A cat among the pigeons! Known specimens and supposed distribution of the extinct Solomons Crested Pigeon *Microgoura meeki* Rothschild, 1904

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SUMMARY.—Based on unpublished letters written by A. S. Meek to the staff of Rothschild's Museum at Tring, the collection of the only known specimens of the Solomons (or Choiseul) Crested Pigeon *Microgoura meeki* Rothschild, 1904, on the island of Choiseul is discussed. The question of whether six or seven adults were collected by Meek is resolved, and notes are provided on the habitat and supposed distribution of the bird, which is now considered extinct. Details are given of subsequent searches for *M. meeki*, in particular by the Whitney South Sea Expedition, in the form of extracts from unpublished journals held in the Department of Ornithology archives at the American Museum of Natural History, New York. The unique egg, a skin of *M. meeki*, sections from Meek's letters, and a Whitney map showing the areas of Choiseul that were searched, are illustrated for the first time.

Pigeons (Columbidae) have not been the most fortunate of birds in their contacts with people, indeed the association has often been catastrophic. The most famous example of extinction (the Dodo *Raphus cucullatus* from Mauritius in the late 17th century) and the massacre of billions of Passenger Pigeons *Ectopistes migratorius* in the continental USA less than 100 years ago are widely known. A lesser known pigeon whose fate may also be laid—albeit indirectly—at the door of *Homo sapiens* is the Solomons (or Choiseul) Crowned Pigeon *Microgoura meeki* Rothschild, 1904, which Mayr & Diamond (2001: 37) regarded as 'the most spectacular endemic bird of Northern Melanesia'.

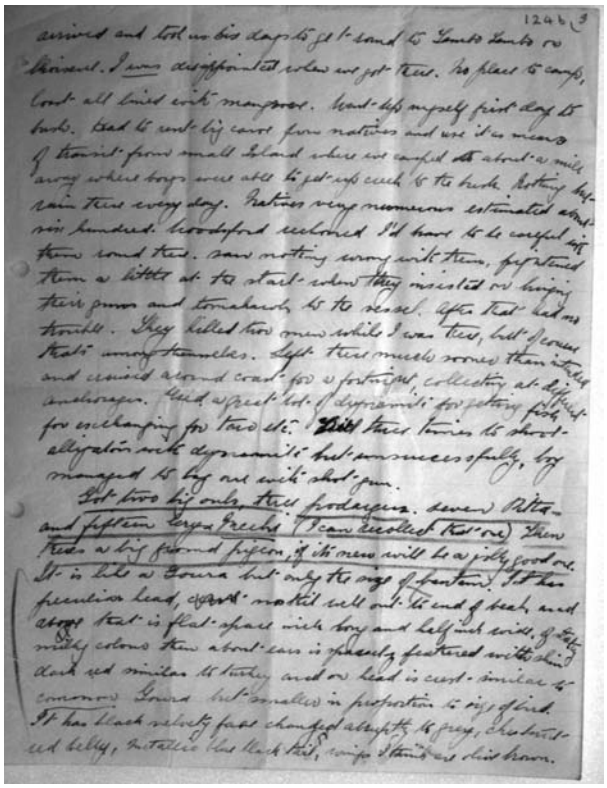
In transcribing letters written by Albert Stewart Meek (1871–1943) between 1894 and 1931 to the staff of Walter, Lord Rothschild's Museum at Tring in Hertfordshire, references were noted regarding his collection of *M. meeki*. The correspondence consists of *c*.500 handwritten letters, a high proportion of which were written by Meek in the field. In addition to providing an insight into Meek's mindset, and the very real hardships associated with 19th and early 20th century collecting in some of the most remote places on the globe, they contain a wealth of field data relating to a variety of natural history material. The correspondence is rather frustrating, primarily because it is so one-sided. It comprises letters written by Meek to Rothschild and his curators, Ernst Hartert in the case of birds and Karl Jordan on the subject of insects, but copies of replies to Meek were not retained at Tring (the earliest copy of an outgoing letter to Meek is dated January 1911). This paper deals with some confusion in the literature regarding how many specimens of *M. meeki* were sent to Tring by Meek, subsequent searches for it, and the supposed distribution of this distinctive bird, considered by most ornithologists—almost certainly correctly—to be extinct.

