



U.S. Fish & Wildlife Service

National Conservation Training Center

Conservation History

Fall 2008

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Conservation History

**Fall 2008
Volume 1, Number 1**

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Preface

The longer you can look back, the farther you can look forward.

Winston Churchill, The Royal College of Physicians, March 2, 1944.

Welcome to the first edition of *Conservation History*. This journal is dedicated to sharing America's complex and fascinating history of wildlife conservation with the American public. Many (but not all) of these stories are presented in the unique voices of conservationists on the front lines, those men and women working on refuges and other habitats in an effort to preserve our precious wildlife legacy. In fact, it is the desire for *preservation* that joins conservation biology to *Conservation History*. Just as we have, after much trial and error, come to recognize the importance of preserving the full panoply of species diversity, so to we seek to preserve that history in all its first person narrative richness. So please enjoy this small slice of our rich wildlife history and come join us on this ongoing journey to conserve both our cultural and our natural history.

Cheers,
Mark Madison
FWS Historian
Editor, *Conservation History*

Join Us in Capturing the History Through Our Voices

Within the far-flung and wonderfully diverse community that is the U.S. Fish and Wildlife Service there are folks who have done just about everything one can imagine, from crime investigations to collecting turtle eggs, from family isolation at remote stations to urban research in our biggest cities.

But what of their personal stories, what of the details of their experiences, their passion for the work, the results they achieved? And the disappointments?

While the Service has collected a wide variety of physical and historic artifacts through its Heritage Programs, not much has been done with the written word. Researchers have kept personal diaries; family members have as well. But, apart from their being important reminiscences, they languish in drawers not to be seen again. The Service has missed out on that.

We know that there are lots of manuscripts out there. So we are creating a forum to present those stories so they can be shared with everyone. I think we can learn a lot from those stories and most of all what it is that connects us all to the same goals—personal or professional.

So we are launching a new publication where we can collect those stories and preserve them, but most of all to share them. We have the *Fish and Wildlife News* and the *Retiree's Newsletter*, but this will be different, more personal, and not strictly limited to the experiences of our retirees.

The success of this project depends on you joining us. It doesn't take much...just put your feelings, observations, adventures, friendships into words. A typical story will be about 1000 words—more or less-- and can be submitted as a typescript, as an Email, as a floppy disk or CD. It can include photos as well, in fact they are encouraged.

Right now we see this as a once a year publication, but its frequency really depends on how much are able to gather. If we get a lot, we might do more than one. But for now it's schedule for once a year."

In the end, these stories are by you, about you, and for all of us."

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Rachel Carson: Nature's Bureaucrat



FWS Illustrator Bob Hines and Rachel Carson studying the oceans.

Rachel Carson (1907-1964) is best remembered for her pioneering indictment of pesticides, *Silent Spring* (1962), which began the modern environmental movement. Rachel Carson's sixteen years with the U.S. Fish and Wildlife Service are now largely forgotten. This is unfortunate because many of Carson's ideas and writing skills originated while working for the nation's only federal wildlife conservation agency.

Carson had not intended to work for the government, but her hopes of an academic career were derailed by the Great Depression. Faced with supporting a family and armed with a Masters in Zoology from Johns Hopkins University, she sought a position with the Bureau of Fisheries the nation's oldest conservation agency. In 1936 she was hired by the Bureau at the minuscule, but stable, salary of \$19.25 a week. She was the first female biologist hired by the Bureau and one

of only two women in a non-clerical position. Although she held a Masters in Zoology, mores of the day precluded her from traveling on marine research vessels and pursuing field studies. She was assigned to write radio scripts explaining marine biology and the work of the Bureau of Fisheries to the American public. Her aptitude for writing blossomed in this position and some of her more ambitious scripts were adapted for popular magazines of the day like *Atlantic Monthly*.

Carson's ability to make the life of the sea come alive for the American public was evident in her first published book *Under the Sea Wind* (1941). The book was anthropomorphic albeit engaging in its clear-headed explanations of life in the sea. Unfortunately it was a commercial flop and Carson remained a writer-biologist for the U.S. Fish and Wildlife Service, the new entity created in 1940 by combining the Bureau of Fisheries with

the Biological Survey. Within this new agency, responsible for conservation of all creatures on land and sea, Carson rose quickly. Her writing and editing skills allowed her to become Chief Editor of all publications by 1949, an important position as the Service attempted to explain wildlife conservation for the first time to the broader American public. As part of this effort Carson was put in charge of an ambitious series called "Conservation In Action"--an attempt to explain the work of the Service through extensive photos, clear text, and an overarching theme of protecting the environment to maintain our wildlife resources for posterity. It was the type of lucid explanation of complex ecological principles (e.g., environmental destruction, food chains, migratory bird flyways) that was to become a hallmark of her books.

In addition to being the public relations arm of American conservation, Carson was also suddenly exposed to cutting edge science including troubling new findings on environmental contaminants. The Fish and Wildlife Service's premiere laboratory in Patuxent, MD had begun to study the effects of pesticides like DDT on certain wildlife, primarily birds and their eggs. This research had begun early in 1944 shortly after DDT came into widespread use as a chemical to win the World War II. As Chief Editor, Carson oversaw all the scientific publications emanating from this new research and as early as 1945 began considering the topic as a source of an article or book. However, she was already at work on her second more successful book *The Sea Around Us* (1951). This second book was a bestseller and allowed Carson to leave the "lucrative" field of government service and devote herself full time to writing. Yet the germ of an idea had already been laid and ten years after she left the Service in 1952 Carson would write a pioneering book ushering in the modern environmental movement, *Silent Spring*. Amidst *Silent Spring's* voluminous endnotes are references to her scientist colleagues at Patuxent and refuge managers in places Carson had profiled for her "Conservation In Action" series. The skills Carson had developed in her sixteen years as government writer allowed her to take a complex scientific argument and make a compelling case to the general public in the chemical indictment that was *Silent Spring*.

Carson's *Silent Spring* was quickly attacked by agrichemical interests often along gender lines. Carson was derided as being "hysterical," a "spinster", and "unscientific." Her success with and, eventual, acceptance by government biologists helped her withstand these baseless attacks. She had shown in her books and work with the Fish and Wildlife Service that she could edit, write, and explore science more lucidly and credibly than most.

Although Carson was always a writer and only occasionally a federal conservationist, all of her work benefited from this important early initiation into public writing, wildlife conservation, and environmental contaminants. Carson gently led her audience through the complexities of food chains, contaminants, interconnectedness of natural systems, and a balance of nature in all her federal and popular writings. Her legacy can be found in the Environmental Protection Agency, the Fish and Wildlife Service's Division of Environmental Contaminants, the Endangered Species Act, and in a more knowledgeable American public concerned about the status of their local environment. Perhaps her final legacy is one of civil servant's mobilized for conservation. There may be no better role model for federal conservationists than Rachel Carson. Not only did she overcome significant obstacles facing women in science, but she became our century's most articulate voice for a harmonious balance between humans and nature. Carson's life and legacy are an inspiration to public servants who seek to protect our natural resources in perpetuity and a stinging rebuke to those who would diminish and degrade our children's natural inheritance. She outlined a path for all of us to conduct our work with integrity and ethics and to devote our lives to conservation in action. Mark Madison is the Historian for the U.S. Fish and Wildlife Service. The National Conservation Training Center hosted a Rachel Carson Conference in August 2001. For a copy of those Proceedings please contact Mark Madison (Mark_Madison@fws.gov or 304 876-7276).

An Excerpt from Ira Gabrielson's unpublished autobiography:



Ira Gabrielson and Ding Darling.

Note: Ira Gabrielson was Director of the Fish and Wildlife Service from 1935-1946. The following excerpt describes how he was appointed Chief of the Biological Survey by Jay "Ding" Darling. The full autobiography is currently being edited for publication at the NCTC Archives/Museum.

On October 31 at 11:30 a.m. Biological Survey Chief Jay "Ding" Darling called and asked me to come to his office. It was a hot and very muggy day and I was working in my shirt sleeves. Darling met me in the hall and said, "Go get your coat, we're due in the Secretary's office in 15 minutes." Usually he would inform me as to what the

discussion would be whenever we went to see the Secretary and it was a routine practice for him to take me whenever there was a western problem involved. However, nothing was said about this conference and he asked about Clara, the children, my health, and other things. Finally I asked him point blank, "Ding, what's the row about this time?" He replied "There is no row, we're just making some changes in the executive head of the Survey and you are it." I couldn't say anything, just leaned up against the wall and looked at him. He went on to explain as we walked down the hall that he had called me from the Mayo Clinic, where

the doctors had told him to quit carrying the lead he was responsible for. I have always been sure that Darling was trying to march me into the Secretary's office without my knowing what was coming ahead, and he certainly would have succeeded except for my direct question.

Secretary of Agriculture Henry Wallace was exceedingly kind and so was everyone else and when we approached him he said, "Congratulations on your new job and what are your policies going to be?" My reply was that I didn't know and had not known about the appointment until just outside his door. He laughed and said, "Well, I don't know anything about this wildlife business, but Ding said you do so you take it and run it and if I can be of any help, you come to me."

Letters from My (Only) Neighbor: Early Days of Fish Springs National Wildlife Refuge



Lee Marlett at Fish Springs NWR, Utah.

Attached are Lynn and Judy's letters.

February 18, 1961

Mr. LeMoyne Marlatt
Fort Collins, Colorado.

Dear Mr. Marlatt:

It was with considerable pleasure that my wife and I learned of your imminent appointment to this station. After much more than a year of neighbor-less living at this remote station, it will be extremely pleasant to have someone else on the refuge with us. I'll try to answer the questions posed in your recent letter, as well as fill you in on some of the details of the refuge and our activities here. Your first living accommodations will be somewhat less than luxurious, though you will be imposed upon for only a short time. The residences, which should be under construction by the time you arrive, will be finished and ready for occupancy by late June--we hope. The trailer you will live in the interim is twenty-four feet long, equipped with stove and refrigerator, and is at the moment undergoing a complete interior face-lifting.

There is, of course, running water, sewer, and electricity. The rent for the trailer amounts to \$4.00 biweekly, including electricity, water, and the like. The stove is LP gas, which you must purchase. Our experience indicates that the LP fuel will run about \$3.00 per month. There are gas bottles

My husband, the late LeMoyne "Lee" Marlatt, was a FWS refuge manager for thirty two years. His first assignment was at the newly created Fish Springs Refuge in western Utah, where he would fill the new position of assistant manager. He arrived for duty on April 1, 1961. Lynn Greenwalt was the refuge manager and he and his wife, Judy, wrote letters introducing us to our new home. (Lynn later went on to become the director of the Fish and Wildlife Service from 1974 to 1981.) For those of you that aren't familiar with Fish Springs, it was, and still is, one of the most isolated wildlife refuges in the lower 48. These letters give personal insight into life on this remote and very special place before full time electricity and permanent housing. (Fish Springs was established as a wildlife refuge in 1959 but it would be several years before facilities were completed.)

here. We may encounter some confusion with the refrigerator, since yours is electric and we operate the generator only part-time. The refrigerator in the trailer I use is gas, so in the past we have shared it with the occupant of the trailer you will use. This is a problem that can be ironed out easily, however. No furnishings other than cooking utensils, linens and other personal items will be necessary to make the trailers livable. Your trailer was originally intended for use by visiting firemen, engineers and other bachelor types, so has been equipped with a set of bunks and a divan that converts into a double bed. You will, of course, be at liberty to rearrange things to suit yourselves.

As for clothing, I would suggest your purchasing only field-type gear at this time. The Fish and Wildlife Service is on the verge of adopting a uniform, for which an annual allowance will be made. I'm told that this will take effect sometime after July. A sturdy pair of boots is in order, too. Incidentally, if you'll let me know your boot size I'll see to it that we have some waders on hand that will fit you, since a part of your work will involve sloshing around in the marsh.

I heartily recommend your arriving two or three days in advance of your reporting date so that you can get situated comfortably. I'd suggest your coming down to Salt Lake City, then coming on west on Highway 40 to Tooele, Utah, then south and west to Dugway Proving Ground. When you

arrive at Dugway, ask at the main gate for the road to Fish Springs. From Dugway it's about 65 miles to the refuge. The road from Dugway to Fish Springs is sometimes in poor shape, so it might be best if I arrange to meet you at the Dugway gate. Therefore, if you can indicate to me your schedule, I shall arrange to meet you along the way. If you will stop in Salt Lake City or Tooele and telephone the Post Signal Office, Dugway, telling them when you plan to arrive at Dugway, I'll get your message by radio from Dugway and can be on deck to meet you. Since I do not monitor the radio all the time, I shall make periodic check-in calls prior to your scheduled arrival. If you should get to Dugway before I do, by all means don't wait--I'll meet you along the way.

Do not, however, try to cross the desert at night on your first trip in—if you should have trouble you might have to spend the night on the road before anybody came by. It's really not as ominous as it sounds--I just don't want you to have difficulties on your first trip into the wilds. I'm afraid I may have painted a rather bleak picture of the area and the country in general, but I can assure you that in spite of the isolation of the refuge and the inconveniences we must endure, it's a place that is both intriguing and challenging. And the inconveniences are not so overwhelming either. We have made arrangements to use the PX and Commissary facilities at Dugway, along with the recreational facilities there. We have radio contact

with the base, so in the event of any emergency we can get professional help in much shorter time than it is normally available in a city. Mail is delivered by air, usually twice a week, and the military fliers are happy to give us rides over the marsh to census ducks and the like. All in all, it's a pretty good deal.

You are being assigned to this refuge at a particularly propitious time. Fish Springs is scheduled for major development work to be done in a relatively short time. You will, then, get experience that you might never get on another refuge. There are a number of problems connected with the development and maintenance of the area; none insurmountable and all stimulating.

Your assignments will be as varied as I can make them and will increase in responsibility and complexity as you gain experience. In short, you can look forward to a tour of duty that should be extremely interesting. As you might imagine, the opportunities for city-type recreation are practically nil here, but, I think, are more than offset by the peace and quiet and the possibility of pursuing other activities. The waterfowl hunting is good, splendid deer hunting is available within thirty miles, and one can find scads of Indian and early-day historic artifacts. One item of considerable value in combating "cabin fever" is a transistor-type radio for use when no power is available. We will have full-time power when the headquarters installation is finished, of course, but in the

meantime it can get awfully quiet without a radio.

At the moment the staff consists only of one laborer (temporary) and myself. By the time you arrive there should be an engineer in residence (he will be the inspector for the construction work), as well as the contractor's people who will be doing the construction work. My family consists of my wife, Judy, and sons Mark, 3, and Scott, 1 year. All of us are looking forward to your arrival and you may rest assured that we will do everything possible to make your stay here a pleasant one.

Attached is a map of the area, on which I have sketched some of the major features of the refuge, as well as some of the development proposed.

Judy is adding a page or so of information that will probably be of value in making your preparations for the move. Sent under separate cover.

Sincerely,

Lynn

Lynn A. Greenwalt

Refuge Manager

P. S. You'll probably have further questions--don't hesitate to shoot I 'em along.

Tooele, Utah

February 22, 1961

Dear Mrs. Marlatt,

By now you have received Lynn's letter to which I was supposed to add a few lines. As usual, I was running behind schedule: getting ready to make

a trip "out", as we say. Mark and I had dental appointments; and Scott had a series of baby shots to be completed, so we have been staying in town this week. After a week in civilization, that desert will certainly be a wonderful sight. We are looking forward to your arrival at Fish Springs and will certainly help in any way we can to get you settled. You will probably want to buy groceries on your trip down, but you might want to buy for only a few days.

One of the first things Lynn will do for you will be to take you to Dugway to get you set up with an identification card which will enable you to get on post and make use of the privileges we have there. At that time you will be able to go into the commissary to stock up on groceries---and take advantage of the reasonable prices. We usually shop every two weeks---on pay-day! I have stocked up on canned goods and staples in case we get snowed or "muddled" in, but by the time you get moved out, we should have no weather fears. I believe Lynn mentioned that we will share the butane (more correctly propane) refrigerator, since the one in your trailer can be operated only at night when there is steady current. We had students this summer and engineers this fall who also used the refrigerator, so you don't need to feel that you'll be invading our property.

Your husband wrote that you have been living in a furnished apartment. We did the same when

we were first married, so all our worldly goods were chucked into boxes and barrels whenever we moved. We now have our furniture in storage; some of our boxes and trunks are stored in one of the barns at the Bear River Refuge; and the rest is all in barrels in the refuge hangar. Storage in the trailers is limited, and there isn't much room left in the hangar since so much government equipment and supplies have recently been purchased. When you have stuffed every crook and cranny in the trailer and still find you have half a box-car of "left-overs", we'll take your items to be stored up to the ranch-house. A temporary employee is now living in part of the old house, but there are a couple of vacant rooms which can be made tight and waterproof. This will give you a good storage place until we all get into houses. Happy day!

I'll send along a sketch of your trailer, so you'll have some idea of what your new home will be. Lynn is now refinishing it, and I'll get over to clean the stove and refrigerator before you get out. There are bunks in the bedroom of the trailer, but the divan makes a double bed. There would be room in the bedroom for a roll-away bed, if you wanted to replace the bunks. Or you may want to take them out and use the room for something else. Anyway, you will be able to fix it up to suit yourself.

One of the big questions you probably have is LAUNDRY. With two small boys this is my biggest job. We bought a portable machine. and we are

keeping our fingers crossed, hoping it will hold out until we get in the house. My big machine is in storage. If I know that we'll be making a trip to Tooele, I gather up everything but the pups to take into the laundro-mat. You may want to do likewise; and there will be more trips made to town once the construction has begun. One more thing about the laundry: my machine refuses to wash anything heavy, so I send sheets and Lynn's trousers to the laundry. The laundry is in the post exchange and the things are back in a couple of days. It's inexpensive, too.

If you have any more questions, don't hesitate to write me. We came to Fish Springs the first part of October, 1959: and to me it was as if I had entered another world. I'd never lived in such a remote area, nor in one so wild. I really fell for the place, and I hate to think I shall ever have to leave. I sincerely hope you all will like it as much as we do. We are looking forward to having neighbors and will help you all we can to make you glad you joined the Fish and Wildlife Service.

Yours truly,

Judy Greenwalt

I think Lynn is putting a light gray on the walls with white on the ceiling to brighten up the place. The floor is mottled gray with red. There are no curtains at the windows, but there are Venetian blinds. I have put a few odds and ends of dishes and utensils in the kitchen for the students, and

there is an aluminum camp set also. If you need any of these things, you are welcome to use them. If you don't need them, we'll box them up and get them out of your way.

Guess that's about it I've probably succeeded in making your new living quarters sound like a cell, but I hope not. And just think: brand new houses soon!

Personal comments:

On our way in, our car, pulling a trailer loaded with all our worldly possessions, could not make it over a steep pass about 30 miles from the refuge. So Lee backed down a very steep, narrow road and we waited. We were sure someone would eventually come looking for us, but luckily a contractor came by on his way to the refuge and we sent word with him. Before long, Lynn arrived in the big four-wheel drive pickup with a chain and pulled us over the mountain. When we arrived at the refuge, Judy had supper waiting for us. A very warm, gracious welcome!

