MIGRATORY GAME SESSION

ON THE STATUS OF "WILDLIFE MANAGEMENT" AS A SCIENTIFIC PROFESSION

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INTRODUCTION

A continuing process within the broad field of biological sciences has been the emergence of subordinate specialties as major divisions that become independent of and equal in status to their parent disciplines.

The first major break in biology was the separation of botany from zoology, with each becoming a distinct entity or division within itself. These major divisions have since undergone their own separations into such basic subdivisions as anatomy, ecology, physiology, taxonomy, and numerous others. In many colleges, even these subdivisions have gained departmental status or equivalent. Since this emergence is a continuing process, some have further developed into major divisions that are represented by national and international professional organizations.

Within the past thirty years, a major division of the biological sciences has evolved that is actually a *synthesis* of zoology, botany, and many other sciences but with practical applications as its primary objective. This division, wildlife management, sought professional recognition with the founding of The Wildlife Society on February 28, 1937. The objectives of this organization, as stated in the original charter, are to: "Establish *professional* solidarity and maintenance of the highest possible *professional* standards and to develop all types of wildlife management along sound biological lines." [1] Wildlife management itself is often split into the subdivisions of fisheries and game management.

HISTORY

From the historical viewpoint, wildlife management in the United States was preceded by the philosophy of natural resources conservation as then interpreted by such outstanding naturalists as Gifford Pinchot, William Hornaday, and Theodore Roosevelt. The establishment of game regulations and their enforcement was the most tangible result of conservation efforts before 1900. From this beginning, the concentrated efforts of interested individuals in forestry and other related fields produced a concept of game management that Aldo Leopold was able to interpret and present as a new body of science.

In discussing the future of game management, Leopold (1933) declared that: "Forestry in two decades experienced a complete transition to a professional basis . . . The same transition has now begun in the field of game. Game men in both public and private employ must become technicians, or be gradually replaced. Game management must become a profession if game conservation is to become a fact." Leedy (1953) felt that wildlife conservation as a way of life and as a profession was just coming into its own when Wildlife Research Units were established in 1935.

The founding of The Wildlife Society indicates that the professional challenge was accepted. Despite this, English in 1942 felt that wildlife management was still an infant from a professional standpoint.

That progress was made is indicated by the statement of Bennitt in 1946. "There has been little time for a professional philosophy to mature.

"Wildlife management may now constitute a profession. I think it does, . . . but its professional standing is not yet universally recognized."

The overall interests and skills of those in attendance at this meeting and the diversity and quality of the papers presented indicate that wildlife manage-

[1] Italics supplied.

ment is a vital and growing profession in the field of biological sciences. True, many problems and growing pains exist but they can be ironed out as they arise under the direction of competent leadership. Recent proposals to The Wildlife Society for the adoption of professional standards to improve professional prestige and stature (Berryman, 1958) indicate that its future is being well-guided.

BASIC RESEARCH THE CORNERSTONE

Wildlife specialists are becoming more aware of the trend by state and other conservation agencies toward increased recognition of academic biology and basic research. This recognition has resulted in granting research fellowships and funds to many college institutions. These contributions have resulted in the investigation and publication of many biological problems, the construction of wildlife exhibits in natural history museums, the production of informational movies, and the publication of books pertaining to state faunas. All these efforts are directed at making technical information more readily available to the general public.

Early in 1938, King recognized that basic research was the cornerstone to success when he concluded that the systematic accumulation of facts in regard to life histories, ecology, growth, habits, and needs of wild animals is the science of wildlife research on which an exact art of wildlife management can and must be based.

Haugen (1952) carried this theme even further by contending that wildlife managers must raise their profession to the same level as that now occupied by agriculture, engineering, and forestry by carrying on the same caliber of research that made it possible for these professions to develop.

Emphasis on basic research was given additional federal recognition in 1956 with the enlargement of the Wildlife Research Branch within the Bureau of Sport Fisheries and Wildlife when the Fish and Wildlife Service was given cabinet status with an Assistant Secretary to the President.