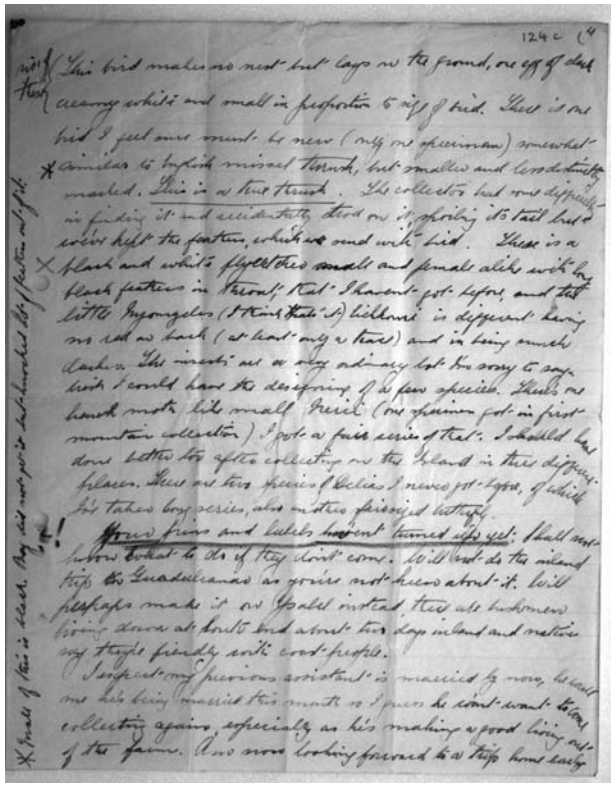
The discovery of *Microgoura meeki*

Like its collector Albert Stewart Meek, most often referred to simply as 'A. S. Meek', but cited for example as 'Alfred Stanley Meek' by Parsons (1998) throughout his book, the

pigeon has been provided with different names in the literature. The most frequently used common names are Solomons Crested Pigeon, Solomon Islands Crested Pigeon or Choiseul Crested Pigeon, but it has also been referred to as Choiseul Pigeon (e.g. Stattersfield & Capper 2000), Crested Choiseul Pigeon (Mayr 1945), the 'Crested Pigeon of the Solomons' (Greenway 1967) and Dwarf Goura (Tyler 1979). Ferguson-Lees & Faull (1992) declared it was 'better known as Meek's Pigeon', although I have not noted this name used elsewhere—other than informally in the Whitney South Sea Expedition journals (see below). A. S. Meek was one of the most productive of Rothschild's professional natural history collectors and he is well known to entomologists for the enormous number of new insects he discovered, including the largest butterfly in the world: *Ornithoptera alexandrae* Rothschild, 1907 (Ackery 1997, Tennent in press). Ornithologists remember him for his prolific collections of birds, which included *Microgoura meeki*.

Meek's first mention of what was soon to be described as *M. meeki* appears in a letter to Ernst Hartert dated 18 January 1904 (Meek 1904a; Figs. 1–2): ' . . . there's a big ground pigeon, if it's new will be a jolly good one. It is like a Goura but only the size of a bantam. It has peculiar head, nostril well out to end of beak, and above that is flat space inch long





Figures 1–2. Meek's letter giving the first details of what was to be described by Rothschild as *Microgoura meeki* (Meek, 1904a: 3–4) (© The Natural History Museum, London).

and half inch wide, of slatey milky colour then about ears is sparsely feathered with chin dark red similar to turkey and on head is crest similar to common [original emphasis] Goura but smaller in proportion to size of bird. It has black velvety face changed abruptly to grey, chestnut red belly, metallic blue black tail, wings I think are olive brown. This bird makes no nest but lays on the ground, one egg of dark creamy white and small in proportion to size of bird.'

Very shortly thereafter, this highly distinctive pigeon was described by Rothschild (1904) as a new species in a monotypic genus *Microgoura* and, so far as is known, the bird has never been seen since, at least by ornithologists. Not unusually for the time, the number of specimens available to Rothschild is not mentioned in the type description, other than to say that both sexes were present, together with an egg (Rothschild 1904). The birds' habitat was given as 'Choiseul Island, Solomon Islands', and the holotype was said to have been collected by Meek on 7 January 1904 (according to the accompanying data label, the Tring paratype ♂ [Fig. 4] was taken two days earlier). Considering the specimens were taken in January, some distance from the capital of the Solomon Islands (at that time on Tulagi Island, part of the Florida group), they reached England quite quickly, and Meek said in a letter less than six months later (Meek 1904b): 'Your [letter] of tenth May duly to hand . . . you do not mention getting egg (cream colour) of the crested pigeon . . . '. Since then, there have been at least four concerted efforts to rediscover *M. meeki*—by members of the Whitney South Sea Expedition in 1927 and 1929 (especially the latter), and more recently by Jared Diamond (Diamond 1987) and the late Shane Parker, an Australian ornithologist with a particular interest in the pigeon (Parker 1967a,b, 1972). Historical and modern literature raise questions as to how many specimens of *M. meeki* were collected by Meek in 1904, and on the distribution of the pigeon.

How many specimens of *Microgoura meeki* were collected?

Despite an unequivocal statement by Rothschild & Hartert (1905: 247) that ' . . . Mr Meek sent seven specimens, of which six are in the Tring Museum . . . 3♂♂, 3♀♀, Choiseul, January 1904 . . . an egg was taken on January 10th', doubt has been expressed as to whether there were seven specimens or only six. Parker (1967a) said: ' . . . still only known from seven skins (five in the American Museum of Natural History, one in the British Museum [Natural History], one untraced) and an egg (in the B.M. [N.H.]) . . . ' and added (Parker 1967b: 129): 'Many specimens not retained by Rothschild were passed on to such dealers as Gerrard and Janson; this may have been the fate of the missing seventh specimen of the Solomons Crowned Pigeon . . . whereas the majority of Meek's bird skins passed with the Rothschild collection to the American Museum of Natural History, New York, in 1932, a few came *via* Gerrard to the British Museum (Natural History), London . . . '. However, five years later Parker (1972: 25) mentioned that 'Meek, in a letter to Hartert from Gizo dated 18 January 1904, wrote that he had collected six specimens . . . '. This was repeated by Fuller (2000: 185–186) who stated ' . . . in a covering letter dated 18 January, Meek wrote . . . that six specimens had been sent. Interestingly, Rothschild and Hartert recorded that seven were actually received; the seventh specimen is probably a cream-coloured egg that still exists at the museum . . . five of the skins were eventually sold . . . to The American Museum of Natural History, New York . . . and the sixth passed into the collection of The Natural History Museum, London'.

