

Threatened Birds of Asia:

The BirdLife International Red Data Book

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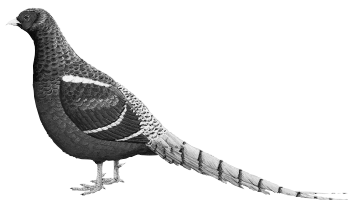
HUME'S PHEASANT

Syrmaticus humiae

Critical ☐ —

Endangered ☐ —

Vulnerable ☒ C1; C2a



This species appears to have been reduced to a small population, which has become increasingly fragmented. Although its status remains virtually unknown across a substantial proportion of its historic range in Myanmar, habitat loss and hunting continue to operate as major threats throughout. It therefore qualifies as Vulnerable.

DISTRIBUTION There are two subspecies of Hume's Pheasant (see Remarks 1), one of which, *S. h. humiae*, is found in north-east India in eastern parts of Nagaland, Manipur and Mizoram through western Myanmar south to the Irrawaddy (= Ayeyarwady) river, while the other, *S. h. burmanicus*, occurs in southern China, northern and eastern Myanmar and extreme northern Thailand (see Oates 1898, Finn 1898d). Although the species was suspected to occur in the Chittagong Hill Tracts of Bangladesh (Sarker 1986a), this is perhaps unlikely given the relatively low altitude of these highlands and there is no definite record for the country.

■ **CHINA** The subspecies *burmanicus* is found in two main areas of China, western and southern Yunnan and western Guangxi. Records are from:

■ **Yunnan Zhongdian county**, male at Sanpa, c.100 km south-east of Zhondian, 2,040m, May 1995 (S. Howe *in litt.* 1999); **Weixi county**, collected at Pantiange, November 1991 (male in KIZCN) and at 2,500 m, June 1993 (Han Lianxian 1997), and at Lidiping, 2,800 m, November 1981 (Yang Lan 1995, female in KIZCN); **Lanping county**, feathers found on Fuhe Shan, 2,500 m, May 1993 (Han Lianxian 1997); **Yangbi county**, undated (Yang Lan 1995), collected in or near to this county on the "Chutung–Yangpi road", female collected, March 1902 (Ingram 1912, Rothschild 1926) and the "Yungping–Yangpi divide", 2,150–2,450 m, April 1921, in dense mixed forest (Rothschild 1923a, 1926, male in BMNH); **Wuding county**, undated (Yang Lan 1995); **Yongping county**, undated (Yang Lan 1995); **Weishan county**, collected at Tiantangxiao, 2,000 m, May 1993 (Han Lianxian 1997, specimen in KIZCN); **Tengchong county** (Tengyueh, Teng-yueh Ting), probably c.1913 (specimen in MCZ), April 1917 (Bangs 1921, Rothschild 1926, female in AMNH), collected at Lengshuihe, Datang, 2,200 m, May 1960 (female in KIZCN), Datang, May 1965 (specimen in ASCN), seen south of Datang, Gaoligongshan region, 1992–1994 (Ma Shilai *et al.* 1994), and reported by local people at Yunhua township, 1,800 m, 1992 (Han Lianxian 1997); **Shuangbai county**, recorded at Xiabazu, 1,900–2,500 m, July 1993, in coniferous forests (Han Lianxian 1997); **Fengqing county**, July 1964 (Cheng Tso-hsin 1978, Yang Lan 1995, specimen in ASCN); **Jingdong county**, undated (Yang Lan 1995), collected at Wuliang Shan Nature Reserve, 1,200 m, November 1964 (male in KIZCN; also Liu Donglai *et al.* 1996); **Luxi county**, collected at Santaishan, 1,250 m, April 1962 (female in KIZCN; also Yang Lan 1995); **Yongde county**, April 1964 (Yang Lan 1995, specimen in ASCN), reported from in or near Daxue Shan Nature Reserve, undated (Zhang Zhengwang *in litt.* 1997; also Liu Donglai *et al.* 1996); **Ruili county**, feathers found at Nanjingli, 1,200 m, 1992, recorded at Nanyuanhe, 800–1,000 m, 1992 (Han Lianxian 1997; also Yang Lan 1995), recorded in Tongbiguan Nature Reserve (Zhang Zhengwang *in litt.* 1999); **Lincang county**, undated (Yang Lan 1995); **Zhenkang county**, undated (Li Xiangtao 1996); **Zhenyuan county**, undated (Yang Lan 1995); **Jinggu county**, male collected and feathers found at Yongping, 1,200 m, May 1960 and feathers found at

Fengshan, 1,500–2,300 m, 1993 (Yang Lan 1995, Han Lianxian 1997, specimen in KIZCN); **Cangyuan county**, undated (Li Xiangtao 1996); **Simao county**, April 1957 (specimen in ASCN), recorded at Zhendong, 800–1,200 m, March 1996, in coniferous forest (Han Lianxian 1997); **Jinghong county**, recorded at Zhengnuo, 1,500 m, April and November 1994, feathers found at Taipingzhang, 1,600 m, May 1995 (Han Lianxian 1997); **Mengla county**, seen near Mengla, March 1988 (J. Hornskov *per* S. Jensen *in litt.* 1989), tail feathers found at Xiangming, 1,000 m, November 1991, in tropical monsoon forest (Han Lianxian 1997); Chuxiong county, reported by local people at Zixi Shan, 2,000–2,500 m, 1993 (Han Lianxian 1997), possibly recorded inside Ailao Shan National Nature Reserve, in this county or Shuangbai, Jingdong or Zhenyuan counties (see MacKinnon *et al.* 1996); Nu Jiang Nature Reserve, Gongshan, Fugong and Bijiang counties, by report (Liu Donglai *et al.* 1996), but there are apparently no documented records;

■ **Guangxi Tian'e county**, undated (Lu Taichun 1991); **Leye county**, recorded at Yachang, Huayan and Luohuasheng, undated (Wu Mingchuan 1993); **Longlin county**, recorded at Jinzhongshan Nature Reserve, Longhuo, Jieting, Yancha, Sheyi, Xiangbo and Gebu, undated (Wu Mingchuan 1993; also Liu Donglai *et al.* 1996); **Xilin county**, recorded at Wangzishan, Guzhang, Bada, Nazuo, Mabang, Xiping and Nalao, undated, specimens collected at Zhouyue village of Guzhang township, June 1978 (Wu Mingchuan 1993); **Lingyun county**, recorded at Lingzhan and Xiajia, undated (Wu Mingchuan 1993); **Tianlin county**, recorded at Langping, Pingtang and Anding, undated (Wu Mingchuan 1993), and in Cenwang Laoshan Nature Reserve (shared between this county and Lingyun) (Liu Donglai *et al.* 1996); Biase (untraced), undated (Li Xiangtao 1996); Yuanbao Nature Reserve, Rongshui county, by report (Liu Donglai *et al.* 1996), but there are apparently no documented records.

