

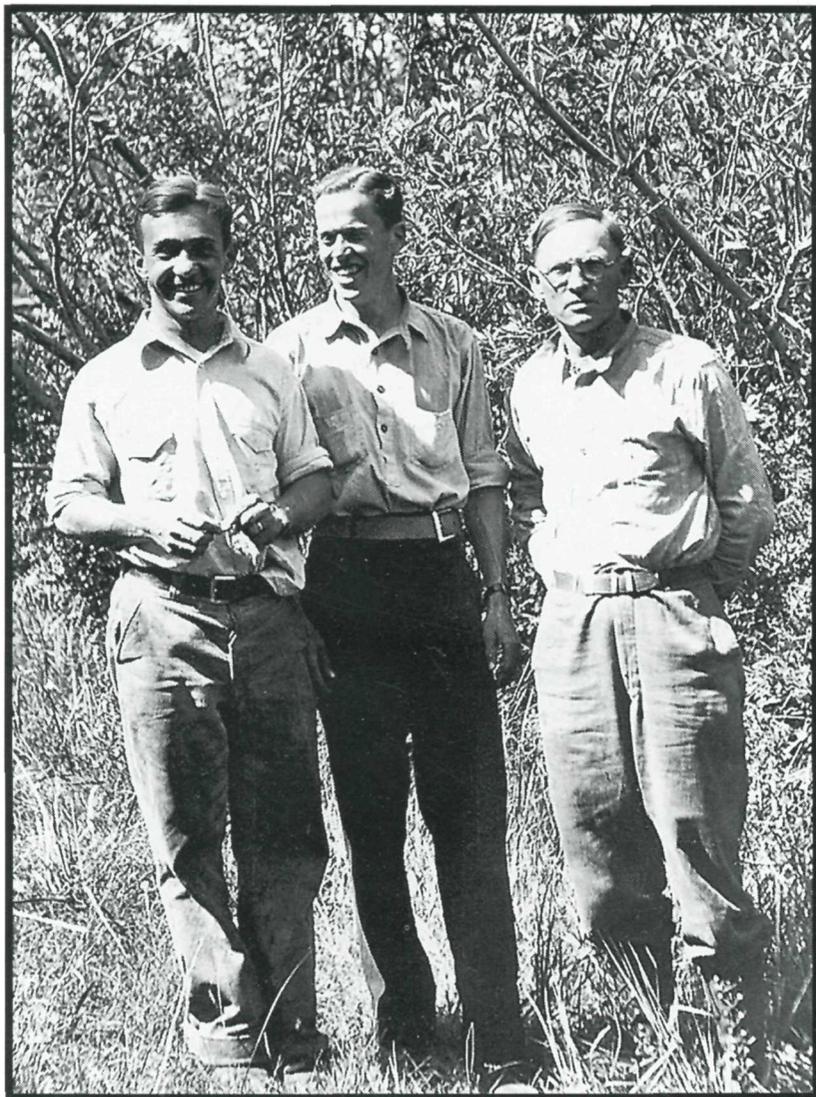
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Dedicated to the Protection, Preservation and Management
of Cultural and Natural Parks and Reserves
Through Research and Education

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Number 4

Society News, Notes & Mail	2
Box Sixty-Five: The Path Not Taken: National Park Service Wilderness Management <i>Richard West Sellars</i>	4

CELEBRATING GEORGE WRIGHT: A RETROSPECTIVE ON THE 20TH ANNIVERSARY OF THE GWS

George Wright's Vision: What Does It Mean Today? <i>David Harmon</i>	9
A Personal Tribute <i>Pamela Wright Lloyd</i>	12
George Melendez Wright, 1904-1936: A Voice on the Wing <i>Jerry Emory and Pamela Wright Lloyd</i>	14
The Significance of George Wright <i>Richard West Sellars</i>	46
A Summary List of George Wright's Field Notes <i>Compiled by Jerry Emory</i>	51
A George Wright Bibliography <i>Compiled by Jerry Emory</i>	58
The Magic Window <i>George M. Wright</i>	60

Mosquitoes and Public Health: Protecting a Resource in the Face of Public Fear <i>Constantine J. Dillon</i>	63
Ah! Wilderness <i>William E. Brown</i>	73

On the Cover: George M. Wright, Ben H. Thompson, and Joseph S. Dixon, the co-authors of the landmark Fauna #1. See Sellars article on page 46.

Richard West Sellars

Box 65: Commentary from the GWS Office and our members

The Path Not Taken: National Park Service Wilderness Management

Within the realm of National Park Service natural resource concerns, wilderness management represents a supreme opportunity—and challenge. Yet today, despite the National Wilderness Steering Committee's having provided to the Park Service some basic managerial tools, such as policies and director's orders, NPS's wilderness program remains erratic, poorly defined, and vaguely implemented in most parks within the system. Despite the dedication of many individuals at different levels of the Park Service, and strong wilderness programs in certain parks, the wilderness program still suffers, overall, from the lack of a truly institutionalized, systemwide commitment to excellence in wilderness management.

By way of some background to the current situation, it is worth noting that the 1964 Wilderness Act was the first statutory restraint of any consequence placed on Park Service management of "backcountry" since the 1916 Act establishing the National Park Service. Long accustomed to wide latitude in managing national parks, NPS was unenthusiastic about the passage of the 1964 Wilderness Act, claiming that the act was not necessary, and that national park backcountry was already adequately protected.

This attitude remains strong today. In my opinion, it is the chief underlying factor for the indifference that the Park Service has demonstrated since 1964 toward establish-

ing a sound, systemwide wilderness management program. When NPS does not—in policy and practice—clearly recognize the managerial differences between wilderness and backcountry, it is, in effect, managing by the far more permissive National Park Service Act of 1916, and avoiding compliance with the much more restrictive Wilderness Act.

One of the most fundamental factors contributing to the current state of wilderness management is the program's organizational invisibility. For instance, although the wilderness resource affects approximately 84% of all National Park System lands, wilderness management in the Washington office merits only one collateral-duty position, with, until

very recently, more than one-half of that position's duties devoted to other matters. This collateral-duty arrangement is reflected in all regions except the Intermountain Region, which has a full-time wilderness coordinator. And throughout the National Park System, the wilderness program is buried within park organizational arrangements, chiefly in ranger activities or natural resource management.

In 1998, when I first became a member of the National Wilderness Steering Committee, I believed that wilderness management should be administered under natural resource management, rather than under ranger activities. Now I am not so sure. To me, a very important factor is that there is currently no true organizational "home" for wilderness management within the National Park System—no cohesive, identifiable organization within the Park Service that is eagerly seeking to promote wilderness management to a level commensurate with the great significance of this natural resource. Since the program's inception in the years after the 1964 act, National Park Service wilderness oversight has mainly been under park ranger activities—and the problem is that now, nearly 36 years after the act, we still have a weak and heavily criticized wilderness program.

On the other hand, I have not heard a drumbeat from the natural resource management ranks expressing a desire to take charge of the wilderness program and manage wil-

derness in strict accordance with the law, and with Park Service policies and directives. Among other things, it appears that many natural resource managers are not very interested in the restrictive, "minimum-requirement" aspects of wilderness management.

In sum, it seems that no single organizational unit within the Park Service is earnestly dedicated to excellence in wilderness management, according to existing law and policy. Thus, as recently as 1998, *The Wilderness Act Handbook* (published by the Wilderness Society, whose standards and goals for national park wilderness management approximate the publicly declared commitments of the Park Service) stated that NPS has "no discernible wilderness management program and makes no real distinction between park wilderness and general park lands."

I recognize that wilderness management is multidisciplinary and requires the involvement of several of NPS's (and each park's) key organizational divisions. I further recognize that each park has special organizational needs that must be taken into consideration in wilderness management planning and implementation. Add to this the great range of environmental and ecological conditions in park wildernesses—from, say, Isle Royale to Joshua Tree to Everglades to Shenandoah to Wrangell-St. Elias—and it becomes apparent that, by necessity, there will be some variability within wilderness management across the system. Cer-

tainly, some parks have well-run wilderness programs. Yet, overall, where is hard-core wilderness leadership in the Park Service? And why is the National Park Service unwilling to push wilderness management to its full and highest potential throughout the system?

* * *

The National Wilderness Steering Committee was created in the mid-1990s, following a highly critical report by the Ranger Activities Division's Wilderness Task Force. At its first meeting, in 1996, the steering committee identified three primary deficiencies within the Park Service's wilderness program: a lack of accountability, a lack of consistency, and a lack of continuity. To me, the most fundamental of these problems is the issue of strict accountability in wilderness management. And I believe that wilderness management plans provide the most substantive and quantifiable basis for accountability. Indeed, in addition to the steering committee's expressed concern, a key requirement in the Park Service's management policies is for approved wilderness management plans in all parks having wilderness resources. Yet, more than three decades after passage of the 1964 act, wilderness management plans have not been completed in most wilderness parks: approximately 12 out of 75 parks containing wilderness resources have approved plans.

Thus, since the wilderness program's inception in the 1960s, the

Park Service has had no tangible way to effectively monitor its wilderness management program systemwide. Without wilderness plans, NPS is left with having to resort to using indicators such as position descriptions and performance standards to establish wilderness accountability. By themselves, such indicators are a woefully ineffective means of achieving high-quality wilderness management that addresses the congressional intent for wilderness.

It appears that a number of leaders within the National Park Service believe that wilderness management plans are not necessary. Yet, I feel strongly that the plans form a kind of contract with the public, with the National Park Service itself, and with a park's future personnel, by stating the methods and means by which wilderness will be managed. Among other things, park wilderness management plans require: an organizational profile that specifically identifies those positions that are accountable for wilderness management and preservation; clearly established minimum-requirement protocols; clearly established protocols for scientific research and monitoring activities in wilderness areas; assurance of the full integration of wilderness preservation into both long-term and day-to-day park operations; and clear identification of legal boundaries for wilderness. The plans thus provide a detailed blueprint against which responsible parties can be held accountable. In my opinion, without adequate wilderness management

plans, there can be no real accountability. And without accountability, we have an vague, amorphous wilderness program.

In order to attain excellence in wilderness management, the National Wilderness Steering Committee and National Park Service leadership should look very closely at—and ask very hard questions about—the long-term indifference that the Park Service has shown toward completing wilderness management plans (while at the same time it has been forcefully proclaiming the need for accountability). What activity other than wilderness management planning is more fundamental to identifying elements by which the National Park Service can truly establish accountability in its wilderness program?

By themselves, the plans cannot accomplish excellence in wilderness management—but they can form the foundation for excellence. Full-faith implementation of the plans is essential.

* * *

In many ways, the passage of the 1964 Wilderness Act reflected a public distrust of the federal land-managing agencies' inclination toward excessive development and use of the more pristine areas of America's public lands. Yet, ironically, the very agencies (including the National Park Service) whose management had brought on the distrust were themselves entrusted to manage the wilderness that the public and Con-

gress sought to protect. Thus, it should be no surprise that these agencies have been ambivalent about changing their traditional management practices once designated or potential wilderness areas became a reality. For the National Park System, the National Wilderness Steering Committee and the Park Service's leadership and rank and file should work to effect a decisive turnaround to bring the Service at long last into full-faith compliance with this exceptionally important preservation act.

Perhaps more than any other natural-area program, the Park Service's wilderness management puts to the test NPS's belief in itself as a preservation agency. This belief is in everyone's heart, but is still not reflected in everyone's action. As we know, wilderness is statutorily different from typical backcountry, and the law requires very special treatment of wilderness. National Park Service compliance with the law should recognize the tremendous significance of wilderness as outstanding examples of America's most pristine landscapes—areas of great ecological, spiritual, and recreational value.

Let the Park Service now live up to its belief in its preservation mission, and match the nobility of national park wilderness—and of the Wilderness Act itself—with a strong and decisive wilderness management program that is institutionalized throughout the National Park System.

Editor's Note: This Box 65 comment on wilderness management is taken from a May 5, 2000, statement from National Park Service historian Richard Sellars to the Park Service's National Wilderness Steering Committee, of which he is a member. It is published here as a resource preservation concern of the outgoing president of the Society—and in the belief that attitudes toward wilderness similar to those discussed above exist in other federal wilderness-management agencies.



Reminder: this column is open to all GWS members. We welcome lively, provocative, informed opinion on anything in the world of parks and protected areas. The submission guidelines are the same as for other GEORGE WRIGHT FORUM articles—please refer to the inside back cover of any issue. The views in “Box 65” are those of the author(s) and do not necessarily reflect the official position of The George Wright Society.

David Harmon

George Wright's Vision: What Does It Mean Today?

In this issue of the FORUM, which closes the 20th anniversary year of the George Wright Society, we step back from current concerns to remember, in greater depth than ever before, the man for whom our organization is named. A cynic might ask: Why bother? What real relevance could there be for today in the actions of a man who died, barely into his thirties, after a public career of fewer than ten years? It's all well and good to acknowledge Wright's historic role in shaping the National Park Service, but surely our understanding of ecological and resource management principles has advanced far enough so that we can relegate him to that pantheon of conservation pioneers whose names we honor but whose works we can safely leave unread.

I suppose, on a crude level, the cynics are right. If I were a young natural resource manager just starting a park career today, doubtless I could get along well enough without having any direct contact with Wright's ideas. It would suffice to know that Wright had lived, that he made important contributions to the Park Service, and let it go at that. Yes, one could get along well enough. But truly effective park resource management calls for something much more than just getting along. It requires a mature depth of understanding that comes only through firsthand knowledge of the key thinkers who paved the way to the present—a backlighting, if you will, of our current state of knowledge. This is an insight which, if not insisted upon by some wise mentor early in one's professional life, will

only disclose itself in mid-career or later. People just starting out are, quite understandably, focused on getting up to speed with the latest thinking in the myriad disciplines that are relevant to the resources in one's particular park. It's no easy task, on top of the all the purely bureaucratic drains on one's time. Yet over the years I have observed that many of the "latest" ecological and conservation concepts were substantially anticipated in the thinking of people who, like Wright, we just assume we can ignore because they've been dead so long. If you read the bibliographies of articles in current learned journals, especially in the sciences, you could easily draw the conclusion that nothing worth quoting was written prior to 1995. A historical perspective—such as a reading of Wright provides—is an

immensely useful corrective to this kind of chronocentric hubris. It's not just a matter of acknowledging debts to the past; *knowing* the history of one's field is what elevates one's professional working knowledge above the treadmill level of just "keeping up."

The heart of Wright's thinking is in Fauna #1 and Fauna #2. He wrote or co-wrote most of the chapters and the stamp of his personality is all over both monographs. What was that personality? To get a sense of Wright the man, I urge you to take time, as you read the excellent articles that follow, to study the photos which accompany them. I had not seen most of them before starting in on editing this issue, but, upon examining them, I was struck by how Wright's extraordinary character comes shining through. Though short in stature, he had a commanding presence—like a Napoleon, one almost is tempted to say! For my part, I am convinced that, had Wright lived, his practical achievements as a conservationist would have matched those of, say, Aldo Leopold. In fact—and I go out on a limb here—I believe Wright had the introspective capacity to match, even exceed, Leopold as a philosopher of conservation. Certainly Wright was far ahead of his time in grasping the ecological basis of the great natural parks. He married that knowledge to a firm commitment to preserving natural processes in the parks. As Dick Sellars points out in his article

below, this was poles apart from the prevailing emphasis on serving up idealized nature scenes to visitors. Imagine how Wright might have developed his conservation philosophy, had he only been fated to live a full life.... There are glimmerings all through his writings of the direction he would have gone, and there is little doubt that the result would have been a landmark in American conservation history.

All this points to a simple conclusion: the work of George Wright, both his on-the-ground achievements and his thinking, is still very relevant today. Wright not only set in train the entire scientific and natural resource management program of the National Park Service, he shone a beacon in the direction park management must go if it is to be up to the task of truly preserving the parks "unimpaired" for the future.

I also feel—though I must admit my "evidence" amounts to nothing more than a hunch—that Wright would have applauded the increasing emphasis we see today on integrating natural and cultural resource management concerns, particularly in the realm of cultural landscape management. Take a look at my favorite picture of Wright: the one on page 21, where he is speaking with Maria Lebrado, reputedly the last surviving Native American to have inhabited the Yosemite Valley (this, according to *Yosemite Nature Notes*, where the photo was first published). It's July 1929; she must have been a little girl

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

when her tribe was forced out of the valley. Who knows what Maria is telling George? We can only guess. But look at the rapt expression on Wright's face: he's *listening*. And, from all appearances, listening sympathetically. (In fact, a caption to the original photo noted that Wright—and his colleague, Ben Thompson—endeared themselves to Lebrado by their ability to speak to her in Spanish.) I like to think that Wright would have been quick to realize that the human presence in natural landscapes is of long standing and has its own value.

