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A new subspecies of Spectacled Fulvetta *Alcippe ruficapilla* from Vietnam

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A new subspecies of Spectacled Fulvetta *Alcippe ruficapilla* [Timaliini (Timaliidae)], believed to be endemic to the Da Lat Plateau in southern Vietnam is described. It is restricted to upper montane forest above 2,100 m elevation. The most distinctive characters are its general dullness and the absence of whitish-grey and blackish on the outer webs of the primaries.

INTRODUCTION

On 22 May 1991 the authors, together with Truong Van La, observed an unfamiliar fulvetta *Alcippe*, thought to belong to the group of species comprising Streak-throated *A. cinereiceps* and Spectacled *A. ruficapilla*. It was at 2,160 m elevation on Nui Bi Doup in Lam Dong Province, southern Vietnam. On 23 May this individual was again observed and later, a flock of at least four was seen on the summit at 2,289 m. One of the four individuals observed on the summit was mist-netted, and a series of biometrics was taken before it was released (Robson *et al.* 1993).

On 12 December 1993 whilst on a return visit, J.C.E. and N.C. observed six birds of the same form, on the summit of Nui Bi Doup, and on 13 December trapped nine individuals, of which a series of seven specimens was collected.

On 16 January 1994, above 2,200 m on Chu Yang Sin in neighbouring Dac Lac Province, J.C.E. observed three flocks of the same *Alcippe*, consisting of five, eight and three birds respectively. On 17 January, J.C.E. trapped and photographed two birds, on 26 January J.C.E. and N.C. observed and trapped a flock of six birds at 2,210 m, and took a series of biometrics before all the birds were released. The species was common along the summit ridge on 27 January and recorded commonly at the summit (2,442 m).

FORMAL DESCRIPTION

The birds seen and collected on Nui Bi Doup in 1991 and 1993, and observed on Chu Yang Sin in 1994 are of a previously undescribed taxon for which we propose the name

Alcippe ruficapilla bidouensis ssp. nov.

Holotype

Institute for Ecology and Biological Resources, Hanoi, number BT 2341, adult female collected on Nui Bi Doup, Lam Dong Province, Vietnam (12° 05'N 108° 40'E), on 13 December 1993. Collectors J.C.E. and N.C. (Figure 1).

Diagnosis

A small, arboreal, flocking babbler assigned to *Alcippe* due to the presence of a short, only slightly decurved culmen; short-rounded wings; soft plumage; lateral crown-stripes and an eye-ring. Plumage brown above and vinous buff and rufescent-brown below. The remiges are brown and have no blackish or whitish-grey edgings on the outer webs of the primaries (Figures 2 and 3).

Description of holotype

Forehead and crown greyish-brown with an olive tint. Narrow white supercilium extending from the lores to behind the eye, where it becomes duller and buff-tinged; it also extends more narrowly over the base of the bill but is buffy and less conspicuous there. Lateral crown-stripes blackish-brown extending and broadening from above eye to nape. Whitish eye-ring, broken by inconspicuous grey eye-stripe. Ear-coverts and cheeks vinous-pink or vinous-buff, lightly streaked with brown. Mantle, scapulars and upper wing-coverts, warm rufescent brown. Rump slightly more rufous than mantle. Chin and throat whitish becoming pale vinous-buff on upper breast, distinctly paler than ear-coverts. Streaking on throat and upper breast formed by brown shaft-streaks on feathers. Streaking becomes more distinct on upper breast. Belly whitish-buff, similar to throat, grading to ochre-buff or orange-buff on the vent and undertail-coverts. Flanks vinous-buff. Outer webs of remiges rufescent brown, intermediate in colour between mantle and rump. Rectrices dull blackish-brown on inner webs and rather more rufous-brown on outer webs. The bill of the freshly dead bird was flesh-horn, slightly paler at the tip and along the cutting edge. By July 1994 the upper and lower mandibles had become entirely dark-horn, except for a flesh base to the lower mandible. Tarsus and toes dark horn, the soles paler. Iris dark brown. Full biometrics are given in Table 1.

Paratypes

Six paratypes are designated, all collected by J.C.E. and N.C. at the same

locality and on the same date as the holotype. Five of the paratypes are held at the Institute of Ecology and Biological Resources, Hanoi, the sixth is held at the Museum of Natural History, Tring, U.K.

Individual variation

Variation in soft part coloration and biometrics between the seven type specimens and six other individuals for which data are available are presented in Table 1. All of the 13 birds were believed to be adults. Although the sample of sexed individuals was small (n = 7), the available data indicate that males, on average, have a longer tarsus, wing and tail and are heavier than females.

RELATIONSHIPS AND RECOGNITION

Within the genus *Alcippe*, the species *vinipectus*, *striaticollis*, *ruficapilla*, *cinereiceps* and *ludlowi* are similar in size and general appearance, with brownish upperparts and a distinct pale flash or panel on the wing formed by pale grey or whitish on the outer webs of the primaries. Taxa assigned to *A. ruficapilla* are generally typified by having a brown, not black, bill; a dark iris; vinous-brown ear-coverts, throat and upper breast; and a distinct whitish eye-ring. The taxa assigned to *A. cinereiceps*, are typified by a black bill (except *A. c. formosana*); a pale iris; greyish to greyish-brown ear-coverts, throat and breast; and the absence of white around the eye and on the supercilium (except *A. c. formosana*). The morphological variation within the two species is summarised in Tables 2 and 3.