■ **INDIA** Birds of the subspecies *humiae* occur in certain pockets of Nagaland, Manipur, Mizoram and apparently Arunachal Pradesh, principally high in the hills bordering Myanmar, this presumably being the “eastern Looshai country” mentioned by A. O. Hume (*Stray Feathers* 9 [1881]: 461–471). Ripley (1952b) added that “in the southern Naga Hills they are confined to the Manipur side of the Kohima-Imphal Valley south of Karong, and to a few places in the hills south of Jessami, a village nearly 30 miles [= 50 km] as the crow flies east and slightly south of Kohima”. In Manipur the species is supposedly confined to upper elevations in the north-east of the state (Baker 1921–1930). Records are from:

■ **Arunachal Pradesh Namdapha National Park**, in “thick brush” near Hornbill campsite, one male, three females, one unsexed, December 1998 (*Oriental Bird Club Bull.* 29 [1999]: 51–56, D. Johnson *in litt.* 1999), although this record is somewhat surprising (at an unusually low altitude and in continuous dense forest) and confirmation of its presence in the park is thus desirable;

■ **Nagaland Naga hills**, apparently around 3,050 m, “seen and shot”, pre-1917 (Baker 1921–1930, 1922–1930), and by local report, 1950 (Ripley 1952b), with feathers of hunted birds seen in the Patkai hills, undated (Baker 1921–1930), probably originating from this area;

■ **Manipur Dzuko valley**, undated (Choudhury 1992a); at “Kairong,” here assumed to be **Karong**, one male, November 1896 (Finn 1898a), October 1950–January 1951 (45 specimens in UMMZ); **Ukhrul**, c.1,850 m, one individual, pre-1918 (Higgins 1933–1934); on **Sirohi** (= Siroi, Shirohifurar peak), Ukhrul district, 2,750 m, November 1882 (two specimens in BMNH, Godwin-Austen 1882), and a pair trapped, undated (Choudhury 1992a); Toubal valley (not mapped; the Toubal river is a tributary of the Manipur river), undated (Higgins 1933–1934, Ali and Ripley 1968–1998); Heika (untraced), 1,450 m, one individual, January 1918 (Higgins 1933–1934); Kamhow district (untraced), undated (*Stray Feathers* 9 [1881]: 461–471);

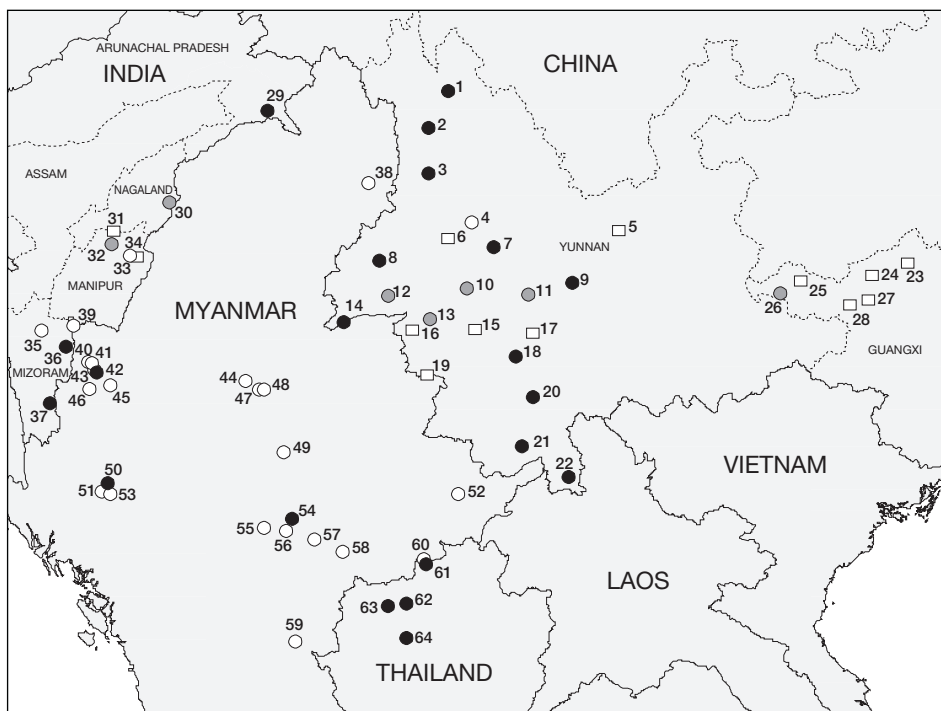
■ **Mizoram** Phailenkot, here presumed to be at or near **Phaileng**, January 1940 (four specimens in BNHS, FMNH, UMMZ); **Murlen National Park**, January 1995 (Robertson

1995), two sightings, January 1996 (Katju 1996, Kaul *et al.* 1996); **Blue Mountain National Park** (= Phwangpui National Park), by local report in the 1950s (Ghose 2000) and 1996 (Katju 1996), with two, March–May 1997 (Ghose 1997, 2000).

