

ADDITION  
to *Forktail* 4

On p. 17 add the author's name and address:

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We apologise to Mr de Roder and to readers for this omission.

**A review of the  
Black-tailed Crake *Porzana bicolor***

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The Black-tailed Crake *Porzana bicolor* is a little-known railid with few recent records from anywhere in its range. The plumage and biometrics of the species are described, its taxonomic affinities discussed and all known records summarised by country. Certain records (mostly from between 1,000 and 3,000m) extend from Sikkim, Bhutan and the north-east Indian uplands into eastern Burma, south-west China and the northern parts of Viet Nam, Laos and Thailand, although the only recent records are from Thailand and China. The species affects dense vegetation by streams and pools, often shaded by trees, but will feed in the open. Its song is a long trill given mainly at dusk; the breeding season extends from May to August.

The recent discovery of the Black-tailed Crake *Porzana bicolor* in northern Thailand (Sériot *et al.* 1986) has prompted us to review the sparse literature pertaining to this very poorly known species, and to incorporate new observations, in particular the first published details of its vocalisations. There is a wide scatter of records in a number of countries in the Oriental region, to which the bird is endemic, but there are few recent observations. This is partly because many of the localities are currently inaccessible to all but a few local ornithologists, but the absence of records in the last fifty years from the frequently visited Darjiling district, India, is not easy to explain.

In the following account, unless otherwise stated, the coordinates and modern place-name spellings are derived either from *The Times atlas of the world* (1986) or from more detailed maps consulted in Cambridge University Library. Superscript numbers next to place-names in the text correspond to the position of the localities on the map (see Figure 1). AMNH stands for American Museum of Natural History, ANSP for the Academy of Natural Sciences, Philadelphia, BMNH for British Museum (Natural History), FMNH for Field Museum of Natural History, Chicago, MCZ for Museum of Comparative Zoology, Harvard, USNM for National Museum of Natural History, Washington.

DESCRIPTION

The following descriptions are derived from a number of sources, but mainly from Walden (1872) and Sharpe (1894). Where described features appear to be at variance with the majority of descriptions, they are included in parentheses.

*Full-grown birds* Head and neck dark ashy-grey, darker on the crown and nape; mantle, rump, scapulars and wing-coverts dull rufous-brown; carpal-edge white; alula, primary coverts and remiges dark brown, outer

webs rufescent brown or fuscous (P.D.R. has seen one individual with very narrow whitish margins to the tertials); upper tail-coverts and tail blackish; sides of head pale grey; chin whitish; rest of underparts ashy-grey, breast slightly darker; vent and under tail-coverts blackish or dusky brown; under wing-coverts and axillaries dusky, slightly washed with rufous-brown.

Iris blood-red or vermilion in adults, brown in immatures; orbital ring venetian-red or apricot-orange.

Bill pale bluish-green or apple-green, tipped paler and greyer (or tip black: Walden 1872, Stanford and Mayr 1941), with a venetian-red patch near the base of both mandibles, which is brighter in the breeding season (however, P.D.R. has never observed any red at the base); gape slaty colour.

Legs and feet dull lobster-red, bright brick-red or deep pinkish-red (or fleshy-grey: Stanford and Mayr 1941) (Meyer de Schauensee 1984 also mentions 'livid purple' but this is probably a transcription error for *Amauornis akool*).

*Pullus* Black all over with a steely-green gloss on the upperside. Iris hazel. Bill pale pinkish-mauve, tip lighter. Tarsus dusky with a faint mauve-plumbeous wash (Kinnear 1929).

Table. Biometrics of the Black-tailed Crake *Porzana bicolor*, in millimetres

	Baker (1929)	Benson and Wagstaffe (1972)	Stevens (1925)	
Wing	112-119	3 females: 106, 113, 115 3 ? 112, 115, 117	2 males: 113, 116 2 females: 110, 117	1 female 109 (Cheng <i>et al.</i> 1962)
Tail	57-60	3 females: 50, 51, 58 3 ? 51, 54, 60		48.3 (Sharpe 1894)
Bill (from feathers)	21-27	3 females: 23, 24, 24 3 ? 23, 26, 27		
Tarsus	37-39	3 females: 37, 39, 39 3 ? 38, 38, 40		34.3 (Sharpe 1894)
Middle toe (without claw)		3 females: 36, 36, 37 3 ? 35, 37, 38		
Middle toe (with claw)				44.5 (Godwin-Austen 1874)
Total length (cm): 20.3 (Sharpe 1894), 21.6 (Blanford 1898), 22.2 (Godwin-Austen 1874), 25.4 (King <i>et al.</i> 1975).				

