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Historic Museum Collections as Primary Sources: Thomas Wilson's Robenhausen Material at the Smithsonian Institution's National Museum of Natural History

Kathryn G. Maxwell
University of Wisconsin-Milwaukee

HISTORIC MUSEUM COLLECTIONS AS PRIMARY SOURCES: THOMAS WILSON'S ROBENHAUSEN MATERIAL AT THE SMITHSONIAN INSTITUTION'S NATIONAL MUSEUM OF NATURAL HISTORY

by

Kathryn Maxwell

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ABSTRACT

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Kathryn Maxwell

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Under the Supervision of Professor Bettina Arnold

This thesis investigates the role of early museum curators and their collecting practices in the construction and transmission of archaeological knowledge. During the late 19th century, artifacts from Swiss lake-dwelling sites, including Robenhausen, a Neolithic and early Bronze Age site located on Lake Pfäffikon in Switzerland, were sold and traded in a "lake-dwelling diaspora" to many collectors and museums in the US and UK (Arnold 2013:877). A collection of Robenhausen material acquired by the Smithsonian Institution's (SI) United States National Museum (USNM) in 1904 is used as a proxy for the collecting practices of the time and serves as a primary source of information regarding the material and social networks that were crucial to the development of archaeology as a discipline in the US (Leckie 2011:iii; Smithsonian Institution 2013).

Amassed in 1883 by former US Consul to Europe and Curator of Prehistoric Archaeology at the USNM Thomas Wilson (1832-1902), the collection was chosen for its well-documented excavation history, well-preserved organic materials and the perspective it provides on early museum collecting and curation practices (Arnold 2013:879). Robenhausen has also been recently reinvestigated more systematically than was possible in the late 19th and 20th centuries, adding to the research relevance of the material from this site in museums worldwide (Altorfer 2000; 2004).

The Wilson SI collection and associated archival material is compared to Robenhausen collections at other contemporary institutions, situating his collecting practices in the general 19th century context of such activity (Díaz-Andreu 2007:3; Gosden and Larson 2007:52-56). Additionally, this thesis contributes to the efforts of scholars currently engaged in virtually reuniting Swiss lake-dwelling collections, ensuring that they may be researched and exhibited in the future (Arnold 2013:888).

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LIST OF INSTITUTIONAL ABBREVIATIONS

Antiquarische Gesellschaft Zürich	AGZ
Bureau of American Ethnology	BAE
Congrès International d'Anthropologie et d'Archaéologie Prèhistoriques	CIAAP
Milwaukee Public Museum	MPM
Smithsonian Institution	SI
Smithsonian Institution Archives	SIA
Smithsonian Institution's National Anthropological Archives	NAA
Smithsonian Institution's National Museum of Natural History	NMNH
Smithsonian Institution US National Museum (1881-1911)	USNM
State Historical Society of Iowa (Iowa City and Des Moines branches)	SHSI

LIST OF ARCHIVAL SOURCES

Type	Institution	Location
Accession Records	Smithsonian Institution National Museum of Natural History (NMNH)	Museum Support Center (MSC) Suitland, Maryland
Accession Records	Milwaukee Public Museum (MPM)	Milwaukee, WI
Correspondence	Antiquarische Gesellschaft (AGZ), National Museum	Zürich, Switzerland
Correspondence	Smithsonian Institution National Anthropological Archives (NAA)	Museum Support Center (MSC) Suitland, Maryland
Microfilm	Smithsonian Institution National Museum of Natural History (NMNH)	Museum Support Center (MSC) Suitland, Maryland

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CHAPTER ONE: INTRODUCTION

1.1 Introduction to the Research Problem

"Context is key to the relative importance of archaeological objects; locating an object in time and space allows scholars to develop theories about the activities, ideas, and lives of past peoples" (Caywood 2011:1). The lack of this type of context for many archaeological collections in museums (along with factors such as funding and space shortages) can limit avenues of scholarly research, and as a result, historic museum collections often lie in storage unstudied. However, alternative research routes can and should be pursued that place museum collections within a different type of context; more recent scholarly work suggests that, "knowledge about the past is embodied in material things, which are in turn the products of practices that occur in particular social networks and institutional contexts" (Leckie 2011:2 see also Gosden and Larson 2007; Kaeser 2008b; Kopytoff 1986; Miller 1987; Pearce 1992). Consequently, historic museum collections can be used as primary source material to investigate the varying representations of the past that have been developed by previous generations, while providing information on the development of archaeology as a discipline (Leckie 2011:15). Examining museum collecting practices, including how collections were acquired, who collected them and why, the social networks and institutions involved, what types of artifacts were collected and how they were conserved and cataloged, all provide the data necessary to draw conclusions about the creation of knowledge about the past (ibid.; see also Gosden and Larson 2007; Straus 2004).

These types of studies effectively place museum collections within the intellectual, socio-cultural and political contexts in which they were collected, thus providing them with an entirely new layer of contextual information that was previously unrecognized (Straus 2004).

1.2 Thomas Wilson's Robenhausen Collection

This study will apply a social-historical research approach to a 19th century collection of Swiss lake-dwelling material comprised of pottery, stone tools, textiles, wood and botanical samples in the Smithsonian Institution's National Museum of Natural History (NMNH).[1] Although the project makes use of historical sources and applies a museological analysis to existing collections, the greater context is anthropological in the sense that the discipline itself was impacted by 19th century developments such as the lake-dwelling phenomenon (Arnold 2013). Most researchers during this period had training in some other discipline (e.g. Wilson was a lawyer) and very few people could be considered professional archaeologists due to the lack of a distinct discipline of archaeology separate from anthropology or history (Hinsley 1885). Museum collecting activities served as a primary source of early archaeological research and were crucial to the development of archaeology as a discipline (Jacknis 1985).

Lake dwelling sites, also called pile dwellings (*Pfahlbauten* in German), are Neolithic and Bronze Age settlements found on or near the shores of Alpine lakes in Switzerland, Germany, France, Italy and Slovenia (Keller 1866; Menotti 2004; 2013). The waterlogged, alkaline and anaerobic burial environment associated with such sites

1 At the time the collection was acquired, the NMNH was the United States National Museum (USNM). In this thesis, the USNM will be cited as the collecting institution.

provided exceptional preservation conditions for a wide range of organic materials including bone, antler, wood, textiles, basketry, as well as fruit, grains and seeds (Higgitt et al. 2001:81). Lake-dwelling sites also provide some of the best examples of prehistoric plant-fiber based artifacts in Europe, an object category not typically preserved in archaeological contexts (ibid.; Lillis 2005).

The collection of lake-dwelling material in question was recovered in 1883 from the site of Robenhausen, located on Lake Pfäffikon in Switzerland (Figure 1.1). The collector, Thomas Wilson, personally excavated a portion of this material and the remainder was purchased from Jakob Messikommer, a farmer and amateur archaeologist who owned the land on which the site was located and who excavated there for several decades (Altorfer 2010). This collection was formally accessioned by the USNM in 1904.[2]

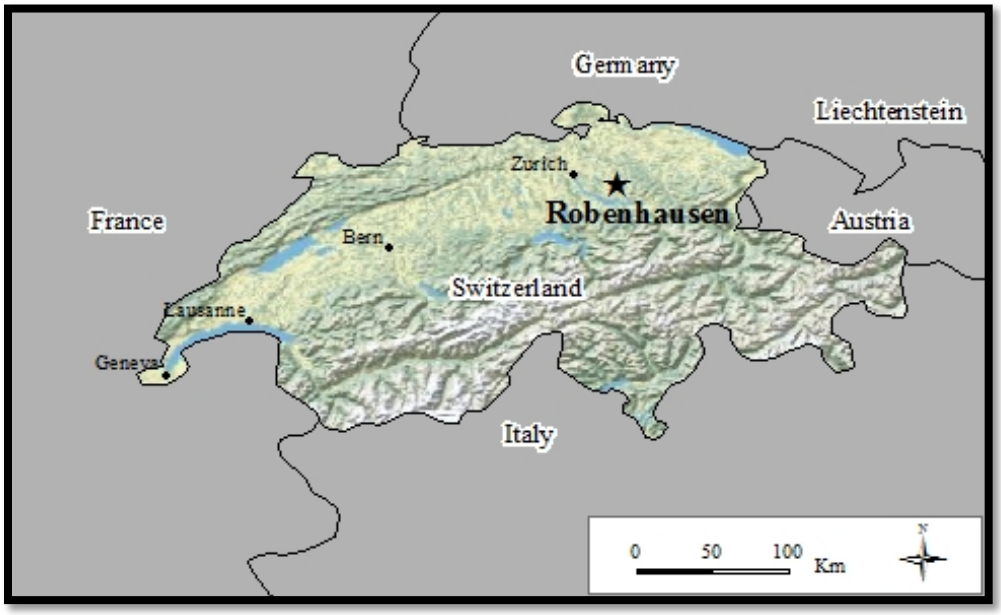

Figure 1.1: Location of Robenhausen in Switzerland (Map courtesy of Lindsay Robinson).

2 Smithsonian Institution's National Museum of Natural History (NMNH) accession number 42207

1.3 Motivations

The lake-dwelling site of Robenhausen is of particular interest because of its well-documented excavation history and, excellent preservation conditions. Additionally, it provides insight into early museum collecting practices and the development of archaeology as a discipline because of the wide distribution of material from the site to museums across the world (Altorfer 2010; Arnold 2013). Jakob Messikommer excavated at Robenhausen throughout the late 19th and early 20th centuries (Altorfer 2000, 2010). To fund the excavations, Messikommer sold and traded artifacts from Robenhausen and other sites to foreign collectors, part of what Arnold has termed a "lake-dwelling diaspora" that is especially well represented in museums in the US and the UK (Arnold 2013:877).

Eleven pile dwelling complexes, including Robenhausen, were given UNESCO World Heritage status in 2011, adding to the importance for museums in the US and UK that have material excavated from these sites to make the collections available, at least in digital form (Arnold 2013:888). This is one of the secondary goals of this project. Although these sites are currently studied and interpreted for the public in Europe, the material in the US is rarely examined or displayed today (Leuzinger 2013; Schöbel 2004). While the NMNH displayed part of their Robenhausen collection in their Western Cultures Hall, it was removed during renovations in 2010 and there are currently no plans to display it again due to space and monetary constraints (James Krakker, pers. comm.). The same shift occurred a decade ago at the British Museum when all the Paleolithic and Neolithic displays were mothballed to make way for concessions and gift shops (Arnold pers. comm., cf. Anthony Spence pers. comm.).

Since 2004, a concerted effort has been made to document and investigate these lake-dwelling collections in the US and UK (Arnold 2013:888; Leckie 2011). Recent research includes several Master's theses at the University of Wisconsin-Milwaukee and a Bachelor of Arts thesis at New York University focusing on the collections of lake-dwelling material in US natural history museums, as well as a dissertation by Katherine M. Leckie at Oxford University and an unpublished manuscript by Katherine Cooper at the University of Cambridge addressing the collections housed in the UK (Cooper 2008; Leckie 2012; Lillis 2005; Johnson 2006; Ross 2011; Wolfhagen 20011). Robenhausen itself was also the focus of a Master's thesis and a subsequent monograph by Swiss archaeologist Kurt Altorfer, adding to the research value of the material from the site in museums outside Switzerland (Altorfer 2000, 2004, 2010). Most recently, Bettina Arnold published a chapter in an Oxford University Press volume that presented a preliminary overview of the diaspora of lake-dwelling material to museums in the US and UK during the 19th and early 20th centuries (Arnold 2013). Arnold's initial survey of lake-dwelling material in US museums identified an extensive collection donated to the Smithsonian by a single individual, the aforementioned Thomas Wilson, whose life and scholarly work had not yet been thoroughly documented. Previous studies on the history of archaeology in the US mention Wilson briefly and his contributions to the field have not been fully acknowledged (see Browman and Williams 2002; Darnell 1998; Lewis-Johnson et al. 1978; Petraglia and Potts 2004; Stocking 1974; Trigger 2006; Willey and Sabloff 1974). Arnold's research provided the impetus for this study in the form of an initial analysis and inventory of the SI material and preliminary information on Wilson and some of the other individuals who collected lake-dwelling material in the 19th and

early 20th centuries. This thesis significantly expands that initial effort, revealing a singular and important character in early US prehistoric scholarship.

A jack-of-all-trades, Thomas Wilson was a Union officer in the Civil War, a lawyer, US Consul to Belgium and France, a curator at the USNM and a pioneer in what was then the developing field of archaeology in the US (Arnold 2013:879; Petraglia and Potts 2004). However, Wilson also belonged to numerous scholarly societies in both the US and Europe and helped develop early drafts of antiquities legislation in the US (Mason 1902; Petraglia and Potts 2004). [3] The author of numerous publications on anthropological and archaeological subjects, Wilson appears to have been a deeply passionate scholar who was committed to educating the public about archaeology (Wilson 1888f, 1890f, 1898; see also Mason 1902; Petraglia and Potts 2004).

Thomas Wilson was also an unusual collector for the 19th century because he kept detailed notes regarding the objects he amassed. During this early stage of archaeology and museum collecting, this type of basic contextual information was rarely recorded because the intellectual tradition of the time was more concerned with creating typologies of artifacts for comparison than studying specific sites in detail (Kaeser 2004b:37). It is also rare that a collection more than 100 years old is as well documented as Wilson's Robenhausen collection at the NMNH. Wilson's personal catalog, available in microfilm form at the SI National Museum of Natural History, made it possible to identify individual pieces from named sites, including Robenhausen, and even indicates whether

3 National Park Service. "NPS Archaeology Program for the Public." http://www.nps.gov/archaeology/pubs/lee/Lee_ch6.htm. Last updated 8/13/2013.

he excavated specific objects or purchased them from Messikommer (Appendix B).[4] Wilson also included a brief summary of the site, the dates he visited it and the sources he used to obtain information about the material.

In addition to these provenience clues, Swiss archival material from Zürich includes references to Wilson's visits to the site in September of 1883 and August of 1886.[5] The following is an excerpt from a letter written by Messikommer to Rudolph Jucker (1886):

> On September 6 [1886], I accompanied Mr. Thomas Wilson, former American consul in Nice, to Niederwil [*sic*]. He was in Robenhausen two [6] years ago, at which time I dug a shaft expressly for him. His wife was with him and he had a camera along and took photographs. It was a great pleasure for me to go to Niederwil [*sic*] with him, even though I don't speak French and he could not speak German, but my sister-in-law in Winterthur had the goodness to serve as interpreter. [7]

For all of the aforementioned reasons, the Wilson Robenhausen collection at the NMNH provides an excellent illustration of how historic museum collections and their associated collecting practices can be used as primary sources in the study of the production of archaeological knowledge and the history of archaeology (Straus 2004).

1.4 Brief Description of the Project and Methods

Thomas Wilson's writings (both public and private), personal background, social and intellectual networks, collecting practices, Robenhausen collection at the NMNH and associated archival material will be assessed and compared to similar collections

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4 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NMNH Microfilm. (photocopy of document acquired by Bettina Arnold).

5 Jacob Messikommer to Rudolf Jucker 8/26/1886: Antiquarische Gesellschaft Zürich (AGZ) Archives, Band 40, Nr. 453 (copied and translated by Bettina Arnold).

6 All other sources, including Wilson's catalog, indicate that Wilson's visit was in Sept. 1883, three years prior to the letter.

7 Jacob Messikommer to Rudolf Jucker 8/26/1886: Antiquarische Gesellschaft Zürich (AGZ) Archives, Band 40, Nr. 453 (copied and translated by Bettina Arnold)

generated at the same time (e.g. Charles Dörflinger's Robenhausen collection at the Milwaukee Public Museum) in order to situate this collection within a broader historical context (Díaz-Andreu 2007:3; Gosden and Larson 2007:52-56).

The specific questions addressed in this project are as follows:

1. What is the distribution of artifact types in Thomas Wilson's Robenhausen collection at the NMNH?

2. How does Wilson's collection compare/contrast to that of contemporary US Robenhausen collections, particularly that of Charles (Carl) Dörflinger at the Milwaukee Public Museum (MPM), in terms of percentages of commonly collected object types (e.g. stone tools and pottery) versus objects generally overlooked in the 19th and early 20th centuries (e.g. organic material)? How does his collection compare to the range of objects and material excavated at Robenhausen in more recent years and objects found in 19th century Swiss collections (Altorfer 2010)?

3. How are Thomas Wilson's collecting practices situated in the 19th century context of such activity and what influence did he have on the production of archaeological knowledge and the development of archaeology as a discipline in the US?

4. How did Wilson's collecting practices affect the interpretive and/or research value of the Robenhausen material at the Smithsonian?

5. How can this collection be used in the future?

1.5 Goals

The primary goal of this investigation is to elucidate the role that early prehistorians

and their collecting practices played in the development of knowledge about the past and archaeology as a discipline in the US, particularly the debates over: 1) human cultural evolution; and 2) the antiquity of Native American cultures in North America (Díaz-Andreu 2007; Gosden and Larson 2007; O'Hanlon et al. 2000:8; Wilson 1895). As an added benefit, understanding the collecting history of the material can improve our current knowledge of the collections, clarifying their potential and limitations for research and exhibition purposes. This investigation will also aid the efforts of scholars currently engaged in digitally reuniting the collections, ensuring that they may be researched and exhibited in the future (Arnold 2013:888; Kaeser 2008a). A database of the Smithsonian's Wilson lake-dwelling collection will be provided in Appendix C on an attached disk to add to existing knowledge of Robenhausen material for future use and will be made available in digital form to the SI.

1.6 Limitations

While Wilson's collecting practices were advanced for his time, potential limitations in working with lake-dwelling material in general include the lack of exact provenience for individual objects (i.e. where they were found in relation to one another), the current state of these collections (i.e. lack of documentation, conservation issues, missing original packaging, etc.), the impossibility of locating all of Wilson's ephemera, and the inability to reunite all of Wilson's Robenhausen material at one institution.

1.7 Implications

Although the focus of this thesis is turn of the 19th century museum collections, the broader question of how knowledge about the past is constructed and transmitted is not simply a historical one (Leckie 2011:2). In general, an awareness of this process can

certainly be applied to current anthropological research in museums and other institutions, whether one is developing exhibits, or conducting research within a university context. In addition, future research should focus on documenting all of the Robenhausen collections in US museums so that the site may be studied further and the material exhibited for future generations (Altorfer 2010; Arnold 2013).

1.8 Chapter Outline

Chapter Two will include a literature review on the following topics to place this project within its larger socio-historical context: lake-dwelling culture, museum collecting, the lake-dwelling "diaspora", and Thomas Wilson's life and archaeological pursuits. Chapter Three details the theoretical orientation employed to analyze the data and the methodology used, including primary sources, archival sources and collections research. The physical parameters of the collection are also outlined. Chapter Four provides an analysis of the sources and data discussed in Chapters Two and Three and presents the conclusions drawn from this research and their implications.

CHAPTER TWO: BACKGROUND

2.1 Introduction

Sections 2.2 and 2.3 present a brief overview of prehistoric lake-dwelling cultures, Robenhausen and previous lake-dwelling research. Theoretical approaches to museum collecting are discussed in section 2.4. In sections 2.5 and 2.6, a selection of lake-dwelling collectors contemporary to Thomas Wilson, and then Thomas Wilson himself, will be discussed to place into context the motivations and social networks that fueled the diaspora of lake-dwelling material, the creation of archaeological knowledge about Swiss lake-dwellers and the development of archaeology as a discipline in the 19th century. Old World/New World comparisons and the debate over cross-cultural and ethnographic analogy will also be discussed in the context of the development of anthropological scholarship in North America.

2.2 Lake-Dwelling Cultures

Robenhausen is situated on pastureland on the south side of Lake Pfäffikon, near the city of Wetzikon, in the Swiss canton of Zürich (Altorfer 2010; Keller 1866:37; Munro 1890:111). The site is intersected by the Aa River, with the high mountains of Glarus in the background (Figure 2.1). There is a lesser-known site to the east at Irgenhausen as well. Robenhausen is part of a complex of Neolithic and Bronze Age (c. 4300-500 B.C.) lake-dwelling sites, or stations, located primarily in Switzerland, France, Italy, Austria, Slovenia and Germany (Altorfer 2000; Higgitt et al. 2011:81; Lillis 2005:5; Menotti 2004). Numerous well-known stations in Switzerland are located on Lakes Neuchâtel, Bienne, Zug, Zürich and Constance (Menotti 2004:164; Figure 2.2).

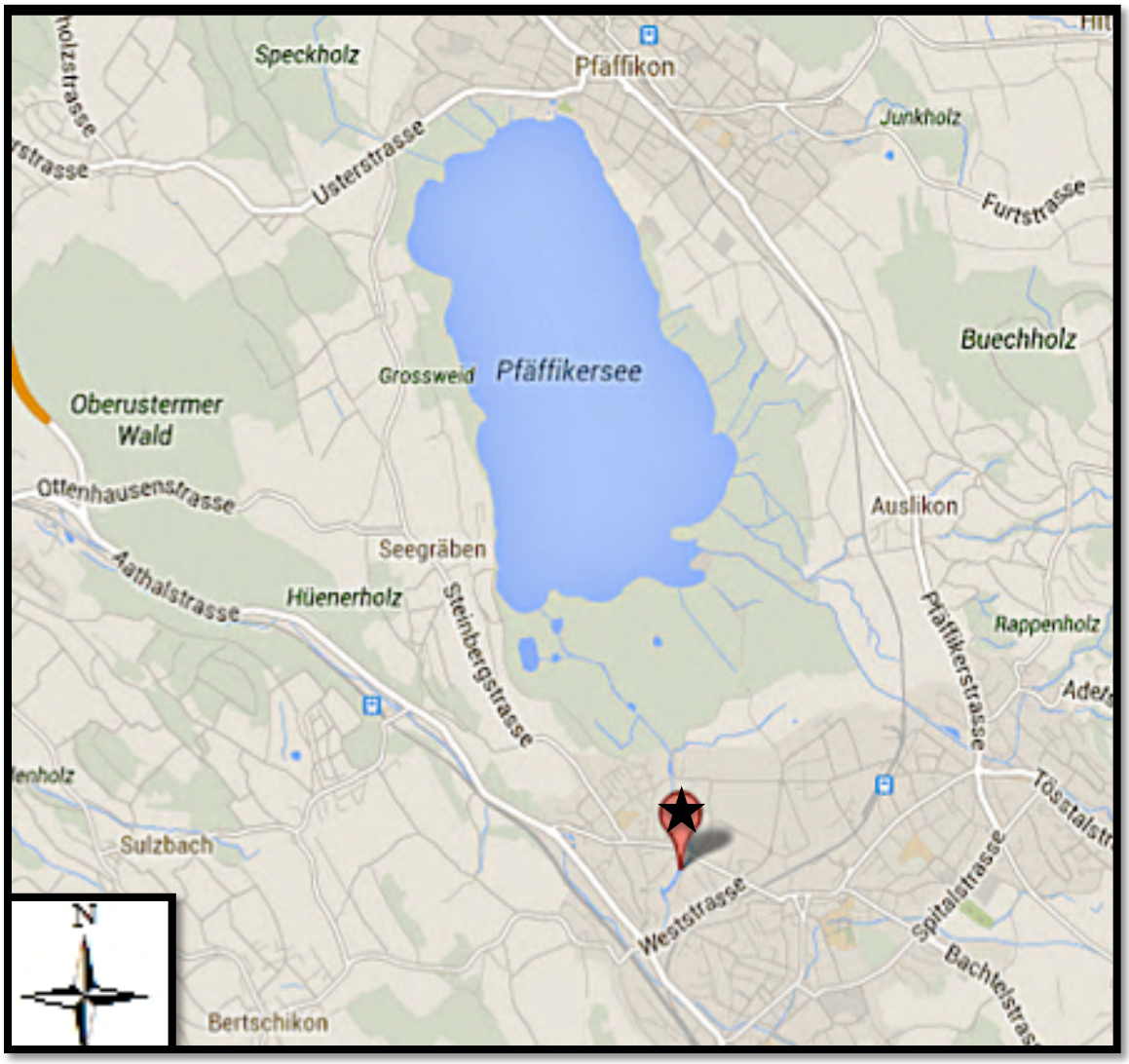

Figure 2.1: Location of Robenhausen on Lake Pfäffikon (adapted from Google Maps).

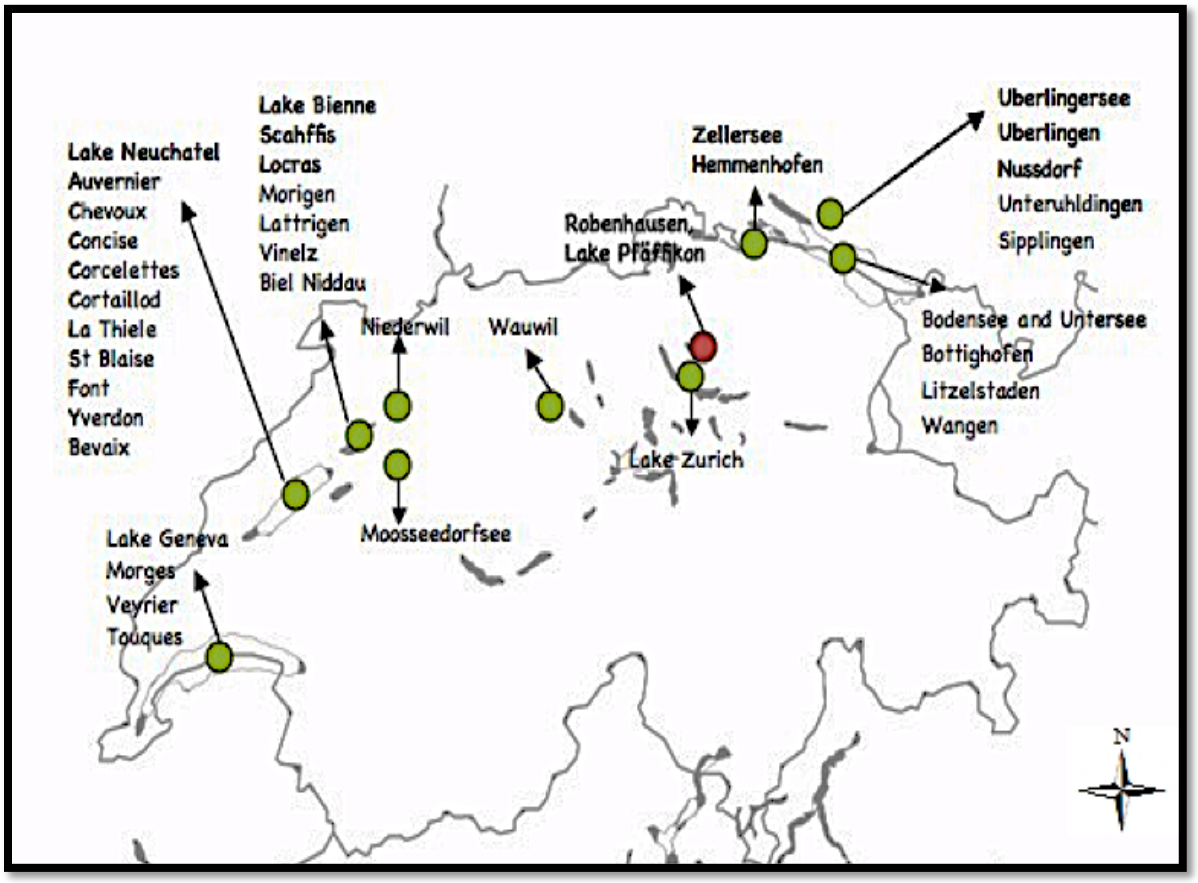

Figure 2.2: Location of Major of Lake-Dwelling Sites in Switzerland including Robenhausen (adapted from Leckie 2011:Fig. 4-66)

A chronology of lake-dwelling sites has been established using dendrochronology, paleo-botanical and faunal analyses (Menotti 2004:2, Table 2.1). Plant cultivation and animal husbandry originated in the Middle East about 12,000 years ago and moved into Central Europe via the River Danube and the Mediterranean Sea (Suter et al. 2011:18). These immigrants inhabited the shores of the western Mediterranean regions and around 5000 BC began to spread out and construct dwellings along the Alpine lakeshores in Italy.

By 4300 BC, this phenomenon had spread throughout the Alps and appears to have lasted from the late fifth millennium B.C. to the first half of the seventh century B.C., although occupation was not continuous during this period (Menotti 2004:2; Suter et al. 2011:18).

Robenhausen itself was occupied from the early Neolithic through the Late Bronze Age (c. 4000-1000 B.C.) with a break occurring in the Middle Bronze Age apparently due to cultural and/or environmental factors (Lillis 2005; Menotti 2004:2; Table 2.1). During the Neolithic, large, systematic settlements like Robenhausen began appearing in the circum-Alpine region of Europe, that represent a change in lifeways from hunting and gathering to simple agriculture supplemented by some hunting and gathering (Lillis 2005:23; Menotti 2013:11). Lake-dwelling sites became increasingly complex, both technologically and socially, by the early Bronze Age and appear to have gradually been abandoned after about 800 B.C., possibly due to climate change and the rising water levels of the Alpine lakes (Menotti 2013:12; Pétrequin 2013:264). In spite of the quantities of organic material found, very little is known about social structure (Menotti 2004:3). However, using micro-botanical and osteological evidence it is known that lake-dwelling people were largely sedentary and their subsistence base consisted of a combination of agriculture and pastoralism, including planting and gathering local grains, apples and other plant foods, augmented by some fishing and hunting (ibid.; see also Ross 2011).

Table 2. 1: Robenhausen and Swiss Neolithic Prehistoric Chronology 4300 BC-1000 BC (after Altorfer 2010: Abb. 84)

Robenhausen (Messikommer 1864)	Chr. (BC)	Swiss Neolithic (Altorfer 2010)
	1000	
		Late Bronze Age
	1500	Early Bronze Age
3rd Settlement (*Niederlassung)*		
		Salzerbeil
	2000	
2nd Settlement (*Niederlassung=Obere Brandschicht*)		
	2500	
		Schnurkeramik
		Horgen
	3000	
		Pfyn
1st Settlement (*Niederlassung= Untere Brandschicht*)	3500	
	4000	

The appearance of pottery is seen in the Neolithic in conjunction with the domestication of plants and animals, which indicates that trade was occurring between

groups (Altorfer 2010; Menotti 2004:3). Cultivated plants included wheat, barley, flax and emmer (Keller 1866:348-350; Menotti 2004:3). A variety of fruits, vegetables, nuts and other plants were also exploited including poppies, apples, raspberries, peas, lentils, hazelnuts, walnuts, etc. (Heer in Keller1866-Appendix A; Menotti 2004:3).

The remains of domestic animals recovered in Swiss lake-dwelling sites include cattle, goats, sheep, pigs, dogs and in the late phase horses (Ross 2011; Ruttkay et al. 2004:63). Osteological and material evidence indicates that cattle were used to transport goods and people, as well as being exploited for meat. The age and sex distribution of sheep and goats indicates that they were preferred for their milk. Pigs were slaughtered when they were young for consumption. Dogs were also occasionally consumed. Animal husbandry could not provide enough meat so red deer and chamois were hunted to fill deficiencies during the late fall and winter. Fishing also supplemented the diet of lake-dwelling cultures (Ross 2011:60).

Wood was an important resource for lake-dwelling people. Their pile-dwellings were constructed using wattle and daub structures on wooden platforms, built both on and near the lake (Menotti 2004:2; Figure 2.3). Figure 2.3 depicts one of the lake-dwelling models constructed by Jacob Messikommer, the farmer who owned and excavated the site of Robenhausen. This particular object is a combination of a model previously owned by the SI and one that was part of Wilson's collection.[8] Wooden dugout canoes and slab-wheeled wagons were used for transportation beginning around 3400 BC (Suter et al. 2011:20). Other wooden artifacts found at lake-dwelling sites include bows made from yew wood, ladles, bowls and cups, and handles for various stone and metal tools,

8 Memorandum: The Thomas Wilson Collection of Prehistoric Archaeology, n.d. NAA(copy acquired by Bettina Arnold).

including hatchets and axes, the latter typically made of ash (ibid.).

Figure 2.3: Model of a Swiss Lake-Dwelling House Made by Messikommer in the NMNH Collection #A170331 (photo courtesy of Bettina Arnold).

Other technology included tools made of chipped and ground stone, bone and antler. New tools were developed during this period including polished ground stone axes and hatchets made out of nephrite, greenstone, and other hard stone and eventually copper and bronze (Munro 1890:114; Suter et al. 2011). The axes had wooden handles and the heads were inserted into deer antler sleeves, making them more durable (Suter et al. 2011:46). Flint was used to construct arrowheads, drills and knives and, in the 3rd millennium, daggers. Bone and antler were used to make a variety of other tools

including chisels, scrapers, needles, combs, knives, fishhooks, and weaving implements, amongst other items (Johnson 2006:96)

Lake-dwellers also had a sophisticated textile and basketry tradition using flax for linen, and bast, the inner bark of lime, willow and oak trees, for baskets, mats, and other woven pieces (Lillis 2005:65; Fig. 2.4). Wool was not introduced until the Late Neolithic; before that time textiles were mainly made of linen, hemp and nettle fibers (Higgitt et al. 2011; Lillis 2005). Excellently preserved textiles, exhibiting a variety of weaving techniques, have been found at lake-dwelling sites including partial hats, shoes and belts, cloak fragments, mats, baskets and bags (Suter et al. 2011:51).

a. **b.**

Figure 2.4a: Robenhausen Textiles from MPM (A15055) and 2.4b: Illustration of Neolithic Hats (Lillis 2005 Fig. 2.13, after Winiger 1995:Abb. 12 & 13).

Storage and cooking vessels of fired clay have been found at lake-dwelling sites, ranging from crude to fine ware, the latter appearing especially in the Late Neolithic/Chalcolithic, along with the first experimental copper and early bronze working

(Menotti 2004:2; Suter et al. 2011:20). Loom weights and spindle whorls were also made of fired clay and are found in large numbers at some sites (Lillis 2005; Figure 2.5).

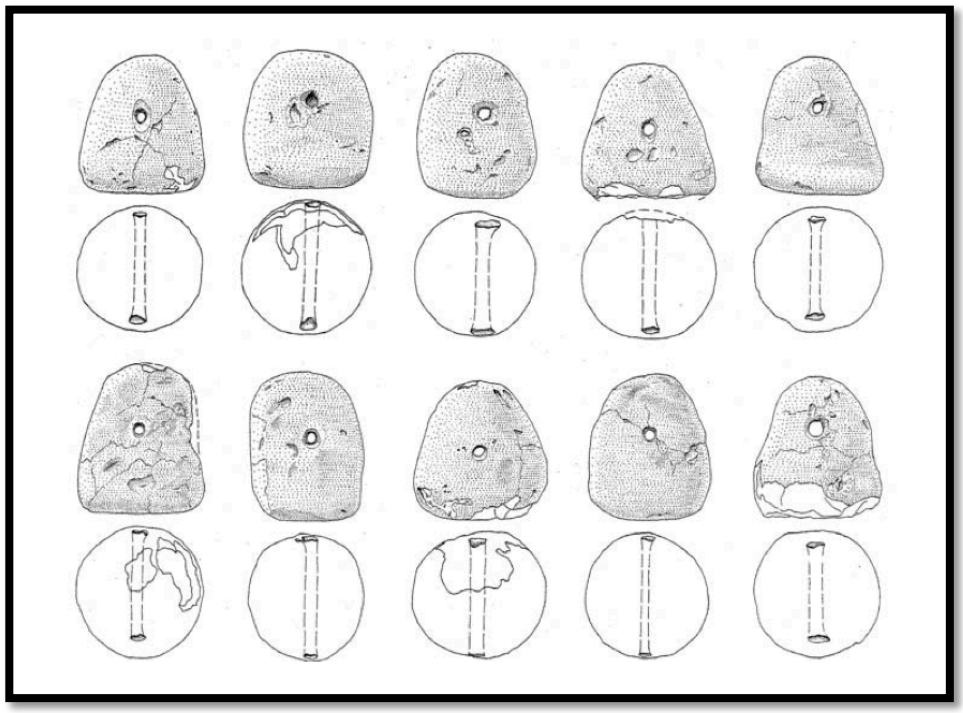

Figure 2.5: Loom Weights from 1999 Robenhausen Excavation (adapted from Altorfer 2010:Plate 5).

Jewelry associated with lakeside settlements includes pendants made out of animal teeth and bone as well as limestone beads and amber or glass beads (Suter et al. 2011:20). Bronze pins and bracelets, in a variety of shapes, were also worn in the Bronze Age.

Over thirty cultural groups have been identified in the Alpine region during this period, although there is some debate over whether material remains like pottery, jewelry, and tool types actually represent ethnic units (Suter et al. 2011:44). Cultures represented at Robenhausen include: Pfyn and Cortaillod (about 3800-3200 BC), Horgen (3000-2000 BC) and Schnurkeramik or Corded Ware culture ca. 2000 BC (Lillis 2005:34-36; Figure

2.6).