■ **MYANMAR** The nominate race inhabits the Chin hills in the west (a southward extension of the Naga/Patkai/Manipur/Mizo range), while the range of *S. h. burmanicus* extends from north-eastern Myanmar south through Shan state to Karenni (= Kayah state) (Smythies 1986). Records are from: upper **Ngawchang**, shortly after the turn-off to Wawlu pass, 2,150 m, one male, 1948 (Smythies 1949); above and to the west of **Hainggyin**, near Hankin, North Chin hills, 2,000–2,150 m, five clutches found, May 1914 and 1915 (Hopwood and Mackenzie 1917); **Tiddim**, Chin hills, 1,500–2,100 m, 12, c.1916 (Blandy 1918); **Dimlo** (Dimla), Chin hills, May 1907 (male in BNHS); **Fort White**, 1,500–2,150 m, March 1916 (Blandy 1918, Abdulali 1968–1996), and c.9.5 km from Fort White, on the way to Kalembo, at least five, 1,200–1,500 m, March 1900 (Finn and Turner 1900), 1,200 m, undated (Blandy 1918); Htin Yu Sakan, near **Thiangin**, 1,750 m, remains found, April 1995 (King *et al.* 1996, Robson *et al.* 1998); **Shwe-u-daung Sanctuary**, Katha district, male and two females seen above Sinaing camp, March 1934 (Smith 1942), with a clutch of nine eggs found on the slopes of Pandaung, c.1,200 m, 26 April 1934 (Smith 1942, BMNH egg data); **Haka**, Chin hills, c.3,000 m, undated (Venning 1912, Abdulali 1968–1996), and nearby at Vanna, May 1930 (BMNH egg data); **Falam**, Chin hills, pre-1889 (specimen in BMNH); **Mogok**, 1,200 m, before 1907 (23 specimens in BMNH and AMNH), and November 1938 (male in BMNH); **Ruby mines** district, April 1895 (Oates 1895), March 1904 (two specimens in BNHS, Abdulali 1968–1996), undated (Beebe 1910); Payingon, “Yatsauk State”, here presumed to be **Hpayangon** one male, 1900 (Bingham and Thompson 1900); **Mindat**, Chin hills, 2,300 m, remains found, April 1995 (Robson *et al.* 1998), these presumably being the feathers of a recently killed male found “near Maputi”, April 1995 (King *et al.* 1996); **Mount Victoria** (= Natma Taung), Chin hills, 2,300–2,600 m, March and April 1904 (two males in BMNH), undated (Harrington 1909a), at various subsites (including Pokokku), April to June 1938, (14 specimens in FMNH and MCZ, Stresemann and Heinrich 1940); hills near **Loi Mwe**, “Southern Shan States”, 1,400–1,700 m, January 1923 and 1924 (three specimens in YPM, Drummond 1923); **Kanpetlet**, Mount Victoria, one male, January 1902 (Wood and Finn 1902); **Taunggyi** crags, undated (Wickham 1929–1930), March 1925 (specimen in BNHS, Abdulali 1968–1996), a nest found near Taunggyi, c.1,500 m, April 1938 (Livesey 1938), one male, February 1985 (King 1985b); **Kalaw**, “Southern Shan States”, April/May 1896 (two specimens in BMNH, Rippon 1897; also Bingham and Thompson 1900), 1898–1901 (Rippon 1901), seen “several times”, April 1912 (Cook 1913); hills immediately east of **Mong Hsaw** (= Fort Stedman), 1898–1901 (Rippon 1901); western slopes of **Loi Maw**, undated (Rippon 1901); **trans-Salween Mawmai**, 1,050 m, April 1897 (male in BMNH, Bingham and Thompson 1900); **Nattaung**, Karenni (= Kayah state), 1,500 m, two males and five females, April 1940 (female in BMNH, Smith *et al.* 1940–1944); north-east of Kawng Hong Hpu (not mapped), 1960s (Vincent 1966–1971); near Minkin (untraced), undated (Baker 1921–1930); Pine-Tree Camp (untraced), undated (Baker 1921–1930).

■ **THAILAND** The species occurs on a few high mountains in the far north. The absence of records from Doi Inthanon and other sites south of Doi Suthep-Pui, such as Om Koi Wildlife Sanctuary, is surprising given that the habitat seems suitable; an unidentified pheasant thought not to be a *Lophura* was observed briefly on Doi Inthanon in the early 1980s (P. D. Round *in litt.* 1998), and a Karen villager interviewed in 1994 claimed that Hume’s Pheasant “used to occur” but has now “almost disappeared” (P. D. Round *in litt.* 1994). There are anecdotal reports of it from a number of other sites in the far north-west of Thailand and it might prove fairly widespread as large areas of suitable habitat remain (Eames 1993, P. D. Round *in litt.* 1998). Records are from: **Doi Pha Hom Pok**, two males, 1,950 m, February 1938 (Deignan 1946); **Doi Ang Khang**, Chiang Mai, recorded at three or four separate localities on

the mountain, up to four, February–March 1990 (J. N. Dymond *in litt.* 1990, *Oriental Bird Club Bull.* 12 [1990]: 40–44, S. Christensen, M. Kennewell and P. Shepherd *in litt.* 1999), a pair, February 1992 (S. Duffield, R. J. Wardle, D. Wright *per* P. D. Round *in litt.* 1998), a pair, January 1994 and many other sightings by various observers in the 1990s (P. D. Round *in litt.* 1998, 1999), including a pair in February 1999 (*Bird Conserv. Soc. Thailand Bull.* 16, 4 [1999]: 15); **Doi Chiang Dao Wildlife Sanctuary**, two females at 1,400 m, February and March 1931 (Chasen and Kloss 1932c), a pair at 1,200 m, January 1933 (Deignan 1945), with up to six males and six females in the vicinity of the wildlife sanctuary substation at Den Ya Khat, c.1,450 m, between 1989 and 1998 (e.g. *Oriental Bird Club Bull.* 11 [1990]: 40–48), and a report by wildlife sanctuary workers in December 1993 that there were four groups each of one male and 2–5 females within a 1 km radius of the substation (A. Pierce *per* P. D. Round *in litt.* 1998), plus many other sightings in the area by various observers in the 1990s (P. D. Round *in litt.* 1999), including up to six, December 1997 (A. Drewitt *in litt.* 1999), and five



The distribution of Hume's Pheasant *Syrmaticus humiae*: (1) Zhongdian county; (2) Weixi county; (3) Lanping county; (4) Yangbi county; (5) Wuding county; (6) Yongping county; (7) Weishan county; (8) Tengchong county; (9) Shuangbai county; (10) Fengqing county; (11) Jingdong county; (12) Luxi county; (13) Yongde county; (14) Ruili county; (15) Lincang county; (16) Zhenkang county; (17) Zhenyuan county; (18) Jinggu county; (19) Cangyuan county; (20) Simao county; (21) Jinghong county; (22) Mengla county; (23) Tian'e county; (24) Leye county; (25) Longlin county; (26) Xilin county; (27) Lingyun county; (28) Tianlin county; (29) Namdapha National Park; (30) Naga hills; (31) Dzuko valley; (32) Karong; (33) Ukhrul; (34) Sirohi; (35) Phaileng; (36) Murlen National Park; (37) Blue Mountain National Park; (38) Ngawchang; (39) Hainggyin; (40) Tiddim; (41) Dimlo; (42) Fort White; (43) Thiangan; (44) Shwe-u-daung Sanctuary; (45) Haka; (46) Falam; (47) Mogok; (48) Ruby mines; (49) Hpayagon; (50) Mindat; (51) Mount Victoria; (52) Loi Mwe; (53) Kanpetlet; (54) Taunggyi; (55) Kalaw; (56) Mong Hsaw; (57) Loi Maw; (58) trans-Salween Mawmai; (59) Nattaung; (60) Doi Pha Hom Pok; (61) Doi Ang Khang; (62) Doi Chiang Dao Wildlife Sanctuary; (63) Doi Sam Muen-Mae Jok Luang watershed; (64) Doi Suthep-Pui National Park.

