Taiwan possesses 15 endemic bird species that every birder wants to get during the course of a visit. These are (in order of their scientific description, with date provided) Taiwan Whistling Thrush Myophonus insularis (1862), Swinhoe’s Pheasant Lophura swinhoei (1863), Taiwan Blue Magpie Urocissa caerulea (1863), Taiwan Partridge Arborophila crudigularis (1864), White-eared Sibia Heterophasia auricularis (1864), Steere’s or Taiwan Liocichla Liocichla steerii (1877), Styan’s or Taiwan Bulbul Pycnonotus taiwanus (1893), Yellow or Taiwan Tit Parus holsti (1894), Mikado Pheasant Symaticus mikado (1906), Collared Bush Robin Tarsiger johnstoniae (1906), Flamecrest Regulus goodfellowi (1906), White-whiskered Laughingthrush Garrulax morrisoni- anus (1906), Taiwan Barwing Actinodura morrisoniana (1906), Taiwan Yuhina Yuhiia brunneiceps (1906) and Taiwan Bush Warbler Braddyprurus alisan- drensis (2000). You can fairly well gauge the elevations at which these things occur—and hence the order in which they are likely to be ticked off—by the dates of their description, starting with Roben Swinhoe’s multiple gleanings from the lowlands in the 1860s (his pheasant must have been a captive bird brought to him) and ending (almost) with the climactic six-species achievement of Walter Goodfellow forty years later as he reached the summit of Yu Shan, then Mt Morrison (see Ogilvie-Grant 1906). Most of these species are extremely distinctive, although none is in its own genus (the Yellow Tit has its own subgenus Machlolophus); only the whistling thrush, Flamecrest, bulbul and bush warbler appear to be very close to mainland Chinese forms.

But does the taxonomic distinctiveness of Taiwan end with these species? Taiwan possesses a good many endemic subspecies as well, but how distinctive are they? Which among them might be eligible for upgrading to species level in the event of a new taxonomic revision? While it is always difficult to fix a complete inventory, owing to different judgements about the validity of many taxa and the extent to which they figure in modern treatments, a very preliminary review of the island’s endemic subspecies (78 in this compilation—all, I hope, of those currently or recently claimed) is attempted here, based on a list originally compiled by Brian Sykes and a three-day review of material at the Natural History Museum (NHM) in Tring, U.K.

In this short exploratory survey, I treat each of these taxa in turn. I have sought for and, where found, provided diagnostic characterisation of each subspecies from the standard or original sources, and deal very briefly with various types of uncertainty associated with particular taxa. Where a subspecies is said to be “undescribed” by a source, this still means that the source recognises it as valid. The first paragraph of the entry accounts for the foregoing information. The second mainly provides a commentary based on my examination of specimens at NHM. Each taxon is marked with a symbol to indicate my tentative reckoning: ** = possible full species; * = strongly (clearly marked) subspecies; • = weak (poorly marked) subspecies; ‡ = dubious subspecies; † = subspecies but not endemic; - = no decision possible. I use “eyeballing” to mean just a brief visual comparison, including matching wing and tail lengths against each other. To save space, Handbook of the Birds of the World is indicated, with appropriate volume, as HBW, and I should add that as I wrote the quoted HBW (in press) texts for the thrushes and chats I offer no commentary on their accuracy.

**Chinese Bamboo Partridge Bambusicola thoracicus sonorivox**

Generally darker than nominate; much smaller rufous throat-patch; chestnut (not black) blotches on flanks (HBW 2).

The differences between the two taxa are striking. In the nominate the “rufous throat-patch” is the entire area from below the eyes to the neck-sides, with a grey breast-patch below (but with the rufous encompassing it by forming a narrow line below). In sonorivox the grey of the breast extends around the rufous chin and throat to the neck-sides and over the eyes. The underparts of the nominate, below the breast, are buff with small sparse blackish spotting, almost entirely on the flanks; in sonorivox the underparts are rufous-buff with extensive broad chestnut spotting and scaling (a few nominate show more extensive and broader spotting, but not the same degree) (see Plate 1).

There are further, lesser, differences above (sonorivox more suffused grey and olive, with...
more rufous-tinged crown markings, fewer white spots on wing-coverts and mantle, reduced buff edges to wing-coverts).

**Common Pheasant** *Phasianus colchicus formosanus* • Undescribed in HBW 2. Paler than E Chinese race *torquatus*, with flanks almost whitish-buff and mantle straw-coloured (Madge and McGowan 2002).

The differences between *formosanus* and *torquatus* are as stated, the former also having a green-based rather than blue-based rump, but the two are extremely similar.

**Barred Buttonquail** *Turnix suscitator rostratus* • Undescribed in HBW 3 and Johnsgard (1991), although the latter indicates “a duller non-breeding plumage also exists in some races (rostrata [etc], blakistoni)”. The NHM material, which is diversely labelled, suggests that Taiwan females are slightly more rufous-tinged below and slightly buffier in the wing-coverts and the males have reduced barring on the throat and flanks, but the effects of age and season may be in play. At any rate, *rostratus* appears to be a poorly marked subspecies.

**Grey-capped Pygmy Woodpecker** *Dendrocopos canicapillus* *kaleensis* • Treated by Short (1982)—and hence by Winkler et al. (1995), **HBW** 7 and Dickinson (2003)—as encompassing the population on Hainan, but Cheng (1987) continued to recognise *hainanus* from the latter. Given how improbable it is for the same subspecies to occur on two widely separated islands, especially when there are adjacent, essentially intervening mainland populations, Cheng’s treatment seems appropriate, although Short’s only diagnosis is that “Hainan birds average slightly smaller than those from Formosa, but there is great overlap”.

Taiwan birds are clearly smaller than those on the adjacent mainland. Hainan birds are less clearly smaller than Taiwan birds. The separation of the latter goes back to Stuart Baker (1919), who commented: “There are only two specimens of Hainan birds in the British Museum, but these are smaller than Formosan birds, with smaller bills, and are possibly also rather darker above and less brown below. It is with some doubt that I keep them separate, but Dr Hartert, who formerly considered the two subspecies identical (Novitates Zool. xvii p.222), informs me that a series of 12 birds in the Tring Museum [these will now be in New York, where Short will have seen them] bears out the above characters...”. Both Hainan birds (a male and female) have blacker-streaked crowns than any of the six from Taiwan and than most of those from the adjacent mainland. They are infinitesimally darker green above than Taiwan birds but similar below. The slight size difference appears to be real (a larger sample of both taxa is needed to confirm or refute Short’s “great overlap”). However, on these tenuous distinctions I accept *hainanus*, making *tancolo* endemic to Taiwan.