The other three species in the group differ in a number of features. *A. vinipectus* has a broad white supercilium bordered above by a dark lateral crown-stripe; dark ear-coverts; and whitish throat and upper breast (marked with brown to warm brown streaks in some races). *A. striaticollis* has no obvious supercilium; dark brown lateral crown-stripes; faint dark brown streaks on forehead and crown; buffish tinged mid-brown ear-coverts and pale underparts with conspicuous dark greyish-brown streaks on the throat and upper breast. *A. ludlowi* has head (apart from throat) warm mid to dark brown; no supercilium; dark lateral crown-stripes almost obsolete; throat and upper breast white with broad, warm dark brown streaks. *A. ludlowi* was treated as conspecific with *A. cinereiceps* by Deignan (1964), apparently following Delacour (1946), although neither author gave any reasons for their treatment. However, in view of its very distinct morphological and biometrical characters treatment as a separate species is warranted. Additionally, it was recently found in the same locality as *A. c. manipurensis*

Table 1. Biometrics of *Alcippe ruficapilla bidouensis* (all measurements by J.C.E.)

Specimen no.	Date	Locality	Sex	Tarsus (mm)	Wing (mm)	Bill (mm)	Tail (mm)	Weight (g)	Iris	Legs	Bill
Specimens collected											
BT 2337	13/12/93	Nui Bi Doup	F	23.0	58.0	10.0	53.0	10.0 ¹	Dark brown	Flesh horn	Dark horn
BT 2338	13/12/93	Nui Bi Doup	F	23.0	57.0	10.0	58.0	9.0 ¹	Dark brown	Flesh horn	Dark horn
BT 2339	13/12/93	Nui Bi Doup	M	24.0	58.5	10.0	57.0	9.5 ¹	Dark brown	Flesh horn	Dark horn
BT 2340	13/12/93	Nui Bi Doup	M	24.0	60.0	10.0	54.0	10.0 ¹	Dark brown	Flesh horn	Flesh horn
BT 2341 (Holotype)	13/12/93	Nui Bi Doup	F	22.0	56.0	10.0	52.0	9.5 ¹	Dark brown	Dark horn	Flesh horn
BT 2342	13/12/93	Nui Bi Doup	M	24.5	62.0	10.0	55.0	10.0 ¹	Dark brown	Flesh horn	Dark horn, pinkish horn at base
BT2343	13/12/93	Nui Bi Doup	F	23.0	57.0	10.0	52.0	9.0 ¹	Dark brown	Flesh horn	Dark horn
Mean (n=7)				23.4	58.4	10.0	53.7	9.6			
Mean (males) n=3				24.2	60.2	10.0	55.3	9.8			
Mean (females) n=4				22.8	57.0	10.0	52.5	9.4			
Birds trapped and released											
	28/01/94	Chu Yang Sin	-	24.0	59.0	8.0	55.0	13.0	Dark brown	Flesh horn	Dark horn, flesh base
	28/01/94	Chu Yang Sin	-	24.5	59.0	8.5	55.0	11.0	Dark brown	Flesh horn	Dark horn, flesh base
	28/01/94	Chu Yang Sin	-	24.5	56.0	8.5	57.0	11.0	Dark brown	Flesh horn	Dark horn, flesh base
	28/01/94	Chu Yang Sin	-	24.5	59.0	9.0	53.5	12.0	Dark brown	Flesh horn	Dark brown, flesh base
	28/01/94	Chu Yang Sin	-	24.5	58.0	8.0	55.0	12.0	Dark brown	Flesh horn	Dark brown, flesh base
	28/01/94	Chu Yang Sin	-	25.0	60.0	8.5	56.0	11.0	Dark brown	Flesh horn	Dark horn, flesh base
Mean measurements											
Mean (n = 13)				23.9	58.4	9.3	54.4	10.5			

Note: ¹Weights given for specimens collected on Nui Bi Doup are dead weights, measured within 12 hours of death.

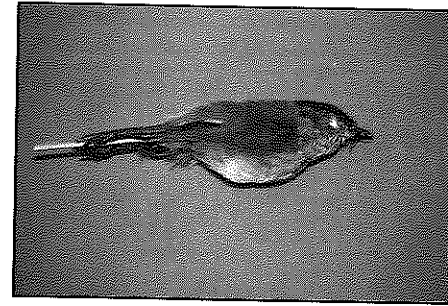


Figure 1 *Alcippe ruficapilla bidouensis* Holotype (photo, J. C. Eames).



Figure 2 *A. r. bidouensis* Nui Bi Doup 23 May 1991 (photo, J. C. Eames).

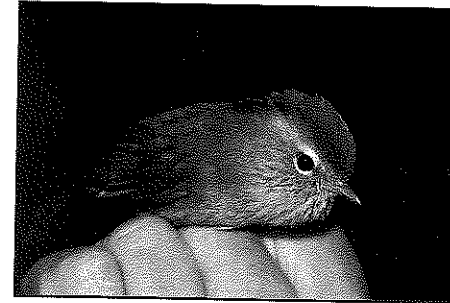


Figure 3 *A. r. bidouensis* showing head in detail, Chu Yang Sin 17 January 1994 (photo, J. C. Eames).



Figure 4 Upper montane forest formation on Chu Yang Sin, a transition zone between Oak-lauel and Montane ericaceous vegetation and the habitat of *A. r. bidouensis* (photo, J. C. Eames).

