Rise and fall of the Harlequin Hummingbird ‘Trochilus multicolor': a species that never was

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Rise and fall of the Harlequin Hummingbird '*Trochilus multicolor*': a species that never was

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Summary.—Based on a plate and descriptions in Latham (1782, 1787), Gmelin (1788) formally named a new species of hummingbird, *Trochilus multicolor*. Prior to the early 1830s, this novelty was discussed and depicted by various authors and artists, but mention of it then largely vanished from the literature. This paper reviews available literature and artwork on the supposed species, reaching the conclusion that the entire corpus probably stems from a single composite specimen present in the British Museum collection from at least the early 1780s, but which was recognised as a fabrication and then destroyed in around 1819. A central role in the affair played by the then well-known, but subsequently neglected, ornithologist and artist, Thomas Davies, is highlighted, though there is no evidence of any fraud on his part.

The 1904 edition of *The encyclopedia Americana*, the authoritative North American encyclopaedia of its day (Ingersoll 1904), gave its general readership a glimpse into the vast variety of colour and adornment so typical of the family Trochilidae (Fig. 1). One of the 13 species (no. 12) depicted on this striking plate is, however, conspicuously absent from modern lists of hummingbirds, namely the Harlequin Hummingbird *Trochilus multicolor* J. F. Gmelin, 1788.

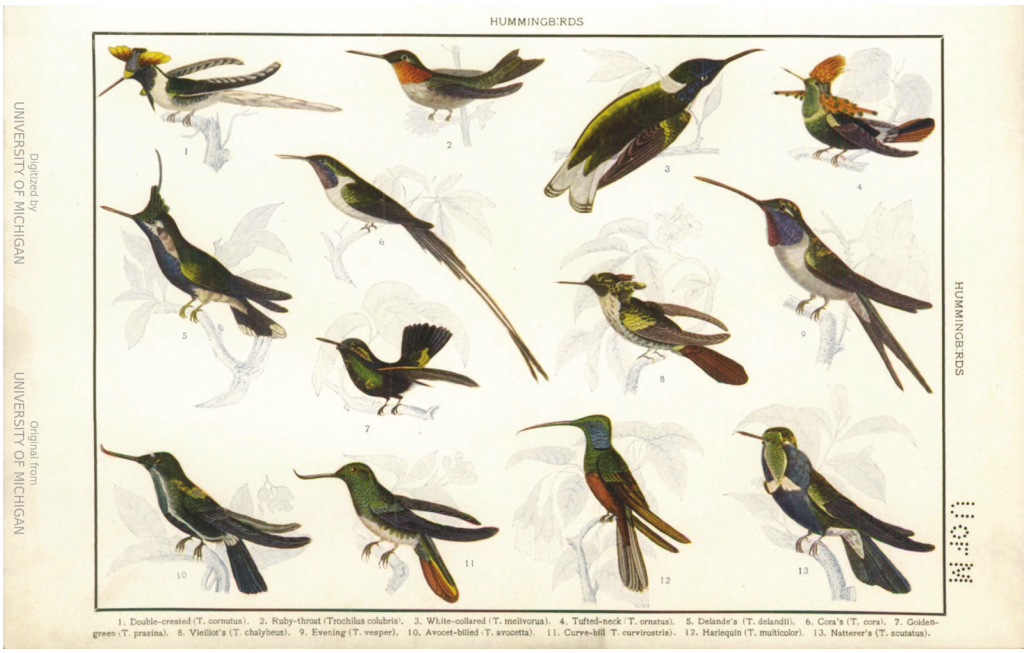

Figure 1. Plate of hummingbird species from Ingersoll (1904), including the Harlequin Hummingbird (no. 12, centre-right, bottom).

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This supposed species had been introduced to science well over 100 years earlier, when it was described as the Harlequin Humming-Bird by Latham (1782: 760) from a specimen in the collections of the British Museum (BM), but not illustrated. His description ran: '*Length four inches and a half. Bill bent, an inch and a quarter in length, and of a brown colour: crown of the head, chin, breast, and middle of the back, green: from the bill, through the eye, is a stripe of fine blue, passing behind almost to the nape; the lower part of this is edged with black: the upper parts of the body and wings are brown: the belly and vent of the colour of cinnabar, but not glossy like the rest of the plumage: the tail even at the end, and of a brown colour: the legs are also pale brown.*' Latham further noted that the unique skin had '*no history annexed to it*', and he was unable to offer any information about the bird's range or habits.

