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IN CHINA'S BORDERLANDS, 1880-1950

EDITED BY

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FRONTISPIECE Bridge and riverbed, upper Yangtze, 1908.
 Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

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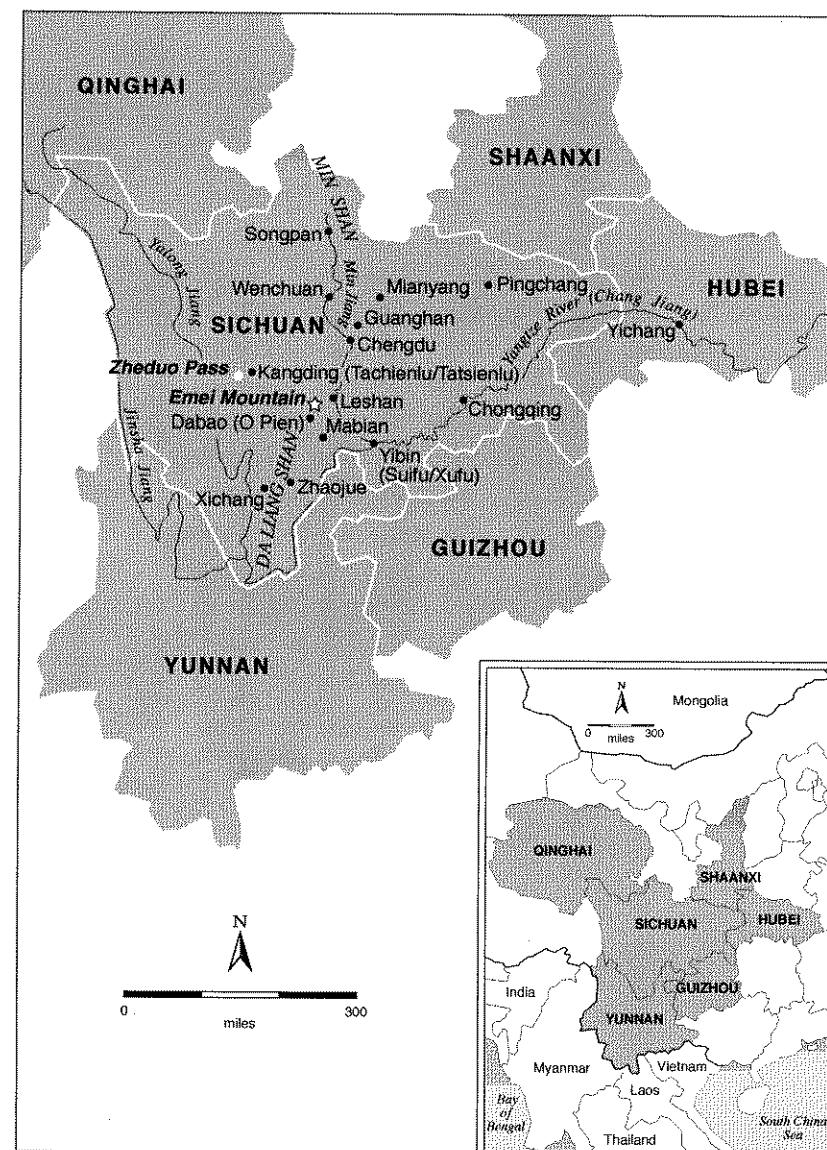
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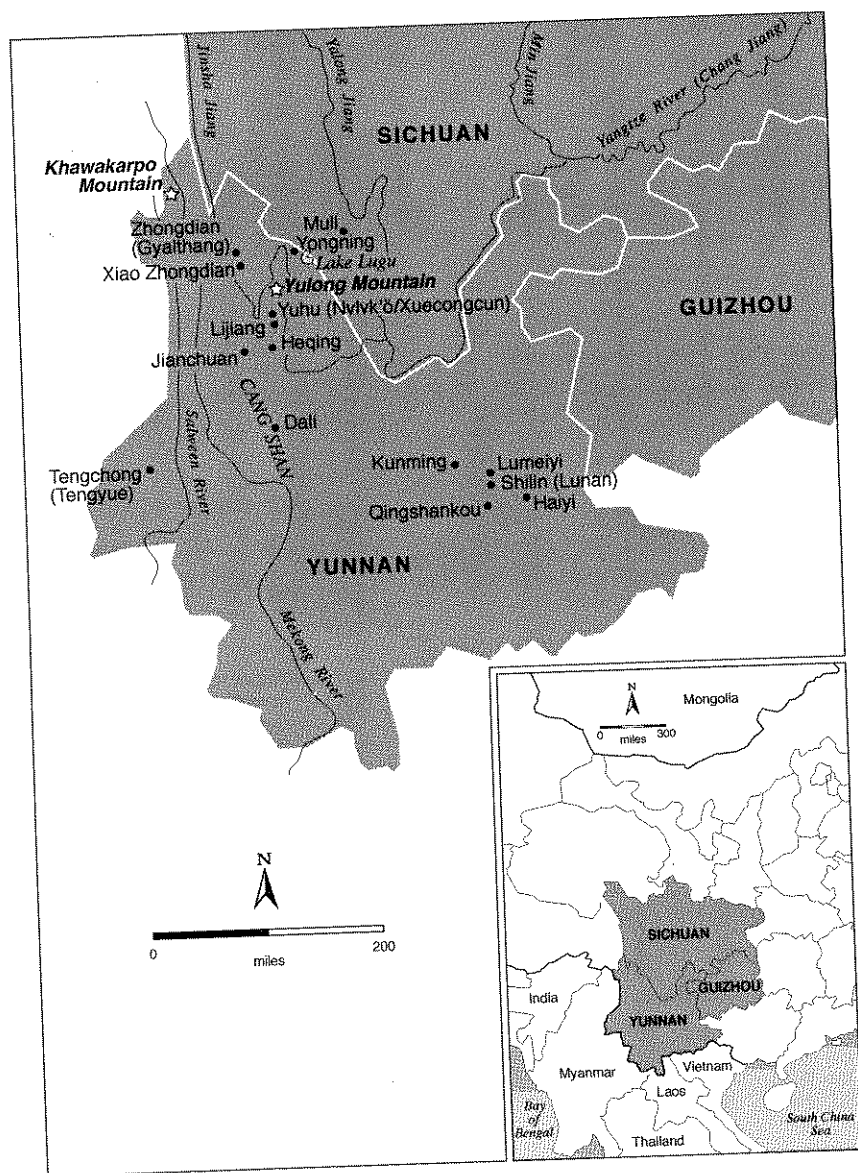
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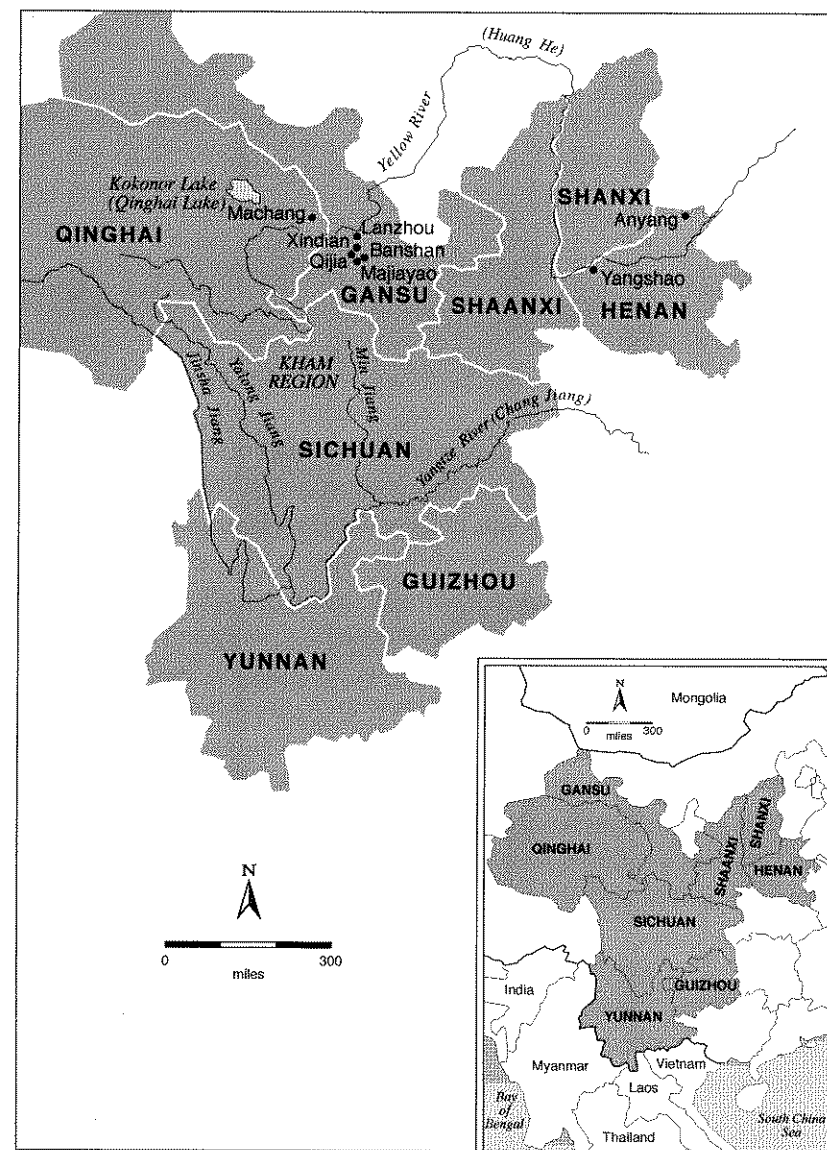
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MAP 1 Areas of Sichuan and Hubei provinces, with sites of exploration by Ernest Henry Wilson, Fritz and Hedwig Weiss, and David Crockett Graham (see chaps. 2, 3, 6, and 7).



