Buried History

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Buried History

Buried History is the annual journal of the Australian Institute of Archaeology. It publishes papers and reviews based on the results of research relating to Eastern Mediterranean, Near Eastern and Classical Archaeology, Epigraphy and the Biblical text, and the history of such research and archaeology generally for an informed readership. Papers are refereed in accordance with Australian HERDC specifications.

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Cover: The people involed with the first season of the Harvard Expedition to Samaria 1908, clockwise from top left, Gottlieb Schumacher, George Andrew Reisner, David Gordon Lyon and Clarence Stanley Fisher.

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Editorial

This edition of *Buried History* continues with the colour presentation of images. The additional information provided by colour seems to be appreciated. On another matter, one paper dealing with the history of indigenous Australian archaeology was considered for this volume, and while it was rejected in its submitted form by the reviewer, it should be noted that *Buried History* is ready to consider such themes.

A large portion of this volume is devoted to Professor Ron Tappy's description of the first season of the Harvard University expedition to Samaria. Dr Tappy has been the G. Albert Shoemaker Professor of Bible and Archaeology since 1997. After graduation he studied at the Jerusalem University-College, the Oriental Institute of the University of Chicago and received a MATS degree *summa cum laude* from Gordon-Conwell Theological Seminary and an AM and PhD from Harvard University. He is currently the project director and principal investigator of the Zeitah Excavations, an archaeological field project at Tel Zayit, Israel. The Institute was pleased to have Professor Tappy give the Australian Institute of Archaeology's annual lecture in 2015 on the stratigraphy associated with the Samaria Ostraca.

The paper herein tells the story of the excavation itself. The traditional understanding is that George Reisner dismissed Gottlieb Schumacher, the field director for the first season, toward the end of the season because he had not followed Reisner's specified excavation strategy. Subsequent seasons were then directed by Reisner himself who introduced some principles of stratigraphic excavation and published an acclaimed excavation report in 1924. The first season's personal diaries of the staff appear to tell a different story. Many archaeologists will read this paper from a knowing standpoint having encountered similar personal and political situations on expeditions. Human nature seems to continue largely unchanged.

In the early 1950s the Institute received a number of objects by way of division from Sir Max Mallowan's excavations at Nimrud. Although these are documented in the distribution lists held by institutions such as the British Museum, some objects seem to have become 'lost'. A case in point is the three ceramic 'hands' held by the Institute. Dr Luis Siddall has written a short paper to bring their existence in Melbourne to the attention of the archaeological world.

The paper on the Roman period spritsail is a follow-up to my paper in the last issue. It draws attention to the possibility that the operational control provided by the spritsail was the catalyst for a dramatic increase in merchant sailing ship sizes in the late 2nd century BC, which saw a concomitant increase in Roman period maritime trade. I am indented to Professor Greg Horsley, who oversaw the review of this paper.

In preparation for the re-publication of the Institute's cuneiform material, Drs David Saunders, Richard Collmann and Luis Siddall report on the progress made with the Institute's RTI (Reflectance Transformation Imaging) dome. The Institute has benefitted from advice from Cultural Heritage Imaging of San Francisco and Jacob L. Dahl, Associate Professor of Assyriology, University of Oxford.

We are indebted to Professor Alan Millard for reviewing a collection of W.G. Lambert's writings on Mesopotamian religion. Alison White, after some consultation with Professor Greg Horsley, reviewed a volume on Greek and Roman society and language. A couple of books about church architecture and decoration are reviewed by Professor Susan Balderstone and my review of a book about the sailing season during Greek and Roman times was included partly because of the subject's relationship to the spritsail paper.

As always we acknowledge our reviewers, who have spent much time on our behalf. Their scholarly endeavour has added significant value to the papers here published.

Christopher J. Davey
Editor

The Harvard Expedition to Samaria: A Story of Twists and Turns in the Opening Season of 1908

Ron E. Tappy

DOI: https://doi.org/10.62614/hf08a972

Abstract: The previously unpublished field diaries of the principal leaders involved in the first season of the Harvard Expedition to Samaria are held by the University's Semitic Museum. The narrative they contain sheds light on the organization and archaeological techniques applied at the site and gives some context to the much acclaimed final publication of the excavations (Reisner, Fisher & Lyon, 1924).

Introduction

In an address to the Australian Institute of Archaeology in the spring of 2015 I focussed on the 1910 season of the Harvard Excavations at Samaria, when the team recovered the important cache of Samaria Ostraca. But that discovery, like many others made by the Harvard expedition, might easily have remained obscured by time and the deep deposits of earth that smothered the grandeur of an erstwhile capital city. Events in world history could well have prevented the excavations at Samaria from even happening and, then, from reaching publication. During the broader course of the work, from conception to print (1905–1924), world empires lay in transition. Across Europe, political entities were defined or redefined and national identities gathered shape (for example, through observances such as Anzac Day). Maps of the eastern Mediterranean littoral and hinterlands, from the Great Sea to the Persian Gulf, would be redrawn to the satisfaction of great powers. The precipitating struggle proved costly in every way, and new endeavours such as the Semitic Museum at Harvard and its desired field project at Samaria required long-term financial sponsorship and stable dealings with scattered and multiple levels of foreign bureaucracy. Neither of these necessities came effortlessly, for the fledgling discipline of modern archaeology itself had barely taken flight. This paper provides a window into some of the many challenges faced by those who organized, administered, and launched the exploration of Samaria, an important undertaking that would ultimately help shape a new academic discipline.

Every excavation, like every picture, tells a story. In fact, excavations tell multiple stories, starting with those of cultures past. But the official report that ultimately emerges from a field project and, to an even greater degree, the private, unpublished notes and records left by an expedition also disclose a story about the expedition itself—a kind of autobiographical account of its own life and times. Moreover, field projects themselves sometimes unfold at such auspicious historical moments that one can analyse and understand the results of their work only within that larger context. While the primary archaeological goal of an expedition may aim at recovering a particular site's ancient context and history, the chronology and broader setting of the project itself must become important factors in any subsequent interpretation. Such was the case at Samaria, since Harvard's work there transpired during the waning years of the Ottoman Empire and the coming of World War I. The project's inaugural season, in 1908, overlapped the very time of the Young Turk Revolution. All these events wielded a pervasive, enduring influence over world history at the outset of the twentieth century CE. And they ensconced the Samaria expedition betwixt and between international and local powers and events. The present study has this larger context in mind as it explores both the internal and external struggles of a start-up expedition cast within a bourgeoning academic field and the vicissitudes of world affairs.

Figure 1: *Front row, right to left: Gottlieb Schumacher, David Gordon Lyon, Clarence Stanley Fisher with field staff in a trench at Samaria (courtesy of the Semitic Museum, Harvard University).*

Sources

Throughout this discussion, I base my comments and observations on primary versus secondary materials, particularly on unpublished records contained in the personal journals and diaries of David Gordon Lyon, Gottlieb Schumacher, Clarence Stanley Fisher (Figure 1), cited as *LD I–III*, *SD I–II*, *FD I–II,* respectively, and to a lesser extent, of George Andrew Reisner (Figure

5), cited as *RD I–VII*. This approach allows me to step away from the beaten academic track trod and worn by the published record and into the otherwise hidden world of the protagonists' private thoughts. Yet the use of such writings bears its own risk, since it could result in my guileless interpretation of *their* interpretation of reality. I shall return to this hermeneutical predicament in some concluding comments. Still, when handled judiciously, such unpublished, handwritten accounts can not only provide data crucial to understanding the archaeology of the site, but they can also enliven the story behind the discoveries and reveal the archaeological and administrative trials persistently faced by excavators past and present.

Figure 2: *Jakob Heinrich Schiff, Portrait by Louis Loeb 1903 (© President and Fellows of Harvard College, courtesy of Harvard Art Museums).*

The Semitic Museum at Harvard University has produced a tremendous aid for students of Samaria by making available electronic copies of not only the two official excavation reports from the Harvard Expedition to Samaria in 1908–1910 but also these private, otherwise unpublished field diaries. These resources are accessible through the *Harvard University Library Open Collections Program: Expeditions and Discoveries, Sponsored Exploration and Scientific Discovery in the Modern Age*. Their online availability surely sets a standard for other holders of valuable research materials to follow.

I. Tripping at the Starting Gate

By the outset of the twentieth century, American interest in the archaeological exploration of Palestine led to three key developments. First, Jakob Heinrich ('Jacob Henry')

Figure 3: *Semitic Museum, Harvard University, photograph by Daderot, May 25, 2008 (Wikimedia Commons, Public Domain).*

Schiff (1847–1920), a German-American banker, philanthropist and Jewish leader (Figure 2), became the financial founder and most generous benefactor of the Semitic Museum of Harvard University (Figure 3). Established in 1889 (very near the opening of the national archaeological museum in Istanbul), the fledgling Museum functioned under the vision and excellent care of Curator David Gordon Lyon (1852–1935) and represented an emerging commitment by the University to the study of ancient lands and peoples (Figures 4, 9 & 11). Construction of the Museum's permanent home on Divinity Avenue

Figure 4: *David Gordon Lyon, Curator of the Semitic Museum and Principal Figure behind the Harvard Expedition to Samaria, 1908–1910 (courtesy of Andover-Harvard Theological Library).*

concluded in 1902 at an approximate cost of $80,000 (the equivalent of around $2.2 million today).

Second, the American Schools of Oriental Research was established in 1900. Under the capable leadership of its first director, Charles C. Torrey (1863–1956), the new society acquired permanent quarters in Jerusalem, collected and maintained a credible library, and established positive working relations with other similar international institutions, such as the Palestine Exploration Fund and the École Biblique. Attention soon turned to fund raising with an eye to launching a field project somewhere in the region. After a generous pledge of funds at the founding of ASOR by the Rev. James Buchanan Nies (who bequeathed a large collection of cuneiform tablets and seals to Yale University) and Mrs. Jane Dows Nies coupled with a noble effort to secure other patrons and a license to excavate at Samaria—which Rev. Nies counted among 'the sites of cities of the highest importance to science'—the plan stalled when the Ottoman authorities in Constantinople refused the request.

All seemed lost. But then the third important development occurred—one which not only revived the desire to excavate and focused once again on Samaria but also provided the necessary means to do so. Jacob Henry Schiff offered Harvard's Semitic Museum $50,000 in January 1905 to support a five-year excavation at the ancient capital city. Although he initially pledged $10,000 per year, Schiff

Figure 5: *George Andrew Reisner, Field Director of the Harvard Expedition to Samaria, 1909–1910 (from* The Rotarian *49, no.1 [July 1936], p.23; photograph by Bob Davis of the New York Sun; June 26, 1933 [B8331]).*

Figure 6: *Charles William Eliot, Harvard University, President, 1869–1909 (1903 portrait Charles W. Eliot, Wikipedia, Public Domain).*

modified his terms in 1908 and deposited the full amount; at the same time, he also allowed for the expenditure of more than $10,000 in a single year. He soon supplemented the 1905 gift with an additional $5,000 toward anticipated expenses for the initial application to Ottoman authorities. By most inflation calculators, the total donation would equate to between $1.4–1.5 million today. Thus the idea that our archaeological forebearers had hundreds if not thousands of readily available local workers but only a shoe-string budget, while project directors today almost certainly face the opposite situation, is patently untrue.

Harvard quickly formed a steering panel, the Committee on Exploration in the Orient, which in turn appointed George Andrew Reisner (1867–1942) as project director (Figure 5). Armed with this substantial financial backing and, this time, with letters of support from Charles William Eliot, President of Harvard from 1869 to 1909 (Figure 6), and indeed from Theodore Roosevelt, President of the United States, Reisner arrived in Constantinople in November 1905 and presented to the Ottoman Sultan a proposal to excavate at Samaria. Generally, such requests were granted only with approval from the Director of the Imperial Ottoman Museum in Constantinople. But despite the impressive patronage and further support from the American Minister to Turkey, the permit was not granted until the autumn of 1907. Schiff's original offer had attached the stipulation that Harvard would secure an excavation license from the Turkish authorities within six months (i.e., by the summer of 1905). When the initial trip

Figure 7: *Gottlieb Samuel Schumacher, Field Director of the Harvard Expedition to Samaria 1908 Season.*

to Istanbul ran beyond this time limit, Schiff graciously extended the deadline to October 1906. Ultimately, the organizers failed to meet even that target date. Because the unfortunate delay exceeded time limits imposed by Schiff, in 1906 Reisner accepted an invitation by the Egyptian government to undertake a three-year period of work in that country.

When the American proposal for Samaria finally gained approval, Schiff somewhat hesitantly renewed his offer, contingent on Reisner's presence at Samaria to oversee the initial planning of the project. Harvard then engaged Haifa resident Gottlieb Samuel Schumacher (1857–1925), as field director (Figures 7 & 10) and former member of the Philadelphia Expedition to Nippur Clarence Stanley Fisher (1876–1941) as architect (Figure 8). Working on behalf of the German Society for the Study of Palestine, Schumacher had excavated at strategically located Megiddo from 1903–1905, where he applied relatively rudimentary field methods to open a wide (20–25 m), north-south trench across the impressive mound (see below). Reisner and Schumacher met at Samaria on Friday, April 24, 1908, and outlined the scope and methods of the project. That this strategy session even occurred implies that Reisner understood and approved Schumacher's field tactics prior to the start of work. Schumacher's own journals confirm their agreement on how to approach the site (*SD I*, 5).

Lyon himself arrived at Samaria around 6:00 pm on Thursday, May 21, 1908, and found there a comfortable dig house (originally built as a chapel by the Baptist Missionary Society in London), a full complement of staff (local commissioner, cook, 'house boy,' and 'a soldier for our protection'), plus a well-laid table of 'fruit (oranges and preserved fruits), fowl, and various kinds of meats, rice, vegetables, eggs, tea, etc.' He did not have, however, 'good and safe drinking water,' and he wrote that 'flies are a pest, and mosquitos and sand flies still more so' (*LD I*, 11–14). But as the inaugural season unfolded, such nuisances would pale in comparison to the problems to come. Although excavation had begun on the very day of Reisner's meeting with Schumacher (April 24), only five and a half days later work was interrupted by rain as well as administrative and financial discord with local authorities. It finally resumed in Trial Trench A after Lyon's arrival and ran from May 22–June 3, 1908, with sporadic interruptions, and then again from July 11–August 21, with a work force of 130 men and women (*LD I*, 15, 20, 24, 59, *II*, 5; *III*, 25; *SD I*, 142; *FD I*, 49).

Thus began a three-year period of exploration at this famous capital city. But why only three years, when the project's impressive academic, political, and financial patronage had arranged for a five-year effort? The answer is very complicated and historians might point to a host of contributing factors. Recurring, if not persistent, problems included but were not limited to: objections to the pay scale; severe difficulties with the local administrators and work force; nasty disputes among the workers themselves; greedy looters and pilfered artifacts; the

Figure 8: *Clarence Stanley Fisher, Architect, Harvard Expedition to Samaria, 1908–1910 (1921 portrait, Philips Studio; Penn Museum Image: 140198).*

improper handling or even loss of artifacts; disagreements over the disposition of artifacts; the insufferable working out of deeds and fees for land rights and the penalties for damaged olive trees; disputes over dumping areas; seasonal suspension of the project during harvest cycles; uncertain effects of local Druz revolts and, on the larger scene, the Young Turk Revolution of 1908; and myriad other challenges.

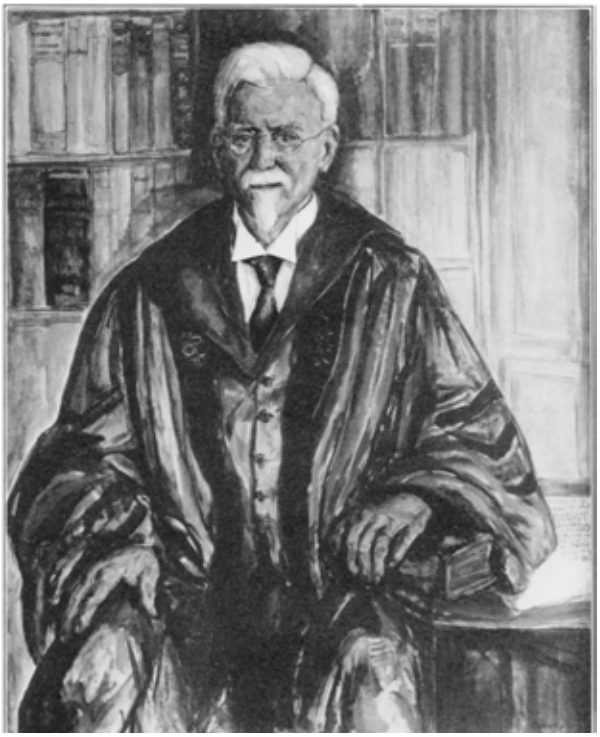

Figure 9: *David Gordon Lyon, Hancock Professor of Hebrew and Other Oriental Languages, Harvard University (Portrait in a Memorial by G.A. Barton,* BASOR *62 [1936], 2–4).*

But the principal struggle, the grave reality that made the inaugural season nearly impassable, centred on personal tussles and disagreements between Schumacher and Lyon over how best to manage the fieldwork. As early as May 9, 1908 (prior to the on-site arrival of Lyon), Reisner had signed a power of attorney granting Schumacher the right 'to act on his behalf at the excavations' (*LD I*, 18). But as representative of the sponsoring institution and procurer of prodigious financial resources, Lyon clearly felt that he should have a major say in running the show. His private, unpublished diaries dramatically reveal how quickly threatening issues arose within and around the project. By mid-summer 1908, the viability of the entire effort lay under siege, and the way forward seemed quite unclear.

II. In the Beginning, Samaria Created Trouble

America, Germany, and pre-World War I Currents at Samaria? If the problems mentioned above did not adequately test an embryonic project in an emergent discipline, the fact that the on-site management brought

Figure 10: *Gottlieb Schumacher excavating dolmens on the Mount of Olives, February 25, 1907 (photograph by D.G. Lyon; courtesy of the Semitic Museum, Harvard University).*

into contact two men representing different scientific (if not political and cultural) approaches surely posed complications enough.

The relationship between David Gordon Lyon and Gottlieb Samuel Schumacher involved a strange alchemy of German-American connections and influences. Both men were born in the United States (Lyon in Benton, Alabama, and Schumacher roughly 750 miles away in Zanesville, Ohio) and both completed graduate work in Germany. From there, however, they embarked upon quite different courses. After relocating in Germany (where he married Tosca Woehler), training under Friedrich Delitzsch, and and receiving the Ph.D. degree in Syriac at the University of Leipzig in 1882, Lyon returned to Harvard Divinity School in Cambridge, Massachusetts, where, despite the fact that his primary training lay in Assyriology, he accepted the Hollis Chair of Divinity—the oldest endowed chair of theology in the United States. (Ironically, the

Figure 11: *David Gordon Lyon at Samieh, March 27, 1907 (courtesy of the Semitic Museum, Harvard University).*

Figure 12: *Grave of Gottlieb Schumacher, Templer Friedhof, Haifa, Israel (photograph by Beni Salzberg, April 8, 2013; Wikimedia Commons, Public Domain).*

appointment of an Assyriologist to this position preceded the arrival of Paul Haupt at Johns Hopkins by one year, thereby making Lyon the first professor of Assyriology in the United States). Lyon was instrumental in developing a program of research in old world archaeology at Harvard and in founding the Semitic Museum in 1889, where he served as Curator until his retirement in 1921, and even afterwards as Honorary Curator. In 1910, the final year of field work at Samaria, he accepted the venerated position of Hancock Professor of Hebrew and Other Oriental Languages at Harvard University (Figure 9). Lyon invested his entire professional life, then, in one American academic institution. His commitment to Harvard, to the study of ancient cultures, and through that study to enhancing the profile of archaeology at Harvard remained steadfast and above reproach.

Schumacher, on the other hand, left the United States when he was only twelve years old. His father, Jakob Frederick Schumacher, though born in Württemberg, Germany, had immigrated to Ohio prior to Gottlieb's birth in 1857. Jakob Schumacher was a member of the *Tempelgesellschaft* (The Temple Society), a German-based movement that held strong eschatological and millennial beliefs anticipating a massive transformation of society. In 1869, he relocated his family to the German Colony in Haifa. Given his training in Germany as an architect and engineer, Jakob played an important role thereafter in the planning and development of that community. Following his own studies in engineering in Stuttgart, Germany (1876–1881), Gottlieb immediately returned to the German Colony and continued to reside there with his wife, Maria Lange Schumacher from Gnadenfeld, South Russia, throughout the expedition to Samaria. During World War I, the Templer community relocated to Germany. Only in 1924 did Schumacher return to Haifa, where he died in 1925 and was buried beside his extended family in the *Templer Friedhof* (Figure 12).

In 1881, Schumacher had accepted an appointment by the Ottoman government as Chief Engineer in the Akko Province. He worked on the completion of the Dera'a–Jezreel Valley–Haifa railway, a westward branch of the Hejaz trunk route that ran from Damascus to Medina (Figure 13) and that was designed to facilitate the integration of distant Arabian territories into the Ottoman Empire. In the course of his surveys for the railway, Schumacher produced the first accurate maps of the region (especially in the Golan, Hauran, and Aijlun areas of Transjordan) and kept detailed records of archaeological remains and contemporary villages (Schmacher 1886). When Kaiser Wilhelm II and Empress Augusta Victoria paid an official visit to Palestine in 1898, Schumacher designed and supervised the construction of a new jetty in the port at Haifa by which the entourage could easily disembark from their ship's tender. As his own passion for archaeology increased, the Kaiser subsequently sponsored an excavation of the geo-politically important site of Tell el-Mutesellim (Megiddo) from 1903–1905, and the skilled engineer, surveyor, and architect from the German Colony in Haifa, Gottlieb Schumacher, logically became the director of the expedition.

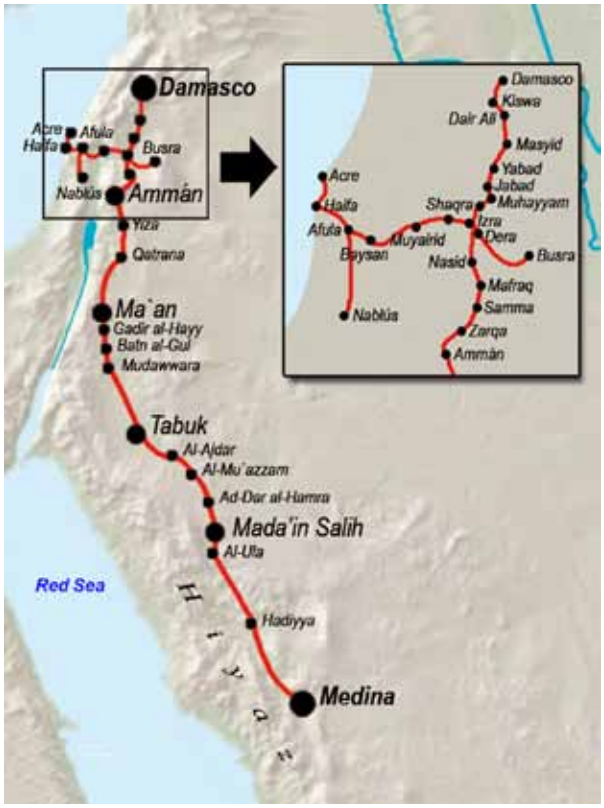

Figure 13: *A map of the Hejaz Railway as it was in 1914, including an insert of Dera'a–Jezreel Valley–Haifa Western Branch (Copyright © 2000, 2001, 2002 Free Software Foundation, Inc.).*

Figure 14: *A German Map of the Ottoman Empire and Vilayet System (Wikimedia Commons, Public Domain).*

Adopting basic field practices that Heinrich Schliemann had followed in earlier excavations at Troy (1870–1879), Mycenae (1876), Orchomenos (1880), and Tiryns (1884–1885), Schumacher proceeded to cut a trench roughly 25 meters in width across the mound at Megiddo and to focus his efforts on architecture and artifacts rather than individual soil layers or stratigraphic sequences. He identified six major building levels, ranging from the Middle Bronze Age to the Iron Age, and brought to light the most impressive architectural discoveries to date in Palestine (e.g., the so-called Mittelburg and Nordburg edifices from the Middle Bronze Age, the Palast from the Iron Age, well-designed tombs possibly built for the royalty of Megiddo, and more). Moreover, he punctually published his work (Schumacher 1908), by which time he had also authored numerous archaeological studies in the journal *Zeitschrift des Deutschen Palästina-Vereins*.

Thus, in retrospect, Schumacher was probably as prepared to take the reins at Samaria as anyone could have been in 1908. Given Reisner's unavailability at the start of the project, Harvard's selection of Schumacher as inaugural field director seems eminently reasonable. While both Reisner (1924) and Kenyon (Crowfoot et al. 1942; 1957) would implement much tighter stratigraphic controls at Samaria in the coming years, one cannot fairly evoke what they were about to do as a critique of what Schumacher actually did in 1908. Moreover, clarity of hindsight suggests that a lack of concern on Schumacher's part for close debris-layer analysis did not constitute the primary catalyst behind the tension that quickly developed between him and Lyon. Other obstacles prevented the two men from negotiating a rapprochement: differences in their national loyalties, training, visions, and their dissimilar relationships to the sponsoring institution back in America, to name a few. The extent to which Lyon emphasized Schumacher's dated digging and analytical skills in his private conversations with Reisner remains unclear in the journals. But these private documents do demonstrate that, strategy wise, Lyon repeatedly blamed his colleague for a ballooning cadre of paid labourers, an impractical scheduling and pace of excavation, an unmanageable expansion of uncoordinated fields of exposure, and the consequent inability to record (but not necessarily the failure to recognize) stratigraphic detail.

It is important to remember, then, that while Germany and America had played significant roles in the lives of both Lyon and Schumacher by the time they found themselves cast together at Samaria, the familial and cultural ties to Germany were much stronger for Schumacher. His affection for and commitment to the Templers in the German Colony at Haifa, where he had spent his formative and post-graduate years, assumed an especially powerful place in his life, and he would allow nothing, not even his position at Samaria, to impinge upon this relationship. At several points in his diaries, he himself openly wrote of such perceived threats (see below). That Lyon, conversely, never acknowledged the Templers or the German Colony when privately criticizing Schumacher not only for his field methods but also his desire to visit family in Haifa suggests, at best, a profound misunderstanding of, or at worst a total lack of appreciation for, the ties that were so meaningful in Schumacher's life.

