

EVOLUTION
OF THE
AUBURN UNIVERSITY
FISHERIES PROGRAM

'GENIUS IN THE KINGDOM OF SERENDIP'

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DEDICATION



I wish to dedicate this History of the Auburn University Fisheries Program to Marion J. Funchess (Figure 4) who served as Dean of the School of Agriculture and Director of the Alabama Agricultural Experiment Station during the period 1924-1950. The contributions by H. S. Swingle and E. V. Smith are well documented in the book. Unfortunately, the important role played by Funchess is less well known. It is safe to say that without a crucial decision by Funchess, amidst difficult circumstances in the early 30s, there would have been no Fisheries Program at Auburn.

Marion J. Funchess, a graduate of Clemson University and a post-graduate student at the University of Wisconsin, was appointed Assistant Professor in Agriculture at Auburn in 1909. He was promoted to Professor of Agronomy in 1915. From 1920 to 1934, he served as Head of the Department of Agronomy and Soils. Then in 1924, he was appointed Dean of the School of Agriculture and Director of the Agricultural Experiment Station. He held both jobs until 1934, when he relinquished the position as Department Head (Yeager and Stevenson, 2000).

Yeager and Stevenson (2000) commented that Funchess, “was recognized as a no-nonsense, morally strict, dogmatic teacher, scientist and administrator.” He had strong opinions that he changed only with overwhelming evidence. Early in his career at Auburn he was given the nickname, “*Facts Funchess*,” by students in his class on Soil Fertility as a result of his insistence that they “keep their facts straight.”

Swingle commented (personal communication) that after 1924, when Dean Funchess held the positions of Head of the Department of Agronomy and Soils and Dean and Director, he began to have problems with his health. His doctor sensing that he was working too hard, insisted that he find some interest beyond agricultural administration. Literally surrounded by avid fishermen on his faculty, he became interested in fishing.

His commitment to the sport is illustrated by a story recounted by Yeager and Stevenson: The need for a good source of fish bait once caused Funchess to countermand an order of Dairy Professor Arthur Burke to

Dairy Herdsman M. C. Mathison to clean up silage spills at the College Dairy Barn. Funchess regularly visited the Dairy to gather insect larvae for fish bait that multiplied in silage spilled while the cart was being loaded. When informed of Burke's order, Funchess told Mathison, "Don't move it, I'll take care of Arthur."

According to an un-published history of the Fisheries Program at Auburn prepared by H. S. Swingle, Funchess made his first crucial decision in 1933; a decision which would ultimately lead to the development of the Fisheries Program. In 1933 he requested that Swingle, F. E. Guyton and F. S. Arant prepare a project proposal to utilize Agricultural Experiment Station funds to conduct research on producing good, sustainable, recreational fishing in 'terrace-water' ponds. The details regarding his decision are unclear, but it must have been related to the poor results obtained from the first stocking of Lake Auburn.

Apparently, members of the Auburn Outing Club had requested that Swingle, Guyton and M. J. Nichols (Professor of Agricultural Engineering) serve as 'managers' for the construction and management of Lake Auburn. It received its first stocking of fish (49 adult red-ears and 121 adult bluegills) in the spring of 1932. It was not opened for fishing for the general membership until the spring of 1933; however, it is likely that by early fall of 1932, the 'managers' knew that fishing was going to be really poor the following year.

It is not possible to know what Funchess had 'invested' in Lake Auburn in late 1932. He was a member of the Auburn Outing Club and an avid fisherman. Further, members of his Experiment Station faculty were 'managers' of the project. Obviously, he had waited expectantly to participate in the excellent fishing that surely would be available in 1933. Facing the prospect of extremely poor fishing in 1933, it is likely that discussions involving Funchess and the 'managers' resulted in an agreement that an Experiment Station Project to conduct research in this area was warranted. It is also likely that they agreed that a formal proposal should be prepared immediately, and probably agreed on who should prepare it. It is also obvious that Funchess knew that the proposal would be approved by the Experiment Station.

