

ROBERT L. HUNT

Unsurpassed Influence on Wisconsin's Trout Resource Conservation



Introduction

Bob Hunt, born 1933 in Madison, graduated from Madison East High in 1951 and served in the army with duty in Germany. At the University of Wisconsin-Madison, he earned a bachelor's degree in 1958 and his master's in 1959, both in Zoology, with the latter's thesis research on invertebrate surface drift and trout diet in the Brule River.

Bob was—and remains—especially fascinated by wild brook trout, the beautiful natives that once dominated Wisconsin's cold streams but diminished after people inflicted plows, cows, and brown trout on the land- and waterscape. While a university student, he handcrafted a leather briefcase for himself. On it, in anticipation of a career no doubt, he tooled the image of a leaping brook trout and the words

Salvelinus fontinalis. Soon thereafter, his exceedingly productive 36-year career as a WCD and DNR aquatic biologist began, and now, thanks largely to him, the species is recovering.

Bob played a major role in conserving and enhancing the natural resources that underpin the special experience that he and many others cherish: fishing in trout streams. More than anyone else, he has contributed to knowledge about Wisconsin's over 10,000 miles of trout streams and to advanced stewardship of them.

His pioneering research on wild trout and the management recommendations he formulated from the findings helped to improve conservation and angling throughout North America's trout-producing regions. His work has garnered many awards and honors.

Bob performed efficiently in all he did. To watch him fish was to see none of the over-gadged fuss and flailing that many anglers display. Bearing just the right gear and bypassing unsuitable spots, Bob would stride straight toward the most promising habitat, false-cast little, and keep his fly on the water and over trout a greater share of the time than anyone. No wonder he caught (and often released) so many more than the rest of us. He was almost never skunked. Likewise, Bob planned work well, focused on it intensely, and executed it with dispatch. The result: amazing professional productivity.

Each year, for hundreds of rain-snow-or-shine hours, Bob Hunt and his electrofishing crew sampled tens of thousands of trout and other fishes, identifying and counting them all, measuring the lengths and weights of most, and seeing to it that a note-taker set all the data to paper. During his career, this fieldwork covered hundreds of stream miles. And each year, he would spend months at the desk analyzing the collected data, reporting the results, and designing new research. Like the field operations, he did the analyses and reports with orderliness and dispatch.

The findings from Bob's work and from the team of biologists he directed led to improved trout resource management and increased trout populations for anglers to enjoy. Bob achieved great significance by doing superb research and making its results known in ways that guided DNR and others, notably Trout Unlimited (TU) at state and national levels, toward enhancing trout resources and angling opportunity.

A man of few words, he chose them well, stating scientific findings and management implications effectively. Clear communication in professional publications, popular articles, oral presentations, and his book, *Trout Stream Therapy*, strongly influenced fellow scientists, fishery managers, natural-resource decision-makers, and the angling public. He often took part in scientific and public forums on trout management as a presenter, sometimes as an organizer. Thereby, he became recognized as the state's top authority on trout stream science and management and a leader in those fields throughout North America. The core significance of Bob's career lay in improved, healthy trout streams and better quality fishing.

Productive Career

Bob's work took place during an era of fundamental change in Wisconsin's trout stream management. He began with WCD in 1959: only 25 years after the agency hired its first fishery biologist and little more than 10 years after it began major stream habitat work. It had been fewer years yet since the Fish Management Division began research in earnest, and still fewer since the Division stopped diverting biologists from research for "brush-fire" duty, such as investigating a complaint that ice-out on some lake revealed dead fish.

In 1959, the WCD trout management program still consisted mainly of operating hatcheries, stocking their products (often with little regard for stream suitability), and setting angling regulations. Public input took the form of "county quota meetings," where sportsmen and resort owners argued about apportioning the annual hatchery handout among streams and lakes. Almost all trout streams were stocked, most of them so devastated by cattle grazing and other human-generated harm that the hatchery trout had poor chances of surviving or reproducing. Rapidly eroding streambanks offered little hiding cover and filled pools with mud and sand, which also inundated spawning gravels. The rare habitat that was excellent and supported wild trout was also stocked—needlessly and causing genetic and competitive harm.