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

females, February 1999 (*Bird Conserv. Soc. Thailand Bull.* 16, 4 [1999]: 15); **Doi Sam Muen–Mae Jok Luang watershed**, a contiguous area of upland habitat between Chiang Mai and Mae Hongson provinces, where a bird was said to have been taken by a trapper at Doi Sam Muen (S. Norapuckprutikorn *per* P. D. Round *in litt.* 1998), another was photographed by a BCST member at Mae Jok Luang Watershed Station (U. Treesucon *per* P. D. Round *in litt.* 1998) and workers of the station also reported its presence (R. Kanjanavanich *per* P. D. Round *in litt.* 1998); **Doi Suthep-Pui National Park**, 1,300 m, one male, March 1919 (Gairdner 1919), 1,700 m, “a male accompanied by three or four hens”, December 1928 (Deignan 1945), and one male “at the same spot”, May 1930 (Deignan 1945), two females, February and March 1931, 1,400 m (Chasen and Kloss 1932c), and then no records despite numerous visits to the area until a male and female were seen in November 1998, at over 1,500 m near the summit of Doi Pui (P. Saengkaew *per* P. D. Round *in litt.* 1999, *Bird Conserv. Soc. Thai. Bull.* 16, 5 [1999]: 16), with a male nearby, April 2000 (*Bird Conserv. Soc. Thailand Bull.* 17, 8 [2000]: 12–13).

Unconfirmed records include: Khun Jae National Park, Chiang Rai, Vieng Pha Phao district (Wiang Pa Phao district), where one was reported on the summit of Doi Lunggaluang (probably = Lang Ka; see Remarks 2), February 1997 (A. Jantimartorn and S. Hanwisai *per* P. D. Round *in litt.* 1998, *Bird Conserv. Soc. Thailand Bull.* 14, 4 [1997]: 15); Thung Yai Naresuan Wildlife Sanctuary, by unattributed report (P. D. Round *in litt.* 1998).

POPULATION Three decades ago it was believed that Hume’s Pheasant was “tolerably abundant” and that “the size of the population need cause no apprehension” (Vincent 1966–1971). With the help of slightly more detailed information, the global population is now estimated at a few thousand individuals, and the subspecies *humiae* may number as few as 1,000 (McGowan and Garson 1995). However, the species’s range is centred on some of the most remote and inaccessible highlands of Asia, and any estimate of its true population in Yunnan, Myanmar and the Naga hills is guesswork at best.

Mainland China The species was reportedly “very common” at several sites in the Yunnan–Myanmar border area 30–40 years ago (Cheng Tso-hsin *in litt.* 1964, U Tun Yin *in litt.* 1970). However, during surveys in the Gaoligongshan region of western Yunnan in 1990–1993, it was rarely seen (Han Lianxian 1996). In its typical habitats in western Guangxi, the density ranged from 10 to 33 individuals per km² in coniferous-broadleaf forest, with 22 per km² in coniferous plantations (Li Xiangtao 1996). Surveys conducted at Jinzhongshan Forestry Station in April and May 1987–1988 found densities of 8.9 birds per km² and 22.4 per km² in two coniferous-broadleaf forest areas (Lu Taichun 1991), although the sample sizes in this study were small. Populations are apparently relatively stable inside protected areas but declining rapidly elsewhere (Zhang Zhengwang *in litt.* 1997). Overall numbers are not known, but are likely to run into the thousands.

India In the 1950s, it was not encountered by Ripley (1952b) during a trip to Mount Japvo, Nagaland, yet locals reported it to be present although “spottily distributed”. In the hills of southern Manipur bordering Myanmar, it was reported by A. O. Hume to be “neither rare nor shy”, and easily trapped, although he did not see an individual in the wild himself (*Stray Feathers* 9 [1881]: 461–471). Baker (1921–1930) did not find it in the Jiri valley of Manipur, and Higgins (1933–1934) felt that the species was likely to occur only east of here, although even then it was scarce (he confided: “though I have frequently searched and driven likely places, I have only seen the bird twice”). Until relatively recently the species must have been locally common in Manipur, judging from the extensive series of specimens (mostly in UMMZ) collected in the region of Karong (see Distribution). It appears to be scarce and local in Mizoram (see Distribution), and is now thought to be generally a very rare bird in the country (R. Kaul verbally 1999).

Myanmar Several reports from early in the twentieth century reveal that the species was locally common in the Chin hills and Shan mountains. In the former, for example, Venning

(1912) found the nominate race to be “not uncommon” in groups of up to 10 at Haka, while Blandy (1918) “shot quite a number” at Tiddim and Fort White, and “flushed fairly large numbers at times”. At Minkin (untraced, but probably in the Chin hills), it was “by no means uncommon” early in the twentieth century (Baker 1921–1930). The race *burmanicus* was also, judging from the number of specimens emerging from the area, “no doubt fairly common about the Ruby Mines” (Oates 1895), “not uncommon in the Mogok hills” (these terms roughly equating to the same area) (Smythies 1949) and “quite common” on Taunggyi crags (Wickham 1929–1930). Cook (1913) flushed five single birds near Kalaw, “at intervals of about a minute or two”, suggesting that the species was fairly common in the area, and he also (in Baker 1921–1930) stated that he often saw and shot birds at several localities in Shan state. Another early report asserted that the species was “very common in trans-Salween Mawmai” at 1,200 m (Bingham and Thompson 1900).

Numbers have apparently declined dramatically (although most of the species’s range is now rarely visited) and it has been infrequently recorded recently. It was apparently “scarce to uncommon” in the Chin hills in 1995 (Robson *et al.* 1998), although villagers were familiar with it and reported it to be commoner than Blyth’s Tragopan *Tragopan blythi* (it is certainly more conspicuous than that species), but adding that all galliforms had declined on Mount Victoria and elsewhere in the Chin hills over recent decades (King *et al.* 1996). There is no recent information from Shan state apart from the single bird seen near Taunggyi in 1985 (King 1985b); however, much of the area is off-limits.