Beyond the level of personal sensitivities, the precise degree to which the growing schism between the United States on the one hand and Germany and the Ottoman Empire on the other had already tainted the on-site atmosphere at Samaria or the relations between Lyon and Schumacher remains open to question. But it seems reasonable to believe that such a state of affairs gradually spread across the region generally. Certainly, when the

Ottoman Empire, which exercised ultimate authority over the Samaria expedition, aligned itself with the Central Powers headed by Germany in 1914, the vulnerability of the entire Mediterranean world became immediately explicit, practical, and likely. The United States assiduously avoided direct involvement in the growing conflict until April 6, 1917, amidst the collapse of the Russian government in March 1917 and the eventual Bolshevik peace accord (The Treaty of Brest-Litovsk) with the Central Powers in March 1918. But the daily operation and excavation goals of Lyon's Semitic Museum had clearly felt the impact of the looming crisis already three years earlier, around the time of the Ottoman alliance with Germany. Lyon's annual report to the President of Harvard on Museum activities for the 1913–1914 academic year contains the first direct mention of the predicament of war, alongside a now-recurring theme of lack of money for acquisitions and operation of the Museum. An atmosphere of gloom characterized his next three reports, and for the two successive academic years (1918–1919 and 1919–1920), Lyon did not even submit a report on behalf of the Museum. All these developments, of course, transpired in the wake of excavations at Samaria and thereby stalled their publication. But the gathering forces and cross currents ultimately proved so strong that one must wonder to what extent Lyon and Schumacher intuitively foresaw them during the preceding years of fieldwork.

In any event, both men had been exposed to and undoubtedly absorbed a similar mixture of American and German experiences by the outset of the first Samaria campaign. Still, they lacked the commonality and cohesion necessary to handle the whims of numerous local sheikhs and land owners and a complicated local bureaucracy that included an often on-site *commissaire* (commissioner), the local *mūdir* (Arabic; a manager or governor), and the *mutesarrif* of Nablus (an administrative term that replaced the older Ottoman gubernatorial title *mutesellim*). With the establishment of the Ottoman Vilayet system in 1864 (Figure 14) and with Samaria's regional political centre now based in Beirut, all these officials functioned within this larger provincial unit under the authority of the *Vali* (cf. Arabic *Wāli*, head of the Wilayah) and many additional *beys*. While the latter may have headed a principality or held a government appointment, most had begun their careers as tribal chieftains or elders. Their administrative (or, more often, merely social) Turkish title (*bey*)—though placed after the first name—meant something like 'governor,' 'lord,' or even 'mister.'

Trouble and Trouble over How to Handle Trouble. Already by May 30, 1908, as they faced a number of the problems listed above and also feared 'a stoppage of work by official order,' Lyon and Schumacher agreed that they should temporarily and voluntarily halt the excavation. But they seem to have disagreed on how to register their complaints with the *mutesarrif*. Lyon wrote that 'As reason for suspension, [Schumacher] considers it wise to mention to the mutesarrif only the present impossibility to secure good workmen, so as not to open with him the more important considerations (1) So as not to offend him (2) Because he has not the power to give us relief' (*LD I*, 45–49). Lyon complied but appears to have disagreed with this more conservative approach. To his letter of May 28 to President Eliot at Harvard, he added a note concerning this situation. From the outset of their working relationship, then, Lyon and Schumacher encountered personal differences in style and management. Whereas Lyon appears to have preferred immediate action, Schumacher advocated restricted and incremental negotiations. Such dissimilarities emerged as harbingers of more turbulent interactions relating to many areas of work.

Figure 15: *Osman Hamdi Bey, Director of the Imperial Museum in Constantinople 1883 (Portrait by Emmanuel de Dieudonné; Wikimedia Commons, Public Domain).*

In the opening weeks of the inaugural season, one primary troublemaker emerged: Hasan Bey el-Huseini, the local *commissaire* assigned to the excavation. Hasan Bey quickly proved a malcontent consumed with self-interest and lacking any real concern for the good of the project. Even in the early weeks of the field season, he (1) repeatedly levelled impossible demands on the project; (2) 'used very strong and insulting language especially against me [Schumacher]'; (3) made attempts to blackmail the director; (4) requested an extraordinary salary and traveling expenses for himself; (5) tried to direct (sometimes through the local Ottoman official, the *mutesarrif* of Nablus) compensatory payments for land use and damaged or lost olive trees to the leaders in Nablus rather than to the local owners of the property; (6) orchestrated a 21-day work stoppage; (7) appointed 'a notorious dealer in antiquities' (Georgi el-Tawil, known locally as 'Long George') from Jerusalem who

'would spoil our workmen' as overseer of the project; (8) insisted that the expedition store all artifacts in local facilities and that Schumacher 'would have access only by special permission'; and even (9) attempted to dictate the precise locations of excavation dumps, etc. (These citations appear as an excursus between pages 512 and 513 in *RD V* [Reisner's underscoring]; on the off-site storage of artifacts in the village, see also *LD I*, 35–39; compare *SD I*, 11–62). By May 28, only one week after arriving at Samaria, Lyon recorded that 'Hasan now boasts of having us in his power, and that he will throw all obstacles in our way till he forces the closing of the works' (*LD I*, 36–37).

Voyage to Constantinople. Ultimately, after consulting with one another on June 1, 1908, Lyon and Schumacher decided to leave Samaria and proceed to Constantinople, where they planned to give a detailed report of these and other shenanigans to a higher authority, Osman Hamdi Bey, Director of the Imperial Museum (Figure 15). The strained affairs on-site at Samaria had reached such a proportion that it seemed unsafe to leave Fisher there to make topographical maps during Lyon's and Schumacher's absence. Against the advice of Lyon, both Schumacher and Fisher initially thought that Fisher could remain on site (*LD I,* 53–54). In the end, however, and given that there was now much sickness (fever) in the village and Fisher himself was already showing signs of illness, Fisher ultimately left for Jerusalem (*LD I*, 62; *FD I*, 38).

Lyon and Schumacher left Samaria around 6:30am on Friday, June 5, 1908, and proceeded from Nablus to Haifa and then Beirut (*LD I*, 62, 64; for full travel details, see *SD I*, 49–54.) The various meetings and consultations that transpired in Beirut belie the severity of the situation. Lyon immediately met with Frederick Bliss on Sunday, June 7, to inform him of affairs at Samaria. Bliss suggested going through the head of the Husseini family in Jerusalem to get the *commissaire* removed (*LD I*, 69). The following day, Lyon 'called at the American consulate and explained the situation at Sebastie. It was agreed that we should call this afternoon with the dragoman Chouri on the Vali, lay the case before him and inform him that the decision is not feasible that we must pay for land in the presence of the Nablus government' (*LD I*, 70). In addition, Lyon went to the German Consulate to obtain 'a copy of law relating to antiques and excavations in Turkey. Saw it in German. To be copied for me' (*LD I*, 71). Later that day, he received a printed copy of the law in French and wrote to Mr. Schiff informing him of the progress made in Beirut (*LD I*, 72).

The main issue of discussion in Beirut, therefore, centred on payment procedures and amounts. While at the American consulate, Counsel Raundal and dragoman Chouri explained in French that the current procedure

> *. . . was obnoxious to the people of Sebastie, who feared that arrears of taxes might cause them to lose a considerable part of the pay. He replied that the arrears must be very small, and agreed that we may pay direct to owners at Sebastie, with the commissioner perhaps as witness, and that he would so instruct the mutesarrif by telegram. The government would use its own method of collecting arrears, but would not use us for that purpose.* (LD I, 70–71)

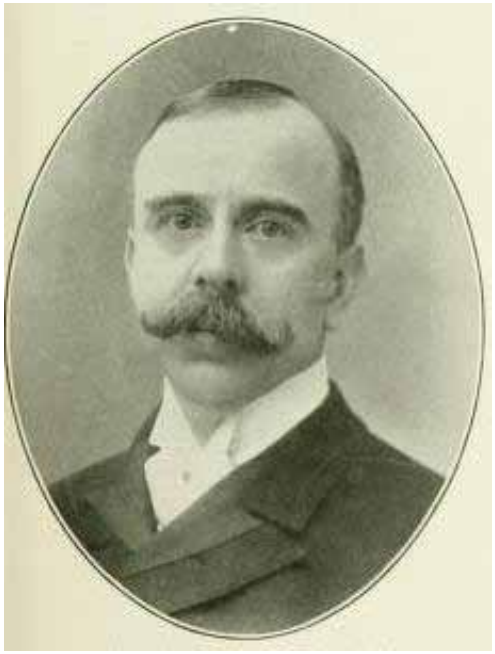

Figure 16: *John George Alexander Leishman, US Ambassador to Turkey, 1900–1909 (1900 Portrait; Wikimedia Commons, Public Domain).*

As these negotiations unfolded, the complex relationship between the regional government in Beirut and the official Ottoman regime in Constantinople became apparent. On Thursday, June 11, 1908, while at the American consulate, Lyon learned from Counsul Raundal 'that [the] son of the mudir of instruction at Beirut had been appointed by the governor here as *commissaire* at Sebastie, but that his appointment was cancelled by the governor when Hamdy Bey appointed Hasan Bey to that post' (*LD I*, 72). Thus Lyon and Schumacher paid a visit to the *mūdir*, who told them that his son would welcome the post. He suggested that they raise this possibility once again with the governor, but the governor was away and they could not arrange this meeting (*LD I*, 73) and so set sail for Constantinople. Passing through Cyprus, Rhodes, Samos, Smyrna, and Gallipoli, they arrived on Wednesday, June 17.

In Constantinople, the visitors would hold multiple meetings with Hamdi Bey, his son Edhem Bey, his brother Khalil Bey, who served as Assistant Director of the Imperial Museum and the one 'who actually superintends cases regarding Commissionaires,' and even the US Ambassador to Turkey, John George Alexander Leishman, from Pittsburgh (Figure 16). But beyond discussions around the immediate practical concerns of the excavation, it is essential to understand that here, in Constantinople, the die would be cast by Lyon (without Schumacher's awareness) regarding the future administration of the entire project at Samaria.

Upon their arrival around 4:00pm, Lyon and Schumacher called twice at the American Embassy hoping to see Ambassador Leishman, but he was out. Lyon left the letter he and Schumacher had written to Hamdi Bey at the embassy for Leishman to read at his leisure, hopefully before their next meeting. But, alas, the Ambassador was gone again the next morning, so Lyon and Schumacher proceeded directly to Hamdi Bey. Again, however, neither Hamdi Bey nor Khalil Bey was there; Edhem Bey, Hamdi Bey's son, said that his father would be back after 3:00 pm. He eventually arrived around 3:30pm, and when they finally gained an audience with him, both Lyon and Schumacher left the meeting feeling slightly rebuffed. Schumacher 'had the feeling that Hamdi [Bey] wished to have little to do with the affair, he hurried over our complaints' (*SD I*, 55). And Lyon recorded privately that 'Hamdi seemed in a hurry, and but little interested in the story. He asked that the complaint be put into writing and delivered to him on Sat. June 20, between 9 & 10 A.M. The whole interview was hardly longer than 5 minutes' (*LD I*, 76).

About 9:45am on June 19, Lyon finally saw Leishman, after having 'met him in his carriage on the way to visit the Grand Vizier.' Like Hamdi Bey before him, 'He did not seem to take the matter seriously and said he thought that the commissioner had been bunglingly handled. I expressed that when I reached Sebastie matters were in such condition that I could show him no attention without reflecting on my colleagues' (*LD I*, 76–77). Finally, on Saturday, June 20, at 8:45am, Lyon and Schumacher once again saw Leishman, who by now had read the letter and 'thought it right, and had no suggestions to make. . . I told him that Hamdi Bey's attitude on the 18th was not reassuring, that if we should meet with a rebuff today, our cause would seem to me in a very critical stage, and that before laying the case by cable before President Eliot I desired an opportunity to discuss the situation fully with him' (*LD I*, 79). In this less-than-subtle manner, Lyon adroitly put the full weight of Harvard University behind his position.

In the end, though weary from multiple meetings and attempted meetings, both Lyon and Schumacher left Constantinople on Thursday, June 25, 1908, feeling that the trip had proven productive. Khalil Bey, after all, had declared that the local *commissaire* in Nablus

> *. . . cannot dismiss any workman or overseer but with our consent, he has no orders to give to them. He is there to mediate all transactions between us [the excavators] and the government and is there especially to help us and further the excavations. . . . We left him quite contented and if he sticks to his word our journey to Istanbul will have been a full success.* (SD I, 59; for Schumacher's complete account of negotiations in Istanbul, see pp. 54–59)

Moreover, when the Samaria representatives had returned to the Imperial Museum around 9:30am on the 20th, Hamdi Bey suddenly acted in a very conciliatory manner. Lyon, who elsewhere presented the work at Samaria as 'in the interest of Biblical *science*' (*LD I*, 65; italics added), later recalled that

> *Hamdi Bey arrived about 10[15]. He was affable. Read our letter and said with emphasis words to this effect: 'I promise you complete satisfaction. I have labored 26 years* [i.e., from the beginning of the construction of the National Museum in Istanbul] *in the interest of* science*, and no one shall cast a stone in your way, whoever he be.' He then asked when we wish to begin work again, and when we propose to leave Constantinople, and told us to confer further about our affair with his brother Halil Bey on Monday afternoon, June 22.*
>
> *The interview was scarcely 10 minutes long.* (LD I, 80, emphasis added; cf. RD V, 72; SD I, 57)

Thus the beginning of a resolution finally came on June 20, 1908, when Hasan Bey was removed in principle as local liaison to the excavation. By Friday, July 10, authorities in Istanbul replaced him with a new *commissaire*, Mohammed Said Effendi 'Abd el Hādi, a graduate of the Imperial University of Constantinople, who served as aid to the Walī of Beirut, and who also had worked on the excavations at Jericho (*SD I*, 58, 68, 72–73). After reporting the conversation to Ambassador Leishman at the embassy, Lyon and Schumacher prepared to leave Constantinople. But the divergent routes and nature of their homeward travel emerge as crucial elements in what happened next.

Despite the apparent success in Constantinople by Lyon and Schumacher, two huge concerns become apparent as a result of this trip. First, Lyon had real, heightened concern that the expedition may, in fact, come to an abrupt and untimely end at this point. Work had ceased on June 3, 1908, as Lyon and Schumacher prepared for their voyage to broker a settlement regarding the *commissaire* and payment for lands. Before departing, Lyon ordered Schumacher to pay Fisher 200 francs for a 1st-class passage home should everything come to a premature end. He also told Fisher that he felt the oversight Committee at Harvard would pay him at least an additional $100 for his work thus far should everything end here (*LD I*, 59). In addition, Lyon wrote that '[I packed] all my belongings, also the large camera . . . [and] large box No. 1, so that it could travel to America, if we do not return here to work' (*LD I*, 62–63). In short, he truly entertained the possibility that he may not even be able to return to Samaria, let alone continue the work there. What a disappointment that would have been after all that Schiff had offered the Semitic Museum. Schumacher also sensed an uncertain future. At their first stop in Nablus after leaving Samaria, both he and Lyon offered Dr. Wright, local liaison for the rental of the house from the Baptist Mission Society in London, 2 napoleons per month 'for as much longer as we shall occupy it, but . . . *the length of time is uncertain*' (*LD I*, 65; italics added).

As they travelled together from Nablus to Haifa and Beirut, Lyon spoke with Schumacher about his salary should the project come to a premature close. Schumacher reportedly said they should at least take enough and proper levels for a map and also measurements for the architecture thus far exposed. He estimated that it would take two months' work and said he 'would make no demand beyond that for salary' (*LD I*, 67). Lyon's reporting of this conversation leads one to wonder whether Schumacher implied that, even with an unfavourable outcome in Beirut or Constantinople, he would expect or even demand at least two more months' salary.

This exchange while traveling marks the first real sign of a break in the Lyon-Schumacher relationship. It reveals not only differences over details and strategy but also a disparity in overall attitude and commitment to the project. Throughout Lyon's personal accounts, he seems entirely dedicated to the furtherance and the good of the project. For Schumacher, however, a faint hint emerges that his interest now focused more on obtaining a permanent salary. Following this exchange, conflict between the two men gradually but consistently escalated. The first crucial passage in Lyon's journals detailing this emerging schism was written on Sunday, June 21, 1908. It seems so fundamental to the situation at hand and to the depth of Lyon's feelings that it justifies citing the entire entry.

> *Constantinople. Sunday, June 21, 1908. On a drive with Dr. Schumacher to Robert College the question came up of the date of resuming work at Sebastie. He said we could not do so before the middle of July, as we had agreed before leaving Sebastie. I told him I had no recollection of such agreement. He said he did, and that it is recorded in his notes. The reason given for the delay was that the peasants have gone to the Hauran* [a region east of the Sea of Galilee, stretching southward from Damascus through the Plain of Irbid and to the mountains of 'Ajlun] *to gather crops and that we cannot get workmen at an earlier date. Moreover, he wished two or three days with his family before returning to Sebastie.*
>
> *At dinner I brought up the subject again, expressing my doubt whether absence in Hauran was the chief reason why we did not have more workmen in May and suggesting intimidation as a more probable reason. He felt sure I was wrong in this.*
>
> *I ~~told~~ reminded him that in the letter to Hamdi Bey signed by us both on the 19th and delivered to Hamdi on the 20th we expressed the hope to begin anew at the commencement of July* (au commencement du Juillet prochain)*. He replied that this language should not be taken literally.*
>
> *He then said that time would be required to get our cook and overseers together. I replied that a telegram to Datodi would accomplish this before we return to Palestine.*
>
> *He said his family needed him ~~to him~~ to help them in moving from Haifa up Mount Carmel, and that he must have at least four full days. I replied that as salaries were going on, perhaps the camp might be got together and some work undertaken before he joined us.*
>
> *He said that a date earlier than the middle of July might be tried, but he did not believe we could get workmen. I replied that unless we were sure on this point I thought we ought to try, that some work, like completing the map* [a goal that would have required Schumacher's surveying skills], *could go on even without the workmen. Furthermore that but little has yet been done, and that the time is passing so fast that prompt and energetic action is necessary. Otherwise the result of the year's work might not prove to Mr. Schiff the wisdom of continuing ~~to~~ the work next year.* (LD I, 81–83; Lyon's strikethroughs)

A number of contentious comments and retorts surface in this passage. The first simple but striking aspect for any reader lies in the fact that Lyon took pains to record in such detail the various aspects of their conversation. It seems clear that he anticipated the need to possess an accurate record of his interchanges with Schumacher . . . from his own point of view, of course. This record also demonstrates clearly that, given his relationship with the Semitic Museum and its patron back in Cambridge, Lyon had to think strategically on multiple levels. His concerns involved more than just the fieldwork at Samaria. While he may have included his reference to Schiff at the end of his comments simply as a means of leveraging his position, Lyon seems to have had in mind an understanding of the requirements for sustaining the interest and resources of an unusually munificent patron on the home front. And given Schiff's substantial and critical support of the Semitic Museum—itself starting years before funding the excavation—Lyon must have felt that much more lay at stake than just the work at Samaria, a fact that Schumacher could hardly have seen in as much relief as did Lyon.

When the two travellers arrived at Halil Bey's museum office around 3:40pm on Monday, June 22, they saw the letter they had written to Hamdi Bey lying on his table, but Halil Bey said he had not had time to read it and asked them to recite the situation orally, which they did. 'He said the com. was young, that this was his first appointment, and that another should be given us, perhaps the man who has been at Jericho with Sellin' (*LD I*, 83). (An Austro-German team, led by E. Sellin and C. Watzinger, had launched a large-scale exploration of Jericho in 1907; the project ran through 1909. That the new *commissaire* had worked with Germans the previous year boded well for Schumacher.) Halil Bey then outlined other matters related to the *commissaire* (e.g., his salary should be '10 pounds Turkish a month . . . he was not entitled to provisions or tent or any other pay except traveling expenses to and from Jerusalem . . .' [*LD I*, 83]). When Lyon touched

on the primary point of conversation in Beirut, namely, difficulties around the method of payment for land use, Halil Bey responded by saying 'that was a local matter.' Ultimately, he seemed affable and accommodating to the visitors. Near the conclusion of the meeting, he remarked that '. . . the office of commissaire is to further the work and to see that the laws are carried out. That he ought to live on good terms with the explorers. He promised definitely a change and said that matters would be arranged by telegraph' (*LD I*, 84).

The voyage to Constantinople, then, brought a tenuous success that should have prompted cautious optimism. But, in terms of the on-site progress of the project, a larger issue entered play at this point: the question of Schumacher's status on the dig. Lyon seems to have seized upon a disagreement over when to restart the excavation as a motive (or perhaps pretext) for replacing Schumacher after the 1908 season. Their differing views on this subject surfaced in the June 22 meeting with Halil Bey.

Lyon's Administrative Detour and Schumacher's Administrative Death Knell. Just prior to their departure from Constantinople, a specific issue suddenly combusted into a major one for Lyon: 'He [Halil Bey] asked when we wished to begin work. I replied, as soon as possible.' Schumacher countered with: 'on the 7th or 8th of July' (*LD I*, 84). It was now June 22, and Lyon clearly saw the delay as inordinate. In a follow-up conversation with Schumacher, he said that they must tell Halil Bey that the new *commissaire* should arrive at Samaria by July 4—that he (Lyon) would be there by that day. But, ultimately, Schumacher seems to have gotten his way, and slightly more; not until Saturday, July 11, did the field work resume 'for 3rd time, the last stop having been on June 3' (*LD II*, 5). The extra delay may seem a small victory for Schumacher, but it would prove a very costly one, and one that may have sealed his overall fate with Lyon, Harvard, and the project at Samaria.

> *In a talk with Schumacher at the hotel, I told him it would be well to write to Halil Bey asking that the commissaire reach Sebastie by Saturday July 4; and ~~saying~~ I told him that I hope to be there by that date or on the next day.* I go via Egypt to discuss Sebastie matters with Resiner. (LD I, 84–85; Lyon's strikethrough; emphasis added)

Lyon's route back to Samaria seems curious and spontaneous, especially since Halil Bey had confirmed that one of the crucial issues (payment for land use, etc.) was a 'local' matter and the high seat of the local government resided in Beirut, not Egypt. Had Lyon simply retraced the route that he and Schumacher had taken to Constantinople (as did Schumacher, in order to end up in Haifa with his wife), he could have conferred once again with the Vali in Beirut. Instead, he now suddenly embarked on a longer itinerary via Smyrna, Mitylene, Athens, Alexandria, and the Gizeh Pyramids at Cairo (*LD I*, 86). The passage cited above is somewhat ambiguous as to whether Lyon's comment about travel to Egypt constituted, at this point, a private note or part of his actual conversation with Schumacher. In any event, he would set the future course of the project in Cairo by convincing Reisner to take the reins in the second field season. Schumacher may not have known it yet, but his days at Samaria were numbered.

Lyon's unplanned return to Palestine through Egypt marks a pivotal point in his relations with Schumacher and the future of the project overall. A number of entries in his diaries suggest that Lyon seized upon what he saw as Schumacher's recalcitrant attitude toward resuming the work as the primary argument for replacing him after the 1908 season (cf. *LD I*, 84, 87; *LD II*, 2–3; 37–38; 42). Lyon's detour seems to have sounded Schumacher's death knell as director of the Samaria expedition. Somewhat curiously, the crucial meeting in Cairo remains one for which Lyon, rather uncharacteristically, chose not to record the specifics of his talks with Reisner. Given his detailed account of relations with Schumacher (and others), Lyon's one laconic note about the Cairo meeting is astounding: 'Giza Pyramids, Cairo, Sunday, June 28, 1908. Discussion with Geo. A. Reisner of plans for the work at Sebastie' (*LD I*, 86). But clearly Schumacher's fate was discussed and determined here, in Egypt. Lyon's final diary comment before leaving Constantinople provides a succinct description of his expectations and plan:

> *Schumacher will telegraph his wife to have Datodi* [the dragoman] *inform the overseers that work is to begin on Monday July 6. The earliest possible date would be Friday, July 3, which would allow Schumacher one day and night at home. As he wants 4 days at home and also objects to Sunday travel, he will perhaps reach Sebastie on Monday, July 6. I hope to be there with Fisher on the 4th or 5th, going* [now from Egypt] *via Jerusalem.* (LD I, 85)

Lyon left Constantinople at 4:30pm on June 23 and sailed on the Khedivial S.S. Osmanich. (Egypt had become a Khedivate, an autonomous but tributary state, in the early nineteenth century CE, when Muhammad Ali Pasha wrested control of the country from the Ottoman Empire and sought to change his title from Wāli, 'governor,' to Khedive, or 'Viceroy.') Just prior to departing, Lyon sent a series of telegrams and letters that included

(1) a laconic note to Fisher — 'Clarence Fisher, American Consul, Jerusalem. Coming via Jerusalem. Work begins *early July*. Lyon';

(2) a heads-up cable to Reisner in Egypt — 'Reisner. Congdon, Cairo. Due Cairo Saturday. Khedivial. Lyon';

(3) a 'letter to Mr. Schiff telling of success of visit to Constantinople';

(4) and a 'brief letter also to Pres. Eliot, of similar tenor.' *(LD I, 85–86;* italics added*)*

Although Lyon's private, unpublished diaries do not outline the full exchange with Reisner in Egypt, they appear to affirm the view that the discussion centred on Lyon's dissatisfaction with Schumacher and the need to replace him as soon as feasible. The June 28th meeting in Cairo resulted in a quick decision. When Lyon arrived in Jerusalem on July 2 to meet Fisher on the way back to Samaria, he composed a 'Letter to President Eliot setting forth the conditions under which Geo. A. Reisner could take charge of the Sebastie work next year' (*LD I*, 87). Lyon had moved quickly. From this point on, he and Schumacher maintained, at best, a civil discord in their daily dealings.