## TAXONOMY

Walden (1872), when he described the species, placed it in *Porzana* but gave no reason for this generic assignment. *Amauornis* had been established by Reichenbach (1852), but until the 1870s much of the Indian literature continued to include in *Porzana* both *akool* and *phoenicurus*, which are now generally accepted as belonging to *Amauornis*. Sharpe (1894) was the first author to transfer *akool* and *phoenicurus* to *Amauornis* but he maintained *bicolor* in *Porzana*. His key to rallid genera indicates that *Amauornis* comprised species with primaries hardly projecting beyond the secondaries and the bill slightly swollen at the base. Blanford (1898) transferred *bicolor* to *Amauornis*, which he distinguished from *Porzana* by the more rounded wing: 3rd primary longest (as opposed to the 2nd) and the 1st primary shorter than the 8th (as opposed to equalling the 6th or 7th). He indicated that the bill is not swollen at the base in *bicolor* or in *fusca*, which he also included in *Amauornis*. Baker (1929) retained this classification in his second edition of the *Fauna*. However, Peters (1934) returned both *bicolor* and *fusca* to *Porzana*. Ali and Ripley (1969) followed Baker in placing *bicolor* in *Amauornis*; they used the same criteria as Blanford and Baker for distinguishing the two genera but, confusingly, transferred *fusca* back to *Porzana*. Benson and Wagstaffe (1972) drew attention to the similarities between *bicolor*, (*Limnocorax flavirostris*, (*Amauornis olivieri* and (*Porzana tabuensis* and advocated 'the placing of all four of these species in the same genus, perhaps most correctly *Porzana*'.

Olson (1973), in a complete review of the classification of the family, declared that 'one of the most difficult problems in rail taxonomy lies in the proper allocation of the species included in the genera *Porzana* and *Amauornis*. The four species that Peters (1934) included in *Amauornis* (*phoenicurus*, *akool*, *olivaceus* and *isabellina*) form a rather basic stock from which both the *Porzana* assemblage and the gallinules could have arisen.' After skeletal studies of various species, but not including *bicolor*, he recommended the placement of *bicolor*, *fusca* and *tabuensis* in *Porzana*. Ripley (1977) included *bicolor* in *Amauornis*, which he defined as comprising species 'powerfully built in proportion . . . and [which] have a tendency to large, stout bills with a culmen ridge extending back into the forehead into a nascent shield'. His key to genera requires that all *Amauornis* have a 'frontal shield or culmen swollen at base' and the tarsus longer than the middle toe without the claw. The characters defining *Porzana* are the lack of a frontal shield, small size (less than 7 inches [180mm] in length) and the tarsus shorter than the middle toe plus claw.

Although *bicolor* is longer than 7 inches, so are several species included in *Porzana* by Ripley and, since this is a small species without a swollen base to the culmen and a tarsus hardly longer than the middle toe less claw, we prefer to follow Sharpe (1894) and Olson (1973) in placing *bicolor* in *Porzana*.

## HISTORY

## India

The first specimens were collected by B. H. Hodgson between 1844 and 1858 whilst he was resident in Darjiling. The present labels (in BMNH) state 'Nepal' as the place of collection and Inskipp and Inskipp (1985) treated them as originating in that country. However, Ludlow and Kinnear (1937) suggested that it was more likely that they had been obtained in Darjiling or Sikkim. There is, in fact, considerable doubt that any specimens in Hodgson's later collections originated in Nepal. Hodgson's specimens were originally misidentified as Brown Crakes *Amaurornis akool*, and remained so until reported correctly by Sharpe (1894).