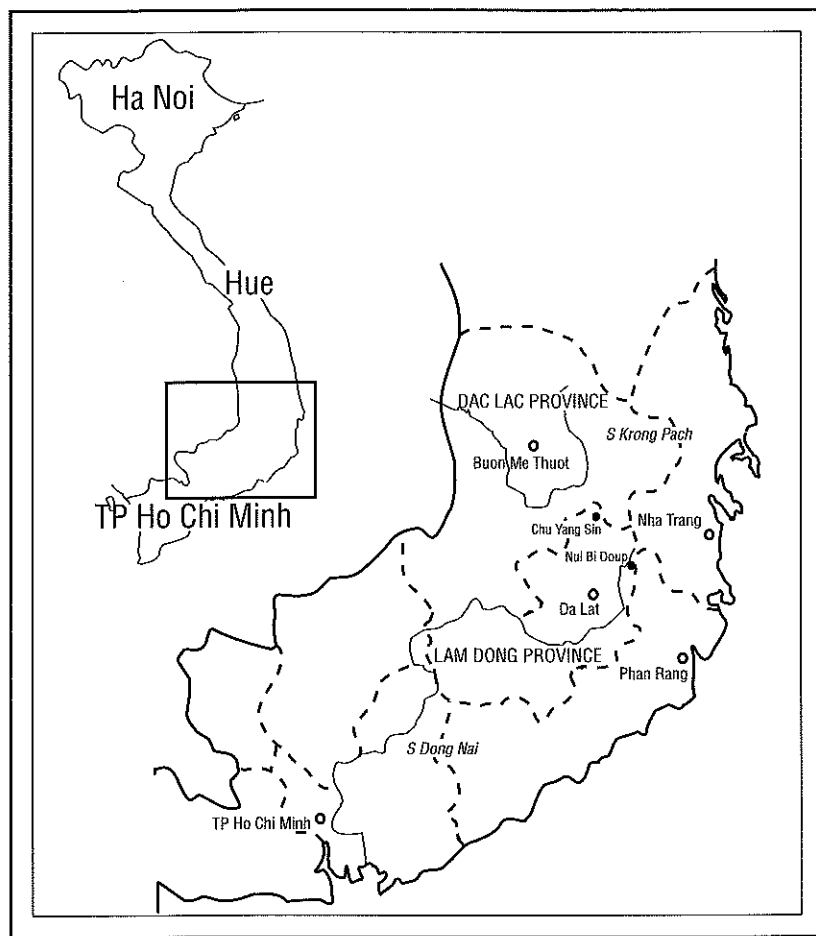
Table 2. Morphological differences exhibited within *Alcippe ruficapilla* and *A. cinereiceps*.

Taxon	Upperparts	Underparts	Sides of head	White eye-ring	Lateral crown-stripe	Primary pattern
Spectacled Fulvetta <i>A. ruficapilla</i>						
<i>A. r. ruficapilla</i> (Verreaux 1870)	Crown rufescent-brown, nape and mantle rufescent mid to light grey, rest warm buff-brown	Throat and upper breast whitish with light greyish streaks, breast paler than nape, lower flanks and undertail-coverts similar to rump	Ear-coverts vinous-pinkish, supercilium behind eye light grey, lores blackish	Yes	Narrow and blackish	P5-5, and sometimes P2 outwardly fringed pale grey, P6-7 outer fringes as finer
<i>A. r. sorolitor</i> (Rippon 1903)	Crown a little paler and browner than nominate	Similar to nominate	Ear-coverts a little paler than nominate, more concolorous with rear supercilium	Yes	Blackish, broader, blacker and longer than nominate	Similar to nominate
<i>A. r. danisi</i> Delacour & Greenway 1941	Crown greyish-brown, rest as <i>bidoupsensis</i>	Very similar to <i>bidoupsensis</i>	Very similar to <i>bidoupsensis</i>	Yes	Blackish-brown	P2-5 have whitish-grey outer fringes basally only, P6-7 appear to have outer fringes as finer at base only
<i>A. r. bidoupsensis</i>	Crown greyish-brown, rest rufescent brown, rump a little more rufous than mantle	Throat whitish, throat and upper breast streaked with brown, lower breast pale vinous-buff, rest buffish	Ear-coverts vinous-pinkish to brown, supercilium behind eye buffy whitish	Yes	Blackish-brown	Outer fringes uniform warm brown, outer fringes of P2-4 at extreme base may be faintly silvery
Streak-throated Fulvetta <i>A. cinereiceps</i>						
<i>A. c. cinereiceps</i> (Verreaux 1870)	Crown and nape vinous-grey or pinkish-grey, mantle chestnut-maroon, back and rump warm buffy brown	Throat and upper breast whitish with very faint darker streaks, lower breast and upper belly light pinkish-grey, rest buffy brown	Paler than crown, lores darker than crown	Absent	Almost obsolete	P5-5 have silvery whitish outer fringes, P2 has a little at base, P6-7 have outer fringes blackish
<i>A. c. fessa</i> (Bangs & Peters 1928)	Very similar to nominate but crown darker, mantle a little duller, less reddish, more olive-brown	Very similar to nominate but lower flanks/vent duller	Very similar to nominate but perhaps a little darker/fuller	Absent	Almost obsolete	As nominate
<i>A. c. fucata</i> (Soyan 1939)	Similar to nominate and to <i>fessa</i> but crown brown, forehead greyer, rump and undertail-coverts deeper rufous	Similar to nominate but streaks on throat and upper breast a little more prominent and browner, lower belly and lower flanks similar to nominate but slightly deeper rufous	Similar to nominate but perhaps a little browner	Absent	Indistinct	Similar to nominate but P6-3 have outer fringes blackish, becoming paler rear tip
<i>A. c. guizhousis</i> (La Touche 1897)	Crown, mantle and back uniform light brownish; rump and undertail-coverts similar to nominate but more buffy, less rufous	Throat whitish, streaks on throat and upper breast more prominent than in nominate; rest of underparts a little browner than in nominate	Paler than crown, lores not darker	Absent	Very indistinct, smoky-brown	P1-3 have whitish outer fringes tinged light brown; rest of primaries have outer fringe blackish
<i>A. c. manipurensis</i> (Ogilvie-Grant 1905)	Mainly light brownish, rump and back rufous	Throat and upper breast whitish, heavily streaked with warm brown, lower breast and upper belly light brownish, lower belly and vent deep rufous	Greyish-brown	Absent	Dark brown	Similar to nominate
<i>A. c. tonkinensis</i> Delacour & Jabouille 1930	As <i>manipurensis</i>	Very similar to <i>manipurensis</i>	Greyish-brown	Absent	Blackish-brown	Similar to nominate
<i>A. c. formosana</i> (Ogilvie-Grant 1906)	Similar to <i>tonkinensis</i>	Similar to <i>tonkinensis</i>	Brownish, but lores blackish or sooty	Yes	Indistinct dull brown	Similar to nominate

Table 3. Bare parts and morphometric differences exhibited within *Alcippe ruficapilla* and *A. cinereiceps* (all measurements, except those for *A. r. bidoupsensis* by C.R.R.)