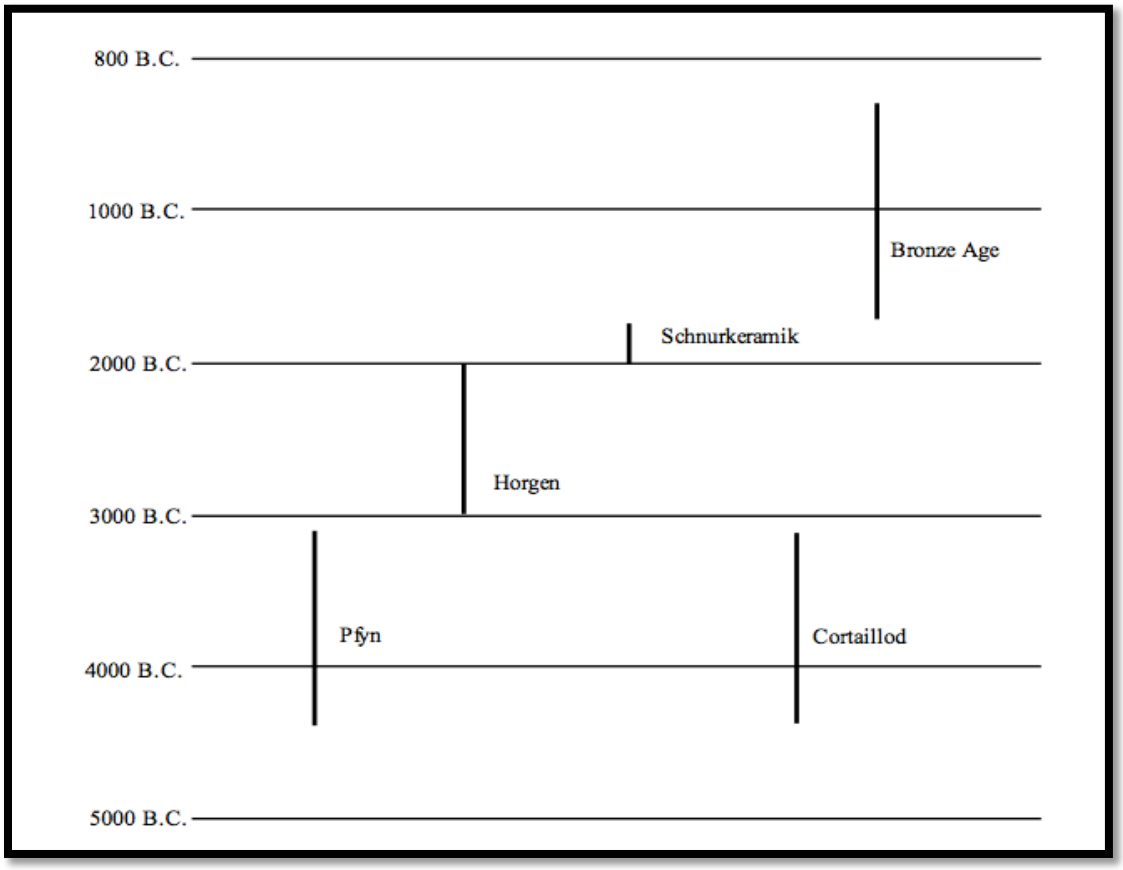

Figure 2.6: Swiss Neolithic and Bronze Age Phases Represented at Robenhausen (adapted from Lillis 2005: Fig. 2.4)

The lack of evidence for mortuary practices makes it even more difficult to identify cultural differences (Suter et al. 2011:58). Only a few burials dated to the 5th/ 4th millennia B.C., with one or more individuals interred in stone or wood cists, have been found at lake-dwelling sites. Grave goods include jewelry and weapons, especially axes and arrows. During the Middle Bronze Age, earthen mounds were constructed over the graves and were often re-used in later periods. The Late Bronze Age is characterized by cremation as the main rite, but by that time the lake dwellings were beginning to be

abandoned as lake levels rose and the climate went from optimal to much colder and wetter (Menotti 2004:2).

2.3 Previous Lake Dwelling and Robenhausen Research

The Lake-Dwelling Phenomenon

The first excavations of lake-dwelling sites were carried out in the mid-nineteenth century and the best-known early sites, including Robenhausen, are in Switzerland. After a period of dry weather in 1853-45, Lake Zürich significantly receded and a local schoolteacher, Johannes Aeppli, reported the site of Ober Meilen, which fishermen in the area had known about for years, to Ferdinand Keller, the founder of the Antiquarian Society of Zürich, who then began excavating at various sites along the lakeshore (Keller 1866:11). The methods highlighted in Keller's publication included excavating in peat deposits, pumping out shallow water, or in deep water, dredging the lake bottom with a long pole with a hinged shovel (1866). From 1854-1866, Ferdinand Keller made numerous reports to the Antiquarian Society of Zürich, including information on the early excavations at Ober Meilen (Higgitt et al. 2011:81; Keller 1866). In his first report from 1854, Keller also informed his readers about other pile-dwelling sites on Lake Zürich and Lake Bienne (Ruoff 2004:9). This original report created a sensation because of Keller's reconstruction of the sites as prehistoric villages built on piles and platforms above the water and Keller became synonymous with both the discovery of lake-dwelling culture and its interpretation. This would later spark a debate about whether the pile-dwellings were built on or above the water. Keller opted for the latter, comparing them to similar structures in New Guinea and New Zealand (Keller 1886; Figure 2.7).

Figure 2.7: Lake Dwelling Illustration by Keller (Lyell 1863:Plate I)

Keller's book *The Lake Dwellings Of Switzerland and Other Parts of Europe* described and interpreted all of the known lake-dwelling sites and the various materials found in them (Keller 1866). Originally written in German, it was translated into English in 1866 by John Lee, for "English antiquaries" (ibid.:1). This volume and later reports provided the impetus for scholars and collectors in the US and UK to seek out and study lake-dwelling sites, thereby turning amateurs, like Messikommer, into professionals (Ruoff 2004:11). Great progress was made in the study of prehistory in Europe in the decades following Keller's publications. Swiss antiquarians Adolphe Morlot and Frederic Troyon became pioneers in underwater archaeology, using a primitive form of diving helmet, while Messikommer has been credited with developing an early system of flotation for retrieving floral remains (ibid.; Arnold 2013:880; Figure 2.8).

Figure 2.8: 1854 Morlot, Troyon and Forel Excavating a Lake Dwelling (Leckie 2011: Fig. 1.4).

Swiss researchers would soon make distinctions between Neolithic and Bronze Age occupations and had a fairly clear idea of the subsistence practices of each period based on organic remains recovered (Ruoff 2004:11). The news about the lake-dwelling sites also piqued the interest of the general public, which romanticized the lake-dwellers in paintings, children's stories, cartoons, films, poems, popular periodicals and open-air museums (Schöbel 2004:221; Figure 2.9). Several other publications that mention lake-dwelling sites came out during this time including: John Lubbock's *Natural History Review* (1862), Charles Lyell's *The Geological Evidences of the Antiquity of Man with Remarks on Theories of the Origin of Species by Variation* (1863), and various American and English works (Lesley 1864; Désor 1866; Darwin 1868; all cited in Arnold 2013:879).

Figure 2. 9: Lake-Dwelling Mural by Albert O. Tiemann (Mural # A-55, Neg. #72168-9 "Bartering Goods, Swiss Lake Dwellings, 3000 B.C. © MPM).

Publications by Morrell (1867) and Munro (1867) also described lake-dwelling sites and material. The majority of these studies focused on chronology and the artifacts found in lake-dwelling deposits. Lavish illustrations were a significant feature of these publications and often accompanied exhibits as well (Fig. 2.9).

Following Keller's groundbreaking work, a debate was sparked about whether the lake dwellings were built on or in the lake (Ruoff 2004:13; see also Reinerth 1929; Speck 1953; Vogt 1955). As a result of this dispute, more scientific research techniques were developed (Menotti 2004:1). Advances in underwater archaeology in the 1960s-70s made it possible to keep the water clear during excavation, allowing the archaeologists to record stratigraphy (Ruoff 2004:14). Over a century after the initial discovery of these

sites, the answer to the great *Pfahlbauproblem* (lake dwelling dispute) was that lake dwellings were built on dry land and the lake shore so that they could be evacuated or repaired in times of flooding, although there is evidence of true lake-dwellings on Lake Zug and Lake Greifen in Switzerland, among other locations (Menotti 2004:1; Ruoff 1972, 2004:17).

Robenhausen Research

Discovered in 1858, Robenhausen was excavated by Jakob Messikommer and his son Heinrich for about three decades (Altorfer 2010). During that time, Messikommer hosted many antiquarians and other interested visitors at the site and sold or gave artifacts to most of them. Some visitors were allowed to excavate the material they purchased; including Charles Dörflinger, the first custodian (Director) of the Milwaukee Public Museum (MPM) (Altorfer 2010; Arnold 2013:888). Thomas Wilson was also given this opportunity, as his catalog, Messikommer's letters and Wilson's obituary indicate (Mason 1902:289).[9] To fund the excavations, the artifacts from Robenhausen and similar sites were also sold and traded to foreign collectors (Altorfer 2010; Arnold 2013:868; Gosden and Larson 2007:52).

Messikommer's excavation methods were unique for his time for a number of reasons (Altorfer 2010). While not comparable to modern standards, Messikommer was thorough in preserving and examining the organic remains recovered at Robenhausen. He even developed the earliest recorded water floatation system for retrieving botanical remains. Before selling items from the site, Messikommer affixed labels to them with the

9 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NAA, (photocopy of a document acquired by Bettina Arnold); Jacob Messikommer to Rudolf Jucker 8/26/1886: Antiquarische Gesellschaft Zürich (AGZ) Archives, Band 40, Nr. 453 (copied and translated by my advisor Bettina Arnold).

site name and his own (Altorfer 2000, 2010; Figure 2.10).

Figure 2.10: A15015 from MPM featuring Messikommer Label.

Since Messikommer's label style changed gradually over several decades, modern researchers have been able to construct a chronology to date individual items based partially on label style (Altorfer 2010:78). The labels with finer print, as seen in Figure 2.10, were used after 1867, whereas the larger print labels were used prior to 1866.

Figure 2.11: Messikommer labels
(from Leckie 20011:Fig. 5-22; adapted from Altorfer 2010:78).

Since the year 2000, there has been a resurgence in lake-dwelling research by Swiss scientists and curators (Leckie 2011:10). This is due in part to the 150th anniversary of the discovery of lake-dwelling sites in Switzerland, which resulted in numerous commemorative public events, exhibitions and publications (Arnold 2013:888; Suter et al. 2011; Zimmerman 2004). These events have sparked renewed interest in the history of lake-dwelling research, including historical biographies of lake-dwelling collectors, studies of the relationship between the lake-dwelling phenomenon and Swiss identity and nationalism, lake-dwelling collections (Kaeser 2004a; Leuzinger 2013; Schöbel 2004), archaeological tourism, exhibitions and collecting practices in Europe, 19th century *Pfahlbaufieber (*lake-dwelling fever), and catalogs of representations of lake-dwelling life (Arnold 2013:888; Leckie 2011:10). Robenhausen itself was also recently reinvestigated systematically (Altorfer 2000, 2004, 2010).

Bettina Arnold's publication, "The Lake-Dwelling Diaspora: Museums, Private Collectors, and the Evolution of Ethics in Archaeology", addresses some of the mechanisms by which lake-dwelling material was collected and dispersed to museums all over the world. She acknowledges that repatriation of this material would not be feasible due to space and financial restraints but argues that researchers have an ethical obligation to attempt to reunite these collections in digital form (2013:888).

Katherine Leckie's recent dissertation uses the Robenhausen material in British museums to investigate how knowledge of the past is created and transmitted and the role material culture plays in that process, supporting the idea that scientific knowledge is a form of cultural production (Leckie 2011:3). By examining the transformative practices (i.e. conservation, packaging, labeling, cataloging and illustration) through which lake-

dwelling artifacts were recovered, documented and displayed, Leckie elucidates the social networks that motivated these practices and the contexts through which collective knowledge of lake-dwellings was created and transmitted.

In addition to Leckie and Arnold, recently published Master's theses from the University of Wisconsin-Milwaukee have focused on the material itself and have explored its usefulness from an academic perspective (Johnson 2006; Lillis 2005; Ross 2011). These studies of collections of lake-dwelling textiles (Lillis 2005), bone and antler tools (Johnson 2006) and faunal remains (Ross 2011;Wolfhagen 2011) in US museums provided the inspiration for this study and illustrate how fruitful inquiries into these collections can be despite the challenges posed by limited provenience and the often fragmentary nature of the material (Strauss 2004).

2.4 Museum Collections: A Primary Source for Studying the History of Archaeology

A museum is a location where "distant places are transformed, re-presented, and studied from afar through some of their material products" (Gosden and Larson 2007:7). Museum collections, collectors and their associated collecting practices are a major focus of this thesis because natural history and university museums were key sites for the development of early anthropological knowledge between 1840 and 1920 (Díaz-Andreu 2007; Gosden and Larson 2007:36; Jacknis 1985; O'Hanlon 2000:5; Strauss 2004; Sturtevant 1969:622-624). In fact, in a 1905 summary of American archaeology, Peabody categorized museum work as one of only three options for archaeological study at the time, the other two being fieldwork and publication (1905:182). In this section, both the intellectual trends/motivations and social networks and institutions surrounding this process will be discussed. Before that can be elaborated upon, some of the theories

regarding museum collecting will be discussed.

Collecting Theory

Museum collecting theory is concerned with what, from the material world, specific groups and individuals chose to preserve, value and exchange (Clifford 1985:240). When discussing 19th and early 20th century museum collections and collecting practices, it is first necessary to set forth a definition for a collection using terms that are largely agreed upon (Pearce 1992:48; Ross 2011:28). For the purposes of this study, a collection is defined as "*the product of deliberate, non-utilitarian gathering of items that are valued by the owner (s) and relate to each other internally or externally without necessarily being classified*" (Pearce 1992:48-50). This definition is coupled with the idea that a collection is more than the sum of its parts in the sense that the collector viewed it as a collection with value. From this starting point, it is possible to delve deeper into the relationship between a collection and its collector (Ross 2011:28).

The process of selecting objects for a collection involves an association between what is chosen for the collection and the material from which it was chosen (Pearce 1992; Ross 2011:29). First of all, each object collected represents a metonym for the possible material of its type, in other words, a part that represents the whole (Clifford 1985:239; Pearce 1992; Ross 2011:29). The second relationship considers the fact that the selected objects are a metaphor for the material of their type, not merely a detached fragment of the whole, but an intrinsic part of the whole with its own meaning (Pearce 1992; Ross 2011:29). The relationship between the collector and his/her collection is what creates this metaphorical characteristic (Ross 2011:29).

Furthermore, the collector's social and intellectual networks and personal beliefs shape the nature and meaning imbued in the collection, resulting in a dialectical relationship between the objects and how they are interpreted (Miller 1987:29). In other words, the material record inspires and bolsters the collective concept, but the concept provides the impulse to continue retrieving and transforming the material (Leckie 2011:292). According to Miller (1987:24), "real knowledge of an object [or museum collection] is possible only when we come to understand that it is a result of our own activity" so by studying the relationship between the object and the collector, it is possible to understand a collection in a different light.

Collecting can be further broken down into three categories, although some collectors may possess qualities of any combination of the three: souvenir, fetishistic and systematic (Pearce 1992:69-84). The most intellectual of the three types, systematic collecting, is also the most relevant to the study of prehistory, and thus to this thesis, and involves collecting based on typologies or systematic organization of artifacts based on their shared physical attributes (Ross 2011:30; see also Pearce 1992:84-87). In systematic collecting, artifacts are collected based on whether they represent the 'typical' or 'atypical' in order to create a complete 'set' to provide references for researchers (Pearce 1992:88). Therefore, "systematic collections are formed by imposing placement ideas of classification on the outside world, which gave rise to ideas to begin with, producing a process of circular reasoning" (Pearce 1992:88; see also Ross 2011:31). Understanding the process by which systematic collections are created provides the basis for explaining the early role played by museum collecting practices in the construction and transmission of knowledge about the past.

Motivations and Intellectual Trends

Examining the motivations and intellectual trends involved in early museum collecting practices is also helpful in clarifying their influence on the production and transmission of archaeological knowledge. The motivations for collecting lake-dwelling objects varied greatly and ranged from profit (e.g. antiquities dealers), to academic curiosity (e.g. those who collected mainly to study the past) and somewhere in between (e.g. collecting for its own sake or for prestige), reflecting the diverse socioeconomic and educational backgrounds of collectors (Arnold 2013:876; Leckie 2011:297). When investigating the motivations and intellectual traditions of early academic collectors like Thomas Wilson, one can distinguish at least two approaches or tendencies in the study of the past, although there were no strict boundaries between them (Kaeser 2008b:381).

The first was antiquarianism, which was primarily concerned with examining the life, manners, customs and beliefs of past cultures, and was central to the development of archaeology as a discipline. While not always motivated by nationalism in the 19th century, antiquarian research would later contribute to nationalism or "the creation of a common identity for a newly united nation state" (Ross 2011:32). Notable antiquarians associated with this research project in Switzerland included Ferdinand Keller and Jakob Messikommer. Thomas Wilson and his contemporaries, scholars like German-American and SI curator, Carl Rau, and the anthropologist Franz Boas also qualify, in part based on their affiliation with national museums (Jacknis 1985; Kelly 2002). However, Wilson does not fit neatly into this category, as will be discussed in further detail shortly.

The second approach to studying the past is the evolutionist perspective, which sought to reveal the "process of human evolution in its relation to the social and natural

milieu, by focusing on technological change, exchange and trade, defining cultures as the interaction between society and the environment" (Kaeser 2008b:382). Nineteenth century naturalists, whose backgrounds were generally in established sciences like geology and biology, were often evolutionists and viewed lake-dwelling material as a representation of a panhuman stage of cultural evolution (Ross 2011:32). Swiss scholar Édouard Desor and French archaeologist Gabriel de Mortillet, who were both involved in acquiring lake-dwelling material for the Peabody Museum at Harvard, fall into this category (Kaeser 2008b:382). Many British scholars, including E.B. Tylor and General Augustus Lane Fox Pitt- Rivers, also believed that objects provided direct scientific evidence for the history of the human mind through all of its stages of development (Gosden and Larson 2007:9).

Until World War I, all antiquarians/early archaeologists focused on material culture in their investigations of human prehistory, beginning as early as the sixteenth century in Europe (Ruoff 2004:13; Schnapp 1993:167). The passion for collecting 'treasures' from the past is as ancient as human curiosity. However, studying the past using material culture has its roots in the sixteenth century, when European scholars and members of the nobility began assembling collections with an informative function as "a microcosm of the world, interpreted as a macrocosm" (Schnapp 1993:167). Where there was a lack of textual evidence, European antiquarians of the 17th through the 19th centuries sought to reveal the meaning of historical objects by deciphering them as they would a text (ibid.: 176-181). This material culture focus is evident in the scholarly writings of Thomas Wilson, as exemplified in his 1899 publication *Arrowpoints, Spearheads & Knives of Prehistoric Times*.

Wilson originally published this work as a report for the SI in 1897, while he was acting as Curator of Prehistoric Archaeology. In this anthropological, cross-cultural study, Wilson gathered evidence from a variety of sources to create a classification of tool types based on material-types, use-wear analysis, form and function, all without being able to date the objects in question (1899a; Figure 2.12). This book also reflects the fact that Wilson was one of the few promoters of the antiquity of Native Americans at the time and his respectful attitude toward pre-contact cultures in the Americas was relatively unusual (Wilson 1899a; see also Petraglia and Potts 2004). However, using tool types as an example, he still partially adheres to the notion of unilateral cultural evolution that was current at the time, which placed Native Americans and stone tools at the bottom of human cultural achievement and viewed the gun as a higher form of technology (Wilson 1899a:831).

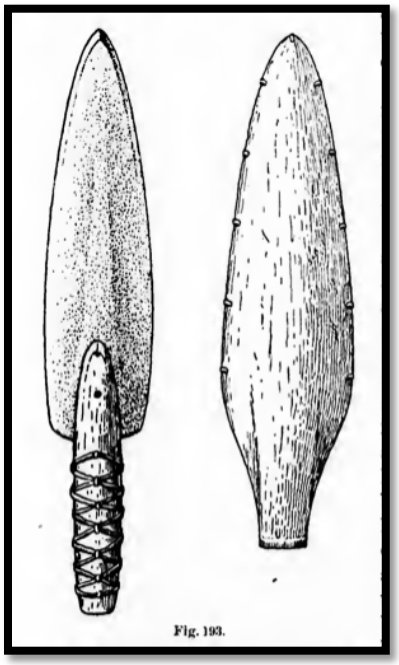

Figure 2.12: Image from Wilson (1899a: Figure 193.)

In the US, these types of systematic collections were often organized and exhibited based on form/function categories and perceived evolutionary schemes, reflecting the theoretical perspective of many early anthropologists working for the US government in museums (Jacknis 1985:79; see also Arnold 2013:885). For example, Wilson's contemporary in the ethnology department, Otis Mason, with the encouragement of the USNM Director George B. Goode, arranged all of the collections according to universal "inventions," like ceramics, tools, and musical instruments, etc. (Jacknis 1985:77). In effect, objects from diverse cultures were placed together according to the presumed evolution of each artifact type (Jacknis 1985:77). These collections represented the goal of the USNM to classify objects like biological specimens and create comparative culture histories. This was based on the assumption that there was an inherent connection between all groups of people, in that they all go through the same stages of cultural evolution. Collections were exhibited based on form/function as well, because Mason believed that cross-cultural comparisons were the only way to see the whole "truth" about human culture and that this was the most educational and interesting approach for the public (Jacknis 1985:77).

In 1887, the same year Wilson took up his position as Curator of Prehistoric Archaeology, Franz Boas, who is considered the father of American professional anthropology by many, began to argue with Mason about his arrangement and display of the USNM collections (Darnell 1998; Jacknis 1985:77; Stocking 1978). Boas promoted the theoretical perspective that the unique historic/cultural context of the object was more important than its form/function and that the collections should be arranged geographically by culture (Jacknis 1985:77).

Creating displays was also one of Thomas Wilson's primary responsibilities as a curator at the USNM and he had a general method of artifact arrangement according to chronology, geographic area, locality and sequence to show the evolution and progress of technology that was different from Mason's approach (Petraglia and Potts 2004:19). In an 1890 USNM report, Wilson described how he pioneered an "exhibition and study series" (Wilson 1890f:185). The exhibit series was meant for the casual museum visitor, and the study series was intended for individuals interested in the science behind the objects. These "synoptical case[s] or series of cases [...] arranged specimens from other countries than America separate from the "European specimens […] which were divided according to their respective ages [...] by countries and according to localities" in a conscious comparative approach (Wilson 1890f:185). These examples show how museum collections and their classification became a theoretical platform for early museum anthropologists with very different agendas and intellectual backgrounds.

Social and Institutional Networks

The development of professional anthropology and archaeology in the US occurred gradually over the course of the 19th century into the early 20th and was mostly centered around institutional contexts like the SI and the associated USNM and Bureau of American Ethnology (BAE) in Washington, DC, the Peabody Museum at Harvard and the University of Pennsylvania (Darnell 1998:12, 99). Also, during much of the 19th century, most anthropologists/ archaeologists were amateurs, both self-taught and self-identified, typically with loose affiliations to scientific organizations because the number of people interested in science outnumbered the available positions at the time (Darnell 1998:12-15). Only a few individuals, among them Thomas Wilson of the USNM, John

Wesley Powell (1834-1902) of the BAE, Frederic Ward Putnam (1839-1915) of the Peabody Museum at Harvard and Daniel Garrison Brinton (1837-1898) of the University of Pennsylvania, switched from previous careers to hold institutional positions in anthropology (Darnell 1998:12-15).

These institutional contexts, including museums and scientific organizations, e.g. the Anthropological Society of Washington, brought together people interested in anthropology from a variety of backgrounds, creating vast networks of participants who contributed to the development of the fields of anthropology and archaeology (Gosden and Larson 2007:54). The individuals involved ranged from wealthy donors who funded museum collecting (e.g. James Smithson), to professionals from other fields that had taken an interest in anthropology (e.g. Wilson, Desor, Rau, Brinton, Putnam, and Powell), to the undereducated trying to make their name and/or living in the fledgling profession (e.g. Messikommer and Moorhead, among many more).

While no individual or group of people singlehandedly influenced the production of archaeological knowledge at this time, by examining the relationships, negotiations and events surrounding collecting practices, it is possible to elucidate the process of intellectual development related to the study of the past (Gosden and Larson 2007:7). For example, while the USNM purchased Swiss lake-dwelling material collected by Thomas Wilson in 1904, there is far more to the story.[10] Thomas Wilson was in Europe from 1881-1887 because he was appointed US Consul first to Belgium and later to France (Mason 1902:288; Petraglia and Potts 2004). Although he was a diplomat and a lawyer by trade, he had a long-standing interest in archaeology and material culture

10 Accession number 42207 in the NMNH.

(Mason 1902:288). The first evidence of Wilson's contact with the USNM was in 1883, in the form of a letter to John Wesley Powell, the first director of the BAE, while Wilson was US Consul in France (Petraglia and Potts 2004:15). Wilson mentioned in this friendly toned letter that he had always been interested in "ethnographical subjects…and evidence of prehistoric man" but he had been too busy to pursue this interest in the past (Petraglia and Potts 2004:15). Wilson spent his years in diplomatic service collecting all over Europe and it was his collection that caught the attention of the individuals at the USNM.

As evidenced by letters in the National Anthropological Archives (NAA), Wilson was also a friend of the SI curator, Spencer Fullerton Baird. [11] Both men were members of the Anthropological Society of Washington (founded in 1879), and in 1887, Baird nominated Wilson to be a member of the Cosmos Club, a national organization of prominent scientists founded and run by SI scholars (Darnell 1998:13; Mason 1902:289; Petraglia and Potts 2004:16). Wilson was also well connected in both government and intellectual circles so it is possible they knew each other in some other capacity prior to 1879 (James Krakker 2013, personal communication; Mason 1902:289). Baird became the first curator of the USNM in 1850 and rose to become the second Secretary of the SI in 1878 until his death in 1887. [12] A prolific writer and naturalist, Baird developed a network of collectors for the museum, greatly expanding its holdings, and later oversaw the construction of the US National Museum that opened in 1881. Among his other accomplishments, Baird established the BAE and simultaneously was the first

11 Correspondence between Wilson and Baird 1884-1887. Smithsonian Institution National Anthropological Archives (NAA). (copy given to me by Bettina Arnold) (Appendix C).

12 Smithsonian Institution Archives (SIA). "Spencer Fullerton Baird, 1823-1887". http://siarchives.si.edu/history/spencer-fullerton-baird.

commissioner of the US Fish Commission (the precursor of the National Marine Fisheries Service).[13]

Several letters in the NAA indicate that Wilson knew what types of objects Baird was actively collecting for NMNH and that he sought out specific European archaeological material to enhance the collection accordingly.[14] Wilson asked Baird for Native American material to trade with European collectors on several occasions while serving as consul in Europe and Baird shipped pieces to him to complete transactions with European institutions.[15] For example, Wilson refers to a visit to an unspecified museum in Turin, Italy that wished to expand their North American prehistoric collection and was willing to trade European material for it.[16] In that same letter, Wilson alluded to future visits to museums in Copenhagen, Denmark and Stockholm, Sweden where North American exchange specimens would be useful. To justify his request, Wilson also noted that based on his previous experience, private collectors and institutions in Europe had proven unwilling to sell any objects but would exchange for objects of "equal or lesser value."[17] While in Europe, Wilson made contact with numerous museums and private collectors, including Ferdinand Keller, and through him, Jakob Messikommer, the owner of the Robenhausen site, in order to collect European archaeological material.[18] In 1883 Wilson personally excavated some objects at Robenhausen, purchased additional material

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13 Smithsonian Institution Archives (SIA). "Spencer Fullerton Baird, 1823-1887". http://siarchives.si.edu/history/spencer-fullerton-baird. Accessed on 6/20/13.

14 Wilson to Baird 10/18/1884. NAA. (copy acquired by Bettina Arnold)

15 Correspondence between Wilson and Baird 1884-1887. Smithsonian Institution National Anthropological Archives (NAA). (copy acquired by Bettina Arnold) (Appendix C).

16 Wilson to Baird 10/18/1884. NAA. (copy acquired by Bettina Arnold).

17 Ibid.

18 Jacob Messikommer to Rudolf Jucker 8/26/1886: AGZ Archives, Band 40, Nr. 453 (copied and translated by Bettina Arnold)

from Messikommer, and on a later visit in 1886 accompanied Messikommer to the site of Niederwil, another lake-dwelling "station" not far from Lake Pfäffikon. Baird used museum funds to have this material shipped back to the NMNH in 1885. [19] Wilson's collection was considered the most complete "set" of European archaeological material that the SI could hope to obtain.[20] Wilson later loaned the Swiss lake-dwelling material, along with other European material he had collected, to the NMNH until his son James formally sold it to the SI in 1904, after his father's death in 1902.

Based on this example, it is possible to see how complex the socially embedded value of a single collection may be, and how many people, events and transactions can be involved in its acquisition. Thomas Wilson's motivations and position within these intellectual traditions and his social/institutional networks will be evaluated in Chapter 4 to clarify the role his collecting practices played in the production of archaeological knowledge and development of archaeology as a discipline in the US at the turn of the 20th century. The next section will discuss how the "lake-dwelling diaspora" can be used as a proxy to better understand collecting practices at that time and situate Wilson's Robenhausen collection within that context.

2.5 The Diaspora Begins: 1853-1854

The English translation by John Lee of Keller's *The Lake-dwellings of Switzerland and Other Parts of Europe* came out in 1866, just after the end of the American Civil War. Extreme public interest in lake-dwelling sites and their artifacts, or "lake-dwelling fever", lead to a frenzy of collecting material from these sites in the

19 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy given to me by Bettina Arnold).

20 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy given to me by Bettina Arnold).

Anglo-American scholarly community after this date (Arnold 2013:876; Altorfer 2004).

Within a short period of time, large numbers of artifacts from these sites were dispersed to the US and UK through museum exchanges, the activities of middlemen or brokers and personal exchanges between excavators and antiquarians (Arnold 2013:876). The diaspora of lake-dwelling material was the result of the following interrelated factors (Leckie 2011:57; Ross 2011:5)**:**

- International interest in the antiquity of humans, after Darwin's *On the Origin of Species* was published in 1859, resulting in the proliferation of museum collections of geological, archaeological, and ethnographic artifacts.
- High epistemological significance placed on ancient artifacts and how these could be used to reconstruct lake-dwelling culture.
- The place of lake dwellings in a growing Swiss nationalist discourse.
- The discovery of many sites within a short period of time and the subsequent production of guidebooks on the best sites to visit.

When considering this phenomenon, it is important to distinguish the various motivations of the participants in this process. The lake-dwelling diaspora occurred at an early stage in the development of archaeology as a profession, so there was a thin line between antiquarian and looter (Arnold 2013:876). The motivation behind the collecting was what primarily separated these people from one another- whether they were mainly collecting for knowledge or mainly for profit. A complex combination of both also occurred (Arnold 2013, personal communication). As lake-dwelling items increased in market value in the 1860s, local fishermen in Switzerland and Italy began selling objects to the highest bidder rather than primarily to antiquarians (Arnold 2013:878).

This increase in value, combined with some collectors' desire to own a complete set of lake-dwelling artifacts, also led to the construction of fraudulent bone and antler tools that were sold as genuine (Altorfer 2004:78). Fraudulent Robenhausen material was also sold to museums and collectors by middlemen, some of whom were aware of the deception (Arnold 2013:878). For example, the Milwaukee Public Museum has objects in its Robenhausen collection attributed to a collector named Renggly that fall into this category (Arnold 2013, personal communication; Lillis 2005). Additionally, misattribution of site provenience was an issue because some sites, like Robenhausen, carried more prestige than others. An object might, therefore, be a genuine Swiss lake-dwelling piece but be sold as a "Robenhausen" piece to inflate its market value. This collecting frenzy reached its height in the late 19th century, but by the1890s, most European countries with lake-dwelling sites were prohibiting their exploitation or the sale of cultural patrimony abroad (Arnold 2013:887). This period of collecting lake-dwelling materials in the US peaked after John Lee's translation of Keller's work had expanded the potential market exponentially (Arnold 2013:879).

Robenhausen is a particularly interesting case study of the collection of lake-dwelling material by American and English antiquarians, who learned of the lake-dwelling sites via a number of publications beginning in 1862 with John Lubbock's *Natural History Review*. Its attractions included its long excavation history and the wide range of organic materials, especially textiles and botanical remains, recovered there. Social networks of scholars in the 1870s through about 1900 played a huge role in the distribution of lake-dwelling knowledge and artifacts through museum institutional contexts (Arnold 2013:879). For example, Édouard Desor, a former student of Louis

Agassiz, and Gabriel de Mortillet, a French naturalist and one of the founders of prehistoric archaeology in Europe, were each responsible for contributing collections of lake-dwelling material to the Peabody Museum at Harvard (Ross 2011). A second example is the Field Museum in Chicago, which obtained its Robenhausen collection through the anthropological work of Frederic Putnam and Franz Boas for the World's Columbian Exposition, or Chicago World's Fair, in 1893 and through a number of post-Columbian Exposition purchases (Jacknis 1985:76). These institutions were intent on expanding their collections temporally and spatially to illustrate human adaptation in a variety of environments. Third, Charles Dörflinger, a Civil War veteran and the first director of the MPM, personally acquired Robenhausen material while he was in Switzerland in 1893 on a rest cure after resigning from the museum for health reasons (Altorfer 2010; Arnold 2013:880). Lastly, Charles (Carl) Rau and Thomas Wilson were the primary collectors of lake-dwelling material for the USNM. Rau, a former school teacher and Curator of Prehistoric Archaeology at the SI, wrote one of the first American reports about the discovery of lake-dwelling sites in an 1875 *Harper's Magazine*, where he singles out Robenhausen for its excellent preservation of organic materials (Arnold 2013:879; Rau 1875). Rau is also known to North American scholars as one of the first to investigate the site of Cahokia in Illinois and other mound sites (Kelly 2002:124). Both Rau and Wilson can be described as "semi-professional" archaeologists due to their positions at the USNM, because they were both self-taught, even though they came from very different backgrounds.

2.6 Thomas Wilson: Biography and Collecting Activity

This section will be devoted to Thomas Wilson, including biographical information related to his archaeological activities and how he fits in to this network of scholars. Figure 2.13 is a photograph of Wilson taken in 1899 and Table 2.2 is a timeline of his life.

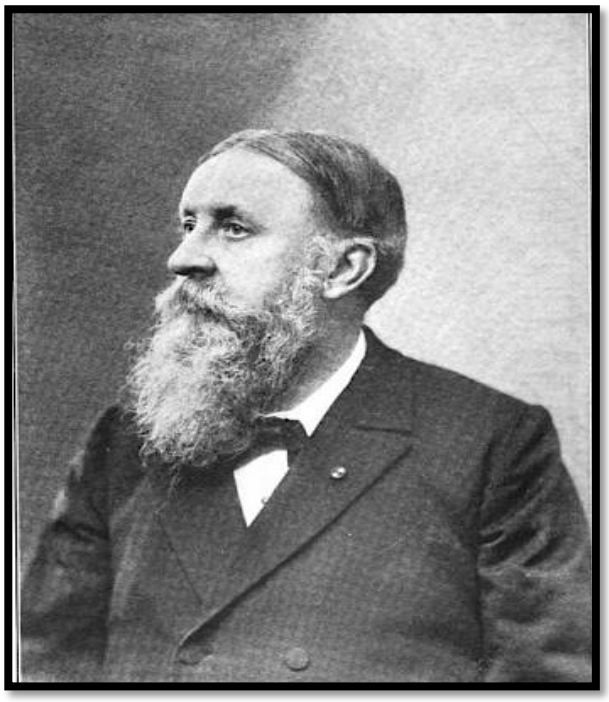

Figure 2.13: Portrait of Thomas Wilson (Wade 1899:23).

Table 2.2: Timeline of Thomas Wilson's Life	
1832	Born in New Brighton, PA
Unknown	Law training at Finch and Crocker- Des Moines, IA
1857	Married first wife Martha Jane Beacom (1836-1871)
1859	First child born (Sarah Lydia Wilson)
1860	Second child born (James Franklin Wilson)

1861	Enlisted in Union Army in American Civil War (2d Iowa Calvary; 4th Iowa Volunteers)
1864	Mustered from service Moved to Washington, D.C. to open law practice with Thomas Corwin of OH
1871	Wife Martha dies (unknown causes)
1872	Married second wife Virginia Robinson (1836-?)
1881	Retired from law practice
1881-1886	US Consul to Ghent, Belgium; Nantes (1882) and Nice (1883) France
1887	Curator of Prehistoric Archaeology at the Smithsonian National Museum (now NMNH)
1902	Death in Washington, D.C., unknown causes

Thomas Wilson was born in 1832 and grew up on a farm in New Brighton, Pennsylvania (Mason 1902:288). He was the son of Quaker parents, James and Lydia (Mercer) Wilson, both of whom were of Northern English and Scottish descent (Mason 1902:288; Wade 1889:23). Thomas Wilson was the eldest of five children (Wade 1899:67; Table 2.3).