The decision by Funchess to begin research on the construction and management of 'terrace-water' ponds was complicated. To begin with, there seemed to be little need for it. Swingle (1936) estimated that there were some 1,000 ponds and small lakes (17,000 acres) in Alabama in 1936, or an average of about 15 for each of its 67 counties.

The 1935 Agricultural Census reported that there were 273,455 farms in Alabama in that year – about one pond or lake per 273 farms. It did not

seem likely that research to improve recreational fishing in ponds and small lakes would improve the lives of Alabama farmers very much.

There was little accumulated knowledge and experience anywhere in the national Agricultural Experiment Station System about this type of research. Developing technology to create good fishing in privately-owned 'terrace-water' ponds had never been part of their mission. In fact, when Auburn made a formal request to use Purnell Act Funds for this purpose, the U.S. Department of Agriculture would not approve it. It was their position that this kind of research should be funded by the Department of the Interior.

At that time, virtually all of the work on fish management was being conducted by other Federal and State Conservation Agencies, and it was directed toward use in public waters. Few could imagine that farm ponds would ever provide very much recreational fishing. Further, there was virtually no Experiment Station money available to begin a new line of research. In 1932, State funding for Experiment Station operations at Auburn was reduced by 30 percent (Yeager and Stevenson, 2000). Even this reduced level of funding was not made available in 'hard cash.' Instead it was paid in the form of *Certificates of Indebtedness*, to be redeemed when the funds became available. State funds for research materials and equipment were essentially non-existent. Faculty were not paid 'in-full' from 1931 through 1937. This would seem to be an extremely poor time to begin a new research program. It was truly amazing that Funchess would consider it.

Also, in the early 30s, Funchess had no one on the Experiment Station faculty that was qualified to undertake research on pond management for recreational fishing. He had hired F. E. Guyton in 1921 to work as an entomologist in the Zoology-Entomology Department. Guyton had apparently had a course in fish taxonomy at some time in his career, but although he was an avid fisherman, he had no background in fish biology or management. Further, after the Lake Auburn debacle, it must have been questionable as to whether or not Swingle and Guyton should be involved at all.

Funchess had no facilities in which to do the research, and there was no one on the faculty who had the slightest idea of what facilities would be required. Unfortunately, there was no one in the national Experiment Station 'network' that could provide any assistance. None of the other Stations seemed to be interested in spending Experiment Station money to develop technology required to establish good, sustainable, recreational fishing in private ponds.

So, in late 1932, there seemed to be little need for a new Experiment Station Project on the construction and management of farm fish ponds. Further, Funchess had little money, no suitable faculty and no facilities. About all that he had was an accumulation of failed expectations for the good fishing produced in Lake Auburn. It was in this muddled 'mix' that he would make his first crucial decision.

The decision to begin research on producing good, sustainable fishing in 'terrace-water' on private land was crucial in the evolution of the Auburn Fisheries Program, but in retrospect, it is fairly obvious that it was made as a result of considerable input from a fisherman's 'heart' rather than from an administrators 'brain.'

The Funchess 1939 decision to purchase 580 acres of land north of Soughahatchee Creek was also important to the evolution of the Auburn University Fisheries Program. However, it was easy to make. The Experiment Station funding situation was much improved. Also the 'Investigators' had several years of solid research accomplishment behind them on the South Auburn Farm, and they had a much better understanding of characteristics required in the development of a facility for conducting research for establishing good, sustainable fishing in ponds.

The decision, in 1943, to purchase land required for the development of the Story Farm was also important; however, it was still easy to make. The funding situation was much better. Further, the 'Investigators' had produced some really exceptional fishing in Farm Pond 4 on the South Auburn Farm in 1940 and 1941 (the 'Eureka' Experiment'). Also, in their early research on the Soughahatchee Farm, they had clearly demonstrated the need for larger ponds.

Funchess retired in 1950. He had played an essential role in the establishment of the Fisheries Program in the early 30s, and was still there to see it accorded national recognition in the late 40s. I am certain that he was pleased with what he had launched, but he would likely have been amazed when the request came from the U.S. Agency for International Development for it to perform on the world stage.