MAP 2 Areas of Sichuan and Yunnan provinces, with sites of exploration by George Forrest, Joseph Rock, and Paul Vial (see chaps. 1, 4, and 5).



MAP 3 Areas of Qinghai, Gansu, and Henan provinces, with sites of exploration by Johan Gunnar Andersson and Ding Wenjiang (see chap. 8).

Preface

THIS volume is the result of a symposium by the same title held at the University of Washington on January 19–21, 2007, organized by Stevan Harrell and sponsored by the Simpson Center for the Humanities (UW), the Burke Museum of Natural History and Culture, the Center for East Asian Studies (UW), and Washington Park Arboretum. The symposium brought together a mix of scholars, researchers, and filmmakers for a weekend of exchange and exploration. Included as part of the symposium were oral presentations and films on various explorers/scientists, voucher specimen displays of plants from China from the Burke Museum Herbarium (supervised by Herbarium curator Richard Olmstead), and a visit to the UW Botanic Gardens at the Washington Park Arboretum for a tour (led by horticulturalist David Zuckerman) of Himalayan plants, many of them introduced to American horticulture by the explorers/scientists discussed in symposium presentations.

The symposium was organized in conjunction with two Burke Museum exhibits: *Vanished Kingdoms: The Wulsin Photographs of Tibet, China, and Mongolia, 1921–1925*, curated by Mabel Cabot and featuring slides of colored lanterns taken by American explorers Janet E. Wulsin and Frederick R. Wulsin Jr., and *Sacred Portraits from Tibet*, curated by Stevan Harrell. Overall, it was a weekend full of discussion and multisensory activities and experiences, with a focus on explorers and scientists on the borderlands in China at the turn of the previous century.

In this book we have maintained a diversity of authorship (from anthropologists to botanists to filmmakers). Several of the written texts here vary somewhat from the oral presentations given at the symposium. Each chapter is also accompanied by black-and-white photographs, which were an important aspect of exploration and scientific discovery at the time the

explorers/scientists were active (many in fact were taken by the explorers themselves) and which, we believe, augment the written text in a significant way. The book will have wide appeal to those in academia as well as to a more general public interested in exploration and scientific and humanistic endeavors.

Publication of this volume has been made possible by contributions from the East Asian Studies Center and the China Studies Program of the Henry M. Jackson School of International Studies at the University of Washington and the Office of the Provost and Dean of Faculty and the Asian Studies Program at Whitman College, as well as by donations from Graham M. Russell, F. Patrick (Pat) Russell, and Vivian Russell. Without the financial assistance of these contributors this book would most likely not have made it to press; we are most grateful for their support. In addition, we would like to thank the Arnold Arboretum, Missions Étrangères de Paris (MEP), the Royal Botanic Gardens (Kew and Edinburgh), Whitman College and Northwest Archives, and the Museum of Far Eastern Antiquities for archival assistance and/or permission to reproduce without charge photographs by Wilson, Vial, Graham, Forrest, Andersson, and Rock.

DENISE M. GLOVER

June 2011

EXPLORERS AND SCIENTISTS

IN CHINA'S BORDERLANDS,

1880–1950

- 13 In 1928, Kermit and Theodore Roosevelt, sons of the former President, would explicitly transfer the visual vocabularies of African big-game hunting to southwest China in their famous expedition to shoot a giant panda, financed by William Kelly, president of Miehle Printing Press and Manufacturing. Accounts of the Kelly-Roosevelt expedition are Roosevelt and Roosevelt 1929 and Stevens 1934.
- 14 In 1950, when a census was taken of the Lijiang valley, Nvlvk'ö had 136 households and 816 people.
- 15 This ethnographic information about ocular courtesy is drawn from the author's fieldwork in 1989 in Baisha, the market village closest to Nvlvk'ö, and in other nearby villages.
- 16 Arnold is referring in particular to Pratt 1992 and Spurr 1993.
- 17 This perspective on the sociality of vision is drawn from Merleau-Ponty [1964] 1968.

2

At Home in Two Worlds

ERNEST HENRY WILSON AS NATURAL HISTORIAN

Denise M. Glover

How many people know the size of a mule's hoof? Quite a number have felt the strength of a mule's leg and the sharpness of his teeth; his obstinacy is a proverb. But the size of his hoof is another matter. Frankly, I do not know with mathematical exactness but as I lay on the ground and more than forty of these animals stepped over my prostrate form the hoof seemed enormous, blotting out my view of the heavens.

—Ernest Henry Wilson, *Plant Hunting*

TAKEN from the forty-third chapter of the second volume of an especially popular book, the above quote is from Wilson's account of "discovering" what became a significant horticultural lily, *Lilium regale* (which Wilson refers to as "Her Majesty"), in the western area of present-day Sichuan Province, near Songpan. The chapter is framed, beginning and end, by an account of getting caught in a rockslide during the course of this particular adventure (Wilson suffered a broken leg from the rockslide; the fractures would cause him trouble for the rest of his life and would amount to what was known as his "lily limp"). In focusing on the visual aspect of his experience in this particular passage, Wilson artfully captures the feeling of being stepped over by his caravan of mules; he notes not what the animals smelled like or how the ground felt underneath him as he lay there, but how his view of the heavens was blocked by hooves. In addition, "size" here is not an absolute measure, but one that can be subjectively experienced.

The written and visual aspects of Wilson's work as a natural historian are worthy of examination, and the intersection between the aim of collecting, categorizing, and describing that was so central to his work (and that of other explorers of his time) and the aim of emoting a response (mostly to the "unknown") in readers is of particular interest here. Vision played a prominent role in these aims, and Wilson used this sense as a tool for both objective documentation and emotive response. A literary and visual journey through his work shows that Wilson was both a scientist and a humanist with an ability to straddle these two facets of human experience and knowledge acquisition in a particularly compelling fashion.

In many ways, Wilson is a typical nineteenth-century natural historian, successfully combining expression with documentation. His work was situated during a time when the division between the "two cultures" (literature and science) had already begun but was simultaneously being questioned by some, particularly natural historians. As Lynn Merrill notes, while most social historians today may associate a discussion of the "two cultures" with C. P. Snow's famous Rede lecture at Cambridge in 1959 and subsequent publication (1959), the intellectual tension between scientists and humanists dates back at least one hundred years before Snow so poignantly articulated its nature, when the budding field of science was beginning to threaten the privilege long maintained by literary culture: "Science gained so much power that the nineteenth century saw the birth of 'the two cultures,' with writers lamenting the yawning gulf between the classical worldview and the upstart scientific one. One of natural history's great strengths was that for many people it served as a bridge between these two disparate views" (Merrill 1989, 11–12).¹ Thus Wilson, in the early twentieth century, was carrying on a tradition that had commenced before his time. In many ways this tradition of natural history, which began as an interest of the upper class in European culture at the start of the seventeenth century, was by Wilson's time an available genre for the working class throughout Europe and America. Because of the friction that arose between literature and science, works like Wilson's were undoubtedly as inspirational for a wide audience then as they are now: "The Two Cultures debate is of interest . . . not as an isolated episode in the history of ideas, but because it was the culture medium, the petri-dish agar in which *popular* natural history grew" (Merrill 1989, 102; emphasis added).

Perhaps because of his education in Great Britain, Wilson may have been keenly aware of the tension between literature and science and worked

purposefully to bridge the gap between the two. Educated in an applied science at a technical school, and from a middle-class background, Wilson exhibits an appreciation for literary expression and knowledge obtained through a broad-spectrum understanding of the humanities that undoubtedly can be traced to the prestige associated with classical training in Great Britain's university system at the time. Although Wilson did not enter university as a student in England (and there is no indication that he desired to), having a decent grounding in literary classics and their aesthetic forms was an important form of cultural capital that Wilson himself seems eager to showcase in his work.

Yet Wilson was also innovative and adds the relatively "new" medium of photography to his work, thus augmenting the literary style of natural history writing to include visual documentation and expression in the form of black-and-white photographs. Wilson's innovation asks us to consider how, in the historical genre of natural history, photographs functioned as a form of aesthetic documentation that did not necessarily require specialized training in order for the viewer to appreciate it. This particular visual aspect of Wilson's work—and later works of similar ilk—may in fact have added to the overall appeal of such publications on a popular level. While allusions to historical literature and the use of literary tropes may have targeted a population educated in the classics, the increasing widespread popularity of photography both as a tool of "objective documentation" and as a trigger for aesthetic experience undoubtedly enabled the extensive reach of Wilson's publications to "common" consumers.

There are essentially two sets of Wilson's photographs that are of interest in this essay. One is the entire collection from his explorations in the interior of China and elsewhere. The bulk of these photographs are now available online through the Arnold Arboretum of Harvard University and its Visual Information Access (VIA) database, which contains more than two thousand images that Wilson took or had taken.² This full set is useful for examining the proportion of documentary and aesthetic photographs and how this "raw material" relates to Wilson's published photography (what I am here considering a second set). The full collection of Wilson's photographs can act as a window into the process of exploration and documentation, while an analysis of those photographs chosen for publication can give us a sense of Wilson's aesthetic intentions and sensibilities of representation.