Interestingly, this account of the decline of Schumacher derives principally from Lyon's personal records of the situation. Neither Schumacher nor Fisher wrote much of the friction that was growing on-site. In reality, Fisher's journals keep very close to the facts and hardly ever mention administrative or personal events, conflict, etc.—events that he surely sensed or even witnessed in the course of the season. His records remain more purely archaeological than either Lyon's or Schumacher's. Fisher either chose to maintain a high decorum or he simply was not engaged in or perhaps not included in the administrative end of the work. His reticence seems striking, particularly since he kept a detailed account of his meeting Lyon in Jerusalem and their travels back to Samaria (*FD I*, 45–47). He wrote that they encountered Schumacher, who by then was returning from Haifa, shortly before reaching Samaria and that the three reversed course and returned to Nablus for the night. At no point does Fisher give any indication that Lyon had shared with him any of his conversation in Egypt with Reisner or that he already knew that Reisner would soon replace Schumacher. Fisher's silence does not necessarily indicate that Lyon's account is inaccurate, biased, or tainted with personal emotion. It may suggest only that Lyon kept his cards concealed and did not confide in Fisher.

Homeward Bound . . . but Still More Trouble Every Day. Shortly after arriving in Jerusalem, Lyon received news on Friday, July 3, suggesting that the change in *commissaire* may not be as easy and as smooth as he hoped.

> *Fareed and John Whiting of the American Colony told me that* [Ismail] *Bey, a friend of theirs, and uncle of our commissaire, had expressed a desire to see me to talk about the com's behavior at Sebastie. They reported him as admitting that the fellow is rather good-for-nothing, but as saying that his connections are so powerful that he cannot be dismissed from his office, and that if we try to put him out it would cost us many months of trouble.*
>
> *I replied that I hoped that we were going to have a different commissaire, but that I was willing to talk over the matter with the uncle, if Mr. Wallace our consul considers this advisable.* (LD I, 87–88)

Lyon met Ismail Bey in the reception room of the American Colony around 9:45am on Saturday, July 4, 1908. He outlined the untenable situation at Samaria and recounted his recent trip to Constantinople, whereupon Ismail Bey offered an analysis of Hasan Bey's rude behaviour. Lyon responded with quite harsh words for Hasan, and his account of this exchange appears as follows:

> *He* [Ismail Bey] *speaks English tolerably, but John Whiting was present to help as interpreter when necessary. Ismail had a scribe present to whom he dictated in Arabic the essence of what I said.*
>
> *I reported at Ismail's request the behavior of Hasan Bey at Sebastie, told of my trip to Constantinople, and of the promise of Hamdi Bey and Halil Bey that we shall not be annoyed in our work. I said I had no confidence in Hasan Bey and hoped that we were going to have a different man, but that I do not know yet what will be done.*
>
> *He replied that Hasan Bey is a stupid and headstrong fellow,* who might be controlled by kindness*; said the place had been given him at the request of another uncle, a friend of Hamdi Bey; and that he would talk with Hasan Bey and try to send him to me to apologize. He said that Hasan illustrates the Arabic proverb of the dog's tail, always crooked, though you might give it a hundred positions. That he had tried to educate Hasan, but that he had learned little, and had left school without deriving much profit there. – I told him that such* a stupid, ignorant and headstrong fellow *ought not to be placed in such a responsible position, and that without* a complete change of behavior *it would be* impossible to work with him. (LD I, 88–90; emphasis added)

Once again, Lyon appears to begin with a level manner and reasonable speech. But, if given an opening, his discussion soon becomes more pejorative and inflexible. As in his dealings with Schumacher, Lyon seems quick to reach a point of intensifying the situation, drawing a final conclusion, and ruling out alternative courses of action. It seems clear that, at a certain juncture in Constantinople, Lyon grew headstrong on proceeding to Egypt and removing Schumacher from the directorship. Now, rather than weighing the profitability of using kindness—even as a pragmatic, self-serving strategy, as Ismail had suggested—Lyon demanded a unilateral and 'complete change of behavior.'

Dinner Discussions . . . All in the Family. That same day, in the afternoon, Lyon met Mahmud Effendi, Hasan Bey's cousin. Mahmud also offered an explanation for Hasan's behavior but now added his own observation that he suffered from a mental illness: '. . . he will not obey uncles or brothers, is 'cracked', is not to blame [for his bellicose behaviour] because he is 'not right in his mind'' (*LD I*, 90). He then invited Lyon to meet him the following afternoon on the Mount of Olives, where he would introduce Lyon

to Hasan's brothers. Lyon accepted, although it meant further 'postponing my return to Nablus which had been set for tomorrow.' He then left fearing that Halil Bey had not yet 'carried out his promise to give us a different commissaire' but also realizing that 'If Hasan remains as commissaire, it seems that entering into relations with the family may improve relations with him' (*LD I*, 90–91).

At last, on Sunday, July 5, prior to leaving Jerusalem for Nablus, Lyon received the news he awaited:

> *At 7 P.M. on invitation of Mahmud Effendi, cousin of Hasan Bey, our commissaire, I dined with Musa Bey, a brother of Hasan Bey, on Mt. of Olives. Ismail Bey also present, (uncle of Hasan Bey) whom I saw yesterday. Mahmud Effendi informed me that Hasan Bey had rec'd a ~~letter~~ telegram from Constantinople saying that he is no longer commissaire for Sebastie.* (LD I, 91; Lyon's strikethrough)

When, on the morning of Monday, July 6, Lyon left Jerusalem with Fisher en route to their camp at Samaria, he must have felt a sense of accomplishment. After some initial frustrations, he had received a positive reception and brokered constructive adjustments in Constantinople (with promises of a change in *commissaire*); after an unscheduled and no doubt costly detour to Egypt, he had convinced Reisner to sack and personally replace Schumacher; and back in Palestine he had established favorable contact with important relatives of Hasan Bey and, finally, received news of Hasan's dismissal from the post. On his way back to Samaria via Nablus, the savvy Lyon drove rapidly and even altered his usual route so as to pass through 'the village owned by Ismail Bey, . . . [who had] about 10,000 olive trees in [the] region' (*FD I*, 45). Fisher noted that, upon reaching Ismail Bey's estate, Lyon 'bought some fine white grapes, which we ate sitting under the big tree just above the little inn or restaurant' (*FD I*, 45–46). While in faraway places, then, Lyon had furtively succeeded in dealing major blows to his two perceived sources of greatest trouble at Samaria, Gottlieb Schumacher and Hasan Bey.

As a result of the protracted and very difficult period that consumed much of the inaugural season of fieldwork, Lyon devoted a huge segment of his initial journal to simmering frustrations with Schumacher and the struggle to remove Hasan Bey from office—a struggle that involved multiple cessations of work at the site, an unplanned trip to Istanbul by Schumacher and Lyon, and then another unplanned trip to Cairo alone. Following Hasan Bey's dismissal as *commissaire*, Schumacher— somewhat ironically, perhaps, since he presumably did not yet know of his own fate—cited other officials who referred to Hasan Bey as 'a fool, a man without sense and not at all fit for the position he occupied' (*SD I*, 68).

But Lyon's troubles would not stop here. When he and Fisher, riding between Nablus and Samaria while en route home, met Schumacher returning from Haifa, they learned that he had already made a stop at the excavation. Schumacher reported that no *commissaire* was currently on-site. Hearing this news, the three returned to Nablus 'for the night, in order to make inquiry.' Alas, Schumacher was the herald of further bad news, for he described vandalism at the Augusteum (locals had thrown stones on the great staircase and had pulled a capital down from its place) and told Lyon that 'the people of ~~Nablus~~ Sebastie have sent in a petition to have our work stopped.' In addition, he said that 'a serious form of fever has been prevailing there' (*LD I*, 92; Lyon's strikethrough; *SD I*, 65, 68; *FD I*, 47). When the trio arrived back at Nablus, they could learn nothing about a new *commissaire*; the *mutesarrif* was away and they would have to invest yet another day awaiting his return.

Finally, on Tuesday, July 7, 1908, the three Samaria representatives gained an audience with the *mutesarrif* of Nablus, who addressed three topics of concern. First, he confirmed 'that he knew of Hasan Bey's dismissal, but was not informed as to his successor.' Second, he had accepted and approved a request from Hamdi Bey that the expedition might construct a barracks somewhere at Samaria. Third, he affirmed that 'the only object of governmental control in our payments would be to make sure that the pay goes to the real owners and thus save us from future troubles, that the Sebastie sheikhs cannot be relied on to do right.' Lyon added an abbreviated journal note stating that the *mutesarrif* 'wrote and sent to office a telegram addressed to Vali of Beirut regarding commissaire. When com. comes we hope that payment for lands may be adjusted in a fair way' (*LD I*, 92–93). Later on, as Schumacher ordered material for building a kitchen of mats at the dig site, he met Abd-al-Hadi, an uncle of the newly assigned *commissaire*, and learned that he was now on his way to Samaria from his home in Beirut.

Home Again, Home Again. Not until 3pm did the three beleaguered travellers leave Nablus for Samaria, where they finally arrived at 4:30pm Thus despite Lyon's best intentions, his own return to Samaria coincided with that of Schumacher, who in the end had the time he desired for his family in Haifa. But the future had been written in Egypt: Reisner would replace Schumacher. The first volume of Lyon's diaries, then, ends with some relatively positive developments but also a lingering unknown—the identity and nature of the newly assigned *commissaire*. Once back home they selected for the new tents a location on the western side of the site (a place they then called 'Camp Schiff' [*LD II*, 2]). Lyon wrote a summary of Schumacher's financial outlays (40,851.06 francs = $8,170.21), a tallying that likely anticipated an approaching end to his service there. In an addendum to this volume of private notes, Lyon also acknowledged that 'we cannot begin work till the new commissaire arrives' (*LD I*, addendum to p. 93, appearing after p. 95). The Inaugural Season would not end officially until Friday, August 21, 1908 (*LD III*, 25), but already by early July enough challenges had occurred to fill several field seasons.

III. Deeper into Lyon's Lair: The Sealing of Schumacher's Decline and Fall

At this point in the discussion, it remains difficult to know just how to interpret some of Lyon's journal entries, especially since their viewpoint receives no corroboration in the private writings of either Schumacher or Fisher. The strong action that appears to have arisen from a disagreement over when to resume work following the Constantinople trip seems, on first glance, like a tempest in a teacup. But apparently it was not so to Lyon, who also and always had to bear in mind the pressure of overall budget constraints and the need to retain and satisfy the project's one and only patron. One must allow for the possibility that Lyon used the topic of restarting work somewhat capriciously and tendentiously, i.e., as an artifice to wield control over the project and to impose his personal goals on the project director. Whatever the case, following the team's return to work after the time in Constantinople and Egypt, the seeds of discontent would sprout into a very thorny problem.

Everyday Hang-Ups. In the days immediately following the return of Lyon, Fisher, and Schumacher to Samaria, and in the weeks to follow, a number of circumstances arose that continued to hamper the smooth operation of the project and to raise further suspicions in Lyon's mind. It is important to remember that all these day-to-day issues lay behind and undoubtedly exacerbated Lyon's frustrations with the nominal success of his overall mission and also, to some degree, with Schumacher himself. Perusal of several of these ancillary matters will help set the stage for a return to the ever deteriorating relationship between Lyon and Schumacher.

a. Stolen Pegs and Cast-Away Stones. Upon their return to Samaria on Wednesday, July 8, 1908, Lyon and Schumacher immediately encountered signs of vandalism on the excavation site. While measuring '2 small tracts of land on summit and S.W. of it, with view to purchase for dumping place,' Schumacher discovered that 'the surveying pegs and stones fixed by him on many spots have been taken away, which destroys the means of further ~~surveying~~ map-making without re-surveying. This seems to be the work of ill will' (*LD II*, 1–2; Lyon's strikethrough). Both Lyon and Schumacher naturally saw in this activity an attempt to reverse whatever progress the excavators had made prior to the hiatus in Constantinople and to thwart further advancements. Such episodes had to worsen the erosion of trust between the project leaders and the locals they employed.

b. Wright and Wrong News. By Sunday, July 11, Lyon wrote that 'Fisher has fever all day' (*LD II*, 7). When Fisher's status worsened through the night and the following day, Dr. Wright was called in from Nablus on July 13. The physician brought with him the needed treatment for Fisher but also some more ominous news. He reported to Lyon 'that [the] mutesarrif of Nablus is going to send a commission to Sebastie, ~~to~~ with [the] ostensible object 1. To determine boundaries of land taken by us 2. To determine whether proper owners have had the money paid by us. Reported also that the tax collector now here proposes to be present on our pay day to seize taxes as we pay wages to our workers' (*LD II*, 7–8; Lyon's strikethrough). Regarding the procedures for payment, then, the situation seemed not to have improved.

c. Meet the New Boss, Same as the Old Boss. The hint of further governmental meddling in the excavation's payment schedule and procedures immediately raised red flags for Lyon. The new *commissaire* had just arrived at Samaria on the morning of Friday, July 10. He quickly informed Lyon that 'we may pay the people here direct, if we can agree with them as to terms.' In the event of disagreements or disputes, a commission would be formed 'to fix the price of trees and land.' Lyon's reading of these comments appeared in a private, bracketed note later that day: '[Query: Is this a trick of the officials, in order to put a finger in the pie?]' (*LD II*, 4).

As the weeks passed, Lyon's initial suspicion concerning the new *commissaire*, Mohammed Effendi, seemed substantiated. While the new *commissaire* initially engaged the Samaria archaeologists in a positive manner, ambiguities remained over the recipients of the payments. Then, the day following Mohammed Effendi's own arrival, his brother—who was conveniently a 'collector of taxes'—appeared on site and demanded two years' worth of back taxes owed on the house the excavation had rented from the Baptist Mission Society in London (see *SD I*, 74, 76, 80, 82, 87). By the end of the 1908 Season, Mohammed Effendi himself had become dissatisfied with his own salary (*SD II*, 147–48), and Schumacher all but accused him of openly pilfering several valuable objects from the excavation's stored artifacts. Effendi simply attempted to turn the accusation on Lyon himself.

> [Monday, August 24, 1908] *The commissaire left today at 10^{h}.30 for Nablus. Before leaving he took out of the nailed boxes several small objects, such as coins etc. and put them in his hand bag, pretending to send them separately and for post to Hamdi Bey. I told him that I did not consider this handling of antiquities quite correct, but he replied that he had the right to do so.*
>
> *He afterwards had an encounter with Prof. Lyon indeavoring* [sic] *to prove that he as commissaire helped us very much during this campaign and was not duly remunerated for it, he also objects to Prof. Lyon taking any fragments of pottery with him. Prof. Lyon answered that he never intended to unless Hamdi Bey gave him leave to do so.*
>
> *At last the Commissaire recommended that we should pay the soldier a gratification for services rendered.* (SD II, 149–50)

d. <u>No</u> News is Good News and Revolution is in the Air. By the end of the day on Monday, July 27, Lyon may have felt that he had received at least one bit of encouraging

Figure 17: *Sheikhs Abd-er-Rahman (left) and Kaid. June 3, 1908 (from Reisner,* et al. *1924: pl. 84d; courtesy of the Semitic Museum, Harvard University).*

news. 'The commissaire returned from Nablus, whither he went Sat. morning. Reports that the village sheikhs had been there to complain of prices we pay for trees and land, and had been dismissed by the mutesarrif' (*LD II*, 46). But this report shimmered into mirage the following day, when additional information arrived stating 'that at the request of the Sebastie sheikhs a commission will come from Nablus tomorrow to set a new valuation on land and trees.' In the end, however, the *commissaire* did not come (*LD II*, 51, 53).

A much more serious development unfolded during this same period, and Schumacher served as herald of the news. 'About 4[30] Dr. Schumacher returned from Haifa, whither he went on 25th. He brings report of a revolution at Constantinople' (*LD II*, 51; Lyon's underscoring). In 1876, Sultan Abdul Hamid II had established the first constitutional monarchy in Constantinople, only to have it suspended two years later. In July 1908, the Young Turks Revolution pushed for a restoration of the 1876 constitution and a multi-party system under the authority of the Ottoman parliament. Success of their basic goal came quickly, when on July 24, 1908, Sultan Abdul Hamid II capitulated, a move that ushered in the so-called 'Second Constitutional Era.' How these developments would affect the project at Samaria was anyone's guess, and of great concern to both Lyon (who, incidentally, consistently used the imperial, Greco-Roman, non-Turkish name, Constantinople) and Schumacher (who preferred the centuries-old and soon-to-be-standardized Turkish designation, Istanbul).

e. Money Problems Beset the Best-funded Project Ever. By July 30, 1908, Lyon forwarded the final salary owed to Hasan Bey Husseini, the original *commissaire*, to Consul Wallace in Jerusalem (*LD II*, 54, 57). Then on Saturday, August 1, he observed that the behaviour of the replacement, the newly appointed *commissaire* Mohammed Effendi, seemed odd. 'He came neither to breakfast nor to lunch,' Lyon wrote. After speaking directly with him, Schumacher learned 'that his brother was forcing him to demand more money, that his brother took offense because no special attention was paid to him last night when he came to camp, and that Sheikh Abd er-Rahman (Figure 17) had been complaining to him that our foremen [who, in the following season under Reisner, will all be Egyptian] are not sufficiently polite and tender with the workers at the excavation.' Lyon continued, 'Dr. S. told him that we are going straight in every particular, and that his duty is to stand by us.' The response seemed to ameliorate the situation for the present, but this particular sheikh, Abd er-Rahman ('Servant of the Most Merciful'), would become Reisner's primary provocateur throughout the 1909–1910 seasons.

The *commissaire*'s demand for more money gets to the heart of a serious issue with which Lyon had to contend. By August 1 of the inaugural season, Lyon's concern over the solvency of the project was heightened. When looking over the accounts with Schumacher that evening, Lyon found that Schumacher still had approximately $500 in hand, that they expected roughly $800 more to arrive from Reisner, and that the Harvard Treasurer back in Cambridge held an additional $2,000. The combined real and anticipated resources added up to $3,300, but that amount would present a shortfall, especially since Lyon recognized that 'Something will have to be set aside for expenses subsequent to actual digging. Unless therefore Mr. Schiff puts in more money this year, it seems that we can dig but 2 or 3 weeks longer' (*LD II*, 62).

On Wednesday, August 5, Lyon sent a cable to the Deutsche Palaestina Bank in Haifa requesting a transfer of funds to the expedition's account; he also cabled the Treasurer of Harvard College asking that he send £100 to the DPB (*LD II*, 66). Ironically, perhaps, these concerns and requests came on the very day when the excavation's labour force had reached its highest number ever (441; see below). Then, on Monday, August 17, 1908, Lyon wrote: 'We expect to close work and leave on Friday or Saturday following (28, or 29), our money limit being nearly reached' (*LD III*, 16). The expedition that began with today's equivalent of $1.5 million suddenly found itself pinching pennies.

Even in the midst of these worries, Lyon dutifully 'Began writing an acc. of the work at Sebastie, to send to Cambridge for publication' (*LD II*, 62). He completed the report the following day and read it to Schumacher and Fisher before sending it on August 5, accompanied by a letter, to President Eliot at Harvard. The account of this season's archaeological work, he wrote, was 'intended for the October issue of the Harvard Theological Review' (*LD II*, 67).

Luncheons and Schisms: The Big Issue and a Big Announcement. Problems such as those outlined above continued to nag at Lyon and consume his time and energy. But they were small matters when compared to his main concern—the attitude, work habits, and overall status of Gottlieb Schumacher.

Following his return to Samaria on July 7 from Constantinople and Egypt, Lyon did not wait long to inform Schumacher of the decision he had reached with Reisner in Egypt.

> *After luncheon* [on July 9, 1908] *I told Dr. Schumacher of the possibility of Dr. Reisner's resignation in Egypt, and of the desirableness of having him to carry on the Sebastie work, if we have a campaign next year. He thought our desire natural and seemed concerned on only one point, that he should not seem to have been dismissed* [this reply, if accurate, reveals Schumacher's own awareness of the breach and his anticipation of the results]. *I told him that this could easily be set right by interchange of letters on the subject. He suggested that he might come perhaps twice a year and finish the surveying of the place. I told him I thought this might be arranged, but was not sure, and said it might depend on Dr. Reisner's feeling on the subject.*
>
> *I assured him that if this matter leads to his resignation I hoped it would be under circumstances entirely honorable to both sides. Our interview was altogether amicable.* (LD II, 2–3)

What seems surprising in Lyon's account of their conversation is Schumacher's easy acceptance of the results. But whatever amicability existed between Lyon and Schumacher at the time would not last very long. Growing differences over excavation goals and strategy inevitably estranged the two administrators. On Thursday, July 16, 1908, Lyon complained that 'By Dr. Schumacher's order Jusif and a small gang dug today near gateway in west, looking for spring said to be there' (*LD II*, 15). One senses at this point that Lyon strongly disapproved of this effort.

Moreover, Lyon had learned late in the evening of July 9 that the new *commissaire* had reached Nablus en route to Samaria. His arrival had further complicated the atmosphere in camp. (As shown above, this new relationship would deteriorate over the second half of the initial excavation season.) Misunderstandings began to spread, first with regard to payment procedures, which had long constituted one of Lyon's ongoing frustrations. On Friday, July 16, 1908,

> *Commissaire returned early from Nablus. Reports that mutesarrif says that we must pay for land at Nablus in accordance with agreement of May 14th, of which commissaire brought a copy.*
>
> *We told him that this agreement was set aside by Wali on June 8, and showed him Raundal's letter in Eng. and in Turkish to Wali ~~remin~~ reciting terms of agreement of June 8 and asking Wali to instruct mutesarrif accordingly. Com. took a copy of the letter. Will go to Nablus again and thinks he can arrange the matter, but wishes 10 Napoleons* [a French-minted gold coin] *to do so. Sch. tells me that he promised this and that he sent word to mut. by com. that he will pay the people for land on Monday next at Sebastiyeh.* (LD II, 16)

Judging from this entry, one must wonder whether Schumacher was now acting independently of Lyon, exercising too much autonomy, and failing to communicate all that he did. At least, it seems that this was Lyon's interpretation of the situation. In a long, concluding passage for Friday, July 24, 1908, Lyon recorded his three principal objections to Schumacher's directorship: Schumacher's engagement of far too many workers; his regular absence from work areas in the field; and the number and length of his home visitations, particularly now as the season was drawing to a close.

> *In the evening I told Dr. Schumacher that in my judgment there are now too many workers for adequate supervision, and that it would be wise to concentrate the work lest our available money be exhausted before any one piece be completed. He wishes to continue at all points (temple at threshing floor, summit of hill, and trench F to virgin soil or rock) and thinks that those can be completed. He proposes to continue ~~cou~~ present course 2 weeks longer.*
>
> *I think Schumacher's presence at the works needed more than is the case, and several days ago I proposed to him that Fisher and I would keep the record of the finds so as to set him free from that. He replied that this was a very important matter and that he must do it himself.*
>
> *Tomorrow morning Schumacher goes to Haifa, to see his family, get money and supplies for the work, and to return on Tuesday. As to the frequency of his going home there has been no definite understanding. He wrote me in the winter that he would need to go home occasionally to look after his family (letter of date 1908), ~~To~~ and that from Mutesellim he was accustomed to go home every Saturday. To this point I made no reply (letter of date 1908), assuming that at so great a distance as Sebastie is from Haifa 'occasionally' would not mean oftener than once in several weeks.*
>
> *When several days ago he mentioned his intention to go home tomorrow, I asked if in view of the probability of closing the work at the end of August he could not so arrange as to make a visit home between tomorrow and that date unnecessary. He replied that the interval was long and that he would need to go again to get money to pay expenses.* (LD II, 37–38; Lyon's underscoring and strikethroughs)

Apparently, no rapprochement was reached. Early the next day (Saturday, July 25), Schumacher left for Haifa and the *commissaire* left for Nablus (perhaps feeling free to do so since the project director himself departed).

Figure 18: *The Augusteum's grand stairway (courtesy of Sonia Halliday Photo Library, Gregory House, Oxford).*

Lyon remained onsite and continued the excavation of numerous areas (Trenches A, E, F, G, H, and L) with the 377 costly labourers that Schumacher left behind. And the trials never seemed to end for Lyon. By that evening, he was beset with yet another problem:

> *Datodi reports that fresh complications are in the air. The Sebastie sheikhs are said to be in conference with the Nablus authorities, complaining that our work is ruining their land. The action of the sheikhs believed to be based on fear of losing their chance to lend money to the poor villagers at exorbitant rates (18 to 24%).* (LD II, 41)

Throughout this period, Schumacher had accepted larger and larger numbers of local workers, a fact that troubled Lyon on two levels. First, the excavation had to pay the labourers. Second, as hinted above, neither he nor Schumacher nor Fisher could individually (or even as a triumvirate) manage such a large force and simultaneously maintain accurate record keeping. Escalation in the tension between Lyon and Schumacher paralleled the rising number of people on site. The daily count rose as follows: July 16th = 183 workers; 17th = 186; 18th = 247; 20th = 320; 21st = 291; 22nd = 377; 23rd = 385; 24th = 390; 25th = 377; 27th = 363; 28th = 393; 30th = 391; 31st = 391; Aug. 1st = 319; 3rd = 437; 4th = 439; 5th = 441 (peak); 6th = 437; 7th = 425; 8th = 414; 10th = 408; 11th = 426; etc. By July 24, the issue had become a serious one for Lyon and he increasingly articulated his resistance to further hires. Still, the numbers remained high and even began to increase in a matter of days. By August 5, Schumacher had orchestrated a 13 percent increase in the already burgeoning force of July 24, despite Lyon's repeated protestations. Beside the general number of employees, Fisher seems also to have sensed some hesitation regarding the efficacy of their distribution across the site. 'It has been arranged by Dr. Schumacher that we divide the work be[tween] looking after the summit excavations and the one near the threshing floor. Therefore I can make very few notes upon the summit bldgs.' (*FD I*, 59–60). But this is the extent of Fisher's comments. Unlike Lyon, he expressed no further evaluation or opinion, though he undoubtedly had be cognizant of the brewing friction between his two associates (which otherwise must have simply boiled beneath the surface, with the lid kept on).

The number of workers remained inordinately high through August 14 (364 labourers), when it dropped suddenly and without explanation on August 15 (221). On the 15th, Lyon opened his daily journal entries with: 'No. reduced more than half. I have never approved of the large No. Too many for careful observation and record.' He continued, 'The work was in general the same as heretofore' (he then listed a dozen areas where the fieldwork proceeded; see *LD III*, 11)—a statement that, in his mind, apparently served as proof of his position regarding the required sum of workers. Reduction in the overall force would not undercut the excavation's productivity; it would, however, greatly improve management-labourer relations and the accuracy of recording. So he was acutely aware that an over-abundance of people compromised the integrity of the work on various levels.