The question of what Meek himself said is easily resolved. His letter dated 18 January 1904 (Meek 1904a) is one of his longer missives, comprising six pages and written in at least two sections ten days apart (the last section is dated 28 January). Meek was in expansive

Figures 3–4. Male paratype of Solomons Crested Pigeon *Microgoura meeki*, held at The Natural History Museum, Tring (© The Natural History Museum, Tring).

Figure 5. The unique egg of Solomons Crested Pigeon *Microgoura meeki*, held at The Natural History Museum, Tring (© The Natural History Museum, Tring)

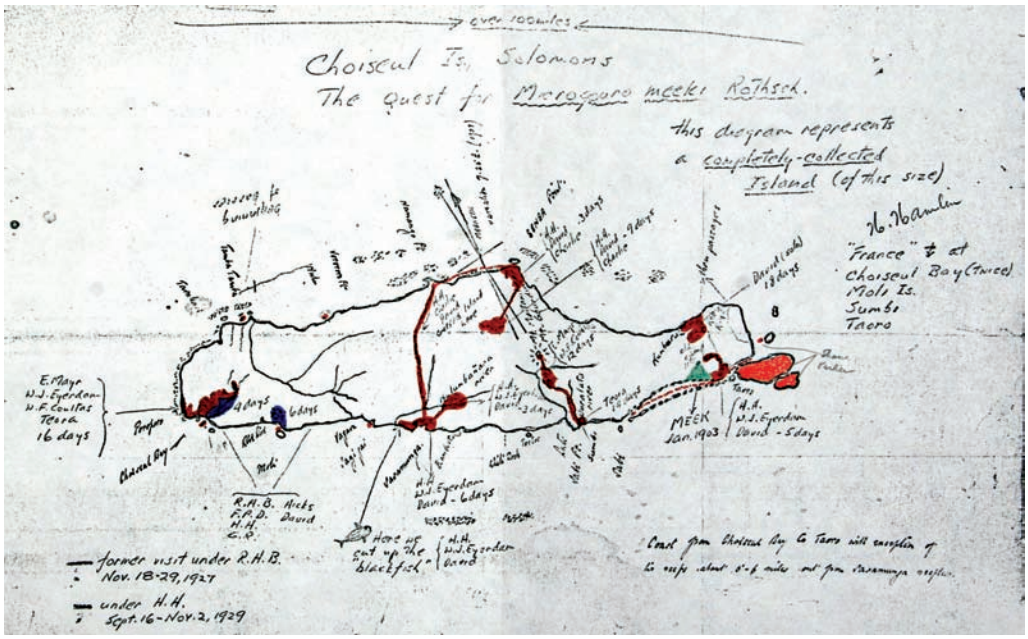


Figure 6. Map of Choiseul Island, showing collecting localities of the Whitney South Sea Expedition (Hamlin 1930) and the subsequent search by Shane Parker (courtesy of the Department of Ornithology, American Museum of Natural History, New York)

mood, and discussed his health, money, equipment, future expedition plans, and collection of birds and insects from Choiseul and elsewhere. Many of Meek's letters have words or sections annotated or underlined by the staff at Tring, often in coloured crayon, and the section in this letter noting the 'new pigeon' is underlined in red (Fig. 1). There is also a note in red ink on the first page of the letter 'Please return soon for answer'. On the top of the fourth page (Fig. 2), next to the final part of the entry, is written 'six of these'. This is clearly in Meek's handwriting, and although it is next to Meek's description of the egg, and does not actually state 'I collected six specimens' in so many words (*cf*. Parker 1972), it can only refer to the number of birds sent. Subsequent authors have varied in their statements: some mentioning six specimens, others seven, and others six or seven.

Miriam Rothschild (1983: 158) noted that Walter agreed to pay Meek for 'six specimens of every species [of bird] at [six shillings and six pence = 37.5 pence in modern currency] each, with a bonus of £4 for every new species', and this is confirmed in Meek's correspondence, although there is evidence there that additional birds were sometimes accepted on the basis that Rothschild could and would use unwanted material for exchange. Meek had a well-established agreement with Rothschild and his curators that insects surplus to requirements would be released to Oliver Janson for sale, and the same arrangement existed with natural history dealer Edward Gerrard in respect of bird skins. In the case of *Microgoura meeki*, Rothschild retained all of the skins Meek sent him but later sold the bulk of his bird skins—some 280,000 specimens—to the American Museum of Natural History (AMNH), New York, retaining 4,000 skins that he wished to bequeath in due course to what is now The Natural History Museum (BMNH) (Robert Prŷs-Jones pers. comm.). The male *M. meeki* (Fig. 3) now in the BMNH (Tring) is the sixth of Rothschild's specimens. The unique egg (Fig. 5) is rather dark in colour (creamy) compared to the eggs of associated taxa, and is also in the BMNH at Tring.