The literary and visual facets of Wilson's published work fit together to create a composite of Wilson himself, of his delights and aversions, and his inquiries into natural phenomena. The contrast, and complementarity, of objective observation and subjective experience is encapsulated in Wilson's work. By all accounts his publications were read with great interest in his native England as well as in the United States, both by a popular audience and by those in the scientific community.³ By examining several important aspects of Wilson's work we can come to understand more about Wilson and his projects of exploration, representation, and expression and also find inspiration in Wilson's ability to be both observant and passionate. At a time when the "divide" between science and humanities is ever widening, particularly within my own discipline of anthropology, the work of Wilson and others can be especially illuminating.⁴

A BRIEF BIOGRAPHY OF WILSON

Ernest Henry Wilson was born in 1876 in Chipping Campden, Gloucestershire, England, the eldest of six children. His father was a railway worker; later the family appears to have engaged in a floral business, although the nature of this business has been difficult to ascertain.⁵ Wilson apprenticed at a local nursery as a young man before being employed at the Birmingham Botanical Gardens, during which time he also studied at the Birmingham Technical School and received the Queen's Prize for botany. In 1897, at age twenty-one, he began working at the Royal Botanic Gardens (Kew); there he won the Hooker Prize for an essay on conifers. Roy Briggs notes the degree of training that Wilson received in both horticulture and botany:

Initially his duties [at Kew] were those of any young gardener there and in his spare time he studied for the Higher Grade examination in horticulture administered by the Royal Horticultural Society. He passed twenty-ninth in the first class, and used the National Scholarship he had won to attend a course of botany lectures at the Royal College of Science in South Kensington, passing part 1 of the "Honours" in May the following year. In October 1898 Wilson left Kew and took up the study of botany at the Royal College full time. His intention was to gain qualifications to become a teacher of the subject he had come to love. Hardly had his studies begun, however, when he was presented with a very different career opportunity. (Briggs 1993, 10–11)

Wilson had contemplated teaching botany as a profession but apparently had little time to pursue this path; being confined to a classroom would probably not have been a fulfilling life for Wilson. Instead, he was offered a position (under recommendation) as a plant collector in China with the firm of James Veitch and Sons. His first task for Veitch (in 1899) was to find the source of *Davidia involucrata* (variously known as the dove tree, the handkerchief tree, and the ghost tree), which he did.⁶ During this first stay in China, which lasted more than two years, he also collected thirty-five Wardian cases of tubers, corms, rhizomes, and rootstock; herbarium specimens of more than nine hundred species; and seed of more than three hundred species.⁷ As this first expedition shows, he was an ambitious and dedicated plant hunter. His next trip for Veitch was to secure the yellow Chinese poppy, *Meconopsis integrifolia*. As expected, he accomplished his assigned task with most impressive results, obtaining *Meconopsis punicea* as well. After working for Veitch on these two expeditions, Wilson took a position as collector with Harvard's Arnold Arboretum in 1906. He made numerous collecting trips to China and elsewhere while in this position. He received many noteworthy awards, an honorary master of arts degree from Harvard and a doctorate of science degree from Trinity College. In addition, Wilson became Keeper of Arnold Arboretum in 1927 after the death of his close friend and mentor Charles Sprague Sargent. Tragically, Wilson and his wife, Nellie, were killed in a car accident in 1930 in Worcester, Massachusetts. Many have commented on the cruel irony of Wilson's having survived numerous life-threatening situations in the "faraway" lands of China and elsewhere only to die a seemingly senseless death caused by poor driving conditions at home.

Wilson was among the first in a wave of professional plant collectors in the interior of China. His travels took him to western Hubei and throughout much of Sichuan Province, reaching as far north as Songpan (which Wilson found to be one of the more hospitable and agreeable places he visited) and as far west as the Zheduo Pass west of Kangding.⁸ Others had collected plants in inland China and the Himalayas before Wilson, but most of these men (and most were in fact men) were not professional plant collectors; instead, they were government officials, missionaries, or general naturalists. Wilson is therefore a noteworthy explorer because he had specialized training both in botany and in procuring plants from the wild. His work in China has been recognized as ushering in a new era of plant collecting (sometimes referred to as the "Wilson Era"), in which most of

the significant discoveries and introductions of plant materials from this area of the world were undertaken by people trained in and dedicated to botany and plant collecting as professions. Wilson's extensive collecting in China earned him the name "Chinese" Wilson (although reportedly he did not like this name), and the list of species procured by Wilson is extensive. He is credited with introducing more than one thousand new species to Euro-American horticulture. Wilson botanized in China for a total of eleven (nonconsecutive) years. In addition, he traveled to Japan, Taiwan, Australia, Indonesia, and Africa during the course of his professional life. By all accounts he was a rugged, fit, and adventurous soul, as photos of him in the course of his travels reflect (see fig. 2.1). His determination and success in securing important specimens from "remote" areas of China and elsewhere are indeed impressive. As many scholars have noted, Wilson's contributions to Euro-American botany and horticulture are monumental.

ENVISIONING THE NATURAL

The genre of nineteenth-century natural history writing typically presents objective descriptions of place, people, plants, and animals as well as impressions and reactions to the experiences that writers themselves had in encountering the "unknown" so described (often the descriptions are also embellished or intoned with feeling). Capturing both makes for captivating reading and historically has resulted in widespread appeal. As Merrill aptly notes, "Natural history is aesthetic science, nature closely examined to enhance the pleasure that an ordinary person takes in it" (Merrill 1989, 14). Merrill makes three important points about natural history: (1) it has an aesthetic orientation, (2) the use of sight is central to the endeavor, and (3) it appeals to a common audience. Wilson's publications exhibit all of these aspects.

A chronological examination of Wilson's work shows that his early writings—particularly full-length books—tend to be dry, with much of the language factual and descriptive and without embellishments; there is little affective engagement for the reader. For example, Wilson begins volume 1 of *A Naturalist in Western China* with the following:

Western China is separated from Thibet proper by a series of parallel mountain ranges running almost due north and south, and divided by narrow valleys. On some maps the name Yun-ling is applied to the



FIG. 2.1 Wilson with guide after bird hunting, 1909. Wilson's notes: "Bag of 52 ordinary pheasants (*Phasianus decollatus*) with self and boy. *Phyllostachys mites* behind. Altitude 4500 ft. Changyang Hsien." Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

whole system, with sections marked Hsueh shan, Hung shan, Taliang shan, and so on. A great many local names, the majority of them unpronounceable when converted to English, are also applied to this system, but outside certain maps no one general name for it exists. Later we shall have much to say about this region, for the time being it suffices to note the general trend of the ranges and a few of their important features. (Wilson 1913, 1:1)

Wilson continues to discuss the important features of this area for the next seventy pages or so, and his writing is peppered with travel accounts. His interest, at least in this excerpt, is in describing and naming these features. It is clear that his goal in this part of the book (the opening) is to document

the geological, topographical, and botanical features of western China (often noting local nomenclature for these features), but also to establish the lens through which the reader views or imagines this area: as an objective, well-informed observer. Here Wilson does not attempt to encourage any particular emotional reaction from the reader, nor does he himself exhibit such a response. Throughout much of the book, Wilson remains the observing empiricist—as do his readers, along with him—and he is quite successful in many ways, as the above passage indicates.

Several of Wilson's observations are of particular interest from an ethnobotanical point of view. For example, in volume 2 of *A Naturalist*, Wilson gives Chinese names and local uses for plants; in fact, some of Wilson's "prose" in this volume reads like an ethnobotanist's field notebook. He dedicates several chapters to subject matters of interest to economic botany and ethnobotany alike. His may be among the first comprehensive descriptions written in English about the production of silk. He also dedicates entire chapters to subjects such as insect white wax (the harvesting of scale insects and their secretions, which are then processed into wax used for candles, medicine, and other purposes); timber trees; Chinese materia medica; fruits; principal crops; and tea production. In this same volume Wilson analyzes the flora of western China in terms of seven vegetation zones (with curious mention of Tibetan peoples noted in the subalpine and alpine zones—but no other human inhabitants noted elsewhere).⁹

Wilson was not only interested in flora and mountain ranges, although clearly the former was an especially important preoccupation of his. He was also interested in people, particularly those on the Sino-Tibetan border ("Sifan," Tibetans, and other non-Han peoples) and their political and social institutions. For example, in discussing the Jiarong (Chiarung) tribes in chapter 8, volume 1, of *A Naturalist*, Wilson describes their form of subsistence, marriage customs, religious beliefs, language, social history, and social relations. His interest in people and culture is undoubtedly part of the larger project of objective description so central to natural history writing.

Clearly, these descriptive accounts hold much value from the perspective of documenting and recording an "objective" reality. This seems to have been especially the case for collectors of natural kinds during the nineteenth and twentieth centuries. One could argue that early European collectors in the area of natural science were especially interested in coming to grips with how what they were "discovering" related to a sense of

overall order in the natural world. The first European experience of the platypus, for example, was surrounded by befuddlement in terms of how to classify this seemingly anomalous creature (see Ritvo 1998). Furthermore, there is a significant visual element to describing the world and trying to organize it. Merrill contends that the visual orientation of many naturalists is intrinsically connected to the occupation (and obsession) with collecting: "To collect things is to look at them closely" (Merrill 1989, 117). As Timothy Mitchell argues, the nineteenth-century obsession with discerning order out of chaos was grounded in a visual trope of "pictorial order" or "organization of the view" (Mitchell 1991, 2–23); making sense of the world (discerning order) was importantly connected to knowing how to organize it visually.¹⁰

Therefore, one had to know at least a little bit about how to see correctly—not any old looking would do. The motif of proper seeing is especially prominent in the writing of John Burroughs, the noted American naturalist. In his 1908 volume *Leaf and Tendril*, Burroughs dedicates at least two chapters to the topic of vision: "The Art of Seeing Things" and "Straight Seeing and Straight Thinking." Burroughs begins his work by stating the centrality of proper observation in natural history:

In the field of natural history, things escape us because the actors are small, and the stage is very large and more or less veiled and obstructed. . . . By a close observer I do not mean a minute, cold-blooded specialist . . . but a man who looks closely and steadily at nature, and notes the individual features of tree and rock and field, and allows not subtle [*sic*] flavor of the night or day, of the place and the season, to escape him. . . . Power of attention and a mind sensitive to outward objects, in these lies the secret of seeing things. (Burroughs 1908, 7–11)

For Burroughs, one need not obtain formal, specialized education to learn how to see properly. What were needed were abilities of attention and sensitivity that one could cultivate oneself, largely through firsthand experience in the natural world.

