

## WHAT IT WAS LIKE IN THE 1950'S AND 1960'S

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*Key words:* animal welfare, doe hunting, history, hunting, prescribed fire, predator control, professional development, The Wildlife Society, waterfowl management, Western Section of The Wildlife Society, wildlife conservation

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### TRANSACTIONS OF THE WESTERN SECTION OF THE WILDLIFE SOCIETY 40:3-8

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I am very grateful for this invitation to talk to you at the panel discussion of the 50-year history of the Western Section of The Wildlife Society (Section) of what the wildlife field was like in the 1950's and 1960's. Loving the wild outdoors like I do, I am proud of the accomplishments of the Section. There is nothing an old timer (I'm almost 87) likes better than to be able to tell others what it was like in the "good old days" but you are saved because my speech today is limited to 20 minutes. This paper, however, has additional information not included in my speech.

I was one of the first to get a Ph.D. in animal ecology. Even then I was highly concerned about how people were affecting Nature. I also recognized that the inevitability of rapid growth of the human population in the world was going to make things worse. With the advancements in agriculture, industry, public health, and medicine, man has moved away from Nature's death ethic more than any other species by eliminating so many of Nature's mortality factors.

I was hired in 1947 as an instructor in zoology and a junior zoologist in the Agricultural Experiment Station at the University Farm, University of California, Davis (UCD). During the 1950's and 1960's, I had research support from the California Department of Fish and Game (Department), California Department of Food and Agriculture, County Agricultural Commissioners, California Department of Forestry, and numerous agricultural organizations and related industries. It was great. I have had 56 overseas consulting or lecturing assignments and learned much from the 44 graduate students who got either a Ph.D. or M.S. under my direction.

I did not have the hassle of writing research grants until the 1960's. Rex Marsh, my research colleague, and I didn't have to justify our expenses

each year. More significantly, in those years we were not caught up in the computer and cellular morass of today. We seemed to have more time to think about Nature and what was going on in the environment. Life was at a slower pace.

From a personal point of view, I thought this period was very exciting and certainly presented challenging times for doing wildlife research in the new field of animal ecology. To better understand my philosophy about Nature, one needs to know that my main post-doctorate research goal since 1947 has been to find better ways for wild animals and people to coexist in the rapidly expanding human-modified environments. This goal is what led to my close association with agriculture because it was the greatest modifier of the environment. Also, agriculture needed ecologists to help them deal with wildlife ecology issues.

When first employed by UCD in the summer of 1930 as a high school lad, I was paid \$0.25 an hour. When I joined the faculty at UCD in 1947, there were only about 800 students. Now there are more than 30,000 students at UCD. Have I seen changes! In 1950, I had to take the oath that I was not a member of the Communist Party for reasons I never could understand except I was traveling overseas a lot. My neighbors were visited by the FBI inquiring about me, and one neighbor told the FBI to "get lost."

Through the 1950's and 1960's, I was lucky to spend a lot of time in the field. This gave me time to reflect on Nature's struggles, especially in modified environments. Even back then, most environments had already been greatly altered by people. I found doing research in the field was very exciting be-



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cause nearly every day I'd observe something that was contrary to the meager published material which had mostly come from armchair authors. While in the field I also had ample time to think critically and, more importantly, to look for "evidence-based" reasoning about Nature's life-death ethic which so intrigued me as it does today. Instead of the prevailing emotional opinions about Nature in modified environments, we needed more hard data.

My field observations and laboratory research, which was mainly with rodents, were gold mines in the 1950's and 1960's. Upon checking my reprint list for this period, I was surprised to find that I have 150 titles, of which 75 are in science journals. This includes 3 booklets, 20 in the *Journal of Mammalogy*, 12 in the *Journal of Wildlife Management*, and 10 in the *Journal of Range Management*. I could never do that today. No way!

Scientific research has become highly sophisticated. In fact, much science today is way out of my reach. Consequently, I am very grateful that I lived when I did. In my forthcoming autobiography book, *Saved by Bedbugs* (Howard 2003), I have a long chapter on my research activities during the 1950's and 1960's. Another forthcoming book *Nature in Today's World* (Howard *in press*) that is hopefully getting its final editing has more in-depth analysis of Nature.

