THE ECOLOGICAL SOCIETY OF AMERICA

Historical Data and Some Preliminary Analyses

Robert L. Burgess
Environmental Sciences Division

OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37830
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INTRODUCTION

Since its inauspicious beginnings in 1914, the Ecological Society of America, like most professional scientific groups, has generated an interesting and complex history. In spite of periodic attempts at record keeping and archiving, however, the Society has not made a concerted and continuous effort at documenting its meetings, activities, deliberations, and accomplishments. As a Society, there has been no processing of the temporal changes in its role that accompany both societal growth and the technological, cultural, and populational shifts in the internal structure of a great nation. From time to time, several papers have appeared on aspects of the history of ecology (Brewer 1960, Cowles, 1904, McIntosh 1976, Reed 1905). These have not, however, dealt with the development of an organized professional group, its founders, its builders, its objectives, or its accomplishments. In the United States, much of the general scientific history reflects, and is a reflection of, the history of a professional society. Consequently, much interpretation drawn from the writings of both historians and ecologists (Egerton 1976, McIntosh 1974, 1976) has been used to highlight this preliminary inquiry into the developmental history of the Ecological Society of America. Various scientific groups have documented their development with essentially this same technique (Abbott 1958, Kathren and Tarr 1974, Laude *et al.* 1962, Reese 1976, Sullivan 1976), natural resource research and management history has been recently published (Doig 1976, Price 1976), and numerous papers have appeared (in English) on aspects of the history of ecology and related fields (Allee *et al.* 1949, Brewer 1960, Egerton 1976, Egler 1951, Gleason 1936, McIntosh 1974, 1975, 1976, Odum 1968, Raup 1942, Roche 1976, Rübel 1927, Sears 1969, Tansley 1947). In addition, at least two major foreign language works exist on the history and development of ecology (DuRietz 1921, Trass 1976). All of these are useful, not only for their comprehensiveness, but for the approaches used.

In an attempt to delve into Society history, as must be true of most similar endeavors, one is met immediately with either a lack of data, or data in rather dispersed form. The *Bulletin of the Ecological Society of America*, begun in 1917, contains a wealth of information, albeit scattered and discontinuous, on the mechanics of the Society during its 62 years of operation. Lists of officers, and reports of meetings and committees appeared in most early issues. In addition, *Ecology*, the Society's major journal carried business proceedings and reports from 1926 through 1946. These sources were scrupulously searched, primarily for material that could be tabulated, in order to place any future efforts toward a comprehensive history of the ESA on a firm foundation.

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The data and analyses which follow, gleaned solely from the above sources, cover membership, officers, meetings, committees, publications, and a suite of Society activities that have resulted in major impacts on the ecological setting in the United States. I stress the preliminary nature of these analyses, but believe them to be appropriate and utilitarian ventures toward a more definitive history of the Ecological Society of America.

THE BEGINNINGS

The initial move toward an Ecological Society appears to be a letter from Robert H. Wolcott, Professor of Zoology at the University of Nebraska, to Victor E. Shelford, then at the University of Chicago, dated March 27, 1914 (Shelford 1938). We do not know the extent of the influence of Tansley's founding of the British Ecological Society the year before. Wolcott suggested a society composed of both botanists and zoologists, strongly oriented toward field work (rather than formal meetings and presentation of papers), but limited geographically to the upper Mississippi valley. He specifically suggested limits of Kansas and North Dakota on the west (but equivocated about including Colorado), western Ohio (Sandusky Biological Station) to the east, and Missouri to the south. Subsequent correspondence confirmed Wolcott's concept of a regional, rather than national, organization.

Following the Shelford-Wolcott exchanges, Henry Chandler Cowles organized a meeting of both animal and plant ecologists on December 30, 1914 in the lobby of the Hotel Walton in Philadelphia. Present were C. C. Adams, H. H. Bartlett, F. H. Blodgett, W. L. Bray, C. T. Brues, W. A. Cannon, Cowles, A. P. Dachnowski-Stokes, R. F. Griggs, J. W. Harshberger, A. F. Hill, O. E. Jennings, D. T. MacDougal, Z. P. Metcalf, G. E. Nichols, R. C. Osburn, A. S. Pearse, H. L. Shantz, Shelford, Forrest Shreve, Norman Taylor, and Wolcott (and perhaps a few others) (Shelford 1938). Of this group, all but Bartlett and Brues became charter members of ESA, and nine later served the Society as president.

The 1914 meeting appointed Harshberger to chair an organizing committee and prepare for another meeting of interested individuals at the American Association for the Advancement of Science (AAAS) sessions in Columbus, Ohio the next December. That took place at the Hotel Hartman on December 28, 1915, with about 50 in attendance. Chairman Harshberger also had about 50 letters in favor of a society from those unable to attend the Columbus meeting. The group voted to form the Ecological Society of America, adopted a brief constitution, elected officers, and set the next meeting in New York, again with AAAS. Shelford (1938) notes that W. C. Allee and F. E. Clements objected to the formation of "just another society" but both were charter members of ESA. Allee served as president in 1929, but until his death in 1945, Frederick Edward Clements, perhaps the single most influential personage in early American ecology, never held an elective office in the Society.

Present issues of ESA journals indicate that the Society was incorporated under the laws of Wisconsin in 1915. Either the new Society acted quickly after the December 28 meeting, incorporation procedures were already implemented and needed only the December ratification vote, or the date is wrong. The Proceedings of the 1944 meeting [*Ecology* 26(2): 216–234, 1945] state that 1927 articles of incorporation were archived at the University of Cincinnati, and Article 2 of the Bylaws states rather unequivocally that "The Society ... was incorporated ... in the State of Wisconsin, December 20, 1927."

THE MEMBERSHIP

The 22 people in attendance in Philadelphia at the close of 1914 had fertilized the germ of a professional society. A year later, 286 had become charter members (Moore 1920a). Biographical sketches of this

original group were published in a 1917 "Handbook of the Ecological Society of America," a group surely representative of the nation's ecological community at that time, but probably missing a number of then present and soon-to-be ecologists.

By 1921, the year after the Society began its own journal, membership was up to 458. Another 140 were added in the next two years, and in spite of dues of only $4.00, the financial success of the young association seemed assured. During the twenties, growth slowed, and following the crash of 1929, Society membership declined during the great depression, down to 546 in 1934 (from 645 in 1928), but was back up to 680 in 1937. Stability followed through World War II, a period of little production in colleges and universities, and of course, some casualty losses. The growth curve (Fig. 1) starts to climb during the 1950's, reaching 2000 by early 1960. Acceleration continued in the 60's: 3000 by 1966 and 4000 by 1970. Doubling time during this period ranges between nine and 13 years, depending on the slope of the curve. By 1973, 5000 members were recorded, and the 1976 total stood at 5890. The 6000 mark should be reached sometime during 1977.