Review of the literature

Writing five years later, Latham (1787: 135) had come across another source of information, noting in his text on the Harlequin Hummingbird that: '*Among the drawings of Colonel Davies, I observe one of these which measures full five inches. The colours of the plumage are much the same as before described, except that beneath the black at the back part of the neck is a narrow band of blue green: the wing coverts and upper part of the back incline to green; and the under part of the tail verges to purple. The plate herewith given is a good representation.*' In fact this plate (Fig. 2), which is unsigned and undated, partly reflects Latham's original description (e.g. no blue-green below the black on back of neck, upper part of back brown) and partly differences suggested by Davies (e.g. wing-coverts green and the inner undertail feathers tending to very pale purplish), while departing from both in showing the blue on the head not passing from the bill through the eye, but rather being confined to an area behind the eye and extending downwards towards the nape.

In revisiting the species, Latham (1822) gave essentially an identical description to that of Latham (1782), and he added very similar comments to those in Latham (1787) when going on to mention Davies' drawing. Likewise, his accompanying plate (Fig. 3) is in outline that from his 1787 work, but now coloured somewhat differently, at least comparing the copies of his works consulted here, held in the Rothschild Library of the Natural History Museum at Tring: the area of coverts previously green is now brown; the inner undertail has lost its purplish hue; and, most striking, the stripe of blue is now depicted passing through the eye from the base of the bill, in conformity with his 1782 text.

Something puzzling is clearly occurring. Fortunately a search has revealed what is apparently Latham's original copy of Davies' depiction among the 888 original watercolours of birds, in six volumes, formerly in the possession of Latham but since 1920 held by the Natural History Museum (NHMUK), which holds the life and earth sciences collections formerly in the BM (Sawyer 1949, Jackson 1999). Although most are attributed to John Latham himself (Jackson 1999), who was a more than adequate artist (Jackson 1985), some are signed by other artists, including T. Davies. However, the Harlequin Hummingbird picture (Fig. 4) is not so signed and, despite the tentative pencilled attribution on it to Davies in an unknown hand, other evidence demonstrates that it is most unlikely to be by him (R. Tovell *in litt*. 2019; see below). This image is in precisely the same pose as the reproductions in Latham (1787, 1822), but in a mirror-reversed stance and set against a roughly sketched background. Most strikingly, the plumage coloration in this painting differs from the description in Latham (1782) in much the same features that Latham (1787) attributed to the Davies drawing, vindicating Latham's (1787: 135) statement that '*The plate herewith given is a good representation* [of Davies']*.*' Seemingly the plumage coloration discrepancies noted earlier in Latham's printed reproductions may have crept in due to poor rendition of the original by the colourists employed.

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Figure 2. Plate of the Harlequin Hummingbird from Latham (1787, pl. 111).

Latham's 1782 and 1787 descriptions and his 1787 plate provided the entire source material on which Gmelin (1788) based his brief Latin type description of *Trochilus multicolor*. Subsequently, Latham (1790: 308) adopted Gmelin's scientific name, while including in his Latin species outline an enigmatic phrase that translates as '*in some of which there is a blue-green patch below the nape*'.

The following year, Shaw & Nodder (1791) felt able to narrow the range of the Harlequin Hummingbird, '*among the rarest species of its genus*', to South America, hardly a bold conjecture for a large, colourful hummingbird. Shaw's Latin account was accompanied by a plate by Frederick Nodder (Fig. 5) painted, according to the text, from the BM specimen, which seems likely to be true as Shaw had been appointed an assistant Keeper of Natural History there earlier in the year (Harrison & Smith 2008). Unlike Latham's earlier published painting (Fig. 2), Nodder's plate does show the blue on the head passing through the eye, and also resembles Latham's (1787) account of Davies' painting in having blue-green below

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Figure 3. Plate of the Harlequin Hummingbird from Latham (1822, pl. 76).

the black on the back of the neck, the upper part of the back greenish and the underside of the tail verging to purplish on its inner feathers.