In this period, hunters were less emotional about Nature. They had a better understanding of Nature's death ethic than is prevalent today. Hunters, trappers, and fishermen recognized that wild animals usually died much more humanely when they were shot or trapped than when they died by any "natural" cause. Today, people forget that sportsmen kill animals under many regulations that are designed to make all deaths caused by sportsmen to be as humane as is feasible, whereas Nature's death ethic nearly always results in a horribly cruel death.

Much of what I observed about wild populations of rodents and other wildlife during my fieldwork was new at that stage of knowledge about wildlife. While sitting in the field eating a sandwich, I developed my favorite Ph.D. oral exam question for candidates, "Why are there not more or less of whatever species the doctoral candidate was studying? What are the factors that determine their population density?"

If you try to analyze this critically, you will discover that it is not just a combination of predation, cover, and food supply. Unidentified factors must also be operating. Animals do not behave "naturally" after their habitat has been altered. For example, explain why there are not more yellow-billed magpie (*Pica nuttallii*) colonies in the Sacramento Valley on farms or in cities, or why the colonies don't continue to expand in size.

#### ORIGIN OF THE WESTERN SECTION OF THE WILDLIFE SOCIETY

After the Society for Range Management, of which I am a charter member, created a California Section, I realized that the answer for wildlifers was to establish a California Section of TWS so wildlife folks could get acquainted and share knowledge.

I'll give a brief account on the origin of the Section in 1953 which I more completely described in a previous paper (Howard 1989). Initially, it was called the California Section, but in 1964 it became the California-Nevada Chapter when Nevada was added to the Section's boundaries. In 1970, the organization became the Western Section when Hawaii and Guam were added.

In July 1953, with much support from several members of Department, I made my first attempt to form a California Section. On 31 August 1953, I mailed over 50 invitations to prospective members inviting them to attend a "wildlife biologist symposium" in my back yard. Many came to this social event where beer and soft drinks were buried in a wheelbarrow of ice cubes. There was strong support from many Department biologists, except the supervisor of the Department's Game Management Branch who, presumably to protect his turf, managed to temporarily sabotage the idea. However, when Department employees left this symposium many of them told me to "go for it." Many Department biologists supported the idea and many charter members and early officers worked for the Department.

Later in 1953, the California Section of the Society for Range Management scheduled a meeting for December 21-22 at UCD. I wrote all members of the Range Management Section who were TWS members and also others I knew who were interested in creating the California Section of TWS and

invited them to a luncheon that was held on 21 December. Fifty-eight TWS members attended this luncheon and signed a petition to create the California Section which I mailed to the TWS for approval. The TWS approved creation of the California Section in early 1954. My earlier paper (Howard 1989) has considerably more details on the Section's creation.

In the late 1940's and 1950's, I was aware that TWS didn't have a satisfactory way for its members to get together as needed for professional communication and development. The only annual meeting the TWS members had was a short one during annual North American Wildlife and Natural Resources Conferences (NAWNR). Through time, the focus of NAWNR conferences became more policy-oriented and less technical so the conference benefits to TWS members changed somewhat. At 2 NAWNR conferences, I tried to arrange for TWS to hold their own meetings so that there would be greater opportunities for TWS members. Even though TWS members at the second meeting voted almost unanimously on my motion that TWS should let the members vote on the issue of separate meetings, there was some resistance by the organizer of the NAWNR conferences, the Wildlife Management Institute (WMI), to let TWS hold their own annual conferences. Additional concern by TWS leadership of the inherent financial risks associated with sponsoring a professional conference combined with some lack of support by WMI for an annual TWS conference delayed the decision by TWS to have a separate annual meeting for some time. In the end, however, TWS decided to hold annual conferences separately from the NAWNR conferences. These annual TWS conferences have been held since 1994, and their success is easily demonstrated by the 1000-2000 wildlifers who annually attend them.