So I urge all readers of the FORUM to invest the time in reading Wright. Again, Fauna #1 and #2 are the benchmarks, and are fairly widely available in park libraries. Reading them is time well spent. Rather than excerpting those in this issue, we have instead chosen to give you a

glimpse of Wright's genesis as a naturalist by republishing a short article, "The Magic Window," that tells how his love of the natural world was awakened as a boy.

I hope it will not be thought amiss if I close this brief introduction to this issue of the FORUM by publicly thanking George Wright's daughters, Sherry Brichetto and Pam Lloyd, for their support of the Society since our founding in 1980. Sherry, along with her late husband Dick, Pam and her husband Jim, and Pam and Jim's son-in-law, Jerry Emory, have in various ways all been instrumental to the success of the George Wright Society. On behalf of the Society's Board of Directors, staff, and membership, I want to express our deepest gratitude to all of them. The vision of George Wright lives on in their efforts.

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Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

Pamela Wright Lloyd

A Personal Tribute



On February 25, 1936, at the age of 31, my father—George Melendez Wright—was killed in an auto accident. I was only two and a half years old, too young to remember him. But over the years I came to know him through the personal remembrances of my mother, Bee Wright Shuman, and other family members, friends, and colleagues, and written accounts of his life. I also came to know my father

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

through the legacy of his work, and, more importantly, through his professional writing.

George Wright was a pioneering and visionary biologist in the early days of both natural resource conservation and the National Park Service. Long before concepts and terms such as “ecosystem,” “environmentally sound,” and “sustainability” had been coined, George Wright’s ecological perspective and philosophy pointed to the need for a science-based management of the national parks.

At an early age, long before the 1970s and the modern environmental movement, I grasped the importance of what my father believed and stood for: his love of the wilderness and wildlife, his sure knowledge of the need to tread lightly on the natural world, and especially his first love—birds. As previously mentioned, I came to know George Wright principally from his eloquent writing, as with one of my favorite passages from the second essay of the Fauna Series No. 2, published in July 1934 (first delivered the previous May at the annual meeting of the American Society of Mammologists):

Conservation thus is seen to be not an end in itself or a creed over which men might fight according to personal prejudice, but a means for securing the maximum cropping of natural resources without destruction of productive capital. The forms of cropping include the realization of sporting, economic, aesthetic, and scientific values.... Much of man’s genuine progress is dependent upon the degree to which he is capable of this sort of control. If we destroy nature blindly, it is a boomerang which will be our undoing.... Consecration to the task of adjusting ourselves to [the] natural environment so that we secure the best values from nature without destroying it is not useless idealism; it is good hygiene for civilization.

In this lies the true portent of this national parks effort. Fifty years from now we shall still be wrestling with the problems of joint occupation of national parks by men and mammals, but it is reasonable to predict that we shall have mastered some of the simplest maladjustments. It is far better to pursue such a course though success be but partial than to relax in despair and allow the destructive forces to operate unchecked.

My father’s true and clear calling in life was not mine, but somewhere along the way—thanks to his books and articles—I was drawn to the beliefs on which his calling rested. In the quotation above, and in all of his written work, George Wright articulated a philosophy, indeed a vision, which not only transcends his life and times but speaks to us across the years with stunning clarity and relevance.



Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

Jerry Emory
Pamela Wright Lloyd

George Melendez Wright

1904-1936:

A Voice on the Wing

I arrived at Cracker Lake shortly after ten. Over the west wall great shafts of sunlight from the breaking clouds shot downward through the purple haze. Some angles of the rocks reflected the light dazzlingly.... Some goats posing on rocky prominences were illuminated from behind by these beams so that they looked twice natural size. Radiant pagan gods framed in silver halos they gazed at lower earth from their high thrones.

George Melendez Wright
Field Notes, September 1, 1931
Cracker Lake, Glacier National Park

George M. Wright's professional accomplishments and his views on wildlife and park management have been written about by several distinguished authors (see "Writing on Wright," below). This article hopes to illuminate Wright's life beyond the professional dimension. We hope to offer an insight into Wright as a keen naturalist, energetic field biologist, loyal friend, and loving husband and father. That is, George M. Wright as a person. We do so by relying heavily on excerpts from Wright's unpublished field notebooks (both authors read 716 pages of his 1924-1933 notes), personal papers, a 1987 interview with Ben Thompson, and family remembrances.

This is not simply an exercise in nostalgia for two people for whom the life of George M. Wright still looms large more than six decades after his death. Instead, it is clear to us that Wright's intense dedication to wildlife biology and the national parks, his friends, and his family were so inextricably intertwined, that

by painting a more complete picture of Wright—albeit somewhat informal—we might more fully understand his thinking and his accomplishments.

Unfortunately, much is still unknown about Wright's childhood years. What we do know is that George Melendez Wright was born

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

on June 20, 1904, in San Francisco, California. His mother, Mercedes Melendez Wright, was born in El Salvador and died in 1906; his father, Captain John Tennant Wright, a native New Yorker, died in 1912. His great aunt, Cordelia Ward Wright, helped raise the young boy from an early age and officially adopted him in 1913. George M. Wright had two brothers, Charles and John, who returned to El Salvador to live with relatives. His brothers also died relatively young, but their families, and some of the relatives of Mercedes Melendez, still live throughout that country—living reminders of George M. Wright's Latin American heritage.

Cordelia Wright, fondly referred to simply as "Auntie" by George (and later by many rangers in Yosemite and the wildlife survey team), might be responsible for his early interest in nature. Apparently the young Wright was allowed to hike all around the San Francisco Bay Area where he undoubtedly developed the love of birds and bird songs that permeated all his work. After graduating from San Francisco's Lowell High School in 1920 (where he was senior class president and president of the Audubon Club), Wright and Auntie moved to Berkeley, where he attended the University of California.

While at U.C. Berkeley, Wright majored in forestry, but it is well documented that he was heavily influenced by the teachings and personage of Professor Joseph Grinnell,

one of America's leading zoologists and wildlife researchers. Knowledge of Wright's non-academic activities from 1920 to 1925 is rather sketchy, not unlike his early years. There is no question, however, that his intense interest in wildlife biology was developing and maturing quickly. It is believed that during summers and school breaks he often took to the road and backcountry, visiting Yosemite and other parks on the West Coast. In the summer of 1922, for example, Wright helped lead students during a Sierra Club "High Country Trip" as an instructor of natural history.

Wright's first known recorded "field trip" lasted nearly two months during the summer of 1924. Along with fraternity brothers Robert Shuman and Carlton H. Rose, he ventured throughout the West visiting numerous national parks and wildlife areas (see "Chronology of George M. Wright's Field Notes" elsewhere in this issue). Wright recorded this trip in a journal he titled "The Perils of Ponderous Peter." "Peter" was his well-seasoned Model T Ford, and many of his entries discuss the most recent mechanical failure of the aging vehicle (such as the 72 flat tires they fixed). Other entries are quite revealing.

In Yellowstone National Park on July 14, Wright—not knowing where the future would take him—both expressed an interest that would occupy the rest of his life while showing us his humor.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



George M. Wright, young Forestry student, U.C. Berkeley, early 1920s.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

I like the country very much. It is reported full of wild game. While cooking supper in the dark I made the grave mistake of warming the peas in a pot containing our dish rag and washing soap. We could not make a go of the soapy peas—quite impossible to keep them on the knife.

A few weeks earlier, at Montana's Flathead Lake, his love of the outdoors comes through clearly. "Is there anything on this earth that approaches the heavenly state more closely than a night spent at the foot of a noble pine beside a beautiful lake? So endeth the longest day of the year." And, when visiting Crater Lake National Park on June 30 with his occasionally reluctant traveling mates, it becomes clear that Wright had covered some of this territory before. "It is wonderful to see Crater Lake once more. I hope that Carl and Bob find it worth the risk."

Wright graduated with a degree in forestry in 1925 and eventually became a field assistant to Joseph Grinnell. In the summer of 1926, Wright and Joseph S. Dixon (an economic mammalogist on Grinnell's staff) were sent to Mount McKinley (now Denali) National Park to collect specimens and conduct natural history studies. These field notes, held by the Museum of Vertebrate Zoology (MVZ) at U.C. Berkeley, not only show that Wright was using the now-legendary journal system taught to all Grinnell students, but that his observational and writing skills were being honed.

As fortune would have it, the McKinley trip would also help Wright establish himself in the ornithological world as the discoverer of a nesting surfbird—a bit of knowledge coveted by Grinnell and other ornithologists. On May 28, 1926, Wright recorded the following.

Mr. Dixon stayed home with a strained ankle while I went prospecting for specimens in general and a hoary marmot in particular.... While following the contour of the hill at approximately 4,000 feet through sheer good luck I happened to make the find of my young life.... A quick movement some five or six hundred feet away attracted my attention to a grayish bird that was sneaking hurriedly along.... Here was a surf bird in the nesting season....When Mr. Dixon heard the good news he was inclined to think it some sort of a bum joke but was soon convinced and eager to be on the firing line.

In Dixon's notes of the same day, also held by the MVZ, he recounts what happened when Wright returned to fetch him, bad ankle and all. "Wright came on to camp to tell me the good news and by 6 o'clock we packed up and left camp to investigate the nest.... The surf bird was on the nest when we arrived and Mr. Wright was correct when he said 'I'm sure it is a surf bird.' To Mr. George M. Wright then belongs the credit of finding the first nest of this species on May 28, 1926 at 4 p.m. He is, so far as we have record, the first white man to set eyes on the eggs of this bird which hither to have been unknown."

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

Wright and Dixon then retreated to a nearby knoll to observe the surf-bird into the twilight of the next morning. Here Wright discloses that he could be moving and eloquent in his observations while hunkered down against the rain and cold.

Shelter provided by a small rock outcropping, along with a smoky fire of alder dragged from the little creek basin some distance away, helped to make our storm vigil more endurable. Hardly a scant half hour had passed before it commenced to rain with an accompaniment of chill wind that fairly froze.

Misty clouds would come drifting slowly up the cañon and over the rocky ridge tops in great white swirls. They moved on with a relentless sureness until finally they hung at dead level over the valley from the North mountains to the main Alaskan Range. All underneath this heavy gray mist from foothill slopes to the winding shallow river looked mysteriously unreal in the Northern twilight.

Sometimes the rain would let up as a shifting wind turned back the clouds. Then a little light filtered down to show us whole troops of mist ghosts rise right out of the tundra and go chasing away up the valley. No doubt they were on their way to join the cloud ranks again.

Beginning with Wright's 1927 to 1929 Yosemite field notes (held by the Yosemite Research Library at the national park), and continuing through 1933, we can begin to find the seeds of his formal scientific writings and the ideas contained in the Fauna Series. Clear thoughts and concerns illuminate the pages. But there is more. In addition to his con-

tinuing sense of humor, we can now begin to read about his disgust (Wright's term) with a variety of wildlife situations in the national parks, his amazing ear for the sounds of nature, accounts of his arduous hikes into the backcountry (often solo hikes), and an intense dedication to classic field work.

Field people know that field notes are typically rewritten at the end of the day in a formal journal, such as those used by Wright. In a 1987 interview with Ben Thompson at his home in Glenwood, New Mexico, Thompson made the following comment regarding Wright and his field notes. "His observations were intense, but always with pleasure. At night, he was very self-disciplined about writing his notes. You know, when you're by a campfire, and maybe you're tired, and maybe it's cold, and damp and so on. It takes self-discipline to make yourself write those notes. He was very conscientious about that."

For the two years that Wright was in Yosemite working as an assistant naturalist for the Park Service (November 1927 to October 1929) his travels seemed to be confined to the back country of Yosemite, the Sierra foothills, Berkeley (where he maintained a home), and the California coast. The vast majority of his observations, mostly short entries, took place in Yosemite Valley where he always noted and listed the birdlife (he often went out all day solely for birdwatching trips), but he was also

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



George M. Wright, Yosemite Valley (photo by Carl Russell)

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

possessed with the status of large mammals: deer, bear, elk. In addition to his duties as assistant park naturalist (Carl Russell was head naturalist at the time), he wrote many natural history pieces for the *Yosemite Nature Notes*, taught field classes, and cared for his Auntie. Cordelia Wright moved into the newly fin-

ished Ahwahnee Hotel to be close to George. She died in Yosemite on December 19, 1928, at the age of 88. From all reports Auntie was an extraordinary person. For Cordelia Wright, George was “My Boy,” and surely she stood behind him for at least 16 of his most formative years.



Carl Russell and George M. Wright, Yosemite Valley, September 26, 1928

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

Before Cordelia Wright's death, in September of 1928—approximately a year into his stay—there is a brief entry that, like many early observations, foreshadows an issue that will preoccupy him for years. "The elk problem bothers me very much. There are many sides to the question."

Ironically, one of his most detailed species observations during this period concerns the rather mundane brown towhee from a hospital window in Oakland (we don't know if Wright was in the hospital for an ailment or if he was visiting a friend).

Birds are not numerous in this thickly populated part of town. A brown towhee is very evidently singing for joy that he is the father of a family or at least a prospective father. The song appears to be

certain definite arrangement of a series of notes almost exactly similar to the usual call note. Spacing them to give time interval they are somewhat like this: [drawing of song]. There are about fifteen notes to the song but the last are so rapid that it is difficult to count them. All are pitched alike and the variation comes in intensity and spacing. The song gives an effect almost depressing in its monotony.

After conceiving the plan for a wildlife survey of the national parks in 1928, and receiving the approval of Director Horace M. Albright the following year (see accompanying box, below), Wright assembled his team. For the next three years he was almost always accompanied in the field by Ben Thompson and Joseph Dixon, either together, or separately.



George M. Wright interviewing Maria Lebrado, "The Last Yosemite Indian," July, 1929 (photo by Joseph S. Dixon)

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

Berkeley, California
August 17, 1930

To All Park Superintendents and Managers of Park Operations—
Hotels, Lodges, Stores, Etc.:

One of the most important of the newer activities of the National Park Service is our wild life research branch, the work of which is being carried on by Mr. George M. Wright, Mr. Joseph Dixon, and Mr. Benjamin H. Thompson. Mr. Wright is personally carrying a major portion of the financial burden of this work, owing to the fact that Congress has not yet provided adequately for it. Because of Mr. Wright's generosity and public spirit, we have been able to move ahead much more quickly than would have been the case had we had to wait until full recognition was given by Congress to the needs of this division.

All Superintendents and others connected with the national parks are requested to extend all practicable courtesies and assistance to Mr. Wright and his associates as they go from park to park. They are entitled to receive the benefits of all special rates as well as the opportunity to have work done in our shops, obtain gas and oil, etc.

Messrs. Wright, Dixon, and Thompson are just now starting on an important trip that will keep them out in the field until November, and, in view of the lateness of the season and the danger of encountering bad weather, it is especially important that all available National Park Service facilities be placed at their disposal, in order that their work may be carried on with the utmost expedition and efficiency.

Finally, let me say that there is no work going on in the National Park Service today that interests me more than the undertaking of Mr. Wright and his associates. Therefore, any assistance and courtesies extended to them personally, as well as officially, will be appreciated by me.

Sincerely yours,

Horace M. Albright
Director

HMA: RN
cc Mr. Wright

Wright's field notes during the wildlife survey are far richer than his previous notes. His entries are longer and more detailed. During this three-year period the wildlife team made several circular trips through the West, typically starting with parks and wildlife areas in the Southwest

then moving north, back out to the coast, then home to Berkeley and the wildlife office on the University of California campus.

In addition to the team's personal observations, Wright interviewed as many park superintendents, rangers, and employees as possible regarding

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



Wildlife Survey Team, George M. Wright, Ben H. Thompson, Joseph S. Dixon, Mono Lake, California, July 24, 1929

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

wildlife and range conditions. He also sought out local ranchers and other residents who lived near the parks, many resident from as early as the 1880s. After talking with the locals, and recording their comments, he would often note their reliability as informants.

Below are selected excerpts from the wildlife survey field notes, in chronological order, with an occasional comment by the authors or others regarding aspects of Wright's work and his personal life. It soon becomes apparent that Wright was focusing in on a number of issues discussed at length in the Fauna Series: wildlife species (particularly trumpeter swans, deer, elk, antelope,

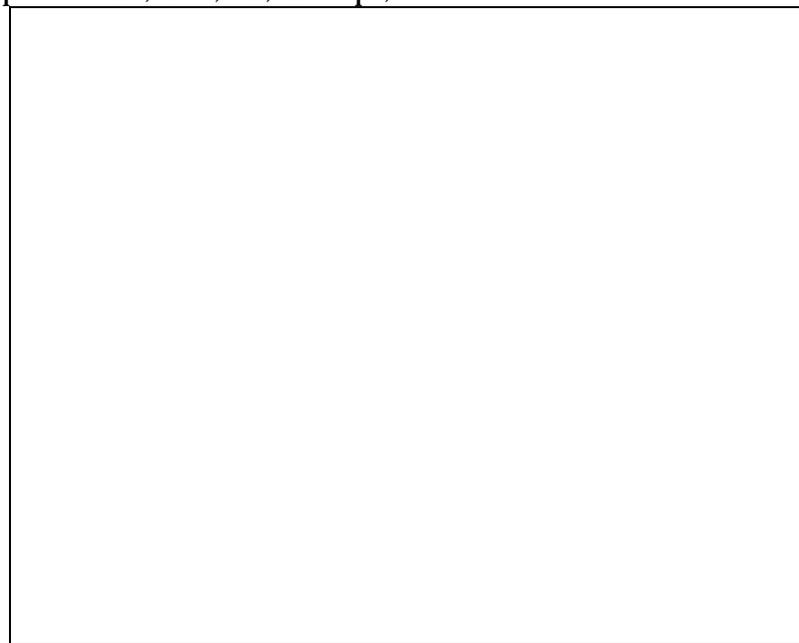
grizzly bears, black bears, badgers, martens, wolves, coyotes, and mountain lions), the "frightful" range conditions he observed, predator control, and hunting in and around parklands.

