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## COLLECTION REPORT

**THE KENTISH EOLITHS OF BENJAMIN HARRISON:**  
**Their Rise and Fall in Museum Collections and What This Tells Us about the Circumstances of Their Survival**

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## ABSTRACT

Studies focusing on the history of collections generally emphasize what is estimable about them, but how should we make sense of collections that, once held in high regard, have subsequently been judged worthless? Such is the case for eoliths, stone objects resembling early artifacts, which held a pivotal position in arguments concerning the origins of human tool-making, but which are now largely considered nonartifactual. This article discusses the circumstances in which eolith collections were assembled, with reference to national and local museums in southeast England, but is mainly concerned with how and why, with the passing of the eolithic heyday, so many objects described as eoliths were lost, why others remain in museums, and what this tells us about curatorial practice. [object authenticity, prehistoric archaeology, eoliths, collection histories, curatorial practice]

Recent discussions in archaeology and collections history have interrogated the word “collection,” which so often implies agreement as to what constitutes shared content and boundaries. This assumption brings with it the danger that collections might become reified factoids. Instead, some have suggested we reconfigure collections as “assemblages,” drawing on both the archaeological definition of “found items already brought together” and the analytic use of the term by Deleuze and Guattari (1980) as developed in association with Actor Network Theory (Müller and Schurr 2016). Both emphasize the impermanence of boundaries, and the contingent “always incomplete” and unfinished character of grouping objects. Using the gerund or present participle “assembling” with its processual implication underlines this. The insights

obtained from this approach seem especially apt when considering collections of *eoliths*—crude stone objects purported to be artifacts but often showing little or no convincing evidence of human workmanship (Figure 1). Eoliths became the focus of debates about the earliest human tools, and many survive in contemporary collections.

This paper examines the process of assembling (and disassembling) associated with eolith collections, in which the *facticity* (Latour and Woolgar 1979) of the eolith as a knowledge object emerges and disappears. A “knowledge object” in this context is a physical entity which, by virtue of its material characteristics and the situation in which it was found, evinces information about its technical function and age. We describe here some existing collections of eoliths and associated manuscripts in museums in southeast England, linked in particular to the work of Benjamin Harrison (1837–1921). We ask how we might account for patterns of curation and disposal in relation to an episode in the history of archaeology that for many later scholars became an embarrassing sideshow. The modernist justification for keeping contentious and ambiguous objects in museums is that they may still be relevant to archaeology, which continues to grapple with the artifact/geofact problem, and are useful in testing experimental methods and modes of analysis developed during the controversy. This has become especially relevant given



Figure 1. Tray of eoliths, “loosely-assembled,” as they appeared in the Herne Bay store of the Royal Museum Canterbury in 2008. Stained and patinated “ochreous” material, collected around Ash between 1896 and 1915 by Benjamin Harrison and others. (Reproduced from Ellen 2013.)

recent evidence for the earliest human occupation of Britain at a timeline corresponding with the geological period from which many British eoliths were drawn. However, part of the explanation for the continuing existence of this material is also the institutional compulsion to curate everything that has been accessed, with equal care, and to provide resources for the study of historical objects regardless of issues around their authenticity.

The collections discussed here contain objects from southeast England, where British eoliths were concentrated and first collected. They are preserved in a number of museums of national importance—the British Museum (BM), the Natural History Museum (NHM), and the Pitt-Rivers Museum in Oxford (PRM)—and a number of local museums in Kent: Maidstone (MM), Rochester, Canterbury, Tunbridge Wells, and Dartford. Other UK museums acquired Kentish eoliths through exchange, and in some cases objects regarded as eoliths were obtained from their local areas, mainly southern and eastern England, but extending to the unlikely Port Stewart eoliths from Northern Ireland.

#### THE HISTORICAL CONTEXT OF BRITISH EOLITH COLLECTIONS

The possibility of human-made objects predating Paleolithic tools was an issue as soon as the first paleoliths were accepted, as pushing back the human lineage into further antiquity became a pressing matter. The first British eoliths were collected and described by Benjamin Harrison of Ightham in Kent in the early 1880s, encouraged by a coterie of eminent prehistorians and amateurs, though others (such as John Evans) were increasingly skeptical.

Harrison's eoliths were soon followed by others. By 1898 there were reports of eoliths from elsewhere in Kent, and in neighboring counties (Kennard 1898, 29). Until this time most specimens had been found on the edge of the Weald, in West Kent. Now they were reported from southeast England in an ever-widening circle, later merging with equally doubtful material from East Anglia described as "pre-palaeoliths" (e.g., Moir 1919). They were also being claimed for locations further afield, such as Northern Ireland (Bennett 1903). In mainland Europe, in addition to early finds in France and Portugal, they were being found most notably in Belgium, and outside

Europe in places as widely separated as Burma and North America.

Although many eoliths were accepted by respected British authorities until the 1920s, they were largely discredited as archaeological evidence after the Second World War. Despite this, not only did the controversy generate a vast literature (Ellen and Muthana 2013), and play an important role in the development of modern scientific archaeology, it left a physical residue in the form of museum collections. As more and more eoliths were discovered, they started to find their way into local museums and, later, national collections.

