

TECHNICAL REPORT NO. 24  
SCIENTIFIC PERSONNEL PARTICIPATING  
IN THE GRASSLAND BIOME STUDY  
JUNE 1968 THROUGH JANUARY 1970

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Colorado State University

GRASSLANDS BIOME  
U.S. INTERNATIONAL BIOLOGICAL PROGRAM

## INTRODUCTION

This report is intended to serve as a directory of all participants active in the Grassland Biome Program between June 1968 and January 1970, and those participants joining the program in January 1970. The basic entries in this report are divided into sections, each in alphabetical order, first for the senior level investigators, and then for the graduate students. All entries are written in a comparable format and contain background information on academic training and professional experience, major interests, professional activities, and all publications and technical reports. Naturally, those entries for the senior level investigators will tend to be much longer than those given for the graduate students.

Preceding the individual vitae is an overall list of all participants contained herein, together with their formal organizational affiliation. This list is again divided into three parts for the present senior level personnel, new senior personnel, and graduate students. A summary of participation by individual scientists active in the program in the different research areas, meetings, program administration, and coordination activity for the Grassland Biome for the dates given above is given in Table 1. Those people who participated as external advisors to the Grassland Biome program, but do not occur in either Table 1 or in the vitae section are listed in Table 2 along with their organizational affiliation.

DISCUSSION

List of Senior Participants active June 1, 1968 to January 1, 1970.

Name	Organization
Alexander, G.	University of Colorado
Baldwin, P. H.	Colorado State University
Becker, C. E.	University of Wyoming
Beidleman, R. G.	Colorado College
Bement, R. E.	Colorado State University and Agricultural Research Service, USDA
Bledsoe, L. J.	Colorado State University
Blocker, D. H.	Kansas State University
Burman, R. D.	University of Wyoming
Burzlauff, D. F.	University of Nebraska
Christenson, M.	University of Wyoming
Clark, F. E.	Colorado State University
Collins, D. D.	Montana State University
Cook, C. W.	Colorado State University
Dix, R. L.	Colorado State University
Doxtader, K. G.	Colorado State University
Everson, A. C.	Colorado State University
Fisser, H. G.	University of Wyoming
Franklin, W. T.	Colorado State University
French, N. R.	Colorado State University
Glover, F. A.	Fish and Wildlife Service
Gorden, R. W.	Texas Tech University
Gross, J. E.	Colorado State University
Hansen, R. M.	Colorado State University
Hanson, C. L.	Agricultural Research Service, USDA
Haug, P. T.	Colorado State University

Harris, J. O.	Kansas State University
Heady, H. R.	University of California
Herbel, C. H.	New Mexico State University
Herrmann, S. D.	Southern Colorado State College
Huddleston, E.	Texas Tech University
Hyder, D. N.	Colorado State University and Agricultural Research Service, USDA
Jameson, D. A.	Colorado State University
Klein, W. M.	Colorado State University
Kline, J. R.	Argonne National Laboratory
Knievel, D. P.	University of Wyoming
Knight, D. H.	University of Wyoming
Knox, K. L.	Colorado State University
Lavelle, J. W.	Southern Colorado State College
Lavigne, R.	University of Wyoming
Lewis, J. K.	South Dakota State University
Marlatt, W. E.	Colorado State University
Mayeux, J. V.	Colorado State University
McDaniel, G.	South Dakota State University
Miller, L. D.	Colorado State University
Moir, W. L.	Colorado State University
Morris, M. S.	University of Montana
Nagy, J. G.	Colorado State University
Osborn, N. L.	Southern Colorado State College
Packard, R. L.	Texas Tech University
Pengra, R. M.	South Dakota State University
Pieper, R. D.	New Mexico State University
Pochop, L. O.	University of Wyoming
Porter, L. K.	Colorado State University

Post, G.	Colorado State University
Reuss, J. O.	Colorado State University
Rice, R. W.	University of Wyoming
Risser, P. G.	University of Oklahoma
Ryder, R. A.	Colorado State University
Seilheimer, J. A.	Southern Colorado State College
Shubert, M. L.	University of Denver
Sims, P. L.	Colorado State University
Smith, F. M.	Colorado State University
Striffler, W. D.	Colorado State University
Thatcher, T. O.	Colorado State University
Thomas, B. O.	Colorado State College
Tomanek, G. W.	Fort Hays Kansas State College
Van Dyne, G. M.	Colorado State University
Van Horn, D. H.	University of Colorado
Ward, R. T.	Colorado State University
Whicker, F. W.	Colorado State University
Whitman, W. C.	North Dakota State University
Wiens, J. A.	Oregon State University
Wright, R. G.	Colorado State University

List of new personnel.

Name	Organization
Austin, W. G., Jr.	Colorado State University
Bell, R. T.	University of Vermont
Cole, V. C.	Agricultural Research Service
Cook, K. R.	Colorado State University
Crossley, D. A., Jr.	University of Georgia
Driscoll, R. S.	U. S. Forest Service
Francis, R. C.	Colorado State University
Hedstorm, W. E.	Colorado State University
Hoffman, R. S.	University of Kansas
Hulett, G. K.	Fort Hays Kansas State College
Hutcheson, H. L., Jr.	South Dakota State University
Jochens, L. W.	Rain Bird Sprinkler Company
Johanningsmeier, A. G.	Boston University
Jones, J. K., Jr.	University of Kansas
Klett, R. H.	Texas Tech University
Lloyd, J. E.	University of Wyoming
McGlellan, J. R.	Colorado State University
Mackay, R. S.	Boston University
Martel, Y.	University of Saskatchewan
Mecham, J. S.	Texas Tech University
Moore, R. E.	Montana State University
Nell, L. G.	Colorado State University
O'Brien, C. W.	Ohio State Department of Health
O'Brien, R. T.	New Mexico State University
Quick, H. F.	University of Colorado

Raïtt, R. J.	New Mexico State University
Rasmussen, J. L.	Colorado State University
Rickard, W. H., Jr.	Battelle Northwest
Riker, J. T., III	Colorado State University
Rose, F. L.	Texas Tech University
Sherman, B.	University of Colorado Center
Sherman, R. J.	University of Colorado Colorado Springs Campus
Sherrod, L. B.	Texas Tech University
Smolik, J. D.	South Dakota State University
Staffeldt, E. E.	New Mexico State University
Streeter, C. L.	Colorado State University
Swartzman, G.	Colorado State University
Terwilliger, C., Jr.	Colorado State University
Wallmo, O. C.	Rocky Mountain Forestry and Range Experiment Station
Watts, J. T.	New Mexico State University
Weaver, T. W.	Montana State University
Weinberg, L.	University of Minnesota
Williams, O.	University of Colorado
Williams, G. J., III	University of Denver
Wunder, B. A.	Colorado State University

List of Graduate Research Assistants.

Name	Organization
Armijo, J. D.	University of Wyoming
Bainter, E. L.	
Bartos, D.	Colorado State University
Bauerle, B. A.	Colorado State College
Birney, E.	University of Kansas
Brunner, J. D.	U.S. Forest Service
Cameron, R. E.	University of Illinois
Cavender, B. R.	Colorado State University
Chu, J.	University of Wyoming
Conley, W.	Texas Tech University
Creighton, P. D.	Colorado State University
Dittberner, P. L.	Colorado State University
Dunca, F. V., Jr.	
Flinders, J. T.	Colorado State University
Galbraith, A. F.	Colorado State University
Dye, A. J.	New Mexico State University
Eklund, L.	Colorado State University
Fisher, J. T.	Colorado State University
Giezentanner, J. G.	Colorado State University
Grow, R. R.	Colorado State University
Grubbs, K. J.	Colorado State College
Hanson, C. L.	Agricultural Research Service, USDA
Hoover, J. P.	Colorado State University
Inyamah, G. C.	Colorado State University
Johnson, F. L.	
Lauenroth, W. K.	



Lester, J. E.	Colorado State University
Marion, W. R.	Colorado State University
Marti, C. D.	Colorado State University
Martin, R. E.	Colorado State University
Matocha, K. G.	Colorado State University
Mitchell, J. E.	Colorado State University
Neithercut, D.	Colorado State University
Nelson, C.	Colorado State University
Nunn, J. R.	University of Wyoming
Parker, R. S.	Colorado State University
Paur, L. F.	Colorado State University
Pearson, R. L.	Colorado State University
Peden, D. G.	Colorado State University
Pinkham, D. D.	Fort Hays Kansas State College
Redetzke, K. A.	Colorado State University
Reed, R. C.	
Rogers, L. E.	University of Wyoming
Savelle, G. D.	Colorado State University
Scarborough, A. M.	University of Wyoming
Schmer, D. A.	Colorado State University
Seaman, S. L.	Colorado State University
Trusler, K. A.	Colorado State College
Vavra, M.	Colorado State University
Wesley, D. E.	Colorado State University
Woodmansee, S.	
Yuswack, R.	

Table 1. Personnel Participating in Various Phases of the Grassland Biome Program, June 1968 to January 1970.

NAME	Affiliation	Pawnee Research		Synthesis Proj.		Sci. Coord.		Pawnee Research		Sci. Coord.		Program Manage.		Comprehensive Research	
		68 - 69	68 - 69	68 - 69	68 - 69	68 - 69	69 - 70	69 - 70	68 - 69	68 - 69	68 - 69	69 - 70	69 - 70	69 - 70	
Alexander, G.	UC		X												
Baldwin, P. H.	CSU	X						X							
Becker, C. F.	UW			X											
Beidleman, R. G.	CC		X												
Bement, R.	ARS	X		X				X							
Bledsoe, L. J.	CSU		X	X											
Blocker, D.	KSU		X	X									X		
Burman, R. D.	UW	X						X							
Burzlauff, D.	UN		X												
Christenson, M.	UW	X													
Clark, F.	CSU	X		X				X							X
Collins, D.	MSU		X												
Cook, C. W.	CSU														
Dix, R. L.	CSU		X												
Doxtader, K. R.	CSU	X						X							
Everson, A. C.	CSU	X		X				X							
Fisser, H. G.	UW		X										X		
Franklin, W. T.	CSU														
French, N. R.	CSU												X		
Glover, F. A.	FWS		X												
Gorden, R. W.	TTU														X
Gross, J. E.	CSU	X		X											
Hansen, R. M.	CSU	X						X							
Hanson, C. L.	ARS														
Haug, P. T.	CSU												X		
Harris, J. O.	KSU													X	



NAME	Affiliation	Pawnee Research		Synthesis Proj.		Sci. Coord.		Pawnee Research		Sci. Coord.		Program Manage.		Comprehensiv Research	
		68 - 69	68 - 69	68 - 69	68 - 69	69 - 70	69 - 70	68 - 69	68 - 69	69 - 70	69 - 70	68 - 69	68 - 69	69 - 70	69 - 70
Rice, R.	UW														
Risser, P.	UO		X												X
Ryder, R. A.	CSU	X							X						
Seilheimer, J.	SCSC	X		X					X						
Shubert, M. L.	DU			X											
Sims, P. L.	CSU	X							X						
Smith, F. M.	CSU														
Striffler, W. D.	CSU	X		X					X						
Thatcher, T. O.	CSU	X							X						
Thomas, B. O.	CSC	X		X					X						
Tomanek, G. W.	FKKSC			X											X
Van Dyne, G. M.	CSU			X									X		
Van Horn, D. H.	UC										X				
Ward, R. T.	CSU			X											
Whicker, F. W.	CSU														
Whitman, W. C.	NDSU			X											X
Wiens, T. A.	OSU														X
Wright, R. G.	CSU											X			X

ORGANIZATION KEY

ANL	Argonne National Laboratory	OSU	Oregon State University
ARS	Agricultural Research Service, USDA	SCSC	Southern Colorado State College
CC	Colorado College	SDSU	South Dakota State University
CSC	Colorado State College	TTU	Texas Tech University
CSU	Colorado State University	UC	University of Colorado
DU	University of Denver	UCAL	University of California
FKKSC	Fort Hays Kansas State College	UM	University of Montana
FWS	Fish and Wildlife Service	UN	University of Oklahoma
KSU	Kansas State University	UO	University of Oklahoma
MSU	Montana State University	UW	University of Wyoming
NDSU	North Dakota State University		
NMSU	New Mexico State University		

Table 2. External advisors to the Grasslands Biome Program. October 1967 to January 1970

NAME	Affiliation	Oct. 67	Nov. 67	June 68	Dec. 68	July 69	Sept. 69	Nov. 69
		CSU	CSU	KSU	CSU (Consultation)	Denver	CSU	CSU
Balbach	EIU			X				
Bark, D.	KSU			X				
Bliss, L. C.	UI	X	X					
Bonham, C. D.	UA			X				
Clymer, A. B.	Columbus, Ohio				X			
Cooper, C.	NSF	X					X	
Coupland, R. T.	U.S., Canada	X		X				
Dahlman, R. C.	ORNL			X				
Dodd, J.	T&M			X				
Doherty	NSF						X	
Dorris, T.	OSU			X				
Ellis, R.	TRC	X			X			
Emlem, J. T.	UC	X						
Fritchen, L.	U Wash	X						
Gilmore, C. M.	BYU		X					
Goldman, C. R.	UC	X						
Gonzales, M. N.	U Mex				X			
Harper, K.	UU							X
Holling, C. S.	UBC	X						
Hulbert, L.	KSU			X		X		
Ives, J. D.	UC			X				X
Jain, S. K.	UCAL			X		X		
Johnson, P. O.	U Ga	X						
Kadlec, J. A.	U Mich	X		X				
Kane, J.	UBC				X			
Kannowski, P.	UND			X				
Klemmerson, J. O.	UA		X					

NAME	Affiliation	Oct. 67 CSU	Nov. 67 CSU	June 68 KSU	Dec. 68 CSU	Dec. 68 CSU (Consultation)	July 69 Denver	Sept. 69 CSU	Nov. 69 CSU
Lloyd, M.	U Chic						X		
Landers, R. Q.	I State			X			X		
Lorenz, R.	ARS			X					
Marr, J. W.	UC	X							
Marzolf, S.	KSU			X					
McNaughton, S.	Cornell								X
Oliver, D.		X			X				
Olsen, J.	ORNL	X							
Paris, C. H.	UC	X							
Paul, E. A.	US	X							
Pitelka, F.	UCAL	X							
Schultz, V.	WSU		X						
Smith, F.	HU	X	X			X			
Vest, D.	CSC	X							
Viets, F.	ARS		X						
Webber, P.	UC							X	
West, G.	UAL	X							
Wilson, D.	BLM			X					

ORGANIZATION KEY

- ARS Agricultural Research Service, USDA
- BLM Bureau of Land Management
- BYU Brigham Young University
- EIU University of Eastern Illinois
- HU Harvard University
- KSU Kansas State University
- NSF National Science Foundation
- ORNL Oak Ridge National Laboratory
- OSU Oregon State University
- TA&M Texas A&M
- TRC Travelers Research Center

- UA University of Arizona
- UAL University of Alaska
- UC University of Colorado
- UBC University of British Columbia
- UI University of Illinois
- U Ga University of Georgia
- U Mich University of Michigan
- UND University of North Dakota
- US University of Saskatchewan
- UU University of Utah

Name: Gordon Alexander

Born: 1901

Academic Training:

Degree	Year	Institution	Major
B.A.	1923	Central Methodist College	
M.A.	1925	Princeton University	
Ph.D.	1931	Princeton University	Entomology

Professional Experience:

Date	Position	Institution
1926-1928	Assistant Professor, Biology	Central Methodist College
1928-1930	Visiting Professor	Chulalongkorn University (Bangkok)
1931-1939	Associate Professor, Biology	University of Colorado
1939-1958	Head, Dep. of Biology	University of Colorado
1939-	Professor of Biology	University of Colorado

Major Interests:

Ecology of insects.

Professional and Honorary Societies:

AAAS	Society of Sigma Xi
AIBS	Society for Study of evolution
American Society of Zoologists	Society of Systematic Zoology
Ecological Society of America	
Entomological Society of America	

Publications, Technical Reports:

- Alexander, G. General Zoology. (College Outline Series). Eighth Edition. Barnes and Noble, Inc. New York. 295 p. (in press).
- Alexander, G. and W. H. Halliburton. 1964. Effect of photoperiod on molting of *Chortophaga viridifasciata* (DeGeer) (Orthoptera:Acrididae.) Entomol. News 75:133-137.
- Alexander, G. and J. R. Hilliard, Jr. 1964. Life history of *Aeropedullus elavatus* (Orthoptera:Acrididae) in the alpine tundra of Colorado. Annals Entomol. Soc. Amer. 57:310-317.
- Alexander, G. 1964. Occurrence of grasshoppers as accidentals in the Rocky Mountains of northern Colorado. Ecol. 45:77-86.
- Alexander, G. 1964. Ecology of high altitude insects. Book Review: Mani, M.S. Introduction to high altitude entomology, Methuen, London, 1962. Ecol. 43:780-781.

Name: Walter G. Austin, Jr.

Born: 1932

Academic Training:

Degree	Year	Institution	Major
B.B.A.	1954	Texas Tech. University	Accounting
M.B.A.	1957	Texas Tech. University	Accounting
Ph.D.	1964	University of Texas	Accounting and Finance

Professional Experience:

Date	Position	Institution
1957-1960	Auditor	Peat, Marivick, Mitchell & Co.
1961-1962	Assistant Professor	Arizona State University
1963-1964	Assistant Professor	Fort Lewis College
1964-1969	Associate Professor	Univ. of Texas at Arlington
1969-	Associate Professor	Colorado State University

Professional and Honorary Societies:

American Institute of Certified Public Accountants  
American Accounting Association  
Beta Alpha Psi

Major Interests:

Accounting systems.

Current Professional Activities:

Consulting industrial firms concerning accounting systems and other problems.

Teaching: Graduate accounting courses.

Research: Financial accounting and reporting of commercial banks in the United States.

Publications, technical reports:

Austin, W. G., Jr. 1964. A survey of accounting and reporting practices. Auditgram 40.

Austin, W. G., Jr. 1965. Critical evaluation of bank earnings statement. Burroughs Clearing House. Nat. Bank Examiner Regional Newsletter's Guest Column.



Name: Paul H. Baldwin

Born: 1913

Academic Training:

Degree	Year	Institution	Major
B.A.	1936	University of California	Zoology
M.S.	1939	University of Hawaii	Zoology
Ph.D.	1950	University of California	Zoology

Special Training:

Harvard Graduate School, 1939-1940, Zoology.

Professional Experience:

Date	Position	Institution
1941-1946	Assistant to Superintendent	Hawaii National Park
1946	Curator of Collections	Bernice P. Bishop Museum Honolulu, Hawaii
Summer 1954	Visiting Assistant Professor	University of Texas
1955-1962	Visiting Professor	University of Montana (Summers)
1950-1956	Assistant Professor, Zoology	Colorado State University
1956-1964	Associate Professor, Zoology	Colorado State University
1964	Professor, Zoology	Colorado State University

Professional and Honorary Societies:

Ecological Society of America	Sigma Xi
American Ornithologists Union	Western Forest Insect Work Conference
Wilson Ornithological Society	
Western Bird-banding Society	
Cooper Ornithological Society	

Major Interests:

Population relations of woodpeckers in coniferous forests; feeding ecology of insectivorous birds and forest insects in coniferous forests; predator-prey and trophic ecology.

Current Professional Activities:

Teaching: Zoology, Vertebrate Biology, Ornithology

Research: Feeding ecology of herbivorous and insectivorous grassland birds

Publications, Technical Reports:

Baldwin, P. H. 1939. A study of temperature resistance in the Decapoda. M.S. Thesis, Univ. Hawaii. 53 p.

- Baldwin, P. H. 1940. Environmental relationships of birds in the Kilauea Section, Hawaii National Park. Hawaii Nat. Park Natur. Hist. Bull. 6. 26 p. (Mimeo).
- Baldwin, P. H. 1941. Checklist of the birds of the Hawaii National Park, Kilauea-Mauna Loa Section, with remarks on their present status and a field key. Hawaii Nat. Park Natur. Hist. Bull. 7. 38 p. (Mimeo).
- Baldwin, P. H. and G. O. Fagerlund. 1943. The effect of cattle grazing on Koa reproduction in Hawaii National Park. Ecology 24:118-122.
- Baldwin, P. H. 1944. Birds of Hawaii National Park. Audubon Mag. 46:147-154.
- Baldwin, P. H. 1945. The Hawaiian Goose, its distribution and reduction in numbers. Condor 47:27-37.
- Baldwin, P. H. and H. I. Fisher. 1945. A recent trip to Midway Islands, Pacific Ocean. Elepaio 6:11-13.
- Baldwin, P. H. 1945. Fate of the Laysan Rail. Audubon Mag. 47:343-348.
- Baldwin, P. H. and H. I. Fisher. 1946. War and the birds of Midway. Paradise of the Pacific 48:4-9.
- Baldwin, P. H. and H. I. Fisher. 1946. War and the birds of Midway Atoll. Condor 48:3-15.
- Baldwin, P. H. 1946. Bulwer Petrel breeding on eastern Hawaiian Islands. Condor 48:3-15.
- Baldwin, P. H. and H. I. Fisher. 1947. Notes on the Red-billed Leiothrix in Hawaii. Pacific Sci. 1:45-51.
- Baldwin, P. H. 1947. Life history of the Laysan Rail. Condor 49:14-21.
- Baldwin, P. H. 1947. Foods of the Hawaiian Goose. Condor 49:108-120.
- Baldwin, P. H. 1948. Discovery of tapeworm parasites in three genera of Hawaiian honey suckers. Elepaio 9:1.
- Baldwin, P. H. 1949. A Review: "Some Hawaiian ecological notes." I. La Rivers, 1948. Wasmann Collector 7:85-110. In Elepaio 10:15-16.
- Baldwin, P. H. and D. B. Hubbard. 1949. The Hawaiian Dark-rumped Petrel reappears on Hawaii. Condor 51:231-232.
- Baldwin, P. H. 1950. Comparative ecology of certain Hawaiian Honey Creepers (Family Drepaniidae). Ph.D. Thesis, Univ. California 250 p.
- Baldwin, P. H. 1950. Occurrence and behavior of the Hawaiian bat. J. Mammal. 31:455-456.

- Baldwin, P. H. 1951. The role of foods in avian evolution as shown by the Hawaiian Honey Creepers. *J. Colorado-Wyoming Acad. Sci.* 4:82. (Abstr.)
- Baldwin, P. H. 1952. A Review: "The Hawaiian Honeycreepers (Aves, Drepaniidae)." D. Amadon, 1950. *Amer. Mus. Natur. Hist. Bull.* 95:153-262. *In Auk* 69:92-98.
- Baldwin, P. H., C. W. Schwartz, and E. R. Schwartz. 1952. Life history and economic status of the mongoose in Hawaii. *J. Mammal.* 33:335-356.
- Baldwin, P. H. 1952. Reproduction of the mongoose in Hawaii. *J. Colorado-Wyoming Acad. Sci.* 4:90-91. (Abstr.).
- Baldwin, P. H. and O. P. Pearson. 1953. Reproduction and age structure of a mongoose population in Hawaii. *J. Mammal.* 34:436-447.
- Baldwin P. H. 1953. Annual cycle, environment, and evolution in the Hawaiian Honeycreepers (Aves: Drepaniidae). *Univ. California Zool. Pub.* 52:285-398.
- Baldwin, P. H. and L. P. Richards. 1953. Recent records of some Hawaiian Honeycreepers. *Condor* 55:221-222.
- Baldwin, P. H. 1953 The chromosomes of the Red-wing and the Yellow-headed Blackbird (Family Icteridae). *J. Colorado-Wyoming Acad. Sci.* 4:60.
- Baldwin, P. H. and S. Makino. 1954. The chromosomes of the American blackbirds, *Agelaius phoeniceus* and *Xanthocephalus xanthocephalus* (Family Icteridae). *Cytologia* 19:217-224.
- Baldwin, P. H. and E. G. Reed. 1954. A chronology of nesting for the Hoary Redpoll (*Acanthis hornemanni*) at Umiat, Alaska in 1953. *J. Colorado-Wyoming Acad. Sci.* 4:62-63.
- Baldwin, P. H. and J. R. Stocker. 1954. A preliminary comparison of daily spermatogenic rhythm in passerine birds of arctic and temperate latitudes. *J. Colorado-Wyoming Acad. Sci.* 4:63-64.
- Baldwin, P. H. 1955. The breeding ecology and physiological rhythms of some arctic birds at Umiat, Alaska. *Arctic Inst. North Amer., Proj. ONR-121.* 112 p. (Mimeo).
- Baldwin, P. H. 1955. Book Review: An introduction to ornithology. G. J. Wallace, 1955. Macmillan Co., New York, 443 p. *In Wilson Bull.* 67:313-314.
- Baldwin, P. H. 1955. Chromosome elimination in birds. *J. Colorado-Wyoming Acad. Sci.* 4:63-64. (Abstr.).
- Baldwin, P. H. and E. B. Reed. 1955. Reproductive cycle in birds of the Arctic Plateau. *J. Colorado Wyoming Acad. Sci.* 4:64. (Abstr.).
- Baldwin, P. H. and E. B. Reed. 1955. Adaptations in the molt of Arctic birds. *J. Colorado-Wyoming Acad. Sci.* 4:64-65. (Abstr.).

- Baldwin, P. H. 1956. Breeding record of Brewer Sparrow in northwestern Montana. *Wilson Bull.* 68:251.
- Baldwin, P. H. 1960. Overwintering of woodpeckers in bark beetle-infested spruce-fir forests of Colorado. *Int. Ornithol. Congr., Proc.*, 12:71-84.
- Baldwin, P. H. and G. D. Amman. 1960. A comparison of methods for censusing woodpeckers in spruce-fir forests of Colorado. *Ecology* 41:699-706.
- Baldwin, P. H. 1961. Book Review: XII International Ornithological Congress, Helsinki, Proceedings. 1958, 6:5-12. G. Bergman, K. O. Donner and L. von Haartman [ed.], 1960. 2 Vols. 1:1-436; 2:437-822. *In* *Wilson Bull.* 73:302.
- Baldwin, P. H. 1961. Distribution, overlap, and hybridization of two species of redpolls in Alaska. *Ecol. Soc. Amer. Bull* 42:152. (Abstr.).
- Baldwin, P. H. 1961. Occurrence of woodpeckers at infestations of the Engelmann spruce beetle. *J. Colorado-Wyoming Acad. Sci.* 5:49-50. (Abstr.)
- Baldwin, P. H. 1962. Book Review: Morphological differentiation and adaptation in the Galapagos finches. R. I. Bowman, 1961. Univ. California Pub. 58, 302 p. *In* *Wilson Bull.* 74:295-297.
- Baldwin, P. H. 1962. Problems in the study of bird and bark beetle relationships. *Annu. Western Forest Insect Work Conf., Proc.*, 13:57.
- Baldwin, P. H. and W. F. Hunter. 1962. Nesting of the black swift in Montana. *Wilson Bull.* 74:409-416.
- Baldwin, P. H. and W. F. Hunter. 1963. Nesting and nest visitors of the Vaux's swift in Montana. *Aug* 80:81-85.
- Baldwin, P. H. 1963. Nesting specializations of the swifts of the Rocky Mountains. *J. Colorado-Wyoming Acad. Sci.* 5:39. (Abstr.)
- Baldwin, P. H. and N. K. Zaczkowski. 1963. Breeding biology of the Vaux swift. *Condor* 65:400-406.
- Baldwin, P. H. and R. W. Schneider. 1963. Flight in relation to form of wing in the Lewis' woodpecker. *J. Colorado-Wyoming Acad. Sci.* 5:58-59. (Abstr.).
- Baldwin, P. H. and D. E. Oehlerts. 1964. The status of ornithological literature, 1964. *Stud. Biol. Lit. Commun.* 4. Biological Abstracts, Inc., Philadelphia. 53 p.
- Baldwin, P. H. and J. R. Koplín. 1964. The Boreal owl and its status in Colorado. *J. Colorado-Wyoming Acad. Sci.* 4:46-47.

- Baldwin, P. H. 1965. Woodpecker - bark beetle relationships. 1965 Combined Western and Cent. Forest Insect Work Conf., Proc. p. 79.
- Baldwin, P. H. 1966. Book Review: A survey of birds of Kauai, Hawaii. F. Richardson and J. Bowles, 1964. Bernice P. Bishop Mus. Bull. 227, Honolulu, Hawaii. 51 p. In Bird-Banding 37:144-145.
- Baldwin, P. H. and J. R. Koplín. 1966. The Boreal owl as a Pleistocene relict in Colorado. Condor 68:299-300.
- Baldwin, P. H. 1966. The consumption of adult Engelmann spruce beetles by insectivorous birds. J. Colorado-Wyoming Acad. Sci. 5:96. (Abstr.)
- Baldwin, P. H. 1968. Woodpecker feeding on Engelmann spruce beetles in wind-thrown trees. Rocky Mountain Forest and Range Exp. Sta., USDA. U.S. Forest Service Res. Note RM-105:1-4.
- Baldwin, P. H. 1968. *Acanthis hornemanni* exilipes (Coues) Hoary Redpoll, p. 400 to 407. In O. L. Austin, Jr. [ed.] Life histories of North American cardinals, grosbeaks, buntings, towhees, finches sparrows, and allies. U.S. Nat. Mus. Bull. 237.
- Baldwin, P. H. 1968. Vertebrate predation. Annu. Western Forest Insect Work Conf., Berkeley, California, Proc., 19:26-29.
- Baldwin, P. H. 1969. Predator-prey relationships of birds and spruce beetles. North Cent. Branch - Entomol. Soc. Amer., Proc., 23:90-99.
- Baldwin, P. H. 1969. The Hawaiian Hawk from 1938 to 1949. Elepaio 29:95-98.
- Baldwin, P. H. 1969. The 'Alala (*Corvus tropicus*) of western Hawaii Island. Elepaio 30:41-45.

Name: Clarence F. Becker

Born: 1920

Academic Training:

Degree	Year	Institution	Major
B.S.	1943	North Dakota State University	Agricultural Engr.
M.S.	1949	North Dakota State University	Agricultural Engr.
Ph.D.	1956	Michigan State University	Agricultural Engr.
	1944	Professional Certificate in Meterology, UCLA	

Professional Experience:

Date	Position	Institution
1949	Asst. Professor Agr. Engr.	University of Wyoming
1957	Associate Professor	University of Wyoming
1959	Professor	University of Wyoming
1964-1966	U.N. Consultant, Tunisia, Iran	
1966	Department Head	University of Wyoming
1968-1970	Chief of Wyoming Team	Kabul University, Afghanistan

Major Interests:

Meteorology, statistics, farm mechanization.