1930

The following is Wright's introductory page to his 1930 notes.

*A Survey Of Animal Problems
In The National Parks Of The
United States*

April and early May have been spent in preparation. After numerous delays which have delayed our starting nearly three weeks we are on the way. No one can know how glad we are.



"Joseph S. Dixon and Ben H. Thompson in field car used for animal surveys in the national parks. Taken at Lake Merritt, Oakland, California, May 23, 1930" (photo by George M. Wright)

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

May 24 (most likely in Berkeley):

This is the first official field season of 'was,' wild animal surveys in National Parks. This party consists of Joseph Dixon, economic mammalogist at the University of California, George M. Wright, scientific aide, U.S.N.P.S., and Benjamin H. Thompson, field assistant. We start in a car of the latest vintage (registering 160 miles only) which the members of the party have had built from an idea of their own.

In Thompson's 1987 interview, he tells a bit more about the research vehicle. "It was a Buick Roadster and three could sit comfortably in the front seat. They cut the conventional back off, and built a truck bed on the back, like today's trucks. There was a water-tight compartment built right behind the front seat for camera equipment, books, and other things you needed to protect. Camping gear, pots, and bedding and everything else was under a tarp in the back."

March 30, Yosemite Valley to Merced, California:

Wild flowers too are at their height in the Merced Cañon particularly as regards the poppies which swept up the steep slopes in glorious tongues of flame.

June 1, VT Ranch, Kaibab National Forest, Arizona:

I believe that the Kaibab will yield more over a long period of time in deer hunting than it ever would from the few cattle that could range there. As it is now the deer will go down. Then there will be a cry to stock more cattle on the extra range and there will be a temporary increase of revenue from these grazing fees. We saw about 8 head of cattle feeding near the road about half way in from Point Sublime. This is within the park boundaries.

Ranger Brown reported trapping for coyotes and wild cats on the north rim last winter. He said that trapping was good. When other animals were caught he released them. He spoke of badgers and three red foxes, said

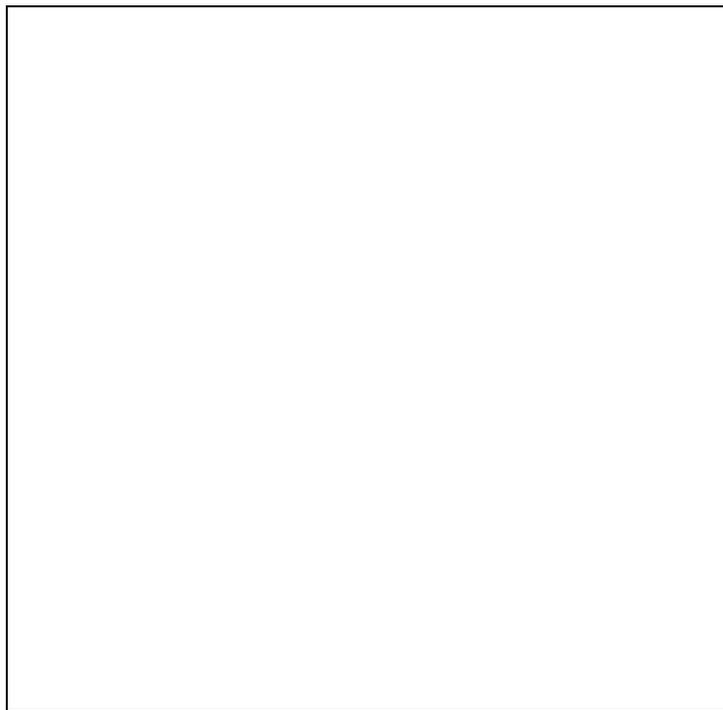
Many miles later, Survey Team research vehicle, Pipestone Pass, Continental Divide Montana, n.d.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

that he 'tapped them on the nose' making them unconscious until he released them from the traps and that they later recovered and ... off. I think this practice very questionable. He also said that occasionally he had to take animals that he should have released because they were too greatly injured.

It must be remembered that although Wright became a leading opponent of predator control and unregulated hunting in and around parks, he was not opposed to hunting in general. In fact, it is not surprising to realize that as a field biologist he had collected dozens, possibly hundreds, of specimens (many are still held by the MVZ in Ber-

keley). More than once Wright notes how, during field trips in a variety of parks, local rangers would stop the car he was riding in, or get down off their horse, in order to shoot at a coyote. There is no hint of reprimands. Wright simply observed and took notes (when Wright came across coyotes on his own, he would stalk them for as long as possible, detailing their behavior.) This is also true when he is told by park employees how they trap coyotes (and by mistake take the occasional eagle), and when Yellowstone's "Buffalo Keeper" informs Wright that he has been dynamiting badger dens.



George M. Wright and rubber boat for observing trumpeter swans, Yellowstone, n.d.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

Trumpeter swan observations in the greater Yellowstone area take up many pages of Wright's notes. On June 11, at Yellowstone's Tern Lake, we find his first entry regarding swans and two other species. "Mr. Thompson and I crossed the outlet of the lake took off our clothes and crossed the tules toward the nest. The nest was right on the open water & was separated from the main body of tules by a stretch of water twenty-five feet across. I went in up to my neck in crossing to the nest which was floating & was anchored to a few tule stems.... This association of the sandhill crane, canada geese, and trumpeter swans is very thrilling when one considers the desperate status of two of them and the acute case of the third."

September 30, Mount Rainer National Park:

Hornquist at the Mt. Rainier National Forest headquarters said in commenting on the hunting season for elk that it was necessary to clean them out as they were taking the range from cattle and sheep.

He [an unnamed ranger] said that grouse were scarce largely due to the large hawks which I took to be goshawks. He stated that he shot as many of the latter as possible.

November 11 to 14, Mesa Verde to Kaibab Plateau:

These four days were spent as happily as any I have ever known. The desert scenery, for color, and fantastic formation surely must be as fine as any in the world.

1931

The year began with the marriage of Wright to Bernice "Bee" Ray on

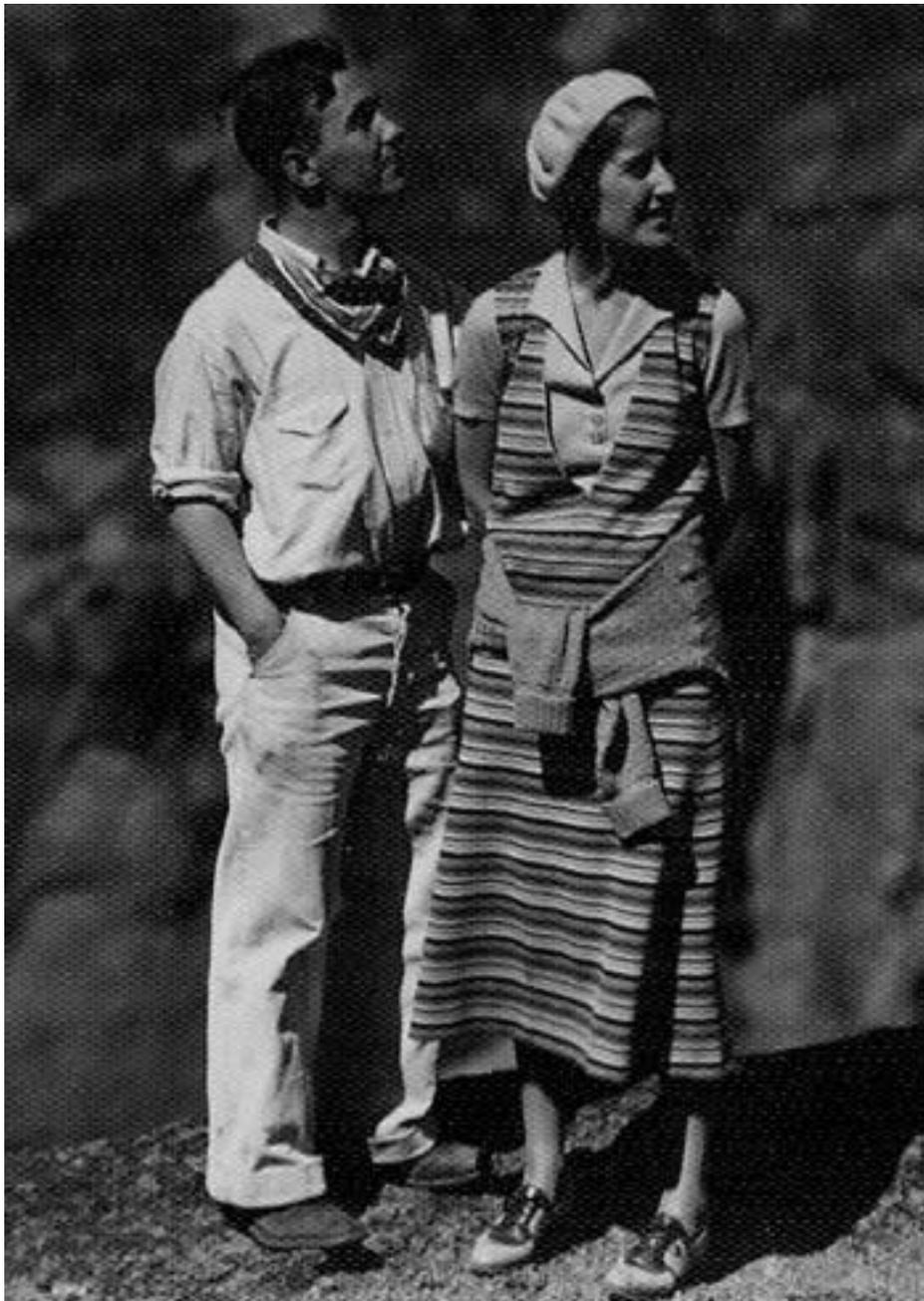
February 2, 1931, in a Phoenix hospital. Wright apparently was suffering from a bout of malaria. He soon recovered, and returned to work. For the next two years Bee often accompanied Wright into the field to help with observations or record species lists (particularly bird lists). He once dispatched Bee to the Yellowstone River to watch a pair of swans while he stayed at Tern Lake observing a pair to make sure they were two distinct pairs. His newlywed status may have influenced the following entry.

April 26, Carlsbad, New Mexico; Mr. J. Stokely Ligon's game farm:

Once during our several visits I heard the 'chiming' song of the Mearns [Montezuma] Quail. The several notes, all of the same quality and equally spaced are silvery clear and totally sweet, soft and yet penetrating. The song came from no direction. It was just on the air. About it there was a timeless quality. There was no beginning and never an end, just the voice of eternity in the wind on the desert.

I fight strongly against the natural inclination to interpret the actions of other animal species in terms of human emotions. But I could not watch the two mated pairs of Mearns Quail at Ligon's for very long without being convinced that here were the perfect lovers. They were constantly together. The male never letting his lady get more than a few inches from him. When they were perched out of their hiding places they nestled right against each other in the most peaceful satisfied manner. If it was cold it actually looked as though the male partially covered the female with his feathers while she crouched low under shelter of him. When hiding in

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



George M. Wright and Bee Wright, newlyweds on the road, March 1931

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



George M. Wright and Bee Wright, Yosemite Valley, n.d.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

their little protection nests they snuggled so close that in the shadow it was almost impossible to distinguish that there were two birds.

May 27, Yellowstone National Park; interview with Chief Ranger George Baggley:

In reference to the trumpeter swans he stated that he would have removed the otters from Trumpeter Lake last fall but for the fact that the whole thing had had too much publicity. He said that those things

had to be done quietly and that is certainly true of any control measures practiced in a national park.

May 30, Trumpeter Lake, Yellowstone National Park:

In the mud & grass about 5 feet from the water lay an elk calf. It did not act so jumpy as the other. After taking its picture lying down Bee tried to coax it to rise but even pushing with her hand was ineffectual.



Bee Wright with baby elk, Yellowstone, May 30, 1931 (photo by George M. Wright)

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

So intense was Wright's interest in trumpeter swans that he spent countless hours tracking down potential nesting areas, feeding sites, and recording general observations. On May 31 of this year he stayed in a single location observing swans from 5:15 AM to 8:40 PM.

May 31, Trumpeter Lake, Yellowstone National Park (mistakenly recorded as April 31 in field notes):

This day have kept a continuous watch over Trumpeter lake to record the actions of a pair of Trumpeter swans during a typical day in the incubation period. I watched them entirely from a distance where they took no note of me in order that their movements should not be altered by human presence.

June 2, Trumpeter Lake, Yellowstone National Park:

Several times we have heard coyotes howling in the distance. Last evening we heard them just before dark and previously it was about nine in the morning. At 11:45 last night one howled many times from the immediate vicinity of camp. A meadow lark sang twice. Strange duet, I thought, and turned over.

June 14, Yellowstone National Park:

This day (a long one lasting from 6 AM until 9 PM) I walked from a point on the east entrance road 2 1/2 miles beyond Squaw Lake up Pelican Creek towards its source, thence west to Tern Lake, along the east shore of White Lake, and thence down Astringent Creek from its source to where it joins Pelican Creek and down Pelican Creek again to the point of starting.

At 8:10 PM while walking down Pelican Creek I was startled by a loud wailing which could only have been coyote. They are evidently abundant in this section.

While looking for the source of this sound I spied a black form moving through the sagebrush across the Creek. It was a large grizzly bear, the first I have ever seen away from the immediate vicinity of a feeding platform.

The grizzly did not see me, though moving leisurely it covered ground at a rapid rate.... The large size, the grizzly cast to the dark coat, the hump & dish face made identification exceedingly simple and certain.

July 7, Grand Teton National Park:

This day I walked from park headquarters to Taggart Lake, Bradley Lake, Teton Glacier, Jenny Lake store and back down the valley to headquarters. Distance traversed was about sixteen miles and the elevation from 6,500 to 11,000 feet.

July 25-28, Yellowstone National Park:

The Heart Lake fire covered an area of approximately 20,000 acres and burned approximately 11 days.... In company with Chief Ranger George Baggley for a large part of the time and by myself, I covered the entire perimeter of the burn, a distance of over fifty miles. Sometimes we walked right through the heart of burns, often right at the line, and occasionally over stretches untouched by the devastating enemy. I took pains to discover everything I could relative to the effect of the fire upon the fauna of the area. Several observations were of unusual interest.

Wright continues this entry noting the curious behavior of night-hawks, meadow mice, chipmunks and marvels that "animals and birds alike went about their daily routine much as though nothing had happened."

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



Betty Russell (Carl Russell's wife), George M. Wright, and Bee Wright, Bechler River, Yellowstone, 1931 (photo by Carl Russell)

August 27, Glacier National Park:

This grazing and poaching [in the park] are harmful but to eliminate it would really mean starving the ranchers out. The only fair thing will be for the government to buy out their holdings. Glacier Park has poaching from ranchers on the west, railroad riff raff along the south, and Indians on the east. Undoubtedly this is why the game remains as wild as it does.

September 5, Red Eagle Lake, Glacier National Park:

Horned Owl. We saw one along the highway driving back toward Two-Medicine last night. The ranger told Dixon that they were hated by the Indians because they frequently

made away with their pet cats. Hooray for the horned owl.

1932

When the 1931 season wrapped up in November, Wright apparently returned to Berkeley and the wildlife office to begin writing Fauna Series #1 with Thompson and Dixon, and prepare for the next season. He remained in Berkeley until early April, then traveled directly to Yellowstone.

The following disturbing entry regarding white pelicans on Yellowstone Lake's Molly Islands, marked "do not type" by Wright in his notes, was mentioned in far less detail in

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

Fauna #2. Wright includes no commentary after this entry, but the practice of killing pelicans to improve fishing soon stopped.

April 28, Yellowstone National Park:

American White Pelican. The confidential report indicates that control work began in 1923 and has resulted in reduction of the colony from about 600 to 250. In '23 every young pelican was destroyed; in '24 & '25 all eggs were destroyed; in '26 83 young were destroyed & about half escaped; in '27 all young were destroyed; '28, '29, '30 no data available; in '31 75 young reported but only 43 could be found. Estimate is of 175 killed each year of control.