Table 2.3: Thomas Wilson's Siblings (adapted from Wade 1899:67)	
Hannah Ann	1834-1896
John C.	1836-1862 (died in battle in the Civil War)
Benjamin F.	1839-1865
Alisan [*sic*]	1844-1910

Information about Wilson's family is relevant because it can provide insight into his worldview and early intellectual development. For example, Wilson's younger sister, Alisan, was the only one he did not outlive (Wade 1899:67; Table 2.4). She was educated in a public school and became a writer, advocating for women's rights and education (A. Wilson 1884). [21] Alisan also ran her own lucrative real estate business after learning about the business from her father. Like Thomas Wilson, she was a world traveler and participant in the 1893 Congress of Women at the World's Columbian Exposition in Chicago. Alisan had many business and travel opportunities that were not common for women at the time. Also, she never married, which may not have been her choice. As was customary at the time, Alisan tended to their blind father and invalid mother, an expectation likely not placed on Thomas Wilson as the eldest male child.

Thomas Wilson had a variety of occupations and interests during his lifetime. Among other things, he practiced a mechanic's trade, attended law school, served as a soldier, and later as a diplomat abroad, and through his interest in science and prehistory eventually became a museum curator (Mills 1902:158). Wilson's education began with the common schools in New Brighton, PA (Mills 1902:158). Once he completed his schooling at the age of 16, he moved to Salem, OH where he was an apprentice to a carriage maker for two years (Wade 1899:23). Wilson returned home to New Brighton at age 19, and helped his father run his carriage and buggy manufacturing business. It was during this period, in 1857, that he married Martha Jane Beacom (1837-1871).[22]

In subsequent years, Wilson traveled west and was a journeyman in several places

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21 Wilson, Alisan. "Sign of the Times." A Celebration of Women Writers. ed. Mary Mark Ockerbloom. http://digital.library.upenn.edu/women/eagle/congress/wilsona.html. Accessed 9/20/13.

22 Search for Thomas Wilson. http://ancestry.com. Last accessed 10/2013.

in Illinois and Missouri (Mason 1902:158). He later settled in Marietta, IA, (exact year unknown) where he fabricated plows. In Marietta, he became a deputy clerk of the court, which was how he became interested in the law (Mills 1902:158). Wilson received his legal training at the law office of Finch and Crocker, in Des Moines, IA, as was customary at the time (ibid.; Wade 1899:23). When he passed the bar, he returned to Marietta where he had a successful law practice until the American Civil War broke out in 1861.

At the beginning of the Civil War, Wilson enlisted in the 2d Iowa Cavalry, where he achieved the rank of Captain (Mills 1902:158; Wade 1899:23). His preference for the infantry branch of service led him to resign as Captain and join the 4th Iowa Volunteers (Mills 1902:158). In September of 1864 he was discharged from service and traveled to Washington, D.C to settle his accounts with the government. It was there that he formed a legal partnership with Thomas Corwin, a prominent Ohio lawyer. The focus of their practice was to prosecute claims against the government before the US Court of Claims and the US Supreme Court (ibid.; Harbert 1909:23). Wilson was so successful in his law practice that he was financially comfortable enough to retire in 1881 (Harbert 1909:23). An interest in foreign travel led to his appointment as United States Consul at Ghent, Belgium and later in Nantes (1882) and eventually Nice, France (1883) (Harbert 1909:23).

Although Wilson had many different careers, his interest in archeology was sparked at an early age, as he reportedly grew up near a prehistoric Native American mound (Mason 1902:288). His subsequent periods of residence in Ohio, Illinois, Missouri and Iowa during the American Civil War also yielded collections of Native American

artifacts. Wilson's background as a diplomat allowed him to collect objects from all over Europe as well. During his leisure time in Europe from 1881-1886, Wilson pursued his interest in archaeology and anthropology and began amassing a collection of European material, the majority of it from the Paleolithic (Mason 1902:288; Petraglia and Potts 2004:15). While in Ghent, Belgium, Wilson found a cave bear from the Mousterian period that he enthusiastically collected and eventually gave to the USNM; it was included in the exhibition he developed for the Cincinnati Exposition of 1888 (ibid.; Wilson 1888e:12; see also Petraglia and Potts 2004). In 1882, when he was in Nantes, he explored megalithic monuments in Brittany and caves in the Garonne region to the south (Mason 1902:288). He also obtained access to archival records on the trial of Gilles de Rais, a 15th century French serial killer commonly known in folklore as Bluebeard, on whom he published a monograph (Harbert 1909:24; Wilson 1899). Once posted to Nice in 1883, he was able to travel to Switzerland, Italy and southern France with ease (Mason 1902:288). After serving as US Consul in Belgium and France for five years, Wilson spent the subsequent two years traveling across Europe with his second wife Virginia (Robinson) Wilson, whom he married in 1872, exploring and studying any prehistoric site or collection he could find, always "on the lookout for knowledge beneficial to his countrymen" (Harbert 1909:24; Mason 1902:288).

> "With untiring zeal, accompanied by Mrs. Wilson, you saw him exploring caves and cemeteries, measuring monoliths of Brittany, tramping over Scandinavia and the British Isles, **looking down through the glass bottom of his boat upon the remains of Swiss lake cultures** (my emphasis), searching for hidden treasures in Etruscan tombs, and **all the while taking notes**, gathering photographs and publications, and collecting substantial specimens of man's ancient handicraft. At the same time he was mindful always of the archaeology of thought as preserved in folklore" (Mason 1902:289).

In the course of his lifetime, Thomas Wilson collected 18, 475 objects from all over the world. Table 2.4 shows the accessions at the SI that comprise his collection, the dates when they were accessioned, and where they were collected. [23] The majority of the collection was obtained in Europe (11,105 objects) while Wilson served as US Consul there. This material included a large number of Paleolithic stone and bone implements from France (2,630). Wilson also collected 4,960 Neolithic objects- primarily stone tools, along with some pottery, animal bones, etc. from England, Scotland, France, Belgium, Scandinavia and Italy. Additionally, Wilson amassed a "representative series" of Neolithic and Bronze Age Swiss lake-dwelling material from a variety of sites, including the Robenhausen material documented in this project.[24] The 1,323 Neolithic lake-dwelling objects included stone and bone implements, ceramics, horn sockets for chisels and hatchets, clay spindle whorls, textile fragments, botanical remains. Wilson's 288 Bronze Age Swiss lake-dwelling objects included hatchets, swords, poignards, spearheads, arrowpoints, fish hooks, fibulae, knives, sickles, razors, spoons, pins, rings, bracelets, buttons, and ornaments. Wilson also collected Bronze Age material from Italy, Sweden and England (84 objects). Etruscan ceramics, including impressive Samian ware, (878 objects) and miscellaneous Roman material (307 objects) comprised the rest of Wilson's European collection. Lastly, 354 objects from Egypt were also obtained by Wilson from W. M. Flinders Petrie's 1899 expedition to the Fayum. The remainder of Wilson's collection was obtained from various states in the US.

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23 Exhibit A: The Thomas Wilson Collection of Prehistoric Archaeology. Accessions and Number of Specimens, n.d.: NMNH Microfilm. (copy acquired by Bettina Arnold); Exhibit B: The Thomas Wilson Collection of Prehistoric Archaeology. Description of Accessions, n.d.: NMNH Microfilm. (copy acquired by Bettina Arnold).

24 Archaeology. Wilson Collection, n.d.: NMNH Microfilm (copy acquired by Bettina Arnold).

Table 2.4: The Thomas Wilson Collection of Prehistoric Archaeology at the SI NMNH[25]			
Accession Number	**Date**	**Number of Specimens Collected**	**Location**
19006 (includes material from Robenhausen at NMNH)	4/30/1887	10, 361	Italy, Switzerland, France, England, and the Scandinavian countries
20019	1/8/1888	3	Thenay, France
22523	11/5/1889	99	France, England, Greece, Peru
23823	12/10/1890	1	Italy
26538	12/9/1892	92	France
26795	3/13/1893	2	Norfolk, England
28333	7/11/1894	1	Europe
30134	12/31/1895	6	Brittany, France
31636	2/11/1897	1	Europe
34329	11/21/1898	347	Paris, France- originally from Egypt
6557	11/27/1900	200	France
6558	11/27/1900	268	Carnac, Brittany, France
6770	5/4/1901	8	Thebes, Egypt
6771	5/6/1901	14	France and Italy
20034	1/13/1888	383	US- PA, NJ, DC
21087	8/28/1888	2	US- New Brighton, PA

25 Exhibit A: The Thomas Wilson Collection of Prehistoric Archaeology. Accessions and Number of Specimens, n.d.: NMNH Microfilm. (copy given to me by Bettina Arnold).

21238	10/4/1888	70	US- OH
21355	11/9/1888	1	US-VA
22100	6/10/1889	19	US- DC
22129	6/17/1889	6	US-DC
22154	6/25/1889	105	DC
24891	10/3/1891	174	US-NJ, PA
25461	3/12/1892	48	US-OH
26870	4/5/1893	187	US-OH
27435	10/16/1893	3,202	US-OH
27816	2/17/1894	2,564	US-VA
27988	3/22/1894	18	US-TN
27989	3/22/1894	14	US-AK
27990	3/22/1894	1	US-NJ
27991	3/22/1894	22	US-MD
27992	3/22/1894	5	US-MD
27993	3/22/1894	9	US-VA
28243	6/6/1894	15	US-OH
28321	7/6/1894	1	US-MD
28322	7/6/1894	1	US-VA
28668	11/5/1894	4	US-OH
28695	11/14/1894	1	US-MD

28821	1/11/1895	1	US-VA
29612	8/1/1895	4	US-OH
29630	7/9/1895	18	US-OH
31633	2/11/1897	1	US-NC
32169	6/10/1897	64	US-TN
34384	12/7/1898	111	US-OH
32200	6/18/1897	21	US-NC
Total		18,475	

In addition to his collecting and folklore research, while he was consul Wilson wrote numerous letters to the US State Department on subjects as diverse as the Treaty of Ghent, the reclaiming of lands in the Netherlands, postal savings institutions, the marriage of American girls to citizens of France and much more (Mason 1902:288; Harbert 1909:24).

In 1887 after a brief period as an administrator, Thomas Wilson replaced Charles (Carl) Rau, the late head of the Department of Antiquities, as the first Curator of Prehistoric Archaeology at the USNM, serving in this capacity until his death in 1902 (Mason 1902:289; Petraglia and Potts 2004:15). Wilson's appointment as curator at the USNM was reflective of the custom of the period to choose individuals of social stature and distinction for such positions, due to the lack of formal training in archaeology at the time (Petraglia and Potts 2004:15). During Wilson's tenure at the USNM, he published monographs, designed expositions, and lectured for the public on anthropological

subjects. Table 4.1 in Chapter Four includes a list of his publications. He also held a professorship at the National University Law School, where he was given the honorary degree of LLD (Harbert 1909:24).

Wilson's position at the SI also afforded him the opportunity to create exhibitions at a number of events, including the 1888 Cincinnati Exposition, where he curated an exhibit on prehistoric archaeology, the World's Fair at Chicago in 1893 and the Exposition in Atlanta in 1895 (Mills 1902:159). In 1889 and 1900, Wilson was sent to Paris as a delegate from the Smithsonian to the Congrès International d'Anthropologie et d'Archaéologie prèhistoriques (CIAAP), or International Congress of Anthropology and Prehistoric Archaeology (ibid.; CIAAP Report 1902: 69). Wilson contributed papers to the CIAAP written in French on prehistoric man in North America, or *La haute ancienneté de l'homme dans l'Amérique du Nord,* and on the classification of arrowheads, spear points and stone knives, or *Classification des pointes de fleches, de pointes de lances et des couteaux en pierre* (CIAAP Report 1902:203). He is also listed as a vice president for the organization, along with Sir John Evans, Oscar Montelius and other well-known European archaeologists (ibid.:7). Wilson visited the Columbian Historical Exposition in Madrid, Spain in 1892 and served on the jury of awards at the World's Columbian Exposition at Chicago (Mills 1902:159). The King of Belgium inducted Wilson into the Order of Leopold for his service as a commissioner to the exposition of Brussels in 1898 (ibid.). Lastly, Wilson was appointed a regent of the National University from which he received an honorary LLD degree (year unkown) (Wade 1899:23; Mills 1902:159).

A member of numerous learned societies, Thomas Wilson was deeply involved in

as many anthropological pursuits as were available to him (Table 2.5).

Table 2.5: Thomas Wilson's Professional Memberships (Mason 1902:290)
Anthropological Society of Washington
American Folk-Lore Society
Société d' Anthropologie de Paris
Anthropological Institute of Great Britain and Ireland
Société d' Anthropologie de Bruxelles
Société d' Anthropologie de Nantes
Archaeological and Asiatic Association of Nevada, Iowa
American Association for the Advancement of Science
Cosmos Club
Congrès international d'anthropologie et d'archaéologie prèhistoriques (CIAAP)

In 1899, Wilson became the Chairman of the "Committee on the Protection and Preservation of Objects of Archaeological Interest" that was established by the American Association for the Advancement of Science (AAAS) to promote a bill in Congress for the preservation of Native American antiquities situated on federal lands. [26] Other members of the committee included Frederic Putnam, N. H. Winchell, G. K. Gilbert, A. W. Butler and George A. Dorsey, all well-respected amateur archaeologists of the day (Hinsley 1985). In the same year, the Archaeological Institute of America (AIA) set up a "Standing Committee on American Archaeology" with members Franz Boas, Charles Bowditch and F.W. Putnam. The two groups combined their efforts in drafting a bill and Wilson served as "Chairman of the Committees of the two Societies." These efforts

26 National Park Service. "NPS Archaeology Program for the Public." http://www.nps.gov/archaeology/pubs/lee/Lee_ch6.htm. Last updated 8/13/2013.

eventually led to the Antiquities Act of 1906.

Wilson could be described as an amateur archaeologist or antiquarian, as the profession was still in its infancy at the time and he lacked formal training. However, he was considered by those working in the field at the time to be a professional, as evidenced by the number of times he is cited as an expert on North American stone tools in Warren K. Moorhead's 1900 book *Prehistoric Implements* (Christenson 2011:1; see also Moorhead 1900). Moorhead (1900:iii) mentions in the Preface to his book that "there are 27 men who may be considered scientific archaeologists" and he evidently considered Wilson to be one of them. Moorhead did not specifically mention the criteria he used in making this determination but Christenson (2011) replicated and expanded on this list based on whether the individual was employed by a museum or university, engaged in and published research, and was actively involved in scientific societies (Table 2.6). However, this list is not exhaustive and it must be noted that there were also individuals who were instrumental to the development of archaeology as a profession who were not included because they either a) were working independently, like Moorhead or b) were scientists from other fields who had an interest in archaeology, like J.W. Powell of the BAE, or c) were overlooked by or unknown to Moorhead, like Carl Rau (Christenson 2011).

Wilson was included in Christenson's list for several reasons. Along with his position at the Smithsonian, he wrote a manual for laypeople entitled *Circular Relating to Prehistoric Anthropology*, describing how to record and excavate sites, including a detailed account on the recording of stratigraphy (1888f). In addition, he penned numerous other papers on archaeological subjects including *A Study of Prehistoric*

Anthropology: A Handbook for Beginners (1890a) and *Arrowpoints, Spearpoints and Knives of Prehistoric Times* (1899a). Wilson's commitment to education through public lectures, monographs, exhibitions and association with professional societies and the NMNH made him one of the earliest professional archaeologists in the United States. These activities distinguish him from other lake-dwelling collectors of his time, especially those who collected for profit or prestige and antiquarians who were not concerned with provenience, like Renggly or the Swiss collector Victor Gross, whose massive Swiss lake collection is now at the Peabody Museum at Harvard (Ross 2011).

Table 2.6: North American Archaeologists of 1900 (adapted from Christenson 2011)

Name	Dates	Affiliation	Residence	College Education	AAA Invitee (I), Founding Member (F) orAA pub 1899–1901 (p)	AAAS 1900 Fellow (F); Secretary (S+yr.)
*Bandelier, A. F.	1840–1914	AMNH	Bolivia	None		
**Beauchamp, W. M.	1830–1925	NYSM; retired minister	NY	Delancy Divinity School		S(89,92)
*Boyle, David	1842–1911	Ontario Provincial Mus.	Canada	teaching certificate	F, p	
*Cushing, Frank H.	1857–1900	BAE	DC	None	p	
*Dorsey, George A.	1868–1931	Field Museum	IL	Harvard PhD anthro.	I, F, p	F
*Fewkes, J. Walter	1850–1930	Smithsonian	DC	Harvard PhD zoology	I, F, p	
Gordon, George	1870–1927	Peabody	Mexico	Harvard		

*Hodge, F. W.	1864–1956	Smithsonian	DC	Columbian	I, F, p	
*Holmes, W. H.	1846–1933	USNM	DC	McNeely Normal BS	I, F, p	S (91)
*Hough, Walter	1859–1935	USNM asst. cur.	DC	WVU PhD	I, F, p	F
*McGee, W. J.	1853–1912	BAE, ethnologist	DC	None	I, F, p	F
*McGuire, J. D.	1842–1916	USNM volunteer	DC	None	I, F, p	
**Mills, W. C.	1860–1928	Ohio State HS	OH	Ohio State BA	F	
Owen, Charles L.	1861–1927	Field Museum	IL	Denison BA	I, F	
*Pepper, George H.	1873–1924	AMNH/Hyde Explor. Exped.	NY	Understudy of Putnam	F	F
**Putnam, F. W.	1839–1915	Harvard; AMNH	MA/NY	Harvard (no degree)	I, F	F
*Saville, Marshall H.	1867–1935	AMNH	NY	Harvard (no degree)	I, F, p	S (98);F
**Smith, Harlan I.	1872–1940	AMNH	NY	Michigan BA	I, F, p	F
Thompson, Edward H.	1857–1935	Peabody	Mexico	None		
**Thomas, Cyrus	1825–1910	BAE	DC	Law	I, p	
Uhle, Max	1856–1944	UC Berkeley	CA/Peru	Leipzig PhD		
*Willoughby, Charles C.	1857–1943	Peabody	MA	None	F, p	F
Wilson, Wilson,Thomas	**1832–1902**	**USNM (NMNH)**	**DC**	**Law**	**p**	**F**

* Mentioned in Moorehead (1900)
** Listed in preface or chapter authors in Moorhead (1900)

A WorldCat search indicated that Wilson's personal journal from 1881-1887, personal photographs and other documents are stored at the State Historical Society of Iowa (SHSI) in Des Moines.[27] Due to the fragility of the manuscripts and the absence of an inventory, this source could not be included in this MS thesis. However, Becki Plunkett, an archivist with the SHSI Des Moines branch, provided a photograph of the collection and a preliminary list of its holdings for future research (Figure 2.14).

27 WorldCat. http://www.worldcat.org/title/papers-1881-1887/oclc/052778443

The Wilson manuscript collection includes 31 volumes regarding his diplomatic service, collecting activities and several of his writings on archaeological topics, e.g. his paper "Prehistoric Art" (Wilson 1896a; Appendix C). The manuscript collection is important because the more that is known about Wilson's life, the better our understanding of his collecting practices and activity as an archaeologist.

Several primary sources were used to gain information about Wilson's life in this section and must be further evaluated. Otis Mason (1902) and William C. Mills (1902), two of his peers, wrote obituaries of Wilson that were used as references for part of the biographical information.

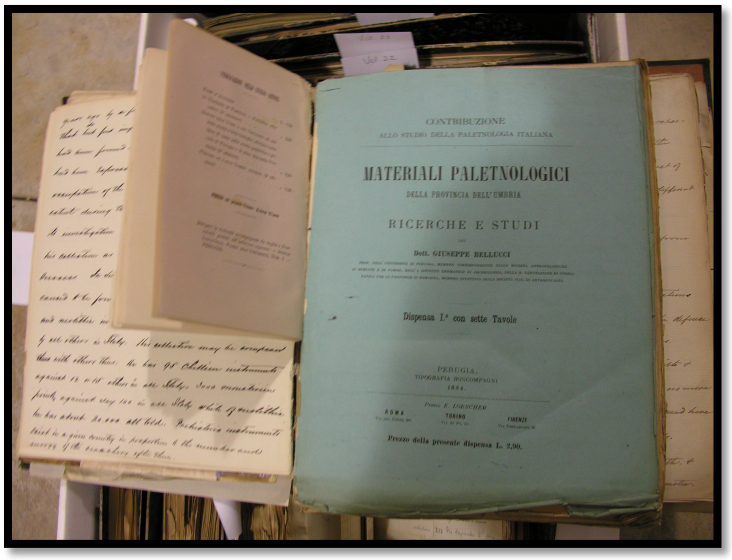

Figure 2.14: Photograph of Wilson Manuscripts Housed at the SHSI in Des Moines, IA (photo courtesy of Becki Plunkett, Special Collections Archivist at the SHSI, 11/1/13).

Otis T. Mason was the Curator of Ethnology at the SI and a colleague of Wilson's at the USNM, as well as a fellow member of the Anthropological Society of Washington (see section 2.4 for more information). W.C. Mills was the Curator of the Ohio State

Archaeological and Historical Society (1902) and knew Wilson through this position. Mills was also the first North American archaeologist to use the word "culture" in an archaeological context in his writings about the Fort Ancient and Hopewell cultures (Trigger 2006:187). One of the other sources was a family history written by Isaac Wade, one of Wilson's relatives (1899). Wilson and Wade were both descended from John Okely, of Bedford, England, a 17th century minister in the Established Church, which prompted Ward to write about their family with Wilson's help. The passages about Wilson in this publication are full of high praise and almost seem like a eulogy, although Wilson was still alive when it was written. Another primary source used to gain information about Wilson's life was by Albert Newton Harbert, a curator at the Historical Society of Linn Co., Iowa. Harbert reviewed Thomas Wilson's paper on the swastika (1894b), and followed the review by highlighting information about Wilson's life in the *Annuals of Iowa* (1909:19-25), a publication associated with the Historical Department of Iowa. Harbert praised Wilson for "making careful comparisons" in his assessment of the function of the swastika in numerous cultures (1909:22) and closes his article by commending Wilson as an open-minded and successful individual. Archival sources from the NMNH, NAA and AGZ were used to further elucidate Wilson's collecting activity and will be elaborated on in Chapter Three, along with primary literary sources and collections research. An additional source by Petraglia and Potts (2004) highlights Wilson's career at the USNM in relation to his role in the development of the Old World Paleolithic collection at the SI and has been used to provide independent confirmation of data acquired from other sources.

CHAPTER THREE: METHODS

3.1 Introduction

The methods employed to answer each of the research questions are highlighted in this section, which includes a discussion of a theoretical orientation and methodology, including primary literary research methods, archival research and the assessment of selected museum collections. First, the theoretical framework for analyzing collecting practices and museum collections to understand their influence on knowledge about the past is discussed. Second, the methodology for using primary literary and archival research selected is reviewed. Third, the methods of collections research utilized in this study of Thomas Wilson's Robenhausen material at the NMNH are highlighted including basic artifact identification, description and condition assessment, photography, and an analysis of the distribution and relative proportions of artifact types. Fourth, a comparative analysis of Thomas Wilson's NMNH collection and Charles Dörflinger's Robenhausen collection from the Milwaukee Public Museum (MPM) is outlined in order to situate Wilson's Robenhausen material within a known collecting context involving a contemporary who also visited the site and donated his material to a natural history museum. These two focal collections will then be compared to Robenhausen collections from other museums, including the published material in Switzerland, with respect to artifact categories represented and collections strategies employed. Fifth, the creation of a database compiling all of the Wilson Robenhausen material is briefly described. Lastly, the limitations of this study are assessed in terms of their impact on studies such as this one and directions for future research are proposed.

3.2 Theoretical Orientation

The link between human life and the material world has been the focus of many anthropologists and scholars (Gosden and Larson 2007:6; Kopytoff 1986; Miller 1987; Pearce 1992). Museums are an exceptionally useful place to study this link because they house the material evidence of human history (Pearce 1992:1; Straus 2004:ix). This thesis investigates the role played by early museum collecting practices in the construction and transmission of archaeological knowledge about prehistoric Europe (Leckie 2011:iii).

Theories regarding the production of archaeological knowledge must also be evaluated to understand early museum collecting practices. Individuals producing archaeological knowledge have always been susceptible to broader intellectual, social, economic and political trends in how they interpret the past. Intellectual trends within archaeology as a discipline must first be considered. In the last 200 years, an oppositional tension has persisted between rationalism, universalism and positivism (e.g. processual archaeology) on the one hand and romanticism, particularism and idealism (e.g. post-processual archaeology) on the other (Trigger 1995:263; see also Binford 1962; Hill 1991; Hodder 1991). However, both extremes have their pitfalls. Post-processualists argue for the impossibility of carrying out positivist archaeology, free from outside influences, shaped by "explanations based on explicit theories being tested in the light of adequate evidence, according to proper scientific methods" (Trigger 2006:2). Yet when the relativism promoted by post-processualists is taken to an extreme, all truth is rendered subjective and there is no validity in distinguishing between any particular set of ideas. A middle ground is preferred in this thesis- the broader assertion that scientific

knowledge is a form of cultural production is accepted, with the caveat that the nature of archaeological evidence itself constrains interpretation (Trigger 2006:2).

Political and economic factors must also be discussed. It has been repeatedly argued that the construction of nearly all archaeological knowledge can be linked to nationalist or political agendas, "either operating in the context of nationalism itself, or of nationalism in combination with imperialism and colonialism" (Díaz-Andreu 2007:11; see also Arnold 1990; Trigger 1995, 2006). Political context plays a significant role in archaeological research, as is exemplified by the case of the National Socialist regime in Germany, which used prehistoric archaeology to enhance its legitimacy (Arnold 1990:464). On the other hand, there are less extreme examples, including the use of Swiss lake-dwelling material to bolster the formation of a national identity and the motivation of US museums to obtain Old World collections in order to be seen as "civilized" (Leckie 2011:57; Goode et al. 1888). The focus of the main US National Museum (SI) is reflected in the *Report on the Progress and Condition of the United States National Museum for the Year Ending in June 30th, 1888,* which states that:

> Every considerable nation has a museum in its capital city- centres [*sic*] of scientific and educational activity- the treasure-houses of the nation, filled with memorials of national triumphs in the fields of science, art and industrial progress" and that "they **[museums] are legitimate objects of national pride, for upon the character of its museum and libraries intelligent persons visiting a country very properly base their judgment as to the nature and degree of the civilization of the people**" (Goode et al. 1888:6, my own emphasis).

The SI's main goal was to create one of the greatest museums in the world and the report even lists the museums in Europe that they clearly saw as equals and competitors (Goode et al. 1888:7).

In studying the interactions between prehistoric objects and the individuals who collect and interpret them, it must also be noted that museums housing archaeological material are not immune to the influences of political and social ideologies either in what they choose to collect or in how the past is interpreted in publications and exhibits (Levy 2006:135). Levy provides a unique example in her 2006 study of the (mis)representation of the Saami population in North European museums. The Saami are a minority group indigenous to northern Europe and northwest Russia. However, within current national borders, the majority populations, Norwegians, Swedes and Finns, also consider themselves to be indigenous to the region. As a result, the minority Saami population tends to be underrepresented or misrepresented in the exhibits in national natural history museums (ibid.).

A significant distinction is made in Levy's article between 'modernist' or national museums, i.e. those that originated in the late 19th century, and "post-museums," community museums that have opened in the last 25-30 years (Hooper-Greenhill 2000; cited in Levy 2006:137). National museums, like the SI, tend to place importance on categorization, order, and the notion of "progress"; consequently, they tend to be ideologically tied to projects of imperialism and nationalism. In contrast, "post-museums" tend to be more colorful, noisy, complex spaces that portray more diverse voices in their exhibitions e.g. the Saami community museums.

Levy shows that in each type of museum, visitors would get a different idea of the Saami because of what the museums choose to emphasize in the exhibits (Levy 2006:137). However, both types of museums use similar iconography. The national museums have traditionally depicted the Saami as reindeer herders frozen in the 18th and

19th centuries without an ancient past. Although they no longer subsist this way, the Saami community museums also rely heavily on reindeer herding iconography. Nevertheless, their motivation for doing so *emphasizes* their ancient past and therefore supports their claims to the landscape. The depiction of heritage, ethnicity and identity when portraying the past in both types of museums has the potential to be skewed and this example illustrates the importance of identifying and circumventing political ideologies when examining how the past has been portrayed. The archeological interpretation of the past is no doubt impacted by some combination of all the above factors, although the way they relate to each other in specific situations is complicated (Trigger 1995:265). As this example demonstrates, the interpretation of the past is also shaped by variables such as what archaeologists personally and collectively think they know about prehistory and the methods they use for collecting, analyzing and interpreting archaeological data. In addition, the physical evidence of the past that accumulates over time plays a role. Thus, it becomes clear that each of these factors should be considered when examining early museum collectors and collecting practices.

This thesis focuses on primary archival sources and the physical collections of two contemporary US antiquarians to provide evidence that knowledge about the past, in this case the lake-dwellers of Switzerland, is created and transmitted through the interaction between people and objects, and through the structured transformation of material remains (Gosden and Larson 2007:121; Leckie 2011:60). It is not only the objects in museums that inform knowledge about the past but the vast social networks to which museums belong, from the individuals who made and used the objects in the

collections to collectors, traders, dealers, curators, lecturers, academics, administrators, travelers, students and the public (Gosden and Larson 2007:5).

Thomas Wilson and his collection of Robenhausen material at the NMNH was chosen as a case study because "writing a history on the micro scale of a single scientist makes it possible to encompass…the social, political, intellectual, cultural and religious factors which interact in the construction of archaeological knowledge" (Kaeser 2008a:9). By investigating Thomas Wilson's writings, both public and private, one can start to elucidate the lens through which Wilson and his contemporaries viewed and interpreted the past. In doing so, early museum collecting practices and their influence on archaeology as a discipline in the US and Europe will become clearer.

In addition, Thomas Wilson's collecting practices influenced how lake-dwelling material is used and understood today, and therefore were a major consideration in the development of a theoretical and methodological framework for this thesis. As previously discussed, many antiquarians were less interested in provenience information of the material they obtained than its aesthetic or technical features because the dominant paradigm for gaining knowledge about the past was focused on creating typologies (Kaeser 2004a:37). Thomas Wilson was an exception to this pattern because he provided information on where and when he obtained the Robenhausen material in his SI collection. [28]

28 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NAA, (photocopy of document acquired by Bettina Arnold).

Charles Dörflinger's MPM Robenhausen collection was chosen for comparison in order to determine whether and in what ways Wilson's collection of lake-dwelling material was representative of 19th century US antiquarians. The two men were similar in some ways (both were Civil War veterans who had expressed an early enthusiasm for studying antiquities) but were very different in other ways. Dörflinger's collection will be discussed in Ch. 4. The following methods section will address the sources used to obtain information about Wilson's life and collecting practices and will highlight the data collected and how these were documented for use in this thesis.

3.3 Methodology

As this case study deals with a previously uncontextualized historic collection, the dataset also relies heavily on primary literary and archival research. By examining both the writings of Thomas Wilson and his contemporaries, one can get a better idea of the thought processes underlying the acquisition of these collections and the archaeological knowledge they produced (Schlanger and Nordbladh 2008:3). Archival sources, including letters, internal reports, notebooks, marginal annotations, photographs, accession records and personal catalogs, take this process a step further because they were not intended to be seen by the public (ibid.). Although they cannot be viewed in positivist terms as independent of the biases and perspectives of their producers, they can provide additional unique insight into the lives of early museum collectors and archaeologists. The following sections will describe the information obtained from each source.

Primary Literary Research

Documentary information on Thomas Wilson's life, activities, previous Robenhausen research, early museum collections and collection practices, and the lake-dwelling diaspora highlighted in Chapter Two (along with archival material and collections information) will be used to answer the following research questions: How were Thomas Wilson's collecting practices situated in the 19th century context of such activity and what was his influence on the development of early archaeology in the US? In order to ascertain Wilson's motivations, a selection of his public writings is reviewed, providing a firsthand account of how he viewed objects and past cultures (Wilson 1890a; 1895c; 1899a). Lastly, Thomas Wilson's obituaries, written by fellow academics Otis T. Mason (1902) and W.C. Mills (1902), provide the background information on Wilson needed to partly reveal his motivations and collecting practices. The annual reports from the SI during Wilson's tenure at the museum (1887-1902) also provide clues regarding the motivations of the museum and its scientists. Secondary sources in English, French and German were consulted where relevant as well.

Primary and secondary literary research was also used to obtain information regarding other Robenhausen collections, paying special attention to collection motivations that differed from Wilson's, i.e. recreational collectors, dealers and other scholars (Altorfer 2001, 2004, 2011; Arnold 2013; Gosden and Larson 2007; Leckie 2011; Ross 2011). This information was gathered to illustrate the range of types of collectors, their motivations and how their interpretations may have differed based on background. This information also has implications for how the collections can be used in the present.

Archival Research

Background research in the NMNH Archives in the summer of 2013, following a pilot study carried out by Bettina Arnold in the summer of 2012, yielded Thomas Wilson's accession records, letters detailing his donation to the NMNH and his detailed, handwritten personal catalog (Appendix B). [29] The first archival source examined, the accession records, provided details on when, how and why the collection changed hands, from Wilson to the USNM (NMNH).

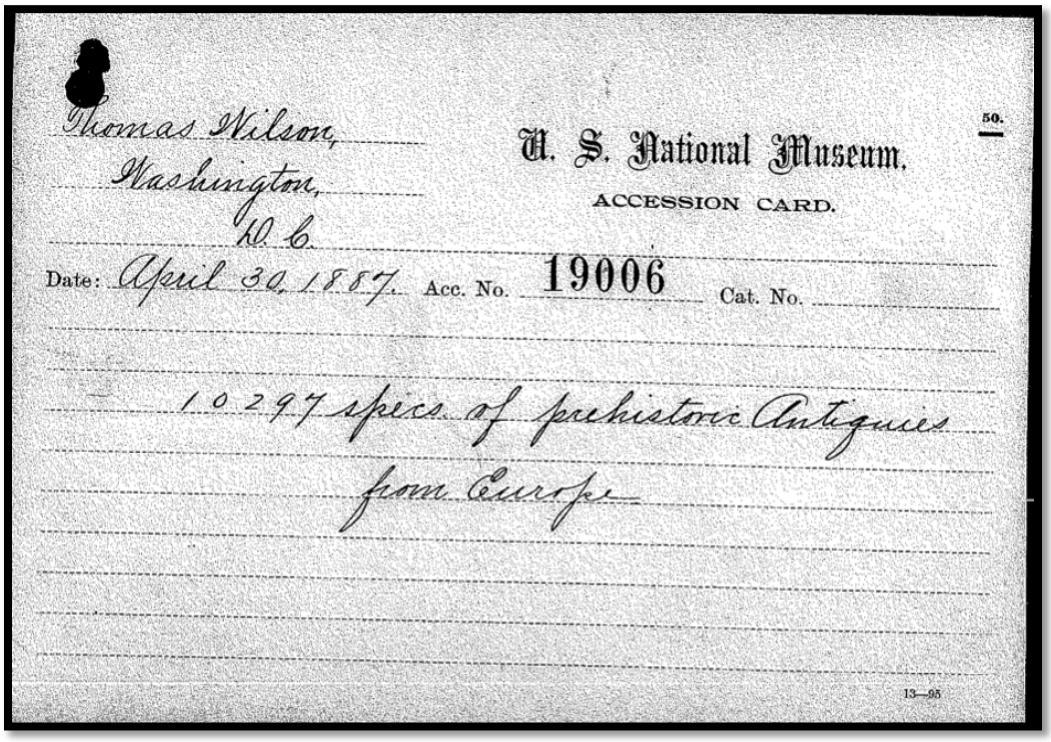

Figure 3. 1: USNM Accession Card 19006 10/30/1887.

29 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NAA, (photocopy of document acquired by Bettina Arnold)., USNM accession records for #19006 and #42207, 1886-1904. NMNH Microfilm (copies of documents acquired by Bettina Arnold)., Correspondence between Wilson and Baird 1884-1887. SI National Anthropological Archives (NAA), (copy acquired by Bettina Arnold)., Richard Rathbun (Assistant Secretary of the USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA, (copy acquired by Bettina Arnold).