**White-backed Woodpecker** *Dendrocopos leucotos* *insularis* • Smallest race, similar to *D. l. tangi* but more white on back, more extensive pink below (*HBW* 7).

NHM specimens are decidedly shorter-winged and shorter-tailed than *tangi*, but they have neither more white on the back nor more pink on the underparts.

**Grey-headed Woodpecker** *Picus canus* *tancolo* • Treated by Short (1982)—hence by Winkler et al. (1995), **HBW** 7 and Dickinson (2003)—as encompassing the population on Hainan, but Cheng (1987) continued to recognise *hainanus* from the latter. Given how improbable it is for the same subspecies to occur on two widely separated islands, especially when there are adjacent, essentially intervening mainland populations, Cheng’s treatment seems appropriate, although Short’s only diagnosis is that “Hainan birds average slightly smaller than those from Formosa, but there is great overlap”.

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**Black-browed Barbet** *Megalaima oorti* *nuchalis* **•** Intermediate (with *M. o. annamensis*) between nominate race and black-crowned races *sini* and *faber*, *nuchalis* with red on mantle (*HBW* 7).

Although *nuchalis* can be thought of as intermediate in the way *HBW* suggests, it is in fact less so morphologically than at first glance, and not at all so in terms of geography. Races *oorti* and *annamensis* from SE Asia clearly belong together (rather than *annamensis* with *nuchalis*), differing
Plate 1. *Bambusicola thoracica thoracica* (1914.3.6.13) and *B. t. sonorivox* (63.2.16.5) (above).

Plate 4. *Turdus poliiceps* niveiceps male (1909.10.29.15) (left) and female (96.6.1.657).

Plate 6. *Niltava vivida oatesi* (1933.11.13.106) (left) and *N. v. vivida* (87.12.30.1366).
Plate 2. Ventral view of Megalaima corti oorti (99.3.23.1) (far left), M. o. annamensis (1927.6.5.524), M. o. faber (1914.4.8.7), M. o. sini (1934.6.20.4) and M. o. nuchalis (1907.12.12.109).

Plate 3. Dorsal view of specimens in Plate 2.
in distinct but small ways; the same is true of *faber* and *sini*, which are approximately adjacent in S China. The Taiwan taxon shares the full red breast-patch with the latter pair, and the crown colour with the former pair, but both former and latter are more similar in having red on the hind-crown, whereas *nuchalis* has a red stain on the mantle (not the nape, despite its scientific name). My inclination would be to treat *orti* and *annamensis* as one species, *faber* and *sini* as a second, and *nuchalis* as a third. See Plates 2 & 3.

**House Swift** *Apus nipalensis kuntzi* or *A. affinis kuntzi* -

Intermediate between nominate (i.e. *nipalensis*) and *subfurcatus*, with most heavily streaked rump of any subspecies (*HBW* 5; also Chantler 2000). This is all based on Brooke (1971): “intermediate in general colour between *nipalensis* and *subfurcatus*, but has the rump ashy white and usually with dark shaft-streaks, not clear white as in all other races”. The original description (Deignan 1958) also mentions “general coloration... almost matt black” with a hint of greenish not bluish gloss, and the greyish-white of throat making the definition of light and dark areas less clear.

There appear to be no specimens in NHM, but one bird (1914.4.8.13), simply marked “Takao” and taken by Styan, must be from Taiwan (Styan collected there, Swinhoe lived and took birds in “Takow” (see, e.g., Swinhoe 1865), and a 1922 *Times atlas* marks Takao on the site of modern-day Kaohsiung and indicates no place of the same or similar spelling for anywhere in China). This does not possess a rump any more heavily streaked, ashier or less clear-cut than specimens taken at random from NHM trays for *nipalensis* and *subfurcatus* (latter from the adjacent mainland). Why in any case would a geographical outlier be intermediate between two subspecies that lie to the west and far south-west of it? Of course a sample size of one with a question-mark over its provenance is not the basis of a taxonomic judgement, and I think the distinguished authorities above should be allowed to prevail; but a new look at the evidence would be worthwhile.

**Grass Owl** *Tyto capensis pithecops* (Eastern Grass Owl *T. longimembris* pithecops) -

Treated as synonymous with *chinensis* by König et al. (1999). Larger (than [nominate] race *longimembris* or else race *chinensis*) with some buff suffusion (*HBW* 5).

Four specimens of *pithecops* in NHM are not obviously larger than the five of *chinensis*; however, all are whiter-faced, and three are distinctly paler buff on the breast, whiter on the lower abdomen, and paler on the uppertail (the fourth is matched in these features by one relatively pale *chinensis*). On this slim basis *pithecops* seems valid.

**Mountain Scops Owl** *Otus spilocephalus hambrooki* -

Has no rufous morph; dark brown above with prominent pale collar, buffish and finely streaked below, with very distinct pale facial disc and long bicoloured ear-tufts (*HBW* 5). König et al. (1999) suggest its voice is typical of the species.

NHM specimens are as indicated, and marginally less rufous-tinged below and above. Facial pattern, long ear-tufts and whitish nuchal collar make this a very distinctive form (albeit *vanderwateri* from Sumatra possesses the same collar pattern).

**Elegant Scops Owl** *Otus elegans botelensis* -

Darker and even more finely marked than Japanese birds, often occurring in dark rufescent morph (*HBW* 5).

NHM has no *botelensis*.

**Collared Scops Owl** *Otus bakkamaena glabripes* or *O. lettia glabripes* -

Paler than nominate (letitia) (*HBW* 5); toes bare (König et al. 1999).

Compared to adjacent mainland race *erythrocampe* (name not used in NHM), *glabripes* is not discernibly paler. However, *erythrocampe* has a ruff of feathers bordering the lower facial disc which are largely buff and distinct from the stone-white in the rest of the underparts and face, whereas in *glabripes* this area is stone-white; moreover, there is more buff in the upperparts on *erythrocampe* than in *glabripes*, and the latter's toes are indeed less feathered basally. This therefore seems a moderately distinct subspecies.

**Brown Wood Owl** *Strix leptogrammica caligata* or *S. newarensis caligata* †

This taxon is universally treated as present on both Taiwan and Hainan (Cheng 1987, *HBW* 5, König et al. 1999, Dickinson 2003) but, given the presence of populations (allocated to *ticehursti*) all along the intervening Chinese mainland, the logic and likelihood of this arrangement are questionable. König et al. say “slightly larger than nominate... possibly a synonym of nominate”.