The Harlequin Hummingbird was subsequently painted again, by Sydenham Edwards (Fig. 6) for Audebert & Vieillot (1802), who also claimed that Edwards had worked directly from the BM skin. Whether true or not, this image's overall close similarity to the bird depicted in Nodder's plate suggests that Edwards was also familiar with the latter. It does, however, differ from Nodder's in omitting the nape patch that Latham had noted in Davies' drawing, something that Audebert & Vieillot regarded as being indicative of a 'variety' of

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Figure 4. Original watercolour of the Harlequin Hummingbird, now held among six volumes of Latham's drawings in the NHMUK Dept. of Library and Archives (vol. 3, no. 447) (© Natural History Museum, London)

the Harlequin, and in having the green on the crown extend a short distance down the back of the neck. Unfortunately, the originals of neither Nodder's nor Edwards' paintings seem to be available for study, so the extent to which differences may be attributable to

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Figure 5. Plate of the Harlequin Hummingbird by Frederick Nodder in Shaw & Nodder (1791, pl. 81).

the colourists employed cannot be judged. It was Edwards' image that was used by *The encyclopedia Americana* (Fig. 1).

The first published intimation that the Harlequin Hummingbird specimen might not be all it appeared to be came as a footnote to the account of Latham (1822: 317), in which he noted that: '*It has been suggested to me, that this is no other than a bird made up by the ingenuity of some whimsical person, who has fabricated it from the feathers of others; but which, by every attention paid to it, I cannot detect; yet should it prove to be so, it is not the only deception among the many thousands of Natural History Curiosities in the place where it is yet to be seen.*' A few years later, Lesson (1829) included the species, along with the Edwards drawing taken from

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Figure 6. Plate of the Harlequin Hummingbird by Sydenham Edwards in Audebert & Vieillot (1802, pl. 69).

Audebert & Vieillot (1802) and coloured similarly, but explicitly stated that he did so with great reservation and merely for the sake of completeness. He even wondered, largely on the basis of its plumage colours, whether it was actually a sunbird that had been described; seemingly, he was not at this point aware of Latham's (1822) footnote. Subsequently, however, Lesson (1831: xiii) stated unambiguously that (translation): '*M. Stokes writes to us that the bird that served as the type for Latham's description and for the figure copied by Vieillot was the product of a fabrication, and that it had been discovered on deconstructing the specimen preserved in the British Museum.*'

Two years later again, Jardine (1833), having definitely read Latham (1822) and Lesson (1829), but seemingly not Lesson (1831), again reproduced the Edwards drawing (with a little background foliage added) and was still prepared to posit that the species might be valid, writing: '*… we have ventured a third time to introduce it* [Edwards' figure], *with the view of attracting the attention of British naturalists, for it has been hinted that the specimen in the British*

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Figure 7. (a) Original watercolour by Thomas Davies that includes the Harlequin Hummingbird, held by the NHMUK Dept. of Library and Archives (Davies volume, sheet 107, no. 147); (b) close-up of the Harlequin Hummingbird from (a) (© Natural History Museum, London)

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Museum was a specimen made up from the feathers of different birds. … If there is a specimen in the British Museum, and a drawing in the possession of General Davis [sic], *corresponding and evidently done from an individual of the same species, there will be no doubt of its existence.'*

Despite Jardine's sanguine assessment, Gould (1861) essentially wrote the swan-song of the Harlequin Hummingbird in the ornithological literature within his great monograph on the Trochilidae. For this work, he had been '*at all times favoured … with both information and the loan of specimens*' from the collections of the BM (Gould 1861: viii), but could find no evidence of any extant skin attesting to its existence. Indeed, he concluded that Gmelin (1780) had described the Harlequin Hummingbird as a new species based on '*characters … taken from a plate which must have been drawn from the imagination and not from any real specimen.*' (Gould 1861: ix). As a final nail in its coffin, Salvin (1892) made no mention at all of either specimen or species in his comprehensive account of the Trochilidae for the relevant volume of the *Catalogue of birds in the British Museum*.