#### HOW EOLITH COLLECTIONS WERE ESTABLISHED

The first and most influential collection of eoliths in Britain was established by Benjamin Harrison above his grocer's shop in Ightham (Ellen 2011b, fig. 1). There are good descriptions of this, and of how he organized his material. He is reputed to have "collected upwards of four thousand specimens" from the "Kent Plateau," meaning that "they were taken from heights varying from 400 to 800 ft" (120–240 m above sea level). His recording methods were meticulous: "every specimen received a number, the date when found, under what conditions, and any other detail, all entered in ... [a] catalogue against each number" (Quick n.d., 335). But methods nowadays unremarkable were matched by some decidedly unconventional practices—for example, storing them in cigar boxes. Such quaint informality was extended to how Harrison used mnemonics to refer to objects in his collection. Roe (1981a, 219) refers to watercolor sketches where two eoliths are identified through the box names "Asquith" and "Bonar Law." On labels attached to watercolors in the Maidstone museum are geographical provenances such as "Otham," but on others are mysteriously written "Woodruff," "Pearce," and so on. These do not, as one might suppose, refer to people gifting eoliths, but rather to British prime ministers, and perhaps to Harrison's friends, all being used to reference specimen drawers or containers. He also employed names appearing in commercial images (e.g. "Rosebery"). Marvin (1896, 375) notes in an interview with Harrison that, having

exhausted all the scientific terms for his collection, and in order to render classification more easy he has labeled some of the boxes after well-known men. De Wet may be seen a few feet from Cromwell, while Stanley, Rosebery, Salisbury, and other well-known names may be found . . . . Mr Harrison, on account of the size of his collection, has been compelled to adopt a plan of this kind, for otherwise he would find it difficult, when scientists visit him, to readily turn up the specimens he wishes to shew to prove his arguments.

Christian Rudolf de Wet was a Boer general, and we might guess at some of the others. Confusingly, a cigar box (Figure 2) featuring the Spanish “Flor de Rosebery” trademark with—presumably—a portrait of the British prime minister Lord Archibald Rosebery, also has “Kembell” prominently inscribed on the front, leaving us to wonder about the nuances in his nomenclature.

Harrison’s museum became a place of pilgrimage for eolithists and more skeptical students of early stone tools, from within the UK (Edward Tylor, Alfred Wallace, John Evans, Ray Lankester) and from abroad, such as Aimé Rutot (1909) from Brussels in 1900 and Hermann Klaatsch (1908) from Heidelberg in 1903. Not only was his museum a hub for enthusiasts examining and exchanging eoliths (McNabb 2012), but given his straightened



Figure 2. Cigar box used by Benjamin Harrison for storing eoliths, featuring some nomenclature underlying his system of classification. (Tunbridge Wells Museum.)

circumstances, Harrison relied upon selling eoliths to subsidize his income and continue his research. On February 12, 1895, he wrote to Tylor, sending a sketchbook of specimens he had “to offer”: “skeleton sets” of 12 to 14 at two guineas. A harrowing correspondence about payment suggests that he was desperate (Ellen 2011b, 285). There is evidence that attests further to this commerce: a receipt for 6 pounds and 60 pence paid by J. W. Ford signed by Harrison, and five letters from Harrison to Ford relating to sales (BM Document Archive Reg. Nos. P1996.1–6.1). Harrison even sold sets of eoliths in aid of Serbian war relief in 1914.

Harrison exhibited at meetings of the British Association and other professional societies. Although O’Connor (2007, 187–88) notes that some meetings were a contentious “free-for-all,” the various activities surrounding eoliths and their “flow as material artefacts” (Brown et al. 2000, 258)—their inspection, sharing, exchanging, trading, displaying, curating, and the associated debate—were sufficiently disciplined to justify describing their network as an “invisible college” and “community of eolithic practice” (Lave 1993), in which boundaries between professionals and amateurs were fluid (Ellen 2011b, 279–80; Ellen and Muthana 2010, 362–63).

#### INTO THE PUBLIC MUSEUM

Harrison had long sought to place eoliths in public museums, as a mark of their significance and acceptance, and to make them more available to study. This was regarded as more important than presentation at scientific meetings or publication in reputable journals, a view shared by others. In Belgium, for example, Rutot (de Bont 2003) claimed that if only skeptics would see the object in the museum they would be convinced, for here they could observe “a decent series.” In his attempt to be recognized, Harrison started with the local museums of Kent, moving on to national collections. Some were more accepting than others.

In 1893 the Maidstone Museum requested some of Harrison’s “rude” implements. By 1896 he had sketched and catalogued more than 5000, and he produced numerous documented series of specimens to enrich not only Maidstone but also “other collections and public institutions.” In the same year a series was purchased for the British Museum (Harrison 1928,



186, 223), though eoliths were not accessed there until 1900. None were exhibited until 1902 when rearrangement of the galleries made this possible (Anonymous 1902, fig. 1), and with the word “eolithic” in inverted commas, suggesting persisting curatorial doubts regarding authenticity and terminology. Harrisonian eoliths were now represented in most major UK museums. Maidstone had finally purchased its collection in 1899: all the Medway gravels paleoliths and a representative set of eoliths (Harrison 1928, 224). By 1896, collections of Harrison’s eoliths had been acquired by the Natural History Museum, the Pitt-Rivers, the Geological Museum in London’s Jermyn Street (subsequently moved to Oxford), and the Museum of the Royal College of Science (Marvin 1896, 375), plus the National Museum of Washington, DC (which became the Smithsonian National Museum of Natural History: Anonymous n.d.). Some were obtained through exchange by the Australian Museum in Sydney.