The second archival source, consisting of letters exchanged between Wilson and various employees at the NMNH, was carefully examined to gain insight into his relationship with the museum, his personal connections and collecting motivations (Appendix C). The ten letters exchanged between Spencer Fullerton Baird, the SI Secretary at the time, and Wilson from 1884-1887 were especially helpful because they provided details regarding the circumstances of their exchange and of Wilson's feelings about his collecting excursions. [30]

The third archival source, Wilson's catalog, was used to create an Excel spreadsheet of Wilson's SI Robenhausen material and objects purchased from Jakob Messikommer, with corresponding numbers and object descriptions. This catalog also explained how and roughly where Wilson obtained the objects, although there is no *in situ* provenience information. This information was consulted to create a research plan for the collections, elucidate Thomas Wilson's relationship with the NMNH, and provide insight into his collecting practices, including his motivations and personal connections (Gosden and Larson 2007; Leckie 2011).

Several other archival sources were also consulted. For example, upon examining Wilson's personal catalog, it was found that he took photographs while he was visiting Robenhausen.[31] These photographs proved difficult to locate, as they did not appear using a search for Wilson in the SIRIS online database. Archivists at the NAA were consulted in the search for the photographs mentioned in Wilson's catalog. The photographs located in the search can be seen in Chapter Four.

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30 Correspondence between Wilson and Baird 1884-1887: NAA. (copy acquired by Bettina Arnold).

31 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NAA, pg. 38. (photocopy of document acquired by Bettina Arnold).

Wilson's personal manuscripts, notebooks and photographs at the SHSI in Des Moines could not be obtained at the time of publication, but may contain more images. An additional archival source, correspondence between Messikommer and Rudolph Jucker from the AGZ in Switzerland, was also consulted (previously mentioned in Chapter 2); this provided additional information on Wilson's visit to Robenhausen and other sites with Messikommer and indicates that Ferdinand Keller was the initial point of contact between Messikommer and Wilson.[32]

Database Research on the NMNH Lake-Dwelling Collection

In order to determine the amount and nature of NMNH lake-dwelling material collected by Thomas Wilson, the SI's online database was recorded and analyzed. A total of 1,380 objects in the database were listed as archaeological material from Switzerland.[33] This information was exported from the NMNH database into an Excel spreadsheet. The spreadsheet was filtered and searched to generate an estimate of the number of lake-dwelling objects donated by Thomas Wilson. However, preliminary research carried out by Bettina Arnold suggested that the on-line records underestimated the actual amount of material from the site in the collections (Arnold personal communication 2013). The reason for this is that some objects donated by Wilson were not attributed to him as the donor in the database. The NMNH online database also yielded different totals for the Robenhausen and other lake-dwelling material collected by Wilson, depending on the search terms used.

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32 Jacob Messikommer to Rudolf Jucker 8/26/1886: Antiquarische Gesellschaft Zürich (AGZ) Archives, Band 40, Nr. 453 (copied and translated Bettina Arnold).

33 Smithsonian Institution National Museum of Natural History. Search the Anthropology Collections. http://collections.mnh.si.edu/search/anth/. Last updated 2013.

The site name is often misspelled, mis-identified or presented in different ways (e.g. Pfäffikon, Wetzikon, etc.) This situation draws attention to one of the main problems with relying solely on such on-line databases for research. Orthographic and language-related errors, as well as a lack of understanding of site naming conventions, make such searches incomplete. There are misspellings in the SI database, leading to accuracy issues with the queries. For example, Lake Pfäffikon is spelled three different ways in the NMNH database: Lake Pfäffikon, Lake Pfaeffikon, and Lake Pfäffikorn.

The NMNH online database indicates that Thomas Wilson contributed 571(about 41%) out of the 1,379 objects from Swiss lake-dwelling sites in their collection.[34] Of those 571 objects, 90 are listed as specifically coming from Lake Pfäffikon (i.e. probably Robenhausen or nearby), while 138 are listed as originating in Zürich or Switzerland in general, for a total of 228 Swiss lake-dwelling objects. This information was used to create a list that was used as a frame of reference to search the physical collections. Object labels to be used in the photographs were also created from this list prior to the research carried out on the physical collections.

Wilson's USNM Collection

Wilson numbered each object using his own system and created a hand-written catalog that identified and described the object, including whether he found it himself or purchased it from Messikommer (Appendix B). [35]

34 Smithsonian Institution National Museum of Natural History. Search the Anthropology Collections. http://collections.mnh.si.edu/search/anth/. Last updated 2013.

35 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NMNH Microfilm, (photocopy acquired by Bettina Arnold).

In addition, the botanical specimens were prepared for preservation purposes in various hand-blown glass bottles with corks and affixed with Robenhausen labels by Messikommer (Altorfer 2004:40) (Figure 3.2).

Figure 3. 2: A100390 from NMNH.

Wilson even mentions in his catalog that casts of the wooden piles were created because it was known that they would shrink once out of the peat from which they were excavated. [36] A majority of the objects in the SI collection are currently stored in their original bottles and mounts. The NMNH also still uses Wilson's identifications of the lake-dwelling material in their database and exhibited much of it for a number of years, bringing this transaction to the present time (James Krakker, personal communication).

On a side note, the database, along with supplemental information from SI NMNH Archaeological Collections Specialist, James Krakker, indicates that three other people donated most of the remainder of the NMNH Robenhausen collection: Charles (Carl) Rau, Ludwig Rütimeyer (a Swiss zooarchaeologist) and Henri de Saussure (a Swiss entomologist and geologist, whose collection was loaned to the USNM but never cataloged) (Table 3.1).[37]

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36 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NMNH Microfilm, (photocopy acquired by Bettina Arnold).

37 Switzerland Loan Numbers. SI NMNH KeEmu Search, 6/21/13. (copy given to me by Archaeological Collections Specialist, James Krakker).

Table 3.1: Robenhausen Donors to the NMNH		
Donor	**Year**	**Number of Objects**
De Saussure	1866	28
Rau	1887	127
Rütimeyer	1871; 1874	83
Wilson	1883	96
Total		334

The NMNH also has a KeEmu database for internal use, which seems to provide slightly more and/or different information than the online database, although it is also incomplete. The Archaeological Collections Specialist, James Krakker, provided a list of Robenhausen material from the NMNH database that included the drawer locations of each object and a list of material donated by Saussure that did not come up in the online database.

Collections Research

Thomas Wilson's personal catalog and accession records were compared to the online database at the SI to obtain a preliminary inventory of what was likely to be found in the collection storage area at the NMNH prior to visiting the physical collection. In his catalog, Wilson numbered every object and included a brief description, organizing the objects by whether they were purchased from Messikommer or were his own finds (Figure 3.3). Table 3.2 is a list of Wilson's Robenhausen material based on his catalog. It includes his item numbers, object descriptions and whether he purchased the item (P)

from Messikommer or found it at the site (F). Clarifications on Wilson's descriptions are in parentheses. Only 14% of the objects listed were excavated by Wilson; the rest were purchased from Messikommer.

Table 3.2: Thomas Wilson's Robenhausen Material at the NMNH

Wilson's #	F or P	Wilson's Catalog Description
1200	P	Stone hatchet with deer horn socket
1201	P	Linen cloth- in glass
1202	P	Machines for hauling fish nets (whisks)
1203	P	Machines for hauling fish nets (whisks)
1204	P	Bone knife
1205	P	Bone knife
1206	P	Bone chisel
1207	P	Pottery- bottom of vase
1209	P	Bone knife
1210	P	Stone hatchet w/ deer horn socket
1211	P	Charred grains of wheat
1212	P	Flax balls
1213	P	Poppy seed
1216	P	Seeds
1220	F	Piece of wood
1221	F	Piece of soft birch wood pile
1222	F	Piece of oak pile
1223	F	Pottery sample
1224	F	Piece of dried clay (daub)
1226	F	Pollisoir (polisher)
1227	P	Piece of loaf of bread
1228	F	Apples in half
1229	F	Wheat
1230	F	Barley
1231	F	Hazel nuts
1232a	F	Burnt straw of hay
1233	P	Birch bark
1234	P	Pine cone- scotch fir
1235	P	Pine cone- spruce
1237	P	Piece of bread
1238	P	Hazel nuts
1239	P	Hazel nuts
1240	P	Water chestnut
1241	P	Silver fir

1243	P	Flax fiber
1244	P	Flax fiber
1245	P	Vegetable fiber
1246	P	Vegetable fiber
1250	P	Woven linen cloth
1251	P	Apples
1252	P	Apples
1253	P	Wheat
1254	P	Wheat
1255	P	Wheat
1257	P	Barley
1259	P	Barley
1260	P	Barley
1261	P	Apple seeds
1262	P	Beech nuts
1263	P	Flax balls
1264	P	Dogwood
1265	P	Buckbean
1266	P	Spruce fir seeds
1267	P	Flax seed
1268	P	White water lily
1269	P	Marsh bed straw
1270	P	Common elder
1271	P	Burdock
1272	P	Bird cherry stones
1273	P	Water plantain
1274	P	Bramble
1275	P	Water crowfoot
1276	P	Parsnip
1277	P	White goosefoot
1278	P	Bramble
1279	P	Lake scirpus
1280	P	Pond weed
1281	P	Marsh lousewort
1283	P	Common tinder fungus
1284	P	Red stone
1285	P	Flint arrowhead
1286	P	Bergcrystal (quartz crystal)
1287	P	Tooth of castor beaver
1288	P	Snail shell
1289	P	Fish scales
1290	P	Burnt straw or hay
1291	P	Millet

1292	P	Dogrose
1293	P	Raspberry
1294	P	Poppy
1295	P	Hornbeam
1296	P	Undetermined by Wilson
1297	P	Undetermined by Wilson
1298	P	Undetermined by Wilson
1299	P	Undetermined by Wilson
1300	P	Undetermined by Wilson
1301	P	Undetermined by Wilson
1302	P	Undetermined by Wilson

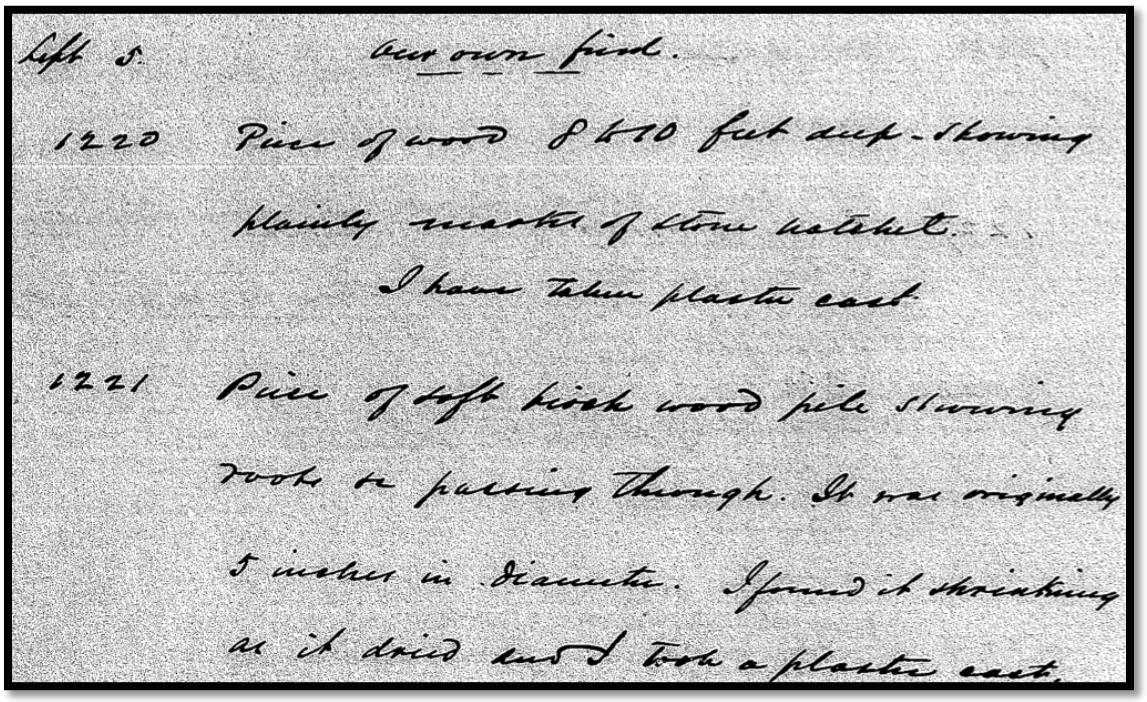

Sept 5. Our own find.
1220 Piece of wood 8 & 10 feet deep - showing plainly marks of stone hatchet. I have taken plaster cast.
1221 Piece of soft birch wood pile showing roots in passing through. It was originally 5 inches in diameter. I found it shrinking as it dried and I took a plaster cast.

Figure 3. 3 Excerpt from Wilson's Catalog (NMNH Microfilm) [38]

Transcription of Figure 3.3:
Sept. 5 Our Own Find.
1220 Piece of wood 8 x 10 feet deep, showing plainly marks of stone hatchet. I have taken plaster cast.

38 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NMNH Microfilm, pg. 41. (copy acquired by Bettina Arnold).

1221 Piece of soft birch wood pile showing roots in passing through. It was originally 5 inches in diameter. I found it shrinking as it dried and I took a plaster cast.

The collections research was carried out at the NMNH between June 10th and June 21st 2013. The collection is housed in Storage Pod 2 of the MSC facility in Suitland, MD. Access to the collections was obtained through the Archaeological Collections Specialist, James Krakker, who provided a list of the storage drawers that contained Swiss lake-dwelling material. The primary focus was the Robenhausen material in the Wilson lake-dwelling collection. The twelve items from other sites that were purchased from Messikommer by Wilson were not studied in detail. Basic artifact identifications, descriptions and photographic documentation of the objects were completed, paying special attention to material known to have been donated by Wilson based on his records and the museum's database. The drawers examined are listed in Table 3.3 below.

Table 3.3: Storage Location Drawers for Wilson's Robenhausen Material at the NMNH

Location Prefix	**Drawer Numbers**
2342B00	101, 102, 108, 113, 116
2342B00	201, 202, 205, 206, 208, 209, 210, 212, 214

Each drawer was systematically investigated and each object was cross-referenced with Wilson's catalog and the list from NMNH. Another spreadsheet was created for notes on the objects found in the collection (Appendix C). A basic examination of the artifacts was completed to ascertain whether they were typical of Robenhausen material in other collections.

Previous publications (Altorfer 2000; Keller 1866; Leckie 2011; Suter et al. 2011) and the MPM collection were consulted to obtain familiarity with the range of artifacts typical of the site and served as a reference. Any potentially fraudulent artifacts were searched for although it is unlikely that any of the material donated by Wilson falls into that category, based on the fact that he is purported to have excavated much of the material himself and purchased it from Messikommer for the benefit of the SI. This does not mean, however, that all SI NMNH Robenhausen material is necessarily authentic. Descriptions of the objects were recorded including their material, dimensions, and basic condition. All labels on the objects, including Messikommer's, Wilson's and the Smithsonian's, were noted. Each original Messikommer label was photographed in close detail to be seriated, if possible. In addition, any evidence of conservation treatment at the time of excavation was documented. This information will be compared to other collections, especially the Dörflinger collection at MPM. Evidence of past conservation treatments is also crucial in determining the research and interpretive potential of the collection and will be helpful to future researchers who may access the database described later in this chapter.

Detailed photographs were taken of the objects at NMNH with a Nikon digital camera. A small, flexible tripod was used to secure the camera. There is no photo studio available for researcher use at the MSC, so a small, portable photo studio was purchased that includes lighting and a background (Figure 3.4).

Figure 3.4: Portable Photography Studio (Amazon.com)

Each photo included a size scale, as well as a label with the object's catalog number. Photograph naming and metadata conventions (photographer and contact information, date, location, Smithsonian copyright) were developed to standardize the process. Each digital photo was designated as follows: "Museum Catalog Number_Photo Number." This information is included with the photos in Appendix C.

Analysis of Artifact Types

The primary question to be addressed was how typical or representative is Wilson's collection? Do deviations from the norm (as represented by Dörflinger's MPM collection and the excavated material from the site) provide clues to Wilson's collecting strategy? The spreadsheet in Appendix C created using Thomas Wilson's catalog was used to tabulate the artifact types in the collection. Tables 3.4-3.6 indicate whether the

objects were purchased from Messikommer or whether Wilson excavated the objects personally. This distinction was made because it is indicative of Wilson's collecting practices and what was available at the site at the time of his visit. Also, the artifact distribution was analyzed using Thomas Wilson's catalog rather than what was found in the physical NMNH collection because the document contains his descriptions of the material, mitigating modern bias or ways of categorizing the objects. In addition, for the purposes of this thesis, what Wilson collected is more significant than what remains in the SI NMNH collections of that material today- although this information will also be presented and discussed.

Table 3.4: Wilson's Robenhausen Material	
Excavated by Wilson	13 (14%)
Purchased from Messikommer	83 (86%)
Total	96

Table 3.5: Categories of Robenhausen Artifacts Excavated by Wilson	
Non-organic (Non-perishable)	3 (20%)
Organic (Perishable)	10 (80%)
Total	13

Table 3.6: Categories of Robenhausen Artifacts Purchased by Wilson	
Non-organic (Non-perishable)	16 (19%)
Organic (Perishable)	67 (81%)
Total	83

The range of artifact types collected by Thomas Wilson was determined to identify his collecting practices as compared to those represented by other Robenhausen assemblages (Gosden and Larson 2007:95; Leckie 2011:58). In particular, the percentage

of the items collected that were historically considered mundane[39], or of less importance than other classes of artifacts, such as botanical remains, textiles, and charred wood, were calculated and compared to other collections of the period, especially Charles Dörflinger's material at the MPM (Higgitt et al. 2011:83). The percentage of different artifact classes, such as tools and pottery, items that would have been commonly collected and sold at the time as "type" specimens were also determined (Gosden and Larson 2007:95; Straus 2004:xi). The core of most museum collections of lake-dwelling material from this time period is made up of stone, bone or antler tools and weapons. Such items make up 50% of the collection at Oxford's Pitt Rivers Museum obtained prior to 1945, for example (Gosden and Larson 2007:95-96). Ceramics also fall into this 'commonly collected' category. In addition, the relative frequency of particular object categories in Robenhausen collections in Switzerland as documented in Kurt Altorfer's 2000 Masters thesis, issued as a monograph in 2010, was compared with the Wilson collection and will be discussed in Chapter Four.

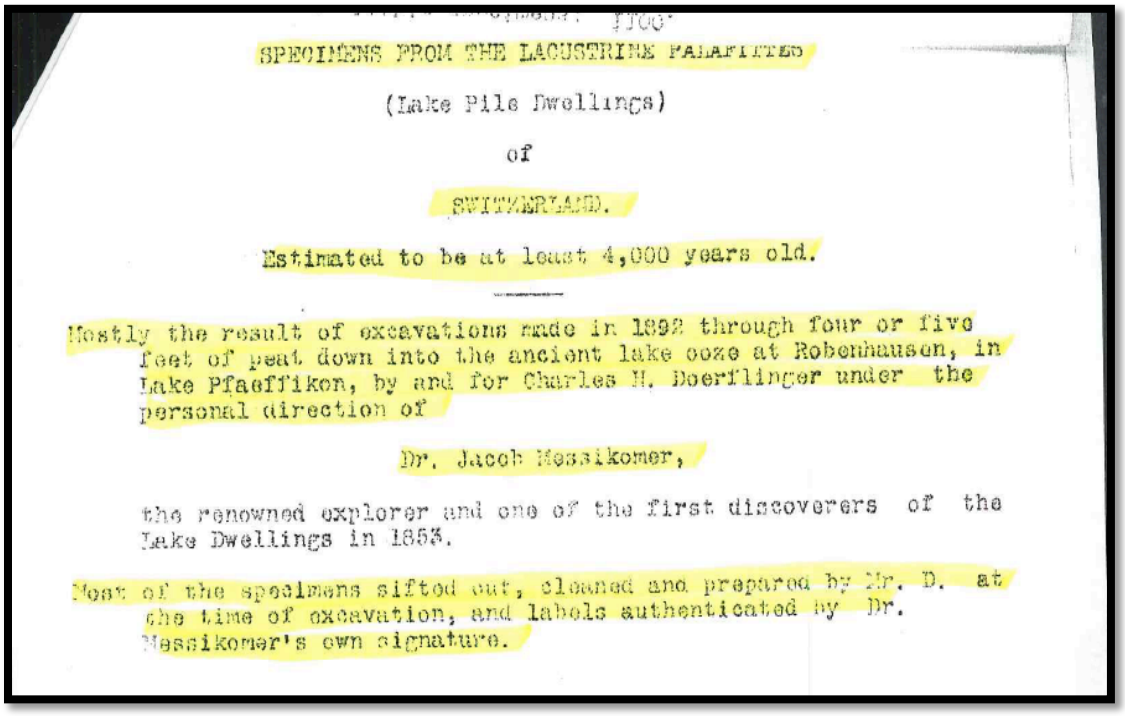
Charles Dörflinger's Robenhausen Collection at the MPM

On 7/25/13, Charles Dörflinger's Robenhausen material at MPM was examined. This collection was chosen as a comparison to the Wilson collection for several reasons: 1) Both men were amateur archaeologists who were employed by large natural history museums; 2) Both men visited the site personally and excavated some of the material themselves, although at different times, making for an interesting comparison and;

39 The term "mundane" is used for these types of objects because they were not considered desirable by the wealthy cultural elite who were involved in collecting at the time (Hinsley 1985:58). They were interested in antiquities as art and believed that only the "perfect products of human genius" had a legitimate place in a collection.

3) Lastly, both men came from similar, middle class backgrounds, were Civil War veterans, and shared an interest in ancient technology and cultural evolution (Arnold 2013:881). There is no evidence that Dörflinger and Wilson knew each other, making the comparison more interesting and relevant to answering the question of the representative nature of Wilson's collection.

Charles Dörflinger, a Civil War veteran like Thomas Wilson, was the first Custodian (Director) of the Milwaukee Public Museum, a pre-eminent 19th natural history museum in the Midwestern US (Arnold 2013:881; Lurie 1983). Upon his retirement in 1887, he visited Europe with his family (Arnold 2013:881). According to the checklist of Dörflinger's donation, he visited Robenhausen in 1892, several years after Thomas Wilson (Figure 3.5).



SPECIMENS FROM THE LACUSTRINE PALAFITTES

(Lake Pile Dwellings)

of

SWITZERLAND.

Estimated to be at least 4,000 years old.

Mostly the result of excavations made in 1892 through four or five feet of peat down into the ancient lake ooze at Robenhausen, in Lake Pfaeffikon, by and for Charles H. Doerflinger under the personal direction of

Dr. Jacob Messikomer,

the renowned explorer and one of the first discoverers of the Lake Dwellings in 1853.

Most of the specimens sifted out, cleaned and prepared by Dr. D. at the time of excavation, and labels authenticated by Dr. Messikomer's own signature.

Figure 3.5: MPM Acc. Record from Dörflinger's Donation [based on his handwritten catalog, now lost](Arnold pers. comm.).

Additionally, correspondence between Jakob Messikommer and Ferdinand Keller references Dörflinger's visit (K. Altorfer: Notizen in Autobiographie Messikommer: S. 166 [May 1893], translated by Arnold 2013:881):

> A veteran of the American Civil War of Secession (the Civil War), C. Dörflinger from Milweuke [*sic*], visited me often around this time from Zürich, where he was living with his family…we also went together to Niederwil [*sic*].

This letter corroborates the MPM catalog, which indicates that the collection in question was excavated by and for Charles Dörflinger under the personal direction of Messikommer and that most of the specimens were sorted out, cleaned and prepared by Dörflinger at the time of excavation and given labels with Messikommer's signature (Figure 3.6).

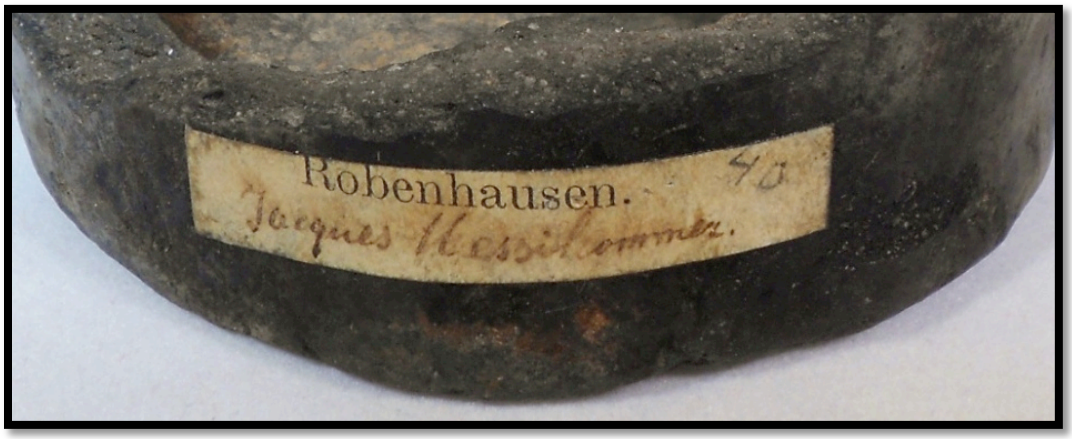


Figure 3.6: Bottom of Ceramic Vessel from MPM Collection Showing Messikommer Robenhausen Label.

However, the documentation does not indicate which material Dörflinger excavated himself versus what was purchased from Messikommer. Dörflinger's catalog describes the specimens as having been excavated "by and for Charles H. Dörflinger under the personal direction of Dr. Jakob Messikommer" (Fig. 3.5), suggesting some material was

not personally excavated by Dörflinger. (Dörflinger addressed Messikommer as "Dr." because Messikommer was awarded an honorary doctorate in 1893 by the University of Zürich [Altorfer 2000:7]). The MPM has other material from Robenhausen, but not all of it can be definitely identified as coming from Robenhausen and/or Messikommer (Arnold 2013, personal communication). Accession 213, donated by William Frankfurth, is most likely legitimate, as he was in Europe in 1890-1891, but the material donated by Renggly is less clear in its origins (ibid.; see also Caywood 2011).

Dawn Scher Thomae, Anthropology Collections Manager and Associate Curator at MPM, conducted a search of MPM's KeEmu database to find the items from Robenhausen donated by Charles Dörflinger. This search yielded a total of 96 objects, all in Accession 3884, also coincidentally the number of Robenhausen objects in Thomas Wilson's SI catalog. The majority of the collection was located and accounted for using the location information on the database printout. This information was compared to the checklist of Dörflinger's donation, obtained through previous research into the MPM archives by Bettina Arnold, which included the number of objects and a brief description.[40] The entire collection was not matched to the catalog because the concern was primarily to compare the descriptions in the checklist to Wilson's catalog produced around the same time. Hence, the whole collection was not photographed but a selection of objects with Robenhausen labels was chosen to compare to Wilson's collection. [41]

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40 Copy of Checklist of Prehistoric Implements… Collected and Exhibited as a Loan Deposit in the Public Museum of Milwaukee by Charles H. Dörflinger, n.d. Milwaukee Public Museum Archives. (copy acquired by Bettina Arnold).

41 For more information about MPM's lake-dwelling collection see their website: http://www.mpm.edu/research-collections/anthropology/online-collections-research/robenhausen-site. Last updated 2013.

Table 3.7 is a list of the items in the collection based on the original checklist, which totaled 108. Clarifications regarding Dörflinger's descriptions are in parentheses. There were several items that have since been crossed off on the checklist, bringing the current total at MPM to 96. I was unable to locate the items that were crossed off the checklist. Based on Dörflinger's descriptions from his catalog and the MPM database, Table 3.8 was created using the distinction non-organic versus organic, respectively. The percentage of what were at the time mundane, or overlooked, artifacts versus commonly collected artifacts was calculated and will be compared to Wilson's collection in Chapter 4.

Table 3.7: Dörflinger's Robenhausen Material at MPM

Object Description (#)
Bundles of charred flax fibers prepared for the loom, with grains of wheat and barley (2)
Bundles of charred flax fibers prepared for the loom, with grains of wheat and barley (1)
Jar of charred wheat and barley (1)
Jar of charcoal, charred twigs and birch bark (1)
Box of charcoal, charred twigs and birch bark (1)
Box of stable manure, roots, blades of grass, and heads of wheat; somewhat charred (1)
Box of charcoal, charred grain, etc. (1)
Envelope with charred wheat and barley (1)
Charred apples (2)
Well preserved hazelnuts (3)

Long box of charcoal and charred wood (1)
Cards with charred straw and withes, charred (3)
Card with a piece of 2 ply twine, charred (1)
Glass frame with a piece of fine cloth, charred (1)
Glass frame with a piece of coarse cloth, charred (1)
Box cover with a branch of a birch tree retaining its bark (1)
Chip from pile, showing rough marks of stone axe (1)
Handle and two pieces of a scoop or ladle (1)
Handle of a tool (1)
Handle of ashwood (1)
Head of war club, made of a pine knot or root (1)
Chip of a pine pile (1)
Chip of an oak pile (1)
Charred piece of a plank or a rafter (1)
Piece of a hunting bow, made of Eibe-wood (yew), the toughest and most elastic wood ever known to have existed in Switzerland, and still used to make bows (1); the site produced several of these.
Whole pile (1)
Stone gauge or celt, edge blunted (1)
Stone (serpentine?) ax, edge blunted (1)
Stone ax, edge bruised (1)
Slate (?) hatchet, broken (1)
Small jadeite hatchet (1)

Base of the antler of a reindeer (or deer), showing cutting (1)
Piece of well preserved rind of a deer's antler (1)
Head of a wooden war club, mortised; broken (1)
Flint (jasper?) scraper (1)
Bone chisel (1)
Double pointed needle, pin or awl of bone (1)
Bone hair pin, awl or needle (1)
Claw or tooth (?)(1)
Part of paddle; unfortunately the softened paddle was destroyed by the "preserving fluid" recommended (1)
Chunks of burned clay, probably from chinking or fireplace (daub) (5)
Pot (lower part) containing charred supplies and sundries (1)
Ornamented pieces of the rim of pots (2)
Complete handle of a very large vessel (1)
Part of a large pot bottom (1)
Fragments of a pot rim with an expansion for handle (2)
Other fragments of pottery over one inch to 4 inches in diameter, besides about 20 smaller pieces (50)
Total 108

Table 3.8: Composition of Dörflinger's Robenhausen Collection at MPM	
Non-organic	67 (62%)
Organic	41 (40%)
Total	108

Database of the Thomas Wilson Robenhausen Collection at the NMNH

An Excel spreadsheet was created to record the NMNH catalog and accession numbers, Wilson's personal catalog numbers, an object description, and any additional comments regarding the status of the object. This information was then compiled into a database, along with the photographs (labeled with NMNH catalog number), and included in Appendix C in this thesis. It will also be made available digitally and online in order to be accessible for future research.

Justification of Methodology

The methodological approach taken in this thesis is comparable to recent studies undertaken by Leckie (2011), Gosden and Larson (2007), and Petraglia and Potts (2004) although on a different scale. Leckie's dataset included all of the Swiss lake-dwelling material, with an emphasis on Robenhausen, in ten British museums, Gosden and Larson analyzed the entire Pitt-Rivers Museum collections at Oxford, and Petraglia and Potts analyzed all of the European Paleolithic material at the SI. All three studies demonstrate how museum collections and the social networks they represent can provide clues regarding the production of knowledge about the past. However, these studies were on such a large scale that more nuanced questions possible in the study of a single collection and donor, like this one, could not be addressed.

The benefits of doing a "microhistory," or biography of a single scientist, have been extolled by Kaeser (2008a). He shows that writing history on this scale enables you to encompass nearly all of the variables (social, intellectual, political, religious and cultural) that interact in the construction of knowledge about the past, thereby making it possible to "transcend the anecdotal" (Kaeser 2008a:9). Furthermore a microhistory is

not only the subject of the study but a proxy that leads to an understanding of the wider context of archaeology in the past. Kaeser also argues that research into the history of archaeology is "particularly vulnerable to present [theoretical, social and political] biases" and suggests that studying archival material aids in mitigating this problem (2008a:9). It is for these reasons that a single collection and collector were chosen as a case study, with a comparable collection for comparison. Although it is recognized that it is not possible to identify every factor involved, this approach allows for a more in-depth look at the mechanisms, particularly the idiosyncrasies, that influence individual choice and agency in producing knowledge about the past.

This case study demonstrates that museums are not just final resting places for objects- they can be catalysts for exploring the history of archaeology, as well as its future. "To study a museum is to study an endless, endlessly shifting, assortment of people and things" and the possibilities are infinite (Gosden and Larson 2007:6). It is for this reason that Thomas Wilson, and his social networks and collecting practices, are the primary focus of this thesis. Special attention is paid to the types of objects collected, why they were collected, how they were treated and used and the information that they were believed to contain (Gosden and Larson 2007:10).

3.4 Limitations

The complexity of this case study also encompasses its limitations- the nearly infinite number of social connections, negotiations and events involving even a single donation to the NMNH. To study all of the Robenhausen material at the NMNH in this amount of detail would be too much for a single project of this kind.

This project is also limited in that working with a collection of this age, there is bound to be missing information. For instance, although it is known that Wilson participated in excavations at Robenhausen, there is no information regarding the people who were likely to have helped him or all of the various contacts he made along the way in Europe. His manuscripts and papers in Des Moines, IA may help fill in these details if they can be consulted in the future. If not, they should be part of any subsequent study. Wilson's wife Virginia was also said to be present on his collecting trips but there is no specific information on her role in his collecting process, if any (Mason 1902:1889). She apparently spoke German well, but may not have been present or translating for him on Thomas Wilson's September, 1883 visit to Robenhausen based on Messikommer's comments in his letter to Jucker (1886). [42] Although it is not possible to know every detail regarding each collection or object donated to the NMNH from the late 19th century, the information that is known may be used to show how particular social networks and collection practices led to the production of archaeological knowledge regarding the Wilson Robenhausen collection at the NMNH. This research was conducted with the hope that interest in this and similar historic collections will be reinvigorated and that similar studies will be undertaken to add to our present knowledge of the history of archaeology and the social history of European/American interactions at the end of the 19th century.

42 Jacob Messikommer to Rudolf Jucker 8/26/1886: Antiquarische Gesellschaft Zürich (AGZ) Archives, Band 40, Nr. 453 (copied and translated by Bettina Arnold).

3.5 Summary

This chapter addresses the theoretical orientation of this research and focuses on the methods performed to answer the research questions posed in Chapter One. The data gathered using these methods were incorporated to address each of the research questions in the subsequent chapters. For example, collections research and some literary and archival sources were used to answer questions 1, 2, 4 and 5: the distribution of artifact types collected by Wilson and how Wilson's collection compares to collections made by his contemporary Charles Dörflinger vs. Swiss collectors; how his collecting practices affected the interpretive and/or research value of the Robenhausen material at the SI and how this collection might be used in the future. A database compiling all of the lake-dwelling collection information was also created to aid in future research using this collection. The background information highlighted in Chapter 2 was utilized along with archival material and research on the NMNH collection and the MPM collection to answer the third research question: how Thomas Wilson's collecting practices can be situated in the 19th century context of such activity and the influence he had on the development of early archaeology in the US. The next section, Chapter 4, will include an analysis of these data and will discuss their significance in relation to the research questions posed in Chapter 1.

CHAPTER FOUR: ANALYSIS AND DISCUSSION

4.1 Introduction

The following section includes an analysis of the data presented in Chapter Three and the conclusions that can be drawn based on those data. The first section of this chapter provides an analysis of each type of data collected- primary and secondary literary sources, archival material and collections research including the analysis of artifact types in Wilson's collection at the NMNH, Dörflinger's collection at the MPM and Swiss Robenhausen collections as described in Altorfer (2010). The following sections will describe the information obtained from each source, highlighting the parameters of the collection and information gleaned about the life of Thomas Wilson, his collecting practices and his contributions to the production of knowledge about the past.

4.2 Primary Literary Sources

A wide variety of primary and secondary literary sources were consulted in order to situate Wilson's collecting practices within their 19th century context. They were also crucial in understanding his involvement in the production of knowledge about the past and the development of archaeology as a field. The primary literary sources, including a selection of Wilson's scholarly writings, various publications by his contemporaries, including obituaries, museum reports and family history, will be analyzed in their 19th century context in the following section, while the secondary sources highlighted in Chapter Two will be tied back in in Chapter Five.

Thomas Wilson's Publications

A selection of Wilson's publications will first be analyzed for evidence of the influence of other contemporary scholars, as well as possible influences from European prehistory on Wilson's thinking about human cultural evolution. Table 4.1 provides a list of his publications. Many were published more than once; in those cases the earliest publication date is included in the table, with reprint dates in parentheses. Where possible, the number of pages per document has also been provided.