Professional and Honorary Societies:

Registered Professional Engineer - Wyoming  
Sigma Xi  
American Society of Agricultural Engineers

Publications, Technical Reports:

- Becker, C. F. 1957. Solar radiation availability of surface in the United States as affected by season, orientation, latitude, altitude and cloudiness. J. Solar Energy Sci. Engr. 1.
- Becker, C. F. 1958. Determining available solar radiation. Air Cond. Heat. Vent. 54(6).
- Becker, C. F. 1961. Availability of solar energy. Agr. Engr. 42:302-306.
- Becker, C. F. 1963. The effect of relative humidity on the application of pesticides to agricultural crops. Inter. Symp. Humidity Moisture.
- Becker, C. F. 1964. Temperature probabilities in Wyoming. Wyoming Agr. Exp. Sta. Bull. 415.
- Becker, C. F. 1965. The effect of relative humidity on the application of pesticides to agricultural crops. Humidity Moisture 2:226-230.
- Becker, C. F. 1965. Precipitation probabilities in Wyoming. Wyoming Agr. Exp. Sta. Bull. 416.

Name: Richard G. Beidleman

Born: 1923

Academic Training:

Degree	Year	Institution	Major
B.A.	1947	University of Colorado	Biology
M.A.	1948	University of Colorado	Biology
Ph.D.	1954	University of Colorado	Biology

Professional Experience:

Date	Position	Institution
1948-1956	Assistant Professor, Zoology	Colorado State University
1956-1957	Assistant Professor, Biology	University of Colorado
1957-	Assistant Professor, Associate Professor, Professor of Zoology	Colorado College

Major Interests:

Population studies of birds and small mammals in Colorado ecosystems; social organization among winter birds; successional studies in Colorado ecosystems; impact of man within ecosystems.

Professional and Honorary Societies:

American Society of Mammalogists	Society for the Study of Evolution
The Wildlife Society	Cooper Ornithological Society
Ecological Society of America	American Ornithologists Union
Animal Behavior Society	
American Society of Zoologists	

Publications, Technical Reports:

- Beidleman, R. G. Guide to the Winter Birds of Colorado.
- Beidleman, R. G. Guide to the Birds of Prey of Colorado (Univ. Colorado Museum).
- Beidleman, R. G. The American Beaver (Thorne Ecological Station).
- Beidleman, R. G. Wildlife Guide to the Southern Rockies (Naturegraph Press).
- Beidleman, R. G. Dynamic Equilibrium (Rand McNally).
- Beidleman, R. G. Bibliography of Techniques in Mammalogy (Rocky Mt. Nature Assoc.).

Name: Ross T. Bell

Born: 1929

Academic Training:

Degree	Year	Institution	Major
B.S.	1949	University of Illinois	Zoology
M.S.	1950	University of Illinois	Entomology
Ph.D.	1953	University of Illinois	Entomology

Professional Experience:

Date	Position	Institution
1955-	Instructor, Zoology	University of Vermont
	Assistant Professor, Zoology	University of Vermont
	Associate Professor, Zoology	University of Vermont

Major Interests:

Morphology, systematics and ecology of Carabid beetles.

Professional Societies:

Coleopterist's Society  
Entomological Society of America  
Entomological Society of Washington

Publications, Technical Reports:

- Bell, R. T. 1955 Species of the *Pallipes* group of *Nebria* in the eastern U. S. Entomol. Soc. Washington, Proc. 57:265-267.
- Bell, R. T. 1957. *Carabus auratus* L. in North America. Entomol. Soc. Amer., Proc. 59:254.
- Bell, R. T. 1958. Intraspecific variation in *Chlaenius tomentosus*. Ann. Entomol. Soc. Amer. 51:432-435.
- Bell, R. T. 1959. A new species of *Scaphinotus*, intermediate between *Scaphinotus s. str.* and *Irichroa newman*. Entomol. Soc. Washington, Proc. 61:11-13.
- Bell, R. T. 1960. Revision of the genus *Chlaenius* in North America. Entomol. Soc. Amer. Misc. Pub. 1:98-166.
- Bell, R. T. 1962. The taxonomic position of the Rhysodidae. Coleop. Bull. 16:99-106.
- Bell, R. T. 1964. *Platypatrobus lacustris* Darlington in Vermont. Entomol. Soc. Washington, Proc. 66.
- Bell, R. T. 1964. Does *Gehringia* belong to the Isochaeta? Coleop. Bull. 18:59-61.



- Bell, R. T. 1965. Coxal cavities and the phylogeny of the Adephaga. Int. Congr. Entomol., Proc. 12:80-81.
- Bell, R. T. 1966. Coxal cavities and the classification of the Adephaga. Ann. Entomol. Soc. Amer. 60:101-107.
- Bell, R. T. 1966. *Trachypachus* and the origin of the Hydradephaga. Coleop. Bull. 20:107-112.
- Bell, R. T. 1966. *Chlaenius patruelis* Leconte, a valid species. Entomol. Soc. Washington, Proc. 68:321-322.
- Bell, R. T. 1970. The Rhysodini of North America, Central America and the West Indies. Entomol. Soc. Amer. Misc. Pub. 6:289-324.

Name: Robert Earl Bement

Born: 1918

Academic Training:

Degree	Year	Institution	Major
B.S.	1940	Colorado A & M College	Forestry
M.F.	1947	Colorado A & M College	Range Management
Ph.D.	1968	Colorado State University	Range Science

Special Training: Army Command and General Staff Course - 1957-1961

Professional Experience:

Date	Position	Institution
1940-1946	2nd Lt. to Lt. Col.	US Army
1947-1948	Instructor	Colorado State University
1948-1955	Range Conservationist	Soil Conservation Service
1956-present	Range Scientist	Agricultural Research Service
1967-present	Graduate Faculty	Colorado State University

Professional and Honorary Societies:

Ecological Society of America	Sigma Xi
American Society of Range Management	Gamma Sigma Delta
American Society of Animal Science	Phi Kappa Phi

Major Interests: Relations of season and intensity of grazing use to the vegetation and animal gain per head and per acre; measure of quantity and quality of forage consumed by grazing animals.

Current Professional Activities:

Range Scientist in charge of the ARS Forage and Range Branch Program at Fort Collins

Teaching: Graduate Faculty - 4 graduate students

Publications, Technical Reports:

Bement, R. E. and D. W. Davis. 1958. How much feed can this range produce? J. Range Manage. 11:281-282.

Bement, R. E. and G. E. Klipple. 1959. A pasture-comparison method of estimating utilization of range herbage on the Central Great Plains. J. Range Manage. 12:296-297. Presented Ann. Meeting Amer. Soc. Range Manage., Tulsa, Oklahoma, January 1959.

- Klipple, G. E. and R. E. Bement. 1961. Light grazing--is it economically feasible as a range-improvement practice. *J. Range Manage.* 14:57-62. Presented Ann. Meeting Amer. Soc. Range Manage., Tulsa, Oklahoma, January 1959.
- Bement, R. E., D. F. Hervey, A. C. Everson, and L. O. Hylton, Jr. 1961. Use of asphalt-emulsion mulches to hasten grass-seedling establishment. *J. Range Manage.* 14:102-109.
- Hylton, L. O., Jr. and R. E. Bement. 1961. Effects of environment on germination and occurrence of sixweeks fescue. *J. Range Manage.* 14: 257-261.
- Hyder, D. N. and R. E. Bement. 1964. Sixweeks fescue as a deterrent to blue grama utilization. *J. Range Manage.* 17:261-264.
- Hyder, D. N., R. E. Bement, E. E. Remmenga, and C. Terwilliger, Jr. 1965. Frequency sampling of blue grama range. *J. Range Manage.* 18:90-93.
- Bement, R. E., R. D. Barmington, A. C. Everson, L. O. Hylton, Jr., and E. E. Remmenga. 1965. Seeding of abandoned croplands in the Central Great Plains. *J. Range Manage.* 18:53-57.
- Hyder, D. N., R. E. Bement, E. E. Remmenga, and C. Terwilliger, Jr. 1966. Vegetation-soils and vegetation-grazing relations from frequency data. *J. Range Manage.* 19:11-17.
- Hyder, D. N., R. E. Bement, J. J. Norris, and M. J. Morris. 1966. Evaluating herbage species by grazing cattle, Part 1, Food Intake. *Int. Grassland Congr., Proc.*, 10(4):970-974.
- Hyder, D. N., R. E. Bement, J. J. Norris, and R. R. Wheeler. 1966. Evaluating herbage species by grazing cattle, Part 2, Food Quality. *Int. Grassland Congr., Proc.*, 10(4):974-977.
- Bement, R. E. 1968. Plains pricklypear: Relation to grazing intensity and blue grama yield on Central Great Plains. *J. Range Manage.* 21: 83-86.
- Bement, R. E. 1968. Herbage growth rate and forage quality on shortgrass range. Ph.D. Dissertation, Colorado State University. 53 p.
- Hyder, D. N., R. E. Bement, and J. J. Norris. 1968. Sampling requirements of the water-intake method of estimating forage intake by grazing cattle. *J. Range Manage.* 21:392-397.
- Bement, R. E. 1969. A stocking-rate guide for beef production on blue-grama range. *J. Range Manage.* 22:83-86.
- Hyder, D. N. and R. E. Bement. 1969. A micro-ridge roller for seedbed modification. *J. Range Manage.* 22:54-56.

Everson, A. C., D. N. Hyder, H. R. Gardner, and R. E. Bement. 1969.  
Chemical versus mechanical fallow of abandoned croplands. *Weed  
Sci.* 17:548-551.

Name: Lewis J. Bledsoe

Born: 1942

Academic Training:

Degree	Year	Institution	Major
B.A.	1964	Univ. Tennessee	Mathematics
	1966	Univ. Michigan	Biophysics
M.S.	1968	Colorado State Univ.	Wildlife Biol., Statistics
Ph.D. Candidate		Colorado State Univ.	Systems Ecology

Professional Experience:

Date	Position	Institution
1961-1966	Mathematics Consultant	Oak Ridge Nat'l. Lab.
1961-1962	Programmer	Botany Dep., Univ. Tennessee
1964-1965	Programmer	Inst. Sci. & Tech., Univ. Michigan
1967-	Instructor	Colorado State University

Professional and Honorary Societies:

Association of Computing Machinery  
Analogue Computer Education Users Group  
Ecological Society of America

Major Interests:

Applications of Mathematics to Environmental Biology

Current Professional Activities:

Data Processing & Modeling Studies, Grassland Biome, IBP

Teaching: Systems Ecology

Research: Grassland Biome Modeling

Publications, Technical Reports:

Bledsoe, L. J. and J. S. Olson. 1967. COMSYSI: a stepwise compartmental simulation program. ORNL Tech. Mem. 2413.

Bledsoe, L. J. and G. M. Van Dyne. 1968. Simulation and Analytical computer programs for compartment analysis of ecological phenomena. ORNL Tech. Mem. 2414.

Bledsoe, L. J. 1968. Compartment Models and their use in the simulation of secondary succession. M.S. Thesis, Colorado State Univ. 112 p.

Bledsoe, L. J. and G. M. Van Dyne. 1969. A compartment model simulation of ecological succession, Chap. 8. In B. Patten [ed.] Ecological systems research. Academic Press, New York. (Manuscript submitted).

- Van Dyne, G. M., W. E. Frayer, and L. J. Bledsoe. 1969. Optimization techniques and problems in the natural resource sciences. *In* Soc. Ind. Appl. Math. Studies in Applied Mathematic: Symposium on Optimization.
- Bledsoe, L. J. and D. A. Jameson. 1969. Model structure for a grassland ecosystem, p. 410 to 435. *In* R. L. Dix and R. G. Beidleman [ed.] The grassland ecosystem: a preliminary synthesis. Colorado State Univ., Range Sci. Dep. Sci. Ser. No. 2. 437 p.
- Bledsoe, L. J. 1969. Simulation languages and large scale ecosystem models. Presented at the Conference on Applications of Continuous System Simulation Languages, San Francisco, June 30-July 1, 1969. Submitted to Simulation.
- Clymer, A. B. and L. J. Bledsoe. 1969. Hierarchy of models for the Jornada range ecosystem. Presented at Ford Foundation Workshop, Albuquerque, New Mexico, June 16-27, 1969.

H. Derrick Blocker

Born: 1932

Academic Training:

Degree	Year	Institution	Major
B.S.	1954	Clemson University	Entomology
M.S.	1958	Clemson University	Entomology
Ph.D.	1965	No. Carolina State Univ.	Entomology

Special Training:

Summer Institute of Systematics III, Smithsonian Institution, Wash., D. C.  
June 23 - July 11, 1969; sponsored by NSF and Society of Systematic Zoology

Professional Experience:

Date	Position	Institution
1954-1956	MSC Officer, U.S. Army	
1956-1958	Grad. Res. & Teaching Asst.	Clemson University
1958	Entomologist	So. Carolina Crop Pest Commission
1961-1964	Grad. Research Asst.	No. Carolina State University
1965-	Asst. Prof. Entomology	Kansas State University

Professional and Honorary Societies:

Sigma Xi  
Gamma Sigma Delta  
Phi Sigma  
Entomological Society of America  
Society of Systematic Zoology  
Kansas Central States Ento. Soc.

Major Interests:

Taxonomy and ecology of leafhoppers, particularly those of grassland and prairie; evolution and ecology of insects in general; ecology of grassland insects.

Current Professional Activities:

Curator of Insects

Teaching: Taxonomy of Insects, External Morphology of Insects

Research: Taxonomy of Leafhoppers; Taxonomy and Ecology of Grassland Insects; IBP Comprehensive site (Osage), Research on Insects

Publications, Technical Reports:

Blocker, H. D. 1967. *Athysanella attenuata* and a closely related new species from Kansas (Homoptera: Cicadellidae). J. Kansas Entomol. Soc. 40:576-578.

- Blocker, H. D. 1967. A classification of the Western Hemisphere Balclutha (Homoptera:Cicadellidae). U. S. Nat. Mus., Proc. 122:1-55.
- Blocker, H. D. 1968. A new species of Balclutha from Brazil and notes on new distribution of some existing species (Homoptera:Cicadellidae). J. Kansas Entomol. Soc. 41:207-209.
- Blocker, H. D. 1969. Impact of insects as herbivores in grassland ecosystems, p. 290-299. Dix, R. L. and R. G. Beidleman [ed.] The grassland ecosystem: a preliminary synthesis. Range Science Series No. 2 p. 437.
- Blocker, H. D. 1970. Book Review: "Principles of Systematic Zoology." Ernst Mayr. J. Kansas Entomol. Soc. 43:112-113.
- Blocker, H. D. A taxonomic study of the Genus Stragania in America, north of Mexico. (Homoptera:Cicadellidae:lassinae). Submitted to Ann. Entomol. Soc. Amer.



Name: Robert D. Burman

Born: 1925

Academic Training:

Degree	Year	Institution	Major
B.S.	1950	University of Wyoming	General Engineering
M.S.	1961	University of Wyoming	Civil Engineering
Ph.D.	1969	Cornell University	Agricultural Engineering

Professional Experience:

Date	Position	Institution
1950-1951	Surveyor	Union Pacific Railroad
1952-1954	Junior Highway Engineer	Washington State Dep. of Highways
1963-1964	NSF Science Faculty Fellow	Cornell University
1956-Present	Associate Professor	Univ. Wyoming
July 1968	Acting Head, Agricultural Engineering	Univ. Wyoming

Professional and Honorary Societies:

American Society of Agricultural Engineers  
Registered Professional Engineer and Land Surveyor, Wyoming  
Sigma Xi

Major Interests: Micrometeorology, Hydrology, Irrigation

Current Professional Activities:

Teaching: Conservation Engineering, Open Channel Hydraulics, Flood Routing

Research: Meteorology, Hydrologic modelling Pawnee study, Irrigation water supply and operation

Publications. Technical reports:

Hough, H. W., R. D. Burman, and M. A. McNamee. 1957. Sugar beets and water. Wyoming Roundup.

Burman, R. D. 1958. Reservoirs for range stockwater development. Wyoming Agr. Exp. Sta. Circ. 67.

Burman, R. D. 1957. The 1957 Wyoming underground water law. Agr. Ext. Series Leaflet 39.

Burman, R. D. 1958. Wyoming's new underground water law helps fashion key to underground water use. Wyoming Stockman Farmer, (December).

- Burman, R. D. 1959. Engineer will play big part in agriculture of tomorrow. Wyoming Stockman Farmer.
- Burman, R. D. and D. Bohmont. 1961. Evaluating the growth rate of great northern beans as influenced by soil moisture level under greenhouse conditions. Agron. J. 53:354-355.
- Burman, R. D. and J. R. Partridge. 1962. Evapotranspiration of water by small grains, corn and beans in northwestern Wyoming. Wyoming Agr. Exp. Sta. Mimeo. Circ. 174.
- Burman, R. D., L. I. Painter, and J. R. Partridge. 1962. Irrigation and nitrogen fertilization of field corn in northwest Wyoming. Wyoming Agr. Exp. Sta. Bull. 389.
- Burman, R. D. and L. I. Painter. 1964. Influence of soil moisture on leaf color and foliage volume of beans grown under greenhouse conditions. Agron. J. 56:420-423.
- Ferguson, J. E., C. F. Becker, and R. D. Burman. 1966. The effect of summerfallow-tillage methods on the vertical energy balance. Amer. Soc. Agr. Eng. Paper 66-230. (Presented at Amer. Soc. Agr. Eng., Proc., Amherst, Mass., June 28, 1966).
- Burman, R. D. and T. L. Loudon. 1967. Evapotranspiration and irrigation efficiency studies, Farson Pilot Farm. Wyoming Agr. Exp. Sta. Res. J. 10.
- Burman, R. D. and T. L. Loudon. 1967. Evapotranspiration and microclimate of irrigated pastures and alfalfa under high altitude conditions. Amer. Soc. Agr. Eng., Trans. 11:123-125, 128.
- Burman, R. D. and R. D. Black. 1968. The inference of intake and hydraulic roughness parameters from plot runoff using kinematic wave theory. Amer. Soc. Agr. Eng., Trans. December 10-13, 1968, Chicago, Illinois.

Name: D. F. Burzlaff

Born: 1923

Academic Training:

Degree	Year	Institution	Major
B.S.	1950	University of Wyoming	Agriculture
M.S.	1952	University of Wyoming	Botany
Ph.D.	1960	Utah State University	Range Science

Professional Experience:

Date	Position	Institution
1953-1961	Associate Professor, Agronomy	University of Nebraska
1962-	Professor, Agronomy	University of Nebraska

Major Interests:

Effects of fertilizer on range vegetation, soil and vegetative characteristics of grasslands.

Professional and Honorary Societies:

Sigma Xi  
 American Society of Range Management  
 American Society of Agronomy  
 The American Forage and Grassland Council

Publications, Technical Reports:

Burzlaff, D. F. 1962. A soil and vegetation inventory and analysis of three Nebraska range sites. Univ. Nebraska Res. Bull. 206. 33 p.

Burzlaff, D. F. 1963. A study of selected characteristics of soil and vegetation in the sandhills of Nebraska (Abstr). J. Range Manage. Abstr. Papers p. 9-10.

Russell, J. S., E. M. Brouse, H. F. Rhodes and D. F. Burzlaff. 1965. Response of sub-irrigated meadow vegetation to application of nitrogen and phosphorus fertilizer. J. Range Manage. 18:242-247.

Burzlaff, D. F. 1966. The Focal-point technique of vegetation inventory. J. Range Manage. 19:222-223.

Clanton, D. C. and D. F. Burzlaff. 1966. Grazing cattle on sub-irrigated meadows. J. Range Manage. 19:151-152.

Streeter, C. L., D. F. Burzlaff, D. C. Clanton and L. R. Rittenhouse. 1966. The effect of stage of maturity, method of storage and storage time on the nutritive value of sandhills upland hay. J. Range Manage. 19:55-59.

Burzlaff, D. F., G. W. Fick and L. R. Rittenhouse. 1967. The effect of nitrogen fertilization on certain factors of a western Nebraska range ecosystem. (In press).

Rittenhouse, L. R. and D. F. Burzlaff. Variation in foliage density of mixed prairie vegetation in western Nebraska as influenced by date of sampling and livestock disturbance. Submitted to J. Range Manage.

Name: Martha Christensen

Born: 1932

Academic Training:

Degree	Year	Institution	Major
B.S.	1953	University of Nebraska	Botany - Soils
M.S.	1956	University of Wisconsin	Botany
Ph.D.	1960	University of Wisconsin	Botany (mycology, ecology)

Professional Experience:

Date	Position	Institution
1953-1954	High School Biology Teacher	Ralston, Nebraska
1954-1960	Research and Teaching Assistant	Univ. Wisconsin
1960-1963	Post-doctoral Project Associate	Univ. Wisconsin
1963-1968	Assistant Professor	Univ. Wyoming
1968-	Associate Professor	Univ. Wyoming

Professional and Honorary Societies:

Phi Beta Kappa  
Sigma Xi  
Phi Sigma  
Mycological Society of America  
The Ecological Society of America

Major Interests: Taxonomy and ecology of soil microfungi

Current Professional Activities:

Teaching: Mycology, Dendrology, Morphology of Cryptograms, General Botany

Research: The soil microfungi of a short-grass prairie;  
Wyoming soil microfungi

Publications, Technical Reports:

Christensen, M. and M. P. Backus. 1961. New or noteworthy penicillia from Wisconsin soils. *Mycologia* 53:451-463.

Christensen, M. and M. P. Backus. 1962. A new penicillium from coniferous forest soils. *Mycologia* 54:573-577.

Christensen, M., W. F. Whittingham, and R. O. Novak. 1962. The soil microfungi of wet-mesic forests in southern Wisconsin. *Mycologia* 54:374-388.

Christensen, M. and D. I. Fennell. 1964. The rediscovery of *Aspergillus oerwinus*. *Mycologia* 56:350-353.

- Christensen, M., D. I. Fennell, and M. P. Backus. 1964. *Aspergillus kanagawaensis* and related species in Wisconsin forest soils. *Mycologia* 56:354-362.
- Christensen, M. and M. P. Backus. 1964. Two varieties of *Monocillium humicola* in Wisconsin forest soils. *Mycologia* 56:498-504.
- Christensen, M. and W. F. Whittingham. 1965. The soil microfungi of open bogs and conifer swamps in Wisconsin. *Mycologia* 57:882-896.
- Christensen, M. and Jack S. States. 1966. *Aspergillus leporis*, a new species related to *A. flavus*. *Mycologia* 58:738-742.
- Christensen, M. 1969. Soil microfungi of dry to mesic conifer-hardwood forests in northern Wisconsin. *Ecology* 50:9-27.

Name: Francis E. Clark

Born: 1910

Academic Training:

Degree	Year	Institution	Major
B.A.	1932	University of Colorado	Biology
B.D.E.	1933	University of Colorado	Education
M.S.	1933	University of Colorado	Microbiology
Ph.D.	1936	University of Colorado	Bacteriology & Public Health

Professional Experience:

Date	Position	Institution
1936-1970	Jr. Microbiol. to Chief Microbiol.	Agr. Res. Service, USDA
1937-1941	Collaborator	Kansas State University
1942	Lecturer	So. Methodist University
1943-1946	Major	U. S. Army
1946-1954	Professor	Iowa State University
1962-1963	Fulbright Scholar	New Zealand & Australia
1957-	Faculty Affiliate	Colorado State University

Professional and Honorary Societies:

Soil Science Society of America	Societe de Microbiologie de Nancy, France
International Society of Soil Science	Phi Beta Kappa
American Society Agronomy	Kappa Delta Phi
Geochemical Society	Sigma Xi
Washington Academy of Science	

Major Interests:

Microbiology, Ecology

Current Professional Activities:

Regional Editor, J. Biol. & Biochem.; Associate Editor, Geoderma--Int. J. Soil Science

Publications, Technical Reports:

Clark, F. E. 1933. The efficacy of bone marrow medium in producing exotoxins from *Staphylococcus aureus*. Univ. Colorado Studies 21:17.

Clark, F. A. 1936. A study of *Bacillus bifementans* and *Bacillus centrosporogenes* with comparative notes on certain other closely related species of anaerobic bacteria. Univ. Colorado Studies 24:15-16.

Clark, F. E. and Hall, I. C. A comparative study of *Bacillus bifementans* and *Bacillus centrosporogenes*. J. Bacteriol. 33:23-24.

- Clark, F. E. 1937. The relation of *Bacillus siamensis* and similar pathogenic sporeforming bacteria to *Bacillus cereus*. J. Bacteriol. 33:335-343.
- Smith, N. R. and F. E. Clark. 1937. A proposed grouping of the mesophilic aerobic sporeforming bacilli. SSSA Proc. 2:255.
- Clark, F. E. and N. R. Smith. 1938. Carbohydrate fermentation responses of the aerobic sporeforming bacteria. J. Bacteriol. 35:9-10.
- Smith, N. R. and F. E. Clark. 1938. Motile cobnies of *Bacillus alvei* and other bacteria. J. Bacteriol. 35:59-60.
- Thom, C., F. E. Clark, M. L. Fierke, and H. Fellows. 1938. Variations in the microflora of wheat roots. J. Bacteriol. 36:322.
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Name: C. Vernon Cole

Born: 1922

Academic Training:

Degree	Year	Institution	Major
B.S.	1947	University of Massachusetts	Chemistry
M.S.	1948	University of Massachusetts	Agronomy
Ph.D.	1950	University of Wisconsin	Soils

Special Training:

Post-Doctorate Research Training at U. S. Plant Soil and Nutrition Lab., and Cornell University, Ithaca, N. Y. 1957-1958.

Professional Experience:

Date	Position	Institution
1950-	Research Soil Scientist	Agricultural Research Service

Professional and Honorary Societies:

Agronomy Society of America  
Soil Science Society  
American Society of Plant Physiology  
Fellow AAAS  
Sigma Xi

Major Interests:

The effect of solid phase phosphorus compounds, calcium activity and PH on the concentration and activity of phosphorus in the soil solution, mineral nutrition of plants - factors regulating the rates of uptake and translocation of nutrients.

Publications, Technical Reports:

- Swenson, R. M., C. V. Cole, and D. H. Sieling. 1949. Fixation of phosphate by iron and aluminum and replacement by organic and inorganic ions. Soil Sci. 67:3-22.
- Cole, C. V. and M. L. Jackson. 1950. Colloidal dihydroxy dihydrogen phosphates of aluminum and iron with crystalline character established by electron and X-ray diffraction. Phys. Colloid Chem. 54:128-142.
- Cole, C. V. and M. L. Jackson. 1950. Solubility equilibrium constant of dihydroxy aluminum dihydrogen phosphate relating to a mechanism of phosphate fixation in soils. Soil Sci. Soc. Amer., Proc. 15:84-89.
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- Bell, M. C. and C. V. Cole. 1967. Vulnerability of food crop and livestock production to fallout radiation. *UT-AEC Agr. Res. Spec. Pub.*

Name: Don D. Collins

Born: 1935

Academic Training:

Degree	Year	Institution	Major
B.S.	1961	Montana State	Range
Ph.D.	1965	Montana State	Genetics

Special Training:

NSF Biology Institute Summer 1965

Professional Experience:

Date	Position	Institution
1965-1969	Assistant Professor	Montana State
1969-	Associate Professor	Montana State

Professional and Honorary Societies:

Phi Kappa Phi	Botanical Society
Phi Sigma	AIBS
Sigma Xi	Society of Range Management
Ecological Society	

Major Interests:

Ecological Research-Terrestrial Productivity  
Ecosystem Analysis

Current Professional Activities:

Teaching: Ecology, Intro. Biology, Plant Physiology

Research: National Park Service, NSF, IBP

Publications, Technical Reports:

- Collins, D. D. 1963. The occurrence of nematodes in a population of *Agropyron smithii* in Montana. Plant Dis. Rep. 50:1.
- Collins, D. D. 1965. Ecology, cytology and biosystematics of the genus *Agropyron* native to Montana. Ph.D. Thesis, Montana State Univ.
- Collins, D. D. 1965. The cytology of the diploid and tetraploid strains of *Agropyron spicatum* native to Montana. Rep. 18th Western Grass Breeders Conf.
- Collins, D. D. 1965. Natural hybrids of *Agropyron latiglume* and *Agropyron seribneri*. Torrey Bot. Club Bull. 93.
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- Collins, D. D. 1969. Ecological effects of weather modification. Progress Rep. and Continuation Proposal. N.S.F.



Name: C. Wayne Cook

Born: 1914

Academic Training:

Degree	Year	Institution	Major
B.S.	1940	Kansas State University	Botany
M.S.	1942	Utah State University	Range Science
Ph.D.	1950	Texas A&M University	Range Science

Professional Experience:

Date	Position	Institution
1942-1944	Assistant Professor of Range Science	College of Southern Utah
1946-1968	Professor of Range Science	Utah State University
1968-	Professor of Range Science	Colorado State University

Professional and Honorary Societies:

- American Society of Range Management
- American Society of Animal Science
- Soil Conservation Society of America
- American Institute of Biological Sciences
- American Association for the Advancement of Science

Major Interests:

Range management, range nutrition, range livestock production.

Current Professional Activities:

Teaching: Department Head, Range Science, Colorado State University

Publications, technical reports:

Cook, C. W. 1950. What species of grass for range seeding. Farm Home Sci. 11:72.

Cook, C. W. 1956. Soil as a factor influencing plant distribution on salt-deserts of Utah. Ecol. Monogr. 26:155.

Cook, C. W. 1958. Sagebrush eradication and broadcast seeding. Utah Exp. Sta. Bull. 404.

Cook, C. W. 1960. The use of multiple-regression in measuring cause and effect relationships. Ecology 41:556-560.

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- Cook, C. W. 1968. Effect of supplementation on intake and digestibility of range forage. *Utah Agr. Exp. Sta. Bull.* 475. 1968.
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- Cook, C. W. 1969. Research, management, and administration of the range ecosystem. *Arid Lands Symposium, Paper No. 16.* Australia Academy of Science, Canberra City, Australia.
- Cook, C. W. 1969. Methods and techniques for seeding roadway cuts and fills on the interstate highway system in Utah. In press.

Name: Kenneth R. Cook

Born: 1931

Academic Training:

Degree	Year	Institution
B.S.	1957	University of Oklahoma
M.S.	1959	Michigan State University
Sc.D.	1962	University of New Mexico

Professional Experience:

Date	Position	Institution
1957-1959	Instructor, Electrical Engineering	Michigan State University
1962-1965	Assistant Professor, Electrical Engineering	Oklahoma State University
1965-1966	Associate Professor, Electrical Engineering	Oklahoma State University
1968-	Associate Professor, Electrical Engineering	Colorado State University

Professional and Honorary Societies:

Institute of Electrical and Electronics Engineers  
 American Society of Electrical Engineers  
 Tau Beta Pi  
 Sigma Tau  
 Eta Kappa Nu  
 Sigma Xi

Major Interests:

High speed transportation communications; Environmental effects on aerospace sensor systems.