Acceptance by museums was important, but Harrison was forever concerned about how his material would be viewed. He would periodically check. Alexander Montgomerie wrote to him about the “plate of implements” that Harrison had produced for the Natural History Museum in November 1900: “I called at the Cromwell Road Museum on Monday and was glad to find the eoliths left by Professor Prestwich on show. . . . Now this is a great step in advance” (Harrison 1928, 236). In November 1903, Harrison records visiting the British Museum, and he departed annoyed that his eoliths “were poorly displayed not showing proper chipping.” For Harrison, how eoliths were physically displayed in glass cabinets and in images was crucial to accepting their authenticity (Harrison 1928, 227–28, 343; Harrison 1957; Ellen 2011, 280). He distrusted photographs and engravings and preferred pencil and watercolor sketches to convey the features he wished to emphasize, the reason these are so well-represented in the archives. Harrison’s distrust of photographs in some ways runs counter to the general trend in late-nineteenth-century science which moves from ideal type “characteristic” representations to “faithful” individual depiction, but his preference was hardly exceptional, and others argued that “photography was not enough,” that photographic images often had to be embellished, and that seeing what was significant in a

specimen was about learning the relevant perceptual conventions (e.g., Daston and Galison 1992, 93–101). Harrison produced a large number of watercolors with help from his nephew, W. S. Tomkin. These appear in his sketchbooks and notebooks or are found separately in many museum collections. We have so far documented more than 200 pencil and watercolor sketches in the Maidstone Museum alone, and in the last 20–30 years of his life several thousand specimens must have been reproduced in this way (Ellen and Muthana 2010, 354, 358–59, 365). Display cards and labels are also preserved in the Maidstone and Pitt-Rivers collections, with how eoliths were displayed underpinning the classification of types that Harrison depended upon. For instance, looking for shapes such as “double broad crook tool,” “draw-shave or hollow scraper,” and “pole scraper” evoked familiar objects of late-nineteenth-century Kentish rural life.

The number of eoliths collected and transferred to museums was enormous. In 1911 the Medway Valley Scientific Research Society assembled “some 4000 specimens” (Cook 1911, 1). And not only did museums continue to acquire eoliths into the 1930s, but there was a lively trade. The sums paid for individual objects were high by modern standards, at “10 guinees [*sic*] a set” (Ellen 2011b, 285–86). The trade continued after Harrison’s death, and the Pitt-Rivers Museum records that Sydney Hewlett was paid nine pounds and nine shillings for a single Sussex eolith as late as January 1934.

Once eoliths were established as important, many museums sought to obtain them, and once installed, the transformation from mere stones to “specimens” progressed further. This was partly conceptual, but it also entailed a physical process. By selecting stones, describing them as “eoliths,” arranging them, and marking them with inked catalogue numbers and comments, and pieces of stuck paper (some printed with relevant descriptors such as “PLATEAU” or “WEST OF MEDWAY” (e.g., Ellen and Muthana 2010, figs. 5 and 6), they became fully cultural objects in the worlds of archaeology and museum curation (Figure 3). Attachments and markings are not unique to eoliths, and many early collections of stone tools are similarly adorned. However, given the ambiguity and doubts surrounding eoliths, such additions gave incremental authority to



Figure 3. Eoliths from Maidstone Museum illustrating different types of marking and attachment.

their status as artifacts. By creating a label, an object is transformed into a specimen (Sturtevant 1969), the label interpreting the object through its collection history and physical analysis. The more information, the more the object becomes reified. Specimens in Maidstone are covered with ink markings indicating place of publication. For example, MM-2012 is inscribed with “Prestwich 1891,” referring to its appearance in the *Quarterly Journal of the Geological Society*; MM-1959, with “Prestwich 1889” referring to another publication; and “Royal Society” appears on MM-3294 and MM-3253, and “RSA” (presumably Royal Society of Arts) on specimens MM-29, MM-22, and many others. Other markings assisted technical examination through the addition of lines and shading to emphasize features on the objects difficult to see using the naked eye. Just as significant, the act of cast-making emphasized the importance of the original objects, conferring even greater authenticity through reification. One cast in the Pitt-Rivers from Pit 2 of the 1890 British Association excavation in Ash, a village about eight kilometers north of

Ightham, shows lines added for explanatory effect (Ellen 2011b, 302, fn 48).

A number of objects became “celebrity eoliths” (Figure 4), some “named” eoliths, which Harrison thought so significant in arguments around authenticity that their images were widely circulated and their distinctive features known about. Other pieces were inscribed with amusing ink drawings. The former included Harrison’s “Convincer” and the “Corner Stone,” now in Maidstone (MM-2826; see also Harrison 1928, 132). Another (Figure 4a) features a sketch by Harrison of an “Eskimo” bearing a close resemblance to Victorian depictions of Robinson Crusoe. The inscription reads “the stone which the builder rejected.” In a letter to Worthington Smith informing him of this and other “missing link” specimens, Harrison recalls how in return for a flint from Smith on which he had made a sketch of an “eolithic man,” he had made sketches of similar beings on three of his other stones. Roe depicts an ink and wash drawing by Smith, undated but inscribed in pencil “W.G. Smith on one of BH’s Eoliths” (original,



Figure 4. “Celebrity eoliths” bearing ink sketches: (a) an “Eskimo” by Harrison, Maidstone Museum 2680 (No ID\_36452); (b) caricature of Harrison as “Eolith Man” by Worthington Smith on Mesolithic “Thames Pick,” Maidstone Museum 3346; (c) another of Harrison by Worthington Smith, to whom it had been sent for an opinion. (Pitt-Rivers Museum 1936.17: 2–15.)

17.5 × 12.5 cm [drawing of a “savage”]), while another Smith drawing dated March 1906 is based on a stone from Caddington in Bedfordshire. The original bears the inscription “AMI NOTANE OLIT HANDAB RIC KBAT” (“Am I not an eolith and a brickbat”) together with a drawing of a “savage” scraping a skin (Roe 1981b, fig. 2). A similar paper sketch of an eolithic man by Willie Tomkin (1908: Maidstone, Harrison Notebook 24, p. 29) is captioned “An eolithic deity extirpating Eolithic parasites with Eolithic body-stones.” Celebrity eoliths are relevant here because, even though some were produced by eolithophiles as amusing means of bonding a particular “community of practice,” they were a form of self-mockery which for their opponents provided further ammunition to undermine arguments.