Original plans were for the houses to be ready for occupancy by June first. But, due to construction delays (some things never change!) our houses weren't completed until December first. In the meantime, we had electricity for about two hours a day (in the evening or long enough for Judy to wash diapers and other laundry).

Though we laughed when Judy wrote that they would use green spray-dye on the "mustard" colored divan in our trailer, it actually turned out to be very presentable.

When we went to town every 2-3 weeks for supplies and groceries, everyone sent their grocery lists, shopping lists and dirty laundry. We brought the clean laundry home wet and hung it on the line to dry the next day as there wasn't time to dry it at the laundromat. A trip to town started at 6:00 AM and if we were lucky, we were home by 10:00 PM.

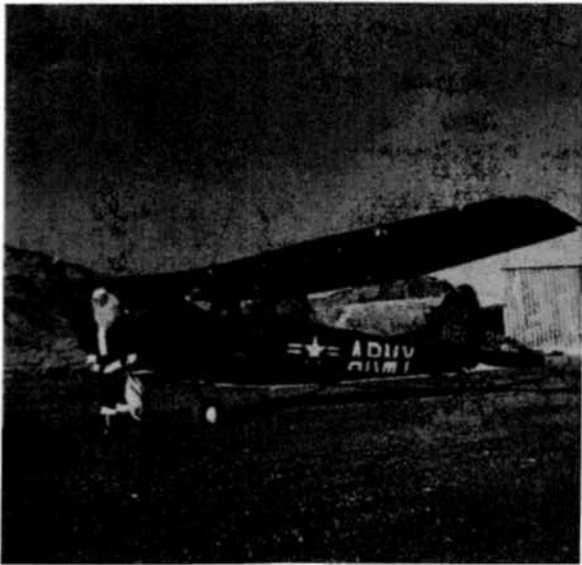
The pickup was always piled high with purchases and laundry. Occasionally, Lee went in by himself when I was very pregnant and I would watch across the marsh for his headlights. Then it was time to put supper on the table as he would be home in about 30 minutes.

After Lynn got a special use permit, several young men, who were summer employees, brought their milk cow to the refuge. We all then had fresh--but warm--milk all summer!

Fish Springs is a unique and beautiful refuge. What an adventure it was for us to start a career on and it gave us many memories to treasure that made our lives forever richer!

Billie Marlatt lived on refuges much of her life.

Ho, Ho, Ho (hic!), Merry (hic!)...



Santa arrives by plane in Fish Springs, UT.

Our first Christmas at Fish Springs Refuge in western Utah, was in 1960, a year after my wife, Judy, and I moved there with our son, Mark, now two and a half years old. We lived in a camping trailer and a tired old residence trailer that had won release from long service with BLM. We were connected to neighbors by 22 miles of gravel road to the West, and 66 miles of gravel-in-places road leading to a paved highway and another 25 miles to town. We had a two-way radio to the sprawling and super-secret Army biological test center at Dugway, Utah. No telephone, no television, and electricity available only when we ran a military surplus generator that had a mind of its own and a hunger for gasoline.

Mark was not quite old enough to be entirely prepared for Christmas, though visits with grandparents and his interest in magazines made him aware that the world was somewhat more than a grand view of a large wet spot in the heart of a vast reach of desert. He had what I imagine was a vague and perhaps confusing concept of Santa Claus, but the whole idea was a little less than crystal clear to him.

Until the airplane came, that is.

The fine people at the Dugway Proving Ground dropped by to see us fairly often, bringing mail and

packages when they could, and I was given many opportunities to observe the marsh and its denizens from the back seat of one of the small "Bird Dog" aircraft that were used to keep tabs on the extensive military area.

On a Friday before Christmas one of these planes landed unexpectedly. I walked out to greet the two occupants and was startled to note that one of them was Santa Claus. When he emerged from the plane he looked quite authentic, complete with corpulence, a white beard slightly askew, and a regulation Santa Claus hat on his head. He had shiny black boots, with Santa pants neatly "bloused," military style, and he was clearly ready to do business.

Judy knew immediately what was afoot—she has always been ahead of me in matters of intellect—and aroused a sleepy Mark, who would never willingly miss the arrival of a visiting airplane. Santa, aided by a Captain whom we knew from several trips out to visit us, gathered some gifts and brought them over to a somewhat uncertain small boy.

Santa performed perhaps a little more vigorously than one might expect from a man whose busiest day of the year was just ahead of him, and he was a bit unsteady, perhaps as a result of a rough ride across.

Mark was snatched into Santa's strong embrace, peered quizzically into Santa's eyes and gradually took part in the ceremony. Our Captain friend explained to me that the flyers had been making the rounds of some of the Christmas parties being held on the base, giving gifts to children on base and greeting colleagues at their own parties. Someone had recalled the small boy out at Fish Springs, resulting in an expansion of plans. The sergeant who was Santa was agreeable.

The Captain also revealed, and Judy confirmed, that Santa had enjoyed a little wassail at various parties and was a trifle tipsy, though hardly offensive. That explained his "Ho, ho, ho" delivered heartily, and often, as well as the expansive compliments directed toward my bride.

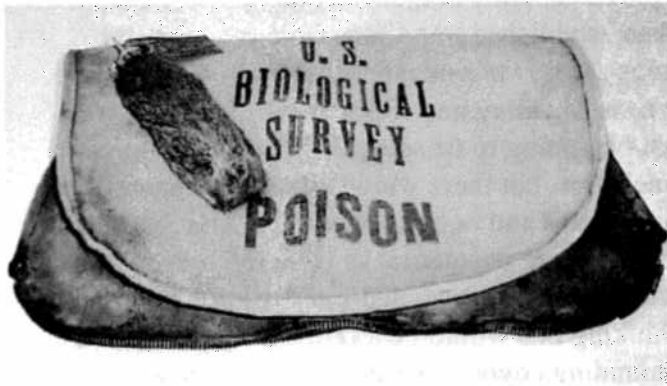
The gifts were received with pleasure and opened in the presence of Santa and his driver. After another round of hugs and "Ho, ho, ho," Santa was settled once again in the back seat of the airplane and whisked away to further good deeds.

These remarkable people watched over us as diligently as they looked after the Nation's secret works. This son, and another who joined us a bit later, were visited again by other air-borne Santas, though none so powerfully fueled as this one. In a few years we moved to Albuquerque, and the boys visited Santa at stores in that city.

They always said that Santa seemed to have grown older and less enthusiastic than he was those Christmases at Fish Springs.

Lynn Greenwalt grew up on a refuge and served as FWS Director from 1973-1981.

Three Months on a Box Spring



Biological Survey poison grain sack housed in the NCTC Archives/Museum.

I. GOVERNMENT TRAPPER

Where have I been for the past thirty-one years? This long journey started in the summer of 1965, the summer Pat and I were married. That summer, after my third year at New Mexico State University studying wildlife management, I worked for the New Mexico Department of Game and Fish. I was thrilled to have landed that job, working for a fisheries biologist on the new Navajo Lake in northern New Mexico. I was close enough to my fiancé to run into town on Friday night for the weekend, and I was allowed to live in an empty Bureau of Reclamation construction house at the base of the new dam. My only furniture was a refrigerator, stove, kitchen table with one chair, and a box spring onto which I threw my sleeping bag.

That three month summer job would lead to more than thirty years with the U.S. Fish and Wildlife Service, and a mostly wonderful career “watching out for the critters.” That, I later found, could even be done from a bureaucrat’s office at the Main Interior Building in downtown Washington, D.C.

The journey actually began in an area far removed from that stuffy, hectic office in Washington. It began when, still in college and pursuing a teaching degree to add to my wildlife management credentials, I received a note from my major professor in the wildlife school that a former classmate had quit his job with the Fish and Wildlife Service in Albuquerque. Although I was not entirely sure what his job was, I felt compelled

to follow up on it. A call to his former boss, two hundred miles north of Las Cruces, resulted in an appointment to interview for the job working with coyotes..

That interview proved to be exciting, challenging, and profitable. I had no idea how to trap coyotes, but I was soon to learn.

In a few short weeks, February 13, 1967, I was in Albuquerque, assigned to a large area of ranch land in central New Mexico, and expected to start making a noticeable dent in the coyote population. I found this to be a formidable, and largely frustrating, enterprise. Quickly gaining a high degree of respect for that much maligned mammal, I came to doubt that we would really win this battle of man-against-nature. The coyote is a survivor, wily and opportunistic. The ones I was up against were also smarter than the trapper. That was the beginning of my journey, leading a long way from that lumpy box spring in northern New Mexico.

The lady who was by this time my partner on this journey, and I, had previously agreed it would be exciting if we were both teachers, had the same hours and vacations, and could spend our mutual time off together. My unexpected abandonment of that plan must have been a shock to her, but I sensed she also felt the same excitement; this could be the beginning of an adventure. In fact it has proven to be. When she finished that year of teaching, I returned to Las Cruces. We stuffed our few belongings into a small U-Haul trailer, and feeling like the Beverly Hillbillies, we moved to Albuquerque.

After a few months, even before we both moved to Albuquerque, I was beginning to question whether this particular phase of “wildlife management” was where I really wanted to be and, perhaps more importantly, if I wanted to be a part of some of the management practices. I was already questioning the need to undertake extirpation of the coyote, based solely on the rancher’s allegation that “they are eating me up,” and the doubt that we were really accomplishing anything anyway. These misgivings were exacerbated by two particular assignments.

The worst of these involved working prairie dog towns to control their damage to rangeland. Truly, they are capable of denuding the natural grasses in a large town. Needless to say, cattle ranchers are not enamored with prairie dogs. This assignment involved my spending two days on horseback, riding through a town with a sack of grain and a dipper, scattering grain which had been treated with strychnine. It does indeed kill prairie dogs. However my second morning revealed it also kills any other creature that eats grain. This includes songbirds and ground squirrels. The prairie dog town looked like Armageddon. I felt ill; I felt like an imposter. I had just finished four years in college studying "wildlife management," wanting to enhance wildlife populations. Now I was out conducting wholesale eradication of animals, which bring enjoyment to people. I then learned that strychnine kills not only the first animal to eat it, but then the next one in the food chain as well. The euphemism, which sounds better than repeat killing, was "non selective control." I still didn't like it.

The other incident involved the use of poisoned horse carcasses, tied to posts out on the desert, again as a coyote control measure. This was also used in higher elevations for bear control, although I was never involved in that activity. The incident which still bothers me, thirty years later, involved a horse carcass which had to be disposed of before spring when people started going out onto the desert. In this case that meant buried. On the desert where this occurred, the surface was what biologists call desert pavement. Digging a hole large enough to bury half a horse was a long term, difficult chore. The easiest place to dig out there was in the arroyo; deep sand, deep enough to bury a horse carcass. But what if a desert rain storm were to occur, as they often do in that environment? The arroyos turn into torrents, washing away anything loose, like sand. How long would that carcass continue to kill anything that chewed on it?

The posts to which the meat was tied were to be marked with a large red sign warning people of the nearby poison. That worked well unless, as one letter in our file stated, "While I was reading the warning sign, my dog ate the meat." I don't know how that letter was responded to.

In spite of the feelings I had about the work, there was occasionally some welcome humor as well. I had established trap lines, which ran several miles across various ranches east of Albuquerque, in a small valley near Edgewood. This area was just beginning to be settled by people looking for ranchettes, but there were still large areas where the coyotes and bobcats roamed freely. I found a "run," where coyote tracks were fresh every time I came by in my assigned International Scout. Thinking this would be a prime place to catch a marauding coyote, I carefully dug the hole for the trap, armed the trigger mechanism and placed the trap in the hole. Next I covered it with a small piece of canvas and sprinkled it with just enough soil (in this area actually just sand) to disguise the hole. Then, as an irrefutable temptation to get nosey and step on the trigger, I sprinkled the "set" with a few drops of ocelot urine from my once empty Worcestershire bottle. What red blooded American coyote could refuse such a chance to leave his own scent, I thought.

This one refused.

Not only did he refuse to step on the trap, he dug it out of the hole, turned it over without setting it off, and urinated on it. Up yours Mr. Government Trapper! As I said, I had already developed a feeling of fond respect for the coyote.

Another one of those "...gee I really wish I hadn't done that..." memories I have of the period I was trapping coyotes, involved a late afternoon as I was driving the Scout back to the highway after running my trap line. I headed cross-country, which in itself was not unusual, but I tried to go through an old, abandoned farmstead. The Scout came to a sudden and very definite stop. There had been no noise to indicate that I had hit anything, so I looked underneath. There were the remains of a large, loosely rolled tangle of ancient baling wire. Although loosely rolled moments before, it was now very tightly wound around the drive shaft and braided into the u-joints. The vehicle wasn't going anywhere, and neither was I. The sun, however, was going somewhere: down. Looking at the tangled mess under my only transportation, it appeared that I may get to spend the night listening to a coyote serenade, performed by the very critters

I had earlier been trying to silence forever.

Tools? My vehicle contained a pile of traps, a small folding shovel, a reasonably sharp ax, and a bottle of ocelot urine. I spent the remaining daylight, and into the early twilight, cutting the wire by chopping it with the ax, and scolding myself for trying to take a shortcut instead of staying on the road. I arrived home somewhat late that evening, hungry but having learned yet another lesson.

An ancillary duty of mine was to meet with local conservation groups to answer questions they might have about our program. Ideally, I was to convince them that what we were doing out there on the desert and ranch land was right and proper. The catch in this was that I didn't fully believe it myself. It was very difficult for me to look them in the eye, defend what we were doing, and feel good about myself. Again, the feeling of being an imposter.

In fairness to the Fish and Wildlife Service, I need to recognize that in December of 1985, congress transferred the Animal Damage Control function from the Department of the Interior to the Department of Agriculture. That is where it should have been all along, since the historic focus was on ranching. Today the concentration is much broader, the use of poisons such as strychnine has been outlawed, and there is an effort to work with more urban issues such as airport bird strikes and agricultural field bird depredation. To me, this is a welcome change.

At about this time I began to look in earnest at finding something else to do, that I could feel good about. I talked to the City of Albuquerque, but they really didn't have anything to offer in my field. The Department of Game and Fish was not hiring. I did want to stay with the Fish and Wildlife Service, but could not continue doing the same thing and still live with myself. I decided to "look in my own back yard," and explore within the Service. That was a serendipitous thought, one that led me to a new world of experience, and a wonderful life with the wildlife. I decided to explore the Division of Refuges, and see what National Wildlife Refuges might have to offer me

as a career. That has proven to be a most fortunate decision.

One morning, when I was not out running my trap lines, I walked across the street to speak to someone about possibly transferring into the Refuge Division. The secretary led me into the office of the Assistant Regional Supervisor for Refuges, who greeted me very warmly. I explained to him what I was doing now, that I did not feel comfortable with it, and that I would like to transfer into the Refuge Division. His interview was very pleasant, and very brief. It consisted of three questions:

Q: "What kind of refuge would you like to work on, breeding, migratory, wintering?"

A. I don't know, it doesn't matter, and I just want to get onto a refuge.

Q. Geographically, where would you like to go? With refuges all over the U.S., do you have a preference?

A. No, I don't have a preference; most any place would be fine.

Q. Do you have any children?

A. No, we have only been married a couple of years, and have been in school.

Q. Young man, I have a place for you."

II. DUCK WATER

That "place" proved to be unlike anything we could have imagined, and certainly unlike anything we wildlife students had studied. That "place" was Fish Springs National Wildlife Refuge, sixty miles of secondary (sometimes questionable) gravel road southwest of Dugway Proving Grounds on the extreme southern edge of the Utah salt flats. Just getting there was an adventure.

After the moving truck was loaded, and a last inspection made of our little rent house, we set out in a heavily loaded 1963 Corvair for Fish Springs, not really knowing where it was or how long it would take to get there. We spent our first night in Farmington, New Mexico, visiting relatives in our home town, and saying our goodbyes, for how long we didn't know. Then, with our dog Taco, we were off for our adventure, first stop Provo, Utah. Overnight in Provo, then northwest to Tooele where we bought groceries to get us through at

least a week. Feeling pretty good by now, and knowing we had the majority of the trip behind us, we headed for Dugway Proving Grounds, a high security military establishment seventy miles away.

Eventually we did reach the gate to the Proving Grounds, where we explained to the spit-polished guard who we were, and where we were going. He was not impressed with who we were, but was very polite, saying he knew of the refuge. "If you will follow that gravel road 'out there,' you will reach where you are going." In other words, we were not going through the proving grounds on the paved road, but were welcome to drive around it on the gravel. So again, knowing neither distance, nor firm direction, we left with high spirits and resolute determination.

After not too long a time, when we got a look at the sparse desert and endless horizon with nothing but more of the same on it, both spirits and resolution began to dissolve. In addition, Taco had become nervous and irritable because of the gravel pounding the bottom of the car, which was not far above the roadbed due to the amount of belongings packed in it. I had even packed some small items in the hubcaps to save room inside the car.

As we continued into the desert, I began to sense a degree of anxiety in Pat as, I suspected, she began to wonder what she had gotten herself into with this biologist guy. We continued on, stopping occasionally while I would break out the binoculars to survey the expanse, looking for anything over which I might be able to report "there it is"! On the fourth stop, I saw trees out across the desert, and was able to state confidently that I thought that must be the place. Wouldn't a wildlife refuge have trees? We continued on, eventually coming around the last curve and sighting the headquarters area, whereupon Pat burst into tears and announced with unmistakable resolve "I'm going back on the pill." This would later prove to be a sensible, even if moot, exclamation.

The headquarters area at Fish Springs consisted of the office and a three bay vehicle garage, a four bay shop building, an oil house, generator house, bunk house, and four residences. Only one of the residences was occupied, by the Manager and his

wife. We were assigned to the residence next door, a nice brick three bedroom house. It was the nicest home we had lived in, and was perfectly adequate for the two of us. Since the moving truck would not arrive for another four days, we moved into the bunk house, a multi bedroom dormitory built for summer students who worked on the refuge.

That evening we enjoyed dinner with the manager and his wife. She was a very resourceful woman who was able to keep busy with her own interests, help out on the refuge when needed, and maintain a positive attitude although living on the south edge of the salt flats with no other families for over thirty miles. We were to become very close to this couple, establishing a friendship which has lasted for almost thirty years.

That night we collapsed, exhausted, into the bunkhouse cots, and went to sleep in almost total silence. The only sound was the generators, which ran twenty-four hours supplying us with power. Like people being accustomed to a freight train going by, we came to hear the generator's deep-throated throbbing only when they went down, and we sat straight up in bed asking "what do I hear?"

The quiet was so intense, so complete, that only five days after we arrived, Pat said "I would like to hear some noise, any kind of noise." So, for the first time, we turned on a radio. We were so far out in the "wilderness" however, that radio reception was full of static, but it was noise! We eventually came to be jealous of our silence, sometimes resenting refuge visitors for disturbing it.

One of the "disturbances" which occurred infrequently was not from random refuge visitors, but helicopter pilots flying security checks on the perimeter of the proving grounds. We would hear a small helicopter buzz the houses, make a circle, and return to land on our short runway. The buzz meant "we are coming in, put on the coffee." So we had official visitors on those days, but did not resent them because the proving ground was the guardian angel for the refuge. Most anything we needed was quickly provided by the military, including commissary and hospital privileges. Since we didn't have communication of any kind with the rest of the world, we maintained radio contact with

the proving ground security forces. A cup of coffee was a small price to pay for our own guardian angels.