NHM has two specimens from Taiwan (one female, one unsexed), none from Hainan. Wing and tail lengths, eyeballed, do not differ from three (all male) mainland Chinese specimens (race *ticehursti*). The underpart barring on the two Taiwan specimens is slightly vaguer and browner than that on mainland birds, but this may be a sex, age
or individual difference; a female *ticehursti* from Vietnam appears identical to the Taiwan birds. On this inadequate sample and review, I am inclined to regard *caligata* as invalid.

**Tawny Owl** *Strix aluco yamadae* •
Undescribed in both *HBW* 5 and König et al. (1999). Yamashina (1936) diagnosed *yamadae* as similar to *nivicola* (the race from adjacent China) but “decidedly smaller”, with minimal overlap in wing length of eight specimens (256-282 vs 282-312 mm).

Eyeballing wing length of the only *yamadae* in NHM against the single race *ma* and a large series of *nivicola* (split as Himalayan Wood Owl in Rasmussen and Anderson in press) suggests that Yamashina was correct, and I find that Mees (1970) also had a specimen that confirmed the diagnosis.

**Collared Owlet** *Glaucidium brodiei pardalotum* •
Darkest race (*HBW* 5). König et al. (1999) acknowledged no other race except *pardalotum*, but their description involves no comparison.

Specimens in NHM are not noticeably darker than mainland Chinese birds, but the streaks on the lower underparts are darker and more distinct, and the head is all spotted, not (mainly) barred and (slightly) spotted. The pale markings on the upperparts of most *pardalotum* are buffer than in mainland birds. It would be worth checking how different the voice of Taiwan birds is, but on this evidence *pardalotum* is a good subspecies.

**Savanna Nightjar** *Caprimulgus affinis stictomus* •
This taxon breeds in Taiwan and may or may not winter in Indochina (Cleere 1998, Holyoak 2001), but does not breed in the latter as implied in Dickinson (2003). Cheng (1987) and *HBW* 5 list it for Taiwan only. Placed in *monticolus* group by Cleere, and considered in the past to be synonymous with *monticolus*, but the five specimens in NHM are greyer overall (Holyoak 2001). Cleere noted that the type, a female, is buffish-brown above and cinnamon-tinged below, and that two male specimens are also very buffish. Swinhoe (1866) thought Taiwan birds extremely close to *monticolus* and only gave them a name because Blyth, having seen a female specimen, encouraged him to do so.

The five NHM specimens of *stictomus* are indeed less rufous both above and below than specimens of race *amoyensis* from adjacent mainland China.

**Oriental Turtle Dove** *Streptopelia orientalis orii* †
Duller than nominate (*HBW* 4). Very similar to nominate but underparts average slightly paler; probably not valid, but sample size too small (Gibbs et al. 2001). Yamashina (1932) based his description on its smaller size, and “many specimens... somewhat paler in colour than *S. o. orientalis*... breasts more purplish-red and... rump... more greyish-blue”.

NHM holds five specimens from Taiwan. Three are relatively paler-bellied than apparently comparable material from mainland areas and Japan, but I cannot see any reliable way of distinguishing these birds—their wing lengths match those of Japanese birds—and *orii* seems best placed in synonymy with *orientalis*.

**Spotted Dove** *Streptopelia chinensis formosa* †
This race was not mentioned by *HBW* 4 and was rejected by Gibbs et al. (2001), followed by Dickinson (2003), but Cheng (1987) admitted it, and Gibbs et al. acknowledged its minor differences (“may average a little larger and have more white on the outerwebs of the outer tail feathers”). In describing it, Kuroda (1927) regarded it as identical in plumage and merely shorter-winged on average.

Eyeballing three Taiwan specimens in NHM against birds from mainland China, many of the latter have comparable wing lengths and none shows more white on the outertail; so *formosa* seems a likely synonym of *chinensis*.

**Emerald Dove** *Chalcophaps indica formosanus* •
This taxon was rejected by Gibbs et al. (2001) as one of a number of subspecies which “show no significant differences and are best treated as synonyms of the nominate”. Even Cheng (1987) took this line; *HBW* 4 and Dickinson (2003) make no reference to the taxon. Swinhoe (1865) diagnosed it on the basis of black, not greyish-brown undertail-coverts.

NHM has seven specimens from Taiwan, all in essence identical to mainland birds. The undertail-coverts of Taiwanese birds are blackish-grey, but some (collected after Swinhoe) are ash-grey, and this feature appears variable in continental forms also.

**White-bellied Green Pigeon** *Treron sieboldii sororius* •
This subspecies was accepted by Cheng (1987)—who listed it as wintering in adjacent mainland China—and hence by Dickinson (2003), but was ignored as one of several unspecified but invalid races in *HBW* 4, and explicitly rejected by Gibbs et al. (2001): “examination of a good series... could
Plate 5. Brachypteryx montana sinensis male (1903.7.3.282) (left) and female (1900.10.15.53), and B. m. goodfellowi male (1913.1.29.47) and female (1913.1.29.45).
Plate 7. Cettia fortipes davidiana (1905.12.24.731) (left) and C. f. robustipes (type; 1898.9.1.1500).


Plate 11. Lateral view of *Pomatorhinus ruficollis striulus* (1918.6.25.38) (left) and *P. musicus* (1907.12.12.50).

Plate 12. Ventral view of specimens in Plate 11.
confirm none of the diagnostic features nor establish any other significant differences from the nominate”.

NHM contains at least eight females and six males from Taiwan, and a larger series from Japan. In the Taiwan tray D. Goodwin, author of Pigeons and doves of the world, has left a note: “I can see no distinction between the Japanese & Formosan specimens. The original statement (based on comparison with a written description) of the colour differences of back & rectrices are [sic] incorrect”. Indeed, back and tail feathers are uniform. However, males from Taiwan all show yellower crowns, napes and neck-sides than any from Japan; and the females do likewise, though less obviously. On this basis formosae emerges as valid, but the difference could scarcely be slighter.

Whistling Green Pigeon Treron formosae formosae – (**)

From two Japanese races by golden-bronze crown, smaller size, brighter plumage; Gibbs et al. (2001) listed several characters of the fourth race filipina that do not conform with their own description of the nominate—abdomen white, maroon extending onto mantle, iris blue not red, bill without yellowish or greyish tip—but comment that “none of these features seems to distinguish this form convincingly from the nominate”. They do, however, retain filipina, as does HBW 4; otherwise nominate formosae would not be endemic to Taiwan.

Nominat formosae is very and fairly distinct from the northern and southern Ryukyu races respectively, and its separation at species level may be appropriate; this needs urgent investigation, as the conservation status of the species, as currently constituted, is Near Threatened (BirdLife 2001), and a split into two species would probably upgrade both to a higher category of threat (but it is uncertain whether the southern Ryukyu race would belong with its northern or southern neighbour). NHM contains no filipina.