Publications, Technical Reports:

- Cook, K. R. 1962. Experimental and theoretical investigation of the feasibility of wave propagation in the earth's crust. Tech. Rep. EE-83, Eng. Exp. Sta., Univ. New Mexico.
- Cook, K. R. 1962. Quasi-static response of a magnetic dipole near the air-earth interface. Presented at U.R.S.I. Meeting, Austin, Texas.
- Cook, K. R. 1962. Electromagnetic radiation in magneto-ionic media for VLF and VHF spectra. Tech. Rep. EE-76, Eng. Exp. Sta., Univ. New Mexico.
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- Cook, K. R. 1966. Current distributions for a cylindrical dipole in an homogeneous anisotropic ionosphere. Progress Rep., Nonr. 2595(04), School of Electrical Eng., Oklahoma State University.
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- Cook, K. R. 1968. Comments on propagation constant for the current distribution and radiation resistance of a linear antenna in a weakly ionized plasma. Int. J. Electronics, Vol. 24, No. 3, p. 297.
- Cook, K. R. 1968. Use of surface waves in communicating with high speed vehicles. ESSA Res. Lab.
- Cook, K. R. 1968. Mode coupling between surface wave transmission lines. IEEE Group on Antennas and Propagation, Denver-Boulder Sect.
- Cook, K. R. and J. E. Partch. 1969. Surface wave communications for high-speed ground transportation. IEEE Int. Conf. on Communications, Boulder, Colorado.
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- Gallawa, R. L., K. R. Cook, et. al. 1969. The G-line and its use in communicating with high speed vehicles. IEEE Transactions on Communication Technology, COM-17, No. 5, p. 518.

Name: D. A. Crossley, Jr.

Born: 1927

Academic Training:

Degree	Year	Institution	Major
None	1948	Texas A&I College	
B.A., M.S.	1951	Texas Tech	Biology
Ph.D.	1956	University of Kansas	Entomology

Professional Experience:

Date	Position	Institution
1956-1967	Ecology	Oak Ridge Nat. Lab., Tennessee
1967-	Prof. Entomology	University of Georgia

Publication, Technical Report:

- Crossley, D. A. 1950. A new species of nasal mite, *Neonyssus* (*Neonyssus*) *columbae*, from the pigeon. Entomol. Soc. Washington Proc. 52:309-312.
- Crossley, D. A. 1952. Two new nasal mites from Columbiform birds. J. Parasitol. 38:385-390.
- Crossley, D. A. and R. B. Loomis. 1953. A new species of chigger from eastern Kansas. J. Kansas Ext. Soc. 26:32-34.
- Crossley, D. A. and L. J. Lipovsky. 1954. Two new chiggers from the central states. Entomol. Soc. Washington Proc. 56:240-246.
- Crossley, D. A. 1955. A new species of chigger from Colorado. J. Parasitol. 41:289-295.
- Crossley, D. A. and R. B. Loomis. 1955. A new *Neoschongastia* (Acarina: Trombiculidae) from western Kansas and eastern Colorado. Entomol. News 64:113-118.
- Crossley, D. A. and R. B. Loomis. 1955. A new genus of chigger mites. J. Kansas Entomol. Soc. 28:136-143.
- Crossley, D. A. and S. I. Auerbach. 1957. Effects of gamma radiation on *Collembola* population growth. Science 126:614.
- Crossley, D. A. and S. I. Auerbach. 1958. Strontium-90 and Cesium-137 uptake by vegetation under natural conditions. 2nd Un. Geneva Conf. Paper 401.
- Crossley, D. A. and M. E. Pryor. 1960. The uptake and elimination of Cesium-137 by a grasshopper--*Romalea* microptera. Health Phys. 4:16-20.
- Crossley, D. A. and K. K. Bohnsack. 1960. Long-term ecological study in the Oak Ridge area. III. The oribatid mite fauna in pine litter. Ecology 41:785-790.

- Crossley, D. A. 1964. Biological elimination of radionuclides. Nucl. Safety 5:265-268.
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- Crossley, D. A. and E. W. Baker. 1964. A new species of mite, *Fusoherecia lawrencei*, from an artificial tree-hole. Natal. Mus. Ann. 16:3-8.
- Crossley, D. A., G. L. Plummer, and D. A. Gardiner. 1965. Growth response of two sedges inhabiting a radioactive waste disposal area. Ecology 46: 346-348.
- Crossley, D. A. and D. E. Reichle. 1965. Radiocesium dispersion in a cryptozoan food web. Health Phys. 11:1375-1384.
- Crossley, D. A. 1966. Radiocesium measurement of food consumption by a leaf beetle species, *Chrysomela knabi* Brown. Ecology 47:1-8.
- Crossley, D. A. and J. A. Payne. 1966. Animal species associated with pig carrion. ORNL TM-1432.
- Crossley, D. A. and M. Witkamp. 1966. The role of arthropods and microflora in breakdown of White Oak litter. Pedobiologia 6:293-300.
- Crossley, D. A. and M. Witkamp. 1967. Effects of a pesticide on biota and breakdown of forest litter. VIII Int. Cong. Soil Sci., Vol. III, 1964, Proc. 887-892.
- Crossley, D. A. and D. E. Reichle. 1967. Investigations on heterotrophic productivity in forest insect communities, p. 563 to 587. In K. Petruszewicz [ed.] Secondary productivity of terrestrial ecosystems. Panstwowe Wydawnictwo Naukowe (Warsaw - Krakow).
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- Crossley, D. A. and E. F. Menhinick. 1968. A comparison of radiation profiles of *Acheta domesticus* and *Tenebrio molitor*. Entomol. Soc. Amer. Ann. 61: 1359-1365.
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- Crossley, D. A. and S. I. Auerbach. 1960. A sampling device for soil microarthropods. *Acarologia* 3:279-287.
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- Crossley, D. A. and W. T. Atyeo. 1961. The genus *Raphignathus duges* (Acarina, Raphignathidae) in the United States with notes on the old world species. *Acarologia* 3:14-20.
- Crossley, D. A. and H. G. Howden. 1961. Insect-vegetation relationships in a radioactive waste area. *Ecology* 42:302-317.
- Crossley, D. A. and J. H. Schnell. 1961. Comparative elimination of radiostrontium and radiocesium by grasshoppers. *Entomol. Soc. Amer. Ann.* 54:459-561.
- Crossley, D. A. and H. F. Howden. 1961. Insect species on vegetation of White Oak Lake bed, Oak Ridge, Tennessee. *Ornl-3094*.
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- Crossley, D. A. and W. T. Atyeo. 1961. The Labidostommidae of New Zealand (Acarina). *Dominion Mus. Rec.* 4:29-48.
- Crossley, D. A. and R. W. Stranctmann. 1962. A new species of soil-inhabiting mite, *Hypoaspis marksi* (Acarina, Laelaptidae). *J. Kansas Entomol. Soc.* 34:180-184.
- Crossley, D. A. and M. P. Høglund. 1962. A litter-bag method for the study of microarthropods inhabiting leaf litter. *Ecology* 43:571-573.
- Crossley, D. A. 1963. Heterotrophic productivity in the grazing food chain of terrestrial vegetation. Vol. 4. 16th Int. Conf. Zoology, Washington D. C., Proc. (August).
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- Crossley, D. A. 1963. Tracer studies in the breakdown of forest litter, p. 411 to 416. In V. Schultz and A. W. Klement, Jr. [ed.] *Radioecology*. Reinhold, New York and AIBS, Washington.
- Crossley, D. A. 1963. Consumption of vegetation by insects, p. 427 to 430. In V. Schultz and A. W. Klement, Jr. [ed.] *Radioecology*. Reinhold, New York and AIBS, Washington.
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- Crossley, D. A. 1963. Use of radioactive tracers in the study of insect-plant relationships, p. 43 to 54. In *Radiation and radioisotopes applied to insects of agricultural importance*. Int. Atomic Energy Agency, Vienna.

- Crossley, D. A. 1969. Comparative movement of  $^{106}\text{Ru}$ ,  $^{60}\text{Co}$  and  $^{137}\text{Cs}$  in arthropod food chains, p. 687 to 695. In D. J. Nelson and F. C. Evans [ed.] Symposium on radioecology. U. S. Atomic Energy Comm., Washington, D. C.
- Crossley, D. A. and D. E. Reichle. 1969. Analysis of transient behavior of radioisotopes in insect food chains. *BioScience* 19:341-343.
- Crossley, D. A. and R. I. Van Hook, Jr. 1969. Assimilation and biological turnover of Cesium-134, Iodine-131, and Chromium-51 in brown crickets, *Acheta domestica* (L.) *Health Physics* 16:463-467.
- Crossley, D. A. and E. F. Menhinick. 1969. Radiation sensitivity of twelve species of arthropods. *Entomol. Soc. Amer. Ann.* 62:711-717.
- Crossley, D. A., C. A. Edwards, and D. E. Reichle. Experimental manipulation of soil invertebrate populations for trophic studies. (In press).
- Crossley, D. A., C. A. Edwards, and D. E. Reichle. The role of soil invertebrates in turnover of organic matter and nutrients. (In press)
- Crossley, D. A. Energy assimilation by the cricket *Acheta domestica* (L.) measured with radioactive Chromium-51. (In press).



Name: Ralph L. Dix

Born: 1924

Academic Training:

Degree	Year	Institution	Major
B.A.	1950	Catholic University of America	Botany
M.S.	1951	Catholic University of America	Plant Ecology
Ph.D.	1955	University of Wisconsin	Plant Ecology

Professional Experience:

Date	Position	Institution
1951-1955	Teaching & Research Assistantships, Botany Dept.	University of Wisconsin
1955-1958	Instructor, Biology	Marquette University
1958-1960	Assistant Professor, Biology	Marquette University
1960-1961	Assistant Professor, Plant Ecology	University of Saskatchewan
1961-1967	Associate Professor, Plant Ecology	University of Saskatchewan
1967-	Professor, Botany & Plant Pathology	Colorado State University

Major Interests:

Grassland ecology, phytosociology, species diversity, ordination, soil-plant relationships.

Professional and Honorary Societies:

Ecological Society of America  
De L'Association Internationale De Phytosociologie  
American Society of Range Management  
Society of Sigma Xi  
Nature Conservancy  
British Ecological Society  
Canadian Botanical Association  
Southwest Association of Naturalists

Publications, Technical Reports:

- Dix, R. L. and J. E. Butler. 1953. Correlations between species distributions and soil depths on a dry prairie in Wisconsin. Bull. Ecol. Soc. Amer. 34:69-70.
- Dix, R. L. 1953. The effects of grazing on the species composition of the thin-soil prairies of Wisconsin. Bull. Ecol. Soc. Amer. 34:71.
- Dix, R. L. and J. E. Butler. 1954. The effects of fire on a dry, thin-soil prairie in Wisconsin. J. Range Manage. 7:265-268.
- Dix, R. L. 1955. The behavior of prairie plants under the influence of grazing in Wisconsin. Bull. Ecol. Soc. Amer. 36:89.

- Curtis, J. T. and R. L. Dix. 1955. The vertical distribution of alpha-emitting radioactive substances in certain forest types. *Bull. Ecol. Soc. Amer.* 36:88.
- Curtis, J. T. and R. L. Dix. 1956. The distribution of alpha-radioactivity in certain forest types. *Science* 123:799-800.
- Dix, R. L. 1956. Book Review: *Man's Nature and Nature's Man*. L. R. Rice. *J. Range Manage.* 9:147-148.
- Curtis, J. T. and R. L. Dix. 1956. The distribution of alpha-radioactivity in natural vegetation. *Bot. Gaz.* 117:231-238.
- Dix, R. L. 1956. Trees and shrubs of the Little Missouri Badlands. Mimeo, 18 p. Nat. Park Serv., Medora, North Dakota.
- Dix, R. L. 1957. Sugar Maple in forest succession at Washington, D. C. *Ecol.* 38:663-665.
- Dix, R. L. 1958. Some soil-plant relationships in the grasslands of the Little Missouri Badlands, North Dakota. *J. Range Manage.* 11:88-92.
- Dix, R. L. 1958. The effects of slope and exposure on the local distribution of grassland plants. *Bull. Ecol. Soc. Amer.* 39:86.
- Dix, R. L. 1959. The influence of grazing on the thin-soil prairies of Wisconsin. *Ecol.* 40:36-49.
- Dix, R. L. 1960. The effects of burning on the mulch structure and species composition of grasslands in western North Dakota. *Ecol.* 41:49-56.
- Dix, R. L. and J. E. Butler. 1960. A phytosociological study of a small prairie in Wisconsin. *Ecol.* 41:316-327.
- Dix, R. L. 1961. Time-resence studies in selected vegetation types. *Bull. Ecol. Soc. Amer.* 42:102.
- Dix, R. L. 1964. A history of biotic and climatic changes within the North American grassland. In *Crops, D. J. (ed.) Grazing in terrestrial and marine environments. A symposium of the British Ecological Society.* Blackwell, Oxford. p. 71-89.
- Ayyad, M. A. G. and R. L. Dix. 1964. An analysis of the vegetation-microenvironmental complex on prairie slopes in Saskatchewan. *Ecol. Mono.* 24:421-442.
- Dix, R. L. and R. F. Skrentry, J. 1965. Reproduction of *Fagus grandifolia* Ehrh. by seed in Wisconsin. *Can. J. Bot.* 43:757-763.
- Dix, R. L. and J. M. A. Swan. 1966. The phytosociological structure of upland forests at Candle Lake, Saskatchewan. *J. Ecol.* 54:13-42.
- Hulett, G. K., R. T. Coupland, and R. L. Dix. 1966. The vegetation of dune sand areas within the grassland region of Saskatchewan. *Can. J. Bot.* 44:1307-1331.

- Ralston, R. D. and R. L. Dix. 1966. Green herbage production of native grasslands in the Red River Valley - 1965. *North Dakota Acad. Sci.* 20:57-66.
- Dix, R. L. and F. Smeins. 1967. The prairie, meadow, and marsh vegetation of Nelson County, North Dakota. *Can. J. Bot.* 45:21-58.
- Newsome, R. D. and R. L. Dix. 1968. The forests of the Cypress Hills, Alberta and Saskatchewan, Canada. *Ecol. Mono.* (in press).
- Swan, J. M. A., R. L. Dix, and C. F. Wehrhahn. 1968. An ordination technique based on the best possible stand defined axes and its application to vegetational analyses. *Ecol.* (in press).

Name: Kenneth G. Doxtader

Born: 1938

Academic Training:

Degree	Year	Institution	Major
B.S.	1961	Univ. of Calif. (Berkeley)	Soils & Plant Nutr.
M.S.	1963	Cornell University	Soil Microbiology
Ph.D.	1965	Cornell University	Soil Microbiology

Professional Experience:

Date	Position	Institution
1961-1965	Research Assistant	Cornell University
1965-	Asst. Professor	Colorado State Univ.

Major Interests:

Ecology of soil microorganisms, biochemistry and microbiology of carbon, nitrogen and mineral transformations in natural environments, the fate of synthetic organic compounds in soil-water systems.

Professional and Honorary Societies:

American Society of Agronomy  
Soil Science Society of America  
American Society for Microbiology  
Sigma Xi

Publications:

Author or coauthor of 8 publications. Pertinent or recent publications are listed below:

- Doxtader, K. G. and M. Alexander. 1966. Role of 3-nitropropanoic acid in nitrate formation by *Aspergillus flavus*. J. Bacteriol. 91:1186-1191.
- Doxtader, K. G. and M. Alexander. 1966. Nitrification by heterotrophic soil microorganisms. Soil Sci. Soc. Amer., Proc. 30:351-355.
- Doxtader, K. G. and M. Alexander. 1966. Nitrification by growing and replacement cultures of *Aspergillus*. Can. J. Microbiol. 12:807-815.
- Alexander, M., T. Yoshida and K. G. Doxtader. 1966. Substrates and products of heterotrophic and autotrophic nitrification. Intern. Congr. Microbiol. 9. (Abstr).
- Doxtader, K. G. and A. D. Rovia. Nitrification by *Aspergillus flavus* in sterilized soil. Austral. J. Soil Sci. In press.

Doxtader, K. G. and T. S. Hora. Inhibition of soil microorganisms by herbicides. (Manuscript in preparation).

Doxtader, K. G. and T. S. Hora. Inhibition of soil bacteria by diuron. (Manuscript in preparation).

Doxtader, K. G. The microbial degradation of aromatic compounds in soil-water systems. (Manuscript in preparation).

Name: Richard S. Driscoll

Born: 1928

Academic Training:

Degree	Year	Institution	Major
B.S.	1951	Colorado A&M University	Range Management
M.S.	1957	Colorado State University	Range Management
Ph.D.	1961	Oregon State University	Plant Ecology

Professional Experience:

Date	Position	Institution
1958-1960	Instructor	Oregon State University
1960-		U. S. Forest Service

Professional and Honorary Societies:

American Society of Range Management

Major Interests:

Soils; Statistics

Current Professional Activities:

Research: Grassland mapping and classification.

Publications, Technical Reports:

Driscoll, R. S. 1953. Use plastic to protect aerial photographs. J. Range Manage. 6:181-182.

Harris, R. W. and R. S. Driscoll. 1954. Gains made by cattle on summer range. Oregon Cattleman 3:5-24.

Driscoll, R. S. 1955. Grazing season determined by forage maturity. Oregon Cattleman 4:6, 13-15.

Driscoll, R. S. 1955. A guide to the Starkey Experimental Forest and Range. U. S. Forest Service, Pacific Northwest Forest and Range Exp. Sta. 21 p.

Costello, D. F. and R. S. Driscoll. 1957. Hauling water for range cattle. USDA Leaflet, No. 419. 6 p.

Driscoll, R. S. 1957. Effects of intensity and date of herbage removal on herbage production of elk sedge. M.S. Thesis, Colorado State University. 86 p.

Driscoll, R. S. 1957. Effects of intensity and date of herbage removal on herbage production of elk sedge. J. Range Manage. 10:212.

- Driscoll, R. S. 1958. A loop method for measuring ground cover characteristics on permanent plots. *J. Range Manage.* 11:94.
- Driscoll, R. S. 1958. New answers to old problems. *Western Livestock J.* 36:33-39.
- Driscoll, R. S. 1958. Damage to conifers by mule deer. *In* What to look for in big game damage to forest crops. Pacific Northwest Forest Pest Action Council, Portland, Oregon. 18 p.
- Driscoll, R. S. 1960. The interrelationships of watershed management and range management. *Proc., Cooperative Watershed Management Short Course.* Corvallis, Oregon State College, March 25-30, 1960. Section 7.
- Driscoll, R. S. and C. E. Poulton. 1960. Management recommendations for the range resources of the Warm Springs Indian Reservation. *In* Warm Springs Research Project, Corvallis, Oregon State University. Vol. V, p. 35-69 + maps.
- Driscoll, R. S. 1962. Soil factors as aids to describe and identify habitat types. *In* Abstracts. 15th Annu. Meeting, Amer. Soc. Range Manage.
- Driscoll, R. S. 1962. Characteristics of some vegetation-soil units in the Juniper Zone in Central Oregon. Ph.D. Dissertation, Corvallis, Oregon State University. 150 p.
- Driscoll, R. S. 1962. Characteristics of some vegetation-soil units in the Juniper Zone in Central Oregon. *Diss. Abstr.* 22:3357-3358.
- Driscoll, R. S. 1962. Characteristics of some ecosystems in the juniper zone in central Oregon. *J. Range Manage.* 15:347.
- Driscoll, R. S. 1963. A larger bitterbrush. *J. Range Manage.* 16:82-83.
- Driscoll, R. S. 1963. Repellents reduce deer browsing on ponderosa pine seedlings. *U.S. Forest Service Res. Note PNW-5.* 8 p.
- Driscoll, R. S. 1963. Sprouting bitterbrush in central Oregon. *Ecology* 44:820-821.
- Driscoll, R. S. 1963. Production and floristic composition of vegetation as measures of site. *In* Range Research Methods, A Symposium, Denver, Colorado, May 1962. *USDA Misc. Pub. No. 940.* 172 p.
- Driscoll, R. S. 1964. A relict area in the central Oregon juniper zone. *Ecology* 45:345-353.
- Driscoll, R. S. 1964. Vegetation-soil units in the central Oregon juniper zone. *U. S. Forest Service Res. Paper PNW-19.* 60 p.
- Driscoll, R. S. 1966. Range grazing systems: considerations. *In* Abstracts. Annu. Meeting, Amer. Soc. Range Manage. 19:49-50.
- Driscoll, R. S. 1967. Managing public rangelands: Effective livestock grazing practices and systems for national forests and national grasslands. *U.S. Dep. Agr., AIB-315.* 30 p.

Name: A. C. Everson

Born: 1920

Academic Training:

Degree	Year	Institution	Major
B.S.	1945	University of Idaho	Forestry
M.S.	1949	Utah State University	Range Management
Ph.D.	1964	University of Wyoming	Range Management

Professional Experience:

Date	Position	Institution
1945-1946	Farm and Range Planner	SCS, Montpelier & Lava Hot Spgs., Ida.
1946-1947	Instructor in Forestry	Southern Branch, Univ. of Ida.
1947-1949	Grad. Research Asst.	Utah State University
1949-1952	Research Asst.	University of Arizona
1952-1953	Grad. Research Asst.	Oregon State College
1953-1962	Instructor & Asst. Prof. of Range	Colorado State University
1962-1964	Grad. Research Asst.	University of Wyoming
1964-	Asst. & Assoc. Prof. of Range Science	Colorado State Univ.

Professional and Honorary Societies:

Alpha Zeta	American Society of Range Management
American Society of Agronomy	Society of American Foresters
Gamma Sigma Delta	Xi Sigma Pi
Sigma Xi	

Major Interests:

Range reseeding, grazing studies, forage evaluation, forage nursery plot tests, plant physiology, blowout stabilization, and oil shale overburden and spent shale reclamation.

Current Professional Activities:

Teaching: Range Ecosystem measurements and Range Ecogeography

Research: Replacement of native communities with introduced communities and its impact on ecosystem function. Seedbed preparation and reseeding, grazing management, and species adaptation.

Publication, Technical Reports:

Clark, I. and A. C. Everson. 1946. Range condition--a classification of the grassland-sagebrush, browse and aspen types in the Bear Lake Soil Conservation District. Soil Conservation District. Soil Conservation Service, U. S. Dep. Agr.



- Everson, A. C. 1949. Analysis of a forage utilization method based on the weight of plant units. M.S. Thesis, Utah St. Agr. Coll., Logan Utah.
- Humphrey, R. R. and A. C. Everson. 1950. Improving the range. Prog. Agr. in Arizona 2:7-11.
- Brown, A. L. and A. C. Everson. 1951. Ripping aids range recovery. Prog. Agr. in Arizona 3:7.
- Everson, A. C. 1951. Grass yields of three differently treated range areas. J. Range Manage. 4:93-94.
- Humphrey, R. R. and A. C. Everson. 1951. Effect of fire on a mixed grass-shrub range in southern Arizona. J. Range Manage. 4:264.
- Brown, A. L. and A. C. Everson. 1952. The longevity of ripped furrows in southern Arizona. J. Range Manage. 5:415-419.
- Humphrey, R. R., A. L. Brown, and A. C. Everson. 1952. Common Arizona range grasses--their distribution, forage value and management. Univ. Arizona Agr. Exp. Sta. Bull. 243.
- Everson, A. C. 1956. Stabilize sandy blowouts. Colorado Farm and Home Research 6:3-5.
- Hervey, D. F. and A. C. Everson. 1956. Effects of drought on range seeding in Colorado. Record Stockman.
- Herzman, C. and A. C. Everson. 1957. Range conservation handbook, Weld County 4-H Club. Colorado A and M. Ext. Service, Dep. of Forestry and Range Manage., and Soil Conserv. Service.
- Herzman, C., A. C. Everson, M. H. Mickey, I. R. Porter, R. H. Searway and C. S. Fonte. 1959. Handbook of Colorado Native Grasses. Colorado St. Univ. Ext. Service Bull. 430 A.
- Hervey, D. F. and A. C. Everson. 1959. Range reseeding progress. What's New in Crops and Soils.
- Bement, R. E., D. F. Hervey, A. C. Everson and L. Hylton. 1961. Use of asphalt emulsion mulches to hasten grass seedling establishment. J. Range Manage. 14:102-109.
- McGinnies, W. J., D. F. Hervey, J. A. Downs, and A. C. Everson. 1963. A summary of range grass seeding trials in Colorado. Colorado St. Univ. Agr. Exp. Sta. Tech. Bull. 73.
- Bement, R. E., R. D. Barmington, A. C. Everson, L. O. Hylton, Jr., and R. E. Remmenga. 1965. Seeding of abandoned croplands in the Central Great Plains. J. Range Manage. 18:53-58.
- Everson, A. C. 1964. The effects of frequent clipping at different intensities on western wheatgrass. Ph.D. Thesis, Univ. Wyoming.

- Everson, A. C., B. Dahl, and A. H. Denham. 1965. Changing active blowouts to stable, forage producing areas. Colorado Agr. Exp. Sta. Progress Rep. 168.
- Everson, A. C., B. Dahl, and A. H. Denham. 1966. Changing active blowouts to stable, forage producing areas. J. Range Manage. 18:53-58.
- Everson A. C. 1966. The effects of frequent clipping at different stubble heights on western wheatgrass *Agropyron smithii*. Agron. J. 58:33-35.
- Dahl, B. E., A. C. Everson, J. J. Norris, and A. H. Denham. 1967. Grass-alfalfa mixtures for grazing in eastern Colorado. Colorado Agr. Exp. Sta. Bull. 829-S.
- Everson, A. C. and B. E. Dahl. 1967. Grass variety grazing trials. Colorado Agr. Exp. Sta. Progress Rep. 233.
- Marquiss, R. W. and A. C. Everson. 1968. Dryland pasture grasses and alfalfas at the Hesperus Station, San Juan Basin. Colorado Agr. Exp. Sta. Progress Rep. 68-5.
- Marquiss, R. W. and A. C. Everson. 1968. Dryland pasture grasses and alfalfas at the Yellow Jacket Substation, San Juan Basin. Colorado Agr. Exp. Sta. Progress Report 68-4.
- Hyder, D. N. and A. C. Everson. 1968. Chemical fallow of abandoned croplands on the short-grass plains. Weed Sci. 16:531-533.
- Sims, P. L. and A. C. Everson. 1969. Plant growth characteristics and palatability of warm-season grasses. Colorado St. Univ. Exp. Sta. PR 63-53.
- Marquiss, R. W. and A. C. Everson. 1969. Performance tests of dryland pasture grasses and alfalfa at the Hesperus Station. Colorado St. Univ. Exp. Sta. PR 69-42.
- Everson, A. C., D. N. Hyder, H. R. Gardner, and R. E. Bement. 1969. Chemical versus mechanical fallow of abandoned croplands. Weed Sci. 17:548-551.

Name: Herbert G. Fisser

Born: 1926

Academic Training:

Degree	Year	Institution	Major
B.S.	1958	Montana State University	General Agriculture
M.S.	1961	Montana State University	Range Management
Ph.D.	1962	University of Wyoming	Range Management

Special Training:

Summer Institute in Radioecology, Oak Ridge, Tennessee - 1963  
Training Course in Aerial Photo Interpretation, Corvallis, Oregon - 1964  
Training Course in Radiation Health and Surveillance Procedure, Grand Junction, Colorado - 1968

Professional Experience:

Date	Position	Institution
1958	Research Assistant	Montana State University
1959-1962	Instructor	University of Wyoming
1962-1966	Assistant Professor	University of Wyoming
1966	Associate Professor	University of Wyoming
1970	Professor	University of Wyoming

Professional and Honorary Societies:

American Society of Range Management  
Ecological Society of America  
Sigma Xi

Major Interests:

Arid land ecology, rangeland production-moisture relationships, grazing management, game range improvement, harvester ant-rangeland relationships.

Current Professional Activities:

Teaching: Range Plant Identification and Ecology, Aerial Photo Interpretation, Vegetation Measurement Methods (Graduate Level)

Research: Plant Pattern Analysis, Grazing Systems Impacts, Arid Land Ecology, Game Range Improvement

Publications, Technical Reports:

Van Dyne, G. M., W. Vogel, and H. G. Fisser. 1963. Influence of plot size and shape on range herbage production estimates. Ecology 44:746-759.

- Fisser, H. G. 1964. Range survey in Wyoming's Big Horn Basin. Wyoming Agr. Exp. Sta. Bull. 424. 44 p.
- Fisser, H. G. 1965. Vegetation changes from cold desert to subalpine communities. Int. Grassland Congr. Proc. 10:425-427.
- Fisser, H. G. and G. M. Van Dyne. 1966. Influence of number and spacing of points on accuracy and precision of basal cover estimates. J. Range Manage. 19:205-211.
- Fisser, H. G. 1968. Soil moisture and temperature changes following sagebrush control. J. Range Manage. 21:283-287.
- Wight, J. R. and H. G. Fisser. 1968. *Juniperus osteosperma* in northwestern Wyoming-their distribution and ecology. Wyoming Agr. Exp. Sta. Sci. Monogr. No. 7. 31 p.

Name: Robert C. Francis

Born: 1942

Academic Training:

Degree	Year	Institution	Major
B.A.	1964	Univ. California, Santa Barbara	Mathematics
M.S.	1966	Univ. Washington	Biomathematics
Ph.D.	1970	Univ. Washington	Biomathematics

Professional Experience:

Date	Position	Institution
1969-	Asst. Prof. Statist., Fishery, and Wildl. Biol.	Colorado State Univ.

Professional and Honorary Societies:

Biometric Society

Major Interests:

Applications of statistics to ecological problems; mathematical modeling of ecological systems

Publications, Technical Reports:

Francis, R. C. 1966. Estimation of survival rates from a multiple tag-recapture experiment. M. S. Thesis, Univ. Washington, Seattle, Washington.

Name: Warren E. Hedstrom

Born: 1940

Academic Training:

Degree	Year	Institution	Major
B.S.	1961	University of Maine	Agricultural Engineering
M.S.	1969	Cornell University	Agricultural Engineering
Ph.D. Candidate		Colorado State University	Agricultural Engineering

Professional Experience:

Date	Position	Institution
1961	Field Engineer	Soil Conservation Service U.S. Dep. Agriculture
1962		U.S. Army
1964	Graduate Research Assistant	
1969	Instructor	University of Wyoming

Major Interests:

Irrigation, drainage, groundwater hydrology.

Professional and Honorary Societies:

American Society of Agricultural Engineers  
Soil Science Society of America  
American Geophysical Union

Publications, Technical Reports:

None

Name: William Talbert Franklin

Born: 1923

Academic Training:

Degree	Year	Institution	Major
B.S.	1952	Montana State University	Agr. Soils
M.S.	1955	Washington State University	Soils
Ph.D.	1970	Oregon State University	Soils

Professional Experience:

Date	Position	Institution
1952-1955	Research Assistant	Washington State University
1955-1962	Assistant Agronomist (Soils) Project Leader, Soil Reclamation	Colorado Agr. Exp. Sta. San Luis Valley, Colorado
1964-	Assistant Professor (Soils)	Colorado State University

Professional and Honorary Societies:

American Society of Agronomy  
Western Soil Science Society of America  
Gamma Sigma Delta

Publications, Technical Reports:

- Franklin, W. T., R. S. Whitney, W. E. Code, and R. C. Reeve. 1956. Reclamation of saline-alkali lands in the Mosca-Hooper area, San Luis Valley. Colorado Agr. Exp. Sta. Gen. Ser. Paper No. 648.
- Franklin, W. T., R. S. Whitney, W. E. Code, and R. C. Reeve. 1957. Reclamation and management of saline-sodium soils, Mosca-Hooper area, San Luis Valley. Colorado Agr. Exp. Sta. Gen. Ser. Paper No. 667.
- Franklin, W. T. and R. S. Whitney. 1959. Soil and water management studies of saline-sodium soils, Mosca-Hooper area, San Luis Valley. Colorado Agr. Exp. Sta. Gen. Ser. Paper No. 711.
- Franklin, W. T. and H. M. Reisenauer. 1960. Chemical characteristics of soils related to phosphorus fixation and availability. Soil Sci. 30: 192-200.
- Franklin, W. T. and R. S. Whitney. 1961. Soil and water management studies, Mosca-Hooper area, San Luis Valley. Colorado Agr. Exp. Sta. Gen. Ser. Paper No. 758.
- Dotzenko, A. D., J. B. Cardwell, W. T. Franklin, H. O. Mann, and J. F. Swink. 1964. Alfalfa varieties for Colorado. Colorado Agr. Exp. Sta. Bull. 5193.