The AMNH (internet site accessed March 2009) lists five specimens (AMNH 616456–460), the last associated with a skeleton. In March 2009 AMNH *Microgoura* holdings were very kindly examined by Mary LeCroy, who confirmed the presence of five skins and a partial skeleton, removed from the skin more recently, associated with AMNH 616460. Beyond the statement by Rothschild and Hartert, there is no evidence that there were ever more than six skins extant, nor any indication that more than five specimens were offered to, or received by, the AMNH. Meek's comment in the margin of his letter can be taken as definitive. Unusual though it may be—for Rothschild was renowned for attention to detail and for his prodigious memory—it seems that he, and Hartert, made a mistake.

The Whitney South Sea Expedition search

Unpublished Whitney South Sea Expedition journals held in the Department of Ornithology archives at the AMNH provide a fascinating insight into the search for *M. meeki* some 25 years following its discovery and raise reasonable doubt as to reliability of locally obtained data concerning the bird. The journal sections seen are typed, and include a map prepared by Hannibal Hamlin (Hamlin [1930]) entitled ' . . . The Quest for Microgoura meeki . . . ', reproduced here (Fig. 6) with annotations made by Mary LeCroy to show where the late Shane Parker subsequently investigated offshore islands close to the southern coast of Choiseul in the 1960s. Hamlin's map appears to be based on one drawn by Coultas (1929–30: unnumbered page between 225 and 226). Several members of the expedition referred to the pigeon, including Rollo Howard Beck who, as leader of the expedition in 1927, noted in an entry dated 22 November 1927 (Beck 1923–28: 280) 'went up into a wild forest to look for ground pigeons, but found none' and on 29 November (Beck 1923–28: 281) 'The last four days we have been at Choiseul Bay but found no *Microgoura* . . . '. Guy

Richards, another member of the expedition's 1927 visit to Choiseul, added (Richards 1927–28: 124) 'The search for the ground pigeon that Meeks [*sic*] reported came to no result . . . the dove family were hard to locate, and it was on only one day that any of us ever heard them call' and later (Richards 1927–28: 129–130) 'Our stop in Choiseul Bay was presumably for another try at Meek's crested pigeon. After going up both rivers, one or more of us several times, we all had the same story to report, no birds . . . our stay in Choiseul Bay from the collecting standpoint was a rank failure . . . the quest for the crested pigeon proved as fruitless here as it had at Moli'.

The most detailed Whitney account was provided by Hannibal Hamlin. Regarding the visit to Choiseul Bay on 22 November 1927, he noted (Hamlin 1927–28: [90]) 'The crested ground pigeon (Microgura [*sic*] meeki) remains a mystery bird'. In 1929, Hamlin, having replaced Beck as expedition leader, made a concerted effort to rediscover *Microgoura*; in a journal entry for 15 September 1929, he wrote (Hamlin 1928–30: [99]–[100]): ' . . . [we dropped] anchor in the northern corner of Choiseul Bay . . . [we] spent from November 25–28, 1927 in this anchorage . . . after six days at Moli Is., about 15 miles down the coast . . . we failed to find any trace of the Microgoura meeki Rothsch. . . . it is my idea that Meek spent his time somewhere around the southern extremity of Choiseul; and it is there that we shall have to go in order to get the bird . . . my intention was to go to Bambata where we can get all the information needed, and proceed down the southern coast as we found anchorages and, if we did not get the bird, to continue right around the island and up the northern coast . . . Choiseul Bay is known as a safe anchorage and from here we can reach almost any part of Choiseul by launch. The difficulty will be to learn whether the pigeon has a localized habitat or distribution, whether or not Meek collected it at the southern end, etc. The natives I have questioned about the Microgoura, all from the vicinity of Choiseul Bay, have given doubtful evidence. One or two seem to know the bird and are positive of its presence. All reports, however, are vague and are given in a favorable manner more to please the inquisitor than anything else.'

Two days later, on the morning of 17 September, aboard a Chinese trading vessel en route for Senga on the north-west coast, he wrote (Hamlin 1928–30: [101], [103]): ' . . . upon short notice I had little opportunity to formulate any accurate plans or prognostications. We hope to find new terrain that harbors our pigeon, at least we will acquire some definite information. The rest of the staff must make the best of the country around Choiseul Bay . . . ', and a few days later, ' . . . the Microgoura is probably a forest bird . . . numerous nut-harvesters questioned about the bird; all proved indefinite but cited a crested pigeon as 'kukuwonzo'. It answers to the characteristics of the Microgoura as given by me, the natives say 'Yes' to everything. But I suspect it is the long-tailed crested arboreal pigeon because the call which they imitate is the same . . . the teacher brought some boys along and we had more talk about birds. Again, they do not seem to know the Microgoura. It is best that we hunt around here for a few days more, and if we do not find it make a camp inland. I am informed that there are still some bush villages; perhaps the citizens of these can impart something conclusive or useful . . . '.