Table 4.1: Wilson's Known Publications (1888-1901)

Year	**Title (# of Pages)**	**Publisher (Page #s)**
n.d.	Unpublished manuscripts	(NAA)
1888a	Megalithic Monuments of Brittany (16 pp.)	*The American Naturalist Vol. 22* (573-589)
1888b	Man in North America during the Paleolithic Period (25 pp.)	*Annual Report of the US National Museum* (677-702)
1888c	The Treaty of Ghent (15 pp.)	New York: Press of J. J. Little & Co.
1888d (1890)	Ancient Indian Matting from Petit Anse Island, La. (2 pp.)	*Annual Report of the US National Museum* (673-675)
1888e	Exhibit made by the Department of Prehistoric Anthropology at the Cincinnati Exposition, Cincinnati (33 pp.)	*Proceedings. U. S. National Museum* (1-33)
1888f	Circular Relating to Prehistoric Anthropology (16 pp.)	*Proceedings. U. S. National Museum*
1888g	Fraudulent Spear or Arrowheads of Curious Forms (1p.)	*American Naturalist, Vol. 2* (555)
1889a	Report on Hygiene and Demography (28 pp.)	Washington: US Congressional Series
1889b (1894)	The Paleolithic Period in the District of Columbia (6 pp.)	*American Anthropologist Vol. 2* (235-240)

1889c	Sur la Statistique du Crime dans les Etats-Unis de l'Amerique du Nord (5pp.)	*Archives de l'Anthropologie Criminelle et de Sciences Pénales* Paris
1890a	A Study of Prehistoric Anthropology — Hand Book for Beginners (76 pp.)	*Annual Report of the US National Museum* (597-673)
1890b	The Smithsonian Institution and its Anthropologic [*sic*] Work (9 pp.)	*Royal Anthropological Institute of Great Britain and Ireland Vol. 19* (509-515)
1890c	Results of an Inquiry as to the Existence of Man in North America during the Paleolithic Period of the Stone Age (25 pp.)	*Annual Report of the US National Museum* (677-702)
1890d	Report on the Department of Prehistoric Anthropology in the United States National Museum, 1888 (15 pp.)	*Annual Report of the US National Museum* (123-138)
1891a	Criminal Anthropology (69 pp.)	*Annual Report of the Board of Regents, USNM* (617-686)
1891b	Mines and Workshops of Flint: Report of International Congress of Anthropology and Prehistoric Archaeology of Paris (2pp.)	*American Naturalist Vol 25* (1031-1032)
1891c	The Amulet Collection of Professor Belucci (2 pp.)	*The Journal of American Folklore, Vol. 4,* No. 13 (144-146)
1891d	Anthropology at the Paris Exposition in 1889 (39 pp.)	*Annual Report of the US National Museum* (641-680)
1891e	Report of the Department of Prehistoric Anthropology in the US National Museum, 1889 (22 pp.)	*Annual Report of the US National Museum* (317-339)
1892a	Les Instruments de Pierre Dure en Amerique (11 pp.)	Paris: Printed by E. Leroux.
1892b	Proposed Classification of the Section of Anthropology at the Chicago Exposition	*Annual Report of the US National Museum*
1892c	Report of the Department of Prehistoric Anthropology in the US National Museum, 1891	*Annual Report of the US National Museum* (183-198)
1892d	La Periods Paleolithique dans l'Amerique du Norde (1-32)	Paris: Printed by E. Leroux.

1892e	Importance of Science and of the Department of Prehistoric Anthropology (17 pp.)	*The American Naturalist Vol. 26* (681-689; 809-816)
1893 (1894)	Primitive Industry (13 pp.)	*Annual Report of the U. S. National Museum* (521-534)
1894a	Minute Stone Implements from India (6 pp.)	*Annual Report of the U. S. National Museum*
1894b (1896)	The Swastika, the Earliest Known Symbol, and its Migrations (254 pp.)	*Annual Report of the U. S. National Museum* (757-1011)
1894c (1896)	The Golden Patera of Rennes (10 pp.)	*Annual Report of the U. S. National Museum* (609-618)
1895a	On the Presence of Fluorine as a Test for the Fossilization of Animal Bones (42 pp.)	*The American Naturalist Vol. 29* (301-317; 439-456; 719- 725)
1895b	Stone Cutting Implements (7 pp.)	*The Archaeologist Vol. 3* (179-185)
1895c (1897; 1898)	The Antiquity of the Red Race in America (186 pp.)	*Annual Report of the U. S. National Museum* (1-185)
1896a (1998)	Prehistoric Art (339 pp.)	*Annual Report of the U. S. National Museum* (325-664)
1896b	Piney Branch (DC) Quarry Workshop and Its Implements (28 pp.)	*The American Naturalist Vol. 30* (873-885; 976-992)
1897a	A Classification of Arrow or Spear Heads or Knives (6 pp.)	Columbus, Ohio: Antiquarian
1897b	The Antiquity of the Red Race in America (Opinion article) (1 pp.)	New York: The Public Opinion Company, Volume XXVII (655)
1898	Beveled Arrowheads (2 pp.)	*American Archaeologist Vol. 2* (141-143)
1899a (2007)	Arrowpoints, Spearheads, and Knives of Prehistoric Times (78 pp.)	*Annual Report of the U. S. National Museum*. (811-988)
1899b	Blue-Beard A Contribution to History and Folk-Lore (213 pp.)	New York and London: G. P. Putnam's Sons

1899c	The History of the Beginnings of the Science of Prehistoric Anthropology (25 pp.)	*Science Vol. 10* Easton, PA: Chemical Publishing Co. (585-601; 637-638)
1900	Dakota Legend of the Head of Gold (4 pp.)	*The Journal of American Folklore Vol. 13,* No. 51 (294-297)
1901a	La Haute anciennete de l'homme dans l'Amerique du Nord (42 pp.)	*L'Anthropologie Vol. XII* Paris: Masson et Cie. (149-191)
1901b	Arrow Wounds (18 pp)	*American Anthropologist Vol. 3* New York (513-531)
1902 (based on 1897 publication)	Classification des pointes de fleches, des pointes des lances et des couteaux en pierre (26 pp.)	*L'Anthropologie Vol. XII* Paris: Masson et Cie. (568-594)
Total		44 publications

In order to obtain a better understanding of how Thomas Wilson's ideas changed over time, an analysis of his publications was conducted in chronological order by publication date. The first publication reviewed was *A Study of Prehistoric Anthropology —Handbook for Beginners* (Wilson 1890a). Wilson stated the intended audience of this report was people interested in prehistoric archaeology, although he acknowledged that it was not comprehensive. Wilson begins by presenting the various subjects that are synthesized in the study of archaeology, including human anatomy, comparative psychology, literature and language, industry (material and implements of every craft, clothing and personal adornment, habitations, household utensils, weapons, objects for amusement), architecture, fine arts, mounds (sepulchral, effigy and altar), forts and earthworks, graves and cemeteries, idols and temples, sociology (love and marriage, child-life, social organization, customs, beliefs and pastimes, tribal organization,

government, education, charities, and mortuary customs (Wilson 1890a:597). Wilson next explains that material remains derive their significance only from the context in which they are discovered and advocates for careful excavation, recording, and preservation (Wilson 1890a:597; 604). He adds that knowledge of zoology and geology are necessary to identify the faunal remains from archaeological sites and understand the stone tools and their origins, respectively. Wilson also reviews the discovery of prehistoric man and the individuals responsible (Wilson 1890a:600-603). He credits Danish antiquarians Jens Worsaae and Christen Thomsen for the discovery of "man on earth in the ages before history began," as seen in kitchen middens, Ferdinand Keller for making the public aware of the discovery of lake-dwellings containing ground stone and Bronze Age artifacts, M. Boucher de Perthes for the discovery of the more ancient, chipped stone period and John Lubbock for coining the terms Paleolithic and Neolithic, making the distinction between chipped and polished stone tools and for writing the most comprehensive volume of this early stage of human development (Wilson 1890a:600-603). A bibliography was included of all the publications that he deemed most "prominent" and helpful to obtain a "fair start in the science [of prehistoric archaeology] (Wilson 1890a:600-603). Wilson includes over 50 sources from all over the world, including the US, European countries such as the UK, France, Spain, Sweden, and Switzerland, as well as a list of relevant, English-language periodicals.

In the remainder of his 1890 publication on the study of prehistoric archaeology, Wilson discusses the various epochs of prehistory, which he designates as the Eolithic, Paleolithic (including the Chellian, Mousterian, Solutrean, and Magdalenian periods in Europe), followed by the Neolithic (characterized by dolmens, menhirs, and stone

alignments). Sections on the lake-dwellers, the Bronze Age and lastly Paleolithic implements found in North America follow, accompanied by many detailed drawings. Wilson's assessment of each of these topics includes numerous cross-cultural comparisons between artifact types found in the Americas and Europe (1890a:600-670).

Of particular interest to this thesis is Wilson's section on the lake-dwellers (1890a: 627-629). He provided general descriptions of the known sites (both near the lake and on the lake) and noted that they represented numerous intermittent occupations between the Stone and Bronze Ages, arguing that these occupations continued into the Iron Age in some areas. Wilson included specific information on named sites, including Robenhausen, Cheveroux and Estavayer, among others. He even mentions that he excavated at twelve stations (sites) on Lake Neuchâtel and Lake Zürich, although he does not name them all specifically.

Wilson's section on Paleolithic implements of North America is particularly noteworthy because he highlights a questionnaire that he sent out to the public in the SI circular no. 36, in January of 1888 (Wilson 1890a:630; Wilson 1888b). The survey asked SI members to describe their collections of stone tools, including what they were made of, where they were found, whether they were found with any other tools, if the deposit they were discovered in appeared to be accidental or intentional, and if they had been previously published (Wilson 1890a: 635-636). He requested that stone tools be sent to the SI along with the completed survey. The results were tabulated in his Figure 10 (Wilson 1890a: 635-636). The SI received 209 responses, with a total of 6,762 implements reported and a whopping 789 sent to the USNM. The museum already had 950 specimens, so in total 8,520 Paleolithic implements were reported in the US by this

survey, which admittedly only targeted individuals of a certain social class who were on the SI mailing list. The results were published separately in Wilson's report "Results of an inquiry as to the existence of man in North America during the Paleolithic period of the Stone Age" (1890c).

Overall, this publication is valuable in that it provides information on both Wilson's knowledge of prehistoric archaeology of the time and that of his contemporaries. The people who influenced him are also clearly described. Wilson touches on some of his collecting activities in various regions, and the artifacts are grouped by form and function in much the same way as the categorization of the ethnological collections at the USNM by Mason (Jacknis 1985). Wilson's consistent use of cross-cultural comparisons using material culture and his interest in the antiquity of prehistoric humans in North America are also highlighted, as is his ability to consider multiple sources of evidence before drawing conclusions. The fact that he considered viewpoints different from his own is also evident. For example, while Wilson agreed with and used de Mortillet's culture periods for the European Paleolithic, he specifically states that these subdivisions were tentative and liable to be changed by subsequent discoveries and that there were other ways of classifying the periods, which is still a factor in most modern classification schemes (Wilson 1890a:605).

Another Wilson publication, *Arrowpoints, Spearheads & Knives of Prehistoric Times* (1899a) was previously discussed in Section 2.3. This report for the USNM, originally written in 1897, and republished in 2007 (Figure 4.1), was a cross-cultural, classificatory study of tool types based on material-types, use-wear analysis, form and function. Multiple lines of evidence were considered in this book and it included detailed

drawings that are still relevant to archaeologists today. The foreword of the 2007 reprint by Elizabeth Marshall Thomas and the introductory chapter by Kenneth Tankersley will be further discussed in Chapter 5, as they relate to Wilson's influence on the production of archaeological knowledge and archaeology as a discipline.

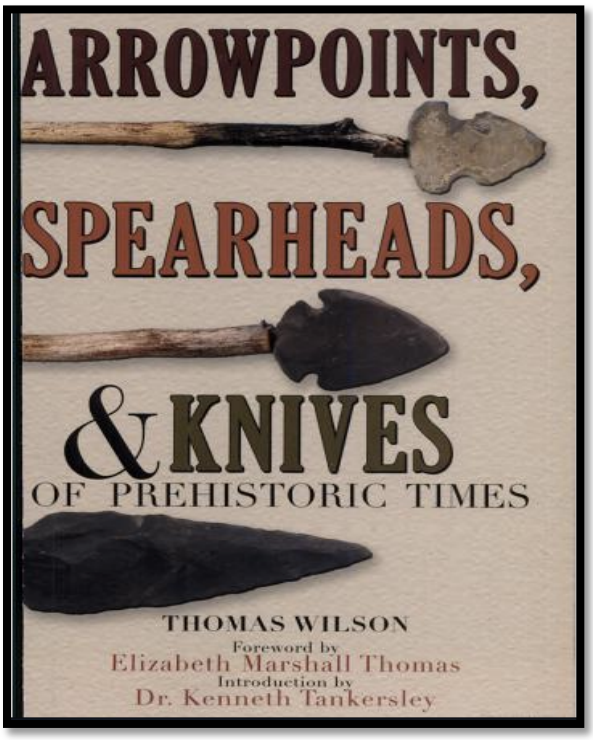

Figure 4.1: Cover of 2007 edition of "Arrowpoints, Spearheads, & Knives of Prehistoric Times" (Wilson 1899a).

In the third publication, Thomas Wilson weighed in on one of the significant debates of this period of archaeology in the US: the antiquity of Native Americans (Wilson 1895c:1041; Peabody 1905:193). In a short article entitled "The Antiquity of the Red Race in America", Wilson proposed that the Native American populations (termed by him "the aborigines", "red race", or "Indians") in the Americas were very ancient and that had either migrated from other areas of the world no later than 2000 BC or evolved

from earlier "animals" (1895c:1041). He carefully makes the distinction that the article is only referring to "aborigines found here by Columbus," and that "no question is involved of another or earlier race, by whatever name called, whether moundbuilder or paleolithic" (Wilson 1895:1041). Wilson also dismisses previous hypotheses that Native Americans were descended from Semites, Phoenicians or Mongolian races, based on lack of solid evidence (Wilson 1895c:1041).

Wilson considers physical, linguistic and cultural evidence when making his claim, based on a comparison of Native American cultures and prehistoric European and Asian groups (Wilson 1895c:1041-1045). He begins by citing Daniel Brinton and Charles Darwin in asserting that all Native Americans were a single race based on their anatomy and physiology and that they likely all came from either a pair or small group of individuals. He argues that the assortment of different languages spoken by Native Americans, their wide distribution on the continent and cultural variations are evidence of their antiquity because it would take a long time for changes of this magnitude to occur (Wilson 1895c:1042). At the same time, Wilson argues that similarities in their technology suggest a longstanding relationship between different groups (Wilson 1895c:1042). Lastly, Wilson cites the "fixedness of type and the persistence of animal characteristics," as further evidence of their antiquity; in his words, "it is an accepted anthropological and ethnological fact that the older a race is the more deeply seated and permanently fixed become the traits of character [physical, mental, moral and sociological] in its people" (Wilson 1895c:1044). Wilson continues by stating that Native Americans were "wild" and "harder to tame" than other races either because they have a greater desire for liberty or due to their persistent state of "savagery" (Wilson

1895c:1044). Although his ideas are largely outdated and would now be considered ethnocentric, if not outright racist, the comparative approach, combined with the use of multiple lines of evidence, appears to be a theme in most of his works. The underlying theories of biological and cultural evolution seem to persist as well. In this respect, Wilson is in line with contemporaries like E. Desor and E. B. Tyler (Kaeser 2004a).

In 1897, Wilson wrote a brief follow-up opinion piece to "The Antiquity of the Red Race in America" for the magazine *Public Opinion*, published out of New York (1897a:655), which explicitly stated his position on human origins. Wilson believed in biological evolution and a single origin for human beings. Furthermore, he suggested the possibility that humans as a species originated in the Americas based on stone tool comparisons and the antiquity of mounds, as indicated by the state of vegetation covering them. Previewing this selection of Wilson's publications, a better understanding of his social and intellectual influences, motivations, and methods can be gained. The trends revealed in these three publications will be elaborated on in Chapter Five. Various publications by Wilson's contemporaries will be reviewed in the next section to supplement this information.

Publications of Wilson's Contemporaries

Publications of a selection of Wilson's contemporaries were reviewed to determine whether any other scholars were citing his work, whether they shared Wilson's views or not, if any of them were citing him in connection with the lake-dwelling phenomenon, and whether they knew him personally. This was done to gain a better understanding of his influence on archaeology as a discipline at that time. The Archaeological Institute of America (AIA) published a brief history (1900-1905) of

American archaeology written by Charles Peabody (1867-1939), a Harvard-trained archaeologist (1905). It summarized the archaeological work being done at the time and divided it into three categories: 1) lab and museum work; 2) fieldwork; and 3) publications. Thomas Wilson's presentation for the 1900 meeting of the International Congress of Americanists, entitled "Jade in America", was briefly acknowledged, as was his death, which occurred in 1902 (Peabody 1905:190-196). Charles Peabody likely knew Wilson through the AIA, although there is no evidence that Wilson was a member. However, Wilson did work with members of the AIA on the legislation that preceded the Antiquities Act of 1906, so he had contact with the organization at the time. [43] Wilson also knew Peabody's mentor, F. W. Putnam, so it is possible they met through Putnam.

Warren K. Moorhead's volume *Prehistoric Implements*, also discussed in Chapter 2, was another publication that cited Wilson heavily with a tendency to agree with his ideas regarding stone tools. Wilson is also acknowledged for providing Moorhead with a "loan of cuts", which refers to images based on the context (Moorhead 1900:xvi). Moorhead was a member of the AAAS with Wilson so they would have likely met one another at meetings as well.

In a 1960 American Anthropological Association (AAA) publication, *American Anthropology 1888-1920*, Wilson's work is referred to by two of his contemporaries, D.I. Bushnell, Jr. (1913) and Aleš Hrdlička (1914). Bushnell mentions Wilson's experimental archaeology on arrowheads in 1891; Hrdlička discusses his contributions to physical anthropology, including Wilson's 1901 publication *Arrow Wounds*, although Hrdlička deems Wilson's physical anthropological work too general to be of lasting value to the

43 National Park Service. "NPS Archaeology Program for the Public." http://www.nps.gov/archaeology/pubs/lee/Lee_ch6.htm. Last updated 8/13/2013.

field. It is unclear from these publications whether Bushnell or Hrdlička knew Wilson personally. However, Hrdlička was hired at the SI after Wilson's death in 1902, so he would have been aware of his work even if the two men actually met (Petraglia and Potts 2004:17).

While no citations of Wilson's work associated with the Swiss lake dwellings could be located, a number of individuals, from different parts of the US, were citing his other work (Moorhead 1900; Harbert 1909; Bushnell 1913; Hrdlička 1914), indicating Wilson's reputation as an archaeologist at the time.

4.3 Archival Material

In this section, Thomas Wilson's accession records, letters detailing his donation to the NMNH and his detailed, handwritten personal catalog are examined and analyzed (Appendix B and C). [44] The accession records and letters related to the Wilson collection provided information on the details of his sale of the material to the USNM (NMNH). This information was crucial in elucidating Thomas Wilson's relationship with the NMNH, and provided insight into his collecting practices, including his motivations and personal connections (Leckie 2011; Gosden and Larson 2007). These documents indicated that the collection was on loan to the SI from the time it was sent to them from Europe in 1886 until January 1904, when his son, James Franklin Wilson, formally sold it to the SI. [45] The period of this loan coincided with Thomas Wilson's appointment as the

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44 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NMNH Microfilm, (photocopy of document acquired by Bettina Arnold)., USNM accession records for #19006 and #42207, 1886-1904. NMNH Microfilm (copies of documents acquired by Bettina Arnold)., Correspondence between Wilson and Baird 1884-1887. SI National Anthropological Archives (NAA), (copy acquired by Bettina Arnold)., Richard Rathbun (Assistant Secretary of the USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA, (acquired by Bettina Arnold).

45 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy acquired by Bettina Arnold).
USNM accession records for #19006 and #42207, 1886-1904. NMNH Microfilm. (copies of documents acquired by Bettina Arnold).

first Curator of Prehistoric Archaeology at the SI on December 1st, 1887, following the death of his predecessor, Carl Rau, the former head of the Department of Antiquities (Goode 1888; Petraglia and Potts 2004:15).

Excerpts from letters between Goode and Wilson, included in correspondence between Richard Rathbun, Assistant Secretary at the USNM (1901-1918),[46] and Samuel Pierpont Langley, Secretary of the SI (1887-1906)[47], indicated that there was some confusion surrounding the initial loan in 1886.[48] The deposit was understood by the SI to be a gift and was accessioned into the collection at that time under the number 19006, whereas Wilson had initially intended it as a loan. [49]

This misunderstanding occurred for two reasons.[50] First, in December 1884, then SI Director Baird sent Wilson a collection of duplicate archaeological specimens to be exchanged for other material from European collections in the name of the SI. Wilson completed the transactions but claimed the collections obtained in the exchanges as his own. Second, having believed the material to be a donation, the SI paid $52.15 US dollars for four accessions, including the Robenhausen material and the exchanged material (Accession 19006) to be shipped from Europe to Washington, D.C. [51] However, Wilson had not intended to give his collection to the SI at that time, but viewed it as a loan or deposit. [52] Wilson requested that Goode add a letter to the file confirming that he

46 SIA RU007078, Rathbun, Richard 1852-1918, Richard Rathbun Papers 1870-1918 and undated. http://siarchives.si.edu/collections/siris_arc_217236. Accessed 10/3/13.

47 SIA. Samuel Pierpont Langley, 1834-1906. http://siarchives.si.edu/history/samual-pierpont-langley. Accessed 10/3/13.

48 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy acquired by Bettina Arnold).

49 USNM Accession Card 19006, 10/30/1887. NAA (copy acquired by Bettina Arnold).

50 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy acquired by Bettina Arnold).

51 Exhibit D: Statement of Freight Charges. n.d. NAA. (copy acquired by Bettina Arnold).

52 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy acquired by Bettina Arnold).

(Wilson) was the owner of the collections, with which Goode complied. Wilson added that if he wished "to dispose of any portion of [his] collections to the Museum by [his] will, [it would be on] "certain conditions, such, for example, as the establishment of a course of lectures to be known by [his] name". [53] This misunderstanding was supposed to be cleared up in the records in 1895 with the note from Goode but it was not fully resolved until 1904, two years after Wilson's death.

To the surprise of SI officials, Wilson bequeathed his entire prehistoric archaeology collection to his son James upon his death in 1902 (Petraglia and Potts 2004:23). James Wilson then offered it for sale to the SI for $5,000, Thomas Wilson's valuation of his collection, [54] which totaled 18,475 objects, comprising 44 accessions, minus 241 that were withdrawn, for a total of 18,234 objects (Figure 4.2). [55] The Robenhausen and other lake-dwelling material was previously given the accession number 19006 in 1887 and included 10,361 specimens from Italy, Switzerland, France and England.[56] The catalog numbers assigned to this accession included 99426-102000, 136303-136623, and 136649-1366729. The Robenhausen material, along with other European, Egyptian and American objects, was ultimately purchased by the USNM for $2,650.00 US dollars on January 23rd, 1904 as accession 42207 (Appendix C).[57] Although SI officials felt they had claim to some of the collections, they offered $2.500.00 dollars [about $57,949 in 2003] for the foreign material and only $150 [about

53 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy acquired by Bettina Arnold).

54 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy acquired by Bettina Arnold).

55 Exhibit A: The Thomas Wilson Collection of Prehistoric Archaeology, n.d.: NAA. (copy acquired by Bettina Arnold).

56 List of Accessions Comprising the Wilson Collection Purchased 1/23/1904 (Order 3439-$2500) as Acc. 42207. 1/26/1904: NAA. (copy acquired by Bettina Arnold).

57 Ibid.

$3,476] for the American objects, for a total of about $61,426 based on the modern value of the dollar (Petraglia and Potts 2004:23).[58] According to Richard Rathbun's letter to S.P. Langley, the European material was the most valuable to the SI at the time because it was "as full a set of this class of objects from Europe as the National Museum would need to possess," adding that losing this collection "would make a large gap in [the SI's] archaeological series" (Appendix C).[59] The American material, on the other hand, duplicated the existing collections of the SI at that time and thus it was of significantly less value to the institution. This deal represents the largest single purchase of Paleolithic material in the history of the SI (Petraglia and Potts 2004:23).

The NMNH records indicated that 86 European archaeology objects were removed as gifts or exchanges, or in one case, sold to other institutions or individuals (Appendix C).[60] This information was helpful in locating potentially missing items from the NMNH collection but the documentation available does not include information on all of the exchanges/gifts or what Wilson or the SI received in these exchanges, if anything. The recipients and number of objects in these gifts/exchanges could be accounted for the in the SI archival material (Table 4.2).[61] Of these 86 items, four objects from Robenhausen were given to what was at the time the Historical Department of Iowa in Des Moines (Table 4.3; Appendix C).[62] Samples of barley and flax are missing based on Wilson's personal catalog so it is possible that those are his numbers 1214 or 1215 (flax or bast) and 1258 (barley). The only way to verify this is to locate the samples.

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58 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy acquired by Bettina Arnold).

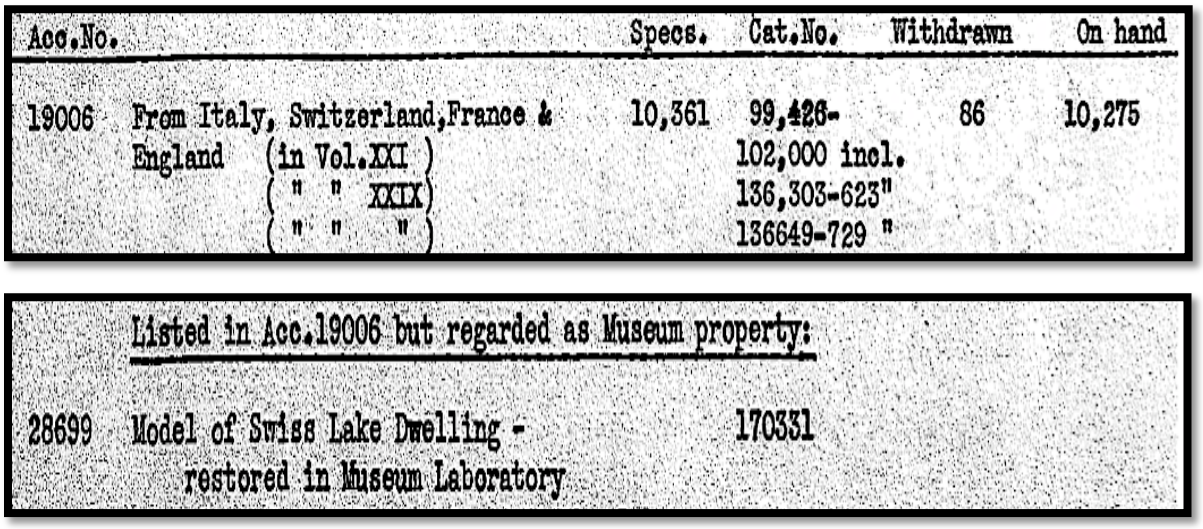
59 Richard Rathbun (Assistant Secretary, USNM) to S.P. Langley (Secretary, SI) 12/7/1903: NAA. (copy acquired by Bettina Arnold).

60 Memorandum: The Thomas Wilson Collection of Prehistoric Archaeology, n.d.: NAA. (copy acquired by Bettina Arnold).

61 Memorandum: The Thomas Wilson Collection of Prehistoric Archaeology, n.d. NAA.(copy acquired by Bettina Arnold).

62 Ibid.

The online database for SHSI's State Historical Museum in Des Moines did not yield any results for the Robenhausen material donated by Wilson. [63] It is unknown at this time where this material currently resides. Leo Landis, a curator at the State Historical Museum (Des Moines), was contacted to search for the items and was unable to locate them due to missing documentation and the fact that their natural history collection is largely uncatalogued at this time (pers. comm. e-mail [8/30/13]).



Acc.No.		Specs.	Cat.No.	Withdrawn	On hand
19006	From Italy, Switzerland, France & England (in Vol.XXI) (" " XXIX) (" " ")	10,361	99,426- 102,000 incl. 136,303-623" 136649-729 "	86	10,275

	Listed in Acc.19006 but regarded as Museum property:	
28699	Model of Swiss Lake Dwelling - restored in Museum Laboratory	170331

Figure 4. 2: NMNH Wilson Accessions Purchased in 1904, including Robenhausen Material. [64]

63 State Historical Society of Iowa. Online database search. http://iowamuseumcollection.pastperfect-online.com/38632cgi/mweb.exe?request=NSKS. Accessed10/4/13.

64 List of Accessions Comprising the Wilson Collection purchased 1/23/1904 (Order 3439-$2500) as Acc. 42207, 1/26/1904: NMNH Microfilm. (copy acquired by Bettina Arnold).

Table 4.2: Specimens Withdrawn from Wilson Collection at NMNH for Exchange or Gifts [65]			
Location	**Date**	**Method**	**Number**
Historical Dept. of Iowa Museum (Charles Aldrich) Des Moines, IA	7/27/1900	Gift	54
Western Reserve Historical Society (Judge C. C. Baldwin) Cleveland, OH	3/23/1894	Gift	1
Hon. J. V. Brower St. Paul, MN	3/23/1889	Exchange	15
F.H. McK. Grant Melbourne, Australia	4/9/1900	Exchange	3
Miss R. F. Upham Washington, D. C.	10/29/1901	Gift	1
University of Chicago, IL (F. B. Tarbell)	12/28/1899	Sold	11
U.S. Geological Survey (T.W. Vaughn)	11/1901	Gift	1
Total			86

Charles Aldrich was investigated further because he was the only person listed as receiving material from Wilson's Robenhausen collection. A Google search for Aldrich yielded the 6th- 9th Biennial Report to the Historical Department of Iowa (Aldrich 1903). This report showed that Aldrich was the curator of the Historical Department of Iowa (Des Moines) at the time. The report also listed James F. Wilson (Thomas's son) as a donor and notes that he was a US Senator. Aldrich's report also mentioned that the Historical Department of Iowa collections included photographs of both Thomas and his son James (Aldrich 1903:71).

65 Specimens withdrawn from Wilson Coll. and distributed by him as gifts or as exchanges,10/1903: NMNH Microfilm.(copy acquired by Bettina Arnold).

Table 4.3: Donation to Historical Dept. of Iowa on 7/27/1900 [66]

SI Catalog #	SI Accession #	Description
A100397-0	19006	Charred apples
A100358-0	19006	Charred head of barley
A100402-0	19006	Charred wheat
A100360-0	19006	Charred flax or bast fibre [*sic*]

The second archival source, consisting of letters between Wilson and various employees at the NMNH, was carefully examined to gain insight into his relationship with the museum, his personal connections and collecting motivations (Appendix C). The ten letters exchanged between Spencer Fullerton Baird, the SI Secretary at the time, and Wilson from 1884-1887 were especially helpful in providing evidence relating to Wilson's social networks in the US and Europe and his collecting motivations. [67] These letters were summarized briefly in section 2.4 but several additional pieces of evidence could be gleaned from them. As previously mentioned, the letters indicated that Thomas Wilson was aware that Baird sought to actively collect prehistoric European materials for the USNM. It was also evident that Wilson sought out specific European archaeological material to enhance the collection accordingly.[68] In fact, Wilson mentioned in his 1884 letter to Baird that he wished to obtain a "respectable showing" of prehistoric European artifacts to benefit "our people, especially my scientific friends of Washington who have

66 Specimens withdrawn from Wilson Coll. and distributed by him as gifts or in exchange,10/1903: NMNH Microfilm. (copy acquired by Bettina Arnold).

67 Correspondence between Wilson and Baird 1884-1887: NAA. (copy acquired by Bettina Arnold). Accessed on 6/20/13.

68 Wilson to Baird 10/18/1884: NAA. (copy acquired by Bettina Arnold).

not had the same opportunity".[69] Wilson also requested Native American material to trade with European collectors on several occasions and Baird shipped pieces to him to complete transactions with institutions and individuals in Europe.[70] Wilson even confessed to feeling annoyed and jealous when he found a collection of North American material in Italy because he would have exchanged such material for Italian antiquities to benefit the SI. Also, Wilson requested that Baird send him articles on subjects such as "tertiary man" and the "cliff dwellers" so that he could be informed and represent his country appropriately.[71] The letters between Baird and Wilson became less congenial over time. There seemed to be an issue with the USNM unpacking his collection before he arrived home and with Wilson representing the SI, as evidenced by a harsh letter from Wilson to Baird dated September 15th, 1885.[72] Based on the amount of underlining in this letter, there was a misunderstanding between Wilson and the SI regarding his collections. Also, a letter dated October 13th, 1886, indicated that a man named J. Durand was in Europe at the same time as Wilson, claiming to be a delegate of the SI in interactions with other museums and collectors. Wilson was offended by this situation and made it clear that he wanted to be the only one with that designation because he knew most of the men there and the artifacts available for purchase or trade.[73] Baird's response to Wilson is not preserved but a letter from Goode to Baird suggests that they offer Wilson prehistoric archaeology as a collecting area and allow Mr. Durand to collect

69 Wilson to Baird 10/18/1884: NAA. (copy acquired by Bettina Arnold).

70 Correspondence between Wilson and Baird 1884-1887:NAA. (copy acquired by Bettina Arnold).

71 Ibid.

72 Wilson to Baird 9/15/1885: NAA. (copy acquired by Bettina Arnold)

73 Wilson to Baird, 10/13/1886: NAA. (copy acquired by Bettina Arnold)

in another field.[74] Apparently Durand had been representing the SI longer than Wilson, so they did not want to dismiss him. It was also suggested that Wilson not be allowed to negotiate with museums that had previously had contact with Durand to avoid confusion. Based on a USNM Report to the Board of Regents, the "J. Durand" listed in the letter is John Durand, son of the famous painter Asher Durand, who was mentioned in the report as an intermediary between the USNM and European museums (Goode 1884:23). The last piece of information noted in the letters was that Virginia Wilson, Thomas's wife, especially enjoyed studying prehistory alongside Wilson and even dug for artifacts herself in excavation units. The information obtained from the archival material will be used to make inferences about Wilson's collecting practices in the conclusions section.

The third archival source was Wilson's handwritten catalog (Figure 4.3; Appendix B).[75] Prior to listing all of the objects in his Robenhausen collection, Wilson provided background information on the site including its location and the fact that the objects he obtained there were preserved in ten to twelve feet of peat. Wilson explained that he met with Messikommer and his son and visited Robenhausen on September 5th, 1883, although it is not known if this was their first meeting. According to Wilson, Messikommer and his workmen dug a four by eight foot trench that was about 8 feet deep and that 16 piles were exposed 'in situ'. Wilson took photos and proceeded to excavate some of the material himself; he purchased additional items from Messikommer, making a distinction between the two groups of objects in his notes. The catalogue indicated that

74 Goode to Baird, Nov. 16th, 1886: NAA. (copy acquired by Bettina Arnold).

75 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NMNH Microfilm, (photocopy of document acquired by Bettina Arnold).

there were originally 108 objects purchased from Messikommer in the NMNH collection; twelve were from other lake-dwelling sites nearby (Tables 4.4; 4.5).

Table 4.4: Objects in Wilson's Catalog Related to Robenhausen	
Objects in Wilson Catalog Identified as Robenhausen	96
Objects Purchased from Messikommer from Other Lake-Dwelling Sites	12
Total	108

Table 4:5 Objects Purchased from Messikommer from Other Lake-Dwelling Sites [76]

Wilson #	**Description**	**Location Found**
1197	Pottery	Mountains near Robenhausen
1215	Flax or bast	Unknown
1217	Stone hatchet w/ deer horn socket	Schaffis- Lake Bienne
1218	Stone hatchet w/ deer horn socket	Luscherz-Lake Bienne
1219	Stone hatchet w/ deer horn socket	Schaffis- Lake Bienne
1236	Rope made of bast	Mörsingen
1242	Bast- linden tree	Schaffis- Lake Bienne
1246a	Vegetable fibre [sic]	Luscherz-Lake Bienne
1247	Vegetable fibre [sic]	Schaffis- Lake Bienne
1248	Vegetable fibre [sic]	Schaffis- Lake Bienne
1249	Vegetable fibre [sic]	Schaffis- Lake Bienne
1256	Wheat	Luscherz-Lake Bienne

76 Catalogue of prehistoric collection of Thomas Wilson, US Consul at Nice France, 31 Dec. 1887: NMNH Microfilm. (photocopy of document acquired by Bettina Arnold).