- Franklin, W. T. 1966. Soil gypsum and lime solubility, and sodium equilibration studies with  $\text{NaHCO}_3$  water. Report to Collaborators (State reports). U.S. Salinity Laboratory, Riverside, California.
- Franklin, W. T. 1966. Salt enhancement and depression effects on yields of Colorado recommended barley varieties. Report to Collaborators (State reports). U.S. Salinity Laboratory, Riverside, California.
- Follett, R. H., W. T. Franklin, and R. D. Heil. Salt-affected soils (saline and sodium problems). Colorado State Univ. Coop. Ext. Ser. FFS, Pamphlet 99.
- Franklin, W. T. and R. S. Whitney. 1969. Reclamation and water management studies on coarse-textured saline-sodic soils in the San Luis Valley of Colorado. Colorado Agr. Exp. Sta. Bull. (In Review).
- McCaslin, B. D., W. T. Franklin, and M. Dillon. 1970. Rapid determination of nitrate-nitrogen in sugar beets with the specific ion electrode. (To be published in the J. Amer. Soc. Sugar Beet Tech., April issue).



Name: Norman R. French

Born: 1927

Academic Training:

Degree	Year	Institution	Major
B.A.	1949	University of Illinois	Zoology
M.A.	1951	University of Colorado	Biology
Ph.D.	1954	University of Utah	Biology

Special Training:

Calculus, Nuclear Physics, University of Idaho, 1955-1959  
Computer Programming, University of California, 1965-1969

Professional Experience:

Date	Position	Institution
1949-1951	Asst. to Dir.	Univ. Colorado Museum
1951-1952	Curator, Zool.	Univ. Nebraska State Museum
1951-1952	Instructor	Univ. Nebraska
1954-1955	Instructor	Univ. Utah
1955-1959	Chief, Ecol.	AEC Nat. Reactor Testing Sta., Idaho Falls, Id.
1958	Asst. Prof.	Michigan State Univ.
1959-1969	Res. Ecol.	Univ. California Lab. Nucl. Med. & Radiat. Biol.
1969-	Prof. Biol.	Colorado State Univ.

Professional and Honorary Societies:

Sigma Xi  
Laboratory of Ornithology, Cornell Univ.  
Ecological Society of America  
AAAS  
Cooper Ornithological Society  
American Ornithologists' Union

Major Interests:

Ecosystem analysis  
Computer modeling and simulation  
Population dynamics

Current Professional Activities:

Research: IBP-Grassland Biome Comprehensive Network Coordinator

Publications, Technical Reports:

French, N. R. 1951. Duck Hawks nesting in Colorado. Condor 53:54.

French, N. R. 1954. Notes on breeding activities and on gular sacs in the Pine Grosbeak. Condor 56:83-85.

- French, N. R. 1955. Foraging behavior and predation by the Clark Nutcracker. *Condor* 57:61-62.
- French, N. R. and L. Van Middlesworth. 1958. Biological monitoring of recent air-borne fission products. II Int. Conf. on Peaceful Uses of Atomic Energy Proc. 18:516-518.
- French, N. R. 1959. Distribution and migration of the Black Rosy Finch. *Condor* 61:18-29.
- French, N. R. 1959. Life history of the Black Rosy Finch. *Auk* 76:159-180.
- French, N. R. and R. W. Hodges. 1959. Torpidity in cave-roosting hummingbirds. *Condor* 61:223.
- French, N. R. 1959. Iodine metabolism wild jack rabbits, p. 113 to 121. *In* Oklahoma conference-radioisotopes in agriculture. U. S. Atomic Energy Comm. Rep. TID 7578.
- French, N. R. 1960. Strontium-90 in Ecuador. *Science* 131:1889-1890.
- French, N. R. 1960. Occurrence of radioactive strontium in Ecuador. *Ciencia y Naturaleza* (Quito) 3:58-61.
- French, N. R. 1963. Fallout and natural populations. I Int. Conf. on Wildlife Dis. Proc. 152-156.
- French, N. R. 1963. The occurrence, effect and utilization of specific isotopes in the environment: review and discussion of barium, p. 557 to 569. *In* V. Schultz and A. W. Klement, Jr. [ed.] Radioecology. Reinhold Publ. Corp., New York.
- French, N. R. and K. H. Larson. 1963. Environmental pathways of a radioactive iodine from nuclear test in arid regions, p. 77 to 81. *In* V. Schultz and A. W. Klement, Jr. [ed.] Radioecology. Reinhold Publ. Corp., New York.
- French, N. R. and H. Bissell. 1963. Strontium-90 in California deer. *Ecol. Soc. Amer. Bull.* 44:46. (Abstr.)
- French, N. R. 1963. The source of ingested radioactivity in desert rodents. *Ecol. Soc. Amer. Bull.* 44:74.
- French, N. R. 1963. Analysis of reproduction in the black-tailed jack rabbit. XVI Int. Congr. of Zool. Proc. 1:258.
- French, N. R. 1964. Description of a study of ecological effects on a desert area from chronic exposure to low level ionizing radiation. U. S. Atomic Energy Comm. Rep., UCLA 12-532. 27 p.
- French, N. R. 1964. A radiation facility for ecological studies at the AEC Nevada Test Site. *Ecol. Soc. Amer. Bull.* 45:79-80.
- French, N. R. 1964. Analysis of dispersal in desert rodents. *Ecol. Soc. Amer. Bull.* 45:115.

- French, N. R., R. McBride, and J. Datmer. 1965. Fertility and population density in the black-tailed jack rabbit. *J. Wildl. Manage.* 28:14-26.
- French, N. R. 1965. Radiation and animal populations. *Health Physics* 11: 1157-1568.
- French, N. R., P. Hayden, and T. Tagami. 1965. The source of ingested radioactivity in desert rodents. *Health Physics* 11:637-645.
- French, N. R. and J. B. French. 1965. Rosy Finches of the High Rockies, p. 422 to 432. In O. S. Pettingill, Jr. [ed.] *The bird watcher's America*. McGraw Hill.
- French, N. R., B. G. Maza, and A. P. Aschwanden. 1965. Duration of life in confined populations of desert rodents. *Ecol. Soc. Amer. Bull* 46:40-41.
- French, N. R. 1965. Mortality and fertility in a desert population of pocket mice. *Ecol. Soc. Amer. Bull.* 46:122.
- French, N. R., B. G. Maza, and A. P. Aschwanden. 1966. Periodicity of desert rodent activity. *Science* 154:1194-1195.
- French, N. R. 1966. A FORTRAN IV program for evaluation of thyroidal assimilation of radioiodine. U. S. Atomic Energy Comm. Rep., UCLA 12-592. 15 p.
- French, N. R. 1966. Irradiated desert rodent populations, p. 22. In G. A. Sacher [ed.] *Radiation effects on natural populations*. Argonne Nat. Lab.
- French, N. R., B. G. Maza, and A. P. Aschwanden. 1966. Life spans of heteromyid rodents in the Mojave Desert. *Ecol. Soc. Amer. Bull.* 47:172.
- French, N. R., B. G. Maza, and A. P. Aschwanden. 1967. Life spans of *Dipodomys* and *Perognathus* in the Mojave Desert. *J. Mammal.* 48:537-548.
- Lucas, A. C. and N. R. French. 1967. A miniature thermoluminescent dosimeter and its application to radioecology, p. 402-411. In F. H. Attix [ed.] *Luminescence Dosimetry*. AEC Sympos. Ser. 8.
- French, N. R. 1967. Comparison of radioisotope assimilation by granivorous and herbivorous mammals, p. 665-673. In B. Aberg and F. P. Hungate [ed.] *Radioecological concentration processes*. Pergamon Press.
- French, N. R. and H. D. Bissell. 1968. Strontium-90 in California mule deer. *Health Physics* 14:489-494.
- French, N. R., T. Y. Tagami, and P. Hayden. 1968. Dispersal in a population of desert rodents. *J. Mammal.* 49:272-280.
- French, N. R. 1968. *Leucosticte atrata* Ridgway, Black Rosy Finch, p. 365-372. In Oliver L. Austin, Jr. [ed.] *Life histories of North American cardinals, grosbraks, buntings, towhees, finches, sparrows, and allies*. Smithsonian Inst. Bull. 237.

- French, N. R. and H. W. Kaaz. 1968. The intrinsic rate of natural increase of irradiated *Peromyscus* in the laboratory. *Ecology* 49:1172-1179.
- French, N. R., B. G. Maza, and H. W. Kaaz. 1969. Mortality rates in irradiated rodent populations, 46 to 52. In D. J. Nelson and F. C. Evans [ed.] Symposium on radioecology. U. S. Atomic Energy Comm. Pub. CONF. 670503.
- French, N. R. 1969. Radiation sensitivity and rodent species. *Nature* 222: 1003-1004.
- French, N. R. 1969. Simulation of dispersal in desert rodents. In G. P. Patil, E. C. Pielou, and W. E. Waters [ed.] *Statistical Ecology*. Pennsylvania State Univ. Press. (In press).
- French, N. R. 1969. Chronic low-level gamma irradiation of a desert ecosystem for five years. In A. Grauby [ed.] *Proceedings of the Radioecology Symposium*, Cadarade, France. (In press).

Name: Fred A. Glover

Born: 1918

Academic Training:

Degree	Year	Institution	Major
B.S.	1941	Oregon State University	Fish and Game
M.S.	1942	Pennsylvania State University	Zoology
Ph.D.	1949	Iowa State University	Zoology

Professional Experience:

Date	Position	Institution
1940	Laboratory Assistant	Oregon State University
1949	Laboratory Assistant	Iowa State University
1950-1954	Wildlife Management Dep.	Humboldt State College
1959-1964	Chief, Section Migratory Birds	B.S.F.W.
1964-	Leader	Colorado Coop. Wildlife Research Unit, B.S.F.W.

Major Interests:

Waterfowl, wildlife ecology, conservation.

Professional and Honorary Societies:

Sigma Xi  
 The Wildlife Society  
 American Ornithologists Union  
 American Society of Mammalogists  
 Cooper Ornithological Club

Publications, Technical Reports:

- Glover, F. A. 1951. Spring migration of waterfowl. Iowa St. Coll. J. Sci.
- Glover, F. A. 1964. Tundra to tropics. In Waterfowl tomorrow. U.S. Fish Wildlife Serv. p. 23-29.
- Glover, F. A. 1965. Co-op for wildlife research. Colorado Outdoors 14:36-39.
- Glover, F. A. 1965. Flyways for waterfowl. Colorado Outdoors 14:12-13.
- Glover, F. A. 1966. Waterfowl: citizens of the world. Colorado Outdoors 15:36-39.
- Glover, F. A. 1966. Distribution of mallards from Columbia Basin in indicated by zinc-65. Progress Report C00-1514-1 to AEC for the period ending June, 1966. 17 p.
- Glover, F. A. 1967. Pesitcides vs. wildlife. Colorado Outdoors 16:18-21.
- Anderson, D. R. and F. A. Glover. 1967. Effects of water manipulation on waterfowl production and habitat. N. Amer. Wildl. Natur. Res. Conf. Proc. 32.

Name: Robert W. Gorden

Born: 1932

Academic Training:

Degree	Year	Institution
B.S.	1957	Manchester College
M.D.	1962	University of Georgia
Ph.D.	1967	University of Georgia

Professional Experience:

Date	Position	Institution
1968-	Assistant Professor of Biology	Texas Technological College

Major Interests:

Microbial ecology, microbiology

Professional and Honorary Societies:

American Society for Microbiology  
American Association for the Advancement of Science  
American Institute of Biological Sciences  
Ecological Society of America

Publications:

Recent or pertinent publications are listed below:

- R. G. Eagon, R. J. Beyers, and R. W. Gorden. 1966. Microbial ecology of an aquatic microcosm. I. Bull. Ecol. Soc.
- R. G. Eagon, R. J. Beyers, and R. W. Gorden. 1967. Microbial ecology of an aquatic microcosm. II. Bact. Proc. 47.
- G. C. Buchanan, and R. W. Gorden. 1968. Heterotrophic activity during autotrophic succession on an aquatic microcosm. Bact. Proc. 33.
- R. J. Beyers, E. P. Odum, R. G. Eagon, and R. W. Gorden. 1969. Studies of a simple laboratory microecosystem: Bacterial activities in a heterotrophic succession. Submitted to: Ecology.

Name: Jack E. Gross

Born: 1930

Academic Training:

Degree	Year	Institution	Major
B.S.	1956	University of Alaska	Wildlife Mgmt.
Ph.D.	1967	Utah State University	Wildlife Mgmt.

Professional Experience:

Date	Position	Institution
1954-1957	Biological Aide	Bur. of Sport Fish. & Wildlife
1959-1961		Bur. of Sport Fish. & Wildlife
1962-1965	Asst. Prof. Zoology Asst. Leader	N. Mex. Dept. Game & Fish
1965-1967		N. Dak. State University
1967-		Coop. Wildlife Res. Unit, C.S.U.

Major Interests:

Population ecology, particularly mechanisms of balance and short-term fluctuations in vertebrate populations; latitudinal diversity of reproductive and mortality mechanisms.

Professional and Honorary Societies:

Sigma Xi  
The Wildlife Society  
National Institutes of Health  
American Society Biological Science

Publications:

Author or coauthor of 7 publications. Recent or pertinent publications are listed below:

- Gross, J. E. 1960. History, present, and future status of the desert bighorn sheep (*Ovis canadensis mexicana*) in the Guadalupe Mountains of southeastern New Mexico and northwestern Texas. Fourth Annual Meeting, Desert Bighorn Council, Las Cruces, New Mexico.
- Gross, J. E. 1961. The need for quality control in the analysis of wildlife management data. West. Assoc. State Game Fish Comm., Proc.
- Gross, J. E. 1961. Coronado was second. New Mexico Wildl. 6(3):10-11.
- Gross, J. E. and Betty L. Gross. 1966. Jackrabbit humeri cleaned with clorox. J. Wildl. Manage. 30(1):212.
- Gross, J. E., F. H. Wagner and L. A. Stoddart. 1966. Population dynamics of black-tailed jackrabbits in northern Utah. Amer. Soc. Mammal.

- Gross, J. E. 1962. Range and range use by Dall sheep (*Ovis dalli dalli*) on Victoria Mountain and Mount Schwatka, Alaska. MS thesis, Univ. Alaska, College Alaska. Unpublished.
- Gross, J. E. 1967. Demographic analysis of a northern Utah black-tailed jackrabbit population. Ph.D. thesis, Utah State Univ., Logan, Utah.



Name: Richard M. Hansen

Born: 1924

Academic Training:

Degree	Year	Institution	Major
B.S.	1950	University of Utah	Biology
M.S.	1951	University of Utah	Zoology
Ph.D.	1954	University of Utah	Zoology

Professional Experience:

Date	Position	Institution
1950-1951	Lab. Instructor	University of Utah
1951-1952	Research Fellow	Univ. Utah Research Foundation
1952-1954	Research Fellow	Nat. Inst. Health, USPHS
1954	Grad. Faculty-Full Member	Colorado State University
1954-1955	Assistant Professor	Colorado A & M College
1968-	Prof. Range Biology	Colorado State University

Professional and Honorary Societies:

American Society of Mammalogists	Sigma Xi
The Wildlife Society	Phi Sigma
Phi Kappa Phi	Phi Delta Kappa

Major Interests:

Mammalogy, herbivory

Current Professional Activities:

Teaching: Professor of Range Biology

Research: "Coordinator for Producer-Consumer Studies" for Grasslands Biome Project

Publications, Technical Reports:

- Hansen, R. M. 1957. Development of young varying lemmings (*Dicrostonyx*).  
Artic 10:105-117.
- Hansen, R. M. and R. S. Miller. 1959. Observations on the plural occupancy  
of pocket gopher burrow systems. *J. Mammal.* 40:577-584.
- Hansen, R. M. 1960. Age and reproductive characteristics of mountain pocket  
gophers in Colorado. *J. Mammal.* 41:323-335.
- Hansen, R. M. and E. E. Remmenga. 1961. Nearest neighbor concept applied  
to pocket gopher populations. *Ecology* 42:812-814.

- Hansen, R. M. 1962. Dispersal of Richardson ground squirrel in Colorado. Amer. Midl. Natur. 68:58-66.
- Reid, V. H., R. M. Hansen, and A. L. Ward. 1966. Counting mounds and earth plugs to census pocket gophers. J. Wildl. Manage. 30:327-334.
- Bear, G. D. and R. M. Hansen. 1966. Food habits, growth and reproduction in white-tailed jackrabbits in southern Colorado. Colorado Agr. Exp. Sta. Tech. Bull. 90. 59 p.
- Hansen, R. M. and R. F. Beck. 1968. Habitat of pocket gophers in Cochetopa Creek drainage. Colorado Amer. Midl. Natur. 79:103-117.
- Hansen, R. M. and M. J. Morris. 1968. Movements of rocks by northern pocket gophers. J. Mammal. 49:391-399.
- Hansen, R. M. 1968. High energy food: aspen bark. Colorado Outdoors Mag. 17:48-49.
- Hansen, R. M. and L. D. Reed. 1969. Energy assimilation in Richardson ground squirrels. Amer. Midl. Natur. (In press).

Name: Clayton L. Hanson

Born: 1937

Academic Training:

Degree	Year	Institution	Major
B.S.	1959	North Dakota State University	Civil Engineering
M.S.	1964	University of Idaho	Civil Engineering
	1959-1960	University of Washington	Meteorological Training

Professional Experience:

Date	Position	Institution
1960-1962	Weather Forecaster	U. S. Air Force
1963-	Agricultural Engineer	Agricultural Research Service

Major Interests:

Hydrology.

Professional and Honorary Societies:

American Society of Civil Engineers

Publications, Technical Reports:

- Hanson, C. L. 1967. Stockpond water losses in western South Dakota. South Dakota Farm Home Res. 18:23.
- Rauzi, F. and C. L. Hanson. 1966. Water intake and runoff as affected by intensity of grazing. J. Range Manage. 19:351.
- Hanson, C. L. 1963. An investigation of the snow capacitor and diaphragm deflection methods of measuring the water equivalent of a snow pack. Eng. Exp. Sta., Univ. Idaho, Moscow. 118 p.

Name: John O. Harris

Born: 1916

Academic Training:

Degree	Year	Institution	Major
B.S.	1939	Kansas State University	Bacteriology
M.S.	1941	University of Hawaii	Bacteriology
Ph.D.	1943	Kansas State University	Bacteriology

Special Training:

Radioisotopes in Biology, Argonne National Laboratory, August 1948;  
Underground Corrosion Short Course, University West Virginia, 1957.

Professional Experience:

Date	Position	Institution
1941	Instructor in bacteriology	Kansas State University
Present	Professor	Kansas State University
1958-63	Part-time consultant	Koppers Co., US Steel, Mobil Oil, Esso
July-Aug. 1969	Consultant	USAID--Andhra Pradesh India

Professional and Honorary Societies:

American Society of Microbiology	National Assoc. Corrosion Engineers
AAAS	Kansas Academy of Sciences
American Chemical Society	Sigma Xi
American Agronomy Society	Gamma Sigma Delta

Major Interests: Microbial ecology, decomposition of complex molecules,  
N-fixation surfaces and microbial nutrient uptake.

Current Professional Activities:

Teaching: General Microbiology, Soil Microbiology, Microbiology, Nature.

Research: Decomposers

Publications, Technical Reports:

Harris, John O. 1944. Respiration of resting *Azotobacter* cells as affected  
by the respiratory menstruum. J. Bacteriol. 48:689-96.

Harris, John O. 1946. A study of the effect of growth substrate on the  
respiration of *Azotobacter*. J. Biol. Chem. 162:11-20.

Harris, John O. 1948. The respiration of *Salmonella* in the presence of  
agglutinating serum. J. Bacteriol. 56:271-275.

- Harris, John O. 1949. Conductivity studies of bacterial suspensions. J. Bacteriol. 57:67-71.
- Harris, John O. 1949. Combination of certain fluorane derivative dyes with bacterial cells at different hydrogen ion concentrations. Stain Technol. 24:217-221.
- Harris, John O. 1949. Morphological development of nodules on *Seabornia grandiflora* Poir. with reference to the origin of nodule rootlets. Amer. J. Bot. 36:651-661.
- Harris, John O. 1949. Combination of dyes with growing, resting, and killed bacterial cells. Kansas Acad. Sci., Trans. 52.
- Harris, John O. 1950. The relationship between stage of growth and pigment production by *Pseudomonas aeruginosa*. Kansas Acad. Sci., Trans. 53:494-499.
- Harris, John O. 1951. Acid-base-combining capacities of concentrated bacterial suspensions. J. Bacteriol. 61:57-62.
- Harris, John O. 1951. Phosphate turnover studies with soil bacteria. Kansas Acad. Sci., Trans. 54:560-564.
- Harris, John O. 1953. A study of the respiration of *Micrococcus lysodeikticus* in the presence of lysozyme. Kansas Acad. Sci., Trans. 56:67-73.
- Harris, John O. 1953. The isoelectric point of bacterial cells. J. Bacteriol. 65:198-202.
- Harris, John O. 1953. Electrophoretic behavior and crystal violet absorption capacity of ribonuclease treated bacterial cells. J. Bacteriol. 65:518-521.
- Harris, John O. 1953. The influence of sodium, potassium, and ammonium ions on the respiration of *Azotobacter chroococcum* as related to the composition of the growth medium, Soil Sci., Proc., 17:245-246.
- Harris, John O. 1954. The effect of lysozyme on the electrophoretic mobility of certain cocci. Exp. Cell Res. 6:307-310.
- Harris, John O. 1954. The preliminary description of a cellulose digesting micrococcus. Kansas Acad. Sci., Trans. 57:81-84.
- Harris, John O. 1954. The effect of certain vitamin K compounds upon the respiration of *Saccharomyces cerevisiae*. Arch. Biochem. and Biophys. 48:261-266.
- Harris, John O. 1954. The influence of carbon dioxide on oxygen uptake by "resting" cells of bacteria. J. Bacteriol. 67:476-479.

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- Harris, John O. 1968. Resorcinol as a selective inhibitor for the isolation of molds. Biol. du Sol 9:19-20.



Name: Peter Tiffany Haug

Born: 1936

Academic Training:

Degree	Year	Institution	Major
A.B.	1960	Hamilton College	English
Adv. Study	1965-1968	Colorado State University	Natural Resource Sciences, Statistics and Quantitative Ecology

Professional Experience:

Date	Position	Institution
1960-1962	Public Relations Account Executive	L. M. Harvey & Co. Rochester, N.Y.
1962	Editor (6 months)	<u>Honoeye Falls Times</u> Honoeye Falls, N.Y.
1962-1964	Reporter (Police, suburban, general assignment, drama, music).	<u>The Democrat and Chronicle</u> , Rochester, N.Y.
1964-1965	Assistant Director of Public Relations	University of Rochester, Rochester, N.Y.
1966-1968	Research Assistant	Colorado State University
1968-	Instructor	Colorado State University

Professional and Honorary Societies:

Ecological Society of America  
 The Wildlife Society  
 American Society of Mammalogists  
 The Human Ecological Society

Major Interests:

Quantitative ecological interrelationships, information theory, processing, and retrieval, ecosystems analysis and simulation.

Publications, Technical Reports:

- Van Dyne, G. M. and P. T. Haug. 1968. Variables affecting *in vitro* rumen fermentation studies in forage evaluation: an annotated bibliography. Oak Ridge National Laboratory. TM-1973. 73 p.
- Haug, P. T. and G. M. Van Dyne. 1968. Secondary succession in abandoned cultivated fields: an annotated bibliography. Oak Ridge National Laboratory. TM-2104. 70 p.
- Haug, P. T. 1969. Succession on old fields: a review. M.S. Thesis, (in preparation). Colorado State University.

Name: Harold F. Heady

Born: 1916

Academic Training:

Degree	Year	Institution	Major
B.S.	1938	University of Idaho	Range Management
M.S.	1940	New York State Coll. of Forestry	Ecology
	1940-1941	University of Minnesota	Ecology
Ph.D.	1949	University of Nebraska	Grassland Ecology

Special Training:

Guggenheim Fellow, 1958-1959  
Senior Fulbright Research Scholar, 1958-1959 and 1966-1967

Professional Experience:

Date	Position	Institution
Summer 1937	Range Surveyor	U.S. Forest Service
1941	Range Conservationist	U. S. Soil Conservation Service
1942	Asst. Professor	New York State College of Forestry
1942-1947	Asst. Professor	Montana State College
1947-1951	Assoc. Professor	A. & M. College of Texas
1951-	Asst., Assoc., & Professor	University of California, Berkeley

Professional and Honorary Societies:

Ecological Society of America  
American Society of Range Management  
Sigma Xi  
Xi Sigma Pi  
Alpha Xi Sigma

Major Interests:

Grassland ecology and range management

Current Professional Activities:

Teaching: Ecology and range courses

Research: California Experiment Station - Ecological adjustments of plant populations to use and environment

Publications, Technical Reports:

Heady, H. F. 1940. Annotated list of the ferns and flowering plants of the Huntington Wildlife Station (Part IV). Roosevelt Wildlife Bull. 7:243-369.

Heady, H. F. 1942. Littoral vegetation of the lakes on the Huntington Forest. Roosevelt Wildlife Bull. 8:5-37.

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- Heady, H. F. 1946. Sheep production on mountain range. Farms Illus., 1946.
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- Heady, H. F. 1946. An annotated bibliography of recent range literature, 1945. A contribution from Dep. Anim. Ind. and Range Manage., Montana State Coll. 4:1-21. (Mimeo).
- Heady, H. F., R. T. Clark, and T. Lomasson. 1947. Range management and sheep production in the Bridger Mountains, Montana. Montana Agr. Exp. Sta. Bull. 444:1-30.
- Heady, H. F. 1949. Methods of determining utilization of range forage. J. Range Manage. 2:53-63.
- Heady, H. F. 1949. Book Review: "Marching with the grasses." J. Range Manage. 2:137-158.
- Heady, H. F. 1949. Studies on blubunch wheatgrass in Montana and height-weight relationships of certain range grasses. In Abstr. Doctoral Diss., Univ. of Nebraska. p.39-42.
- Heady, H. F. and R. A. Darrow. 1949. Grazing regions and important grasses in Texas. Lab. Manual for RF 401. Published by Exchange Store. p. 1-74.
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J. Range Manage. 3:228-229.
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4:306-307.
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A. W. Sampson. J. Range Manage. 5:90-91.
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mixed prairie. J. Range Manage. 5:144-149.
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Rep. on Meeting of Econ. of Range Resources Development Comm. p. 6-11.
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- Heady, H. F. 1954. Viable seed from sheep and deer pellets. J. Range  
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- Heady, H. F. 1954. Dr. John Ernst Weaver. J. Range Manage. 7:217.
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8:114-116. (Reprinted in: The Pakistan J. of Forest. 5:193-195.)
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California, January 1955. (Black line print).
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- Heady, H. F. 1956. Evaluation and measurement of the California annual type.  
J. Range Manage 9:25-27.
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manipulation of natural mulch. Ecology 37:798-812.
- Heady, H. F. 1957. The measurements and value of plant height in the study  
of herbaceous vegetation. Ecology 38:313-320.
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annual type. J. Range Manage. 10:175-177.
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*In* C. B. Baker and C. V. Plath [ed.] Economic research in the use and  
development of range resources; a methodological anthology. Giannini  
Foundation. p. 99-106.

- Heady, H. F. 1958. Vegetational changes in the California annual type. Ecology 39:402-416.
- Heady, H. F. and L. Rader. 1958. Modifications of the point frame. J. Range Manage. 11:95-96.
- Heady, H. F., R. P. Gibbens, and R. W. Powell. 1959. A comparison of the charting, line intercept, and line point methods of sampling shrub types of vegetation. J. Range Manage. 12:180-188.
- Heady, H. F. and D. T. Torell. 1959. Forage preferences exhibited by sheep with esophageal fistulas. J. Range Manage. 12:28-34.
- Heady, H. F. and T. Bedell. 1959. Rate of twig elongation of chamise, *Adenostoma fasciculatum* H. & A. J. Range Manage. 12:116-121.
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- Heady, H. F. 1960. Moderate grazing protects future forage production. Calif. Agr. 14:15. (Research brief).
- Heady, H. F. 1960. An interview on British East Africa. 15 minute tape recording for Voice of America, U.S. Information Ser. October 7, 1960.
- Heady, H. F. 1960. Vegetational characteristics as they relate to grazing management. Annual Meeting of California Sect., Amer. Soc. Range Manage., Proc., p. 55-59.
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- Heady, H. F. 1962. Vegetation change at recreation site in Yosemite Valley. XIV Ext. Forest. Field School, Proc., 8 p. (Mimeo).
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- Heady, H. F. 1963. Changes in mineral status in an annual grassland due to mulch removal. Paper presented to AAAS Symposium on Mineral Cycling, Standford, California, June 1963.
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- Heady, H. F. 1964. Management of grazing resources in the redwood region. Talk given in Tech. Seminar Ser. on Forest. Res.--Key to the Redwood Region's Future, sponsored by School of Forest., Univ. California, Berkeley and Univ. California Agr. Ext. Service, Humboldt and Mendocino Counties. March 9-10, 1964.
- Heady, H. F. and D. W. Cooper. 1964. Soil analysis aids grazing management in Humboldt County. California Agr. 18:4-5.
- Heady, H. F. and R. P. Gibbens. 1964. The influence of modern man on the vegetation of Yosemite Valley. California Agr. Exp. Sta. Ext. Service, Manual 36. 44 p.
- Heady, H. F. 1965. Rangeland development in East Africa. In Ecology and economic development in East Africa. Inst. of Int. Stud., Univ. California Berkeley, Res. Ser. 9:73-82.
- Heady, H. F. and G. M. Van Dyne. 1965. Botanical composition of sheep and cattle on a mature California annual range. Hilgardia 36:465-492.
- Heady, H. F. and G. M. Van Dyne. 1965. Dietary chemical composition of cattle and sheep grazing in common on a dry annual range. J. Range Manage. 18:78-86.