The species was described from a specimen (in BMNH) taken at 880m at Rungbee (= Rangbi)<sup>1</sup>, below Darjiling (27°N 88°20'E), in November 1870 (Walden 1872). This specimen is pre-dated by one taken by H. J. Elwes on 29 September 1870 at 1,570m in a paddyfield at Choongtam (= Tsungtang)<sup>2</sup>, Sikkim (27°38'N 88°35'E) (Sharpe 1894). Early in 1872 Hume had named this latter individual *Porzana elwesi* in a description sent to *Ibis*, but the editor put it aside and only remembered it after the appearance of Walden's publication (Hume 1875, Hume and Marshall 1879). Soon afterwards, four adults were taken by L. Mandelli: one at Lebong<sup>3</sup>, Darjiling district (27°03'N 88°25'E) in 1874, and the others in 'Native Sikkim' (= Darjiling area), in May 1874, November 1877 and March 1879; in addition a juvenile was obtained on an unknown date (Sharpe 1894, BMNH collection data).

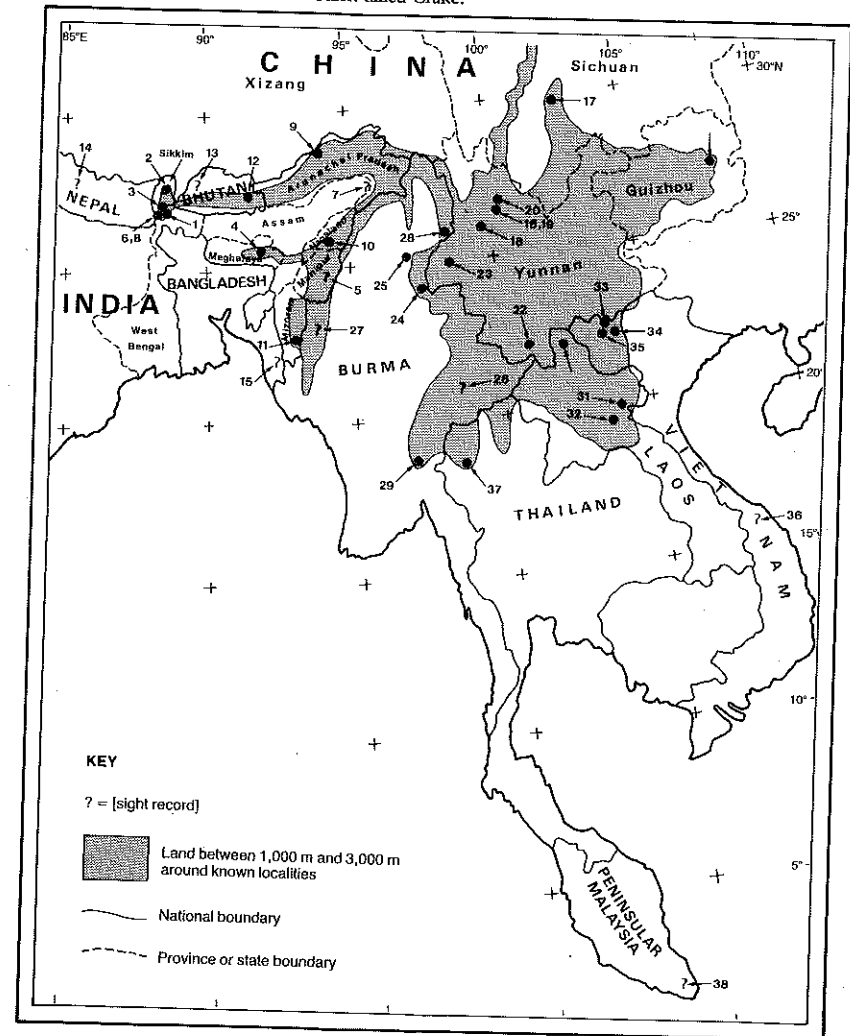
Meanwhile the species had been found at Shillong<sup>4</sup>, Meghalaya (25°34'N 91°53'E) by Godwin-Austen (1874), who collected one at 1,570m in June. Two other birds were brought to him alive with an egg, said to be from this species; he kept the birds in confinement but reported that they did not live for long – these were perhaps the same birds as two specimens, now in BMNH, dated 14 July and August (BMNH collection data). Hume and Marshall (1879) stated that 'numerous specimens have now been obtained in Sikkim, and again in the neighbourhood of Shillong', but no other relevant specimens have been traced in museum collections.