#### THE DEMISE OF EOLITHIC COLLECTIONS

From the beginning there was skepticism surrounding eoliths, led first by John Evans and in the next generation by the likes of William Sollas, who in an angry exchange with Ray Lankester claimed that they were no better than “lumps of road metal.” Ridicule, aided by the development of empirical tests and experiments using “natural” stone material fueled the demise of the eolithic idea, and after 1930 prehistorians became wary about claiming rude implements as pre-Paleolithic (Ellen 2011b, 295). Harrison’s name is mentioned less and less, and almost always only in connection with eoliths, despite his having made

important contributions to Paleolithic archaeology more generally. The mentions are often quirky footnotes to enliven otherwise acceptable retrofitted histories of the early years of prehistoric archaeology. This dismissive view by the archaeological establishment impacted curators.

The way the eolith debate ambiguously persisted and yet gradually retreated into the realm of professional embarrassment is illustrated by the fate of the Ernest Westlake collection (Ellen 2011b, 296–97). More than 5000 Westlake specimens were offered to Sollas and Henry Balfour at Oxford, who made casts and were optimistic that they would be accepted, if not at Oxford then at other institutions, and would “realize a fair sum.” The collection moved to Ipswich, then back to Oxford in 1953, and finally to the Southampton Museum in 1961. By 1976, little of the material was thought to have been intentionally modified, though the near worthlessness of the collection was difficult for the younger Westlake to accept. The collection strangely disappeared around 1980, with the rumor that it had been dumped in a Hampshire pond.

If the story of the Westlake collection being passed from pillar to post and suffering the ignominy of being dumped may seem extreme, similar stories can be told for others. At Maidstone, part of Harrison’s original collection was allegedly used as ballast in building storeroom foundations, and there is evidence of specimens being surreptitiously removed

from other collections. More generally, however, eoliths were simply shifted into nonpriority residual collection areas (in Canterbury, by moving them to Herne Bay), often uncatalogued and uncared for. After we examined the Herne Bay collection in 2008, the museum was detached administratively from Canterbury and rebranded “The Seaside Museum.” The eoliths, now arguably out of place, were removed and subsequently discovered in a garden shed, from where they were retrieved and restored to the museum.

Elsewhere, although the curatorial response to the demise was less dramatic, it was arguably more insidious. The Pitt-Rivers and British Museum eoliths were carefully recorded and stored. Some British Museum eoliths were moved at an early stage to the Paleolithic-Mesolithic collection (e.g., BM-1920 10–15.1), and Roger Jacobi spent time sorting out genuine tools from eoliths in the collection. More recently, on May 8, 2000, the catalogue reports staff having “removed . . . any unimportant, unregistered eoliths,” placing them in a special eolith spreadsheet. On September 1, 2004, others were not added to the spreadsheet as they were “objects for dispersal.” Around this time, staff considered putting the eoliths in the “White Sturge drawers with cut-outs,” which would have required 137 drawers. At this point, curatorial economics kicked in. A list dated DS 1/9/2004 distinguishes “real objects” from eoliths and notes that about 21 objects have been replaced in the main collection and required further curation. Only at Maidstone has a surviving eolith collection been fully catalogued, described, and properly stored.

#### EXISTING COLLECTIONS OF EOLITHS AND ASSOCIATED ARCHIVES

We have not attempted to trace all existing collections of Kentish eoliths but rather have undertaken to describe the main collections, and a representative sample of smaller collections. What follows are notes on those closely connected with the story of Kentish eoliths and of Benjamin Harrison’s role in it. We are, however, aware that smaller collections of Harrisonian eoliths are located elsewhere. For example, Sargent (1995, 9) notes the Sussex Archaeological Society Collections, containing watercolors dated 1915, possibly Harrison’s. Given the latter’s zeal in attempting to sell and disseminate his eoliths, it is likely that many similar collections are to be found. In mainland Europe, British—specifically, Harrisonian—eoliths are known in collections in France and Belgium, and perhaps elsewhere.

The descriptions presented below relate to collections as they existed in 2008–2009, unless otherwise indicated. In their pre-sorted and unanalyzed condition, we might prefer to describe their contents as “assemblages,” consistent with our opening conceptual leitmotif. The approximate numbers of objects and related archive material are summarized in Table 1. The individual collections vary in size and form, depending on whether they are in a small, local museum (e.g., Dartford); a large, county-level museum (e.g., Maidstone); or a national collection (e.g., the British Museum). The character and specificities of each assemblage is determined not only by its size but by the pattern of acquisitions, the location along the accession

Museum Archive	“Eoliths” ( <i>N</i> )	Sketchbooks	Notebooks and other archival materials
Canterbury, Royal Museum	144	0	some relevant correspondence
Dartford Museum	61	0	
London, British Museum	431	1	3
London, Natural History Museum	112		
Maidstone Museum	856	13	23
Oxford, University Museum of Natural History	0	0	Westlake archive
Oxford, Pitt-Rivers Museum	294	1	some relevant correspondence
Rochester Guildhall Museum	64	0	2, 62 watercolors
Tunbridge Wells Museum and Art Gallery	74	0	4

Table 1. Number of objects described as eoliths in nine UK museum collections, together with (mainly) Harrisonian archive documentation.



process (for example, whether registered or unregistered), the context within the wider collection, the history of objects as they have moved between collectors and museums, the relationship between objects and associated archive, and the amount of attention staff have been able to devote to labeling, classification, and interpretation, and in some cases to reassignment and disposal. Circumstances of acquisition may be influenced by other factors, such as acquisition of the notorious Piltdown fossils by the London Natural History Museum, which were associated with eolithic-style objects supposedly from the same site. Together, these various factors contribute to the overall “shape” and character of a particular museum assemblage.