- Heady, H. F. and G. M. Van Dyne. 1965. Interrelations of botanical and chemical dietary components of animals grazing dry annual range. *J. Anim. Sci.* 24:305-312.
- Heady, H. F. 1965. Prediction of weight composition from point samples on clipped herbage. *J. Range Manage* 18:144-148.
- Heady, H. F. and G. M. O. Maloly. 1965. Grazing conditions in Kenya Nasailand. *J. Range Manage.* 18:269-272.
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- Heady, H. F. 1965. Range management in Area I, Saudi Arabia. Parsons-Basil Company, Riyadh, Saudi Arabia. 23 p. (Confidential).
- Heady, H. F. et al. 1965. Agricultural planning and cost report on Area I, Saudi Arabia. Parsons-Basil Company, Riyadh, Saudi Arabia. 75 p. (Confidential)
- Heady, H. F. 1966. Influence of grazing on botanical composition of *Themeda triandra* grassland, East Africa. *J. Ecol.* 54:705-727.
- Heady, H. F. 1967. Practices in range forage production. Univ. Queensland Press. 81 p.
- Heady, H. F. 1967. Editorial -- The trail boss. *J. Range Manage.* 20:283.
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- Heady, H. F. 1969. Exclosures. In A practical guide to the study of productivity of large herbivores. Blackwell Sci. Pub., Oxford & Edinburgh. p. 250-252.
- Biswell, H. H., H. F. Heady, and M. E. Krueger. 1968. Arthur William Sampson, 1884-1967. In Memoriam, Univ. California.
- Heady, H. F. 1968. Grassland response to changing animal species. *J. Soil and Water Conserv.* 23:173-176.
- Heady, H. F. and W. M. Longhurst. 1968. Summary report of a symposium on east African range problems. The Rockefeller Found. 119 p.
- Heady, H. F. 1968. Range management in east Africa. In Summary report of a symposium on east African range problems. The Rockefeller Found. p. 78-79.
- Heady, H. F. 1969. Challenge of preserving desert life. Magazine section of The Times of London, March 3, 1969.
- Heady, H. F. and H. J. Vaux. 1969. Must history repeat? *J. Range Manage.* 22:209-210.

- Heady, H. F. and T. N. Shiflet. 1970. Specialized grazing systems: their place in range management.
- Heady, H. F. 1970. Grazing systems: terms and definitions. *J. Range Manage.* 23:59-61.
- Heady, H. F. and D. A. Ducan. 1970. Grazing systems in the California annual type. *In* Abstracts of papers. XXII Annu. Meeting Amer. Soc. Range Manage. 23-24.



Name: Carlton H. Herbel

Born: 1927

Academic Training:

Degree	Year	Institution	Major
B.S.	1949	Texas A & I University	General Agriculture
M.S.	1954	Kansas State University	Range Management
Ph.D.	1956	Kansas State University	Range Management

Special Training:

March 1962, ARS Supervisory Development Program  
September 1962, ARS Workshop on Sampling Methods  
January 1969, Physiological aspects of crop yield  
May 1969, Grass biology and utilization  
June 1969, Modeling the Jornada ecosystem

Professional Experience:

Date	Position	Institution
1949-1950	Assistant Agronomist	Southwest Foundation for Research & Education
1953-1956	Graduate Research Assistant	Kansas State University
1956	Agronomist	Southwest Foundation for Research & Education
1956-	Range Scientist	ARS, USDA

Professional and Honorary Societies:

Gamma Sigma Delta	Ecological Society of America (sustaining)
Sigma Xi	American Forage and Grassland Council
American Society of Agronomy	American Society of Range Management
Crop Science Society of America	AAAS
Soil Science Society of America	National Wildlife Federation

Major Interests: Plant-soil-weather-animal relations, data synthesis, seeding arid rangelands, control of mesquite, creosotebush, and tarbush, range ecology, and grazing management.

Current Professional Activities:

Full-time research on the Jornada Experimental Range

Teaching: Adviser for graduate students

Research: Primary productivity of desert grassland and other studies as indicated under major interests.

Publications, Technical Reports:

- Herbel, Carlton H. 1950. Some typical practices of range improvements in Texas. Southwest Res. Inst. mimeo. 17 p.
- Herbel, Carlton H. 1955. Range conservation and season-long grazing. J. Range Manage. 8:204-205.
- Anderson, Kling L. and Carlton H. Herbel. 1955. Six years of differential grazing in the Flint Hills of Kansas. Abstr. in Agron. Abstr. p. 63. (Volunteer paper presented by Anderson at Davis).
- Herbel, Carlton H. 1956. Forage investigations at the San Antonio nursery. Southwest Foundation for Research and Education mimeo. 55 p.
- Herbel, Carlton H. 1956. Supplemental winter pastures for South Texas. Southwest Foundation for Research and Education, Report 15. 11 p.
- Herbel, Carlton H. 1958. The research program at the Jornada Experimental Range. Research Advisory Council, Rocky Mountain Forest and Range Experiment Station mimeo. (Invitational paper presented at Albuquerque).
- Herbel, Carlton H. 1958. Procedures for field evaluation of drought tolerance. Proceedings Western Grass Breeders 12th Work Planning Conf. (Presented volunteer paper at Tucson).
- Herbel, C. H., F. N. Ares, and J. O. Bridges. 1958. Hand-grubbing mesquite in the semidesert grassland. J. Range Manage. 11:267-270.
- Herbel, Carlton H. 1959. Soil factors affecting range forage. Proceedings 4th Annual Cattle Breeders School, New Mexico State University. (Presented invitational paper at Las Cruces).
- Herbel, Carlton H. and Kling L. Anderson. 1959. Response of true prairie vegetation on major Flint Hills range sites to grazing treatment. Ecol. Monogr. 29:171-186.
- Knipe, Duane and Carlton H. Herbel. 1960. The effects of limited moisture on germination and initial growth of six grass species. J. Range Manage. 13:297-302.
- Herbel, Carlton H. 1961. A four-pronged mesquite control program. Range Weed Research, Proc., p. 56-57.
- Herbel, Carlton H. 1961. The mesquite control program on the Jornada Experimental Range. New Mexico Brush Tour, Proc., p. 20-29.
- Herbel, Carlton H. and Fred N. Ares. 1961. A "two-gun" ground sprayer. Weeds 9:656-657.
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- Herbel, Carlton H. 1963. Past and present research on the Jornada Experimental Range and future needs. Jornada Range mimeo. 19 p.
- Herbel, Carlton H. 1964. Jornada Experimental Range research. The Cattleman 51(2):103.
- Herbel, Carlton H. 1964. Brush control. The Cattleman 51 (2):160.
- Herbel, Carlton H. 1965. Research on improvement of brush infested grazing land on the Jornada Experimental Range. Jornada Range mimeo. 8 p.
- Herbel, Carlton H. 1965. Reseeding in the arid southwestern United States. Australian Arid-Zone Res. Conf., p. E-23 - E-24.
- Herbel, Carlton H. and Arnold B. Nelson. 1965. Performance of Hereford and Santa Gertrudis cattle on an arid range in southwestern United States. Australian Arid-Zone Res. Conf., p. F-19 - F-20.
- Buffington, Lee C. and Carlton H. Herbel. 1965. Vegetational changes on a semidesert grassland range from 1858 to 1963. Ecol. Monogr. 35:139-164.
- Herbel, Carlton H. 1966. Australian Arid Zone Research Conference. J. Range Manage. 19:161-162.
- Herbel, Carlton H. 1966. Brush control in New Mexico. Jornada Range mimeo. 12 p.
- Herbel, Carlton H. 1966. Mesquite (*Prosopis Juliflora* (Sw.) DC.). In Chemical control of range weeds. Interagency Report, USDA and USDI. U.S. Government Printing Office, Washington, D.C. p. 26.
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- Herbel, Carlton H. 1967. Creating a more favorable microenvironment for seeding southwestern ranges. Agron. Abst., p. 36.
- Herbel, Carlton H. 1967. Brush control research on the Jornada Experimental Range. Range Weed Research, Proc., p. 65-70. (I presented this invitational information on a tour of the Jornada).
- Herbel, Carlton H., Fred N. Ares, and Arnold B. Nelson. 1967. Grazing distribution patterns of Hereford and Santa Gertrudis cattle on a southern New Mexico range. J. Range Manage. 20:296-298.
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- Sosebee, Ronald E. and Carlton H. Herbel. 1967. Temperature and moisture effects on seedling emergence and initial growth of range plants. Agron. Abst., p. 40.
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- Kiesling, H. E., A. B. Nelson, and C. H. Herbel. 1968. Effect of the esophageal fistula on chemical composition of feeds. J. Anim. Sci. 27:1183. (Abstract of volunteer paper presented by Nelson at national meeting).
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- New Mexico Inter-Agency Range Committee. 1968. Cholla cactus control in New Mexico. Report No. 3. 18 p. (Herbel attended tour and helped prepare report).
- Herbel, Carlton H. and Ronald E. Sosebee. 1969. Moisture and temperature effects on emergence and initial growth of two range grasses. Agron. J. 61:628-631.
- Herbel, Carlton H. and Arnold B. Nelson. 1969. Grazing management on semidesert ranges in southern New Mexico. Abstract, Arid Lands in a Changing World, n.p.
- Herbel, Carlton H. and Arnold B. Nelson. 1969. Grazing management on semidesert ranges in southern New Mexico. Jornada Experimental Range Report No. 1. 13 p.
- Herbel, Carlton H., Phillip L. Dittberner, and Tommy S. Bickle. 1969. A quantitative ecology of the Jornada Experimental Range. Manuscript prepared for the Ford Foundation Workshop, "Modelling the Jornada ecosystem," at Albuquerque, New Mexico, June 16-27, 1969. 98 p. (Presented by Herbel).
- Gould, Walter L. and Carlton H. Herbel. 1969. Chemical control of mesquite as influenced by rate of 2,4,5-T, carrier type, and volume and type of aircraft. Weed Sci. Soc. Amer. Abst. No. 63.
- Gould, Walter L. and Carlton H. Herbel. 1969. Evaluation of herbicide treatments for the control of creosotebush (*Larrea tridentata*). Western Soc. Weed Sci., Research Progress Report, p. 26-27.
- Gould, Walter L. and Carlton H. Herbel. 1969. Herbicide evaluation studies for the control of tarbush (*Flourensia cernua*). Western Soc. Weed Sci., Research Progress Report, p. 27.
- Gould, Walter L. and Carlton H. Herbel. 1969. Evaluation of aerial treatments for the control of creosotebush (*Larrea tridentata*). Western Soc. Weed Sci., Research Progress Report, p. 27-28.
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- Kiesling, H. E., A. B. Nelson, and C. H. Herbel. 1969. Chemical composition of tobosa grass collected by hand-plucking and esophageal-fistulated steers. J. Range Manage. 22:155-159.
- Nelson, A. B., C. H. Herbel, and H. M. Jackson. 1969. Chemical composition of the diet of cows grazing on arid range. Amer. Soc. Anim. Sci., Western Sect., Proc., 20:355-360. (Nelson presented this volunteer paper). An abstract of this paper appeared in J. Anim. Sci. 28:868.

- Nelson, A. B., L. A. Holland, and C. H. Herbel. 1969. Performance of Hereford and Santa Gertrudis cattle on an arid New Mexico range. Abstract, *Arid Lands in a Changing World*, n.p.
- Nelson, A. B., L. A. Holland, and C. H. Herbel. 1969. Performance of Hereford and Santa Gertrudis cattle on an arid New Mexico range. *Jornada Experimental Range Report No. 2*. 15 p.
- Nelson, A. B., C. H. Herbel, and H. M. Jackson. 1969. Chemical composition of forage species grazed by cattle on the Jornada Experimental Range. (Approved by Crops Research Division for publication as a New Mexico Agricultural Experiment Station bulletin).
- Sosebee, Ronald E. and Carlton H. Herbel. 1969. Effects of high temperatures on emergence and initial growth of range plants. *Agron. J.* 61:621-624.
- Herbel, Carlton H. 1970. Environmental modification for seedling establishment. *Proceedings, Symposium on Grass Biology and Utilization*. (Invitational paper presented at Riverside).
- Herbel, Carlton H. and Walter L. Gould. 1970. Control of mesquite, creosotebush, and tarbush on arid rangelands of the southwestern United States. *Proceedings XI International Grassland Congress*. (Accepted for publication).

Name: Scott J. Herrmann

Born: 1942

Academic Training:

Degree	Year	Institution	Major
B.S.	1964	Northern Illinois University	Biology (Zoology)
Ph.D.	1968	University of Colorado	Limnology

Special Training:

NSF Summer Research  
Friday Harbor Laboratories (University of Washington)

Professional Experience:

Date	Position	Institution
1966-1968	Teaching Assistant	Univ. Colorado
1968-	Assistant Professor of Biology	So. Colorado St. Coll.

Professional and Honorary Societies:

Sigma Xi  
Midwest Benthological Soc.  
Phi Sigma  
Sigma Zeta

Major Interests:

Limnology  
Water Pollution  
Fresh-water invertebrates and their distribution, systematics and physiological ecology.  
Colorado Hirudinea

Current Professional Activities:

Teaching: Invertebrate and Vertebrate Zoology  
Genetics

Research: IBP  
Grassland Ecosystem  
Aquatic Components of Ecosystem  
American Museum of Natural History  
Inventory of Fresh-Water Invertebrates on the Colorado Piedmont.

Publication, Technical Reports:

Herrmann, S. J. 1966. An annotated key to the living Paguridae of the waters of the San Juan Archipelago. Friday Harbor Lab. Pap. Zool. (Mimeo.).

- Herrmann, S. J. 1968. Zoogeography of Colorado Hirudinea. J. Colorado Wyoming Acad. Sci. 6:8. (Abstr.)
- Herrmann, S. J. 1968. Systematics, distribution, and ecology of Colorado Hirudinea. Ph.D. Thesis, Univ. Colorado. 140 p.
- Herrmann, S. J. 1969. A scheme for the typology of lentic habitats in Colorado. J. Colorado Wyoming Sci. 6:54. (Abstr.)
- Herrmann, S. J., J. W. LaVelle, J. A. Seilheimer,,and N. O. Osborn. 1969. A preliminary study of three lentic communities on the Pawnee National Grasslands. p. 308-315. In R. L. Dix and R. G. Beidleman [ed.] The grassland ecosystem: a preliminary synthesis. Colorado State Univ., Range Sci. Dep. Ser. No. 2. 437 p.
- Herrmann, S. J. 1970. Systematics, distribution, and ecology of Colorado Hirudinea. Amer. Midl. Natur. (In press).
- Herrmann, S. J. 1970. Total residue tolerances of Colorado Hirudinea. Southwest. Natur. (In press).
- Herrmann, S. J. 1970. New host record for *Illinobdella moorei* Meyer, 1940. Southwest. Natur. (In press).



Name: Robert S. Hoffmann

Born: 1929

Academic Training:

Degree	Year	Institution
B.S.	1950	Utah State University
M.S.	1954	University of California, Berkeley
Ph.D.	1955	University of California, Berkeley

Professional Experience:

Date	Position	Institution
1955-1957	Instructor, Dep. Zoology	University of Montana
1957-1961	Asst. Prof., Dep. Zoology	University of Montana
1961-1965	Assoc. Prof. Dep. Zoology	University of Montana
1965-1968	Prof., Dep. Zoology	University of Montana
1956-1968	Curator, Zoological Museum	University of Montana
1960 Summer	Visiting Asst. Prof.	Univ. British Columbia
1968-	Prof. Systematics and Ecology (Chairman 1969-) and Curator of Mammals, Museum of Natur. History	University of Kansas

Professional and Honorary Societies:

Ecological Society of America	AAAS
Montana Academy of Sciences	American Institute of Biological Sciences
INQUA	American Ornithologist's Union
INECOL	American Society of Mammalogists (Director)
Society of Systematic Zoology	AMQUA
Sigma Xi	Australian Mammal Society
Wildlife Society	Cooper Ornithological Society

Major Interests:

Ecology of small mammal populations, ecology of alpine ecosystems, and systematics and zoogeography of Holarctic mammals.

Current Professional Activities:

Teaching: Population Biology and various graduate-level courses

Publications, Technical Reports:

Hoffmann, R. S. 1958. The role of reproduction and mortality in population fluctuations of voles (*Microtus*). Ecol. Monogr. 28:79-109.

Hoffman, R. S. and D. L. Pattie. 1968. A guide to Montana mammals. Univ. Montana Printing Service. 133 p.

- Hoffmann, R. S. and C. F. Nadler, Jr. 1968. Chromosomes and systematics of some North American species of the genus *Marmota* (Rodentia:Sciuridae). *Experimentia* 28:740-742.
- Hoffmann, R. S. and J. R. Koplin. 1968. Habitat overlap and competitive exclusion in voles (*Microtus*). *Amer. Midland Natur.* 80:494-507.
- Hoffmann, R. S., P. L. Wright, and F. E. Newby. 1969. The distribution of some mammals in Montana. I. Mammals other than bats. *J. Mammal.* 50:579-604.
- Hoffmann, R. S., D. L. Pattie, and F. Bell. 1969. The distribution of some mammals in Montana. II. Bats. *J. Mammal.* 50:737-741.

Name: Ellis W. Huddleston

Born: 1935

Academic Training:

Degree	Year	Institution	Major
B.S.	1956	Texas Technological College	Agronomy
M.S.	1958	Cornell University	Entomology
Ph.D.	1960	Cornell University	Entomology

Professional Experience:

Date	Position	Institution
1956-1960	Research Assistant	Cornell University
1960-1965	Asst. Prof. of Entomology	Texas Tech. College
1965-1966	Assoc. Prof. of Entomology	Texas Tech. College
1966-1967	Assoc. Prof. of Ent. (Visiting)	University of Hawaii
1967-	Assoc. Prof. of Entomology	Tex. Tech. College

Major Interests:

Biological control of insects and noxious species; ecology of playa lakes.

Honors:

Spencer A. Wells Award for faculty member who has made the most valuable contribution to Texas Technological College during 1967-1968.

Professional and Honorary Societies:

Sigma Xi  
Entomological Society of America  
Hawaiian Entomological Society  
Agricultural Sciences Advisory Committee  
Organization for Tropical Studies

Publications:

Author or coauthor of 21 publications. Recent or pertinent publications are listed below:

- Huddleston, E. W., D. Ashdown, C. R. Ward, and D. Morris. 1962. Multipurpose Modification of Playa Sinks. "Section on Biology" Project Number 29. Division of Water Supply and Pollution Control, U.S.P.H.S., First Annual Report. 1-123.
- Huddleston, E. W., D. Ashdown, C. E. Forehand, C. R. Ward, and D. Morris. 1964. Multipurpose Modification of Playa Sinks, "Section on Biology," Project Number 29, Division of Water Supply and Pollution Control, U.S.P.H.S., Third Annual Report. 1-114.
- Huddleston, E. W., D. Ashdown, C. E. Forehand, R. Schaefer, and D. Herzog. 1965. Effects of the 1964 High Plains Boll Weevil Control Program on Population Trends, of Non-Target Insects. Effects on the Environment of the 1964 Boll Weevil Diapause Control Program in the Texas High Plains, Plant Pest Control Division, U.S.D.A. 1-43.

Name: Gary K. Hulett

Born: 1936

Academic Training:

Degree	Year	Institution	Major
B.S.	1958	Fort Hays Kansas State College	Botany
M.S.	1959	Kansas State College	Botany
Ph.D.	1962	University of Saskatchewan	Plant Ecology

Professional Experience:

Date	Position	Institution
1956-1959	Research Assistant	Kansas State College
1959-1962	Research Assistant	Saskatchewan Research Council
1962-1963	Assistant Professor of Biology	University of North Dakota
1963-1965	Assistant Professor of Botany	Fort Hays Kansas State College
1965-	Associate Professor of Botany	Fort Hays Kansas State College

Professional and Honorary Societies:

American Society of Range Management  
Ecological Society of America  
Association of Southwestern Naturalists  
American Institute of Biological Science

Major Interests:

Ecosystem ecology (grasslands), primary productivity, organic matter transfer rates, root production.

Publications, Technical Reports:

Author or coauthor of 7 publications. Recent or pertinent publications are listed below:

Redman, R. E. and G. Hulett. 1964. Factors affecting the distribution of certain species of compositae on an eastern North Dakota prairie. North Dakota Acad. Sci. Proc. 18:10-21.

Hulett, G. K., R. T. Coupland and R. L. Dix. 1966. The vegetation of dune sand areas within the grassland region of Saskatchewan. Can. J. Bot. 44:1307-1331.

Goodman, C. L., G. W. Tomanek and G. K. Hulett. 1967. A survey of phreatophytes at Cedar Bluffs Reservoir. Kans. Acad. Sci. Trans. 70:451-463.

Young, S. Emory and G. K. Hulett. 1968. Emergence and growth of six Mixed Prairie grasses under the influence of *Yucca glauca* extract. Kans. Acad. Sci. Trans. 71:136-144.

- Hulett, G. K. and G. W. Tomanek. 1969. Remnant prairies on the shallow limy range site in north central Kansas. *J. Range Manage.* 22:19-23.
- Hulett, G. K., G. L. Van Amburg and G. W. Tomanek. 1969. The effect of soil depth on cover and production of a shallow limy range site in Western Kansas. *J. Range Manage.*
- Hulett, G. K., C. D. Sloan and G. W. Tomanek. 1969. The vegetation of remnant grasslands in the loessial region of northwestern Kansas and southwestern Nebraska. *Southwestern Natur.*

Name: H. L. Hutcheson, Jr.

-109-

Born: 1937

Academic Training:

Degree	Year	Institution	Major
B.S.	1960	Oklahoma State University	Natural Science
M.S.	1962	Oklahoma State University	Plant Ecology
Ph.D.	1965	University of Oklahoma	Plant Ecology

Professional Experience:

Date	Position	Institution
1960-1962	Teaching Assistant	Oklahoma State Univ.
1962-1965	Teaching Assistant	Univ. Oklahoma
1965	NSF Postdoctoral Grant	Univ. Oklahoma Biol. Sta. (Summer)
1965-1969	Assistant Professor of Botany	South Dakota State Univ.
1966	Visiting Assistant Professor	Univ. Oklahoma (Summer)
	Summer Ecology Institute	
1969-	Assoc. Prof. of Botany-Biology	South Dakota State Univ.

Professional and Honorary Societies:

Ecological Society of America	South Dakota Academy of Science
AIBS	Oklahoma Academy of Science
American Society of Range Management	American Association of Univ. Professors
Sigma Xi	South Dakota Biology Teachers Association
Southwestern Association of Naturalists	Organization of Inland Biological Field Sta.

Major Interests:

Plant ecology and geo-botany

Publications, Technical Reports:

- Dwyer, Don D. and H. L. Hutcheson. 1965. Growth rate of four range grasses in north-central Oklahoma. Oklahoma Agr. Exp. Sta. Bull. B-638. 15 p.
- Hutcheson, H. L. 1965. Vegetation in relation to slope exposure and geology in the Arbuckle Mountains. In Report of research conducted under NSF Postdoctoral Grant EB3462. 56 p.
- Hutcheson, H. L. and R. J. Baalman. 1965. Buffalo, fire and grass in the Wichita Mountains. In Report of research conducted under NSF Postdoctoral Grant EB3462. 12 p.

Name: Donald N. Hyder

Born: 1921

Academic Training:

Degree	Year	Institution
B.S.	1947	University of Idaho
M.S.	1949	Utah State University
Ph.D.	1961	Oregon State University

Professional Experience:

Date	Position	Institution
1941	Forest Guard	U. S. Forest Serv., Idaho
1942	Field Assistant	Grazing Service, Idaho
1943-1944	Aviation Cadet	U. S. A. Air Force
1944-1946	Pilot	U. S. A. Air Force
1947-1949	Teaching Assistant	Utah State Agri. College
1949-1956	Research Range Conserv.	BLM, Oregon
1956-1961	Research Agronomist	ARS, Oregon
1956-1960	Assistant Professor	Oregon State University
1960-1961	Associate Professor	Oregon State University
1961-	Range Scientist	ARS, Colorado State Univ.
	Teaching: Grad. Faculty	

Professional and Honorary Societies:

Sigma Xi	Crop Science Society of America
Phi Kappa Phi	American Society of Agronomy
Xi Sigma Pi	Weed Society of America
Gamma Sigma Delta	American Society of Range Management

Publications, Technical Reports:

- Hyder, D. N. and W. A. Sawyer. 1951. Rotation-deferred grazing as compared to season long grazing on sagebrush-bunchgrass ranges in Oregon. J. Range Manage. 4:30-34.
- Hyder, D. N. 1952. Rotation-deferred grazing at Squaw Butte. Oregon Cattleman 1:18-21.
- Hyder, D. N. 1953. Grazing capacity as related to range condition. J. Forest. 51:206.
- Hyder, D. N. 1953. Controlling big sagebrush with growth regulators. J. Range Manage. 6:109-116.
- Hyder, D. N. 1954. Forage utilization. J. Forest. 52:603-604.
- Hyder, D. N. 1954. Spray to control big sagebrush. Oregon Agr. Exp. Sta. Bull. 538. 12 p.

- Hyder, D. N. and F. A. Sneva. 1954. A method for rating the success of range seeding. *J. Range Manage.* 7:89-90.
- Hyder, D. N. and F. A. Sneva. 1955. Effect of form and rate of active ingredient, spraying season, solution volume, and type of solvent on mortality of big sagebrush, *Artemisia tridentata*. *Oregon Agr. Exp. Sta. Tech. Bull.* 35. 16 p.
- Hyder, D. N., F. A. Sneva, and W. A. Sawyer. 1955. Soil firming may improve range seeding operations. *J. Range Manage.* 8:159-163.
- Hyder, D. N. and F. A. Sneva. 1956. Seed- and plant-soil relations as affected by seedbed firmness on a sandy loam range land soil. *Soil Sci. Soc. Amer. Proc.* 20:416-419.
- Hyder, D. N. and F. A. Sneva. 1956. Herbage response to sagebrush spraying. *J. Range Manage.* 9:34-38.
- Hyder, D. N., F. A. Sneva, and L. D. Calvin. 1956. Chemical control of sagebrush larkspur. *J. Range Manage.* 9:184-186.
- Hyder, D. N., F. A. Sneva, D. O. Chilcote, and W. R. Furtick. 1957. Chemical control of rabbitbrush with emphasis upon simultaneous control of big sagebrush. *Weeds* 6:289-297.
- Cooper, C. S., D. N. Hyder, R. G. Peterson, and F. A. Sneva. 1957. The constituent differential method of estimating species composition in mixed hay. *Agron. J.* 49:190-193.
- Sneva, F. A., D. N. Hyder, and C. S. Cooper. 1958. The influence of ammonium nitrate on the growth and yield of crested wheatgrass on the Oregon high desert. *Agron. J.* 50:40-44.
- Cooper, C. S. and D. N. Hyder. 1958. Adaptability and yield of eleven grasses grown on the Oregon high desert. *J. Range Manage.* 11:235-237.
- Hyder, D. N., F. A. Sneva, and W. A. Sawyer. 1958. Sagebrush or grass. *Oregon Agr. Exp. Sta. Circ.* 590. 11 p.
- Hyder, D. N., W. R. Furtick, and F. A. Sneva. 1958. Differences among butyl, ethyl, and isopropyl ester formulations of 2,4-D, 2,4,5-T, and MCPA in the control of big sagebrush. *Weeds* 6:194-197.
- Booster, D. E. and D. N. Hyder. 1958. The Oregon grass seeder. Paper presented at the annual meeting of the Interagency Range Reseeding Equipment Committee, Phoenix, Arizona, January 1958. mimeo.
- Hyder, D. N. and F. A. Sneva. 1959. Carbohydrate reserves in crested wheatgrass. A summary of significant findings prepared especially for the Soil Conservation Service, U. S. Dep. Agr. mimeo.
- Hyder, D. N. and F. A. Sneva. 1959. Growth and carbohydrate trends in crested wheatgrass. *J. Range Manage.* 12:271-275.
- Hyder, D. N., W. R. Furtick, and F. A. Sneva. 1959. 2,4-D effectiveness on big sagebrush and green rabbitbrush as influenced by nutrient and gibberellin additives. 1959 Research Progress Report, Western Weed Control Conference.



- Hyder, D. N. 1960. An observation on height of flight for spraying big sagebrush. 1960 Research Progress Report, Western Weed Control Conference.
- Sneva, F. A. and D. N. Hyder. 1960. Adjusting range production to a median year. Presented 13th Annu. Meeting, Amer. Soc. Range Manage., Feb.
- Hyder, D. N. and F. A. Sneva. 1960. Bitterlich's plotless method for sampling basal ground cover of bunchgrasses. *J. Range Manage.* 13:6-9.
- Sneva, F. A. and D. N. Hyder. 1960. Adjusting range production to a median year. *Amer. Meteorol. Soc. Abstr. Bull.* 41:261.
- Hyder, D. N., D. E. Booster, F. A. Sneva, W. A. Sawyer, and J. B. Rodgers. 1961. Wheel-track planting on sagebrush-bunchgrass range. *J. Range Manage.* 14:220-224.
- Hyder, D. N. and F. A. Sneva. 1961. Fertilization of sagebrush-bunchgrass range--a progress report. *Oregon Agr. Exp. Sta. Misc. Paper* 115.
- Hyder, D. N. 1961. Growth characteristics of crested wheatgrass, *Agropyron desertorum* (Fisch.) Schult., in the big sagebrush-bluebunch wheatgrass province of southeastern Oregon. Ph.D. Thesis, Oregon State Univ. 158 p.
- Hyder, D. N. and F. A. Sneva. 1962. Chemical control of foothill deathcamas. *J. Range Manage.* 15:25-27.
- Sneva, F. A. and D. N. Hyder. 1962. Estimating herbage production on semiarid ranges in the intermountain region. *J. Range Manage.* 15:88-93.
- Hyder, D. N., F. A. Sneva, and V. H. Freed. 1962. Susceptibility of big sagebrush and green rabbitbrush to 2,4-D as related to certain environmental, phenological, and physiological conditions. *Weeds* 10:288-295.
- Hyder, D. N. and F. A. Sneva. 1962. Selective control of big sagebrush associated with bitterbrush. *J. Range Manage.* 15:211-215.
- Hyder, D. N. and F. A. Sneva. 1962. Forecasting range production in eastern Oregon. *Oregon Agr. Exp. Sta. Bull.* 588. 11 p.
- Hyder, D. N. and F. A. Sneva. 1963. Forage characteristics of big bluegrass, crested wheatgrass, and beardless wheatgrass. Presented at the Annu. Meeting of the Amer. Soc. Range Manage., Rapid City, South Dakota, Jan. 1963.
- Sneva, F. A. and D. N. Hyder. 1963. Spring response of crested wheatgrass fertilization as affected by stand density and age. Paper presented at the Annu. Meeting of the Amer. Soc. Range Manage., Rapid City, South Dakota, Jan. 1963.
- Hyder, D. N. and F. A. Sneva. 1963. Morphological and physiological factors affecting the grazing management of crested wheatgrass. *Crop Sci.* 3:267-271.
- Sneva, F. A. and D. N. Hyder. 1963. Raising dryland rye hay. *Oregon Agri. Exp. Sta. Bull.* 592. 8 p.
- Hyder, D. N. and F. A. Sneva. 1963. Studies of six grasses seeded on sagebrush-bunchgrass range. Yield, palatability, carbohydrate accumulation, and developmental morphology. *Oregon Agr. Exp. Sta. Tech. Bull.* 71. 20 p.
- Hyder, D. N., C. E. Conrad, P. T. Tueller, L. D. Calvin, C. E. Poulton, and F. A. Sneva. 1963. Frequency sampling of sagebrush-bunchgrass vegetation. *Ecology* 44:740-746.