Black-chinned Fruit Dove Ptilinopus leclancheri taiwanus –

Larger than nominate with a longer tail, much more massive bill, darker green upperparts with blue blotching from crown to back, larger, paler, more maroon breast-band, posterior of chin-patch more maroon, underparts much darker. This description is taken from Ripley (1962) by Gibbs et al. (2001), who remarked that taiwanus is “known from very few specimens, most of which are now lost”. HBW 4 did not recognise it but may have missed Ripley (1962) altogether, as they did not admit Taiwan itself in the range of the species, merely “Lan Hsiu” (presumably Lanyu).

NHM holds no specimens. From the description by Ripley, this ought to be a highly distinctive form, and the fact that it is hardly known on Taiwan is completely mystifying.

Slaty-breasted Rail Gallirallus striatus taiwanus †

Palest race, along with race gularis (HBW 3); as pale as race jouyi, but smaller; paler than gularis, upperparts more greyish-olive, white on belly more extensive (Taylor 1998). Yamashina (1932) distinguished it from nominate striatus and race gularis by its being “strikingly pale” above and below, with grey edges to back feathers, grey ground colour of wings and flanks, and broader (twice as broad) white stripes on flanks; and from jouyi by its smaller size.

NHM only holds a small sample of the species in general, and only two Taiwan birds. However, one of the Taiwan birds matches most of those from the adjacent mainland (jouyi) in wing length, and the colour shading is indeed the same; I could find no specimens in NHM from the range of gularis (S China), but as Cheng (1987) did not recognise the latter the differences are presumably vanishingly small. On NHM evidence, Yamashina’s diagnosis only works with respect to nominate striatus, not jouyi, so the validity of taiwanus appears tenuous.

Slaty-legged Crane Rallina eurizonoides formosana –

Colour of throat purer white (HBW 3); upperparts darker than in race amauroptera (Taylor 1998). This latter seems to be based on Seebhohm (1895), who remarked that “compared with immature examples of Rallina eurizonoides... the upper parts... are much darker”.

NHM only possesses the type, which is in immature plumage; in any case the throat feathering is matted. Its lower underparts have the more-black, less-white barring of Philippine populations, and its upperparts are precisely similar dark brownish-olive. Everything hinges on the whiter throat of formosana than nominate eurizonoides.

Black Kite Milvus migrans formosanus †

This taxon was not recognised by Cheng (1987) nor by Ferguson-Lees and Christie (2001), but was accepted by HBW 4, which offered no diagnosis, and by Dickinson (2003), although both latter sources indicated that it also occurs on Hainan (in respect of which the same considerations as for Grey-headed Woodpecker and Brown Wood Owl apply). Ferguson-Lees and Christie (2001) described formosanus as sedentary in Taiwan (not mentioning Hainan) and as “very like lineatus but averages smaller” (hence in their view invalid). NHM does
not possess a copy of the obscurely published original diagnosis by Kuroda in 1920, and Kuroda (1927) merely gave the dimensions of the type.

NHM possesses six Taiwan birds and five from "Amoy" (Xiamen) in adjacent Fujian province. In terms of plumage and eyeballed measurements I see nothing to distinguish the Taiwan birds; I doubt they even average smaller.

Crested Serpent Eagle *Spilornis cheela hoyoa*
Undescribed in HBW 2. Size of adjacent race ricketti; much darker, cheeks and throat blackish, breast nearly plain, rest of underparts clearly spotted (Ferguson-LEes and Christie 2001).
Upheld in NHM.

Crested Goshawk *Accipiter trivirgatus formosae*
Undescribed in HBW 2. Although relatively distant from other populations, the only distinction given is "probably averaging larger even than indicus" (Ferguson-LEes and Christie 2001). The original description (Mayr 1949), however, stressed this taxon's darkness (but disclosing that the sample size was two): adult male "very dark, particularly below", immature female "very dark and heavily marked underneath", the tendency towards darker coloration being "noticeable also in certain specimens from northern Burma and northern Indo-China, but not reaching quite the extreme shown by the two Formosan birds".

NHM possesses four Taiwan birds, two adults (male and female) and two immatures (male and female). The adult female and immatures are no darker above or below than various birds from elsewhere in the range. The adult male is matched for darkness above by two males from Thailand; however, the pale rufous-buff breast-streaks are much browner in the Taiwan bird, and the barring on the belly is mid-brown with paler centres. No size differences suggest themselves. On this meagre basis formosae must provisionally stand.

Besra *Accipiter virgatus fuscicapetus*
Undescribed in HBW 2. Placed with mainland "affinis" group and judged the largest race, darker and browner above (Ferguson-LEes and Christie 2001). The original description (Mees 1970), comparing with mainland affinis, indicated that adult males have "breast and barring on the underparts brown, not so rufous", and "upperparts... brownish-grey rather than pure grey", while adult females are likewise slightly browner below but greyer (less brown) above (so that viewed from above males and females of fuscicapetus show hardly any difference); moreover, male wings are usually >170 mm in fuscicapetus, usually <170 mm in affinis.

Mees (1970) borrowed four NHM Taiwan specimens for his extensive comparisons, but in fact NHM holds no fewer than 13 specimens from the island. His diagnosis of differences between males holds, and on this basis fuscicapetus is validated; but I am stumped by his assertion that females are greyer above than female affinis (some specimens show a greyish gloss, including one borrowed by Mees, but so do several affinis), nor can I see any difference between NHM's two Hainan specimens (both female) which Mees said are brown above and therefore belong with affinis. In the absence of a male from Hainan it is not possible to determine whether fuscicapetus is present there or not; for the moment it is appropriate to assume not (particularly given my doubts about subspecies-sharing between the two islands), leaving fuscicapetus a poorly marked Taiwan endemic.

Long-tailed Shrike *Lanius schach formosae*
This taxon was accepted by Cheng (1987) but not mentioned by Lefranc (1997), Harris (2000) or Dickinson (2003).
Specimens from Taiwan are identical to certain birds from adjacent mainland China.

Eurasian Jay *Garrulus glandarius taiwanus*
Placed in the "bispeculalis" group, distinguished by "blackish mottling on forehead and dusky nasal tuft" (Madge and Burn 1993).
The nasal tufts are black, not dusky, and the mottling is really just a few streaks immediately above the tufts. Other diagnostic features are: smaller and smaller-billed than adjacent mainland sinensis, whiter on abdomen and greyer on scapulars.