In many of his articles, Wilson, through references to his experiences, accomplishments, and observations as a plant hunter, establishes authority on whatever subject he is discussing: "As one who has hunted the Lily on cliff and dale, on mountain-slope and alpine moorland, and through

woodland and swamp in many remote parts of China and the Tibetan borderland, and from the extreme south of Japan northward through that pretty country to Saghalien and the lonely shores of the Okhotsk Sea, I propose here to consider, cursorily, how Lilies grow" (Wilson 1915a, 283). The gist of this article, titled "Consider the Lilies," is that if you want to know how to grow a plant successfully, you have to understand its native habitat—and Wilson himself understands the native habitat of lilies especially well, having traversed through much of it himself during the course of his fieldwork. This sense of authority is based on having had direct observation, or what Charles Darwin termed "ocular proof." In fact, Darwin's personal journal highlights the central connection among seeing, exploring, and belief (proof), as Merrill notes that "Darwin frames his revelations in a terminology of sight. The explorer sees, views, observes, beholds, watches. All around him are 'extraordinary spectacles' (porpoises jumping, chapter III, p. 37), and scenery, wide views of 'strange aspect' (Sierra de la Ventana, chapter VI, p. 102). He hears stories too bizarre to be believed, until he has 'ocular proof' (chapter IV, p. 109). . . . As a group, Victorian naturalists revered vision, especially surreptitious sights" (Merrill 1989, 61).¹¹ Wilson's ocular proof is tied directly to his authority as a plant hunter, a naturalist, and a writer conveying his experience and knowledge to a lay audience.

Proper observation and seeing were stressed in nineteenth-century England through a number of venues. Samuel Smiles, a physician and social reformer known for his work stressing the ethic of self-help in building character, argued that keen observation is the mark of a dutiful citizen. As Jennifer Tucker explains:

The creed of the humble observer shines through Smiles's writings. He insisted that the "intelligent eye of the careful observer" gave "apparently trivial phenomena their value," for "so trifling a matter as the sight of seaweed floating past his ship, enabled Columbus to quell the mutiny which arose amongst his sailors at not discovering land. . . . There is nothing so small that should remain forgotten; and no fact, however trivial, but may prove useful in some way or other if carefully interpreted." The "repetition of little acts" built individual character and improved "the character of the nation." Accuracy of observation was the mark of a well-trained civic man. (Tucker 2005, 58; quotes from Smiles 1859)

In writing for a popular audience, Wilson is perhaps both performing a civic duty himself—by attending to the minute details of ocular importance—and helping improve the overall character of his readers by adding to their experience of the world: a vicarious cultivation of observation skills.

Burroughs argued that there must be a balance between objective description and expressive voice in natural history writing, with care taken not to let overzealous expression run wild: "What we want, and have a right to expect, of the literary naturalist is that his statement shall have both truth and charm, but we do not want the charm at the expense of the truth. I may invest the commonest fact I observe in the fields or by the roadside with the air of romance, if I can, but I am not to put the romance in place of the fact" (Burroughs 1908, 123). Or, as he succinctly quips in regard to the debate about how much "imagination" a natural historian can imbue his work with: "Certainly 'the imagination may be used in interpreting and narrating facts'—must be used, if anything of literary value is to be the outcome. But it is one thing to treat your facts with imagination and quite another to imagine your facts" (Burroughs 1908, 111). Wilson is clearly concerned with laying down a baseline of facts, particularly in his early full-length works. These facts function as "ocular proof," captured and preserved in language (and also very importantly in the form of photographs, discussed below). The inclusion of these in Wilson's publications aids the reader in being able to see the objective "truth" to which he refers; it orients the reader to a type of seeing—a witnessing through the visual.

But unlike Burroughs, Wilson had another tool at hand for establishing objective truth: photography. Indeed, a striking feature of Wilson's work is the use of photography. While several other plant hunters explored this area of China at roughly this same time, and published their writings, Wilson's work alone uses photographs extensively.¹² Several historians of Wilson's life note the trouble that he and his followers experienced in carrying, into the field, the heavy glass plates and camera equipment necessary for photography; where Joseph Rock was famous for lugging along on his expeditions collapsible bathtubs and dinner settings (although some photographic equipment as well; see Yoshinaga et al., this volume), Wilson's expeditions were possibly equally encumbered with photographic equipment.¹³ Thus Wilson's expeditions included an important element of visual documentation; photography was a central, not an ancillary, part of Wilson's collecting efforts.¹⁴ In addition, the effect to which Wilson uses

photographs in his published work sets him apart from some of the other plant collectors of his time. Wilson's photos are a blend of documentation and composition and are therefore especially interesting as reflections on the mix between empirical observation and expression.

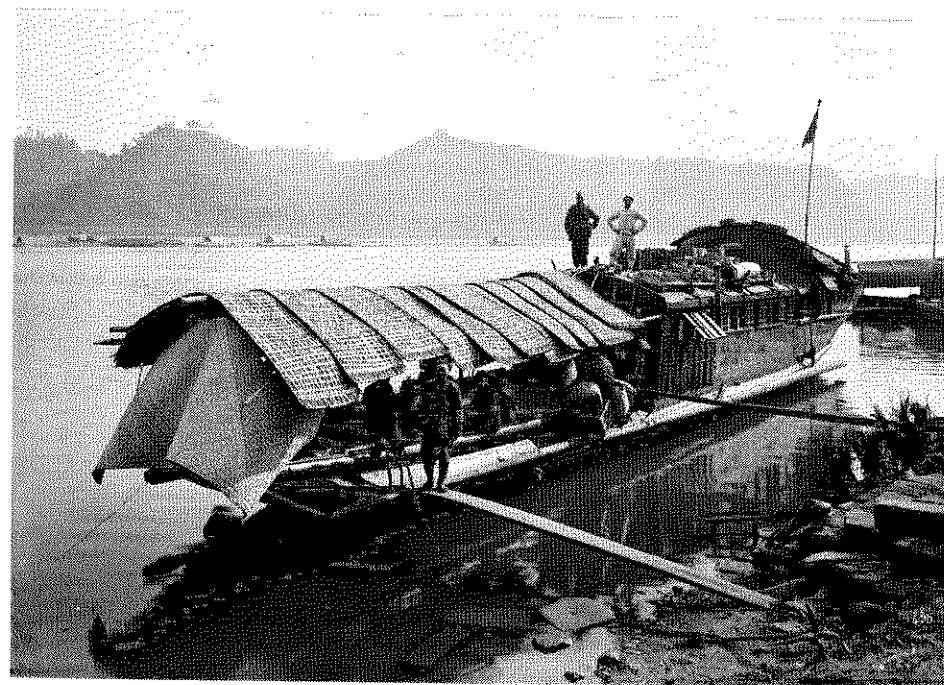
In his full-length books and in the articles he wrote for popular magazines, Wilson presents a sampling of the visual in concrete form. He in fact took thousands of photographs, many that were never reproduced in his written work, so an analysis of his photography in the context of his published works is perhaps limited in scope.¹⁵ Many of his photographs in this context act as entries in a catalog of identification; yet there are some that are of particular interest because of their aesthetic focus, as I will discuss more at length below.

Roy Briggs and Peter J. Chvany note that Wilson seems to have quickly acquired his training in photography before his third expedition to China, from a neighbor and friend, the renowned photographer E. J. Wallis (Briggs 1993, 46–47; Chvany 1976, 182). Wilson maintained his connection with Wallis even after traveling in China and shipped glass plates directly to Wallis from the field.¹⁶ In later years, Wilson's daughter, Muriel Primrose, would explain that her father took great care in selecting subjects to photograph; this process usually included a scouting trip to survey possible locations for shooting, a return trip to the location with the necessary photographic equipment, and sometimes a third trip if previous conditions were not right for photographing; before actually shooting he would analyze a scene from several angles (see Chvany 1976, 211). At least in his later years, Wilson seemed especially deliberate in his photographic choices in the field.

The majority of Wilson's 2,400-plus photographs that are available to view online function as "descriptive" documentation. It appears that Wilson's main objective in using the camera in the field was to preserve all that he encountered and "discovered" in visual form, available for later analysis, recall, and consumption. Many of the photos capture aspects of travel, such as the boats used to traverse the rivers (see fig. 2.2), or are portraits

FIG. 2.2 Wilson traveled by boat up the Yangtze in Sichuan, 1908. Wilson called this "the Harvard houseboat." Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

FIG. 2.3 Bridge and riverbed, upper Yangtze, 1908. Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.