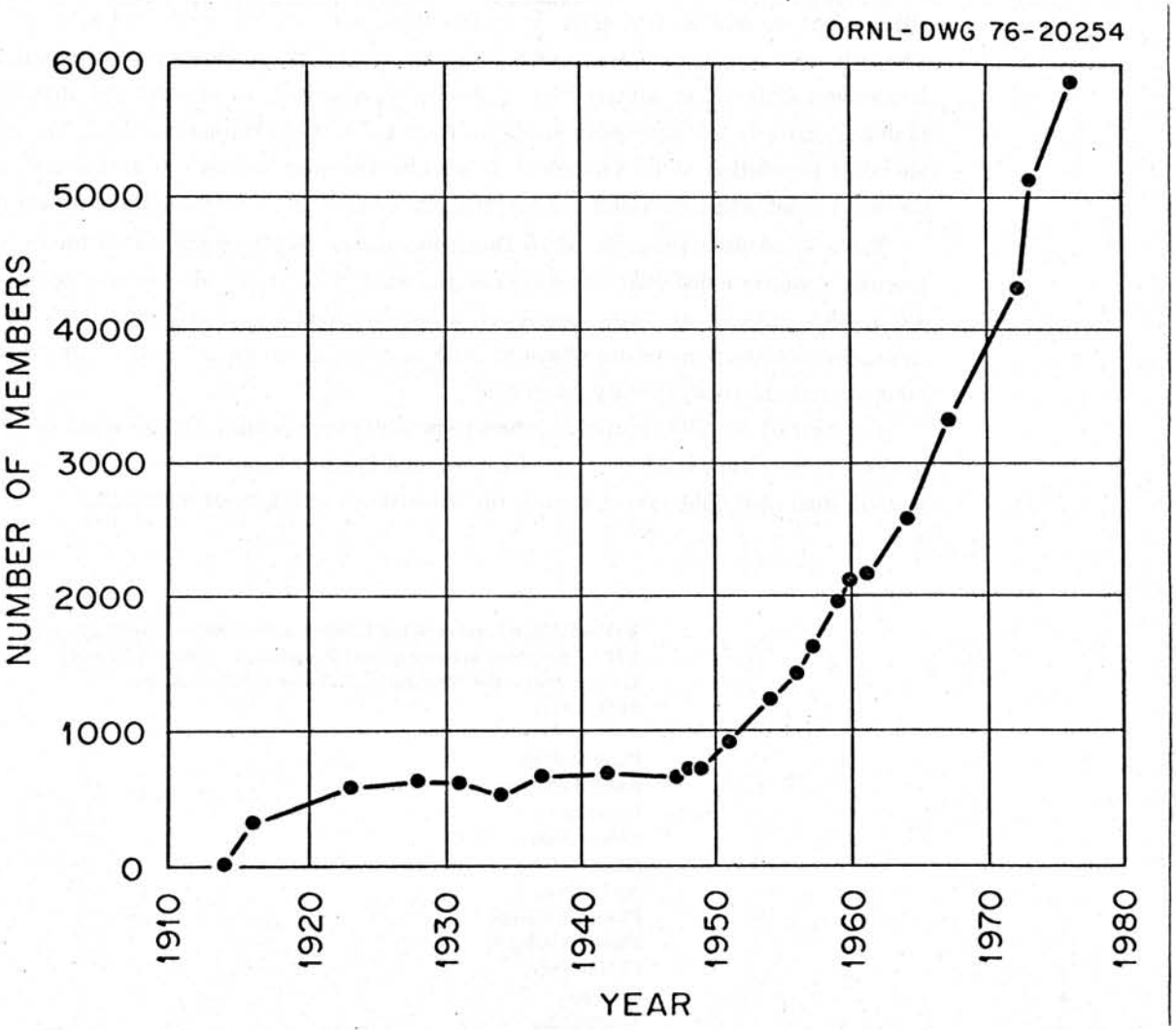

Fig. 1. Growth in membership in the Ecological Society of America from its start in 1914 through 1976, the latest year for which data are available.

Much of the recent growth appears to be a complex result of several factors. During the 1960's, the post-World War II "baby-boom" was hitting the colleges. Many students, simply as a function of the expanding population, found their way into ecological studies, environmental careers, and ultimately, the ESA. Secondly, Earth Day 1970, spawning the "environmental decade," spurred an unprecedented interest in, and concern for, the world around us. While ESA gained some members from the "bandwagon," it came nowhere near the 100,000 new members enjoyed by organizations like the Sierra Club and the National Audubon Society. Finally, beginning with the National Environmental Policy Act (NEPA) in late 1969, a new breed of scientist arose – the environmental consultant. Applied expertise for hire did two things. First, it created jobs – a demand for ecological knowledge that rapidly permeated all levels of government. Secondly, it attracted numbers of other kinds of environmental scientists – geologists, chemists, meteorologists – to a society that had been (and still was) predominantly biological. This does not imply that in the previous 50 years ESA did not have such members. Rather, following NEPA, percentages of these kinds of members increased, along with significant numbers of interested laymen.

Table 1 gives a classification of the 307 members (284 charter members plus 23 elected to membership at the 1916 annual meeting) according to disciplinary interest. Fifty-seven percent classed themselves as either plant or animal ecologists, but even then, both applied fields and non-biological environmental scientists were represented. Geographical distribution (Table 2) shows the major seats of the new Society. Illinois was a hotbed of activity, but the Federal government was close behind. Interestingly, 59 years later (Table 3) growth has been phenomenal in most areas, while Washington, D.C. has apparently only maintained its population of ESA members. It must be remembered, however, that many ecologists live or work (or both) in suburban Maryland and Virginia, and current totals for these states reflect this fact.

Table 4, adapted from the 1976 Directory, shows that the main reason for membership remains the journals. "Active" members receive *Ecology*, and "Sustaining" also receive *Ecological Monographs*. In 1976, ESA still had 31 "Life" members, a category long since discontinued. The 71 "Family" memberships, for additional members where at least one in the family is "Active" or "Sustaining," is a recent innovation that has never really taken hold.

Eighteen of the 284 charter members (6 percent) were women. Of this group, only E. Lucy Braun later held office, but both Edith Schwartz Clements and Edith Bellamy Shreve are well known both for scientific work in their own right as well as for being the wives of very famous ecologists.

Table 1. Membership in the Ecological Society of America in 1917, grouped according to disciplinary areas of major interest [from the "Handbook," Bull. Ecol. Soc. Amer. 1(3), 1917]

Plant ecology	88
Animal ecology	86
Forestry	43
Entomology	39
Marine ecology	14
Agriculture	12
Plant physiology	7
Plant pathology	4
Climatology	4
Geology	4
Animal parasitology	3
Soil physics	3
	307

Table 2. Ranked geographical distribution of members, of the Ecological Society of America, 1917 [from the "Handbook," Bull. Ecol. Soc. Amer. 1(3), 1917]

Illinois	32	Montana	4
District of Columbia	30	New Jersey	4
New York	30	British Columbia	3
California	20	Indiana	3
Massachusetts	14	Nebraska	3
Minnesota	14	Quebec	3
Michigan	10	Texas	3
Pennsylvania	10	Hawaii	2
Colorado	9	North Dakota	2
Ohio	9	Philippine Islands	2
Ontario	9	South Carolina	2
Wisconsin	9	Vermont	2
Maryland	8	Alberta	1
Iowa	7	British Guiana	1
Kansas	7	Canal Zone	1
New Mexico	7	Florida	1
Arizona	6	Louisiana	1
Connecticut	6	Maine	1
Missouri	6	North Carolina	1
Washington	6	New Hampshire	1
Oregon	5	Sweden	1
Utah	5	Tennessee	1
Idaho	4	Wyoming	1
Total	307		

Table 3. Ranked geographical distribution of members of the Ecological Society of America, 1976 [from the "Directory," Bull. Ecol. Soc. Amer. 57(3a), 1976]

California	655	Iowa	55
New York	348	Montana	49
Illinois	230	Oklahoma	46
Michigan	213	New Hampshire	44
Pennsylvania	190	Alaska	42
Ohio	167	Rhode Island	40
Massachusetts	166	United Kingdom	39
Texas	160	Idaho	38
Florida	158	Hawaii	36
Wisconsin	155	Mississippi	36
Maryland	153	Asia	35
Washington	152	Louisiana	35
North Carolina	150	North Dakota	35
Colorado	148	Quebec	35
New Jersey	130	Alabama	33
Virginia	126	Washington, DC	33
Tennessee	123	Wyoming	31
Oregon	114	Kentucky	29
Minnesota	112	Maine	29
Connecticut	105	Nevada	28
Arizona	101	Delaware	26
Georgia	100	Africa	23
Ontario	99	Vermont	21
Utah	87	Puerto Rico, Guam, Virgin Islands	20
Indiana	79	Saskatchewan	20
Kansas	70	South Dakota	20
Australia	66	Oceania	19
Europe	65	Manitoba	18
New Mexico	62	Arkansas	17
Missouri	61	West Virginia	16
British Columbia	60	Nebraska	15
Alberta	59	Nova Scotia	15
South Carolina	59		
Latin America	59		

Table 4. Numbers, dues and classes of membership in the Ecological Society of America, 1976. All members receive the *Bulletin of the Ecological Society of America;* Active and Student Active members receive *Ecology* in addition; Sustaining and Student Sustaining members receive all three ESA journals, including *Ecological Monographs.* A Family member resides in the same household as a member of another class. Emeritus membership is available after 30 years of continuous Active or Sustaining membership, and journals are available at cost. [from the "Directory," Bull. Ecol. Soc. Amer. 57(3a), 1976]

Class	Current dues	Number
Life		31
Emeritus		39
Associate	$ 7.00	456
Active	$25.00	2639
Student active	$20.00	589
Sustaining	$35.00	1537
Student sustaining	$30.00	400
Family	$ 3.00	71
Total		5762

THE OFFICERS

Since the 1915 organizational meeting, ESA has always had a president and a vice-president. The other offices have experienced some changes, albeit rather minor ones, and numerous new offices and some reorganization has occurred, mostly in the last 25 years.

The presidency, throughout most of ESA history, has been a prestige position. It has been called sort of "an eminent ecologist award" (Simkins 1971). The evidence for this lies in the prohibition, following establishment of an Eminent Ecologist citation by the Society in 1953, of presidents or past presidents of ESA from consideration. Within the last 10 years this policy has changed, but it did, in fact, permeate the election process for several decades. A second policy, also recently allowed to die in peace, was a stipulation that the office of president should alternate between a botanist and a zoologist – a policy that, on reflection, was self-defeating of the original aims of the Society – to bring *ecologists* together.

Nevertheless, the Ecological Society of America has consistently been led by good ecologists. Their success or failure as presidents has probably been as much a function of the scientific and political climate of the times and the generally conservative tenor of a professional scientific association as it was the philosophy, nature, or perseverance of the presidents. The list (Table 5) reads much like a "who's who" in American ecology, from Shelford and Cowles, Adams, Transeau and Juday, through Nichols, Vorhies, and Emerson, to Cain, Blair, Odum, and Stearns. Each president has had, at least on paper, some semblance of a platform (Coker 1938, Dreyer 1945). The early ones stressed growth, consolidation, a journal. Later came a preoccupation with things like research, preservation of research areas, ecological programs – many aimed, however, at an individual or institutional level. With few exceptions, the Society has not undertaken major projects that have involved the Society as a unit. More recently, platforms have stressed fiscal necessity, social responsibility, and problem responsiveness (Hollander 1976, Nelkin 1976, Simkins 1971). A broad view again indicates that many of the above were (and are) a reflection of the scientific, political, and socio-economic conditions of the period.