May 13, Yellowstone National Park:

Last summer for the first time two grizzly cubs became tame and were fed by hand around Old Faithful. This will not do and must be stopped before it is well started or the bear problem will be worse than ever.

On May 19, Wright relates the story of Mrs. Wright and Francis L. Chamberlain driving from Old Faithful to Mammoth Hot Springs. An osprey flew in front of their car with a large fish and proceeded to land on the road. The bird abandoned the fish, and flew away. Bee and Francis stopped their car, picked up the fish, and brought it to Wright. The keen biologist studied the markings on the fish left by the osprey's talons, weighed the specimen (two-and-a-half pounds), then proceeded to fry it up for dinner!

June 11, Red Rock Lake, Montana:

Lower Red Rock Lake is the best lake I have ever seen for trumpeters.

July 7, Grand Teton National Park:

Interview. Al Austin is chief mechanic in Teton Park. He first came to Jackson's Hole in 1900 and among other things was a ranger with the forest service for 14 years. His hobby is the study and photography of game.... Mountain Lion. Lions were abundant when Austin first came here. Over two hundred were taken out. He believes they may be gradually returning.

In the following passage from a letter dated August 9, addressed to his friend and colleague Carl Russell in Yellowstone, Wright doesn't mention why he is absent from the field, but it was undoubtedly because his first daughter — Charmaine "Sherry" Wright — was born in Berkeley five days later. The reason for the letter is that Wright had just heard that Russell wished to leave his post in Yellowstone. Although there is no mention of the impending arrival of his child (he sent Russell a humorous telegram after her birth), we learn about his relationship with Ben Thompson. Wright returned to the Yellowstone area on November 7.

Ben is back like a fresh gust of wind and with lots of news for us. It was so sad a thing to me to have to go away from the park during the height of the season and while all our projects were the most interesting. But next to being there myself it is nearly the same having Ben there. We think and work so

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

nearly along the same lines that it is like one person divided.

November 13, Gallatin Station, Yellowstone National Park (along the Gallatin River during hunting season, with "Ranger LaNoue"):

With one possible exception all the men we saw were meat hunters and were not concerned with thoughts

of sport. Most of them had come up from Bozeman.... To us the whole looked like a scene from other days, the era of the market hunter.... In the camp on Buffalo Horn Cr. we counted 39 elk and 52 cars at 4:30 PM. A number of cars had gone out that day with their elk and others had only just come into camp. Of course the camp was without orga-



George M. Wright and Ben H. Thompson, in snowdrift, Yellowstone, n.d.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

nization. It clung together by virtue of being where car travel ended. The location was a little lodgepole covered flat by the creek. The trees had beauty and order and dignity but they roofed a jumbled ugly human community. Tents, big and little, cars and trucks. Men and boys, and elk in the trees and on the ground all huddled together on the cold snow. Our gov't license and ranger hats were viewed with suspicion at first but in a short time were accepted along with other distasteful features of the place in an amazing spirit of equanimity. Here was an elk heart speared on a dead limb, there a sprawling liver hardened by cold to the consistency of the front tire toward which it seemed to flow and yet never reach. This same kindly cold rendered innocuous for the time elk legs, and head, and quarters and whole carcasses and tent interiors and human refuse. All was in a refrigerator but a thaw would have driven out the hardest man in camp.

1933-1936

During 1933 Wright's itinerary is less than clear. According to his notebook he begins the year in Berkeley with a few brief entries through early March. On March 2 two paragraphs, apparently written in Yellowstone, record winter movements for trumpeter swans, as reported to Wright. The next entry jumps to the end of July at Platt National Park (now Chickasaw National Recreation Area), then a prolonged stay back in Yosemite through September. His last entry for the year—regarding American pronghorn—is on September 24.

Wright was probably working on Fauna #2 with Thompson during

1933, and his second daughter—Pamela Melendez Wright—was born on October 17. He might have also made a trip to Washington, D.C., during this period. After the wildlife survey Wright and his family moved back and forth between Washington and Berkeley before settling in the nation's capital in late 1935.

He had also taken enthusiastically to family life with two young daughters during this period. In a letter to friends on December 19, 1933, Wright alludes to his unfolding domestic scene. "You would think I'd have my hands full with four women on my hands [Wright's wife, two daughters, and maid] ... but not me! I still have room in this ample heart for you poor lambs so far away.... Anyway & again, Merry Xmas & Happy New Year. Togo."

"Togo"? What is that? Wright, apparently, was rarely referred to as "George" by his friends but instead by the nickname "Togo." Ben Thompson tried to explain. "I asked him once how people came to call him 'Togo.' He said he thought it was from some fraternity and sorority party ... so he was 'Togo' or 'Tog' the rest of the way through college. That's about the best I can do. We never called him 'George.'"

September 5, 1935; letter from Wright to his father-in-law, William F. Ray:

Dear Dad:

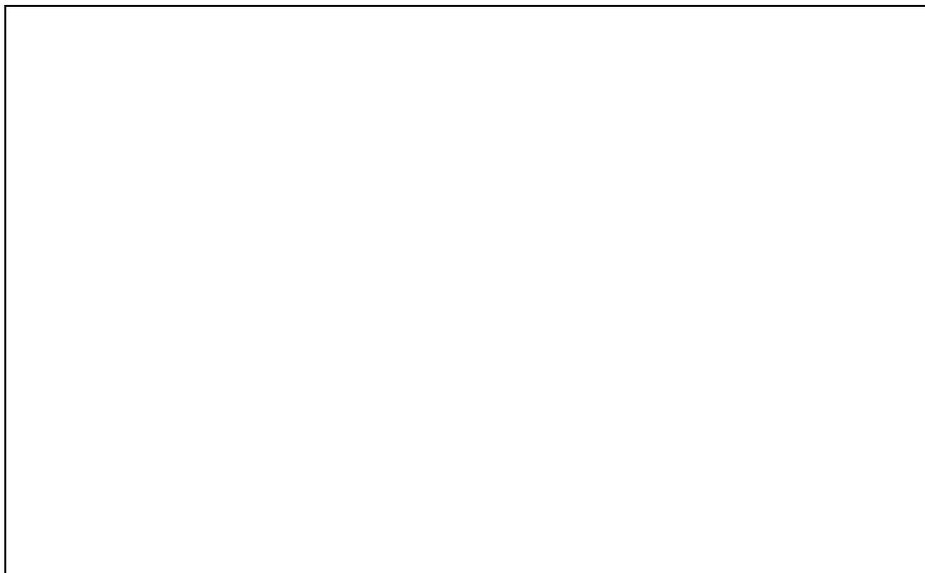
Ever since our arrival I have wanted to write but the old hurry and flurry caught up with me before I caught

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



Bee Wright with daughters Sherry (L) and Pam (R). Florida, 1934, while George M. Wright was researching the proposed Everglades National Park (photo by George M. Wright)

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



Researching proposed Everglades National Park, via the blimp “Resolute,” December 7, 1934. L-R: Roger W. Toll, John B. Ricker (co-pilot), George M. Wright, Capt. J.A. Boettner (pilot and manager of airship operations for the Goodyear Company), O.G. Taylor, Dr. H.C. Bryant

up with Washington.... I am pretty lucky to have a wife so perfect and in-laws that I can love so much too.... Bee & the babes are in the very pink of good health. You must be sure to come see them and us when we get settled in our new home. You are good travelers so don't hesitate.

Lots of love,
George

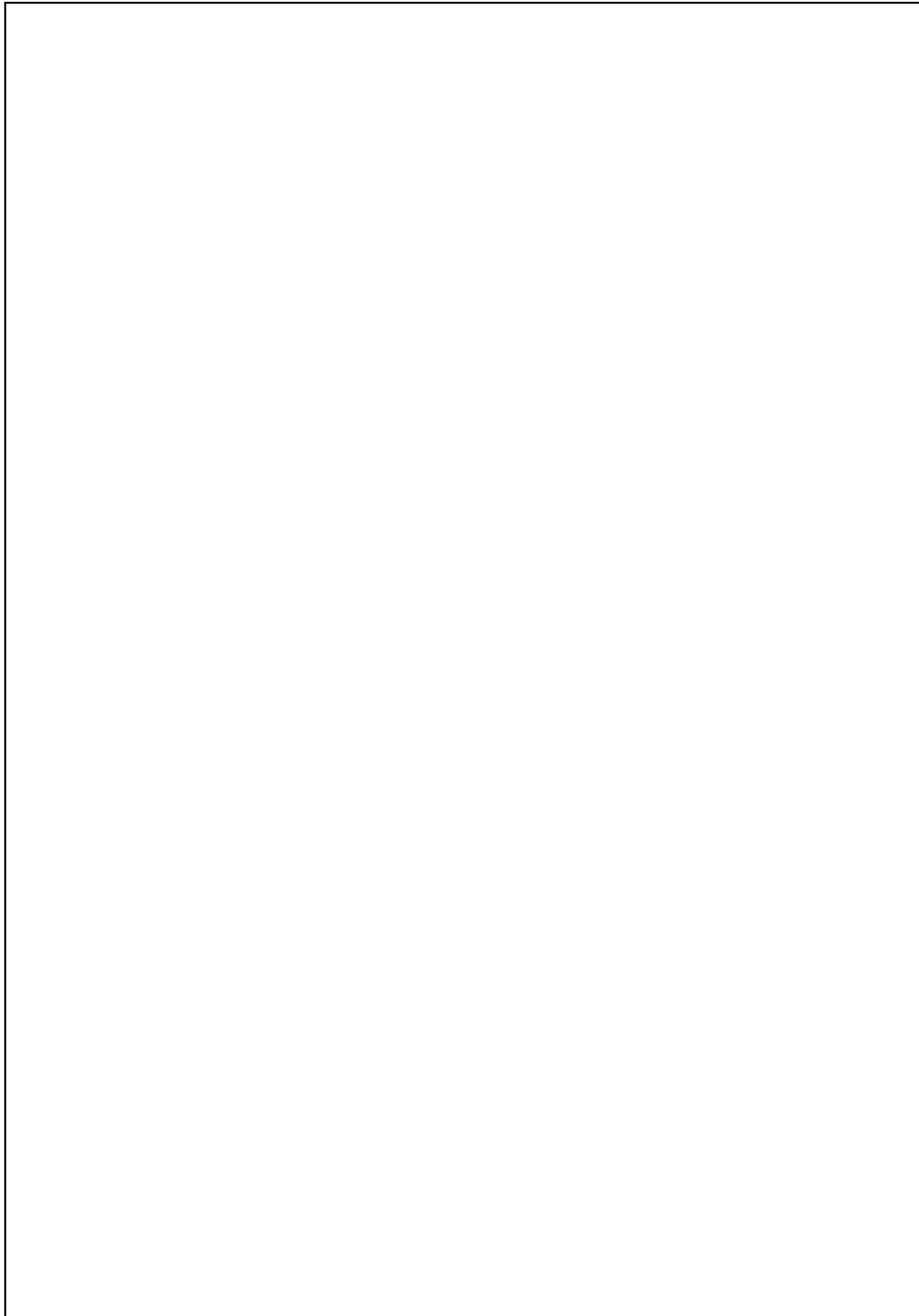
With his wildlife survey field work behind him (but never far from his thoughts), Wright turned to convincing the powers-that-be in Washington that the proper management of wildlife in the national parks and elsewhere was a critical issue. He did, however, visit the Virgin Islands and Puerto Rico with Harold Bryant in the summer of 1934 and was appointed by Presi-

dent Roosevelt to head up the National Resources Board. Later that year, and in early 1935, he ventured to the Florida Everglades (once with Bryant, Roger Toll, and Oliver Taylor). All these trips were undertaken to research the possibilities for establishing parks.

Wright's life soon became very hectic as he found himself in the thick of “the old hurry and flurry” of Washington. In a letter dated January 22, 1936 (one month before his death), Beatrice Newcomer (Wright's secretary) wrote to Ben Thompson's wife-to-be, Matilda Jane Ray (Bee Wright's step-sister), regarding a job possibility.

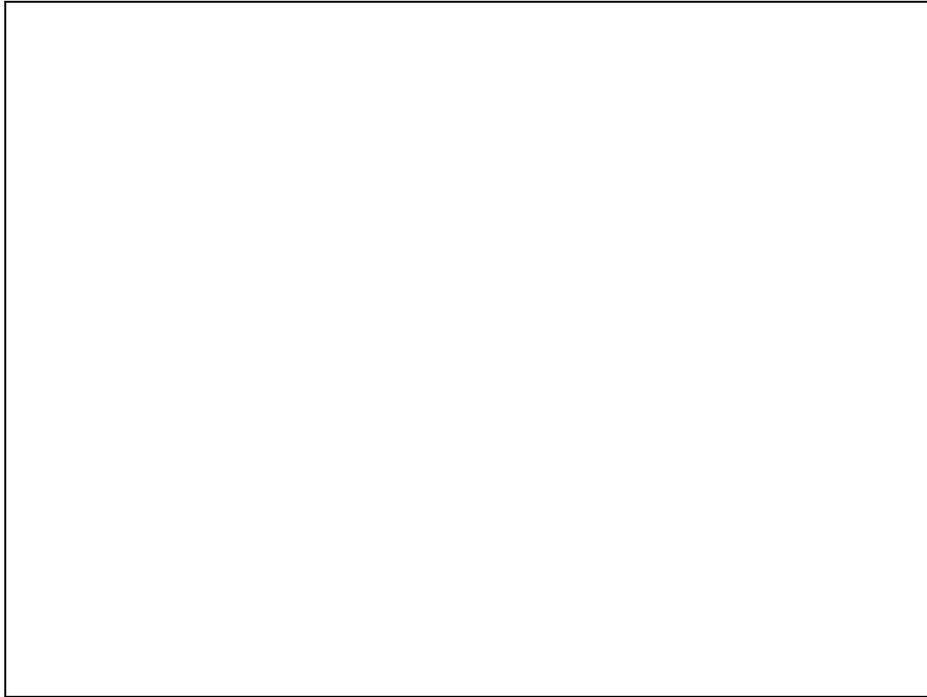
... In these rather wild moments, however, he [Wright] is trying to hold

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



George M. Wright and daughters, Pam (L) and Sherry (R), November 1935.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



Group shot in Puerto Rico, Summer, 1934. George M. Wright and Harold Bryant, far right.



Group shot, International boundary park survey: Near Boquillas, Texas, along the Rio Grande, February, 1936

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

quietly in his lap: the North American Wildlife Conference, the conference of the American Planning and Civic Association, the program for the assembled wildlife technicians, and the reorganization of the Wildlife Division itself under the new ECW set-up. You may imagine it's an armful.... At any rate, and this is what is of particular interest of course to you, Mr. Wright will do his darndest—and you know that is a darn good darndest—to see that the position in the western office is available, open, and ready for you if and when your name comes up on the Secretary's list of eligibles.

The last known letter Wright wrote, but never finished, was penned just before his departure with Roger Toll to the newly authorized Big Bend National Park. The previous fall, Dr. F. M. MacFarland of Stanford University had made a visit to Wright and discussed the possibility of his becoming the director of the California Academy of Sciences in San Francisco. In his letter, Wright apologizes for being “unprepared” to consider the offer, although he was greatly honored. The last sentence reads: “My chief interest, apart from my family, lies in giving such....”

We have no idea what he was thinking, but it is unlikely he would have left the Park Service at such an important and exciting time.

In 1987, when Ben Thompson was asked what made George M. Wright special, he paused, and said: “People reacted positively to him. I don't think he had any enemies.

Wherever he went, very quickly he was welcomed. And, I think that has something to do with it. Also, going ahead with his ideas, they weren't universally accepted in the parks at that time. There were a number of longtime employees, superintendents, chief rangers, and others, who liked the good ol' days of predatory animal control and corralling the ungulates so the public could see some of them, like the buffalo, and feeding the elk so they'd concentrate for viewing, feeding the bears at feeding stations and making a big show of it. There was all of that to overcome. And to make progress with that, and have them still like you, was quite an accomplishment. Joe [Dixon] and I didn't have that kind of personality. We knew it. But George did have it. It was a gift of his character. He liked people, was outgoing, and generous, and honest, and motivated, and people sensed that. And they reacted to it.”

In a letter postmarked March 13, 1936, from Denver, Marguerite Toll, widow of Roger Toll, wrote Ben Thompson that she received a note from her husband written on the morning of February 25, the day Wright and Toll left from Big Bend and their meeting with Mexican park officials. “We've a new name for George,” Roger Toll wrote. “‘Chapper' meaning shorty.”