By the time Bob retired in 1992, the DNR program to protect, enhance, and restore trout habitat had grown tremendously, was regarded by many as the best in North America, and was emulated by other states and provinces. Helped as well by decreased riparian grazing, thousands of miles of streams had healed, and good fishing had increased immensely. DNR still stocked trout, but more judiciously and in fewer waters. Instead of meeting to argue about stocking quotas, anglers would assemble in conservation groups to assist the DNR with habitat projects. Bob deserves the lion's share of credit for Wisconsin's late-20th-century ascension to preeminence in trout management and for public awareness of proper management.

Exceptionally well organized, Bob's work was visionary, scholarly, insightful, diligent, persistent, and thorough. Some visionaries and planners develop sound ideas, which are never put into practice. Other people are tacticians who, however skilled in execution, build or manipulate needlessly—even harmfully—because they lack proper vision and strategy. Bob Hunt integrated vision, strategy, and execution. He saw where knowledge was needed, and, by following rational strategies in obtaining it, and in transferring it to professionals and the public, he converted it into action.

Trout Mentor

Bob's accomplishments toward understanding and managing trout habitat, populations, and fisheries formed the primary basis for modern stewardship of the resource. Over 100 DNR studies, most emanating from his leadership, many under his direct conduct, have evaluated habitat managements for trout—more such studies by far than in any other state or province.

Wisconsin's diversity of streams and of habitat techniques required many evaluations. Those evaluations revealed what works and what doesn't. The methods that worked yielded striking increases in trout abundance. This justified expanded habitat work by Wisconsin's DNR and conservation groups and by counterparts beyond the state. Other important aspects of trout ecology and management received Bob's attention, notably angling regulations, which, with changes he advocated, resulted in more rational fishery management. Wisconsin's trout fishing is now much better than it was 50 years ago, and the angling public owes much of that improvement to Bob Hunt.

Throughout, his career, Bob acted loyally, thoughtfully, and dependably in dealing with associates and the public. He advised on the projects of others and helped them with fieldwork and writings. He promoted advancement of subordinates and colleagues. His many professional and personal kindnesses helped knit together the DNR family and the wider conservation community.

In retirement, Bob has continued work on trout issues. With the University of Wisconsin-Green Bay, he produced a video, *Trout Stream Habitat Restoration—A Case History*, covering the classic habitat work on Lawrence Creek. He also organized a display on trout fishing at the Waupaca Public Library, the second-best-attended exhibition in the library's history. Recently, he helped forge a partnership between the Central Wisconsin Trout Unlimited Chapter (CWTU), the DNR, and the City of Waupaca to install habitat structures in a stream in that town. With a kiosk explaining the habitat work and promoting proper release of landed trout, this project is a boon to the resource and the city. And in July 2010, Bob and a fellow CWTU board member proposed a Central Sandhills Ecosystem Restoration Initiative before the Wisconsin TU Council. This would combine the resources of TU, DNR, other natural resource agencies, private and public organizations, and interested persons to restore, maintain, and protect 201 streams comprising 917 miles of trout water in ten counties.

The results of Bob Hunt's work on Wisconsin's trout resource can be summed up as *scientific advance, sound conservation, and better fishing*.

Special Foundations

Bob considers a major factor in his life to have been his father's gift of a fine fly rod on his seventeenth birthday. It was his first really good fishing rod, and a fly fishing obsession ensued.

As people who most influenced his career, Bob names his father Roy, his brother Dick, Oswald "Os" Matson, and Prof. Arthur Hasler. Matson, a WCD wildlife technician, taught Bob much about fly-fishing. Hasler, a UW-Madison limnologist, served as Bob's graduate advisor. He credits DNR Research Bureau Chief Cyril Kabat for backing long-term projects and Fishery Research Section Head Lyle Christenson for giving him freedom in choosing research subjects and methods, and for consistent support.

Four other DNR colleagues were also especially important partners in helping Bob complete assignments: Ruth Hine and Susi Nehls, superb Bureau of Research technical editors; and Kent Niermeyer and Harry Sheldon, Cold Water Group technicians who faithfully carried out a variety of essential office and field work chores. Oscar Brynildson and Ray White provided essential mentoring throughout Bob's career.