- Sneva, F. A., C. B. Rumburg, and D. N. Hyder. 1964. A summary of alfalfa investigations conducted on the Squaw Butte Experiment Station. Oregon Agr. Exp. Sta. Spec. Rep. 176. 19 p.
- Hyder, D. N. and R. E. Bement. 1964. Six weeks fescue as a deterrent to blue grama utilization. J. Range Manage. 17:261-264.
- Hedrick, D. W., D. N. Hyder, and F. A. Sneva. 1964. Overstory-understory grass seedings on sagebrush-bunchgrass range. Oregon Agr. Exp. Sta. Tech. Bull. 80. 31 p.
- Sneva, F. A. and D. N. Hyder. 1965. Yield, yield-trend, and response to nitrogen of introduced grasses on the Oregon high desert. Oregon Agr. Exp. Sta. Spec. Rep. 195.
- Hyder, D. N., R. E. Bement, E. E. Remmenga, and C. Terwilliger, Jr. 1965. Frequency sampling of blue grama range. J. Range Manage. 18:90-93.
- Hyder, D. N., R. E. Bement, E. E. Remmenga, and C. Terwilliger, Jr. 1966. Vegetation-soils and vegetation-grazing relations from frequency data. J. Range Manage. 19:11-17.
- Hyder, D. N., R. E. Bement, J. J. Norris, and M. J. Morris. 1966. Evaluating herbage species by grazing cattle. Part 1. Food intake. X International Grassland Cong. Proc. Sec. 4:970-974.
- Hyder, D. N., R. E. Bement, J. J. Norris, and R. R. Wheeler. 1966. Evaluating herbage species by grazing cattle. Part 2. Food quality. X International Grassland Cong. Proc. Sec. 4:974-977.
- Hedrick, D. W., D. N. Hyder, F. A. Sneva, and C. E. Poulton. 1966. Ecological response of sagebrush-grass range in central Oregon to mechanical and chemical removal of *Artemisia*. Ecology 47:432-439.
- Sneva, F. A. and D. N. Hyder. 1966. Control of big sagebrush associated with bitterbrush in ponderosa pine. J. Forest. 64:677-680.
- Hyder, D. N. 1967. Pounds of forage per pound of beef. Range Manage. Conf., Texas Tech. Coll., Lubbock, Texas, Proc. October 13.
- Hyder, E. N., R. E. Bement, and J. J. Norris. 1968. Sampling requirements of the water-intake method of estimating forage intake by grazing cattle. J. Range Manage. 21:392-397.
- Hyder, D. N. and A. C. Everson. 1968. Chemical fallow of abandoned croplands on the short-grass plains. Weed Sci. 16:531-533.
- Marlatt, W. E. and D. N. Hyder. 1968. Modification of soil surface micro-relief to reduce wind erosion on the high plains. Amer. Meteorological Soc. Abstr. Bull. 49:298.
- Hyder, D. N. 1968. Water intake by cattle as a measure of forage intake and quality. Invitational paper presented at the U. S. Forest Service Workshop on Range and Wildlife Habitat Evaluation, May 1968, Tempe, Arizona. USDA Misc. Pub. 1147.

- Hyder, D. N. and R. E. Bement. 1969. A micro-ridge roller for seedbed modification. *J. Range Manage.* 22:54-56.
- Hyder, D. N. 1969. Microridge roller holds erosive, sandy soils for seeding. *Crops and Soils* 21:20.
- Everson, A. C., D. N. Hyder, H. R. Gardner, and R. E. Bement. 1969. Chemical versus mechanical fallow of abandoned croplands. *Weed Sci.* 17:548-551.
- Hyder, D. N. 1969. Effects of N on grass morphology. Invitational paper presented at a workshop on the nitrogen cycle in semiarid grasslands, Bismarck, North Dakota, March 25-26.
- Hyder, D. N. 1969. The impact of domestic animals on the function and structure of grassland ecosystems, p. 243-260. In R. L. Dix and R. G. Beidleman [ed.] *The grassland ecosystem: a preliminary synthesis.* Range Sci. Dep. Sci. Ser. No. 2, Colorado State Univ. 437 p.
- Hyder, D. N. 1969. Defoliation in relation to vegetative growth. Invitational paper presented at a symposium on grass biology and utilization, Riverside, California, May 20-22. (In press).

Name: Donald A. Jameson

Born: 1929

Academic Training:

Degree	Year	Institution	Major
B.S.	1950	Colorado State University	Range Management & Forestry
M.S.	1952	Montana State University	Range Management & Animal Industry
Ph.D.	1958	Texas A & M University	Range Management, Plant Physiology, and Soils

Special Training:

Air Force Residence Schools. 1952-58. Courses in communications and electronics Research and Development Seminar, National Security Seminar.

Air Force Correspondence Courses. 1952-58. Including Automatic Data Processing, Electronics Fundamentals, Air Weather, Communications, Fire Control Systems.

IBM Schools. 1963-67. FORTRAN & Assembly Language.

Courses for credit at Northern Arizona U. 1963-67. Including Micro and Macro Economic Theory, Special problems in Chemistry, Calculus, Matrix Algebra and Differential Equations.

Consultant and lecturer to Northern Arizona University on computer programming and mathematical modeling of biological data. 1967-68.

Certificate. 1968. Mathematical and computer analysis of biological systems models. Washington Engineering Services Co., Inc.

Certificate. 1969. Operations Research and Analysis course. University of California, Los Angeles.

Professional Experience:

Date	Position	Institution
1950-1952	Research Assistant	Montana Agr. Exp. Sta.
1952-1954	Air Force Communication Officer	
1956-1963	Range Scientist	Rocky Mountain Forest & Range Exp. Sta., Forest Service, Flagstaff, Arizona
1963-1968	Plant Physiol. & Project Leader	" " "
1968-Present	Associate Professor, Range Science	Colorado State University

Professional and Honorary Societies:

Ecological Society of America  
 American Society of Range Management  
 Sigma Xi

Major Interests:

Grassland and brushland ecology; soil-plant relationships, modeling and evaluation of ecological problems; quantitative management of natural resource-economic-community complexes.

Current Professional Activities:

Teaching: Ecosystem function, Range Economics, Quantitative Ecosystem Planning, Short Course development for selected U. S. Forest Service Personnel

Research: IBP - Intensive Site Director, Grassland Biome; Contract Research with U. S. Forest Service; Colorado Experiment Station - Optimization of Land Management Practices

Publications, technical reports:

Payne, G. F., D. A. Jameson and A. M. McKinney. 1951. Nutritional values of certain Montana range forage plants. *Western Sec. Amer. Soc. Anim. Prod., Proc.*, 2:141-143.

Jameson, D. A. 1952. Nutritive value of browse on Montana winter ranges. *J. Range Manage.* 5:305-310.

Jameson, D. A. and G. W. Thomas. 1956. Time of day as a consideration in grass clipping experiments. *J. Range Manage.* 9:98-99.

Jameson, D. A. and D. L. Huss. 1959. The effect of clipping leaves and stems on numbers of tillers, herbage weights, root weights, and food reserves of little bluestem. *J. Range Manage.* 12:122-126.

Cotner, M. L. and D. A. Jameson. 1959. Costs of juniper control: bulldozing vs. burning individual trees. *Sta. Paper 43, Rocky Mountain Forest and Range Exp. Sta.* 14 p.

Jameson, D. A. 1961. Heat and desiccation resistance of tissue of important trees and grasses of the pinyon-juniper type. *Bot. Gaz.* 122:174-179.

Jameson, D. A. 1961. Growth inhibitors in native plants of northern Arizona. *Rocky Mountain Forest and Range Exp. Sta. Res. Note 61.* 2 p.

Jameson, D. A. 1962. Plant growth regulation (book review). *J. Range Manage.* 15:112.

Jameson, D. A. 1962. Effects of burning on a gallets-black grama range invaded by juniper. *Ecology* 43:760-763.

Jameson, D. A., J. A. Williams and E. W. Wilton. 1962. Vegetation and soils of Fishtail Mesa, Arizona. *Ecology* 43:403-410.

Jameson, D. A. 1963. Evaluation of the responses of individual plants to grazing. *In Range Res. Methods. A symposium. U. S. Dep. Agric. Forest Service Misc. Pub.* 940:109-116.

Jameson, D. A. 1963. Physiology of defoliation. Paper presented to joint meeting of American Society of Agronomy and American Society of Range Management. See: *Agron. Abstr.* 17-21:105.

- Jameson, D. A. 1963. Responses of individual plants to harvesting. *Botan. Rev.* 29:532-594.
- Jameson, D. A. 1964. Effects of defoliation on forage plant physiology. *Amer. Soc. Agron. Spec. Pub.* 5. p. 67-80.
- Jameson, D. A. and T. N. Johnsen, Jr. 1964. Ecology and control of alligator juniper. *Weeds* 12:140-142.
- Arnold, J. F., D. A. Jameson and E. H. Reid. 1964. The pinyon-juniper type of Arizona: effects of grazing, fire, and tree control. *U. S. Dep. Agric. Prod. Res. Rep.* 84. 28 p.
- Jameson, D. A. 1965. Arrangement and growth of pinyon and one-seed juniper trees. *Plateau* 37:121-127.
- Jameson, D. A. and E. H. Reid. 1965. The pinyon-juniper type of Arizona. *J. Range Manage.* 18:152-153.
- Jameson, D. A. 1965. Phenology of grasses of the northern Arizona pinyon-juniper type. *U. S. Forest Service Res. Note* RM-47. 8 p.
- Jameson, D. A. 1965. Nutrient minerals in grassland herbage (book review). *J. Range Manage.* 19:378.
- Jameson, D. A. 1966. Competition in a blue grama-broom snakeweed-actinea community and responses to selective herbicides. *J. Range Manage.* 19:121-124.
- Jameson, D. A. 1966. Pinyon-juniper litter reduces growth of blue grama. *J. Range Manage.* 19:214-217.
- Jameson, D. A. 1966. Diurnal and seasonal fluctuations in moisture content of pinyon and juniper. *U. S. Forest Service Res. Note* RM-67. 7 p.
- Jameson, D. A. 1966. Juniper control by individual tree burning. *U. S. Forest Service Res. Note* RM-71. 4 p.
- Jameson, D. A. 1967. The relationship of tree overstory and herbaceous understory vegetation. *J. Range Manage.* 20:247-249.
- Pearson, H. and D. A. Jameson. 1967. Relationship between timber and cattle production on ponderosa pine range--The Wild Bill range. *Rocky Mountain Forest and Range Exp. Sta. Pub.* 10 p.
- Jameson, D. A. 1968. Species interactions of growth inhibitors in native plants of northern Arizona. *U. S. Forest Service Res. Note* RM-113. 2 p.
- Jameson, D. A. 1968. Degradation and accumulation of inhibitory substances from *Juniperus osteosperma* (Torr.) Little. *Proc. IBP Symposium on plant-plant chemical interactions.* Santa Barbara, Calif. March 1968. Mimeo.

- Lavin, F., D. A. Jameson, and F. B. Gomm. 1968. Juniper extract and deficient aeration effects on germination of six range species. *J. Range Manage.* 21:262-263.
- Clary, W. P., P. F. Ffolliott, and D. A. Jameson. 1968. Relationship of different forest floor layers to herbage production. U. S. Forest Serv. Res. Note RM-123. 3 p.
- Jameson, D. A. and J. D. Dodd. 1969. Herbage production varies with soil in the pinyon-juniper type of Arizona. U. S. Forest Serv. Res. Note RM-131.
- Jameson, D. A. 1969. Rainfall patterns on vegetation zones in northern Arizona. *Plateau* 41:105-111.
- Bledsoe, L. J. and D. A. Jameson. 1969. Model structure for a grassland ecosystem, p. 410 to 435. In R. L. Dix and R. G. Beidleman [ed.] *The grassland ecosystem: a preliminary synthesis*. Colorado State Univ., Range Sci Dep. Sci. Ser. No. 2. 437 p.
- Vorhies, G. and D. A. Jameson. 1969. Fiber length in southwestern young-growth ponderosa pine. *Forest Prod. J.* 19:52-55.
- Jameson, D. A., R. K. Gierisch, and S. Wallace. 1970. Range condition classification by discriminant analysis. Colorado State Univ. Range Sci. Ser. (In press).
- Jameson, D. A. 1970. Degradation and accumulation of inhibitory substances from *Juniperus osteosperma* (Torr.) Little. *Plant and Soil*. (In press).
- Jameson, D. A. 1970. The value of broom snakeweed as a range condition indicator. *J. Range Manage.* (In press).
- Jameson, D. A. 1970. Juniper root competition reduces basal area of blue grama. *J. Range Manage.* (In press).

Name: Leslie W. Jochens

Born: 1922

Academic Training:

Degree	Year	Institution	Major
B.S.	1949	University of Nebraska	Agric. Engineering

Professional Experience:

Date	Position	Institution
1949-1960	Irrigation Engineer	Rocky Mountain Irrig. Co.
1961-1964	Irrigation Engineer	Warren Industries
1965-pres.	District Manager	Rain Bird Sprinkler Co.

Professional and Honorary Societies:

Registered Professional Engineer State of Colorado

Major Interests:

Design and sales of sprinkler irrigation systems for both agriculture and turf



Name: Arthur George Johanningsmeier

Born: 1930

Academic Training:

Degree	Year	Institution	Major
B.S.	1956	Purdue University	Biology and Chemistry
M.S.	1962	Purdue University	Biology
Ph.D.	1966	Boston University	Biology

Professional Experience:

Date	Position	Institution
Summer 1956	Naturalist	Shades State Park, Indiana
1958-1960	Instructor, Gen. Botany	Purdue University
1960-1962	Instructor, Gen. Zoology	Purdue University
1964-	Assistant Professor of Biology	Boston University

Professional and Honorary Societies:

Sigma Xi  
American Society of Mammalogists  
American Institute of Biological Science  
American Association for the Advancement of Science  
Ecological Society of America

Major Interests:

Development of techniques for the estimation of energy and materials utilization in the small mammal component of terrestrial food chains; biochemical, telemetric, and isotopic work with *Microtus pennsylvanicus* and *Sylvilagus floridanus* nutritional studies.

Current Professional Activities:

Teaching: Botany, zoology, and biology.

Research: Ecology of small mammals.

Publications, Technical Reports:

Johanningsmeier, A. G. 1962. Use of I-131 to measure movements of small animals. *Science* 138:147-148.

Johanningsmeier, A. G. 1962. Ecological studies on *Microtus pennsylvanicus*. M. S. Thesis. Purdue Univ. 147 p.

Johanningsmeier, A. G. 1966. Studies on energy and materials utilization in *Microtus pennsylvanicus* under field and laboratory conditions. Ph. D. Thesis. Boston Univ. 248 p.

Johanningsmeier, A. G. 1968. Book review: Recent Mammals of the World: a Synopsis of Families. S. Anderson and J. Knox Jones. *In Amer. Sci.* Spring 1968.

Johanningsmeier, A. G. 1970. Studies on energy and materials utilization in *Microtus pennsylvanicus* under field and laboratory conditions. In preparation.

Name: J. Knox Jones, Jr.

Born: 1929

Academic Training:

Degree	Year	Institution	Major
B.A.	1951	University of Nebraska	Zoology
M.A.	1953	University of Kansas	Zoology
Ph.D.	1962	University of Kansas	Zoology

Professional Experience:

Date	Position	Institution
1962-1965	Asst. Prof. Zool. Asst. Curator of Mammals, Mus. Natur. Hist.	Univ. Kansas
1965-1968	Assoc. Prof. Zool. Assoc. Curator of Mammals, Mus. Natur. Hist.	Univ. Kansas
1965-1967	Asst. Dir. Mus. Natur. Hist.	Univ. Kansas
1968-	Prof. Systematics and Ecol. Curator of Mammals, Mus. Natur. Hist. Assoc. Dir. Mus. Natur. Hist.	Univ. Kansas

Professional and Honorary Societies:

American Society of Mammalogists (Vice-president and Managing Editor)  
Society for the Study of Evolution (formerly Managing Editor)  
Society of Systematic Zoology (Council)  
AAAS  
Biological Society of Washington  
Herpetologists League  
Kansas Academy of Science  
Southwestern Association of Naturalists  
Sigma Xi

Major Interests:

Systematics, biogeography, and natural history of North American mammals, particularly on the Great Plains and in Middle America.

Current Professional Activities:

Teaching: Mammalogy and various graduate-level courses

Publications, Technical Reports:

Jones, J. K., Jr. and B. Mursaloglu. 1961. Geographic variation in the harvest mouse, *Reithrodontomys megalotis*, on the Great Plains and in adjacent regions. Univ. Kansas Mus. Natur. Hist. Pub. 14:9-27.

- Jones, J. K., Jr. 1964. Distribution and taxonomy of mammals of Nebraska. Univ. Kansas Mus. Natur. Hist. Pub. 16:1-356.
- Jones, J. K., Jr., E. D. Fleharty, and P. B. Dunnigan. 1967. The distributional status of bats in Kansas. Univ. Kansas Mus. Natur. Hist. Misc. Pub. 46:1-33.
- Jones, J. K., Jr. and S. Anderson (Eds.). 1967. Recent mammals of the World-- a synopsis of families. Ronald Press, New York. 453 p.
- Jones, J. K., Jr. and H. H. Genoways. 1967. Annotated checklist of bats from South Dakota. Kansas Acad. Sci. Trans. 70:184-196.
- Jones, J. K., Jr. (Ed.). 1969. Contributions in mammalogy: a volume honoring Professor E. Raymond Hall. Univ. Kansas Mus. Natur. Hist. Misc. Pub. 51:1-428.
- Jones, J. K., Jr. and R. S. Hoffman. 1969. Influence of late-glacial and post-glacial events on the distribution of recent mammals of the northern Great Plains. In W. Dort and J. K. Jones, Jr. [eds.] Pleistocene and recent environments of the central Great Plains. Univ. Kansas Press, Lawrence, Kansas. (In press).

Name: William M. Klein

Academic Training:

Degree	Year	Institution
B.S.	1955	Colorado State University
M.S.	1957	Colorado State University
Ph.D.	1964	Claremont Graduate School and University Center

Special Training:

1961-1965, U.S. Air Force School of Aerospace Medicine, Brooks Air Force Base, Texas.

Professional Experience:

Date	Position	Institution
1965-1969	Assistant in Herbarium	Colorado State University
1969-	Head of Herbarium Department	Colorado State University

Professional and Honorary Societies:

AAAS  
AAPT  
American Association Plant Taxonomy  
AIBS  
Botanical Society of America

Current Professional Activities:

Research: Co-principal investigator on research contract, "Effects of Shock on Plant Species and Plant Communities" sponsored by U.S. Geological Survey.

Publications, Technical Reports:

- Klein, W. M. 1958. Cotyledon variations in *Juniperus occidentalis* Hook. *Aliso* (April: 129).
- Gregory, D. P., and W. M. Klein. 1960. Investigations of meiotic chromosomes of six genera in the Onagraceae. *Aliso* 4:505-521.
- Klein, W. M. 1962. New taxa and recombinations in *Oenothera* (Anogra). *Aliso* 5:179-180.
- Klein, W. M. 1966. The origin of *Oenothera californica* Watson. (Abstr.) *Amer. J. Botany* 53:632.

Name: Ramon Hollis Klett

Born: 1936

Academic Training:

Degree	Year	Institution	Major
B.S.	1958	Texas A&M University	
M.S.	1963	Texas A&M University	Animal Science
Ph.D.	1966	Oregon State University	Animal Nutrition

Professional Experience:

Date	Position	Institution
1966-	Instructor, Animal Science	Louisiana State University

Professional and Honorary Societies:

Alpha Zeta  
American Society of Animal Science  
Louisiana Animal Science Association  
Sigma Xi

Major Interests:

The interrelationship between climatic environment, breed, and ration and their effects on feedlot performance; development of techniques for estimating intake and digestibility of grazing animals.

Publications, Technical Reports:

- Klett, R. H. 1963. Quantity and quality of milk produced by beef cows in selected herds in Texas. M.S. Thesis, Texas A & M University, College Station.
- Klett, R. H. and A. T. Ralston. 1964. Utilization of grass hay and a grass hay-legume mixture by replacement heifers. Proc. of the Western Section, Amer. Soc. Anim. Sci. 16:79-1, 79-6. Also Abstracted in J. Anim. Sci. 24:601.
- Klett, R. H., T. R. Mason, and J. K. Riggs. 1965. Milk production of beef cows and its relationship to the weaning weight of their calves. Proc. of the Western Section, Amer. Soc. Anim. Sci. 16:6-1, 6-6. Also abstracted in J. Anim. Sci. 24:586.
- Klett, R. H. 1966. A comparison of *in vivo* and *in vitro* techniques for the evaluation of varying roughage-concentrate rations. Ph.D. Dissertation, Oregon State University, Corvallis.
- Klett, R. H. and A. T. Ralston. 1967. A comparison of *in vitro* and *in vivo* digestion techniques. J. Anim. Sci. 26:922 (Abstr.).
- Klett, R. H. and A. T. Ralston. 1967. Variables affecting nylon bag and *in vitro* digestion. J. Anim. Sci. 26:222 (Abstr.).

- Klett, R. H. and A. T. Ralston. 1968. Effect of Inoculum source on *in vitro* dry matter digestion. J. Anim. Sci. 27:294 (Abstr.).
- Samford, R. A. and R. H. Klett. 1968. Feeding weanling calves on all-concentrate ration. J. Anim. Sci. 27:297 (Abstr.).
- Klett, R. H., G. G. Colvin, and R. A. Samford. 1969. Climatic effects on feedlot performance of steers. J. Anim. Sci. (Abstr.) In press.
- Samford, R. A. and R. H. Klett. 1969. Drylot performance of calves on concentrate rations. J. Anim. Sci. (Abstr.) In press.
- Waymack, L. B., B. J. Torbert, and R. H. Klett. 1969. Etiology Ca utilization in the parasitized calf. J. Anim. Sci. (Abstr.).
- Klett, R. H. and A. T. Ralston. 1969. Effect of inoculum source on *in vitro* dry matter digestion. J. Anim. Sci. In press.

Name: Jerry R. Kline

Born: 1932

Academic Training:

Degree	Year	Institution	Major
B.S.	1957	University of Minnesota	Soils
M.S.	1960	University of Minnesota	Soils
Ph.D.	1964	University of Minnesota	Soils

Professional Experience:

Date	Position	Institution
1957-1963	Research Assistant	University of Minnesota
1963-1964	Pre doctoral Research Associate	Argonne Nat. Laboratory
1964-1965	Post doctoral Research Associate	Argonne Nat. Laboratory
1965-1968	Associate Scientist, Chief Scientist	Puerto Rico Nuclear Center
1968-	Associate Ecologist	Argonne Nat. Laboratory

Major Interests:

Soil chemistry; soil-plant relationships applied to ecology.

Professional and Honorary Societies:

Soil Science Society of America  
Ecological Society of America  
AAAS  
Sigma Xi

Publications, Technical Reports:

- Kline, J. R. and R. H. Rust. 1966. Fractionation of copper in neutron irradiated soils. Soil Sci. Soc. Amer. Proc., 30:188-192.
- Kline, J. R., C. F. Jordan and C. Drury. 1967. The rain forest project Annual Report. PRNC 103. Clearinghouse Fed. Sci. and Tech. Information, Springfield, Va. 201 p.
- Kline, J. R. and C. F. Jordan. 1968. Tritium movement in soil of a tropical rain forest. Science, 160:550-551.
- Kline, J. R., C. F. Jordan and C. Drury. 1968. Rain forest annual report. PRNC 119. Clearinghouse Fed. Sci. and Tech. Information, Springfield, Va. 147 p.
- Kline, J. R. and N. Mercado. 1969. Preliminary Studies of radionuclide cycling in understory plants in the rain forest. In: A Tropical Rainforest H.T. Odum ed. In press.
- Kline, J. R. and S. S. Brar. 1969. Instrumental analysis of neutron irradiated soils. Accepted by Soil Sci. Soc. of Amer. Proc.
- Kline, J. R., J. E. Foss, and S. S. Brar. 1969. Lanthanum and Scandium distribution in three glacial soil of western Wisconsin. Accepted by Soil Sci. Soc. of Amer., Proc.



Name: Daniel Paul Knievel

Born: 1943

Academic Training:

Degree	Year	Institution	Major
B.S.	1965	University of Nebraska	Honors (Agronomy)
M.S.	1967	University of Wisconsin	Agronomy
Ph.D.	1968	University of Wisconsin	Agronomy

Professional Experience:

Date	Position	Institution
1968-	Crop Physiologist	University of Wyoming

Professional and Honorary Societies:

Alpha Zeta	Crop Science Society of America
Sigma Xi	American Society of Plant Physiologists
American Society of Agronomy	American Chemical Society.

Major Interests:

Crop improvement through elucidation and application of physiological principles to crop management and plant breeding.

Current Professional Activities:

Teaching: Crops  
Crop Physiology

Research: Carbohydrate translocation.  
Effect of temperature during seed maturation on lipid content of alfalfa and tall fescue seed.  
Managerial and physiological effects related to barley production.

Publications, Technical Reports:

Knievel, D. P. 1968. The effect of warm and cool temperatures on the development and growth of Timothy *Phleum pratense* L., Orchardgrass *Dactylis glomerata* L., and Tall fescue *Festuca arundinacea* L. Ph.D. Thesis, Univ. Wisconsin. 188 p.

Knievel, D. P. 1968. Crop growth analysis-concepts and application. Crop Care in Wyoming. 5 p.

Knievel, D. P. and D. Smith. 1970. Yields and chemical composition of Timothy *Phleum pratense* L. plants derived from summer and winter tillers. Submitted to Crop Sci.

Name: Dennis H. Knight

Born: 1937

Academic Training:

Degree	Year	Institution	Major
B.A.	1959	Augustana Coll., South Dakota	Biology
M.S.	1961	University of Wisconsin	Botant-Ecology
Ph.D.	1964	University of Wisconsin	Botant-Ecology

Professional Experience:

Date	Position	Institution
1959	Research Assistant	Quetico-Superior Wilderness Res. Center
1959-1963	Research Assistant	University of Wisconsin
1961	Research Assistant	Panama (Summer)
1963-1964	Teaching Assistant	University of Wisconsin
1964-1966	Instructor	Univ. Loja, Ecuador Peace Corps
1966-	Assistant Professor	University of Wyoming

Professional and Honorary Societies:

Ecological Society of America	AAAS
International Society for Tropical Ecology	AIBS
American Society of Range Management	Sigma Xi
Association for Tropical Biology	

Major Interests:

Ecology of the Western Great Plains and Rocky Mountains, Succession in tropical forest vegetation, the analysis of begetation on the basis of plant structure and function.

Current Professional Activities:

Teaching: General Biology, Ecology

Research: Influence of veg. structure on ecosystem function in grasslands and coniterous forests; tropical forest ecology

Publications, Technical Reports:

Knight, D. H. 1963. A distance method for constructing forest profile diagrams and obtaining structural data. *Trop. Ecol.* 4:89-94.

Knight, D. H., O. Sexton, H. Heatwole. 1964. Correlation of micro-distribution of some Panamanian reptiles and amphibians with structural organization of the habitat. *Caribbean J. Sci.* 4:261-295.

Knight, D. H. 1965. A gradient analysis of Wisconsin prairie vegetation on the basis of plant structure and function. *Ecology* 46:744-747.

- Knight, D. H. 1966. Some necessary functions in the stable tropical community. [In Spanish] Turrialba 16:384-386.
- Knight, D. H., V. Loaiza, and F. Vivar. An ecological guide for a trip from the high Andes to the lowland rainforest in Ecuador. [In Spanish] *Annales de la Facultad de Agronomie y Veterinaria de la Universidad de Loja* 1:13-17.
- Knight, D. H. and O. L. Loucks. 1969. A quantitative analysis of Wisconsin forest vegetation on the basis of plant function and gross morphology. *Ecology* 50:219-234.

Name: Kirvin L. Knox

Born: 1936

Academic Training:

Degree	Year	Institution	Major
B.S.	1958	Fresno State College	Dairy Husbandry
M.S.	1960	Colorado State University	Nutrition
Ph.D.	1964	University of California	Physiology-Biochemistry

Special Training:

Chromatography training, UCLA, 1962; Special leave U.C. to study biochemistry of lactic acid.

Professional Experience:

Date	Position	Institution
1958-1960	Research Assistant	Colorado State University
1960-1964	NIH Predoctoral-Fellow	University of California
1960-1964	Chemist	Escalon Packers
1964-	Professor	Colorado State University

Professional and Honorary Societies:

Phi Kappa Phi	American Society of Animal Science
Sigma Xi	Colorado-Wyoming Academy of Science
Gamma Sigma Delta	New York Academy of Science
Alpha Zeta	AAAS
American Dairy Science Association	

Major Interests:

Nutrition and biochemistry of normal and abnormal animals, including: energy metabolism, biochemical basis of disease and environmental physiology.

Current Professional Activities:

West. Reg. Committee W-46, West Reg. Committee W-88. American Soc. Animal Sci. Prog. Chairman and Editorial Committee, West Sec. ASAS, Grad Student Eval. Committee, ADSA Colo. Memb. Chrman.

Teaching: Principles of Animal Nutrition, Animal Nutritions, Bioenergetics

Research: (IBP) Energy Flux in Pronghorn Antelope, Energy Flow in Cattle, Energy Metabolism in Domestic Animals, Neonatal Enteric Disease, Betaine Metabolism and Lactic Acidosis

Name: James W. Lavelle

Born: 1930

Academic Training:

Degree	Year	Institution
B.S.	1953	Abilene Christian College
M.A.	1955	University of Texas
Ph.D.	1968	University of Colorado

Professional Experience:

Date	Position	Institution
1954-1955	Laboratory Technologist	Breckenridge Hospital, Austin Blood Bank
1955-1956	Instructor of Biology	Abilene Christian College
1956-	Head of Biology Dept.	Southern Colo. State College

Major Interests:

Limnology, Primary productivity, stream biology, and invertebrate zoology.

Professional and Honorary Societies:

American Association for the Advancement of Science  
American Institute of Biological Sciences  
Colorado-Wyoming Academy of Science  
National Education Association  
Sigma Xi

Publications:

Author or coauthor of 4 publications.

Lavelle, J. W. 1955. The distribution and frequency of occurrence of blood groups and Rh factors in the population of Austin, Texas. Master's Thesis, Univ. Texas, Austin, Tex.

Lavelle, J. W. and Simms. 1966. College biology laboratory manual. Wm. C. Brown Book Co., Dubuque, Iowa. 251 p.