Hamlin's suspicion that reports of *M. meeki* probably referred not to that species but to the Crested Cuckoo-Dove *Reinwardtoena crassirostris* Gould, 1856, was confirmed to his satisfaction on 25 September 1929 (Hamlin 1928–30: [105]): 'I crossed several deep ravines and unexpectedly came upon a nutting camp of true bush people from Saralata, one of the few surviving bush villages. Only one man could speak pidgin and he could give me no information of the Microgoura, which I certainly expected, either through lack of understanding or ignorance. As it happened, luckily, a crested pigeon started calling close at hand while we were talking. We promptly stalked the unmistakable call and I shot it. He brought it to

me, naming it 'kukuwonzo', which proves my suspicion correctly that the Senga natives have taken my description of the ground bird to be that of this crested tree pigeon (Turcaena crassirostris, old nom.), or 'kea' pigeon. Further inquiry with evidence in hand evinced no additional information'.

Jared Diamond had a similar experience when he visited Sasamunga in 1974 to search for *Microgoura*. He was told of a crested pigeon that was rarely encountered, referred to by a guide as 'kuwanjo'. A solitary pigeon heard and then seen by Diamond and his guide was *R. crassirostris*, which the guide proclaimed to be 'kuwanjo' (J. Diamond *in litt*. 2009). As Gibbs *et al*. (2001: 418) recently pointed out, *R. crassirostris* is generally grey with a long crest, and this has probably perpetuated confusion in local folklore regarding the supposed continued existence of *M. meeki*. Hamlin's enquiries continued. Writing at Sasamunga on 7 October 1929 he said (Hamlin 1928–30: [109], [110]): 'Enquiried [*sic*] about the Microgoura resulted in some new information: the bird they know here from my description is called 'kukuru-ni-loua' (lit. pigeon-belong-ground), and is recalled only by the older men, who say that cats, introduced since the advent of the Mission, have destroyed so many that they cannot remember when one was last seen in the bush . . . the big river basin we traversed yesterday is said to have been a good place for them. The birds were easily caught by the boys in their hands after they had found a low-branched tree in which the pigeons roosted in twos and threes and fours by noting the manure on the ground underneath; they would simply wait their opportunity and seize them while sleeping. No one could recall Meek or where he worked on Choiseul'.

Some further light is thrown on the name 'kukuru-ni-loua' by Jared Diamond who, on his visit to Sasamunga, was told of another large pigeon called 'kurulilua'. An elderly Sasamunga inhabitant informed Diamond that the Whitney Expedition had collected a specimen of 'kurulilua', and since the expedition diaries confirm collecting their only specimen of the large ground-dwelling Yellow-legged Pigeon *Columba pallidiceps* at Sasamunga, it is quite possible that the local name 'kukuru-ni-loua' or 'kurulilua' refers to *C. pallidiceps*, not *M. meeki* (J. Diamond *in litt*. 2009). On 11 October (Hamlin 1928–30: [112]) continued: 'Left the ship . . . en route we cabled [*sic*: called] at several villages where I made enquiries about Meek's bird. Only one seemed to know it—ToiToi. They confirmed what I had been told at Sasamunga—that they had not seen the bird of late and that cats gone wild had been known to make prey of it . . . '.

Almost a week later, still with no sign of *Microgoura meeki*, and with expedition time running out (Hamlin 1928–30: [114]–[115]): 'October 16. With seven carriers and ourselves loaded we climbed the range just behind the coast and dropped into the extensive flats flanking the Kolumbanara [= Kolombangara] river . . . according to the older men they used to catch the Microgouras in this locality . . . October 17. Nine of us out in various directions. Those without guns will search for roosting places. Rain fell continuously after 10 o'clock and all returned to camp by 5 with no report of success . . . October 18. All out with similar intent . . . the natives are discouraged about the Microgoura; no sign of its presence has been found. Many are in the bush looking for it since I posted a reward of five pounds for a live one. This extravagance is safe; the species is probably extinct. Only the rarest kind of luck could bring one into the collection . . . '.

The promise of such largesse failed to provide any reliable evidence of *M. meeki*'s continued existence (Hamlin 1928–30: [118]–[122]): 'October 24. . . . we have about given up the Microgoura, although some local boys are still said to be in the bush hoping to find one in order to be able to claim the five pound bounty . . . I learn that the citizens of Tauro village recall that Meek worked in that vicinity. Three of the older men vouched that they had seen the Microgoura this year, one man in June, and two others just a few months ago while nut-

ting. Can I believe them? . . . October 26. Called at Sambi village and anchored at Rorivai (Roramboko) for the night . . . propaganda about Meek's pigeon was spread at both these places. Again, the older inhabitants recognized the description of the bird and remarked on its beauty; but one has not been seen or heard lately. They imitate the call by a low trilling sound . . . October 28. . . . at Tauro village which is situated on a bluff fifty feet high on the very point of the mainland of Choiseul, a deep water passage dividing it from Rob Roy I., just across the bay . . . the few people in the village can impart no information about the Microgoura; they speak no pidgin and we shall have to hunt for ourselves until the men who told us they had seen it this year return from Sasamunga . . . November 2 . . . the teacher . . . took us by canoe to a big inland river flat where he says the Microgoura was observed this year. Four hunters walked about until dark and saw nothing. Either these gentlemen are awful liars, which I suspect is the case, or the M. meeki Rothsch. is nomadic because of the pussy cats gone wild. Arriving back at the village . . . we found the whale boat of the France waiting for us; the ship anchored about two miles up the coast this afternoon. So we embarked, giving up the search for the phantom ground pigeon . . . '.