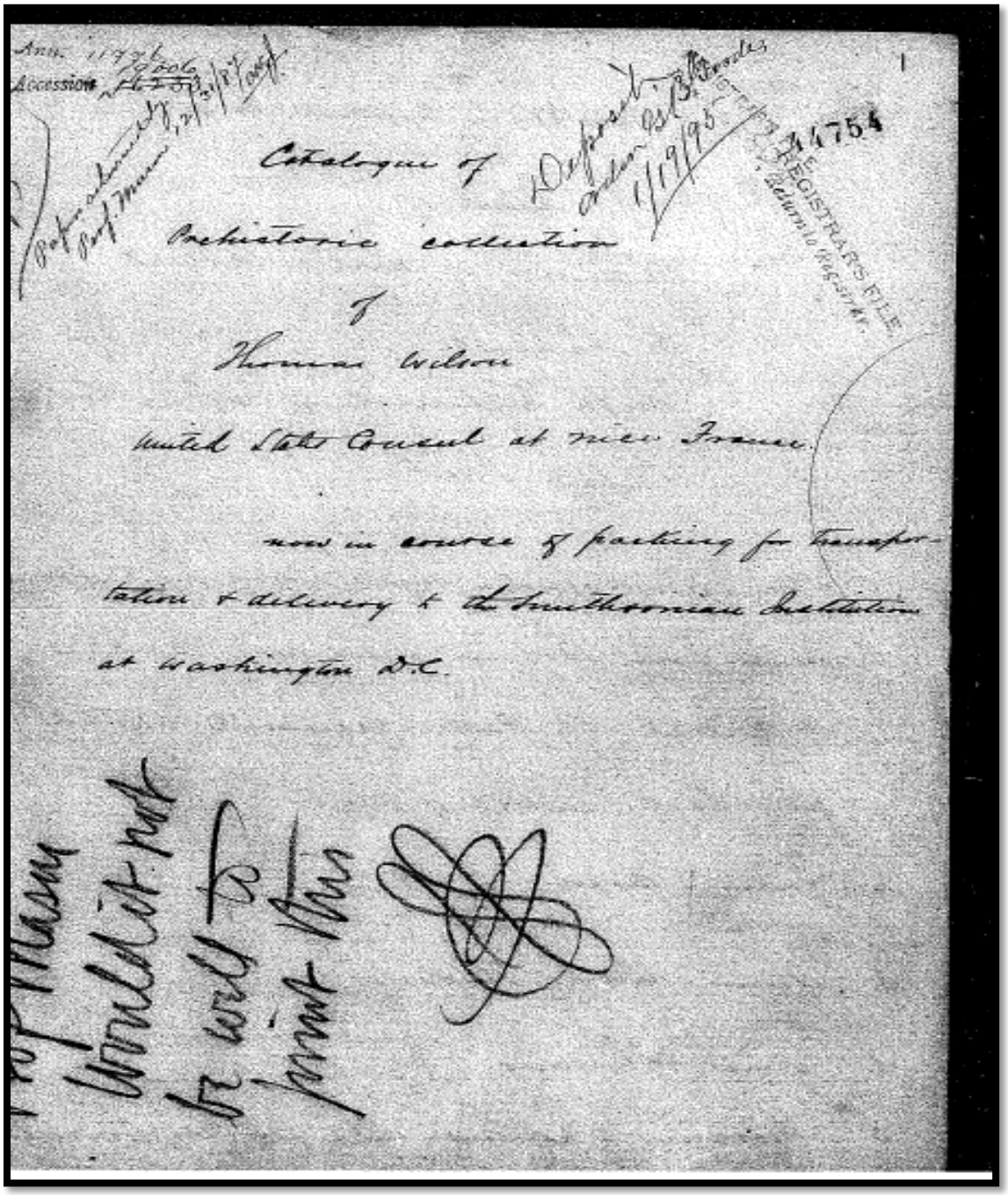


Figure 4.3: Cover of Thomas Wilson's Catalog

Additional archival material from the Antiquarische Gesellschaft in Zürich confirms the fact that Thomas Wilson visited the site along with others in the area in August of 1886.[77] It is not clear based on the catalog whether any material was collected during this second visit, although the date on the top of the page of the catalog for several of the purchases is illegible. Section 3.4 can be referenced for additional information on the physical parameters of the collection.

After discovering in Wilson's catalog that he took photographs at Robenhausen, NAA archivists were consulted to locate them. Their search yielded two images, one of Jakob Messikommer that was a gift to Wilson in 1886 (Figure 4.4 [front of photo]; 4.5 [back of photo]) and one picture that was probably taken by someone other than Wilson, since the same image appears in Altorfer (2010:Abb. 281) (Figure 4.6).[78] The reverse of the photo in Figure 4.4 indicates that the photographer was v. Wiesendanger [?] of Wetzikon, (Zürich) and the inscription in German and French translates into English as follows:

> Mr. Consul Thomas Wilson, with heartfelt appreciation from Jacob Messikommer (Antiquarian), Wetzikon, Zürich, September 1886 (translation by author- Google Translate).

This personal inscription to Wilson from Messikommer provides a small additional insight into their relationship. The photographer is not indicated in the second photo of a trench at Robenhausen depicting workers standing beside palisade posts with their shovels (Figure 4.5; see also Altorfer 2010:Abb. 281).

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77 Jacob Messikommer to Rudolf Jucker 8/26/1886: AGZ Archives, Band 40, Nr. 453 (copied and translated by advisor Bettina Arnold)

78 International Geography Series: Europe: [Switzerland]: "Lake dwellers". Unnumbered Acc. Photo Lot 88-30, Box 3: NAA.

It is possible that the rest of Wilson's photographs from Robenhausen are with his manuscripts at the SHSI in Des Moines, IA. Additional images also still be located at the NAA but staff was unable to find them at the time of this request.

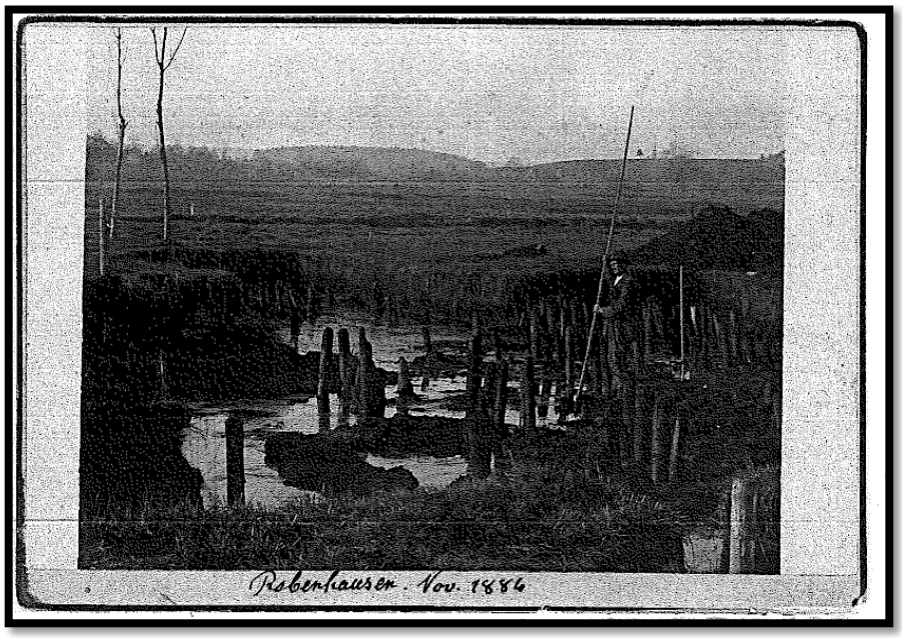


Figure 4.4: Messikommer at Robenhausen, 11/1886 © NAA Smithsonian Institutions (Front).

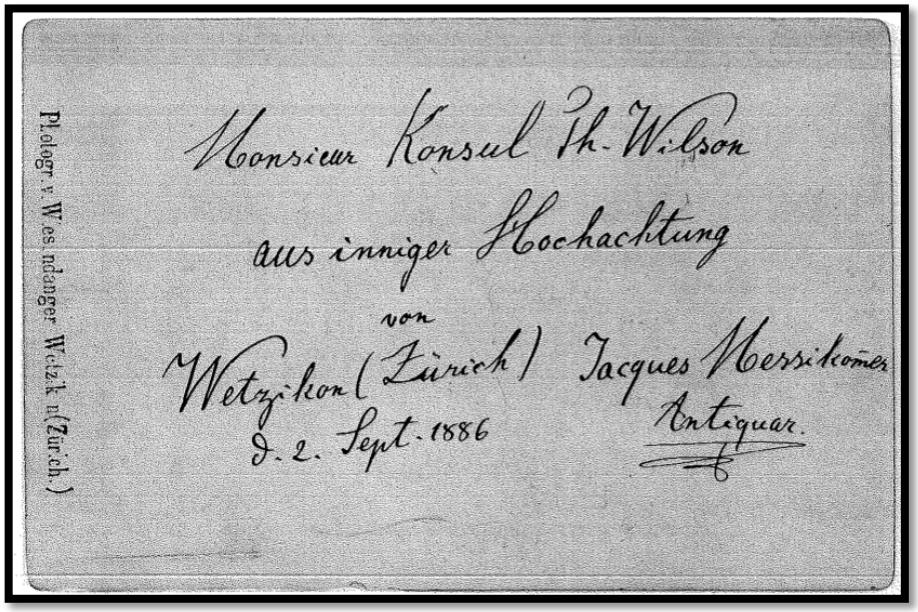


Figure 4.5: Messikommer at Robenhausen, 11/1886 © 2013 NAA Smithsonian Institution (Back).

Figure 4.6: Excavation at Robenhausen, N.d. © 2013 NAA Smithsonian Institution.

4.4 Collections Research

Wilson's Robenhausen Collection at NMNH

A total of 104 objects were examined at the NMNH (Appendix C). Of these 104, 95 objects were matched to Wilson's catalog either by locating Wilson's number written on the object or by the process of deduction. Of those 95, seven were not from Robenhausen but were purchased from Messikommer. Therefore, the SI NMNH collections attributed to Wilson contain only 88 objects that can definitely be attributed to Robenhausen. Furthermore, twenty-six of the objects in the SI NMNH collection did not have Wilson's number on them, but could be matched with the descriptions in Wilson's catalog (Table 4.6). For example, there was only one castor beaver tooth in Wilson's catalog (#1287) and only one remains in the SI NMNH Swiss lake collection (A100433-

0) (Appendix C). Based on this information and the fact that the catalog number was similar to others in Wilson's accession, the tooth was determined to be number 1287 in Wilson's catalog.

Table 4.6: Objects from NMNH without Wilson Numbers: Matched to Catalog

SI Catalog #	SI Catalog Description	Wilson Catalog #
A100349-0	Wooden Fishing Pales (2)	1203
A100356-0	Horn Haft	1210
A100359-0	Poppy Seeds (*Papaver somnif., Var, Aut.*) in Bottle	1213
A100357-0	Bottle of Seeds	1216
A100588-0	Frag.Wood	1219
A100589-0	Facsimile of Wooden Handle for Hatchet	1219
A100587-0	Section of a Pile	1222
A100373-0	Charred Piece of Bread	1227
A100381-0	Bottles Containing Pine and Spruce Cones (*Pinus sylvestris*)	1235
A100382-0	Bark Rope in Bottle	1236
A100389-0	Flax Fibre [sic] in Bottle	1243
A100403-0	Bottles Containing Barley (2 of 2- wheat)	1256
A100405-0	Bottles Containing Barley	1259
A100408-0	Bottle of *Fagus sylvatica*	1262
A100362-0	Flax Fibre Seed (*Rubus idaens*) in Bottle	1267
A100414-0	White Water Lily Seed (*Nymphea alba*) in Bottle	1268
A100418-0	Cherry Stones (*Prunus padus*) in Bottle	1272
A100421-0	Water Crowfoot (*Rananculus aquatillis*)	1275
A100422-0	Parsnip (*Pastinaca sativa*) in Bottle	1276
A100424-0	Bramble (*Rubus frueticosus*) in Bottle	1278
A100425-0	Lake Scirpus (*Scirpus lacustris*) in Bottle	1279
A100433-0	Tooth of Castor Beaver in Bottle	1287
A100437-0	Millet in Bottle	1291
A100439-0	Raspberry (*Rubus idaens*) in Bottle	1293
A100440-0	Poppy (*Papaver somnif.,Var.Aut.*) in Bottle	1294
A100448-0	Bottles With Contents Not Determined	1302

This process of elimination was made easier by entering the SI catalog numbers of objects that had Wilson numbers on them into the spreadsheet created from Wilson's catalog (Appendix C). From there, it could be determined which objects in Wilson's catalog were missing and it was possible to match the SI objects without Wilson numbers to that list. In the end, seven of the Robenhausen objects found at the NMNH did not have Wilson catalog numbers or definitively match up to Wilson's catalog (Table 4.7).

Table 4.7: Objects in NMNH Collection without Matches in Wilson Catalog

SI Catalog #	SI Catalog Description	Old Label
A100413-0	Flax Seed (Linum angustif., Huds.) In Bottle	None
A100341-0	Fragments of Cloth	"Robenhausen *Geflechte*"
A100342-0	Fragments of Cloth	"Robenhausen *Faden*"
A100343-0	Fragments of Cloth	"Robenhausen *Geflechte*"
A100344-0	Fragments of Cloth	"Robenhausen *Leiste*"
A100345-0	Fragments of Cloth	"Robenhausen *Geflechte*"
A100358-0	Bottles of Head of Barley (Flax – SI description is incorrect)	"Robenhausen *Linum angustifol. Huds*" "Flax Balls"

Also, nine objects were missing (eight of the 96 total from Robenhausen and one object from another lake-dwelling site that was purchased from Messikommer) from Wilson's catalog when this was compared to the SI collection (Table 4.8).

Table 4.8: Objects Listed in Wilson's Catalog Not Located in NMNH Collection

Wilson Number	Object Description	Location Found	Additional Wilson Notes
1198	Large vase	Robenhausen	Goes with 1199
1199	Large vase	Robenhausen	Goes with 1198
1208	Pottery-half of vase	Robenhausen	Divided perpendicularly
1214	Flax or bast	Robenhausen	Fiber natural

1215	Flax or bast	Unknown	Same in rope
1225	Piece of charcoal	Robenhausen	N/a
1232	Seeds	Robenhausen	N/a
1258	Barley	Robenhausen	*Hordeum hexast sanct.*
1282	Cretan catchfly	Robenhausen	*Silene cretica*

It is possible that some of the missing flax samples could be found among the fragments of cloth without clear donor information, although Wilson's numbers were not written on the original frames, as they were with the other textiles identified as Wilson's (Figure 4.7).

Figure 4.7: Robenhausen Textile from the Wilson Collection at NMNH (A100340; Wilson #1201).

Since I was unable to determine the link with certainty, I did not assign this piece to the Wilson collection. Also, I am fairly confident that the samples sent to Charles Aldrich by Wilson could have included the seeds and barley. I am hopeful that this will be

confirmed in the event that the natural history specimens at the SHSI State Historical Museum are found and inventoried. Lastly, Wilson could have kept the missing pottery or exchanged it for other objects because not all changes to the collection were accounted for in the documentation. It is unlikely, but the pottery could also be stored somewhere in NMNH under a different designation. With a collection that extensive, it would be easy to find an occasional error.

Overall, the collection is in fairly good order, especially for a historic assemblage as old as this one, which often lack significant information. There were only a few minor issues, including the nine missing objects, errors in both the online and KeEmu databases, and some conservation problems with the textiles associated with the historic mounts. Some of the original bottles for the botanical remains are also missing. It is believed that they were discarded when the collection was on exhibit at the NMNH Western Cultures Hall (Krakker pers. comm., June 2013). Those specimens are stored in archival boxes with archival tissue paper so they are not facing any conservation issues. However, the original bottles are helpful in placing the specimens into context within the collection because Wilson's personal catalog numbers were written on all of the packaging. Also, the historic packaging included Messikommer's Robenhausen labels. The majority of the botanical remains were stored in glass vials with corks (Fig. 4.9).

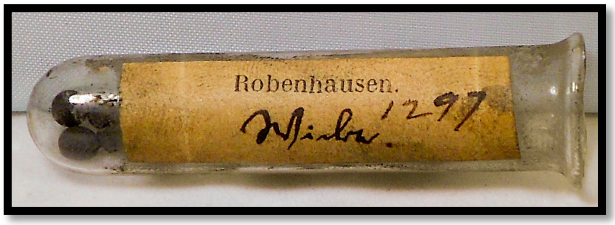
Messikommer's labels were missing on 36 of the 104 Wilson collection objects in the NMNH collection. This is likely due to the fact that many of the objects were on exhibition in the West Culture Hall at the NMNH up until 2010 (Krakker, pers. comm., June 2013), who suggested that many of the original bottles were discarded during the exhibition process. Still, 68 objects out of 104 have the original Messikommer labels and

packaging, which is excellent considering the age of the collection.

The labels and original packaging not only provide insight into Wilson's interaction(s) with Messikommer, and they also confirm that the objects were all collected around the same time (Altorfer 2010:78). The larger print labels, as seen on the left in Figure 4.8, were used prior to 1866, while labels with finer print indicate that the specimen was acquired after 1867. The labels from the Wilson collection at the NMNH (collected in 1883) mainly resemble the same fine print Messikommer label seen on the right in Figure 4.8, which corresponds to Altorfer's seriation of the label types (2010:78). Figures 4.9 a. and b. depict examples of the Messikommer labels on objects that Wilson purchased.

Figure 4.8: Examples of Messikommer's Labels (adapted from Altorfer 2010:78).

a.



b.

Figure 4.9a &b: Examples of Labels Affixed to Objects Wilson Purchased from Messikommer in the NMNH Collection.

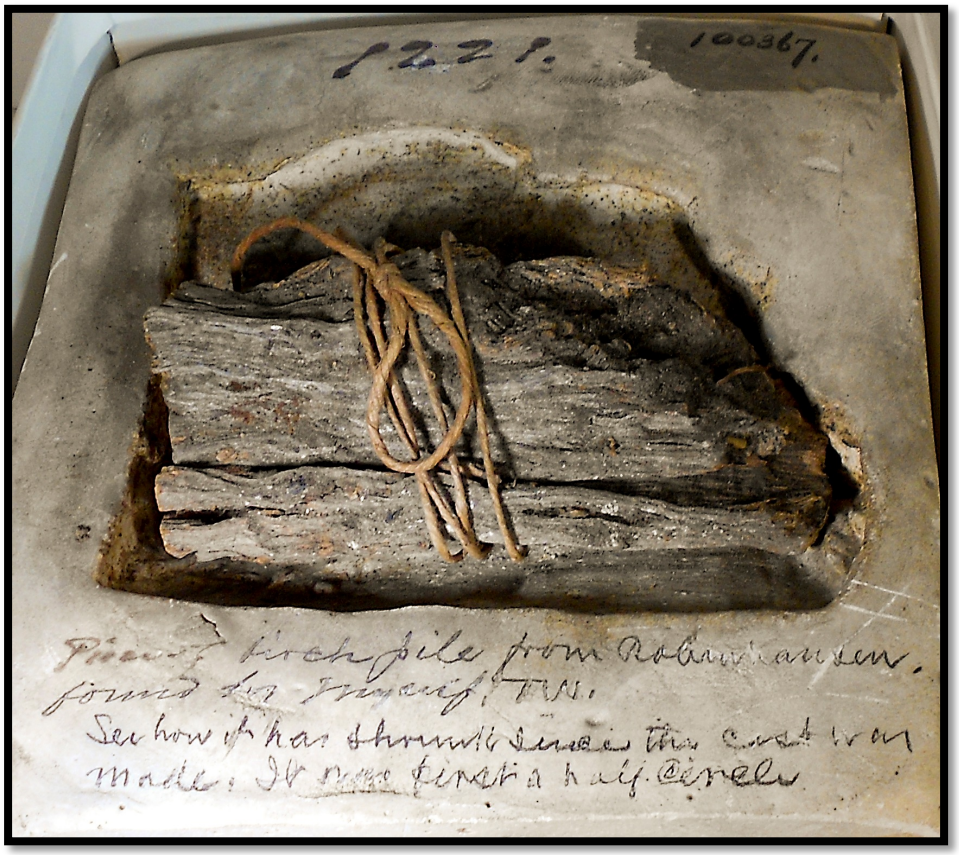
The original labels on the objects that Wilson purchased from Messikommer either have Messikommer's Robenhausen label with the description of the object printed on the label (Fig. 4.9 b), or they have the same label with a handwritten description (Figure 4.9 a). Figures 4.10 and 4.11 depict the various types of labels affixed to the objects that Wilson excavated himself. The majority of the labels on the objects excavated by Wilson are handwritten, with the exception of the pile [NMNH # A100587-0] (Figure 4.10 c).

a. b.

c.

Figure 4.10 a-c: Examples of Labels on Objects Excavated by Wilson in the NMNH Collection

a.



b.

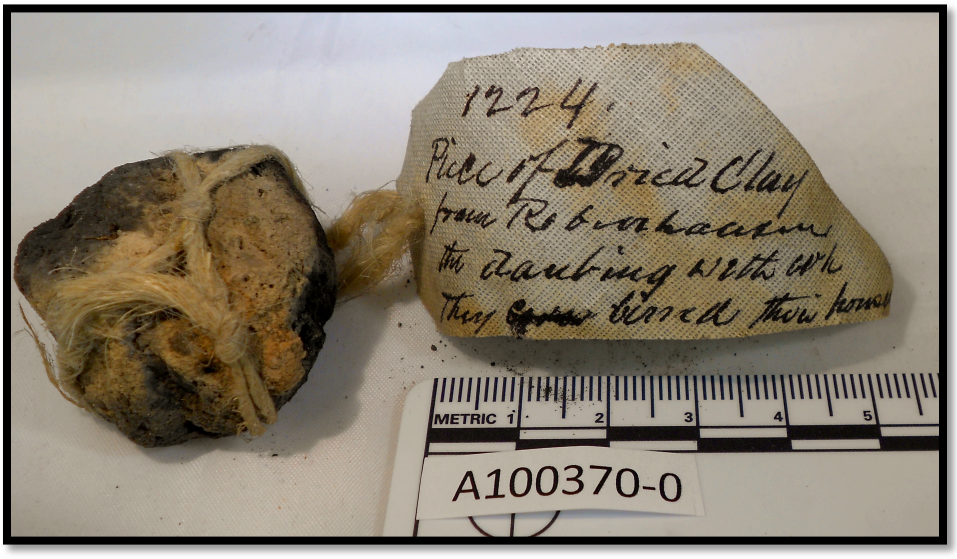


Figure 4.11 a&b: Handwritten Labels on Objects Excavated by Wilson in the NMNH Collection

The collection is currently housed in a stable environment and the historic packaging does not appear to be harming the objects, except in the case of the textiles enclosed in broken mounts. Due to the fact that the collection has been stored properly over the years, it is in fair to good condition, making it possible to exhibit it and conduct research on it in the present. If a future researcher wanted to study the collection, there would not be too many issues, especially if they were able to access the database created in this thesis to correct for any database misinformation in the online SI catalog.

Dörflinger's Collection at MPM

Charles Dörflinger's collection will be analyzed in this section in terms of its labels and historic packaging, condition and the distribution of artifact types in order to provide a comparison with Wilson's collection. First, there are three different types of Messikommer Robenhausen labels in this collection, although the majority of the objects do not have original labels (Fig. 4.12). One type is completely handwritten. The second type is a typed label, similar to that in Wilson's collection but it has "Jacques Messikommer" signed on it in ink, in handwriting that appears to match that of Messikommer (Arnold pers. comm. 2013). The third type of label seen in Dörflinger's collection is completely typed and includes the object name in italics. The print labels are similar to those in the Wilson collection, which reflect acquisition from Robenhausen after 1867 (Altorfer 2010:78). Fig. 4.12 shows the three types respectively. Fig. 4.13 depicts the label on the lake-dwelling model constructed by Messikommer and repaired using a previous model by Wilson while he was curator at the USNM.

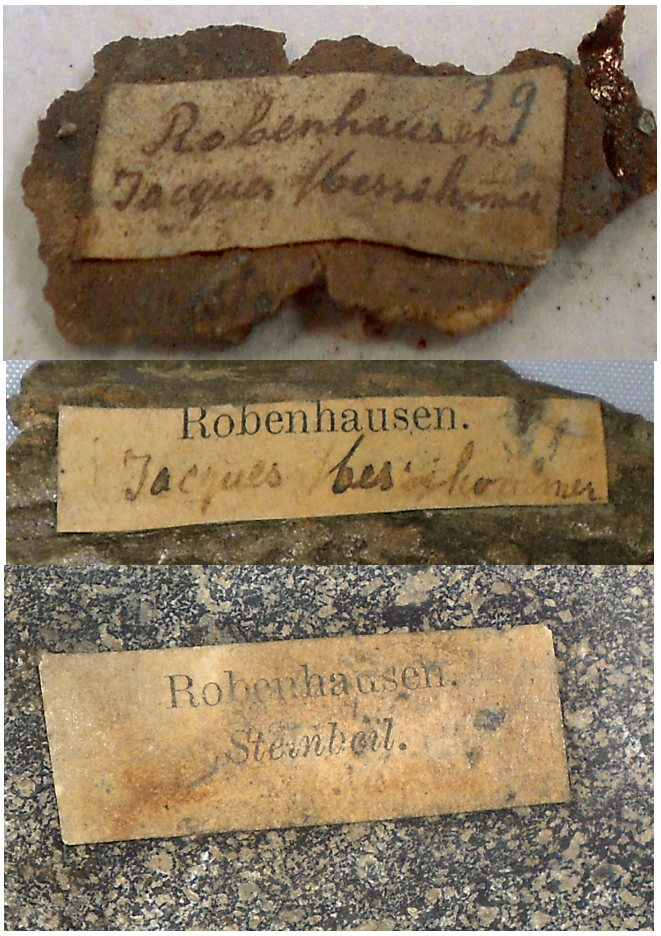


Figure 4.12: Messikommer Robenhausen Labels in Dörflinger Collection

Figure 4.13: Close-up of Label on the Lake Dwelling Model Made by Messikommer in the NMNH Collection #A170331 with photo of Messikommer in upper right corner (photo courtesy of Bettina Arnold).

In relation to the labels, a few of the objects are stored in historic packaging, like Wilson's SI material. For example, some of the botanical samples are stored in little boxes, lined with cotton, as opposed to the corked, glass vials in Wilson's collection. Similar boxes are seen in other collections including those in UK museums (Leckie 2011). The textiles in the Dörflinger's collection are mounted between two pieces of glass, in much in the same manner as Wilson's textiles, although the color of the border is different (i.e. Wilson's are blue and Dörflinger's are black). It is likely that the MPM borders were re-taped. In general, the Dörflinger material at MPM is fair to good condition and is well organized and accounted for in their KeEmu database due to the recent research undertaken by Dr. Bettina Arnold and her students at the University of Wisconsin-Milwaukee (Lillis [2005] and Johnson [2006]). Lastly, Dörflinger's checklist differs from Wilson's catalog in the amount of detail surrounding the collection of the material. The only copy available is a transcription but presumably contains the same information as the original. Dörflinger does not distinguish between objects "purchased" from Messikommer or "found" at Robenhausen during excavations conducted by him in person. However, based on the information provided in Messikommer's account of Dorflinger's visit, we know he excavated some of the objects.

4.5 Distribution of Artifacts in Wilson's Robenhausen Collection

The artifacts were tabulated based on Altorfer (2010), with slight modifications, using the data from Thomas Wilson's catalog to analyze the distribution of artifact types in his collection. Table 4.9 and Figure 4.14 include a summary of the collection. In subsequent tables, each artifact type is broken down further. Of the artifact categories, botanical remains comprise the majority of Thomas Wilson's Robenhausen collection at

the NMNH (63%), with the second most prevalent type of object being textiles, fibers or matting (10%). Ceramics (5%), wood (5%) and worked bone (4%) are the third most prevalent, with stone tools, both chipped and ground stone, 'other faunal' and the 'other' categories as the smallest percentages (Table 4.9). In this collection, the 'other' category includes samples of bread and charcoal and a piece of daub. Wilson's collection does not include any antler tools but this category was intentionally kept in the table because Dörflinger's collection includes it. This information will be compared to Dörflinger's collection, along with Swiss Robenhausen collections described in Altorfer (2010).

Table 4.9 Distribution of Artifact Types in Wilson's Robenhausen Collection

Material	**Number of Objects**
Ceramic Vessels	5 (5%)
Ground Stone	2 (2%)
Chipped Stone/ Flint	1 (1%)
Other Stone	3 (3%)
Antler	0
Worked Bone	4 (4%)
Other Faunal	3 (3%)
Wood	5 (5%)
Textiles, Matting and Fibers	9 (10%)
Botanical Specimens	60 (63%)
Other	4 (4%)
Total	96

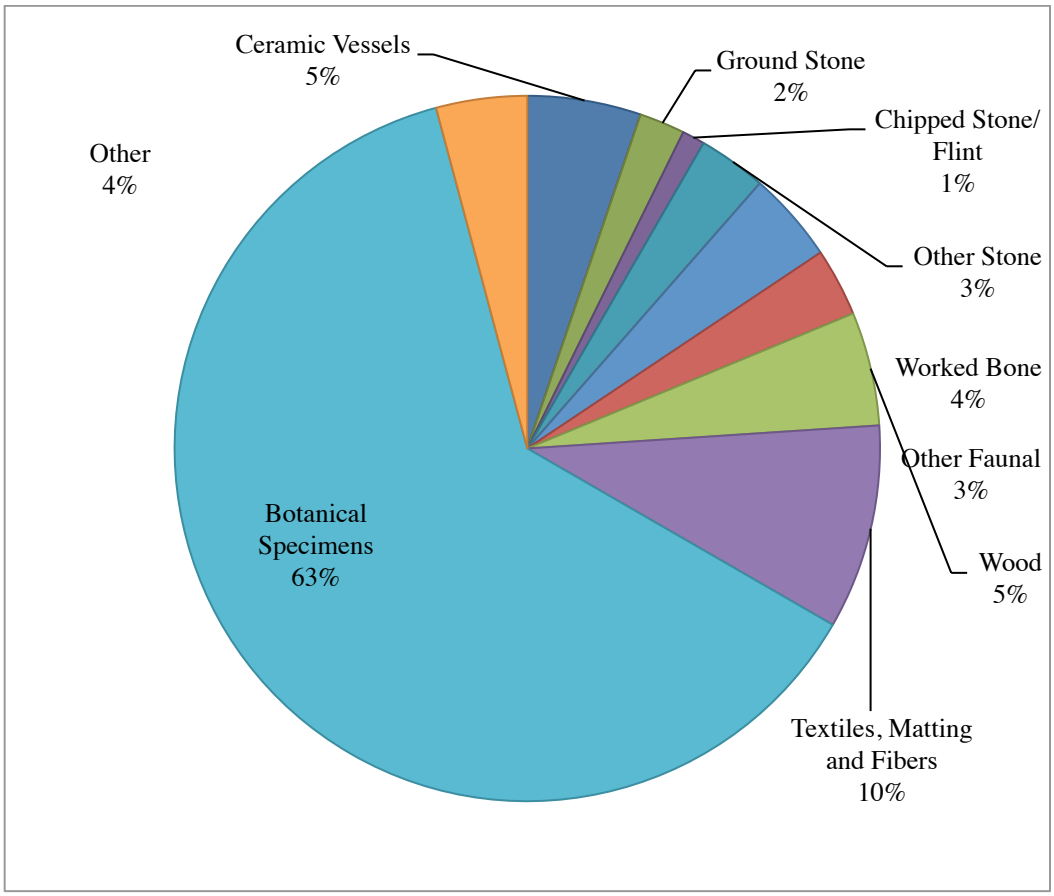


Figure 4.14: Distribution of Artifact Types in Wilson Collection

Wilson Collection: Ceramics

Table 4.10: Ceramics in Wilson's Robenhausen Collection

Wilson #	Found or Purchased	Object Description	Category
1198	P	Large vase	Ceramic Vessels
1199	P	Large vase	Ceramic Vessels
1207	P	Pottery- bottom of vase	Ceramic Vessels
1208	P	Pottery-half of vase	Ceramic Vessels
1223	F	Pottery sample (no specified #)	Ceramic Vessels

Wilson Collection: Stone

Table 4.11: Stone in Wilson's Robenhausen Collection			
Wilson #	**Found or Purchased**	**Object Description**	**Category**
1200	P	Stone hatchet w/ deer horn socket	Ground Stone
1210	P	Stone hatchet w/ deer horn socket	Ground Stone
1285	P	Flint arrowhead	Chipped Stone
1226	F	*Pollisoir* (polisher?)	Other Stone
1284	P	Red stone (red ochre)	Other Stone
1286	P	Bergcrystal (Quartz crystal)	Other Stone

Wilson Collection: Faunal

Table 4.12: Faunal Remains in Wilson's Robenhausen Collection			
Wilson #	**Found or Purchased**	**Object Description**	**Category**
1204	P	Bone knife	Worked Bone
1205	P	Bone knife	Worked Bone
1206	P	Bone chisel	Worked Bone
1209	P	Bone knife	Worked Bone
1287	P	Tooth of castor beaver	Other faunal
1288	P	Snail shell	Other faunal
1289	P	Fish scales	Other faunal

Wilson Collection: Wood

Table 4.13:Wood in Wilson's Robenhausen Collection			
Wilson #	**Found or Purchased**	**Object Description**	**Category**
1202	P	Machines for hauling fish nets	Wood
1203	P	Machines for hauling fish nets	Wood
1220	F	Piece of wood	Wood
1221	F	Piece of soft birch wood pile	Wood
1222	F	Piece of oak pile	Wood

Wilson Collection: Textiles, Matting and Fibers

Table 4.14: Textiles, Matting and Fibers in Wilson's Robenhausen Collection			
Wilson #	**Found or Purchased**	**Object Description**	**Category**
1201	P	Linen cloth in glass	Textiles, Matting and Fibers
1212	P	Flax balls	Textiles, Matting and Fibers
1214	P	Flax or bast	Textiles, Matting and Fibers
1243	P	Flax fiber	Textiles, Matting and Fibers
1244	P	Flax fiber	Textiles, Matting and Fibers
1245	P	Vegetable fiber	Textiles, Matting and Fibers
1246	P	Vegetable fiber	Textiles, Matting and Fibers
1250	P	Woven linen cloth	Textiles, Matting and Fibers
1263	P	Flax balls	Textiles, Matting and Fibers

Wilson Collection: Botanical Remains

Table 4.15: Botanical Remains in Wilson's Robenhausen Collection			
Wilson #	**Found or Purchased**	**Object Description**	**Category**
1211	P	Charred grains of wheat	Cereals
1213	P	Poppy seed	Oil-Producing Plants
1216	P	Seeds	Unknown
1228	F	Apples [cut] in half	Fruits and Berries
1229	F	Wheat	Cereals
1230	F	Barley	Cereals
1231	F	Hazelnuts	Nuts
1232	F	Seeds	Unknown
1232a	F	Burnt straw of hay	Unknown
1233	P	Birch bark	Forest Trees and Shrubs
1234	P	Pine cone- scotch fir	Forest Trees and Shrubs
1235	P	Pine cone- spruce	Forest Trees and Shrubs
1238	P	Hazelnuts	Nuts
1239	P	Hazelnuts	Nuts
1240	P	Water chestnut	Nuts
1241	P	Silver fir	Forest Trees and Shrubs
1251	P	Apples	Fruits and Berries
1252	P	Apples	Fruits and Berries
1253	P	Wheat	Cereals
1254	P	Wheat	Cereals
1255	P	Wheat	Cereals
1257	P	Barley	Cereals
1258	P	Barley	Cereals
1259	P	Barley	Cereals

1260	P	Barley	Cereals
1261	P	Apple seeds	Fruits and Berries
1262	P	Beech nuts	Nuts
1264	P	Dogwood	Oil-Producing Plants
1265	P	Buckbean	Water and Marsh Plants
1266	P	Spruce fir seeds	Forest Trees and Shrubs
1267	P	Flax seed	Bast and Fibrous Plants
1268	P	White water lily	Water and Marsh Plants
1269	P	Marsh bed straw	Water and Marsh Plants
1270	P	Common elder	Fruits and Berries
1271	P	Burdock	Weeds of the Corn-Fields
1272	P	Bird cherry stones	Fruits and Berries
1273	P	Water plantain	Water and Marsh Plants
1274	P	Bramble	Fruits and Berries
1275	P	Water crowfoot	Water and Marsh Plants
1276	P	Parsnip	Culinary Vegetables
1277	P	White goosefoot	Weeds of the Corn-Field
1278	P	Bramble	Fruits and Berries
1279	P	Lake scirpus	Water and Marsh Plants
1280	P	Pond weed	Water and Marsh Plants
1281	P	Marsh lousewort	Water and Marsh Plants
1282	P	Cretan catchfly	Weeds of the Corn-Fields
1283	P	Common tinder fungus	Plants for Starting Fire
1290	P	Burnt straw or hay	Unknown
1291	P	Millet	Cereals
1292	P	Dogrose	Fruits and Berries
1293	P	Raspberry	Fruits and Berries
1294	P	Poppy	Oil-Producing Plants

1295	P	Hornbeam	Forest Trees
1296	P	Undetermined	Unknown
1297	P	Undetermined	Unknown
1298	P	Undetermined	Unknown
1299	P	Undetermined	Unknown
1300	P	Undetermined	Unknown
1301	P	Undetermined	Unknown
1302	P	Undetermined	Unknown

Wilson Collection: Other

Table 4.16: Other Materials in Wilson's Robenhausen Collection

Wilson #	Found or Purchased	Object Description	Category
1224	F	Piece of dried clay (daub)	Other
1225	F	Piece of charcoal	Other
1227	P	Piece of loaf of bread	Other
1237	P	Piece of bread	Other

4.6 Distribution of Artifact Types in Dörflinger's MPM Collection

Table 4.17 includes a summary of the distribution of artifact types in Dörflinger's collection at the MPM. Ceramic vessels are the most prevalent in this collection (52%). Wood is a distant second at about 15% and botanical remains comprise only 8%. There are significantly fewer remaining categories (stone tools, antler, textile, etc.) (Figure 4.15). The subsequent sections present tables showing the composition of each artifact category.