Lavelle, J. W. 1966. Development of a method of measuring primary production in lotic habitats. In press.

Lavelle, J. W. 1967. Primary and secondary productivity of the upper Arkansas River. Doctoral thesis, Univ. Colorado, Boulder, Colo.

Name: Robert Lavigne

Born: 1930

Academic Training:

Degree	Year	Institution	Major
B.A.	1952	American International College	Biology
M.S.	1958	University of Massachusetts	Entomology
Ph.D.	1961	University of Massachusetts	Entomology

Special Training:

Institute of Animal Behavior

Professional Experience:

Date	Position	Institution
1956-1959	Teaching Fellowship Instructor	University of Massachusetts University of Massachusetts
1959-1965	Assistant Professor	University of Wyoming
1965-	Associate Professor	University of Wyoming

Professional and Honorary Societies:

Entomological Society of America  
Pan-Pacific Entomological Society  
Animal Behavior Society  
Society of Systematic Zoology  
Kansas Entomological Society

Major Interests:

Behavior and taxonomy of robber flies (*Diptera asilidae*); bionomics and behavior of ants; food web studies including effect of parasites and predators on insect populations.

Current Professional Activities:

Study of insect fauna found in digestive systems of lizards and tree frogs.

Teaching: Insect Behavior, Taxonomy of Insects, Theory of Classification.

Research: Effect of insect parasites and predators on grassfeeding insects.

Publications, Technical Reports:

Lavigne, R. J. 1959. Highlight ant control at 19th Annual Eastern PCO Conference, January 21-23. Pest Control 27:43-44, 46, 66.

Lavigne, R. J. 1959. Biology of the meadow spittlebug, *Philaenus spumarius* in Massachusetts. J. Econ. Entomol. 52:904-907.

- Roberts, E. C. and R. J. Lavigne. 1959. Fungus gnat found to inhibit development of turfgrass. United States Golf Ass. J. 12:25-26.
- Smith, C. T., F. Shaw, R. J. Lavigne, J. Archibald, H. Fenner, and D. Stern. 1960. Residuas of malathion on alfalfa and in milk and meat. J. Econ. Entomol. 53:495-496.
- Fisser, H. F. and R. J. Lavigne. 1961. A leaf feeding beetle found on three-tip sagebrush. J. Range Manage. 14:278-279.
- Lavigne, R. J. 1961. Occurrence of *Forcipomyia ciliata* Winn. in North America with notes on its biology (Diptera:Ceratopogonidae). Pan-Pacific Entomol. 37:108-110.
- Lavigne, R. J. 1962. Immature stages of the stalk-eyed fly, *Sphyracephala brevicornis* Say (Diptera:Diopsidae), with observations on its biology. Brooklyn Entomol. Soc. Bull. 57:5-14.
- Lavigne, R. J. 1963. Notes on the behavior of *Stenopogon coyote* Bromley with a description of the eggs. Pan-Pacific Entomol. 39:103-107.
- Lavigne, R. J. 1963. Description of the eggs of *Leptogaster salvia* Martin (Diptera:Asilidae). Pan-Pacific Entomol. 39:176.
- Lavigne, R. J. 1963. Biological control. Crop Care in Wyoming, September. 4 p.
- Lavigne, R. J. 1964. Notes on the distribution and ethology of *Efferia bicaudata* (Diptera:Asilidae), with a description of the eggs. Ann. Entomol. Soc. Amer. 57:341-344.
- Lavigne, R. J. and R. E. Pfadt. 1964. The role of rangeland grasshoppers as scavengers. J. Kansas Entomol. Soc. 37:1-4.
- Pfadt, R. E. and R. J. Lavigne. 1964. Alfalfa weevil control by stubble treatment. J. Econ. Entomol. 57:996-997.
- Lavigne, R. J. 1965. New host plant for *Tephritis araneosa*. Pan-Pacific Entomol. 41:100.
- Lavigne, R. J. 1965. Abnormal antennae in *Batyle ignicollis* (Coleoptera:Carabycidae). J. Kansas Entomol. Soc. 38:358.
- Lavigne, R. J. and R. E. Pfadt. 1965. Insects collected on Wyoming rangeland in connection with grasshopper egg sampling. J. Kansas Entomol. Soc. 38:61-66.
- Pfadt, R. E. and R. J. Lavigne. 1965. Further tests with power dusting to control the sheep ked. J. Econ. Entomol. 58:37-38.
- Lavigne, R. J. and L. Stevens. 1965. Systemics for the control of the clear-winged cottonwood leaf aphid in southeast Wyoming. J. Econ. Entomol. 58:818-821.
- Lavigne, R. J. 1966. *Paraboloeratus viridis* (Homoptera:Cicadellidae) and ants associated with it. J. Kansas Entomol. Soc. 39:65-67.

- Lavigne, R. J. 1966. Individual mound treatments for control of the western harvester ant, *Pogonomyrmex occidentalis* (Cresson), in Wyoming. J. Econ. Entomol. 59:525-532.
- Lavigne, R. J. and R. G. Fisser. 1960. Controlling western harvester ants. Mountain States Regional Pub. 3. 4 p.
- Lavigne, R. J. and R. E. Pfadt. 1966. Parasites and predators of Wyoming rangeland grasshoppers. Wyoming Agr. Exp. Sta. Sci. Monograph 3. 31 p.
- Lavigne, R. J. 1967. Notes on two species of *Asilus* (Diptera:Asilidae) associated with rodent burrows with a redescription of *Asilus gilvipes* Hine. J. Kansas Entomol. Soc. 41:334-339.
- Lavigne, R. J., M. Bloom, and W. Neys. 1968. Adult behavior of *Tabanus reinwardtii* and *Chrysops fulvaster* (Diptera:Tabanidae) in southeastern Wyoming. Wyoming Agr. Exp. Sta. Sci. Monograph 12. 37 p.
- Lavigne, R. J. 1969. Bionomics and nest structure of *Pogonomyrmex occidentalis* (Hymenoptera:Formicidae). Ann. Entomol. Soc. Amer. 62:1166-1175.
- Lavigne, R. J. 1969. A new species of *Lasiopogon* (Diptera:Asilidae) from Wyoming. J. Kansas Entomol. Soc. 42:363-365.
- Holland, F. R. and R. J. Lavigne. 1969. Comparative behavior of eleven species of Wyoming robber flies (Diptera:Asilidae). Wyoming Agr. Exp. Sta. Sci. Monograph 18. 60 p.
- Lavigne, R. J. 1969. Ethology of North American robber flies. I. Courtship and predatory behavior of *Cyrtopogon auratus* and *C. glarealis* (Diptera:Asilidae). J. Kansas Entomol. Soc. (In press).
- Lavigne, R. J. 1969. Ethology of North American robber flies. II. Courtship and predation behavior of *Heteropogon maculinervis* (Diptera:Asilidae). J. Kansas Entomol. Soc. (In press).
- Lavigne, R. J. 1969. Insects in the behavior laboratory. Amer. Biol. Teacher. (In press).
- Lavigne, R. J. 1969. The Asilidae of Wyoming. Wyoming Agr. Exp. Sta. Sci. Monograph. (In press).
- Barr, W. and R. J. Lavigne. 1969. Annotated list of the Asilidae of Idaho. Idaho Agr. Exp. Sta. (In press).



Name: James K. Lewis

Born: 1924

Academic Training:

Degree	Year	Institution	Major
	1943	Abilene Christian College	
B.S.	1948	Colorado State University	Animal Husbandry
M.S.	1950	Montana State College	Animal Husbandry
Ph.D.	1970	Texas A and M University	Range Management

Professional Experience:

Date	Position	Institution
1948-1950	Research Assistant	Montana State Coll.
1950-1956	Assistant Professor, Animal Husbandry	South Dakota State Coll.
1956-1957	Teaching Assistant	Texas A and M. Univ.
1958-	Associate Professor, Animal Science	South Dakota State Univ.

Professional and Honorary Societies:

American Society of Range Management	British Ecological Society
American Society of Animal Science	AAAS
Ecological Society of America	Phi Kappa Phi
The Wildlife Society	Gamma Sigma Delta
British Grassland Society	Sigma Xi

Major Interests:

Effect of intensity of grazing on range ecosystems; range measurements; range animal nutrition.

Publication, Technical Reports:

- Lewis, J. K., F. R. Gartner, and J. Nesvold. 1964. The effect of winter supplementation and intensity of grazing on steer gains on native range. Proc. Western Section, Am. Soc. Animal Sci. 15:49.
- Lewis, J. K., F. R. Gartner, and W. R. Trevillyan. 1965. Effect of self-fed lambing ration on lamb production. South Dakota Agr. Exp. Sta. Circ. 171:24.
- Lewis, J. K., F. R. Gartner, L. B. Embry, and J. Nesvold. 1965. The effect of level of winter supplementation and intensity of summer grazing on steer gains on native range. South Dakota Agr. Exp. Sta. Circ. 171:29.
- Lewis, J. K., J. Nesvold, and B. Beer. 1966. The effect of level of winter supplementation and intensity of summer grazing on steer gains on native range. South Dakota Agr. Exp. Sta. A.S. Series 66-9.
- White, E. M. and J. K. Lewis. 1967. Recent gully formation in the prairie areas of the Northern Great Plains. Plains Anthropol. 12:318.
- Lewis, J. K. 1969. Range management viewed in an ecosystem framework, p. 97 to 173. In G. M. Van Dyne [ed.] The ecosystem concept in natural resources management. Academic Press, New York. 383 p.

Name: John Edward Lloyd

Born: 1940

Academic Training:

Degree	Year	Institution	Major
B.S.	1962	Pennsylvania State University	Zoology and Entomology
Ph.D.	1967	Cornell University	Entomology

Professional Experience:

Dates	Position	Institution
1962-1967	Research Assistant	Cornell University
1967-1968	Assistant Professor, Entomology Ext.	Pennsylvania St. Univ.
1968-	Assistant Professor, Entomology	University of Wyoming

Professional and Honorary Societies:

Entomological Society of America  
Phi Kappa Phi  
Phi Sigma  
Sigma Xi

Major Interests:

Entomology, Applied Entomology, Animal Ecology, Medical Entomology, Insect Toxicology, Animal Husbandry

Current Professional Activities:

Teaching: Insect Toxicology  
Insects Affecting Livestock

Research: Hypoderma lineatum in horses in Wyoming.  
The effect of biting flies on weight gains of beef cattle in Wyoming.  
Resinous adjuvants to increase the residual toxicity of malathion.

Publication, Technical Reports:

Lloyd, J. E. and J. G. Matthyse. 1966. Polymer--insecticide systems for use as livestock feed additives. J. Econ. Entomol. 59:363-367.

Lloyd, J. E. 1967. Polymer insecticide systems for use as livestock feed additive larvicides. Ph.D. Thesis, Cornell Univ. 150 p.

Matthyse, J. G., J. E. Lloyd, J. F. Butler, and K. Tillapaugh. 1968. Cattle grub control by dust bag application of coumaphos in summer. J. Econ. Entomol. 61:311-312.

Name: R. Stuart Mackay

Academic Training:

Degree	Year	Institution	Major
Ph.D.	1949	University of California	Physics

Professional Experience:

Date	Position	Institution
1949-1957	Assistant Professor, Electrical Eng.	University of California
1958-1960	Associate Clinical Professor and Associate Research Physicist	University California Medical Center
1961-1963	Clinical Professor and Research Biophysicist	University of California
1964-1967	Director, Physiology Project	Space Sciences Laboratory
1967-	Professor, Biology	Boston University

Professional and Honorary Societies:

National Academy of Sciences  
International Federation for Medical and Biological Engineering  
National Biophysics Society  
Bio-Medical Engineering Society  
Phi Beta Kappa  
Sigma Xi  
Pi Mu Epsilon

Major Interests:

Electron microscopy; nonlinear electronic circuits and pulse techniques; medical electronics research; bio-medical telemetry; bio-medical engineering.

Publications, Technical Reports: (Over 150; only pertinent recent ones included.)

- Mackay, R. S. 1964. Deep body temperature of untethered dolphin recorded by ingested radio transmitter. *Science* 144:864-866.
- Mackay, R. S. 1965. Telemetering from within the body of animals and man: Endoradiosondes, p. 147-235. *In* Caesar Caceres [ed.] *Biomedical Telemetry*. Academic Press.
- Mackay, R. S. 1966. Telemetering physiological information from within cetaceans and the applicability of ultrasound to understanding *in vivo* structures and performance, p. 445-470. *In* K. Morris [ed.] *Whales, Dolphins and Porpoises*. University of California Press, 1966.
- Mackay, R. S. 1966. Tortoise and lizard temperature observations in the laboratory and the field. *Symposium on Recent Developments in Research Methods*. Abstracts P. 30, October 1966. National Institutes of Health.

Mackay, R. S. 1968. Bio-Medical Telemetry: Sensing and Transmitting Biological Information from Animals and Man. John Wiley, New York.

Name: William E. Marlatt

Born: 1931

Academic Training:

Degree	Institution	Major
B.A.	Nebraska State College	Physical Sciences and Math
M.S.	Rutgers University	Agricultural Meteorology
Ph.D.	Rutgers University	Soil Physics

Professional Experience:

Date	Position	Institution
1951-1953	Aerographer	U.S. Navy
1954-1955	Research Assistant	USFS Diseases, Fire Weather
1956-1958	Research Assistant	Rutgers University (meteorology)
1958-1961	Research Associate and Instructor	Rutgers University (meteorology)
1961-1964	Assistant Professor	Colorado State University
1964-1967	Associate Professor	Colorado State University
1967-	Associate Dean, Graduate School	Colorado State University

Professional and Honorary Societies:

American Meteorology Society  
American Astronautical Society  
Sigma Xi  
Who's Who in American Men in Science  
Who's Who in the West

Major Interests:

Interaction of climate and environment; remote sensing.

Publications, Technical Reports:

Author or coauthor of 16 publications. Pertinent or recent publications are listed below:

Marlatt, W. E. 1961. The interactions of microclimate, plant cover, and soil moisture content affecting evapotranspiration rates. Crops and Soils. CSU Atmos. Sci. Dept. Tech. Paper No. 23. 13 p.

Marlatt, W. E., A. V. Havens, N. A. Willits and G. D. Brill. 1961. A comparison of computed and measured soil moisture under snap beans. J. Geophys. Res. 66:535-541.

Marlatt, W. E. 1965. The effect of weather modification on physical processes in the microclimate. Papers presented in the Ground Level Climatology Symposium at the 1965 ASM-AAAS Berkeley Meeting.

- Marlatt, W. E. and D. Hill. 1965. Circuitry modification of the Model IT-2 Infrared Radiometer for an improved precision over a wide temperature range. CSU Atmos. Sci. Dept. Misc. Report. 12 p.
- Moxham, R. M., D.R. Crandell and W. E. Marlatt. 1965. Thermal features at Mount Rainier, Washington, as revealed by infrared surveys. U.S. Geol. Prof. Paper No. 525-D. 8 p.
- Marlatt, W. E. 1967. Remote and *in situ* temperature measurements of land and water surfaces. J. Appl. Meteor. 6:272-279.

Name: Yvon Martel

Born: 1942

Academic Training:

Degree	Year	Institution	Major
B.A.	1963	University of Montreal	
B.S.	1967	University of Laval	Soils
Ph.D. (tentative)		University of Saskatchewan	Soil Biochemistry

Major Interests:

Mathematical modelling of organic matter conversions in soil.

Professional and Honorary Societies:

La corporation des agronomes de la province de Quebec.

Canadian Society of Soil Science.

International Society of Soil Science.

Publications, Technical Reports:

Martel, Y. and E. Paul. 1969. The dynamics of soil organic carbon, abs.  
The Canadian Soil Soc., Saskatoon, Saskatchewan, Canada.

Martel, Y. and E. Paul. 1970. A Process Model; the turnover of carbon in  
soils, I.B.P. Grassland Meeting, Saskatoon 1969. (In press.)

Name: Jerry V. Mayeux

Born: 1937

Academic Training:

Degree	Year	Institution	Major
B.S.	1960	Louisiana State Univ.	Bacteriology
M.S.	1961	Louisiana State Univ.	Bacteriology
Ph.D.	1965	Oregon State Univ.	Microbiology

Professional Experience:

Date	Position	Institution
1960-1961	Research Assistant	Louisiana State
1961-1964	Res. & Teaching Asst.	Oregon State Univ.
1965	Asst. Chief, Microbiol.	U. S. Army, Letterman, Gen'l Hospital
1965-1966	Research Associate	NASA, Ames Res. Center, Exobiology Div.
1966-	Asst. Prof., Microbiol.	Colorado State Univ.

Professional and Honorary Societies:

American Society for Microbiology  
AAAS  
Sigma Xi  
Phi Sigma

Major Interests:

Physiology and ecology of aquatic and terrestrial bacteria.

Current Professional Activities:

Teaching: Microbiology of Water and Sewage; Bacteria in Aquatic Environments.

Research: Bacterial Ecology of Pawnee Grassland Soils; Effects of Heavy Metal Ion Pollution on Aquatic Bacteria

Publications, Technical Reports:

Mayeux, J. V. and A. R. Comer. 1962. The effect of 2,3,6-trichlorophenylacetic and 2,2-dichloropropionic acids on nitrate oxidation. *Appl. Microbiol* 10:206-210.

Mayeux, J. V., R. P. Bhatt, and C. M. Gilmour. 1963. The comparative role of molecular oxygen and nitrate-oxygen in the dissimilation of glucose. *Bacteriology Proc.* 63:116. (Abstr.)

Gilmour, C. M., R. P. Bhatt, and J. V. Mayeux. 1964. Comparative role of nitrate and molecular oxygen in the dissimilation of glucose. *Nature* 203:55-58.

Gilmore, C. M., R. P. Bhatt, and J. V. Mayeux. 1964. Participation of molecular and nitrate oxygen in the terminal pathway(s) of glucose catabolism. *Intern. Bot. Congr.* 10:369-370.

Mayeux, J. V. and E. J. Johnson. 1967. Mechanism of purine nucleotide inhibition of autotrophic CO<sub>2</sub> fixation in *Thiobacillus neapolitanus*. *Bacteriology Proc.* 67:121. (Abstr.)



Littlejohn, J. H., S. M. Morrison and J. V. Mayeux. 1969. CO<sub>2</sub> fixation in conjunction with Fe and Mn precipitation by Sphaerotilus discophorus. Bacteriol. Proc. 69, 24-25.

Name: J. Forbes McClellan

Academic Training:

Degree	Year	Institution	Major
B.S.	1947	University of Illinois	Zoology
M.S.	1948	University of Illinois	Zoology
Ph.D.	1954	University of Illinois	Zoology and Physiology

Special Training:

Colorado State University, Research Associate in Space Biology, 1966.  
 Colorado State University, Training in Electron Microscopy, 1966.  
 University of California, Institute in Protozoology, 1967.

Professional Experience:

Date	Position	Institution
1950-1951	Fellow in Zoology	University of Illinois
1951-1963	Instructor - Associate Professor	University of Detroit
1963-	Associate Professor, Zoology	Colorado State University

Professional and Honorary Societies:

Society of Protozoologists	AAAS
American Association of University Professors	Phi Sigma
American Society of Zoology	Sigma Xi

Major Interests:

Cell and nuclear division; generation time and DNA synthesis; relation of structure to function in Protozoa; fine structure of Protozoa (electron microscopy).

Publications, Technical Reports:

- McClellan, J. F. 1948. Observations on plasmodium of birds from the vicinity of Urbana, Illinois. Master's Thesis.
- McClellan, J. F. Literature review of selenium toxicology (For Detroit Arsenal U.S. Army Ordnance).
- McClellan, J. F. Survey of freshwater plankton, Detroit River and Lake Erie. (Report on new water intake for Wayne County Road Commission).
- McClellan, J. F. 1954. Observations on nuclear division on *Pelomyxa illinoisensis*. Diss. Abstr., 14:1858.

- McClellan, J. F. 1959. Observations on nuclear division in *Pelomyxa illinoisensis*. Kudo. J. Protozool. 6:322-331.
- McClellan, J. F. 1959. Preliminary investigation of cytological details of cysts of *Pelomyxa illinoisensis*. J. Protozool, 5 (Suppl.) 10.
- McClellan, J. F. 1964. Tritiated thymidine incorporation and utilization in amoeba. J. Protozool., 11:20.
- McClellan, J. F. 1966. Deoxyribonucleic acid synthesis in the giant amoeba *Pelomyxa carolinensis*. J. Protozool., 13:26.
- Daniels, E. W., P. A. Sustarsic and J. F. McClellan. 1969. Giant amoebae from Colorado identified by transplantation. J. Protozool. (In press).
- McClellan, J. F. DNA Synthesis in a syncytial system. (In manuscript).
- McClellan, J. F. Electron microscope studies of *Bursaria truncatella*. (In preparation).
- McClellan, J. F. Electron microscope studies of *Homalozoon vermiculare*. (In preparation).

Name: Burruss McDaniel

Born: 1927

Academic Training:

Degree	Year	Institution	Major
B.A.	1953	University of Alaska	Biological Sciences
M.S.	1961	Texas A & M University	Entomology
Ph.D.	1965	Texas A & M University	Entomology

Professional Experience:

Date	Position	Institution
1957-1959	Entomologist & Dir. Research	Insect Control & Res. Inc., Baltimore, Maryland
1959-1961	Graduate Assist., Entomol. Dep.	Texas A & M University
1961-1966	Department of Biology	Texas A & M University
1961-1966	Research Associate	Rob & Bessie Welder Wildl. Found., Stinton, Texas (Summers)
1966-	Associate Prof. Entomology	South Dakota State Univ.

Professional and Honorary Societies:

Kansas Entomological Society  
Society for the Study of Evolution  
AIBS  
Entomological Society of America  
Entomological Society of Washinton, D. C.  
American Ornithologists Union  
South Dakota Academy of Science  
Texas Academy of Science  
Southwestern Association of Naturalists (Member of Board of Governors)  
American Men of Science  
Sigma Xi  
Gamma Sigma Delta

Major Interests:

Taxonomy of mites and insects

Publications, Technical Reports:

- McDaniel, B. and E. U. Balsbaugh, Jr. 1968. Bovine manure as an overwintering medium for Coleoptera in South Dakota. *Ann. Entomol. Soc. Amer.* 61:765-768.
- McDaniel, B. 1968, 1969. The armored scale insects of Texas (Homoptera: Coccidea: Diaspididae). *The Southwestern Natur.* 13:201-241; 14:89-113; 14:270-291. Parts IV through VII in press.
- Guad, J. And B. McDaniel. 1969. New genus for *Chauliacia tricapitosetosa* McDaniel. *Acarologia* 11:384-391.

Name: John S. Mecham

Born: 1928

Academic Training:

Degree	Year	Institution	Major
B.A.	1950	University of Texas	Zoology
M.S.	1952	University of Florida	Zoology
Ph.D.	1955	University of Texas	Zoology

Professional Experience:

Date	Position	Institution
1953	Teaching Assistant	University of Texas
1954-1955	NSF Fellow	University of Texas
1955	Assistant Professor	University of Tulsa
1956-1961	Associate Professor	Auburn University
1961-	Associate Professor	Texas Tech University

Professional and Honorary Societies:

Society for Study of Evolution  
AAAS  
Society for Systematic Zoology  
Southwest Association of Naturalists  
American Society of Ichthyologists and Herpetologists

Major Interests:

Evolution, systematics and ecology of amphibians and reptiles.

Publications, Technical Reports:

- Milstead and J. S. Mecham. 1949. *Lampropeltis alterna* from Pecos County, Texas. *Herpetologica* 5:140.
- Milstead, McClintock, and J. S. Mecham. 1950. The amphibians and reptiles of the Stockton Plateau in northern Terrell County, Texas. *Tex. J. Sci.* 2:543-561.
- Mecham, J. S. 1952. Notes on the larvae of two Florida salamanders (with Hellman). *Quart. J. Fla. Acad. Sci.* 15:127-133.
- Mecham, J. S. 1954. Geographic variation in the green frog, *Rana clamitans* Latreille. *Tex. J. Sci.* 6:1-24.
- Mecham, J. S. 1956. The relationship between the ringneck snakes *Diadophis regalis* and *D. punctatus*. *Copeia* 1956:51-52.
- Mecham, J. S. 1957. The taxonomic status of some southwestern skinks of the *multivirgatus* group. *Copeia* 1957:111-123.

- Mecham, J. S. 1957. Some hybrid combinations involving Strecker's chorus frog, *Pseudacris streckeri*. Tex. J. Sci. 9:337-345.
- Mecham, J. S. 1958. Some Pleistocene amphibians and reptiles from Friesenhana Cave, Texas. Southwestern Nat. 3:17-27.
- Mecham, J. S. 1959. Experimental evidence of the relationship of two allopatric chorus frogs of the genus *Pseudacris*. Tex. J. Sci. 11:343-347.
- Mecham, J. S. 1960. Natural hybridization between the treefrogs *Hyla versicolor* and *Hyla avivoca*. J. Elish Mitchell Sci. Soc. 76:64-67.
- Mecham, J. S. 1960. Range extensions for two southeastern skinks. Herpetologica 16:224.
- Mecham, J. S. 1960. Introgressive hybridization between two southeastern treefrogs. Evolution 14:445-457.
- Mecham, J. S. 1961. Isolating mechanisms in anuran amphibians. p. 24-61. In W. F. Blair, (ed).
- Mecham, J. S. 1964. Ecological and genetic relationships of the two cricket frogs, genus *Acris*, in Alabama. Herpetologica 20:84-91.
- Mecham, J. S. 1965. Genetic relationships and reproductive isolation in southeastern frogs of the genera *Pseudacris* and *Hyla*. Amer. Midland Nat. 74:269-308.
- Mecham, J. S. 1967. Polymorphic *Eumeces multivirgatus* from the Texas High Plains. Southwestern Nat. 12:104-105.
- Mecham, J. S. 1967. *Notophthalmus perstriatus*. Catalogue of American amphibians and reptiles, account 38. Amer. Soc. Ich., Herp., 2 p.
- Mecham, J. S. 1967. *Notophthalmus viridescens*. Catalogue of American amphibians and reptiles, account 53. Amer. Soc. Ich., Herp., 4 p.
- Mecham, J. S. 1968. Evidence of reproductive isolation between two populations of the frog, *Rana pipiens*, in Arizona. Southwestern Nat. 13:35-43.
- Mecham, J. S. 1968. On the relationship between *Notophthalmus meridionalis* and *Notophthalmus kallerti*. J. Herpetology 2:121-127.
- Mecham, J. S. 1968. *Notophthalmus meridionalis*. Catalogue of American amphibians and reptiles, account 74. Amer. Soc. Ich., Herp., 2 p.
- Mecham, J. S. 1969. Studies on evolutionary effects of isolation in the *Rana pipiens* complex. Year Book Amer. Phil. Soc., 1968:314-316.
- Mecham, J. S. 1969. New information from experimental crosses on genetic relationships within the *Rana pipiens* species group. J. Exp. Zool. 170:169-180.

Name: Lee D. Miller

Born: 1938

Academic Training:

Degree	Year	Institution	Major
B.S.E.	1961	University of Michigan	Math Engineering
B.S.E.	1962	University of Michigan	Civil Engineering
M.S.E.	1963	University of Michigan	Geodetic Engineering
Ph.D.	1968	University of Michigan	Forestry

Special Training:

Date	Position	Institution
1960-1961	Administrative Assistant	University of Michigan
1962-1963	Computer Programmer	University of Michigan
1961-1963	Teaching Fellow	University of Michigan
1963-1968	Research Assistant	University of Michigan
1968-1970	Physical Scientist	U.S. Geological Survey
1968-Present	Assistant Professor	Colorado State University

Professional and Honorary Societies:

Sigma Xi	Michigan Acad. Sci., Arts and Letters
American Society of Civil Engineering	Ecological Society of America
American Congress of Surveying & Map.	Society of American Foresters
American Society of Photogrammetry	American Geophysical Union
AAAS	AIBS

Major Interests:

The application of the techniques of remote sensing of environment to collect data of interest to the natural resource manager and scientist; Bioclimatology, Micrometeorology, Systems Engineering, Instrumentation Engineering.

Current Professional Activities:

Chairman of a Standing Committee of the Colorado Natural Resource Center on Remote Sensing of Natural Resources.

Teaching: Remote sensing of natural resources

- Research:
1. Impact of remote sensing on urban watershed analysis (OWRR).
  2. Application of airborne and ground remote sensing systems to the measurement of the grasslands biome (IBP).
  3. Aerial thermal mapping of geothermal phenomena.

Publications, Technical Reports:

- Miller, L. D. 1963. Scintillation and the surveyor. *J. Surv. & Map., Amer. Soc. Civil Eng., Proc.*, 89(SU-1):13-25.
- Miller, L. D. 1965. Diurnal and seasonal variations in the radiation of objects and backgrounds, 4.5-5.5 $\mu$  spectral region. Univ. Michigan, Inst. Sci. & Tech., Rep. #6400-32-T. 42 p. CONFIDENTIAL.
- Miller, L. D. 1965. Investigation of a method for remote detection and analysis of life on a planet. Univ. Michigan, Inst. Sci. & Tech., Rep. #6590-4-F. 33 p.
- Miller, L. D. 1966. Location of anomalously hot earth with infrared imagery in Yellowstone National Park. Proceedings Fourth Symposium on Remote Sensing of Environment, Univ. Michigan, Infrared Physics Lab., Inst. Sci. & Tech., p. 751-769.
- Miller, L. D. 1966. Report to the Sixth Yellowstone Field Research Expedition. Final Report - Sixth Yellowstone Field Research Expedition, Pub. #37. Atmospheric Sciences Research Center, State Univ. New York, Albany, p. 92-98.
- Miller, L. D. 1966. Determination of mass and distribution of mass from thermal infrared imagery. Univ. Michigan, Inst. Sci. & Tech. Rep. #6400-48-S. 31 p.
- Miller, L. D. 1967. Report to the Seventh Yellowstone Field Research Expedition. Final Report - Seventh Yellowstone Field Research Expedition, Pub. #45. Atmospheric Sciences Research Center, State Univ. New York, Albany, p. 112-120.
- Miller, L. D. 1968. Winter observations on steaming ground in Yellowstone National Park, 1968. Eighth Yellowstone Field Research Expedition, Pub. #68. Atmospheric Sciences Research Center, State Univ. New York, Albany, p. 133-148.
- Miller, L. D. 1968. Steaming and warm ground in Yellowstone National Park: Its location, geophysics, vegetation, and mapping with aerial multi-spectral imagery. Ph.D. Thesis, Forestry Department, Univ. Michigan. 153 p.
- Miller, L. D. 1969. Measurement of resource environments with airborne thermal mappers--where do we stand? Proceedings Purdue Centennial Year Symposium on Information Processing. Electrical Engineering Dep., Purdue Univ., Lafayette, Indiana. 17 p.
- Miller, L. D. and C. C. Cooper. 1969. Analysis of environmental and vegetative gradients in Yellowstone National Park from remote multi-spectral sensing, p. 108-131. In: P. Johnson [ed.] Remote sensing in ecology. Univ. Georgia Press, Athens.
- White, D. E. and L. D. Miller. 1969. Geothermal infrared anomalies of low intensity, Yellowstone National Park. Report on Mission Results, NASA Aircraft Project--Earth Resources Program, Manned Spacecraft Center. 4 p.