On October 26, 1967, two days after we had arrived at Fish Springs, Pat mentioned that she thought she might be pregnant. Of course we wondered if that were true, but living where we did, we didn't just call and make an appointment with a doctor. But on November 3, she became concerned over some physical signs, and we made our first trip to Tooele, approximately one hundred twenty miles away. We were able to get a doctor's appointment, and Pat had an examination. When she came out of the doctor's examining room, she was beaming with the broad smile of a very happy lady, and seemed not to be touching the ground. In seven and a half months, we would be three. We were both equally thrilled. So much for going back on the pill; birth control is not retroactive.

While the quiet solitude and occasional romantic rides around the refuge were special, there were drawbacks too. Only once every two weeks did someone make a trip to Dugway, taking turns getting everyone's groceries, miscellaneous household supplies, and mail. Those days were looked forward to; contact with the outside world. Other than the employees who came from Callao, thirty miles west, and the occasional helicopter pilot looking for coffee, we saw very few people. Without telephones or neighbors, questionable at best television reception, and few trips to town, the mail became a very important part of our lives.

Pat's middle sister did brave a visit to see us, the first from either of our families. Not being a real outdoors person, she was somewhat taken aback by the rustic isolation of the place in which her sister lived. Also, not being an outdoors or wildlife person, she was not familiar with the idea of National Wildlife Refuge, or waterfowl marshes. In conversation one day, trying to remember the name of where she was visiting, she called it Duck Water. A far cry from Fish Springs, but in spite of that the name stuck, at least within our immediate family.

A lone person we did see moving around the marsh was actually a resident from long before it became

a National Wildlife Refuge. His name was Jim Harrison, and he was a muskrat trapper from the old school. He lived in the marsh, ate from the marsh, and had little use for the outside world. He also smelled like he lived in the marsh; bathing was not an activity he frequently enjoyed. Because of that, and the fact that once he started visiting with another two-footed creature we couldn't get him to leave, we always chatted with him out of doors.

One conversation Pat had with him though was memorable. Once Jim found out that Pat was pregnant, he became almost solicitous of her well being. He reminded her of how far it was to town, how bad the road was, and how delicate her condition could be. Then he proceeded to tell her about a former female resident of the immediate area, who was pregnant, and started to hemorrhage. "She bled to death right here." This did not comfort Pat a great deal. We continued our visits to Dugway for prenatal checkups.

Sometimes "outside" people did find their way into the refuge, and we wondered how they got that far. One car full wanted to know where the nearest restaurant was, and where could they buy gasoline. For that kind of situation, which happened a number of times, both of us residents kept a 5-gallon jerry can of gasoline in our garage. We couldn't do much about a restaurant.

Pat and I occasionally took the opportunity for an evening drive out on the dikes, just looking at the waterfowl, or checking on water levels in the pools. We always saw lots of wildlife, from swans to pelicans to muskrats. One evening as we drove along the dike, a killdeer, a small shore bird with a single black "necklace" across its chest, jumped up and started running in front of the truck. It was limping, and dragging one wing in the most pitiful show of attempted escape anyone could imagine. Pat said "stop, he's hurt!" She jumped out of the truck and started chasing the wounded bird, which stayed just ahead of her, and just out of reach. After about 15 yards, with the danger sufficiently moved away from its nest, the bird suddenly recuperated and flew off. Pat stopped, stood up and turned around with a very sheepish "I've been had, haven't I" look on her face. My thoroughly enjoying her being suckered into the

bird's perfectly executed "distract and escape" ruse, did not help hide her red face.

By this time we had been authorized, because we were federal government employees, to use the base commissary and hospital. This was very fortunate, and allowed Pat to establish medical attention during her pregnancy. In early June, her doctor advised her to plan on coming into "town" earlier than the expected delivery date, in case the road became impassable and we couldn't get there on time. During her checkups, Pat had established a relationship with a single nurse, who promptly invited her to come on base and live with her for the last week before the projected delivery. So, in late June, Pat moved to Dugway. Each evening I would trudge up to the office, get on the radio, and call the security office to find out if I was a father yet.

Each evening the answer was the same, negative. Then, finally on the eleventh of July, two full weeks after Pat went into Dugway, I was out in one of the impoundments when our refuge clerk drove out onto the dike and started frantically waving to me. "You better get into Dugway, you're a daddy."

By the time I changed clothes and drove into Dugway, of course the baby was delivered and Pat was in her room with our new son. On my way off the base that day, I was stopped by the MP's for some now forgotten indiscretion. I wasn't too upset, considering I was now the father of a beautiful baby boy, and I gave the M.P. a cigar that said "It's a Boy!" Catching him off guard, he only said "Congratulations, and be careful."

Even though hospital procedure in those days prohibited the husband from being in the delivery room, unclear person that he might have been, I have always regretted that I was not there. Other fellows who have been present for the birth of their children thought they had witnessed an almost spiritual event. I wish I could have shared that with both of our boys.

Sometimes humor comes from unexpected places. When we received the Chris' birth certificate, in the space for place of birth, it said "Fish Springs National Wildlife Resort. Obviously, the medical

staff had no conception of where we lived.

So, without lessons of any kind, we launched into parenthood. The manager and his wife had no children, so we couldn't get advice from them, even though sometimes we needed it. Within a very few days of bringing the baby home, we began to notice some discoloration in his diaper, obviously from his urine. This was discomforting, since we had no idea what it might mean. So I got on the radio to security, which brought our doctor into the radio room, and discussed this situation over the air. Anyone in central and northern Utah, who had a radio on that frequency, heard the discussion and the diagnosis: the discoloration was coming from the liquid vitamins. OK, to the certain relief of everyone in Utah, that crisis was solved.

The birth of a baby, a grandson, a redheaded grandson, brought Grandpa to visit. Actually, it brought both grandparents, Pat's dad and my mother. They knew the place was called Fish Springs National Wildlife Refuge, but had no conception of what it was like to actually be there. I arranged clearance for them to come into the proving grounds, go to the hospital to pick up Pat and the baby, and exit to the refuge by way of the Callao gate (the paved road). They were thrilled with the baby, and singularly unimpressed with the rest of what they were seeing.

Grandpa enjoyed seeing the refuge, and learning about what we were doing out there, but could not imagine staying for more than a few days. My mother was glad to see us and the baby, but mostly just tolerated her stay. When they were preparing to leave, and be escorted back through the proving grounds, Pat's dad summed up what he thought of the refuge by calling it "The asshole of the universe." He has never said what he thought of me for taking his daughter to live in such a place.

For all the good things I can say about Fish Springs, it was not the best place to have children, or a family that wanted more stimulation, and opportunity to be part of the real world (that thought would later come back to haunt me). I began to apply for other jobs on other refuges all over the country. I even applied for one in North Carolina. I was not desperate to leave Fish Springs,

but the opportunity to move up a little, and to see other parts of the country was appealing to both of us. When I was finally notified, by way of a radio transmission from Dugway, that I was selected for the job in North Carolina, it took me a few minutes to remember that I had applied. Sometimes the government does not move with lightening speed.

The radio message came while the new manager and I were out on the refuge. Pat and I were going to their home that evening for dinner, and I told him not to say anything about the move until I did. I wanted to surprise Pat. And surprised she was. Out of the blue, I simply said "how would you like to move to North Carolina"? After a few seconds for it to sink in, Pat's open-mouthed response was "are we really going to?"

Neither of us could sleep that night from the excitement. Pat started packing boxes, which we had saved from our move in here, the next day. At that time the government still did not pay enough for moving costs to allow the moving company to do the packing. North Carolina sounds like a long ways away. The refuge is Mackay Island NWR, located in North Carolina, but with headquarters in Virginia Beach, Virginia. It was a satellite refuge, meaning I will be away from the headquarters and mostly on my own. Exactly what I had hoped for.

Part III. COOKED GOOSE

Our trip across country was fun, exciting, and tiring. With an eight month old baby having trouble digesting milk, and a socially maladjusted dog, some days seemed very long. We kept going, excited to see what North Carolina was going to look like, and what our house would be. After the nice brick home at Fish Springs, it would be surprising to have anything as pleasant.

We arrived in Virginia Beach, Va. on March 30, 1969, after five long days on the road. I was not interested in sight seeing along the way, I just wanted to get there. I don't know what the hurry was, except that I was excited to get started.

We drove into Virginia Beach, and stopped at a restaurant for lunch. While eating, we asked the waitress how to get downtown. She looked at us for a second, and said "there is no downtown,

just what you see along this street." At that time, Virginia Beach was a rather tacky ocean side tourist area, with everything located between the highway, which paralleled the ocean, and the water. If you wanted to go shopping, you drove to a nearby strip mall or into Norfolk. I suspect that not a lot has changed since that time.

We then drove along that street, looking for a motel priced within our per diem rate that would take the dog. We found the Sandpiper, which filled both of those requirements, and had a ground floor room for ease in walking the dog. Taco was a small cocker spaniel, with an attitude. He thought he could whip any other dog, regardless of size or breed. He only picked fights when he was on the leash, knowing we would pull him from the jaws of danger the moment anything started. That day, he challenged a very large opponent, which had him by the scruff of the neck, shaking him like a rag doll before we could react. Taco didn't learn anything.

That evening, after the baby was asleep, we walked out to the beach, in the rain, for our first real look at the Atlantic Ocean. For two New Mexican desert rats, it was an awesome, almost overpowering feeling. We reacted like kids, getting our feet wet in the surf, and talking about this being as far east as we could go from New Mexico. The sound of the waves breaking was exhilarating, and we called our parents from a pay phone on the beach so they could hear it too.

The next day we drove to where we thought the refuge was, wanting to see our house and the area. Not knowing the roads, we actually ended up at Sandbridge, a small community on the sand dune peninsula running south along the edge of the ocean. Technically, this is a part of the outer banks. Although we soon realized we were not in the right place, it was very interesting. Most of the Ocean side homes were built on substantial stilts, which kept them above the sea water during times of hurricane caused flood tides.

I was later to witness one of those beach homes burn. Being situated well above the ground, with plenty of air space under it, the fire became a roaring, upward vortex, destroying the structure

in a matter of minutes. Cancel any thoughts of an ocean-side beach home. A question to one of the local people got us on the right road, and on our way.

We proceeded south toward the refuge through thick green trees and occasional agricultural fields. Coming from the salt flats in Utah, we weren't used to all of the green, but it was a pleasant change. Finally we came out into a large marsh, containing sloughs and small islands, and waterfowl. Being February, there were still large numbers of snow geese in the marsh, which showed up like snowflakes against the darker colored vegetation and water. The deep blue sky, with puffy white clouds scattered across it was beautiful.

We drove across the marsh on a manmade causeway, not constructed until 1955, but which now connected the island with the mainland. Historically this was called Knotts Island, except for the far south end, which was called Mackay (Mackee) Island after the man who owned it as a hunting area. The refuge, most of which was purchased from his estate, was named after him. At one time the hunting area was highly developed, containing a large home, barn and even a swimming pool. Now, the home was gone, the barn was in disrepair, and unless a person liked swimming with water moccasins (snakes), one did not venture into the pool.

I had been told our house was an old farmhouse toward the north end of the island. With a little searching, and a question or two, we found it. The house was a typical North Carolina farmhouse, a white two story, pitched tin roof, with a huge screened in porch on the front. It looked like it had lots of room, and would make a nice home for the three of us. Still unbeknownst to us, in only a few months we would welcome another youngster into our family.

One thing we didn't know about the house until a hot, muggy night that summer, was that part of it had burned one time. We learned that after asking a neighbor why we woke up last night smelling smoke, but could find none. Other than that, and the fact that the mosquitoes had free access to anyone in the house until we put up storm

windows, the house was adequate. When we went into town to shop for groceries, people thought our oldest boy had chicken pox. The storm windows also helped keep the winter wind from blowing through, and forcing Pat to wear gloves while cooking in the kitchen.

The house was located near the north end of the island, about a quarter mile from the Virginia line. The North Carolina-Virginia border cut across the island due to a trick of nature when the line was first surveyed. The official survey was to commence at an agreed upon natural cut in the outer banks, and run westward. Between the time of that agreement, and the actual survey, nature conducted a hurricane, and the agreed upon cut moved due to the force of the storm. When the survey was actually done, the line ended up crossing Knotts Island, severing it along the new state boundary.

The refuge teemed with wildlife. In the marsh were countless water birds, including wading birds and snow geese, which the refuge was primarily focused on, and ducks of several species. In the open bays around the island were Canada geese and whistling swans. Songbirds flourished, and deer, raccoon, snapping turtles and osprey could be seen every day. It was truly a "wildlife refuge."

Mackay Island was a satellite of the Back Bay National Wildlife Refuge, located on the outer banks south of Sandbridge. Back Bay was an old refuge, as could be evidenced by the design of the buildings, including the residences. Their design was of the typical outer banks architecture, hurricane resistant and sturdy. The outbuildings were the same, and together they presented an attractive picture, reminding one of a coast guard station on the northeastern coast. All it lacked was a lighthouse.

South of the refuge were several small communities, with interesting names such as Corolla, Sanderling and Duck. These were communities which had been there for generations, and had changed little in that time. Talking to the residents was an experience, because they still retained an Elizabethan accent so heavy that they were difficult to understand. Further south were

more familiar community names like Nags Head and Kill Devil Hills.

These were people with roots going clear back to the earliest English settlers in this country. They were good people, staid in their ways, and understandably not fond of the federal government. Included in that attitude was a propensity to ignore federal law relating to hunting of waterfowl, and hunting on National Wildlife Refuge lands. That provided some interesting challenges at Mackay Island.

On Knotts Island I represented the only federal wildlife law enforcement. Being the only person with law enforcement authority, automatically made me suspect in many people's minds. While most everyone on the island was polite, only one other couple really accepted us as friends. We were outsiders, meaning we were not born on the island, and so were they. I joined the volunteer fire department, and became qualified to drive the ambulance. Most of the other men on the island worked in Norfolk. As almost the only available man on the island during the day, the locals were as friendly as they could be. The same was not true for Pat.

There was no mail delivery on the island; we went to the tiny local post office to pick it up. There were also no individual boxes, so we asked the Post Mistress to hand it to us. The small post office was often a gathering place for the ladies on the island, so anyone picking up their mail had to go in and say hello to all of them too. When Pat would go for our mail, as she approached the door there would frequently be animated conversation going on inside. As soon as she took hold of the door knob, the conversation died. She would go in, get our mail, and return to the car. The minute the door closed, the conversation picked up again.

Nothing personal you understand, you are just an outsider.

Wildlife law enforcement was part of my job, and it was a challenge. I quickly learned two things: there was poaching going on, both of deer and waterfowl, and the violators knew more than I did, like where I was most of the time. I spent a

lot of evenings prowling in my truck, which had a switch enabling me to keep the brake lights from announcing exactly where I was, but I also know the time could have been better spent at home with my family. Based on the number of cases I wrote, the violators came out ahead.

The Dooney Bonney case stands out, however, even if it was made by accident. Dooney was a known violator, of the most flagrant order. The federal game agents with whom I occasionally coordinated, had been trying to catch Dooney in the act for years. On this afternoon my maintenance man and I took our boat out into a bay east of Knotts Island, and holed up in an empty boat house to just watch what happened as the afternoon went by. After a couple of hours, the birds weren't moving and no shots had even been fired. We decided to call it quits and head for home.

Within an hour of arriving home, I heard a horn honking in my front yard and looked out to see two game agents wearing very broad smiles. I walked out to their truck and boat, which contained a large number of dead ducks.

"We nailed Dooney," they exclaimed at the same time. "We were also pulled into an empty blind, but no one knew we were there. As soon as you guys left, Dooney came roaring out of his blind, and went straight for a raft of ducks. When they started flying, he started blasting. That's when he found out we were there!"

They had written him up for several things, including over limit and hazing, both highly illegal. It was hard for me to sleep that night I was so excited, even if I had been an accidental contributor to the bust. Old Dooney subsequently lost his hunting privileges for several years, his shotgun and his boat. I was not sorry.

We did enjoy some real hands-on wildlife management work at Mackay Island. One of the fun things we did was to canon net Canada geese, sex and leg band them, and then release them back to the wild. The canon net was simply a long net, laid out in a folded position, along an area which has been baited with corn. Behind the net was a row of "canons," which were simply large pipes

loaded with explosive. When this is set off, by touching two wires to a car battery, the net is pulled behind a projectile and falls over the geese which have been attracted onto the baited area. The geese are then taken out of the net, sexed, banded and released. That was always the plan, and that usually happened. On one occasion however, the plan didn't quite come together.

On this particular November day, by the time we had the net laid out, the corn distributed and the canons loaded, a slow, steady rain was falling. Geese aren't too concerned about getting wet, or getting their feet muddy, and before long about sixty of them were on the site gobbling grain. My supervisor and I were in a small wooden blind built into some low trees, waiting and watching. He said "now" and I touched the wires to the battery. The canons went off, geese tried to fly but under the net only rolled in the mud, and we headed toward the net to get them corralled. That was our first mistake.

We loaded the whole gaggle into boxes, and transported them to the building where we were going to finish the job. Mackay Island was a poor refuge, and consequently had poor facilities. The only building we had to do this work in was a large, converted chicken house. In this case converted meant the building had been gutted, removing all of the roosts, and large sliding doors installed on either end. No heat and a dirt floor. This was also our vehicle maintenance building. By now it was pitch dark. We discussed whether we should just leave the geese over night, and finish banding them in the morning, or "tough it out", and finish that night. We decided to finish that night. That was our second mistake. We handled geese until late that night, releasing them to the outside as we finished with each one. That was our third and crowning mistake.

Early the next morning, I received a call at home from someone who had found a very wet, bedraggled, too heavy to fly goose walking through their yard. As the morning wore embarrassingly on, I received several of those calls. I dutifully went to each home, picked up the goose, and took it back to the chicken house to dry, and once again be released. I don't know how many

we lost to predators, or how many ended up on the Thanksgiving tables that year. I do know a chagrined refuge manager who felt like his goose had been cooked.

On October 8, 1969, our son Mark arrived with a flourish, six weeks early. Getting Pat off the island, and to the hospital in Virginia Beach was an adventure. I was at the main office in Princess Anne, when I received a call from Pat saying, "you had better come home, I think I am getting ready to have this baby." I jumped into my vehicle and headed south toward Knotts Island at a reasonably sane, but not necessarily legal, rate of speed. When I reached the small community of Pungo, everything came to a halt. The highway department was installing a large pipe under the highway, and the trench was cut completely across the road. No way to go around it, just sit and wait and sweat. I explained to the work crew why I really needed to get by and, as they say in southern Virginia, "carry my wife to the doctor." Finally they filled the trench enough to allow me to pass, get Pat, and return past the same point on the way back to Virginia Beach. Again, I was not allowed in the delivery room, so I passed the time talking news, weather and sports with the other anxious men in the waiting room. That gave both of our boys the distinction of being born on national wildlife refuges.

