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A partial revision of the Asian babblers (Timaliidae)

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Application of a scoring system that grades morphological and vocal differences between allopatric taxa (major character 3, medium 2, minor 1; minimum 7 for species status, with none permitted on minor differences alone) of the Asian babblers (Timaliidae) results in the recognition of 44 species previously, usually or still occasionally accorded subspecific status: Rufous-crowned Laughingthrush *Garrulax ruficeps*, Sumatran Laughingthrush *G. bicolor*, Bare-headed Laughingthrush *G. calvus*, Cambodian Laughingthrush *G. ferrarius*, Rufous-cheeked Laughingthrush *G. castanotis*, Blue-crowned Laughingthrush *G. courtoisi*, Rufous-vented Laughingthrush *G. gularis*, Buffy Laughingthrush *G. berthemyi*, Orange-breasted Laughingthrush *G. annamensis*, Taiwan Hwamei *G. taewanus*, Bhutan Laughingthrush *G. imbricatus*, Assam Laughingthrush *G. chrysopterus*, Silver-eared Laughingthrush *G. melanostigma*, Golden-winged Laughingthrush *G. ngoclinhensis*, Malayan Laughingthrush *G. peninsulae*, Black-streaked Scimitar Babbler *Pomatorhinus gravivox*, Spot-breasted Scimitar Babbler *P. mcclellandi*, Grey-sided Scimitar Babbler *P. swinhoei*, Sri Lanka Scimitar Babbler *P. melanurus*, Taiwan Scimitar Babbler *P. musicus*, Sumatran Wren Babbler *Rimator albostriatus*, White-throated Wren Babbler *R. pasquieri*, Grey-banded Babbler *Napothera sorsogonensis*, Taiwan Wren Babbler *Pnoepyga formosana*, Rusty-throated Wren Babbler *Spelaeornis badeigularis*, Grey-bellied Wren Babbler *S. reptatus*, Chin Hills Wren Babbler *S. oatesi*, Pale-throated Wren Babbler *S. kinneari*, Chevron-breasted Babbler *Sphenocichla roberti*, Visayan Pygmy Babbler *Stachyris pygmaea*, Bold-striped Tit Babbler *Macronous bornensis*, Mindanao Miniature Babbler *Micromacronus sordidus*, Vietnamese Cutia *Cutia legalleni*, Collared Babbler *Gampsorhynchus torquatus*, Black-crowned Fulvetta *Alcippe klossi*, Indochinese Fulvetta *A. danisi*, Streak-throated Fulvetta *A. manipurensis*, Taiwan Fulvetta *A. formosana*, Black-browed Fulvetta *A. grotei*, Black-headed Sibia *Heterophasia desgodinsi*, Indochinese Yuhina *Yuhina torqueola*, Chestnut-crested Yuhina *Y. everetti*, Burmese Yuhina *Y. humilis* and Black-headed Parrotbill *Paradoxornis margaritae*. Scores for two taxa suggested as possible new species, 'Afghan Babbler' *Turdoides (caudatus) huttoni* and 'Mount Victoria Babax' *Babax (lanceolatus) woodi*, fall short, 'Deignan's Babbler' *Stachyris rodolphei* is provisionally placed in the synonymy of *S. rufifrons* owing to overlap of diagnostic characters, and a new genus, *Robsonius*, is erected for *Napothera rabori* and *N. sorsogonensis* of the Philippines based on no rictal bristles, part-feathered nares, broad white tips to wing-coverts and outer primaries, copious rump feathering, insect-like call and walking habit. Taiwan gains seven new endemic species, Vietnam six, China five, Philippines three (and an endemic genus), Cambodia one, Sri Lanka one, Myanmar one, Sumatra two, the Eastern Himalayas EBA two, Peninsular Malaysia one, and Thailand minus one. The tiny population of *Garrulax courtoisi* and massive trade in *G. bicolor* make these 'new' species the highest priority for conservation action, but several other new splits have small ranges and all require conservation status review.

INTRODUCTION

The family of babblers Timaliidae (as adopted by Dickinson 2003), or Timaliinae within the catch-all family Muscicapidae (as adopted in Deignan 1964), or Garrulacinae and Timaliini within the family Sylviidae (as adopted by Inskipp *et al.* 1996), represents a rather ill-defined assemblage of species whose affinities to each other and to other families and species are somewhat unclear. Very recently, for example, biomolecular analysis has indicated that the 'shrike babblers' *Pteruthius* and 'Malagasy babblers' are not timaliine, but that *Sylvia* warblers, parrotbills Paradoxornithidae and white-eyes Zosteropidae are (Cibois *et al.* 1999, Cibois 2003a,b). Species limits in the family are also in a state of flux. In the past six years Robson (2000) and Rasmussen and Anderton (2005) have made a number of changes that substantially inflate the list of species provided by Inskipp *et al.* (1996), which—molecular insights notwithstanding—is here taken as the baseline reference list for the Asian component of the family, with one parrotbill also considered. Collar (2003) contrasted this component (plus the parrotbills) with the Neotropical antbirds (Thamnophilidae and Formicariidae) to suggest that taxonomic parity of treatment with the latter might result in an extra 67 species of babbler and parrotbill.

From Inskipp *et al.* (1996), other than adding three species described in the intervening period, Robson (2000) made the following species-level changes, all of them splits, marked with a sword (†) in the headings below: (1) *Garrulax ferrarius* from *G. strepitans*; (2) *Garrulax castanotis* from *G. maesi*; (3) *Garrulax annamensis* from *G. merulinus*; (4) *Alcippe danisi* from *A. ruficapilla*; (5) *Alcippe grotei* from *A. peracensis*; and (6) *Heterophasia desgodinsi* from *H. melanoleuca*. Rasmussen and Anderton (2005) did likewise as follows, marked with a double-sword (‡) in the headings below: (7) *Garrulax imbricatus* from *G. lineatus*; (8) *Garrulax chrysopterus* from *G. erythrocephalus* (with two unspecified splits in South-East Asia); (9) *Pomatorhinus melanurus* tentatively from *P. horsfieldii*; (10) *Rimator malacoptilus* (nominate, monotypic) from other taxa in *R. malacoptilus*; (11, 12) *Spelaeornis reptatus* and *S. oatesi* as a three-way split from *S. chocolatinus*; (13) *Sphenocichla roberti* from *S. humei*; (14) *Turdoides huttoni* from *T. caudatus*; (15) *Babax woodi* tentatively from *B. lanceolatus*; (16) *Gampsorhynchus torquatus* (plus other taxa) from *G. rufulus* (monotypic); and (17) *Alcippe manipurensis* from *A. cinereiceps*. None of these splits is justified in more than a few words, and usually only with the assertion that evidence for the split exists rather than with the evidence itself. Consequently many of Robson's (2000) splits were not accepted by Dickinson (2003).

Evidence is assembled below to evaluate these and a number of other splits that appear to be worth making or supporting, namely: *Garrulax ruficeps* from *G. albogularis*, *Garrulax bicolor* from *G. leucolophus*, *Garrulax calvus* from *G. lugubris*, *Garrulax courtoisi* from *G. galbanus*, *Garrulax gularis* from *G. delesserti*, *Garrulax berthemyi* from *G. poecilorhynchus*, *Garrulax taewanus* from *G. canorus*, *Garrulax melanostigma* and *G. peninsulae* in a three-way split (following the loss of *G. chrysopterus*) from *G. erythrocephalus*, *Pomatorhinus gravivox*, *P. mcclellandi* and *P. swinhoei* in a four-way split from *P. erythrocnemis*, *Pomatorhinus musicus* from *P. ruficollis*, *Napothera sorsogonensis* from *N. rabori*, *Pnoepyga formosana* from *P. albiventer*, *Spelaeornis kinneari* as a further split from *S. (chocolatinus) reptatus*, *Stachyris pygmaea* from *S. plateni*, *Macronous bornensis* from *M. gularis*, *Micromacronus sordidus* from *M. leytensis*, *Cutia legalleni* from *C. nipalensis*, *Alcippe*

klossi from *A. castaneceps*, *Alcippe formosana* from *A. cinereiceps*, and *Yuhina torqueola* and *Y. everetti* in a three-way split from *Y. castaniceps*; also included here is the separation of *Paradoxornis margaritae* from *P. gularis*. Moreover, a small number of lumpings by Dickinson (2003), beyond those involving splits by Robson (2000) or indeed Inskipp *et al.* (1996), are evaluated (*Garrulax gularis*, *G. ngoclinhensis*, *Pomatorhinus erythrocnemis*, *Spelaeornis badeigularis*, *Yuhina everetti* and *Y. humilis*; marked with D in the text headings). It perhaps needs stressing that these splits were ones that drew themselves to my attention through the evaluation of museum specimens, but this is not to claim that this review is exhaustive, and it has not involved any direct evaluation of vocal differences, although these may exist between taxa that look too similar to be considered obvious candidates for species-level treatment.

METHODS

I examined study-skin preparations held (in descending order of visiting time) at the Natural History Museum, Tring, UK (BMNH), American Museum of Natural History, New York (AMNH), National Museum of Natural History, Washington DC (USNM), Muséum National d'Histoire Naturelle, Paris (MNHN), Naturalis, Leiden (RMNH), Carnegie Museum of Natural History, Pittsburgh (CM) and Museum of Natural History, Genoa (MSNG), taking measurements with digital calipers and storing and analysing data in electronic spreadsheet files. For all taxa I attempted to measure a sample of 10–15 individuals, seeking as far as possible a balance between the sexes, but in several cases such numbers were unavailable. Although I cite mensural data from other sources, those that are analysed here (Tables 1–2) come from my own measurements. For each pair or group of taxa considered, and for each variable, a one-way ANOVA was done to test if there is a statistically significant difference amongst the taxa and, if so, a Scheffe post-hoc comparison was done to determine where the differences lie; the significance values in Table 1 are for these comparisons.

In a similar recent exercise (Collar 2004a) I remarked that, in my view, the guidelines produced by the British Ornithologists' Union for discriminating species-level taxa, particularly in allopatric situations (Helbig *et al.* 2002), set thresholds too low by allowing the number (and only a small number) of diagnostic characters to be used without taking account of their strength or possible biological significance. Here instead I deploy a quantitative system—to be published in detail elsewhere (Collar *et al.* in prep.)—for grading morphological and vocal differences between allopatric taxa: what I judge to be a major character (involving a pronounced and striking difference in the colour or pattern of a body part or in a vocalisation) scores 3, a medium character (a clear difference in the foregoing parameters, e.g. reflected by *shade* of colour rather than completely different colour) 2, a minor character (a weak difference, e.g. reflected as relatively slight change in shade) 1, a threshold of 7—gauged from a general assessment of prevailing species-level taxonomies (as in, e.g., Dickinson 2003 and the *Handbook of the birds of the world*)—is set to allow species status, and no taxon can qualify for this status on minor differences alone, no matter how many. In cases of polytypy the morphologically closest subspecies are compared (although in statistical tests on mensural data one taxon is sometimes compared against pooled taxa).

Simplistic, crude and arbitrary as this method may be, it introduces an element of explicitness and consistency into the taxonomic process while setting limits on the subjectivity necessarily involved in the appraisal of character 'strength'; moreover, it establishes a threshold which evaluations and comparisons elsewhere suggest is reasonably appropriate to, and consonant with, broadly accepted decisions in other regions on the taxonomic status of allopatric forms. Obvious functional dependence is allowed for, so that where several character differences appear correlated (for example, different measures of body size such as tarsus and wing length) they are here scored once. Very slight shading and very minor mensural differences are allowed no score. There is no automatic assumption that statistical significance equates with biological significance, and all mensural differences, no matter how highly statistically significant, are scored as minor characters. To permit assessment of the magnitude of such differences, percentage differences (always of the larger taxon relative to the smaller) are also given in the text; the threshold for according such differences a score (always only 1) was 5%, but most differences lay in the region of 10–20%. Vocal differences, when scored at all, are scored relatively subjectively, with the acknowledgement that more detailed study using sonagrams is desirable in due course.

Rasmussen and Anderton (2005) pioneered the reinstatement of many timaliine genera, notably in the case of the large and evidently polyphyletic *Garrulax*, although the neglected work of Wolters (1975–1982) attempted to set this trend a quarter of a century ago. For ease of reference, however, generic names are retained from Inskipp *et al.* (1996), whose sequence is also followed. Similarly, for ease of reference all species-name headings contain in brackets the name of the taxon from which the split is being made (but where the split is here not accepted, the brackets have been left out). In a few cases where the situation is particularly complex, I have listed out the new arrangement in full, in the style of Dickinson (2003).

SPECIES-LIMITS EVALUATIONS

Garrulax (albogularis) ruficeps

Collar (2004b) outlined the plumage differences between *ruficeps* and *albogularis* (and its two similar races), having earlier indicated the candidacy of the split with photographs (Collar 2003). The entire crown of *ruficeps* is dull rufous (3) whereas on *albogularis* only the lower forehead is stained this colour; the breast-band in *ruficeps* is greatly reduced in width (1) and the lower underparts are whitish with grey-buff flanks rather than golden-buff throughout (2). There are slight mensural differences between races *eous* (Yunnan) and nominate *albogularis* (Bhutan to northern Vietnam; westernmost *whistleri* not measured): *ruficeps* possesses a slightly longer bill, shorter wing and shorter tail (3–11% differences) (1; Tables 1–2) but substantially and highly statistically significantly larger white two outermost tail-tips (length of tip was measured as the length of the shaft which was white; all pair-wise comparisons for each rectrix, $P < 0.001$; *ruficeps* respectively 19% and 16% longer than *albogularis*, and

Plate 1. Head of mounted *Garrulax bicolor* (MSNG 26547). Photo: N. J. Collar.

27% and 23% longer than *eous*) (1). A score of 8 confirms that species status for *ruficeps* is appropriate here, and for it I suggest the name Rufous-crowned Laughingthrush.

Garrulax (leucolophus) bicolor

White-crested Laughingthrush *G. leucolophus* consists of five subspecies: nominate *leucolophus* in most of India and into Tibet, *patkaicus* adjacent in north-east India and Yunnan, *belangeri* in Myanmar and south-west Thailand, *diardi* from Thailand to Indochina, and *bicolor* in Sumatra. Of these *patkaicus* differs little from *leucolophus* but has a usually more extensive and richly coloured chestnut mantle (based on BMNH skins); *belangeri* has more extensive rufous-chestnut upperparts than *patkaicus*, the black of the lores meeting just above the bill on the lower forehead, the white of the throat and upper breast extending onto the belly and merging with the rufous-chestnut of the flanks and lower belly (rather than being sharply delineated below the upper breast), with the remaining underparts chestnut rather than dark brown; and *diardi* is like *belangeri* but slightly stronger rufous-chestnut above, while below the white is still more extensive, reaching the lower belly, with dull rufous-brown on flanks, thighs and vent.

However, *bicolor* reverts to *leucolophus* in pattern, having the white sharply delineated on the lower breast, but lacks any rufous-chestnut, grey, or mouse-brown that are present in various combinations in the other subspecies, having instead a blackish body, wings and tail (3), although juveniles have the mid-belly to vent with much white admixed (RMNH Cat.15). It has a very different facial pattern owing to the black round the base of the bill pushing up as a triangle onto the forehead (1), the white on the side of the forehead moving down in front of the eye (1), and the black of the ear-coverts being reduced to a thick line (1), leaving a black goggle-like rim round the eye quite different from the bold masked pattern on all other *leucolophus* (Plate 1). It is also a statistically significantly shorter-tailed bird (1) than any of the other races (13% shorter tail than the other races combined; Tables 1–2). A score of 7 does not, perhaps, do full justice to the distinctiveness of this species, for which I suggest the name Sumatran Laughingthrush.

There is also, incidentally, weak evidence of a habitat shift between *bicolor* and continental taxa, the former being judged 'montane', ranging from 750 to 2,000 m (RMNH Cat.13 is from 720 m), albeit with a reputed lowland population requiring substantiation (van Marle and Voous 1988), the latter extending from sea-level to 1,600 m, rarely to 2,135 m (Robson 2000). However, this may simply reflect a trend in continental avian taxa to become more montane in the Sundaic region (P. D. Round *in litt.* 2006), and certainly should be allowed no relevance as a taxonomic gauge.

Garrulax (lugubris) calvus

Inskipp *et al.* (1996) pointed out that both Sibley and Monroe (1990) and Andrew (1992) had without explanation treated Bornean *calvus* (Bare-headed Laughingthrush) as a species separate from *lugubris* (Black Laughingthrush), but they drew attention to Chasen's (1935) detection of 'incipient baldness' in *lugubris* and Harrap's (1992) discovery of identical vocalisations eliciting immediate responses from each population when played recordings of the other. Robson (2000) nevertheless considered *lugubris* monotypic, extending only to Sumatra, thereby indicating his support for the splitting off of *calvus*. Dickinson (2003), in retaining the two taxa as one species, made no reference to Robson's decision.

The auditory evidence certainly suggests that these two taxa have diverged little, but in an aside on their vocal similarity Eames *et al.* (1999) argued that 'there would have been no evolutionary advantage for the two taxa to evolve distinctive songs since they are spatially separated'. However one regards the vocal issue, the baldness of *calvus* with its resultant brownish-yellowish cranial coloration (as against rich black feathering with a blue bare postocular patch in *lugubris*) is, unquestionably, a major character whose magnitude might best be reflected by allowing for the baldness (3) and difference in colour (2) separately; the body plumage is brownish-grey rather than blackish-grey (1), and the bill and tail are highly significantly shorter and wing significantly so (1) (respectively 6%, 8% and 3% shorter; see Tables 1–2). This score only just makes the grade, and is dependent on a very subjective assessment of the characters of the head. It is possible, however, that the bill of *calvus* is more red rather than orange, and that the bare orbital and postocular skin is bluish-green or bluish-brown rather than bluish to violet; these would add two further points.

***Garrulax (strepitans) ferrarius*†**

Under White-necked Laughingthrush *G. strepitans* Inskipp *et al.* (1996) carried a brief history of the treatment of this taxon, concluding with the following statement: 'The form *ferrarius* shows a number of plumage characters that are not intermediate between *strepitans* and *milleti* [with both of which it was at various times lumped] and the tail is slightly shorter than that of *milleti*, but much shorter than that of *strepitans* (C. R. Robson pers. comm. 1995)'. Later, in treating *ferrarius* as a full species (Cambodian Laughingthrush), Robson (2000) himself stated that it 'shows strong morphological differences consistent with other closely related species in the White-necked/Black-hooded/Grey Laughingthrush grouping'. Neither this nor the argument in Round and Robson (2001) satisfied Dickinson (2003), who noted that the evidence for this split, as given in Robson (2000), is 'limited', and kept *ferrarius* within *strepitans*. Thus initially it is with *strepitans* that *ferrarius* must be compared.

BMNH possesses a single specimen of *ferrarius* (photographed live and discussed in Eames *et al.* 2002)

Table 1. Means, ranges and standard error of measurements (in mm) of various taxa reviewed in this paper. Bill was measured from skull, wing curved.