Humble Beginnings

Bob began with WCD in 1959 as leader of the Lawrence Creek research project, established in 1955 to test effects of angling restrictions on wild brook trout. The project, near Westfield, operated from a field station—an old, dilapidated, two-story frame farmhouse, "not modern," as the euphemism goes, and so near the end of useful existence that its shabby exterior didn't deserve new paint—not even WCD's cheap cream and green.

The interior, though, had been tidied with a layer of institutional pastel green. At a front-room counter, anglers got permits to fish in the creek, and then returned there to show their catch. There were bedrooms for visiting personnel, a kitchen, and an office where Bob bundled up for drafty deskwork in winter. Especially on hot days, the pungent, long-lived-in ambience of old homesteads prevailed, for the spaces between wall studs served as hoppers for bat guano. This was a field station, not the cushy quarters of administrative offices and fish hatcheries.

Bob concluded the Lawrence Creek Station's angling restriction tests in the early 1960s and switched the project's objective to evaluating efficacy of stream channel structures installed to improve trout habitat. This yielded a 10-year record (three years pre-, seven years post-construction) of increased habitat and trout abundance, then and long afterward the most intensive such study ever done. Important reports resulted, culminating in a professional journal article on the long-term evaluation and its relation to improving management-related research (Hunt 1976), still one of the most widely cited publications on stream restoration.

Exemplary Leadership

In 1967, Bob moved the trout research office to Waupaca, and eventually, he became the DNR coldwater research group leader. With fellow biologists Robert Carline and Ed Avery, he expanded statewide study of trout management in streams, headwaters, and spring ponds.

Bob's innovative research and growing expertise brought increased responsibility and influence—and widespread recognition, professional and public. His evaluatory research led to modifications of habitat structures, as well as development of new structural methods. The results clearly demonstrated benefit to trout populations and angling. He pioneered testing of streambank debrushing and the use of brush bundles and half-logs as habitat improvement—now widely applied in Wisconsin and other states.

His publications and reports to anglers' groups, especially Trout Unlimited, elicited public support for legislation which created Wisconsin's inland trout stamp, a program that now generates \$1.5 million annually for DNR trout habitat work. Ultimately, he became the first person to hold a new Wisconsin civil service position: Senior Scientist. His career served as the model for that classification.

Of particular importance in resource stewardship, Hunt's pioneering research dealt mainly with *wild* trout at a time when widespread, often indiscriminate stocking of hatchery fish was the state's major thrust in trout management. His findings engendered fishery managers' interest in the role of wild trout, leading to Wisconsin's system of classifying trout streams, which took self-sustaining populations into account. Knowing that many streams produce ample trout without stocking enabled DNR to concentrate its hatchery output on other waters, thus providing for increased angling while reducing the harm (disease,

genetic contamination, and behavioral chaos and competition) that artificially-reared trout cause for wild trout populations. Bob considers the emphasis on wild trout to have been one of his personally most satisfying efforts.

Bob was instrumental in developing concepts for Wisconsin's present system of trout angling regulations, tailored to zones of the state and to the productive capacities of streams and the species inhabiting them. In the course of testing effects of various angling restrictions on trout fisheries, he was one of the world's first experimenters (perhaps the very first) on use of an "open-slot limit"—a size range within which a number of trout may be creelied, but below and above which the fish are protected.

Above and Beyond

Within DNR, Bob performed as an authoritative consultant to top management. He served on many committees and often influenced the strategic direction expressed in committee action. For example, he was a member of the Bureau of Fisheries Trout Committee, the Brule River Task Force, and the Environmental Quality Division's Statewide Interdisciplinary Committee on Stream Rehabilitation and Improvement. In addition, he often responded to specific requests from various management and administrative levels for information and advice, and he served as a DNR expert witness at hearings and in the courts. He made presentations to the Natural Resources Board on trout habitat management and research, provided major input on the comparative benefits of trout stocking and habitat improvement, and prepared information outlining future trout management and research needs. In 1990, he testified before the Natural Resources Board on the need for emergency trout fishing regulations during drought.

Bob's national and international services as expert and consultant were many. He was certified as a Fisheries Scientist by the American Fisheries Society, and served on that organization's Awards Committee and Certification Board of Review. He provided consultation and training sessions for personnel of natural resource agencies in six other U.S. states and two Canadian provinces, as well as for employees of the U.S. Forest Service and the Society of American Foresters.