Table 4.17: Dörflinger's Robenhausen Collection at MPM[79]

Material	**Number of Objects (%)**
Ceramic vessels	56 (52%)
Ground stone	5 (5)
Chipped stone/ flint	1 (<1)
Other stone	0
Antler	2 (2)
Worked Bone	3 (3)
Other Faunal	1 (<1)
Wood	16 (15)
Textiles, Matting and Fibers	6 (6)
Botanical Specimens	9 (8)
Other	5 (5)
Total	108

[79] Object counts in Table reflect the objects on Dörflinger's checklist at the time of their donation and may not reflect the number of objects currently in the collections.

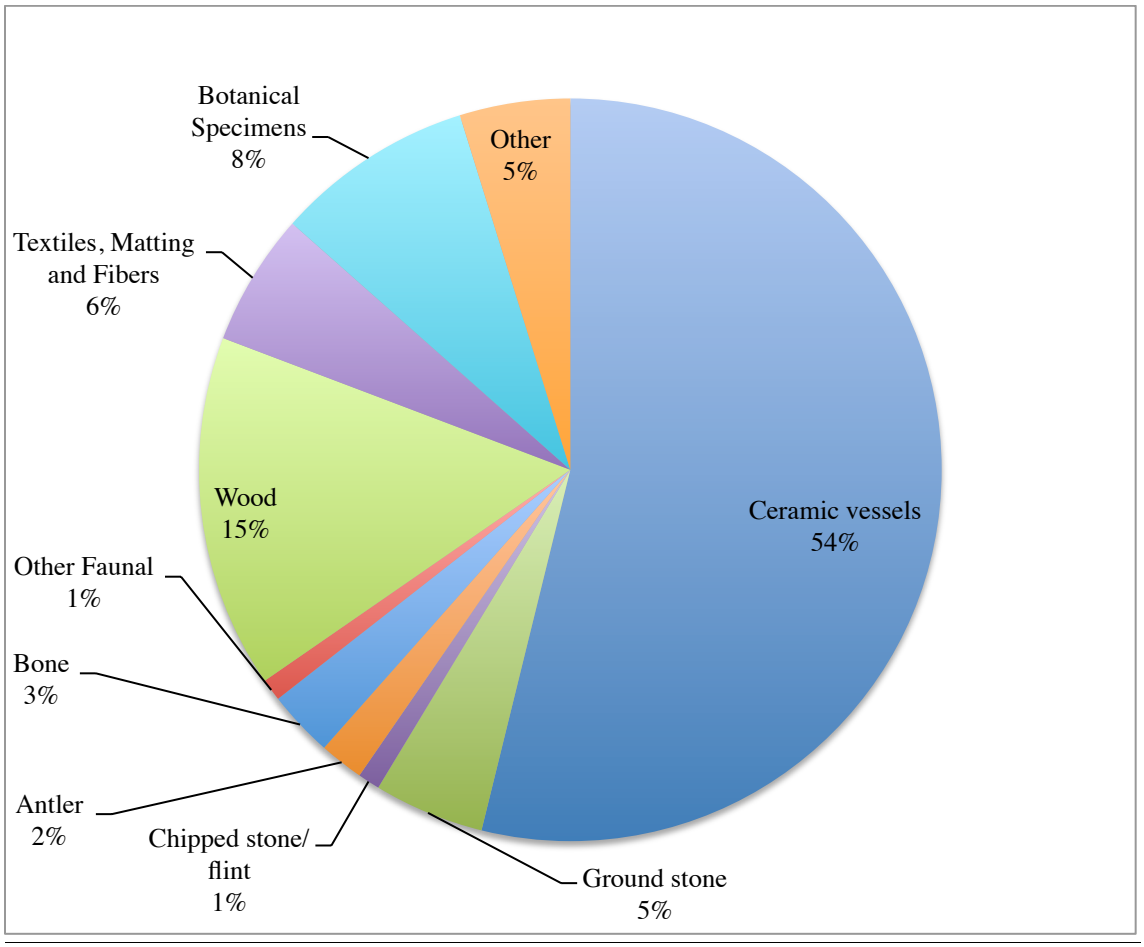


Figure 4.15: Dörflinger's Robenhausen Collection at MPM.

Dörflinger Collection: Ceramics

Table 4.18: Ceramics in Dörflinger's Robenhausen Collection

Object Description (#)	**Category**
Pot (base) containing charred supplies and sundries (1)	Ceramic Vessel
Ornamented pieces of the rim of pots (2)	Ceramic Vessel
Complete handle of a very large vessel	Ceramic Vessel
Part of a large pot base (1)	Ceramic Vessel
Fragments of a pot rim with an expansion for handle (2)	Ceramic Vessel
Other fragments of pottery (50)	Ceramic Vessel

Dörflinger Collection: Stone

Table 4.19: Stone in Dörflinger's Robenhausen Collection	
Object Description (#)	**Category**
Stone gouge or celt, edge blunted (1)	Ground Stone
Stone (serpentine) ax, edge blunted (1)	Ground Stone
Stone ax, edge bruised (1)	Ground Stone
Slate hatchet, broken (1)	Ground Stone
Small jadeite hatchet (1)	Ground Stone
Flint (jasper) scraper (1)	Chipped Stone

Dörflinger Collection: Faunal

Table 4.20: Faunal Remains in Dörflinger's Robenhausen Collection	
Object Description (#)	**Category**
Base of the antler of a reindeer (or deer), showing cutting (1)	Antler
Piece of well preserved rind of a deer's antler (1)	Antler
Bone chisel (1)	Worked Bone
Double pointed needle, pin or awl of bone (1)	Worked Bone
Bone hair pin, awl or needle (1)	Worked Bone
Claw or tooth ? (1)	Other Faunal

Dörflinger Collection: Wood

Table 4.21: Wood in Dörflinger's Robenhausen Collection	
Object Description (#)	**Category**
Jar of charcoal, charred twigs and birch bark (1)	Wood
Box of charcoal, charred twigs and birch bark (1)	Wood
Long box of charcoal and charred wood (1)	Wood
Box cover with a branch of a birch tree retaining its bark (1)	Wood
Chip from pile, showing rough marks of stone ax (1)	Wood
Handle and two pieces of a scoop or ladle [*sic*] (1)	Wood
Handle of a tool (1)	Wood
Handle of ashwood (1)	Wood
Head of war club, made of a pine knot or root (1)	Wood
Chip of a pine pile (1)	Wood
Chip of an oak pile (1)	Wood
Charred piece of a plank or a rafter (1)	Wood

Piece of a hunting bow, made of Eibe-wood (yew) (1)	Wood
Whole pile (1)	Wood
Head of a wooden war club, mortised; broken (1)	Wood
Part of paddle (1)	Wood

Dörflinger Collection: Textiles, Matting, and Fibers

Table 4.22: Textiles, Matting and Fibers in Dörflinger's Robenhausen Collection	
Object Description (#)	**Category**
Bundles of charred flax fibers prepared for the loom, with grains of wheat and barley (2)	Fibers
Bundles of charred flax fibers prepared for the loom, with grains of wheat and barley (1)	Fibers
Card with a piece of 2 ply twine, charred (1)	Fibers
Glass frame with a piece of fine cloth, charred (1)	Textiles
Glass frame with a piece of course cloth, charred (1)	Textiles

Dörflinger Collection: Botanical Remains

Table 4.23: Botanical Remains in Dörflinger Robenhausen Collection	
Object Description (#)	**Category**
Jar of charred wheat and barley (1)	Cereals
Box of stable manure, roots, blades of grass, and heads of wheat; somewhat charred (1)	Cereals
Box of charcoal, charred grain, etc. (1)	Cereals
Envelope with charred wheat and barley (1)	Cereals
Charred crab apples (2)	Fruits and Berries
Well preserved hazelnuts (3)	Nuts

Dörflinger Collection: Other

Table 4.24: Other Category in Dörflinger Robenhausen Collection	
Object Description (#)	**Category**
Chunks of burned clay, probably from chinking or fireplace (5)	Other

4.7 Analysis of Artifact Types in Swiss Collections

Altorfer (2010:119) includes the artifact distribution of Robenhausen collections in eleven Swiss museums (Table 4.25), which is described below. These percentages will be compared to the Wilson and Dörflinger collections in Chapter Five to determine how representative the two US collections are of the material retrieved from the site over several decades of excavation. The percentage of objects in the various artifact categories is more evenly distributed in the Swiss collections. Textiles, matting and fibers are the most common (28%), with ground stone tools the second most prevalent category (20%). Wood, ceramic vessels, and bone, antler, and chipped stone tools are similarly distributed, ranging from 8-11 % each. The "other ceramics" category (4%) includes loom weights, clay rings, crucibles and an "other" designation. None of the items in this category are found in Wilson's collection or Dörflinger's at the MPM. The same is true for metal objects, although there were only two metal objects present in the Swiss collections. This is because the Bronze Age (BA) occupation at the site was much shorter than the Neolithic ones and because metal is very rare in early BA sites in general.

Table 4.25: Swiss Robenhausen Collections (Altorfer 2010:119)

Material	**Number of Objects (%)**
Ceramic vessels	126 (9%)
Other ceramics	56 (4%)
Ground stone	272 (20%)
Chipped stone/ flint	114 (8%)
Antler	131 (9%)

Bone	149 (11%)
Wood	151 (11%)
Textiles, Matting and Fibers	394 (28%)
Metal	2 (<1%)
Total	1395

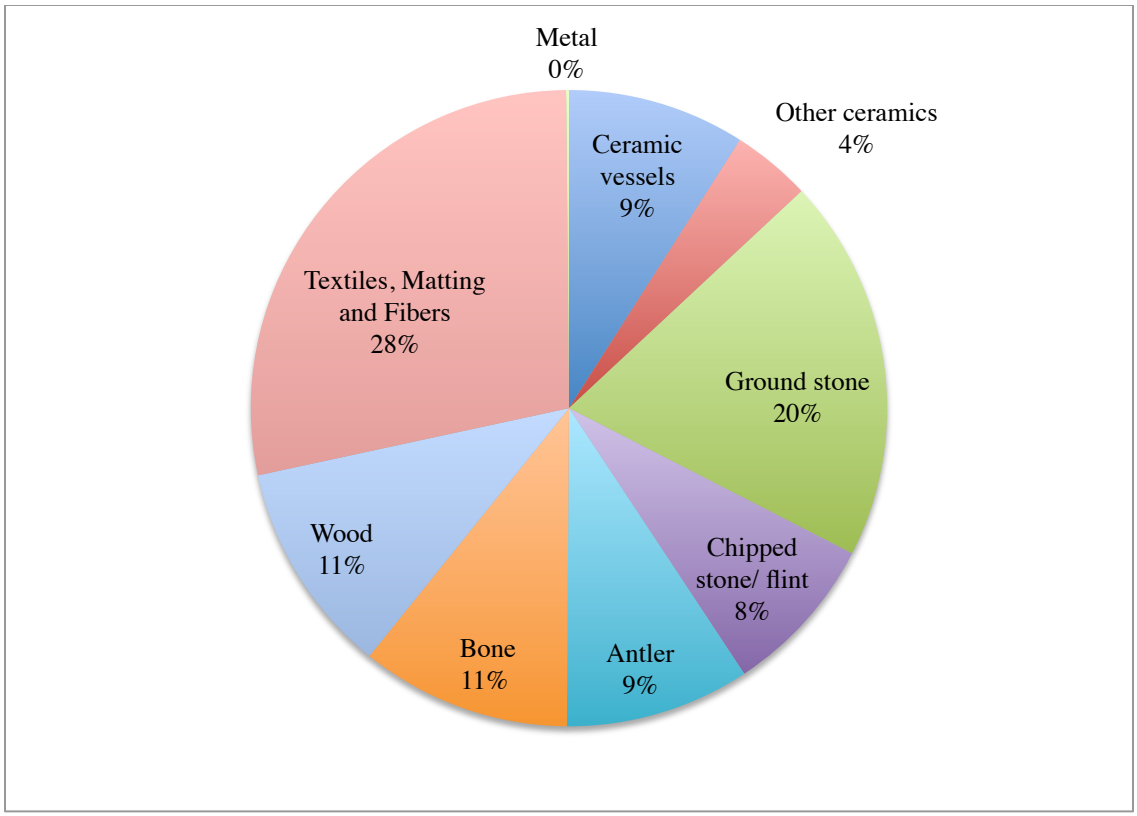


Fig. 4.16: Swiss Robenhausen Collections (based on data in Altorfer 2010).

Botanical Comparison of Swiss and Wilson Collections

Table 4.26 is a comparison of the botanical specimens in the eleven Swiss collections cited in Altorfer (2010:171) and in Wilson's collection, to determine whether or not Wilson collected a representative sample of the main botanical specimens recovered from Robenhausen. Table 4.26 also indicates whether or Wilson had any rare

specimens in his collection as compared to those in Switzerland. Those specimens are highlighted. The number of Swiss collections that have each specimen (out of a total of eleven) is indicated and the presence (P) or absence (A) in Wilson's collection is noted. The botanical designations were obtained primarily from Oswald Heer's chapter in Keller (1866) but some were modified based on Altorfer (2010: Fig. 173 a/b). Plant specimens represented in other Swiss lake sites according to Heer, but not in Robenhausen at the time of publication and not represented in current Swiss Robenhausen collections, are indicated by P (Heer). The significance of these data will be discussed in Chapter 5.

Table 4.26: Lake-Dwelling Plants from Robenhausen in Swiss and Wilson Collections
(Heer in Keller 1866; adapted from Altorfer 2010:Fig. 173a/b)

	Common name	**Genus and Species**	**Present in Swiss Collections (# out of 11)**	**Present in Wilson Collection (P or A)**
1. CEREALS				
	Barley	*Hordeum vulgare*	**10** (Altorfer)	**P**
	Wheat	*Triticum turgidum/durum/aest.*	**11** (Altorfer)	**P**
	Emmer or two-grained wheat	*Triticum dicoccum*	3 (Altorfer)	A
	Rye	*Secale cereale*	P (Heer)	A
	Oat	*Avena sativa*	P (Heer)	A
	Millet	*Panicum miliaceum*	P (Heer)	**P**
	Italian setaria, "Kolbenhirse" or "Fennich"	*Setaria italica*	2 (Altorfer)	A
2. WEEDS OF THE CORN-FIELD				
	Darnel	*Lolium temulentum*	2 (Altorfer)	A
	White goosefoot	*Chenopodium album*	4 (Altorfer)	**P**
	Many-seeded goosefoot	*Chenopodium polyspermum*	1 (Altorfer)	A
	Red goosefoot	*Chenopodium rubrum*	P (Heer)	A
	Burdock	*Arctium minus*	P (Heer)	**P**
	Corn cockle	*Agrostemma githago*	P (Heer)	A

	White campion/ Ragged Robin	*Lychnis flos-cuculi*	P (Heer)	A
	Cretan catchfly	*Silene Cretica*	**2** (Altorfer)	**P**
	Chickweed	*Stellaria media*	P (Heer)	A
	Smooth-seeded spurry	*Spergula pentandra*	P (Heer)	A
	Thyme-leaved sandwort	*Arenaria serpyllifolia*	P (Heer)	A
	Goosegrass	*Galium aparine*	P (Heer)	A
	Creeping crowfoot	*Ranunculus repens*	P (Heer)	A
	Little bur medick	*Medicago minima*	P (Heer)	A
	Corn bluebottle	*Centaurea cyanus*	P (Heer)	A
3. CULINARY VEGETABLES				
	Parsnip	*Pastinaca sativa*	**1** (Altorfer)	**P**
	Common carrot	*Daucus carota*	P (Heer)	A
	Celtic fieldbean	*Faba vulgaris or Celtica nana*	P (Heer)	A
	Pea	*Pisum sativum*	1 (Altorfer)	A
	Lentil	*Ervum lens/ Lens culinaris*	1 (Altorfer)	A
4. FRUITS AND BERRIES				
	Apple	*Pyrus malus (a: smaller crab-apple) and b: larger, rounder apple)*	**11** (Altorfer)	**P**
	Pear	*Pyrus communis/ pyraster*	P (Heer)	A
	Service-tree	*Pyrus aria*	P (Heer)	A
	Cherry	*Prunus avium*	1 (Altorfer)	A
	Sloe	*Prunus spinosa*	8 (Altorfer)	A
	Bullace	*Prunus institia*	P (Heer)	A
	Bird cherry	*Prunus padus*	**4** (Altorfer)	**P**
	Perfumed cherry	*Prunus mahaleb*	P (Heer)	A
	Vine	*Vitis vinifera*	P (Heer)	A
	Raspberry	*Rubus idaeus*	8 (Altorfer)	**P**
	Bramble	*Rubus fruticosus*	8 (Altorfer)	**P**
	Strawberry	*Fragaria vesca*	6 (Altorfer)	A
	Dog-rose	*Rosa canina*	3 (Altorfer)	**P**
	Common elder	*Sambucus nigra*	4 (Altorfer)	**P**
	Dwarf elder	*Sambucus ebulus*	1 (Altorfer)	A
	Bilberry	*Vaccinium myrtillus*	P (Heer)	A

	Red whortleberry or cowberry	*Vaccinium vitis idaea*	P (Heer)	A
	Cornel-cherry	*Cornus mas*	P (Heer)	A
	Wayfaring tree	*Viburnum lantana*	3 (Altorfer)	A
5. NUTS				
	Hazelnut	*Corylus avellana*	**8** (Altorfer)	**P**
	Beech	*Fagus sylvatica*	**7** (Altorfer)	**P**
	Walnut	*Juglans regia*	P (Heer)	A
	Water chestnut	*Trapa natans*	**10** (Altorfer)	**P**
6. OIL-PRODUCING PLANTS				
	Opium or garden poppy	*Papaver somniferum*, var. *antiquum*	**5** (Altorfer)	**P**
	Dogwood	*Cornus sanguinea*	**3** (Altorfer)	**P**
7. AROMATIC PLANTS				
	Caraway	*Carum carvi*	P (Heer)	A
8. BAST AND FIBROUS PLANTS				
	Flax	*Linum angustifolium/usitatissimum/ austriacum*	**10** (Altorfer)	**P**
	Lime	*Tilia grandifolia/ cordata/platyphyllos*	5 (Altorfer)	A
9. PLANTS USED FOR DYEING				
	Weld	*Reseda luteola*	P (Heer)	A
10. FOREST TREES AND SHRUBS				
	Scotch fir	*Pinus sylvestris*	**4** (Altorfer)	**P**
	Mountain pine	*Pinus mugo*	1 (Altorfer)	A
	Spruce fir	*Picea abies*	**2** (Altorfer)	**P**
	Silver fir	*Pinus picea*	P (Heer)	**P**
	Juniper	*Juniperus communis*	P (Heer)	A
	Yew	*Taxus baccata*	4 (Altorfer)	A
	Oak	*Quercus robur*	1 (Altorfer)	A
	Hornbeam	*Carpinus betulus*	**4** (Altorfer)	**P**
	Alder	*Alnus glutinosa*	P (Heer)	A
	Birch	*Betula alba*	**2** (Altorfer)	**P**
	Willows	*Salix repens* and *S. cinerea*	P (Heer)	A
	Ash	*Fraxinus excelsior*	P (Heer)	A
	Mistletoe	*Viscum album*	P (Heer)	A
	Holly	*Ilex aquifolium*	P (Heer)	A
	Spindle-tree	*Euonymus europaeus*	P (Heer)	A
	Berry-bearing alder	*Rhamnus frangula*	P (Heer)	A
	Mountain ash	*Sorbus aucuparia*	P (Heer)	A
	Maple	*Acer* spec.	1 (Altorfer)	A

11. MOSSES AND FERNS				
	Mosses	*Antitrichia curtipendula*	P (Heer)	A
		Neckera complanata	P (Heer)	A
		Neckera crispa	P (Heer)	A
		Thuidium delicatulum	P (Heer)	A
		Anomodon viticulosis	1 (Altorfer)	A
		Leucodon sciuroides	P (Heer)	A
		Hylocomium brevirostre	P (Heer)	A
	Fern	*Pteris aquilina*	P (Heer)	A
12. PLANTS FOR STARTING FIRE				
	Common tinder fungus	*Polyporus igniarius* and *P. fomentarius*	**5** (Altorfer)	**P**
	Oak agaric	*Daedalia quercina*	P (Heer)	A
13. WATER AND MARSH PLANTS				
	Chara	*Chara vulgaris* and *C. foetida*	1 (Altorfer)	A
	Common reed	*Phragmites communis*	P (Heer)	A
	Lake scirpus	*Scirpus lacustris*	P (Heer)	**P**
	Sedge	*Carices*	P (Heer)	A
	Marsh Scheuchzeria	*Scheuchzeria palustris*	2 (Altorfer)	A
	Yellow Flag	*Iris pseudacorus*	2 (Altorfer)	A
	Pondweeds	*Potamogeton perfoliatus, P. compressus, P. natans, P. fluitans*	**5** (Altorfer)	**P**
	Common hornwort	*Ceratophyllum demersum*	2 (Altorfer)	A
	Water plantain	*Alisma plantago*	**3** (Altorfer)	**P**
	Water pepper	*Polygonum hydropepper*	1 (Altorfer)	A
	Marsh bedstraw	*Galium palustre*	**6** (Altorfer)	**P**
	Buckbean	*Menyanthes trifoliata*	**2** (Altorfer)	**P**
	Marsh lousewort	*Pedicularis palustris*	**3** (Altorfer)	**P**
	Marsh pennywort	*Hydrocotyle vulgaris*	1 (Altorfer)	A
	Hog's fennel	*Peucedanum palustre*	3 (Altorfer)	A
	White water-lily	*Nymphaea Alba*	**4** (Altorfer)	**P**
	Yellow water-lily	*Nuphar luteum and N. pumilum*	3 (Altorfer)	A
	Water crowfoot	*Rananculus aquatilis, R. hederaceus, R. flammula, R. lingua*	**1** (Altorfer)	**P**

CHAPTER 5: CONCLUSIONS

5.1 Introduction

In the following section, the results presented in Chapter Four are synthesized with reference to the research questions and sources to answer Questions one and two: What was the distribution of artifact types collected by Wilson? How does Wilson's collection compare to collections made by his contemporary Charles Dörflinger vs. Swiss museum collections from Robenhausen? The background information highlighted using primary and secondary literary sources in Chapter Two is evaluated along with archival material and research on the NMNH collection and the MPM collection to answer the third research question: How were Thomas Wilson's collecting practices situated in the 19th century context of such activity and what influence may his European collecting have had on the development of early archaeology in the US based on his later publications? The last two sections of this chapter address the fourth and fifth research questions respectively: How did Wilson's collecting practices affect the interpretive and/or research value of the Robenhausen material at the SI and how might this collection be used in the future?

5.2 Comparison of the Distribution of Artifacts

Wilson vs. Dörflinger Collections

Wilson's NMNH Robenhausen material and Dörflinger's collection at the MPM are very different in their focus. Botanical remains comprise significantly more of Wilson's collection (63%) than Dörflinger's Robenhausen material at the MPM (8%) of the collection) (Table 5.1). The Wilson collection also has better quality botanical remains, in the sense that most of them are not mixed together like the specimens in

Dörflinger's collection, and most are labeled with their common name, genus and species, in their original glass vials. In contrast, Dörflinger's collection is dominated by ceramic vessels (54%), including whole vessels and rim sherds, while only 5% of Wilson's collection consists of ceramics. The second most prevalent artifact category in the Wilson collection is textiles, fibers and matting (10%), whereas in Dörflinger's collection, wood is the second most prevalent artifact category (15%).

Table 5.1: Robenhausen Collections at NMNH and MPM [80]		
Material	**# (%) of Wilson NMNH**	**# (%) of Dörflinger MPM**
Ceramic vessels	5 (5%)	**56 (54%)**
Other ceramics	0	0
Ground stone	2 (2)	**5 (5)**
Chipped stone/ flint	1 (1)	1 (1)
Other stone	**3 (3)**	0
Antler	0	**2 (2)**
Bone	**4 (4)**	3 (3)
Other Faunal	**3 (3)**	1 (1)
Wood	5 (5)	**16 (15)**
Textiles, Matting and Fibers	**9 (10)**	6 (6)
Botanical	**60 (63)**	9 (8)
Other	4 (4)	**5 (5)**

There are some similarities between the two collections. They are comparable in the amount of chipped and ground stone tools, although Dörflinger's collection has 3% more ground stone tools and Wilson has the only "other stone" samples e.g. red ocher, quartz crystal, etc. (3%). They are also similar in the amount of total faunal remains (6

[80] Object counts in tables reflect individual catalogues or checklists at the time of their donation and do not necessarily reflect the number of objects currently in the collections. The collection with the majority of an object type is indicated in bold.

and 7% respectively). However, Dörflinger's collection contains antler tools (2%) while Wilson's collection does not have any of this object type. Also, Wilson's collection has very few worked bone pieces, which is unusual for Robenhausen collections in the US and UK (Johnson 2006:96). The "other" category is about the same (4 and 5%) in both collections, although there are differences in the objects in each collection that fall under that category. Both collections contain daub in this category, but Wilson's is the only one with bread and charcoal. Lastly, neither collection has any "other ceramics" (loom weights, clay rings, crucibles, etc.).

Wilson, Dörflinger and Swiss Collections

Table 5.2 combines the artifact distribution information for the Wilson, Dörflinger and Swiss collections for easier comparison. The number of botanical specimens present in the Swiss collections (519) is based on Altorfer (2010:171). This amount was added to the total of the other categories that comprise the Swiss collections to reach a grand total (1531). The percentages of other artifact categories were then recalculated based on the new total and rounded up to the nearest whole percent. Based on Table 5.2, it is apparent that all three collections are very distinct in terms of artifact distribution. There are no close similarities between the Wilson and Dörflinger collections when compared to the Swiss collections. Dörflinger's collection still has the highest relative percentage of ceramic vessels (54% vs. 5% and 8%). Wilson's collection also has the highest relative percentage of botanical specimens (63% vs. 8% and 9%). Textiles, matting and fibers are the most prevalent type of objects in the Swiss collections (26% vs. 6% and 10%); this seems logical, as Robenhausen is known for its textiles (Higgitt et al. 2011; Lillis 2005). The Swiss collections also have a considerably higher percentage of stone, bone and

antler tools, as well as objects in the "other ceramics" category, which the Wilson and Dörflinger collections lack. The N/A indicates that the collections did not contain any specimens under that specific category.

Table 5.2: Robenhausen Collections at NMNH, MPM and Swiss Museums Category Comparison (Altorfer 2010)			
Material	**# (%) in Wilson NMNH**	**# (%) in Dörflinger MPM**	**# (%) in Swiss Collections**
Ceramic vessels	5 (5%)	**56 (54%)**	126 (8%)
Other ceramics	0	0	**56 (4)**
Ground stone	2 (2)	5 (5)	**272 (18)**
Chipped stone/ flint	1 (1)	1 (1)	**114 (7)**
Other stone	3 (3)	0	N/A
Antler	0	2 (2)	**131(9)**
Bone	4 (4)	3 (3)	**149 (10)**
Other Faunal	3 (3)	1 (1)	N/A
Wood	5 (5)	**16 (15)**	151 (10)
Textiles, Matting and Fibers	9 (10)	6 (6)	**394 (26)**
Metal	N/A	N/A	2 (0)
Botanical	**60 (63)**	9 (8)	136 (9)
Other	4 (4)	5 (5)	N/A
Total	96	104	1531

Botanical Comparison: Wilson, Dörflinger and Swiss Collections

Thomas Wilson's Robenhausen collection at the NMNH contains specimens from nearly every possible type of plant set forth in Heer's chapter in Keller's volume *The Lake Dwellings of Switzerland and Other Parts of Europe* (1886) (Table 5.3). Of the three categories where Wilson is missing a specimen (i.e. 'aromatic plants', 'plants used for dyeing' and 'mosses/ferns'), the Swiss collections are also lacking these same specimens, indicating their relative rarity. In each plant category, Wilson has at least

20% of all possible specimens, most with 50% or more. Also, there are five species that nearly every museum listed in Altorfer (2010) has in their collections: barley, wheat, flax, apple and water chestnut. Wilson has samples of all of them, as does Dörflinger. There are also some species not present in the eleven Swiss collections described in Altorfer (2010) that were part of Wilson's collection including lake scirpus, silver fir, burdock, and millet. Lastly, any botanical category that is well represented in the Swiss collections is also found in Wilson's collection. Based on Tables 5.2 and 5.3, Wilson had a nearly complete collection of the available botanical remains known from Robenhausen. This is in direct contrast to Dörflinger's collection, where specimens were often mixed and rarely stored in Messikommer's original packaging. In addition, it appears that Wilson intentionally obtained specimens from each type of plant, based on the fact that he meticulously labeled, identified and cataloged each specimen.

Table 5.3: Comparison of Wilson and Swiss Collections in Percentages of Botanical Remains
(Heer 1866; adapted from Altorfer 2010:Fig. 173a/b)

Type of Plant (# of Possible Species Listed in Heer)	**Wilson # (%)**	**Swiss # (%)**
Cereals (7)	3 (43%)	4 (57%)
Weeds of the Cornfield (15)	3 (20)	4 (27)
Culinary Vegetables (5)	1 (20)	3 (60)
Fruits and Berries (19)	6 (32)	11 (58)
Nuts (4)	3 (75)	3 (75)
Oil-Producing Plants (2)	2 (100)	2 (100)
Aromatic Plants (1)	0 (0)	0 (0)

Bast and Fibrous Plants (2)	1 (50)	2 (100)
Plants Used for Dyeing (1)	0 (0)	0 (0)
Forest Trees and Shrubs (18)	5 (28)	8 (44)
Mosses and Ferns (8)	0 (0)	0 (0)
Plants for Starting Fire (2)	1 (50)	1 (50)
Water and Marsh Plants (18)	8 (44)	15 (83)

5.3 Situating Thomas Wilson's Collecting Practices in Context

The evidence from the collections comparisons between Wilson's Robenhausen material and Dörflinger's MPM material suggests that Wilson's collecting practices were different from those of his contemporaries who also collected Swiss lake dwelling material, especially in the number of botanical specimens he focused on and how these were identified, catalogued and labeled. Although Wilson and Dörflinger were contemporaries who both worked in a natural history museum and came from similar backgrounds, their collections are substantially different in terms of their composition and how they were treated after their collection. In addition, there is variation between the two US collections and those found in Switzerland by Altorfer (2010). This evidence suggests that personal preference played more of a role in early museum collecting practices than previously thought. For example, Wilson's collection heavily favors organic materials (77 of 96 objects/ object groups, or 86%), which could be partly due to his interest in reconstructing past lifeways in order to make comparisons between different peoples in terms of their stage of cultural evolution.

However, archival research has revealed that the influence of Jakob Messikommer may have been greater than was initially thought on what was available for purchase, and the complex relationship between the excavator (Messikommer), the Director of the National Museum in Zürich (Ferdinand Keller) and Wilson apparently played a major role in the composition of the collection that ultimately ended up at the NMNH.[81] The archival sources from the AGZ indicate that Messikommer initially received most of his scholarly contacts through Ferdinand Keller, who was the founder of the Antiquarische Gesellschaft in Zurich. [82] Several of Messikommer's letters suggest that he had developed a relatively lucrative business for himself selling and trading lake-dwelling material from Robenhausen, as well as serving as an intermediary between scholars and various other lake-dwelling sites, like the nearby Niederwil and Lüscherz (both visited by Wilson) (Altorfer 2010). Since Messikommer was a farmer, he had to make extra money by selling lake-dwelling material so that he could take time away from farming to carry out his excavations. Messikommer also traded lake-dwelling items for advertising space in various publications in the US. For example, antiquarian Reverend S.D. Peet, of Clinton, WI, offered Messikommer advertising space in his publication in exchange for "relics from the Lake Dwellings". [83] According to one of the letters, Messikommer was also selling lake-dwelling objects out of a room in his house, where he prepared them with his labels (Altorfer 2010).[84] As a result, Wilson may have been somewhat dependent on what Messikommer had available during the times that he visited

81 Messikommer correspondence: AGZ Archives, Band 40, Nr. 453 (copied and translated by Bettina Arnold)

82 F.Keller to J. Messikommer. 8/22/1877: AGZ Archives, Band 40, Nr. 363(copied and translated by Bettina Arnold)

83 S.D. Peet to Jakob Messikommer. 3/11/1882: AGZ Archives, Band 40, Nr. 453 (copied by Bettina Arnold).

84 Messikommer to Caspar Escher-Züblin 29. September 1873: AGZ Archives, Band 37, Nr. 147 (copied and translated by Bettina Arnold).

the site. However, it appears that Wilson excavated a portion of the Robenhausen site alongside Messikommer; and of the material he excavated, Wilson predominantly chose botanical remains, adding credibility to the hypothesis that personal preferences influenced these early museum collectors more than previously realized. It appears that Wilson, like other nineteenth century collectors, chose to collect a complete series ("objects grouped typologically according to form and function") of botanical remains from lake-dwelling sites, emphasizing the unique or impressive specimens, as well as everyday items (Gosden and Larson 2007:23; Arnold 2013:880). On the other hand, it seems that Dörflinger chose to collect an "assortment", referring to an arbitrary sample of objects available for sale composed of a greater range of object types rather than a complete set of one object category (Arnold 2013:880).

The implications of this evidence also affect how knowledge about the past has been constructed, and in turn, how these trends have impacted the development of archaeology as a discipline. The potential influence of Wilson's social networks, motivations, and his intellectual tradition will be further assessed to determine his influence on the production of knowledge about the past and archaeology as a discipline.

Social Networks

Thomas Wilson was well connected in intellectual communities in both the US and Europe. Rather than narrate Wilson's social connections within the burgeoning field of archaeology, Figures 5.1-5.3 visually portray his position in the network of European and US scholars with whom he had connections during the late 19th and early 20th centuries, although these links not exhaustive. Wilson had many contacts through his involvement with learned societies in both the US and Europe, including the

Anthropological Society of Washington, Cosmos Club, CIAAP, Société d'Anthropologie de Paris, Anthropological Institute of Great Britain and Ireland, American Association for the Advancement of Science, etc (Mason 1902; Petraglia and Pots 2004:15). Wilson's positions at the SI and as US Consul in Europe brought him into contact with numerous scholars, as did his collecting activity. He also presented exhibitions at a number of Worlds Fairs and Expositions (see Chapter 2).