Mention here of the name 'pussy cat' rather than plain 'cat' is not as strange as it might now seem: many Solomon Islanders still refer to the animal as 'pusscat', presumably as a result of having been given this name for an animal they had no experience of prior to the arrival of missionaries. Even as the expedition prepared to leave Choiseul, local hunters continued—probably erroneously in the opinion of Hamlin—to report the presence of the bird. On 3 November further reports were received (Hamlin 1928–30: [122]–[123]). 'November 3 . . . a canoe came alongside in the late afternoon with boys returning to Kumburu village which is on the other end of the trans-Choiseul passage from Tauro. They say they have seen the Microgoura this year and are positive one only has to go to their place to get it. The older ones know of Meek and can point out his camp in the bush . . . November 4. I decided last night to leave David here on Choiseul to have a final stab for this rumor of the Kumburu boys. He will be able to put in three weeks before the steamer takes him from Gizo to Tulagi . . . if these natives are not liars, which they are, he might crown our discouraging search with eleventh-hour success . . . '.

Much of Hamlin's account appears in lesser detail in journals compiled by other expedition members, and the lack of success of this final search for *M. meeki* was recorded by Walter Eyerdam (Eyerdam 1929–30: 7–8): 'At Bambatani we continued our hunting and had a lot of hunters out but no sign of a Microgoura pigeon. Some of the older natives know the bird and one of the newcomers to the big religious meeting that was in progress, declared that he had caught two of them about a year before near Tahro on Rob Roy Island, adjacent to the south end of Choiseul island. This locality was very near to the spot where Meek and Eichhorn had secured their specimens, so we still laid out hopes of bagging one or two in that place. We were informed by the natives that the bird had been practically exterminated by pussy cats gone wild that the Mission had first brought to Choiseul Island, a few years before. This is quite likely the case and we are quite convinced that there are no more Microgoura pigeons left. They can fly but little, have permanent roosts at night, are easily found and especially the young would be very easy prey for cats, dogs and pigs . . . Mr. Hamlin and David and I went . . . to Tahro where we hunted over a week. This was Meek's old hunting locality and remains of his camp could still be seen in the bush at one place . . . Mr. Hamlin had not yet abandoned hope . . . so he left David, our best hunter and bird skinner, to work further inland and to hunt on the mainland of Choiseul. About three weeks later, David joined us in Tulagi, with a good few birds but no Microgoura. Over three months had been spent on Choiseul at an expense of about 60 dollars per day. The primary object [in visiting Choiseul] was to get Microgoura . . . '.

Supposed distribution of *Microgoura meeki*

Many years later—after the 1927 Whitney Choiseul visit, but before that in 1929—Meek stated in a letter to Rothschild (Meek 1929): 'I met a man in Sydney a few months ago who said he was collecting for a M^{r} Whitney (I think he said), and wanted to know the exact spot where I'd taken the ground pigeon (Microgoura meeki). He'd already been thereabouts a long while. When I told him he was surprised to find he had anchored there and collected for some weeks without dropping across it.'

The man in question was almost certainly Rollo Beck, who had looked for *M. meeki* in the Choiseul Bay area in 1927, and there is little doubt that the type locality of the bird was in that general area, on the north-west coast of the island, although Meek did also collect in other localities. According to his book (1913: 134) Meek regarded his collection of the Solomons Crested Pigeon as highly noteworthy: ' . . . at Choiseul I discovered a very wonderful bird, which the Hon. Walter Rothschild names after me *Microgoura meeki*. It is a kind of crested ground-pigeon and was my best discovery so far in Natural History.'

It is interesting that Meek made no such claim in any of his letters, and that although the statement may be true—he may have made such a comment verbally to the staff at Tring on one of his visits—there is persuasive evidence (research in progress) that the bulk of his book was written by the editor, Frank Fox, from Meek's correspondence, with little or no contemporary input from Meek. However, he made several remarks on the distribution of *M. meeki*. In 1908 (Meek 1908, repeated almost verbatim in his book [Meek 1913: 187]), he said: ' . . . The Microgoura I'm satisfied does not occur [on Bougainville], though I'm told by boys that it's on both Ysabel [Santa Isabel] and Malaita . . . '. And a year later (Meek 1909) he added: ' . . . After doing this trip I should like to revisit the Solomons and collect on Malaita. I know the Microgoura pigeon occurs there, from the natives . . . '.