I mentioned that we became friends with one other couple on the island, and she in particular took a shine to Mark. She would come over to visit Pat, who as likely as not was at the end of her rope caring for two babies. Pat would pick up one baby, she would take the other, and they would sit and visit, and rock babies. At that time Laugh In was a popular weekly show on television. One sketch every week featured the Farkle Family, and one of their children was named Mark. Our friend picked up on that, and from then on she called our youngest, Mark Farkle. That name still comes out of us on occasion.

We often give wild creatures credit for being intelligent, or having natural senses which we humans don't share. These same wild creatures can at times become confused though.. While we were at Mackay Island, we observed a full solar eclipse.

Being curious about how the wildlife might react, I waited on the shore of one small bay where a several species of waterfowl and other birds could always be found.

At the very beginning of the eclipse, all was normal. The redwing black birds were trilling, the geese and swans were scattered over the bay; it was a very normal, serene setting. As the moon began to cover the sun, however, that began to change. By the time the sun was completely blocked, and we were in apparent twilight, the black birds were in trees roosting, and the waterfowl had gathered into their usual nighttime rafts. They were going to bed! Then, of course the sun began to "arise" again, and the birds resumed their daily routine. I found that, while not surprising, at least fascinating to watch.

While living at Knotts Island we bought our first camp trailer. The one couple who had befriended us were regular outdoor campers, and hardly quit talking about how much fun it was. We decided to join them and bought a little tiny Scotty which we could easily pull and had enough room for the four of us - barely. It was so small Pat had to keep her head down while cooking to keep from bumping it on the ceiling. And with two boys in diapers, it occasionally got a little "close" in there. In spite of that, we became hooked on camping, and have done it ever since.

One other memorable trip, again with two very small children, was to Washington, D.C. We did the whole routine, White House, as much of the Smithsonian as we could squeeze in, Capitol Hill, and the memorials. We took that trip because we knew we would not have another chance to see Washington, and we wanted to do that. So that took care of that, we had seen it. Then...

In late August of 1970, the Assistant Regional Refuge Supervisor in Atlanta called to say he had an opening in northern Virginia at the new Mason Neck National Wildlife Refuge that he would like for me to fill. Take your family up there to look at the refuge and the area, and see what you think. Then let me know. This was intimidating, for a number of reasons. First, we would have to buy a house after years of living in government provided

quarters. Second, we would be living in the Washington, D.C. metropolitan area, after several years of living in out of the way, secluded places. We weren't sure about this at all.

We took the trip to Mason Neck, which was beautiful, and while there looked at the area we learned we could most likely afford. It scared us terribly.

We stopped in one real estate office to talk in general terms. We told the agent we didn't know what we could buy, but would like to keep our payments at no higher than one hundred dollars per month. He was kind enough not to laugh out loud, but the message was clear: "you must be kidding." Undaunted, we asked to look at something we could afford. The one house we saw was ramshackle, and in a terrible neighborhood. There were only curtains on the cupboards, and we could easily see under the back door. Enough, we are going home.

We returned to Mackay Island. The next day I called the Assistant Supervisor in Atlanta and told him we had looked at the area, and decided it was more than we could handle. But thank you for the opportunity. I then called my supervisor in Princess Anne, and told him the same thing. After a long, boss to subordinate pep-talk, I called Atlanta back and reversed my previous decision. On October 15, the moving truck arrived, and we were off to a new adventure as is so often the case, this turned out to be a fortunate turn of events.

IV. MR. ROGERS' NEIGHBORHOOD

Before the actual move, we made a house hunting trip to Woodbridge, in Prince William County, Virginia. Across the Occoquan River, where the refuge was located, was Fairfax County, with real estate prices we simply could not touch. We bought a house in something of a hurry, because the market was such that if you even thought you might be interested, you better make an offer; it won't be available tomorrow. The Realtor we were working with had been waking people up to present offers at 11:00 p.m., so that someone else didn't get there earlier the next morning. By cashing in our bonds, and making a couple of phone calls to "Mom" we managed to scrape together enough money for

the down payment. Now we were first time home owners.

Because Mason Neck was a new refuge, there were no facilities, and no office. That meant my office would be in our home, at least until I could get one established. Due to the design of the house, a split foyer, the most convenient place for my "office" was in the den, on the lower level. I placed my desk, which was left over from a condemned married housing project at college, in one corner of the den. In the other corner was the television set, in front of which our one and two year old boys spent part of each morning. I watched Mr. Rogers come in, take off his sweater and hang it up, and change his shoes a lot of times. Can you say ad nauseam, boys and girls? Our boys never did learn to hang up their clothes, in spite of Fred Rogers.

The Mason Neck refuge was named after the boot shaped "neck" or peninsula on which it was located. This land mass was originally named after George Mason, one of the nation's founding fathers and author of the Virginia Bill of Rights. Above the heel of the boot, Mason had built a beautiful, typical Virginia architecture home called Gunston Hall. This area adjoined the Northern Virginia Regional Park Authority's Pohic Bay Park, which was a publicly owned, protected area slated for eventual high density public use development. Then, at the toe of the boot was a Virginia state park, also protected, but planned for low intensity public use. The last chapter in the protection of Mason Neck, and the establishment of the refuge, was written by a large number of determined, dedicated conservationists, rallying around one special creature.

How very appropriate, fronting on the Potomac River, and actually within sight of Mount Vernon (remember that last chance forever to see Washington trip?), that special creature was our nation's symbol, the bald eagle. Nestled into the arch of the boot, was a beautiful fresh water marsh, surrounded by northern Virginia nature. Dogwoods and holly trees, ladyslipper orchids, and Indian pipestems made the woods an adventure to walk through. The neck had been logged a long time before, but only ancient, rotting stumps remained like sentinels to witness the past.

Pileated woodpeckers drummed their message in the silence, leaving room for the occasional sound of retreating white tail deer rushing off from two legged intruders. But the creature which historically graced the skies, and decorated the tall trees with regal white head and tail, was missing.

Rachel Carson wrote her book *Silent Spring* in 1962, addressing the very reason why the eagles had disappeared from Mason Neck, and much of the habitat they occupied nationwide. That reason was the pesticide DDT, which was being sprayed on the landscape in hundreds of thousands of gallons annually. What she concluded, and history has shown her to be correct, was that the DDT was finding its way into the environment, mostly through runoff from rainfall. It was then being moved up the food chain to birds, like the bald eagle, which ate fish, which swam and ate in the rivers, which received this runoff. The birds then built nests as they have done for eons, and laid eggs as they have done for as long, and sat on these eggs to incubate them. The catch came in the fact that because of the DDT, the eggshells were very thin, and the incubating adult actually broke their own eggs. After a few years, the numbers of eagles, and many other bird species, began to show demonstrable decreases, and the eagles disappeared from much of the landscape, including Mason Neck.

In the early 1960s, residents on Mason Neck became aware of the development potential on the neck, and of what they had in this undeveloped wild area. At the same time, awareness of the bald eagle's plight was growing, and alarms were going off in the environmental community. Out of this awareness came the idea that something could be done for the bald eagle, and what better place than in an area where he used to nest? Like a mushroom popping up overnight, the idea was born to establish a national wildlife refuge on Mason Neck.

I must also recognize that more was going on than simple altruism, and concern for the wild creatures. The residents of Mason neck were living in their own Shangri-la-on-the-Potomac. They did not want the Washington, D.C. metro area/ bedroom community to ooze its way downriver and swallow up the serenity they enjoyed. They

very effectively began putting together plans, and lobbying their elected representatives. They were eventually successful, and land acquisition funds were included in the national budget to begin establishing the refuge. When I arrived at Mason Neck, it was all of 609 acres in size, small enough that I got to know each tree by name.

Although the majority of citizens on Mason Neck were strongly in favor of the refuge, there is always that small minority who object, for whatever reason. In this case, objection came in the form of actions ranging from simple acts of covert rebellion, to outright vandalism. The covert rebellion was in the form of an old eastern tradition, which is shared nationwide any more, called dump your trash in the woods, or on the desert, or in the stream, or where ever you get it out of your own sight. When I moved to Mason Neck, there was trash all over the refuge, especially along any road or trail a pickup truck could maneuver. There was even a stripped car body along one road, which the county was good enough to remove for me.

I did surprise one of these dumpers in his own driveway once. Finding a new trash pile just off the main road through the refuge, I stopped to go through it. There were a number of prescription bottles from one local drug store, and some mail. I took the prescription bottles to the drug store, flashed my refuge manager badge, which meant nothing special to the clerk, but she gave me the address of the person who bought the medicine. Unethical perhaps, but it worked.

I found the culprit standing next to his truck in front of his home. He was very surprised when I told him what I had found, and that I had traced it to him. He started to plead innocent, but quickly realized it would not be worth the effort. What he then wanted to know was how I traced it to him. Rather than say what I really wanted to, about his obvious mental shortcomings in leaving prescription bottles and mail in what he dumped, I simply told him some of it had his name on it. I never traced any more to him, so maybe he stopped doing it.

The more covert objections were not as easily traced, and may have even been plain old

vandalism. On one evening I received a phone call from the manager at the Pohick Bay Regional Park, who I had come to know because we managed adjacent areas. After a friendly greeting, he matter of factly said "hey, your refuge is on fire." I jumped into my work clothes, and headed for the refuge, a fifteen minute drive away. Within minutes after I arrived, the local volunteer fire department also arrived. As volunteers are want to do, they charged up close to the fire line, which meant they drove their fire truck into the woods, over small trees and over who could tell what legally protected plants. I was at a loss for words, but it was probably good that I was. They were there to put out a fire on the refuge, they had been called away from their families too, and the damage was already done to the environment. We never found who started that fire, but no doubt it was arson.

There were special places we sometimes had access to, where very few people were allowed. One of these was tiny Fisherman Island National Wildlife Refuge, smack in the mouth of Chesapeake Bay, and on the path of the twenty mile long Chesapeake Bay Bridge Tunnel. Fisherman Island was but 250 acres in size, and the only round barrier island. Shore birds, dolphins and ghost crabs were just a very few of the wild creatures one could observe on the island.

During the Second World War, the military established a base on the island with the objective of protecting the Chesapeake Bay and the industry along its shores from aircraft attack. When we visited the island, only collapsing walls of a few buildings remained. The wildlife abounded however. The thrill of seeing acres of nesting wading and shorebirds, where you had to watch your step so as not to crush one of those nests, was something we will never forget.

Our dog Taco, not a Rhodes Scholar by any stretch, also enjoyed running through the surf and matching wits with the ghost crabs in a futile attempt to catch one. The crabs had a natural advantage in this chase. Being the same color as the sand, Taco could only see them when they moved in their erratic way. You could see the puzzlement on his face when, just as he got to where the quarry was, it disappeared from sight, only to start running again

in a different direction. The chiggers however, were not a laughing matter, at least for the two-footed visitors.

Starting up a new facility, whether it be a wildlife refuge or anything else, requires doing things you never thought you might someday do. The main refuge road, an old, long established trail, was called the Lady Lewis road. This was in reference to gentry who reportedly once lived there. At one point the road crossed a gully, which became a creek whenever a heavy rain fell. In order to safely cross that gully, whether full of water or not, we needed a bridge. I contacted a man in our Washington, D.C. office, who was also an officer in a National Guard engineer unit. He said they could build a bridge that would last for years, and do it in short order. All he wanted from me was material. We concurred on a date, I got the material, and on the agreed upon day we built a bridge.

I remember a couple of things in particular about his engineer unit. One, no one was going to die of over exertion while building that bridge. Two, they were playing their 8-track tapes as they worked. I had never heard such lyrics in any music, anywhere before. The words did rhyme, and there was a definite rhythm, but the lyrics were words and ideas my parents would never have approved of me listening to.

They built a good bridge though. It was built to weather almost anything. That is almost anything. Not long after the bridge was built, hurricane Camille hit the gulf shore. Then the storm moved inland, and intensified. Southern Virginia received a rain storm that washed out major roads, threatened the Occoquan dam outside of Woodbridge, and flooded low areas clear into Pennsylvania. The gully my new bridge spanned suffered considerable erosion, and the bridge plunged into the chasm. The bridge was built to survive intact, and it did. However, it was somewhat unimpressive lying on its side at the bottom of that gully.

Wildlife law enforcement was also a part of the job at Mason Neck. We did not have a hunting program on the refuge. It would have had to be hunting deer, and the local residents would not

have put up with that. Years later the deer did overpopulate the area however, and the refuge manager had a real battle getting a hunting program instituted. Why would some people rather see the forest grazed down to mineral soil, the tree limbs and leaves denuded as high as the deer can reach, and deer starve to death, than to allow the herd to be thinned down in a more humane manner?

At any rate, I had developed a close working relationship with the local State Game Warden, and we worked other deer hunts as well as waterfowl hunting on the Potomac River around the refuge.

On one winter morning we met on a high spot on the refuge, and "set up" on an island just off shore where there was a hunting blind. On this day two hunters were in the blind at sunrise, the legal time to begin hunting. It quickly became clear that they were having a good day, based on the number of shots they were firing. It was so good a day in fact that we both became suspicious of how they were getting all of those ducks to come into their shooting area. So we piled into my boat, and ran out to the island.

When we got to the island, we visited for a few minutes, and checked their licenses and guns to see if they had the proper plugs in them to limit the number of shells the gun would hold. We checked their "bag" for numbers and species of ducks taken. So far everything was as it should have been. Then the warden and I went to work. We had a small hand held dredge to check the river bottom in front of the blind for corn. Baiting, or using grain to coax the birds in, is illegal. The bottom in front of the blind looked like they were planting corn. No wonder these guys were having a good day. While he began writing the citations, I walked to the other end of the small island where their boat was moored. In the bottom of the boat was a duffle bag, the kind hunters use to carry their decoys. On impulse, I took that bag and turned it upside down. Lots of dead ducks came tumbling out, way more than these two men were entitled to. So, while I gathered up all of the birds, and samples of the corn, the warden just kept writing. Pretty good morning's work.

One other law enforcement duty, which was

actually more fun than work, was at Susquehanna NWR, a tiny island at the very northern end of Chesapeake Bay. This island was actually man made, providing enough room to build a light house to warn ships of shallow water. Ships venturing that far up the bay were actually headed for the Susquehanna River, and the commerce up stream. The Fish and Wildlife Service came into the picture because of a 1939 Proclamation Boundary signed by President Franklin D. Roosevelt, which prohibited waterfowl hunting in a several thousand acre area around the lighthouse. Every so often, one of us was detailed up there to spend a couple of days checking hunters, and watching what was going on in terms of waterfowl numbers and species composition.

This refuge was actually administered by the Blackwater NWR in Cambridge, Maryland. There was one employee who mostly served as the eyes and ears for the refuge. If he got any compensation, it must have been minimal. He was a crusty individual who frequented flea markets, and had a penchant for old clocks. The inside of his home in Havre de Grace, looked like he frequented flea markets too. While putting these notes together, I learned that the proclamation boundary was rescinded in 1978, and the refuge reduced to one-half acre around the lighthouse. It has now fallen into disrepair, and may be turned over to a lighthouse preservation society. The few nights I spent in this lighthouse were very enjoyable, kind of like camping out in the middle of a huge lake.

That fellow did teach me one law enforcement trick that I have used several times. As we were moving across the bay and saw a floating log, we'd stop and roll it over to see if any of the hunters had weighted some over-limit ducks and attached them to this floating anchor. If it appears that I am mistrustful of waterfowl hunters, it should. This opinion is based on a number of years working waterfowl hunts, and watching people's behavior. That is a sad commentary, but based on my experience, it is accurate.

I was notified to expect a visit from one of the Regional Office people in Atlanta. He wanted to see the refuge, and talk about what was planned

for the future. No problem, I was always proud to show off what was going on and what had been accomplished. While we visited he mentioned that nominations were open for the Departmental Manager Development Program, a one-year management training effort in the Central Office. That meant the Washington Office, and a chance to see close up how the agency operated, and perhaps for an eventual promotion. I had heard of this program in the past, and I knew I wanted to experience it. I told him so, and he said he would see what he could do.

In June of 1972, I was notified that I had been selected. I was ecstatic. The good news was that since I already lived in the Washington, D.C. metropolitan area, I would not have to relocate for this assignment. I could begin my commuting experience, which I am still doing today. Pat and I were both pleased about not having to move.

V. MR. JOE

My story of Mason Neck would not be complete without including a very special person, a person who played a significant role in establishment of the refuge, and in fact in the very early history of what we now call the U.S. Fish and Wildlife Service. His name is Joe Flakne, or as my boys called him, Mr. Joe.

Joe's roots go back to northern Minnesota, on a homestead at what was called Mud Lake. Today maps still show Mud Lake, but it is surrounded by the Agassiz (Ag-a-see) National Wildlife Refuge. The Thief River flows into the lake, and the Middle River drains to the north. This appeared to be a good arrangement until the spring thaw began, and ice melted in the south but more slowly in the north. The water wouldn't flow and drain the lake, it just backed up and flooded the homestead. So, each winter the cattle were moved to the tops of the buildings, which were made of sod, to wait for the thaw further north.

Joe had various jobs as a younger man, including working in a filling station in Minneapolis, but eventually found his way even further north, to Alaska. There he signed on with the Bureau of Biological Survey, where he had responsibilities that took him to many of the mountain ranges and

valleys across that snow and ice covered territory. This sounds exciting even today, but Joe did it on a dog sled, following his lead dog Monkey and his team. Not surprisingly, realizing the bond and dependence for survival developed between the musher and his team, Joe still gets a soft spot in his voice when he speaks of his dogs. Over time the Bureau was renamed a couple of times, eventually becoming the U.S. Fish and Wildlife Service. At 96, Joe still remembers and speaks of those days in Alaska with excitement.

Joe eventually went on to the Interior Department as Director of Trust Territories, Islands of the Pacific, retiring long before I got to Mason Neck. In the interim, he became deeply involved in establishment of the refuge, which led up to me going there and the two of us becoming life long friends. Also after going to Washington, he and his wife purchased a small log cabin on the banks of the Potomac, just downstream from, and within sight of, Mount Vernon. I spent many hours in that cabin, sometimes using it as a base for contacting people, meeting local politicians, and at one time writing my annual report. Eventually Joe donated the cabin and the land to Fairfax County to be used as a park for older citizens, where they could sit and relax, and watch the river flow by.

Joe had a wonderful impact on me professionally, and my family. We shared a number of holiday dinners at our home, always enjoying the stories and the friendship. On one occasion we experienced a typical Virginia thunderstorm, with lots of lightning and thunder. Both of our boys were frightened by the noise, but Joe talked to them, measuring the time between the flash and the thunder clap, and explaining what nature was doing. After that they were no longer frightened by these storms, and still remember Joe's being there that day. Although Joe has now relocated to his native Minnesota, but not to Mud Lake, we still maintain contact, and still remember the good times and what we did for the refuge. Mr. Joe holds a special place in my career, and is a unique memory for my family.