Taxon	Bill colour	Iris colour	Wing length (mm)	Bill length (from skull) (mm)	Tail length (mm)	Tarsus length (mm)	Weight (g)
Spectacled Fulvetta <i>A. ruficapilla</i>							
<i>A. r. ruficapilla</i>	Yellowish-brown	Dark brown	♂50.5-58.0 ♀52.0-53.0	♂10.0-10.5 ♀10.0	♂45.5-52.5 ♀46.0-47.5	♂20.5-21.0 ♀20.5-22.0	♂9.0-10.0
<i>A. r. sorolitor</i>	Upper mandible grey-brown to dark brown; lower mandible paler or bone yellow to yellowish brown	Brown to blackish, sometimes light yellow	♂51.5-56.0 ♀51.0-54.5 ♂/♀51.0-53.0	♂10.0-11.0 ♀10.5	♂45.0-50.5 ♂/♀44.0-53.0	♂20.0-21.0 ♀20.0-20.5	♂9.0-10.0 ♀8.0-10.0
<i>A. r. danisi</i> (Laos) (Guizhou, China) (Wu et al. 1986)	Horn brown	Brown	♂57.0	♂10.5-11.5	♂48.0-52.0	♂22.0	♂9.0-10.0
<i>A. r. bidoupsensis</i>	Flesh horn to dark horn	Dark brown	♂58.5-62.0 ♀56.0-58.0	♂10.0 ♀10.0	♂54.0-57.0 ♀52.0-53.0	♂24.0-24.5 ♂/♀22.0-25.0 ♀22.0-23.0	♂9.5-10.0 (dead) ♂/♀11.0-13.0 (live) ♀9.0-10.0 (dead)
Streak-throated Fulvetta <i>A. cinereiceps</i>							
<i>A. c. cinereiceps</i>	Black	Whitish to yellowish-white	♂56.0-61.0 ♀57.0	♂10.5-11.5	♂53.0-55.0 ♂/♀51.0 ♀53.0	♂22.0 ♂/♀21.5 ♀22.0	♂10.0-14.0 ♀10.0
<i>A. c. fessa</i>	Black	Similar to nominate	♂58.0-62.5 ♀53.5-58.0	♂11.0 ♀10.0	♂55.0-57.0 ♀53.0-54.0	♂22.0-22.5 ♀22.0-22.5	♂10.5-12.0 ♀10.0-12.0
<i>A. c. fucata</i>	Black	Similar to nominate	♂57.5-59.0 ♀55.0	♂10.5-11.0 ♀10.0	♂51.0-53.0 ♀48.5-50.0	♂22.5 ♂/♀21.5 ♀22.0	♂11.0 ♂/♀11.0-13.0 ♀11.0
<i>A. c. guizhousis</i>	Black	Greyish hazel	♂55.0-58.0 ♀52.0-55.0	♂10.0-11.5 ♀10.0-11.0	♂46.0-52.0 ♀46.0-48.0	♂21.5-23.0 ♀21.0-22.5	♂9.0-11.0
<i>A. c. manipurensis</i>	Black	Pale pinkish-yellow to brown or pale straw-yellow	♂50.0-55.5 ♂/♀50.0-57.0 ♀51.5-55.0	♂10.0-10.5 ♀10.0-10.5	♂45.0-46.5 ♂/♀43.0-49.0 ♀43.0-47.0	♂19.5-22.0 ♂/♀19.5-23.0 ♀20.5-21.0	♂9.0-11.0 ♀9.0
<i>A. c. tonkinensis</i>	Black to blackish-brown	Black to blackish-brown	♂52.5-56.0 ♀51.0-53.0	♂10.0-11.5	♂44.0-47.5	♂/♀20.0	♂9.0-11.0
<i>A. c. formosana</i>	Pale brown to pale pinkish	Pale golden-brown to pale cinnamon	♂52.0-57.0 ♀55.0-56.5	♂10.5-11.0 ♀10.5	♂45.5-49.5 ♀48.0-49.5	♂22.0-23.5 ♀22.5	♂9.0-11.0

Figure 5 Localities mentioned in text



in eastern Arunachal Pradesh, India in March, at which time some neighbouring populations of the latter are in breeding condition.

Bidouppensis exhibits characters generally ascribed to taxa in the *A. ruficapilla* group. However, the wing panel conspicuously shown by all the taxa currently assigned to the above-mentioned species, is absent in *bidouppensis* and much reduced in *A. r. danisi*. The darker brown bill of *bidouppensis* and *danisi* and the greyish-brown tones in the crown of both taxa place them closely together and slightly removed from *A. r. ruficapilla* and *A. r. sordidior*. The absence of a wing panel in *bidouppensis* suggests a cline within *A.*

ruficapilla, of increasing dullness from north to south. Another scenario should however, be briefly mentioned; it is arguable that *bidouppensis* and *danisi* are sufficiently distinct from *ruficapilla* and *sordidior* to be lumped together as a separate species, or as two separate species in their own right, since they are arguably allospecies within a superspecies. For the time being, however, we place *bidouppensis* within *A. ruficapilla*.