#### COOPERATION WITH THE CALIFORNIA DEPARTMENT OF FISH AND GAME

In the good old days, I enjoyed doing research with the Department, creating exam questions for them, and periodically addressing wardens at their annual meetings. It was easy to co-author research with CDFG staff while Seth Gordon was Director of the Department. From my perspective, unfortunately, Gordon was the last Department Director that was recruited and hired after searching nation-

ally. All subsequent Directors were recruited from efforts of the current Governor's administration. California's Governors appoint all Department Directors regardless of how they are recruited. Gordon's office and the Department's headquarters were in San Francisco at the Ferry Building, and he decentralized the Department into 5 Regions in 1952. A year later, Gordon moved the headquarters to Sacramento. That's a long time ago for many of you but it is only yesterday to me.

Immediately following the inauguration of California's newest Governor, Arnold Schwarzenegger, on 17 November 2003, I wrote Governor Schwarzenegger suggesting that he make the directorship of the Department a career position instead of one appointed by the Governor. I am sure he was too busy to do anything about it. I did, however, congratulate him for appointing Ryan Broddrick, a 20-year Department employee and former Regional Manager and Chief Deputy Director, as the Department's new Director in January 2004 because Ryan is the type of Director the Department needs. I only wish that the Director's position is permanent and not an appointment by the Governor which is confirmed by the California State Senate. We were also extremely honored to have Ryan speak to us today at the plenary session of the Western Section's 2004 Annual Conference. [Editors note: Mr. Broddrick was confirmed as the Department's Director by the California State Senate on 30 April 2004].

#### WILDLIFE MANAGEMENT PHILOSOPHIES

In the 1950's and 1960's, people were not as concerned about the welfare of wild animals as they are today. We have come a long way in reducing cruelty to animals, in part, thanks to the animal rights movement. But there have been dramatic changes in public attitudes concerning "animal mortality" caused by hunting, fishing and trapping. To many people, these methods are no longer acceptable methods to harvest wildlife because animals suffer. It is true that there is suffering, but animals taken by sportsmen die with less suffering than when they die naturally. Taking of wildlife is occurring, however, in human-modified environments where the natural predator-prey balances no longer exist. Modern hunting and trapping practices have never endangered any wildlife species. Instead, sportsmen

contribute more than any other group for improving the welfare of game with purchases of hunting licenses and stamps and contributing in many ways that support habitat acquisition, conservation and management. The sportsmen I knew in the 1950's and 1960's also recognized that people are more humane than natural predators.

In those days, displaced or troublesome animals were commonly called pests leading to the development of various lethal and non-lethal pest control methods. Now animal damage management has fortunately become a major policy area for TWS. We no longer "kill" unwanted wildlife. As Dr. Robert H. Schmidt, a wildlife damage specialist, notes instead they either are "destroyed," "dispatched," "euthanized," "harvested," "put down," "put to sleep," "removed," "slain," or "taken." Nowadays, we only "kill" pests such flies, mosquitoes, rats, and mice.

California has become largely an urban population, and most residents don't seem to understand Nature's laws such as her life-death ethic where most birds and mammals, whether they're game species or not, must die prematurely to prevent overpopulation from damaging the environment and their welfare. These surplus births are what provide the food and energy for Nature's balance.

With so many biologists unwilling to work with agriculture on related wildlife issues during the 1950's and 1960's, many wildlife problems resulted. The goal of farmers and ranchers, of course, was to economically produce food; hence they wanted the crops and livestock to be protected from wildlife. The need to preserve biological diversity and endangered species was unimportant then.

In those days, leading mammalogists and ornithologists were extremely anti-agriculture, and with some justification. I probably didn't realize at the time just how emotional anti-agricultural sentiments were or I might not have tackled the problem of trying to improve the management of wildlife in human-modified environments. I also recognized that wildlife populations usually need to be managed and not left to Nature's whims because we are dealing with unnatural environments.

Having survived many very harsh battles on this subject, I feel I have been somewhat successful in creating a better understanding of wildlife damage management and Nature's life-death ethic in human-modified environments. One way I was rewarded

for my philosophy about Nature's life-death ethic was that my writings and lecturing, which stirred up a hornet's nest in the United States, resulted in consulting or lecturing 56 times in other countries that enabled me to visit 71 countries. However, I am realistic and don't expect my philosophy about Nature to be widely accepted until after I am gone.