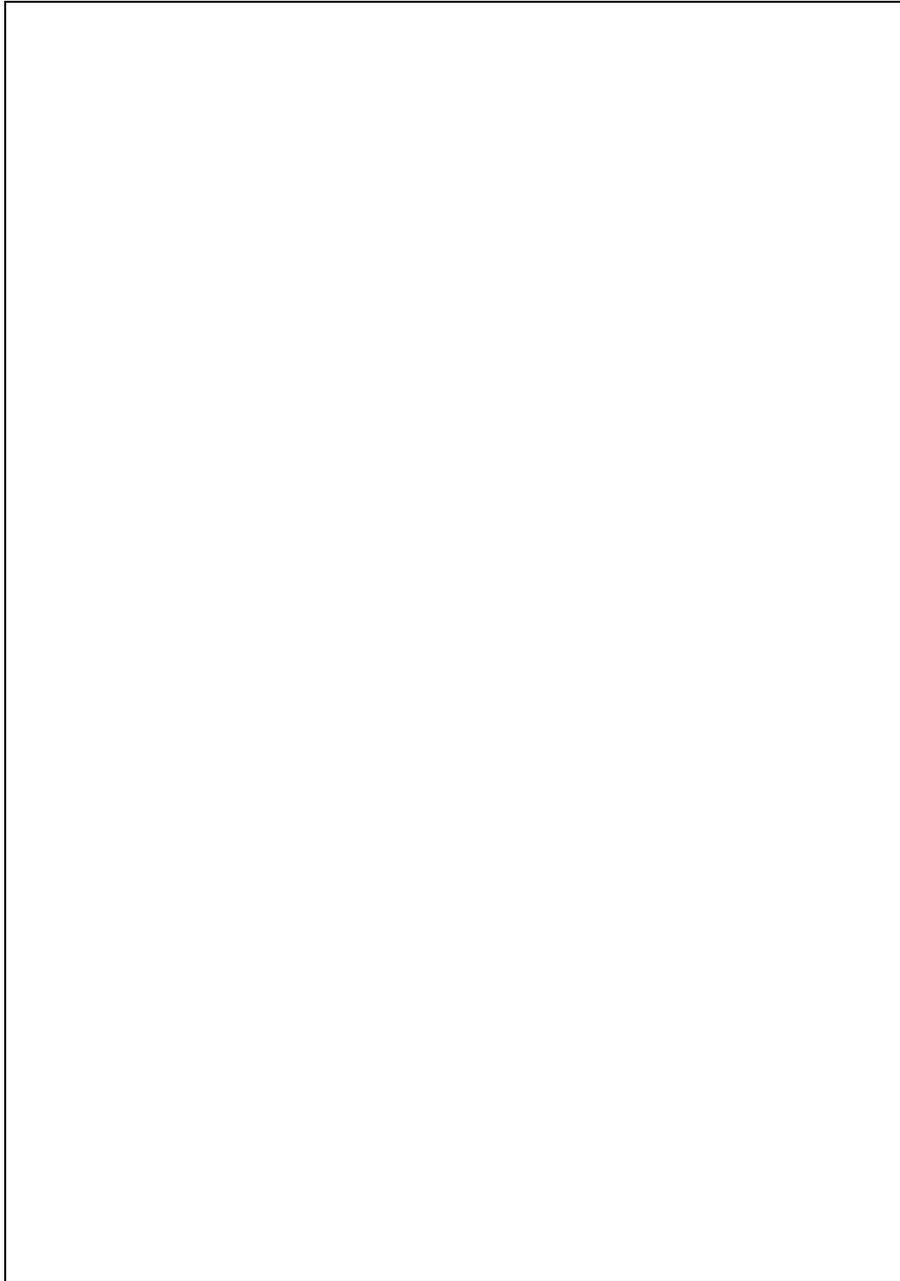
What Toll probably heard was “Chapo,” which indeed is a Mexican term of endearment for a short per-

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



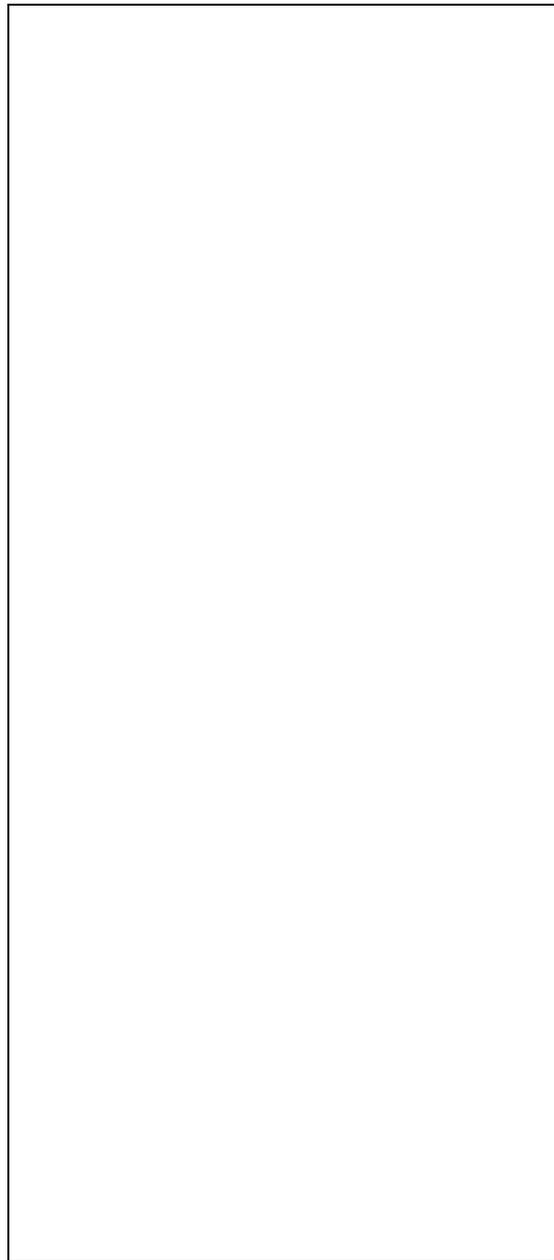
George M. Wright, "The Wright Warplane Costume" for surveying Big Bend region, February 18, 1936 (photo by Roger Toll)

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



Togo, or “Chapper,” Rio Grande, Texas, February 22, 1936. Last known photograph of George M. Wright (photo by Roger Toll)

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



The account of the accident which claimed the lives of Wright and Toll. Deming (N. M.) *Graphic*, February 27, 1936.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

son. George M. Wright stood tall at 5 feet 4 inches, and he had no doubt impressed his Mexican counterparts with his personality and knowledge. If time had been kind to Wright, the new nickname might have replaced "Togo."

Of course, we will never know what might have been if Wright—and Toll—had lived. As Ben Thompson said in 1987, "History does not reveal her alternatives."

What did survive from the brief yet amazing life of George M. Wright is an enduring legacy and a "conviction that wilderness still lives." This consummate field biologist, husband, and father is also remembered by two mountains named after him, one in Denali National Park, and another in Big Bend National Park (where there is also a Mount Toll).

However, for his family—and perhaps for field professionals today—it is George M. Wright's compelling writing that keeps his memory alive, as with the following quotation from *Fauna #2*, one of our favorites.

But it is the birds of the water, beautifully wild birds by the thousand, that are encouragement and inspiration to the man who prays for conviction that the wilderness still lives, will always live.... Sometimes while I am watching these birds on the water, the illusion of the un-touchability of this wilderness becomes so strong that it is stronger

than reality, and the polished roadway becomes the illusion, the mirage that has no substance.

Writing About Wright

George Melendez Wright's influence on the early days of wildlife biology and management in the national parks has been written about for many years, beginning with the numerous detailed obituaries that appeared after Wright and Roger Toll (superintendent of Yellowstone National Park) died in an automobile accident in February of 1936. Ben Thompson, a close friend and colleague from the winter of 1928 until Wright's death, profiled Wright in the first issue of *THE GEORGE WRIGHT FORUM* (Summer 1981; reprinted in the Tenth Anniversary Issue, Vol. 7, No. 2, 1990). Lowell Sumner's *FORUM* article, "Biological Research and Management in the National Park Service: A History" (Vol. 3, No. 4, Autumn 1983), also highlighted Wright's career and influence on NPS (Sumner was another colleague of Wright and Thompson). Additionally, Alton A. Lindsey, Alston Chase, Alfred Runte, and Richard Sellars either mentioned Wright at length or profiled the young wildlife biologist in their respective books (see References). Sellars' tribute to Wright in this issue is an eloquent addition to this body of work.

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Some quotations in this article are from field notes in the collection of the Museum of Vertebrate Zoology at the University of California, and are used with the permission of the MVZ.

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Richard West Sellars

The Significance of George Wright

George Melendez Wright was born into a well-to-do San Francisco family in 1904. Even as a boy, he showed an unusually strong interest in the natural history of the San Francisco Bay Area and northern California. At the University of California in Berkeley, he studied zoology and forestry under the highly respected biologist, Joseph Grinnell, head of the university's Museum of Vertebrate Zoology.

Wright's career with the National Park Service began in 1927 in Yosemite National Park, where he served as assistant park naturalist. In 1929, concerned about an almost complete absence of scientific data to inform park management, Wright initiated a scientific wildlife management program for the National Park System, beginning with a survey of wildlife populations in the parks. Thereafter, he succeeded in building and strengthening the wildlife program to the extent that it began to influence management practices in the large natural parks. But in February 1936, during a reconnaissance of prospective international parks and wildlife refuges along the Mexican border, Wright died in a head-on collision on U.S. Highway 80, about seven miles east of Deming, New Mexico. At his death, Wright was only 31 years of age; his worthy efforts to improve wildlife management had been tragically cut short.

* * *

George Wright's most significant contributions began with his national

park wildlife survey. Wright not only initiated the survey, but also funded it from his personal fortune (in 1933, the Park Service began to pay all costs). The survey marked the National Park Service's first sustained scientific research in support of natural resource management. And Wright's efforts motivated the Park Service to establish a "wildlife division," thereby beginning a period of substantial scientific activity within the national parks.

The wildlife survey team under Wright produced a landmark report, *Fauna of the National Parks of the United States* (referred to as Fauna No. 1). Published in 1933, this report on natural resource management was the very first of its kind in NPS history. Moreover, it made recommendations that went beyond the preservation of existing conditions: the report advocated not only the preservation, but also, where feasible, the *restoration* of natural conditions in the parks.

In 1934, Park Service Director Arno Cammerer declared the Fauna

No. 1 recommendations to be official policy. As official management policy aimed at the preservation and restoration of natural resources by a government bureau, and applicable to an entire system of public lands, Fauna No. 1's recommendations were unprecedented in the history of national parks—and, indeed, in the history of American public land management.

The Fauna No. 1 policies differed considerably from previous NPS policies. Wright had begun his career during the era of Stephen T. Mather, the first Park Service director (1916-1929), a time when national park management policies required no scientific understanding. Instead, policies focused on extensive manipulation of natural resources such as bison, bear, fish, and forests—manipulation that was aimed not at preserving natural conditions, but rather at presenting the touring public with idealized versions of scenic nature. National park management under Mather was typified by the major policy statement of the era, the 1918 "Lane Letter," a development-oriented document that placed heavy emphasis on accommodating the public and ensuring their enjoyment of the parks' majestic scenery.

In truth, the biological science program that Wright initiated (and that NPS would build up during the first half of the 1930s) did not result from any well-considered prior determination by the Park Service that scientifically based preservation of the national parks' natural resources

needed to get under way. On the contrary, it occurred through a fortunate happenstance—the presence in the Park Service of George Wright, who not only recognized the need for such a program, but was also willing to start it with his own money. Had Wright not proposed the survey and offered to fund it, the Park Service may have waited for years before initiating its own biological science program. There is no evidence to the contrary.

George Wright's efforts thus began a new era in National Park Service history. In effect, the wildlife biologists under Wright's leadership reinterpreted the 1916 congressional mandate that the Park Service must leave the parks "unimpaired." In their view, the Park Service's mandate required not only preserving scenery and ensuring public enjoyment, but also applying scientific research to ensure that the parks were left as ecologically intact as possible, given public use of the areas. From Wright's time on, the persistent tension between management for aesthetic purposes and management for ecological purposes has been a dominant factor in national park history.

The biologists' new perspectives on natural resources provided new options for park management that challenged traditional assumptions and practices. Becoming a kind of "minority opposition party" within the Park Service, the wildlife biologists under Wright raised serious

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

questions about the NPS's utilitarian, recreational emphasis in park management. Specific to the biologists' concerns for ecological preservation and restoration in the parks were recommendations for scientific research, protection of predators and endangered species, reduction or eradication of non-native species, and acquisition of more ecologically complete wildlife habitats.

Wright, and the biologists brought into the Park Service during his time, especially feared the ecological consequences of President Franklin D. Roosevelt's New Deal programs, with their varied and well-funded national park development projects that emphasized intensive recreational use. At times, the biologists harshly criticized the Park Service. They asserted, for instance, that, although NPS ought to be the leader in nature preservation, through extensive park development it had been "more at fault than many other agencies" in destroying natural values. Improved park roads they described as "infections" that stimulated incremental development along road corridors, such as campgrounds, restaurants, parking lots, maintenance yards, ranger stations, and other administrative facilities. The biologists warned against exceeding the "recreational saturation point" in parks by building more roads and trails and facilities for winter sports and other activities. And, in what seemed like a particularly alarming policy to traditional

Park Service managers and foresters, the biologists accepted forest fire as a natural ecological element. They even argued that, in a park maintained in a natural condition, a forest blackened by a naturally caused fire is just as valuable as a green forest. Inspired by Wright, the biologists brought these and other radical new perspectives into the Park Service.

Yet the National Park Service failed to live up to the Fauna No. 1 policies that Director Cammerer had proclaimed official in 1934. During the New Deal, the Park Service aggressively sought national park development for public use, along with the growth and diversification of NPS responsibilities in national recreation programs. Thus, the emergence of ecological attitudes that Wright promoted was overwhelmed by the New Deal's emphasis on recreational tourism and park development. For example, at the time of Wright's death in 1936, the Park Service employed approximately 27 wildlife biologists. But by the late 1930s, and without Wright's leadership, the number of biological positions had dwindled to nine. At that time, in contrast to the biologists' situation, the Park Service employed approximately 400 landscape architects to help undertake New Deal development activity. Moreover, in 1940, through a bureaucratic reorganization by President Roosevelt and Secretary of the Interior Harold Ickes, the wildlife biologists were transferred to another Interior bu-

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

reau, the Biological Survey—an administrative separation from the Park Service that symbolized the diminished influence of biological science in national park management. The biologists were returned to the Park Service after World War II—but only about six of them were left by that time.

The automobile accident that took Wright's life truly marked a turning point in National Park Service history. Under his leadership, the biologists had gained strength and influence in national park management. In 1935, they had been moved from their offices on the University of California campus in Berkeley to National Park Service headquarters in Washington, D.C.—an indication of the increasing prominence in national park affairs of both George Wright and the biology program he had initiated. Beyond Wright's administrative skills and his founding of an important national park program (the only major management program in Park Service history to be established with private funds), it is very likely that his personal fortune gave him direct access to the highest levels of NPS management. Had this accident not claimed his life, his influence would surely have continued to increase—indeed, it is possible that Wright may have risen to the very pinnacle of National Park Service leadership. In any event, Wright's presence within the highest ranks of the Park Service would have continued to bolster the biologists' influ-

ence in national park management, averting the drastic decline that the program underwent without his leadership.

* * *

George Wright was a visionary—a biologist whose concepts of scientifically based natural resource management in the National Park System were far ahead of their time. His ideas had flourished briefly in the 1930s, but were soon shoved aside to accommodate other priorities. Yet, as the environmental era began to impact NPS thinking in the 1960s, Wright's ideas (modified in accord with contemporary ecological knowledge) experienced a resurgence, and they have since gained an increasingly greater influence in national park management.

Today, Wright is widely recognized as the founder of scientific natural resource management in the National Park System. He had provided the vision, inspiration, funding, and leadership. His untimely death—as well as Park Service reluctance to alter its traditional management practices—brought about the decline of the biologists' influence. Still, for the few biologists remaining in the Park Service during the post-World War II years and up to the 1960s, Fauna No. 1—the initial product of Wright's wildlife management program—remained, as one biologist recalled, the “bible” for wildlife management, giving the biologists guidance and inspiration at a

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

time when their programs had been eclipsed. Moreover, Fauna No. 1 was clearly the philosophical and policy forerunner to the 1963 reports on national park management and science by the Leopold Committee and the National Academy of Sciences—reports that sparked the Park Service's contemporary move toward more ecologically attuned park management.

Due to the dominance of traditional management attitudes, the Park Service's move toward ecologically based management has been exceptionally sporadic. Yet it is still ongoing and is currently being strengthened by the NPS initiative known as the Natural Resource Challenge. In many ways, the Challenge represents a contemporary updating and expansion of the ideas

expressed by George Wright and the Park Service biologists of the 1930s.