This largely chronological synopsis of the scientific literature leaves two key questions unresolved. It seems apparent that a specimen, quite possibly fraudulent, must have existed that was studied by Latham (1782), and very probably also seen by Shaw and the artists Nodder and Edwards, but what happened to it and when? It further appears certain from Latham (1787) that a picture by Davies, putatively of a different specimen, also existed, but who exactly was Davies, on what did he base his picture, and what happened to render it unavailable to any author or artist subsequently? A further, less central but nevertheless intriguing uncertainty surrounds the identity of Lesson's (1831) correspondent 'M. Stokes', not least because resolving this could assist in answering the first of the main questions.

Fate of the specimen

Regarding the specimen, some printed evidence was in fact available but of which Gould (1861) was seemingly unaware, and it serves to vindicate Latham's (1822) footnote. In 1835–36, a major Parliamentary enquiry, involving a Select Committee, was conducted into the (unsatisfactory) state of the 'Condition, Management and Affairs' of the BM, during which many staff and others were called to give evidence. In late April of the 1836 session, John Edward Gray (1800–75), a zoologist on the BM curatorial staff since late 1824, appeared before the committee and was questioned by Sir Robert Inglis concerning, among other things, the stated French taxidermy practice of improving the appearance of exhibition specimens by having them 'made up', i.e. bringing together parts from more than one bird. Included within this encounter was the following exchange (Parliamentary Papers 1836, paragraphs 2953–2954):

'2953. Looking at that practice [making up] *as a man of science, do you consider it advisable or reprehensible? – It is very wrong. We had formerly in the collection of the Museum a made-up specimen, called the harlequin hummingbird, which I believe was destroyed by Dr. Leach. It was ejected before my time.*

2954. Can you state the reason why you have not adopted it in the British Museum? – I never would adopt it, because it would be impossible to depend upon a description made from a bird so stuffed; and if I knew that any bird in the British Museum was in that state, I should recommend its being destroyed.'

William Elford Leach (1791–1836) was appointed as BM curator with responsibility for zoology in February 1814, following the death of his predecessor, George Shaw (Harrison & Smith 2008). He nominally served until being pensioned off on the grounds of ill health in April 1822, but his active involvement in the work of the museum almost entirely ceased from September 1820, when he had a mental collapse. Although Gray was not employed by the BM until 1824, he had in fact assisted Leach on an *ad hoc* basis since around 1816,

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and therefore both knew him well personally and had first-hand knowledge of his working practices. It thus seems highly probable that his reply to the parliamentary enquiry, though phrased in a less than definitive manner, should be taken as a factual statement.

When then might the Harlequin Hummingbird specimen have been destroyed? Clearly not before Leach joined the BM in early 1814; indeed, Harrison & Smith (2008) adduce evidence that the specimen was on public display in Room XI, the BM Bird Room at Montagu House, until at least 1808. Clearly also, it seems highly unlikely to have been after autumn 1820, when Leach suffered his mental collapse. Limited circumstantial evidence suggests that it may have been sometime between mid 1819 and mid 1820. In early 1819, Leach had attended the major auction of specimens resulting from Bullock disposing of his famous museum, with a brief to purchase material for the BM collection (Harrison & Smith 2008). On 18 May 1819, he had acquired, expensively, an unusual petrel that had feet resembling those of a duck; it subsequently transpired that this was because the legs *were* those of a duck, which must have brought home to him rather forcibly the problems inherent in 'made up' specimens! At least one other Bullock specimen on sale, a bird-of-paradise, apparently had a similar problem, proving to be a composite of several species (Harrison & Smith 2008).