Alexander (1956) summarized the current status of basic research when he concluded that: "We have not given sufficient recognition to the value of research in solving wildlife problems, although its value is widely accepted in other fields of endeavor; and the biologist has not yet been accorded professional status, even though his training and experience are equivalent to those in other professions."

At present, there is an immediate and urgent need for closer liaison between agriculturists, botanists, foresters, wildlife managers, and zoologists since fundamentally they are all scientists utilizing biological principles to obtain their numerous objectives. This closer, intimate cooperation is essential in order to prevent duplication of research efforts and to enable the various groups involved to take advantage of the increased knowledge that solidarity can offer.

TRAINING

Aldo Leopold inaugurated a Department of Wildlife Management at the University of Wisconsin in 1933 that is generally recognized as the first opportunity for a formal education in wildlife management at the graduate level in the United States. Since that time, the opportunity to obtain formal training has greatly increased. Here in the Southeast,[2] a minimum of twenty college institutions offer at least one course in wildlife management or conservation of natural resources (Table I). In addition, eleven offer Bachelor of Science, eleven Master of Science, and eight Doctor of Philosophy degrees in fisheries or wildlife management (Table II). The high proportion of graduate degrees is encouraging since it is now generally conceded that a master's degree is desirable as a minimum of formal training to gain professional standing (Leedy, 1953).

In addition to these opportunities, North Carolina State College will offer the first game hunting short course in the nation this fall. This course will be conducted from November 30 through December 6, 1958, and will feature

2 Construed to include the member states of the Southeastern Association of Game and Fish Commissioners.

TABLE I

SOUTHEASTERN COLLEGE INSTITUTIONS OFFERING AT LEAST ONE COURSE BUT NO DEGREE IN WILDLIFE MANAGEMENT OR CONSERVATION OF NATURAL RESOURCES

State	*Institution*	*Dept.*[1]	*Title of Course*	*Level*[2] *U*	*G*
Ala.	University Alabama	B	Conservation	X	
	Florence State College	B	Wildlife Conservation	X	
	Jacksonville State College	B	Wildlife Conservation	X	
	Troy State College	S	Wildlife Conservation	X	
Ark.	Arkansas A.&M. College	B	Life Science and Conservation	X	
	Ark. Polytechnic Institute	B	Conservation of Nat. Rsc.	X	
Fla.	Miami University	Z	Wildlife Conservation	X	
	Rollins College	B	Conservation of Nat. Rsc.	X	
Ga.	Mercer University	B	Conservation of Biological Rsc.	X	
Ky.	Georgetown College	B	Conservation of Nat. Rsc.	X	
	University Louisville	B	Game Management	X	
La.	Southwestern La. Institute	B	Conservation Nat. Rsc., Wildlife Management	X	X
	Tulane University	Z	Wildlife Management		X
Md.	University Maryland	Z	Wildlife Parasitology	X	X
	State Teachers College, Towson	S	Conservation of Nat. Rsc.	X	
Miss.	Mississippi State College	Z	Game Conservation and Mgt.	X	X
	University Mississippi	B	Elements of Wildl. Cons.	X	
S. C.	Clemson College	Z	Game Management	X	
Tenn.	University Chattanooga	B	Conservation of Nat. Rsc.	X	
	University Tennessee	Z	Fundamentals of Wildl. Mgt.	X	

1 B-Biology, S-Science, Z-Zoology.
2 U-Undergraduate, G-Graduate.

TABLE II

SOUTHEASTERN COLLEGE INSTITUTIONS OFFERING DEGREES IN FISHERIES OR WILDLIFE MANAGEMENT

State	*Institution*	*Dept.*[1]	*Degrees Offered*[2] *B.S.*	*M.S.*	*Ph.D.*
Ala.	Ala. Polytechnic Institute	Z	F,G	F,G	F,G
Ark.	University Arkansas	Z	F		
Fla.	Florida State University	Z	F	F	F
	University Florida	B	F	F	F
	University Miami	Z		F	
Ga.	University Georgia	Z	W	W	W
La.	La. Polytechnic Institute	Z	W		
	La. State University	Fo	G	G	
	Tulane University	Z	F	F	F
Md.	University Maryland	Z	F	F	F
Miss.	Mississippi Southern	B	C		
N. C.	N. C. State College	B	W	W	W
Va.	Va. Polytechnic Institute	B	W	W	W
	William and Mary College	B		F	

1 B-Biology, Fo-Forestry, Z-Zoology.
2 C-Conservation, F-Fisheries, G-Game Management, W-Wildlife Management.

instruction in hunting deer, dove, fox, pheasant, quail, rabbit, raccoon, and squirrel.