Table 5. Officers of the Ecological Society of America, 1916-1976

	President	Vice-President		Secretary-Treasurer
1916	Victor E. Shelford	William Morton Wheeler	1916-1919	Forrest Shreve
1917	Ellsworth Huntington	John W. Harshberger	1920-1930	A. O. Weese
1918	Henry Chandler Cowles	R. E. Coker	1931	Alfred E. Emerson
1919	Barrington Moore	T. L. Hankinson	1932-1933	Raymond Kienholtz
1920	Barrington Moore	George Elwood Nichols	1934-1935	Arthur G. Vestal
1921	Stephen A. Forbes	Edgar Nelson Transeau	1936-1937	Orlando Park
1922	Forrest Shreve	H. E. Crampton		
1923	Charles C. Adams	Gustav Adolph Pearson		Secretary
1924	Edgar Nelson Transeau	W. C. Albee		
1925	A. S. Pearse	John Ernst Weaver	1938	Orlando Park
1926	John W. Harshberger	R. C. Osburn	1939-1941	William J. Hamilton, Jr.
1927	Chancey Juday	William Skinner Cooper	1942-1947	William A. Dreyer
1928	Homer Leroy Shantz	R. N. Chapman	1948-1950	William A. Castle
1929	W. C. Allee	Walter P. Taylor	1951-1953	Murray Fife Buell
1930	John Ernst Weaver	G. P. Burns	1934-1957	John F. Reed
1931	A. O. Weese	Francis Ramaley	1958-1961	John E. Cantlon
1932	George Elwood Nichols	Joseph Grinnell	1962-1964	Paul G. Pearson
1933	E. B. Powers	Herbert C. Hanson	1965-1969	Stanley Irving Auerbach
1934	George D. Fuller	Paul S. Welch	1970	William A. Niering
1935	Walter P. Taylor	Emma Lucy Braun	1971-1976	J. Frank McCormick
1936	William Skinner Cooper	J. G. Needham		
1937	R. E. Coker	H. DeForest		Treasurer
1938	Herbert C. Hanson	Lee R. Dice		
1939	Charles T. Vorhies	C. F. Korstian	1938-1940	Stanley Adair Cain
1940	Francis Ramaley	Orlando Park	1941-1943	Royal E. Shanks
1941	Alfred E. Emerson	B. C. Tharp	1944-1949	Henry J. Oosting
1942	C. F. Korstian	C. E. Zo Bell	1950	William T. Penfound
1943	Orlando Park	Paul B. Sears	1951-1954	Frederick H. Test
1944	Robert F. Griggs	Alfred C. Redfield	1955-1957	Alexander C. Hodson
1945	Alfred C. Redfield	John M. Aikman	1958	Jack S. Dendy
1946	John M. Aikman	Aldo Leopold	1959-1962	Kirby L. Hays
1947	Aldo Leopold	Paul B. Sears	1963-1965	Ralph W. Kelting
1948	Paul Bigelow Sears	William A. Dreyer	1966-1969	William Clark Ashby
1949	Z. P. Metcalf	Charles E. Olmstead	1970-1971	Shelby D. Gerking
1950	Emma Lucy Braun	R. V. Truitt	1972-1975	Forest W. Stearns
1951	S. Charles Kendeigh	Fred W. Albertson	1976	Paul G. Pearson
1952	Frank C. Gates	David E. Davis		
1953	Lee R. Dice	Stanley Adair Cain		
1954	John Ernst Potzger	Samuel Eddy		
1955	William J. Hamilton, Jr.	Murray Fife Buell		
1956	Henry J. Oosting	W. Frank Blair		
1957	William A. Dreyer	William T. Penfound		
1958	Stanley Adair Cain	Frank Preston		
1959	Thomas Park	Aaron J. Sharp		
1960	Charles E. Olmstead	W. Dwight Billings		
1961	Arthur D. Hasler	Edward S. Deevey, Jr.		
1962	Murray Fife Buell	Bostwick H. Ketchun		
1963	W. Frank Blair	Lora Mangum Shields		
1964	John F. Reed	LaMont C. Cole		
1965	Eugene Pleasant Odum	John E. Cantlon		
1966	Bostwick H. Ketchum	Robert B. Platt		
1967	Rexford Daubenmire	George M. Woodwell		
1968	LaMont C. Cole	George E. Sprugel, Jr.		
1969	John E. Cantlon	Pierre Dansereau		
1970	Edward S. Deevey, Jr.	Paul G. Pearson		
1971	Frank Herbert Bormann	Robert H. Whittaker		
1972	Stanley Irving Auerbach	Forest W. Stearns		
1973	Robert B. Platt	Frank B. Golley		
1974	Frederick E. Smith	Charles R. Goldman		
1975	Richard S. Miller	Arthur S. Cooper		
1976	Forest W. Stearns	Gordon Orians		

Only one president has succeeded himself, Barrington Moore in 1919 and 1920. Moore was the first editor of *Ecology*, and the continuance through reelection appears to be related to a new journal and the attendant complications. And only a single woman, E. Lucy Braun of Cincinnati, has been elected president – 26 years ago.

The distribution of presidents (Fig. 2) reflects distribution of the membership, the meetings, and to some extent, the centers of ecology in the United States. Illinois has been home to 11 presidents, two from Northwestern, two from the University of Illinois, and seven from the University of Chicago. New York and Wisconsin have furnished five presidents each, while four have come from Ohio, Massachusetts, North Carolina, and Arizona. Identical to the distribution of annual meetings (though without substantive correlation), 14 ESA presidents have come from west of the Mississippi, while 47 were eastern. Perhaps more importantly, only four of the 14 western presidents have served since 1940 (Gates in Kansas, Blair in Texas, Reed in Colorado, and Daubenmire in Washington) and the four from Arizona (Shreve, Shantz, Taylor, and Vorhies) all had served by 1939. California has not yet had a president, even though over 10 percent (655 of 5762) of the ESA membership was located in California in 1976.

The vice-presidency, similar to the situation in many organizations, has been an ill-defined role. The office has not been used as a replacement for the president, as no ESA president has either resigned or died in office. No vice-president has ever been re-elected, but Paul B. Sears served in both 1943 and 1947, before moving up to the presidency in 1948. Of the 61 vice-presidents, 30 (49 percent) have subsequently been president, with an average intervening time span of 6.75 years. This ranges from 19 years for Robert E. Coker (VP in 1918, president in 1937) to one year for Redfield, Aikman, Leopold, and Sears (second term). This last sequence, from 1945–1948, indicates an initial attempt, although unspecified, at the

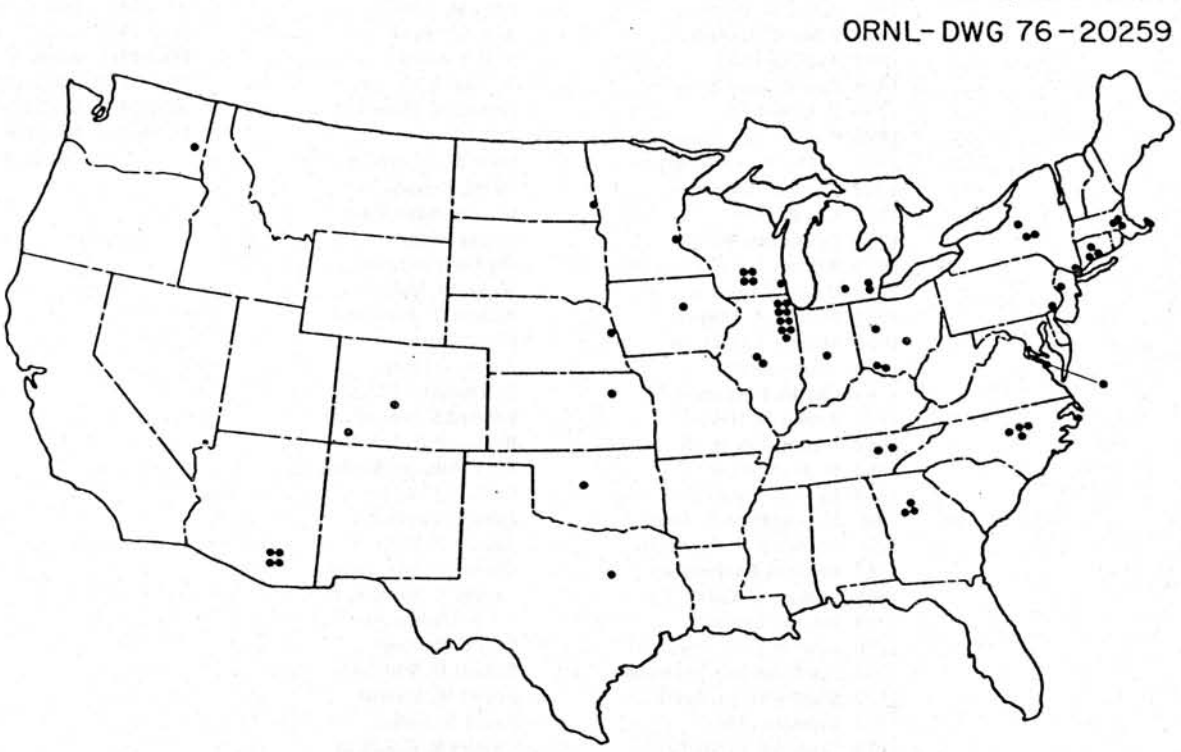

Fig. 2. Geographical locations of presidents of the Ecological Society of America, 1915–1976, as of the time of their election.

concept of a "president-elect." The necessary constitutional changes were finally implemented in 1951, so that ESA now annually elects a president-elect, rather than a president. Two women have served as vice-president, E. Lucy Braun in 1935 (later president in 1950), and Lora Mangum Shields of New Mexico in 1963.