The identification of the mysterious 'M. Stokes' may also lend support to a thesis that the deconstruction, and subsequent destruction, of the BM Harlequin Hummingbird specimen happened around this time, assuming that he was, as seems likely, '*Charles Stokes (1783–1853), Member of the Stock Exchange and enthusiastic collector. Elford* [Leach] *described molluscs he collected at Lymington, Southampton (Leach 1852: 319)*' (Harrison & Smith 2008: 397). Although the Leach paper referred to was not published until long posthumously, when it was put to press by Gray, Leach had essentially finalised it during the period leading up to his mental collapse: the plates are dated 1820 and the paper was then at proof stage. Moreover, as well as describing his molluscs for his paper, we know that Leach was in close touch with Charles Stokes during 1818/19, as the latter contributed towards Leach's ultimately unsuccessful attempt to raise funds to buy the Dufresne collection for the BM (Harrison & Smith 2008). As a scientific friend with an interest in the BM, it therefore seems very probable that Stokes was aware of the ongoing Harlequin Hummingbird investigation, and thus may well have been the informant of Latham (1822) in addition to Lesson (1831).

The important role of Thomas Davies

The Colonel Davies mentioned by Latham (1787) was the talented watercolourist Thomas Davies (1737/38–1812)[1], a British army officer who served for extended periods of time in North America and attained the rank of Lieutenant-General (Stacey 1972, Jackson 1999). He had studied drawing during his military training and is probably best known for his watercolour depictions of military operations and landscapes, notably in North America (Hubbard 1972). However, it was '*birds that were the consuming interest of his later life*' (Hubbard 1972: 38). His interests in this direction really became apparent from about 1770, when a letter from him on the preparation and preservation of bird specimens was read at the Royal Society and published in their *Philosophical Transactions* (1770: 184–187), by chance in the same year that Latham published his first article in the same journal (Jackson 1985). Davies' subsequent published output was small, but included illustrated descriptions of new bird species (Hubbard 1972). A Fellow of the Linnean Society, he was elected a Fellow of the Royal Society in 1781, and clearly consorted with, and was admired by, the

[1] *The Gentleman's Magazine* 82(1): 394, 1812, notes the death of Davies as 'March 16 – At Blackheath, in his 75th year, Lieut. Gen. Thomas Davies, R.A.'

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leading gentleman scientists of the day (Hubbard 1972, Stacey 1972). Among these was John Latham, who in his first major work commented that: '*In this gentleman's* [Captain Davies'] *elegant collection will be found many scarce specimens, especially from North America, which he has been at the pains to collect and arrange himself. His friends too are obliged to him for the free communication of every knowledge or observation in Natural History in his power*.' (Latham 1781: 100; see also Stacey 1972: 62). Subsequently, in his later works, Latham repeatedly referred to Davies' illustrations and specimen collection (e.g., see Mathews & Iredale 1920).

After his death, appreciation of General Davies as an ornithologist and natural historian began to fade, to the point that 100 years later the highly knowledgeable Mathews & Iredale (1920: 122) commented '*We have not yet attempted to work out the life-history of General Davies, but … the interest of this old-time ornithologist … has suffered neglect so that his name is scarcely known*.' Likewise, discussing his importance as an artist, Hubbard (1972: 18–20) noted that '*any direct influence by him on later art was precluded by the fact that his work was for such a long time hidden away in private collections in England*'. This began to change in 1953, when more than 50 of Davies' views and landscapes came on the market from the famous library at Knowsley, near Liverpool, assembled by the natural historian Edward Smith Stanley (1775–1851), the 13th Earl of Derby, who had acquired a large collection of Davies' watercolours either at 'Van Holde's Sale' in 1817 (Fisher & Jackson 2002: 46) or more probably earlier, at the sale of Davies' specimen collection in June 1812 (R. Tovell *in litt*. 2019).

Although Sawyer (1949) had drawn attention to the fact that Knowsley held a further portfolio of Davies' paintings, including 126 delineations of birds with their names and localities, Hubbard (1972: 20) surprisingly stated that '*This collection* [Knowsley] *is also said to have contained a great many of his* [Davies'] *drawings of birds but no trace of these remain today*.' This must have been based on a misunderstanding, because the portfolio certainly remained there until 2017, when it passed to NHMUK under the UK Government Acceptance in Lieu scheme (Arts Council England 2017: 31). A search through this collection has now revealed an original Harlequin Hummingbird watercolour signed by Davies, part of a composition of three different hummingbird species (Fig. 7a), with the top figure labelled 'Harlequin' in ink, apparently in Davies' own hand (Fig. 7b). The additional pencil annotation beneath this is probably by the 13th Earl of Derby (C. Fisher *in litt*. 2019).