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PREFACE

In the mysterious Kingdom of Serendip, people often found unusual and important things while looking for something entirely different (Serendipity). In 1931, a small group of faculty at the Alabama Polytechnic Institute began the search for a better place to fish in rural Alabama, and a half century later they found a world of fish-hungry people in Africa, Asia and South America. It could only have happened in the Kingdom of Serendip and it could have only happened in a situation where “genius” recognized and seized the unexpected opportunities.

In April, 1942, the Alabama Agricultural Experiment Station published Bulletin 254, *Management of Farm Fish Ponds*, and in January 1947, a revised version was published. Without question these two publications established the base for the evolution of the reputation of the Fisheries Program at Auburn University; a reputation that would ultimately provide it with the opportunity to be of service to humankind throughout the world. These two publications had their origin in a failed attempt in 1932 and 1933 to provide improved recreational fishing opportunities for the Auburn Outing Club. Fortunately, the Auburn University administrators and faculty responded to this failure by developing a research program that in some 6 years would solve many of the problems that were responsible for the initial failure, and would provide the information included in Bulletin 254. It took an unbelievable amount of hard work and insight and a series of fortuitous events, local, national and international to go from that failed fishing pond to world-wide service. In the following pages I will attempt to describe some of those events and how they came to be. I think that you will agree that it is a fascinating story.

Although this has been a story in progress for almost 80 years, it was the first decade that provided its direction and momentum; consequently, in the following pages an inordinate amount of attention will be devoted to the establishment of its essential outline in those early years. This effort is also intended to focus attention on two individuals, H. S. Swingle and E. V. Smith, faculty members in the College of Agriculture and the Agricultural Experiment Station who were almost completely responsible for establishing the ‘story-line.’ This is a fascinating story in itself. Neither had any experience of any kind in hydrobiology. Swingle was an entomologist and Smith a botanist with a specialty in plant physiology, and I am not certain that Smith even liked to fish.

This close look at the early years will also provide us with an opportunity to participate in their ‘self-education,’ to almost be in their mental processes as they attempted to ‘learn while doing.’ It is probably fortunate that neither had any formal training in hydrobiology. For a number of very

practical reasons, hydrobiologists of the day, in order to learn Mother Nature's 'secrets,' were forced to sit by the water and listen carefully to her still, small voice. Swingle and Smith came from a completely different background – a background in agricultural research. With this background they had learned to 'force' Mother Nature to answer questions that they wanted answered. This was accomplished through the use of carefully designed field trials. In general, traditional hydrobiologists did not have this opportunity. They had to deal with Mother Nature as they found her, primarily in natural waters.

After getting past these early years, I changed the 'story-line' considerably. After having described the establishment of the program's 'base,' I turned to recounting some of the more recent events that carried the Program from a 12-acre terrace-water pond in eastern Lee County, Alabama onto a world stage. In these Sections, the work of the Program's faculty on the three primary missions of the Land Grant College (Instruction, Research and Outreach) is described. Finally, I added two Sections of supplemental material – one on Information and the other on Special Relationships.

ACKNOWLEDGEMENTS

This book on the evolution of the Auburn University Fisheries Program represents the summation of contributions from many individuals. In this Section, I wish to acknowledge as many of their contributions as practical. The description of the developments of the early years are largely derived from the highly detailed Annual Reports prepared by H. S. Swingle and E. V. Smith. A hand-written manuscript entitled *Fisheries Work* prepared by Swingle in the early 70s, provided important details on the history of the Program before the first formal Project was approved. He later expanded this hand-written outline into a more formal manuscript entitled *History of Fisheries at Auburn University*. Copies of these documents are maintained by the Media and Digital Resource Laboratory (MDRL) at the Ralph B. Draughon Library.

Swingle and Smith maintained a detailed list on the construction of ponds and related facilities on the Farms from the early 30s. Later, Swingle made certain that these important records would be maintained and up-dated each year. Lamar Black joined the Program on January 1, 1948. I am not certain when Swingle assigned him the responsibility of maintaining this list, but he continued to update it each year until he retired in 1985. Subsequently it was maintained by Randell Goodman until his retirement in 2011. Since that time, Karen Veverica has been responsible for maintaining it. This list has been invaluable in following the evolution of the Program. With details included, it is possible to closely 'track' different aspects of the Program over the years. The most recent version is included in the book as Appendix Table 1.