### *Canterbury, Royal Museum*

In 2008 the collections at the Royal Museum Canterbury incorporated those at Herne Bay. None of the objects described as eoliths were fully catalogued prior to our work, most having derived from the original specimens of J. Gilchrist Wilson and T. Armstrong Bowes. The early material can be securely dated to 1896. It is likely some pieces were obtained directly from Harrison. Archival material accompanying the collection lodged in Herne Bay includes typed letters from Harrison dated to around 1910, and two manuscripts: Wilson, “On Paleolithic Figured-Stones,” a typescript labeled “Cuxton 24 April 1909,” and (no author) “The Story of the Chalk Hills. Chapter 1. ‘In the beginning.’”

### *Dartford Museum*

Of the Dartford objects identified as eoliths, apart from one which on closer inspection is a Clactonian flake, most are typical Harrisonian material. The earliest dated eolith is 1890, though which were first acquired and registered is unclear. The collection belonged to [W. M.] Newton of Dartford, mentioned by E. R. Harrison in his biography of his father (Harrison 1928, 268). The objects include some that clearly belonged to Harrison, and others we suspect were collected by Newton. There are also “figured stones,” which have been shown to be part of the broader “controversy of credibility” linked to the first claims for the peopling of Britain, and connected with the Piltdown scandal (Ellen 2013, 456–57).

### *London, British Museum*

The British Museum (BM) holds the largest collection of eoliths in the UK, though the history is surprisingly recent given eolith activity from 1880 onwards. The first accessed were in 1900, six pieces obtained directly from Harrison. If we look at the period 1900 to 1940, the accessions are dominated by East Anglian material which reflects the dominance of these sites, and the role of workers such as J. Reid Moir and E. R. Lankester.

Most Kentish material was technically unregistered at the time of our 2009 inventory but is ultimately derived from Harrison, passing through the collections of others: L. de Barri Crawshay (14 objects), H. Christy (13 objects), R. H. Chandler (4 objects), F. W. Shilling (5 objects), and W. A. Sturge. The F. N. Haward material is independent of Harrison and was accessed in 1945. The J. W. Ford collection consists of 28 objects, each precisely matched against drawings and numbers in a Harrison sketchbook which accompanied the 1897 purchase, but which were not registered until 1996. Another Harrison collection was transferred from the Geological Museum and registered in 1989. Material acquired from J. A. Brown (25 objects) and probably from Harrison remains unregistered. A collection of 36 objects dated 1903 is listed as from an unknown source, but one piece is marked as having been sent to John Evans, and circumstantial evidence suggests it was from Harrison. The W. A. Sturge collection was bequeathed in 1919 and comprises 55 unregistered objects plus an unregistered collection of 25 objects from the “Kent Plateau,” 35 objects from the “North Downs,” 30 from “Kent un-provenanced,” plus 91 others from Kent. There is also a Harrison Collection relating to the British Association Excavation on the “Kent Plateau.” The BM has 105 pieces from Northern Ireland, all unregistered and from various collectors (BM Sturge Document Archive for Northern Ireland).

The relevant BM archive in 2008 was all Harrison-related material distributed in various carefully described document files. These include photographs, site maps, letters from Harrison (1891–1917); correspondence with Prestwich, Sturge, and A. M. Bell; papers by Harrison, biographical notes on Harrison, lecture notes, receipts and similar ephemera. There are also a notebook illustrating a set of 31 objects sold

by Harrison to J. W. Ford (only 28 registered), articles about Harrison, printed brochures and display labels, and watercolor illustrations of eoliths drawn by Harrison. There are three Harrison notebooks and one sketchbook in the BM, the sketchbook containing drawings that are not all provenanced or numbered. A second sketchbook is a copy of an original in Croydon.

### *London, Natural History Museum*

In 2008, more than 40 objects in the Palaeontology Department were described as eoliths from Kent and Norfolk, and 40 from (somehow appropriately) Bethlehem (actually, from excavations at a tell southwest of Jerusalem). There was also a boxed collection of Bethlehem eoliths collected by Dorothea Bate and Elinor Gardner (1937). In all, we entered 110 objects in our 2008 database. In 2020 there were also two eoliths located in the Petrology collection, one from Ash acquired in 1984. The archive includes approximately 10 letters sent from Sevenoaks and Ightham by Harrison, mainly to Arthur Smith Woodward (the NHM keeper of paleontology, 1902–1913). There are 13 letters from Reid Moir to Woodward concerning eoliths, Piltdown implements, and Ipswich Man, written in 1912 and 1913. The Rothschild Zoological Museum archive held by the NHM Library also contains a letter from Harrison dated May 29, 1895.

### *Maidstone Museum*

Maidstone has 856 objects described as eoliths, most of which derive from Harrison's collection.<sup>1</sup> The accompanying Harrison archive consists of 13 numbered sketchbooks (SB)<sup>2</sup> and 23 numbered notebooks (NB).<sup>3</sup> Many sketchbooks contain watercolors of eoliths for which Harrison became famous. In all, we estimate there are 200 watercolors and the same again for drawings in the sketchbooks and notebooks combined. There are also separate sheets of watercolors and sketches, some (outline sketches on board) possibly parts of exhibits. There are separate printed sheets (e.g., the verses "That little chocolate man," "Eolith, palaeolith – nature or man," "Chip and slide") and letters, plus two volumes of the Harrison autobiography, comprising collected notes, pasted ephemera, a typed lecture, and some letters. The sketchbooks are, from a chronological point of

view, complicated as the individual books were evidently put together from sketches and other items pasted in from various dates between 1861 and 1897, whereas the numbering appears to have been added later and is not always chronological. The notebooks comprise bound volumes of writings, actual letters (e.g., G. de Mortillet, December 5, 1892), copies of letters both written and received, newspaper clippings, various other items of ephemera, and illustrations, as well as several folders containing further letters, receipts, and copies of articles. The notebooks present similar problems of chronology to the sketchbooks.