Thailand After a male was collected at Doi Suthep, Meyer de Schauensee (1930) concluded that the species was “very rare in Thailand, as none of the natives... had seen it before”. However, on a visit to Doi Chang Dao in 1933, Meyer de Schauensee (1934) collected individuals “frequently” and considered the species “not uncommon in open oak forest”. Despite “constant collecting” on Doi Suthep during 1935–1937, Deignan (1945) “never once saw or heard of the species”. It was not recorded during surveys in the 1960s, nor by the many birdwatchers who visited the site between 1976 and 1997 (P. D. Round *in litt.* 1998), and it appeared to be extinct there until rediscovered on the adjoining peak of Doi Pui in 1998 (see Distribution and Remarks 3). Although it is now seen only at very few sites, many suitable mountains remain unvisited; the population is estimated at 200–500 individuals and probably slowly declining (P. D. Round *in litt.* 1998).

Captivity In 1962, birds were imported into Britain; by 1966 there were 133 in 24 zoos (Vincent 1966–1971), and by 1985 at least 527 were distributed around ten countries (Wayre 1969, Howman 1985). The total numbers in captivity are now probably still higher. For the whole species, an estimated 1,000 individuals were in captivity in the mid-1990s (G. Robbins in McGowan and Garson 1995), although there is no record of the subspecies *burmanicus* ever being kept outside China (Delacour 1977).

ECOLOGY Habitat In general, Hume’s Pheasant appears to rely on broken or successional habitat (McGowan and Garson 1995), frequenting a variety of open or stunted woodland types (including rhododendrons and scrub), especially where this is interrupted by clearings, grassy or rocky slopes, dwarf palms or bracken, often well away from water (Cook 1913, Blandy 1918, Baker 1922–1930, Davison 1980b, Smythies 1986). It has been described as a bird of “forest edge” (Davison 1980b) and “steep hill-sides” (Wickham 1929c), but is never, or rarely, seen in the open (Drummond 1923). However, Baker (1921–1930) quoted a correspondent who reported that birds at Fort White, Myanmar, were sometimes “to be found in the open grass-land, feeding in the more open land, and lying up during the hotter hours in the denser patches” (see also Gairdner 1919, Davison 1980b, Smythies 1986). Deignan (1945) also thought that birds in Thailand spent the middle of the day concealed in dense evergreen forest, coming out at dusk and dawn to feed in more open forest, and then occasionally walking on trails through dense “lalang” grass.

In the Chin hills, the species was seen in oak, rhododendron and “khasia pine” forests, and at the Shwe-u-daung Sanctuary it nested in open forests of oak and chestnut with little or no undergrowth (Smith 1942). At Kalaw, birds were seen “in a small valley between two pine-clad slopes” and in a “rocky valley with a good deal of undergrowth, chiefly bamboo” (Rippon 1897). On Nattaung, it preferred “dry pine ridges covered with short grass” (Smith *et al.* 1940–1944). On Doi Suthep, Thailand, it favoured “fairly open oak or pine jungle with a sparse undergrowth of coarse grass” and also occurred in “oak-savannas” (Deignan 1931). An individual was flushed in Myanmar from under wild raspberry bushes among tall grass, although birds were more frequently flushed in open oak or oak/pine woodland on rocky grassy hills (Cook 1913); one flushed bird in Myanmar was seen to drop into a plantation of young conifers (C. R. Robson *in litt.* 1997). Drummond (1923) found the species in “jungles composed of largish trees and thick undergrowth”, mentioning that it was fond of “wild raspberry bushes, tall grass and other rank vegetation” and was sometimes found in “thick scrub jungle with no large trees”. In China it inhabits both subtropical evergreen forest (typically dominated by *Quercus*) and coniferous forest as well as mixed coniferous-broadleaf (typically *Quercus-Pinus yunnanensis*) forest; it also frequents rhododendron bushes, open grasslands on rocky slopes or sparse pine and hazel forest (Lu Taichun 1991). For Gaoligongshan region in western Yunnan, Han Lianxian (1996) listed the habitats used by this species as “tropical mountain rainforest, southern subtropical monsoon evergreen forest and mountain deciduous broadleaf forest”. In Yunnan, S. Howe (*in litt.* 1999) encountered a displaying male in sparse rhododendron scrub on or near a limestone outcrop. Foraging has been recorded in a variety of micro-habitats. Near Fort White, in Myanmar, birds were “feeding amongst the dry leaves which littered the ground” (Finn and Turner 1900), while Smythies (1949) found them feeding in the Mogok hills on a burnt patch of hillside.

While the species tends not to inhabit dense, moist forests (Baker 1921–1930, Ripley 1982, Smythies 1986), there are nevertheless several records from such habitat. For example, A. O. Hume (*Stray Feathers* 9 [1881]: 461–471) described it as preferring dense hill forests in the vicinity of streams, although this is by local report and probably erroneous, as pointed out by Baker (1921–1930). Deignan (1931) stated that “at dawn it is often found feeding in the high grass on the ridge, whence it flies into the evergreen jungle which clothes the slopes”. The species was recently encountered in the Blue Mountain National Park, Mizoram, in thick primary forests (Ghose 1997, 2000). Intriguingly, Blyth’s Tragopan (usually a bird of dense forests; see relevant account) is often found in Blue Mountain National Park on scrubby slopes and in secondary forests, apparently ideal habitat for Hume’s Pheasant. On Mount Victoria the species apparently favours “undergrowth of broadleaf forests and especially ravines with evergreen broadleaved woodland between the pine forests” (Stresemann and Heinrich 1940). Elsewhere in Myanmar, it was occasionally found in the same “very heavy jungle” habitat occupied by tragopans, but always with “open jungle or grassy slopes... more or less nearby” (Blandy 1918). These reports suggest that it occurs in both open and densely forested areas, probably preferring their interface.

First reports of the species indicated that it occurred between 750 and 1,500 m (*Stray Feathers* 9 [1881]: 461–471), with its altitudinal range later given (for north-eastern India) as 850–2,000 m (Ripley 1982, Ali and Ripley 1968–1998). In Guangxi, China, and in Gaoligongshan (western Yunnan) it is generally found between 750 and 1,800 m (Lu Taichun 1991, del Hoyo *et al.* 1994, Han Lianxian 1996), while in Myanmar it usually occurs higher, between 1,200 and 2,800 m (Smythies 1986), breeding above 2,000 m near the summit of the north Chin hills (Hopwood and Mackenzie 1917); it was recorded at 2,500–3,300 m on Mount Victoria (Stresemann and Heinrich 1940). In Thailand it also occurs above 1,200 m (Gairdner 1919, Deignan 1931). Abandonment of lower altitudes may be a response to human interference in this zone (Davison 1980b).