As the Park Service's scientific natural resource management programs re-emerged, Wright's vision and contributions became increasingly recognized, and his reputation has rapidly ascended. The George Wright Society, founded in Wright's honor in 1980 and dedicated to the preservation and protection of national parks and equivalent preserves around the world, has become a major influence in efforts to attain ecologically attuned national park management. The Society enjoys strong support from National Park Service leadership, scientists, and other professionals, thereby ensuring the perpetuation of George Wright's early visionary aspirations for national park management.

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A Summary List of George Wright's Field Notes

1924

"The Perils of Ponderous Peter" (a Model T Ford) – May 18 to July 3

- Mojave Desert, California
- Nevada
- Zion National Park, Utah
- Rocky Mountain National Park, Colorado
- Yellowstone National Park, Wyoming
- Glacier National Park, Montana
- Idaho
- Washington
- Crater Lake National Park, Oregon
- Berkeley, California

Note: Accompanied by U.C. Berkeley schoolmates Robert Shuman and Carlton H. Rose, Wright ventured throughout the west in a Model T Ford, sticking mostly to wilderness areas and parks. Informal observations. Original notes held by: Pamela Wright Lloyd, Mill Valley, California.

1926

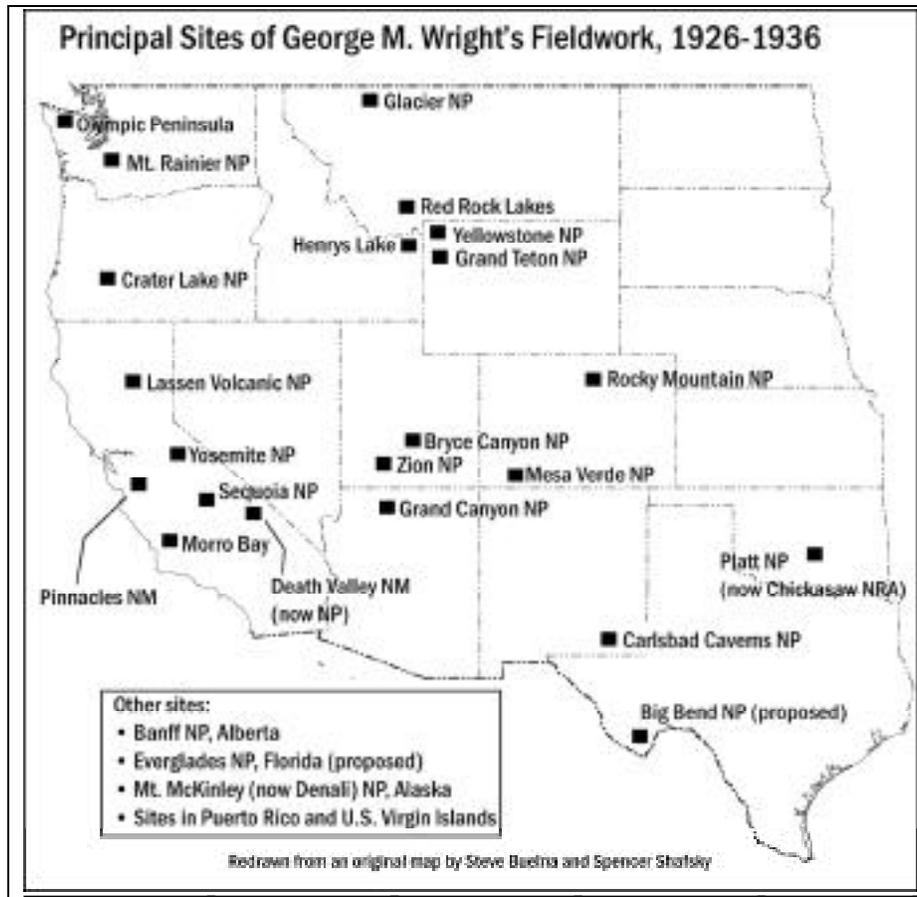
Wright, G.M., pp. 1-145: Mt. McKinley District, Alaska (Denali National Park and Preserve)

- Savage River area, May 19 to July 8
- Copper Mountain area, July 9 to July 15
- Copper Mountain to Wonder Lake, July 16
- Wonder Lake, July 17 to July 18
- Wonder Lake to Copper Mountain, July 19
- Copper Mountain to Toklat River, July 20
- Toklat River to Igloo Creek, July 21
- Igloo Creek to Savage River, July 22
- Savage River, July 25
- Savage River to Fish Creek, July 26
- Fish Creek to Savage River, July 27

Species index, 4 pages. Specimens collected, Museum of Vertebrate Zoology accession #2755 (mammals #37526-37607, birds #49651-49755). Original notes held by: Museum of Vertebrate Zoology, University of California, 3101 Valley Life Sciences Building, Berkeley, California, 94720.

Note: Some of the photographs taken on this trip, probably all by Joseph Dixon, appear in Fauna Series #1.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS



1927-1929

Wright, G.M., pp.1-76: Yosemite National Park and elsewhere in California

- Yosemite Valley, November 15, 1927-April 10, 1928
- Yosemite Valley to Mariposa, April 13, 1928
- Yosemite Valley to Mariposa Grove, April 15, 1928
- El Portal to McCauley's Ranch, April 19-20, 1928
- Yosemite Valley, April 21-October 16, 1928
- Yosemite Valley, January 11-25, 1929
- Merced to Yosemite Valley, February 5, 1929
- Yosemite Valley, February 6-March 3, 1929
- Merced to Yosemite, March 4, 1929
- Yosemite Valley, March 16-April 30, 1929

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

- Peralta Hospital, Oakland, California, May 12, 1929
- Yosemite Valley, June 10, 1929
- Morro Bay, California, October 13, 1929
- Lake Merritt, Oakland, California, October 17, 1929

Original notes held by: Yosemite Research Library, P.O. Box 577, Yosemite, California, 95389.

1930-1933

Wildlife Survey, Wright, G.M., pp. 77-542

1930

- 1936 Thousand Oaks Blvd., Berkeley, California, February 28 (GMW's home)
- Mt. Hamilton, California, March 3
- Yosemite Valley, March 27-29
- Yosemite Valley to Merced, California, March 30
- Santa Maria, California, to Berkeley April 15
- Zion Cañon, Utah, May 30 (Beginning of Wildlife Survey)
- Pipe Spring National Monument, Arizona, May 31
- VT Ranch, Kaibab National Forest, Arizona, June 1-2
- Bear River Marshes, Brigham, Utah, June 6-7
- West Yellowstone to Lamar River, June 8
- Lamar River, Yellowstone June 9
- Lamar River to Lake Yellowstone, June 10
- Tern Lake, Yellowstone, June 11-12
- Lamar River, Yellowstone, June 13-29
- Yellowstone, June 30-July 1
- Casper, Wyoming, July 1
- Milner Pass, Rocky Mountain National Park, Colorado, July 6
- Estes Park, Colorado, July 7
- Longmire Springs, Washington, September 28
- Longmire Springs to Lewis, Washington, September 29
- Lewis to Ohanapecosh Hot Springs, Washington, September 30
- Yakima Park, October 2
- Sunrise Point, Mt. Rainer National Park, October 3
- Cayuse Pass, Mt. Rainer National Forest, October 4
- Yakima Park to Carbon River, October 5
- Seattle, Washington, October 7
- Crescent Lake and Port Angeles, Olympic Peninsula, October 8

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

- Crater Lake, Oregon, October 12
- Grand Cañon, Arizona, October 29-November 1
- Grand Cañon to Yavasupai Cañon, November 3
- Grand Cañon to “V” Ranch, November 4 [actual brand looks like a “w” on top of a triangle]
- Grand Cañon to Coconino Basin, November 5
- Mesa Verde, Colorado, November 8-10
- Mesa Verde to Kaibab Plateau, November 11-14

1931

- Pinnacles National Monument, California, March 4
- Berkeley, California, March 26
- Darwin Falls Cañon, Panamint Valley, California, April 11
- Mesquite Springs, Death Valley, California, April 12
- Death Valley, California, April 14 (conversation with Dr. C. Hart Merriam at Furnace Creek Inn)
- Carlsbad Caverns, New Mexico, April 25 (dates transposed)
- Big Cañon, Guadalupe Mountains, New Mexico, April 24 (dates transposed)
- Carlsbad, New Mexico, April 26
- Mesa Verde National Park, Colorado, May 3-5
- 1936 Thousand Oaks Blvd., Berkeley, California, May 18
- Fernly, Nevada, May 23
- Salt Lake City, Utah, May 24
- Logan, Utah, May 25
- Yellowstone, Wyoming, May 25-June 14 (Mammoth Springs, Trumpeter Lake, Bechler River, Crescent Hill, Tern Lake)
- Rocky Mountain National Park, Colorado, June 23
- Estes Park, Colorado, June 24
- Rocky Mountain National Park, Colorado, June 25
- Never Summer Range, June 26
- Lander, Wyoming, July 4
- Grand Teton National Park, Wyoming, July 6-7
- Emma Matilda Lake, Jackson Hole, Wyoming, July 8
- Yellowstone National Park, July 25-August 2 (Heart Lake {Fire}, Yellowstone Lake, Tern Lake, Old Faithful, West Yellowstone)
- Gallatin Highway, Montana, August 3
- Kintla Lake, Glacier National Park, Montana, August 14-17
- Swan Lake, Montana, August 20

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

- Libby, Montana, and Procter Lake, British Columbia, August 22
- Glacier National Park, Montana, August 27-September 5 (Going-to-the-Sun Chalets, Cracker Lake, Ptarmigan Lake, Red Eagle Lake)
- Coal Creek, Montana, September 7
- Glacier National Park, Montana, September 8
- Banff, Alberta, September 11
- Lake Louise, Alberta, September 12
- Mt. Rainer National Park, Washington, September 16-19
- Crater Lake National Park, Oregon, September 25
- Lassen Volcanic National Park, California, September 28
- Yosemite Valley, California, November 27-30

1932

- Berkeley, California, January 19-April 2 (213 Hilgard Hall, U.C. Berkeley)
- Livingston to Mammoth Springs, Yellowstone, Wyoming, April 10
- Mammoth Hot Springs, Yellowstone, Wyoming, April 12-May 14
- Mammoth to Livingston, Montana, April 14
- Livingston to Mammoth, April 19
- Mammoth Springs, Yellowstone, April 21-28
- Mt. Everts, Yellowstone, April 29
- Mammoth Springs, Yellowstone, May 1
- Mammoth to Buffalo Ranch, Yellowstone, May 2-3
- Mammoth Springs, Yellowstone, May 4
- Gallatin Ranger Station, Yellowstone, May 6
- Mammoth to Junction Butte, Lamar River, Yellowstone, May 8
- Mammoth Hot Springs, Yellowstone, May 10
- Lamar River, Yellowstone, May 11
- Mammoth to Old Faithful and West Yellowstone, May 13
- Mammoth Hot Springs, Yellowstone, May 14-15
- Mammoth to Lamar River Bridge, Yellowstone, May 16
- Mammoth Springs to Yankee Jim Cañon, Montana, May 18
- Madison Junction, Yellowstone, May 19
- Mammoth to Cañon and Lake and return same route, Yellowstone, May 20
- Mammoth Hot Springs, Yellowstone, May 22-23
- Mammoth Springs to Gibbon Meadows, Yellowstone, May 24
- Mammoth to Yellowstone Lake, Yellowstone, May 31

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

- Mammoth to Game Preservation Ranch via Sepulchre Mountain, Yellowstone, June 1
- Mammoth to Old Faithful, Yellowstone, June 3
- Mammoth to Buffalo Ranch and Bison Peak, Yellowstone, June 3
- Lake Yellowstone, June 4
- Mammoth Springs, Yellowstone, June 8
- Red Rock Lake, Montana, June 11
- Henry's Lake, Idaho, June 12
- Trumpeter Lake, Yellowstone, June 17
- Bechler Ranger Station, Yellowstone, June 21
- Tern Lake, Yellowstone, June 23-25
- Jackson Hole, Wyoming, July 6-7 (Meeting with Olaus J. Murie of the U.S. Biological Survey)
- Grand Teton National Park, Wyoming, July 7
- Berkeley, California, September 1 and 25
- Atascadero to Morro Bay, California, October 1
- Livingston to Mammoth Hot Springs, Yellowstone, November 7
- Mammoth, November 8-9
- Mammoth to West Yellowstone, November 10
- West Yellowstone to Old Faithful, Yellowstone, November 11
- Gallatin Ranger Station, Yellowstone, November 13-14
- Mammoth to Game Preservation Ranch, Yellowstone, November 15
- Mammoth to Buffalo Ranch, Yellowstone, November 16
- Mammoth Hot Springs, Yellowstone, November 18
- Mammoth to Buffalo Ranch, Yellowstone, November 22-23
- Mammoth to Lamar River Bridge, Yellowstone, November 26
- Mammoth to Old Faithful, Yellowstone, December 2
- Mammoth Hot Springs, Yellowstone, December 3
- Yellowstone National Park, Wyoming, December 11

1933

- Berkeley, California, February 17-19 and March 5 [wrong date?]
- Yellowstone Park, Wyoming, March 2
- Platt National Park, Oklahoma, July 23-24
- Swan Lake, Yellowstone, August 13
- Belton, Montana, August 31
- Lake McDonald to Upper St. Mary Lake, Glacier National Park, Montana, September 1
- Cardston, Alberta, to Glacier National Park, Montana, September 3

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

- Glacier Park Station to Many Glacier, September 4
- Many Glacier, September 5
- Cracker Lake, Glacier National Park, September 6
- Red Eagle Lake, Glacier National Park, September 7
- Willow Park and Swan Lake, Yellowstone, September 12
- Firehole River Basin, Yellowstone, September 13
- Mammoth to Lake and return via Mt. Washburn, Yellowstone, September 14
- Mammoth to Norris, Yellowstone, September 15
- Mammoth Hot Springs, Yellowstone, September 16
- Mammoth to Lamar River Bridge, September 17
- Mammoth to West Entrance, Yellowstone, September 18
- Henry's Lake, Idaho, and Red Rock Lakes, Montana, September 19-20
- Lone Star Geyser to Shoshone Lake, Yellowstone, September 21
- Tower Junction to Upper Hell-Roaring Creek, September 23
- Gardiner Entrance, Yellowstone, September 24

Note: During this entire period, February 1930 through September 1933, Wright was almost always accompanied by either Ben Thompson or Joseph Dixon, separately or together. After Wright's marriage to Bernice (Bee) Ray on February 2, 1931, Mrs. Wright was often in the field with the research team. Original notes held by: Pamela Wright Lloyd, Mill Valley California.

Compiled by Jerry Emory



A George Wright Bibliography

Ed. note: this bibliography, compiled by Jerry Emory, is preliminary. It contains most, if not all, of GMW's writings, published and unpublished.

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- . 1928. The Sky Pilot. *Yosemite Nature Notes*7:7, 54.
- . 1928. An Early Morning Bird Revue. *Yosemite Nature Notes*7:9, 74-75.
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— Compiled by Jerry Emory



George M. Wright

The Magic Window

This is a story of many years ago, of things that were told by the magic kitchen window in an old home on Laguna Street in San Francisco. A very magic window this, for grown-ups could rub and rub its glass without ever seeing more than a very indifferent backyard, while children had merely to press their adaptable little noses against its cool surface to find themselves in an enchanted world full of the most exciting adventures.

Great tears rolled down the cheeks of two small brothers, one four, one five, huddled in the window watching the twilight of a summer day in 1909. Their pet guinea pig had disappeared down the dark alley-way and out of their tender young hearts forever, grasped in the jaws of a marauding Scotch terrier.

Six years later, a bird-bath devised from the saucer of a large jardiniere was installed in one corner of the little garden. For three weeks the water was freshened daily, but no bird was tempted, and only a cat, black and ominous, came to drink and leer up at the window. Then one morning, at breakfast time, a bird came fluttering down through the vines on the old board fence and gingerly hopped on to the rim of the bath, dipping up a billful or two of water, before hastening off in the greatest confusion. But—most horrible of doubts—perhaps this was just a common “chippy.” Not until his birthday brought a bird guide to his

hands did the embryonic ornithologist who watched at the kitchen window identify his guest as a song sparrow. A big game hunter bagging his first white rhinoceros could never have been more puffed with pride of success. From that day on, little song sparrow was his favorite bird, and neither sandhill crane, nor surfbird, nor trumpeter swan, met with in faraway places in later years, ever challenged its throne.

The song sparrow must have been the trail-blazer who told others, for soon the Nuttall's sparrows came. After that there were green-backed goldfinches, Anna's and Allen's hummers, and others. In autumn, winter migrants came to swell the list. The magic window revealed yellow warblers, western tanagers, and red-breasted nuthatches, to the one who possessed its secret, but ordinary folk could never see anything but “those dirty sparrows,” and they fretted about smudge marks on the glass and the putty that was

crumbling on the sills.