You really can't imagine how many zoologists were emotionally against agriculture in those days, hence against me, even though my work with agricultural interests was intended to improve their understanding and relationships with wildlife. I can't think of a single zoologist who supported my philosophy. The wildlife management field, as such, at that time was not yet fully established in academia as it had not yet separated from zoology.

We all have different philosophies and ethics. There are no absolutes when it comes to managing wildlife populations as each of us sees the world a little differently. Unfortunately, too many people, including wildlife biologists, become so emotional they forget that science benefits enormously from controversy. Debates and unconstrained controversy can be very valuable to the advancement of knowledge about Nature's life-death ethic.

## WATERFOWL MANAGEMENT

I can remember after rice was planted in the Sacramento Valley that some growers recruited UCD students to shoot as many ducks and geese as they wanted as long as they had their own shotgun. At the time, this was considered an effective means of repelling the birds from crops. The landowners usually provided all the shotgun shells, and sometimes even beer and steaks, along with an outbuilding where the students could sleep if they wanted to stay for a second day of shooting. The law, however, prohibited the hunters from picking up any birds that were shot. Many of the students got sore shoulders and overheated guns. This shooting activity, which only drove the birds onto someone else's field, wasn't as bad as putting oil on ponds to kill the birds. Fortunately, the use of oil or UCD hunters was not often done.

All these lethal methods stopped once wildlife refuges were established because they provided the harassed birds a safe place to feed. At first, the landowners fought the establishment of refuges because they thought it would increase the number of birds

and also take land off the property tax bases. However, once the refuges were established and the financial and hunting benefits were recognized, the landowners became strong refuge supporters.

### FARMER-SPORTSMEN RELATIONS

To save our wildlife and natural resources, I felt it was important to have a better understanding and working relationship between sportsmen, landowners, and the Department. Fortunately, in those days most hunters and fishermen did have a deep respect, appreciation, and understanding of Nature. Following World War II, however, a large number of returning veterans, who had had experience with guns, wanted to hunt waterfowl, quail, doves, deer, and other game. They were frustrated when they discovered so much game was on private agricultural land that was closed to hunting. In desperation, many hunters claimed they should have access to private lands because game was publicly owned. This created horrendous trespass problems and it became a liability to have game on your land. Also, the landowners were inundated with "hunter" friends. Dr. Bill Longhurst worked with me on this hunter access problem. Even though it was very controversial, we encouraged farmers to charge fees for hunters to use their fields thus giving the farmers an incentive to preserve wildlife habitat rather than eliminate it. As a result, the first pheasant cooperative hunting area was established in 1949.

To find a cooperative way of overcoming the farmer-sportsman relationship dilemma and with strong support from the Director Gordon, I developed a list of 34 recommendations in 1955 for how the Department and UCD's extension specialists and researchers could jointly cooperate to solve these problems. The agenda also included my suggestions for *A Policy Statement for Wildlife Management on Private Land in California and a Sportsman's Code of Ethics on Private Land*. More information on hunter-sportsmen relationships can be found in Howard (1989).

### DOE HUNTING

I had the privilege of serving on the advisory committee of Dr. Starker Leopold's Department's Pittman-Robertson project on mule deer (*Odocoileus hemionus*) population and management problems in California which started in 1948.

This study showed the importance of harvesting does in addition to bucks, and Starker was a strong advocate for taking does. The deer population in much of the western United States peaked in the 1950's. This is when the inflated populations of deer began to severely damage their food supply by over browsing their winter mainstay of bitterbrush (*Purshia tridentata*) and other plants.

California's first antlerless deer hunt occurred in 1948 on Santa Catalina Island but doe hunting was a highly emotional subject throughout the 1950's. It was difficult to discuss the issue with most people, including the sportsmen. Too many people misunderstood the dynamics of deer populations in modified environments where some does should be harvested to prevent overpopulation. They couldn't understand that you could actually increase the number of buck fawns born each year by shooting does in overpopulated herds because the sportsmen reasoned we must protect all does since does produced the fawns. They didn't realize that does in healthy herds could produce an average of 1.5 fawns per doe or more, whereas in some overpopulated herds does produce an average as low as 0.25 fawns per doe.