Taxon		Bill		Tarsus		Wing		Tail	
		N	mean ±SE min–max	N	mean ±SE min–max	N	mean ±SE min–max	N	mean ±SE min–max
Garrulax (albogularis)	*albogularis*	10	24.8 ±0.42 22–27	10	46.3 ±0.47 44–49	10	128.0 ±1.83 119–136	10	144.8 ±2.10 133–154
	eous	10	23.8 ±0.36 22–25	9	43.0 ±0.55 40–46	10	128.1 ±1.65 118–136	10	133.1 ±2.41 118–145
	ruficeps	10	25.7 ±0.21 25–27	10	45.9 ±0.53 43–48	10	122.0 ±1.14 117–128	10	128.7 ±1.48 122–137
	albogularis+ eous	20	24.3 ±0.29 22–27	19	44.7 ±0.52 40–49	20	128.1 ±1.20 118–136	20	139.0 ±2.05 118–154
Garrulax (leucolophus)	*belangeri*	10	30.6 ±0.37 29–33	10	44.9 ±0.69 42–48	10	129.0 ±0.89 125–133	10	123.3 ±2.16 116–135
	bicolor	10	28.6 ±0.31 27–30	10	45.5 ±0.31 44–47	10	122.7 ±1.48 116–130	10	111.8 ±1.69 103–119
	diardi	10	30.3 ±0.60 28–33	10	46.2 ±0.84 43–51	10	132.4 ±2.60 121–145	10	127.3 ±2.86 114–144
	leucolophus	10	29.1 ±0.31 27–31	10	47.1 ±0.48 44–49	10	129.6 ±0.83 126–134	10	136.0 ±1.78 129–146
	patkaicus	10	28.6 ±0.43 26–31	10	46.0 ±0.68 43–49	10	125.2 ±1.25 119–132	10	126.2 ±1.81 116–133
	Group (all but *bicolor*)	40	29.7 ±0.25 26–33	40	46.1 ±0.35 42–51	40	129.1 ±0.86 119–145	40	128.2 ±1.30 114–146
Garrulax (lugubris)	*calvus*	10	27.6 ±0.37 26–29	10	38.2 ±0.44 37–40	10	120.9 ±0.67 117–124	10	118.6 ±1.05 113–123
	lugubris	10	29.4 ±0.27 28–31	10	39.2 ±0.42 38–42	10	124.3 ±0.82 121–129	10	129.4 ±1.64 119–136
Garrulax ferrarius	*ferrarius*	3	28.3 ±0.33 28–29	3	43.3 ±0.33 43–44	3	124.7 ±0.88 123–126	3	117.0 ±1.00 116–119
	milleti	10	28.4 ±0.31 27–30	10	44.9 ±0.46 43–47	10	126.8 ±0.95 123–133	10	123.7 ±0.73 121–127
	strepitans	10	29.8 ±0.51 28–33	10	47.0 ±0.33 46–49	10	129.6 ±1.22 125–137	10	132.0 ±0.99 128–137
Garrulax (maesi)	*castanotis*	10	27.2 ±0.20 26–28	10	44.7 ±0.26 43–46	10	116.4 ±1.54 106–121	10	115.2 ±1.00 110–120
	castanotis+varennei	20	27.7 ±0.27 26–31	20	45.0 ±0.26 42–47	20	121.8 ±1.50 106–131	20	122.8 ±1.93 110–135
	maesi	10	28.6 ±0.40 27–30	13	45.3 ±0.51 43–49	13	122.5 ±0.98 117–128	13	130.2 ±1.83 121–145
	varennei	10	28.2 ±0.47 26–31	10	45.3 ±0.45 42–47	10	127.1 ±0.85 124–131	10	130.4 ±1.37 121–135
Garrulax (delesserti)	*delesserti*	9	29.1 ±0.33 28–31	9	38.5 ±0.50 36–41	9	103.1 ±1.77 92–109	9	104.5 ±1.98 94–111
	gularis	10	29.6 ±0.31 28–31	10	38.5 ±0.31 37–40	10	100.1 ±1.70 93–109	10	100.1 ±1.55 94–109
Garrulax (poecilorhynchus)	*berthemyi*	14	23.9 ±0.23 22–25	15	40.5 ±0.43 37–43	15	116.2 ±1.41 109–128	15	127.7 ±1.59 118–143
	poecilorhynchus	15	26.4 ±0.29 25–28	15	39.9 ±0.31 38–42	15	105.0 ±0.69 100–111	15	126.3 ±1.50 117–136
Garrulax (merulinus)	*annamensis*	13	26.1 ±0.21 25–27	13	35.9 ±0.37 34–38	14	87.9 ±0.82 83–92	14	92.2 ±0.90 88–100
	merulinus	15	27.7 ±0.29 26–29	14	38.7 ±0.19 38–40	15	92.9 ±1.18 86–101	15	92.5 ±1.20 80–98
Garrulax (canorus)	*canorus*	10	23.8 ±0.44 22–26	10	36.0 ±0.42 34–38	10	90.3 ±1.29 81–95	10	100.1 ±1.55 93–108
	taewanus	10	23.9 ±0.35 22–26	10	36.7 ±0.60 34–40	10	89.7 ±0.76 85–93	10	104.8 ±1.40 98–111
Pomatorhinus (erythrocnemis)	*erythrocnemis*	10	34.8 ±0.36 33–37	10	35.3 ±0.52 33–38	10	90.7 ±0.91 88–97	10	102.8 ±1.02 99–107
	mcclellandi	10	32.5 ±0.45 31–35	10	33.4 ±0.52 31–36	10	83.0 ±0.79 80–88	10	95.9 ±0.72 93–99
	swinhoei	9	36.1 ±0.84 33–41	10	37.8 ±0.33 37–40	10	93.2 ±0.74 90–97	10	101.8 ±1.19 96–107
	Group 1 *(erythrogenys +ferrugilatus+imberbis+celatus)*	38	34.8 ±0.30 31–40	40	35.8 ±0.24 32–40	40	89.6 ±0.90 79–105	39	97.6 ±0.97 86–108
	Group 2 *(odicus+decarlei +cowensae+dedekensi)*	32	35.0 ±0.40 31–41	34	36.1 ±0.26 32–40	34	88.9 ±0.84 80–100	34	101.5 ±1.43 90–122

Taxon		Bill		Tarsus		Wing		Tail	
		N	mean ±SE min–max	N	mean ±SE min–max	N	mean ±SE min–max	N	mean ±SE min–max
Rimator (malacoptilus)	*albostriatus*	4	30.8 ±1.25 27–32	4	29.3 ±1.03 27–31	4	62.5 ±0.96 60–64	3	39.0 ±2.00 37–43
	malacoptilus	10	24.9 ±0.23 24–26	10	24.1 ±0.35 22–26	10	55.2 ±0.65 52–58	7	37.3 ±0.52 36–39
	pasquieri	4	27.0 ±0.41 26–28	4	25.0 ±0.71 24–27	4	55.8 ±0.25 55–56	4	35.5 ±1.26 32–38
Pnoepyga pusilla/(albiventer)	*albiventer*	10	13.8 ±0.13 13–14	10	25.0 ±0.21 24–26	10	58.0 ±0.73 55–62		
	formosana	8	14.1 ±0.13 14–15	9	22.5 ±0.18 22–23	9	49.4 ±0.56 47–52		
	pusilla	10	12.7 ±0.15 12–13	10	19.7 ±0.30 18–21	10	45.5 ±0.40 44–48		
Sphenocichla (humei)	*humei*	11	25.9 ±0.25 25–27	11	27.5 ±0.21 26–28	11	69.4 ±0.59 65–72	11	73.9 ±0.95 68–79
	roberti	11	27.5 ±0.39 25–29	11	28.5 ±0.45 25–30	10	69.8 ±0.90 66–74	10	67.2 ±0.65 63–70
Stachyris (plateni)	*plateni*	15	12.5 ±0.11 11.6–13.2	15	15.8 ±0.13 15.1–16.8	15	54.3 ±0.55 48–57	12	49.3 ±0.57 47–54
	pygmaea	11	11.9 ±0.15 11.1–12.6	11	15.9 ±0.11 15.4–16.5	11	50.1 ±0.72 47–54	11	44.1 ±0.39 42–46
Macronous (gularis)	Group 1 *(bornensis+montana +everetti+javanicus)*	32	15.4 ±0.14 14–17	32	20.2 ±0.19 18–22	32	60.0 ±0.54 55–66	31	57.5 ±0.47 53–65
	Group 2 *(woodi+gularis +lutescens+sulphureus+rubicapilla)*	50	14.4 ±0.09 13–16	49	18.9 ±0.13 17–21	50	54.9 ±0.38 50–60	49	53.0 ±0.25 50–57
Babax lanceolatus	*lanceolatus*	10	26.7 ±0.58 24–29	10	36.7 ±0.37 35–38	10	94.1 ±0.97 90–101	10	124.5 ±1.25 119–130
	woodi	5	28.0 ±0.32 27–29	6	37.8 ±0.54 36–40	6	96.5 ±0.50 95–98	6	119.0 ±1.55 113–122
Cutia (nipalensis)	*legalleni*	9	21.9 ±0.35 20–23	10	28.0 ±0.33 27–30	10	83.9 ±1.33 79–93	10	72.8 ±0.39 71–75
	melamchima	10	22.0 ±0.56 20–24	10	28.5 ±0.34 27–30	10	89.3 ±1.04 84–95	10	64.1 ±0.67 61–69
Alcippe klossi	*castaneceps*	15	11.4 ±0.13 11–12	15	20.1 ±0.19 19–21	15	54.3 ±0.37 53–57	15	45.2 ±0.50 42–48
	klossi	15	13.0 ±0.10 12–14	15	19.7 ±0.23 18–21	15	55.3 ±0.64 52–59	15	50.1 ±0.52 48–54
Alcippe (peracensis)/ (poiocephala)	*annamensis*	10	13.8 ±0.25 13–15	10	21.5 ±0.40 20–23	10	60.3 ±0.54 58–62	10	71.2 ±0.42 70–74
	grotei	10	14.8 ±0.20 14–16	10	20.9 ±0.35 19–23	10	64.8 ±0.73 61–69	10	64.8 ±0.63 61–67
	haringtoniae	10	15.5 ±0.17 15–16	10	22.2 ±0.20 21–23	10	65.8 ±0.63 63–69	10	67.2 ±0.73 63–70
	peracensis	10	14.6 ±0.16 14–15	10	21.8 ±0.33 20–23	10	63.1 ±0.69 60–68	10	73.2 ±0.66 71–78
	peracensis+annamensis	20	14.2 ±0.17 13–15	20	21.7 ±0.25 20–23	20	61.7 ±0.53 58–68	20	72.2 ±0.44 70–78
Yuhina (castaniceps)	*castaniceps*	10	11.2 ±0.13 11–12	10	17.3 ±0.21 16–18	10	58.7 ±0.67 56–63	10	55.3 ±0.47 53–58
	everetti	10	11.8 ±0.13 11–12	10	17.1 ±0.28 16–18	10	61.0 ±0.68 58–64	10	59.0 ±0.33 58–61
	torqueola	10	11.8 ±0.13 11–12	10	17.3 ±0.26 16–18	10	63.3 ±0.30 62–65	10	60.1 ±0.46 58–63
	Group *(rufigenis+striata +plumbeiceps)*	35	11.3 ±0.09 10–12	35	16.9 ±0.12 16–18	36	59.0 ±0.34 55–64	36	55.6 ±0.42 50–59
Paradoxornis (gularis)	*laotianus*	9	14.3 ±0.17 14–15	9	27.2 ±0.28 26–28	9	86.7 ±0.50 85–90	9	86.6 ±0.47 85–90
	margaritae	3	15.0 ±0.58 14–16	3	26.7 ±0.67 26–28	3	83.3 ±1.20 81–85	3	80.0 ±1.53 78–83
Stachyris rodolphei/rufifrons	*rodolphei*	2	14.8 ±0.35 14.4–15.1	2	18.5 ±0.50 18–19	2	55.0 ±1.00 54–56	2	49.5 ±0.50 49–50
	rufifrons	11	14.3 ±0.18 13.5–15.3	10	18.2 ±0.20 17–19	11	49.9 ±0.61 46–53	11	47.9 ±0.49 45–50

and USNM two; it appears that these may be the only specimens in the world of *ferrarius*, making statistically robust analysis of biometrics impossible. However, while it is clear that *ferrarius* is indeed close to *strepitans* in plumage pattern, the differences are notable: it has a sooty brown-black ('clove brown' in Riley 1930b) rather than dark rufous-brown crown (score 3), all-black rather than rufous-brown-tipped (lower) or rufous-brown (upper) ear-coverts (1), dark brownish-black ('deep quaker drab' in Riley 1930b) rather than dark rufous-brown throat and breast (1), darker grey sides of breast and belly and more olive lower belly and flanks (1), and no whitish hind-collar or greyish-white border to the dark breast at the breast-sides (white reduced to a small area on the neck-side behind the ear-coverts) (1). The label of the single *ferrarius* in BMNH describes the facial skin as 'pale china blue', as do Eames *et al.* (2002), whereas in *strepitans* it is 'darker, bluish-slate' (Round and Robson 2001) (1).

The scoring above allows recognition of *ferrarius* as a separate species, but it is possible that a single gene is responsible for the overall darkening of the plumage, which some may regard here as being essentially double- or triple-counted. However, the assertion that the tail is much shorter than *strepitans* is certainly borne out by the very limited evidence. Both the BMNH specimen and the type as measured by Riley (1930b) measure 116 mm, and in a third specimen it is 118.5 mm (Riley 1938). These figures are confirmed in Tables 1–2, where other

Table 2. Statistical significance of different measurements of the taxa in Table 1 (*P*-values from Scheffe post-hoc comparisons).

Taxon	Contrasts	Bill	Tarsus	Wing	Tail
Garrulax (albogularis)	*albogularis vs ruficeps*	n.s.	n.s	n.s.	0.001
	eous vs ruficeps	0.01	0.05	n.s.	n.s
	albogularis+eous vs ruficeps	0.05	n.s.	0.05	0.05
Garrulax (leucolophus)	*belangeri vs bicolor*	n.s.	n.s.	n.s	0.05
	diardi vs bicolor	n.s.	n.s.	0.01	0.01
	leucolophus vs bicolor	n.s.	n.s.	n.s	0.001
	patkaicus vs bicolor	n.s.	n.s.	n.s	0.01
	Group *vs bicolor*	n.s.	n.s.	0.05	0.001
Garrulax (lugubris)	*lugubris vs calvus*	0.001	n.s.	0.01	0.001
Garrulax ferrarius	*ferrarius vs milleti*	n.s.	n.s	n.s.	0.01
	ferrarius vs strepitans	n.s.	0.001	n.s.	0.001
Garrulax (maesi)	*castanotis vs maesi*	0.05	n.s.	0.01	0.001
	varennei vs maesi	n.s.	n.s.	0.05	n.s.
	castanotis+varennei vs maesi	n.s.	n.s.	n.s.	0.05
Garrulax (delesserti)	*delesserti vs gularis*	0.05	n.s.	0.001	0.05
Garrulax (poecilorhynchus)	*berthemyi vs poecilorhynchus*	0.001	n.s.	0.001	n.s.
Garrulax (merulinus)	*merulinus vs annamensis*	0.001	0.001	0.01	n.s.
Garrulax (canorus)	*canorus vs taewanus*	n.s.	n.s.	n.s.	0.05
Pomatorhinus (erythrocnemis)	Group 1 *vs mcclellandi*	0.05	0.001	0.01	n.s.
	Group 1 *vs* Group 2	n.s.	n.s.	n.s	n.s.
	Group 1 *vs swinhoei*	n.s.	0.05	n.s	n.s.
	Group 1 *vs erythrocnemis*	n.s.	n.s.	n.s	n.s.
	mcclellandi vs Group 2	0.05	0.001	0.05	n.s.
	mcclellandi vs swinhoei	0.01	0.001	0.001	n.s.
	mcclellandi vs erythrocnemis	n.s.	n.s.	0.05	n.s.
	Group 2 *vs swinhoei*	n.s.	0.05	n.s	n.s.
	Group 2 *vs erythrocnemis*	n.s.	n.s.	n.s	n.s.
	swinhoei vs erythrocnemis	n.s.	0.05	n.s	n.s.
Rimator (malacoptilus)	*albostriatus vs malacoptilus*	0.001	0.001	0.001	n.s
	albostriatus vs pasquieri	0.01	0.01	0.001	n.s
	malacoptilus vs pasquieri	0.05	0.05	n.s.	n.s
Pnoepyga pusilla/(albiventer)	*albiventer vs formosana*	n.s.	0.001	0.001	
	pusilla vs formosana	0.001	0.001	0.001	
Sphenocichla (humei)	*humei vs roberti*	0.01	n.s.	n.s.	0.001
Stachyris (plateni)	*plateni vs pygmaea*	0.01	n.s.	0.001	0.001
Macronous (gularis)	Group 1 *vs* Group 2	0.001	0.001	0.001	0.001
Babax lanceolatus	*lanceolatus vs woodi*	n.s.	n.s.	n.s.	0.05
Cutia (nipalensis)	*melamchima vs legalleni*	n.s.	n.s.	0.01	0.001
Alcippe klossi	*castaneceps vs klossi*	0.001	n.s.	n.s.	0.001
Alcippe (peracensis)/(poiocephala)	*annamensis vs grotei*	0.05	n.s.	0.01	0.001
	peracensis vs grotei	n.s.	n.s.	n.s.	n.s.
	haringtoniae vs grotei	n.s.	n.s.	n.s.	0.001
	annamensis+peracensis vs grotei	n.s.	n.s.	0.05	0.001
Yuhina (castaniceps)	Group *vs torqueola*	0.05	n.s.	0.001	0.001
	Group *vs everetti*	0.05	n.s.	0.05	0.001
	torqueola vs everetti	n.s.	n.s.	n.s.	n.s.
	torqueola vs castaniceps	n.s.	n.s.	0.001	0.001
Paradoxornis gularis	*laotianus vs margaritae*	n.s.	n.s.	0.05	0.001
Stachyris rodolphei/rufifrons	*rodolphei vs rufifrons*	n.s.	n.s.	0.01	n.s.

measurements suggest that *ferrarius* is only marginally smaller than *strepitans*, so the tail difference is worth a score of at least 1. On this basis *ferrarius* achieves specific status from *strepitans*.

However, Riley (1930b, 1938) thought *ferrarius* closer to Black-hooded Laughingthrush *G. milleti* than to *G. strepitans*, as does C. R. Robson (*in litt.* 2006). That this view is correct is demonstrated by the way the scoring system used here only just allows *ferrarius* specific status from *milleti*: 3 for major loss of white continuous 'collar' and whitish mid-belly, 1 for crown colour, 1 for breast colour, 1 for stronger olive flanks, 1 for the marginally shorter tail, total 7. Facial skin colour is the same (C. R. Robson *in litt.* 2006).

***Garrulax (maesi) castanotis*†**

Under Grey Laughingthrush *G. maesi* Inskipp *et al.* (1996) cited a personal communication from C. R. Robson that *castanotis* 'may be a separate species because it is very distinct morphologically and occurs within 50 km of *G. m. maesi* in east Tonkin (J. Eames pers. comm.)'. As with *ferrarius*, Robson (2000), in separating the form (along with race *varennei*) as a species (Rufous-cheeked Laughingthrush), simply remarked that it 'shows strong morphological differences consistent with other closely related species in the White-necked/Black-hooded/Grey Laughingthrush grouping'. Dickinson (2003) made no comment on this when retaining *castanotis* within *maesi*.