VI. OVER THE BACK FENCE

Being selected for the Departmental Manager Development Program was a thrill and a highlight

in my career. Few employees, even today, have the opportunity for this experience. It allowed me tremendous latitude to get into a number of different offices, and interview a variety of people, with the simple opening statement, "I am a Departmental Trainee this year....,"

Our first meeting, of all of the Fish and Wildlife Service trainees, was exciting, because we had all come from different parts of the country, and different functions within the Service. I knew several of the Service trainees, and would come to know the rest very well. Over the next nine months we would spend a lot of time together, some of it fun and some of it stressful. We did a lot of self evaluation, goal setting and planning for our future. We all thought that since we had been selected for this program, we had no where to go but up the ladder. For some of us that was true, but not for all. Over the past twenty four years, some of the group has just faded away.

Shortly before the program began, a neighbor told me they were moving, and would be gone for a year. Their departure time was about the same as when the program would start, and the year's absence would also be very close to the length of the program. Knowing that some of the folks coming from out of town would need a place for their family, I talked to the course coordinator in Washington, and the house was rented within an hour. The family who rented the house were friends we had not yet met, and were also a Fish and Wildlife Service folks. Our families struck up a lasting friendship right away.

Since he and I were going to be in the program together, we would also have the same work schedule. We rode the bus back and forth to Washington, a Greyhound commuter leaving from Woodbridge early each morning. The bus station was close by, just across Highway One, which was only a short walk through some townhouses from my back yard. A short walk that is, after we crossed the wire fence at the back of my property. And to get there, he had to crawl over a chain link fence between our two yards. The two of us must have been a sight crawling over those fences in our three piece suits, especially on days when he wore his red suit. Polyester was the fabric of choice

then; thank goodness those days are gone.

Even though we were each assigned an advisor, we were pretty free to set our own schedules as long as we made all of the meetings, and attended the required classes. One of those classes was Economics of Natural Resources, taught by a graduate student from George Washington University. Fortunately, he knew a great deal about economics. Unfortunately, he knew next to nothing about natural resources. The class left a lot to be desired because of that, but we all passed somehow anyway. Economics was not my strong suit in college, and my attitude toward the subject had not changed appreciably since.

One of the first assignments I was given was to write a recovery plan for the red cockaded woodpecker, an endangered species. I attacked the task with enthusiasm and the conviction that this would be a cake-walk. We knew what kind of habitat the woodpecker liked, and what was happening to cause its numbers to decline. One of the things this bird likes is to drill nest holes in old age pine trees that have heart rot disease. This is a condition that naturally occurs in old stands of pines, and is a primary reason the Forest Service likes to go in and clear cut old stands. They don't see old trees out there, they see lumber.

So, in my enthusiasm, I went downstairs to visit with a National Park Service management person. I suggested that in order to assist in saving the red cockaded woodpecker, we find old stands of pine on their land, and infect them with heart rot disease. My suggestion was met with a great deal less than enthusiasm. It was one of those "don't call me, I'll call you" responses. Oh well, it was worth a shot.

Another opportunity we had was to spend time with a senator or congressman, or a committee over on "The Hill". We were somewhat constrained in what committee or what congressman we could choose, because the Department didn't want any of us to have connection with budget committees which might have an affect on our annual appropriations. I was able to line up an assignment with a senator from New Mexico, Pete Domenici. That was exciting for me because he was my home senator. In retrospect though, it was not a real good

decision, because he was a first term freshman, had no juicy committee assignments, and was also feeling his way along. Since that time his lot has changed, of course, and he is now a mover and shaker in the senate. But it was fun to wander the halls and tunnels under Capitol Hill, just to see the senators and congressmen.

As trainees, we also had wide ranging access to offices within the Interior Department. Again the magic words "I am a Departmental Trainee this year...", were enough to get us into most offices. I shadowed the Director of the Bureau of Land Management, and attended Directorate meetings for the Fish and Wildlife Service. One of the most exciting tasks I was assigned was to accompany the Director to a Senate Hearing on establishment of a new refuge. I sat at the front table, just below the dais behind which all of the senators were sitting. They asked one question, relating to providing resting space for waterfowl, and the Director turned to me and asked that I answer the question. I thought I did a pretty good job, and they must have thought so too, since they didn't ask any more questions on that subject.

This training program was supposed to give us the background, and the credentials to move quickly through the ranks in the organization, and become "someone." Of course, attached to that was the unspoken but crystal clear understanding that you couldn't do that and stay in the same job. An upward mover had to have a broad breadth of experience. I took this to heart, and upon finding that there was an opening for a fish and wildlife biologist in the Ecological Services office in Olympia, Washington, I went for it. To the exhilaration of both Pat and me, the decision was approved by the Director, and in late May, 1973, we were on our way to the northwest.

I had learned my way around the "Hill" well enough that I knew how to find congressional offices, and knew they all had maps of their respective states. By this time the Training Program was winding down, and we had all the time we wanted to find our own things to do. So I walked over to the Senate Office Building, and visited the office of each state through which we would pass on our trip to Washington. My next

effort was to use a yellow hi-liter to mark each highway and projected overnight stop, all the way to Puget Sound. This was still long before I learned that control was not the key to harmony and getting things done. Had I known that then, we would have had a more leisurely trip. In spite of that, with two small children, the same psychotic dog, Taco, and a camp trailer loaded with houseplants, we made our way to the southern tip of Puget Sound. We discovered a whole new physical environment; we found...rain.

VII. THE SLUGS DRANK BEER

I don't remember that it was raining the day we arrived in Olympia, but I do remember that it rained for the next nine months. It wasn't a downpour like we get during the late summer in New Mexico, it was just a slow, steady drizzle, and it went on and on. It didn't take long for us to come to the conclusion that no matter what we were going to do, mow the yard or have a picnic or go camping, we would do it in the rain. Once we accepted that, we were alright. Early on, we heard a story about that.

It seems that a fellow had tried for some time to get his girl to marry him, and move to western Washington. Finally, when he told her that she would love it because it is always green, she relented and married him. They moved to Washington, and she quickly found out why it is always green. It is always raining. We did adjust though, and actually came to like the area very much. We have agreed several times since leaving, that if there was any place we would go back to, if we had to leave Albuquerque, it would be Olympia.

As a further example of the rainfall, and how people miss the sunshine, I think back to the Olympia office. We were located in a World War II barracks, at the foot of a blackberry covered hill sloping down to the water front. Projecting out into the bay was a substantial pier, the one time support for the navy mothball fleet. On days when the sun would finally peek through the clouds, the staff reacted as if someone had pulled the fire alarm, and many of us assembled on the pier to enjoy the feel of sunshine.

After selling a home in the Washington, D.C.

commuting area, we found housing prices to be very attractive. We bought a nice home in an area which was just developing. The area was called Woodland Creek, and in fact there was a beautiful creek running through it. Behind our house was a tract of undeveloped land, grown up with brush and trees, essentially a western Washington forest. Pat's grandmother visited us there once, and didn't want us to let the boys play outside because of the wild animals which might be in those woods.

We didn't see many wild animals out there, other than the squirrels, chipmunks and occasional snakes that were supposed to be in residence. There was one "wild animal" that we saw frequently however. That was the slug, a slow moving, and rather ugly, black, slime machine. We would frequently see a slime trail leading up and down our sliding glass patio doors; from a slug. There was one option for getting rid of at least some of them, before they trailed across the patio door, or the door knob. That was to bury a nearly empty beer bottle, slanting up from the soil, near the patio edge in the evening. The next morning you would have a wonderful collection of slugs in that bottle, which you could throw away. What else do you do with a beer bottle full of slugs? Of course, you knew this only made you feel like you were doing something. The woods were full of a never ending supply of slugs, helping the rotting process and just waiting to attack your patio door.

The rain also continued into winter, and on very rare occasion it turned to snow. Our second winter there we had a blizzard, and several inches of very wet snow fell, breaking power lines, and occasional trees. Most of the trees in that area were evergreens, and very pliable, just bending with the weight of the snow. There are also white barked alder trees, which are brittle and will break if too much wet snow gathers on them. That is what happened one winter evening, just when I went out to see how much snow had fallen, and how badly the trees were bending. I heard a sudden, loud crack, followed by a crash and a horrible buzzing sound. At that moment, our house and part of our neighborhood became dark.

The crack of course was a large alder tree, which crashed onto a corner of our house, breaking

through to the attic, bouncing off and taking down the power line which serviced our home. The buzzing was the electric fuse box blowing up immediately next to where I was standing. That sent an electrical surge through our neighborhood, knocking out power to several other homes, and our community well. Rube Goldberg could not have planned a better sequence of events to turn the water off. We learned that it takes a lot of snow, melting on the stove in the camper, to gather enough water to flush the toilet. For a couple of days, little boys writing their name in the snow in the back yard, was OK.

One of the responsibilities of my job was to inspect sites of proposed personal docks on the thousands of miles of shoreline in and around Puget Sound. Inspecting these sites often took me as far north as Anacortes and Port Townsend, opposite each other at the mouth of the Sound. The reason for the inspection was federal responsibility to assure that the structure did not have a negative effect on the environment, specifically the fish and shellfish so abundant in those biologically rich waters. This could happen through shading or interruption of the natural water currents along the shore. Sometimes our recommendations, which were made to the Corps of Engineers, made us quite unpopular with the landowner who had paid a lot of money for waterfront, only to have the Fish and Wildlife Service object to their building a dock. Usually we could come to some agreement with the applicant to modify his plan in a small way, so that our concerns were alleviated.

Like my concerns with the prairie dog work years ago, I again had the feeling that we were sometimes overstepping, if not the letter of the law, at least the element of reason. At times I think we did. And then I would find the shoreline owner who was running his bulldozer into the water, well below the low tide line, and reeking havoc on shellfish beds. Then my concern over our actions would lessen.

There was one person, however, who was all in favor of our protecting the shellfish beds. Pat and I attended a picnic with the antique bottle club I belonged to. We met on a small bay along the Sound, and had a clam bake, the first we had been to. Pat dug into the steam pot, learned how to open

the clam shells, and just flat enjoyed herself. She amazed both of us, eating freshly harvested clams, and loving it.

We made one trip "out of the country" while we were in Washington. Leaving the boys with friends for a long weekend, we caught the ferry in Seattle, cruised north through the San Juan Islands and landed at Victoria on Vancouver Island, British Columbia. I will never forget sailing through the islands, and seeing several bald eagles in the trees along the water. At that time the eagle was in trouble, and to see more than one at a time was a treat. We had tea at the appointed time on the hotel veranda, rode a double-decker bus to Busch Gardens, and saw the most beautiful flowers, all over Victoria, one can imagine.

I didn't travel much in this job, mostly day trips to inspect the various dock and pier applications. My office did get a request from the Washington Division of Game for one of our biologists to do the annual white wing dove census. I was able to get authorization to take Pat and the boys along on this trip, and was glad I did. The surveys I did were in the southeastern corner of Washington, in very rural country. The census route ran through one small town, and those people probably wondered who that was out there at sun up with his family and binoculars. We found a lot of white wings, and had a nice family vacation while we were at it. Taking my family along on such a trip, is something I have done only once in my career. I am not real sure, because of the family being there, that the census numbers were really reliable. The boys got a taste of what doing a wildlife census was, but were hard pressed to stay quiet so as not to scare the birds off.

In April 1975, I received a telephone call that thoroughly surprised, and wildly excited both Pat and me. That call was from an old friend of Fisherman Island days, who was by then the Chief Scientist for the National Park Service in their Boston Regional Office. He called to ask if I would be interested in a four-month detail to the National Park Service, in New York City, at the new Gateway National Recreation Area. The job would be to write the management plan for a wildlife refuge to be established on the new recreation area. Park Service would pay all expenses for me and

my family, and would work out the details with my
superiors in Washington. Would I be interested?
*Larry A. Dunkeson is an FWS Retiree living in New
Mexico.*

Reporting (Almost) to our First Duty Station

When I graduated from Humboldt State College in January 1963, I had already worked for Fish and Wildlife Service three summers in Refuges' student trainee program (one summer at Stillwater Refuge in Nevada, and two summers at Sacramento Refuge in California). The Service was hiring a lot of biologists in those days (those were the days!) and, if you were in the student trainee program, you were pretty much guaranteed a job at graduation. You didn't get to choose where that job would be, but you did have a job waiting for you.

As graduation neared, I had a number of phone conversations with Gib Bassett, our Region 1 personnel officer. Sally was very much pregnant with our first child, and I was able to get a two-month delay reporting for duty. There had been various rumors about where we might be going, but Gib warned me not to do anything until I actually had my transfer papers in hand. The papers finally arrived, and I found I had been assigned to the Merced Refuge in central California.

As a student trainee, I was a career-conditional employee, and had some financial coverage for our move. Unfortunately, I was only covered from my last duty station (Sacramento Refuge) to the new one, a distance of a couple hundred miles. To save some of the money that we didn't really have, we decided to make the move from Humboldt to Merced in our '51 Ford sedan. We thought we could probably do it in two round-trips, paying only to have our (very limited) furniture moved by truck.

Even though Sally was eight months pregnant, we loaded up the car, and drove the 500 miles down the Redwood Highway and through the Bay Area to Merced. I had never been to refuge headquarters, but had worked six months for California Department of Fish and Game on their wildlife area at nearby Los Banos, so the territory was familiar. Another assignment in the Central Valley hadn't been our dream, but as we drove Sandy Mush Road, we saw the obligatory refuge coot, and felt like we were "home."

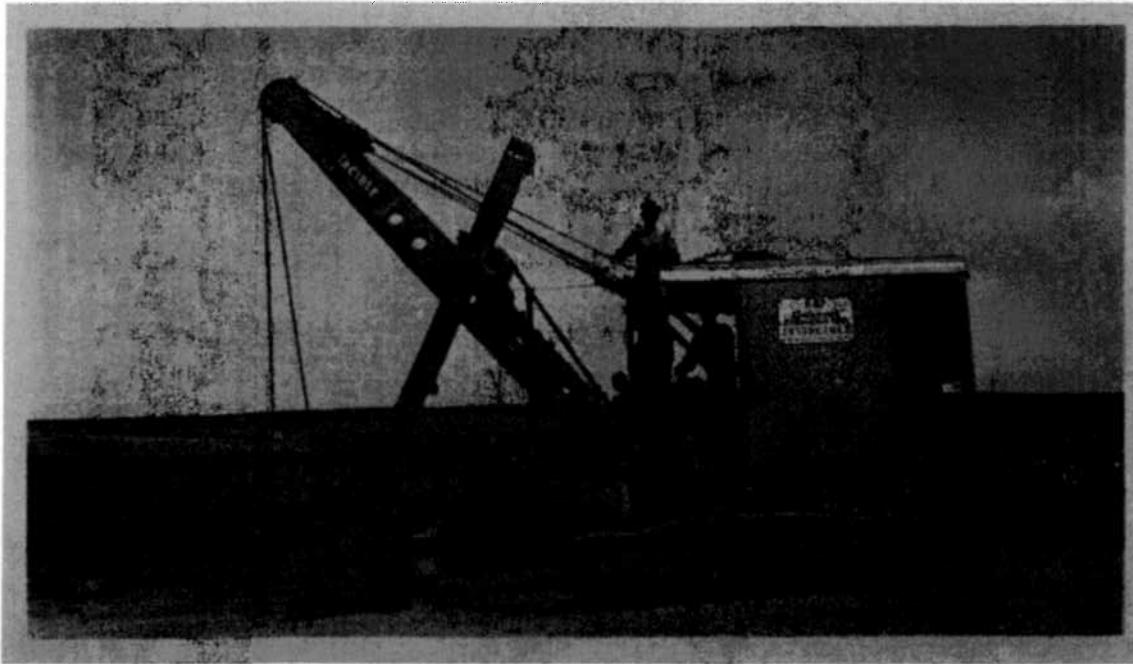
That feeling changed quickly as we entered the refuge office. Don White, the manager, was there by himself. (I don't think he had a clerk, at that time.) He asked, not particularly cordially, as I recall, who we were. I said, "I'm your new assistant manager." "I don't think so," he replied. "I better call Mac."

"Mac," Ken McDonald, was Region 1 refuge supervisor. He was well-liked and respected, I think, but he liked to move his field folks around, sometimes on fairly short notice. We stood in the office, and listened to Don's half of the phone call to Portland. Mac was obviously doing most of the talking. When the call was over, Don turned to us, and said, "Mac says you're not coming here." He paused. "Mac also says that I'm not staying here."

We climbed in our still-loaded Ford, and drove back to the Redwoods. A month later, with a 9-day old baby boy, we were headed for Minidoka Refuge in southern Idaho. Don was also on his way north, to Bowdoin in Montana.

Sanford R. "Sandy" Wilbur's FWS career ran from 1960 to 1994, beginning with Refuges (Regions 1 and 4), moving to Research (Patuxent field staff), then to Region 1 Endangered Species, and finally back to Region 1 Refuges.

A Summer on the Otter Tail River



Civilian Conservation Corps crew using a dragline on a refuge.

My first job offer in the field of wildlife biology came while I was seated on the front steps of a drug store in Tower-Soudan, a small mining town in northeastern Minnesota. It was a sunny day in early June 1941. I had recently received a bachelor's degree in wildlife management from the University of Minnesota and I was working as a chainman on a surveying crew for the Minnesota State Highway Department. We had been slope-staking a stretch of new highway east of town. Our crew was in the middle of its lunch break when a pickup truck with U. S. Fish and Wildlife Service markers on its doors rolled up and parked nearby. A tall, handsome fellow dressed in neat khakis stepped out and approached us.

"I'm looking for Liven Peterson," the man said.

"Right here," I said, much mystified.

The stranger identified himself as Gil Gigstead, the manager of Tamarac National Wildlife Refuge. I had never heard of it but learned it was a new federal refuge located near Detroit Lakes in western Minnesota.

"Your name came up on the civil service list of eligibles for a job as a student assistant at the

refuge this summer," Gigstead said. "I drove over here to check you out."

Gigstead had stopped first at my hometown, Virginia, located 35 miles south of Tower-Soudan. He learned my whereabouts when he talked to my parents.

He proceeded to question me at some length about my ability to identify waterfowl and aquatic vegetation. In due time he took his leave, advising me to stick to my current job until I received official notification from the Service's regional office in Minneapolis that my appointment had been approved.

After Gigstead departed I told Don Grey, the engineer in charge of our party, about the job offer. He advised me to take it even though it was just a summer job. Both jobs were at the very bottom of the pay scale, less than \$100 per month. I might be able to stay on working for the state and, with experience, become an instrument man operating a level and transit, but there was not much future in that because I did not have an engineering degree. On the other hand, the refuge position, although temporary, would provide me with experience in my chosen field. The nation was still struggling to

work its way out of a deep economic depression, and jobs were hard to find.

About a week later I received a telegram from the Minneapolis office advising me to report to Tamarac Refuge as soon as possible. I scraped up \$300 from my meager savings and bought a used 1935 Oldsmobile, a straight-eight, four-door sedan. I packed my suitcase and soon was headed westward with high hopes on my first venture into the Outside World. My car worked fine but it had a tendency to vapor-lock when I parked it after running it hard. I learned to park on a down-slope so I could get it started again without waiting for it to cool off. My destination was 200 miles west of Virginia, about half of the trip over graveled roads common in those days. Gas cost about 18 cents per gallon. My route was through second-growth woodlands with many scenic lakes most of the way.