One winter, a hermit thrush, most chic of birds, came to live in the block. A bath a week more than satisfied the bird student at the window, but the hermit was not content with one a day. Two or three, each followed by a complete toilet, were necessary to maintain the perfection of order that marked its dress. One morning in early spring just before the regular time for the northward departure of its kind, it was found feet up at the foot of a wall near a small tree. Not a feather was deranged, and the cause of death remains a mystery to this day. The thrush was buried under the moss-covered wall.

Another year a flock of restless robins blew down out of the sky, like leaves scuttling before a storm. They feasted on the black berries of an English ivy hedge that had grown and spread for years over a nearby garden bulkhead. Theirs was not the faint-hearted way, and they seemed to give confidence to the shier birds. Even the red-shafted flicker followed their lead into the garden. Three robins tried to occupy the bath at once, and the little song sparrows, the ruby-crowned kinglets, and the bush-tit bided their turn in the safety of the bushes.

A Wilson's snipe with a broken wing was rescued at Merced Lake and brought to the Laguna Street house. After a futile attempt to put the wing in splints, the bird was released in the garden. Though it

would follow the fence line all around, it did not seem to know how to get the earth worms that were so quickly discovered and pulled out by the robins. So the worms were first dug in the garden, then packed into some damp earth which was carried in on a flat piece of cardboard and deposited right next to a wall in one of the carpeted rooms. As soon as the snipe came to this earth in its patrol along the walls, it would begin to feed by thrusting its long bill with sensitive expansible tip straight downward into the earth and drawing out the worms. Apparently the hit-and-miss method was used in locating food.

A feeding table was mounted on a long willowy pole out in the central flower bed. This bed was planted with narcissus bulbs, which still lay dormant. The saucy English sparrows, the golden-crowned sparrows, and the Nuttall's sparrows scattered the food off the table on to the ground, and the more timid birds learned to come there for the seeds long before they dared to venture on the table.

Early one spring morning in 1920, it must have been about seven o'clock, a robin was busy on the feeding table when a large rat ran out from under a shed to feed on the crumbs scattered below. In an instant the robin was down on the ground and chasing that rat around and around the feed table at such speed that it was not possible to distinguish anything beyond a blur of motion.

Celebrating George Wright: A Retrospective on the 20th Anniversary of the GWS

After a few seconds of this, the rat
darted off at a tangent headed for the
shed, in complete rout.

That fall the boy who had been
born in the old house moved away,
and with him went the secret of the
magic window.

*Reprinted, with permission, from The Gull, journal of the Audubon Society of
the Pacific (San Francisco, California), Vol. 16, No. 7, July 1934.*



Constantine J. Dillon

Mosquitoes and Public Health: Protecting a Resource in the Face of Public Fear

Mosquitoes and Fire Island. The two are synonymous for the millions of visitors who come to Fire Island National Seashore every year, for the 30,000 people who live within the park, and for the additional hundreds of thousands who live within five miles of the island. When the mosquito-borne West Nile Virus (WNV) arrived in the New York area in 1999, mosquitoes became the object of a whole new sense of danger and fear to the public. The response of the National Park Service (NPS) and Fire Island National Seashore became a critical element in protecting the extensive bay marshes and wetlands in the national seashore while responding to public health concerns.

A History of Conflict

Fire Island National Seashore was established in 1964 “for the purpose of conserving and preserving for the use of future generations certain relatively unspoiled and undeveloped beaches, dunes, and other natural features within Suffolk County, New York, which possess high values to the Nation as exam-

ples of unspoiled areas of great natural beauty...” (P.L. 88-587). In that law, NPS is charged to “administer and protect the Fire Island National Seashore with the primary aim of conserving the natural resources located there.” In 1980, Congress further established within the national seashore the Otis Pike Fire



Figure 1. Part of the designated wilderness at Fire Island National Seashore.

Island High Dune Wilderness, the only wilderness in the National Park System in the northeast U.S. This gave these lands in the eastern end of the park a protection afforded by the Wilderness Act, in addition to National Park System protections. It is in this wilderness that the mosquito populations are at their highest.

Fire Island National Seashore encompasses 26 miles of a 32-mile-long island. The park also includes more than 20 smaller islands, bay waters, and the detached 612-acre William Floyd Estate. On the island and within the boundary are 17 communities that contain a summer population of some 30,000. Almost from its inception, the management of mosquitoes in the marshes has been a source of discussion and disagreement between the NPS, Suffolk County Vector Control, and Suffolk County Department of Health Services officials. A cursory investigation of correspondence dating back to 1976 between the county, local elected officials, members of Congress, national seashore staff, and Department of the Interior officials in Washington reveals that a tug of war over mosquito management policies has been the norm. Concerns over nuisance mosquitoes biting park neighbors, island residents, and visitors have been interspersed with public health concerns over the transmission of Eastern Equine Encephalitis (EEE).

In the early 1980s, NPS was be-

sieged with letters demanding action to alleviate mosquitoes. The concerns primarily focused on the east end of the national seashore where the island is closest to the mainland. The extensive marshes are hatching grounds for a variety of the more than 75 species of mosquitoes found in New York. Primary among them is *Aedes sollicitans*, a particularly voracious biter that can fly up to five miles and feeds primarily from dusk to dawn. Residents of the communities of Mastic, Mastic Beach, and Shirley, which lie across the bay from these marshes, complained that the mosquitoes from Fire Island were the source of their concerns. Though NPS is sympathetic to the nuisance of mosquitoes, it remained opposed to using pesticides to address merely a nuisance issue. In response to complaints, NPS commissioned a study of mosquito dispersion, conducted by Dr. Howard Ginsberg. The purpose of the study was to determine the range of the mosquitoes from these marshes. The Centers for Disease Control and Prevention (CDC) and the U.S. Public Health Service (USPHS), in cooperation with NPS, assessed the health risks of mosquitoes on eastern Fire Island. Based upon Dr. Ginsberg's three-year study and the CDC study, no significant risk of EEE from the mosquitoes on Fire Island was found, and it was determined that a small portion of the total mosquitoes on Fire Island make it to the mainland. This science did little to dispel public concerns.

Policies and Guidelines

It is the policy of NPS not to use pesticides to control nuisance insects. The agency's management policies state: "Native species will be allowed to function unimpeded except ... to manage a human health hazard as defined by the Centers for Disease Control or to protect against a significant threat to public safety" (Chapter 4:13). In addition, mosquito management within the Seashore is specifically addressed in the general management plan for Fire Island National Seashore, which states that "the use of insecticides, herbicides and other chemical and petroleum products as widely applied flora and fauna control methods on federally owned tidal marshes and other lands will not be allowed." Use of pesticides in the wilderness was further addressed in the 1983 wilderness management plan for the park: "[T]he routine maintenance of existing ditches and the use of chemical pesticides [including *Bacillus thuringiensis*, or Bti] as mosquito control techniques will not be permitted."

Complicating these policies is the fact that Suffolk County Vector Control operates without restriction in the communities within the national seashore. Though these communities are interspersed with federally owned lands and the waters are connected, NPS has never sought to restrict or manage the use of pesticides in these areas. The general management plan does state that "use of these substances on non-fed-

erally-owned lands within the legislated boundary of Fire Island National Seashore will be discouraged," though there is no history of action on the part of NPS to do so. The legal case *U.S. v. Moore* established the authority of NPS to control the use of pesticides on non-federal land within a legislated boundary.

New Pressures

In 1997, I arrived at Fire Island National Seashore as the new superintendent. Less than two weeks into my assignment, I received my first mosquito complaint and a summons to the office of the local member of Congress. Once again the issue of mosquitoes and threats to public health and quality of life became the focus of concerns. Suffolk County Vector Control and the Suffolk County Department of Health Services insisted that the mosquitoes from the marshes were a threat and that NPS had to allow pre-emptive use of pesticides. The county preferred to use aerial applications due to the lack of roads on Fire Island. Health concerns centered on EEE, a disease that is about 50% fatal in humans. The fact that there has never been a human case of EEE in the county did not dissuade fears. It is understandable that the public would be concerned about this dangerous disease.

Biologically, it is a remote possibility for salt marsh mosquitoes to transmit EEE to humans. EEE originates in birds and is transferred primarily among birds by freshwater



Figure 2. Bog at Fire Island National Seashore.

species of mosquitoes. Mosquitoes on the eastern end of Fire Island are salt marsh mosquitoes, *Aedes sollicitans*. The types of freshwater swamps that typically produce EEE infections do not exist on the eastern end of Fire Island National Seashore.

The difficulty in helping the public to assess its health risks and their relationship to mosquitoes is that the means of transmission and the infection rate of mosquito-borne disease—whether EEE or WNV—are not easily explained. For example, salt marsh mosquitoes are capable of transferring EEE and WNV to people, but only under two scenarios:

1. An infected freshwater mosquito bites an uninfected bird in a freshwater habitat. This bird, now infected, flies to the national seashore's salt marshes, where spraying is not allowed. There, a previously uninfected salt marsh mosquito bites the infected bird. That mosquito is now infected. It must then bite a person for him or her to get EEE or WNV.
2. An uninfected salt marsh mosquito flies from the wilderness to the mainland. There, it bites an infected bird and acquires the EEE or WNV virus. This infected mosquito must then bite a person to pass on the virus.

Note, however, that in both cases not all mosquitoes that bite an infected bird actually acquire the disease.

These chains of events and their likelihood are lost on a general population that only knows that

mosquitoes are biting them, they don't like it, and they may get a deadly disease. In the summer of 1997, there was a series of meetings and discussions between NPS, the county, and the office of the local member of Congress. Newspaper articles and editorials blamed NPS for risking public health at the expense of protecting mosquitoes. Attempting to explain NPS policy on managing mosquitoes or the added responsibilities of a wilderness area were lost in the overwhelming anger over what was perceived as a cavalier attitude towards human health. This was culminated by Congressman Michael Forbes introducing language in the House Appropriations Committee calling on the operating budget of Fire Island National Seashore to be cut by 50% if the park did not take action to control mosquitoes in the wilderness. The language did not pass, but it was an indication of the depth of frustration among the public.

A New Course of Action

It was clear from the public and political attitudes that NPS could not continue to rely upon denials of culpability or explanations of the low risk of disease as support for its position. Nor could education alone dispel fears. Therefore, a new tactic was warranted. In 1997, we decided that NPS had to demonstrate its concerns for public health and take a preventative position to both preserve the marsh ecosystem and respond to public fears.

Working with Dr. Ginsberg, now with the U.S. Geological Survey's (USGS's) Patuxent Wildlife Research Center, the CDC, NPS's Integrated Pest Management Office in Washington, USPHS, and Suffolk County Vector Control, NPS developed a mosquito monitoring and testing program for the national seashore. The program was written and reviewed in the fall and winter of 1997-1998.

A Coordinated Program

The program, initiated in the spring of 1998, was a multi-pronged approach designed to address the three major concerns: public safety, public education, and resource protection. The elements of the program are as follows.

- We restored the marsh at the William Floyd Estate. This consisted of plugging the "mosquito ditches" that were commonly built in the Northeast until the 1960s in order to restore a more natural open-water marsh. Studies in other areas have shown this kind of restoration restores fisheries and bird habitat—and reduces mosquitoes. The project was completed in the fall of 1999 with the cooperation of the U.S. Fish and Wildlife Service, Ducks Unlimited, Suffolk County Vector Control, the New York State Department of Environmental Conservation, and USGS.
- We initiated a public education program through the production of a brochure entitled "Mosqui-

toes and You" that has been distributed widely. The brochure addresses the life cycle of mosquitoes, health risks, and personal disease-prevention techniques. It also contains tips to reduce the nuisance element of mosquitoes.

- Park staff, including the superintendent and deputy superintendent, conducted a series of public meetings on the island and in nearby communities presenting the new program and answering questions about mosquitoes.
- We have produced letters, a question-and-answer sheet, and news releases explaining both our management policies and our concerns for the protection of both public health and resource health by minimizing the use of pesticides.
- We created a page on the park's Web site devoted to mosquito information.
- We adopted an accelerated step-by-step response in the event EEE is discovered in mosquitoes on Fire Island or nearby communities. This procedure includes the use of pesticides on the mosquitoes should a disease risk materialize.
- We hired a seasonal biologist each year for the past three years to implement the monitoring program.
- With the arrival of WNV in 1999, we expanded the monitoring area to include NPS lands

along the entire length of the island.

The Monitoring Plan

The monitoring and response protocol is the heart of the program. This is a testing program coupled with a graduated escalation of response based upon results. Testing is done by the same laboratory as all county samples in order to coordinate findings with Suffolk County Vector Control and ensure that the state and county public health officials receive first notice of any positive hits for disease.

An essential part of the program is integration with the county and state mosquito management programs and reassurance to the local agencies, elected officials, and the public that NPS is paying attention to the issue, has public health as its foremost concern, and is actively involved.

The presence of WNV in or near the park, or of EEE in the park, or extraordinarily persistent or high levels of EEE infection in mosquitoes near the park, could trigger NPS interventions if conditions are such that (1) the conditions strongly suggest a disease risk to humans, (2) the risk of disease transmission would be substantially lowered by the intervention, and (3) mosquito management within the national seashore is superior to other approaches available to manage disease risk.

Interventions can include closing portions of the park to the public, the use of mosquito management meth-

ods such as applications of Bti to prevent emergences, or adulticide applications to areas with high levels of adults of *Culex* spp. or of *Aedes sollicitans*. The final decision on all management interventions within the park or the William Floyd Estate are made by the superintendent in accordance with NPS management policies.

Four levels of action, described below, are used: (1) routine surveillance, (2) intensified surveillance, (3) public notification, and (4) mosquito management. Critical to the program is the surveillance done in the summer months. Guidelines are presented for criteria, based on surveillance data, that would result in a move to the next higher level of surveillance and management. Arrangements for pesticide applications (to be applied if necessary, according to the protocol) are in place by the end of June, with approvals completed at that time. These arrangements include permit approval, arranging for applicators, etc. Decisions on movement to higher action levels are made by NPS staff in consultation with appropriate experts.

Level 1: Routine surveillance.

This consists of passive surveillance for dead birds as well as mosquito monitoring using CDC miniature light traps baited with carbon dioxide, and gravid traps. Traps are set once each week, July through September. Passive surveillance for dead birds includes alerting park rangers and resource management staff to be on the lookout for them. Dead birds

are collected using appropriate protocols and sent for EEE and WNV testing. Substantial mosquito trap catches results in a move to Level 2.

Level 2: Intensified surveillance. This includes continued surveillance for dead birds, as well as monitoring of adult mosquitoes using traps as described in Level 1. In addition, mosquitoes are tested for WNV and EEE virus, and densities of larval mosquitoes are monitored. The national seashore begins the season at Level 2 due to the high expectation of virus in the New York area. Evidence from larval samples of a potential emergence of adult mosquitoes results in a move to Level 3.

Level 3: Public notification. NPS notifies Suffolk County Vector Control of the results of the surveillance program. In case of detection of WNV or EEE, visitors to the park are also notified about mosquito densities, possibility of infection, and self-protection methods to minimize the number of mosquito bites. Arrangements are finalized for pesticide application in case conditions warrant such intervention (coordinated with Suffolk County Vector Control). Consultation is initiated between the park and Suffolk County Vector Control, New York State Health Department, CDC, U.S. Department of the Interior, and experts from universities or other institutions to guide the park superintendent on potential courses of action.

Level 4: Mosquito management. This is the highest step and the only one under which NPS actu-

ally manages mosquitoes. The approach to mosquito management will depend on the nature of the disease risk, as projected from the surveillance data. EEE activity must be detected by cell culture, or by another suitably rigorous technique approved by national seashore staff, before mosquito management is initiated in the park. Detection methods for WNV are based on CDC recommendations and approved by national seashore staff. Specific actions to be taken are described in the plan, according to epidemic factor and the type of disease present.

Actions could include aerial application of adulticide (such as resmethrin, malathion, or another material approved by NPS) to park lands. Any pesticide would be applied to the site of viral identification and to the barrier island for approximately five miles in both directions from the identification site(s), stopping at appropriate natural borders. Multiple viral isolations could result in more extensive adulticide application, determined by the consultation process, and based on specifics of viral spread.

Results

The summer of 2000 marks the third full year of the program. Results have been positive and encouraging. Tens of thousands of mosquitoes have been collected and tested from throughout the national seashore. When WNV broke out in late summer 1999, NPS was cited as an example of a proactive example of

responsible public health management. In anticipation of the 2000 season, the national seashore coordinated a meeting with Gateway National Recreation Area and Sagamore Hill National Historic Site to assist them in beginning mosquito programs and developing a coordinated NPS response that would be consistent throughout the New York area. Despite the recurrence of WNV in 2000, the national seashore has not been the subject of a single editorial or congressional meeting. In fact, residents and community leaders on Fire Island are now in the habit of calling NPS for reference and information. The credibility of NPS has increased to the point where we are now considered a reliable source of factual information.