While *castanotis* and *maesi* are spectacularly different from each other, *varennei* forms something of a bridge between them, sharing the former's rufous cheek-patch and the latter's white areas, hence encouraging the notion that all three taxa belong within *maesi*. Nevertheless, *varennei* aligns much more clearly with *castanotis* than with *maesi*. Where *maesi* shows somewhat smudgily edged greyish-white ear-coverts and adjoining white post-ocular lateral crown-stripe, post-auricular patch and neck-sides, this white is reduced in *varennei* and absent in *castanotis*, both of which exhibit a clear-cut bold circular rufous patch of elongate feathers (larger in *castanotis*) extending over the ear-coverts and lower moustachial area but not onto the lateral crown area or the neck-sides (score 3 for colour difference, 1 for elongation of feathers); the forecrown of *maesi* is markedly paler grey than in *castanotis* or *varennei* (1). Where *maesi* has a buffy greyish-brown throat and upper breast with palish grey remaining underparts, *castanotis* and *varennei* have a dark grey-brown throat and breast (2) with somewhat darker grey remaining underparts (no score). Mensurally, *maesi* is a slightly larger bird than *castanotis*, with a decidedly longer tail, but again *varennei* sits between them as a link (Tables 1–2). Nevertheless, the facial and frontal features of *castanotis* and *varennei* are sufficiently distinct from *maesi* to justify their separation as a polytypic species.

Garrulax (galbanus) courtoisi

Long *et al.* (1994) suggested that Yellow-throated Laughingthrush *G. galbanus* (monotypic) might better be separated from what had until then been regarded as its two subspecies, *G. courtoisi* and *G. simaoensis*, a course favoured by Pasini *et al.* (1994). Inskipp *et al.* (1996) elected to follow Long *et al.* (1994) in keeping the three taxa united as one species 'pending further study'. Such further study has been inhibited by the paucity and diaspora of specimen material, and by the difficulty of finding any *simaoensis* in the wild and of getting into habitat where nominate *galbanus* occurs.

R. Wilkinson (*in litt.* 2006) has measured specimens of *courtoisi* and the type of *simaoensis* as well as *galbanus*, and has found that, on wing length, all three *courtoisi* skins and two out of three *simaoensis* measure longer than a series of 44 *galbanus*. He strongly suspects that *simaoensis* is a synonym of *courtoisi*, since the latter is moderately variable in the minor character (breast-band coloration) that is used to separate it; but even if the taxon stands it is clearly no more than a subspecies of *courtoisi*. BMNH holds 45 nominate *galbanus* including the type, no *courtoisi* and a single captive specimen, juvenile and tailless, of what is believed to be *simaoensis*. This material, supplemented by photographs of living and museum-preserved *courtoisi* supplied by R. Wilkinson, L. Gardner and M. Kilburn, have allowed a reasonable comparison between *courtoisi* and *galbanus*, from which it is obvious that they are extremely closely related. However, the long-noted differences in *courtoisi*, the rich blue crown and nape (3) and blue-shaded primaries (2), are not its only characters. It also possesses a markedly broader and longer black supercilium, giving a broader general mask (which runs over and into the black ear-coverts) (1), a more olive-tinged mantle, back and inner primaries (1), a greyer-blue proximal portion of the tail (no score, since perhaps better treated as one with the blue-shaded primaries) and more extensive white tail-tipping (1). The minor but distinct yellowish-grey breast-band is probably variable, and not a character to separate from the more olive-tinged mantle; even so, a score of 8 confirms that *courtoisi* is sufficiently distinctive to be treated as a separate species, for which I suggest the name Blue-crowned Laughingthrush.

A much more detailed analysis of this taxon, including a review of morphometrics, is in preparation by R. Wilkinson and co-workers.

Garrulax (delesserti) gularis D

Breaking with precedent, Sibley and Monroe (1990) treated Rufous-vented Laughingthrush *G. gularis* as a separate species from Wynaad Laughingthrush *G. delesserti*, and in this they were followed by Inskipp *et al.* (1996), who pointed out that 'it is very distinct in a number of plumage characters', and by Grimmett *et al.* (1998). However, Dickinson (2003) remarked that 'this split is probably valid, but it has not been sufficiently defended since the two were lumped'. This curious circumstance persists: Grimmett *et al.* (1998) devoted their text to indicating how *gularis* differs from *G. galbanus*, not *G. delesserti*, while Rasmussen and Anderton (2005), although treating the two as separate, offered no argument to allay Dickinson's concern.

In plumage and bare-part coloration, *gularis* differs from *delesserti* in the following characters: all-dark bill (*delesserti* has a pale lower mandible, at least) (2); paler grey crown and nape, and paler brown upperparts and wings (1); paler tail (less contrasting than in *delesserti*, where the tail is darker than the back) (1); rufous outertail feathers (uniform in *delesserti*) (3); darker (blackish) and hence more contrasting mask (1); distinct black interramal region (or 'chin') and black patch at the base of the lower mandible (both sparsely feathered and either straw-coloured or buffy-brown in *delesserti*) (1); yellow not white chin, throat and central breast and upper belly (2); and rustier, less chestnut lower flanks and belly (1). These

differences, three of them (bill, outertail and breast) distinctive, are easily enough to warrant treatment of *gularis* as a separate species. Moreover, the compilation of vocal data in Rasmussen and Anderton (2005)—who indicate no mensural differences of import (although Tables 1–2 reveal a marginally shorter bill, longer wing and longer tail in *delesserti*: score 1)—suggests that at least one song type of *delesserti* has no clear equivalent in *gularis*.

Garrulax (poecilorhynchus) berthemyi

Collar (2004b) outlined the plumage differences between *G. p. poecilorhynchus* and *G. p. berthemyi* but a correction is required (the bare orbital area in life is blue, not black as in museum skins) and further clarification is in order. Their colour pattern is essentially the same, but the shading is notably different, with *berthemyi* distinctly paler (pale silvery-grey *vs* dark smoky-grey on the lower breast to abdomen; creamy buff-brown *vs* rufous-tinged darkish brown on throat and upper breast; pale olive-rufous *vs* darkish rufous-brown from crown to rump) (score 3). Moreover, *berthemyi* has richer rufous-chestnut wings and tail, so that the contrast with the paler body plumage is much stronger than in the more continuously dark rufous of *poecilorhynchus* (1); it has obviously larger white tail-tips than the latter (commonly twice the width of the latter and present on three rather than two or one outermost feathers) (1); it has black lores, lower forehead and chin *vs* rufous-chestnut in *poecilorhynchus* (2); and its auriculars are white-tipped (1). While tarsus and tail are of equal lengths in the two taxa, in *berthemyi* the bill is very significantly shorter (9%; 1) and the wing very significantly longer (11%; 1) (see Tables 1–2). There is apparently no difference in shade of orbital skin, based on photographs (C. R. Robson *in litt*. 2006), while it is unknown whether one exists in voice; but a score of 8–10 makes these two allospecies. I suggest that *G. poecilorhynchus* retain the English name Rusty Laughingthrush, and *G. berthemyi* take Buffy Laughingthrush.

Incidentally, examination of the type and a second specimen (USNM 314188 and 314189) of the Yunnan race *ricinus* leads me to think that *berthemyi* might better be considered monotypic. Riley (1930a) established *ricinus* for being 'lighter brown above and on the foreneck and jugulum' and 'breast and belly a much lighter gray' than *berthemyi*. However, setting his two specimens against the only one in USNM (273765) of *berthemyi*, from Fujian, I see no difference at all between them; nor do the measurements in Riley (1930a), which suggest a rather larger bird in Yunnan with a rather shorter bill, come out distinct against the sample in Tables 1–2. The series of eight *ricinus* in BMNH all fail to show paler bellies than specimens of *berthemyi*, and while five of them are slightly stonier (less rufous-tinged) above, the other three are consistent with *berthemyi*; thus *ricinus* seems a fairly tenuous taxon. On the other hand, it is gratifying to note that Riley (1930a) concluded his description of *ricinus* with a defence of the separateness of *berthemyi* and *poecilorhynchus*: 'They have both been derived from the same stock, but now are so distinct that it is misleading to treat them as forms of the same species.'

***Garrulax (merulinus) annamensis*†**

Under Spot-breasted Laughingthrush *G. merulinus* Inskipp *et al*. (1996) carried the following statement: 'C. R. Robson (pers. comm. 1995) prefers to treat *G. m. annamensis* of southern Vietnam as a separate species from *merulinus* because of striking morphological differences'. Robson (2000) himself split *annamensis* (Orange-breasted Laughingthrush), simply citing 'very significant morphological differences'. Dickinson (2003) conceded that *annamensis* 'may be a separate species as suggested by Robson (2000)' but called for a 'full review'.

Garrulax merulinus occurs in three subspecies in mountain forest from north-east India, northern Myanmar and western Yunnan, China (nominate *merulinus*), north-west Thailand (*laoensis*) and south-east Yunnan to northern Laos and northern Vietnam (*obscurus*). These taxa are lightly differentiated, based largely on the shading of the upper- and underparts, and size and shape of breast markings. The situation changes completely with the appearance of *annamensis* in South Annam. Where *merulinus* (including *laoensis* and *obscurus*) has a buffy-white postocular supercilium, basal breast colour and mid-belly to vent, *annamensis* is a rich rufous-tan (score 2). Where *merulinus* possesses a buffy-white chin and throat with brown spotting (consistent with the breast), and greyish-brown lores and forecrown distinct from the richer brown crown, *annamensis* has a black chin and throat extending onto the moustachial area, lores and periorbital region (3), with the rufous-tan supercilium extending forward over the lores (1). Where *merulinus* has bold thrush-like brown spotting on the throat and breast, *annamensis* has much finer and black streaks (2). On the upperparts *annamensis* is a shade more olive and the tail a shade darker than in *merulinus* and, below, the latter's brown flanks are a shade redder and darker (possibly 1). From collectors' descriptions of bare part colours it would seem likely that the legs are darker brown in *annamensis* (possibly 1). In *annamensis* it may be possible to tell the sexes apart, as the black of the chin and throat appears to be shaded brown and less defined in the moustachial region in the female (possibly 1); telling the sexes of *merulinus* is less obvious, but females may be paler buff on the chin. Mensurally *annamensis* is slightly shorter-billed and -winged than nominate *merulinus* (no score; Tables 1–2), but a score of at least 8 establishes the latter as a monotypic species.

Garrulax (canorus) taewanus

Collar (2004b) outlined the plumage differences between the taxa *taewanus* and *canorus*, having earlier indicated the candidacy of the split with photographs (Collar 2003). Race *taewanus* lacks the white brow and broad eye-ring (3), the base colour below and on forehead is pale buff rather than pale rufous (2), and the base colour to the crown and nape is a buffy stone-grey rather than a pale buffy-brown (1); moreover, several website photographs confirm the report by F. Crystal (*in litt*. 2006) that *taewanus* has 'yellowish skin round the eye', whereas photographs of *canorus* show distinctly (bluish-)greyish skin in this area, offset by the broader white eye-ring (1). Mensurally the two are very close, but with *canorus* having a slightly shorter tail (no score; Tables 1–2). Tu Hsiao-wei (2003) reported that the song of *taewanus* resembles that of *canorus* but is less complex and more repetitive (1). It is known that the two taxa react to each other's songs, and there is worrying interbreeding of the Taiwan birds with escaped *canorus* that have been imported for singing competitions (L. L. Severinghaus verbally 2003). Nevertheless, a score of 8 permits the separation of *taewanus* at the species level, and I suggest the names Taiwan Hwamei and Chinese Hwamei for the two resultant species.

***Garrulax (lineatus) imbricatus*‡**
Calling this the Bhutan Laughingthrush *Trochalopteron imbricatum*, Rasmussen and Anderton (2005) commented: 'Considered a distinct species here, as *imbricatum* is morphologically very distinct from [Streaked Laughingthrush] *G. lineatum*, evidently not intergrading despite close geographic approach. Most of its vocalisations differ considerably, and tape playback yielded no response (PIH [P. I. Holt]); further study needed.'

The form *imbricatus* of Bhutan differs from the five subspecies of *lineatus* as they line up from west to east (*schachdarensis* in Uzbekistan and Tajikistan, *bilkevitchi* in Afghanistan, *gilgit* mostly in Pakistan, nominate *lineatus* in the western Himalayas and *setafer* in the central Himalayas) by its unstreaked rich brown crown (score 2), lack of rusty ear-coverts (2), more extensive white shaft-streaks from moustachial region and ear-coverts onto sides of neck (1), richer brown upperparts and tail and absence of background grey in the plumage above or below, making for a richer, darker lower belly (2), considerably longer tail (1) and greatly reduced pale tail-tips (1). Tail measurements in this case are gauged from Rasmussen and Anderton (2005), who give a range of 105–112 for *imbricatus* as against 90–95 for *gilgit* and 95–99 for *setafer*. It is entirely reasonable, with a score of 9, to regard *imbricatus* as specifically distinct from *lineatus*, irrespective of vocal differences.

***Garrulax (erythrocephalus) chrysopterus*‡**
Garrulax (erythrocephalus) melanostigma
***Garrulax (erythrocephalus) ngoclinhensis* D**
Garrulax (erythrocephalus) peninsulae
Dickinson (2003) retained Chestnut-crowned Laughingthrush *G. erythrocephalus* as highly polytypic and, without explanation, added to it the recently described Golden-winged Laughingthrush *G. ngoclinhensis*, despite the very strong case for species status made in the latter's original description (Eames *et al.* 1999), which also, incidentally, provides a valuable key for the characters of all subspecies of *G. erythrocephalus sensu lato*. Meanwhile, in splitting *chrysopterus* from *G. erythrocephalus* under the name Assam Laughingthrush *Trochalopteron chrysopterum*, Rasmussen and Anderton (2005) simply remarked: 'Striking morphological and consistent vocal differences from other racial groups argue for specific status, as is also the case for two extralimital SE Asian racial groups.' They divided their restricted *G. erythrocephalus* into a western group, with the nominate form in the western Himalayas and subspecies *kali* in west and central Nepal, and an eastern group, including the subspecies *nigrimentum* (east Nepal to western Arunachal Pradesh) and the often disregarded *imprudens* (eastern Arunachal Pradesh). In their newly established *G. chrysopterus*, whose nominate form occupies Meghalaya, they included at least the subspecies *godwini* (north Cachar to western Manipur) and *erythrolaemus* (eastern Manipur and Lushai Hills).

The difference between the western and eastern groups of the restricted *G. erythrocephalus* is very marked (in some respects more so than the difference between *G. erythrocephalus* and *G. chrysopterus*). The eastern group loses the chestnut crown that gives the species *sensu lato* its name, retaining chestnut only on the nape, and having the crown dark grey with broad black streaks; below, and on the back and scapulars, it is a much richer chestnut colour. Nevertheless, as Rasmussen and Anderton (2005) pointed out, there is a broad zone of intergradation in central Nepal, so that their separation at the species level would appear to be inappropriate (although further study of the breadth of this zone might indicate a different treatment).

Garrulax chrysopterus, with the three subspecies mentioned by Rasmussen and Anderton (2005), differs from the restricted *G. erythrocephalus* by: more extensive, browner-centred spotting on the upperparts (score 1) and less extensive spotting on the underparts (1), with no black throat (2), different-structured (elongate, with paler centres, *vs* rounded with paler fringes) pinkish-chestnut ear-coverts (2). The pale grey supercilium present in races *chrysopterus* and *godwini* is absent in *erythrolaemus*, this last thus possessing a head very like nominate *erythrocephalus*. If Rasmussen and Anderton's (2005) assertion of 'consistent vocal differences' is allowed a score of 3 (although their transcriptions of songs do not look particularly different), then a score of 9 strongly upholds the split.

However, where does the race *woodi*, not considered by Rasmussen and Anderton (2005) because extralimital to their region, fit in this split? It occurs in north and north-eastern Myanmar and western Yunnan, and is therefore an eastern outlier of both species-level taxa in the proposed rearrangement. While it possesses the basic throat pattern (absence of black) and the ear-covert structure and pattern of *chrystopterus*, it shares the crown pattern, back pattern and breast pattern of *nigrimentum*. Its throat and upper breast pattern is dissimilar from the rest of *chrysopterus* in being duller, darker and more streaked, thus tonally closer to the upper breast of *nigrimentum*. I therefore place it next to *nigrimentum* as a member of the newly restricted *G. erythrocephalus*. In distinguishing *chrysopterus* from *G. erythrocephalus* thus constituted, the characters can be enumerated again as the more extensive spotting above (1) and less extensive spotting below (1), and the rather bright rufous throat with black streaking (2). It is a leap of faith to assume that the vocal characters of *woodi* align with those of *erythrocephalus*—the score of 3 takes us to the needed 7—and I make it here with circumspection.

Once the taxa in the *chrysopterus* group are allowed species status, it becomes considerably less easy to maintain the taxa further east and south within the reduced *erythrocephalus*. Examination of material at BMNH, which holds all subspecies except *subconnectens* and *schistaceus* (these exhibit relatively minor differences from *melanostigma* and *connectens*, *fide* Deignan 1938), certainly allows a further breakdown of the *erythrocephalus* complex. To begin with, all remaining subspecies possess no maculations on the upperparts of the body, only light (if any) scaling on the breast, and black (dark grey in *connectens*) primary coverts. Subspecies *connectens* (north-east and central Laos, south-east Yunnan and north-west Vietnam), *subconnectens* (northern Thailand), *schistaceus* (eastern Myanmar and northernmost Thailand), *melanostigma* (eastern and south-eastern Myanmar, southern north-west Thailand) and *ramsayi* (southern south-east Myanmar; for clearer ranges of all taxa see Robson [2000]) group together (under the oldest name, *melanostigma*) in being dull olive-green above (except on the crown) and shading below from rufous throat to greyish belly. The taxa *ngoclinhensis* and *peninsulae* represent two highly distinct offshoots, the former with grey and the latter with dull rusty-brown body plumage.

Set against either *G. erythrocephalus* or *G. chrysopterus*, birds of the *melanostigma* group show no dorsal maculation

(3), dark primary coverts (black in all except *connectens*, in which they are dark grey) (2), more extensive silvery-edged ear-coverts (1), broad, dark-streaked grey supercilium spreading onto upper neck-sides (1), black chin and malar area (1), and olive-tinged lower underparts (1). The subspecies *connectens* is well named, since it exhibits the breast scaling and paler primary coverts that suggest a link to Himalayan taxa, but even so it sits well enough within the *melanostigma* group, which clearly emerges as specifically distinct in this analysis and scoring.

The form *ngoclinhensis* differs from *G. melanostigma* in having a dark grey body (3), rusty-golden outerwebs to the remiges and fringes to the rectrices (2), dark-streaked brownish-grey forehead (1) and virtually zero chestnut tones on chin and throat (1–2). The score of 3 scarcely does justice to the distinctiveness of the body coloration; but in any case the total score of 7–8 confers specific rank on this taxon. Additional scores would accrue from comparison with the maculated *G. erythrocephalus* and *G. chrysopterus*.

The form *peninsulae* differs from *G. melanostigma* and *G. ngoclinhensis* in having throat to belly plain chestnut-brown (richest on throat, becoming browner on lower flanks, thighs and vent) (3), mantle and scapulars to uppertail-coverts plain dull chestnut-brown (1), crown maroon-chestnut (1), reduced black on lores and chin (1), reduced silvery delineation of ear-coverts (1), dark silvery-grey hind-collar (1) and white eye-ring (1). Again, additional scores would accrue from comparison with the maculated *G. erythrocephalus* and *G. chrysopterus*, but in any case the taxon emerges as a full species.

The new arrangement thus lines up—with several tentatively proposed new English names and very crude ranges—as follows:

CHESTNUT-CROWNED LAUGHINGTHRUSH *Garrulax erythrocephalus*
- *G. e. erythrocephalus* (Vigors, 1832) – NW Himalayas.
- *G. e. kali* Vaurie, 1953 – C Himalayas (W and C Nepal).
- *G. e. nigrimentum* (Oates, 1889) – E Himalayas (E Nepal to N and E Assam).
- *G. e. woodi* (E. C. S. Baker, 1914) – N and NE Myanmar, W Yunnan.