An additional point that is relevant here is that *A. r. danisi* is only known for certain from Laos (see Appendix). However, Cheng (1987) listed it for south-east Yunnan and south-west Guizhou, China, noting that they were 'originally identified as *A. r. sordidior*, but from zoogeographical viewpoint, the specimens collected probably belong to *A. r. danisi*'. The identification of these specimens remains doubtful (and they are treated separately in the Appendix), especially since the measurements given for the specimens from Guizhou (Wu *et al.* 1986) suggest a smaller bird than *danisi* and fit within the range known for *sordidior*.

The scattergram shown in Figure 7 plots tarsus and wing lengths for four subspecies of *A. ruficapilla* and six subspecies of *A. cinereiceps*; where *A. r. ruficapilla* $n = 5$, *A. r. sordidior* $n = 18$, *A. r. bidouppensis* $n = 13$, *A. r. danisi* $n = 1$; and *A. c. cinereiceps* $n = 3$, *A. c. fessa* $n = 2$, *A. c. fucata* $n = 3$, *A. c. guttaticollis* $n = 17$, *A. c. manipurensis* $n = 14$, *A. c. formosana* $n = 7$. Most of the specimens were measured by C.R.R. in the collection of the Museum of Natural History, Tring; those of *bidouppensis* were measured by J.C.E., and the specimen of *danisi* was measured by R. A. Paynter, Jr. at the Museum of Comparative Zoology. The only specimen of *A. c. tonkinensis* in the collection at Tring had a broken tarsus and this taxon is therefore omitted from the figure. With reference to Figure 7, there is no clear pattern or geographical cline; *A. ruficapilla* shows the expected decrease in size from north to south in China, but *bidouppensis* is bigger than both of the northern subspecies.

ETYMOLOGY

We name this subspecies after Nui Bi Doup, the mountain on which the holotype was collected. Mount (Nui) Bi Doup (2,289 m) is the second highest mountain in the southern part of the western highlands of Vietnam. The general area, known as the Da Lat Plateau and sometimes Langbian (Langvien or Langbiang) Plateau, is noted for its high levels of endemism in birds and plants (Eames and Nguyen Cu 1994). Of the four species of bird endemic to this area, one bears the name Langbian, the Grey-crowned Crocias *Crocias langbianis*. Some other endemic subspecies variously bear the name *annamensis* derived from the old provincial name Annam, or

Figure 6 Distributional ranges of related taxa mentioned in text

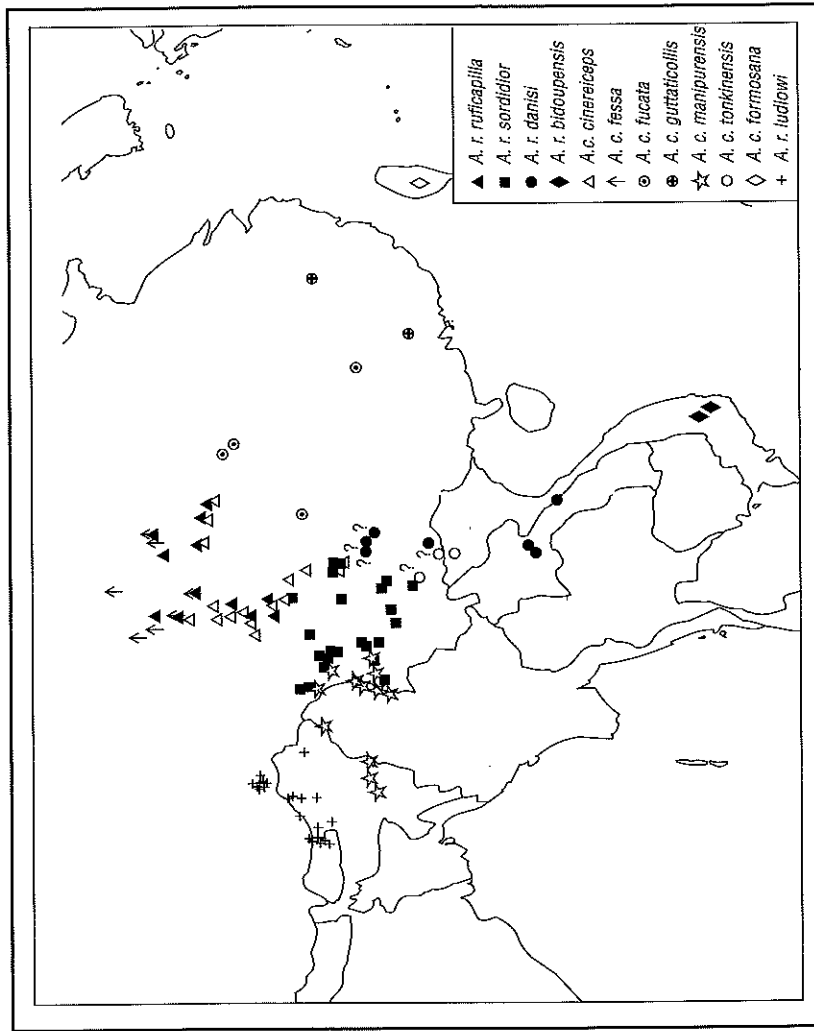
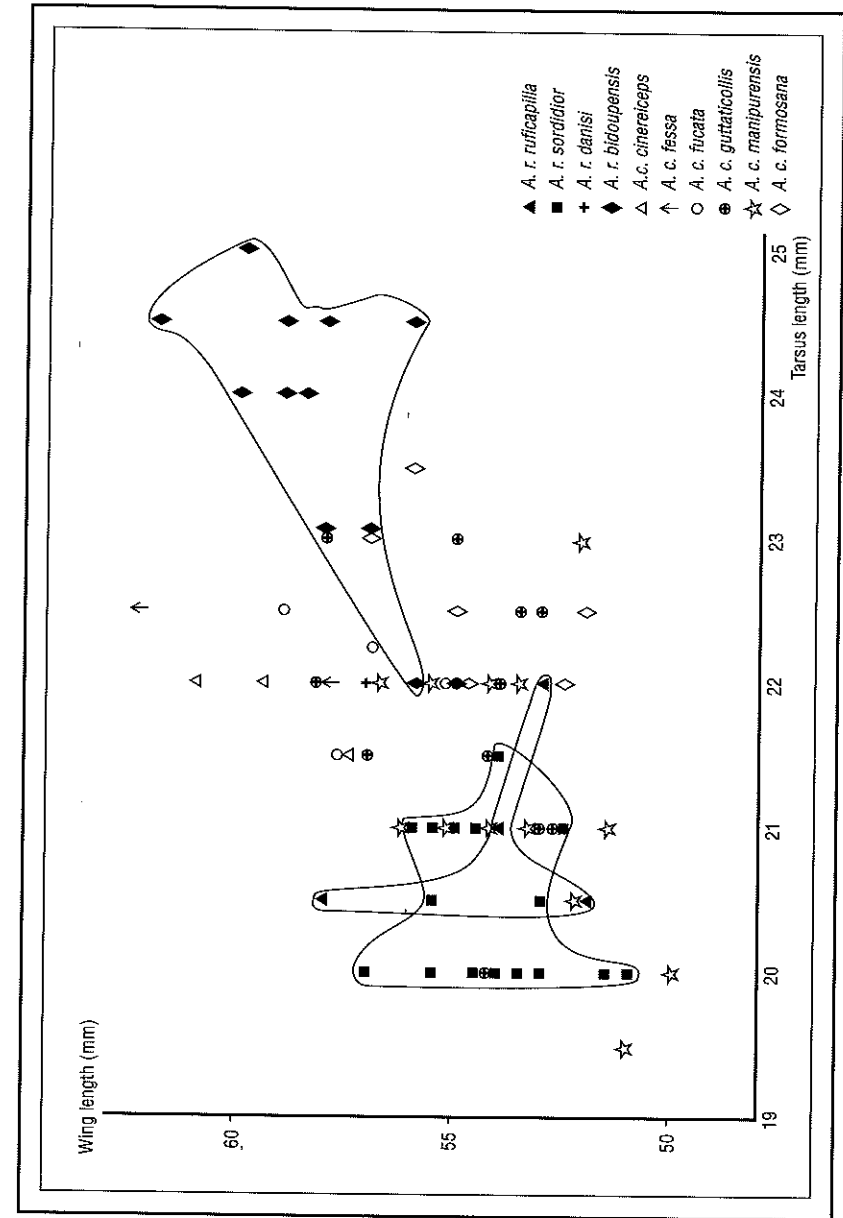