I crossed the refuge boundary on a late Sunday afternoon in mid-June and stopped at a small, white farmhouse to ask directions. As luck would have it, I found that Clem Mercier, the refuge clerk, lived there. The refuge headquarters office was just around a curve in the road. Clem, a very friendly guy, guided me a few miles further to a Civilian Conservation Corps camp where I was to room and board.

At the camp I moved my gear into the staff bunkhouse where I was assigned a small, Spartan room equipped with a table, chair, army cot, and mosquito bar. I was too late for the regular evening meal but the cook in the mess hall gave me a husky baloney sandwich, an orange, and a cup of coffee. Clem then left me to my own devices, announcing that he would see me at the refuge headquarters in the morning. I plugged in my little Sears Roebuck Silvertone radio and hung some of my clothes from nails in the wall. Bedding was provided by the camp. It was a good start for my summer adventure.

The CCC camp consisted of a cluster of one-story frame buildings perched along the bank of a tranquil stream called the Otter Tail River. The area was quiet and remote. When I crawled into bed that night, under my mosquito bar, I was lulled to sleep by the whine of hungry mosquitoes and the

murmur of the Otter Tail's waters just outside my window.

I did not realize at the time that my bedroom was within sight and sound of one of the most highly rated streams for recreation in Minnesota. The Otter Tail River is 200 miles long and rises just west of Itasca Park, which is the source of the Mississippi River on its route to the Gulf of Mexico. The Otter Tail is part of the Red River drainage, however, and its waters eventually flow to Hudson Bay. Brook trout inhabit its upper reaches. The stream meanders from lake to lake through the length of the refuge. It has clear water, a gravel bed, and gently flows through small lakes with stands of wild rice and past miles of mixed woodlands. It has one major tributary in the refuge, the Egg River, which drains the northwest quarter. Another small river, the Buffalo, originates at Tamarac Lake on the west side of the refuge and flows about 90 miles westward to join the Red River also.

The next morning, at breakfast, I met the five camp-staff members. These men were LEMs, or Local Experienced Men, who directed the training and work of the enrollees. We ate in a dining room in our bunkhouse. The enrollees ate in the mess hall. The camp commander was an Army Reserve captain. CCC camps were administered by the U. S. Army. The men were issued Army clothing and assigned to "companies." They had to follow a disciplined schedule with reveille and retreat formations. On weekends they had to have a pass to leave camp. We all worked Saturday mornings in those times.

I paid a small fraction of my \$85 monthly salary for room and board at the CCC camp. In addition to our bunkhouse there was a central kitchen-mess hall, storage buildings for trucks, tools, and other equipment, and several barracks that housed the trainees. The men were being trained in the use of heavy equipment such as bulldozers and draglines. They had scooped out ditches to provide open water for wildlife in bogs, built low dams and gates to control water levels in the lakes, and maintained roads and trails, among other things. They also had an educational program where they could earn credits for a high school diploma.

At the refuge office I learned that Tamarac Refuge was located about ten miles east of the western margin of forested land in Minnesota. In other words, open prairie lands stretched from the forest margin west to the Rocky Mountains in Montana. The refuge was a rectangular tract roughly 7 miles east-west by 13 miles north-south (about 43,000 acres). It encompassed second-growth mixed woodlands (aspen, birch, maple, oak, spruce, and pine), two dozen marshy lakes, and a few farms that were reverting to natural vegetation except for a few fields that were planted to grain crops for wildlife food. It was located in the transition zone between the northern hardwoods of central Minnesota and the coniferous forests of pines and spruce of the north. Most of the virgin white and red pines had been logged off by 1920.

The terrain had been glaciated and was gently rolling with many depressions filled with water, bogs, and swamps. The area lay just a few miles east of the former shoreline of historic Lake Agassiz, an enormous glacial lake that covered nearly 200,000 square miles of central North America with water melting from receding glaciers. The lake drained away to the north about 8,000 years ago.

President Franklin Roosevelt authorized the refuge in 1938 by executive order. By 1940 the land had been acquired with Federal Duck Stamp money. A new law (1934) at that time required waterfowl hunters to buy the stamps each year to legally shoot waterfowl. A stamp cost a dollar then. Today the stamp costs \$12.00.

In the summer of 1941, a few inholdings were still owned by politically powerful gun clubs but these were acquired by the late 1960s. The White Earth Indian Reservation surrounded the refuge on three sides, and the north half of the refuge was also reservation land. The native Indians were Chippewas.

The refuge headquarters, which consisted of a two-room office at the end of a four-stall garage, was located about 20 miles from the closest town, Detroit Lakes. A country post office and general store known as Rochert served the rural community near the south boundary. Phone service

was primitive, consisting of a party line serving a number of farm homes in the neighborhood. When the bell jingled two short rings it signaled a call to the refuge. Others on the party line would often listen in to a call.

The refuge staff consisted of three people. Besides Manager Gil Gigstead, there were Clem Mercier, the clerk, and Hank Broker, the patrolman. Gil and his wife Lorraine lived in a new ranch-style home near the headquarters. Mercier and his wife lived in a farmhouse about a mile away. Broker and his wife lived in another farmhouse about 3 miles distant. The scrubby fields had been taken over by the refuge. There was a patrol cabin located near the north boundary and it was unoccupied. They were the only people living on the refuge other than the occupants of the CCC camp, which was near the east boundary. Several good graveled, public roads crossed the refuge, but there was little traffic.

On my first day of duty Gil told me that my main job would be to map aquatic vegetation of refuge lakes. He provided a set of instructions so my maps would conform to Service standards. He also gave me a field diary, a small pocket-sized booklet in which I kept brief notes on my daily activities. At the end of each month I would turn my diary in to Mercier who summarized my accomplishments in the monthly report that was sent to the Minneapolis regional office. I still have my field diary. Each page with its terse scrawled notes brings back a host of memories.

For example, on Friday, June 27, 1941, I wrote the following:

"Two hours in office working on maps. Then up to Wauboose with Mercier. Saw pair of Hoelbell's Grebes (now red-necked grebe) and nest near east shore. Osprey flew over."

"Chara abundant. Water quite shallow. Bottom slopes out gradually to a maximum depth of 15 feet. Fairly clear but starting to bloom (algae). Bottom sandy to silty. Surrounding arboreal vegetation 2d growth hardwood. "

"North shore drops off more quickly than the others. A narrow strip of bulrush underlaid by

a wider zone of chara lines the shore. In the deeper water beyond the chara lies a belt of Najas. Throughout all of this are scattered beds of Potamogeton zosteriformis and P. perfoliosus. Six hours on lake."

While I was on the lakes, I kept a record of where the denser beds of wild rice were located for possible harvest later. As the summer wore on I became more aware of the rice beds slowly emerging into view. Wild rice belongs to the grass family and its Latin name is *Zizania aquatica*. As the name implies it grows in water. The stands of graceful green fronds arching over the water were common at many sites in the refuge. Indians had depended on the rice for food in this country for hundreds of years. Our wild rice is related to the cultivated rice (*Oryza* sp.) used for food worldwide. The latter was developed from Asiatic species of wild rice.

In addition to mapping, I did anything that the manager wanted me to do. I had a wide variety of experiences. Gigstead made sure I became aware of the many responsibilities that a refuge manager has. I made waterfowl brood counts, patrolled boundaries, did clerical and farm work, maintained equipment, harvested wild rice, and started a collection of aquatic plants native to the refuge.

According to my field notes, I spent about 40 percent of my time on the mapping project, including both field and office time. Twenty percent of my time was directed towards wildlife surveys. The remaining 40 percent was divided between janitorial-maintenance chores (13%), clerical (11%), ricing (8%), and patrol work (8%). About midsummer the regional office informed Gigstead that his biological aide seemed to be spending too much time doing menial tasks like sweeping the office, mowing the lawn, cultivating a corn field, and cleaning up the garage, so the balance of my time changed for the better after that. I did not mind doing some menial chores but I probably could have gotten at least one more lake mapped if I had not been diverted to such trivial work so much.

As it turned out I mapped eight of the lakes on the refuge, about one third of the total. The total is

indefinite because some lakes lay partially outside of the refuge. The lakes mapped were Pine, Flat, Two Island, Wauboose, Blackbird, Balsam, Chippewa, and Tea Cracker. The lake I remember most clearly is Two Island, probably because it had two islands and was more irregular than the others. It also seemed to be the deepest.

For most of my field mapping I used a metal duckboat. The usual routine was for Hank Broker to take me and my boat in his pickup truck to a lake and leave me for a half day or sometimes the whole day. Hank was a quiet dependable guy... someone I felt very comfortable with. I had a clipboard for my map, a cord with a weight for making soundings, a canteen of water, and a small jar of homemade insect repellent (pine tar and citronella). Deer flies and horse flies were vicious and abundant.

During the first week I learned my way around the refuge and became accustomed to the routine and the people I lived and worked with. I enjoyed exploring the lakes and recording my observations. I had the lakes to myself ... they were wild and undisturbed as refuge lakes should be. Today I would not enjoy sitting all day in a leaky duckboat under a blazing sun swatting horseflies, but one has a different viewpoint when young. In retrospect, however, this was one of the best summers I ever had.

I found the lakes on the refuge to be quite shallow and small, rarely exceeding a mile at their widest point. Flat Lake was the largest, extending two miles at its widest point. The warm shallow waters produced an abundance of aquatic vegetation such as sago pondweed, Najas, chara, bulrush, and wild rice. I would simply row around the lake, stopping to sketch in major beds of vegetation as I found them, estimating their shape, location, and density. I also measured the depth from place to place. The method was not precise but somewhat similar to the forester's technique of timber cruising. Botany and ornithology had been among my strong suits at college so I did not find the work difficult.

In the office I spent considerable time making final inked copies of my field maps. I sat at a small folding table in the outer office with pens, India

ink, and a few simple drafting tools. I took pride in making the maps but sometimes I wondered what became of them. Did they stay at the refuge or were they sent to the regional office? Did Gigstead really want them or were they the products of an idea dreamed up by someone at the regional office?

In the course of doing this work I kept a record of the birds and other natural phenomena that I observed although emphasis at that time was placed on waterfowl management. For example, on June 24 I flushed a loon off its island nest at Two Island Lake, the bird slithering into the water like an alligator, its legs being too far back on its body to support it properly on land. On another occasion I came upon a large snapping turtle that seemed to be in the process of devouring a duckling. I found nesting colonies of black terns, nesting red-necked grebes, and osprey nests.

One aspect of my work which seemed questionable to me was tending pole traps. These devices consisted of steel animal traps set on top of posts in open areas where raptors might alight. The intent was to "control birds of prey" which might kill ducks and other game birds. The traps killed more beneficial birds like flickers and meadowlarks than anything else. I caught a beautiful red-tailed hawk but I managed to talk Gil into banding and releasing it. A short-tailed weasel climbed to the top of a ten-foot pole and got caught. I made a taxidermic mount out of it. Since the trap was not baited I wondered what compelled the weasel to climb up the pole. About mid-summer, much to my relief, I was told to dismantle the pole traps.

One day Gil took a mildewed leather holster with a Colt .45 caliber revolver out of a locker. He handed it to me and said I should carry it on my day's mission, which was to cruise a stretch of the east boundary in search of deer-poaching evidence. The Colt was a veteran of World War One and was equipped with a banana clip so it would accept .45 automatic cartridges instead of the standard rimmed bullets it was designed for. It was loaded with three bullets. I had no authority to arrest anyone but I think Gil thought it would be good experience for me to think about the need for law enforcement on a refuge and also for self defense. He also may have been having a little fun with his young tyro

aide. I was not overly awed by the pistol because I had one of my own (a .22 caliber) that I used for hunting rabbits and grouse.

Hank dropped me off near the northeast corner of the refuge, and I plunged into the brush with my compass and headed south to meet Hank at the next point where a road crossed the unfenced boundary. A poacher might leave some evidence in the form of deer hair rubbing off as he dragged the carcass across the boundary. My tramp through the woods was uneventful and I met Hank about noon.

Occasionally visiting big-shots would interrupt our routine. August 7 was a red-letter day for me because Dr. Clarence Cottam, Dick Griffith, and Fran Gillette, all Fish and Wildlife Service staff members, dropped in. Luckily I had just come in from the field with some plant specimens I wanted to identify. Dr. Cottam was an expert in the field of aquatic vegetation and he took great pleasure in helping me name my plants.

Another big name that I met was Shaler Aldous, a research biologist with the Service. He was looking for a site for a beaver research station. He wanted to study captive beavers. The farmhouse occupied by Hank Broker and his wife was selected as a possibility, so I was assigned to make sketch maps of the house, outbuildings, and grounds. Before he left, Shaler asked me if I'd take the job of caretaker the next winter if his project was approved. I accepted, but the project was cancelled when war broke out in December.

Gil Gigstead had made a name for himself by pioneering in the use of wood-duck nesting boxes in the mid-1930s while he was manager of Chautauqua Migratory Waterfowl Refuge on the Illinois River near Havana, Illinois. Those bottomlands supported one of the largest breeding populations of wood ducks in the country. I was somewhat awed by the fact that Gil had presented a paper on wood ducks at the Third North American Wildlife Conference in Baltimore, Maryland, in February 1938. In his article he went on at some length about the habits of that species, based on personal observations in the Illinois bottoms. Among other things, he found that snakes caused more damage to eggs and young than any other predator.

Early in the 20th century wood ducks had been reduced almost to the point of extinction by market hunting and loss of habitat. The season for wood-duck hunting in Canada and the United States was closed from 1918 until 1941, when their numbers had increased enough to allow limited hunting once more. The season had been closed all of my life. Naturally we talked about the future of the wood duck at some length.

The conclusion of Gil's article went as follows: "Wood ducks should be forever protected. They should never again be permitted to be classed as a diminishing species. Their value as meat should never be given another thought. This magnificent creature which nature has adorned, and designed so attractively should be encouraged to represent a symbol of achievement in Conservation."

Although I was an avid duck hunter and bird watcher I had never seen a wood duck in the wild. On some weekends in northeastern Minnesota two of my friends and I shot sixty ducks, mostly scaup and ringnecks, which we quickly parceled out to friends and neighbors so we could try to repeat the performance the next weekend. In those days the daily limit of most ducks was ten, with a possession limit of twenty. In 1941 I think one wood duck was allowed in possession.

When Gil mentioned that they had set out a number of wood duck boxes on the refuge I asked if I might check some of them to see if they had been used. He reluctantly gave me one afternoon to look at some boxes. It was a time-consuming process because the boxes were scattered all over the area, and we had to haul a ladder in a pickup to each site. The upshot was that we did not find any evidence of nesting by wood ducks. Further, I did not see a wood duck anywhere all summer, except for one possible on Flat Lake.

Later I ran across one bit of wood-duck trivia: in October 1959 someone in Otter Tail County shot a male wood duck that had 56 bur oak acorns in its crop and throat. That kill was made not very many miles south of Tamarac Refuge.

Another disappointment was my survey of the ditches cut through the bogs. CCC trainees had

used draglines to scoop out ditches about 6 or 8 feet wide. The ditches were made in areas where the water table was close to the surface. The ditches did not drain anywhere but were made simply to provide open water habitat. In my brief survey I found no evidence of waterfowl use. The ditches had been made the previous year. Gigstead had found in Illinois that young wood ducks often fed on insects in drainage ditches that had no aquatic plant life; hence his interest in ditches.

Gigstead also fancied hunting dogs. He owned five...three pointers (Shot, Lady, and Sunshine), an Irish setter (Patsy), and a springer spaniel (Butch). Sunshine was the runt of a litter reared by Shot and Lady so Clem and I promptly renamed him "Halfshot." Gil was not amused. As a hunting dog lover myself I was envious of Gil's canine wealth. My dog Jeff, waiting my return to Virginia, was a husky Chesapeake-Irish water spaniel cross who thought his main purpose in life was to retrieve decoys.

In August I was told that our CCC camp was going to be closed. A more important need for young men like the enrollees had come up. In 1941 the military draft was in effect, and war was raging in Europe. Thousands of draftees were being called into active service each month in the United States. The Selective Service Act passed in September 1940 was to be in effect for only one year. When it came up for renewal in August 1941 it passed the House of Representatives by a margin of only one vote. So the draft was continued, and the Civilian Conservation Corps was phased out. No one knew at that time, of course, that the Japanese were planning a surprise party for us just a few months later at Pearl Harbor on Dec. 7, 1941. Attitudes about the draft and foreign conflicts changed overnight then.

My Selective Service classification was 1-B so I was not acceptable for active duty in 1941. A year later they were not so fussy and I found myself in the field artillery at Camp Roberts, California. But in August 1941 Tamarac Camp FWS 2 closed, and I moved to room and board at a nearby farm operated by Mr. and Mrs. Wachsmuth.

Mrs. Wachsmuth was an excellent cook who

stuffed me with eggs, bacon, sausage, and pancakes for breakfast and pork roast, meat loaf, sweet corn, and homemade bread in the evening. They did not yet have electricity on the farm, so our lighting in the evening was restricted to Aladdin or kerosene lamps and candles. The farm was homey and comfortable but I missed the camaraderie of the CCC camp.

Fifty odd years later, as I write this and watch the current political scene, I think back with nostalgia to the days of the CCC program. It marked the start of an era of great progress in wildlife conservation.

Franklin Delano Roosevelt took office as president of the United States early in 1933 and one of his first actions was to establish the Civilian Conservation Corps. The nation was in the throes of the Great Depression, and 14 million wage earners were unemployed, one of every four. Roosevelt wanted to put young men to work and also manage the natural resources of the country. He had no detailed plan but simply turned his idea over to capable aides.

Congress passed the Emergency Conservation Work Act March 31, 1933. The first enrollee was registered April 7, 1933, and the first camp was established April 17, 1933. The program was an instant success and a great boost for thousands of young men and their families across the country. It gave them hope and confidence and brought food to the family table. A dollar bought considerably more in those days than it does now.

In 1933 I was sixteen years old and somewhat aware of the economic problems facing the country. One problem was the surplus of grains and other farm products. After World War I we stepped up farm production to feed the starving people of Europe. As they recovered and began to feed themselves, we found ourselves in high gear with less demand for our farm products. Prices for crops declined. Farms began to default in their loans, and banks began to fail. People were unable to pay as much for goods and services. Unemployment began to rise. We had no welfare programs beyond private charities. President Herbert Hoover, an able and respected man, and his Republican administration seemed helpless to do anything

about it. Franklin Roosevelt and the Democrats took over the government.

In my home town of Virginia, Minnesota, on the Mesabi Iron Range, a large lumbermill closed down. They had cut most of the virgin pine forests in northern Minnesota and they moved out west to Oregon. They left behind hundreds of unemployed lumberjacks. These men built tiny shacks of scrap lumber on the outskirts of town forming clusters of hovels that were called Hoovervilles. Many working people were forced to take days off without pay, called Hooverdays, of course. The Farmers and Merchants State Bank failed. Frugal families lost their life savings. The iron mines on the Range cut back production and dismissed a number of workers. This dire economic condition had developed after the stock market crash of 1929.