Organizers of national and international workshops and symposia invited papers and oral presentations from Bob, which he accepted on 12 occasions. Published proceedings of those meetings often became standard technical references.

In 1975, with on-campus help from Prof. Jack Heaton, Bob co-chaired the first national Workshop on Management of Brook Trout, held on the UW-Stevens Point campus. Three years later, he helped organize a second workshop on the subject in North Carolina. In 1988, his advice was sought again to develop a workshop on brown trout management. He contributed three papers and served on two discussion panels at these species-management conferences.

In 1978, Bob and Jack organized a Trout Stream Habitat Improvement Workshop at UW-Stevens Point, the first conference of its kind, bringing together 75 habitat biologists and managers from North American states and provinces. The workshop dealt with practical aspects of habitat work and included field trips to project sites. Thereafter, it was held every two years in various parts of the U.S. and Canada, was expanded to include salmon habitat issues, and attracted participants from abroad. In 2002, Ireland biologists hosted the workshop. For many of these events, Bob helped on the steering committee and presented papers.

Bob was one of eight American fishery scientists that Trout Unlimited invited to present papers at a Soviet-American conference held at Racine in 1989. Following that, he served as principal organizer and guide for a two-day field trip to observe trout habitat projects.

Career Highlights

Highlights of accomplishments from Bob's innovative scientific and technical studies and projects can be listed as follows:

1. Authorship: 45 technical publications (17 on stream habitat, 12 on angling regulations), several articles in popular outlets, and a book, *Trout Stream Therapy*. The latter is a fully illustrated field

guide to improving trout habitat in streams damaged by human activities associated with agriculture, forestry, and urbanization.

2. First evaluations of streambank debrushing and use of brush bundles and "half-log" devices.
3. First intensive evaluation of newly designed habitat structures for Wisconsin's higher-gradient streams.
4. First *long-term* evaluation of bank-covers, now a standard device.
5. First evaluation of catch-and-release angling regulations in Wisconsin.
6. First compilation and interpretation of Wisconsin's many evaluations of habitat management in one document.
7. First evaluation of size-limit regulations on wild brook trout at a time when little attention was being paid to wild trout.
8. First evaluation of Canadian-strain brook trout stocked in Wisconsin waters.
9. First measurement of biological production (total elaboration of flesh) by a generation of wild brook trout throughout its lifespan (and thereafter by several generations), a study widely used as a model for similar research and by academicians teaching fishery science.
10. Innovations in electrofishing gear and fish sampling procedure: custom-built fiberglass boats, testing of a lightweight DC generator, and development of population inventory methods that became standard for Wisconsin biologists and managers.
11. Initiation of a TU project to promote anglers' unharmed release of trout that they do not wish to keep, CPR (Consider Proper Release); this project included five steps to reduce post-release mortality. Thousands of released fish have had their lives extended by anglers who followed these simple practices. Bob considers this project one of his most important accomplishments.

In addition to the many direct and indirect public benefits of Bob's research and of recommendations emanating from it, which are discussed above, a few other items deserve mention. His research and his technology transfer led to appointment as Scientific Advisor to the Wisconsin TU Council, the state's most influential organization of trout anglers—and to service on TU's National Scientific Advisory Board. He suggested research topics and provided field assistance and guidance to several M.S. students and two Ph.D. students at the University of Wisconsin campuses in Madison and Stevens Point, and he presented occasional lectures to fishery biology classes at those universities. In a nutshell, the scope and public influence of policies and standards that Bob developed were immense within our state.