Figure 7 Scattergram showing correlation between tarsus and wing length of five subspecies of *A. ruficapilla* and *A. cinereiceps*.



dalatensis after Da Lat, the largest city in the area. The plant *Elaeocarpus bidoupensis* (Elaeocarpaceae) is similarly named after Nui Bi Doup.

It is hoped that by naming the taxon *bidoupensis* attention will be drawn to the need for full establishment of the Thuong Da Nhim and Chu Yang Sin Nature Reserves in which Nui Bi Doup and Chu Yang Sin are located.

BEHAVIOUR

The first individual observed on Nui Bi Doup in 1991 appeared, by its behaviour, to be defending a territory in bamboo undergrowth along a narrow ridge. The bird persistently called from the undergrowth and was quite confiding. It showed a strong response to play-back of its alarm call. Other birds of this taxon observed at this time were however, in a small flock.

In January on Chu Yang Sin birds were only ever observed in flocks and were not territorial. The species was only observed in single species flocks.

VOCALIZATIONS

The alarm call is high-pitched and rapid, and consists of a number of similar notes and phrases which could be transcribed as '...chuttachuttachuttachutta...'. The call is not loud but is constantly given by birds, especially when mobbing a human at close quarters. What was believed to be the song of this taxon was heard briefly on one occasion by C.R.R., and consisted of four thin high-pitched notes, roughly transcribed as 'see-sew-see-see'. Unfortunately the singing bird was not seen to confirm the identification.

DISTRIBUTION

A. r. bidoupensis is currently only known from Nui Bi Doup, Lam Dong Province and Chu Yang Sin, Dac Lac Province, Vietnam. On Chu Yang Sin it is probably the commonest bird in the upper montane forest. The subspecies is unlikely to be an altitudinal migrant as it was recorded at the summit of Chu Yang Sin during the winter (Figure 4).

HABITAT

Floristically the habitat of *A. r. bidoupensis* could be described as being within the transition zone between Oak-laurel and Montane ericaceous forest (Whitmore 1990). On Nui Bi Doup *A. r. bidoupensis* was found in

bamboo and undergrowth in broadleaved evergreen forest and in secondary scrub in cleared areas. On the summit of Nui Bi Doup forest canopy height varied from 4 to 10 m; canopy cover varied from 25% to 90% and ground cover varied from 40% to 85%. A sample of 20 trees selected on the summit comprised genera of the following families: Annonaceae (35%), Fagaceae (40%), Lauraceae (10%), Myrsinaceae (10%) and Symplocaceae (5%).

On Chu Yang Sin the fulvetta was found in forest undergrowth, and also in the forest canopy between 2,110 m and the summit at 2,442 m elevation (Figure 4). Between these elevations canopy height varied from 3 to 15 m; canopy cover varied from 40% to 95% and ground cover varied from 10% to 95%. In a sample of 120 trees with a diameter at breast height (DBH) of greater than 10 cm, within this altitudinal range, the following families were recorded: Cupressaceae (2.5%), Ericaceae (34.1%), Fagaceae (35.8%), Hamamelidaceae (2.5%), Lauraceae (8.3%), Pinaceae (1.6%), Podocarpaceae (1.6%), Theaceae (12%), unidentified (1.6%).