All of the active faculty were given copies of the material in the manuscript that described their contribution to the evolution of the Fisheries Program. They were given the opportunity to suggest changes in the material. Most of them responded enthusiastically. Retired faculty were accorded the same opportunity when it was possible to contact them. Several active Staff were also asked to review relevant material. Most of the changes that they suggested are included in the manuscript.

Major Sections of the manuscript do not concern single Faculty or Staff members, but are more general in nature; consequently, different individuals were asked to prepare material for those Sections.

I am deeply indebted for the contribution of Mary Lou Smith. She spent countless hours in the Library, copying budget material related to the Fisheries Program. She was able to find and copy material dated from 1947-1948. These records have been invaluable in writing the history of the Fisheries Program. They record the 'comings-and-goings' of virtually all of the personnel ('Investigators') associated with the program over a 65-year

period. They serve as markers of important watershed events. The establishment of the Department of Fisheries and Allied Aquacultures and the International Center for Aquaculture are clearly shown by the increase of personnel in the early 70s.

It would have been extremely difficult to have written the book without the material prepared by Len Lovshin and those who worked with him in the Information Technology Group. More on their contribution will be described in the Section on Information.

Many years ago, Don Moss prepared an excellent summary on the events related to the establishment of the International Program. Much of the material that he prepared is included in that Section. Later, Rudy Schmittou, with considerable assistance from Billy Earle, summarized some of the details of the vast amount of data on grants and contracts associated with the Program. These two manuscripts are stored in the Media and Digital Resource Laboratory (MDRL).

Randell Goodman assembled the available information on the description of the different tracts of land purchased by the University for the establishment of the Soughatchee, Story and Farmville City Farms. He also prepared most of the material included in the Sections on houses located on the Soughatchee and Story Farms and their occupants. Finally, he provided valuable information for the Sections on the Field Crew and Field Operations.

Benjamin Beck and Craig Shoemaker provided much of the material included in the Section on Aquatic Animal Health Research Laboratory.

David Bayne prepared much of the summary on the research conducted by the Lawrence-Bayne Work Group and later the Bayne Work Group on water quality and weed control in public waters.

Gregory Whitis prepared much of the material included in the Section on the development of the Alabama Fish Farming Center.

Billy Powell contributed much of the material on early events leading to the involvement of the Alabama Cooperative Extension Service in the establishment of a marine outreach program in the State's Coastal Zone. Later, Rick Wallace prepared much of the material included in the Section on the evolution of the Auburn University Marine Extension and Research Center (AUMERC). La Don Swann later reviewed this entire Section and added some more recent details about the program.

Bill Deutsch prepared much of the material included in the Section on the history of the Alabama Water Watch Program.

Jimmy Avery and Craig Tucker provided important details about the role of USDA in supporting research in aquaculture.

Gregory Whitis read the entire manuscript, including all Tables and Figures and in the process, wore-out at least a dozen red pens in making corrections and suggestions. His visual perception is even sharper than that of Evil-Eye Fleegle, a legendary character in Al Capp's comic strip *Li'l Abner*.

June Burns, who has been responsible for producing a large share of the Boyd manuscripts over the years, accepted the mostly thankless task of editing this one as well. She also standardized the format throughout. I deeply appreciate her weeks of effort in pulling everything together.

The staff, and especially John Varner, in the Department of Special Collections and Archives have been unfailingly helpful in locating and retrieving information. They have assembled, catalogued and stored an amazing amount of information about the Fisheries Program, and they are always willing to retrieve it.

Finally, I want to acknowledge the long suffering patience of my precious wife – Jean. She has patiently tolerated my partly Scotch-Irish personality for 64 years. Unfortunately, after I retired and began to write, pressure on her sweet, tolerant personality was stretched to a breaking point as her 'honey-do' list mounted and finally spilled over. The brightness of the *stars in her crown* is equal to the light of the sun itself.

To each and everyone that has helped in any way to make this *Evolution of The Auburn University Fisheries Program* a reality – Thank you, Thank you Thank you, a thousand times Thank you!