The next mention of the species was by Hume (1888) who saw two birds, which he felt sure were of this species, at 3,500m below Tankool Hoondoong (= Tangkhul Hundung)<sup>5</sup>, Manipur (24°45'N 94°10'E). He did not feel able to add it to his Manipur list on the basis of this sight record, but it is nevertheless listed as occurring in Manipur by Sharpe (1894), Baker (1928, 1929), Ripley (1977) and Ali and Ripley (1980).

Baker (1907) recorded taking two specimens, trapped on nests, in the Khasi Hills. There are two specimens of male *bicolor* in AMNH, collected by Baker from nests at Shillong<sup>4</sup>, in the Khasi Hills, on 20 and 21 June 1908. It is possible that the same individuals are involved and that the year of collection on the museum labels is incorrect. Stevens (1925) had three live birds brought to him on 22 May 1912, whilst he was collecting on the

Nepal–Darjiling border; he was told that they had been caught between 3,660m and 3,960m, but was not entirely convinced by this claim. He also provided details of a female, containing an oviduct egg, taken by F. S. Boileau on 27 March 1918 at about 1,300m, below Nagri<sup>6</sup> in the Rungbong (= Rangbang) Valley, Darjiling district (26°55'N 88°12'E). Baker (1928, 1929, 1935) listed the species as occurring in 'Eastern Assam' (now

Figure 1. The distribution of the Black-tailed Crake.



Arunachal Pradesh) above 1,000m and in the Lakhimpur district<sup>7</sup>, Assam, calling it 'not uncommon practically down to the foothills', and noting that it also breeds 'in considerable numbers in the Khasia Hills, as also in the North Cachar Hills in the few places suitable to it'. A specimen was taken at 1,675m at Mirik<sup>8</sup>, Darjiling district (26°52'N 88°10'E), on 30 January 1938 (Matthews and Edwards 1944).

In May 1938 F. Ludlow noted four on 4th and collected a male and female on 6th, all at 2,135m at Lhalung<sup>9</sup>, Arunachal Pradesh (28°42'N 94°12'E) (Ludlow and Kinnear 1944, Cheng *et al.* 1983, BMNH collection data).

W. Koelz collected a male on 5 August 1950 at Takubama (= Chakhabama)<sup>10</sup>, Nagaland (25°40'N 94°14'E) (ANSP collection data), and the last known records for India involve a male and female that Koelz collected on 20 and 23 February 1953 at Sangau<sup>11</sup>, Lushai Hills, Mizoram (22°43'N 93°04'E) (FMNH collection data).

#### Bhutan

The only definite record is of one collected by Ludlow at 2,290m at Taktoo<sup>12</sup>, Gamri Chu (27°22'N 91°50'E) on 27 October 1934 (Ludlow and Kinnear 1937, BMNH collection data). However, Ripley (1977) saw a bird that he was convinced was of this species at Gasa<sup>13</sup> (3,250m) (27°45'N 89°40'E) in September 1968.

#### Nepal

Apart from the records discussed above under India there is a possible sight record from Phul Chowki<sup>14</sup>, Kathmandu Valley: on 27 March 1981 T.P.I. saw a small, plain-looking, short-billed rallid at 1,650m crossing a forest path well away from water.

#### Bangladesh<sup>15</sup>

The species is listed as a rare resident by Khan (1982), but no further details are known.