Grey Treepie *Dendrocitta formosae formosae*
Placed in the eastern group which is characterised by darker, less patterned plumage with a very white rump and shorter, wholly black tail; nominate formosae fairly brown above and light below, with basal third of central tail feathers grey (Madge and Burn 1993).
Taiwan birds differ from those on the adjacent mainland not only by the grey bases to the tail (black on mainland) but also by the whitish-grey rump (whitish on mainland).

Spotted Nutcracker *Nucifraga caryocatactes owstoni*
Placed in the southern group which is distinguished from the northern group by a mid-brown body, smaller, less intense spotting and relatively longer tail with more white in the outermost feathers; in owstoni ground colour of body sooty-brown (Madge and Burn 1993).
The deeper brown body coloration in oustoni is confirmed, and its blacker cap; moreover, the white mantle-streaks in the nearest Chinese population (race macella) are reduced in oustoni to a few nape-flecks, and the size of breast-spots is also greatly reduced.

Maroon Oriole Oriolus trallii ardens
Having eight years earlier named ardens as a species, Swinhoe (1870) distinguished as a variant the population he found on Hainan under the name nigellicauda, asserting it to be shorter-winged and longer-tailed, with black of neck extending less far down the breast, and black "shafts" to tail feathers. Dickinson (2003) extended the range of nigellicauda to N Vietnam and SE Yunnan, China.

NHM has a good series from Taiwan, with six full-plumaged males including the type of ardens, but only a single full-plumaged male from Hainan, the type of nigellicauda. It also has a good series from Indochina. I cannot see any difference between adult males from Taiwan and from Indochina; and I think the sooty-shaded vanes (not shafts) of the type of nigellicauda are an individual variation (birds of all populations show this in varying degree). Females and immatures from all three areas also appear similar. Measurement of all specimens might disclose some consistent differences of the kind to which Swinhoe alluded, but eyeballing wings and tails suggests no real discontinuities. I suspect the name ardens should apply to all these populations.

Black Drongo Dicrurus macrocercus harterti
Stuart Baker (1918) described this taxon as the biggest of all in the species, with the exception of Himalayan birds (race albircitus), but "separable at a glance by its curiously short tail".

Stuart Baker's diagnosis seems to hold in NHM birds, although some specimens have tails that are comparable in length to those of other taxa. The geographically closest race, cathoeus of E China, is certainly often as long-tailed and, from Stuart Baker's own data, entirely overlaps harterti in wing length; but the bill of harterti appears consistently larger (deeper), and it is more on this basis than any other that harterti seems valid.

Bronzed Drongo Dicrurus aeneus braunianus
Dickinson (2003) admitted two other subspecies, of which the closest to approach Taiwan is the nominate, ranging from India through Indochina to S China. Swinhoe (1863) compared his specimens of braunianus with specimens from India, and noted that the bill is always shorter and broader-based, with higher feathers on the culmen, while the head and back feathers are shorter and rounder, reflecting purple and blue instead of copper-green; breast-sheen similar, but feathers there much larger and round instead of lanceolate; wings and tail black below (not brown), and wings longer; feathers of tail much broader, sheen again blue not green.

Although NHM lacks material from adjacent mainland China, many specimens of nominate aeneus from Indochina are available. Comparison of these with braunianus bears out Swinhoe's diagnosis well, with the exception of bill dimensions and shade of undersides of wings and tail.

Black-naped Monarch Hypothymis azurea oberholseri
Stresemann (1913) diagnosed this taxon as very like nominate azurea in colour but on average larger with slightly less violet on the back and generally larger nape-mark. He added that the adjacent mainland race styani is on average smaller, and the white of the undersides reaches higher on the belly.

At a glance I cannot see any obvious difference in back colour between oberholseri and azurea, or in the extent of white on the belly between oberholseri and styani; however, the black nape-mark is indeed generally larger in oberholseri than azurea, and both azurea and styani appear smaller. The bill of oberholseri looks stouter than in azurea, shorter than in styani.

Island Thrush Turdus poliocephalus niveiceps
Possibly best candidate for species status among at least 51 subspecies of Island Thrush, being highly distinctive in plumage, the only subspecies with pronounced sexual dimorphism, and much the most northerly outsider; male white-hooded with blackish upperparts and breast-band shading to orange belly with broad black-and-white-striped vent, female similar but browner above, head brown with buff postocular supercilium, buff-speckled cheeks, buff submoustachial and throat with dark-stippled malar and throat-streaks; only in this race does female show complex facial pattern and dark throat-streaks (HBW in press).

I am not in favour of a major splitting exercise on poliocephalus, but re-checking NHM material certainly reinvigorates my sense that this taxon may be a special case within the poliocephalus complex. See Plate 4.

White-browed Shortwing Brachypteryx montana goodfellowi
Race goodfellowi rather different from others in plumage, bill morphology (much longer than other races) and voice, and conceivably a separate species; male olive-brown above, slightly rustier
on forehead and rump, with long concealable white supercilium, paler below and whitish on mid-belly, bill black, legs brown, female similar but with a slightly weaker supercilium (HBW in press). The song is untypical (OBC Bull. 30: 60).

Shortwings may be to Asia a little of what tapaculos Rhinocryptidae are to South America: possibly a complex of species hides behind the considerable morphological uniformity that has led systematists to unite so many taxa under this one species. The long-billed, female-plumaged *goodfellowi* is among the most distinct of current subspecies, and certainly warrants detailed analysis, involving close vocal comparisons, to determine its most appropriate future treatment. See Plate 5.

**Snowy-browed Flycatcher** *Ficedula hyperythra innexa* –
There is no useful published diagnosis that I have been able to find.

Eyeballing specimens in NHM is inconclusive; they are too few (none from SC China, apparently the nearest mainland area for the species) and too dishevelled to make quick progress with. I cannot see any obvious differences with nominate birds from the Himalayas. Sharpe (1879) put it in synonymy with *hyperythra*.

**Vivid Niltava** *Niltava vivida vivida*
Salvadori (1887) separated the race *oatesi*, which came to encompass all continental forms, on the simple diagnosis that it is larger than *vivida*, which was first named by Swinhoe from Taiwan.

The size discontinuity is striking, although there seem to be no plumage differences (or none obvious on a cursory glance). It would be interesting to compare voices. See Plate 6.

**White-browed Bush Robin** *Tarsiger indicus formosanus*
The distinctive isolated form *formosanus* clearly represents an offshoot of *indicus* but might better be treated as a separate species, particularly if vocally different, but it has been judged to hybridise with Collared Bush-robin *T. johnstoni*, which complicates any taxonomic assessment; male like male nominate above but with ochreish-olive crown diffusing onto mantle, little or no white malar, and pale olive in place of dull orange, but female like female nominate (and only told from female Collared by olive-buff vent) (HBW in press). Hartert (1909) found *formosanus* slightly smaller in wing and tail, with slightly different wing shape and formula.

