998).

Breeding Intense pre-breeding activity was observed during surveys in 1997 by Dowell *et al.* (1997), with intermittent song heard throughout the day, although the most intense calling period occurred during the first three hours after dawn. Pairs were observed performing aerial chases above the forest canopy (presumed to be associated with pair-bonding), and antagonistic interaction (presumed to be territorial) between two or more males was observed on several occasions; a large nest, still under construction (on 13 May) apparently by both the male and the female birds, was located at a height of 20 m in a moderately mature replanted *Sorbus folgneri* tree (Dowell *et al.* 1997). At Babao Shan in Guangdong, a female was seen on a nest from 3–9 May 1999 (*Oriental Bird Club Bull.* 31 [2000]: 49–57).

Migration The species is migratory, arriving at the breeding sites in China in April or May, with the latest records there in October; it is recorded in the non-breeding ranges in Thailand and Cambodia between October and April (see Distribution).

THREATS The Silver Oriole is one of four threatened members of the suite of five bird species that are entirely (at least as breeding birds) restricted to the “Chinese Subtropical Forests Endemic Bird Area”, threats and conservation measures in which are profiled by Stattersfield *et al.* (1998).

Habitat loss The main threat to the species is the loss and fragmentation of its habitat, as much of the natural forest within its range has already been cleared or degraded, and many of the remaining forests are under pressure; for example, forest cover in Sichuan was estimated to have been reduced from 19% to 12.6% between the early 1950s and 1988 (Smil 1993), and the relatively accessible, low-altitude subtropical forests have been disproportionately badly affected (see Table 1). The Dayao Shan (Yaoshan) range in Guangxi has suffered two decades

Province	Habitat	Original	Remaining	%	Protected	%
Sichuan	deciduous broadleaf forest	55,413	3,887	7	1,623	2.9
Sichuan	deciduous/evergreen broadleaf forest	34,461	4,048	12	2,123	6.2
Sichuan	subtropical evergreen broadleaf forest	141,433	1,892	1	3,067	2.2
Yunnan	subtropical evergreen broadleaf forest	92,681	12,141	13	7,328	7.9
Guizhou	deciduous/evergreen broadleaf forest	77,770	3,800	5	1,263	1.6
Guizhou	subtropical evergreen broadleaf forest	73,104	2,586	4	2,303	3.2
Guangxi	deciduous broadleaf forest	1,560	780	50	0	0
Guangxi	deciduous/evergreen broadleaf forest	15,066	12,146	81	1,263	8.4
Guangxi	subtropical evergreen broadleaf forest	53,976	9,758	18	3,154	5.8
Guangdong	subtropical evergreen broadleaf forest	91,316	632	1	1,188	1.3

Table 1. Changes in the extent of natural habitats within the species’s range in southern China. The data in this table are reproduced from MacKinnon *et al.* (1996), and show the estimated areas (both original and remaining in km²) of presumably suitable habitats within the species’s known range, and the area of each habitat estimated within existing protected areas. However, it is important to note that this only gives an indication of the extent of reduction of presumed habitats, as there is no information on the time-scale over which they have been lost, and the species does not necessarily occur throughout each habitat in each province.

of rapid deforestation owing to conversion of forest to agricultural land, with large additional areas destroyed by uncontrolled fires (Smil 1984). There was widespread clear-felling there in the 1950s and 1960s, and most of the remaining natural forest is 20–30-year-old secondary regrowth, with limited areas of primary forest mainly confined to the inaccessible higher peaks (MacKinnon *et al.* 1996). Most of the primary broadleaf forests in southern Sichuan where the species was recorded by Dowell *et al.* (1997) in 1996 and 1997 were scheduled for logging in the next 20–25 years, but a ban on logging in the upper Yangtze basin appears to have led to a complete halt to deforestation within the range of the species (Dowell and Dai Bo 2000; see Measures Taken). However, in addition to legal logging, forest was also being cleared for agriculture or illegally logged, and disturbance was caused by large numbers of people entering the forest to collect bamboo shoots in spring and early autumn and by livestock either grazing in the forest or moving through it to pastures above the treeline (Dowell *et al.* 1997).

Forest loss is also a major threat to the species virtually throughout its non-breeding range (see Collins *et al.* 1991). For example, Khao Yai National Park in Thailand has become an isolated forest patch, subjected to increasing pressures (including encroachment, illegal logging, poaching and shifting cultivation) by the huge concentrations of people around its boundaries, coupled with inadequate management (Enderlein and Maxwell 1976). For further details of threats to forest in Thailand (including Khao Soi Dao Wildlife Sanctuary) and Cambodia (including the Bokor region), see the equivalent section under Chestnut-headed Partridge *Arborophila cambodiana* and Pale-capped Pigeon *Columba punicea*.

MEASURES TAKEN *Legislation* Silver Oriole is protected under WARPA in Thailand.