Comparison of Latham's depiction (Fig. 4) of the Harlequin Hummingbird specimen with that in Davies' original drawing (Fig. 7b) shows the former indeed to be an almost exact copy of the latter. As regards coloration, Davies' watercolour clearly shows the features that Latham attributed to it and included in his own representation, namely a narrow band of blue-green below the black at the back of the neck, the wing-coverts and upper back green, and the underside of the tail purplish; in addition, it depicts the blue on the head passing from the base of the bill though the eye. It is only in the printed versions of Latham's painting that coloration differences become apparent.

Finally, on what did Davies base his picture? Latham (1787, 1790) clearly implied that he thought Davies had made use of a different individual from that in the BM, which differed in certain plumage characteristics. In addition to travelling widely on military duty in eastern North America between 1757 and 1790, Davies also visited the West Indies in 1786 (Stacey 1972). Moreover, he received numerous bird specimens from elsewhere for his own collection, and also worked widely in other collections. Latham (1821: x–xi) noted that *'from* [Davies'] *faithful pencil I have been furnished with many very exact representations of new subjects, taken from the different Ornithological collections of his friends, independent of those in his own well-chosen cabinet of subjects in Natural History*.' Unfortunately, Davies' own collection was dispersed by a sale in June 1812 (Fisher 2002), immediately after his death earlier in the year, so its contents cannot now be determined; however, and unlike for some other

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species, Latham in his various writings never stated that Davies himself had a specimen of the Harlequin Hummingbird.

Conclusions

Overall, probability argues against there ever having been more than one Harlequin Hummingbird. Available evidence demonstrates that the BM specimen was all but certainly a fraudulent composite that was destroyed when this was discovered, and it strains credibility that a different but very similar one should somehow have been available to Davies. He certainly worked in the BM on at least one occasion, as indicated by a note on one of his drawings in the portfolio acquired by NHMUK in 2017, and Davies is known to have been in England during 1785 and early 1786 (Stacey 1972). Furthermore, although Latham (1787) laid stress on the apparent plumage coloration differences between Davies' drawing and his own prior description, the recording of plumage coloration in specimens that are largely iridescent—in this case, according to Latham (1782), all except the cinnabar belly and vent of the Harlequin Hummingbird—is problematic, as structural colours can appear to alter according to how light strikes them. In this context, when formerly in charge of the NHMUK bird collections, RP-J had personal experience more than once of being asked to check coloration on iridescent species by publishers of illustrated bird guides who had found that their artist's depiction did not match their author's description! Potentially supporting this supposition, the published depictions by Nodder and by Edwards, both of which were stated to be based on the BM specimen, have colorations closely (Nodder) or somewhat more loosely (Edwards) similar to that of Davies.

The presumption that only one specimen of the Harlequin Hummingbird existed does however leave one puzzling point unanswered; namely, why Latham should not have realised that Davies might actually have used the BM specimen for his illustration. Did he possibly just assume this could not be the case because of the differences in plumage depiction between Davies' image and his own 1782 description? Resolution of this matter will likely remain impossible unless relevant writings by and between the two men become available. Regardless, Latham should certainly not be viewed too critically for mistaking a composite hummingbird specimen for a new species—he would certainly not be the last excellent ornithologist to make this error (e.g. Chapman 1889a,b).

Drawing a more general conclusion, it is worth emphasising that even where fraud is suspected or seemingly proven, museum curators should not, and hopefully nowadays would not, destroy the offending specimen(s) as happened in the case of the Harlequin Hummingbird, but rather merely flag their concerns clearly. Otherwise much of the evidence that might potentially inform future investigation, in particular that based on novel technological developments, would be lost, as has already been highlighted by detailed investigation of the large-scale fraud perpetrated by Richard Meinertzhagen, for which the survival of specimens that a former NHMUK bird curator considered should be burnt has proved vital (Rasmussen & Prŷs-Jones 2003).

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