### *Oxford, University Museum of Natural History*

The eoliths originally in the University Museum of Natural History were transferred to the Pitt-Rivers, but the archive remains. It comprises Brecknell, S. M. 17.10.2005 Papers of Ernest Westlake, 1855–1922. In particular, I. Correspondence, Box 1, Letters/circulars received by E. Westlake; J. Prestwich (Professor, Sir Joseph Prestwich (1812–1896) of Oxford University, writing from Sevenoaks) (32 Aug. 1883): on a "Downton [Hants.] implement." III. Publications, etc. Box 2; Publications by Westlake: Westlake, E. (1902) *Note on recent discoveries of Palaeolithic and Eolithic implements in the valley of the Avon*. This archive is pertinent for the light shed on the "lingering demise" and ultimate fate of the Westlake collection.

### *Oxford, Pitt-Rivers Museum*

Most of the Pitt-Rivers eoliths are from Kent, and within Kent from the Ightham area, but there are also examples from Sussex, Suffolk, Wiltshire, and Oxfordshire, and from Belgium (e.g., PRM-1950.5.5). Four eoliths from the Tylor collection formed part of an exchange with the Australian Museum in Sydney in 1950.<sup>4</sup>

In 2009 the Pitt-Rivers contained considerable material labeled "Palaeolithic" which on further inspection turned out to be "eolithic" (213 objects), and 81 objects labeled "Neolithic" (including 44 from the Edward Tylor collection and 26 from the A. R. Wallace collection) that are also "eolithic." There is little doubt that the "neoliths" and most of the "palaeoliths" are errors, most likely made when the

catalogue was computerized. The numbers of objects given in the Pitt-Rivers catalogue are also not always accurate. Where we have checked objects ourselves, we have used updated calculations, and for the parts of the collection accessed fully by Z. McGreevy in 2007–2008 we use her revised figures. Many dated acquisitions are of material collected earlier, and many accessions made much later than they were acquired. Thus, Tylor’s collection (PRM-1912.30.1–50) and a collection gifted posthumously by his wife (PRM-1917.53.1–44), were from Harrison and acquired years earlier. The same is true of Wallace’s collection (1946), assembled in 1898 with Harrison, gifted to Wallace with correspondence and sketches, and donated by W. G. Wallace. H. Balfour accessed material in 1916 previously owned by him but derived from Harrison (e.g. PRM-1916.33.1). An ovate found in 1894, and the 1897 pick-shaped tool collected by R. R. Marrett in Ash on an outing with Harrison (Ellen 2011a, 2011b, fig. 1), were not accessed until 1942, when both were acquired from Exeter College. Additional material collected by Harrison circa 1893 with F. Fawcett was not logged until 1911, and the Harrison material found in the Parsonage Farm excavation was not gifted (by the British Association) until 1900.

Some eoliths have recently been reanalyzed. R. J. McCrae reexamined one box from Savernake in October 1990 and found all to be non-artifactual, though a series from Maplescombe (1921.91.461.1–40) includes artifacts. We found a significant amount of artifactual and uncertain material labeled “eoliths” (e.g., possibly PRM-1940.12.167.1–2). Box 26 from Ightham contained 15 mostly artifactual pieces, while in Box 128 (Wiltshire eoliths collected by Bell from Savernake) 21 were definitely Paleolithic, 13 eolithic, and 7 uncertain.

The Pitt-Rivers also contains specimens that are “geological” rather than “archaeological,” though of relevance to understanding the eolithic controversy (e.g., PRM-1940.4.11), and casts of geological specimens (e.g., PRM-1940.12.161.1–12) transferred from the Oxford Geology Department. Marked “natural eoliths made by underground pressure and friction,” these and other “naturally formed stones” and casts of eoliths were used by Warren (1905) and later Barnes and Bevor (1909) in experiments and as reference material. Warren’s 1905 casts were designed to

show how Kent eoliths had been chipped under pressure. The collection includes casts of eoliths from St Prest (France) and from Belgium, as well as from the “Kent Plateau,” Weybourne in Norfolk, and from Ipswich. Finally, there are specimens of particular historic interest—for example, three “eoliths” made by Harrison and given to A. R. Wallace, and the stone ovate and pick-shaped tool collected by Marrett. The Barnes collection includes an ironical sketch of Harrison by Worthington Smith, to whom it had been sent for an opinion (PRM-1936.17: 2–15).

The Pitt-Rivers archive includes four sheets of Harrison’s eolith watercolors, with Box 12 of the Tylor papers containing letters from Harrison and a Harrison sketchbook.

### *Rochester Guildhall Museum*

There is a small group of objects labeled eoliths in Rochester, mostly donated by or purchased from Harrison, and dated 1911. One object labeled an eolith is in fact an Acheulian pointed hand axe from Swanscombe. The confusion here may arise from it having been acquired with the eoliths from Harrison. Sargent (1995) records two notebooks compiled between 1896 and 1899 containing watercolors and with the provenance of each artifact. There are 62 watercolors, 42 of which are attributable to Harrison. One is definitely of a paleolith and another almost certainly of a human-produced flake. The paleolith is a pointed hand axe on a cobble and clearly comes from the Swanscombe middle gravels, at the same level as Swanscombe girl, so circa 400,000 BP. The Rochester collection includes at least three letters from Rutot to Harrison dated 1899 and 1903.