#### China

The first record was a specimen collected by G. Rippon at 2,750m in the Lijiang Valley<sup>16</sup>, north Yunnan (26°51'N 100°16'E) on 10 April 1906 (Ingram 1912, BMNH collection data). The species was subsequently found breeding at 1,830m on Wa Shan<sup>17</sup>, Ebian County, Sichuan (29°40'N 103°E), and two males were collected there by W. R. Zappey on 29 May and 7 June 1908 (Thayer and Bangs 1912, MCZ collection data). In 1923 J. F. Rock collected two specimens on 3 June from Lanping Plain<sup>18</sup>, north-west Yunnan (26°25'N 99°25'E); also a male on 22 August near Lungwangmiao<sup>19</sup> (2,500m), Lijiang Plain, and three more specimens in the same area in August (Riley 1926, AMNH and USNM collection data). In the winter of 1929–1930 a further female was collected at Lijiang<sup>16</sup> by M. S. Hsuen

(FMNH collection data). In 1960 a female was collected on 6 April at 2,500m on Yulongxue Shan<sup>20</sup>, north Yunnan (27°08'N 100°17'E) (Cheng *et al.* 1962, Tan and Cheng 1964; specimen held in Institute of Zoology, Beijing). In 1963 a male was collected on 21 September at Taiping<sup>21</sup> (500m), Jiang, north-east Guizhou (27°45'N 108°50'E) (Wu Zhikang 1982, Wu Zhikang *et al.* 1986; specimen held in Kunming Institute of Zoology, Kunming, Yunnan). In 1965 a female was collected at 2,000m on Wa Shan<sup>17</sup> on 11 May (Cheng Tso-hsin *in litt.*). In 1988 the species was recorded at Mengyang Nature Reserve<sup>22</sup>, south Yunnan (22°N 101°E) on 29 March (S. Jensen *in litt.*).

One specimen has also been collected in August at Tengchong<sup>23</sup> (25°02'N 98°28'E), south-west Yunnan (Kunming Institute of Zoology, Academia Sinica 1980), but the year of collection is not known.

#### Burma (recently renamed Myanmar)

A specimen in BMNH, which was presented by G. A. Frank (apparently a dealer in skins), is labelled 'Burmah', but no further details are known. H. H. Harington procured a nest with four eggs at Sinlum-Kaba<sup>24</sup> (1,830m), Bhamo district (24°18'N 97°32'E), on 29 May 1905. These were identified as of this species when compared with six eggs taken with an adult bird by O. K. Tancock, nearby at Lweje on 9 May 1909 (Harington 1910). Harington (1914) subsequently obtained 'other specimens' at Sinlum in December 1909. B. B. Osmaston found a nest containing six eggs on 18 July (year not known), near Mogaung<sup>25</sup> (100–200m), north-east Burma (25°20'N 96°54'E), the only low-elevation record for the country (Baker 1935, Smythies 1953). T. R. Livesey described the species as not uncommon in the Southern Shan States<sup>26</sup> (presumably in the 1930s) (Smythies 1953). P. F. Wickham (1930) found it to be common in the Chin Hills<sup>27</sup>, West Burma. A female was brought to A. Vernay and S. F. Hopwood at Hpawshi<sup>28</sup> (1,525–1,830m), near Gangfang, north-east Burma (26°N 98°30'E) on 12 February 1939, and another crake, almost certainly belonging to this species, was seen 'on a small swampy pool at Gangfang' (Stanford and Mayr 1941, Stanford 1942, AMNH collection data). The most recent record is of a male taken at Nattaung<sup>29</sup> (1,370m), Karenni (18°49'N 97°02'E), on 9 April 1940 (Smith *et al.* 1944, BMNH collection data).

#### Laos

A male was collected by J. van Tyne at Phong Saly<sup>30</sup> (1,340m) (21°40'N 102°06'E) on 4 May 1929 (Bangs and van Tyne 1931, FMNH collection data). David-Beaulieu (1939, 1940) noted the species at Nong Het<sup>31</sup> (19°29'N 104°01'E) and Xieng Khouang<sup>32</sup> (19°21'N 103°23'E); at the latter locality he collected a male on 25 March 1939 (USNM collection data), but subsequently he collected 'un bon nombre' at these two localities and considered it to be less rare than formerly supposed.