For the first 22 years of its existence, ESA had a combination secretary-treasurer (Table 5). Recognizing that a degree of continuity was essential to the administration of a young society, these officers were elected for more than one year. Forrest Shreve (1916–1919) and A. O. Weese (1920–1930) carried the Society through its formative (and crucial) years. Shelford (1938) states, "The society was guided and its policies given continuity for the first 16 years of its existence through the unbroken services of these two men whose enthusiasm kept life and progress in the organization while maintaining an unusual harmony because of their kindly and cordial personalities."

In 1938, the offices were divided, with Orlando Park choosing to remain as secretary and Stanley Cain elected treasurer. This arrangement has persisted to the present, with three- to five-year terms, usually staggered, being the general rule.

Both major journals have always had a business manager, starting with the Brooklyn Botanic Garden for *Ecology* in 1920. In 1931, with the beginning of *Ecological Monographs*, Duke University Press furnished a business manager for both journals. The need for this type of professionalism continued to grow, and in 1952, ESA arranged for a business manager for the Society, the first being Henry J. Oosting. Duties were many, but included overseeing the business (i.e., fiscal) operations of the Society – journals, income, expenses, trusts, and general cash flow. He worked closely both with the treasurer and the business manager for the journals, an individual still provided by Duke University Press. In 1970, the importance of a business manager was recognized by placing virtually all financial responsibilities with that office. The treasurer became more of a planning position and figurehead, a situation which continues, but without any movement to abolish the office.

ESA Council was organized in 1946 as the true governing body of the Society, following the failure of an amendment for a "Board of Governors" in 1941. In addition to the elected officers, it included representatives to various organizations, and chairmen of sections and standing committees. With the addition of an elective Board of Editors in 1970, Council swelled to 30 members, dominated, of course, by the editors. Some members thought this good, as they believed that the prime function of ESA lay with its journals. Others disapproved of the dominance, and sought ways to reduce the size of the Council. At present, constitutional amendments are pending which would maintain Board of Editors representation, but curtail the actual number as members of Council.

With a Council of considerable size, it rapidly became unwieldy and unresponsive to decisions that had to be made and actions that needed implementation. Consequently, an Executive Committee, empowered to act on behalf of Council (which in turn was empowered to act on behalf of ESA) was formally designated. The Executive Committee consists of the president, immediate past-president, vice-president, secretary, treasurer, and business manager. As far back as 1935, the term "executive committee" had been used, and references to it appear throughout the meeting summaries, minutes, and proceedings. It appears to have been synonymous with the "officers."

THE MEETINGS

The meetings of the Ecological Society of America fall readily into two classes, the annual meetings, and secondary or ancillary meetings. With few exceptions, the official annual meeting has been held in

conjunction with a larger scientific body. Until the early 1950's these were with the AAAS that almost always met the week between Christmas and New Year. Since then, meetings have been with the American Institute of Biological Sciences (AIBS), on college campuses (in contrast to downtown hotels), and in summer, usually in August. Annual meetings include elections (or election results), business sessions, reports of officers and committees, presentation of awards, a banquet and presidential address, presentation of symposia and contributed papers, and field trips.

The distribution of annual meetings (Fig. 3) shows a distinct favoritism for the northeastern quadrant of the United States. Ohio has hosted seven meetings, Pennsylvania six, and Massachusetts five. Of 61 meetings, only 14 have been west of the Mississippi River, only six west of the 100th meridian (all since 1957, and three in the 1970's). The annual meetings, therefore, show strong correlation with the total population, the distribution of colleges and universities, and undoubtedly with the location of a membership. They do not correlate with reigning presidents or other items internal to ESA. The explanation lies in the continued programming of the official annual meeting with a larger, umbrella-type, organization. Thus, meeting locations are beyond the jurisdiction of the Society, its officers, or its membership. This is true despite the fact that ESA has a representative to AIBS who participates in the setting of meeting locations.

In contrast, the geographic distribution of secondary meetings (official meetings other than the "annual meeting") (Fig. 4) shows an almost complete reversal of pattern. Forty-one have been held west of the Mississippi, and only 15 to the east. Thirty-nine were held west of the 100th meridian, and 23 in California. In addition, two meetings have been held in Vancouver, and one each in Toronto and Montreal. Annual meetings have never been held outside the conterminous United States. The possible reasons for this distribution are both numerous and cloudy.

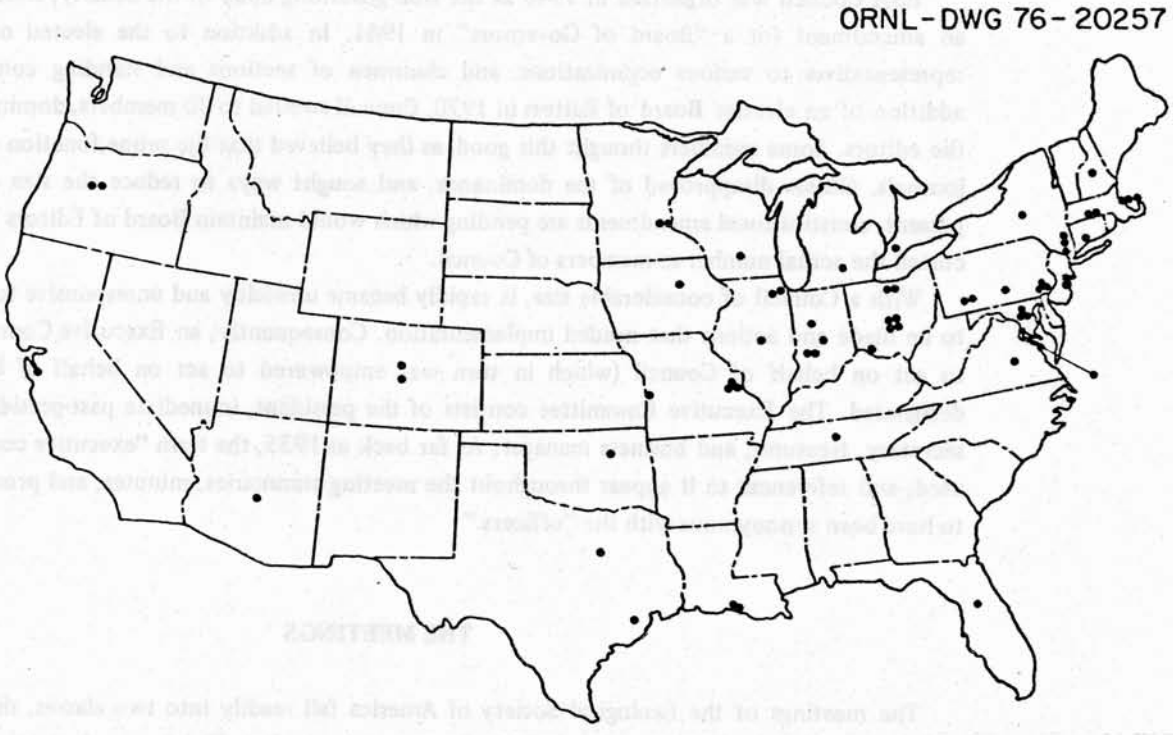

Fig. 3. Geographical distribution of annual meetings of the Ecological Society of America from 1914 through 1976.

Fig. 4. Geographical distribution of secondary meetings (those meetings of ESA other than the annual meeting) of the Ecological Society of America from 1914 through 1976.

First, many of the California meetings were in conjunction with the Pacific Division of AAAS, and the Society often had a "western" meeting on this pretext. More important, perhaps, were the regularly scheduled field trips. With the preponderance of ecologists in the east and midwest, the opportunity for new and exciting ecological experiences was undoubtedly a stimulus. Unfortunately, we have little information on either the number or the distribution of those in attendance. Finally, the west coast was building an ESA population that must have found it difficult, in the pre-1950 period, to finance long train or bus trips to the annual meetings. Consequently, these secondary meetings in the western states provided opportunities for papers, discussions, acquaintanceships, and scientific exchange, in addition to the ever-present field trips. No report of any meeting has yet come to light that did not offer at least one field trip. The ESA, 61 years after its founding, is still a field oriented society.