Absence Makes the Conversation Wander. On Sunday, July 26, 1908, with Schumacher away from Samaria, Lyon conferred with a foreman regarding the current versus proper work strategy at this point in the field season:

> *Talk with Datodi about amount possible to accomplish in digging by the end of August, and about concentrating workers for ease of supervisors. He agrees that with the present method it will not be possible to complete any one piece of the work. In answer to my inquiry he said that he had never before at Taanach, Mutesellim or Megiddo, engaged more than 250 workers at one time, whereas we now have here nearly 400.* (LD II, 42)

Subsequently, in his entry for Monday, July 27, Lyon does not even acknowledge Schumacher's return to the site. The highlight of the day was the discovery of a marble statue of an emperor, probably Augustus. But the frustration of the day (at least for Lyon) had to be the opening of new work in 2 areas: '<u>New work</u>. Began cutting a new slice ~~from~~ on S.W. corner of the more westerly [?–illegible word] in front of the stairway. Began also cutting from above a new slice on eastern side of Trench L' (*LD II*, 43; Lyon's underscoring and strikethrough)—a trench in which the previous day Lyon had found no sign of building activity and had concluded that it 'Seems thus far to be all rubbish' (*LD II*, 41). If, as one might suspect,

this new work order came from Schumacher (prior to his departure from Samaria; he did not return until late in the day on the 28th), one can imagine the frustration felt by Lyon, who clearly realized that they had more workers than they could reasonably manage and that they had already opened more areas of excavation than they could possibly bring to a satisfactory conclusion by season's end (even with the extraordinary number of labourers). In short, the field strategy, management relations, and project overall—just weeks into the inaugural season—lay in an untenable and unsustainable circumstance.

Biting Off Too Much at Another Luncheon, and Another Spat. By Wednesday, July 29, 1908, Lyon wrote: 'At luncheon Dr. Schumacher, *of his own accord*, expressed the idea that it would be well to concentrate more on the summit . . . , and said he would order the squad working in [Trench] E. to begin in F., and would transfer part of those working in A. and D. to the summit' (*LD II*, 54; italics added). It is hard to know the tone of the italicized portion of this passage. Was Lyon grateful for the fact that Schumacher had apparently come around to seeing the necessity of such a strategy? Or was he resentful of the fact that just five days prior to this time he (Lyon) himself had made the same basic proposal, only to meet opposition from Schumacher, who then left for his Haifa home, and now reintroduced the strategic adjustments as his own suggestion?

Whatever the feelings over lunch on the 29th, tensions mounted during yet another meal late in the season, on Friday, August 7, 1908.

> *I repeated at breakfast table my fears to Dr. Schumacher . . . that more surface is being covered than can be finished to* [bed]*rock before we close, in about two weeks. He accordingly afterwards ~~limited the~~ contracted the limits of F on the north side and selected two or three parts of the trench to carry down to rock. He said that the ~~widen~~ deepening of the large tract west of H. had been discontinued.* (LD II, 72; Lyon's strikethroughs)

While it may appear, then, that Schumacher and Lyon finally stood in agreement with regard to curtailing the expansive scope of fieldwork, that was not the case. Schumacher ploughed ahead and almost immediately opened a new trench 3m in width.

> *Trench K. A new trench, 3.00 wide begun along southern side of the summit, from trench H westward. The eastern end is included included in the space already dug down several feet in the widening of trench H. To my inquiry Schumacher said this trench was to see if the temple* [i.e., the Augusteum] *wall extended so far. I repeated an old suggestion that a narrow trench be run from the platform south.* (LD II, 72–73; Lyon's underscoring and strikethrough)

In addition, workers now began clearing out the large vaulted chamber situated to the west of the Augusteum's

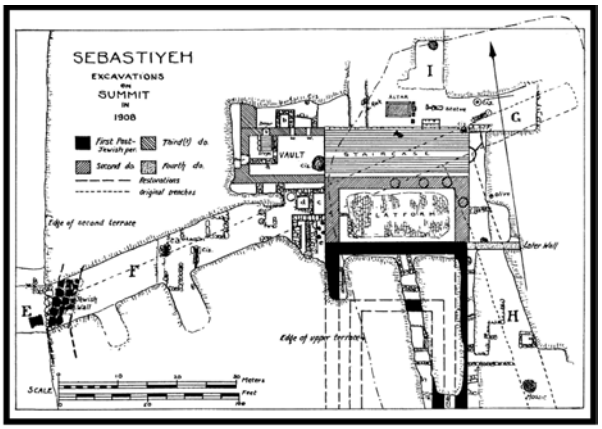

Figure 19: *The plan of Schumacher's oblique summit cut Trenches E, F, and G (courtesy of the Semitic Museum, Harvard University).*

grand stairway (Figure 18). They had realized that the northern wall of the vault had a doorway, with three steps leading down into the chamber. So Schumacher began the clearing. Somewhat paradoxically, Lyon wrote, 'I again urged on Dr. Sch. the importance of putting more workers on this chamber, pointing out that we can hardly hope to clear it in the remaining two weeks' (*LD II*, 73).

Another irony emerged in the fact that now, so late in the inaugural season (Saturday, August 8, 1908) and in Trench F (Figure 19), where Lyon had finally persuaded Schumacher to limit the area of work, the most sought-after levels began to emerge. 'Trench F. Only wheelbarrow men working at west end. Dr. Schumacher believes that we are now in Jewish pottery at this spot, and has begun to collect by basketful for study' (*LD II*, 76). And later, by Monday, August 10, Lyon recorded: 'Trench F. Dr. Schumacher feels sure that we are now in Jewish or rather 'Israelitish' débris at the western end. He sent sixteen baskets of the pottery to Mr. Fisher, who spent all day studying and copying it, completing seven baskets' (*LD II*, 88; Lyon's underscoring). Fisher's personal records confirm the sudden press of the ceramic load: 'Put in whole time on sorting and recording the fragments of pottery from excavations on the summit. The results of this are given in another book' (*FD I*, 122; August 9–10, 1908).

Virtually every excavator has experienced the rush of revealing an important discovery near the end of a scheduled season, even sometimes on the very last day of work. Such was the unfortunate case at Samaria, when deposits from Old Testament Israel—bearing material that would excite any donor of the time—finally appeared within their grasp. But pressures of time and finances had prompted both a restricting of areas worked and the ripping out of material culture by basketfuls—with both realities promoting shoddy recordkeeping.

'You Can't Fire Me . . . I Quit!' That evening (August 8), with the excavation set to close in only two weeks, Lyon outlined nine 'obvious things to be completed' and added that the achievement of these goals would require

a stoppage of work at the village and a concentration of efforts on summit features (*LD II*, 81–82). But over lunch on Sunday, August 9, tempers once again flared and everything boiled over in what appears from Lyon's diary to have been a heated exchange, which bears full citation.

> *At lunch I tried to discuss with Dr. Schumacher the 10 points . . . . He was reasonable for a while, but then lost his temper, and declared that it was clear that it had been decided to get rid of him, and that he would resign after this year anyhow, that I had written to him in Feb. that I was coming out not in the capacity of advisor. He went to the tent to get my letter, and there read that I was coming* to aid *'with advice' and otherwise.*
>
> *I assured him that I recognized him as the leader of the expedition and that decisions as to places of work must be made by him, my wish being only to make clear my judgment as to what ought to be done. I admit the value of all the work that has been done, but told him that I think that he has tried to do too much (to cover too much ground in the limited time). He said this was* a new illustration of the old story that Germans and Americans cannot work together. [Recall the nervous general atmosphere in the region and in the world now as large scale war approached.]
>
> *I told him that if I were in his position, ~~and a representative of the~~ the head of an expedition, I should frequently and freely discuss with my associates plans and details and possibilities. He thought he had done this. I replied that there had not been a case wherein a discussion of plans had been introduced by him, and that I had to learn the meaning of new trenches by inquiring after they were started. That he had at times made a chance remark about ~~begin~~ the desirability of laying out a new trench, but not with any evident intention of discussion. I assured him that having put him in charge I was not going to interfere, but ~~only~~ should limit my activity to an expression of my opinions, but I claimed that as representing the University it seemed to me reasonable to be kept well informed of every plan and every important step.*
>
> *Dr. Schumacher seems to be in the unhappy mood of suspecting that I am in some way hostile, a state of mind entirely without foundation.* (LD II, 83–85; Lyon's strikethroughs; emphasis added)

Both men stewed over the exchange as the day progressed, and at tea time Lyon handed Schumacher a written letter (apparently to create an official paper trail but also perhaps from a feeling that they were now beyond reasonable verbal communication):

> *At tea in the afternoon I handed Dr. Schumacher the 10 points copied out, and introduced by the words:*
>
> *'Suggestions regarding the remainder of the present campaign, made in view of the apparent impossibility of completing now all the work that is in progress,' and ~~col~~ closing thus:*
>
> *'These suggestions are made for Dr. Schumacher's consideration, with full recognition of the fact that any day's discovery might make a serious modification necessary. David G. Lyon'* (LD II, 85)

Schumacher's response, now once again affable in nature, proves of interest on both psychological and historical grounds. According to Lyon, he appealed to family pressures as a reason for having to rein in his position with the expedition. His reply also once again raises the spectre of World War I and the ever deteriorating relations between Germany and America. (As noted earlier, the Ottoman Empire eventually aligned with the Central Powers headed by Germany and Austria-Hungary, while America became one of the principal Allied Powers.)

> *He* [Schumacher] *assented to every point and said that he would proceed on that line.*
>
> *He also stated that he could not so operate in the work next year because he needed to be more with his family, that* the work here endangered his relations and that of the German Colony at Haifa with the officials*, and he admitted that he would suffer no loss or wrong if his relations with the work close with this campaign and the completion of his report.*
>
> *Mr. C. S. Fisher was present at both discussions. When I read this account to Fisher at 7 P.M. he stated that it was accurate and attaches hereto his signature.*
> *9 Aug. 08.* *Clarence Fisher.*
> (LD II, 86; emphasis added)

Lyon then ended this diary entry with an addendum in which he reiterated his opposition to having so many workers on site (averaging more than 400, he said) and by repeating that 'the work proceeds now too fast for adequate supervision and record' (*LD II*, 87). Reliably, Lyon's recorded points of view made Schumacher appear quite moody, changeable, and unpredictable. While one cannot gainsay Fisher's presence at both discussions, it seems peculiar that no account of these exchanges, accounts that might verify or refute Lyon's version, exist in his (or in Schumacher's) private journals.

These lengthy passages are crucial to understanding the state of affairs between the excavation's leaders as they neared the conclusion of the inaugural season. The two figures could not seem to reach a full and amicable understanding. On Monday, August 10, 1908, Lyon wrote,

> *The agreement of yesterday was observed in the work of today* in the main. Exceptions *were continuance by the e. and w. trench running west from southern part of H, i.e. K. . . . A new narrow trench was also begun west of tent*[?] *cutting across the western part of the platform*

n. and s. This I had not contemplated. *(Aug. 11. Asking Dr. S. at breakfast about this trench, he said* he attached no importance to it*, but thought he was* acting on my wish. *See my* instruction *no. 6 on p. 82. The new trench seems to be a* misunderstanding *of my suggestion.)* (LD II, 87; emphasis added)

The sixth of Lyon's ten instructions, which he had recorded on page 85 as a mere suggestion but which he cited as an *instruction* in this excerpt, read as follows: 'explore platform enclosures on west where stones are gone.' I have emphasized some of the more salient points in the above passage: (1) Schumacher pursued only a partial implementation of Lyon's list; (2) he also initiated at least two exceptions to Lyon's wishes; (3) Lyon had never considered an expansion of existing work areas or the opening of new areas this late in the season; (4) but, at this late hour, Schumacher began unfinishable work that he himself subsequently described as unimportant; and (5) Schumacher's claim to be acting according to Lyon's wish belied either pretence or impudence on his part. While Lyon concluded by allowing that at least some of the new work represented a simple 'misunderstanding' of what he had written and said to Schumacher, item No. 6 clearly states that the final exploration of that area was to occur where the stones had already been removed. That is to say, his intent seems to have wanted to avoid any new excavating there.

This passage is indeed very strange, especially with regard to Schumacher's claim (pretence?) that he was simply following Lyon's wish. If Lyon's private accounts of their previous conversations are accurate, how could anyone believe that Lyon desired to open new areas or hire additional workers? One might interpret the current dilemma as comprising either an honest misunderstanding or a case of orchestrated manipulation—perhaps by both parties. Maybe the adventure-story title should read: 'A Passive-aggressive Engineer and the Overly Prickly Lyon.' In any event, Lyon's second diary concludes with the following August 11th entry: 'Schumacher has been unusually agreeable all day. – Commissaire returns from Nablus. – Our table boy Awad bitten in heel by a dog today' (*LD II*, 95). Alas, such trouble seems to have followed poor Awad, for on Monday, August 17, Lyon recorded, 'Awad bitten by a scorpion last night' (*LD III*, 16).

III. Making the Most of Trying Times? Or Making the Most Trying of Times?

Records, Revolution, and Another Deep Hole. Sunday, August 16, 1908, 'Began with Fisher making a copy of the Register, which has been kept by Dr. Schumacher of the objects found' (*LD III*, 14). One wonders whether this activity, completed during the weekend absence of Schumacher, represented simply a normal 'back-up' procedure or something deeper—a distrust of Schumacher and the suspicion that he may resist turning over such records at the end of the season. Judging from Lyon's diaries, the latter option seems likely. Shortly after this time, he wrote of Schumacher's obstinacy with regard both to field strategy (*LD III*, 22–23) and the keeping/sharing of records (*LD III*, 26–27). These passages reveal just how serious the rift in leadership had become.

In addition to excavation challenges and problems of personality at Samaria, the directors always had to keep a wary eye out for unrest and disputes in Nablus at both the personal and municipality levels. A diary entry for Sunday, August 16, 1908, reads: 'Revolution. It is reported that affairs are growing turbulent in Nablus. The power of the governor is not respected, the two chief families, Abd al-Hadi and Hammad, are quarrelling, and there is a tendency to lawlessness' (*LD III*, 14; Lyon's underscoring). These kinds of local disputes posed a constant threat of spilling over into the affairs of the excavation.

But, to the end, the principal rupture lay in the Lyon-Schumacher relationship. On the day before the close of fieldwork for the 1908 Season (Thursday, August 20), yet another confrontation occurred over one of their longstanding issues—initiating too much work for the time left.

> *In the late afternoon, just before dinner, I asked Dr. Schumacher a question about a large opening found today in the s.e. corner of vaulted chamber.*
>
> *He replied that he could answer my question after the hole is cleaned out, that he was too tired to talk, that he could hardly stand, was almost sick, had too much to do, and was not sure that he could hold out till the end of next week.*
>
> *As I had done several times previously, I asked why he did not make use of Mr. Fisher's assistance in the work of measuring and drawing. He replied, he wished to do the work himself.*
>
> *It is quite evident that he cannot complete what remains to be done by the closing of the campaign on Friday next, and that his behavior is unfair to himself, disloyal to his employees and not in the interests of science. I have repeatedly explained to him that I must have plans to show Mr. Schiff on my return. I see no chance that plans can be ready unless Fisher and I make them. The situation is anomalous and most disagreeable.* (LD III, 22–23)

This passage makes clear that Lyon saw Schumacher's decisions and demeanour as disrespectful to those both below and above him in the expedition's hierarchy. On a practical level, Lyon understood that Schumacher's decline not only made it nearly impossible just to finish the inaugural season but also jeopardized the longevity of the project overall. The reference to Schiff again reminds the reader that Lyon had to balance many more behind-the-scenes administrative concerns than did Schumacher, who by this point (in Lyon's diaries, at least) looks extremely weary, somewhat incompetent, and actually unstable to a degree.

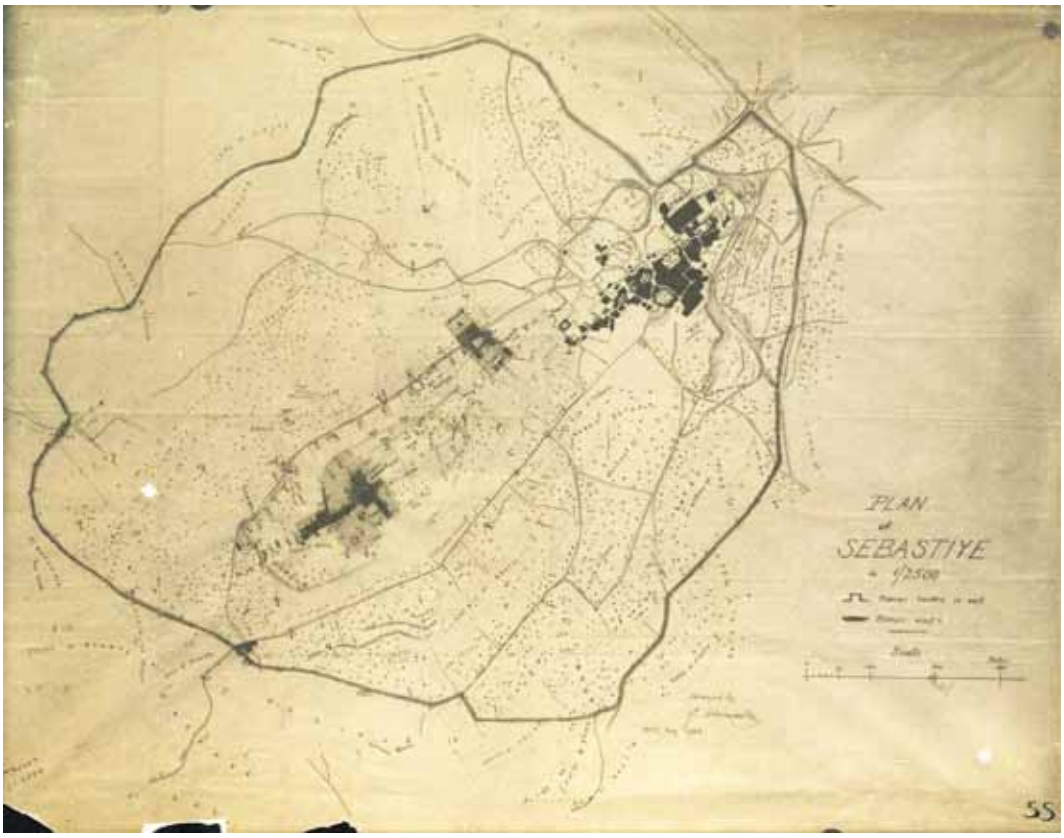

Figure 20: *Plan of Samaria 'Surveyed by G. Schumacher, April, May 1908' (courtesy of the Semitic Museum, Harvard University).*

More Scrambled Relations for Breakfast. The closing days of any field season always prove extremely tense as pressure mounts to conclude the work, preserve the site, process the finds and photography, write the reports, etc. A strained working relationship between project leaders only exacerbates the anxiety and prepares the stage for elevated discord or even open hostility. Thus it was at Samaria. Over the course of three days (August 22–25), the already fragile relationship between Lyon and Schumacher erupted into heated exchanges.

> *Sebastie, Sat., Aug. 22, 1908. At breakfast (Fisher also present) I asked Dr. Schumacher if he did not think it might be well for me to take a copy of his scientific diary, giving two reasons 1) danger of loss if only one copy existed. 2) information of the Committee* [at Harvard]*, so that they might have the material for advising Dr. S. as to the fullness of report to be submitted by him.*
>
> *He replied that until his report is ready no one could have a copy of his diary, it being* his intellectual property. ~~*I may*~~ *That when his report is ready he would turn over the diary to Harvard, but* ~~*no*~~ *until then it could not pass out of his hands.*
>
> *I told him I thought his position untenable. Asked if he had any objection to my looking through the book. He replied no, but he must have it by him day and night till work is over here, perhaps next Thursday night. Then I could see it. I proposed some noon hour when he is taking his siesta. He replied, he would not give it out of his hands at all, and that no note might be made as to its contents.*
>
> *He thought he may have made a mistake in allowing a copy to be made of the register of objects found, because that register contains records of discoveries made by him, credit for which he is entitled to.*
>
> *As he was leaving the work for good, he said, he did not consider it proper to give copies of the material out of his hand until he is through working it up. I replied that if he thought any improper use would be made of the material by Harvard University, he did not* ~~*really*~~ *realize quite the quality of those with whom he is dealing.* (LD III, 26–27; Lyon's strikethroughs; emphasis added)

The following day, Lyon again complained privately of his lack of access to the recorded results of their work:

> *Sunday, Aug. 23, 1908. Schumacher having refused to allow the copy of his 'scientific diary' to be made, and having not allowed Fisher to have any hand in the measurements and drawings and sketch making on the hill, I, in order not to go home without* ~~*certain*~~ *material for certain places and elevations, worked with Fisher three or four hours taking measurements, espec. of*

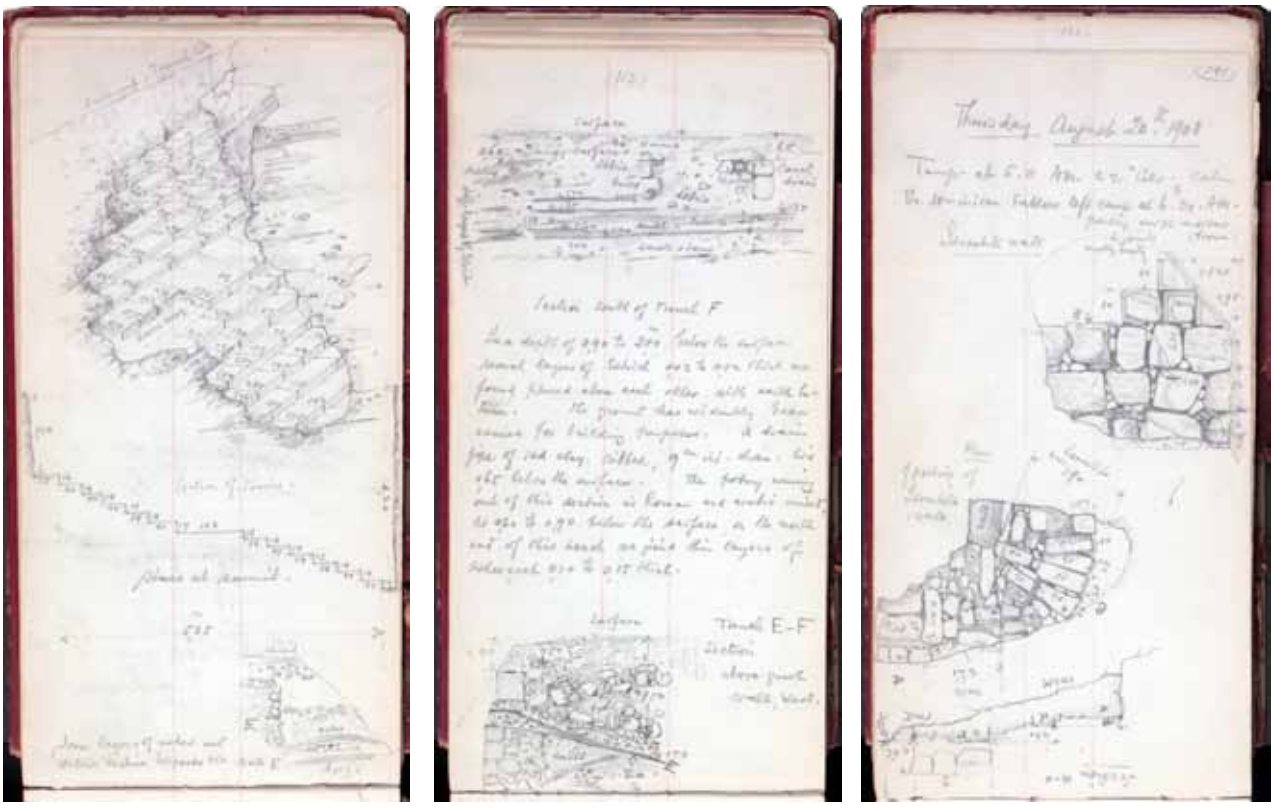

Figure 21: *Entries from Schumacher's Diary I, page nos. 48, 113 and 141, recorded in a surveyors fieldbook (courtesy of the Semitic Museum, Harvard University).*

> *the 'Israelite' wall, vaulted chamber and altar.* (LD III, 28)

It is interesting that, at least according to Lyon, Schumacher claimed the excavation's records, drawings, etc., as his own 'intellectual property,' not that of Harvard, his employer (Figures 20 & 21). If Lyon's allegation is true, the concept relates to an ownership issue that persists even to this day, whether involving field notes or lecture content delivered in a classroom setting. Schumacher's stance appears to stand in contrast to that of Fisher, who from the beginning placed the notice, 'Property of Samaria Exped. Harvard University,' inside the title page of each volume of his diaries.

Schumacher apparently preferred to hold everything, equipment as well as records, close at hand. His diary entry from Thursday, June 4, is informative: 'I *lent* my level instrument to the Expedition or Mr. Fisher, with the understanding that should it be lost or damaged that the *University of Harvard would pay me* £10. In case the instrument is damaged the damage must be made good by the University. Arrived at this understanding with Prof. Lyon' (*SD I*, 46; italics added). Taking such pains to turn the use of a standard piece of equipment into a contractual agreement seems curious. It may belie a basic attitude of either personal mistrust in what amounted to a German-American relationship or other, ever-growing historical realities (recall the coming of WW II).

In any event, it seems noteworthy that Fisher's diary Vol. I concludes with, and that the entirety of Vol. II is dedicated to, a long series of drawings that bear numerous measurements. In addition, Vol. II included four and a half pages of recorded levels. This material likely reflects the work that he hastily completed with Lyon in the final days of the 1908 Season. More importantly, however, Lyon and Schumacher once again seem to have reached an impasse.

> *. . . Wrote a letter to Schumacher asking him to state in writing his objections to my having a copy of the scientific material. Copy. [Not delivered. Aug. 28]*
>
> *. . . Schumacher, commissaire and foremen packed the antiques for shipment to Constantinople, 3 boxes.* (LD III, 28; Lyon's underscoring)

Taken together, these notations indicate that Lyon could not even participate in the packing of the artifacts—an incredible circumstance, given his position within both the Semitic Museum and the Samaria Expedition. Once again, one wonders whether the presentation of a letter stemmed from a desire by Lyon to create an official record, a paper trail, or from the mere fact of a total inability for the two to communicate profitably through oral communications. But beyond this question, these records read as though Schumacher was colluding with the crooked *commissaire* to exclude Lyon from as many elements of the excavation as possible. (Later that night, when Lyon paid the *commissaire*, 'he was much dissatisfied and insisted that his services had been so valuable as to deserve much larger pay. I assured him I would gladly pay him two fold if we were in a position to do so' [*LD III, 29*].)