ASSAM LAUGHINGTHRUSH *Garrulax chrysopterus*
- *G. c. chrysopterus* (Gould, 1835) – SW Assam.
- *G. c. godwini* (Harington, 1914) – N Cachar Hills (SE Assam).
- *G. c. erythrolaemus* (Hume, 1881) – E Manipur, W and SW Myanmar.

SILVER-EARED LAUGHINGTHRUSH *Garrulax melanostigma*
- *G. m. connectens* (Delacour, 1929) – NE and C Laos, SE Yunnan, NW Vietnam.
- *G. m. subconnectens* Deignan, 1938 – Doi Phu Kha (N Thailand).
- *G. m. schistaceus* Deignan, 1938 – E Myanmar, N Thailand.
- *G. m. melanostigma* Blyth, 1855 – E and SE Myanmar, NW Thailand.
- *G. m. ramsayi* (Ogilvie-Grant, 1904) – southern SE Myanmar.

GOLDEN-WINGED LAUGHINGTHRUSH *Garrulax ngoclinhensis* Eames, Trai and Cu, 1999 – C Vietnam.

MALAYAN LAUGHINGTHRUSH *Garrulax peninsulae* (Sharpe, 1887) – Malay Peninsula.

Pomatorhinus (erythrocnemis) gravivox [as ***P. (e.) erythrocnemis*** *sensu lato*] D

Pomatorhinus (erythrocnemis) mcclellandi

Pomatorhinus (erythrocnemis) swinhoei

The *Pomatorhinus erythrogenys* complex has divided authorities into two camps: those who would maintain it as a single species (Deignan 1952, 1964, Ali and Ripley 1971, Cheng 1987, Dickinson 2003) and those who would split it into its plain-breasted and spot-breasted components as 'Rusty-cheeked Scimitar Babbler' *P. erythrogenys* and 'Spot-breasted Scimitar Babbler' *Pomatorhinus erythrocnemis* (Stanford and Ticehurst 1935, Vaurie 1954, 1959, Sibley and Monroe 1990, Inskipp *et al.* 1996, Grimmett *et al.* 1998, Robson 2000, Rasmussen and Anderton 2005). Although the split of *erythrocnemis* from *P. erythrogenys* is accepted here because I follow Inskipp *et al.* (1996), it is necessary to go over the ground again to confirm the situation and give context to any further break-up of *erythrocnemis*.

The *erythrogenys–erythrocnemis* split was apparently first proposed by C. B. Ticehurst partly because the taxa *odicus* and *imberbis* (a) 'bear little resemblance' to each other, (b) approach each other as closely as 'Bhamo and Bernardmyo' (the latter evidently near Mogok) in Myanmar, with 'no intergrades being known', and (c) occur sympatrically at two other localities *fide* Lord Rothschild (Stanford and Ticehurst 1935). However, Deignan (1952) demonstrated that no such sympatry has been found; this is presumably the source for Dickinson's (2003) footnote, made against the race *celatus* (='*imberbis*' in this part of Myanmar), that 'there is insufficient evidence of sympatry between *celatus* and *odicus* to require treatment as two species'. Deignan (1952) also argued that the distance from Bhamo south to Mogok (only about 160 km) marks a known zoogeographic gap (indeed: see under *Heterophasia desgodinsi*), rendering the idea of sympatry even less tenable. Moreover, the revelation that birds in north-west Thailand (*celatus*) can occasionally show spotted breasts (P. D. Round *in litt.* 2006) further complicates the situation. These things, however, do not alter the facts that, in general, the taxa are very distinctive and approach each other very closely in this region, and Vaurie (1954) pointed out that further south in Myanmar the two remain relatively close (*imberbis*/*celatus* at Kalaw and Taung-gyi and in adjacent northern Thailand, *odicus* in Kengtung state some 250 km to the east), remarking: 'the sharp difference in pattern between the two and the fact that intergrading populations are unknown suggests that it is more constructive to regard them as separate species'.

Rasmussen and Anderton (2005) noted that (a) *ferrugilatus* [=*haringtoni*] and *mcclellandi* 'approach each other closely in range, without evidence of intergradation', but that (b) female-type song-notes of birds in northern Thailand are longer than in the Himalayas and thus 'do not support conspecificity of all unspotted forms to the exclusion of all spot-breasted forms'. They judged that 'several species are probably involved, with... *mcclellandi* perhaps one'. The extent to which vocal differences in this complex of taxa will shed light on their relationships is unknown, and comparison within unspotted forms is not here attempted, but certainly their rearrangement into a number of species, using morphological evidence only, is worth pursuing.

Separation of *mcclellandi* as a monotypic species resides in its unregimented, loose buffy olive-grey (appearing drab

brown) spotting on the breast (*vs* regimented black streaks, plain breast or, in many *ferrugilatus*, dense blurry greyish-streaked throat to breast) (3), and warm buffy olive-grey (*vs* orange-tawny) flanks (2); from plain-breasted taxa it further differs in its much stronger malar stripe (2), and from spot-breasted forms (discounting *erythrocnemis*) by its much paler and reduced rusty ear-coverts and lores (2). It also separates from other species as recognised below on its shorter tarsus and wing (no score; Tables 1–2). A score of 7 just lifts *mcclellandi* into species status. It appears not to intergrade with other taxa.

The acquisition of heavy regular black drop-like streaking on the breast of birds is a major character separating predominantly eastern forms from plain-breasted forms and even from the spot-breasted *mcclellandi* (3). Except for the eastern races *abbreviatus*, *swinhoei* and *erythrocnemis*—to be considered separately—the spot-breasted races differ further from the plain-breasted forms in possessing a strong malar stripe topped by a pale (sometimes flecked) submoustachial area (3) and less extensive and intense orange-tawny flank coloration (1). A score of 7 again just lifts the various taxa, whose oldest name is *gravivox*, into species status.

In the forms *abbreviatus* and *swinhoei*, major differences from adjacent Chinese taxa occur: the submoustachial stripe disappears (2), the scapulars and back become foxy-rufous, as does the vent (2), but the underparts below the breast are suffused grey, including the outer flanks (2) and the breast-streaking is trimmed more clearly at mid-breast, not extending onto the upper belly (1). For a third time a score of 7 just reaches species status. Deignan (1952) noted that in the past these two taxa and the Taiwan bird had 'commonly been considered a species distinct from other ferruginous-cheeked scimitar-babblers', but he judged that his new race *cowensae* 'shows a first step toward intergradation between *gravivox* and *swinhoei*' by virtue of the 'general reddening of the plumage and the strengthening of the dark centers of the coronal feathers'. However, these do not influence the scored differences above; nor does Deignan's (1952) discovery of a northernmost specimen of *swinhoei* with rufous-washed flanks, which he felt predicted an undocumented intermediate population.

Finally, while the Taiwanese form *erythrocnemis* groups with *swinhoei* and *abbreviatus* in terms of its rustier tones above, underparts without orange-ochre, and more organised, clear-cut breast-spotting, it is nevertheless markedly different: the bill is all dark (1), crown darker grey (1), neck-sides greyish (not rusty-olive) (1), chin and throat clearer white (without dark shaft-streaks) but breast-streaking broader and denser (2), submoustachial area black (2), rear ear-coverts (indeed all ear-coverts except the subocular area) grey (not rusty) (1), flanks stained dark olive (less pure grey) with belly whiter (1), mantle and scapulars, and vent, darker chestnut, including lower tarsal feathering (1). A specimen in USNM (472175) showing a rather weakly developed dark submoustachial area is presumably immature; all other specimens I have examined show the stripe strongly.

The new arrangement, which clearly rests on uncertain foundations and is in need of considerable fortification (which is not supplied by morphometric analysis, as this shows as much variation within the new species as between them, notably a remarkably long tail in *dedekensi*: see Tables 1–2), thus emerges—with several tentatively proposed new English names—as follows (Rusty-cheeked included here to clarify which subspecies belong to it):

RUSTY-CHEEKED SCIMITAR BABBLER *Pomatorhinus erythrogenys*
- *P. e. erythrogenys* Vigors, 1832 – NW Himalayas
- *P. e. ferrugilatus* Hodgson, 1836 – C Himalayas (Nepal to Bhutan)
- *P. e. imberbis* Salvadori, 1889 – Karenni (E Myanmar)
- *P. e. celatus* Deignan, 1941 – Shan States (E Myanmar), NW Thailand

SPOT-BREASTED SCIMITAR BABBLER *Pomatorhinus mcclellandi* Godwin-Austen, 1870 – S Assam, W Myanmar

BLACK-STREAKED SCIMITAR BABBLER *Pomatorhinus gravivox*
- *P. g. odicus* Bangs and Phillips, 1914 – NE and E Myanmar, N Indochina, S Yunnan, Guizhou (except N)
- *P. g. decarlei* Deignan, 1952 – E Xizang, SW Sichuan, NW Yunnan
- *P. g. dedekensi* Oustalet, 1892 – (N)E Xizang, W Sichuan, NW Yunnan
- *P. g. gravivox* David, 1873 – S Gansu, S Shaanxi, S Shanxi, NW Henan, N Sichuan
- *P. g. cowensae* Deignan, 1952 – C and E Sichuan, N Guizhou, W Hubei

GREY-SIDED SCIMITAR BABBLER *Pomatorhinus swinhoei*
- *P. s. swinhoei* David, 1874 – E Jiangxi, S Anhui, NW and C Fujian
- *P. s. abbreviatus* Stresemann, 1929 – Guangxi, S Hunan, N Guangdong

BLACK-NECKLACED SCIMITAR BABBLER *Pomatorhinus erythrocnemis* Gould, 1863 – Taiwan

***Pomatorhinus (horsfieldii) melanurus*‡**

This is a split within a split. White-browed Scimitar Babbler *P. schisticeps* of the Himalayas has been regarded as embracing 'Indian Scimitar Babbler' *P. horsfieldii* (peninsular India) and 'Ceylon Scimitar Babbler' *P. melanurus*, although Inskipp *et al.* (1996), in seemingly their own taxonomic decision (or perhaps upholding one common option against another), separated *horsfieldii* (with *melanurus*) from *schisticeps* 'because they differ morphologically, especially the subspecies of each form that are nearest in geographical range.' Rasmussen and Anderton (2005) took this a step further: 'if *horsfieldii* is considered a distinct species from *schisticeps*, *melanurus* probably should also be considered a distinct species, as levels of vocal and morphological differentiation are similar'. Nevertheless they conceded that, while plumage and proportions are 'distinctive' and vocalisations 'distinctly different', *melanurus* 'may respond strongly to playback of S Indian *horsfieldii* tapes (DW [D. Warakagoda]; further study needed.'

Justification of the separation of *horsfieldii* from (nominate) *schisticeps* is not strictly needed, since it is accepted by Inskipp *et al.* (1996) and indeed by Dickinson (2003); but the score is low, with absence of rufous-chestnut from neck-sides to flanks (3), duller upperparts (1), crown concolorous with ear-coverts (rather than several shades paler) (1), and dark not pale eye making for a very different facial pattern (2). Rasmussen and Anderton (2005) actually reported that the vocalisations of *horsfieldii*

are similar to *schisticeps* and conceded that the two might be 'perhaps better treated as conspecific, as formerly'. There is no evidence of morphometric disjunction; but there are wild size differences in remaining *schisticeps* anyway. Despite Rasmussen and Anderton's doubts, *horsfieldii* is so distinctive that specific status for it seems appropriate.

However, Sri Lanka's *melanurus* (with *holdsworthi*) suggests a reversion to something closer to *schisticeps*. It differs from *horsfieldii* in its rufescent-brown nape, neck-sides and scapulars to rump and richer rufescent flanks (2), yellower and smaller bill (2), much shorter tail (1)—these two last judgements based on values in Rasmussen and Anderton (2005) of 'head' 53–55 and tail 98–112 mm in *horsfieldii vs* 48–51 and 77–92 mm in *melanurus*—and weaker lateral crown-stripes (1); in addition, the song is reported by Rasmussen and Anderton (2005) to be higher-pitched than *horsfieldii*, with more melodious and less hollow-sounding notes (1). It differs from *schisticeps* in its dark eye (2), shorter (*vs* 50–53 mm) bill (1), much shorter (*vs* 107–122 mm) tail (2), dull rufescent-brown (*vs* olive-brown) nape to rump (1), and very dull rufescent-brown (*vs* bright rufous-chestnut) neck-sides and flanks (1). Thus the separation from *horsfieldii* remains very tenuous, particularly as a higher-pitched voice is probably not independent of a smaller bill and probably body size. However, despite many subspecies, *horsfieldii* is fairly constant across the Indian subcontinent, so the Sri Lankan population in no way reflects the end of a cline, and the score of 7 should, for the moment, allow it species status.

Pomatorhinus (ruficollis) musicus

Collar (2004b) suggested that the subspecies *musicus* might merit elevation to species level. However, the Streak-breasted Scimitar Babbler *P. ruficollis* is a highly polytypic species whose subspecies, differing principally in amount and coloration of the breast-streaking, break down into four groups. From the Himalayas east through western China to Anhui and Zhejiang in the east are birds with rather blurred greyish-buff breast-streaks (nominate *ruficollis*, *godwini*, *bakeri*, *similis*, *laurentei*, *eidos* and *styani*; probably also *hunanensis*, which BMNH lacks). To the south, at Bhamo in northern Myanmar, south-west Yunnan and through adjacent north and central Laos, birds have virtually streakless whitish breasts (races *bhamoensis*, *albipectus* and *beaulieui*). In southern Yunnan and in northern Vietnam (*reconditus*) and disjunctly in south-east China (*stridulus*) are birds in which the breast-streaks are rufous-chestnut. On Taiwan (*musicus*) and Hainan (*nigrostellatus*) the breast-streaking is brownish-black.

In Assamese *bakeri* the breast-streaking is weak, indicating the tendency towards the all-whitish breast of *bhamoensis* which continues through south-west Yunnan to Laos. It is notable that the type locality of white-breasted *albipectus* (Simao or Ssu-mao) is less than 250 km west of the type locality of rufous-streaked *reconditus* (Mengtsze or Mengzi), and that these two taxa extend respectively into northern Laos and northern Vietnam. It is not possible, however, to determine how closely they approach each other, but in any case it is simpler at present to see them as opposite ends of a ring. Vocal and genetic studies might, however, reveal different circumstances.

This leaves the black-streaked Taiwan and Hainan birds to consider. Collar (2004b) compared *musicus* only to its nearest neighbour *stridulus* of Fujian and Guangdong, and found strong differences, including in size. The differences hold fairly well across the spectrum of races westwards to India. Thus *musicus* possesses a dark greyish (*vs* olive-toned) crown (2), broad rich chestnut hindcollar (nape and mantle) (2), all-dark upper mandible (1), brownish-black-streaked breast with clean-cut ovate pattern (1) and strongly chestnut-washed belly and lower flanks (1); it has a significantly larger bill than any of the other taxa and than all other taxa combined (1) (14% larger/longer than all other taxa combined). This tallies 8, and if the report by Rasmussen and Anderton (2005) applies solely to *musicus*, that its song is 'lower-pitched with 3–4 upturned notes all on same pitch', a further point or two might be added; but of course a sampling across the wide range and numerous taxa is needed before any serious use of vocal information can be made. I suggest the name Taiwan Scimitar Babbler.

A comment on *nigrostellatus* is appropriate. This form, although dorsally similar to mainland taxa, shares the brownish-black breast-streaking of *musicus*, but in a different pattern, since the breast feathers retain attenuated white fringes, creating a scalier appearance, although in worn specimens this effect is lost and the breast is crowded with dark feathers, allowing little white background (*contra* the constant bold contrast of black and white in *musicus*); on the belly there is a tendency to chestnut, but the flanks are darker and predominantly olive. Scoring of the underparts of *musicus* would be higher without these echoes in *nigrostellatus*, which remains as a subspecies of *ruficollis*.

[***Rimator (malacoptilus) malacoptilus*** ‡]
Rimator (malacoptilus) albostriatus
Rimator (malacoptilus) pasquieri

Rasmussen and Anderton (2005) restricted Long-billed Wren Babbler *R. malacoptilus* to monotypy: 'Best considered a separate species from taxa of Sumatra and Tonkin (*albostriatus* and *pasquieri* respectively) based on strikingly different plumage and apparent vocalisations.' It is not clear if they are proposing *albostriatus* and *pasquieri* as two species rather than one.

Based on rather small samples, both *albostriatus* and *pasquieri* are distinct from *malacoptilus* in having a clean white chin and throat (rather than dull buff) (3), whiter centres to the long white feathers of the underparts (1), with dark brown rather than rusty-rufous thighs and vent (1); *albostriatus* has dark moustachial and malar stripes enclosing a whitish submoustachial (2) and is considerably larger (2); *pasquieri* has plain mouse-brown ear-coverts (1) and slightly longer bill and tarsi (1). Thus *albostriatus* and *pasquieri* separate out from *malacoptilus* as at least one species, but their separation from each other at species level is also tenable. Apart from their difference in size (1) (Tables 1–2), their head patterns are different: *albostriatus* has a darker crown with no rusty fringes (a character *pasquieri* shares with *malacoptilus*) (1), streaked ear-coverts (a character it shares with *malacoptilus*) (1), bold malar stripe offsetting whitish submoustachial (2), and 'soft' lower edge to white throat where *pasquieri* has a clearer-cut white edge and the white, which is also brighter and cleaner, tucking around onto the lower neck-sides behind the lower ear-coverts (2). It is noteworthy that *R. pasquieri* was one of only two new taxa (out of 30) which were allowed full species status by Delacour and Jabouille (1930)—where *Spelaeornis (longicaudatus [= chocolatinus])*

kinneari was also first described—but they gave no reasons for being so confident of this judgement. I suggest 'White-throated Wren Babbler' for *R. pasquieri* (see under *Spelaeornis kinneari* for reason not to use 'Tonkin Wren Babbler') and 'Sumatran Wren Babbler' for *R. albostriatus*.

Napothera (rabori) sorsogonensis

Rabor's Babbler *N. rabori* was only described in 1960, but within 11 years it was known by three subspecies. It was first found in the far north of Luzon (nominate *rabori*: Rand 1960), then in the far south (*sorsogonensis*: Rand and Rabor 1967), and finally in the middle (*mesoluzonica*: duPont 1971a), although ironically it is this last subspecies which is now much the best represented in museums (I am aware of three, five and 17 specimens respectively of the three taxa, in nine museums), much the most familiar to birdwatchers, and the one accorded the baseline description and an illustration in Kennedy *et al.* (2000).

When *sorsogonensis* was first described, it was given species status. Since the senior author was also the describer of *rabori* and the junior author had collected both taxa and been honoured in the naming of the first, one must assume their considerable authority in this judgement. One must also assume that D. S. Rabor supplied information on the appearance of nominate *rabori*, since no adult specimen was available to refer to, for the following diagnosis of *sorsogonensis*, quoted in full from Rand and Rabor (1967), to be made:

> Similar to *N. rabori* but differs in having the crown olive much like the back (not reddish brown); in having the feathers of the back with narrow, indistinct, black edgings giving only a faint scaled pattern (not with a distinct scaled pattern); side of head dark grey to blackish, finely streaked or washed with white (not bright reddish brown); chin and throat white with a narrow black malar line separated from the dark grey side of the head by a broader white stripe (not white generally spotted with black); sides of breast uniform grey, connected across the breast by a narrow, uniform dark grey band; contrasting sharply with white on central part of lower breast and abdomen (not breast widely grey with a streaked and scaled pattern shading to grey-white of abdomen); wing slightly longer.