Meeting cost was recognized in the early days. One of the prescribed duties of the secretary was to negotiate with the railroads for a reduced rate for members attending the annual meeting. Evidently this correspondence was usually successful, and the most common rate was three-fourths of the normal round-trip fare. It must be remembered that in these days before research grants, professional meetings were something that the scientist attended *at his own expense*. They were a business cost, and many of the Society stalwarts attended regularly, with perhaps an occasional token sum contributed by their home institution. Today, of course, there is little of this sacrifice, and most of the attendees that come unsupported are the job-seekers.

THE COMMITTEES

The various committees established by ESA through its first 61 years constitute a very difficult subject. This issue is also clouded by many that I consider to be "housekeeping" committees, and for the moment,

these have been ignored. Examples in this group include membership, program, finance, and publication committees. Most of these are now standing committees, defined by either constitution or by-laws. But a number of special, or *ad hoc* committees, also fall into this societal business category, and will not be discussed further.

A select group of committees and their life span and evolutionary history is shown in Fig. 5. These are subdivided into five groups, subjectively chosen, solely for discussion purposes.

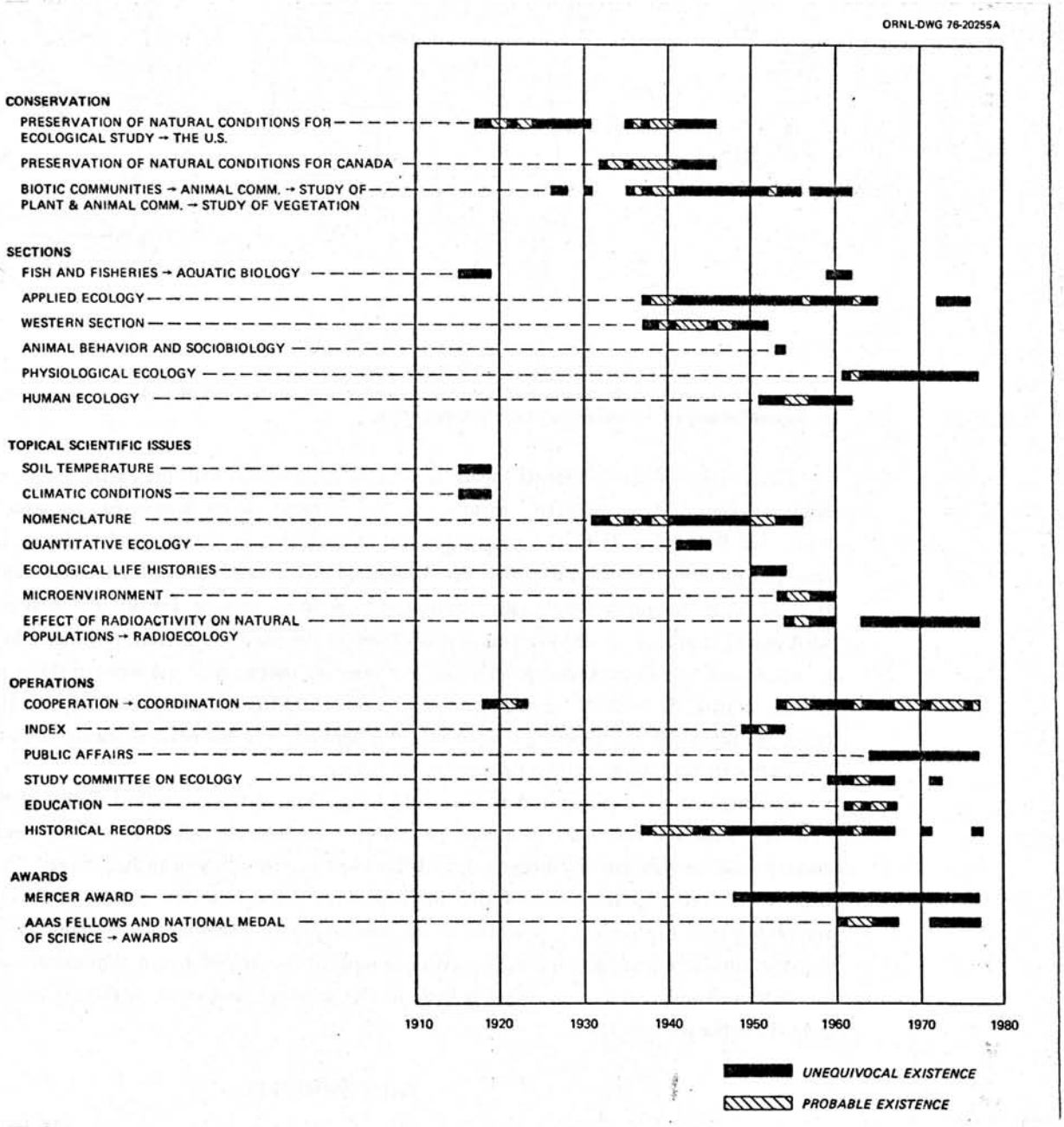

Fig. 5. Selected committees of the Ecological Society of America, grouped by general categories, and indicating time spans, longevity, continuity, and interrelationships.

Conservation

The first group covers those committees addressing a combination of preservation motives, and the objects of study of the science of ecology. ESA has been involved in "natural area" preservation right from the beginning (Harshberger 1918, Moore 1920, Shelford 1943), and while not actively involved as a Society at present, its members lend a great deal of strength to the natural area and wilderness preservation movement. A committee on "Preservation of Natural Conditions for Ecological Study" was established in 1917. The name was changed to "Preservation of Natural Conditions in the United States" in 1932, the same year that spawned a similar committee for Canada. No evidence of their existence after 1946 has been found, but movement toward the "Ecologist's Union" and today's Nature Conservancy was in process at that time, and absorption into a new organizational structure seems to be a logical explanation.

A committee on "Biotic Communities" came into existence in 1926, followed by a closely related series on "Animal Communities," "Study of Plant and Animal Communities," and "Study of Vegetation." There is no implication that these committees shared a common ancestry or that a direct evolution ensued. The series of committees is instead of commentary on the state of the science and the nature of the membership. The thrust began when ecologists were deeply concerned with the classic papers of Gleason (1926) and Cooper (1926), and ended with the major impetus of functional ecosystem ecology in the 1960's.

Sections

The second group of committees are those related to Sections (or at least potential sections). In 1917, a group on Fish and Fisheries was instigated, obviously, by an aquatic component of the membership. After a lapse of 40 years, a Committee on Aquatic Biology was formed in 1959, followed by establishment of the Aquatic Section in 1965. Applied Ecology, a Society interest since before World War II, concerned the foresters and range managers (primarily) in ESA. After the Committee disbanded in the mid-1960's, an Applied Ecology Section was formally constituted at the Minneapolis meetings in 1972. This followed passage of the National Environmental Policy Act (NEPA), Earth Day, and the Calvert Cliffs decision (Maryland vs. AEC) and the thrust of the Section has been toward environmental impact analysis and assessment, rather than the application of ecological principles to natural resource management.

The Western Section, after a long history of more or less independent meetings, was formally disbanded in 1975. This action was taken by ESA Council on petition from the Section officers. The stated reason was simply a lack of interest in sectional meetings and activities. In part, this must be due to a greater incorporation of western ecologists into the annual meetings of the Society. Nevertheless, the demise of the Western Section is almost concomitant with renewed interest in regionalization within ESA as a whole. A Southeastern Chapter was officially established in 1976, and preliminary moves toward at least regional meetings have been made in both the Great Lakes region (upper midwest) and the Pacific northwest within the last two years.

The Animal Behavior and Physiological Ecology Sections both boast over 1,000 members, and both are extremely active. Animal Behavior (as a Section) meets occasionally with ESA, but more often with related societies such as the American Society of Zoologists. In recent years, the Physiological Ecology Section has sponsored or co-sponsored strong programs at the ESA annual meetings. These have included both symposia and contributed paper sessions which, coupled with a periodic "newsletter" and a great deal of interaction among the members, indicates that this is probably the strongest subdivision of ESA at the present time.

A committee on Human Ecology, while never pushing toward section status, has continued to function. Fine distinctions between "human ecology," "sociology," "biological anthropology," and other terms

continue to hamper major development. Recent emphasis among ESA members on "urban ecology" may help in the future to really treat man as an integral component of earth's ecosystems.

Finally, a small (106 members) Paleoecology Section was officially established in 1975 (not shown in Fig. 5). As programs and membership are still under development, it is too early to comment on either the scientific direction or the probable long-term success of this new section.

Topical Scientific Issues

Two committees, reflective of environmental interest, were first established in 1916, one on "Soil Temperature" and one on "Climatic Conditions." These were evidently an early attempt to coordinate subject matter interest through the Society, but by 1920, both had died. This abortive effort can be construed as a trial – both of what a new "Ecological Society" might do, and of the use of the committee mechanism to give a fledgling organization a sense of programmatic purpose.