Alabama and Virginia polytechnic institutes have the only Cooperative Wildlife Research Units in the Southeast. These Units are jointly sponsored by the college and state conservation department involved, the U. S. Fish and Wildlife Service, and the Wildlife Management Institute. This joint sponsorship affords the student an opportunity to gain valuable experience and meet prospective employers while earning his degree. It also gives these agencies a first-hand opportunity to scrutinize potential employees.

EMPLOYMENT

Career opportunities in wildlife management have improved in respect to both salaries and individual status since the publication of Turner's *Professional Opportunities in the Wildlife Field* in 1948. Some forest industries have recently employed game biologists to assist them in managing their forests for wildlife. These biologists have been employed with above-average salaries and numerous fringe benefits comparable to those offered by other leading industries. The Soil Conservation Service recently engaged in hiring additional wildlife specialists to assist in conservation work in the Southeast on a problem-area basis. The U. S. Forest Service in its "Operation Outdoors" has recognized the need for wildlife management on National Forests by allocating funds for wildlife and recreational development and may require wildlife biologists to direct these programs.

Despite proposed changes to give wildlife specialists improved opportunities in the Southeast (Glasgow, 1956), it will be quite some time before the wildlife profession is advanced enough that members with doctorates will turn down a $13,000 a year salary to come to Auburn (or any other school) as Dean Pumphrey claims engineers are doing.

Eugene Legler (1957) summed the present situation up quite well when he said, "All men with a sincere desire to study wildlife problems have an equal opportunity to receive the proper educational requirements and experience needed to qualify for such work. They enter this professional employment knowing that Chinese wages are common and that their knowledge of wildlife will be dragged over rocky paths. No other profession offers more of a challenge to future generations or more opposition from those persons semi-qualified in regard to the basic fundamental principles of conservation."

CONCLUSIONS

In conclusion it can be stated that wildlife management *has* gained professional status and is rapidly becoming a mature, recognized branch of science. Therefore, a man entering the wildlife profession today does so during a transitional period from the ranks of technician to that of biological scientist. This transition implies that the future wildlife specialist will encounter increased pressure to produce the desired results as more people find more time for leisure and outdoor recreation under our present system of changing economy. And the only way to achieve this objective will be to allow for greater individual initiative from a wildlife biologist or specialist who has adequate education and training and an open, inquiring and scientific mind.

SUMMARY

The broad field of biological sciences encompasses many specialties that have emerged as major divisions. Within the last thirty years, a major division of the biological sciences has evolved that is essentially a *synthesis* of botany, zoology, and other sciences but with practical applications as its primary objective. This division, wildlife management, sought professional recognition with the founding of The Wildlife Society in 1937.

Historically, wildlife management was preceded by the philosophy of natural resources conservation as then interpreted by naturalists like Hornaday and Pinchot. Since Aldo Leopold in 1933 cited the fact that game management was undergoing a transition, wildlife management has evolved into an internationally recognized branch of science.

Closer liaison among biological scientists is essential in order to take full advantage of basic research that forms the cornerstone of any successful profession, including wildlife management.

A minimum of twenty Southeastern college institutions offer at least one course in wildlife management or conservation of natural resources. In addition, eleven offer Bachelor of Science, eleven Master of Science and eight Doctor of Philosophy degrees in fisheries or wildlife management.

Salaries and individual prestige in wildlife careers have improved as the wildlife profession has developed. However, there is a great necessity for continuing and accelerating progress along these lines in the Southeast.

Wildlife management *has* gained professional status and it is up to the individual wildlife specialist to hitch up his galluses and approach his research and problems with an open, inquiring and scientific mind.

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