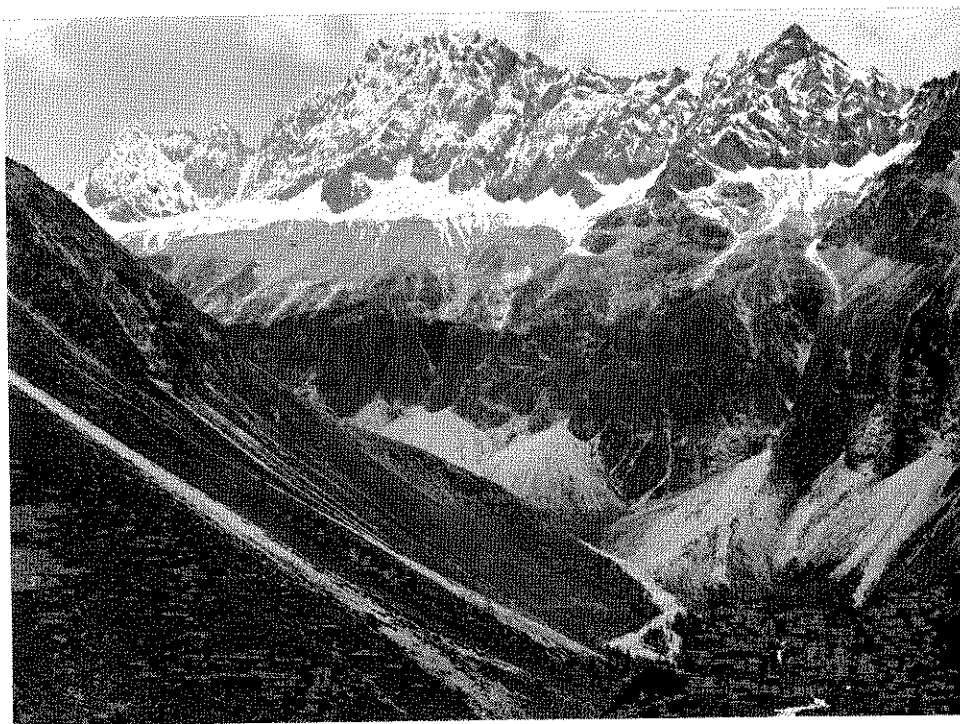


FIG. 2.4 Dabao mountain range northeast of Dajianlu, 1908. Taken at 13,500 ft. Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

of towns, gates, and bridges (see fig. 2.3), while others are of flora (mostly trees), natural features (waterfalls or mountain peaks; see fig. 2.4), and important economic and cultural activities (see fig. 2.5).

Wilson clearly was very concerned with recording, as accurately as possible, through the visual medium of photography. Many of his photos of trees have a visual likeness to voucher specimens, which try to capture as much morphological information of a plant as possible, especially for purposes of identification. In botanical descriptions of plants, size is also carefully noted. Such an assessment can be conveyed visually through scale, and thus within the frame Wilson often includes people, houses, and other features whose absolute size can be estimated and thus used to deduce the size of the flora he is documenting (see figs. 2.6–2.7). Tucker notes that this use of scale was common in scientific photography of the nineteenth century, where measurement was seen as an important marker of science (Tucker 2005, 150).



FIG. 2.5 Tea carriers with brick tea in Sichuan, 1908. Wilson's notes: "One man's load weighs 317 lbs, the other's 298 lbs!! Men carry this tea as far as Tachienlu accomplishing about 6 miles per day over vile roads." Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

Undoubtedly, photographs as documentation help convey Wilson's authority and the "truth" of his accounts. William Ivins Jr. summarizes the power that photography gained throughout the 1800s: "The nineteenth century began by believing that what was reasonable was true and it wound up by believing that what it saw a photograph of was true—from the finish of a horse race to the nebulae in the sky" (Ivins Jr. [1953] 1982, 94; quoted in Tucker 2005, 2–3). Or, one might add, to the flora, fauna, and people of far-off places. William Henry Fox Talbot, the inventor of the calotype process of photography, argued that photography could capture the objectivity necessary to science.¹⁷

Talbot's first public announcement, delivered to the Royal Society in London on January 31, 1839, reflected his interest in the invention of photography as an idea as well as a practice. Proposing that the invention of the technique alone illustrated the soundness of the inductive method, whether or not it proved useful in practice, Talbot revealed that he wanted to be associated with a kind of science: pure research



FIG. 2.6 *Cercidiphyllum japonicum* (Katsura tree) and man, 1910. Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.



FIG. 2.7 Pistachio (*Pistacia chinensis*) tree and people, 1910. Wilson's notes: "A magnificent wayside specimen 60 ft high, 18 ft girth. Note buttressed roots and protuberances, altitude 2000 ft., Paoning Fu." Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

through the Baconian system. He wrote that photography offered "proof of the value of the inductive methods of modern science." (Tucker 2005, 20)

Thus photography was importantly linked to the verification of "truth" and facts that the new discipline of science required as its foundation. In essence, the veracity that photographs promised both informed and was influenced by the Victorian occupation with collecting and seeing and by the rising power of the scientific method so reliant on empirical observation and visual witnessing.

FEELING NATURAL HISTORY

In keeping with the tradition of natural history writing, Wilson's prose is not just descriptive and his photographs do not function only as objective sources of ocular proof. His later writing, such as *Plant Hunting* (1927), is strikingly different from his earlier work in its quality to engage the reader through various literary tropes and a slightly more expressive tone. This difference can be seen by comparing the opening to *A Naturalist* (as given above) with that of *Plant Hunting*:

Discoveries of new lands and peoples, explorers of unknown rivers and mountains, valleys and plains have received fair meed of praise down the centuries. But he who has explored these regions for their flowers, their useful and ornamental plants, remains unsung. Fragments of his achievements have been chronicled here and there but his labors in general have not reached the ears of an appreciative audience. Whether it be Dahlia or Gladiolus, Lily or Rose the plant hunter garnered the first parents from which the gardener has produced the marvelous product we today enjoy. (Wilson 1927, 1: xxi)

Wilson's prose is poetic, the imagery compelling. Perhaps appealing to an American penchant to feel emotionally connected to an underdog or an underrepresented group, Wilson awakens the reader's consciousness to the unsung heroes of the gardening world. On an emotional level, this is more engaging than a description of geography.

In the above passage, Wilson also uses the trope of family to enhance the reader's emotional connection—less to those unsung heroes than to the “objects” of the plant hunters' labor: plants themselves. In an earlier work, Wilson infuses the related concepts of pedigree and race into a discussion about the origin of the modern rose as he evokes images of a “primordial” floral past that still exists: “I would I could take the average reader of this magazine to the mountain fastnesses of central and western China, and to certain remote parts of Japan and there introduce him to the wild types—the raw products—from which have been evolved our [modern roses] . . . his or her astonishment would be profound. Truly it hardly seems credible that the Roses of to-day had such a lowly origin” (Wilson 1915b, 255). His language and the overall orientation of this passage echo similar ideas about human lineages (with “remnants” of past human types

still in existence alongside more “advanced” types) prevalent during the time of his writing. In this same article, Wilson presents the pedigree of modern roses in a chart titled “Parents of the Principal Garden Roses of the 19th–20th Centuries” (Wilson 1915b, 254), noting dates of introduction to Europe (mostly England) from elsewhere (mostly China).¹⁸ Clearly, what Wilson is appealing to in this publication is a preoccupation with origins, breeding, and pedigree so crucial in many American and European social circles in the early twentieth century. He has merely extended the concern among the human social world to the nonhuman plant world. By extension, plants become nearly social creatures as well, exhibiting some of the features of people. In discussing a debate about the lineage of a hybrid rose called the “Crimson Rambler,” Wilson uses a fascinating metaphor that aptly represents the anthropomorphic tendency he and other horticultural enthusiasts often display: “I do not think it [the Crimson Rambler] has any Chinese Monthly [*Rosa chinensis*] blood in it at all” (Wilson 1915b, 254). Clearly, Wilson understood plants well enough to know that their “veins” do not carry blood, yet this is obviously a rhetorical device of great affect: the reader identifies with the plant, making emotional involvement much more likely.

In some of his work, such as a description and brief interpretation of feng shui, Wilson attempts to understand local practices and ideologies in local terms. At other times, however, Wilson finds it more difficult to remain a cultural relativist. When describing the people of the Songpan area, Wilson focuses on their religio-magical practices and thinking, again fascinated with this topic:

From the people at their work, either in low crooning tones or in loud chorus, the mystic hymn, “Om mani padmi hom,” is continually ascending to heaven. The chant of the Sifan is decidedly musical, rising and falling in soft rhythmic cadence. I have often listened to them with much pleasure, though from a distance, since if one tried to approach closely they ran helter-skelter away. They are naturally very superstitious, being fond of charms, afraid of evil spirits, and reverence unusual natural phenomena. (Wilson 1913, 1:148)

Although “uncultured,” the people of Songpan are to Wilson amiable and somewhat appealing: “Though my associations with the Sifan were brief I always received the utmost courtesy at their hands, and found much that

was pleasing and interesting among these happy, unsophisticated children of Nature" (Wilson 1913, 1:148). A self-proclaimed naturalist and nature lover (Wilson 1929, vi), he seems particularly enchanted by the "naturalness" of the non-Han people he encounters, although his charm is tempered by a dedication to a rational understanding of the world. This kind of enchantment with "children of Nature" was characteristic of other plant hunters in China during this era and is probably, at least in part, reflexive of disillusionment with European industrial life, manifested in a more generalized romantic sentiment of the "other" (Glover, n.d.). It is in these discussions of "unsophisticated," "wild" peoples of the frontier regions that Wilson is both ethnocentric and romantic—opinionated about both what disgusts him and what he finds enticing. This mix of experience provides for an interesting and believable read, as one senses the impressions of a man with great curiosity wanting to better understand the world, sure that his ways of thinking and living are among the best while at the same time allowing that other ways of life can result in happiness.

Part of what Wilson seems to be hoping to accomplish with the use of emotion in his writing is to inspire action. In the first of a series of articles titled "Traveler's Letters" (beginning in 1920) in *The Garden Magazine*, Wilson writes about his experience returning to England after nine years to find that the strains of war have altered English gardening and consequent gardens. No longer can tropical and semitropical plants be maintained by the average English gardener (because of the expense of upkeep associated with greenhouses); instead, Wilson notes, there has been a new interest in hardy flowering plants, many of them introduced from China. In this piece, Wilson, using revivalist language, infuses a nationalistic tone into the cultural construct of the garden, which needs buoying from the United States:

Owing to the crushing burden of debt weighting down every European nation the art and practice of gardening must languish unless America comes to the rescue. It is the duty of those in the United States who love flowers, and of every reader of *The Garden Magazine* in particular, to further by precept and example the gospel of gardens and an increased appreciation of flowers throughout the length and breadth of this great country. (Wilson 1920, 194)

This call to action, grounded in a morality of sorts, was written when Wilson was assistant director of the Arnold Arboretum; only three years later

Wilson would write in the same magazine a commentary titled "What the Arnold Arboretum Means to American Gardeners" and would expose some of the financial difficulties that the Arboretum was experiencing. In aiming to (re)kindle a love of and appreciation for gardening in the magazine's readership, Wilson was undoubtedly also looking out for the interest of his profession of plant hunting and propagation. Thus even as a romantic, Wilson was clearly also a practical thinker.