The fact that *sorsogonensis* was at one end of Luzon and *rabori* at the other meant that any intervening population might be intermediate, and this is in fact how duPont (1971a) thought of it when he named *mesoluzonica*, so that he reduced all three taxa to subspecies of *rabori*. Although lamenting that the only specimens available of nominate *rabori* were 'immatures', he felt confident enough to characterise the differences of *mesoluzonica* from *rabori* merely in terms of its narrower black margins on the crown and back and its lighter 'chestnut and red-brown underparts' (*sic*), while from *sorsogonensis* the new form differed in possessing the said black margins above, a wider breast-band and 'richer' flanks and undertail-coverts. Similar diagnoses are given in duPont (1971b).

Unsurprisingly, therefore, Mayr and Vuilleumier (1983), who referred the reader to duPont (1971b) and doubtless themselves were guided by it, merely remarked that 'the differences... are insufficient in our opinion to justify species status', although they added, without offering space for his reasons, that 'D. Amadon (pers. comm.) would keep it as a species'. Neither Dickinson *et al.* (1991) nor Kennedy *et al.* (2000) sought to overturn this taxonomic decision (in spite of their championing of the separation of Golden-crowned Babbler *Stachyris dennistouni*, a taxon which shares largely the same range as nominate *rabori*), and the latter merely indicated that 'races vary primarily by color of face—chestnut in *rabori* and dark brown in others'.

It is not at all clear from any of the preceding publications how far the number and type of differences itemised by Rand and Rabor (1967) were considered. Thus it is not just a case of differing judgement over whether the characters shown by a taxon qualify it for species or subspecies status: it is rather a case where the characters to be judged are themselves uncertain. That they are stronger than indicated by duPont (1971a,b)—who completely missed the 'bright reddish brown' ear-coverts of *rabori*—and even by Kennedy *et al.* (2000) cannot be in doubt. To begin with, the colour of the 'face' in *sorsogonensis* and *mesoluzonica* is neither dark brown nor dark grey to blackish, but mid-grey with varying amounts of white flecking (specimens seen in AMNH, BMNH, Naturalis, USNM; also de Roever 1990). Danielsen *et al.* (1994) reported that two birds, one definitely adult, which they caught in the early 1990s in the northern Sierra Madre 'had no white on breast and belly'. A bird seen by S. Harrap (*in litt.* 2006) on 16 February 2002 in the Talaytay watershed, Aurora province (16°10′34″N 121°55′10″E) had 'white supercilium, bright rusty cheeks, black moustachial and narrow collar across upper breast, bordering white throat, mid-grey underparts', the implication again being that the breast and belly of *rabori* lacks white or has the white largely occluded.

Prompted by this uncertainty, I obtained photographs of one of the birds caught by F. Danielsen at Maconacon in April 1997 (Plate 2), of a watercolour painting by M. K. Poulsen of one of the birds mentioned by Danielsen *et al.* (1994) (Plate 3), and of a specimen in Cincinnati Museum of Natural History (CMNH 37710), mentioned in Kennedy *et al.* (2000) (Plate 4). From this composite evidence emerge the following diagnostic characters of *rabori* (in relation to both *sorsogonensis* and its evident subspecies *mesoluzonica*), which I score accordingly: forehead, supercilium and sides of head bright rusty-chestnut (3); much smaller white throat-patch, not extending onto upper breast (2), with black malar breaking up on lower throat into random spotting (this, when the neck is withdrawn, forms the narrow black collar observed by Harrap) (2); grey breast to mid-belly, with narrow white shaft-streaks (and in one specimen some blackish scaling), shading to greyish-white lower belly (2); overall richer, redder brown upperparts, possibly with heavier blackish barring (1). There is a trace of white above the eye and there are various possible explanations (sex or age difference; individual variation) for the white supercilium seen by Harrap, who also reports (*in litt.* 2006) that he has noticed no vocal differences between *mesoluzonica* and *rabori*. Nevertheless, as the photographs of specimens of *mesoluzonica* (Plates 5–7) indicate, the great distinctiveness of nominate *rabori* is now established, and clearly merits recognition from *sorsogonensis* and *mesoluzonica* at the species level.

A further interesting divergence between *rabori* and *sorsogonensis* lies in the juvenile plumages. In *N. sorsogonensis mesoluzonica* there is relatively little difference from the

adult: Mitchell and Harrap (1994) observed a begging juvenile which 'possessed the conspicuous wing spots and white throat of the adult [but] overall... was a slightly warmer and buffer brown'. By contrast, juvenile *rabori* has a largely obscured throat with some whitish feathers, dark reddish-brown breast and flanks with some grey feathering, and greyish shading paler (some whitish) on the mid-belly, with reddish-brown crown, blackish-brown upperparts and chestnut face and ear-coverts (Rand 1960, supplemented and modified by photographs of the type sent by M. Hennen and by inspection of USNM 607458).

The generic status and position of these two Philippine *Napothera* are discussed below, and consideration of new English names invited.

Pnoepyga (albiventer) formosana

C. R. Robson in Inskipp *et al.* (1996) suggested that '*formosana* is sufficiently different in morphology and vocalisations to warrant treatment as a separate species'. Collar (2004b), however, saw too few dissimilarities to find the split of this taxon very convincing.

Work by Harrap (1989) established the criteria for separating Scaly-breasted Wren Babbler *P. albiventer* from Pygmy Wren Babbler *P. pusilla* in the field and set out a good case for aligning the wren babbler on Taiwan with the former rather than the latter. Criteria for discriminating *albiventer* from *pusilla*, as restated and refined by Robson (2000) and Rasmussen and Anderton (2005), are: *pusilla* slightly smaller and slimmer, with no speckling on crown, neck-sides and ear-coverts, song an unmistakable *ti-ti-tu* or *tseet tsuut* but call (*tchit* or *tsick!*) very like Scaly-breasted. I do not share the latter authors' view that the underpart scaling of *albiventer* is 'more evenly rounded' than on *pusilla*: on BMNH specimens there is a marked tendency for the pattern on *albiventer* to be dominated by the black blade-like centres to the feathers (which themselves are longer, more oblong, than on *pusilla*), and these occupy the entire underparts, whereas in *pusilla* the centres are both less black (more blackish-brown) and less blade-like, so that more white (or ochre) of the outer vanes is apparent and the dark fringes of each feather (also present but much less intense on *albiventer*) are commonly offset against the whitish (or ochre) part of the underlying feather, especially on the lower underparts. Two effects result, upsetting expectations of both the English and scientific names of the former: Scaly-breasted (*albiventer*) looks both less scaly-breasted and less white below than Pygmy (*pusilla*).

Unquestionably, *formosana* is closer to *albiventer* than *pusilla* (an ochre-bellied morph, as found in the other two taxa, has not been recorded), so it is against the former that I score it. If anything the underparts are darker than in *albiventer*, since the white on the breast and belly feathers is reduced (1), and importantly the 'scaling' extends, as noted by Harrap (1989), up to the chin, so that *formosana* lacks a white chin and throat (2). The buffy spotting on the crown is fuller and more tinged rufous even than in ochre morphs of *albiventer* (1). Mensurally *formosana* has a bill as long as (or even longer than) *albiventer* (although visibly slenderer) but a wing and tarsus much shorter (respectively 15% and 10% shorter, these differences being statistically highly significant; see Tables 1–2), so that in these two characters it sits between *albiventer* and *pusilla* (1) (Tables 1–2). Harrap (1989) had access to two tape-recordings of *formosana* which allowed him to characterise its song as 'a fast strong warble, rather shorter but otherwise very similar to that of Scaly-breasted', but his sonagrams certainly suggest a plainer, simpler, more even song than in *albiventer* (2). However, P. I. Holt (*in litt.* 2006) insists that the call and song of *formosana* are 'both massively different' from either *albiventer* or *pusilla*, and in April 2005 found that two male *formosana* at Chingjing failed to respond to playback of the songs of the other two species. In any case, a score of 7 takes 'Taiwan Wren Babbler' to species level.

Spelaeornis (caudatus) badeigularis D

Inskipp *et al.* (1996) provided a brief history of Rusty-throated Wren Babbler *S. badeigularis*, pointing out its reinstatement as a full species by Ali and Ripley (1971), who, in comparing it with Rufous-throated Wren Babbler *S. caudatus*, wrote: 'The white chin, the dark chestnut feathers with darker-streaked centres of the throat and upper breast, and the extensive area all over the lower breast, abdomen, flanks and vent of the subterminal white-tipped bistre feathers, give an entirely different appearance to this bird.' They also noted its longer, 'thicker and stronger' tarsus, 20 mm *vs* 17–18 mm, 'a small difference on paper, but appearing significant when these tiny birds are in the hand'. Dickinson (2003), listing it as a subspecies of *caudatus*, either did not see or did not accept Ali and Ripley's argument, commenting that 'as [*badeigularis*] is still essentially unknown (based on one specimen) we prefer not to treat this as a species'. However, there is no taxonomic reasoning *per se* in this decision, and the white chin (and upper throat) (1), dark chestnut breast with dark-streaked centres (2), greater amount of barring on the underparts (2) and stouter tarsus (1) offered as diagnostic by Ali and Ripley (1971), plus the dark brown (*vs* rufescent) flanks and vent, and darker upperparts and darker grey ear-coverts (1) noted by Rasmussen and Anderton (2005), suggest that species status is just warranted for this taxon. My own examination of the type, alongside specimens of *caudatus*, fully supports the notion that the two taxa are better considered species (including confirming the longer tarsus with a width of 1.9 mm *vs* 1.45–1.65 mm in three *caudatus*), and Plate 8 shows how the chestnut of the lower throat and upper breast is restricted in a way quite different to that on *caudatus*, where it spreads onto the upper breast-sides and flanks, and down towards the belly; the breast-sides in *badeigularis* are, in marked contrast, covered with the blackish-and-white barring of the lower breast.

The rediscovery of *badeigularis*, near the type locality, on 18 November 2004, by B. F. King and J. P. Donahue, involved the use of a recording of *caudatus* to lure it into view (http://www.kolkatabirds.com/wrenbabbler.htm; also *World Birdwatch* 27[2]: 2 [June 2005]). However, despite its responsiveness to *caudatus* song, B. F. King (*in litt.* 2006) reports that the song it sang in reply was rather different, which suggests a further score of at least 1. Most striking of all are Donahue's frontal photographs of *badeigularis* posted on the above website, which show that, in presumably combative excitement, the species discloses a distinct whitish crescent on the lower edge of the chestnut throat, which indicates a markedly different signal from what *caudatus*, with its much more extensive rufous throat and breast, could produce (2). (This breast-band is not apparent on the female type.) Thus *badeigularis* achieves a relatively strong score of 10.

This analysis was completed independently of King and Donahue (2006).

***Spelaeornis (chocolatinus) reptatus* ‡**
***Spelaeornis (chocolatinus) oatesi* ‡**
Spelaeornis (chocolatinus) kinneari

C. R. Robson (in Inskipp *et al.* 1996) observed that the taxa *reptatus*/*kinneari* and *oatesi* 'differ significantly' in both plumage and voice, while *chocolatinus* remained unrecorded, leading to the remark that more than one species may be involved. Rasmussen and Anderton (2005) made the following comment under 'Naga Wren Babbler' *S. chocolatinus*: 'Marked morphological differences between *oatesi* [Chin HillsWren Babbler], *chocolatinus* and *reptatus* [Grey-bellied Wren Babbler], all usually treated as races of *Spelaeornis chocolatinus*, suggest that species status is warranted for each. The songs of *oatesi* and *reptatus* differ significantly, but that of *chocolatinus* is undocumented; further study needed'. Rasmussen and Anderton (2005) also said, under *oatesi* itself: 'Differs markedly in plumage and degree of sexual dimorphism from *S. chocolatinus*, but song of latter unknown. Nagaland specimen(s) identified as *oatesi* perhaps indicate sympatry with *chocolatinus*.'

They provided the following account of *reptatus* (scoring in round brackets mine, referring to their comparison with *chocolatinus*): 'somewhat shorter-tailed than similar [*chocolatinus*] and [*oatesi*] (1), with stronger black scales above (1), and duller and greyer below (1) with white speckles and broader blackish scales (*vs* very fine flecks) (1); chin mottled (1), and pale shaft-streaks on flanks not prominent (2)'. Vocal differences between *reptatus* and *chocolatinus* can now be checked as the voice of the latter has very recently been recorded by M. Ritschard (*in litt.* 2006), but a score of 7 already establishes *reptatus* as a species. From the descriptions and sonagrams in Rasmussen and Anderton (2005) vocal differences between *reptatus* and *oatesi* are evidently very strong (3), and in other respects *oatesi* is highly distinct from both *reptatus* and *chocolatinus*: 'lacks rufous and tawny tones below of similar [*chocolatinus*] and female [*reptatus*] (1)... [with] brownish face without blackish moustachial line (1) and white throat and breast with dense, large black flecks (3)'. On the basis of these descriptions, backed by comparison of material in AMNH and BMNH, and even in the absence of vocal evidence concerning 'nominate' *chocolatinus*, it is appropriate to accept the three-way split of *chocolatinus* as made by Rasmussen and Anderton (2005).

I am grateful to a referee (P. D. Round) for pointing out that this arrangement omitted to indicate the position of the isolated taxon *kinneari* from Tonkin, Vietnam, which has commonly been treated as a race of *S. chocolatinus* (e.g. Deignan 1964, Clements 2000, Dickinson 2003). This timely reminder inevitably came after my visits to various museums where more comprehensive assessment of specimens could have been made, leaving me just two female specimens in BMNH to refer to—these from the three males, eight females and one unsexed in the original series (Delacour and Jabouille 1930)—and rather little good material with which to compare them. Nevertheless, a conclusion can be reached. On vocal evidence C. R. Robson (in Inskipp *et al.* 1996) had associated *kinneari* with the geographically closest *reptatus* (and neither *chocolatinus* nor *oatesi* are morphologically closer) but in Robson (2000) such evidence was important in distinguishing between the two:

> *S. c. reptatus*: Sings with a repeated, decelerating trill: *pwwrriii'i'i'i'* or *pwwrree'e'e'e'e'*. *S. c. kinneari*: Sings with two types of trill (repeated after intervals), which slow towards end: (1) loud rapid *chwi'i'i'i'witchu-wit*, *chwiwiwwi'i'witchu-wit* and *chwwwwiwiwi-witchu-wit* etc. (1.5–2 s long), with stressed ending; (2) *churrrrrr'r'r-r-rt-rt-yut-yut-yut-yut* (2–2.5 s long), stuttering in middle and becoming spaced and fuller-sounding.

These transcriptions, although both of a trill-type song, suggest clearly different vocalisations (score 2–3). In addition, by reference to accounts in Robson (2000) and Rasmussen and Anderton (2005), as well as to the two BMNH skins (one of which is in 'male' dress: see below) and to the (male) type of *reptatus* (BMNH 1903.12.24.233), it is possible to assemble the following points of divergence: *kinneari* possesses a darker moustachial line (1) and, unlike *reptatus* (which is misrepresented on this feature on Plate 90, Figure 11a, in Robson 2000), the male has a distinct whitish chin and throat (buffy in female) (2), and both sexes are darker grey on breast and belly with stronger scaling below (2). Among their series of 12 specimens, Delacour and Jabouille (1930, 1931) remarked that they had two females with white throats, the others buff and with the brown of the plumage noticeably more chestnut, and thus concluded that females are dimorphic. This is not *per se* a taxonomic character, although it tends to suggest a further degree of distinctiveness from *reptatus* (the type of which is slightly smaller than the two BMNH skins of *kinneari*); in any case a score of 7–8 suggests that *kinneari* (Pale-throated Wren Babbler; to echo White-throated Wren Babbler for the sympatric *Rimator pasquieri*, and to avoid 'Tonkin Wren Babbler' for either) merits species status.

***Sphenocichla (humei) roberti* ‡**

Of the form *roberti* ('Cachar Wedge-billed Babbler') Rasmussen and Anderton (2005) wrote: 'Strikingly different from *S. humei* ['Sikkim Wedge-billed Babbler'] in many aspects of plumage, without any evidence of intergradation despite close geographic approach. Doubtless better considered a separate species on basis of morphology; comparative study of vocalisations desirable when recordings of *roberti* become available'.

The morphological characters separating these two taxa are embedded in the descriptive text of *roberti* by Rasmussen and Anderton (2005). Reference to material in BMNH confirms their diagnosis. Where *humei* is brownish-black below with whitish shaft-streaks (itself a remarkable pattern), *roberti* possesses a far more dramatic pattern of triangular (chevron-shaped) scales involving broad buffy-brown feather-centres, whitish fringes in a pointed V, and dark outer fringes (vane extensions), so that the underparts are far lighter than in *humei*, especially at the chin and upper throat where the whitish fringes are broadest (3; this score does scant justice to the difference, which might better be expressed as 2 for paler coloration, 1 for loss of shaft-streaks and 2 for fringing pattern, = 5). On the lores and forecrown, where *humei* has black feathers with whitish shaft-streaks, *roberti* is rusty-brown with vaguely darker edging (1). Where *humei* shows a fairly distinct whitish postocular supercilium that carries down

the neck-sides, *roberti* possesses a line of more disjunct whitish spots that merges with the pattern of triangular scales on the neck-sides (1). Where *humei* has narrow, bright golden feather-centres (with well-spaced vanes) broadly fringed black from mid-crown to nape, making for a streaked effect, *roberti* has broad, warm buff-brown feather-centres with blackish-brown fringes, some with whitish inner fringes, making for a scaled effect (2), both effects becoming weaker on the lower upperparts. The wings and tail of *humei* are blackish-brown, those of *roberti* dull rufous-tinged brown (1). Rasmussen and Anderton (2005) describe *roberti* as larger, with a larger, blunter bill; the latter difference is moderate (6%) but statistically significant (and the horizontally blunter bill of *roberti* is borne out in the BMNH sample), but the tail is notably shorter (9% difference; highly statistically significant) (score 1; Tables 1–2). A score of 9–11 affirms *roberti* as a full species (a situation long in need of rectification).

P. I. Holt (*in litt*. 2006) affirms that while the taxa have two calls that are quite similar, such that *roberti* in western Yunnan responded well to recordings of both calls by *humei* in Bhutan, their songs are 'remarkably different', and in the same experiment no *roberti* showed any response to playback of singing *humei*. This clearly adds another score of 3, and places the split beyond any doubt.

A problem with English names for these two species arises from the fact that both are 'Wedge-billed Babblers'. Retention of this name reflects their relationship, but the addition of further descriptors ('Sikkim' and 'Cachar' or 'Western' and 'Eastern') is unwieldy. Reduction to 'Wedgebill' cannot be countenanced as this name is, as it were, preoccupied. A possible solution is to create entirely fresh names, e.g. Chevron-breasted Babbler for *S. roberti* and Blackish-breasted Babbler for *S. humei*.

A full documentation of the differences between the two taxa, including a detailed vocal analysis, is in preparation by P. C. Rasmussen and P. I. Holt.

Stachyris (plateni) pygmaea

Considering some of the Philippine babblers, J. Delacour, in Delacour and Mayr (1945), wrote:

> On account of the rather considerable differences in colors, we prefer to consider [*Stachyris*] *capitalis*, *nigrocapitata* and *dennistouni* as three species forming a superspecies. *S. plateni* (Mindanao) and *S. pygmaea* (Leyte and Samar) are conspecific, the latter being much grayer and less distinctly marked but quite similar in proportions, pattern and size.