Professional Awards and Honors

- 1979, 1982 and 1987 – Wisconsin DNR Exceptional Performance Award
- 1981 – National Trout Unlimited Conservation Award (Professional Category)
- 1982 – Gulf Oil Conservation Award (Professional Category)
- 1992 and 1999 – Wisconsin DNR Bureau of Research Award for Excellence
- 1992 – Special Recognition Award at the 7th International Salmonid Stream Habitat Workshop, Everett, Washington, for being the workshop's founder (1978) and serving often on its steering committee
- 1992 – Wisconsin Council of Trout Unlimited Award of Merit
- 1992 – American Fisheries Society Special Award of Recognition

- 1999 – Elected to the American Fishery Society National Hall of Excellence, the first DNR biologist to be so honored
- 2000 – Presented with the prestigious Starker Leopold Award (Professional Category) at the Wild Trout VII Conference in Yellowstone Park in recognition of "outstanding long-term service to the coldwater fishery resource"

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The Hunt Brothers



From childhood on, brothers Dick and Bob Hunt led the strenuous outdoor life for which Wisconsin's lands, waters, flora and fauna provide so well. The inspiration, vigor, and values thus imparted carried over into a combined 69 years of extraordinarily productive work as field biologists for the Wisconsin Conservation Department (WCD) and its successor agency, the Department of Natural Resources (DNR). Their abilities and industriousness, and the business-like approach to all they undertook would have suited Dick and Bob for lucrative work in private enterprise—desk bound, no doubt. It wouldn't have interested them in the least!

Choosing instead public service careers—wildlife research in Dick's case, trout research in Bob's—they became renowned scientific experts and promoters of conservation in their specialties. Importantly, their experiences as avid hunters and fishers engendered spirit and a strong sense of purpose and dedication in their work toward restoring and protecting natural resources. Clear in their goals, Dick and Bob far more than repaid Wisconsin for the outdoor life it afforded them.

The molding of such beneficial careers had much to do with their family, the era and location of their upbringing, and mentoring by fellow professionals. Parents, M. Roy and Clara Hunt, reared the boys and two daughters during the 1930s and '40s, the trying years of economic depression and war. Undoubtedly,

hardships were encountered that helped build such traits as industriousness, resilience, and team spirit into the Hunt brothers. Their natural surroundings, however, yielded more advantage and pleasure than adversity.

Initially living in Madison, Wisconsin, the Great Depression forced the Hunts to move to McFarland, a small town south of Madison on Lake Waubesa, right at the Yahara River outflow. The lake, the river, a pond adjoining the property, and nearby fields, wetlands, and woodlands offered abundant opportunities for hunting, fishing, hickory nut collecting, and other outdoor activity. Among their adventures, Dick and Bob searched freshly plowed fields for Indian artifacts and amassed a large collection. Once, Bob fell through the lake's ice and had a narrow escape thanks to the heroism of brother Dick. That story became family lore, and Bob's granddaughter recorded it in the Appendix.

Roy Hunt, a crack shot, avid duck hunter and angler, put much-needed food on the family table and trained his sons well in bagging game and fish. He was also a keen outdoors teacher who Dick says "knew everything that swam, flew, crawled, walked, or ran." Roy regularly left notes telling oldest son Dick to "clean ducks!" Dick thinks over a hundred such notes were left for him, and he credits this early parental training as helping him become a competent waterfowl biologist. Later, Dick and Bob received further tutelage afield at the University of Wisconsin-Madison and from WCD personnel, in particular, Oswald "Os" Matson.

Dick was a University student at Madison during the 1947-50 periods. When he began working with WCD, Bob tagged along on field excursions and got the yen to be a grouse or trout biologist. Dick also brought teenager Bob to graduate seminars at the University—the ornithology sessions of Professor John T. Emlen and those jointly conducted by Professors Joseph J. Hickey and Robert A. McCabe in game management.

The UW Wildlife Department occupied a large, creaky-floored old house, once the Agriculture Dean's residence. There, in the attic library, Aldo Leopold had established a tradition of Monday night seminars continued by Hickey and McCabe, complete with post-presentation passing of a basket of apples. Some scientific complexities may have escaped the young Hunt brothers, but surely they absorbed valuable content, as well as the special spirit of dedication and camaraderie among grad students, faculty and WCD biologists at the seminars.

Attending the seminars besides the Hunts, were seasoned biologists and graduate students including Robert Ellarson, Cyril Kabat, Al Stokes, James Hale, Lawrence Jahn, Robert Dorney, Ruth Hine, George Knutson, Harold Mathiak, Arlyn Linde, Fred Wagner, Carroll "Buzz" Besadny, and Don Thompson. It was a great experience to rub elbows with folks who were or would become eminent in wildlife science and conservation. Dick, already an accomplished outdoorsman and military veteran, didn't let his lack of academic or scientific experience prevent him from contributing to these discussions.