In *Plant Hunting* and other later work, Wilson's writing developed beyond what it had been fifteen years earlier. Although he remained the interested scientist and observer, Wilson in later works became a composer of words, attempting to engage the reader with literary imagery and emotional appeal. Whether this change in Wilson's writing style, voice, and apparent goal is due to simply the passage of time (seeing the world in a different light as a result of his age), the development of a skill over time, or particular considerations from the perspective of publishing is impossible to say. But whatever the reason for the change in writing style, the composite Wilson is clearly comfortable with writing fairly straightforward descriptions as well as crafting stories with attention to literary composition.

In his writings for popular magazines, even in 1915, Wilson especially engages the reader. His articles are scientifically, historically, and in some cases culturally informative, as he weaves together threads of his own travels to far-off lands with new discoveries and understandings from the worlds of botany, horticulture, and evolutionary science. Wilson pulls the reader in with the use of inclusive and visually oriented language:

Journey in thought with me, for a moment or two, westward until west becomes east although we still chase the setting sun. Across this continent, across that broad ocean, misnamed "Pacific," to Shanghai the gate of Far Cathay; onward and westward up the mighty Yangtze River for eighteen hundred miles, then northward, up its tributary the Min, some two hundred and fifty miles to the confines of mysterious Thibet; to that little-known hinterland which separates China proper from the hierarchy of Lhasa; to a wild and mountainous country peopled mainly by strange tribesfolk of unknown origin; to a land where Lamaism, Buddhism, and Phallism strive for mastery of men's souls; to a region where mighty empires meet. There in narrow semi-arid valleys down which thunder torrents, and encompassed by moun-

tains composed of mudshales and granites whose peaks are clothed with snow eternal, the Regal Lily has its home. . . . There, in June, by the wayside, in rock-crevices by the torrent's edge, and high up on the mountain-side and precipice this Lily in full bloom greets the weary wayfarer. Not in twos and threes but in hundreds, in thousands, aye, in tens of thousands. . . . For a brief season this lonely, semi-desert region is transformed by this Lily into a veritable fairyland. (Wilson 1915a, 285)

Composed early in Wilson's writing career, and at a time when Wilson himself was possibly still under the hypnotic sway of his recent "discovery," this passage captures a romantic sentiment of travel and exploration that was successfully expressed in many of Wilson's works. Here the reader is drawn deeper and deeper into a "far-off" land; at the end of this long journey through strange and magnificent lands occupied by strange (and magnificent?) people, one is "greeted" by a crowd of lily fairies. One has arrived at a peaceful resting place, in a deep valley hidden from the rest of the world.

A sensibility of drawing in the reader is also present in many of the photographs in Wilson's published works. While only a small proportion of Wilson's photographs fall into the genre of purely artistic, many of these photos were published in his writings.¹⁹ This indicates that Wilson's work was in fact *consciously* more comprehensive than it was pure documentation but also, and perhaps more important, that Wilson chose to use photography in his publications to enhance the aesthetic experience of his readers. Wilson never published works of his photographs alone, and whether his photographs were ever on exhibit during his lifetime is difficult to ascertain. Wilson therefore seemed to consider his photographs as part of the larger project of writing.

It is noteworthy that the photos that fall into the more artistic genre include people, but they are not exclusively photographs of people. In some photos Wilson appears to have strategically arranged people in the landscape to create a certain aesthetic—one focused on visual balance, the grandeur of nature, and in some cases involvement of the viewer in the photo. For example, in a picture of a bamboo bridge in Sichuan (fig. 2.8), a person stands nearly halfway between the photographer, who seems poised at one end of the bridge, and the far side of the bridge. The viewer, in turn, is drawn into the photograph by the depth and orientation of the bridge



FIG. 2.8 Step onto the bamboo bridge, 1910. Wilson's notes: "Showing structure of . . . bridge, laid on 8 cables each a foot in diameter and suspended from two similar cables on either side. Floor of rough wicker work. Shih-chuan Hsien. Altitude 2700 ft." Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

that stretches out before him or her; it is as if one could imagine stepping into the photo and onto the bamboo bridge. In a photo of a path lined with cypress (fig. 2.9), Wilson captures the grandeur of the trees, while the person in the photo looks quite small; this Wilson does by centering the picture not on the person, or on the temple behind him, but actually on the point at which the horizon meets the tops of the distant trees. The camera, and Wilson behind it, is poised on the path itself, and although the person seems small, he is centered “below” (in front of) the temple in the background. Similar to the bamboo bridge photograph, the viewer is virtually on the pathway, nearly in line for an encounter with the person walking toward him or her on this path lined with arboreal giants.

In this group of photographs, Wilson is accomplishing two things. First, he is inviting the viewer into the photo by positioning a visual entry leading from the center foreground into the inner space of the photograph. In this way, Wilson is transposing the aesthetic of natural history writing, which is “extremely conscious of its audience . . . [going] out of its way to include the audience” (Merrill 1989, 52), into the visual medium of photography. Second, in the cypress tree photo, Wilson purposefully highlights the height of the trees to create a sense of grandeur and perhaps awe at this arboreal scene. Charles Millard notes that trees were a popular subject for Victorian nature photography, especially in focusing on the special qualities of trees over human figures: “Trees . . . possess idiosyncrasies that the figures near them totally lack” (Millard 1977, 25). Thus to some degree the people in the photos are significantly overshadowed and reduced to mere reference points.

In his 1919 article “The Romance of the Trees,” published in *The Garden Magazine*, Wilson chose five photos of trees to include in this approximately five-page essay. Each photo highlights a “famous” tree—either an individual tree or a species of tree that is especially well known. Each specimen is equally magnificent, particularly in size. As explained above, the article focuses on describing some of the basic physiology of trees, contextualizing trees in terms of the earth’s geological history, and, very importantly, encouraging the reader to appreciate the intimate “bond of brotherhood” between trees and people. The photos Wilson chose aid the reader/viewer in experiencing the splendor of trees—due partly to the trees’ overall size (no young specimens were chosen, nor were species of small stature) but also to the histories of the individual trees (four of the five), which are explained in captions, such as this one: “[Photo 2:] The great

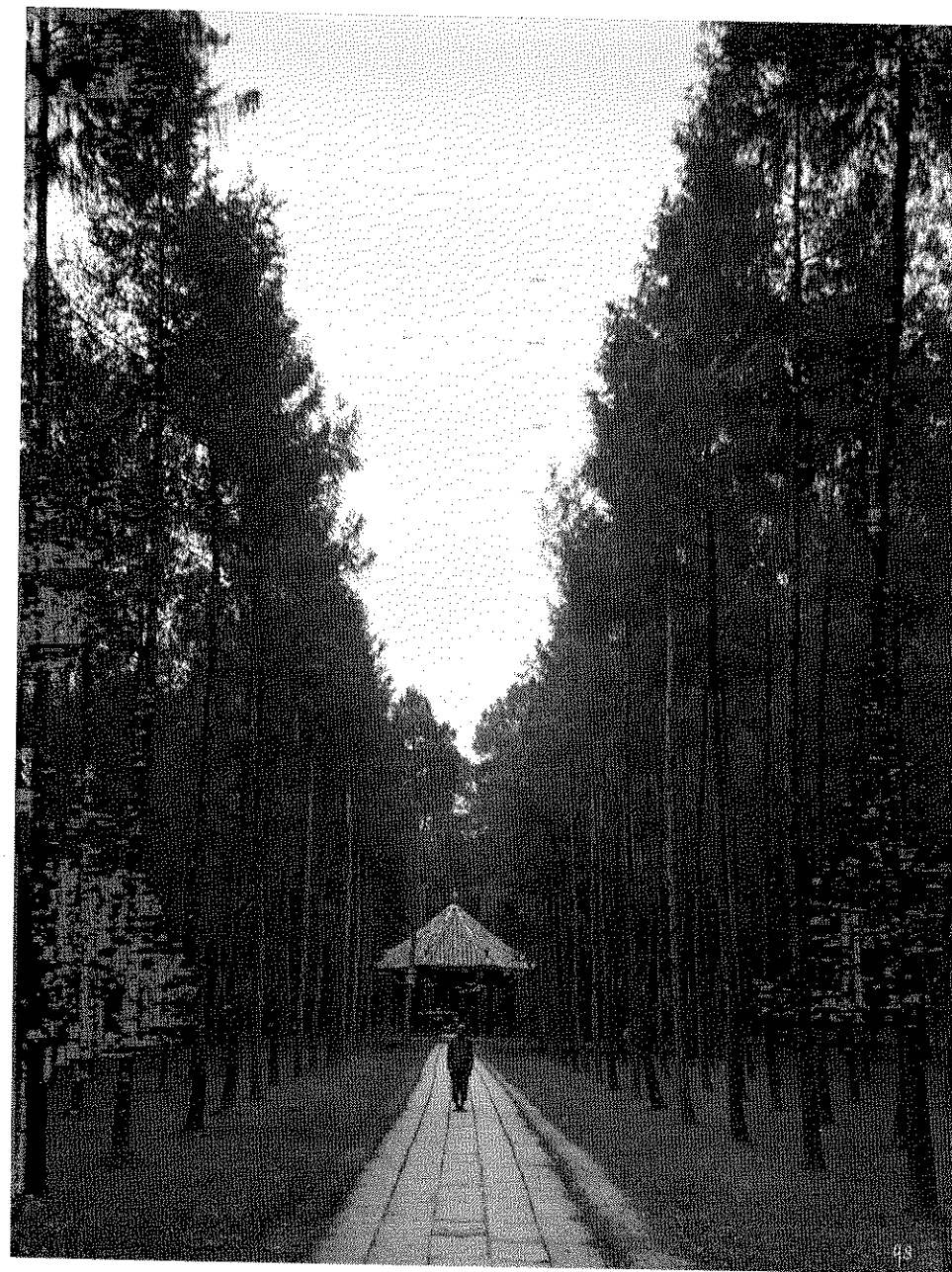


FIG. 2.9 Grandeur of cypress trees, Chengdu, 1908. Wilson’s notes: “Entrance to Chao-chüeh ssu Temple 3 miles outside north gate Chentu City.” Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

oak at Blenheim, The Marlborough Estate in England. The warmth permeating and living in every line and branch of this famous patriarch enfolds like a divine embrace, accounting for the veneration in which all ages of Britons have held these great trees" (Wilson 1919, 90). Here awe-inspiring trees are visually represented to the reader/viewer, while individual stories are attached to each through the written word.