However, in reality there are 'considerable differences in colors' between *plateni* and *pygmaea* also, far too remarkable to be so readily set aside. Where *pygmaea* is dull olive-brown above, slightly warmer on the crown, and with insignificant pale shaft-streaking, *plateni* is a tinge rustier and, on the crown, blackish frontally shading to dull chestnut behind, with bold white coronal shaft-streaking (3); similarly, where *pygmaea* is mid-grey to greyish-olive from chin to breast and flanks, with diffuse white streaks along the shafts making a soft pattern spreading out from the chin, *plateni* is blackish on the chin and throat shading to dull chestnut on the lower throat and breast and to rusty-buff on the flanks (2) with very bold, mostly white feathers bunching under the chin and radiating onto the breast in sharp narrow white streaks with slightly bulbous tips (2), creating a totally different pattern. Because *pygmaea* has the lores darker brown than the crown and riding over the eye in a vague supercilium (1), while in *plateni* the crown, lores and supercilium are equally dark, the difference in pattern when specimens are viewed frontally is even more striking. Mensurally there are small but statistically significant differences between the two taxa, with *pygmaea* slightly shorter in bill (5%) and wing (8%) and markedly shorter in tail (11%) (score 1; Tables 1–2). A score of 9 indicates that the two taxa—Visayan Pygmy Babbler *S. pygmaea* and Mindanao Pygmy Babbler *S. plateni*—are unquestionably better regarded as two species.

Macronous (gularis) bornensis

Throughout most of its substantial range, the Striped Tit-babbler *M. gularis* is characterised by its rufous crown shading to pale olive-brown mantle and back with rufous-tinged wings and tail, pale yellow underparts, supercilium and lores with fine black streaks from chin to breast. This roughly holds for all of continental Asia plus Sumatra and its satellite islands and Palawan in the Philippines. However, on Borneo and its associated islands and Java the situation changes rather dramatically: birds here are larger (1; Tables 1–2), rich chestnut above (3) with blackish or dark grey supercilium and lores (2), stonier-white below with little if any yellow (2) with broad black streaking, usually including a distinct malar or submoustachial stripe (3).

Taxa belonging to *M. gularis* are, as recognised by (and in the sequence of) Dickinson (2003): *rubricapilla*, *ticehursti*, *sulphureus*, *lutescens*, *kinneari*, *versuricola*, *saraburiensis*, *connectens*, *inveteratus*, *condorensis*, *archipelagus*, *chersonesophilus*, *gularis* and Palawan's highly disjunct and slightly anomalous *woodi*. Taxa belonging to *M. bornensis* are: *zopherus*, *zaperissus*, *everetti*, *javanicus*, *bornensis*, *montanus*, *cagayanensis* and *argenteus*. Some of the insular forms are less chestnut and rather greyer above, as is the rather distinctive *montanus*, and the subspecies *zopherus*, from the Anamba Islands, has a supercilium 'olive-buff, with obscure streaks of dusky' (Oberholser 1917), which makes it, as its geographical position might indicate, a link to mainland forms of *gularis*; on the other side, nominate *gularis* from Sumatra is notable for an increase in the intensity of the breast-streaking, again indicating a bridging tendency towards *bornensis* and its races. Nevertheless, the heavily streaked and lightly streaked taxa continue to fall into two distinct groupings based on the above characters.

That these two groups represent two well-separated lineages is at least hinted at by the co-occurrence on Java of what is here to be called *M. b. javanicus* and Grey-cheeked Tit-babbler *M. flavicollis*, which is very similar in appearance to *M. g. woodi* of Palawan. Whether in fact *woodi* might be considered specifically separate from the rest of *gularis* is a question worthy of further investigation, but on simple morphological evidence it does not meet the level of distinctiveness here needed for such recognition. Meanwhile, to maintain some continuity in the established English name I suggest that *M. gularis* might be known as Pin-striped Tit-babbler and *M. bornensis* as Bold-striped Tit-babbler.

Micromacronus (leytensis) sordidus

This tiny and remarkable Philippine babbler falls into two markedly different subspecies. By comparison with the nominate *leytensis* (Leyte and Samar), which is bright yellow below and dirty yellow-green above with broad

bold yellow lores and supercilium, the Mindanao form *sordidus* is overall much duller, without the bright yellow tones. Thus above it is a shade duller and greyer (1), below pale yellowish-grey to greenish-olive (2), with a horn-grey (not black), paler-based and slenderer bill (1) and, perhaps most crucially, grey-green lores and supercilium, continuous with the crown (3). According to the original diagnosis, *sordidus* is a larger bird (wing average 44.6 [43–47, n=5] *vs* 40.8 [40.5–41, n=2]; tail average 30.6 [30–31, n=5] *vs* 27.5 [27–28, n=2]) than nominate *leytensis*, but with shorter elongated back and flank plumes (score 1–2) (Ripley and Rabor 1968). Rand (1970) had speculated that *sordidus* merited specific rank, and in this review a score of 8–9 carries it there, and for it I suggest the name Mindanao Miniature Babbler (with Visayan Miniature Babbler for *M. leytensis*).

***Turdoides caudata huttoni*‡**

'Based on morphology and noticeably different vocalisations from *T. caudata*, *huttoni* (with *salvadorii* of Iran and Iraq) is clearly better considered a separate species', wrote Rasmussen and Anderton (2005). Although lying almost outside the Asian (Oriental) region, *huttoni* occurs in a small area of westernmost Pakistan and in any case is a potential split from a taxon in the Asian region, so it merits consideration here.

Rasmussen and Anderton (2005) distinguished *huttoni* from *caudata* by its larger size, heavier, longer bill, paler, greyer plumage generally, dark streaks on breast and sides, and relatively distinctive vocalisations; in their illustration caption they also mention its lack of rufous tones on cheek and flanks. They characterised the north-west Indian subspecies *eclipes* of *caudata* as 'slightly larger and paler overall than widespread nominate'. However, in reinstating *eclipes* as a subspecies, Abdulali and D'Cunha (1982) produced data suggesting that *eclipes* sits fairly well between *caudata* and *huttoni* in size (Table 3): in terms of wing and tail it is certainly more than 'slightly' larger than *caudata*, and while the bill of *huttoni* emerges as decidedly longer, there is considerable overlap in ranges. My own sampling in BMNH clearly suggests a progressive increase in bill length (*caudata* 20.1 ± 0.34, range 18–22, n = 16, *eclipes* 21.3 ± 0.26, range 20–23, n = 13, *huttoni* 23.1 ± 0.35, range 21–25, n = 16; *caudata vs eclipes* $P < 0.05$, *eclipes vs huttoni* $P < 0.01$, *caudata vs huttoni* $P < 0.001$). Thus it seems that *huttoni*, rather than being a sharp step up in size from *caudata* (including *eclipes*), is at the end of an east–west stepped cline in increasing size.

Nor is it obvious that the 'paler, greyer plumage generally' is anything more than subspecific variation in shading. Laid out dorsally and ventrally, the samples from which I derive my bill measurements above show *huttoni* to be noticeably paler and greyer than the other two taxa on the lower upperparts, tail and especially wings, more consistently to possess light streaking (it is misleading to describe it as 'dark') on the breast-sides, and indeed to be less suffused with 'rufous tones' (these are in any case very weak and more a matter of intensity of buff) on cheeks and flanks. Again, however, there is a degree of overlap: a specimen of *eclipes* from Punjab (BMNH 1949.25.2796) is almost identical in size to one of *huttoni* from Baluchistan (BMNH 1923.12.23.67) (respectively bill 21, 22; tarsus 32, 30; wing 76, 83; tail 118, 119) and has stronger streaking on the breast-sides. Altogether, therefore, one might score *huttoni* 1 for greater size (including bill), 1 for greater pallor (including loss of 'rufous tones') and 1 for streaked breast. Vocalisations in *huttoni* may be distinctive, but the degree of variation in *caudata* and indeed in *Turdoides* babblers generally suggests that a great deal of sampling is needed before a solid conclusion on this point can be reached. Certainly the two sets of sonagrams for *caudata* in Rasmussen and Anderton (2005), from Rajasthan and southern Pakistan, appear as different from each other as either is from the one set they provide for *huttoni*, and the impression one has from them is that a relatively small subset of calls or songs has been captured. In any case, even were *huttoni* to score 3 for major vocal differences, it would still fall short of the threshold for species status. Pending further review, therefore, it would appear to be simpler at present to leave it as a race of *caudata*.

Table 3. Means of measurements of specimens of *Turdoides caudata* in Bombay Natural History Society as provided by Abdulali and D'Cunha (1982). Sample sizes were 27 males and 10 females of *caudata*, five males and five females of *eclipes*, and four males and three females of *huttoni*. Bill measurements contrast with my own from skull, so are presumably from feathering.

	bill♂	bill♀	leg♂	leg♀	wing♂	wing♀	tail♂	tail♀
caudatus	18.7	19.6	25.9	26.3	79	76.8	108	102.5
eclipes	19.6	19.7	26.4	24.7	84.6	80	120	110.4
huttoni	21.6	21.5	28.9	27.5	87.5	84.3	119	105

***Babax lanceolatus woodi* ‡**

Rasmussen and Anderton (2005) wrote: 'Lushai Hills and Chin Hills *woodi* is markedly dissimilar in several aspects of morphology (e.g. blackish-streaked *vs* more uniform rufous crown, blackish-streaked *vs* rufous-streaked mantle to rump, upperparts feathers edged buff not grey, moustache solid black) and in vocalisations from *B. lanceolatus*... of E Tibet, S China and N Myanmar, and is probably better treated as a full species; further study needed'. These authors, who despite these comments provisionally retained *woodi* in *lanceolatus*, offered several sonagrams of singing *woodi* and *lanceolatus* which certainly suggest a difference, but given that (a) several song-types occur in *woodi* (*lanceolatus* is not otherwise represented in the book), and (b) variation both within and between populations of *lanceolatus* must be expected, confidence that these distinctions are consistent cannot be particularly strong.

Based on the one specimen of *woodi* in BMNH (type of '*victoriae*', 1905.9.10.733) and five in AMNH, *woodi* looks very similar to many specimens of *lanceolatus*. In *lanceolatus* the centres to the feathers from crown to rump are dark chestnut, with buffy-brown fringes on the crown and greyish-buff fringes on the dorsal area, whereas in *woodi* the centres are blackish, the fringes on the dorsal area buffy, and the feathers on the crown longer, with more chestnut edging, making altogether for a bolder upperpart pattern (2). The throat (always) and upper breast (usually) of *lanceolatus* are unmarked creamy-white with very fine dark streaks emerging on the lower breast, whereas in *woodi* there is very fine dark streaking from the throat down, with fuller, darker-centred streaking on lower underparts (1). In *lanceolatus* the submoustachial stripe is variable, from chestnut to blackish-chestnut, while in *woodi*

it is black or at least blackish (1). The label of the type of *victoriae* mentions 'irides yellow, bill dark horny, legs and feet lighter'; that of a specimen of *lanceolatus* (BMNH 1937.1.7.297) states 'iris yellow, bill black, l.f. [legs and feet] horny grey', which suggests no serious difference in bare-part coloration between the taxa. Mensurally *woodi* is very slightly larger in bill, tarsus and wing, but not statistically significantly so, and significantly shorter-tailed, albeit only by 4% ($P < 0.05$) (no score—see Introduction, Tables 1–2). Altogether, on present evidence (score 4) the better option at present is to continue to regard *woodi* as a moderately distinctive subspecies of *lanceolatus*.

Cutia (nipalensis) legalleni

Photographs in Collar (2003) indicated the candidacy of this split. The form *legalleni* (south-central Vietnam) is very distinct from other taxa in Cutia *Cutia nipalensis*, in the following ways: in both sexes, the entire underparts except for the chin and throat-sides are barred black (2), the wing is shorter (1), the tail is longer so that the distance between the elongated uppertail-coverts and tail-tip is longer (1), and the white outer tail-tips are distinct (in other subspecies vestigial or absent) (no score); in the male, the rufous upperparts are darker, becoming chestnut on the uppertail-coverts (1); in the female, the lores, crown, nape and ear-coverts are drab brown, whereas the crown and nape are greyish-blue in other subspecies (2), and the base colour of the mantle, scapulars and back is duller, deeper buff, and the dark spots are longer and stronger, forming a streakier pattern (1). Tables 1–2 indicate the mensural differences in question.

On this basis *legalleni* easily qualifies as a separate species. However, the situation is complicated by the recent description of the subspecies *hoae* (Eames 2002). This new form, of which only the type is available in BMNH and of which only male specimens have been collected, is geographically close to *legalleni* and approaches it in several features, namely the narrowness of the barring on the underparts (not given a score above because of this shared character), the larger white tail-tips than on other taxa (but still not as extensive as in *legalleni*), the absence of minute white (male) or whitish-buff (female) tips to the outer vanes of the inner primaries and secondaries (present in all other taxa), and grey (*hoae*) or buffy-grey (*legalleni*) rather than buffy-olive (other taxa) scapulars. On the other hand, the dorsal rufous is, as indicated by Eames (2002), shaded as in subspecies *melanochima* rather than *legalleni*, and my measurement of the tail of the type of *hoae*, 63 mm, coincides with that of Eames (2002) although the uppertail-coverts fall 37 mm short of the tail-tip, which may be an artefact of the preparation.

Eames (2002) was only able to note that in the field the underparts of female *hoae* strongly resemble those of the male. This then leaves unresolved whether female *hoae* has crown and nape, and mantle, scapulars and back, like *melanochima* or like *legalleni*. If they are like *melanochima*, *hoae* belongs with *nipalensis* and *legalleni* becomes a monotypic species. If they are like *legalleni*, *hoae* belongs with *legalleni*, which becomes a polytypic species—scoring 2 for narrowness of underpart barring rather than completeness, 1 for longer distance between uppertail-coverts and tail-tip (irrespective of tail length), 1 for absence of tiny white tips to flight feathers, 1 for greater amount of white on tail-tips, and 2 and 1 for the shared female features. On the basis of the greater known similarities between *hoae* and *legalleni* than between *hoae* and *melanochima* (the greatest of which is the all-white chin to vent), it is perhaps better at present to assign *hoae* to *legalleni* than to *nipalensis*.

The names Himalayan Cutia and Vietnamese Cutia seem appropriate.

***Gampsorhynchus (rufulus) torquatus* ‡**

Of nominate *G. rufulus* Rasmussen and Anderton (2005) remarked: 'Surely not conspecific with the extralimital *Gampsorhynchus* [*rufulus*] *torquatus*, which has very different vocalisations and several morphological distinctions. At Namdapha (SE Arunachal), *G. rufulus* did not respond to playback of *torquatus* tapes (CR [C. Robson])'.

Conflating general sources, as currently constituted White-hooded Babbler *G. rufulus* occurs in the north-east Indian subcontinent from east Nepal east to south-west China and northern and western Myanmar west of the Irrawaddy River (nominate *rufulus*), central and south-east Myanmar east of the Irrawaddy River, south-east Yunnan and Thailand (*torquatus*), northern Indochina (*luciae*) and extreme southern Thailand and Peninsular Malaysia (*saturiator*) (Robson 2000, Dickinson 2003, Rasmussen and Anderton 2005). There is no doubt that the morphological shift from *rufulus* in the north-west to *luciae* and *saturiator* in the south-east is a major one, such as to invite considerable sympathy for a re-drawing of species limits. Unfortunately, however, the intervening populations of *torquatus* in Myanmar are relatively variable, even within collecting localities. Such variation is not sex-related and it seems not to be age-related. Thus BMNH possesses two specimens of *torquatus* from the Karenni region of eastern Myanmar (east of the Irrawaddy), one (88.4.20.633) with an unbroken dark breast-band (something otherwise only found in *luciae*) and one (82.1.20.955) with not a trace of one (as in nominate *rufulus*); from the closely adjacent Toungoo there is another specimen (88.4.20.634) with not a trace of a breast-band and indeed an all-white head (the two preceding have some buff-brown feathering on the crown), so that it can only be distinguished from nominate *rufulus* by its slightly rustier buff-brown upperparts; exactly similar specimens (1924.12.22.20 and AMNH 203972) come from further south-east, at Umphang on the Thai side of the international border. Moreover, there is a specimen (1938.4.14.23) from *west* of the Irrawaddy, on the Chindwin River, which shows a trace of the breast-side (half-collar) mark that characterises *torquatus*. These central Myanmar birds are, on average, relatively lightly stained orange-buff below, whereas birds from Tenasserim are generally more strongly marked on the underparts, and the half-collar is darker and more obvious. Variation in the development of the half-collar and the intensity of the staining continues in Thailand, and the characters only become much more stable in the populations as they reach their southern (*saturiator*) and eastern (*luciae*) extremes.

It is therefore initially somewhat problematic to characterise and score the differences between nominate *rufulus* and the remaining taxa in *torquatus*. The most constant features of the latter are rustier-brown upperparts (score 1), stronger buff-tan staining below (1), a short half-collar on the breast-side (1–2), the reduction to a few white feathers of the generally prominent (though often partly concealed) white wing-slash (median and lesser

Table 4. Proportions of specimens of *Gampsorhynchus rufulus* (= nominate; here split) and *G. torquatus* (with other races except *rufulus*) in various museums (initials glossed in Introduction) which show a foxy-rufous crown indicating immaturity. FMNH = Field Museum of Natural History, Chicago (data from D. E. Willard *in litt*. 2006).

	AMNH	BMNH	FMNH	MNHN	RMNH	USNM	Total	%
rufulus	8/35	22/85	3/12	1/3	3/8	1/5	38/148	25
torquatus	0/13	0/62	0/6	0/18	0/1	0/40	0/140	0

coverts) of *rufulus* (2), and a tendency to buff-brown feathers in the (usually hind-) crown (no score). However, C. R. Robson (verbally 2006) possesses tape-recordings of *torquatus* and subspecies to the east, and of *rufulus* from throughout its Himalyan and Thai range, and reports that the vocalisations are constant within these two groupings and entirely different from each other (3). Thus, despite the anomalies that appear in the Irrawaddy basin (the situation at Umphang seems particularly intriguing), which suggests a certain degree of intermixing of characters possibly through hybridisation or owing to high variability in some populations of *torquatus*, a score of 8–9 takes nominate *Gampsorhychus r. rufulus* to species level (leaving other forms of *torquatus* to cluster under the suggested English name Collared Babbler).

In *Gampsorhychus rufulus* immature birds have a foxy-rufous crown to nape, shading yellower on the face and neck-sides, but this feature appears to be only very briefly if ever shown in *G. torquatus* and its races, suggesting a possible taxonomic feature. Meyer de Schauensee (1934) reported on a newly fledged *torquatus* in which 'the top of the head is orange fulvous mixed with white on the forehead', but this is the only evidence I can find of *torquatus* showing this coloration, and even in this case it was confined to a small area of the crown rather than, as in *rufulus*, affecting the entire head. USNM 350126 from Doi Pu Het, Thailand, 13 June 1935, is labelled as a moulting juvenile but shows no sign of rufous on the head. Table 4 shows this striking disparity, with 25% of all *rufulus* and 0% of all *torquatus* showing rufous crowns.