On the grand level, Lyon clearly resented the fact that, after the expenditure of much time, money, and effort, he possessed basically nothing to take home to present to the Committee of the Semitic Museum, the President of Harvard University, or the generous patron, Jacob Schiff. Personally, he found himself in a most compromised circumstance; and beyond that, the entire project seemed doomed.

How Many Sides Are There to Every Argument? The window into the project's status presented above once again and by necessity depends almost exclusively on Lyon's personal, unpublished account of the situation. As noted earlier, Fisher makes no mention in his diaries of any of these exchanges. His entry for August 20 or 21 reads simply: 'made a series of levels at A as follows,' followed by 'sorted pottery and made late in the afternoon some additional measurements in A' (*FD I*, 132). His silence regarding both the dispute and the new 'hole' seems quite peculiar, almost strange.

Moreover, Schumacher himself made no mention of any of these episodes in his journals. Beginning on August 20, he attentively recorded, as he usually did: 'Temp. at 5.0 AM. 22° Cels. Calm. The Dominican Fathers [Pere Vincent Confrères, who had arrived the previous day] left camp at 6^{h}.30 AM. . . . Found today the upper part of the statue the <u>forehead</u> of marble' (*SD I*, 141–2; Schumacher's underscoring, Figure 21). Thus go the remainder of his diary entries, which focus exclusively on the close of fieldwork and the discovery of various interesting objects (August 21), points at which the bedrock on the summit shows signs of artificial shaping (August 22), paying the *commissaire* in the presence of Lyon (August 23), giving Fisher a plan of the summit to prepare for tracing (August 25), etc. The closest Schumacher ever came during these trying days to detailing a controversy dealt with the behaviour and complaints of the *commissaire*, not with a clash involving Lyon. I have noted earlier that on Monday, August 24, the *commissaire* opened some boxes already packed with artifacts and took several items, apparently for his own shady use or personal gain. Schumacher offered a lightly stated objection to this act ('I told him that I did not consider this handling of antiquities quite correct . . .'). Subsequently, on August 26, the *commissaire* returned with a copy, written in Turkish, of the list of objects found during the season. Schumacher had to sign it. But, knowing that the *commissaire* had removed certain objects, he added, 'I shall send Hamdi Bey a copy of our Registrar in English' (*SD II*, 151)—another mild response that communicated Schumacher's distrust of the *commissaire*'s motives. These notations are about as volatile as any in Schumacher's private records.

In this regard, the tone and content of the close of Schumacher's journal seem relevant.

> <u>*Friday 28th August 1908*</u> *. . . . Prof. Lyon and Mr. Fisher left our town house at 3 PM. and drove to Nablus and Jerusalem. Frauq Datodi accompanied them. Squared all accounts between 4 and 6 PM. with foremen, cook, soldier, Moh. Sais and those workmen that were engaged in transferring our camp to Dēr Sharaf. Finally we prepared an accurate inventory of all things including plant belonging to the University and then packed our private effects. At 10 PM. in the night we had finished everything ready for the start to-morrow morning.*
>
> *Thus closed this year's archaeological Excavations at Sebastiyeh.* (SD II, 158–59; Schumacher's underscoring)

Curiously—particularly in the light of Lyon's records—these entries nowhere display conflict with or animosity toward Lyon or anyone else. Instead, they appear to contain only an interest in the accurate accounting of objects, etc. They also record that Fisher did, in fact, receive a presumably final plan for official tracing. In short, these private records carry a very different tenor from the interpretation Lyon places on the situation. One should recall as well that Fisher nowhere wrote of open conflict between Lyon and Schumacher. So how many sides are there to every argument? In this case, judging from the written records available today, only one.

And Mohammed Said said . . . . On August 24, 1908, the day after the latest breakfast row and letter exchange between Lyon and Schumacher, a great rumpus erupted between Lyon and Mohammed Said, the new *commissaire* who had recently replaced the intractable Hasan Bey. The dispute began over both an ever-pressing anxiety for Lyon—money—and the disposition of artifacts but ended with an ominous threat from Said. Through the dragoman interpreter, Frauq Datodi, Said,

> *. . . held a long harangue on his services to us, preventing the government at Nablus from stopping our work, etc., etc. Similar language he used to Schumacher last evening. We told him last evening that our money was very short, that I receive nothing for my services and that Mr. Fisher gets little more than his traveling expenses, but nothing seemed to impress him.*
>
> *He has undoubtedly been of great assistance to us, but we think that he has done us no more than his duty and that he has been well paid.*
>
> *In taking leave of Schumacher he remarked that next year he would show us the rigors of the law. Evidently* if there is to be a campaign next year, *he is not the proper man for our commissaire. (*LD III, 31; emphasis added)

This interchange at the close of the work draws together several key administrative afflictions that ran throughout the summer of 1908. It also reiterates Lyon's scepticism that a return to the field for the second of five projected seasons would prove possible in the near future.

Breaking Camp, Taking Measurements, Making and Keeping Commitments. On Friday, August 25, 1908, Lyon wrote,

> *Finished copying register of antiques found, except some of the sketches.* This book has been kept by Sch., who several times refused proffered assistance. . . .
>
> *Schumacher agreed to prepare a copy of his scientific journal and send it to us* promptly, excepting such passages as contain his original suggestions, ideas and combinations. *He feels that such passages ought not to pass out of his hand ~~unti~~ before his report is prepared, which he thinks may be ready* by the New Year. (LD III, 33; emphasis added)

So here, near the end, one sees more signs of unremitting struggle, now over the status of excavation records as 'intellectual property' as well as a concern over the stages at which Schumacher would share this property with Lyon. With an economy of words, Lyon seems to contrast 'promptly' with the more distant 'New Year' and his desired full and unfettered access to field records with Schumacher's promise, even now, to release only the material that he himself did not originate. In short, Lyon continues to present his partner as greedy with scientific data and paranoid concerning his own employers and sponsor.

And, again, we see Lyon's view that the earlier mismanagement of time and resources by Schumacher has now become a causal factor inducing much of the stress at the end of the field work. 'We are all expending the time now in doing the last things. Sch. taking measurements on the hill. Had he used Fisher for this work, as I advised so often, there would not now be such a rush' (*LD III*, 33). In his view, Schumacher's resistance and contrariness had actually cost the project both time and money. The final time crunch manifested itself in various practical ways: August 27— 'Packed objects for leaving tomorrow. Photographing and printing not being done, Frauq Datodi is to go with us to Jerusalem to finish the work there' (*LD III*, 36).

The expedition 'broke camp' on Friday, August 28, 1908. Lyon received from Schumacher the pay sheets up through August 21. Schumacher also agreed (1) to prepare a copy of the Register and to send it to Hamdi Bey in Istanbul, (2) to 'copy the accounts and send me [Lyon] the original *promptly*,' and (3) 'to send *soon* a copy of the 'scientific diary', and of the level book.' As they took their leave of one another, Lyon wrote 'an agreement' to this effect, which both he and Schumacher signed (*LD III*, 38; italics added).

So Lyon—the securer of finances, de facto organizer, and chief administrative officer in charge of the entire project on behalf of the Semitic Museum and Harvard University—apparently left the field with little or no real scientific data or even much in the way of elevations for the architecture and objects they had found. He had only whatever data he and Fisher had scrambled to collect in the closing days of the season. This situation, if accurate, seems quite incredible, given that there could have been no project without Lyon. In any event, Lyon left Samaria at 2:30pm on August 28 and headed via Nablus to Jerusalem with Fisher and Frauq Datodi, and from Jerusalem to Port Said (Egypt), Naples, and then homeward on September 7.

Still, despite all that had transpired between Lyon and Schumacher, both men appear to have honoured their pledges to one another. Lyon kept, at least in time, his financial commitment to Schumacher:

> *Jerusalem, Sept. 4, 1908. . . . Wrote Harvard Bursar to send Dr. G. Schumacher 30 pounds sterling to pay his salary for August.*
>
> [Cambridge, Massachusetts] *March 5, 1909. . . . Asked Bursar to pay Dr. G. Schumacher's balance of francs 159.20 (final payment).* (LD III, 41, 56; Lyon's underscoring)

And after returning to Cambridge, Massachusetts, Lyon recorded on October 5, 1908, that he did, in fact, receive from Schumacher 'a *copy* of his official journal and of the Level Book (Samaria documents)' (*LD III*, 45; italics added). Later, on January 6, 1909, he wrote: 'Rec'd from G. Schumacher the originals of his official Samaria journal (2 vols), Level Book, Register of objects found, and his report on the campaign at Samaria' (*LD III*, 51). Finally, by February 2, 1909, Lyon received a box of additional materials (mostly plans and sections) from Schumacher, a shipment that had been delayed in the Boston Customs House (*LD III*, 52–53). Thus it appears that Schumacher also gradually made good on his promises.

Heading Home and Recommending by Denial. While in Port Said on his homeward journey, Lyon documented the following communiqué on September 8, 1908: 'Telegram from G. A. Reisner at Cairo, saying that he has a cable from Pres. Eliot to the effect that Reisner is to have charge at Samaria next year' (*LD III*, 44). This cable had to come as good news to Lyon: the highest official at Harvard University not only approved the proposed transition to Reisner as field director but also clearly expected to launch a second season at Samaria. Still, a nagging awareness must surely have lingered that the unplanned change in on-site leadership arose from an extremely trying and shaky inaugural season.

Lyon's journal contains one more strange entry relating to Schumacher, recorded in Cambridge on October 30, 1908: 'Letter from Schumacher saying there is a report that he stole objects from Samaria last summer and asking me to write to Constantinople in denial. A similar report was rec'd from F. Datodi on Oct. 26' (*LD III*, 47). One wonders whether these accusations were fabricated and somehow linked to the illegal removal of coins and

other artifacts by the malcontent *commissaire* Mohammed Said. In any event, as a follow-up to Schumacher's request, Lyon wrote on November 11 to G.W. Fowle, at the American Embassy in Constantinople, 'telling him to lay the letter before Hamdi Bey, *if he hears that any hostile report has been sent to Hamdi* about our work last summer' (*LD III*, 47; italics added). Interestingly, this reply did not immediately address the indictment against Schumacher; nor did it even mention his name. Instead, Lyon directed that his generic defense of the integrity of the project overall become active *only if* a more official complaint were raised and sent to Hamdi Bey.

Importantly, not until April 13, 1909, did Lyon send a copy of a letter to Schumacher 'regarding accounts, report of last year's work, etc. Sent him also a denial (copy) of the report that he had been dismissed by Harvard from his position' (*LD III*, 63). No other related entries appear in Lyon's diaries. Moreover, his subsequent reports on the work of the first season to various committees at Harvard lack any further reference to Schumacher, the perceived costly disruptions that he had caused during the season, or the post-season allegations of misappropriation against him.

IV. Concluding Comments: A Personal Reflection on the Hermeneutical Predicament

Before closing this story, I return to the interpretative challenge that I acknowledged from the outset and mentioned in my opening comments on sources. Biographical research such as I have presented here carries with it a certain, peculiar risk, perhaps particularly because it deals with unpublished, private diaries of our long-deceased academic forbearers. These learned, dedicated individuals represent the actors who gave shape to the story I now attempt to tell, indeed, who created it by living it, and who often sought refuge in their private journals. Such writings may take the modern reader closer to an author's own heart than does the published, academic report that ultimately emerged from the work. But to what extent do these previously unshared, handwritten accounts contain reliable assessments of the day-to-day situations in which the actors found themselves?

At Samaria, this question is exacerbated by the general impression one acquires when reading the journals of Lyon versus those of Schumacher and Fisher. The writings of the latter two men generally seem factual and work-related; those of Lyon, while containing such information, also include much more personal interpretation of events. Whereas Schumacher or Fisher might write something on the order of 'We went there and did such and such,' Lyon would say of the same activity that 'We went there and did such and such, during which time Schumacher made a poor judgment and then would not listen to reason.' Schumacher and Fisher rarely, if ever, moved to the second-stage annotation in their notes. Lyon, on the other hand, frequently commented on situations *as he saw them*. So the question arises: Did he see them correctly? Unquestionably, Lyon represented the undisputed force behind not only the founding and early survival of the Semitic Museum at Harvard University but also the entire expedition to Samaria. Without him and his personal friendship with Jacob Schiff, it seems unlikely that either entity could have emerged, much less thrived. Lyon invested more symbolic capital (energy, planning, fund-raising, administrating, executing, etc.) in the excavations at Samaria than any other person. He, therefore, had more to lose than anyone else—abundantly more than Schumacher. For Lyon, this field project represented one element of a superior aspiration, a larger dream. The leaves of his private journals slowly but surely reveal this fact.

In my judgment, one cannot deny another fact: Schumacher did not succeed at Samaria. History does not need the journals of Lyon to tell that much. Yet, after many readings of the entire corpus of private writings left by Lyon, Schumacher, and Fisher, and after developing some knowledge of the state of 'best practices' in the emerging discipline of field archaeology in 1908, I have concluded that Schumacher's lack of success at Samaria stemmed more from personality differences and personal clashes with Lyon than from an insurmountable lack of skills, whether administrative or archaeological. I have described, for example, Schumacher's familial and emotional ties to the Templer community at Haifa, for which Lyon showed little appreciation, or even awareness. Trouble between the two men brewed over the seemingly minor and soluble question of when to restart the field-work following their trip to Constantinople. Once it did resume, Lyon seized mainly on over-expansive work areas and labour force as reasons to fulfil his already hatched scheme to edge Schumacher out of the project.

Perhaps Schumacher did overreach by opening too many tracts of excavation and employing too many workers, more than could be managed or paid for, even as the inaugural season drew to a close. But such realities should not obscure his otherwise valuable qualities and abilities, e.g., his background in engineering. The skillset he brought to the project—topographical and excavation-related surveying, planning, drawing, communication in Arabic, etc.—surely did not lie within Lyon's command. One can appreciate Schumacher's prodigious surveying talents, for example, by reviewing the series of extraordinarily detailed maps he created not only of regions in Palestine, with thorough descriptions of archaeological remains, but also the entire eastern Mediterranean world. (These impressive drawings remain available in high resolution through the German Society for the Excavation of Palestine; http://www.palaestina-verein.de/wp/wordpress/?page_id=2010&lang=en.) Schumacher's field sketches of land allotments around Sebaste and architecture at Samaria prove just as impressive.

History may have shown that Schumacher's replacement, George Andrew Reisner, had (or was developing) a vision for how to excavate stratigraphically, to engage in detailed debris-layer analysis, etc. But hardly anyone

else at that time (or for some time to come) had such foresight or ability, not even the trained archaeologists of the day. That Reisner privately critiqued various professional colleagues on that very score confirms this state of affairs. It may be asking too much, then, to expect Schumacher to have known to excavate in this manner. Current standards sought the exposure of architectural horizons, not stratified deposits of earth. Lyon himself, with a degree in Syriac, was undoubtedly also learning the stratigraphic method of digging and recording on the job. And concerning the size of Schumacher's work force, one must acknowledge that the numbers did not diminish all that significantly under Reisner's subsequent leadership. In these and other matters, one might expect Schumacher's prior experience at Megiddo to have led to greater refinement of his management skills and overall field techniques. But he always thought as an engineer, not an archaeologist.

In sum, it appears that Lyon and Schumacher were not well suited partners. Yet while Lyon may have shouldered heavier responsibility and harboured greater vision beyond the project itself, both he and Schumacher brought valuable skills to their work. It seems reasonable, therefore, to temper the subtle but steady, post-Constantinople criticism of Schumacher that Lyon delivers in his private records.

Postscript: Starting Over - then Over again

Changing without Changing. The Harvard Expedition to Samaria would go forward but only for a total of three field seasons, not the projected five years envisioned by the patron, Jacob Henry Schiff. Following the close of the inaugural season, Gottlieb Schumacher would not return to the project. George Andrew Reisner served as on-site field director during the 1909–1910 campaigns. During these years, Lyon spent less time at Samaria and more time coordinating affairs from Cambridge, Massachusetts. Conduct of the excavation appears to have improved under Reisner's more involved participation, although at least one aspect—and one which Lyon had portrayed as a particularly worrying thorn in his flesh, namely, the inordinately large force of workers—did not seem to change over the remainder of the project. On May 24, 1909, Lyon received a letter from Reisner containing various comments about the financial accounts. In an earlier and related communiqué, composed at Joppa while en route to Samaria, Reisner had written of the need to deposit more money into the local account by June 1 '*if we are to work 300 men*' (*LD III*, 68; italics added). Back in the day, as Lyon tried to work alongside Schumacher at Samaria, this program would surely have garnered a derisive comment in Lyon's private journal. But now the museum curator nowhere opposed this plan. In fact, after a consultation with authorities at Harvard, he sent the money without question, reservation, or objection. The work of the 1909 Season began on June 1, after Lyon had received the following cable from Reisner: 'Postponing departure [from Cairo] until May first. Official advice.'

Figure 22: *Kirsopp Lake, Winn Professor of Ecclesiastical History, Harvard University circa 1914 (Portrait; Wikimedia Commons, Public Domain).*

Lyon surmised that the notice came 'doubtless on account of the present disturbed state of affairs in the Turkish Empire' (*LD III*, 65).

The Final Blow: A Patron on the Run. Thus began the Harvard campaigns at Samaria, the largest and best-funded project ever to have taken the field in Palestine. From the initial application for a license to excavate, however, many obstacles and forces militated against success, and the inaugural season particularly proved to be a time of incremental decline. By the end of August, 1908, a rather wobbly vision awaited redefinition, ironically under the new leadership of an Egyptologist. Many features of the project, both archaeological and administrative, did improve over the following two years, as the team went on to clarify or expose such valuable contributions as the Israelite palace, the Samaria Ostraca (which Reisner considered the most important find of all), the great Herodian Augusteum, and more. But, alas, the three-year period of work totally consumed the projected five-year budget and, apparently wary of what this fact portended for future financial needs and demands, none other than Jacob Henry Schiff himself forced an end to the project after only three years' work (see *LD III*, 80–84). Following the 1910 Season, Reisner cabled Lyon from Cairo on January 13, 1911, informing him that he (Reisner) would set sail for America on January 26. Reisner then inquired whether he should apply for a new license to excavate at Samaria. Lyon's return message said simply: 'No. Later

Figure 23: *Silva Tipple New Lake 1911 (Portrait; Wikimedia Commons, Public Domain).*

we hope' (*LD III*, 102). But 'later' never came; thereafter, Harvard could not go it alone.

Back to the Future: Harvard, Samaria, British Connections, and More Schiff Money. Official publication of Harvard's three-year campaign finally appeared in 1924. The University's connection to Samaria, however, would continue in the wake of defeated Central Powers and a collapsed Ottoman regime and without a German-trained engineer as on-site principal. (Other influential figures, such as Gustaf Dalman, the first Director of the German Protestant Institute of Archaeology [*Deutsches Evangelisches Institut für Altertumswissenschaft des Heiligen Landes*], also fell into disfavour as the new constellation of nation-states took shape.) By 1920, Reisner had applied to the recently ensconced British 'Mandate Palestine' for another permit to excavate at Samaria, this time as part of a proposed collaborative project. Ironically, Professor Kirsopp Lake (1872–1946; Figure 22), an Englishman serving as Winn Professor of Ecclesiastical History at Harvard but who wrote mainly in New Testament studies, played a key role in launching the so-called 'Joint Expedition' in 1931. The resumed work at Samaria, directed by John Winter Crowfoot, ran through 1935. In August 1932, Lake divorced Helen Courthope Forman, his wife of 29 years, and in December married Silva Tipple New (1898–1983; Figure 23), his former student who was 26 years younger than Lake, married, a mother of four, and who had taken a post as professor of classics at Bryn Mawr. (Consequently, Lake lost the Winn Professorship in September 1932 but remained as a professor of history in Harvard College until 1938.) Silva Lake became the epigraphist for the Joint Expedition and ultimately published the Greco-Roman inscriptions in the final report (Crowfoot et al. 1942, 1957).

Interestingly, in 1895 Frieda Schiff, daughter of Jacob Henry and Therese Loeb Schiff, married the German-born American financier Felix Moritz Warburg, who hailed from the famous Warburg banking family in Hamburg and who had risen to partner in his new father-in-law's very successful investment firm. With the rekindled British-American interest in Samaria in the 1930s, Frieda Warburg continued the Schiff family's support of work there by helping to sponsor the Joint Expedition.

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On May 7, 2015, I had the distinct honour of presenting the annual Petrie Oration at the Australian Institute of Archaeology in Melbourne, Australia. I am grateful to Director Dr Christopher Davey for inviting me to address the members and guests of the Institute and for arranging a larger lecture tour of many universities in Australia.

For permission to include a number of the photographs of principal figures behind my discussion, I gratefully acknowledge the generosity of Joseph Greene, Deputy Director and Curator of the Semitic Museum at Harvard University. I also thank Isabella Donadio at the Harvard Art Museums and Alison Floyd at the Sonia Halliday Photo Library, Oxford, for their assistance.

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Assyrian Clay Hands from Nimrud in the Australian Institute of Archaeology

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Abstract: The AIA is home to three artefacts known in Assyriology and Near Eastern archaeology as 'clay hands.' These clay hands were included in Grant Frame's 1991 catalogue of clay hands from Assyria, but their description is general and at the time of publication their whereabouts was unknown. To bring these artefacts to light, this article provides a general overview of their nature and a descriptive catalogue.

In 1951 the Australian Institute of Archaeology (the Institute) became a financial supporter of Sir Max Mallowan's excavation at the site of Nimrud. Consequently, Mallowan acknowledged the Institute in later publications (Mallowan 1953: 1) and arranged for the Institute to share in the division of objects (AIA Docs 5202, 5403). Amongst the objects allocated to the Institute were three uninscribed clay hands – or as Mallowan referred to them 'Hands of Ishtar'. The clay hands bear the excavation numbers ND 1959, ND 1961 and ND 1962 and are now registered with the Institute numbers IA5.022, IA5.023 and IA5.076, respectively. While these artefacts were included in Grant Frame's exhaustive catalogue of Assyrian clay hands, Frame was unaware of their location in Melbourne and hence he could provide only a very general description of them in his catalogue (Frame 1991a: 371, nos. 87–98 and 101–102). This article brings to light these clay hands by providing a general overview of their nature and a descriptive catalogue.

Assyrian Clay Hands

According to Grant Frame, over 170 clay hands have been recovered from the excavations of Assyrian cities including Nimrud (Calah), Aššur, Khorsabad (Dūr-Šarru-ukīn) and Nineveh (1991a: 335). The sculpted hands are kiln-fired and consist of two parts: the 'hand,' comprising a clinched, squared human fist with five uniformly stylised digits arranged in the same direction and a rectangular 'arm' which joins the hand at what would be a wrist joint. The hand could be decorated either by a coat of blue or yellow glaze or bear a royal label inscription and could have fingernails inscribed, sometimes with a bitumen coat. Approximately one third of the 148 catalogued clay hands are inscribed and all but one of these bears an inscription of Ashurnasirpal II (Frame 1991a: 338).

The exact context and function of the clay hands is still poorly understood. The vast majority of clay hands have been found in the ruins of Assyrian buildings and thus do not indicate their exact context (Frame 1991a: 355; Curtis and Reade 1995: 104). Indeed, scholars are undecided on whether the clay hands served a structural function or were merely decorative. There is a number of surveys of the different scholarly interpretations (Frame 1991a: 356–359; Curtis and Reade 1995: 104; Guralnick 2008: 241–242; Neumann 2014: 72–73, n. 344).

The shape and appearance of the clay hands suggests that the arm was inserted into the wall and only the hand was visible. The few clay hands that have been found in the ruins of walls confirm this theory. However, it is not uncommon to find the arm section broken off and this suggests that the clay hands were not strong enough to function as a part of the structure. On the basis of the available evidence, Julian Reade's idea that the clay hand functions as a type of corbel seems most reasonable (Curtis and Reade 1995: 104). Some scholars have referred to the clay hands as 'hands of Ištar' but there is little evidence to link the sculpting of hands to the cult of that deity nor is there a clear connect between these hands and other decorative hands, such as the *hamsa*, produced by other societies of the Ancient Near East, modern Middle East and Africa (Frame 1991a: 340–341, 356–359, Curtis and Reade 1995: 104; Neumann 2014: 72, n. 341).

Descriptive Catalogue

The three clay hands in the Australian Institute of Archaeology's collection are in excellent condition and all are complete. They were discovered in Ashurnasirpal II's palace, the so-called 'North West Palace', at Nimrud during two excavation seasons. The Institute's records show that IA5.076 (ND 1962) was allotted to the Melbourne collection from the 1951 dig in 1952 and IA.022 and IA5.023 came from the 1954 excavation (AIA Docs 5202, 5403). Unfortunately, they were not located in their original context but in one of Austen Henry Layard's 'dumps' in the northwest corner of the palace that Mallowan re-excavated a century later (Frame 1991a: 371). However, their presence in the North West Palace indicates that they date from the reign of Ashurnasirpal II.

As a set, they are rather typical in style with other clay hands from Nimrud. They are made from brown clay but there are traces of a pale white paint on two of the three clay hands. In Frame's catalogue he noted that expedition records indicated that some of the clay hands 'were

Figure 1: *IA5.022 (ND 1959) View of the top side.*

covered with a light glaze' and this certainly seems to be the case with IA5.023 and IA5.076.[1] What is a particularly pleasing about these exemplars is the survival of the arms, which can often be missing.[2] Like other clay hands, there is a noticeable difference in the smoother texture of the fists from the rougher surfaces of the arms.

IA5.022 (ND 1959)

IA5.022 is complete, made of brown clay and measures 235 mm (l), 98 mm (w) and 69 mm (h), and weighs 2040g (Figures 1 & 2). There is no trace of a glaze or any other decoration. The end of the arm bears five dents which could well be the indents left by fingertips in antiquity (Figure 3). This is the only example of such dents I have been able to find on a clay hand but, upon inspection of the artefact, it seems that the finger impressions might have been made when pushing the clay hand by the arm into a kiln for firing, since such impressions would have been impossible after firing and one cannot pick the clay hand up by placing one's fingers in the position of the impression.