### Viet Nam

In 1924 H. Stevens collected a chick on 21 June, and an adult female on the following day, below Ngai-tio<sup>33</sup>, Tonkin (22°43'N 103°23'E) (Kinnear 1929, BMNH collection data). In 1929 two birds were obtained at Cha Pa<sup>34</sup>, Tonkin (22°20'N 103°50'E): B. Bjorkegren collected a male on 3 January (MCZ collection data) and J. Delacour collected a female on 18 December (Delacour 1930, AMNH collection data). Vo Quy (1975) has recorded the species at Cha Pa, apparently in recent years, and he also found it at Lai Chau<sup>35</sup>, Tonkin (22°04'N 103°10'E). The only other record is one seen on the Deo Mang Pass<sup>36</sup>, Central Annam, on 31 March 1966 (Abramson 1971). The bird was described as 'about 11 in. long with a conspicuous red bill, olive brown back and wings'. It seems unlikely, however, that the identification as Black-tailed Crake is correct.

### Thailand

The Black-tailed Crake is known in Thailand so far only from Ban Maeo Khun Klang<sup>37</sup> (1,300m), Doi Inthanon National Park (18°32'N 98°31'E), where it was first definitely reported on 25 January 1985 (Sériot *et al.* 1986). A bird was seen at the same site on 29 January by two other observers, and by a number of people, including B. King and P.D.R., on 30 January. The species has not apparently been seen subsequently at this site. However, on 7 April 1983, about 1 km from the above site, P.D.R. and J. W. Wall heard three unknown rallids calling, obtained a tape and saw one bird poorly; in the light of P.D.R.'s subsequent experience he is convinced that these were *Porzana bicolor*. On 31 January 1985 P.D.R., with B. King and others, heard three or possibly four individuals along 200 m of streamside, at a site 400 m downstream from the 1983 site. P.D.R. subsequently found one or two birds at this site on 5–6 November 1985 and 21–22 March 1986 (Anon. 1986), and 25 February 1987. F. and C. Rozendaal heard and saw one bird on 9 May 1987 (Round 1987a) and Robson (1987) saw three individuals on 2 and 3 July. G. Speight confirmed it as a breeding bird when he found two adults with three young on 6 August 1987 (Round 1987b). The Black-tailed Crake is thus clearly a resident species on Doi Inthanon. It is possible that it occurs quite widely in the north of Thailand, perhaps only above 1,000 m (though note Osmaston's low-altitude breeding record in Burma); there are over 13,000 km<sup>2</sup> of land above this altitude in northern Thailand (data from the Conservation Data Centre, Mahidol University *per* P.D.R.).

### Malaysia

In the early 1920s a previously unidentified skin in the Raffles Museum, Singapore, was determined as this species. It bore a label stating 'Kotta Tinggi<sup>38</sup>, Johore, Dec. 18th 1892. Sex female' (Moulton 1922). Some doubt about the authenticity of the record was expressed at the time because of 'a slight possibility of a mistake having been made in attaching the original

label'. Robinson (in Robinson and Chasen 1936) expressed more positive doubt: 'I believe that this skin was brought to Singapore, probably by Davison, with other non-Malayan specimens and that it is now wrongly labelled'. Medway and Wells (1976) make no reference to the species.

### HABITAT, BEHAVIOUR, VOICE

The Black-tailed Crake is usually found in patches of jungle, scrub and rushes between or around rice cultivation or around small ponds in or near forest; it also frequents small streams, especially those with plenty of cover on one side and open grassland on the other (Baker 1927).

In Thailand the recent records are mainly from narrow (1–5 m wide), slow-flowing, permanent streams in which the stream beds are grown over with lush, dense but short (30 cm) grass. The birds were noted emerging into open pools, muddy areas and shallow runnels. These streams are shady with dense herbage and small (up to 12 m) trees of secondary growth along the banks. The surrounding areas are almost completely deforested, with small cultivated patches scattered among dense clumps of *Eupatorium adenophorum* and young pine plantations.

Baker (1927) described birds as coming out of cover in the early mornings and late evenings and feeding in the open grass, picking up small grasshoppers, snails and small worms. At the least sign of danger they scuttled down to the bank and either swam or flew to cover on the far side. When frightened they ran with head and tail depressed and covered the ground at a great pace, but at other times their walk was the usual slow jerky movement affected by all rails. Ripley (1977) described the species as a 'great skulker', though at times feeding unconcernedly in the open. Robson (1987) noted one bird feeding away from cover in the mid-afternoon in close proximity to a grazing horse and a group of people tilling a field. P.D.R. has noted it feeding with a rapid pecking motion, the wings somewhat drooped and the tail cocked and frequently flicked upwards.