The alleged occurrence of *M. meeki* on Ramos, a small island some 40 km off the south-east coast of Santa Isabel between that island and Malaita (and far from Choiseul), not mentioned by Meek, was noted recently. Most authors (including those of the current IUCN Red List) agree that *M. meeki* was endemic to Choiseul, and mention of Ramos is thought to stem from Doughty *et al*. (1999). The first author is unable to recall the source for including the island of Ramos (Christine Doughty *in litt*. 2009). Checklists of the birds of Choiseul and Ramos on Mike Tarburton's website in March 2009 listed the 'Choiseul Pigeon *Microgoura m. meeki*' as 'end[emic]' to 'Chois[eul] and Ramos'—the clear implication being that a *meeki* population (on Ramos) was subspecifically distinct from that on Choiseul. Elsewhere on the same website, the bird's range was stated as 'Mak + Ramos'; 'Mak' usually refers to Makira (=San Cristobal). The author of the website agrees that references to San Cristobal and a phenotypically distinct population away from Choiseul were mistakes (M. Tarburton *in litt*. 2009) and the website is to be amended. J. Diamond (*in litt*. 2009) suggests the possibility of confusion with another now-extinct ground pigeon, *Gallicolumba salamonis*, which did occur on both Ramos and San Cristobal.

Although he planned to do so, Meek never visited Malaita, so how seriously should Meek's correspondence be taken as evidence of the occurrence of *M. meeki* on any of the Solomons other than Choiseul? If the bird is extinct, which it almost certainly is (see Diamond 1987), it is impossible now to know the extent of its previous distribution, and Meek was not averse to pressing a case to the staff at Tring in order to support future travel plans. I possess detailed entomological field experience on many of the Solomons, including all those (with the exception of Ramos) where *M. meeki* has either been looked for or has been claimed to occur (Choiseul, Santa Isabel, Malaita), and in many localities the knowledge local people have regarding their fauna is rather patchy. Local knowledge of actual or potential

food items is understandably more detailed than knowledge of insects, which are rarely regarded as food. However, I stayed several times in a village on San Cristobal where pigeon was on the menu, and where all pigeon species seemed to be collectively referred to as 'kuru kuru', a common name for pigeons throughout the Solomons in reference to the call. Whilst *Microgoura meeki* might be a highly distinctive pigeon to ornithologists, 'confirmation' of its presence elsewhere by local people may not necessarily relate to this species.

Visiting Malaita is difficult, even now. I visited the island several times when researching butterflies in the Solomons (Tennent 2002), but even in the mid 1990s and early 21st century, failed to venture far inland due to the reluctance or refusal of local guides to do so. Parker (1972: 25) stayed two weeks on western Malaita (probably the Auki region) in 1968, enquiring into the presence or previous existence of *M. meeki* on the island, but found no confirmation that it ever existed there.

That said, a proposed occurrence along the northern Solomons chain, from Bougainville to Malaita, is not far fetched. Within the Solomons archipelago (Bougainville belongs politically to Papua New Guinea), there are distinct areas of endemism (Tennent 2002), notably the New Georgia group and San Cristobal and its satellites, and to a lesser extent Malaita. Numerous insects and terrestrial animals share a distribution of Bougainville, Choiseul, and Santa Isabel, and more than a century ago Rothschild & Hartert (1905: 243) noted that 'the ornis of the islands of the northern chain—*i.e*. the three islands of Bougainville, Choiseul and [Santa] Isabel—is generally alike . . . '. Mayr & Diamond (2001: 40) suggested a former presence of *M. meeki* on Bougainville or Santa Isabel and pointed out that almost all bird species occurring on Choiseul also occur on other islands of what Diamond (1983) postulated from hydrographic depth-contours were previously one long island, referred to as 'Greater Bukida'—Bougainville, the Shortlands, Choiseul, Santa Isabel and the Florida group (possibly also Guadalcanal).

Early 20th century (and subsequent) accounts from local people confirming previous or recent occurrence of *M. meeki* on islands other than Choiseul can only have been based on a verbal description or pictures of skins, and there is no supporting evidence that such accounts were accurate. Despite comprehensive searching by experienced ornithologists on Choiseul and elsewhere, no specimen has been collected since Meek's original short series. Since there are no further specimens of *M. meeki* in existence, and no evidence for its appearance on any other island, claims for its occurrence outside Choiseul can be no more than anecdotal. The only confirmed distribution of *Microgoura meeki* is the island of Choiseul.