### *Tunbridge Wells Museum and Art Gallery*

A small group of objects in Tunbridge Wells is labeled “eoliths,” most donated by W. J. Lewis Abbott, who had obtained and in some cases purchased them from Harrison. Some may have come from Harrison directly. The earliest recorded find is a piece from Abbott dated 1895, though not acquired until 1918. The largest amount of material is of unknown provenance, but Kentish. Most provenanced pieces come from Ash. There is some archival material, with Sargent (1995) reporting four notebooks, together with loose correspondence dating from 1890 to 1900.

## DISCUSSION

The period 1900 to 1914 was one of major eolith acquisition. The last record we have of an eolith being acquired and recorded as such is 1950. The volume accepted by museums was considerable, and the true numbers difficult to confirm today given disposal and curatorial neglect during the second half of the century. We offer some explanations for this and arguments for retention of contemporary collections.

The main preoccupation of geologists in the early “Antiquity of Man” debates was proving eoliths originated in the strata attributed to them. Prestwich’s famous 1891 paper (published in 1892; see also Ellen 2013, 454–55) was mainly concerned with how eoliths from the “Brown Flint Drift,” characterized by chalk flints stained chocolate brown, could serve as markers, not with their status as tools. So, even if eoliths were non-anthropic, they still represented a diagnostic geological type, which continued to distinguish “clay with flints” deposits in the Kentish Weald long after it had been accepted that claims for the human origin of most eoliths were spurious (Dewey et al. 1924, 87–89). Thus, although the trend has been to transfer eoliths from geological to archaeological collections (e.g., Oxford Natural History Museum to the Pitt-Rivers, and London’s Geological Museum to both the Pitt-Rivers and the British Museum: see also Roberts 1999), well-provenanced eoliths still have a place as physical evidence in museums of geology.

The argument connected with the continuing significance of eolith collections for archaeology requires a more complex justification. By the 1990s the work of Harrison, particularly on the Paleolithic, was being reevaluated. An ancient landscape in East Anglia was revealing evidence of humans at almost 700,000 BP (Cook and Jacobi 1994; Sargent 1995; Stringer 2006, ix). Moreover, there was renewed interest in clay-with-flints deposits capping high areas of chalk downland in southern England yielding Lower and Middle Paleolithic artifacts. Earlier neglect probably stemmed from embarrassment of association with discredited eoliths, as well as misunderstandings regarding local geology. Genuine Paleolithic material from these deposits has been questioned because of these associations (e.g., Kendall’s Hackpen Hill artifacts), but some reexamined Norfolk “eoliths” resemble the well-attested Pakefield

finds (Scott-Jackson 2000, 4, 51, 57). Moreover, as established in the early eolith debates, primitiveness of tool does not always indicate antiquity. Newton was able to demonstrate that the most convincing Thenay flakes were probably Neolithic, and Balfour’s “eolithic” tools collected at Brandon in 1915 possibly included genuine scrapers. The sub-Crag material remains “ambiguous, not proven,” with the finds from Foxhall being the most perplexing (Newton 1897, 66; Roe 1981a, 116).

Thus, the removal and dismissal of material described as “eolithic” from museums may well prove premature. The issue of whether stones found in the geological levels associated with the earliest human occupation of Europe continues to pose problems similar to those that bedeviled Harrison, Prestwich, and Evans, though in the context of modern dating methods and of accumulated global fossil and archaeological discovery for the period before 100,000 BP. Thus, in Europe there are issues relating to supposedly “archaic” “pre-Acheulian” assemblages including pebble tools reminiscent of Olduvai, and in distinguishing geofacts from intentionally flaked objects (e.g., Roebroeks and van Kolfschoten 1995). But the new context that has led some curators to be more cautious when dismissing the value of eolithic collections has also led to their reexamination and the removal of newly authenticated “tools” entirely, or their redescription in other ways in catalogues. Selective removal of “genuine” artifacts from such collections and relabeling “eoliths” as “paleoliths” (or even “neoliths”) only leads to further attrition of legitimacy.

Finally, there is the history of science argument for retention. There is no doubt that the eolithic controversy drove the discovery of empirical methods for recognizing human workmanship and to better define geological context. In the 1880s these methods were being worked out for the first time, and eoliths were crucial to the development of this critical technical literature. It was the very crudeness that stimulated the growth of such approaches, encouraging—following in particular the work of Evans (1872) and Warren (1914)—a much more systematic and serious attention to lithic analysis, observations on worn and battered stone edges, including microscopic techniques, and an experimental approach to



understanding stone tool production and use, often involving replication by craftsmen. Moreover, the objects and surrounding debates tell us much about how people perceive and imagine stones that are seemingly “tool-like” (Ellen and Muthana 2013, 120). Assemblages of physical eoliths as well as the accompanying archive are an important adjunct to the study of a key episode in the history of archaeology and science more generally. While not always artifacts, they are nevertheless “authentic museum specimens” (Ellen 2013, 472) contributing significantly to our understanding of the phenomenon of collecting, and the sometimes compulsive social and cognitive processes that underlie collecting. In some respects, collections of eoliths were no different from collections of other objects in Victorian Britain, both human-made (everything from postage stamps to porcelain) and found objects in the natural world (such as ferns and fossils). But, revealingly, eoliths were in-between, both found and putatively created. The exchange and commodification of eoliths only increased their value and accentuated interest in them. So, when judged “spurious” by respected scientific authorities, their exchange value crashed.

In understanding how collections of eoliths were put together, we need to recognize what Franklin, Johnson and Bonney (2016) have called “the social power of assembly,” an idea inspired by other recent analyses of the “mutual assembly of things and people” in museum collections (e.g., Gosden et al. 2007), together with the “argument through which naturalized facts” are created by removing objects from one context and placing them in another. Once recontextualized, conceptually and physically modified through placement in cabinets, drawers, and displays with labels, added numbers, catalogue entries, and analytic markings, they represent “frozen moments of reified decisiveness.” So, once found objects became “eoliths” and were accorded their place in the museum, objects of diverse geological origins spanning a huge time period were collapsed into a kind of atemporal “eolithocene” through some kind of negative “power of assembly.”