Alcippe (castaneceps) klossi

Photographs in Collar (2003) indicated the candidacy of this split. Even with the recent addition of race *stepanyani* (Eames 2002), subspecific variation in Rufous-winged Fulvetta *A. castaneceps* is slight except on the Da Lat Plateau of southern Vietnam, where *klossi* occurs. This form differs from all other subspecies of *castaneceps* by its sooty-black rather than dark chestnut crown (2), off-white, much broader streaking on the crown and much less pronounced white supercilium (2), dull ochre-brown primary panel *vs* bold whitish and strong orangey-rufous or chestnut primary panel (2), broad olive-rufescent fringes to blackish-brown greater coverts, resulting in far less visible black on greater coverts (1), paler (notably on the lower mandible) and longer bill (2) and rather longer tail (1) (Tables 1–2). Robson (2000) further noted that the irides of *klossi* are grey-brown as against deep crimson in remaining *castaneceps*, although a specimen of the former in USNM is labelled as having 'clay-red' eyes (no score). This score of 10 lifts *klossi* (Black-crowned Fulvetta) to species level. It is perhaps worth remarking in this regard that Robinson and Kloss (1919), who first described *klossi* (under the name *atriceps*), gave it full species status even while describing other highly distinctive taxa, including two—*Garrulax (merulinus) annamensis* and *Cutia (nipalensis) legalleni*—here raised to species level, as subspecies.

Alcippe (ruficapilla) danisi†

Spectacled Fulvetta *Alcippe ruficapilla* is divided into two northern (Chinese) taxa, nominate *ruficapilla* and *sordidior*, and two southern ones, *danisi* (Laos) and *bidoupensis* (Vietnam). Eames *et al*. (1994) reviewed the characters of their new *bidoupensis* when allying it with *ruficapilla*, and in doing so remarked: 'it is arguable that *bidoupensis* 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'. Later, however, under *A. ruficapilla* in Inskipp *et al*. (1996), C. R. Robson commented: 'The forms *danisi* and *bidoupensis* are very distinct morphometrically and initial analysis of calls (of *bidoupensis*... with *A. r. sordidior*) shows a marked difference. The two forms merit specific rank in *A. danisi* Indochinese Fulvetta.' In making this split, Robson (2000) offered no further explanation. Dickinson (2000) declined to follow him, since 'detailed argument remains to be published'.

Eames *et al*. (1994) examined in detail the records of the taxa in *ruficapilla* and cast doubt on the re-allocation of certain records of *sordidior* in southern China to *danisi*. They thereby maintained *danisi* as a Laos endemic, and provided tabulations of the characters distinguishing the four forms in question. From these tabulations the following scoring results: crown of *danisi* and *bidoupensis* greyish-brown rather than rufescent-brown (score 2); throat whitish with brown streaks with breast pale vinous-brown, rather than throat and breast whitish with light greyish streaks (2); ear-coverts lightly streaked *vs* plain (1), postocular supercilium buffy-whitish *vs* pale grey (1); outer primaries fringed warm brown *vs* pale grey (such that the effect of a prominent blackish-and-whitish wing-panel is lost, or almost so) (1); bill seemingly slightly darker brown (no score). These differences are apparent in material at AMNH and BMNH, neither of which, however, holds *danisi*, so that information on this form is taken on trust from Eames *et al*. (1994), where it is indicated that the differences between *danisi* and *bidoupensis* are small—browner crown and no (rather than a highly reduced) wing-flash in the latter (Robson 2000). Thus, a score of 7 takes *danisi*/*bidoupensis* just over the threshold for species status, irrespective of whether there are vocal differences from *ruficapilla* as suggested in Inskipp *et al*. (1996), while the differences between these two taxa amount to no more than a score of 2, and maintain them as a single polytypic species.

Discovery of populations showing intermediate plumage between *sordidior* and *danisi* seems possible,

in which case the new arrangement would collapse back into the old. It should also be noted (1) that the illustration of *danisi* in Robson (2000) poorly reflects the appearance of *bidoupensis* in BMNH skins and in photographs in Eames *et al*. (1994); and (2) that the claim in Inskipp *et al*. (1996)—that '*danisi* and *bidoupensis* are very distinct morphometrically [i.e. from the other two taxa]'—is not borne out by the tabulation in Eames *et al*. (1994), which gives (wing) 50.5–58 mm (*ruficapilla*), 51–58 mm (*sordidior*), 57 mm (*danisi*) and 56–62 mm (*bidoupensis*), and (tarsus) 20.5–22 (*ruficapilla*), 20–21 mm (*sordidior*), 22 mm (*danisi*) and 22–25 mm (*bidoupensis*). There is a tendency to larger size in *danisi* and *bidoupensis*, but on this evidence it is not 100% diagnostic.

***Alcippe (cinereiceps) manipurensis*‡**
Alcippe (cinereiceps) formosana
'Species limits probably best restricted to include only *manipurensis* and *tonkinensis*, based on morphology and vocalisations' (Rasmussen and Anderton 2005).

Streak-throated Fulvetta *A. cinereiceps*, as commonly constituted, is somewhat problematic. The taxa *manipurensis* (north-east India south of the Brahmaputra, northern Myanmar and western Yunnan) and *tonkinensis* (south-east Yunnan, western N Tonkin in Vietnam) certainly share several features that set them apart from other forms of *cinereiceps* (although there are no obvious morphometric distinctions): they have far stronger throat-streaks (2) and lateral crown-stripes (2), marginally darker breasts (no score), much stronger rust-coloured lower belly and flanks and edges to the inner primaries (2). Unfortunately, Rasmussen and Anderton (2005) did not supply evidence of the different vocalisations to which they referred, but such evidence is taken on trust here, since even a minor difference (1) achieves the necessary score. *Alcippe manipurensis* takes with it the English name Streak-throated Fulvetta, with Grey-hooded Fulvetta for the diminished *A. cinereiceps*.

The form on Taiwan, *formosana*, was not marked down by Collar (2004b) as a particularly likely split, but reference was made to its being 'closest plumage-wise to races *manipurensis* and *tonkinensis* than... to adjacent mainland *guttaticollis*...' and of all taxa in *cinereiceps* 'having much the most clearly marked and extensive throat-streaks of all, and much the strongest and most extensive rufous wing-panel'. With *manipurensis* and *tonkinensis* now split off, the question indeed arises whether *formosana* belongs with them or should stand alone. Against the remaining taxa in *cinereiceps* (nominate *cinereiceps*, *fucata*, *fessa* and *guttaticollis*) it scores for pink-tinged greyish (not black) bill (1), black lores (2), white eye-ring (2), streaked ear-coverts (1), light brown lateral crown-stripes (1), mouse-brown crown (1), strongly brown-streaked whitish breast (2), and strong rusty-tan wing-panel (2), total 13. Against *manipurensis* and *tonkinensis* it scores for pinkish-tinged (not black) bill, appearing yellowish in skins (1), black lores (2), white eye-ring (2), more extensive breast-streaking (1), weaker lateral crown-stripes (1), more olive (weaker rusty) lower belly and flanks (1), and stronger rusty-tan wing-panel (1), total 9. Without reference to vocalisations, *formosana* emerges as a full species (Taiwan Fulvetta) in this analysis. One specimen of *formosana* in BMNH (1913.1.29.27) possesses a bold flash of pure white on the forehead.

***Alcippe (peracensis) grotei*†**
Under Mountain Fulvetta *A. peracensis*, Inskipp *et al*. (1996) provided a brief history of the taxonomic confusion associated with *peracensis* and its group, with the concluding observation:

> C. R. Robson (pers. comm. 1995) suggests that *A. p. grotei* is more closely related to [*A.*] *poiocephala* [*sic*; Brown-cheeked Fulvetta] than to other subspecies of *peracensis*. It is sympatric in Vietnam with *A. p[eracensis] annamensis* in several places and differs in morphology and vocalisations (see also Thewlis *et al*. 1996 for Laos) and it therefore warrants treatment as a separate species.

Robson (2000) duly so treated it (with race *eremita*, under the name Black-browed Fulvetta), repeating the case: 'separated here [from *peracensis*] due to widespread sympatry and markedly different biometrics, morphology and voice'. Dickinson (2003), although purporting to follow Inskipp *et al*. (1996) in his treatment of *grotei*, placed it in *poioicephala* and remarked of Robson (2000): 'His detailed findings, which are important, require publication and will then deserve following.'

The situation ought to be relatively simple to resolve. In Vietnam Robson *et al*. (1993) found *grotei* and *annamensis* together in Bach Ma National Park, the former below 700 m, the latter above 900 m. In Laos Thewlis *et al*. (1996) found birds they ascribed to these two taxa in some form of sympatry or elevational allopatry or parapatry in at least two 'National Biodiversity Conservation Areas': at Dong Hua Sao *grotei* was 'common... up to 400 m, but not above' (presumably the 'not above' refers to range, not to abundance), while *annamensis* was 'very common at 900–1,200 m', and at Phou Xang He it was 'seen at least twice... at only 200 m..., in areas similar to those where [*grotei*] was common'. This last observation suggests straightforward sympatry, while the other evidence suggests one form replacing the other altitudinally in several places: either way, this is clearly enough to indicate that two species are involved.

However, Robson *et al*. (1993) failed to clarify whether *grotei* should be reassigned from *peracensis* to *poioicephala* or given independent status. They noted that 'its biometrics, song and altitudinal range place it much closer to... *poiocephala* [*sic*]' although morphologically distinct from both *peracensis* and *poioicephala*. They added that 'further research is currently underway and it is hoped that a paper will be published on the status of *A. p. grotei* in the near future.' Nothing has appeared, and Dickinson's (2003) placement of *grotei* with *poioicephala* and encouragement of the promised paper is understandable.

Tables 1–2 confirm the assertion that *grotei* is clearly distinct from *peracensis* and *annamensis* in its decidedly shorter tail, and that in biometrics it is very close, albeit not identical, to *poioicephala* (race *haringtoniae*). Compared to *haringtoniae*, the coronal bands are blacker (1), the face is predominantly grey rather than pale brownish (1), the chin to belly are pearly white rather than continuous buff (2), with pale greyish-brown flanks (1), the slightly stronger grey crown contrasts more with (and is more sharply demarcated from) the slightly richer, darker, more rufescent upperparts (1), the inner fringes of the tertials, secondaries and primaries are whiter (1), and the song usually rises less at the end (C. R. Robson *in litt*. 2006)—indeed, P. D. Round (*in litt*. 2006) notes: 'song markedly different from *poioicephala*' (2). No other subspecies of *poioicephala*

displays characters that allow a lower score to be tallied, and on this basis the specific separation of *grotei* is upheld.

***Heterophasia (melanoleuca) desgodinsi*†**
Under Dark-backed Sibia *H. melanoleuca* Inskipp *et al.* (1996) mentioned that Smythies (1949) had described 'significant vocal differences' between *melanoleuca* and *desgodinsi*, and remarked that 'they are as different morphologically as are other species in the genus'. Moreover, 'C. R. Robson (pers. comm. 1996) played the song of *H. d. robinsoni* to an individual of *melanoleuca* in north-west Thailand and found no response, although the bird reacted to its own song. A sample involving several tapes and several birds is necessary to assess the significance of this.' This last proviso notwithstanding, Robson (2000) split *desgodinsi* (under the name Black-headed Sibia) without comment. Dickinson (2003) observed that the *desgodinsi* group 'may well be a separate species' but 'detailed substantiation is needed'.

The *desgodinsi* group (*desgodinsi*, *engelbachi*, *robinsoni*, *tonkinensis* and *kingi*; hereafter *desgodinsi*) is clearly distinct from the *melanoleuca* group (*melanoleuca*, *castanoptera* and *radcliffei*; hereafter *melanoleuca*). In *desgodinsi* the crown is sharply delineated from the mantle, whereas in *melanoleuca* the two run together (2); in *desgodinsi* the mantle, back and scapulars are distinctly paler than the crown, wings and tail, in shading between relatively pure grey and duller, rufous-stained grey, whereas in *melanoleuca* these parts of the body are various shades of very dark rufous-brown (2); in *desgodinsi* the breast and flanks are suffused with pale grey, emphasising the clear white of the throat and belly, whereas in *melanoleuca* the underparts are a hard white with a very slight buff discoloration (2); in *desgodinsi* the interramal (uppermost chin) feathering is usually white, in *melanoleuca* usually black (no score); in *desgodinsi* the tail-tips are greyish-white and broad, notably on the central feathers, whereas in *melanoleuca* they are whitish and narrow (2). A total score of 8 does not convey the strength of the visual difference that an examination of specimen material conveys, but it is enough.

However, it is worth returning to the notes on the songs of *melanoleuca* and *desgodinsi* provided by Smythies (1949, 1986). That of *melanoleuca* is 'about five notes in a minor key... [starting] with a very short trill, which runs into three quick notes on the same pitch and ends with two longer notes dropping in pitch, the last note prolonged and very mournful'. That of *desgodinsi* is 'a melodious phrase of 5–7 notes of unequal interval rising in pitch, sometimes followed by a lower note'. Smythies was familiar with at least the song of *melanoleuca* from several parts of Myanmar, without remarking on any variation in it, and he explicitly records that when he first heard *desgodinsi* he recognised it as a sibia but of an unfamiliar species. These descriptions can fairly be viewed therefore as indicating entirely different songs (score 3; total then 11), and it is worth noting that Smythies heard *melanoleuca* as far north as Mogok in central Myanmar, less than 400 km from 'Laukkaung' (Launggyaung) in north-east Myanmar, where he heard *desgodinsi*.

Yuhina (castaniceps) torqueola
Yuhina (castaniceps) everetti D
Striated Yuhina *Y. castaniceps* breaks up into several well-marked subspecies, of which the most prominent are the two far eastern taxa, *torqueola* of Indochina and *everetti* on Borneo. All members of the species *sensu lato* are plain whitish below and rather pale olive-brown above with darker white-tipped tail, rufous-tan ear-coverts, and variously patterned crown.

Considering these taxa from west to east, *Y. c. rufigenis* (Eastern Himalayas; all ranges simplified from Dickinson 2003) is characterised by whitish-speckled supercilium bordered above by rufous-tan, rufous-tan ear-coverts and contiguous moustachial area, dark-speckled whitish submoustachial area, (brownish-)grey crown with pale shaft-streaks, indistinct pale shaft-streaks on the upperparts, and slight buffy staining to the undersides, especially on the flanks. Race *plumbeiceps* (eastern Assam through northern Myanmar to western Yunnan) differs in being a shade greyer, darker and duller on crown and upperparts with marginally more pronounced shaft-streaks, and cleaner white underparts which extend to the submoustachial area. Nominate *castaniceps* (southern Assam, western Myanmar) resembles *rufigenis* but has a creamier supercilium and rufous-tan crown and nape scaled frontally broad grey-buff, and slightly fainter shaft-streaking above. Race *striata* (eastern Myanmar, northern Thailand) resembles *rufigenis* but the crown is duller, darker and browner with a narrow broken whitish supercilium (no rufous-tan above), ear-coverts paler and duller but with whitish shaft-streaking, underparts cleaner, upperparts with stronger shaft-streaking. All these taxa thus have a fair degree of distinctiveness.

However, the form *torqueola* (central Yunnan to eastern China, eastern north-west Thailand, Indochina; 'Indochinese Yuhina') is more distinct still. It has a greyish crown and narrow grey-flecked white supercilium, rich chestnut-rufous ear-coverts with bold white streaks extending round the nape in a broad, paler (rufous) chestnut collar. There are various ways one might score this remarkable feature, but I allow it 3 for pattern (the striking breadth of the collar) and 2 for its far greater intensity of background coloration and 1 for its bold white streaking (hence 6). It is also a longer-winged and longer-tailed bird than all other taxa except *everetti* (score 1; Tables 1–2), and its call, as documented by Robson (2000), appears to be considerably different from at least other continental taxa (2); from *everetti* it further differs in its crown coloration (2).

In the absence of vocal data, the case of the easternmost form *everetti* (northern Borneo) is rather less tractable. Inskipp *et al.* (1996) followed Smythies (1981) and Smythies and Davison (1999)—albeit neither of the latter carried a justification for this move—in accepting specific status for 'Chestnut-crested Yuhina', but Dickinson (2003), while describing the 'Chestnut-capped Yuhina' as 'very distinct', kept it lumped. Indeed, *everetti* rather closely resembles nominate *castaniceps*, but its crown is richer rufous-tan, lacks the buffy-grey frontal scaling (although the crown feathers may have slightly darker edges, giving a vague scaled effect at very close range), and more fully feathered ear-coverts without pale shaft-streaks (score 3); its lores are (greyish- or buffy-)white (1); its upperparts virtually lack shaft-streaking and are a shade darker (1); its underparts are bolder white, without the vague buffy staining and buffy-grey flanks of *castaniceps*, giving more emphasis to the dusky (brownish-grey) tarsal feathering (1); and its size, like that of *torqueola* (from which it is mensurally indistinguishable) is marginally greater (1; Tables 1–2). This thus achieves a score of 7,

but even so the differences, other than the crown, are very minor and debatable. Of course when *everetti* is compared with the geographically nearest taxon (*torqueola*) or indeed any other subspecies, its score increases beyond the required threshold, but in cases of polytypic species any attempts to split ought to involve comparison with the morphologically closest subspecies, with no allowance for degree of disjunction. Nevertheless, where the morphologically closest subspecies is separated geographically by one or more other taxa in the subspecies, there is a case for adding a point, which would be conveniently reassuring in this case.

Yuhina (flavicollis) humilis D

Inskipp *et al.* (1996), the baseline taxonomy used here, recognised *humilis* (Burmese Yuhina) as a separate species, following King *et al.* (1975), Smythies (1986) and Lekagul and Round (1991), and followed by Robson (2000). However, Dickinson (2003) reunited it with Whiskered Yuhina *Y. flavicollis*, remarking that its separation 'may well be correct, but a thorough study remains to be done'.

The morphometrics and colour patterns of the two taxa appear identical; the differences lie simply in coloration. The forms *humilis* and *clarki* differ from other taxa commonly treated in *flavicollis* by their browner crown and ear-coverts (1) (in the case of nominate *humilis* the crown is barely a shade darker than the upperparts), soft mid-grey *vs* rufous and golden-yellow hind-collar and neck-sides (2), (brownish-)grey (*vs* olive grey-brown) upperparts (1), streaking (albeit very light) on chin and throat (1), and white-centred grey (*vs* dull buffy olive-brown) flank feathers (2). Evidence of any behavioural (especially vocal) divergence would be helpful, but species status is just achieved with a score of 7.

Paradoxornis (gularis) margaritae

Photographs in Collar (2003) indicated the candidacy of the split of *margaritae* from Grey-headed Parrotbill *P. gularis*. The former, from the Da Lat Plateau in South Annam, Vietnam (with a recent sight record from Mondulkiri, Cambodia: C. R. Robson verbally 2006), differs markedly from other subspecies in *gularis* by its jet-black crown (3), dark-mottled ear-coverts (2), slightly richer rufous back (1) and slightly shorter tail (1; Tables 1–2). If the race *rasus* from Chin Hills, Myanmar, which also lacks the black throat and is 'smaller' (Robson 2000), is discounted, the stippled (not solid black) throat (2) of *margaritae*, which in combination with the all-black crown gives a very different appearance to that of *gularis*, entirely settles the issue. The name Black-headed Parrotbill seems most appropriate.

The status of *Stachyris rodolphei*

The history of 'Deignan's Babbler' *Stachyris rodolphei* is very largely written by Deignan himself, but it is unsatisfactorily elliptical. Deignan (1939) established the name *rodolphei* on the basis of three specimens of *Stachyris* from Doi Chiang Dao in north-west Thailand, claiming that

> they cannot be considered representatives of any known species. From *ruficeps* they differ in the absence of yellows in the plumage; from *rufifrons* in having gray lores and throat; from *poliogaster* in the absence of gray from the belly; from *pyrrhops* in having no black on the throat. Moreover, a form of *rufifrons* occurs within 50, if not 25, miles of Doi Chiengdao, and there is even some reason to believe that both *rufifrons* and *ruficeps* occur on Chiengdao itself.