The colour of the male underparts is basically feminised (as with the island’s White-browed Shortwing), and other differences are trivial. I favour retention as a subspecies.

**Plumbeous Water Redstart** *Rhyacornis fuliginosus affinis* •
Female duller grey above, more narrowly barred below, with slightly less white on rump and tail (HBW in press). Ogilvie-Grant (1906) indicated the male has less black lores and dusky ends to the tail.

These characters are all very minor.

**White-tailed Robin** *Myiomyza leucura montium* •
Very slightly smaller than nominate, and female with more olive-toned, less buffy-brown breast (HBW in press). Swinhoe (1864) knew it was close to what is now nominate *leucura*, but stated it lacks “the blue eye-streak and has a shorter and differently marked white and black tail”.

The NHM sample is now larger than the material available to Swinhoe, and it is clear that only the slightly shorter tail still stands as a character. A note in the *montium* tray by D. Goodwin expresses doubt about its separability, although on average smaller; he gave average wing and tail lengths of 10 males each of 93 mm and 69 mm (*montium*) vs 96 and 74 mm (nominate). The HBW diagnosis of female breast pattern is a previously unremarked character.

**Little Forktail** *Enicurus scouleri fortis* ♦
This taxon was rejected by Vaurie (1955) and Cheng (1987), and hence Dickinson (2003). HBW (in press) also discounts it but notes populations on Taiwan average slightly larger and possess a slightly more extensive white forecrown. Hartert (1910a), in describing it, said it was larger, with a longer bill, but he thought southern Chinese birds belonged with it also.

In the NHM *fortis* tray is a note by D. Goodwin: “Our Formosan specimens are... just separable from topotypical *E. s. scouleri* by their more intense glossy black colour & larger white forehead patch, tho’ not on size, which overlaps. Birds from China are intermediate, some match Punjab & some Formosan specimens”. The evidence tends to suggest that “fortis” is the end of a very minor cline and unworthy of recognition.

**Crested Myna** *Acrocephala cristatellus formosanus* ♦
From other races by having frontal crest more developed, and larger (Hartert 1912). Slightly smaller with a greenish-yellow bill, slight green tinge on crown and back, and white undertail-coverts (Hachisuka and Udagawa 1950-1951), cited by Feare and Craig (1998).
Hartert thought *formosanus* larger, Hachisuka and Udatawa smaller. My own eyeballing comparisons suggest there is great overlap. Frontal crests of some mainland Chinese birds are at least as well developed as those from Taiwan. Mainland birds also have greenish-yellow bills, the green crown tinge and white-tipped undertail-coverts (if anything the white tips on Taiwan birds are smaller). On this evidence I am unpersuaded.

**Light-vented or Chinese Bulbul** *Pyconotus sinensis formosae* •
From nominate by whiter underparts (fainter and fewer yellow lines), darker grey breast-band, slightly greyer back and sometimes shorter wings (Hartert 1910b).
Upheld in NHM, but the differences are minor.

**Black Bulbul** *Hypsipetes leucocephalus nigerrimus* •
Black, with grey edges to primaries and tail feathers (Gould 1862).
Upheld in NHM—the only subspecies in this variable species to combine the characters above.

**Brown-eared Bulbul** *Ixos [Microscelis] amaurotis harterti* –
Very similar to race *stejnegeri* of S Ryukyu Islands, but bill, wing, tail and tarsus longer (Kuroda 1922). Browner throughout than nominate, becoming dark rufous on breast (*HBW* in press).
NHM holds neither *stejnegeri* nor *harterti*. I am grateful to L. D. C. Fishpool for the diagnosis from *HBW*, so no judgement there possible.

**Bright-headed Cisticola** *Cisticola exilis volitans* –
The material in NHM is too little, with several specimens labelled “volitans” from adjacent mainland China. In any case, *Cisticola* defies cursory examination.

**Striated Prinia** *Prinia citreola striata* •
Paler and greyer than other subspecies (Baker 1997).
The NHM Taiwan specimens all have dishevelled feathering below, exposing the grey bases; hence they look greyer, but I doubt if they are really either paler or greyer below than adjacent mainland *parumstriata*. However, the pale streaking on the crown and mantle is stonier-buff than in *parumstriata*, making it more contrasting; and the fringes to the wing-coverts are less chestnut than on many *parumstriata*.

**Plain Prinia** *Prinia inornata flavirostris* •
Undescribed (termed “extralimital”) in Baker (1997). Harington (1913) indicated it differs from adjacent mainland *extensicauda* in being greyer in summer, and in winter tinged green above instead of rufous.
These distinctions are largely upheld in NHM, but they are trivial.
Brownish-flanked Bush Warbler Cettia fortipes robustipes**

Discussed but not described by Baker (1997), who mentioned that this subspecies is “treated by some authors as a separate species C. robustipes which also includes C. acanthizoides”; on this matter the comment by Dickinson et al. (1991), under the next species, applies.

NHM holds two robustipes (type and syntype). These are immediately distinct from specimens of adjacent mainland davidiana by their much longer (and rather less deep) bills, rather shorter tails, and slightly shorter wings. In plumage and wing formulae the two taxa are alike, but the bill of robustipes is so striking that, if it is also vocally different, it may well be better treated as a full species. See Plate 7.

Yellowish-bellied Bush Warbler Cettia acanthizoides concolor

Not mentioned by Baker (1997). Dickinson et al. (1991) have the following comment: “The form Cettia [fortipes] robustipes, of middle elevations, is replaced at about 6000 feet by C. [acanthizoides] concolor”. The omission in Baker is probably the result of dependence on various authorities which Dickinson et al. indicate were at fault.

NHM holds four concolor, including the type. These are marginally warmer rufous-brown above, buffier-breasted below and (eyeballing wings) fractionally larger than nominate acanthizoides from the adjacent mainland.

White-throated Laughingthrush Garrulax albogularis ruficeps**

Gould (1862) indicated that this subspecies differs from nominate albogularis in the orange-red crown. Collar (2003) pointed out that it also possesses a whitish belly and a shorter tail.

A double-check in NHM reveals that Taiwan birds are, in fact, smaller overall, with shorter wings; the buff-grey breast-band is much reduced, and the white tips to the tail feathers are more extensive. Despite the obvious similarities (albogularis shows an inkling of orange-red on the forecrown), these accumulated differences amount to a good case for species separation. See Plate 3a,b in Collar (2003).