Labeling processes were consequently integral to how a process of knowledge production worked, in the sense that descriptors and analytic marks attached directly to objects or information stored separately—as in Harrison’s notebooks, catalogues,

classifications, sketches, and watercolors—all contribute to a progressive movement by which one object is distinguished from another, different kinds of “eoliths” are distinguished as types, and the category “eolith” itself achieves a kind of authenticity. Thus we have an incremental series of actions whereby acceptance in the museum creates knowledge objects which can then be legitimately analyzed further, what Daston and Galison (1992, 84) call “selecting and constituting working objects” and which they see as the process by which real world objects are made “safe for science.” By the same token, deaccessioning and certain kinds of transfer within and between museums seem to challenge objects such as eoliths as “knowledge objects” and may delegitimize them.

#### CONCLUSION

Eoliths have a complicated history from a curatorial point of view, being ambiguous objects that have been difficult to place in collections. They have been moved around between collections based on different criteria, and within collections in different institutions they have been mis-catalogued; have been peculiarly subject to labeling errors; have been registered, deregistered, and reregistered; and have been broadly dismissed as garbage while sometimes hiding genuine tools within them. However, there is a strong argument for maintaining the integrity of existing collections of eoliths and not violating them by removing “real tools.” At the time of their formation, and for many early collectors, archaeologists, and curators, they were all part of a distinctive “eolithic” assemblage and all regarded as real tools. Indeed, Harrison was keen to include recognizable Paleolithic types, contending that some were evidently contemporaneous, and some undeniable “transitionals.” Thus, as “specimens” in collections, many twenty-first-century curators have felt compelled to treat eoliths seriously, or at least equitably. In part this may reflect professional regulations surrounding the ethics of responsible disposal, and judgments that they retain some residual historical importance.

Studies focusing on the history of collections generally emphasize what is estimable about them. In this paper we have examined how we might make sense of assemblages of objects that, once held in high regard, have subsequently been judged worthless, and which

raise major issues regarding where we draw a boundary around “a collection.” We have discussed here some of the circumstances in which eoliths were assembled, with special reference to national and local museums in the southeast of England. With the demise of the eolithic heyday, many collections have been downgraded or have disappeared. We argue that for those that remain, although a case can be defended for retaining their integrity on the grounds that some objects may yet prove to be artifacts, many physical objects described as eoliths remain in museums through a kind of curatorial inertia, reinforced by the process through which objects become museum specimens. Collections of eoliths may ultimately tell us more about curatorial practice than they may in future contribute to understanding early human tool use. Moreover, increased knowledge concerning the mechanics of accessioning and deaccessioning and its relation to disciplinary knowledge (in this case, prehistoric archaeology and the study of tool use) can only benefit the field of museum anthropology.

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#### NOTES

1. These are located in 22 boxes as follows: P1 (55: including 3 display items), P2 (61), P3 (32, one illustrated with a ‘savage’), P25: one of which could be a paleolith), P41 (of which three may be eoliths), P44 (19 objects), P47 (36, including 8 paleoliths), P49 (12), P53 (101), P57 (115), P59 (14), P63 (50, possibly including a small paleolith), P64 (118), P65 (67, plus 9 non-eoliths), P72 (8), P115 (20: the Russell Larkby collection, a few of which are clearly Harrison), P138 (5), P138A (5), KCC (14), K1 (31), Box 3 (42), K4 (17, including a Worthington Smith illustrated eolith). The Shilling collection, including Harrisonian eoliths, was acquired in 1912.
2. The Maidstone Sketchbooks comprise the following: SB1 (1861–1883), SB2 (1884), SB3 (1884–6), SB4 (1897), SB5 (1895), SB6 (after 1886), SB7 (1887–97), SB8 (1877 to after 1882), and SB9 (1882–1890), plus four un-numbered by Harrison but which now have Maidstone numbers: SB10 (after 1884), SB11 (after 1894), SB12 (1897) and SB13 (approximately 1900–1910). Of these, SB5, SB6, SB10, SB11 and SB12 contain representations of eoliths.
3. The Maidstone Notebooks comprise the following: NB4 (1887–9), NB5 (1884–7), NB6 (c1879), NB8 (c1890), NB9 (1904 or later), NB10 (c1890), NB12 (c1892), NB13 (1893–6), NB14 (1896–7), NB15 (1890 or after), NB17 (1874–98), NB20 (1870–1900), NB21 (1903–4), NB21a (1901–2), NB22 (1905), NB23 (1907 or after), NB23a (1902–3), NB24 (1907–8), NB25 (1907–8), NB26 (1908–9), NB27 (1909), NB29 (1911–2), NB30 (1899–1900). NB13, NB14, NB15 and NB27 have sketches of eoliths. A catalogue and annotated transcriptions of the Maidstone Harrison Notebooks are available at: <https://research.kent.ac.uk/social-anthropology/projects/?article=2874>.
4. As far as we can reconstruct the sequence, the pattern of acquisition and accession of the Pitt-Rivers eolith specimens was as follows: 1885: 22, 1888: 20, 1894: 11, 1899: 01, 1900: 13, 1905: 01, 1908: 02, 1909: 24, 1911: 13, 1912: 502, 1915: 7, 1916: 2, 1917: 441, 1918: 8, 1921: 220, 1934: 2, 1936: 14, 1942: 2, 1946: 23 (the Wallace collection), and 1950: 16.

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