At around 2,000 m elevation on the north-facing slope of Chu Yang Sin there is a rapid change in the forest structure. The trees become gnarled, and lichen and moss-covered. In the undergrowth the bamboo *Arundinella setosa* was common. Whilst the floral composition on the summit of Nui Bi Doup was similar, its structure and appearance was quite different. This is accounted for in part by the small extent of habitat on the summit of Nui Bi Doup, and that part of the forest here has been felled by humans.

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APPENDIX

Localities of subspecies of *Alcippe ruficapillalcinereiceps**A. r. ruficapilla* (Verreaux 1870)

- China** Gansu: sw + se (Cheng 1987), Si-gu (= Siku 33°56'N 104°18'E) + Huy-sian (?) (C. R. R. from BM specimen labels)
 Shaanxi: Qinling Mt. (Yao & Zheng 1986) = Zhouzhi 34°10'N 108°05'E and Liuba 33°35'E 106°58'E (Zheng *et al.* 1973)
 Sichuan: Wanyuan 29°21'E 102°41'E (Cheng 1987), Baoxing 30°22'E 102°49'E (Li *et al.* 1976), Guanxian 31°00'N 103°37'E (Cheng 1987), Emei 29°31'N 103°20'E (Zheng *et al.* 1963), Chengkou 31°57'N 108°40'E + Wanyan 32°05'N 108°03'E + Nanjiang 32°23'N 106°56'E (Yu *et al.* 1986), Tangjiahe Natural Reserve 32°35'N 104°45'E (SFB/WWF PT 1986), Jiuzhaigou 33°08'N 103°55'E (Clements 1989), Tankwan, upper Minho (?) (Stresemann 1923)

A. r. sordidior (Rippon 1903)

- China** Sichuan: Huidong 26°39'N 102°35'E (Cheng 1987), Muli Mts. 27°56'N 101°17'E (Riley 1932); Baurong 28°41'N 103°13'E + Yutza (?) (Bangs 1932, Stone 1933)
 Guizhou: Weining (Cheng 1987) = Cao Hai 26°51'N 104°17'E, Guanfenghai 27°00'N 103°53'E, Chengguan ?, Songmukan 26°43'N 104°10'E (Wu *et al.* 1986)
 Yunnan: Lijiang 26°54'N 100°15'E, Shuangbai 24°42'N 101°39'E, Kunming 25°02'N 102°43'E (Cheng 1987); Tengyueh 25°02'N 98°30'E (Rothschild 1921); Yunnanfu 25°03'N 102°43'E + Kopaotsun 24°58'N 103°00'E (La Touche 1923); Hofuping Mts. 28°10'N 98°55'E (Riley 1926); Yulo 27°10'N 100°03'E + Ndamucho ? (Riley 1932); Mt. Satseto, Lijiang Range 27°06'N 100°13'E (Greenway 1933); Tsangshan in Tali = Dali 25°42'N 100°09'E + Siaotsun ? + Waishan 25°14'N 100°18'E in Menghwa + Lichang = Lijiang 26°58'N 100°16'E in Kiangchwan (Chong 1937); Mt. Yuhung 27°08'N 100°13'E (Tan & Cheng 1964); Xujiaba 24°32'N 101°01'E - ssp not stated but presumably this (Wang and Wei 1983); Long Peng 23°53'N 102°33'E (Zheng 1988); Yangtse Big Bend (?), Gyi-dzin-Shan, east of Talifu 25°50'N 100°18'E, Shayang-Chutung road 25°24'N 99°27'E, Meechu (probably = Mi-tu or Midu 25°14'N 100°18'E, T'ong-shan ?) (Rothschild 1926); Ao-wah ? (Bangs 1932), Mekong/Salween divide 28°00'N 98°50'E + Yangtse valley 27°20'N 99°38'E + NW flank Lichiang range 27°30'N 100°15'E (C. R. R. from BM specimen labels)

A. r. danisi Delacour & Greenway 1941

- Laos** Phu Kobo 19°12'N 103°28'E (Delacour & Greenway 1941), Phou Bia 18°59'N 103°09'E (David-Beaulieu 1944); Nakay/Namtheun NBCA 18°07'N 105°23'E (R. Timmins and T. Evans *in litt.* 1994)

A. r. danisi

- China** Yunnan: se (Cheng 1987) plotted at 23°10'N 104°20'E
 Guizhou: Xingyi + Xingren (Cheng 1987) = Sandaogou c. 25°26'N 105°10'E, Laochang 25°41'N 104°56'E, Huopu 25°43'N 104°29'E (Wu *et al.* 1986)

A. c. cinereiceps (Verreaux 1870)

- China** Sichuan: Wanyuan 29°21'N 102°41'E, Emei 29°31'N 103°20'E, Baoxing 30°22'E 102°49'E, Kangding 30°03'N 101°58'E (Cheng 1987), Chengwei c. 31°34'E 103°15'E + Cheng Gou forks (Birkhead 1937, Stone 1933), Makaling (?) + Tachino (?) + Washan 29°21'N 103°02'E (Thayer & Bangs 1912); Wolong 31°00'N 103°10'E (Clements 1989); Maowen 31°41'E 103°51'E, Chengkou 31°57'N 108°40'E + Wanyan 32°05'N 108°03'E + Nanjiang 32°23'N 106°56'E (Yu *et al.* 1986), Pingshan County 28°41'N 104°03'E (Huang *et al.* 1993), Dayi County 30°33'N 103°07'E (Zhang *et al.* 1994), Laba He Nature Reserve 30°13'N 102°25'E, Tianquan County (Li *et al.* 1994); Dafengding 28°50'N 103°10'E (King 1989), Gung Tang Goh (?) (Traylor 1967), Kvanhsien 31°00'N 103°37'E + Hwanglungze near Sungpan (Sungpan 32°39'N 103°36'E + Wassuberge ?) (Stresemann 1923)