Rusty Laughingthrush Garrulax poecilorhynchus poecilorhynchus**

When Gould (1862) described this taxon, he wrote that “it differs so much in colour from all other known species of the form, that it cannot be confounded with any of them”. This is still true; but the discovery the following decade of the taxon berthemyi in adjacent areas of China led to their lumping, and the loss of a Taiwan endemic.

While the two taxa are almost identical in plumage pattern, in coloration they are highly distinct. The nominate is a dull rufous-olive above and on the breast, with blackish head-bars, stronger rufous wings and tail, and smoky-grey belly with white vent and undertail-coverts. Race berthemyi is a paler bird, yellowish-olive on the upperparts (brownish-head-bars) and breast, pale grey on belly, paler rufous on wings and tail. Both taxa have black on chin and cheek, the latter with white-tipped feathering, black bill with broad yellow on distal half, and bare black orbital skin.

Race berthemyi has much larger white tips to the tail (in some poecilorhynchus they are vestigial), and black (not rusty) lores. In two such obviously different taxa, separation at species level seems appropriate, even if their vocalisations are similar. See Plate 8.

Hwamei Garrulax canorus taewanus**

This is another taxon recommended by Collar (2003) for possible separation (“smaller, buffier, eyestripe-less”) from parental canorus. Hwamei in Chinese means “paint brow”, but in Taiwan it has forgotten to do so.

I was wrong about the size of Taiwan bird; the wings are about the same, and in several specimens the tails are longer than mainland birds. However, apart from the missing brow Taiwan birds have lost almost all trace of the rust found on canorus, especially above, where a stonier-buff and a darker brown make for much more distinctive streaking on head and mantle (dark streaks much broader). The songs are fairly similar but discernibly different (L. L. Severinghaus verbally 2003). See Plate 4a,b in Collar (2003).

Rusty-cheeked Scimitar Babbler Pomatorhinus erythrogenys erythrogenemis**

Gould (1862) said that erythrogenemis “differs conspicuously from every other known species of the genus”, but at some stage it was lumped with erythrogenys. However, P. erythrogenys is a complex of distinctive subspecies, some of which may be species (Rasmussen and Anderton in press).

Race erythrogenemis differs from adjacent mainland swinhoei in the following: crown with black-and-grey (not brown-and-buff) stripes; greyish (not rusty-olive) neck-sides; chin and throat pure white; submoustachial area black (not freckled); rear ear-coverts grey (not rusty); belly without grey tinges; mantle and scapulars less foxy-rufous; “knees” rusty. There are probably other things; but on this basis alone the case for upgrading erythrogenemis is considerable. See Plates 9 & 10.
Streak-breasted Scimitar Babbler Pomatorhinus ruficollis musicus**
A markedly polytypic species requiring study of species limits—in Taiwan song lower-pitched with 3–4 upturned notes all on same pitch (Rasmussen and Anderton in press).
The nearest population of ruficollis to Taiwan is striolus. Comparison of striolus and musicus reveals major differences, most notably in size: musicus is far bigger, with a relatively huge bill. Although the basic plumage pattern is the same, musicus has a greyish (not olive-brown) crown, a much more distinct rufous-chestnut nape-collar, a larger black face-mask, and blackish (not rufous-chestnut) broad streaks on the breast, with a larger white background that better isolates these markings. Given the vocal differences mentioned, musicus is a strong candidate for species-level treatment. See Plate 11 & 12.

Scaly-breasted Wren Babbler Pnoepyga albiventer formosana*
Ingram (1909) distinguished Taiwan birds from albiventer by their smaller size, darker and more olivaceous back, lack of rufous wash on wings, greater abundance of buff spotting on crown and mantle, and purer and more extensive white below. Following a period when formosana was treated as a race of P. pusilla, Harrap (1989) demonstrated that, if it is not specifically distinct, formosana belongs with albiventer on vocal and morphological grounds, despite the great disjunction of their ranges. He also pointed out that the scaling extends onto the chin in formosana, whereas this is white in most albiventer.

The back of formosana is simply a shade darker brown, and the wings of albiventer do not seem to be washed rufous, but otherwise Ingram’s diagnosis holds. Ingram and Harrap both indicated formosana’s size intermediacy between albiventer and pusilla, and I do not think it sufficiently distinctive to be other than a subspecies of the former.

Rufous-capped Babbler Stachyris ruficeps praecognita *
There are no relevant or available diagnoses to be cited here.

Race praecognita differs from adjacent mainland davidii in having slightly more pronounced and extensive throat streaking, a slightly darker rufous cap, and slightly rufous-tinged olive upperparts.

Streak-throated Fulvetta Alcippe cinereiceps formosana*
There are no relevant or available diagnoses to be cited here.

Race formosana is closer plumage-wise to races manipurensis and tonkinensis than it is to adjacent mainland guttaticollis. It differs in having much the most clearly marked and extensive throat-streaks of all, and much the strongest and most extensive rufous wing-panel. There are other diagnostic features, but these are the key characters.

Dusky Fulvetta Alcippe brunnea brunnea*
There are no relevant or available diagnoses to be cited here.

Nominate brunnea differs from adjacent mainland superciliaris in being (on my eyeballing) slightly smaller, with dirty buff-grey (not white) on throat and breast, greyer-tinged and vaguely mottled (not plain) dull rufous crown, and darker upperparts.

Grey-cheeked Fulvetta Alcippe morrisonia morrisonia
There are no relevant or available diagnoses to be cited here.

Differences between nominate morrisonia and adjacent mainland hueti are vanishingly small; sizes are similar. Possibly the lower flanks of the nominate are a brighter buff, the long sooty superciliary line (vague in both taxa) slightly stronger, the dull yellowish-brown of the lower upperparts slightly less tinged rufous; but possibly not. On this evidence hueti barely registers as valid, rendering morrisonia no longer endemic to Taiwan.

Vinous-throated Parrotbill Paradoxornis webbianus bulomachus •
Swinhoe (1866) did not compare bulomachus with webbianus in his original description, but when he named the adjacent mainland form suffusus (Swinhoe 1871) he compared it with bulomachus, finding suffusus smaller, with a smaller bill and much smaller legs and feet, hindneck richer rufous and more definitely separated from the greyish-olive (not rufous-washed) back.

I am confused. Five birds at random from Taiwan and five from the mainland line up rather differently, with bulomachus having the brighter rufous crown and the more distinct contrast with the yellowish-brown back, while bills, legs and feet are seemingly the same size. On specimen after specimen the only apparent consistent difference is in the slightly richer, brighter rufous crown of bulomachus.