I, along with my circle of teenage friends, watched these developments with concern. What should we plan to do for a living when we were pushed out of the nest? Some of the kids were managing to pick up pocket money by delivering papers or setting pins at the bowling alley. There was no future in that, of course, so what occupations looked promising? We studied with interest the publicity about the CCC program. Enrollees were to be paid \$30 monthly with \$25 to go to their families. Enrollees had to be 18 to 25, single, unemployed, physically fit, and members of families that were impoverished. No one in my peer group could meet that last requirement, but there were millions of impoverished families with young men who did qualify. Although \$25 a month sounds like peanuts now it was equivalent to \$250 in buying power today. Those extra dollars proved to be a godsend to many families who were on the edge of starvation.

Between 1933 and 1942 three million young men had served in the Civilian Conservation Corps. During that time they built 3,000 lookout towers, 8,000 foot bridges, 38,000 vehicular bridges, 123,000 miles of trails and bridges, and 5.8 million erosion check dams. They strung 84,000 miles of telephone line in remote areas, and an equivalent length of fencing on public rangelands. They planted 2.2 billion trees and they spent 6.3 million days fighting wildfires. They provided invaluable

aid in disaster areas hit by floods or hurricanes. When World War II appeared on the scene the Civilian Conservation Corps provided a ready source of healthy, disciplined men trained in useful skills when our nation needed them in a hurry.

Despite these impressive statistics, the program had its critics. The conservative wing of the political spectrum felt uneasy about Roosevelt's free-wheeling schemes financed by tax money. Some were quick to raise a hue and cry whenever a blunder occurred. When World War II appeared on the scene the Civilian Conservation Corps provided a ready source of healthy, disciplined men trained in useful skills when our nation needed them in a hurry.

In early September my three-month term of employment was about to end. The time for harvesting wild rice had come, and Gil put me to work with three others to collect rice. The reason was to provide rice for planting at other refuges. We went out with two rice boats that had been stored at the CCC camp. The boats were rather crude flat-bottomed craft, slim and sharp-prowed. Two men occupied each boat. One man stood in the stern and pushed the boat through the rice with a long forked pole. The other man sat in front with a long smooth stick in each hand. As the skiff moved through the fronds of rice, the front man bent the heads over the boat and beat the rice kernels so they fell into the boat.

Wild rice grew in fairly shallow water, up to four feet or so in depth. Beds were usually located where there was a slight current of clear water. The fronds extended three or four feet above the surface. The rice kernels were in loose heads, about a dozen or two on each frond. It was important to harvest the rice when it was ripe enough to shatter, or fall, fairly easily when whacked with the stick. If too ripe it would start falling into the lake before it was over the open boat. I pushed the boat most of the time, and it was not difficult to do so. As one worked the boat back and forth through the rice stands one had to keep oriented so as not to follow a course already harvested. I was surprised by the rice worms which fell into the boat along with the rice. The worms were about the color and diameter of a rice grain

although two or three times longer. They tended to climb to the top of anything in the boat so I soon would have them on my cap and along the length of my pole.

After the boat was fairly full of rice we would go to shore and shovel it into burlap sacks. The sacks would be kept under water to keep the rice from spoiling. Rice taken for human consumption would be preserved by drying in ovens. The local Indians would toast their green rice in crude ovens made of steel drums that were rotated over a wood fire.

We hauled our rice to the headquarters and kept the sacks in the water just off the dock in Flat Lake. We had to move the sacks around every so often to keep the water from stagnating. The rice would keep just a few days this way so it was soon trucked off to other refuges for planting. We collected rice from Flat and Egg Lakes between September 3 to September 8.

I felt that this story about my early days at Tamarac Refuge would not be complete without checking into its present status over fifty years later. I wrote to the refuge manager, Jay Johnson, and received a gracious response. Apparently the staff has grown from four to twelve people, including seasonal workers. They have a fine Visitor Center/Office facility and a good supply of equipment and vehicles. He is concerned about the downsizing that the Fish and Wildlife Service may undergo in the near future. Current management emphasis at the refuge is directed towards the production and maintenance of migratory waterfowl, much as it was when I worked there. Grasslands are managed for nesting cover, wetlands for wild rice production, and forests to achieve biodiversity with mixed, uneven-aged stands. Sixty percent of the refuge is forested.

Johnson pointed out that the refuge supports an unusual diversity of wildlife, including gray wolves, trumpeter swans (restored), bald eagles, and a wide variety of songbirds (245 species). Moose are seen occasionally. I don't recall that wolves, eagles, and moose were ever mentioned while I was there although they might very well have been there at times in the early 40s. Trumpeter swans, of course, were unheard of. The

restoration project for that species has been a great success in Minnesota.

Other new developments are picnic areas, restrooms, launching ramps, historic site markers, hiking trails, cross-country skiing, a wilderness area, a self-guided auto tour route, and a natural research area

Refuge personnel also have the responsibility for managing wetlands within the 9,500-square-mile Tamarac Refuge Management District, which includes five counties extending up to the Canadian border in northwestern Minnesota.

I hope to return to Tamarac Refuge one day soon and visit some of the areas I explored over 50 years ago. The refuge has been preserved more or less in a natural state so I don't expect to see much change. I look upon my summer on the Otter Tail River in 1941 as one of the best summers of my life. In 1946, after World War II, I went back to work for the U. S. Fish and Wildlife Service but as I advanced in grade I became increasingly deskbound, wrestling with administration, personnel problems, and editing reports. I missed the carefree days afield, dreams of which had drawn me to a wildlife career in the first place.

Pete Peterson is a retired FWS employee currently living in Idaho.

Undercover in the Field



John Gavitt and his dog.

The first thing that needs to be said is that I had a wonderful career as a Special Agent with the Service. It could not have been more interesting and exciting, and I cannot imagine a job that allows you to have more independent decision-making than an agent in the field. I have many fond memories of the people I worked with and the successful investigations I helped to complete. I say ,helped to complete, because they never would have been successful without a team effort. I continue to be very proud of the very important work by the Service and its Special Agents.

For me, this was the job of a lifetime, one that took me to exotic places around the world, into the inner-workings of criminal gangs, and brought me into touch with wildlife challenges hard to imagine at the beginning.

I began my career as a Special Agent (SA) in 1976 on the Eastern Shore, in Salisbury, Maryland. Much of our time was spent on migratory bird enforcement, waterfowl hunting in particular. Duck populations were way down then, while Canada geese populations had never been higher. Baiting was very popular then, and we did quite a bit of pre-season work to locate baited areas and plan surveillance.

I remember one particular incident when SA Vernon Ricker and I were watching hunters shooting ducks from a baited blind. We heard a lot of shooting from another blind that was not that far away, and decided to investigate after taking information from the hunters in the first blind. Approaching the second blind, we immediately noticed that the two hunters in it appeared to be nervous. They had a limit of black ducks (4) in the blind and we felt that they had hidden additional birds somewhere. We told them that we had been watching them during the entire hunt and they might as well go and get the other ducks. Without a word, one of the hunters got out of the blind and headed to their boat. He took out a gas can, turned it upside down, and proceeded to pull five additional black ducks out of the gas can! (See photo). Needless to say, SA Ricker and I were quite pleased with our ruse! We proceeded to check more hunters in the area and, on the way back, we saw smoke spiraling from what was the location of the same duck blind. The hunters had burned it down!

I left Salisbury in 1979, transferring to Sioux City, Iowa. I spent a couple years in Sioux City, getting my , feet wet, in undercover work by purchasing feathers and other parts of eagles from stores selling them ,under the counter. I then went to

work for the Branch of Special Operations, Law Enforcement, a Washington-based undercover unit working on large-scale commercial wildlife investigations. In 1980, I spent a year as a fish dealer in Medford, Oregon, buying and selling illegal salmon originating from the Klamath River in California. I then moved to Fort Collins, Colorado, and spent the next three years as John Cummings, a business manager, for a game processing and taxidermy business there. The head of the business was a paid cooperator.

This 3-year investigation, later dubbed, "Operation Trophykill," focused on illegal hunting and wildlife smuggling activity in and around Yellowstone Park, as well as illegal wildlife trade in other states and in some foreign countries. It was an exhausting period of my life, but a case that turned out to be very successful. In October 1984, 50 arrests were made for offenses that included illegal guiding, taking and illegal transport of bald and golden eagles and other migratory birds, hunting big game out of season, illegal import of cheetah and jaguar skins, and falsification of endangered species records.

With the assistance from many agents in the Region and the Branch of Special Operations, I was able to infiltrate a poaching gang around Yellowstone Park by selling elk antlers to dealers in the area. I would travel to Gardiner, Big Timber and other local towns in Montana with a load of antlers that were supposedly from Colorado ranches. Actually, they were antlers seized from collectors operating illegally in Yellowstone in the first place! SA Joel Scrafford, who was located in Billings, kept me supplied with elk antlers (and intelligence) during the entire investigation.

Being an antler dealer led to buying skins from illegally taken bighorn sheep, mountain lions, and other big game animals from a local poaching ring. After gaining his confidence, the head of the ring agreed to take some of my clients on illegal big game hunts. Of course, those clients turned out to be other Special Agents, so the evidence against this band of thieves kept building over the 3-year period.



Returning from a jaguar hunt in Mexico, carrying a wild turkey that was shot on the last day.

About midway through the investigation, I went to Mexico on an illegal jaguar hunt. The representative from the Texas travel agency sponsoring the hunt told me that, if I killed a jaguar, they would get the trophy back into the United States with no problem (other than committing a violation of the Endangered Species Act, of course!).

I had no idea what I was getting into!

I was picked up at the border by a Mexican driver and we drove south for 2-3 hours in a driving rainstorm. The driver refused to turn the windshield wipers on, so I figured they were busted. About an hour into the trip, we came to a roadblock of Mexican Federal Police and we were ordered at gunpoint to get out of the vehicle. Naturally, I was getting a bit nervous at this point. I didn't speak Spanish but quickly learned the rudiments of the language by carefully following orders from an officer by interpreting his moving rifle barrel. The ,Federales searched the inside of the vehicle thoroughly and then let us go. (I forgot to say goodbye.)

When we finally reached the destination where we would switch to horses, the driver opened the hood of the vehicle and unscrewed a compartment where the wiper motor should have been. Inside the compartment was a small disassembled 12 gauge pump shotgun. The stock and barrel had also shortened to accommodate the tight fit. That,

along with 2 buckshot shells that had probably been carried during the siege of the Alamo, would be my weapon of choice during the next few days.

We got on horses and rode for many, many hours. Unfortunately, I wasn't careful enough when eating and managed to get a bug in me that took over my stomach and made that day and night one of the most miserable I had ever had. When we finally reached our hunt destination, I was so sick that I just dismounted (definition: fell from my horse), took out my poncho and lay down beside my trusted steed, trying to go to sleep between interruptions from my stomach. I finally faded off around 2AM and woke up an hour later to a pouring rain (what next!?), and then fell back asleep again.

Daylight finally came and I awoke shivering, feeling a bit better but knowing immediately that something was wrong. My skin was tingling but it wasn't a nice tingle. I had lain down on what must have been a huge nest of ticks, and they were all over me. I mean EVERYWHERE. I proceeded to pick them off of me, making a game of counting but getting bored with it after a couple hundred or so. Gratefully, most had not yet imbedded in my skin but it was a unique way to kill time before coffee was ready.

Anyway, by afternoon I felt better and we hunted tigre the next couple evenings without any luck (thank goodness). Upon our return to civilization my hosts offered to smuggle a couple jaguar skins back to the U.S. for me if I wanted to purchase them in town. I made the purchase, and the skins were hidden by my hosts in a small compartment in the van belonging to the travel agency. While heading to the U.S./Mexico border and the Customs area, we were approached by a Mexican Customs official. He entered the van and demanded where the skins were. I thought that someone had turned us in! NOT! In fact, the Customs official took the skins and smuggled them across for us! What a nice guy! And in case you are wondering, he was indicted along with the other defendants and had his assets frozen in the U.S. until he paid a hefty fine.

While Operation Trophykill was going on, I was also helping out case agent Don Schmidt and

others with Operation Falcon, one of the most controversial investigations in Service history. I was John Jackson, supposedly a close friend of the paid cooperator in the investigation.

Between John Cummings, and John Jackson, I was forever switching wallets and background stories. A highlight of the investigation was going out to Lake Powell and helping two defendants steal peregrine falcon chicks from a nesting area of the canyon on a high ledge looking down on the lake. I was not well qualified for this assignment because of my fear of heights! In any case, the cooperator, two defendants and I met up in Great Falls, Montana and we were off to Lake Powell, where we rented a boat and headed to the nest area. One of the defendants and I scaled the back side of the canyon and eventually came out on a ledge above the cliff.

Needless to say, I was one unhappy camper at this point.

Now comes the good part!

As there were no trees around, the defendant asks me to support him by looping the climbing rope around my body while he eases down to the nest site. In other words, John Jackson would you mind dying with me if you are not able to hold my weight while I descend the cliff. WHY, OF COURSE I WILL! I AM JOHN JACKSON, A MAN OF MANY TALENTS AND A VERY LOW IQ!!!, Anyway, I wrapped the rope around my middle and he descended the cliff. Sitting down with my feet wedged into a rock crevice, I thought that I could manage to hold him during the descent. However, as the defendant went over the cliff, the rope jerked hard. I lost my foothold and started sliding toward the edge of the cliff. Thankfully, I was able to gain a second foothold before I went over the side and found myself heading very quickly for Lake Powell. The defendant reached the nest, took two young from it, and continued his descent to the boat waiting below. Just another day of work at the office.

In early 1985, after Operation Trophykill ended, I went to Washington and headed up the Branch of Special Operations for five years. The agents

working in the Branch continued to do outstanding covert investigations, in spite of the fact that they often worked alone and under very difficult conditions.

One of the cases I remember best was the ingenious solution they came up with during an investigation involving the illegal taking of saguaro cactus off of public lands. SAs with the Branch set up a business front in Phoenix and began building credibility with the defendants by purchasing saguaro from them, and re-selling it to landscapers. However, they could never prove that the cacti were taken from public lands, and the defendants refused to take any of the SAs out with them during their illegal operations. However, there's more than one way to skin a cat. The defendants eventually borrowed one of the SAs trailers used to load saguaro, not knowing that an electronic bug had been inserted into one of the wooden rails of the trailer.

During late evening, when the defendants were out stealing saguaro, an SA Pilot was overhead, tracking the bug and the defendants' exact location. Once the defendants left the area, the SAs would enter, find the dig hole, and document the violation. This was done over several different occasions with great success. Clearly, their innovation and hard work really paid off!

In 1989, I was offered the opportunity to live in Switzerland and work for the CITES Secretariat, the United Nations Organization responsible for monitoring implementation of the CITES treaty on international wildlife trade by member countries. I actually had to resign from the Service (with reinstatement rights) and become a U.N. employee. I had a lot of support from within and outside the Service to get my paperwork in order before leaving for Lausanne, Switzerland in 1990. My position in the Secretariat was Law Enforcement Officer but with no actual enforcement powers. Needless to say, it was a challenging but fascinating time in my life.

I traveled the world on CITES matters, helping to document and expose treaty violations, providing training and encouraging non-member countries to join. I quickly learned how difficult it is to teach

conservation to people who are wondering where their next meal is coming from. I had to constantly deal with societies with difficult cultures and value systems and try to find common ground with each of them.

After five years in Switzerland, I missed the Service and the good old USA. When I would phone Law Enforcement in Washington and the receptionist would say, John who??. I figured that it might be time to go home! I was selected as Assistant Regional Director for Law Enforcement in Anchorage, Alaska and began my last assignment with the Service there in 1995. I had a wonderful crew of SAs and Wildlife Inspectors there. I was constantly impressed with the patience that they demonstrated with the ever-changing political scene and Alaska Native issues. My hat goes off to them.

I retired from the Service in 2000 and went to work for WildAid, a non-governmental organization focusing on improving enforcement in developing countries. I provided enforcement training and completed enforcement assessments in Cambodia, Thailand, Indonesia, the Galapagos Islands, and islands in the Western Pacific. In April of 2006, I decided that it was time to do something completely different, so I began a guiding business on my property in Hampshire County, West Virginia (www.northriverretreat.com). It is very fulfilling work, as I am able to introduce young people to hunting, fishing and other outdoor activities that inspired me to go into conservation work in the first place.

I am also on the board of two different local conservation organizations, and am very active in my church.

As I look back, I continue to be very grateful for the wonderful career I had with the Service. I am living the best years of my life right now with my wife Arlene and two English setters in Winchester, VA.

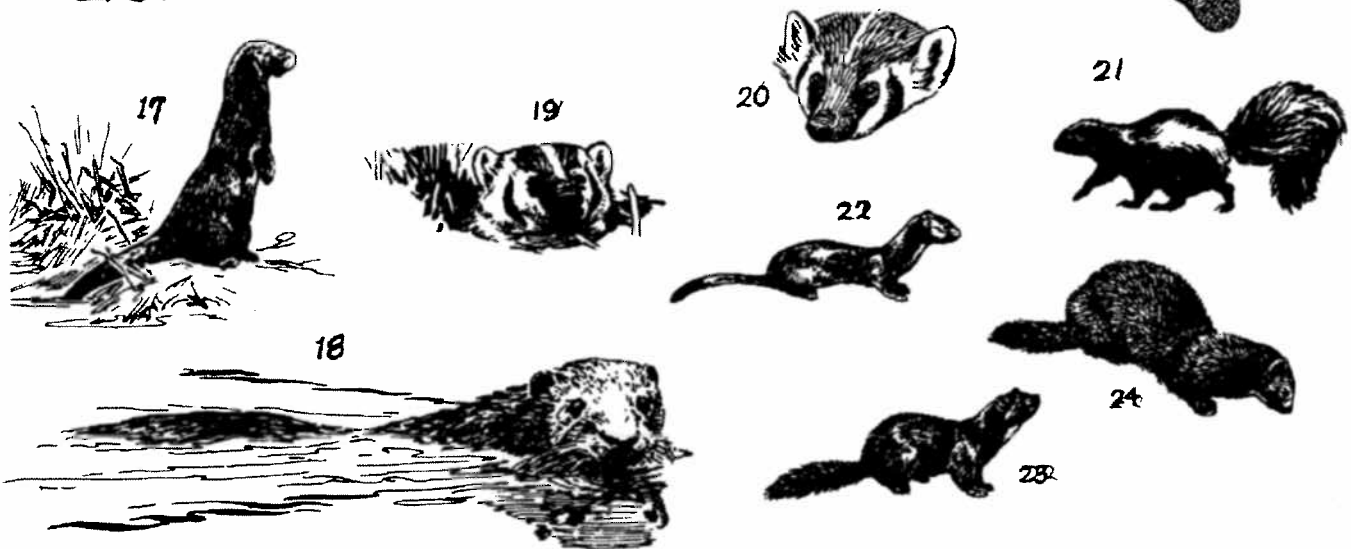
John Gavitt is a retired LE officer living in Virginia.



On special detail for in Nome, Alaska , Gavitt (left) and SA John Cooper (around 1979).



23.



FWS Illustrator Bob Hines' key to small mammals.