Sometimes these events centered at the Fred and Fran Hamerstrom home and field station in central Wisconsin. Dick lived and worked with the Hamerstroms for a while, and Bob got a taste of grouse biology and met Os Matson, who took him trout fishing. Os may also have played a prominent part in the grouse hunting that became becoming a life-long passion for both Dick and Bob.

Dick and Bob's early experiences surely helped instill in them the fortitude needed for working under difficult outdoor conditions. Also gained were the sporting values—and yes, surely the awe and wonder of nature's beauty—which stood them in good stead when they later so admirably served the public, the conservation community, and the natural resource itself. Dick and Bob both chose to keep working as productive and influential field biologists and mentors, rather than accepting advancement into higher paying, office-bound, administrative positions.

Many people aspire to success in terms of wealth, rank, political power, or whatever. More important is *significance*—the effect that a person has. Thanks to Dick Hunt's efforts, more than anyone else's, Canada geese, once scarce in Wisconsin, now abound. Thanks to Bob Hunt's efforts, more than anyone else's, Wisconsin's wild trout, once diminishing in streams devastated by habitat damage and

contaminated with hatchery fish, now thrive. These improved resources enhance quality of life for the people of Wisconsin and for visitors to its fields, marshes and streams.

The Hunt Brothers have profoundly benefitted Wisconsin conservation. Indeed, the Hunt Brothers exemplified what it was that made the fish and wildlife research in Wisconsin develop into one of the best state programs in the country. Dick humbly sums up their contributions by saying he is "proud to be" among the ranks of the "many dedicated people" who have done "wonderful things for resource management and for the citizens of Wisconsin."

Joining the Conservation Hall of Fame

The lives and careers of these two stalwart Wisconsin conservationists are presented in detail on the following pages. Their initiative, impeccable research, and implementation of state, national, and international regulations, management, and institutional policy are deserving of the highest accolades.

From Boy Scouts to biology, Dick Hunt has contributed to society in an honest, forthright manner with a fundamental commitment to wildlife conservation that led to the development of one of the finest wetland and waterfowl conservation programs in the country. Despite controversy in Canada goose management that threatened the state economically as well as undermining public confidence in the DNR, Dick was crucially instrumental in producing the scientific-based solutions that not only restored order to management, but restored Canada goose populations on the brink of collapse.

Dick's contributions beyond his employment involving sandhill cranes, trumpeter swans, and prairie chickens garnered special recognition from those organizations. While he modestly dismisses his contributions to many others including the Friends of Horicon Marsh, Citizen Natural Resources Association, Wisconsin Wildlife Society, Prairie Chicken Society, Wisconsin Wetlanders Group, and the International Crane Foundation, the facts are that they received his help on numerous occasions and his expertise was most valued. He gave expert testimony many times to protect Wisconsin wetlands and developed unique expertise on electric power line impacts on waterfowl that contributed to selecting development corridors with less impact on wildlife and wetlands.

Bob Hunt has dedicated his life to conservation. His innovative wild trout research continues to have significant impact on fisheries policies and habitat management strategies not only in this state, but nationally and internationally. His numerous publications have enhanced the knowledge base of professional fisheries scientists and enabled significant advances in the management of fish species, the improvement of fish habitat, and recreational angling. His positive influence on his profession, students, trout anglers, and the public goes well beyond his civil service responsibilities, and was always conducted with grace and dignity.

Like his brother, Bob's expertise has extended his influence well beyond his employment responsibilities. He has served as a consultant and trainer to natural resources agencies in Iowa, Michigan, Minnesota, California, Pennsylvania, and Georgia. He has provided similar services to U. S. Forest Service personnel, the Society of American Foresters, and provincial employees in Nova Scotia and Newfoundland. He has conducted scientific workshops involving scientists from England, Ireland, Germany, Japan, Russia, and several Canadian provinces. His Trout Unlimited services draw accolades that continue to this day.

At no time in Wisconsin's history have two brothers contributed to conservation programs so much, so well, and for so long. Such service deserves to be commended by their selection to the Wisconsin Conservation Hall of Fame.