Conclusions

WNV is spreading throughout the USA. This year it has been found in New England, and parks there are responding. Few experts deny that we are bound to see other new viruses arise in North America transmitted from around the globe. In order for parks to protect their resources and ensure public safety, the experience here at Fire Island National Seashore can lend some guidance:

- It must be continually reinforced to the public that their safety is a paramount concern.
- We must be sympathetic to the nuisance issue and help the public respond.
- Good science is essential if in-

formation coming from the park is to be credible.

- Having a plan in place before it is needed is the best means of protecting resources against unwarranted damage.
- Working partners that the public considers to be credible and respected, such as CDC and local agencies, gives NPS credibility in its actions.
- Public information is essential. Managers of the affected area must be approachable, available, and knowledgeable on the issues. This cannot be relegated to lower-level staff alone. To maintain credibility with the public, the park manager must be seen as visible and aware of the issue and responsive to public concerns.
- All park employees must participate in the planning and execution of the program so that they are not only ready with information for the public, but that their own concerns for the safety of themselves and their families are addressed.

Our experiences in dealing with mosquitoes at Fire Island National Seashore have demonstrated that the way to protect natural resources and public health is to target efforts carefully and specifically. Identifying the specific issue or threat, addressing that issue, and focusing on its solution go a long way toward eliminating the unwanted side effects and unneeded actions that can damage critical resources and, possibly, public health. Credible science coupled

with demonstrable management reactionary responses that, in the
measures and public information can long run, are not in the best interests
enable NPS to withstand and counter of either people or resources.

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William E. Brown

Ah! Wilderness

As the National Park Service in Alaska lauches into a new generation of ANILCA-mandated wilderness studies—to replace the shelved minimalist ones of the Hodel-Horn era—I thought it might be useful to discuss the concept of wilderness again, as one human construct among many others.

As prelude, I wish to dispose of the abstruse arguments currently fashionable that Wilderness, as concept (and as counterpoint to Homeland), lacks philosophical and logical validity. For human beings have always ordered and explained the universe by using such abstractions. Ancient myths incorporate them, as do modern scientific syntheses. These abstractions are ultimately qualitative, but they start with quantitative and functional elements—which give rise to cohering ideas. These ideas, these abstractions are good or bad, productive or unproductive, depending on one's value system and point of view, which constantly evolve to meet changing social and cultural needs.

Example: The driving force of the 19th and part of the 20th centuries was Progress. Development and Industry were its watchwords. But too much of a good thing! So people started talking about Conservation, which would, for example, reform industrial practices in national forests and save parts of America in national parks. As our population and its demands increased, so did the scope and intensity of Development and

Industry, along with a newcomer, industrial-scale Tourism. The compromises of old-style Conservation could not contain these increases. So national policy shifted selectively to Preservation—of which Wilderness, as a land-use option, is a subset. Stunning mind-set changes marked this evolution. For example, in the Rocky Mountain states, new values tied to major demographic shifts (including flight from ruined urban settings) transformed the old Development vs. Preservation debate into Old West vs. New West—implying dedication of a whole region to a higher use than the destructive extractive economy of the past.

In this light, Wilderness is an evolved, functional element of a larger conservation movement that began in the 19th century. The national parks branch of the movement created a national aesthetics policy (as distinct from the utilitarian policy, only recently modified, that governed national forests). After World War II, increasing populations and matching industrial responses set the scene for the Environmental Movement.

This movement produced a

quantum leap from site-specific conservation to a systemic, ecological approach. Evolving biological and geophysical understandings soon showed that political boundaries sheltered no part of the world from growing concerns over environmental health, biological diversity, climate change, and a host of other natural-system alterations. Now Wilderness has transformed from solely aesthetic value to a higher social utility: these remote and restricted-use places host both Call of the Wild aesthetics and scientific studies in the last relatively untrammelled natural-system baselines left on Earth.

Wilderness, in this progression, became the cohering construct that allows us—as a society, as a species—to draw the line and say: “Thus far, no farther!” It gives us a way to say: “Hey! The world is limited, we must not consume it all.”

Thus, Wilderness—as ideal—is a driving force for reform in a world much overused by the world’s dominant species. Wilderness—as land designation—gives point and substance to that ideal, which comprehends a growing spectrum of older and new values: aesthetic, conservation, spiritual, adventure, discovery, physical and mental health, inspirational, ecological, and so on.

Nor is Wilderness, as some assert, solely a national romance with the Edenic legends and explorations of the Old West. In the Western tradition the lure reaches back to the desert retreats of biblical prophets and the Homeric journeys of ancient

Greeks. All of us, from whatever culture, share antecedents of vision quest and walkabout, meditation and spiritual renewal in remote, undistracted places. All of us still need such places, especially modern people whose electronically interlinked lives define distraction.

* * *

A great deal of current discourse on these matters—both in Alaska and elsewhere—pits Wilderness against Homeland. Lacking the buffered cultural boundaries of earlier times, when people were few and spaces were large, national parks and other conservation units overlap and overlay Homeland.

Fortunately, ANILCA values ongoing indigenous and historical lifeways as nationally significant parts of our national heritage. As well, it provides the means through Title VIII and other provisions to respect and help perpetuate these lifeways by:

- Protecting and preserving the land base and wildlife habitat;
- Providing cultural choices for those local rural Native and non-Native people who want to pursue living-off-the-land lifeways in the new parks and park additions established by ANILCA; and
- Allowing reasonable access for hunting, fishing, and trapping in those parts of the new parks and new additions where comparable customary and traditional uses have occurred.

* * *

Yet the Wilderness versus

Homeland argument persists. The bass-drum beat in this argument asserts that Wilderness represents a modern intrusion of a frivolous sort that threatens the very existence of homelands and the cultures shaped and nurtured by them. The argument centers on indigenous people, with thousands of years of experience in these special places. Conclusion: Wilderness and Homeland are mutually exclusive, both intellectually and in terms of shared use and activity.

This argument, it must be said, carries much plausibility. For Homeland and all it implies is, indeed, very serious.

I have had the opportunity to work with homeland people both in the old NPS Southwest Region and in Alaska. In particular, I learned much from the people of Nuiqueut, an Inupiat village near the mouth of the Nechelik Channel of the Coleville River, which flows into the Arctic Ocean. My task was to translate from their conceptual world their concerns over their homeland environment, their cultural landscape. The resulting Nuiqueut heritage cultural plan was designed to minimize threats to their hunting and fishing way of life by protecting their homeland from feared destructive oil development in the then newly established National Petroleum Reserve. (That was more than 20 years ago, but the plan is still around and the threat has gathered new steam.)

In the plan, I wrote down—for that other world Outside—the ideas

about Homeland that these Nuiqueut people had expressed to me. This was the translation that they finally agreed to, as a close approximation of their ideas:

The cultural landscape of Nuiqueut is occupied by a heritage community that perpetuates Inupiat culture by harvesting the wild resources of land and sea, by preserving places and ideals of value, and by transmitting this heritage to future generations. It is a place that cannot be truly owned by any transient human group nor consumed for any ephemeral human purpose, for it must be passed on intact. It is a cosmos that unites time and space, people and nature, resources and values. This place cannot be understood in simple economic or physical resource terms. Such tools of understanding are too primitive. Yet those from afar who have plans to alter this landscape are using such primitive tools, as did their predecessors.

Now, who among the readers of these compelling words—this approximation of the grand ideal of Homeland—can remain unmoved? And who does not see a convergence of the most enlightened of modern and ancient ideals, of Wilderness and Homeland?

Raymond Dasmann, an inspirational environmental conservationist, provided a basis for this convergence, which became a shaping theme of the philosophical debates leading to Title VIII in ANILCA, in a 1976 article entitled “National Parks, Nature Conservation, and ‘Future Primitive’” (*The Ecologist* 6:5, 164-67). He believed that “biospheric” (modern) people and “eco-

system” (indigenous) people must learn to live together, to share and conserve natural landscapes, to mutually respect each others’ distinct ways of life, and to find common ideals—no matter how diverse our lifestyles—that equally sanctify and protect those special cultural landscapes we share. Among his urgent concerns, Dasmann feared the loss of the deep knowledge and science of place that only ecosystem people have carried forward from our anciently shared origins and experience. Nor was this concern simple nostalgia. Dasmann firmly believed that modern people must reconnect with the living, supporting world to survive. Traditional ecosystem people are the last survivors amongst us who can teach the living connections and perspectives that would make us all, once again, part of the web of life.

Two observations:

1. Both modern and indigenous people share a need for sanctified and protected places. After all, we all descended from hunter-gatherer ancestors. The split between modern and surviving indigenous people occurred only moments ago on the human timeline. Compare that brief separation to the millions of years and thousands of generations when we all lived essentially the same way, varied only by local adaptations. So, not so long ago we all passed through landscapes animated by spirits and marked by shrines and numberless associations. Those of us moderns who have had some tutoring from elders

on the land have felt the stirrings, in gene and soul, of that ancient, timeless present we once shared—and, which, for mutual benefit we should share again.

2. More immediately, the plain fact is we must learn to share these overlapping Wilderness-Homeland sanctuaries. For the Earth presently trembles from the surging demands placed upon it. If biospheric people come to see no value except physical-resource economics in the remote places where ecosystem people live, these places and the cultures dependent upon them will be destroyed. Look around the world for confirmation of this tragic trend. And there is another side to that coin, the displaced people side. Again, look around the world, say to Africa, where desperate displaced people fight small wars with game-park wardens to kill elephants for ivory, which can be sold to avert starvation. Dasmann shows us both sides, and in doing so states our mutual interests:

National parks must not serve as a means for displacing the members of traditional societies who have always cared for the land and its biota. Nor can national parks survive as islands surrounded by hostile people who have lost the land that was once their home.

It boils down to this: preservation of indigenous cultural landscapes is prerequisite to perpetuation of indigenous cultures. National parks and their designated wilderness lands form a very large part of Alaska’s homelands that are safely in

the bank. It was this prospect that created the so-called Unholy Alliance between preservationists and Alaska Natives during the nine years of struggle that eventuated in ANILCA. In essence, Native people accepted a tradeoff. I have heard it stated by Native friends something like this: "We knew we would have trouble with you guys, with regulations and such, once the law was passed. But saving the land itself—the places where we live and hunt and fish—was the most important thing. If the land is wiped out there's nothing left. We figured that we could somehow work out the details so we could continue to live off the land."

* * *

So here we are. It's the year 2000, the beginning of a new millennium, the 20th anniversary of ANILCA. The law is on the books. The parks and monuments and preserves are here to stay. And so is Title VIII, Subsistence, with its living-off-the-land provisions. These are givens.

Where do we go from here?

One of the places we go is to new studies that could result in additional designations of wilderness. This will cause political apoplexy in some circles. We will need allies to get new wilderness recommendations through a Congress presently dominated by resource politics—especially in Alaska. Think of the Arctic National Wildlife Refuge and the Tongass National Forest.

In the long view, both preservation and customary-and-traditional

lifeways benefit from wilderness designation. It is another layer of legal protection for both Wilderness and Homeland in a world that trends evermore to the short view of resource politics.

But it's not just resource politics that complicate this issue. The old Unholy Alliance must be reconstituted for this second round of wilderness recommendations. But the erstwhile allies have fallen out of sorts.

The National Park Service's management of Title VIII has had successes, in the Northwest Areas under Mack Shaver, at Gates of the Arctic with the land exchange, and elsewhere. And since the superintendents' revolt in 1995 much progress has been made generally: in strengthening the involvement of Regional Subsistence Councils, so that they become co-managers in guarding their own subsistence landscapes; in reviving the on-going, locally adaptive, negotiated process approach, rather than the hard-set, wrapped-in-a-box regulatory approach; and in supportive and steady village contacts. This quiet work has allowed mutual self-interest to develop, for example, in ORV limitations—which in the long view benefit subsisters as much as park management.

There are still many problems, a lot of them caused by the NPS-culture syndrome, which plays out all over again whenever new folks join the ranks in Alaska to face ANILCA's mandated social and operational practices. In-depth

training—as we did years ago—could avert much of this culture shock, and must be uniformly required for all new personnel. Ten years of trust can be wiped out by one ignorant motor-mouth the first day on-site—whether a regional director, superintendent, or clerk.

But basically, as far as I know, the old tradeoff still holds over most of the region, despite abrasive issues and contretemps. (The Alaska Legislature's intransigence over rural preference surely contributes to this.) I believe this judgment is truer of Native subsisters than of non-Native ones. Think of Glennallen.

The conservation community, united during the ANILCA struggle as the Alaska Coalition, is more problematic. It would help to get together with people like Celia Hunter and Chip Dennerlein—old Alaska hands—and, working with them, do some missionary work among the more zealous crusaders. There should be some strategy meetings that bring key people together. For some consensus must be reached before this presently disparate and critically necessary constituency can play a constructive role at the essential national level. Ricochet shots during congressional hearings would first alienate the subsistence constituency, then kill the wilderness-proposal package.

* * *

Meanwhile, we need to reinforce the day-to-day alliance between the NPS and the traditional people

whose special privilege in the Alaska parklands resulted from a right and generous impulse of our nation. We have to see ourselves and our friends as parts of a larger, bioregional mosaic who happens to share, in part, the same geography. Without these friends we would be more exposed to political attack and incremental erosion of the integrity of the parklands in our trust. We have to ensure that they see that that integrity, under the sanctions of law, preserves their homeland and, thus, their traditional cultural options.

Working together we can, with sensitivity and trust, help each other to curb high-tech recreation and industrial-scale tourism. For these things, unleashed, damage to biological health and integrity of both park and homeland.

We have to be sensitive, as well, to the preservation of cultural privacy, so that ignorant or exploitative tour operators do not turn functioning villages and fishing and hunting camps into live dioramas and curiosities for the titillation of tourists. Guides and tour directors operate under our permit; we, with suggestions from our friends, must limit such intrusions.

Park and homeland occupy different planes and dimensions overlapping the same spaces. But we are not talking about cohabitation. Rather, the goal is a trustful, respectful cultural distancing, which yet brings us together for a mutual benefit, however different our purposes. The common ground is indeed the

ground itself—a healthy, productive park landscape; a healthy, productive cultural landscape. These are two distinct perspectives and realities, though sustained by the same source.

* * *

Finally, an anecdote from my history of the central Brooks Range—Gates of the Arctic region, *Gaunt Beauty ... Tenuous Life*(1988).

In September 1930, after a summer trek up the North Fork of the Koyukuk River almost to the Brooks Range divide, Bob Marshall wrote a letter to his family describing the trip:

[It was] ... an explorer's heaven, the sort of thing a person of adventure-some disposition might dream about for a lifetime without ever realizing.... I realized that though the field for geographical exploration was giving out, the realm of mental exploration—aesthetic, philosophical, scientific—was limitless. Nevertheless, I still maintained a suppressed yearning for geographical discovery which I never seriously hoped to realize. And then I found myself here, at the very headwaters of the mightiest river of the north, at a place where only three other human beings aside from myself had ever been and with dozens of never visited valleys, hundreds of unscaled summits still as virgin as during their Paleozoic creation.

As far as Bob Marshall knew or could know, this was a fresh world—unvisited, virgin. The facts are that the upper Koyukuk was a natural travel route and hunting area that had been used by Native Americans for millennia. Archeological investigations in 1985 found scores of historic and prehistoric sites in these

upper drainages. Scientific dating and artifact morphology give strong evidence of at least 6,000 years of human presence, and more recent discoveries point to several millennia more.

Since the early dispersions of humankind, geographical exploration has been a generational thing, a renewable resource in the world's wildlands where forgotten histories left few reminders. When Marshall spoke of preserving wilderness for its human values, this was part of what he meant. In wilderness, certain psychological processes would be revitalized—among them the sense of discovering an Earth fresh and whole. That he had unwittingly partaken of his prescription for others—experienced the discoverer's exaltation where many had trod before—is fine irony and validation of his prescription.

Anthropologist Richard Nelson drew a beautifully complementing conclusion to Marshall's experience, in a 1977 study of the subsistence way of life in what were then the proposed Alaska parklands:

The areas proposed for new parks remain in an essentially pristine condition, with healthy populations of wildlife and virtually unaltered floral communities. Except for scattered cabins and threading trails, subsistence users have left the landscape practically free of visible human impact. Thus several thousand years of continuous subsistence use has left us with environments worthy of preservation as the most wild and beautiful in our nation.

I ask this one question: With proper dedication to the principles

and prescriptions of Wilderness and Homeland, why shouldn't these two distinct yet complementing worlds of perspective and experience—both of them beautiful and necessary in our rapidly diminishing world—reach mutually supporting harmony?

If Homeland people follow their own ancient precepts of sufficiency, and if the seekers of Wilderness truly preserve rather than overrun it—both, in other words, rigorously

applying their stated value systems—there is no reason why harmony and perpetuation should not be achieved.

And practically we need each other. For in combination the two value systems strengthen the common necessity: perpetuation of the common land base. The trendlines and headlines of the modern world proclaim every day how vulnerable that land base is.

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