Another of Wilson's photos highlighting his sense of aesthetics shows an arched bridge flanked by cypress and bamboo (see fig. 2.10). Here three people are positioned in the center of the bridge, just above the peak in its arch. Through the impressive capabilities of digitalized media (but only with a decent print of the photo and a magnifying glass) via the online archive of this and other photos, one can zoom in on this scene at the bridge. Doing so can easily convince one that the three people on the bridge are posing for the camera. Their gaze is diverted from the camera (toward the moving water below), while the people on the margins of the photo's center (those lurking behind bamboo) are looking directly at the camera and photographer Wilson (see fig. 2.11). Whether Wilson may have had some hand in this arrangement of gazes may never be known for sure. But in this photo, Wilson does not want a gaze into the camera's eye to spoil his capturing of a "natural" scene on the bridge.

Finally, in "Mausoleum with Ornate Mural Sculpturing" (fig. 2.12) (frontispiece 74, vol. 1, *A Naturalist*), three men sit in front of an elaborate burial chamber. Their positions are perfectly balanced in the composition of the photograph: one sits directly in the center (and is the farthest back in depth), while the other two are seated to the left and right of this center line, just slightly more than halfway to the edge of the photograph. It seems highly unlikely that these men would have "naturally" come into such an arrangement, and one cannot help but sense that Wilson had a most definite role in their placement in this scene. In this photograph, the human "subjects" look directly into the camera. Their gazes look nearly as solid as the architecture behind them does.

It is telling that Talbot, who urged that photography could be so instru-

FIG. 2.10 Arched sandstone bridge, 1910. Wilson's notes: "Pa-chou, altitude 2100 ft." Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

FIG. 2.11 Enlarged images from arched sandstone bridge. Unlike the people on the photograph's periphery, those standing on the bridge are not looking into the camera.

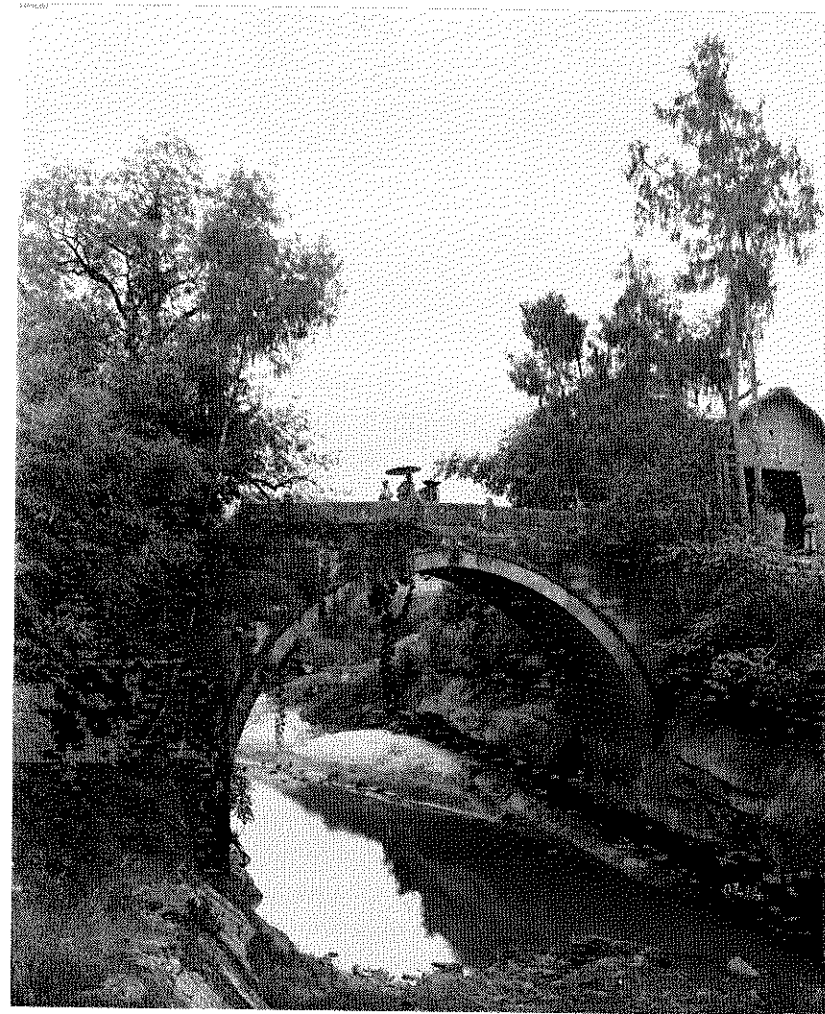




FIG. 2.12 Mausoleum and three men, 1910. Wilson's notes: "Tomb of two wealthy men (father and son) with very ornate mural sculpturing. Pa-chou." Photo by Ernest Henry Wilson; courtesy Arnold Arboretum.

mental to encouraging empirical observation, also wrote about his invention in terms of painting, the dominant form of visual representation until the second half of the nineteenth century, and of the emotions that could be evoked thereby through careful attention to detail: "A painter's eye will often be arrested where ordinary people see nothing remarkable. A casual gleam of sunshine, or a shadow thrown across his path, a time-withered oak, or a moss-covered stone may awaken a train of thoughts and feelings and picturesque imaginings" (Talbot 1844, 25–26; quoted in Merrill 1989, 179). If paintings could stir the soul, so could photography, Talbot believed, precisely because the minutiae of life—which were so readily overlooked by the common gazer—could be captured and more fully appreciated. In Wilson's photographs with intentional aesthetic, one cannot help but feel Wilson himself present, as composer of the scene. He is inviting the viewer/

reader to experience the awe of nature and to visualize him- or herself in the scene. By entering into the photograph, the viewer/reader becomes a witness to the "unknown" that Wilson has discovered, documented, and, in some cases, brought home.

CONCLUSION

Through much of his writing, Wilson aims to teach and inform his readers of important understandings in the fields of botany and other natural sciences. As a natural historian, he does so not just by presenting the facts but also by imbuing the facts with an aura of wonder that leaves one awestruck. In "The Romance of the Trees," Wilson conveys nearly the perfect blend of the descriptive and the affective. He begins the article with a quote from Genesis 2:9²⁰ to highlight the centrality of the tree, as useful material as well as a potent symbol, in many cultures: "And out of the ground made the Lord God to grow every tree that is pleasant to the sight, and good for food, the tree of life also in the midst of the garden, and the tree of knowledge of good and evil" (quoted in Wilson 1919, 90). First, Wilson encourages the reader to marvel at the amazement of how a tree functions:

Built of myriads of minute cells piled on and around each other and differentiated into tissues of varying thickness and forms, all is wonderfully adapted to the work to be performed in the life economy of the whole organism. The big roots firmly anchoring the tree to the earth give off tiny rootlets that absorb water and various food salts in solution, which are carried upward through special tissues to the leaves. The leaves—the lungs and chemical laboratory of the tree—breathe in from the air during daylight a gas deleterious to man (carbon dioxide), break this up and exhale a part as pure oxygen, essential for the life of the animal kingdom. . . . No chemical laboratory in the world built by man, and fitted with all the wonderful appliances of modern science, is half so marvellous as the leaf of any one kind of tree. No system of collection and transportation devised by human ingenuity and skill is so perfect as that which serves each and every tree. (Wilson 1919, 90)

Wilson begins this description at the level of the cell. Merrill notes the centrality of the microscope in Victorian natural history, particularly as a

trope about exploring the wondrous infinity of the world: "The microscope was one of several nineteenth-century devices that 'unveiled hidden beauties' in the natural world. It was by far the best known, especially by the public. . . . And the microscope played its part, both for serious researchers, who investigated physiology and disease processes, as well as for the amateur naturalist, who could include his or her own blood cells in the pantheon of marvels revealed by the lens" (Merrill 1989, 120). And, one might add, by the early twentieth century the microscopic metaphor would prove quite useful for professional naturalists in urging their readership to consider the "bond of brotherhood, as it were, between ourselves—mankind in general—and certain groups of plants" (Wilson 1919, 95);²¹ this Wilson notes as one of the objectives of his article.

After examining how a tree functions, Wilson briefly explains in "The Romance of the Trees" the geological history of the earth, with particular attention to the position of trees in this history (some as having gone extinct, others as still existing—as "living fossils" [Wilson 1919, 91]). He also discusses the current geographic distribution of plants as being reflective of adaptation to environment. Thus the article that begins with a quote from Genesis takes the reader on an evolutionary tour of the earth's vegetative history and then ends by emphasizing the important connection between humans and plants (especially trees—hence the title of the article). Wilson has captured it all, it would seem, in this article: religion, culture, science, and emotion.