The Committee on Ecological Life histories organized the preparation and publication of a series of "Outlines" giving basic literature, methods of study, objectives, and general aspects on the life histories of various groups of organisms – bees (Linsley *et al.* 1952), fossorial mammals (Howard and Ingles 1951), fish (Koster 1955), fungi (Cooke 1951), herbaceous plants (Stevens and Rock 1952), hydrophytes (Penfound 1952), marine mammals (Scheffer 1952), trees, shrubs, and stem succulents (Pelton 1951), and vascular epiphytes (Curtis 1952). Much of this background information has been of great value in autecological and physiological ecology that followed.

Of the remainder of this group, only the Committee on Nomenclature and the Radioecology Committee have made significant accomplishments. All, however, were concerned with substantive scientific subjects that were important to the Society at one time. The group concerned with nomenclature labored over many years toward a standardization of terms. It has been said, tongue-in-cheek, that "ecology is the science that tells you what you already know in terms that you can't understand." Problems of interpretation and shades of meaning were paramount, as were the various proposals for a taxonomy of communities. Publications by Carpenter (1938) and Hanson (1962) were outgrowths of the activity of the Committee on Nomenclature, although neither can be construed as a "final committee report."

The original committee on Effect of Radioactivity on Natural Populations, later shortened to Radioecology, has been active and successful. The committee has been the prime organizer and cosponsor of four major national symposia (Cushing 1976, Nelson 1973, Nelson and Evans 1969, and Schultz and Klement 1973). The last (Cushing 1976) is discussed below as the first Special Publication of the Society.

Operations

The Study Committee on Ecology has been activated by various presidents as the needs arose. They have tackled various problems that have faced both the Society and the science, and have provided recommendations for action. For example, from deliberations of the Study Committee coupled with the Xth International Botanical Congress in Montreal in 1959, direct threads of planning were spun into the Chemical Cycling Subcommittee in 1961, and several meetings that same year of the International Union for the Conservation of Nature (IUCN) and the International Union of Biological Sciences (IUBS) led to U.S. participation in the International Biological Program. A comprehensive review of Study Committee activities would be rewarding, but beyond the scope of the present paper.

The Index Committee was appointed by President Aldo Leopold in 1949 to prepare a 30-year index for *Ecology* (Aikman and Gates 1952). This was a monumental task, and many members contributed. In addition to its utility for the journal, the introduction and some of the index material has proven valuable in this reconstruction of ESA history.

An early Committee on Cooperation recognized the need to work with other groups and organizations, and to remain attuned to larger issues of environmental quality and natural resources, as well as research needs. After a short life, the formal concept was abandoned until 1953, when a Committee on Coordination was formed. Their work has been varied and somewhat intermittent, but appears to have kept ESA and its policies alive in the deliberations of government, industry, academia, and other professional societies (Sears 1956). A recent proposal to establish an executive office of ESA in the Washington, D.C. region was addressed by this committee. A consortium of interested (and related) societies was formed, but no definitive action has yet been taken.

The Committee on Historical Records is something of an enigma. Begun in 1937, it functioned, at least in name, almost to the present. Initially, it worked out an arrangement with the University of Cincinnati Library to act as the historical repository for ESA documents. In 1945, it included bound volumes of *Ecology, Ecological Monographs,* and the *Bulletin,* as well as items such as two folders of Harshberger's correspondence, three of Fuller's, and ten from Charles C. Adams. The University of Cincinnati Library has not been checked in this prolegomenon, but we are led to believe that bound volumes of the three journals are all that is there. A recent effort to move the repository to the University of Georgia was approved, and the move must either surface this material, or at least find out what happened to it. Every organization has an obligation to archive, and in many respects, ESA has been remiss in these obligations.

Awards

Two committees on awards (discussed in more detail below) have functioned during the last half of ESA history. The Mercer Award Committee is appointed each year for the purpose of selecting a recipient of an ESA award. The second committee, on AAAS Fellows and the National Medal of Science, was initiated in response to a seeming lack of recognition of ecologists and ecology by the larger scientific community. This effort has not met with great success (only three or four ecologists are members of the National Academy of Sciences, for instance), but in the last few years, establishment of new awards coupled with international environmental awareness has resulted in some long overdue recognition.

THE REPRESENTATIVES

Representatives from the Ecological Society of America to several organizations (Fig. 6) have served to both maintain contact and to perform liaison functions. Since inception, ESA has sent a member to the National Research Council, the action arm of the National Academy of Sciences. In the mid-1920's, a number of related biological societies formed a "council," and ESA became a staunch member. This activity culminated in the establishment of the American Institute of Biological Sciences (AIBS) in 1947. Shortly thereafter, ESA switched its annual meeting from AAAS in the winter to AIBS in summer. Representation on the AAAS Council apparently began (in 1937) after the young society had become sufficiently established to merit inclusion. Very little information has come to light, and no effort has as yet been expended to determine more of the details. As Fig. 6 clearly indicates, representation to the "big four" (National Research Council, AIBS, AAAS, and the Natural Resources Council) has been both strong and continuous. In 1924, ESA sent a representative to an organization called the Council on National Parks, Forests, and Wildlife. This may have been a forerunner of the Natural Resources Council of America, a non-profit association pledged "to advance the attainment of sound management of natural resources in the public interest." Membership, by written invitation, consists of "recognized national conservation organizations, scientific societies in the natural science field, and . . ."

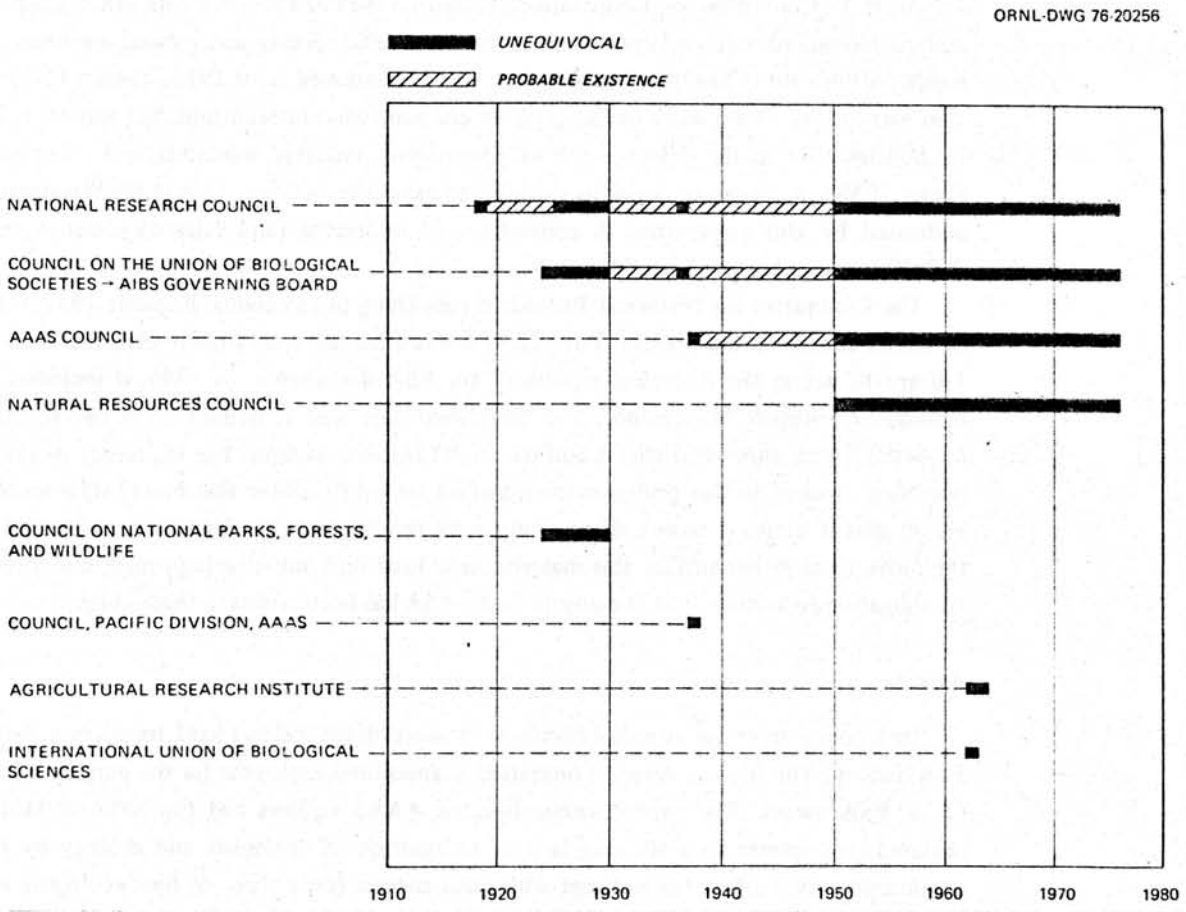

Fig. 6. Representatives of the Ecological Society of America to national and international bodies, showing timing, longevity, and continuity.