Discussion

Despite a relatively recent claim (Day 1981: 38) that 'Modern ornithologists surmise that this pigeon inhabited remote cloud forests in the island's interior . . . ', *M. meeki* seems to have been a coastal forest bird. A high-elevation habitat seems unlikely, if only because it would have been virtually impossible for Meek to venture far inland on Choiseul at the time of his visit in 1904. The source of a further assertion (Day 1981: 38) that 'it seems Meek acquired the birds in trade from a village and consequently did not know exactly what locality they came from . . . ' is also unknown, nor is that of the account by Flannery & Schouten (2001: 108) that 'Meek . . . emerged from the bush unscathed, and with six magnificent chicken-sized pigeons in hand, along with a single egg . . . '. It is most likely—and seems generally accepted—that *M. meeki* was an inhabitant of lowland forests and / or swamps. Parker (1972: 25) received reports of its occurrence 'usually from areas along the sheltered southern coast' and was told by old hunters with memories of the bird that 'it lived in lowland, often swampy, forest, but not in mangroves', contrary to at least one previous report of its occurrence in mangrove. He looked for it on several low-lying swampy

uninhabited islands off the southern Choiseul coast without success, and the most recent (but unsupported) report he received in 1968 was of a small roost seen in the early 1940s on the Kolombangara River, south-west Choiseul, an area extensively searched by the Whitney South Sea Expedition some 40 years earlier.

As natives reported to Hamlin, *M. meeki* was a terrestrial pigeon that was said to roost in small groups on low branches, and presence of a roost was conspicuous due to accumulated droppings on the ground below. It reportedly nested on the ground, although this information originated from Meek (1904a: see introduction), and it might be considered optimistic to extrapolate the species' nesting habits from the discovery of a solitary egg. Gibbs *et al*. (2001: 418) were given information to suggest that a terrestrial pigeon (assumed to be *Microgoura*) habitually roosted in pairs in shrubs just a few feet above the ground and that they could easily be located and picked off a branch by hand when they 'sang' in the evening.

Since the only available specimens are those Meek sent to Rothschild, there is no way of knowing the appearance of this remarkable pigeon in life (see comments by Parker 1967a, regarding the crest). Rothschild & Hartert (1905) provided what was in effect an artist's impression of the bird—a hand-coloured lithograph by J. G. Keulemans—which has been reproduced elsewhere (e.g. Fuller 2000), whilst others (Doughty *et al*. 1999, Flannery & Schouten 2001, Day 1981) have prepared their own impressions; the last depicts a rather different bird to the others, most of which conform more or less to the original plate, in that it has a rather pale breast. Fuller (2000: 185–186) stated: ' . . . Parker (1967) pointed out that the position of the crest shown in a plate . . . may be misleading and perhaps results from a misinterpretation of Meek's museum skins . . . Meek, to the contrary, remarked on how similar the crest of his new species was to the crests on the more familiar *Goura* pigeons'. A picture of the bird in flight with crest slightly raised (Gibbs *et al*. 2001) provided a further artist's impression.

If *M. meeki* did (or indeed, does) occur on any of the other islands in the Solomons, it is remarkable that it was not discovered prior to Meek's Choiseul visit, and that it has not been seen since. At the time of Meek's visit, the inhabitants of Choiseul were, like those of New Georgia and elsewhere—particularly Malaita—extremely warlike, and a European venturing ashore, or at least any distance inland, most certainly took their life in their own hands. But other travellers visited Choiseul Bay prior to Meek, from French navigator Louis-Antoine de Bougainville in 1768, through Henry Brougham Guppy (who had a keen interest in natural history and made various observations on pigeons: Guppy 1887) and the first resident commissioner of the Solomons, Charles Morris Woodford (Tennent 1999) in the late 19th century. Woodford travelled widely in the Solomons, and would surely have seen or heard of such a distinctive ground pigeon, especially one so easy to approach, in his travels on Choiseul or Santa Isabel.

Island faunas have historically been under significant threat, largely because of limited habitat and the highly specialised nature of island species having evolved in the absence of predators. The non-natural introduction by early Western sailors and travellers of exotic species either accidentally (rats escaping from ships) or deliberately (cats, dogs *etc*.) have most certainly had a significant (usually catastrophic) effect on endemic island faunas, either directly (cats to control rats) or indirectly (competition to other herbivores from goats released to provide food for passing ships). Johnson & Stattersfield (1990) reviewed the fate of island endemic birds, and noted three extinct and several other endangered Pacific pigeons, including *M. meeki*—other pigeons known only from the fossil record include a new genus and species of pigeon from as far east as remote Henderson Island (Worthy & Wragg 2008). It seems probable that *M. meeki* only ever occurred on Choiseul and that missionaries' cats contributed significantly to the bird's demise—it must surely have been close to extinction when Meek collected it in 1904.

Sadly, cats, now established as feral on many of the larger islands in the region (Flannery 1995) probably sealed the fate of many ground-nesting birds—the infamous case of the Stephen Island Wren *Xenicus* [=*Traversia*] *lyalli* Rothschild, 1894, and the lighthouse keeper's cat is well known. Greenway (1958, 1967) believed *Microgoura* was 'most probably extinct'. Although Goodwin (1967) offered no opinion on this matter, he later (Goodwin 1983) remarked that he was 'reliably' informed that *M. meeki* was extant possibly as late as the 1980s. This seems rather unlikely. Knox & Walters (1994) noted that the species 'may have survived as late as 1965', and Parker (1972) said 'Although one cannot say even now that *Microgoura meeki* is extinct, the likelihood of its survival is small'. It is almost certainly the case that science would be unaware of the existence of *M. meeki* had it not been for Meek's fortuitous collection in 1904 of the only specimens now known. One wonders how many other animals were lost from the region before their presence could be registered.

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