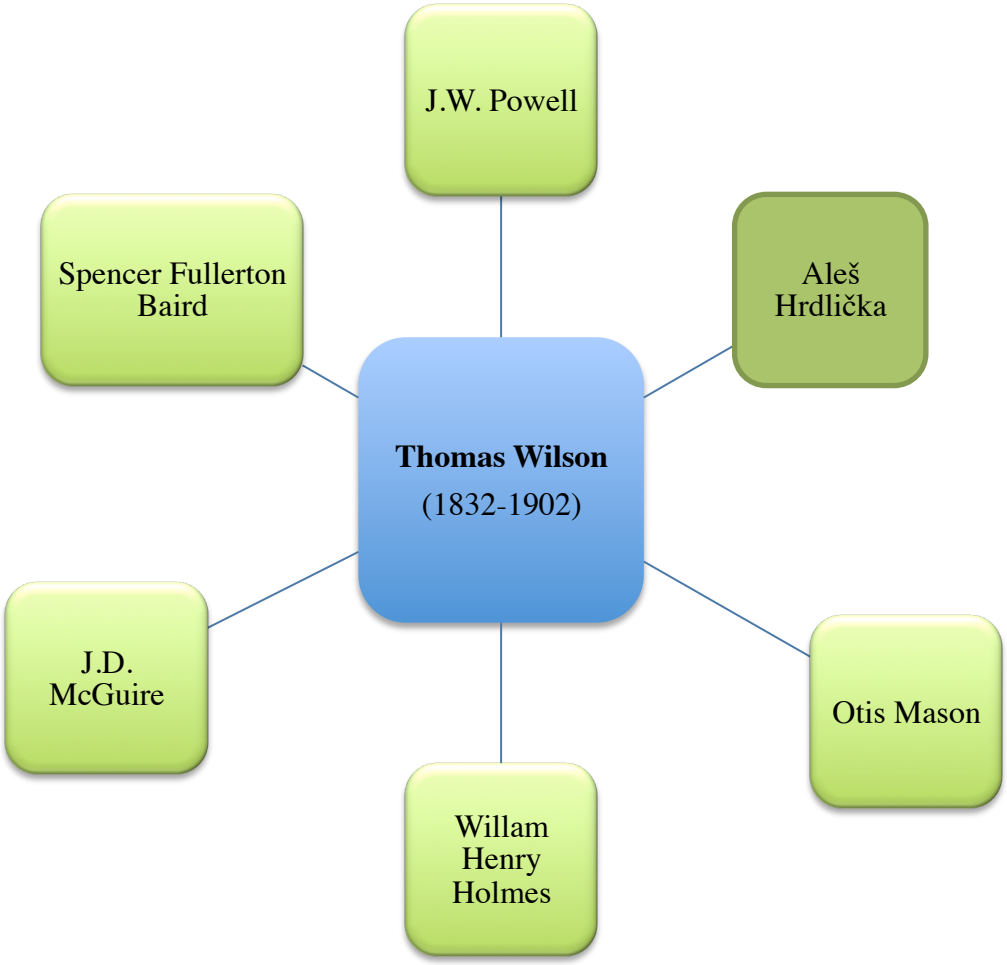


Figure 5. 1: Wilson's Scholarly Connections through the SI. [85]

85 Hinsley 1985; Jacknis 1985; Bushnell 1913 (1960); Petraglia and Potts 2004.

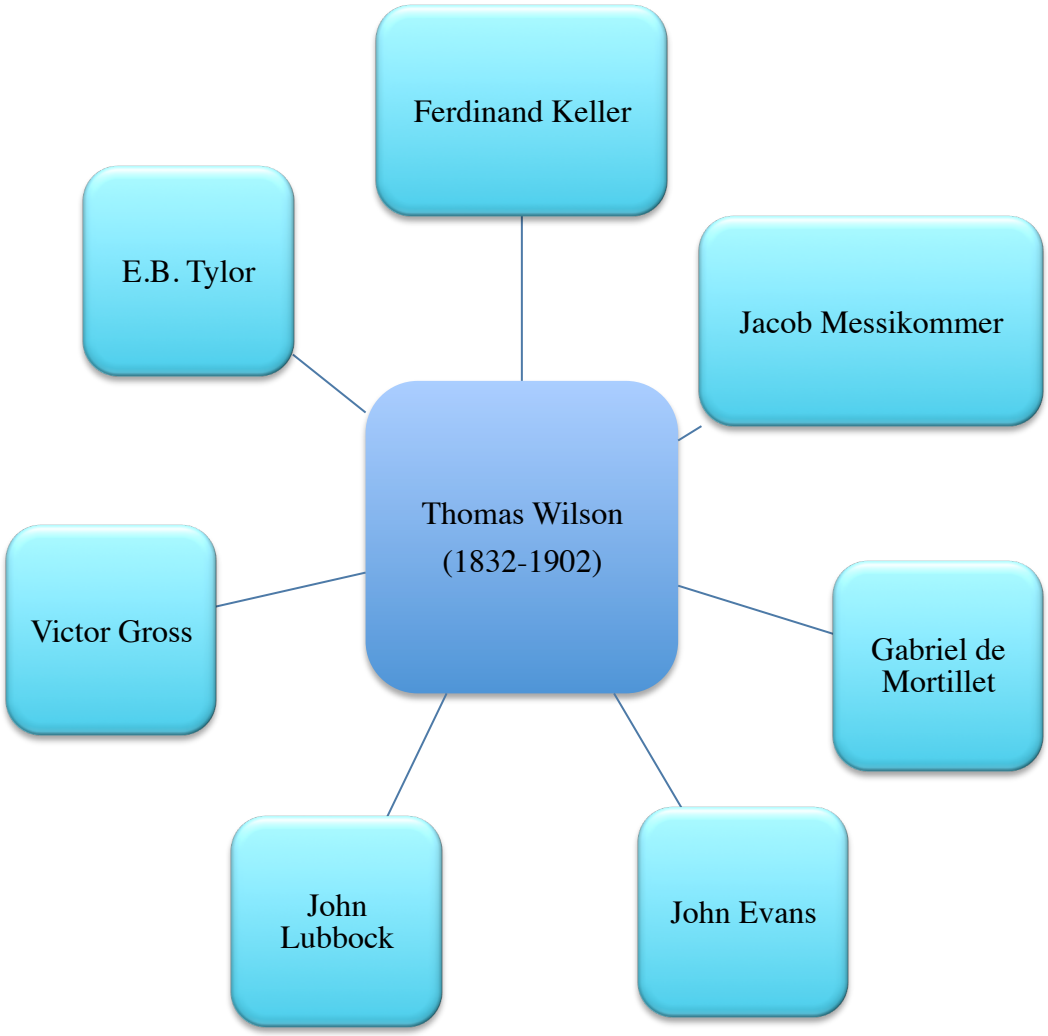


Figure 5.2: Wilson's European Connections. [86]

86 Jacob Messikommer to Rudolf Jucker 8/26/1886: Antiquarische Gesellschaft Zürich (AGZ) Archives, Band 40, Nr. 453 (copied and translated by Bettina Arnold).; Congrès Interational d'Anthropologie et d'Archaéologie Prèhistoriques (1902); Gosden and Larson 2007; Wilson 1888.

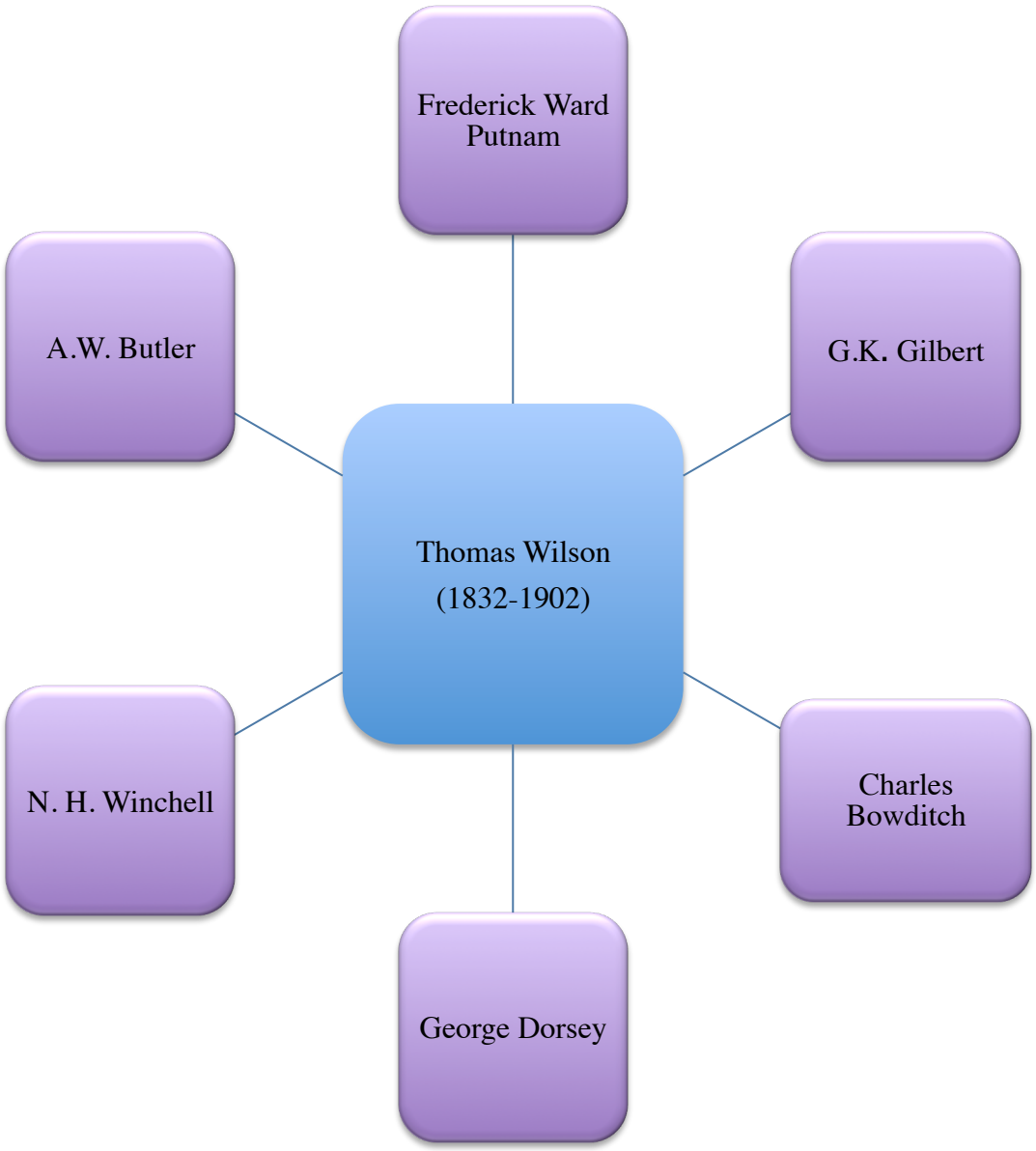


Figure 5. 3: Wilson's Contacts in Developing Antiquities Legislation. [87]

87 National Park Service. "NPS Archaeology Program for the Public".http://www.nps.gov/archaeology/pubs/lee/Lee_ch6.htm. Last updated 8/13/2013.

Motivations and Intellectual Tradition

When investigating Wilson's motivations and intellectual tradition in regard to the production of archaeological knowledge, it is important to place him in the context of the study of the past at the time (Kaeser 2008a:381; Petraglia and Potts 2004). It appears that he represents a combination of the two most common approaches, or tendencies, in operation during the late 19th and early 20th centuries (cont. from Chapter 3): Wilson was both antiquarian and evolutionist. First, Wilson fits into the category of antiquarian in that his collecting practices indicate his interest in reconstructing past lifeways; this is evident based on the heavy botanical content of his Robenhausen collection at the NMNH and his methods of using "synoptical cases" in exhibitions, based on geography, chronology and typology (Wilson 1890f; Petraglia and Potts 2004:20). His publications relating to prehistoric art (1896a) and folklore (1889b) provide additional support for this conclusion. Lastly, he seems to have had a partially nationalist motivation for his European collection, as evidenced by his letters to Baird, where he states that he is collecting for the benefit of his country and that he needed to be sent the latest publications so that he may represent his country, as well as possible to European scholars.[88]

However, Wilson was also approaching the study of the past from an evolutionist perspective, in that his publications and exhibitions indicate a belief in unilinear cultural evolution, as well as biological evolution and a single origin for all human beings (Wilson 1895c:1041; 1897b:655; 1899a:831; Petraglia and Potts 2004). He also appears to portray objects in terms of their state of technological advancement, explicitly drawing

88 Correspondence between Wilson and Baird 1884-1887: NAA.

cross-cultural comparisons between the prehistoric societies of the Old and New Worlds (Wilson 1899a). This cross-cultural and evolutionary focus, as expressed in Wilson's publications, is unusual for his time (Wilson 1899a), and is likely due to his scholarly affiliation with institutions like the SI US National Museum, the American Association for the Advancement of Science and the Congrès international d'anthropologie et d'archaéologie prèhistoriques (International Congress of Anthropology and Prehistoric Archaeology) in Paris, as well as his extensive European travels.

5.4 Thomas Wilson's Influence on the Development of Archaeological Knowledge

Thomas Wilson is usually mentioned briefly in publications on the history of archaeology in the US, but his influence on archaeology as a discipline has not been previously explored (Jacknis 1985; Hinsley 1985; Browman and Williams 2002; Petraglia and Potts 2004; Christenson 2011). At first glance, it may seem that Wilson did not contribute any groundbreaking or significant work to the field of archaeology. However, although his mark may be subtler than that of Franz Boas, for instance, it is no less significant. Based on the evidence laid forth in this thesis, Wilson's main influence on the development of archaeology as a discipline consisted of public lectures given through the SI, exhibitions created for the Cincinnati (1888), Paris (1889), and Columbian (1893) Expositions, numerous publications, including his instructional handbook on archaeology for beginners (1890a), his development of the legislation that led to the Antiquities Act of 1906, his membership in numerous learned organizations, the social networks he cultivated for the SI, and his emphasis on taking detailed notes, using advanced conservation techniques, and classifying objects using a cross-cultural comparative approach.

In addition to these contributions, Wilson was one of the few government anthropologists in the late 19th century to argue for the antiquity of Native Americans, although his position brought him criticism and sparked debate on whether European archaeological evidence could be applied to North America (McGuire 1889:935-937; Petraglia and Potts 2004). Wilson may also have also been one of the first archaeologists to consider the importance of using multiple lines of evidence in his papers. Thomas Crowder Chamberlin's publication *The Method of Multiple Working Hypotheses*, originally written in 1890 and published in the AAAS journal *Science*, is usually credited for introducing this idea into academia, albeit in the field of geology. However, in his 1888 paper, originally published in a 1887-1888 USNM Report, *A Study of Prehistoric Anthropology —Hand Book for Beginners*, Wilson considers multiple sources of evidence before drawing conclusions and discusses viewpoints different from his own. While Wilson agreed with and used Gabriel de Mortillet's culture periods for the European Paleolithic, he made it known that he felt these subdivisions were tentative and liable to be changed by subsequent discoveries and that there were other ways of classifying prehistoric cultures and periods (Wilson 1890a:605). While this is not the only example, it is one of the earliest, indicating that Chamberlin was not the source of Wilson's multiple hypothesis approach. It may be that Wilson's legal training predisposed him to the use of multiple lines of evidence. In constructing a legal argument, one must consider all of the available facts, and it is likely that he applied this approach to his archaeological practice as well. It cannot be proven whether Wilson influenced T.C. Chamberlin, although they were both contributors to the journal *Science* around the same time.

However, Wilson certainly deserves credit for being one of the first archaeologists to consider multiple lines of evidence in testing hypotheses and for his willingness to adjust his ideas based on new evidence. Lastly, Wilson was also innovative in that he was undertaking experimental archaeology as early as 1891 during an *American Anthropologist* symposium on arrows with J.D. McGuire and W.H. Holes, both of the SI (Bushnell 1913:495). His lithic experiments also refuted Sellers' notion that beveled points were not arrowheads meant to rotate in flight by hafting the points on shafts and dropping them off of the roof of the SI; the arrows did indeed rotate (Johnson et al. 1978:340).

5.5 Influence of Collecting Practices on Research Value

Wilson's collecting practices affected the interpretive and research value of the Robenhausen material he donated to the NMNH in several ways. Messikommer packaged the botanical material from Robenhausen in glass vials, which Wilson packed carefully to be shipped to the US. The NMNH kept these specimens in the original vials, thus helping to preserve them. Wilson used botanist Oswald Heer's 1866 chapter in Keller's *The Lake Dwellings of Switzerland and Other Parts of Europe* to identify nearly all of the botanical specimens. These classifications are still used by the NMNH to this date and Wilson's handwritten catalogue, including his description of the objects and how he collected them, makes this collection a good candidate for further research.

5.6 Summary of Conclusions

This thesis has traced the collecting practices and scholarly work of Thomas Wilson and showed how historic museum collections can serve as primary sources of information regarding the material and social networks that were crucial to both the

construction of archaeological knowledge about Swiss lake dwelling cultures and the development of archaeology as a discipline in the US. Based on the distribution of artifact types in Wilson's NMNH collection, as compared to Dörflinger's MPM collection and a selection of Swiss museum collections (Altorfer 2010), it is clear that individual agency was a factor in the composition of artifact types in these museum collections, and in turn, that an individual's collecting practices play as significant a role as intellectual traditions, political contexts, social networks of scholars and museums in the production of archaeological knowledge at the turn of the 20th century (Gosden and Larson 2007; Leckie 2011; Arnold 2013; Díaz-Andreu 2007; Kaeser 2008a; 2008b). This has implications for how these collections can be used and suggests the socio-historical context of the collector must be taken into consideration in any future presentations of the lake-dwelling material at the SI and other museums.

5.7 Future Research

Several possibilities exist for future research on historic lake dwelling collections. First, additional comparisons of historic lake dwelling collectors must be made in order to test the hypothesis that individual agency was an important factor influencing the composition of artifact types in these museum collections, and in turn, the production of archaeological knowledge at the turn of the 20th century in the US. Comparing Wilson to Swiss lake-dwelling collectors from other backgrounds and countries, while tracing their social networks, motivations and backgrounds, will provide the multiple lines of evidence needed to test this hypothesis. Second, the Wilson Robenhausen collection itself could be the subject of archaeological research, due to its excellent preservation and the new information elucidated regarding its context in this thesis. The botanical

specimens, in particular, should be further explored, as there is such a large, representative sample, especially for a US collection. Third, Thomas Wilson's life could be delved into in more detail by conducting more archival research, especially studying his manuscripts that are available at the SHSI in Des Moines, IA, contacting European museums and institutions to locate more information on his collecting activities in Europe, and by further investigating some of his other collections (e.g. the European Paleolithic material, Etruscan ceramics, etc.). Lastly, comparisons of the SI objects with other collections in both the US and Europe would also be fruitful in understanding both the objects themselves and the diaspora of lake-dwelling material to the US and UK. Any future studies, regardless of their nature, should be aimed at virtually reuniting these orphaned collections (Arnold 2013:888).

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Appendix A: List of Known Robenhausen Botanical Specimens (adapted from Keller 1886)

Catalogue of Lake-Dwelling Plants (adapted from Heer 1866 in Keller 1866: 348-350)		
	Common name	**Genus and Species**
1. CEREALS		
	Small lake-dwelling barley	*Hordeum hexastichum sanctum*
	Compact six-rowed barley	*Hordeum hexastichum densum*
	Two-rowed barley	*Hordeum distichum*
	Small lake-dwelling wheat	*Triticum vulgare antiquorum*
	Beardless compact wheat or "Dinkelweizen"	*Triticum vulgare compactum muticum*
	Egyptian wheat	*Triticum turgidum*
	Spelt	*Triticum spelta*
	Emmer or two-grained wheat	*Triticum dicoccum*
	One-grained wheat or "Einkorn"	*Triticum monococcum*
	Rye	*Secale cereale*
	Oat	*Avena sativa*
	Millet	*Panicum miliaceum*
	Italian setaria, "Kolbenhirse" or "Fennich"	*Setaria Italica*
2. WEEDS OF THE CORN-FIELD		
	Darnel	*Lolium temulentum*
	White goosefoot	*Chenopodium album*

	Many-seeded goosefoot	*Chenopodium polyspermum*
	Red goosefoot	*Chenopodium rubrum*
	Striped-seeded goosefoot	*None listed*
	Burdock	*Lappa major*
	Corn cockle	*Agrostemma githago*
	White campion	*Lychnis vespertina*
	Cretan catchfly	*Silene cretica*
	Chickweed	*Stellaria media*
	Smooth-seeded spurry	*Spergula pentandra*
	Thyme-leaved sandwort	*Arenaria serpyllifolia*
	Goosegrass	*Galium aparine*
	Creeping crowfoot	*Ranunculus repens*
	Little bur medick	*Medicago minima*
	Corn bluebottle	*Centaurea cyanus*
3. CULINARY VEGETABLES		
	Parsnip	*Pastinaca sativa*
	Common carrot	*Daucus carota*
	Celtic fieldbean	*Faba vulgaris or Celctica nana*
	Pea	*Pisum sativum*
	Lentil	*Ervum lens*
4. FRUITS AND BERRIES		
	Apple	*Pyrus malus (a: smaller crab-apple) and b: larger, rounder apple)*

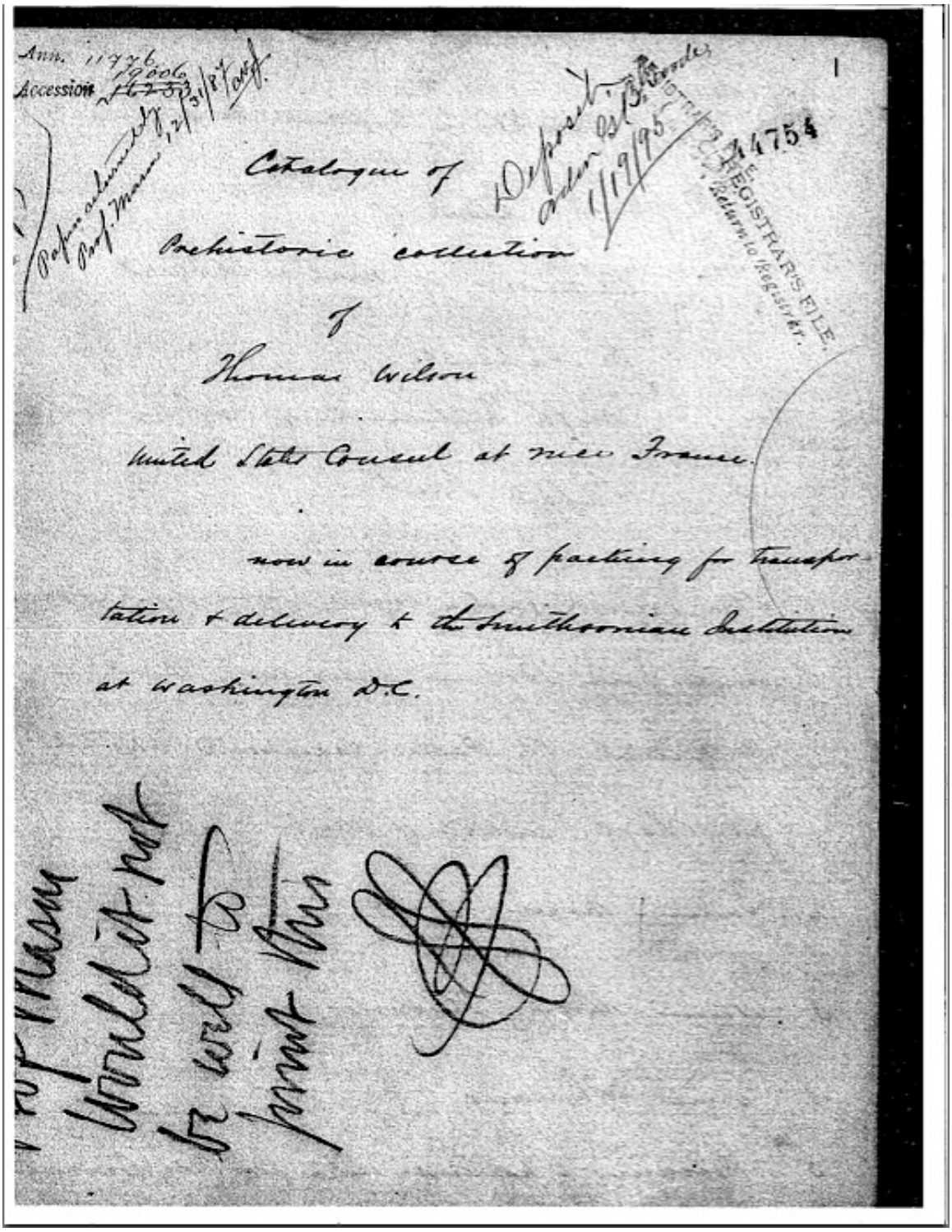
	Pear	*Pyrus communis*
	Service-tree	*Pyrus aria*
	Cherry	*Prunus avium*
	Sloe	*Prunus spinosa*
	Bullace	*Prunus institia*
	Bird cherry	*Prunus padus*
	Perfumed cherry	*Prunus mahaleb*
	Vine	*Vitis vinifera*
	Raspberry	*Rubus idaeus*
	Bramble	*Rubus fruticosus*
	Strawberry	*Fragaria vesca*
	Dog-rose	*Rosa canina*
	Common elder	*Sambucus nigra*
	Dward elder	*Sambucus ebulus*
	Bilberry	*Vaccinium myrtillus*
	Red whortleberry or cowberry	*Vaccinium vitis idaea*
	Cornel-cherry	*Cornus mas*
	Wayfaring tree	*Viburnum Lantana*
5. NUTS		
	Hazelnut	*Corylus avellana*
	Beech	*Fagus sylvatica*
	Walnut	*Juglans regia*
	Water chestnut	*Trapa natans*
6. OIL-PRODUCING PLANTS		
	Opium or garden poppy	*Papaver somniferum*, var. *antiquum*
	Dogwood	*Cornus sanguinea*

7. AROMATIC PLANTS		
	Caraway	*Carum carui*
8. BAST AND FIBROUS PLANTS		
	Flax	*Linum angustifolium*
	Lime-tree	*Tilia grandifolia*
	Small-leaved lime-tree	*Tilia parvifolia*
9. PLANTS USED FOR DYEING		
	Weld	*Reseda luteola*
10. FOREST TREES AND SHRUBS		
	Scotch fir	*Pinus sylvestris*
	Mountain pine	*Pinus montana*
	Spruce fir	*Pinus abies*
	Silver fir	*Pinus picea*
	Juniper	*Juniperus communis*
	Yew	*Taxus baccata*
	Oak	*Quercus robur*
	Hornbeam	*Carpinus betulus*
	Alder	*Alnus glutinosa*
	Birch	*Betula alba*
	Willow	*Salix repens* and *S. cinerea*
	Ash	*Fraxinus excelsior*
	Mistletoe	*Viscum album*
	Holly	*Ilex aquifolium*
	Spindle-tree	*Euonymus europaeus*
	Berry-bearing alder	*Rhamnus frangula*
	Mountain ash	*Sorbus aucuparia*
	Maple	*Acer*

11. MOSSES AND FERNS		
	Mosses	*Antitrichia curtipendula*
		Neckera complanata
		Neckera crispa
		Thuidium delicatulum
		Anomodon viticulosis
		Leucodon sciuroides
		Hylocomium brevirostre
	Fern	*Pteris aquilina*
12. PLANTS FOR STARTING FIRE		
	Common tinder fungus	*Polysporus igniarius* and *P. fomentarius*
	Oak agaric	*Daedalia quercina*
13. WATER AND MARSH PLANTS		
	Chara	*Chara vulgaris* and *C. foetida*
	Common reed	*Phragmites communis*
	Lake scirpus	*Scirpus lacustris*
		Carices
	Marsh scheuchzeria	*Scheuchzeria palustris*
	Yellow Flag	*Iris pseudacorus*
	Pondweeds	*Potamogeton perfoliatus, P. compressus, P. natans, P. fluitans*
	Common hornwort	*Ceratophyllum demersum*
	Water plantain	*Alisma plantago*
	Water pepper	*Polygonum hydropepper*
	Marsh bedstraw	*Galium palustre*

	Buckbean	*Menyanthes trifoliate*
	Marsh lousewort	*Pedicularis palustris*
	Marsh pennywort	*Hydrocotyle vulgaris*
	Hog's fennel	*Peucedanum palustre*
	White water-lily	*Nymphaea alba*
	Yellow water-lily	*Nuphar luteum and N. pumilum*
	Water crowfoot	*Rananculus aquatilis, R. hederaceus, R. flammula, R. lingua*

Appendix B: Copy of Thomas Wilson's Personal Catalog: pp.1; 38-46


Ann. 11776
Accession 19006
Prehistoric collection of Thomas Wilson

38

10 or 12 feet in thickness – no piece of metal has ever been discovered – one piece of pottery excepted. Sept 5. 1883 we applied to Mr Jacques Mesikommes who accompanied us, with his son Henri to the station. He took his tools and workmen and dug out a hole in the post 4 ft square & 4 feet and say 7 or 8 feet deep – showing 16 piles in situ.

I took photos. Some of the following articles we bought from Mesikommes, some we found.

1200 Stone hatchet – deer horn hatchet

1201 Linen cloth – bottom glass

1202 } Machines for hauling up fish nets
1203 } They use same at Geneva at present.

39

rum of visit of Sept 1883. to Neuchatel, Neuveville Pieds, Berne
Nidau
Nidau. Berne Zurich Robenhausen Zug Lucerne & Lake Como & Milan. Returning Lake Maggiore Simplon

Still Neolithic - Polished Stone age.

Chamonix. Geneva Lausanne. Morges Yverdon
Estavayer Font Chavornay &c

From the Swiss Lakes. September 1883.

1193. Pottery from St Blaise - Lake Neuchatel. fingers. Showing marks of potters

1194 } same same.
1195 }

1197 Pottery from Heidenberg in the mountains near Robenhausen.

1198 } Large vase from Robenhausen.
1199 } Robenhausen is the sample station for the polished stone age so that de Mortillet has applied that name to the epoch. It is on the summit Lake Pfaffikon a few miles from Zurich. It contains many articles in excellent preservation - a peat bed having formed over them

1204. Bone knife

1205 " " supposed to have been used for skinning animals.

1206. " Chisel

1207 Pottery- bottom of vase 11 cent. diam.

1208 " half of vase divided perpendicularly

1209 Bone knife. Similar to 1205.

1210 Stone hatchet in deer horn handle- beautiful specimen- possibly nephrite- Tanepeamt will cut glass now. It may have some letters on the handle, they may be only straight marks.

1211 Grains of wheat- charred.

1212 Flax Bolls.

1213. Poppy Seed.

1214 Flax or Bast- fibre natural

1215 " same in rope - from Moringue

1216 Seeds

41

1217 Stone hatchet - deer horn socket.

Schaffis - Lake Bienne

1218 Stone hatchet - deer horn socket - for hand use. Twisthorn - Lake Bienne

1219 ditto - edge broken - sandstone

Schaffis.

Left S. our own find.

1220 Piece of wood 8 & 10 feet deep - showing plainly marks of stone hatchet.

I have taken plaster cast

1221 Piece of soft birch wood pile showing tools in passing through. It was originally 5 inches in diameter. I found it shrinking as it dried and I took a plaster cast.

1222 Piece of oak pile

1223. many samples of pottery - one decorated with by a pinch of thumb and finger. It shows the long thumb nail.

1224. Piece of dried clay with the "daubing" with which they lined their houses.

1225 Pieces of charcoal.

1226 Pollissoir - sandstone - showing marks of use -

1227 Piece of loaf of bread made probably of barley. I bought this from [illegible] - didn't find

1228 Apples in half. See 1251-2-61

1229 Wheat " 1253.

1230 Barley " 1257

1231 Hazel nuts " 1238

1232 divers seeds

1232 a Burnt straw or hay - probably thatch roof.

End of our find at Robenhausen Sept 5. 188

1883

43

Purchase from Jakob Messikommer Dec 7. 18[illegible]
all numbers not marked with the place, come from the Station of Robenhausen.

1233. Birch Bark. *Betula alba*. L.

1234 Pine Cone - Scotch fir. *Pinus Sylvestris* L.

1235. do Spruce - P. abies - L. see 1266.

1236 Rope made of bast, from inside bark of the linden tree - Mösingen?

1237. Piece of bread.

1238 Hazel nuts - *Corylus avellana* L. see 1231

1239 ditto ditto

1240 Water chestnut - *Trapa natans*. L.

1241 Silver fir - Pinus picea. L.

1242 Bast - linden tree - from Schafis.

1243 Flax fibre " "

1244 " " Twisted

1245 Vegetable fibre - Geflechte?

1246 " " Reiste?

1246 a " " moss?

1247 " " bast or flax? from Schafis.

44

1248. vegetable fibre - bark? from Schafis.

1249

1250 Woven linen cloth.

1251. apples - Pyrus malus. see 1228-61

1252 do do

1253 Wheat. small lake dwelling - Triticum vulgare antiquorum

1254 do beardless. T. vulg. compactum muticum

1255 do do

1256 do Lüscherz

1257 Barley. small lake dwelling. Hordeum hexastichum

1258 ditto ditto

1259 ditto six rowed. H. hexastichum densum

1260 ditto - same as -57-58.

1261 apples seeds - Pyrus malus. 1228-57.

1262 Beech nuts - Fagus sylvatica L.

1263 Flax bolls - Linum angustifolium

1264 Dogwood - Cornus sanguinea

1265 Buckbean - Menyanthes trifoliata L.

1266. Spruce fir. seeds Pinus abies. L. see 1235.

1267 Flax seed - Linum angustifol. 1263-43-4

45

1268. White water lily - Nymphaea alba L.

1269. marsh bed straw - Galium palustre L.

1270 Common Elder - Sambucus nigra

1271 Burdock - Lappa major

1272 Bird Cherry stones - Prunus padus

1273 Alisma Plantago. water plantain

1274 Bramble - Rubus fruticosus - 1278

1275 Water Crowfoot - Ranunculus aquatilis.

1276 Parsnip - Pastinaca sativa.

1277 White Goose foot - Chenopodium album

1278 Bramble - Rubus fruticosus. 1274

1279 Lake Scirpus - Scirpus lacustris.

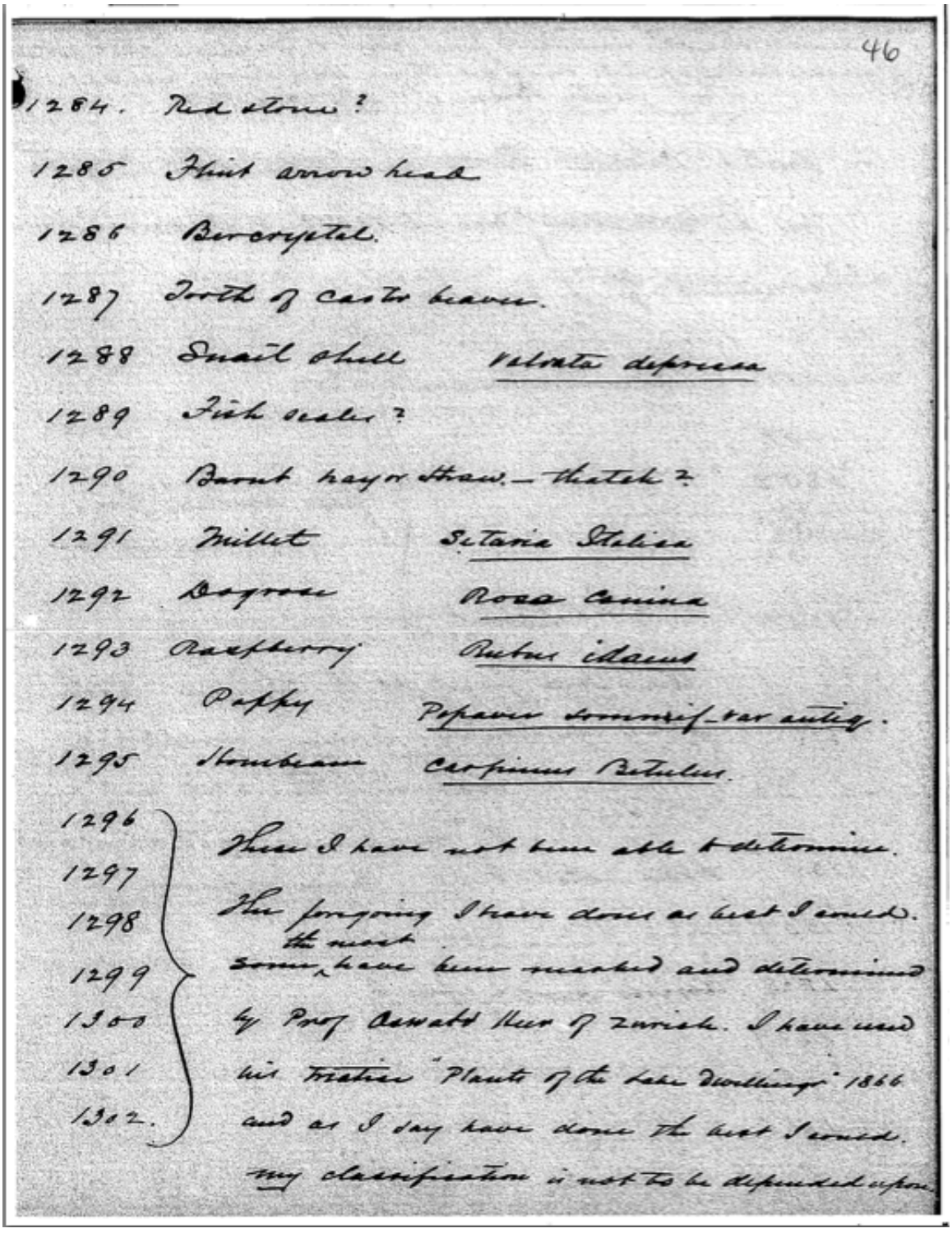
1280 Pond weed - Potamogeton compressum.

1281 marsh lousewort. Pedicularis palustris.

1282 Cretan catchfly - Silene cretica

1283 Common tinder fungus - Polyporus igniarius

Rope cord were made from this fibre.



46

1284. Red stone?

1285 Flint arrow head

1286 Bercrystal.

1287 Tooth of Castor beaver.

1288 Snail shell Helicta depressa

1289 Fish scales?

1290 Burnt hay or straw. — thatch?

1291 Millet Setaria Italica

1292 Dogrose Rosa Canina

1293 Raspberry Rubus idaeus

1294 Poppy Papaver somniferum var antiq.

1295 Hornbeam Carpinus Betulus.

1296 } These I have not been able to determine.
1297 }

1298 } The foregoing I have done as best I could.
1299 } Some of the most have been marked and determined
1300 } by Prof Oswald Heer of Zurich. I have used
1301 } his treatise "Plants of the Lake Dwellings" 1866
1302. } and as I say have done the best I could.
my classification is not to be depended upon.