Golden Parrotbill Paradoxornis verreauxi morrisonianus*
There are no relevant or available diagnoses to be cited here.
Taiwan birds have a more complex facial pattern owing to the greyish lores, sooty patch below the eye and greyish-white ear-coverts (white lores, rest pale golden-rufous and continuous with upperparts in *palidis*), with a duller, slightly olive-washed back, larger black throat-patch, olive wash to golden upper flanks.

**Oriental Skylark** *Alauda gulgula wattersi* †
This taxon is judged endemic by Dickinson (2003), but HBW 9 considers race *wolfei* of the Philippines synonymous with *wattersi*. HBW describes this expanded *wattersi* as less rufous and more heavily streaked above than adjacent mainland taxa, with pale rufous-buff outer tail.

The material in NHM is too little to be conclusive, but it appears that three out of the four adult birds from the Philippines have less heavily streaked breasts than two out of the three from Taiwan. Checking against the original description (Hachisuka 1930), however, I find (spelling and grammar as found): "On comparing over twenty specimens from Pescadore, Formosa and Luzon taken during the winter month, specimens from Luzon has more heavily maculated breast"! I think the HBW solution is therefore appropriate.

**Plain Flowerpecker** *Dicaeum concolor uchidae* –
Similar to race *olivaceum* but tail shorter and generally darker (Cheke and Mann 2001). This is evidently taken from Kuroda (1920), who continued: "...in fact, the upper parts are of a deep olive colour somewhat paler on rump and upper tail-coverts; sides of breast and flanks tinged with olive colour; tail blackish brown, faintly tinged with steel green".

There are no specimens in NHM. Specimens of *olivaceum* correspond to the quoted sentence, suggesting that its contents are diagnostically valueless, but quick measurements of five tails put them all above the 23 mm given by Kuroda for *uchidae*.

**Fire-breasted Flowerpecker** *Dicaeum ignipectum formosum* –
From nominate in being glossy steel-blue above; red below extends onto chin (Cheke and Mann 2001).

There are two adult specimens of *formosum* in NHM including the type. The above description is mistaken over the coloration of the upperparts, which are mainly bluish-tinted bottle-green, and in this regard like many nominate *ignipectum*. Moreover, one *ignipectum* (98.10.20.32) has red-tipped yellowish chin and throat feathers, not quite as marked as in *formosum* but meaning that this one character is rather shaky. In fact, Kuroda (1920), reporting on seven male specimens, seemed to encounter the same thing: "In two of the specimens the white patch [sic] on throat shows a considerable admixture of red, while in the others the red is much less represented". This subspecies is, accordingly, scarcely worth recognition; but more material is needed to decide.

**Alpine Accentor** *Prunella collaris fennelli* –
Similar to race *nipalensis*, but has deeper, more greyish ground colour to head, neck and breast, deeper red-brown on flanks (chestnut rather than ferruginous), and deep ferruginous (rather than brown) uppertail-coverts (Deignan 1964).

There are no specimens from Taiwan in NHM.

**Black-headed Munia** *Lonchura malacca formosana* †
Cheng (1987) appeared to restrict this form to Taiwan, but it is also stated to occur in N Luzon and certain islands to the north in the Philippines (Dickinson et al. 1991). Differs from adjacent Chinese mainland *deignani* by its brownish-grey upper hood and dark grey throat (not all black), dull orange uppertail-coverts and outer tail, and broad black ventral line from mid-breast to vent; adjacent Philippine *jagori* has richer maroon rump, purplish-black hood, uneven-edged black ventral line (Restall 1996, including reference to his illustrations).

Despite the large number of Philippine specimens in NHM, none appears to be from N Luzon. The closest is a female from Calauan, central Luzon (96.6.6.617). This indeed closely resembles *formosana* and, although the explanation for its brownish-grey hood may be that it is not quite yet mature, on this basis it seems unwise to restrict *formosana* to Taiwan.

**Vinaceous Rosefinch** *Carpodacus vinaceus formosanus* †
Slightly darker than nominate, with some winter males having lower breast and belly brown (Clement 1993).

I could not see the above distinction in NHM. The original description (Ogilvie-Grant 1906 [in which the name first applied was *incertus*) turns out to be based on the female and makes its comparison with female Dark-rumped Rosefinch *C. edwardsi!* Comparison of both sexes of *formosanus* and nominate *vinaceus* show no quickly discernible differences, and I suspect this species is monotypic.
Brown Bullfinch *Pyrrhula nipalensis uchidai*  
Has very pale underparts, with almost white belly and white shafts of central tail feathers (Clement 1993).

I could not see the paler underparts in *uchidai* when next to race *ricketti* from the adjacent mainland, but the broad long central lines of white around the shaft of the central rectrices, which were identified as the single diagnostic character of this subspecies (Kuroda 1917), are present (although mostly hidden by the peculiar elongate reflective uppertail-coverts of this species). Both sexes show this character.

Grey-headed Bullfinch *Pyrrhula erythaca owstonii*  
Males lack warm brown tones on underparts, being soft lavender-grey from lower throat to belly and vent, occasionally tinted light pink or buffish-brown on breast; flanks to undertail-coverts white; also shows black (or blackish-blue) patch on outer median coverts, flight feathers and tail very glossy bluish-black, and outer web of inner tertial bright red; has very faint band surrounding black face. Female is more gingery-brown on underparts and deeper grey on crown and nape, with outer web of inner tertial bright yellow (Clement 1993).

There is only one specimen in NHM, labelled female but with a note by P. Leader suggesting it might be male. This is another example, like *Brachypteryx montana goodfellowi* and *Tarsiger indicus formosanus*, of plumage feminisation in an insular form. Incidentally, the diagnosis above appears to have a slip: Rothschild and Hartert (1907) mentioned that no red or yellow appears in the wing of this form, and none is present on the NHM specimen (it is, however, in the preceding taxon).

**Summing up**

This short review is not, of course, a real taxonomic study and the conclusions it reaches are merely tentative pointers based on often inadequate samples. Nothing suggested here should be taken to have any serious authority, and I should stress that in the "no decision possible" category there are several subspecies whose distinctiveness I have little cause to doubt but which are simply unor inadequately represented in NHM. However, I hope that some of these pointers will be taken up by field and museum workers, gathering and using vocal evidence and scrutinising larger samples of specimens, so that a clearer judgement of the true status of these taxa can be made. The paragraphs below summarise the foregoing.

**Possibly full species (10)**  

**Well-marked subspecies (19)**  

**Poorly marked subspecies (24)**  

**Possibly invalid taxa (11)**

**Valid but probably non-endemic subspecies (3)**
Maroon Oriole *Oriolus trallit ardens*, Oriental Skylark *Alauda gulgula wattersi*, Black-headed Munia *Lonchura malacca formosana*.

**No decision possible at NHM (11)**

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