Wilson was an effective nineteenth-century natural historian, successfully combining expressive literary style with empirical documentation. As Noah Heringman notes, natural history remained for several hundred years (beginning in the seventeenth century) a distinctly literary form of discourse on natural phenomena:

One of the virtues of natural history, then as now, is that it helps to unite local scholarly efforts in literature and science. The scientific backgrounds of specific texts are important in themselves and as distinct moments of scientific culture, but they are also jointly important as evidence of the shared culture of "letters" and of the epistemological claims of literary projects to explain the natural world. Such claims reflect the historical importance of aesthetic forms for the transmission of scientific concepts. (Heringman 2003, 6)

Although not all of Wilson's writing seems especially attentive to aesthetics, it is clear that much of it is. Heringman also argues that fieldwork was a distinctive component of natural history writing (as distinguished from the more theoretically rigorous natural philosophy): "The crucial distinction between natural history and natural philosophy in the Romantic period was that the former called for fieldwork, the component that kept natural knowledge accessible to a generalist public, both in the field and on the printed page" (Heringman 2003, 4). Thus the fact that Wilson conducted fieldwork and based his writings on the direct experience—both empirical and aesthetic—he had gained through this immersion undoubtedly bolstered the popularity of his writing among a public curious about the "unknown" dimensions of the natural and cultural world.

Wilson's commitment to inform, educate, and engage the public in his "discoveries" and adventures, as well as more general scientific understandings of natural phenomena, is in keeping with the aims of democratizing science and cultivating a love of nature among British and American publics at the turn of the twentieth century. Wilson was not an elitist, and he undoubtedly felt that part of his civic duties to his fellow countrymen (and countrywomen) was to share his knowledge and experiences in a meaningful and engaging way.

Although Wilson's professional life was geared toward acquisition of plants for both commercial and "scientific" purposes—the former was how he got his start in plant hunting—this endeavor did not circumscribe his achievements. In addition to his impressive contributions to botanical "discoveries" and introductions, Wilson was a successful writer, photographer, and humanist. Unfortunately, Wilson died only three years after *Plant Hunting* was published, at the age of fifty-four. Had he lived longer, there may have been more accounts and interpretations of his adventurous travels in China or elsewhere to ponder. Readers are at least fortunate for the works he produced, even if these appear to be less than cutting-edge travel accounts and sit on shelves for years at a time in between library borrowings. Wilson exemplifies an adventurer and scholar who successfully embraced empirical inquiry and expressive artistry and for that reason can be an inspiration to us all.

NOTES

Epigraph: Wilson 1927, 2:144.

- 1 Snow published an earlier paper in 1956 in the *New Statesman* titled "The Two Cultures," but his 1959 lecture and subsequent publication (1959) are more elaborated and seem to have been what actually launched his ideas into international discourse. Stefan Collini makes a similar argument about the threat of science to literature in the introduction to the 1998 edition of Snow's *The Two Cultures*.
- 2 This database is available at http://via.lib.harvard.edu/via/deliver/advanced-search?_collection=via.
- 3 This essay considers several of his more comprehensive works, as well as a sampling of shorter pieces written for popular magazines. Wilson also published in scientific journals and popular magazines such as *House and Garden*, *Ladies' Home Journal*, and *The Garden Magazine*, with more than one hundred contributions to *Horticulture* alone (Foley 1969, 52). A thorough analysis of his articles in popular magazines could be especially revealing in terms of how horticultural and botanical knowledge was relayed to a popular American—and largely female—audience. Such an analysis has been explored for similar topics in Britain in Henson et al. 2004 and Cantor et al. 2004.
- 4 Throughout this essay, *science* and *humanism* are used to stand for the more general distinction between description based on empirical observation and expression based on subjective and intersubjective experience, respectively. This eliminates important aspects of both science and humanities, such as the importance of theory and explanation in science, but these are fundamental points of departure that are useful to the present essay and Wilson's work itself.
- 5 See, e.g., the discussion in Briggs 1993, 9.
- 6 Finding the "source" of botanical species generally refers to identifying the most probable location in which a particular species first evolved, or at least the location from which a contemporary species radiated outward, especially into the realm of human notice.
- 7 The Wardian case was an indispensable tool used by plant collectors. The design allowed for transporting live specimens: the bottom of the case was of sturdy construction so that sufficient soil could be placed inside, and the sides and/or tops of the case had glass panels.
- 8 In *A Naturalist in Western China*, Wilson notes his affinity for Songpan: "Did the Fates ordain that I should live in Western China I would ask for nothing better than to be domiciled in Sungpan" (Wilson 1913, 1:144). Wilson traveled up the

course of the Yangtze from Yichang to Chongqing to Leshan and beyond. He also ventured on a more northerly land route through Sichuan, which took him through Songpan, Mianyang, and the areas around Pingchang County. For a complete map of Wilson's travels, see Wilson 1913, vol. 2. In the present essay, place-names are given using contemporary names (based on current provincial borders) and spellings, except for direct quotations (in which case the original name and spelling are used).

- 9 Additionally, Wilson notes the problems with flooding in the Emei Shan area, which he and, one assumes, the local inhabitants with whom he spoke attributed to overlogging. Nearly one hundred years later similar problems with flooding would persist so that the central Chinese government would officially ban logging on the upper reaches of the Yangtze in 1998. Wilson also comments on the problem of deforesting more generally: "This mountain [Wu Shan], in common with others I have visited, shows only too plainly the destructive nature of the Chinese. Fifty years more, under the present regime, and there will not be an acre of accessible forest left in all central, southern, and Western China" (1913, 1:247). Most of the deforestation, Wilson adds, is for the making of charcoal. While forests did still exist fifty years after Wilson's time, his comments on the problem of deforestation are insightful, informative, and relevant to similar concerns today; one wonders at how helpful Wilson's analyses might have been if seriously considered at the time of their writing.
- 10 See also Mueggler, this volume, for a discussion of the visual focus in the work of Linnaeus.
- 11 Merrill is here referencing the 1959 edition of *Voyage of the Beagle*. A search through Darwin's voluminous work (at <http://darwin-online.org.uk/contents.html>) reveals that he used the terms "spectacles," "aspect" (to mean sight), and "ocular proof" frequently both throughout this volume as well as in his other writing.
- 12 Other noted plant hunters of Wilson's time who also worked in China include Frank Kingdon-Ward, Reginald Farrer, and George Forrest.
- 13 Briggs notes that it was not actually until Wilson's third expedition to China (his first for the Arnold Arboretum) that he used glass plates, taking with him a high-quality, whole-plate Sanderson camera as well as a small folding Kodak camera (which used roll film). See Briggs 1993, 46–47. During his employment with Veitch, Wilson apparently used only a "snapshot camera" (Chvany 1976, 182).
- 14 Sargent, director of the Arnold Arboretum during Wilson's third and fourth expeditions to China, seems to have had an important role in this inclusion of photography in Wilson's collecting effort. On November 6, 1906, he wrote in a letter to Wilson: "A good set of photographs are really about as important as anything you can bring back with you. I hope therefore, you will not fail to provide yourself with the very best possible instrument you can, irrespective of cost" (quoted in Briggs 1993, 46).
- 15 Chvany states that Wilson took approximately ten thousand photographs throughout the course of his professional life: "a total of over 5000 glass plate photographs for the Arnold Arboretum of the plants and locales to which his journeys

took him, plus an estimated 5000 nitrate-base negatives for himself" (Chvany 1976, 181).

- 16 There appears to be some disagreement as to whether the plates were developed with or without Wilson present. Briggs notes that the plates were not developed until Wilson returned from the field, whereas Chvany implies that Wilson shipped his plates to England for developing ahead of his return.
- 17 The calotype process of photography uses paper (rather than film or glass plates) as a negative base.
- 18 I was fascinated to see that the earliest introduction of *Rosa chinesis* dates to 1781, about one hundred years earlier than I had thought.
- 19 Of Wilson's 2,400-plus photographs that I viewed, approximately 1–2 percent fall into a "purely aesthetic" grouping.
- 20 Interestingly, Wilson incorrectly quotes this as being Genesis 2:8.
- 21 Such a "bond" is implied in Wilson's article not just in considering the similitude between humans and plants on the cellular level but in understanding how humans and plants have been interdependent for tens of thousands of years.

3

Searching for the "Lolos"

TRACKING FRITZ AND HEDWIG WEISS'S TRIP
TO THE LIANGSHAN REGION IN 1913

Tamara Wyss

... later that evening, as we were about to go to sleep, a messenger came to our tent, and asked us to come once more; the mistress wanted to hear the wonderful singing and talking machine again. Among the Lolo, the women also have their say. Inside the house the whole neighbourhood was gathered ... a young Waze [Nuosu slave] with a beautiful clear voice was singing. His repertory was much larger than we had expected. Lullabies, songs for fighting, for guarding cattle, songs sung at weddings and feasts. And when, after recording, we played them back, all the faces glowed with pleasure and gave out a hearty laughter I had never heard before from the Chinese. ... It was almost midnight when we retired and for a long time we could hear their voices before they lay down by the fire, wrapped up in their coats. We felt as if we had received a glimpse into the soul of this strange tribe. Aren't songs, sung by everyone, not the expression of a people's soul? (translation by Patrick Camiller)

—Hedwig Weiss-Sonnenburg,
"Von O Pien Ting nach Ma Pien Ting durchs Lololand"

SOME wax-reel sound recordings, a few photographs, and two collections in museums are what remain of a brief encounter between my grandparents Hedwig and Fritz Weiss and the Nuosu of the Liangshan region.¹ They called the Nuosu "Lolo," and I remember my grandmother speaking of the Lolo with great admiration. They even gave their second