The species is not particularly gregarious (Cook 1913), generally being found either in small parties of 3–5 birds, as single males (Drummond 1923, Lu Taichun 1991) or pairs (Lu Taichun 1991). However, flocks of up to 12 are known to occur (Blandy 1918), presumably comprising a male, his attendant females and their offspring, since there is usually only one adult male per flock (Davison 1980b). In China, birds are sometimes found foraging alongside Silver Pheasants *Lophura nycthemera* (Lu Taichun 1991).

Food The diet in China comprises mainly vegetable matter (89.4%), especially seeds, and birds have been recorded feeding on hazelnuts, berries, seeds, roots, buds, worms and insects (Lu Taichun 1991). Many fruits were found in the stomach of a male bird collected at Fengqing, Yunnan, in July 1964 (Cheng Tso-hsin 1978). Myanmar birds contained small chestnuts that were plentiful in the pheasant's habitat, red berries of a small plant and "occasionally a small snail or two" (Drummond 1923). Cook (1913) speculated that a bird flushed from wild raspberry bushes was likely to have been feeding on the fruit, an assumption that appears reasonable given other observations of this species in this vegetation (e.g. Drummond 1923). The species also occasionally eats acorns and perhaps palm fruits (Venning 1912, Baker 1922–1930, Beebe 1936). Altogether it has been recorded eating the fruits, seeds, leaves, buds and roots of over 40 plant species, including *Pinus yunnanensis*, *Cunninghamia lanceolata*, *Cyclobanopsis*, *Castanopsis delayi*, oaks *Quercus* and wild mushrooms; some insects are taken by adults but in the breeding season plants comprise over 97% (dry weight) of stomach contents; stomachs of young birds, however, contained 50–90% insects (dry weight) (del Hoyo *et al.* 1994).

Breeding System and season The species is polygynous (Zheng Guangmei and Wang Qishan 1998); a cock is normally accompanied by 2–3 hens (Stresemann and Heinrich 1940). A group of two females and one male bred in Myanmar, with both females seen attending the nest simultaneously (Smith 1942). The breeding season in China apparently runs from February to July (Zheng Guangmei and Wang Qishan 1998), although wild nests have been found only between mid-March and mid-May (Baker 1922–1930, Beebe 1936). At Changlung, a female collected in March contained partly formed eggs (Bangs 1921). In Myanmar, Blandy (1918) found a nest containing eggs in March, males have been observed displaying or "drumming" in April, Smith (1942) reported a nest containing "fresh" eggs on 26 April and "chicks unable to fly in May", while downy chicks were also collected on Mount Victoria on 30 May 1938 (FMNH label data, Stresemann and Heinrich 1940). Five nests were found in the north Chin hills in late April or May (Hopwood and Mackenzie 1917), but the April eggs were so hard-set that they must have been laid in March (Baker 1921–1930).

Nest site The nest is apparently always situated on the ground. Three nests in the Chin hills located by Hopwood and Mackenzie (1917) were all near ridge-crests, as was one reported by Blandy (1918). Nests have been found on the top of a small bank above a hill stream in forest (Livesey 1938), or in a hollow under a sloping rock (Smith 1942), or under a bush (0.3 m high), beneath dwarf oaks on a well drained ridge (Blandy 1918). Captive birds make a slight hollow in the ground enlarged by scraping with the feet, generally beneath a shrub or in thick grass when available; this is lined with a few twigs, dead leaves, or whatever material lies within reach of the incubating female, who continually augments these items as incubation proceeds (Davison 1980b). In the wild, nests have been found lined with dead leaves, oak leaves and down (Blandy 1918, Smythies 1986).

Clutch and incubation Laying takes place every second day in the early evening and clutch size (judged from those collected in the Chin hills in 1914 and 1915) is 6–10 eggs ($n=5$) with a mean of 7.6 (Hopwood and Mackenzie 1917, Baker 1921–1930, Davison 1980b). In China, 7–9 eggs have been reported (Zheng Guangmei and Wang Qishan 1998). Captive females roost off the ground until the clutch is complete (Davison 1980b). Incubation, lasting 24–28 days, is performed by the female alone (Blandy 1918, Davison 1980b, Zheng Guangmei and Wang Qishan 1998). One egg incubated in captivity hatched after 26 days (Blandy 1918).

Migration There appears to be very little movement, although Drummond (1923) noted that birds moved down to the lower slopes during winter in Myanmar.

THREATS It might be assumed that, as this pheasant appears not to be strictly reliant on intact forest, it perhaps suffers less severely from the ravages of deforestation than many other birds. However, it may be that intact forest comprises an essential habitat for part of the annual cycle, or in part of the species's range; it would be injudicious to discount this possibility. In any case, the species's preference for a patchwork of habitats suggests that undue degradation of habitat will be deleterious. However, a more direct threat may be posed by hunting, especially as the range of the species overlaps with various hill tribes whose hunting lifestyles are notorious (see Threats under Rufous-necked Hornbill *Aceros nipalensis*).