This is immediately puzzling, because it is by no means clear (a) that one, other or both *rufifrons* and *ruficeps* are sympatric with the taxon in question on Doi Chieng Dao, and (b), if allopatry is instead the circumstance, that the differences Deignan mentions are sufficiently strong to warrant species status. Zimmer and Mayr (1943), in reducing *rodolphei* to a subspecies of *S. ruficeps*, commented that

> The babblers of the *ruficeps–davidi* group are still insufficiently understood and this is the reason why *rodolphei* was described as a full species. There are apparently two species involved, the ranges of which overlap in Indochina and on the Burma–Yunnan frontier, a situation comparable to that of *Alcippe nipalensis* and *morrisoniana*. It seems as if *praecognita*, *bhamoensis*, *bangsi*, *goodsoni* and *davidi* belong to the species *davidi*, and all the other forms, including *rodolphei*, to *ruficeps*.

Soon afterwards, Deignan (1945) declared himself 'now of the opinion that *Stachyris rodolphei* may properly be considered a mere subspecies of the *rufifrons* group', but he gave no reason for this. Moreover, he insisted that he had collected *S. rufifrons insuspecta*—also first described in Deignan (1939)—also on Doi Chiang Dao but in 1931, and in shuffling *rodolphei* down to a race of *rufifrons* he was obliged to re-allocate *insuspecta* to *S. ruficeps*. Even so, he admitted that his identification of his *insuspecta* at that site was based on 'one mutilated specimen', whose preservation seems in doubt, since he referred to it in the past tense:

> I now have no doubt that this example belonged to the race later named *insuspecta*, and since de Schauensee took *S. rufifrons rodolphei* in the grasslands at 5,500 feet, I find it impossible to agree with Mayr in his view that the forms of *rufifrons* and those of *ruficeps* are conspecific.

How Deignan could be confident of the identification of a poorly marked subspecies, whose 'fragments' he had not seen for many (perhaps 13) years, is a further puzzle. In any case, eighteen years later Deignan (1963, 1964) changed his position yet again, yet again without explanation, re-establishing *rodolphei* as a full species and dropping both *ruficeps* and *insuspecta* from the Thailand avifauna, replacing the latter two with the combination *S. ambigua adjuncta* (*adjuncta* being the third taxon he had described in his 1939 paper). Subsequently *S. rodolphei* was recognised by Lekagul (1968), King *et al.* (1975), Sibley and Monroe (1990), Lekagul and Round (1991) and Clements (2000), but not by Robson (2000), who regarded *rodolphei* as a synonym of *rufifrons*, and only reluctantly by Dickinson (2003), who thought it unlikely to be valid, possibly an aberrant and in need of study.

C. R. Robson (*in litt.* 2006) reports that there have been repeated records of *rufifrons* from Doi Chiang Dao, one of them by P. D. Round and U. Treesucon in 1987, who caught and photographed a bird, and who in other searches have never encountered birds they could discriminate as *rodolphei* (P. D. Round *in litt.* 2006); Robson himself has been on the mountain in search of *rodolphei*, and only ever found *rufifrons*, and he cannot see what habitat there is (*Stachyris* being in any case rather catholic

in choice) which could be occupied by a second, very similar species. Deignan's (1939) original description (above) indicates that the difference between *rodolphei* and *rufifrons* is very slight, the former 'having gray lores and throat'. Examination of USNM 336890 and 336891 (type), both taken in March (Plate 9), suggests that *rodolphei* possesses somewhat deeper grey lores and supercilium, deeper olive-grey ear-coverts, and possibly greyer throat than in most *rufifrons*, but these differences are small, and in BMNH there are specimens of *rufifrons* that appear to match *rodolphei* on one or more of these characters. My measurements of a sample of BMNH *rufifrons* and the two USNM *rodolphei* show that the latter have rather longer wings (Tables 1–2), but this may be local variation. My inclination is therefore to concur with Robson (2000) that *rodolphei* is for the moment better placed in synonymy with *rufifrons*, although a proper survey of Doi Chiang Dao would be important to lay the matter finally to rest, and visiting birdwatchers should certainly remain alert to the possibility, however remote, that *rodolphei* might yet prove to be valid.

Meanwhile, there remains a great deal of uncertainty about birds in the '*rufifrons*' complex, especially in Thailand and Indochina. Even *S. ruficeps* and *S. rufifrons*, which appear to separate elevationally and seem never to have been recorded sympatrically, are so slight in their plumage differences (and are vocally so difficult to discriminate) that they may well deserve to be treated as conspecific (they certainly would not pass the test used here for species-level decisions on allopatric taxa). A considerable amount of detailed research, and the comparison of a great deal of museum material, will, however, be necessary in order to draw a robust conclusion on the matter, and in the absence of such work I opt for preserving the status quo.

The generic placement of Philippine *Napothera*

In recent lists (Sibley and Monroe 1990, Clements 2000, Dickinson 2003) the genus *Napothera* has consisted of nine species, arranged (with ranges) as follows (species same but sequence different in Inskipp *et al.* 1996):

Eyebrowed Wren Babbler *Napothera epilepidota* (Bhutan to Borneo)
Streaked Wren Babbler *Napothera brevicaudata* (Assam to Malay Peninsula)
Mountain Wren Babbler *Napothera crassa* (Borneo)
Limestone Wren Babbler *Napothera crispifrons* (Yunnan to S Myanmar)
Rusty-breasted Wren Babbler *Napothera rufipectus* (Sumatra)
Black-throated Wren Babbler *Napothera atrigularis* (Borneo)
Large Wren Babbler *Napothera macrodactyla* (Malay Peninsula to Java)
Marbled Wren Babbler *Napothera marmorata* (Malay Peninsula to Sumatra)
Rabor's Wren Babbler *Napothera rabori* (Luzon)

However, these taxa are unusually disparate in size, structure, plumage pattern and coloration for congeneric treatment. The three first-listed are small, shortish-tailed birds, scaled and streaked above in pale and dark brown. The fourth, *crispifrons*, is a mid-sized, longish-tailed bird with grey and white dress. The five last-listed are all rather large, heavy-billed babblers with mid-length tails and different-patterned brown, blackish, grey, white, buff and often rufous feathering. In his relatively neglected assessment, Wolters (1975–1982) saw fit to divide them up into four genera in the following sequence:

Limestone Wren Babbler *Gypsophila crispifrons*
Marbled Wren Babbler *Cacopitta marmorata*
Rusty-breasted Wren Babbler *Turdinus rufipectus*
Black-throated Wren Babbler *T. atrigularis*
Large Wren Babbler *T. macrodactylus*
Streaked Wren Babbler *Napothera brevicaudata*
Mountain Wren Babbler *N. crassa*
Rabor's Wren Babbler *N. rabori*
Eyebrowed Wren Babbler *N. epilepidota*

This seems closer to expressing the considerable differences between these taxa, even if they are all more closely related to each other than to other genera. Certainly the three *Turdinus* belong together on the basis of their size and upperpart pattern, and the three *Napothera* (minus *rabori*, which presumably Wolters never saw a skin of, and which for simplicity in this discussion includes *sorsogonensis*, split above) do likewise on the same basis. It is also understandable why Wolters thought to place the other two, which are relatively distinctive, in their own genera. The case for *Cacopitta* is probably superficial (see below); but where he seems to have been most mistaken was in placing *rabori* in his restricted *Napothera*.

Rand (1960) thought that *rabori* stands between and connects *marmorata* and *macrodactyla* on the one side and *crispifrons*, *brevicaudata* and *epilepidota* on the other, 'combining the characters of each'. However, the very first feature he gave in the description of the type is 'No rictal bristles', which are possessed by all the other species under review. Moreover, the nares are at least partly covered with bristly feathering, and this condition, too, is absent in the other taxa. The rather elongate and densely fluffy feathering on the sides of rump and lower flanks, a feature of several babblers, is particularly copious in *rabori*, much more so than in any other species in *Napothera sensu lato*, and in study skins it actually forms a large flap between the folded wing and the flanks. It is difficult to be sure, but the tibia of *rabori* appear notably long, perhaps as long as the tarsus (they appear so in RMNH 99810, which is, surprisingly for a 1982 specimen, mounted: Plate 6), and certainly proportionately longer than in other *Napothera sensu lato* (possibly the copious rump feathering is related in some way to this elongation). The white spotting on the wing-coverts is very bold and quite different from the much smaller spots on the wings of the only other species in the genus that show them (*epilepidota* and *brevicaudata*), and uniquely *rabori* has white tips to the two outer primaries.

Apart from these morphological distinctions, the salient differences of *rabori* from other members of *Napothera sensu lato* lie in its behaviour. Where all the others hop and maintain the tail in line with the body, *rabori* walks and runs, and cocks its tail to various angles (de Roever 1990, Harrap and Mitchell 1994, C. R. Robson verbally 2006). Where the others have either structured songs (*marmorata*, *rufipectus*, *atrigularis* and *macrodactylus*) or simple whistles (*brevicaudata* and *epilepidota*; *crassa* may have a song) or chattering chorus (*crispifrons*), *rabori* has a high-pitched thin call, totally unlike the call of any other babbler except Bagobo Babbler *Leonardina woodi*, another Philippine endemic (C. R. Robson verbally 2006). Harrap and Mitchell (1994), who first reported this call in *rabori*, judged that in terms of this vocalisation and general jizz *rabori* 'does not resemble the other members of the genus

Napothera' and thought that its placement in a genus of its own might be appropriate. I concur.

My inclination is to group the four large Sundaic babblers in *Turdinus* (including the rather long-tailed *Cacopitta*, which is similar in size and certain plumage features to the others, and *fide* C. R. Robson in song to *macrodactylus*). The three small babblers merit their placement in the restricted *Napothera*, although *crassa* is somewhat anomalous owing to its curiously broad, rounded head and lack of wing-spotting. The intermediate-sized *crispifrons* shares some characters with both the preceding, but owing to its habitat choice and vocalisations seems better separated in *Gypsophila*. Meanwhile *rabori*, which is of course still more anomalous for its outlying geographical position, requires recognition of its distinctiveness through the establishment of

Robsonius, new genus,

diagnosed by a combination of features that include: absence of rictal bristles; part-feathered nares; broad white tips to wing-coverts and outer 2–3 primaries; very copious, dense, elongate rump feathering; fairly long and slightly hooked bill, as in *Turdinus*; high-pitched, insect-like main vocalisation; and walking habit. Material examined: AMNH 807095, BMNH 1977.16.65–66, CM 151227 and 153961, RMNH 99810, USNM 607458, 608086. Type species: *Napothera rabori* Rand, 1960.

Moreover, it is by no means clear that *Robsonius* is in fact a 'wren babbler', and its removal from this group of birds, perhaps to alongside *Leonardina*—although specimens of which show some rictal bristles and little nasal feathering (G. K. Hess *in litt.* 2006)—is in order. Alternative English names which express diagnostic features of two members the new genus would be 'Rusty-faced Babbler' for *N. rabori sensu stricto* and 'Grey-banded Babbler' for *N. sorsogonensis* (with its subspecies *mesoluzonica*). The name *Robsonius* pays tribute to the expertise and contribution of Craig R. Robson with respect to the study of Asian birds and—as this paper amply demonstrates—Asian babblers in particular.

COMMENTARY

The great majority of taxa reviewed here pass the species-level test outlined in the introduction: no fewer than 44 taxa can be elevated to species on the basis of their degree of difference from other taxa, as assessed on both strength and number of diagnostic characters. This represents only two-thirds of the 67 splits that Collar (2003) suggested might be appropriate to bring the Asian babblers into line with the taxonomic treatment of Neotropical antbirds; but this exercise does not claim to be comprehensive, and further separations among the babblers may well be warranted, especially when the vocalisations of more taxa have been recorded and become available for analysis (the taxa that currently compose Streaked Wren Babbler *Napothera brevicaudata*, for example, are subtly but intriguingly divergent in size and underpart patterning, and a review of the vocal evidence would be extremely helpful). However, one upshot of this scoring system is that vocal differences need not be apparent between taxa for species status to be bestowed on them, if the morphological characters are strong enough.

Whether the scoring system itself is to some degree accurate and helpful is another matter. Since I am part of the team that developed it, it is unsurprising that it produces results that fairly well match my intuitive sense of what constitutes a specific rather than a subspecific difference. Others will doubtless form different conclusions; using the phylogenetic species concept, for example, Reddy (2005) drew far narrower species limits in *Garrulax erythrocephalus* and *Pomatorhinus ruficollis*, and similar results to hers would probably result by applying the BOU criteria in Helbig *et al.* (2002). It is certainly true that the system is easiest to apply in simple cases where only two taxa are being compared, and becomes progressively less straightforward with increasing number of taxa and taxonomic groupings within established species, as with *G. erythrocephalus*, *P. ruficollis* and *P. erythrocnemis*.

In terms of points scored, the most distinctive split might be that of *Sphenocichla roberti* (12–15), in part because the vocal evidence was available, followed by *Garrulax gularis* (13+), *Heterophasia desgodinsi* (11), *Napothera* (now *Robsonius*) *sorsogonensis*, *Spelaeornis badeigularis*, *Macronous bornensis* and *Alcippe klossi* (10), *G. imbricatus*, *G. melanostigma*, *G. peninsulae*, *Stachyris pygmaea*, *A. formosana*, *A. grotei* and *Yuhina torqueola* (9), *G. berthemyi* (8–10), *Micromacronus sordidus* and *Gampsorhynchus torquatus* (8–9), *G. annamensis* and *Pomatorhinus musicus* (8+), *G. ruficeps*, *G. courtoisi*, *G. taewanus*, *Spelaeornis oatesi*, *Cutia legalleni* (8), *Rimator albostriatus* and *Paradoxornis margaritae* (7–9), *G. ngoclinhensis* and *S. kinneari* (7–8), and finally *G. bicolor*, *G. calvus*, *G. ferrarius*, *G. castanotis*, *G. chrysopterus*, *Pomatorhinus gravivox*, *P. mcclellandi*, *P. swinhoei*, *P. melanurus*, *R. pasquieri*, *Pnoepyga formosana*, *S. reptatus*, *A. danisi*, *A. manipurensis*, *Y. everetti* and *Y. humilis* (7). These last 16 are patently the most debatable splits, and the ones for which new evidence is most likely to result in further shifts and assortments in species limits, and the possibility of re-amalgamations cannot be excluded.

The species resulting from this revision clearly require assessment for their conservation status. Many are 'restricted-range' birds in the BirdLife International sense (confined to Endemic Bird Areas or EBAs: see Stattersfield *et al.* 1998). Taiwan gains seven new endemic species, *Garrulax ruficeps*, *G. poecilorhynchus*, *G. taewanus*, *Pomatorhinus erythrocnemis*, *P. musicus*, *Pnoepyga formosana* and *Alcippe formosana*, all confined to the Taiwan EBA. Mainland China gains five species. Vietnam 'gains' (inverted commas because at least two in the list had already been elevated elsewhere) six new endemic species, *Garrulax annamensis*, *G. ngoclinhensis*, *Rimator pasquieri*, *Spelaeornis kinneari*, *Cutia legalleni* and *Alcippe klossi*, the first and last of which are restricted to the Da Lat plateau EBA in south Annam (*Alcippe grotei* and *Paradoxornis margaritae* range into Laos). The mountains of south-west Cambodia host *Garrulax ferrarius*, turning the Thailand-Cambodia mountains Secondary Area into an EBA. Sumatra gains two endemic birds, *Garrulax bicolor* and *Rimator albostriatus*, both of which bolster the complement of the Sumatra and Peninsular Malaysia EBA, as does the Peninsula's *Garrulax peninsulae*. In the Philippines the two splits of taxa straddling Leyte and Samar on one side and Mindanao on the other result in no change to the existing EBA, but the importance of the biogeographical break between the two sets of islands is reinforced; the split of *Robsonius sorsogonensis* adds one species to the Luzon EBA. The Eastern Himalayas EBA

'gains' two species, *Spelaeornis chocolatinus* and *S. oatesi*, from the three-way split of *S. chocolatinus sensu lato*, and *Sphenocichla humei* now becomes endemic to this EBA. *Pomatorhinus melanurus* adds one to the list of Sri Lankan endemics and to the Sri Lanka EBA. Myanmar also gains one species.

It is evident that the majority of these 44 'new' species remain of low conservation priority or concern. However, the taxa confined to south Annam—*Garrulax annamensis*, *Cutia legalleni* and *Alcippe klossi*—are likely to be at elevated risk, as perhaps is *Paradoxornis margaritae* and the Cambodian endemic *G. ferrarius*. *Rimator albostriatus* seems very rare on its native Sumatra (I was only able to find four specimens), *Spelaeornis chocolatinus*, *reptatus* and *oatesi* all have very restricted ranges, and the status of the two Eastern Visayas endemics in the Philippines, *Stachyris pygmaea*

Plate 2. Adult *Napothera (rabori) rabori*, Barangay Reina Mercedes, Maconacon, Isabela, Luzon, April 1997. Photo: F. Danielsen.

Plate 5. Lateral view of *Napothera (rabori) mesoluzonica* (AMNH 807095). Photo: N. J. Collar.

Plate 3. Female adult *Napothera (rabori) rabori*, Palanan, Luzon, March 1991. Watercolour painting by M. K. Poulsen. Photo: F. Danielsen.

Plate 6. Mounted specimen of *Napothera (rabori) mesoluzonica* (RMNH 99810). Photo: N. J. Collar.

Plate 4. Adult *Napothera (rabori) rabori*, Barangay Villa Aurora, San Luis, Aurora, Luzon, May 1997 (CMNH 37710). Photo: J. Ferner.

Plate 7. Ventral view of *Napothera (rabori) mesoluzonica* (AMNH 807095). Photo: N. J. Collar.

Plate 8. Ventral view of the type (female; lower) of *Spelaeornis badeigularis* (USNM 390335) and an unsexed specimen (upper) of *S. caudatus* (USNM 335178). Photo: N. J. Collar.

Plate 9. Lateral view of two of three known specimens of *Stachyris rodolphei* (USNM 336890 and 336891 [type]). Photo: N. J. Collar.

and *Micromacronus leytensis*, requires urgent review. On Taiwan *Garrulax ruficeps* appears to be relatively uncommon, or at least very limited in distribution; but the commoner *G. taewanus* may be more at risk, since it faces a degree of genetic swamping from *G. canorus*, which is imported into Taiwan as a cagebird because of its singing capability, and which escapes regularly (L. L. Severinghaus verbally 2003).

Perhaps the most worrying species are *Garrulax courtoisi* and *G. bicolor*. Considerable anxiety and conservation effort now attend the main population of *courtoisi*, which numbers fewer than 200 individuals in a tiny area of Jiangxi province in eastern China (Hong *et al*. 2003, Wilkinson *et al*. 2004). The problem with *bicolor*, by contrast, is that few appear to know exactly where it may now be found: recently considered a common and widespread species in Sumatra (van Marle and Voous 1988), it appears to have been so completely trapped out of its forest haunts that only a single site is known to F. R. Lambert and J. C. Eames (*in litt*. 2006), while J. A. Tobias (verbally 2006), despite several months spent in its range, has never seen it. Some birds can still be found in markets in northern Sumatra, but they are very rare and hugely outnumbered by imported *G. leucolophus* from the continent (C. Shepherd verbally 2006).

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