The Trail of Two Weasels: Wandering in a Wildlife Wonderland

It was February 28, 1941, a sunlit day, and it had snowed about two inches the day before, perfect for tracking. I was skiing through my Minnewas Study Area looking for weasel tracks. With a total snow depth of 16 inches I needed skis. This was a delightful experience for me ... gliding through a wonderland of woods on a fresh blanket of soft snow on which nature had written a story of what the wild inhabitants had been doing during the past 24 hours.

But before we pursue elusive ermines in the snow, dear reader, first I must introduce you to the Minnewas Area.

In early May of 1940 I picked a 16-acre tract of mixed second growth woodland for a breeding bird survey. By pacing out compass lines I gridded the rectangular area into 50-foot square plots. I tied colored rags to trees or bushes to mark the intersections of my grid lines. Although the survey was not precise I could mark the locations of my observations quite closely on a map.

I named it the Minnewas Area because it was located next to the Minnewas Iron Mine near my home town of Virginia in the Mesabi Iron Range of northern Minnesota. A small creek flowed through the area, and its source was spring water feeding into a white cedar swamp about a mile south of the area. It was a headwater stream of the St. Louis River, which flowed into Lake Superior some 70 miles south. Two miles east of the area another spring-fed stream flowed north into the Hudson Bay drainage. The low rise in the land between the two creeks was the Laurentian Divide, a very modest topographical feature for a continental divide.

My tract contained a mixture of just about every plant species common to that part of the world. Among the trees I listed white pine, red pine, balsam fir, tamarack, white spruce, red maple, sugar maple, trembling aspen, balsam poplar, large-toothed aspen, red oak, mountain ash, black ash,

and American elm. Shrubs included pincherry, chokecherry, wild plum, red osier dogwood, alternate-leaved dogwood, beaked hazel, junberry, alder, raspberry, elderberry, willows, and wild rose. Herbs were wild ginger, hepatica, bloodroot, anemone, cowslip, trillium, violets, bellwort, false lily-of-the-valley, strawberry, bedstraw, and bracken fern. The list is not complete by any means.

As I write this story I am browsing through the journal that I kept 55 years ago. On May 8, 1940, I wrote, "Except for the disappearance of snow there have been few changes in the landscape over the past month. Buds on the trees and shrubs have been swelling. Hazel and alder catkins have enlarged and shed their pollen. Herbs have begun thrusting up tender green shoots. The ice on the lakes has disappeared. Lake Vermilion broke up May 5th and 6th. The smaller lakes around Virginia opened up about a week earlier. Yesterday I saw a myrtle warbler, the first of the warblers to appear this spring."

Thus I recall delightful mornings in May 1940 walking through those woods listening for lovesick male songbirds to sing their territorial songs. Each time I made a positive identification I plotted the bird's position on my map. My list of birds included the following: catbird, clay-colored sparrow, robin, crow, white-throated sparrow (Ah, poor Canada, Canada, Canada!), rose-breasted grosbeak, chestnut-sided warbler, house wren, red-eyed vireo, purple finch, veery, magnolia warbler, hairy woodpecker, flicker, northern yellowthroat, three-toed woodpecker, vesper sparrow, yellow warbler, least flycatcher (chebek), red-winged blackbird, and cowbird.

On May 28 I stumbled onto a marsh hawk's nest with four eggs! I had never before seen the hawk in the immediate area. The nest was in a patch of marshy grass near the center of the Minnewas tract.

In June I moved up to spend the summer and fall at Pelican Lake. I did not visit the Minnewas Study Area until late the following February after a spell of fur-trapping near the Canadian border in January. I had been skiing through the woods daily for weeks and was in top physical condition.

When I crossed the south boundary into the area on February 28 I soon found a weasel track. I followed it in reverse first to see where it had come from. The tracks emerged from a burrow about a hundred feet away. I returned to my starting point and followed the tracks on a twisting course through the woods until they disappeared in another burrow. The tracks terminated about 200 feet in direct distance from the point of origin. I plotted the course on my study area map and determined that the weasel had traveled 1,000 feet since the last snowfall. I circled around both the beginning and ending of the trail and found no indication that the weasel traveled under the snow for a ways and emerged again.

Then I crossed the creek, which was frozen over in most places, and found another weasel track. I found its points of origin and termination and plotted its course. It had traveled 1250 feet with the beginning and end about 100 feet apart. Weasel A had followed the creek for 200 feet but did not cross it. Weasel B crossed the creek three times and wound up on the opposite side from which it started about 100 feet away from its point of origin.

I found it interesting that the two tracks came within 20 feet of each other but then veered apart and never did meet. The points of origin and termination for tracks A and B were at least 400 feet from each other. I wish I could say that I pursued this tracking technique further but I did not. The weasel was ideal for tracking studies because its tracks were easy to identify, its range was limited, and there were not too many around.

Just a month earlier, on January 28, I tracked a weasel and shot it with my .22 caliber pistol. I was skiing on my trapline near the Canadian border. A light snow was falling so I knew the tracks were very fresh. The tracks led to a burrow at the base of a stump. When I pursed my lips and squeaked, the weasel poked its head out of the burrow. When it disappeared back into the burrow I drew my .22 pistol, aimed at the entry hole, and squeaked again. When the weasel peeked out, I fired. The bullet went through its throat just behind the skull. It was a female short-tailed weasel, one of the smallest of the eight weasels I caught that month. It measured only 236 millimeters in total length (about 9

inches). Five male weasels I caught that month ranged from 281 to 319 millimeters long (averaged about 12 inches). Mature male weasels are two or three inches longer than females.

In those times I had the winter woods to myself, even near town. No one spoke of "cross-country skiing," and snowmobiles were unheard of. I rarely saw another human soul unless a friend was with me. My skis were wooden, rather heavy and awkward compared to today's slim composition slats. Bindings were simple leather toe straps, which I supplemented by stretching rings of rubber inner tube from behind my heels over my toes. But the skis were very useful tools which allowed me to explore the winter woods when snow became too deep for easy walking.

Grouse tracks were fairly common. Occasionally I would flush a ruffed grouse from a soft snowdrift into which it had burrowed for the night. Once a half dozen prairie chickens sprang out of the snow around me, a most startling experience!

The patterns of tracks in the snow gave proof that the woods were not nearly as barren and lifeless as they looked when one sped by them in a car on the highway. The most common tracks were the Y-shaped marks left by snowshoe hares. I sometimes saw the hares themselves and would whistle hawk-like at them to make them freeze in place, their instinctive reaction in the hope that their white winter pelage would render them invisible.

In spite of their camouflage, snowshoe hares were usually the most visible mammals in the winter. In some fall seasons when snow arrived late the animals became white too early and looked like ghostly bouncing balls in the dark woods. The hares are cyclic and vary greatly in abundance from year to year. They go through a 10-year cycle. There might be hundreds of hares in a square mile at the peak and only a dozen at the low point. Animals that prey on the hares, like lynx, fox, and goshawks, rise and fall in numbers correspondingly.

One day I was stalking a snowshoe hare in hope of getting a shot at it with my .22 pistol. When the

rabbit dodged behind some hazel brush a goshawk perched in a nearby birch tree swooped down and seized the hare. As I eased closer the hawk quickly killed the hare. With its talons buried deeply in the hare's neck and back, the hawk spread its wings across its inert prey and seemed to glare defiance at me. I shot the hawk to secure it as a museum specimen but still feel a twinge of remorse that I had done so. Large predatory birds like the goshawk and snowy owl, which prey on hares usually migrate further south in winters of snowshoe hare decline. Thus we hear of winter "invasions" of these birds.

Scientists still are not sure what causes the rise and fall of hare populations. They have disproved some of the early theories such as food shortages. They have discovered what seems to be a correlation between hare and sunspot cycles but they don't know how sunspots might affect hares.

Red squirrel tracks were common where there were spruce and pine trees. Farther from town I would sometimes see deer tracks. On rare occasions I would encounter signs of a wandering bobcat. There was not much sign of the smaller mammals. Some species such as the chipmunk and jumping mouse hibernated. I set a few mousetraps at ground level under the snow and caught redbacked and meadow mice. I later learned that they fare quite well under an insulating blanket of snow. Even with sub-zero weather, temperatures can be quite moderate at ground level where the mice forage along a network of burrows through the snow.

One day when I approached a trap I had set under snow in an open area vegetated with marsh grass I spotted a rough-legged hawk standing on the snow. It flew away, and I found that it had somehow discovered the mouse that I had caught in the trap under a foot of snow. That species of hawk feeds primarily on rodents. It might have detected the struggles of the mouse soon after it was caught. The snow had been scooped out, and the mouse, dead but still warm, was exposed.

Pete Peterson is a retired FWS employee living in New Mexico.

Tough Sledding in Klamath Basin: A Christmas Lesson Learned

My family arrived in the Klamath Basin a few weeks before my 5th birthday. Following a long and hot trip from Fort Collins, Colorado towing a trailer with all our worldly goods, which were few, we arrived in the beautiful state of Oregon. We had left a beautiful brick home on a tree-lined paved street with black and English walnut trees, grass, and sidewalks where I roller skated. The library building and grounds, which covered an entire city block, was a block away as was the streetcar line. Dad owned a new and used furniture store and a hardware store; his dad owned a gun/sporting goods store; and his brother owned a grocery store downtown. I remember a short man hawking newspapers on the corner who sang out the headlines just like the Philip Morris cigarette radio commercial of many years ago. He could be heard a block away.

The Depression was in full swing. The four businesses were consolidated into one building, my dad sold his two houses, our household furnishings were sold and we headed west.

We stayed in Klamath Falls, Oregon, 20 miles north of the California state line for a few weeks. Dad found work in Malin, Oregon one mile from the state line. After two months there he purchased a lot in Tule Lake, California four miles south of the state line. We lived in a tent house until Dad built a house. It was unfinished but warmer than the tent and could be finished from inside.

Tule Lake was a town of approximately 400 residents. It was built on a portion of the Tule Lake bottom following construction of dikes, and water pumping. The water table was so high a posthole would fill with murky water. When a train went by the ground quivered as jelly. Drinking water was hauled into town by a railroad tank car. There was no sewer system, and only one telephone at the telephone office, no paved streets, no concrete sidewalks.

I had been unhappy when I was not allowed to bring my roller skates, but as it turned out there

was no place to use them until they were outgrown. There was an elementary school and a high school, two churches, a voluntary fire department (a siren would sound and everyone available responded.)

There was a CCC camp there as well. The C Camp, as it was now known by, was located one mile north of the Tule Lake Refuge office (now Klamath Basin National Wildlife Refuge Complex and Visitor Center). The camp is now part of the 6-refuge complex and is being considered for National Registry as it was later used as a prisoner of war camp and a Japanese detainee camp.

At Christmas time the Civilian Conservation Corps enrollees brought two flatbed type trucks with canvas covers and wooden benches into town. The trucks were the type they used for moving the CCC boys work crews. They gathered up all the children and took them to their camp, five miles west of town over a very bumpy gravel road, then one mile north over washboard graded road. I was the youngest child and my mother had signed on as one of the chaperones so we rode in the cab with the driver.

We were having a Christmas party! Refreshments were served. We gathered in a large room where a tall decorated Christmas tree with pretty wrapped packages underneath awaited Santa's arrival.

The CCC boys, not being able to go home for Christmas, decided to adopt the town's children as their families for the holidays. As each child's name was called they would walk up on the low platform and receive a gift. My brother (age 12) received a sled. My girlfriends received dolls. All the gifts were gone and my name had not been called. I said to someone I had not received a present. They told me to tell Santa. Very timidly I walked up to Santa and told him I had not received a present and I had been a good girl. After whispering and looking the tree over for another present and checking their lists I was told that the sled my brother had received was for both of us.

Somehow the sled always seemed to be my brother's and I felt I had not received a gift. But I still knew I had been a good little girl. I now go a little overboard when I see a Christmas Angel Tree

and take a big handful of names. My favorite tags are for dolls and teddy bears for 5-year olds. But I always include one extra gift with no tag just in case.

Rose Chapman lived near Tule Lake refuge as a young girl.

Lucille and Bill Stickel: Some Thoughts About Great Friends



Lucille and Bill Stickel.

I have some treasured memories of Bill and Lucille Stickel that I would like to share, they were my role models, my inspiration, my enlightenment, my energizers.

Let me explain.

I was selected as the Region's Pesticide Staff Specialist, one of only five in the entire nation, one for each of the five Regions of that time. I had one college course in basic Chemistry, and hated the subject. I took the job for the challenge, with the promise that I would receive the training I needed.

I was assigned to the newly formed Wildlife Services Division that was replacing the old Predator and Rodent Control Division (PARC). The new Pesticide Surveillance and Monitoring duties were assigned to that division primarily because they routinely used a variety of poisons and other chemicals for animal damage control. No one had much idea of what Pesticide Specialists would be doing.

The training came shortly after I began my new job. We were sent to a two-week orientation school at Bowie College, Maryland, not far from the Patuxent Lab. For the old-line PARC employees, it was to teach and impress a new way of doing business, one that would be more environmentally sensitive. For the Pesticide Specialists it was their introduction to their new working partners as well as their new responsibilities.

To prepare for the training, we were all required to read Rachel Carson's *Silent Spring*. That was an awakening for me, but our real training in what we would be doing came from Bill and Lucille Stickel. They were both so enthusiastically serious about us getting started on the right foot. Their lectures were so animated, so spirited and conveyed such urgency and dedication that I was spellbound. It was a whole new world of biology that had me completely fascinated and engaged. Bill and Lucille made it that way!

When they realized that our training was not going to give enough time to cover all we needed to

know, they coaxed us to come to evening classes so they could give us more. We were all captured by their enthusiasm and commitment. They even enticed us with refreshments at their own expense to keep us engaged in the crash course they were presenting. There was so much to absorb and so little time, but they made it so interesting!

That two weeks got us all off to a great start, but it wasn't the last training and inspiration we got from them. I kept Bill's telephone number handy and called him frequently when I encountered situations I didn't know how to handle. They both were my consultants, my mentors, and my friends. They also helped us at other training session in subsequent years, equipping us to provide meaningful input to the Service's Pesticide Registration Office and to Agricultural Extension Service training sessions for pest control operators.

One of my most vivid memories of the Stickles is their urgent quest to find any effect on ecosystems coming from the increasing loads of DDT residues that were being found in all kinds of animals, and even humans. It was their crusade, their urgent mission, their obsession!

Residues were being found in dead robins, and in the earthworms they had eaten, but there was such a wide difference in the amounts found in dead birds that DDT could hardly be blamed as the cause. They knew there had to be an effect from DDT, but it could not be pinned down until they finally proved that the amount reaching the brain was the critical factor. Next came the discovery of soft eggshells in pelicans and eagles, and DDT was on its way out.

My wife Lucy and I were privileged to visit with Bill and Lucille in their mountain home near Franklin, NC soon after they retired. When I congratulated them for the honor they had received from the Patuxent building that had been given their name, they were both surprised and unaware of it.

They were both so content with their lives, and so excited to have us visit them. We re-lived some

of the old times, and I renewed my respect and admiration for these two wonderful scientists. Rest in peace Lucille and Bill! I will never forget your gifts of knowledge and friendship, nor your lifetime contributions to the environment and the world!

John C. Oberheu was a former FWS employee who now lives in Florida.

FWS Patch Chronology

Office of Economic Ornithology – 1885

No known patches from this period.

Bureau of Fisheries – 1903 to 1939

Our first patches are mostly undocumented, but evidence shows that the U.S. Bureau of Fisheries (1903) and the U.S. Biological Survey (1905) which were both in the Department of Agriculture had patches made of similar materials (embroidered felt), but of differing designs.



This is probably the first Bureau of Fisheries patch. Its graphic design is similar to the Fisheries flag.

Bureau of Biological Survey – 1905 to 1939

The Biological Survey, predecessor to the U.S. Fish and Wildlife Service, probably issued their first uniform patches around 1934, and they were most likely used by game protectors/wardens. These patches were embroidered on black felt.



Earliest patches of the United States Biological Survey, predecessor to the Fish and Wildlife Service. Numbers denote regions. Region numbers have changed through time.

Fish and Wildlife Service – July 1, 1939 to 1957

In 1939 the Biological Survey became the Fish and Wildlife Service and in 1940 it moved to the Department of the Interior. Throughout most of the 1940s, Service patches differed little from the earlier Biological Survey design. For example, the earliest Fish and Wildlife Service patch had changed only slightly.



First Fish and Wildlife Service patch

Starting in 1948, the Alaska Region began to design a patch to be worn by Law Enforcement officers and to be displayed on LE planes. On February 22, 1948, Doug Swanson designed this patch. He "found some color pictures of a Canada goose in flight in an *Ethyl* advertisement... in the *Saturday Evening Post*. Then he shopped for a can of salmon that had a proper sized picture of a salmon on the label. He arranged these cutouts within a circle to appear as if the salmon was jumping a falls (Brooke River) and the goose flying overhead. Then he arranged the USDI and FWS lettering in black and orange in the bordering circle."



In February of 1950, and with Swanson's prototype as a guide, Mary Westfall, a file clerk in Juneau, drew two watercolors for Regional Director Clarence Rhode. Rhode thought the Canada goose design "would be ideal for use as a shoulder patch and for decals on service aircraft as this design has life and color while still preserving the original idea of the bird and fish to represent the various functions of the service." Director Al Day approved the final design.



So, in 1952, a patch was made from the marriage of these designs, and was worn by LE officers and other Alaskan personnel. In 1955, Dave Hickok, the manager of Moosehorn NWR, purchased a supply of the patches, and it eventually became semi-officially used throughout Region 5. It became official for Alaska in 1958. Region 2 personnel adopted it in 1959. It, along with the taupe uniform, became official for the entire Service with the adoption of the National Uniform Policy on June 30, 1962.



4" circular patch

Bureau of Sport Fisheries and Wildlife – 1957 to 1974

In 1957 the Fish and Wildlife Service became the Bureau of Sport Fisheries and Wildlife. Rather than design an entirely new patch, the agency added a crescent rocker, which read "Bureau of Sport Fisheries & Wildlife." This minor, yet prudent, modification preserved the existing insignia. In 1967, the patch became smaller and the "U.S." moved from the FWS to DOI location. It became smaller because the uniform was changed. The small hat patch was introduced at this time.



4" circular patch with Bureau of Sport Fisheries and Wildlife rocker



3 1/2" circular patch with Bureau of Sport Fisheries and Wildlife rocker



1 1/2" Hat patch



3 1/2" circular patch

In 1974, the Bureau of Sports Fisheries rocker was discontinued, and the small patch was used until 1978.

U.S. Fish and Wildlife Service – 1978 to Present

In 1974 the Bureau of Sport Fisheries and Wildlife became, once again, the U.S. Fish and Wildlife Service. Designs for a new patch began in 1978 under the direction of Don Young. Young's design, which remains in use today, produced three new patches: a woman's patch, a slightly larger but identical men's patch, and a volunteer patch (intended to be used in conjunction with the woman's patch). Later an oval volunteer patch replaced the previous volunteer patch set.



4 1/4"



3 3/4"



3 3/4"



3 3/4"

Over the years, the Fish and Wildlife Service patch has changed greatly. These changes represent not only the necessities of bureaucratic reorganization but also the century-long pride and creativity of Service employees. Other specialty patches were created and evolved but are not included in this chronology.

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