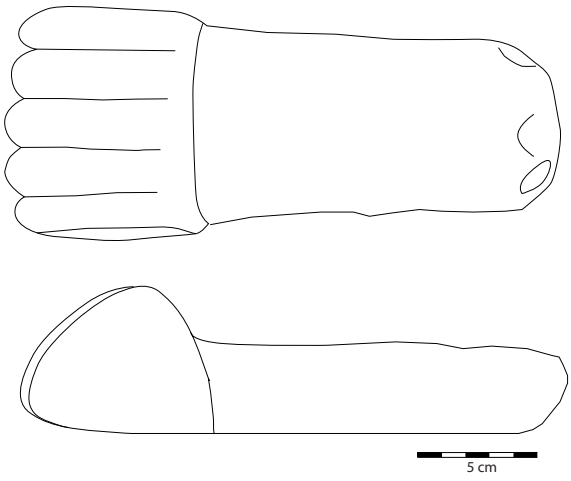

Figure 2: *IA5.022 Drawing, top and side elevations*

Figure 3: *IA5.022 View of the end of the'handle' showing fingure impressions*

IA5.023 (ND 1961)

IA5.023 is complete, made of brown clay and measures 216 mm (l), 95.5 mm (w) and 56 mm (h), and weighs 808g (Figures 4 & 5). The hand is mostly covered in a faint white paint. As mentioned above, Frame noted in his catalogue that the British expedition records state that some of the clay hands excavated from the same find spot as this one were covered in a light glaze. I suspect that this is one such hand.

Figure 4: *IA5.023 (ND 1961) View of the top side.*

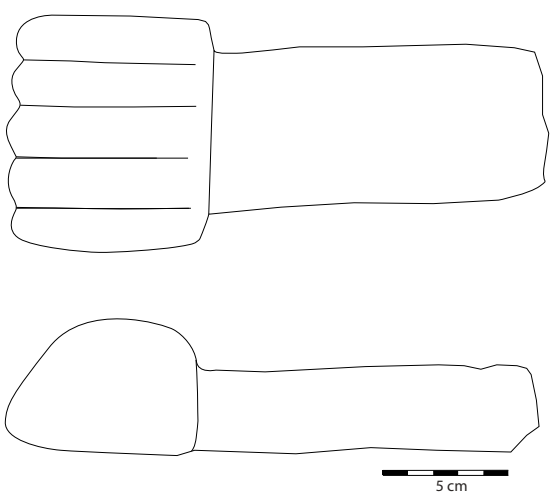

Figure 5: *IA5.023 Drawing, top and side elevations*

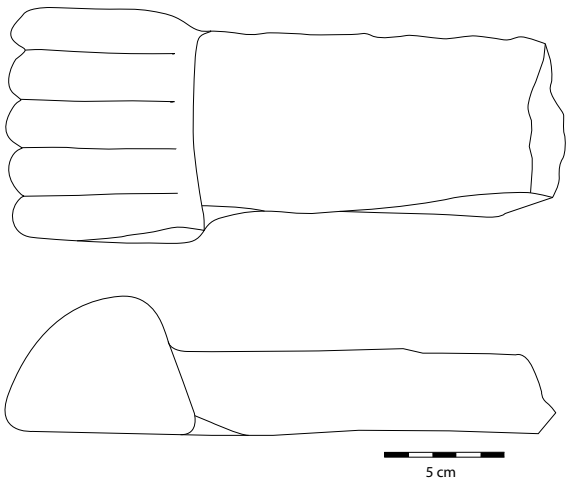

Figure 6: *IA5.076 Drawing, top and side elevations.*

Figure 7: *IA5.076 (ND 1962) View of the top side.*

IA5.076 (ND 1962)

IA5.076 is complete, with minor damage to the end of the arm (Figures 6 & 7). The hand is made of brown clay and measures 232 mm (l), 99 mm (w) and 59 mm (h), and weighs 958g. The hand has traces of the same white paint as IA5.023, though it has not survived as consistently across the fingers. It is most likely that this is another example of the 'lightly glazed' clay hands in the British expedition records.

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I would like to thank the Australian Institute of Archaeology for permission to examine and publish the clay hands in their collection and for providing all images and drawings. I would also like to thank NGS Super for awarding me the 2014 NGS Scholarship that funded my research trip to the collection.

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Endnotes

1 Frame 1991a: no. 87–98, p. 371. Note that IA5.023 (ND 1961) and IA5.076 (ND 1962) are actually no. 102–103 and the description about the glaze is not listed here. However, given these clay hands were found in the same location as no. 87–98 and the general nature of the records from the British expedition, it is not hard to see that the description of the light glaze may actually refer to IA5.023 and IA5.076 in the Australian Institute of Archaeology's collection.

2 Compare, for instance, those clay hands published here with those in the Oriental Institute at Chicago all of which have lost the arms, see Guralnick 2008.

Large merchant ships in Roman times: the Spritsail legacy, Part II

Christopher J. Davey

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Abstract: Iconographic evidence and the shipwreck archaeological record seem to indicate that merchant ships dramatically increased in size and tonnage toward the end of the 2nd century BC. The experience gained from sailing replicas, such as the *Kyrenia II*, has demonstrated that ships powered by a single mainsail lacked controlled manoeuvrability and sometimes needed to resort to auxiliary power such as oars. It is argued that the development of the spritsail-*artemon* discussed previously (Davey 2015) provided the necessary means to control ships and thereby facilitated this increase in size.

Introduction

This paper develops the discussion begun in *Buried History* 51 (Davey 2015) where it was argued that a sail called a spritsail or *artemon* was rigged at the bow of many Roman period ships from at least the 2nd century BC to assist them with directional control when sailing to windward and going about. The paper suggested that this type of sail developed from the Classical period seafaring tradition where there is literary evidence describing how the mainsail was adjusted to assist with steering the ship. The adoption of the spritsail-*artemon* had other implications for the maritime economy, one of which may be the size of merchant sailing ships. To avoid confusion with the spritsail as a mainsail, which is known from Roman times and is used today by wooden-boat enthusiasts, the term spritsail-*artemon* is used throughout.

Estimated seaborne tonnages and timetables for merchant shipping during the Roman period indicate that commerce, especially the Alexandrian-Rome grain-trade, relied on many large ships with displacements exceeding 200 tons (Pomey 1998). Indeed it has been suggested that maritime shipping volume in the Mediterranean during the Roman period was not exceeded until the 16th or 17th century (https://www.abc.se/~pa/uwa/wrekmed1.htm accessed 3-11-2016).

The shipwreck record

Parker catalogues 1259 ancient shipwreck sites in the Mediterranean and Europe (1992). Of these only a small number has been scientifically excavated and only some of these have had substantial remains of the ship's hull (Figure 1). This is not to be unexpected when the aggressive nature many shipwreck sites is considered. Timber is unlikely to remain on the seabed in rocky environments where there are strong ocean currents and, where sand or mud was the resting place, chemical and biological agents may have attacked the wood. Shipwreck sites are therefore often primarily artefact clusters.

Understandably, estimating the tonnages of wrecked ships from artefact scatters does not appear to be common practice. Ancient salvage, modern looting, the ravages of time and the possibility of multiple wrecks at the same location all complicate the situation, aside from the fact that the ship itself may not have been fully loaded at the time of its demise. The area of the artefact scatter may be quoted but even with information about the morphology and history of the site itself estimating ship tonnages would be problematic.

Figure 1: *The Kyrenia ship hull, Kyrenia Archaeological Museum. Photo: the author*

Some wrecks do have remnants of the hull but these are almost never complete, making the estimation of the overall hull length less than straight forward. Maritime archaeology has long undertaken the careful analysis of hull remains to discover the ships' design, boat-building traditions, represented by construction techniques and materials and the condition of the hull at the time of its

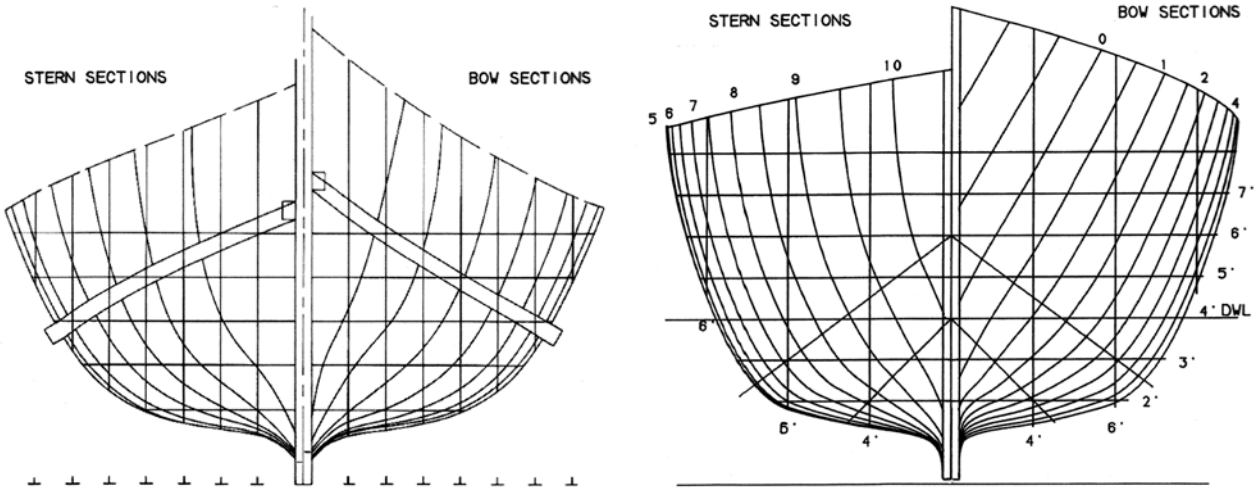

Figure 2: *Two proposed reconstructed hull lines for the Ma'agan Mikhael ship, left by Rosloff – 15 tons displacement and right by Winter – 23 tons displacement (from Winters & Kahanov 2003).*

abandonment, including any repairs (Pomey *et al.* 2012; Steffy 1994). However, the next phase of working-up hull-lines and estimating displacements is yet to be undertaken comprehensively. The difficulties associated with this investigation are demonstrated by the attempts to reconstruct the lines and estimate the displacement of the Ma'agan Mikhael ship, where two different reconstructions gave tonnages of 15 and 23 (Winters & Kahanov 2003) (Figure 2). The lower figure was for a craft reconstructed with a shape not dissimilar to that of a Viking long-ship, such as the Skuldelev 3 (http://www.vikingeskibsmuseet.dk/en/visit-the-museum/exhibitions/permanent-exhibitions/skuldelev-3/ accessed 9 July 2016). Detailed discussion of the issues associated with reconstruction and tonnage estimation are included in the excavation report of the Cavalière wreck (Charlin et al. 1978: 77ff)

Parker noted that amongst Mediterranean shipwrecks that had been excavated or surveyed, ships of a size less than 75 tonnes were common from 5th century BC to the 12th century, ships of 75-200 tonnes occur during the 1st century BC to the 3rd century and larger ships were mostly in the late Republic period (1st century BC), although some marble carrying vessels dated from the late Empire period (1992: 26). He also noted that lead- and iron-stocked anchors have been found from the 3rd century BC onward (1992: 29).

Table 1 draws on the work of Pomey (2012) and Whitewright (2008) and illustrates Parker's observations. It lists nearly all merchant shipwrecks for which there is some evidence of hull length. A few issues should be borne in mind when reading the table. Shipwrecks normally bear the name of the find location. This name can be spelt differently and there can be totally different names used. The Jules Verne 7, so called because it was found in the piazza Jules Verne is, for example, sometimes called the Marseilles 4, the city where the piazza is located. As in this case, there is often more than one wreck at the location so it is important not to confuse or conflate the different wrecks. This becomes difficult when the wrecks are directly on top of one another.

Dates generally refer to the time the ship came to grief and are estimated from the finds. However, the Ma'agan Mikhael and the Kyrenia ships appear to be nearly contemporary, although they sank some ninety-years apart. It is estimated that the Kyrenia ship was about eighty-years old when it sank, while the Ma'agan Mikhael ship was quite new.

The length can refer to the water-line or overall lengths. Publications do not often make a distinction but, where they do, the overall length has been used. The estimated original length is frequently said to be very approximate (Eiseman & Ridgway 1987: 13), indeed nearly all lengths should be treated as such. Depth of water at the find location has been included as it gives an indication of the level of difficulty associated with the excavation and sometimes the method of excavation used; diving deeper than 40m is difficult and time consuming. Some wrecks such as the Lacydon and Les Sorres were discovered ashore in what may have been the environ of an ancient port. Another recent such find was reported at Antipolis (http://www.inquisitr.com/321612/proposed-parking-lot-in-french-riviera-reveals-roman-shipwreck/, accessed 8 July 2016)

The date of excavation also provides an indication of the excavation methods that may have been used and the focus of the excavation. Often the primary interest was the artefacts because shipwreck sites represent excellent time capsules and there was a need to forestall looters. Beginning with French sponsored excavations of the 1950s, interest in maritime technology has grown and more detailed attention has been devoted to hulls, anchors, chandlery, etc. Ancient hull construction varies; hulls using mortise and tenon may be an indication of a

Name/Location	Date	Length m	Depth m	Date Excavated	Reference
Uluburun	1316-1305 BC	15–16	45-60	1984- 94	(Pulak 1998)
Cape Gelidonya	1200 BC	8-9	27	1960-	(Bass 1967)
Point Iria	1200 BC	7-10	12-27	1991-4	(Vichos 1999)
Mazarrón I & II	650-600BC	18 & 14		1993-5	(Negueruela *et al.* 1995)
Giglio A	600 BC	25	45-60	1981-6	(Bound & Vallintine 1983)
Pabuç Burnu	570 BC	17	40-50	2002-3	(Polzer 2010)
Bon Porté	530-525 BC	10	48	1974	(Joncheray 1976)
Jules Verne 7 & 9	520-500 BC	20 & 9	-	1993	(Pomey 1998; 2001)
Grand Ribaud F	500 BC	20	60-75	2000-1	(Long & Rival 2007)
Gela 1	490-480 BC	17.4	5	1988	(Panvini & Benini 2001)
Tektas Burnu	450-425 BC	12	35	1999-2001	(Carlson 2003)
Alonissos	425-415BC	25	30	1991	(Hadjidaki 1996)
Porticello	400 BC	17	33-37	1969	(Eiseman & Ridgway)
Ma'agan Mikhael	400 BC	13.8	2-4	1985-90	(Linder 1992; 2003)
Kyrenia	306 BC	12-15	33	1967-9	(Steffy 1994)
Capistello	300 BC.	20	60-100	1976-8	(Frey et al. 1978)
Lacydon – La Bourse	200 BC	23	-	1969-74	(Gassend 1982)
Chrétienne C	175-150 BC	15		1971-74	(Carre 1983)
Les Sorres VIII	2nd century BC	large	-	1960s	(Izquiero 1985 & 1986)
Spargi	120-100 BC	30	15-16	1958-9	(Pallares 1986)
Grand Congloué B	100 BC	40	38-44	1951-7	(Benoît 1961)
Mahdia	100 BC	30	39	1908, 54-5	(Merlin 1908)
Cavalière	100 BC	13	43	1972-5	(Charlin et al. 1978)
Albenga	100-90 BC	30	40	1950	(Lamboglia 1961)
Madrague de Giens	75-60 BC	40	20	1972-80	(Tchernia et al. 1978)
Dramont A	75-25 BC	25	35	1957-60	(Santamaria 1965)
Titan	50 BC	26	27-9	1957	(Tailliez 1965)
Comacchio	1st century BC	21	3.5 silt	1980	(Berti 1990)
Grand Ribaud D	10 BC	18	19	1983-4	(Hesnard et al. 1988)
Cap de Vol	10 BC	18-19	24	1978-	(Foerster 1980)
Port-Vendres II	41-50 AD	large	7	1972-5	(Colls et al. 1977)
Diano Marina	50 AD	20-22		1976-81	(Gianfrotta 1990)
Rabiou	50 AD	11.3	30	2005-6	(Joncheray & Joncheray 2005; 2006)
Calanque de L'Ane	1st century AD	20-25	18	1988-	(Ximénès & Moerman 1998)
Saint Gervais 3	150 AD	17	4	1978	(Liou et al. 1990; Beltrame 1996)
Grado	150 AD	13	15	1987-99	(Beltrame & Gaddi 2005; 2007)
Procchio	160-200 AD	18	1-2	1967	(Zecchini 1982)
Torre Sgarrata	180-200 AD	30	11	1965-7	(Throckmorton 1969)
Punta Scifo A	3rd century	30-35	4-7	1908-9	(Lamboglia 1974)
Punta Ala	250 AD	25	2	1980	(Lamboglia & Pallarés 1983)
Giglio Porto	300 AD	15	35-40	1985-6	(Rendini 1991)
Laurons 2	300 AD	15	2.5	1978-83	(Gassend *et al.* 1984)
Pointe Lequin B	4th century	20		1970-4	(Liou 1973; 1975)
Yassi Ada 2	4th century	20	42	1967-74	(Van Doornick 1976)

Table 1: *A listing of merchant shipwrecks with some estimated hull dimensions.*

Figure 3: *Map of shipwrecks listed in Table 1.*

Phoenician tradition while sewn hulls may represent an Egyptian or Greek influence. Frame types vary but the universality of shell-first construction is accepted for the period under consideration. Only a few comprehensive excavation reports appear amongst the references and in a number of instances *National Geographic* remain the most useful publication.

It can be seen from Table 1 and Figure 4 that, in general, ships of up to 22m in length occur prior to the 2nd century BC but the more common length is less than 17m. From the late 2nd century BC ships of 30-40m appear in the shipwreck record. In fact about five ships of 30m length or more were wrecked at about 100BC. While this may be an accident of excavation, it may also indicate that the larger ships were being introduced more generally and were proving difficult to command. These ships displaced significant tonnages. When discussing the tonnage of the 40m long Madrague de Giens wreck Pomey and Tchernia argue that ships of up to 600 tons were not uncommon in the merchant fleet that served Rome (Pomey & Tchernia 1978).

To digress briefly, it is worth noting that a displacement of 600 tons was typical of a 6th-rated ship of the line, a frigate, in 17th-18th century navies. The largest ship in the First Fleet that came to Australia in 1788 was *HMS Sirius* of about 34m in length and 612 tons displacement (http://firstfleetfellowship.org.au/ships/eleven-ships, accessed 9 July 2016). The *Mayflower* was about 32m overall and displaced 180 tons while Captain Cook's *Endeavour* was 97 feet 8 inches (29.77m) long. Large Roman period merchant ships were clearly substantial wooden vessels by any measure.

Large boats began with the Egyptians who needed to transport obelisks, the largest of which is the 15th century BC obelisk of Thutmose III from Karnak, which is now in Rome. It is made of red granite, is 37.2 meters (122 feet) in length and weighs 455 tons. The down-river course from the quarry at Aswan reduced the need for motive power and the river context limited wave-generated stresses. Based on a relief at Deir el-Bahari, Landström suggested a reconstruction of an obelisk carrying boat that was 200 feet (61m) long, 80 feet (24.4m) wide and displaced 1,500 tons (1961: 22f).

However there are now more obelisks in Rome than Egypt and these were transported during the Roman period. Casson discussed the size of the ship used to carry the 355 ton obelisk now in front of St Peter's at the time of emperor Caligula (AD 37–41) concluding that, with associated stone work and ballast, the 'total weight aboard was 1,300 or so tons' (1971: 189). Other large ships at the time of Caligula include the two enormous Lake Nemi ships, which were 70m (230ft) long and 20m (66ft) wide, and 73m (240ft) in length and 24m (79ft) wide (Steffy 1994:70-72).

The Literature

The shipwreck data is consistent with Casson's review of ancient literature (1971:170-3, 183-200). He argues that the capacity of Roman period merchant ships has been 'consistently and seriously underrated' (171). His main authority is the port regulations of Thasos dating from 250-200BC, which states that there were two sectors in the harbour and that no ship smaller than 3,000 talents (80 tons) could enter the first and no ship smaller than 5,000 talents (130 tons) could enter the second (*Inscriptions Graecae* XII and *Supplementum epigraphicum graecum* XVII: 417).

A large grain-carrying merchant ship called *Isis* was described by Lucian when it put into Athens in 2nd century AD. 'She was 120 cubits [55m, 180ft] in length, the ship's

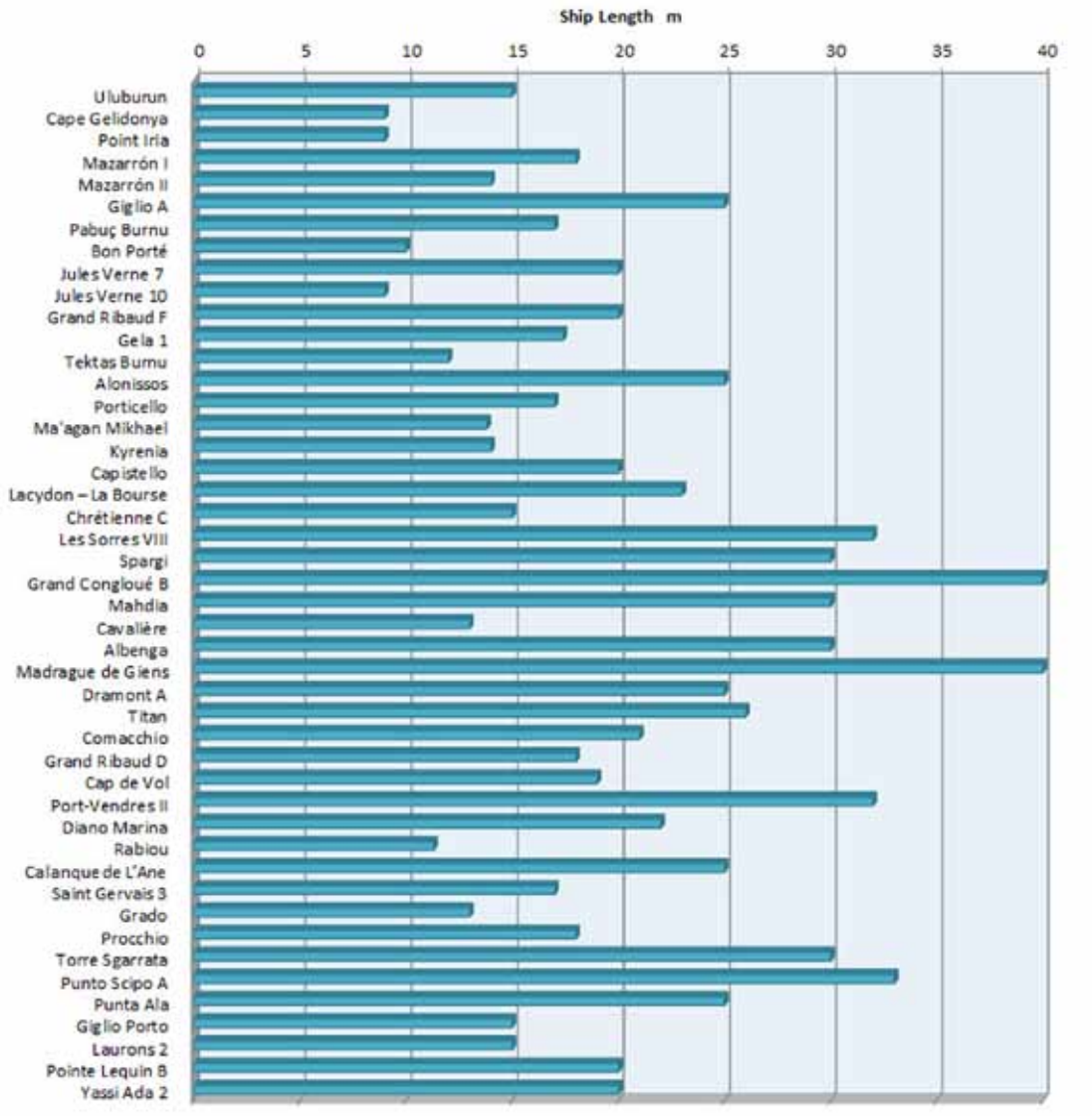

Figure 4: *Bar chart of ship lengths listed in Table 1.*

carpenter said, the beam was more than a quarter of that [plus 13.75m, 45ft], and from the deck to the bottom, to the deepest point of the bilge, 29 cubits [13.25m, 43.5ft]' (Casson 1971:186). All estimates of tonnage for this vessel exceed 1,000 tons.

Casson re-translated the description of Heiro's super freighter (Athenaeus 5.206d-209d) demonstrating that large ships were known as early as the 3rd century BC (1971: 185, 191f). It had three masts and three decks and a carrying capacity estimated to be as high as 4,500 tons. Casson suggests 1,940 tons, which is still extraordinary but not impossible (1971: 186). Many scholars have dismissed the account as apocryphal but the details of construction techniques accurately reflect those known from shipwrecks of that period.

Discussion

The iconography, literature and shipwreck data all testify to the existence of large ancient ships. It is however one thing to build a large ship and quite another to operate it successfully. Heiro's super freighter was too large to dock in many ports and so it was given to King Ptolemy and sent to Alexandria, where it may have stayed as a floating facility for entertainment or accommodation. The saga of this ship is reminiscent of Isambard Kingdom Brunel's *SS Great Eastern,* which failed its original purpose as a luxury ocean liner, was then a cable-layer and finally it became a 'tourist' attraction before being broken up 30 years after it was built. It was launched in 1858 and was by far the largest ship of the time; a larger ship would not be launched until 1898 forty years later. It was a 220m long auxiliary paddle steamer, which met with repeated 'misfortunes' and bankrupted four companies.

The *SS Great Eastern* was a mismatch of technologies and scale that could not efficiently operate in a world where the infrastructure and associated systems were insufficiently developed to support its enormous size (Emmerson 1981). Many of the applied technologies were

inadequate. The paddle wheels, for example, were found to be unsuitable in the rough seas of the north Atlantic causing the ship to roll and yaw uncomfortably. Multiple screw propellers would eventually be used to propel ocean liners but this concept was in its infancy when the *SS Great Eastern* was designed. Economically sustainable technological development has to be incremental.

The increase in ship size in the Roman period would have required larger harbours, port facilities and dockyards for construction and maintenance. On board technologies also had to develop. Anchors and associated hawsers, timber heads, winching devices and mooring points needed improvement to secure large vessels with the application of manual labour. Pumping equipment would also have needed attention.