- Guizhou: Weining (Cheng 1987) = Liangshan 26°52'N 104°05'E, Songmukan 26°43'N 104°10'E (Wu *et al.* 1986)
 Yunnan: Yanjin = Yanjian 28°05'N 104°15'E (Cheng 1987), Lishan in Yenting = Yanjian (Chong 1937)

A. c. fessa (Bangs & Peters 1928)

- China** Gansu: Lanzhou 36°05'N 103°40'E (Cheng 1987); Choni in Tao R. basin 34°35'N 103°30'E, Wantsang Ku valley in Ha Tebbuland 33°56'N 103°37'E, Pezlu on the banks of Chuhungapu in upper Tebbuland (?) (Bangs & Peters 1928)
 Shaanxi: south (Cheng 1987), Tsinling Range, Taibai Shan, Qinling Mt. (Yao 1986) = Taibai 33°57'N 107°45'E and Zhouzhi 34°10'N 108°05'E (Zheng *et al.* 1973)
 Ningxia: Liupan Mt. = Liupan Shan 35°40'N 106°12'E (Cheng 1987)
 Sichuan: Jiuzhaigou 33°08'N 103°55'E (C. R. R. pers. obs.), Tangjiahe Natural Reserve 32°35'N 104°45'E - this or nominate, not stated (SFB/WWF PT 1986)

A. c. fucata (Styan 1899) (including *berlioi* Yen 1932)

- China** Guizhou: Suiyang (Cheng 1987) = Kuankuoshui 28°14'N 106°58'E (Wu *et al.* 1986)
 Hubei: Hejiaping in Yichang (Cheng 1987); Hsien-shansien = ?Xingshan 31°14'N 110°46'E + Ichang = Yichang 30°32'N 111°17'E + Hochaping (Greenway 1933, Thayer & Bangs 1912)
 Hunan: south (Cheng 1987) plotted at 26°00'N 113°00'E, Ching-tung-shan (?) (Yen 1932)

A. c. guttaticollis (La Touche 1897)

- China** Fujian: Guadun = Kuatun 27°45'N 117°35'E (Cheng 1987)
 Guangdong: north (Cheng 1987) plotted at 24°00'N 114°00'E, Mahn-tsi-shan (?) (Mell 1922)

A. c. manipurensis (Ogilvie-Grant 1906) (including *yunnanensis* Rothschild 1922, *insperata* Riley 1930, *menghwaensis* Chong 1937)

- India** Arunachal Pradesh: Ridgetop Camp 27°22'N 96°57'E (Ripley *et al.* 1991)
 Assam: Barail Range (Ripley 1982) plotted at 25°20'N 93°25'E
 Manipur: Owenkulno Peak = Twinkulno (?) (Ogilvie-Grant 1906)
 Nagaland: Aichisagomi (?) (Stanford & Mayr 1941), Japvo 25°36'N 94°04'E + Zephu 25°38'N 94°46'E (Ripley 1952)
China Yunnan: w + nw ranges between Lancang & Jinsha R., and those between Lancang & Nujiang R. (Cheng 1987), Ndamucho (?) (Riley 1930), Tao-mung-chung 27°10'N 99°25'E and Chou-yu-gko nearby (Greenway 1933), Gongshan area 27°44'N 98°41'E (BSKIZAS 1980), Salween valley 25°20'N 98°53'E + Peh Tu P'u, Yungping (Yungping 25°28'N 99°32'E) (C. R. R. from BM specimen labels)
Myanmar Kambaiti 25°25'N 98°07'E (Stanford 1935, Stanford & Ticehurst 1935)
 Lungrebum 24°50'N 97°45'E (Stanford & Ticehurst 1938)
 Htawgaw 25°56'N 98°22'E (Smythies 1949)
 Pawahku 26°11'N 98°40'E (Smythies 1949)
 ?Chin Hills (Stanford & Mayr 1941)

A. c. tonkinensis Delacour & Jabouille 1930

- Vietnam** Fansipan 22°18'N 103°47'E
China Yunnan: Dawei Mt. 22°54'N 103°42'E (Zheng 1988), Xujiaba 24°32'N 101°01'E *manipurensis/tonkinensis* (Wang & Wei 1983)

A. c. formosana (Ogilvie-Grant 1906)

- Taiwan** plotted at 23°30'N 120°45'E

A. ludlowi (Kinnear 1935)

- Bhutan**: Sakden 27°25'N 91°50'E, Dib La 27°35'N 91°40'E (on the border with India, Ludlow collected on the Bhutan side), Yönpu La 27°15'N 91°30'E
China Xizang: sw Qamdo region (Cheng 1987), Tongyuk 29°58'N 94°48'E, Gyadzong 30°11'N 95°04'E, Showa 29°55'N 95°24'E, Nyuksang 29°46'N 95°00'E, Gyala 29°42'N 94°55'E (Ludlow 1951), Dongjug 29°58'N 94°48'E, Tangmai 30°06'N 95°07'E (Robson 1986)
India Arunachal Pradesh: Tawang 27°35'N 91°52'E (Ali & Ripley 1987), Ridgetop Camp 27°22'N 96°57'E (Ripley *et al.* 1991), Thingbu c. 27°40'N 92°20'E, Chakoo 27°05'N 92°30'E, Talley Valley 27°40'N 93°48'E, Majha c. 28°20'N 93°55'E, Mayodia 28°14'N 95°55'E (Singh)