A bird watched by P.D.R. on 30 January 1985 uttered high-pitched *keck* or *kik* notes while feeding (see Figure 2). The 'song' consists of an initial rasping *waak-waak* call, which is often inaudible except at close range, followed by a long, slightly descending trill lasting about 12–13 seconds (see Figure 3). The interval between each trill is usually 5–15 minutes. P.D.R. has mainly heard it calling at dusk, though once (7 April 1983) in the early morning.

### BREEDING

Baker (1927, 1935) is the only person who has recorded finding a large number of nests. Most were in 'quite small patches of jungle round about, or

between, rice fields at an elevation of some 5,500 feet'. The species has been found breeding up to 1,830m and down to about 200m in the Lakhimpur district of Assam and at Mogaung, Burma. The nest is a rough pad of loosely put-together twigs and grass with a slight depression in the centre. Most nests are on the ground in grass but some have been found in trees and bushes and one, in a rhododendron in dense forest, some way from water, was about 6m from the ground (all described in Baker 1927, 1935). In China, two nests found by W. R. Zappey were on small, reedy islands in mountain streams (Thayer and Bangs 1912).

The breeding season lasts from the middle of May to the end of August, and the number of eggs varies from five to seven and, very rarely, eight. The eggs average  $33.9 \times 26.1$ mm and are richly coloured pale cream to pale

Figure 2. Call (presumably for contact; given while feeding) of Black-tailed Crake. Recording by P. D. Round.

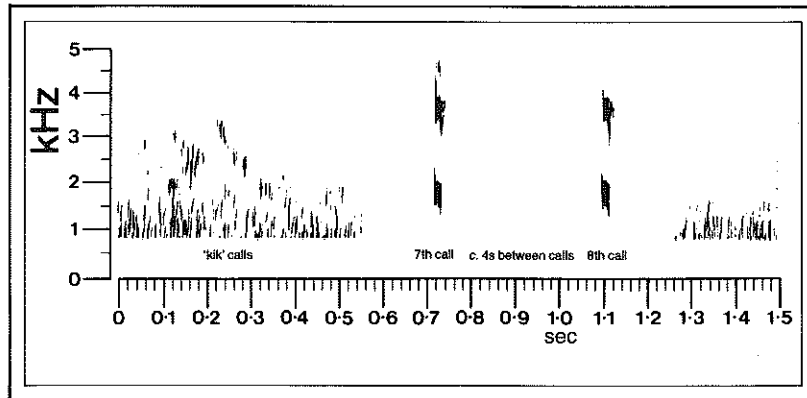
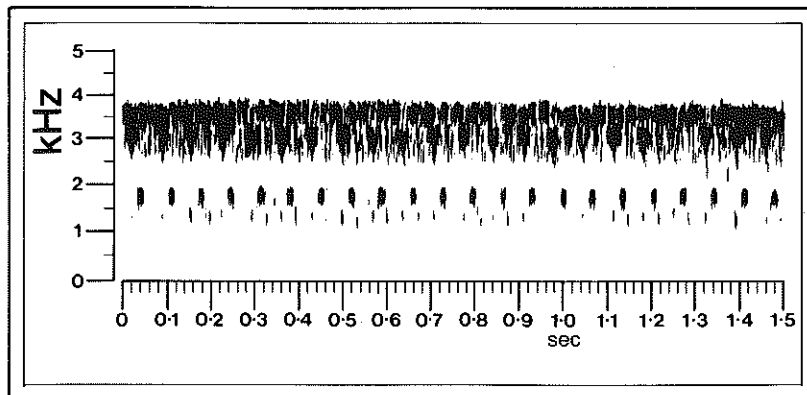


Figure 3. Part of trilling song of Black-tailed Crake. Recording by P. D. Round.



salmon-pink, boldly blotched with deep red-brown, purplish-brown or brick-red, with secondary markings of grey and lavender. Both sexes are involved in nest construction and incubation. The period of incubation is unrecorded.

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