The other three representatives shown, to the Pacific Division, AAAS, the Agricultural Research Institute, and IUBS, are unexplained as to both their origin and their demise. The Pacific Division of AAAS regularly hosted secondary meetings of ESA (Fig. 4), and must have played a part in the formation of the Western Section. The latter was finally abolished in 1975 on petition of the Section officers. The Western Section was the only major geographical subdivision that ESA has had, although "Chapters" were at one time established in Oregon and Minnesota, and an Ecological Register for the New England States (Cushman *et al.* 1971) was compiled under ESA auspices.

THE PUBLICATIONS

The newly formed ESA issued volume one, number 1 of the *Bulletin of the Ecological Society of America* in March of 1917. This was rapidly followed by a "Handbook" later that same year, also issued as a number of the *Bulletin*. By the mid-1920's, following a period of sporadic publication, the *Bulletin* had stabilized as a small, quarterly journal that has continued uninterrupted to the present time. For a significant period, it appears that the *Bulletin* is perhaps the only real source of historical information. Yet there are some lapses. While responsibility for some of the early volumes is shrouded by the mists of antiquity, for at least 40 years the *Bulletin* was edited by the secretary of the Society. That individual had to gather

material, prepare and edit copy, procure a printer, and handle distribution. Therefore, many volumes, upon careful perusal, bear the stamp of the individual secretary. Continuity in format or content was of minor concern.

Reports of meetings are uneven in quality and length. Committee activity summaries are sporadic at best. New members were presented intermittently, although special (separate and additional issues of the *Bulletin* were used as directories. In 1968, two major changes were instituted. One probably resulted from a long-standing Associate Membership, which entitled the member to receive only the *Bulletin*. Dissatisfaction with the housekeeping function of the *Bulletin* led to the establishment of the Bulletin Editor as an elected officer, and responsibility passed from the secretary to this newly created position. Secondly, the rise in environmental awareness spurred a change in format – larger page size, colored cover, and the inclusion of new features. These were typified by short essays on aspects of the science, lists or short sketch reviews of new books, announcements of a wide array of courses, meetings, etc., and the provision for at least some response from the readership.

With Volume 58 (1977), the *Bulletin* will be published six times a year. A large segment of the Society still believes that the *Bulletin* really functions as a "newsletter," and hence content and style ARE the prerogative of the editor. An equivalent group, however, believes that the *Bulletin* needs more structure, even if minimal. Historical record keeping, for example, may be a necessary and requisite objective for the *Bulletin*, and the editor needs to insure that all Society business and reports are adequately documented. At this point, it does not seem that the two views are mutually exclusive, and interesting content and format should be compatible with needs of the Society.

The *Plant World* began publication in 1897, organized and financed by a small, private group, the Plant World Association, and for the next 22 years carried a good share of the ecological publication in the United States. While the thrust of many of the editors and contributors was truly ecological, the journal carried few animal studies. The title, of course, was a discouraging factor. After the birth of the Society in 1915, talk of a journal began almost immediately. Most details, however, are lacking, and we don't yet know in which direction the plans were leading (Taylor 1938).

In late 1918, Dr. Daniel Trembly MacDougal of the Desert Laboratory of the Carnegie Institute at Tucson offered the *Plant World* to ESA (Moore 1938). In 1919, the Plant World Association consisted of 15 men, nine of whom (W. A. Cannon, J. A. Harris, B. E. Livingston, F. E. Lloyd, E. B. McCallum, D. T. MacDougal, J. B. Overton, F. Shreve, and E. N. Transeau) were charter members of the Ecological Society of America. There were only a few inconsequential stipulations – the editors of the *Plant World* were to serve on the board of editors of *Ecology* (as the journal was renamed), and the cover of *Ecology* was to carry the phrase "Continuing the *Plant World*" for a period of five years. In fact, this phrase lasted for 35 years, finally discontinued with Volume 36 in 1954.

An exhaustive review of *Ecology* as a journal is not appropriate here. A few generalities, however, may be in order. The first issue, dated January 1920, stated that "The pages...are open to papers of ecological interest from the entire field of biological science." At some point, as yet undetermined, *Ecology* instituted a policy strongly favoring original research, and with few exceptions, opposing theoretical or review submissions. As a result, many important papers went elsewhere, particularly to the *American Naturalist*, the *Botanical Review*, various kinds of *Proceedings...*, and several symposia. More recently, such items have appeared in two hardcover periodicals, *Advances in Ecological Research*, and the *Annual Review of Ecology and Systematics*. Both of these are published commercially, and have no direct relation to the Ecological Society of America.

In the spring of 1973, the Board of Editors officially changed policy to include theoretical (particularly mathematical) and review papers. In the three years since, however, it is not evident that the stated policy

shift has had an effect on the nature of the journal. First of all, tradition dies slowly, and 40 years of non-acceptance of theoretical papers is hard to overcome. Secondly, except for *outstanding* logical presentations, theoretical papers in ecology do not fair well in review competition with reports and analyses of original research intended for ESA's major journals.

Volume 1 also contained a "Notes and Comment" section intended for shorter communications and originally containing some feedback from the readership. While not of the "Letters to the Editor" type, in its early years *Ecology* did provide for some response. The section survived almost unchanged through Volume 41 (1960) when it was renamed "Reports." The impetus for change came mostly from members who felt that "Notes and Comment" was somehow demeaning for sound scientific papers that were placed in that section solely because they were short (less than four printed pages). As space in the journal became more and more limiting, the "Reports" section, set in smaller type, came under a similar attack, and was last published in 1969 (Volume 50).

Volume 1 also contained the first book reviews, and a review section has been an integral and important part of *Ecology* ever since. Feedback from the readers indicates that the review section is often the first part to be read in each issue, and is probably read in its entirety by a majority of the ESA membership. Reviews in the first 33 volumes (1920–1952) were either written, generated, or solicited by the editors or members of the editorial board. In 1953, a position of Review Editor was formalized, since held by only four men – LaMont C. Cole (1953–55), Robert H. Whittaker (1956–1964), Paul S. Martin (1965–1970), and Robert L. Burgess (1971–present). Commensurate with the expanded interest in ecology beginning in the late 1960's the number of related books received by ESA has burgeoned. What was originally a very sporadic (and short) list of books received has become an average of two pages in each issue.

Content, editing, and finance are outside the scope of the present paper. However, complete lists of editors, assistants, board members, and business managers are given, with institutional affiliation and dates of service in Aikman and Gates (1952) and Thomas and Stearns (1975).

By 1925, a committee had been established to evaluate long-range needs for publication. The main concern was for publication space, and the issue revolved around an increase in the size of *Ecology* versus the initiation of a second journal. The choice was made, and *Ecological Monographs* began in January of 1931, intended to carry longer papers of a monographic nature. This advent was accompanied by a new class of membership, "Sustaining," a portion of whose larger dues would go toward support of the new journal, and by the establishment of a relationship with Duke University Press to act as publisher for ESA (Lawrence and Lawrence 1956). The new journal, the sustaining membership class, and the publisher have remained, with minor changes, intact to 1976. The editorial criteria for *Ecological Monographs* were the same as for *Ecology*, except that length of published papers should be 20 pages or more. With few exceptions, this rule held to 1973, when the limit was lowered to 16 pages. This change was never implemented, however, and the current "Instructions to Authors" perpetuates the 20 page limit. The journal has also remained a quarterly, in contrast to *Ecology* which went to six issues per year (bimonthly) in 1965 (Volume 46). Lists of editors, editorial board members, and business managers appear in Lawrence and Lawrence (1956), while portraits of seven editors of the period are reproduced in Lindsey (1973).

Recently, the Board of Editors of *Ecology* and *Ecological Monographs* has discussed the potential for still additional publication space for the membership and the readership. *Ecology* is almost at a size limit, set partly by postal regulations and partly by the physical unwieldiness of still larger volumes. *Ecological Monographs* continues at about the same size (ca. 450 pages per year) primarily because of a lack of long submitted manuscripts. Coupled to the need for theoretical, mathematical, and other types of outlets, a number of potential new journal titles have been discussed. A *JOURNAL OF APPLIED ECOLOGY* has frequently been suggested. However, that exact title has been in publication for the past 13 years as an

official organ of the British Ecological Society. Some see a need for an *ECOLOGICAL REVIEWS*, similar in nature, perhaps to the *BOTANICAL REVIEW, BIOLOGICAL REVIEWS,* or the *QUARTERLY REVIEW OF BIOLOGY*. Counter-arguments point to the existence of the two hard-cover series, *ADVANCES IN ECOLOGICAL RESEARCH* and the *ANNUAL REVIEW OF ECOLOGY AND SYSTEMATICS.* A *JOURNAL OF MATHEMATICAL ECOLOGY,* and *ECOLOGICAL MODELING* were also discussed, and both have been pre-empted by international publishers.

At present, if ESA does, in fact, decide to add a third journal, something like *ECOLOGICAL THEORY* (or *THEORETICAL ECOLOGY*) or a *JOURNAL OF ECOSYSTEM ANALYSIS* seem to be the most viable concepts. However, in these times of escalating costs, a new journal begun by an existing Society needs to be self-supporting almost from the start. ESA is still uncertain of this possibility, in light of its fiscal resources, and hence has made no decision. The current rejection rate for *Ecology* runs consistently at 70 percent, however, so it is evident that the need is there. Only the future will tell the outcome of these continuing deliberations.