Look at the arithmetic of this situation. Compare the number of bucks produced if there were 50 does in a herd that was so overpopulated that the does averaged 0.25 fawns per doe. That herd would produce only 6 male fawns. Whereas if the herd was reduced to a healthy population of 30 does, they might average 1.5 fawns per doe. This means that 22.5 male fawns would be born in the healthy herd, or almost four times as many male fawns as the overpopulated herd. It proved difficult, however, to convince hunters that it was necessary to shoot does in overpopulated herds if the goal was to increase the number of bucks produced by the herd.

### PREDATOR CONTROL

In the early days, sportsmen had no difficulty pressuring the Department to control the predators of game species. In those days, almost everyone thought predators were bad. At one time, I think the Department had 9 predator control agents and also paid a bounty for any mountain lion (*Puma concolor*) shot. Whenever a lion preyed on livestock, the Department's famous lion hunter, Jay Bruce, was called. With his dogs, he was able to

keep the lion population essentially trouble-free. It is interesting to note that the number of lions taken annually by Bruce and other bounty hunters and predator control agents never equaled the number taken annually in recent years by depredation permits issued by the Department. Lions have an innate fear of people hence these secretive animals were rarely seen by anyone. Now it is not unusual to see young or old lions that have been forced out of the remaining good lion habitat by dominant lions. By being fully protected, they are losing their innate fear of people.

### PRESCRIBED BURNING

The first multi-agency prescribed burn was done in September 1952 at the San Joaquin Experimental Range in Madera County. This experimental burn was done "about time" for ranchers and it was an exciting experiment for researchers. But to the senior personnel from the U.S. Forest Service who spent their career thinking that all fires should be promptly extinguished it was like "roasting their mother." Dr. Leopold spoke out in favor of prescribed burns, yet the subject remains controversial today.

One thing Dr. Hank Childs, my assistant, and I learned with this first experimental burn was that apparently most species of wildlife have evolved behaviors that enable them to survive fire. It seems that the main way fires affect the survival of most wildlife is by altering habitat and not directly killing wildlife. Some species suffer from these habitat changes while other species benefit by these habitat changes.

Most animals that die in fires do so as a result of suffocating because fires temporarily consume all of the oxygen. We showed in our tests that if an animal was in a burrow or on the ground but covered and protected from the temporary loss of oxygen in the area that it could obtain sufficient oxygen from the ground surface during a fire.

This is similar to how large animals can survive being covered by snow as long as their face is kept free so that the animal is not smothered. Large animals and people can survive for days without freezing if buried by snow. However, I discovered that small mammals cannot marshal enough energy from their body fat rapidly enough and will die overnight from "cold weather starvation" if they don't have

access to food. Without food, a mouse will die even at temperatures only a few degrees below room temperature. However, small rodents will not freeze at temperatures below freezing when, for example, captured in a live trap as long as they have ample food. Nesting material is not necessary.

With prescribed burning, initially the plan was to reseed as soon as the ash was cool because it was thought that ash made a good seed bed. However, we found that the ash soon blows away leaving planted seeds exposed, sometimes for months before germination, to be consumed by harvester ants, rodents and birds. Most of these animals usually survive fires. If broadcast seeding is to be successful, the seed needs to be treated to either repel or poison animals that would otherwise eat the seed. Better yet, such broadcasting of seed should be done as near as possible to when it is going to rain. Of course, drilling the seeds, when possible, is by far the best method.

The main problem with control burns in the 1950's and 1960's, just as today, was to have the political will for burning and tolerating the smoke that is created. Unfortunately, there are many local smoke ordinances that make prescribed burning difficult today. The people seem to forget that later they may have a catastrophic fire if they oppose all control burning.

### CONCLUSIONS

Yes, I miss the 1950's and 1960's. That was a wonderful and exciting time in my life. When the Section was created, it helped game managers and biologists become more professional in the new fields of wildlife management and animal ecology. The Section has filled an important niche, and I am very proud of the numerous accomplishments of the Section's early officers and members. Their hard work, commitment and dedication laid the foundation for the Section's future endeavors and successes.

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