Habitat loss *Mainland China* In China, habitat loss is one of the primary threats to the species (McGowan and Garson 1995). Figures from the Jinzhongshan Forestry Station reveal a 9.9% reduction in forest cover between 1974 and 1986 (Zhang Zhengwang *in litt.* 1997). Deforestation continues to be a problem in many areas of China, and the species's distribution is thus becoming increasingly fragmented; details of habitat loss in Yunnan appear in the equivalent section under Rufous-necked Hornbill and White-speckled Laughingthrush *Garrulax bieti*. No data are available on overall changes but its range is almost certainly diminishing in extent. *India* Forest loss is proceeding rapidly in north-eastern India, largely driven by shifting cultivation, conversion to agriculture and logging (see Threats under Rufous-necked Hornbill). Extensive shifting cultivation is apparently reducing habitat suitable for the species in Murlen National Park (Katju 1996, Kaul *et al.* 1996), throughout Manipur (Choudhury 1992a), and indeed in all its Indian range (R. Kaul verbally 1999). The fringes of Blue Mountain National Park are threatened by locals intent on clearing forest for agriculture (Ghose and Sumner 1997). In most parts of Mizoram, where forests are often locally owned, shifting cultivation results in a heavy growth of bamboo, large tracts of which are visible all across the state, forming a habitat which is largely unsuitable for this species (R. Kaul *in litt.* 1998). Protected areas in the state are currently isolated fragments of natural habitat in a "sea" of secondary growth comprising scrub, bamboo, grass and banana plantations, a circumstance that limits the potential movement of terrestrial species between patches (Katju 1996). *Myanmar* Around 1938, the forests around Taunggyi, Myanmar, were being burnt annually and this, coupled with an increase in herds of half-starved cattle, was destroying much natural habitat in the area, leading to large-scale erosion of land such that agriculture became unprofitable and the wildlife increasingly scarce (Livesey 1938). There are few recent data or accounts of forest loss in the country, but it has clearly been very severe in the lowlands and foothills (see Threats under Pale-capped Pigeon *Columba punicea*), and probably fairly rapid in montane areas (see Threats under Rufous-necked Hornbill). *Thailand* The species has suffered from the agricultural intensification and fragmentation of habitat that have accompanied the spread of roads and government-sponsored development projects throughout the highlands of northern Thailand; the blanket reafforestation of large upland areas with dense conifers (mainly native pines) by the Royal Forest Department may also pose a threat (P. D. Round *in litt.* 1998). The open hill-evergreen and pine-forest zone on Doi Inthanon at 1,000–1,500 m is massively disturbed and settled by Hmong and Karen tribespeople, as well as many lowland Thais associated with government projects (P. D. Round *in litt.* 1994). An account of threats to pine forests (in particular the increasing frequency of fire, even in Doi Chiang Dao Wildlife Sanctuary) appears in the equivalent section under Giant Nuthatch *Sitta magna*.

Hunting The species flushes easily, especially when hunters are accompanied by dogs, and thus it is readily shot, despite the fact that its low escape flight through trees or bushes often succeeds in keeping obstacles between itself and the hunter (Drummond 1923; see

Remarks 4). Its predilection for paths, small clearings and open woodlands renders it particularly susceptible to hunting pressure (P. D. Round *in litt.* 1998). The ease with which it is hunted and snared has clearly resulted in its numbers falling dramatically throughout the twentieth century. *Mainland China* Hunting for food apparently takes a heavy toll on populations (Liu Xiao-hua *in litt.* 1995). *India* Trapping and snaring of pheasants in Murlen National Park continues apparently unchecked, despite efforts by the local forest department; the presence of Murlen village within the park boundaries further compounds this problem (Katju 1996, Kaul *et al.* 1996, Mishra *et al.* 1998). The two major problems facing protected areas in Mizoram are (a) the shifting cultivation and fuelwood exploitation that is still extensively practised within park boundaries and (b) the hunting that is undertaken by human populations living nearby (Katju 1996). The local Nagas, Kukis and Mizo tribespeople in the Manipur hills hunt and poach wildlife intensively, including this species, making its conservation problematical (Choudhury 1992a, Robertson 1995). *Myanmar* Individuals of this species were snared in large numbers for local consumption by hill tribes, most frequently during winter when it moved to the lower slopes (Drummond 1923), and this practice continues today (King *et al.* 1996). Little else is known about current hunting practices in the country, but it has long been thought that levels of persecution and poaching are high (U Tun Yin 1954; see equivalent section under Rufous-necked Hornbill and White-winged Duck *Cairina scutulata*), especially in mountainous areas owing to the hunting lifestyles of hill tribes (B. F. King verbally 1998). The survival of the species at Taunggyi crags, only two hours' walk from one of the largest settlements in Shan state, until at least 1985, suggests that hunting pressure might be less severe than usually supposed, and where hill tribes are absent the species is probably much more secure (King 1985b). A recently completed road to 2,900 m on Mount Victoria makes the site much more accessible to hunters and loggers (King *et al.* 1996). *Thailand* Ngampongsai (1986) listed the species amongst those adversely affected by direct habitat destruction and overhunting. On Doi Suthep "hunters may be encountered almost any early morning and having extirpated hornbills, most gamebirds and pigeons, now seek ever smaller species as quarry" (Round 1984). Hunting still occurs in the upper portions of Doi Suthep-Pui National Park, with dire implications for the remnant population of this pheasant (*Bird Conserv. Soc. Thailand Bull.* 16, 5 [1999]: 16; 17, 8 [2000]: 12–13), which is also believed to be threatened by hunting on Doi Chiang Dao, one of its strongholds in the country, not only by hill tribes but by government employees staying at the Agricultural Project Station (*Bangkok Bird Club Bull.* 7, 9 [1990]: 11–12). Indeed, a male was found shot in Doi Chiang Dao Wildlife Sanctuary in December 1996 (*Bird Conserv. Soc. Thailand Bull.* 14, 3 [1997]: 14).

MEASURES TAKEN *Legislation* Hume's Pheasant is listed as a nationally protected species in China (category I) and legally protected in India (Schedule I), Thailand and Myanmar (in the latter as pheasants in general: Wildlife Act 1994). It also appears on Appendix I of CITES.

Protected areas It has recently been determined present in nine protected areas, of which Jinzhongshan Nature Reserve, China, and Murlen National Park and Blue Mountain National Park, India, are considered irreplaceably important for the long-term conservation of galliforms in East Asia, and it is also listed for Doi Chiang Dao Wildlife Sanctuary in Thailand (McGowan *et al.* 1999). It occurs at a variety of other sites that receive some form of protection, as listed below. *Mainland China* It has been recorded in or near to several protected areas: in Yunnan, Tongbiguan Nature Reserve (342 km², forests apparently in quite good condition), Ailao Shan National Nature Reserve (504 km², forests apparently in quite good condition, but partly degraded in the lowlands), Wuliang Shan Nature Reserve (234 km², forests apparently in very good condition) and Daxue Shan Nature Reserve (158 km², forests probably in fine condition); in Guangxi, Jinzhongshan Nature Reserve (220 km², forests apparently "scrubby", and therefore perhaps ideal for this species) and Cenwang

Laoshan Nature Reserve (298 km², forests covering c.37% of the reserve) (protected area size and condition from MacKinnon *et al.* 1996). *India* It occurs in Murlen National Park (c.200 km²), Mizoram, and Namdapha National Park, Arunachal Pradesh. Blue Mountain National Park also supports a population, but this is likely to be fairly small as the park itself is not large (R. Kaul *in litt.* 1998). Some other protected areas, such as that at Fakim in Nagaland, may support further populations. *Myanmar* The Mount Victoria area is now nominally protected within Natma Taung National Park (Khin Ma Ma Thwin *in litt.* 1997). *Thailand* The subspecies *burmanicus* occurs in Doi Chiang Dao Wildlife Sanctuary (McGowan and Garson 1995). There is apparently a tiny population in Doi Suthep-Pui National Park and an almost negligible possibility that the species occurs in Doi Inthanon National Park (P. D. Round *in litt.* 1998).