However it is the sails and rigging of such ships that needed the most attention. The use of tackle and iron fittings may have addressed some of the issues associated with the setting of large sail areas. But it was all pointless if the ship could not be controlled. Cariolou says of the *Kyrenia II* sailing trials:

> *Tacking was found to be difficult but possible. We successfully tacked twice without using oars in winds between 2-4 Beaufort. Tacking in winds above 4 Beaufort proved difficult and very dangerous for the integrity of the sail and was therefore not practised* (1997: 93).

A wind of 4 Beaufort is a moderate breeze of 10-15 knots. During its sailing trials the *Kyrenia II* broke a number of steering oars while sailing close-hauled and tacking demonstrating that significant turning forces were generated when going to windward. Ships with a single square sail and steering oars were clearly not very manoeuvrable and could be dangerous in winds exceeding a moderate breeze, especially when tacking. But the *Kyrenia II* was less than 15m long and displaced less than 30 tons and it sailed with a crew of four. Managing a 'Kyrenia-style' plus 200 ton merchant ship at sea with oars and a small crew was out of the question.

The problem of controlling a sailing vessel was discussed in Part I of this paper (Davey 2015). It pointed out that a sailing ship's direction of travel was largely determined by the set of the sails and, if the force they produced was out of balance with the dynamic force acting on the hull, the ship would be unmanageable. The forces exerted by steering oars or rudders are not significant when compared to those of the sails and hull. A ship with one sail has limited means to control the aerodynamic forces created by the sail. A second sail was the answer. The combined lateral force produced by this sail and the mainsail was more easily managed to match the hydrodynamic forces acting on the hull. If the second sail was at or ahead of the bow it could exert a significant turning moment and its size did not need to be large making it easy to trim and to facilitate the steering of the ship.

Casson believed that the origin of the foresail could be traced to the ship depicted in the 5-6th century BC Etruscan Tomba della Nave, Tarquinia, and that after a 'lack of pictures for the next half a millennium' it could be seen to have either remained 'a sail of fair size' as it was originally depicted or developed into a 'headsail... like the bowspritsail of latter ages'(1971: 240). He called both sails *artemons.* In Part I of this paper (2015: 42) it was argued that the spritsail-*artemon,* Casson's 'bowspritsail', was unrelated to the foresail because its purpose, rigging and operation were different. It was developed to assist with steering, not to provide additional power. It was rigged on an unstayed bowsprit that was secured to the hull and protruded beyond the bow so that the sail could apply a turning moment to balance the dynamic forces of the mainsail. This sail first appears in iconography and literature, where its Latin name was *artemo,* from the late 2nd century BC and there is presently no reason to suggest it had a significantly earlier origin.

The role of the spritsail-*artemon* for steering ships was described by Smith (1880: 201) and recently by Whitewright (2008: 71) but its importance has not been generally appreciated. Without it, sailing ship sizes could not exceed those which could be operated with oars. The spritsail-*artemon* facilitated the practical increase in merchant sailing ship size.

Literary and iconographic evidence seems to indicate that the spritsail-*artemon* was used from at least 100BC (Davey 2015). This coincides with shipwreck data that shows ship lengths regularly exceeding 20m from the late 2nd century BC, which in turn supports the hypothesis that large sailing merchant ships became possible with the introduction of the spritsail-*artemon* toward the end of the Roman Republic period.

However, there are some early shipwrecks with estimated lengths exceeding 20m suggesting that the picture was more complicated. Hajidaki excavated one of these, the plus 25m long 5th century BC Alonissos ship (1996). He has proposed that the Alonissos ship may have been a Κέρκουρος, which is referred to in Greek literature (Herodotus, VII 97; Arrian, Ανάβασις 'Αλεξάνδρου VI 2.4; Diodorus, XXIV 1). Casson describes this type of vessel as a merchant galley that is known to have had crews with up to 50 rowers (1971: 163ff). It was common on the Nile and the rivers of Mesopotamia, in fact Κέρκουρος derives from its Persian name. Layard's drawing of Phoenician galleys depicted in the reliefs from the Palace of Sennacherib (709-681BC) shows them to have nine oars on each side (1849). This appears to have been a common configuration.

Casson describes a variety of merchant galleys known from Greek literature, namely *akatoi, keletes, lemboi, kerkouroi, kybaiai* and *phaseloi* (1971:157-68, 1995). They were normally longer, narrower and had less free-board than sailing merchant vessels, but were wider than warships and required significant numbers of oarsmen to operate. They would have been most suited to flat water,

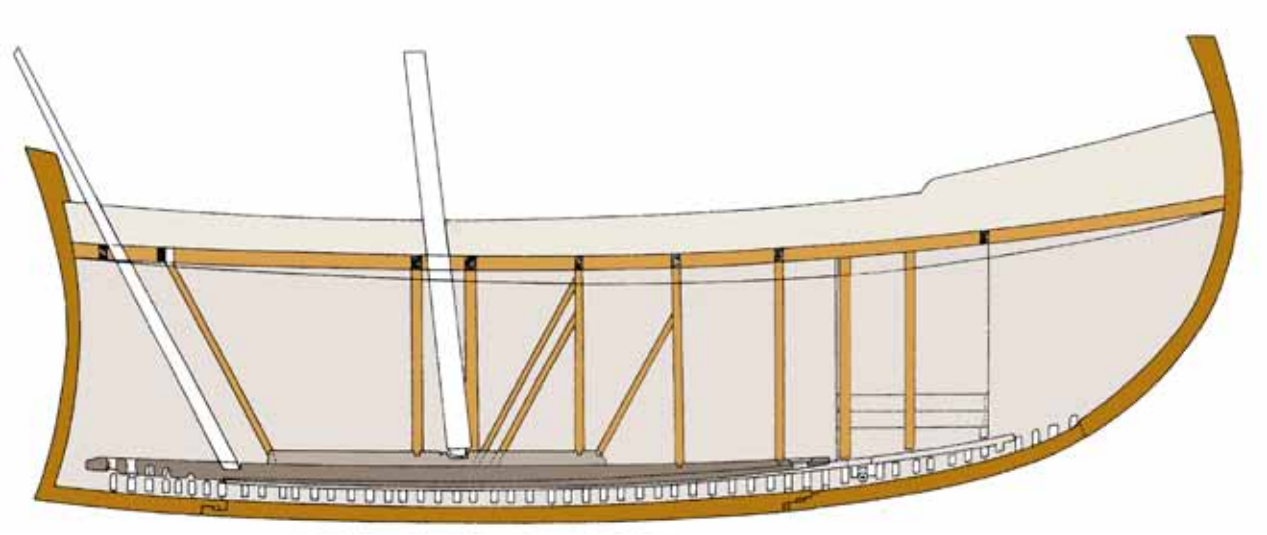

Figure 5: *A reconstruction of Saint Gervais 3 wreck showing the arrangement for the main mast and the bowsprit. The bow is a cut-water design and is on the left. Developed from Beltrame (1996) and Liou & Gassend (1990).*

but were common in the Mediterranean. The shipwreck record as set out in Table 1 reveals that ships with lengths 15 – 25m did occur prior to the 2nd century BC, raising the possibility that these were merchant galleys.

Another possible merchant galley is the Marsala Punic ship 250-175BC (Parker 1992: 262ff; Frost 1981). It was estimated to be 30m long and 5m wide and the absence of cargo and a mast-step pointed to a warship, but evidence to the contrary was also significant. A ram was not found, the hull was lead sheathed and the length to width ratio of 6:1 was deemed typical of a merchant galley. A warship would be 10:1 and sailing merchant ships 3-4:1 (Casson 1995: 119).

Merchant galleys offered quick and reliable passage over short distances but were at a distinct disadvantage when undertaking long-range large-volume commodity trade such as the Alexandrian-Rome grain trade. The economics of merchant galleys and sailing ships were very different. The cost of procuring, training and maintaining a large crew made merchant galleys a high operating cost business; cargoes of such ships therefore needed to be strategically important or of high value. Merchant galleys offered certainty of passage and their predicable timetable made them the preferred means for passenger travel. They were used in the Mediterranean until the 18th century.

Prior to the introduction of the spritsail-*artemon* all sailing ships needed oars to manoeuvre from time to time. The larger the ship, the more oarsmen would have been needed. If a 25 ton vessel such as the *Kyrenia II* could be managed with four rowers, a 22m long 130 ton ship may have carried over 20 crewmen.

It would appear that the introduction of the spritsail-*artemon* to ships of 15-30m was largely a matter of economics, but the issue here is not simply that of sailing ship verses merchant galley. The spritsail-*artemon* offered more than just improved financial efficiencies, it allowed sailing merchant ships' size to exceed that of merchant galleys. Not only could hull length to width ratios be reduced to increase displacements but overall lengths could be increased. These large ships were strategic for bulk commodity trade. The need for such trade to supply Rome and the technological capability offered by the spritsail-*artemon* most probably explains the appearance of vessels exceeding 30m in length in the shipwreck record from the late 2nd century BC.

Archaeological evidence for Spritsails

This brief review of ancient Mediterranean shipwreck data makes it appropriate to comment on the physical evidence for the spritsail-*artemon*. This sail applies a turning moment to the ship necessitating the bowsprit, to which it was attached, to be firmly secured to the hull. It was not just a matter of erecting another mast with stays because to operate effectively the spritsail-*artemon* needed an unstayed and unencumbered spar projecting ahead of the bow (Davey 2015).

Beltrame identified five wrecks where there were slots in the keelson near the bow that would secure the end of a bowsprit (1996). The shipwrecks he identified are the Saint Gervais 3 (Figure 5), Punta Ala (Livorno), Torre Santa Sabina, (Brindisi), Torre Sgarrata (Puglia) and Procchio wrecks. These ships all exceeded 17m in length and belonged to the period when the spritsail-*artemon* was common. Sprits would also have needed to be secured at the deck level, but the wrecks were not preserved to that height.

Beltrame referred to the spar as a 'foremast', however, the iconography of bowsprits shows them to have a forward rake similar to that shown in his reconstruction, Figure 5. In any case foresails rigged on stayed masts are not very common in Roman period ship images.

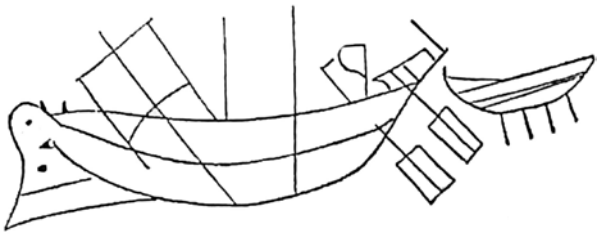

Figure 6: *A graffito from the quay at Utica showing the bowsprit and spritsail. Image from Moore (1911).*

The graffito reported to be from the quay at Utica and published by Moore (1911; Basch 1987: 234) has a bowsprit sloping forward from the keel of the ship and a main mast (Figure 6). A small sail is set on the bowsprit. Moore correctly observes that the artist was probably a seaman who knew how the masts were stepped; 'a landsman would probably have made the masts end at the gunwale' (1911: 280). This evidence supports Beltrame's reconstruction (Figure 5).

Further support comes from graffito in a Roman Villa at Cucuron (Vaucluse) occupied between the first and fourth centuries (Gassend et al. 1986). It also shows the bowsprit stepped into the keel, angled forward and without stays (Figure 7). The graffito is detailed and carefully drawn probably by a seaman (Gassend et al. 1986: 30)

Conclusion

Rome's economic power was partly the result of the significant maritime trade involving large merchant ships efficiently transporting bulk commodities. While merchant galleys were large ships, they were reliant on a large crew and were comparatively expensive to operate. It is probable that during the Classical period all sailing ships needed to carry sufficient crew members to manoeuvre the ship with oars when going to windward, avoiding hazards or entering and leaving port. When the spritsail-*artemon* was introduced, crew numbers could be reduced to those needed to operate the sails. The cost of maritime trade was also reduced and made large-scale bulk commodity trade attractive.

The spritsail-*artemon* also facilitated the growth of the sailing ship to a size that had not previously been possible and in the process offered economies of scale. These ships sometimes reached 40m in length and displaced over 600 tons, dimensions that would not again be customary until the 18th century.

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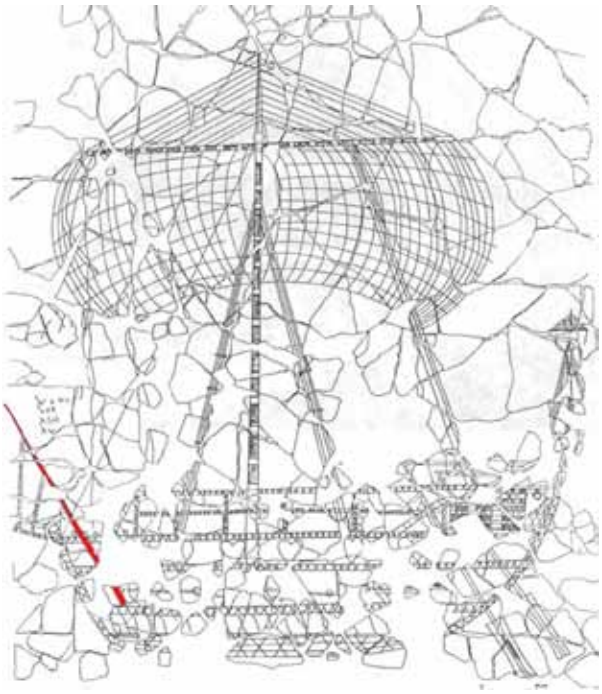

Figure 7: *A graffito from a Roman villa showing a bowsprit (in red) stepped into the keel. Image after Gassend et al. (1986: Fig. 1).*

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Brief Communication

Reflectance Transformation Imaging and the Cuneiform in Australia and New Zealand Collections Project

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Abstract: The paper assesses the suitability of Reflectance Transformation Imaging (RTI) for the Cuneiform in Australia and New Zealand Collections (CANZ) project. This project will produce a series of monographs, develop an interactive web-site for educational purposes and use various media to publicise the collection. While RTI is a well-established technique, its suitability for the CANZ project has not been assessed. The report discusses examples of images of cuneiform tablets captured using RTI fitters and processing tools.

Introduction

The Cuneiform of Australia and New Zealand (CANZ) project was commenced in early 2013. Phase one of the project is complete (Siddall 2015). It identified the locations and numbers of cuneiform tablets in Australia and New Zealand institutions, established, where possible, the provenance of the tablets and identified the content of their texts. A few hundred tablets were identified. The next phase of the CANZ project will involve cataloguing, imaging and publishing.

Reflectance Transformation Imaging (RTI) is proposed to be one of the imaging methods that will be used. RTI is:

> *a digital [image] acquisition process that captures sets of images of a subject from a single view [point] under varying lighting conditions... reflectance functions are modelled from the captured data, making it possible for the user to interactively relight the subject,* (Palma et al. 2010).

The Australian Institute of Archaeology (AIA) will be the principal place for RTI imaging because of the availability of a large multi-light dome. During 2016 a number of trial images was captured and processed using Cultural Heritage Imaging, (CHI) © software.

The imaging results using the AIA multi-light dome for the smaller cuneiform tablets are presented in this paper, however the larger cuneiform tablets have yet to be imaged using either the dome methodology or Highlight-RTI (H-RTI), which uses a fixed camera position and about 40 flash illuminations at fixed radial positions from the centre of the artefact. Light directions are obtained from specular highlights from a black sphere positioned in the camera's view (Mudge et al. 2006).

RTI technology at the AIA

The RTI technology proposed for the CANZ project will largely use a fully-enclosed dome with a single string of 35 white light emitting diodes, (LEDs), positioned around the dome and fired sequentially. With each illumination the camera is triggered. With appropriate camera settings, sufficient illumination time is allowed for automatic focus, however a pre-set manual focus also appeared to function effectively. The dome was developed by eAustralis Pty. Ltd (Figure 1).

The camera used for the imaging trials was a Canon EOS T4i/650D with an EFS 18-135mm macro-zoom lens. Prime macro-lenses at 100mm, 50mm and 18mm will also be used for the capture of images for the CANZ project.

The space under the dome has been modified to include an internal table, which is movable in the vertical direction. This accommodates some of the thicker cuneiform objects by ensuring that the low angle lights provide the same illumination angles for every object.

The images were processed using one of two 'fitters' or tools that model reflectance from captured image pixel data; viz. the Polynomial Texture Map (PTM) developed by Malzbender et al. (2001) of Hewlett Packard Laboratories and the Hemispherical Harmonics (HSH) developed by Wang et al. (2009) of U. California, Santa Cruz. The advantages and disadvantages of the fitters within the RTI Builder of CHI need not be discussed here but we note that some researchers prefer one methodology over

Figure 1: *The multi-light illuminations dome for capturing RTI images at the AIA.*

Figure 2: *Images of IA5.074 a tablet from Nimrud, inverted to highlight the seal, dim. 52x35x23. A an original capture; and PTMs, B using AR unsharp masking, and C a composite image rendered using specular enhancement.*

the other for specific imaging tasks. Further trials using both methodologies are planned for the different types of cuneiform tablets in the CANZ collections.

The matte nature of the surfaces of the cuneiform tablets meant that both fitters were applicable. The PTM fitter was developed specifically for matte surfaces while the HSH fitter was developed for the modelling surfaces with significant texture and with glossiness and specularity. The images presented in this paper were those developed using the HP PTM fitter.

Currently the JPEG files produced by the Canon camera were used for the imaging presented in this paper. The processing of camera-RAW to JPEG will be adopted to produce better quality JPEG images for texture mapping (Schroer 2013) and to be consistent with recommended CHI work-flow.

Preliminary imaging

Three artefacts, two cuneiform tablets and the fragment of a clay brick, IA5.074, IA8.505, and IA7.873, were imaged using the current RTI dome system. All 'texture maps' were generated from the CHI RTI Builder Version 2.02 ©.

Both the PTM and HSH fitters were used. The PTM fitter was preferred in this initial work mainly because of the experience gained using the comprehensive rendering tools implemented in the CHI RTI Viewer Version 1.1.0.

Results

Imaging IA5.074

Tablet IA5.074 (Figure 2) was excavated in 1953 from a private house in ancient Kalhu (Nimrud). The tablet documents a loan on security provided by a person who appeared to be a high official in the city in the time of King Ashurbanipal (668-627 BCE). The text was published by D.J. Wiseman (1953: 135-6, 142).

Of particular interest was the imprints of two seals, placed side by side on the obverse of the tablet. These were below three lines of text and a further four lines of text follow below and around the tablet. The text continues on the reverse and includes statements of witness of the loan. These seals were algorithmically rendered using a number of the CHI tools.

Where there is not significant raking light, single images of IA5.074 appear 'flat' with very little detail apparent in the seals themselves Figure 2A. Figure 2B, however, shows un-sharp masking Algorithmic Rendering (AR) applied to IA5.074. This methodology provided a clearer perception of detail, possibly suitable for publication, but colour rendition was not preserved.

Specular enhancement AR is shown in Figure 2C. The Phong-Bling-Torrence reflectance model, (Malzbender et al. 2001), implemented as an AR tool, provided significant improvement in detail of the seals, although colour rendition was not preserved.

The trials have also shown that higher magnification RTI imaging of the seal imprint region is feasible and has the potential to provide significant detail for specific instances in CANZ publications. In the case of the seal on IA5.074, small regions of text distortion were apparent, thus it would appear that the seal was imprinted after the text. Macro-RTI has been demonstrated in published work and will be trialed in future.

Imaging IA8.505

Tablet IA8.505 (Figure 3) was excavated by Leonard Woolley in 1936-39 from ancient Alalakh Level IV (Tell Açana). The tablet lists soldiers and other persons who entered the city on one occasion during the Late Bronze Age *c.* 1,400BC. The text has been published and translated by Wiseman (1953).

The cuneiform signs on this tablet are clear in the photograph. The aim of the RTI trial with this tablet was to achieve detailed and readable text across the obverse and reverse faces.

IA8.505 is a 'flatter' tablet than IA5.074, thus the over-all surface lighting appeared more uniform for the higher angle lighting. Un-sharp masking, Figure 3B, provided clear imaging of the text and detail could be examined using raking lighting.

Specular AR, Figure 3D, provided significant improvement in the perception of detail over un-sharp masking, Figure 3C.

Figure 3: *Images of IA8.505 a tablet from Alalakh dim. 65x50x25. A (Obv) natural light, PTMs with B. (Obv) luminance un-sharp masking rendering C (Rev.) luminance un-sharp masking rendering, and D (Rev.) specular enhancement rendering.*

Imaging IA7.873

Clay brick fragment, IA7.873 (Figure 4), was excavated from the site of ancient Kalhu (Nimrud). The brick has a centrally located 'stamp' that depicts a lion.

This was the largest artefact imaged using the AIA RTI dome. Similar raking light angles to those used for IA5.074 and IA8.505 were achieved by adjusting the z position -50mm.

Figure 4A is one of the original captures of the clay brick and the image appears 'flat'. It is noted that, as with IA5.074 and IA8.505, the use of raking light in the RTI Viewer provided greater perception of detail. This perceptual effect can be seen by comparing Figure 4B, default rendering, and Figure 4C, specular enhancement, with the original capture. AR more acutely renders the details of markings on the brick and clearer 'resolution' of the embossed animal images

Conclusions

Suitability of Images for CANZ publications

The Hewlett Packard PTM and CHI HSH 'fitters' currently available process image files in JPEG format. This file format was chosen in the early development of RTl for cost expediency and for software licencing reasons. A fully 16 bit work-flow may be a future development. This necessitates the preservation of either the camera-RAW or the PNG files, consistent with the CHI work-flow.

The CHI work flow requires that all images be captured in camera-RAW format and, using the proprietary camera manufacturer's software, produce the best quality .JPG renditions of the original images. Colour cards will, therefore, be included in CANZ original image captures (RAW).

The PTM AR tools provided a range of mathematical tools that have been used to 'enhance' the perception of detail in clay tablets with cuneiform texts. Further work is planned using texture maps generated using HSH.

The selection of images for publication will be subject to the editorial decisions of the CANZ project staff. Assuming relevance, acceptable sharpness and representativeness of the cuneiform tablets, the published images will render colour as accurately as possible, based on the accompanying colour cards. AR images, as demonstrated in this work, may also be used for illustrative purposes within the publications and will be supported by sufficient metadata to allow those referring to AR images to know the process used to obtain the AR image.

Figure 4: *Images of a brick fragment IA7.873 dim 165x125x75. A original capture, PTMs with B default rendering and C specular enhancement*

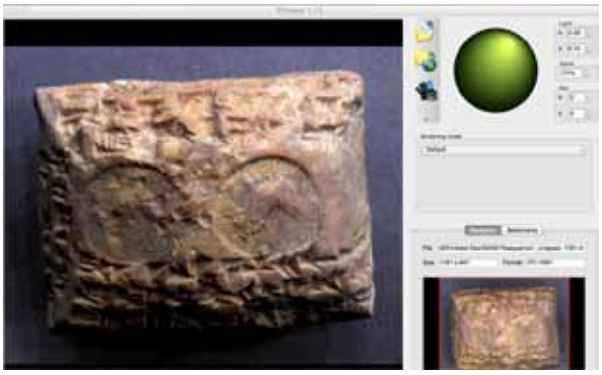

Figure 5: *The RTI Viewer © CHI for interactive relighting of IA5.074, also know as algorithmic rendering.*

The development of the recommended CHI work-flow and archiving system within the AIA imaging capability will be the priority activity for the early stages of the CANZ imaging project in 2017. Imaging for publications will be commenced as soon as the work-flow has been finalised.

Purveying the CANZ Project AR Images

The publication of the CANZ AR images will be those relevant to particular points of discussion as well as more general 'sets' to provide context and comparative images.

The project will also provide the full set of images for each artefact to enable others to study the texts and details of the artefacts themselves, therefore it is proposed that the 'texture maps' developed from AIA imaging will be made available as files that can be Algorithmically Rendered using the CHI Viewer ©. Additionally the AIA's work-flow associated with the image set for each artefact will be made available to those researchers who require such information for their work. A screen capture of the RTI Viewer © CHI is shown in Figure 5.

The advantage of the CHI methodology is that the user may examine captured data from the artefacts as Polynomial Texture Maps (.ptm files) or generated using Hemispherical Harmonics (.rti files) and view using the CHI RTI Viewer. Detailed explanation of the Algorithmic Rendering tools may be found in Malzbender et al. (2001) and Palma et al. (2010).

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Reviews

W.G. Lambert, *Ancient Mesopotamian Religion and Mythology*, edited by A.R. George and T.M. Oshima, Orientalische Religionen in der Antike 15, Tübingen: Mohr-Siebeck, 2016, pp xvi + 279, ISBN978-3-16-153674-8; ISSN 1869-0513, €99.

Reviewed by Alan Millard

During the second half of the 20th century W.G. Lambert (1926-2011) made outstanding contributions to understanding ancient Babylonian thought through his unrivalled knowledge of published texts and his assiduous editions of others stored in museums and private collections. His *Babylonian Wisdom Literature* (1960) introduced his scholarship to the world, with his insistence on interpreting the texts in the light of their ancient contexts rather than through modern theories. That is evident throughout the twenty-three essays collected here, from 'Morals in Mesopotamia' (11-27; 1958) to 'Ishtar of Nineveh' (86-91; 2004). The majority discuss texts he himself edited, or re-edited. Six of the papers were read at gatherings of Assyriologists and many of the others expect a similarly expert readership. When Babylonian texts are presented, many philological notes and footnotes accompany them, so some sections may be opaque to the lay reader. Nevertheless, Lambert's perceptive explanations unlock arcane compositions, such as 'The Qualifications of Babylonian Diviners' (183-99; 1998) which includes comparisons with biblical texts, here Levitical qualifications for priests.

A.R. George contributes an Introduction (1-8) with an appreciation of his teacher and an explanation of the essays he and his colleague have selected.