Other expansions include the reformatting of the *Bulletin* (discussed above) and the decision to publish it bimonthly starting in 1977. Also, the COMMENTARY, carried in *Ecology* from 1969 through 1976, will move to the *Bulletin* in 1977. Publication of *Ecology* eight, ten, or twelve times a year was also considered, but was deemed editorially impossible with the present volunteer Board of Editors.

Two other items deserve mention. The first paid employee of the Society was a Managing Editor, begun with the appointment of Alton A. Lindsey in 1971. He was succeeded by Crawford G. Jackson, Jr. in 1973. The Managing Editor is responsible for both *Ecology* and *Ecological Monographs* in all respects except acceptance/rejection decisions based on scientific merit of the submitted manuscripts. This function is handled by the Board of Editors. Secondly, a Special Publication Series has been established, and the first volume (Cushing 1976) is now in print. Plans are underway for additional volumes. Quality control and editorial criteria are still implemented by the managing editor and the Board, but publication is through commercial channels and is intended to be *ad hoc* rather than periodic.

THE AWARDS

The Society has only two awards that it sponsors regularly for its members, the George Mercer Award (Table 6), and the Eminent Ecologist Citation (Table 7). The first, established by Dr. Frank W. Preston, was accepted by action of Council on December 29, 1947. The award, given for outstanding papers in the field of ecology was defined in the *Bulletin* (Vol. 29, no. 1, March 1948): "The award shall be known as the George Mercer award, and is given in memory of Lieutenant George Mercer, of the British Army of World War I, killed in action October 3, 1918.

"The purpose of the award is to commemorate the sacrifice of a young naturalist and ecologist, and to encourage others to publish papers comparable with those it is reasonable to suppose he would have published if he had lived."

While the award consists only of a citation and a check for $100, it carries great prestige within the Society. Problems are of two kinds. Attempts to increase the stipend through voluntary donation have been unsuccessful. Consequently, many members feel that the amount is so insignificant that the award itself must lack importance. Secondly, the screening committee for the George Mercer award changes each year, so that despite the guidelines, criteria vary. While the original instructions explicitly state that the paper need not appear in one of the ESA journals, many ecologists seem to feel strongly that the selection should come from *Ecology* or *Ecological Monographs*. There is an objective basis for these thoughts. The ESA journals must be a major outlet for ecological papers in English. Indications are that most ecologists in

Table 6. Recipients of the George R. Mercer award, Ecological Society of America, 1949–1975

1949 – Henry P. Hansen	1963 – Joseph H. Connell
1950 – Edsko J. Dyksterhuis	1964 – Orie L. Loucks
Henry S. Fitch	1965 – Kenneth F. Norris
1951 – Helmut K. Buechner	1966 – C. S. Holling
1952 – Robert B. Platt	1967 – Robert H. Whittaker and William A. Niering
1953 – Frank J. Pitelka	1968 – Edward Broadhead and Anthony J. Wapshere
1954 – F. Herbert Bormann	1969 – Lynn T. White, Jr.
1955 – Shelby Gerking	1970 – (no award made)
1956 – Howard T. Odum and Eugene P. Odum	1971 – Edward O. Wilson and Daniel Simberloff
1957 – John J. Christian	1972 – Joel E. Cohen
1958 – Jerry S. Olson	1973 – Carl F. Jordan
1959 – Robert H. MacArthur	1974 – Paul K. Dayton
1960 – Calvin McMillan	1975 – Peter L. Marks
1961 – Robert A. Norris	1976 – William E. Neill
1962 – Harold A. Mooney and W. Dwight Billings	

Table 7. Recipients of the EMINENT ECOLOGIST award, Ecological Society of America, 1953–1976

1953 – Henry Allan Gleason	1965 – Paul Bigelow Sears
1954 – Henry S. Conard	1966 – Alfred C. Redfield
1955 – Albert Hazen Wright	1967 – Alfred Edward Emerson
1956 – George B. Rigg	1968 – Victor Ernest Shelford
1957 – Karl Patterson Schmidt	1969 – Stanley Adair Cain
1958 – Arthur W. Sampson	1970 – Murray Fife Buell
1959 – Henry Allan Gleason	1971 – Thomas Park
1960 – Walter P. Cottam	1972 – Ruth Patrick
1961 – Charles E. Elton	1973 – Robert Helmer MacArthur
1962 – George Evelyn Hutchinson	1974 – Eugene P. Odum
1963 – William Skinner Cooper	1975 – Cornelius H. Muller
1964 – Lee R. Dice	1976 – Alton A. Lindsey

North America with solid, high quality ecological manuscripts submit them first to ESA. Rejection rates approximate 70 percent. Hence, the pages of these two journals already constitute a large step in the selection process of outstanding ecological papers. Since 1958, most awards have, in fact, been made for papers published in one of the ESA journals, but the controversy remains.

Secondly, there are those who feel that a series of papers by an author should be more indicative of the level of contribution to the science than a single paper can ever be. This is true, but neither Nobel nor Pulitzer prizes are awarded for an illustrious lifetime compiled from masses of mediocrity. Instead it is the momentous breakthrough or the one great play for which these awards are made. The donor's original stipulations, in this case, are probably correct.

The second major award is that of Eminent Ecologist. Henry Allan Gleason was cited in 1953 (Gleason 1953), apparently *ad hoc*, as he was cited again in 1957. Selection of the Eminent Ecologist has rested with the Nominating Committee, a procedure which is in the process of change. An Awards Committee was appointed in 1972, ostensibly to coordinate all such activities for the Society. At present, nominations are solicited and evaluated, but final decisions rest with the committee. Through the years, selections have been made from among the great names in American ecology. There are (or were) two constraints, however. Originally, the citation could not be made to a president or past-president of ESA. As mentioned previously, to some extent the presidency has been treated as an "eminent ecologist" award. Secondly, the

award is made to a living individual, usually for a lifetime of service and contribution, i.e., a cumulative honor. The only exception has been the posthumous award following the premature death of Robert MacArthur.

In recent years, ESA has given an external award for contributions to public awareness. The first went to Arthur Godfrey and the second to Pete Seeger. Also, a Distinguished Service Citation was presented to Jack Major in 1975 and to George H. Sprugel, Jr. in 1976. This was created for those *ad hoc* situations where recognition by the Society is richly deserved, but for which no other avenue is available.

Awards have also been presented recently to ESA members. The Tyler Award was presented to Eugene and Howard Odum in 1974 and to Ruth Patrick in 1975. The Browning Award in 1975 went to G. Evelyn Hutchinson, and in 1976, David E. Reichle received the Scientific Achievement Award from the International Union of Forestry Research Organizations. The Pahlavi Environmental Prize, recently established by the Shah of Iran, and a possible Environmental Nobel Prize are additional outlets for recognition of ESA members.

THE SPINOFFS

Time and space do not permit an exhaustive review of the various events and organizations that have derived their impetus from the Ecological Society. Two deserve mention, however, The Nature Conservancy and The Institute of Ecology (TIE).

Almost from the start, two factions within the Society were apparent concerning the preservation of natural areas. While both groups were agreed on the need, a midwestern segment saw such activity as a logical function of an ecological society, while a second, largely eastern, viewed it as a private, industrial, or governmental enterprise, but NOT as a proper path for a learned scientific society to follow.

Consequently, by the late 1940's, the Ecologist's Union was formed, almost entirely of ESA members, and thus having a quasi-ESA flavor. The Union's purpose was to identify and find means to acquire or otherwise preserve portions of the American landscape that had great ecological value for both teaching and research. When it became apparent that ESA as a body could not sanction this activity, The Nature Conservancy was created. Incorporated in 1950, The Nature Conservancy has been a highly successful, private, land preservation association. Original membership was drawn heavily from ESA, and while now in a minority, many ESA members still actively support The Nature Conservancy.

The Institute of Ecology, originally conceived as an action arm of ESA, was the result of a long series of planning exercises by the Study Committee. Traveler's Research Corporation and the firm of Peet, Marwick and Mitchell served as consultants during the formative stages. Incorporated in 1971, TIE was divorced from ESA soon after. Governed by a Board of Trustees and ostensibly supported by a large group of "founding institutions" (each of which holds a seat in the Assembly), it has been beset by financial difficulties from the beginning. It is geographically dispersed (pan-American), and has had to rely heavily on foundation support for its activities. This has given TIE a project orientation, implemented through workshops that address specific problems and identify a final report as an end-product. In 1972 it established a Washington, D.C. office, complete with staff, something that ESA, with over 5,000 members, had been trying to do for several years. The first president, Arthur D. Hasler, was headquartered in Madison, Wisconsin, far from the site of operations. He was succeeded by John M. Neuhold at Utah State, who resigned in mid-1976. At the moment, TIE's existence is at least financially threatened, and we must see what the future brings. It has been a case of running before one learns to walk.

ACKNOWLEDGMENTS

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