Protected areas *China* Several nature reserves in China are known or suspected to support breeding populations of the species. In Sichuan, it has been recorded in or near Mabian Dafengding Nature Reserve (340 km²) (and could occur in the relatively small areas of subtropical forest in the adjacent Meigu Dafengding Nature Reserve), where Dai Bo (1998) estimated that 192 km² of subtropical broadleaf forest remains; in Guizhou, it has been recorded in Tuoda Forest Nature Reserve (20 km²), but probably only on passage; in Guangxi, it is known from Dayao Shan Nature Reserve (2,022 km², which apparently has a moderately good forest cover of c.58%, although rather little primary forest remains, most natural cover being 20–30-year-old secondary regrowth) and Maoer Shan Nature Reserve (451 km², which apparently has fairly good forest cover of c.68%); in Guangdong, it is recorded from Babao Shan Nature Reserve, Nanling National Nature Reserve (531 km², forests apparently patchy but with some good, important areas) and Nankun Shan Nature Reserve (recorded only on passage) (19 km², forests apparently quite good but small) (sizes and condition from MacKinnon *et al.* 1996). There are several other protected areas in Guangxi and Guangdong with subtropical broadleaf forests, and perhaps also in Sichuan and Guizhou, where the species could occur (see Li Wenhua and Zhao Xianjing 1989, MacKinnon *et al.* 1996). *Thailand* In Thailand, it has been recorded in Khao Yai, Khao Sabap and Kaeng Krachan National Parks, and Khao Soi Dao, Huai Kha Khaeng and Khao Ang Ru Nai Wildlife Sanctuaries.

Habitat protection and management *China* Until very recently, the main threat to the species in Sichuan was habitat destruction through commercial logging of primary forest; however, in August 1998 the Chinese government announced a ban on logging in the upper Yangtze basin, which has subsequently been fully implemented, apparently leading to a complete halt to deforestation within its range in Sichuan (Dowell and Dai Bo 2000; see Measures Taken under Sichuan Partridge *Arborophila rufipectus*).

Research *China* Several recent surveys in southern Sichuan, mainly targeted at Sichuan Partridge, have also improved knowledge of the distribution, population density, and ecological and conservation requirements of the species (Dai Bo 1996, Dowell *et al.* 1997).

MEASURES PROPOSED Legislation Zheng Guangmei and Wang Qishan (1998) proposed that Silver Oriole should be listed as a nationally protected species (second class) in China.

Protected areas and habitat management China Following a series of surveys in south-central Sichuan and north-eastern Yunnan in 1996–1998, Dowell *et al.* (1997), Dai Bo (1998) and Dai Bo *et al.* (1998) made a number of recommendations relevant to the conservation of this species and its habitat there, including the establishment of several new protected areas and an extension to Mabian Dafengding Nature Reserve. Their surveys were principally targeted at Sichuan Partridge, and the full details of their recommendations (and those of Yu Zhiwei *in litt.* 1997) are given in the account for that species. The long-term plan of the Wildlife Division of the Sichuan Forestry Department (*per* Dowell and Dai Bo 2000) to establish several new reserves to protect broadleaf subtropical forest is also described in the equivalent section under Sichuan Partridge. MacKinnon *et al.* (1996) made the following recommendations for the protected areas where Silver Oriole has been recorded: at Mabian Dafengding Nature Reserve, jointly manage with Meigu Dafengding reserve; at Dayao Shan Nature Reserve, control the planting of star anis *Illicium verum* and illegal logging; at Maoer Shan Nature Reserve, join to Qingshitian reserve; at Nanling National Nature Reserve, extend the reserve to link up with Mang Shan in Hunan to form a transprovince priority conservation unit and stop hunting and the felling of primary and mature secondary forest; at Nankun Shan Nature Reserve, enlarge the reserve to c.40 km². **Thailand** Khao Yai National Park needs careful control and strict management to avoid gradual degradation through the activities of the surrounding human population (Enderlein and Maxwell 1976). For further details of measures proposed to protect forest in Thailand (including Khao Soi Dao Wildlife Sanctuary) and Cambodia (including the Bokor region), see the equivalent section under Chestnut-headed Partridge and Pale-capped Pigeon.

Research Information on the distribution and habitat requirements of Silver Oriole is currently incomplete, and further surveys and ecological studies are required, targeted at the species and the other threatened birds with similar habitat requirements and range (including Sichuan Partridge, Omei Shan Liocichla *Liocichla omeiensis* and Gold-fronted Fulvetta *Alcippe variegaticeps*). Surveys could initially focus on those protected areas where it has been recorded or could occur (see above), with the aim of determining whether they contain sufficient areas of suitable habitat to support viable populations. Li Wenhua and Zhao Xianjing (1989) described several other protected areas in Guizhou, Guangxi and Guangdong as containing subtropical broadleaf forest, which could also be targeted for ornithological surveys. Any potentially suitable unprotected areas of subtropical broadleaf forest should be surveyed, with the aim of proposing new protected areas. The species has loud calls that are easy to distinguish from those of Black-naped Oriole (although it has a similar cat-like call) (Dai Bo 1996), and would therefore be relatively easy to detect and census during spring surveys.