In 'The Historical Development of the Mesopotamian Pantheon' (39-48; 1975) Lambert observed the Sumerian pattern of a patron god for each city, with a family and courtiers, like a human king. In some cases, notably that of Marduk, one god took on the identity of another, consequent upon political changes. For the 3,000 years of cuneiform writing, scribes were compiling lists of deities, ranking them in order of importance. One list from about 1,200 B.C. equates various lesser gods with one major one; 'cannibalism' Lambert termed it. The supreme example of that is a Late Babylonian tablet, its last lines missing, identifying several gods, major ones among them, with Marduk in the style 'Shamash (is) Marduk of justice' (47, 47). A few other texts hint at the same concept. However, as Marduk was king of the gods, the list may not indicate identity so much as representation. Each one served Marduk in his particular role, so this may not have 'every claim to represent Marduk as a monotheistic god', as Lambert argued, but simply demonstrate his supremacy over all of them. One god replacing another is the topic of 'Ninurta Mythology in the Babylonian Epic of Creation' (143-47; 1986) in which Lambert adduced several lines of evidence to show the composer of the Epic adapted traditions about Ninurta killing a monster to fit Marduk. Mesopotamian mythology told of relationships between deities who embodied natural phenomena, with major centres creating their own myths and lists of gods, differences sometimes being kept in one poem. Lambert closed his essay on 'The Cosmology of Sumer and Babylon' (108-21) by declaring 'in a sense, the Babylonian cosmological ides were a dead end' (119), lacking scientific purpose, leaving the Greeks to make an abstract cosmology and the Hebrew a monotheistic one.

'Devotion: the Languages of Religion and Love' (200-212; 1987) explores the ways relationships between gods and goddesses, men and women were described figuratively. The most fertile sources for expressing physical and emotional feelings in Sumerian and Babylonian were found in the vocabulary of gardening and fruit, as they were in Hebrew and Arabic. It is noted that attitudes of submission by worshippers to their gods are not paralleled by lovers' submissive attitudes toward the beloved.

The three closing essays address a wider audience. 'Old Testament Mythology in its Ancient Near Eastern Context' (215-28; 1988) contains critical remarks about past and current approaches to the subject, decrying comparisons between, e.g. Homer and the Bible, while opining that 'the basic material was spread everywhere from the Aegean to India before our written evidence begins' (218). A summary of sources for West Semitic religion from the Ebla to Ugarit follows, with attention to Genesis 1: 1, where the lack of creation of the earth may reflect a common tradition that all 'derived from earth,' and to Genesis 1: 9-12 where God moved the waters to one place similar to myths of gods controlling threatening waters, and to exaltation of Babylonian and Ugaritic gods to kingship, while Israel's God's was unique.

The 1967 book by Bertil Albrektson, *History and the Gods* (Lund: Gleerup), provoked Lambert to write 'Destiny and Divine Intervention in Babylonia and Israel' (229-34; 1972). He disputed Albrektson's perception of parallels between Hebrew and Babylonian beliefs in the involvement of gods in human affairs. In Babylonian theory the gods rewarded the obedient and punished the contrary, as in Hebrew, and they might intervene in history. Yet for the Babylonians history had no goal, all was set from the first: 'History on this view is like the vibrations of a taut string when plucked - in due course the string ceases to vibrate and returns to the state it was in at the beginning' (233), whereas Hebrew writers believed in a divine plan which prophets expected to reach its goal.

'The Flood in Sumerian, Babylonian and Biblical Sources' (235-44; 1983) summarizes flood narratives from Genesis and Classical sources, then, at greater length, the Babylonian ones, exploring various aspects to conclude that there was a disastrous flood at an early time, eventually recorded in Sumerian and Babylonian texts to which, somehow, the Genesis account is connected.

Other essays in this collection are: 'Ancient Mesopotamian Gods: Superstition, Philosophy, Theology' (28-36), 'Goddesses in the Pantheon: A Reflection of Women in Society?' (49-55; 1987), 'The Mesopotamian Background of the Hurrian Pantheon' (56-61; 1978), 'The Pantheon of Mari' (62-80; 1985), 'The God Assur' (81-85; 1983), 'Der Mythos in Alten Mesopotamian, seen Werden und Vergehen' (95-107; 1974), 'The Theology of Death' (122-33; 1980), 'The Relationship of Sumerian and Babylonian Myth as Seen in Accounts of Creation' (134-47; 1992), 'Myth and Ritual as Conceived by the Babylonians' (148-54; 1968), 'The Reign of Nebuchadnezzar I: A Turning Point in the History of Ancient Mesopotamia Religion' (157-63; 1964), 'Syncretism and Religious Controversy in Babylonia' (166-70; 1997), 'Donations of Food and Drink to the Gods of Ancient Mesopotamia' (171-79; 1993), 'The Cult of Ishtar of Babylon' (180-82; 1975).

The Editors deserve gratitude for making these significant essays easily available and for their care in bringing footnote references up-to-date, among them several that now direct readers to Lambert's long heralded but posthumously published magisterial *Babylonian Creation Myths* (2013). No serious student of Mesopotamian religion can afford to ignore this collection of Lambert's essays.

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Lambert, W.G.1960 *Babylonian wisdom literature,* Oxford: Clarendon Press.

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James Clackson, *Language and Society in the Greek and Roman Worlds* (Key Themes in Ancient History), Cambridge: Cambridge University Press, 2015, pp xiv + 204, Hardback, US$80.00 ISBN 9780521192354; paperback, US$29.99 ISBN 9780521140669.

Reviewed by A.J. White

Clackson's book is a clever, simple and accessible study with a primary focus on Greek and Latin, as well as on the Indo-European languages from which they are derived. Drawing upon many different aspects, including the social, cultural, philological, and historical uses of language, Clackson relates them directly to his knowledge of linguistics. One distinctive feature of this book is his practice of stating both sides of an issue: he outlines the salient points or arguments first but does not fail to mention the difficulties arising in the sources or the reliability of the information. This is especially true when speaking of ancient languages, when not all sources – or even the languages themselves – are completely understood. This book is part of a series which aims to provide readers with a clear overview of various historical topics. Clackson succinctly achieves this goal and this book fits neatly with the others in the series, such as Gillian Clark's *Christianity and Roman Society* (2005) and Paul Cartledge's *Ancient Greek Political Thought in Practice* (2009).

Chapter One (1-32) provides a broad introduction and discusses Mediterranean languages in order to map the languages being used in ancient times. Additionally, it indicates Clackson's scope and aim (his primary focus being Greek and Latin from 800BC to AD400). He looks at several issues including dialectal differences (though very broadly) as well as language change. He demonstrates the variety and complexity of languages and language families that are in use in the ancient Mediterranean, which aids in the understanding of language change. Clackson discusses bilingualism and how bilingual societies can have an impact upon a language. Chapter Two (33-62) then explores this further in his discussion of languages (including Old Persian as well as Greek and Latin) in their political and administrative uses and how languages can develop from a need to express different concepts or vocabulary in a political or administrative context. Within this chapter he analyses the 'standardization,' that is, the 'standardizing,' *written* form of languages including Latin and Greek; and next he gives consideration to the different dialects of Greek. This section could easily have been expanded and more information on Atticism in the early imperial period would have been helpful; however, it would have been difficult to include all the necessary information in a book designed to be part of a series in which succinctness is a primary feature. Accordingly, Clackson has done well in summarizing the main points.

Chapter Three (63-95) addresses again the concept of bilingualism in the ancient world as well as how a language can contribute to the formation of a person's identity. The author looks into several aspects of language and how language may sometimes (but not always) relate to one's ethnic or national identity. The author draws upon documentary sources in this chapter and advances some stimulating points arising from bilingual inscriptions. These languages include, but are not limited to, Greek and Latin but also Greek with Gaulish, Punic and Eteocypriot. Some of these texts contain the same information, which can also offer a comparison between the uses of each language. This is of interest for the study of bilingualism in the ancient world, especially when considering the idea of transliteration, where the writer uses e.g. Latin words but writes them with Greek lettering. One additional example is a Jewish epitaph in Rome where KOYAI BIΞIT is written for Latin *quae vixit* (*CIJ* 1.257; D. Noy, *Jewish Inscriptions of Western Europe, Vol. 2, The City of Rome,* Cambridge, 1995, no. 275). One should also mention the bilingual phenomenon of 'code-switching,' where the writer switches from one language to another in the same text (e.g. *CIJ* 1.523; Noy no. 577).

Chapter Four (96-122) discusses language variation, offering the example of the pronunciation of *r* in different English-speaking countries and then explores language variation in Greek and Latin. He looks at how these changes are reflected in literary texts, in particular, how Aristophanes uses his characters to reflect language change and variation (including dialectal differences). Clackson recognises the difficulty of applying modern linguistic approaches to an ancient language, where there are only written texts surviving for study and no oral informants. This is an especially stimulating chapter, and the author has included useful detail on a complex topic.

Chapter Five (123-142) explores gender differences in speech, including the use of obscenities and euphemisms. Again, Clackson acknowledges the difficulties arising from this when studying Greek and Latin texts, since there are so many fewer texts written by women than by men. Papyrus letters give us occasional shafts of light on to this topic, for further examples see *P.Oxy 12* (1916) 1467 (petition, 263CE) and 46 (1978) 3313 (letter dictated and then corrected by a woman, AD II). On female speech in Greek and Latin comedy the articles by J.N. Adams and D. Bain, respectively, which are included in Clackson's references, are particularly useful.

Chapter Six (143-170) focuses on language used in religious contexts (Christianity primarily) and deals with the translation history of biblical texts, looking at languages individually including Greek, Latin and Hebrew as well as Aramaic, Syriac and Coptic. There are two particular points worth noting, the first is that Clackson mentions that, in the first-written gospel, Mark represents Jesus speaking in Greek and occasionally switching to Aramaic (153-154). Perhaps, however, Mark's variation is not indicative of Jesus' actual language choices, but rather that Mark was writing for a Greek-speaking audience and only used Aramaic at pivotal moments. Mark, as well as Matthew, uses Aramaic (in Greek lettering) for Jesus' final utterance on the cross but both writers also provide a translation. In Mark 7.34 the Aramaic word *ephphatha* is translated for his Greek readers (see Graham Stanton, *The Gospels and Jesus*, 2nd edn, Oxford, 2002, 39). So while Mark does use Aramaic in several places, he is writing for a Greek audience and thereby his use of the Greek language for Jesus' speech is not indicative of what Mark thought him to be actually speaking. Secondly, Clackson uses 1 Corinthians 14:19 as an example of Paul's insistence of keeping language simple and intelligible (158 *n*.15). This verse, however, is not discussing the writing of texts, nor the normal spoken language, but Paul here is speaking of the intra-group, 'spiritual' phenomenon of *glossolalia.* Here Paul is arguing that it is better to be understood (i.e to speak in the same language) than to speak in a communal context in a way that others cannot humanly understand. On the whole, this chapter does raise some thoughtful issues, and deals with a large variety of topics that are important when looking at the language of religious texts.

The Conclusion (171-175) neatly draws together the entire book while reminding the reader of the limitations of studying 'dead' languages. The author reassures his audience that, despite the difficulties faced with only having written evidence, modern linguistics can still play a crucial role in research on ancient languages. A brief bibliographic essay (176-178) concludes the book, offering numerous sources for both the ancient languages as well as linguistics. This is followed by a current and extensive reference list. One additional resource would be G. Giannakis (ed.), *Encyclopedia of Ancient Greek Language and Linguistics*, 3 vols, Leiden, Brill, 2014; however, this only came out just before Clackson's book.

This excellent book by a writer expert on his subject is a useful introduction for any individual who has a developing interest in linguistics and the ancient world. Clackson provides some attractive linguistic maps of the languages spoken around the Mediterranean, including one which illustrates the variety of Greek dialects at different periods. It would perhaps have been helpful if there were more footnotes provided in order to follow up some of Clackson's statements; but by the same token, excessive apparatus may detract from the readability that makes this book so appealing to beginners.

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Vered Shalev-Hurvitz, *Holy Sites Encircled: The Early Byzantine Concentric Churches of Jerusalem*, Oxford Studies in Byzantium, Oxford University Press, New York, 2015, pp 430, includes plans and diagrams (42 figures) and 2 maps + 19 plates, ISBN 978-0-19-965377-5, £90

Reviewed by Susan Balderstone

Vered Shalev-Hurvitz has brought together documentary sources and archaeological research on four significant early churches in Jerusalem. Based largely on her doctoral thesis, the book focuses on one still existing monument - the Anastasis dome of the Church of the Holy Sepulchre and three others known from historical sources and archaeological remains. These three are the Church of the Ascension (also known as the Imbomon), the Kathisma Church (built over the rock on which Mary rested on her way to Bethlehem) and the now lost upper church over Mary's Tomb.

Argument is presented to support the proposition that the first two were foundations of Constantine dedicated to Jesus following the Council of Nicaea in AD 325, that the second two were built under the auspices of Bishop Juvenal and dedicated to Mary Mother of God following the Council of Ephesus in AD 431, and that they were all built as statements about the importance of Jerusalem as a Holy City. The landmark status of the churches was em-

phasised by their domed, circular or octagonal concentric form which, it is argued, was particularly appropriate for commemorating such holy places. It is proposed that this form was subsequently copied in churches at Caesarea, Capernaum, Scythopolis (Beth Shean) and Gerizim and ultimately in the Dome of the Rock on the Temple Mount in Jerusalem using similar planning procedures and basic measurements. The argument is supported by excellent plans and diagrams.

According to the author, the use of the domed concentric form for the Anastasis derived from Constantine's desire to enclose the Holy Sepulchre in an imperial tomb, similar to those of Maxentius, Helena and Constantina in Rome and the centrally-focused, domed architectural form was used for tombs because it represented eternity. Provision of a circular ambulatory around the sepulchre enabled use for liturgical purposes, thereby accomplishing the transition of use for this building type from memorial tomb to commemorative church. She argues that the type was particularly used where churches took over Jewish, pagan or Samaritan sites, so that while it had a commemorative function at the four sites in Jerusalem, it also became a symbol of Christian victory, at least until the form was adopted for the Muslim Dome of the Rock.

In focusing on the concentric churches, Shalev-Hurvitz has highlighted similarities in layout and measurement among the four churches she discusses and has generally illuminated the circumstances surrounding their creation. She has also made connections with concentric churches further afield and shown the influence on them of these Jerusalem churches. However it is difficult to be convinced by some of her arguments, not least because dating of the buildings cannot be undisputedly established.

For instance, as evidence that the Anastasis was founded by Constantine she argues that the dedication in 336 of the basilica of the Holy Cross must have included the domed Anastasis building. While Eusebius' description makes clear that the embellished cave of the sepulchre was included and dedicated as part of the complex, there was nothing to indicate that the domed building over it existed at that time. As Pringle noted (2007: 7) the 'place of the Holy Resurrection' is only testified as enclosed in a building c. AD 348.

In relation to the dating of the Imbomon she throws doubt on the attribution of the Imbomon to a pious lady named Poemenia because the attribution is in a work written a century later, by which time she suggests, the name Poemenia could have been confused with that of another pious lady, Melanie the Elder. She bases her proposition that the Imbomon was built during the time of Constantine on Eusebius' description and praise of Constantine's buildings commemorating three caves in the Holy Land: the cave of Jesus' birth in Bethlehem, the cave of his tomb and the cave which commemorates the place of his ascension, which was the cave where Jesus taught his disciples and where they met before his ascension. The church built over this cave was a rectangular, three-aisled basilica known as the Eleona. While the circular Imbomon formed part of the liturgy described later by the pilgrim Egeria, there is no reason to believe that this building existed at the time of Eusebius' oration in 336. Attribution to Poemenia dates it to before the arrival of Melanie the Elder c. 378. It is possible that she built it under the auspices of Bishop Maximus, successor to Macarius as bishop of Jerusalem, which would date it to before 350.

There was one other possibly octagonal church in Jerusalem, on Mt Sion, contemporary with the Anastasis as indicated in the late 4th century apse mosaic of Sta. Pudenziana in Rome, which might have repaid further investigation by the author. This apse mosaic is understood to show the Anastasis to the left of Christ and the church on Mt Sion to the right (Mackowski 1980: 142-6; Finegan 1992: 233-5). The church on the right with its pointed dome, referred to by Cyril as the 'Upper Church' because being on Mt Sion it was higher up than the Church of the Holy Sepulchre, is clearly different from the gable-roofed basilica shown on Mt Sion in the 6th century Madaba Map, although both are shown adjacent to the Cenacle. The pointed roof church on the right in the St. Pudenziana mosaic is dated by Finegan to the time of Bishop Maximus (335-348) who transferred the central seat of the Jerusalem church from the church of the Holy Apostles on Mt Sion to the Holy Sepulchre. It was later replaced by the church shown in the Madaba Map, attributed to Bishop John II and the emperor Theodosius I.

The form of the Anastasis and the Imbomon, together with that of the church of the Holy Apostles on Mount Sion is more likely to be illuminated through consideration of the Arian sympathies of Bishop Maximus than through trying to force a connection with Constantine (Balderstone 2007).

There were other churches built in the late 4th/early 5th century to mark important places connected with the New Testament story in Jerusalem including the Lazarium in Bethany, the Basilica of Holy Sion, S. Mary of the Probatica (Bethesda), and the Church of Gethsemane, which were not round or octagonal in form. Without the context of these and all the other churches of many different types being built in the region over the same period, and some further insight into the particular choice of the domed concentric type, the usefulness of this work resides primarily in its analysis of the planning procedure and geometric layout of the concentric churches, and the implications of this for later churches of this type.

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Balderstone, Susan 2007 *Early Church Architectural Forms: A Theologically Contextual Typology for the Eastern Churches of the 4th – 6th Centuries*, Melbourne: Australian Institute of Archaeology.

Finegan, Jack 1992 *The Archaeology of the New Testament: The life of Jesus and the Beginning of the Early Church*, Princeton NJ: Princeton University Press.

Mackowski, Richard M. 1980 *Jerusalem City of Jesus: An Exploration of the Traditions, Writings and Remains of the Holy City from the Time of Christ,* Grand Rapids: Eerdmans.

Pringle, Denys 2007 *The Churches of the Crusader Kingdom of Jerusalem: A Corpus* Vol. 3, Cambridge: Cambridge University

Andrew M. Madden, *Corpus of Byzantine Church Mosaic Pavements from Israel and the Palestinian Territories,* Colloquia Antiqua 13, Peeters, Leuven, Belgium, 2014, pp 242. includes pattern diagrams, map and 38 photographs, ISBN 978-90-429-3061-2, €78

Reviewed by Susan Balderstone

Based on his doctoral thesis, Andrew Maddern has published this catalogue of mosaics from almost 3000 sites within the territory of Roman Palestine from the 4th to the 8th century AD. Using the patterns and nomenclature established by Michael Avi-Yonah (*Mosaic Pavements in Palestine,* 1933-35) as amended by Ruth and Asher Ovadieh (*Hellenistic, Roman and Early Byzantine Mosaic Pavements in Israel*, 1987), Madden has brought the record up to date, providing what should be a useful basis for comparison of new discoveries and perhaps for review of the dating of existing churches containing mosaics. The handy indexes at the back enable a particular pattern to be easily traced at all the churches where it has been used in the area of Roman Palestine and where in the church it was located – for example nave field, north aisle field etc. Where firm dates have been given for the church floors by inscription, some conclusions can perhaps be drawn as to the dates of similar floors where there are no inscriptions. However, unfortunately, the published records of the individual churches from which the information has been collected are such that one rarely obtains accurate dates. Tracing a particular pattern (J5) at all the churches where it has been identified results in dates ranging from the last quarter of the 4th century in the first church at Bethany (nave field) to uncertain 5th or 6th century dates in several others or no date is given at all.

There is clearly a further task that could be done using this information, which would be to table places and dates for each pattern with the addition of information from the other similar catalogues for the surrounding region such as Michele Piccirillo's *The Mosaics of Jordan* (1993) and Pauline Donceel-Voûte's *Les Pavements des églises Byzantines de Syrie et du Liban* (1988). Ideally this would be supplemented with similar information from Cyprus and Turkey. Such a catalogue would be immensely useful, particularly if it also contained coloured photographs of each pattern in use. A comprehensive overview such as this would enable a far better understanding of how the design of church floors changed over time (geometric to figurative and back to geometric for instance) and whether particular designs related to particular areas or theological contexts.

However, this suggestion is not intended to belittle the vast amount of work accomplished in this study. As it stands it provides a substantial basis for further analysis and is certain to prove extremely useful to scholars researching Roman Palestine.

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David Beresford, *Ancient Sailing Season*, (Mnemosyne Supplements 351) Leiden & Boston: Brill, 2013, pp xvi+ 364, ills, maps, ISBN: 978-90-04223523, €142.

Reviewed by Christopher J. Davey

In the last edition of *Buried History* I suggested that Roman period shipping could sail anywhere (*Sailing to Windward in Roman Times: the spritsail legacy*). This book by David Beresford argues that they may have done so at any time. It includes a discussion of the textual evidence used to support the idea of a closed sailing season, it considers the climatic regime in the Mediterranean and the character of shipping and navigation during the Graeco-Roman period, to challenge the traditional idea that seafaring on the Mediterranean was seasonal in nature.

According to Beresford there are three ancient texts that are often used to define the sailing season, the 700 BC poem *Works and Days* by Hesiod, the AD 400 Roman military manual *Epitoma rei militaris* by Vegetius and the AD 380 edict of Emperor Gratian which survives in the *Codex Theodosianus*. There is agreement amongst these texts that the sailing season was from March/April to October/November. Hesiod's poem encourages mariners to remove their boats from the water after the setting of Pleiades at the end of October. Beresford argues that this advice applied only to the Archaic period and that it did not relate to the entire Graeco-Roman period because of later developments in maritime technology such as improved hull construction.

Vegetius seems clear, 'So from three days before the Ides of November [ie 11th November] to six days before the Ides of March [ie 10th March] the seas are closed.' Beresford argues that Vegetius was only concerned with warships and that he was not referring to the entire Mediterranean. He draws on a 323 BC Athenian lawsuit which determined that sailing conditions in the Aegean were different from those in the eastern Mediterranean to support the latter proposition. This approach has been bolstered by a 474 or 454 BC Elephantine Palimpsest of customs records from an unknown Egyptian port listing forty-two ships coming and going between March and December (21).

The Gratian edict states that ships would not be received in port between November and March. Beresford argues that the edict only applied to the shipmasters operating in late Roman Africa and was prompted by the treacherous nature of the Libyan coast (24). He also believes it

to be an example of bureaucratic over-reach and not the formalising of a longstanding maritime tradition. There is enough in these arguments to establish that the sailing calendar varied from time to time and from place to place and was often dependent on the politico-economic structure of the maritime industry.

The story of Paul's shipwreck (Acts 27:1-28:13) is discussed in a number of contexts as the narrative highlights Paul's criticism of the inappropriate seasonal timing of his ill-fated voyage. Beresford accepts an October date for the journey, which he believes to be the consensus amongst biblical scholars, and he believes that the January date for the onward journey from Malta to Puteoli supports his contention that there was not a closed sailing season. According to Beresford the weather described in the story, which included fourteen overcast days, is without modern parallel (78).

The chapter on climate acknowledges that the Graeco-Roman period weather may not have been the same as the present, but that current relative conditions may be a reasonable indication of ancient weather patterns. The western Mediterranean in winter experiences more strong wind events than the Levantine coast and the Tunisian-Libyan coast experiences more strong winds all year round than the rest of the Mediterranean. Indeed, winter on the Levantine coast seems better than the summer in the west or on the Tunisian-Libyan coast. During the summer northerly etesian winds prevail in the Aegean making northward passages slow. Beresford argues that winter wind directions may have been more favourable for some journeys than the prevailing summer winds and, in fact, the rapid passage of St Paul aboard *Castor and Pollux* from Malta to Puteoli was the result of a southerly winter wind in a region where summer prevailing winds were northerly. The discussion of wave states lacks the appreciation of a mariner. There is no recognition that short steep waves can be more destructive than higher waves with long distances between crests.

The section about the technology of ships and sails is traditional and rather dated. The most recent advances in the understanding of Roman period ship construction and design are not included. The sea-worthiness of ships is not addressed, except in relation to the sea-trials of the replicas *Olympias* and *Kyrenia*. Repairs to hulls are often reported by maritime archaeologists but the nature of hull damage and the effectiveness of repairs, so relevant to sea-worthiness, are not considered. The development of ancillary functions such as the capacity to remove water from ships' bilges are not discussed; many Roman period shipwrecks have the remains of pumps made from lead.

The section on navigation is useful. Winter sailing involves long nights and overcast skies but in keeping with the rest of the book there is no quantitative analysis. The section on the Indian Ocean offers an interesting comparison, it discusses wind and wave states but not temperatures. The chapter on pirates describes them as seasonal and not generally given to winter sailing, supposedly because their boats lacked sea-worthiness. The book does not discuss other possibilities; there may have been a different cargo regime in the winter, more bulk commodities and fewer passengers with valuable items.

These later chapters are somewhat peripheral to the main subject and occupy space that may have included more strategic studies. The analysis fails to recognise that the well-being of sailors during the cold months was a significant issue; ambient temperatures and their consequences are not included in the discussion. Whatever was technologically and climactically possible by Roman period ships may not have been physically possible by their crews. A modern illustration is to be found in winter recreational sailing in open waters, which has grown in popularity during the last forty years partly because of the improved design of sailors' clothing.

Shipwrecks themselves provide an important source of data. Cargoes may give some idea of the time of year a vessel came to grief and the context of the wreck-site may indicate if the ship's demise was weather related. When reading the weather chapter, one often wonders if the conditions described may have resulted in known shipwrecks. However, comparatively few shipwrecks are referenced in the bibliography and there is no discussion of the topic, which is curious given that safety was a significant reason for limiting the sailing season.

The analysis accepts, indeed depends on, the progress of maritime technology and practice during the Graeco-Roman period but there is no clear statement of what those developments were and how they may have influenced sailing in winter months. Ship design and technology, port facilities and maritime economics and organisation changed during the period under discussion and should have been included in the analysis, which clearly needed to be more nuanced.

Maps, diagrams and images are located at the rear of the book. Some of the maps are indecipherable, which is disappointing for a text of this price. It would have been helpful to have the illustrations in the text where they would be easier to consult while reading. There is no map of port locations, which is surprising given their importance as safe havens.

The above comments tend to indicate that the book is somewhat out-of-date; indeed a scan of the bibliography reveals only 23 references dating after 2000 and nothing later than 2010. There are a few French and German language references but Italian literature, which is substantial and important for ancient shipping, is missing altogether. Omissions aside, this book has valuable textual analysis and useful material on climate and navigation that will influence debate about Graeco-Roman maritime traditions for some time to come.

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