MEASURES PROPOSED *Protected areas and habitat management* As the range of one subspecies of Hume's Pheasant (*burmanicus*) broadly overlaps with the global range of the Giant Nuthatch, protected-area establishment and management in China, Myanmar and Thailand should try to combine the requirements of both taxa. *Mainland China* MacKinnon *et al.* (1996) made the following recommendations for the protected areas where this pheasant has been recorded: at Tongbiguan Nature Reserve, substantially extend the reserve northwards; at Ailao Shan National Nature Reserve, extend the reserve to link up with Wuliang Shan reserve, to form the "Ailao-Wuliang Shan priority unit"; at Wuliang Shan Nature Reserve, extend to link with Ailao Shan reserve; at Daxue Shan Nature Reserve, strengthen protection; at Jinzhong Shan Nature Reserve, retain as a reserve; and at Cenwang Laoshan Nature Reserve, extend northwards to include a karst landscape. *India* Hunting and habitat loss should be controlled within Murlen National Park, Mizoram, and a census of the Hume's Pheasant population conducted. Appropriate management should be implemented in Murlen and Blue Mountain National Parks; including efforts to keep the forested areas safe from further damage caused by shifting cultivation. The proposed Barail Biosphere Reserve in Assam, including the North Cachar Hill Reserve Forest and Barail Reserve Forest, may protect populations of this species (Choudhury 1993d), as would proposed National Parks at Sirohi and Dzuko in Manipur (Choudhury 1992a). If further key populations are identified, the relevant site should be considered for protection. *Myanmar* An effective protected area is required in the Chin hills; the new national park (Natma Taung) around Mount Victoria has the potential to be very important for this and many other species, but this depends on its being properly managed and protected (King *et al.* 1996). Protection of forest and scrub at Taunggyi crags would also benefit the species. As soon as conservation action is feasible in Shan state and other important portions of the bird's range in Myanmar, efforts should be made to identify key sites and promote their protection. *Thailand* Angsirijinda (1980) recommended the greater empowerment of the forestry department, enforcement of legislation, education, and establishment of cross-border sanctuaries for the conservation of rare pheasants in Thailand. A reserve is needed on Doi Pha Hom Pok (P. D. Round *in litt.* 1998), although armed groups from Myanmar have exerted a disruptive influence on parts of the mountain in recent decades. Habitat destruction in the northern mountains of Thailand (especially by shifting cultivators and fire), hunting and the use of agricultural chemicals requires control (Ngampongsai 1986; see Measures Proposed under Giant Nuthatch).

Research Extensive surveys are required, especially in northern Thailand and north-east India, so that the distribution and size of populations can be identified and appropriate conservation action taken. Further research on its ecological requirements throughout the year would benefit future attempts to manage habitats with a view to its conservation (McGowan and Garson 1995). *Mainland China* Surveys are needed in eastern Yunnan to find out whether the species occurs there. *India* More status surveys are needed in Nagaland

and Manipur at the earliest opportunity (R. Kaul *in litt.* 1998). Further evidence of the presence of the species in Namdapha National Park is desirable; surveys in potentially suitable upper elevational habitat should be conducted there. *Myanmar* Surveys and censuses are urgently required in its previous strongholds in the north Chin hills and the Shan hills so that its status and threats can be assessed, and key sites for protection identified. *Thailand* Wide-ranging surveys are required, as most fieldwork is conducted on the few accessible peaks visited by naturalists (P. D. Round *in litt.* 1998). Searches for birds at high altitudes on Doi Pha Hom Pok are needed, security permitting.

Control of hunting As the pressure imposed by hunting is one of the major threats to the species, attempts should be made to minimise it, whether through conservation awareness schemes in key areas or improved patrolling and guarding of protected areas.

Captivity The captive population should be managed to minimise the loss of genetic diversity and ensure that the two subspecies are not hybridised (McGowan and Garson 1995). However, a captive-breeding programme and re-introduction scheme is not required (see equivalent section under Cheer Pheasant *Catreus wallichi*).

REMARKS (1) This bird was named for A. O. Hume's wife, so technically its English name, as indicated in the original description, should be "Mrs Hume's Pheasant"; but since Hume named it himself, it is also "his", as the customary dropping of "Mrs" (probably unintentionally) admits. Some taxonomic judgements merge *Syrmaticus* in *Phasianus* (e.g. Johnsgard 1986), but genetic analysis supports the separation of the two genera (Munechika *et al.* 1999). The eggs of *S. humiae* are apparently "not in the least like" those of true *Phasianus* (Baker 1922–1930) and it does not possess the same crowing calls (Davison 1980b). Although Beebe (1936) mentioned a crowing call by wild birds in the morning or evening, Davison (1980b) never heard this in captivity and believed it was absent, concluding that, as the species lacked the loud call but frequently whirred its wings, it was closer in its audial signalling system to *Lophura* than *Phasianus*, despite its closer morphological affinity with the latter. (2) Young (1967) stated that "Barred-back pheasants are still to be found" on Doi Lang Ka. This is probably the same site as "Doi Lunggaluang", which simply means the main (*luang*) peak of Doi Lang Ka (P. D. Round *in litt.* 1998). (3) As other pheasant species are sometimes released in random places by or for Thai royalty, the potential provenance of these individuals is being investigated, but there is currently no evidence to suggest that the birds involved were not wild (P. D. Round *in litt.* 1999). The indications are that the species has either recolonised the mountain naturally or that a small population remained undetected for many years. (4) Baker (1921–1930) quoted a correspondent from Myanmar who wrote that "to see half a dozen cock birds rise almost at one's feet and then scatter in all directions, the wonderful blue and white feathers of their rumps shewing up like flags against the rest of the brilliant plumage, is a most extraordinary sight, and I have found the blaze of colour so gorgeous and attractive that I have sometimes been arrested in the very act of raising my gun to fire, and have instead stood to watch them and enjoy the sight".