Name: W. H. Moir

Born: 1936

Academic Training:

Degree	Year	Institution	Major
B.S.	1957	Purdue University	Mathematics, Physics
M.S.	1963	New Mexico State University	Biology
Ph.D.	1965	Washington State University	Botany, Soils

Professional Experience:

Date	Position	Institution
1965-1966	Assistant Professor Biology	University of Colorado
1967-1968	Research Fellow Forestry	Australian National University
1968-	Assistant Professor Biology	Colorado State University

Professional and Honorary Societies:

Sigma Xi	
Ecological Society of America	International Soil Science Society
Soil Science Society of America	American Society of Agronomy
Crop Science Society of America	AAAS

Publications, Technical Reports:

- Moir, W. H. 1961. Logic of a digital computer. White Sands Missile Range FSL-EML Memo 154. 29 p.
- Moir, W. H. 1966. Influence of ponderosa pine on herbaceous vegetation. Ecology 47:1045-1048.
- Moir, W. H. 1966. Genesis of western brown forest soil as related to vegetation dynamics in a ponderosa pine ecosystem at Spokane, Washington. AAAS, S.W. & Rocky Mt. Div., 42nd Meeting, Las Cruces, New Mexico. (Abstr.).
- Franklin, J. F., C. Wilburg, and W. H. Moir. 1966. Invasion of subalpine meadows by trees, Mount Rainier National Park. Office Report, USFS Forestry Sciences Laboratory, Corvallis, Oregon. 12 p.
- Moir, W. H. 1967. The subalpine tall grass, *Festuca thurberi*, community of Sierra Blanca, New Mexico. Southwest Natur. 12:321-328.
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- Moir, W. H. 1968. Prairie rebirth. Science 162:1312.

- Moir, W. H. 1969. Compartmentalization and carbon flow pathways in lodgepole pine forests. AAAS, S. W. & Rocky Mt. Div., 45th Meeting, Colorado Springs, Colorado. (Abstr.).
- Moir, W. H. 1969. Energy fixation and the role of primary producers in energy flux of grassland ecosystems, p. 125-147. In R. L. Dix and R. G. Beidleman [ed.] The grassland ecosystem: a preliminary synthesis. Range Sci. Series No. 2, Colorado State University, Fort Collins. 437. p.
- Moir, W. H. and H. Grier. 1969. Weight and nitrogen, phosphorus, potassium, and calcium content of forest floor humus of lodgepole pine stands in Colorado. Soil Sci. Soc. Amer., Proc. 33:137-140.
- Moir, W. H. 1969. The lodgepole pine zone in Colorado. Amer. Midland Natur. 81:87-98.
- Moir, W. H. 1969. Steppe communities in the foothills of the Colorado Front Range and their relative productivities. Amer. Midland Natur. 81:331-340.
- Moir, W. H. and E. P. Bachelard. 1969. Distribution of fine roots in three *Pinus radiata* plantations near Canberra, Australia. Ecology 50: in press.
- Moir, W. H. and H. M. Smith. 1970. Occurrence of the American salamander, *Aneides hardii*, in tundra habitat. J. Arctic and Alpine Res.
- Dick-Peddie, W. A. and W. H. Moir. 1970. Vegetation of the Organ Mountains, New Mexico. Range Sci. Series No. 4, Colorado State University, Fort Collins. 24 p.

Name: Robert E. Moore

Born: 1931

Academic Training:

Degree	Year	Institution
B.A.	1952	North Texas State University
M.S.	1959	Oregon State University
Ph.D.	1962	University of Texas

Professional Experience:

Date	Position	Institution
1960	Instructor, Biology	North Texas State University
1960-1962	NSF Graduate Fellowship	
1962-1966	Assistant Professor	Montana State University
1966-	Associate Professor, Zoology and Entomology	Montana State University

Professional and Honorary Societies:

Ecological Society of America  
American Society of Mammalogists  
American Society of Naturalists  
Sigma Xi

Publications, Technical Reports:

Moore, R. E. 1965. Olfactory discrimination as an isolating mechanism between *Peromyscus maniculatus* and *Peromyscus polionotus*. Amer. Midland Natur. 73:85-100.

Moore, R. E. 1965. Ethological isolation between *Peromyscus maniculatus* and *Peromyscus polionotus*. Amer. Midland Natur. 74:341-349.

Mueller, C. E. and R. E. Moore. 1969. Growth of the sagebrush lizard, *Sceloporus graciosus*, in Yellowstone National Park. Herpetologica 25:35-38.

Name: Melvin S. Morris

Born: 1907

Academic Training:

Degree	Year	Institution	Major
B.S.	1930	Colorado State University	Forestry
M.S.	1932	Colorado State University	Botany
	1940,41	University of Chicago	Advanced work in Botany

Professional Experience:

Date	Position	Institution
Summers 1926, 1927, 1928, 1929	Field work: Cadastral surveys, Fire Control, Range Surveys	-
Summer 1937	Range Examiner	Resettlement Administration
Summer 1945	Forest Ecologist	N. Rocky Mt. For. & Range Exp. Sta.
1949-1958	Member of Faculty on Public and Private Administration	
1950-1956	Assistant Unit Leader	Montana Coop. Wildl. Res. Unit
1950-1956	Collaborator, Research	US Fish & Wildl. Service
1949-Present	Collaborator, Personnel Manage.	USFS
1949-1950	Special Lecturer	New York Coll. Forestry
1950-	Professor of Forestry	University of Montana

Professional and Honorary Societies:

Phi Kappa Phi	Ecological Society
Alpha Zeta	Montana Academy of Sciences
Phi Sigma	Northwest Scientific Association
AIBS	Soil and Water Conservation Society
American Society of Range Management	Xi Sigma Pi
AAAS Fellow, 1963	Honor Alumnus, Coll. Forestry, CSU
American Society of Agronomy	

Publications, Technical Reports:

Morris, M. S. 1931. Increasing forage on sagebrush land. Colo. Agr. Coll. Exp. Bull. 308-A.

Hanson, H. C., L. D. Love, and M. S. Morris. 1931. Effects of different systems of grazing. Colo. Agr. Exp. Sta. Bull. 377.

Morris, M. S. 1932. Can we improve our range? Colo. Agr. Coll. Exp. Bull. 313-A.

Morris, M. S. 1932. A recording atmometer. Ecology 13:100-101.

- Morris, M. S. 1934. Deferred and rotation system of grazing. Amer. Cattle Producer 16:5.
- Morris, M. S. 1935. Crested wheatgrass for dryland pastures. Colo. Agr. Sta. Press Bull. 84.
- Morris, M. S. 1937. Map of the natural vegetation of Colorado. Central Rocky Mountain Forage and Range Exp. Sta. Mimeo.
- Morris, M. S. 1941. The status of blue grama grass in Montana. Montana Acad. Sci., Proc., 11.
- Morris, M. S. (Ed.). 1945. Land use and control of privately owned cutover lands in western Montana. Soc. Amer. Forest., Proceedings of the Northern Rocky Mountain Section.
- Morris, M. S. 1945. The classification of Montana grasslands on an ecological basis. Montana Acad. Sci., Proc., V.
- Morris, M. S. 1946. A comparison of returns from timber and forage on cutover forest lands in western Montana. Montana Forestry Kaimin.
- Morris, M. S. 1947. The problem of food supply in big game management. Montana Forestry Kaimin.
- Morris, M. S. . The grazing use of forest lands in the northern Rocky Mountain region. Soc. Amer. Forest., Proc.
- Morris, M. S. 1952. A study of the food consumption of elk. Western Ass. Game Comm., Proc. with Hungerford.
- Morris, M. S. and Roger DeLand. 1953. Study of the grazing value of intermediate wheatgrass pastures in the Bitterroot Valley of Montana. Montana Forest and Conserv. Bull.
- Morris, M. S., Dwight Stockstad, and Earl Lory. 1953. The chemical characteristics of natural game licks. North American Wildlife Conference, Trans. 18.
- Morris, M. S. 1956. Elk and livestock competition. J. Range Manage. 9.
- Morris, M. S. and J. Meuchel. 1956. The problem of St. Johnswort, a noxious plant, in western Montana. Montana Forest and Conserv. Exp. Sta. Bull. 4.
- Morris, M. S. and J. E. Schwartz. 1957. Mule deer and elk food habits on the National Bison Range. J. Wildlife Manage. 21.
- Morris, M. S. 1960. The principles of range management. Montana Forest Conserv. Exp. Sta. Bull. 13.
- Morris, M. S., J. E. Schmauta, and P. Stickney. 1962. Winter field key to the native shrubs of Montana. Montana Conserv. Exp. Sta. Bull. 23.

Morris, M. S. and Charles Pase. 1968. Ecology of big sagebrush in Montana.  
Sta. Bull. (In press).

Name: Julius G. Nagy

Born: 1925

Academic Training:

Degree	Year	Institution	Major
B.S.	1960	Wayne State University	Microbiology
M.S.	1963	Colorado State University	Nutrition
Ph.D.	1966	Colorado State University	Nutrition

Special Training:

1963 Rumen microbiology techniques with Dr. Marvin P. Bryant, U.S.D.A., Beltsville, Maryland

1964 Gas-chromatography course, University of Colorado, Boulder.

Professional Experience:

Date	Position	Institution
Present	Assistant Professor	Colorado State University

Professional and Honorary Societies:

Sigma Xi	Wildlife Soc.
Pi Kappa Pi (Executive Committee)	AAAS
Nutrition Institute	American Soc. Microbiology

Major Interests:

Nutrition of wild and domestic ruminants.  
Metabolic reactions in rumen.

Current Professional Activities:

Teaching: Wildlife Nutrition

Research: Deer starvation studies.  
Effects of pesticides on rumen function of deer.  
Energy and nutrient transfer through the pronghorn antelope.  
Selectivity of juniper species by deer.

Publication, Technical Reports:

Nagy, J. G., G. Vidacs, and G. M. Ward. 1962. *In vitro* studies on alfalfa hay substrate using deer, cows, sheep, and cattle as rumen fluid donor. (Abstr.) J. Dairy Sci. 45:69.

- Nagy, J. G., G. Vidacs, and G. M. Ward. 1962. Effect of different pre-incubation temperatures of rumen fluid gas production and VFA production in artificial rumen techniques. (Abstr.) J. Dairy Sci. 45:1422.
- Nagy, J. G., G. Vidacs, and G. M. Ward. 1963. Effects of essential oils of sagebrush on bacteria. (Abstr.) Proc. Rocky Mt. Soc. of Microb.
- Nagy, J. G. 1963. Effects of essential oils of sagebrush (*Artemisia tridentata*) on deer rumen microorganisms. M.S. Thesis, Colorado State Univ. 52 p.
- Nagy, J. G., G. Vidacs, and G. M. Ward. 1963. Effects of sagebrush and its essential oils on bovine appetite and metabolism of rumen microflora. (Abstr.) J. Anim. Sci. 22:841.
- Nagy, J. G., G. Vidacs, and G. M. Ward. 1964. Separation of the essential oils of *Artemisia* spp. by gas-chromatography and the effects of the oils on bacteria. (Abstr.) Proc. 35th Ann. Meeting Colorado-Wyoming Acad. of Sci.
- Nagy, J. G., H. W. Steinhoff, and G. M. Ward. 1964. Effects of essential oils of sagebrush on deer rumen microbial function. J. Wildl. Manage. 28:785-790.
- Nagy, J. G. 1965. Sagebrush. Colorado State Univ. Res. Highl. 15:4-5.
- Nagy, J. G. 1966. Volatile oils and antibiosis of *Artemisia* spp. Ph.D. Diss., Colorado State Univ. 73 p.
- Ward, G. M. and J. G. Nagy. 1966. bacterial inhibition by the essential oils of sagebrush N.S.F. Final Rept. 54 p.
- Nagy, J. G., G. Vidacs and G. M. Ward. 1967. Previous diet of deer, cattle, and sheep and their ability to digest alfalfa hay. J. Wildl. Manage. 31: 443-447.
- Nagy, J. G. 1967. Artificial feeding of big game, p. 75 to 77. In D. L. Gilbert [ed.] Proc. 3rd Ann. Short Course in Game and Fish Management.
- Tengerdy, R. P., J. G. Nagy, and B. Martin. 1967. Quantitative measurements of bacterial growth by the reduction of tetrazolium salts. Appl. Microbiol. 15:954-996.
- Nagy, J. G. and R. P. Tengerdy. 1967. Antibacterial action of essential oils of *Artemisia* as an ecological factor. I. Antibacterial action of the volatile oils of *Artemisia tridentata* and *Artemisia nova* on aerobic bacteria. Appl. Microbiol. 15:819-821.
- Nagy, J. G., and G. P. Tengerdy. 1968. Antibacterial action of essential oils of *Artemisia* as an ecological factor. II. Antibacterial action of the volatile oils of *Artemisia tridentata* (Big sagebrush) on bacteria from the rumen of mule deer. Appl. Microbiol. 16:441-444.
- Olson, J. C., D. A. Cramer, and J. G. Nagy. 1968. Gastro-intestinal pH values of sheep by breed. Proc. Western Sect. Amer. Soc. of Anim. Sci. 19:43-46.



- Muller, H. D., T. A. Barber, and J. G. Nagy. 1968. Diet composition and cecal development in young chickens. Ann. Meeting Poultry Sci. Ass. p. 57-59.
- Nagy, J. G. and J. G. Gilbert. 1968. Fecal pH values of mule deer and grazing domestic sheep. J. Wildl. Manage. 32:961-962.
- Nagy, J. G. 1968. Nutrition of big game, 112 p. In D. R. Smith [ed.] Proc. 4th Ann. Short Course in Game and Fish Manage.
- Murphy, B. D., S. I. Savage, J. G. Nagy, E. W. Kienholtz, and D. L. Gilbert. 1968-1969. Chemical characteristics of mature antlers in Rocky Mountain mule deer. Proc. Colorado-Wyoming Acad. Sci. (Abstr.) 203.
- Barber, T. A. and J. G. Nagy. 1969. Sage grouse cecal function. Proc. Colorado-Wyoming Acad. Sci. 6:52. (Abstr.) 186.
- Knox, K. L., J. G. Nagy, and R. P. Brown. 1969. Water turnover in mule deer. J. Wildl. Manage. 33:389-393.
- Nagy, J. G. 1969. Biological relations of rumen flora and fauna. Misc. Publ. USDA For. Serv. (In press)
- Nagy, J. G. and G. L. William. 1969. Rumino-reticular VFA content of pronghorn antelope. J. Wildl. Manage. 33:437-439.
- Nagy, J. G., K. L. Knox, and T. Hakonson. 1969. The effects of food quality on food intake of mule deer. Proc. 34th North Amer. Wildl. and Natur. Res. Conf. (Paper accepted for presentation and publication.)
- Olson, J. C. and J. G. Nagy. 1969. Gastrointestinal pH values of mule deer. Proc. Colorado-Wyoming Acad. Sci. 6:56. (Abstr.) 202.
- Wesley, D. E., K. L. Knox, and J. G. Nagy. 1969. Water kinetics in pronghorn antelope. Proc. Colorado-Wyoming Acad. Sci. 6:56.
- Nagy, J. G., T. A. Barber, and A. E. McChesney. 1969. *Clostridium perfringens* enterotoxemia in hand-reared antelope. J. Wildl. Manage. (In press).
- Barber, T. A., J. G. Nagy, and T. A. May. 1969. Nutrition and dietary preference of penned sage grouse. Proc. 6th Biennial Western States Sage Grouse Workshop. (In press).

Name: Larry G. Nell

Born: 1935

Academic Training:

Degree	Year	Institution	Major
B.S.	1960	Colorado State University	Biological Science

Special Training:

Air Force training courses in:

- Supply operations (1961)
- Inventory management (1962)
- Communications and maintenance familiarization (1962)
- Computer operations (1964)
- Administrative management (1964)
- Supply staff operations (1969)

Professional Experience:

Date	Position
1961-1969	Air Force Supply Operations Officer

Current Professional Activities:

Administrative Assistant: Grassland Biome

Publications, Technical Reports;

None

Name: Charles William O'BrienBorn: 1933Academic Training:

Degree	Year	Institution	Major
B.A.	1956	Univ. Connecticut	Entomology
M.S.	1958	Univ. Arizona	Entomology
Ph.D.	1967	Univ. California	Entomology

Professional Experience:

Date	Position	Institution
1956-1958	Teaching Fellow	Univ. Arizona
1959-1960	Field Entomologist	Bernice P. Bishop Museum, Honolulu
1962-1966	Teaching Assistant	Univ. California
1967-1969	Professor	Univ. Catolica, Santiago, Chile
1969-	Assistant Entomologist	Ohio State Dept. Health

Professional and Honorary Societies:

Royal Entomological Society of London  
 Entomological Society of America  
 Entomological Society of Canada  
 Pacific Coast Entomological Society  
 Sociedad Chilena de Entomologia  
 Society for the Study of Coleoptera  
 Society of Systematic Zoology

Major Interests:

Entomology, morphology

Publications, Technical Reports:

- Gressitt, J. L., R. E. Leech, and C. W. O'Brien. 1960. Trapping of air-borne insects in the Antarctic Area. *Pacific Insects* 2:245-250.
- O'Brien, C. W. 1961. *Phyrdenus maricæus* (Germar) attacking tomatoes in Arizona. *Pan-Pacific Entomol.* 37:185-186.
- Ashlock, P. D. and C. W. O'Brien. 1964. *Catharosia lustrans*, a tachinid parasite of some drymine Lygaeidae. *Pan-Pacific Entomol.* 40:98-100.
- O'Brien, C. W. 1965. A review: An introduction to the study of insects. By Borror and De Long. *Pan-Pacific Entomol.* 41:140.
- Breimeier, L. and C. W. O'Brien. 1966. Observations on territoriality and a new nesting substrate of *Xylocopa californica arizonensis* Cresson (Hymenoptera:Apoidea). *Pan-Pacific Entomol.* 42:27-29.

- O'Brien, C. W. 1969. A new species of *Gerstaeckeria* in Peru, first record for South America. (Coleoptera:Curculionidae). Coleopterists' Bull. (3).
- O'Brien, C. W. 1970. *Pselactus spadix* (Herbst), a European Cossonine weevil new to the western United States. (Coleoptera:Curculionidae). Pan-Pacific Entomol. In press.
- O'Brien, C. W. 1970. Taxonomic revision of the genus *Gerstaeckeria* (Coleoptera:Curculionidae) in America north of Mexico. Ann. Entomol. Soc. Amer. In press.
- O'Brien, C. W. 1970. Taxonomic revision of the genus *Dorytomus* (Coleoptera: Curculionidae) in America north of Mexico. Univ. California Pub. Entomol. In press.
- O'Brien, C. W. 1970. A review: Curculionidae Subfamily Apioninae of North and Central America. David G. Kissinger. Pan-Pacific Entomol. In press.

Name: Robert T. O'Brien

Born: 1925

Academic Training:

Degree	Year	Institution
B.S.	1950	University of North Dakota
M.S.	1952	University of North Dakota
Ph.D.	1956	Washington State University

Professional Experience:

Date	Position	Institution
1950-1952	Assistant in Bacteriology	Univ. of North Dakota
1952-1956	Assistant in Bacteriology and Instr. in Horticulture	Washington State Univ.
1956-1964	Biological Scientist	General Elec. Co., Richland, Washington
1964-1966	Consulting Microbiologist	Electronics Lab., Gen. Elec. Co., Ithaca & Syracuse, N.Y.
1966-	Professor of Biology	New Mexico State Univ.

Publications, Technical Reports:

- O'Brien, R. T. 1955. Antibiotics in food preservation. Food Technol. 9:461.
- O'Brien, R. T. 1955. Effect of subtilin on heat activated and severely heated spores of a putrifactive anaerobic bacterium. J. Bacteriol. 20:487.
- O'Brien, R. T. 1956. Antibiotics in food preservation. II. Studies on the influence of subtilin and nisin on the thermal resistance of food spoilage bacteria. Food Technol. 10:352.
- O'Brien, R. T. 1957. The nutritional requirements of germination and out-growth of spores of thermophilic bacteria. J. Bacteriol. 23:522.
- O'Brien, R. T. 1957. Purification and properties of a proteolytic enzyme from *B. stearothermophilus*. Arch. Biochem. Biophys. 70:432.
- O'Brien, R. T. 1958. Preparation of autoradiograms for electron microscopy. Nature 183:1461.
- O'Brien, R. T. 1959. Subtilin and nisin as additives that lower the heat-process requirements of canned foods. Food Technol. 13:462.
- O'Brien, R. T. 1961. Radiation sensitivity studies on related fermenting and respiring yeasts. Radiat. Bot. 1:61.
- O'Brien, R. T. 1963. Relationship between deuterium inhibition of growth and glucose catabolism in *S. cerevisiae*. Soc. Exp. Biol. Med., Proc. 112:196.

- O'Brien, R. T. 1964. Effect of  $D_2O$  on uptake in yeast. Soc. Exp. Biol. Med., Proc. 117.
- O'Brien, R. T. 1967. Identification of microorganisms by gas chromatographic analysis of metabolic products. Food Technol. 21:78.
- O'Brien, R. T. 1968. Detection of *E. coli* by gas chromatography. J. Bacteriol. 95:1205.
- O'Brien, R. T. 1969. Metabolic patterns of bacteria as shown by gas chromatography. Dev. Ind. Microbiol. In press.

Name: Neal L. Osborn

Born: 1936

Academic Training:

Degree	Year	Institution
A.B.	1958	Baldwin Wallace College
M.S.	1962	University of New Mexico
Ph.D.	1966	University of New Mexico

Professional Experience:

Date	Position	Institution
1960-1964	Laboratory and teaching assistant	University of New Mexico
1964-1965	Assistant Professor, Biology	Baylor University
1965-	Assistant Professor, Biology	Southern Colorado State College

Major Interests:

Systematic botany

Professional and Honorary Societies:

Sigma Xi  
American Institute of Biological Sciences  
Colorado-Wyoming Academy of Science

Publications, Technical Reports:

- Osborn, N. L. 1962. The flora of Mount Taylor, New Mexico. M.S. Thesis, Univ. New Mexico, Las Cruces, New Mexico.
- Osborn, N. L. 1964. *Lycopodium annotinum* on Wheeler peak, Taos County New Mexico. The Southwest Natur. 9:102-109.
- Osborn, N. L. 1966. A comparative floristic study of Mount Taylor and Redondo Peak, New Mexico. Ph.D. Thesis, Univ. New Mexico, Las Cruces, New Mexico.

Name: Robert L. Packard

Born: 1928

Academic Training:

Degree	Year	Institution	Major
B.S.	1951	University of Nebraska	Zoology and Botany
M.A.	1955	University of Kansas	Zoology
Ph.D.	1960	University of Kansas	Zoology

Special Training:

Marine Biological Laboratories, Duke University, Summer 1956; U. S. National Museum, Division of Mammals, Smithsonian Institution, Summer Intern 1957.

Professional Experience:

Date	Position	Institution
Summer 1959	Instructor	University of Kansas
1959-1962	Assistant Professor	Stephen F. Austin State University
1962-1965	Assistant Professor	Texas Tech University
1965-1967	Associate Professor	Texas Tech University
1967-	Professor	Texas Tech University

Professional and Honorary Societies:

American Society of Mammalogists	Sigma Xi
Southwestern Association of Naturalists	AAAS
Society for the Study of Evolution	Beta Beta Beta
Society of Systematic Zoology	Phi Sigma
Texas Academy of Sciences	

Major Interests:

Taxonomy, ecology, and life history of North American mammals with particular reference to those in the grasslands.

Current Professional Activities:

Editor of The Southwestern Naturalist  
Member of the Board of Directors - The American Society of Mammalogists  
Institutional Representative to the Organization for Tropical Studies

Teaching: Natural History of Vertebrates  
Mammalogy  
Zoogeography  
General Zoology  
Special Seminars

Research: Taxonomy of mammals of the southern High Plains  
Ecological studies of mammals on the desert-grassland ecotone



Publication, Technical Reports:

- Packard, R. L. 1950. Notes on the nesting of the black crowned night heron at the Valentine National Wildlife Refuge. The Nebraska Bird Rev. 18:63-64.
- Packard, R. L. 1951. Lead Poisoning of waterfowl in Lancaster County, Nebraska. Nebraska Acad. Sci. Proc. p. 31.
- Packard, R. L. 1954. Notes on the defensive behavior of gray and fox squirrels while moving their young. Kansas Acad. Sci. Trans. 57:471-472.
- Packard, R. L. 1955. Great horned owl attacking squirrel nests. The Wilson Bull. 66:272.
- Stains, H. J. and R. L. Packard. 1955. The coyote on a natural area in northeastern Kansas. Kansas Acad. Sci. Trans. 58:211-221.
- Packard, R. L. and H. J. Stains. 1955. Occurrence of the mink west of the hundredth meridian in Kansas. Kansas Acad. Sci. Trans. 58:222-224.
- Packard, R. L. 1955. Release, dispersal, and reproduction of fallow deer in Nebraska. J. Mammal. 36:471-473.
- Packard, R. L. 1955. Pileated woodpecker and American woodcock in southeastern Kansas. Kansas Ornith. Soc. Bull. 3:15.
- Packard, R. L. 1956. The tree squirrels of Kansas: Ecology and economic importance. Univ. Kansas Mus. Nat. Hist. Misc. Pub. 11:1-67.
- Jones, J. K. Jr. and R. L. Packard. 1956. *Feresa intermedia* (Gray) preoccupied. Biol. Soc. Wash. Proc. 69:167-168.
- Packard, R. L., E. R. Hall, S. A. Anderson, and J. K. Jones, Jr. 1957. Vernacular names for North American mammals north of Mexico. Univ. Kansas Mus. Nat. Hist. Misc. Pub. 14:1-16.
- Packard, R. L. 1957. Broad-winged hawk in Coahuila. The Wilson Bull. 69:370.
- Jones, J. K. Jr. and R. L. Packard. 1958. *Myotis keeni septentrionalis* in South Dakota. J. Mammal. 39:150.
- Packard, R. L. 1958. Carnivorous behavior in the Mexican ground squirrel. J. Mammal. 39:154.
- Packard, R. L. 1958. The taxonomic status of *Peromyscus allea* Osgood. Biol. Soc. Washington Proc. 71:17-20.
- Packard, R. L. 1958. New subspecies of the rodent *Baiomys* from Central America. Univ. Kansas Pub. Mus. Nat. Hist. 9:399-404.
- Packard, R. L. 1959. First record of the pygmy mouse in New Mexico. J. Mammal. 40:146.
- Packard, R. L. 1960. Speciation and evolution of the pygmy mice, genus *Baiomys*. Univ. Kansas Grad. School Mus. Nat. Hist. Pub. p. 1-4.

- Packard, R. L. 1960. Speciation and evolution of the pygmy mice, genus *Baiomys*. Univ. Kansas Mus. Nat. Hist. Pub. 23:579-670.
- Webb, R. G. and R. L. Packard. 1961. Notes of some amphibians and reptiles from eastern Texas. Southwestern Natur. 6:105-107.
- Packard, R. L. 1961. Additional records of mammals from eastern Texas. Southwestern Natur. 6:193-195.
- Packard, R. L. 1963. Distribution of the black-tailed jackrabbit in eastern Texas. Texas J. Sci. 15:107-110.
- Packard, R. L., G. Stephenson, and P. Goodrum. 1963. Small rodents as consumers of pine seed in eastern Texas uplands. J. Forest. 61:523-526.
- Packard, R. L. and H. Garner. 1964. Arboreal nests of the golden mouse in eastern Texas. J. Mammal. 45:369-374.
- Packard, R. L. and H. Garner. 1964. Records of some mammals from the Texas High Plains. Texas J. Sci. 16:387-390.
- Packard, R. L. 1965. Range extension of the hooded skunk in Texas and Mexico. J. Mammal. 46:102.
- Packard, R. L. and T. Alvarez. 1965. Description of a new species of fossil *Baiomys* from the Pleistocene of Central Mexico. Acta Zool. Mexicana 7:1-4.
- Packard, R. L. 1965. Geographic variation and evolution of high plains fox squirrel populations. Yearbook of the Amer. Phil. Soc. Annu. Rep. 288-290.
- Packard, R. L. 1966. *Myotis austroriparius* in Texas. J. Mammal. 47:128.
- Packard, R. L. 1966. Notes on mammals from Washington Parish, Louisiana. J. Mammal. 47:323-325.
- Packard, R. L. 1967. Octodontoid, Bathyergoid, and Ctenodactyloid Rodents, p. 273 to 290. In S. A. Anderson and J. K. Jones, Jr. [ed.] Recent mammals of the world. Ronald Press Co., New York.
- Harvey, M. K. and R. L. Packard. 1967. Cotton rats fail to damage southern pine seedlings. J. Forest. 65:495-497.
- Packard, R. L. and F. W. Judd. 1967. Two noteworthy records of bats from Chihuahua. Southwestern Natur. 12:332.
- Schmidly, D. J. and R. L. Packard. 1967. Swimming ability in pocket mice. Southwestern Natur. 12:480-482.
- Packard, R. L. 1968. An ecological study of the fulvous harvest mouse, *Reithrodontomys fulvescens* in eastern Texas. Amer. Midland Natur. 79:68-88.
- Packard, R. L. and F. Judd. 1968. Comments on some mammals from western Texas. J. Mammal. 49:535-538.

- Packard, R. L. 1969. Taxonomic review of the golden mouse, *Ochrotomys nuttalli*, p. 373 to 406. In J. K. Jones, Jr. [ed.] Contributions in mammalogy. Univ. Kansas Mus. Natur. Hist. Misc. Pub. 51.
- Packard, R. L. 1969. Distributional notes on some foxes from western Texas. Southwestern Natur. 14. (In press).
- Packard, R. L. 1969. Guinea pig, gundi, and hutia. Encycl. Amer. (In press).

Name: Robert M. Pengra

Born: 1926

Academic Training:

Degree	Year	Institution	Major
B.S.	1951	South Dakota State University	Bacteriology
M.S.	1953	South Dakota State University	Bacteriology
Ph.D.	1959	University of Wisconsin	Bacteriology

Professional Experience:

Date	Position	Institution
1951-1953	Research Assistant	South Dakota State Univ.
1954-1957	Research Assistant	Univ. Wisconsin
1957-1962	Assistant Prof., Bacteriology	South Dakota State Univ.
1962-1967	Associate Prof., Bacteriology	South Dakota State Univ.
1966-1967	Research Associate	Cornell Univ. (Sabbatical Leave)
1967-1968	Prof., Bacteriology	South Dakota State Univ.
1968-	Prof. and Head, Bacteriology	South Dakota State Univ.

Major Interests:

Mechanism of biological nitrogen fixation in soil organisms.  
Ecological significance of biological nitrogen fixation in soil.  
Nitrogen fixation by nonleguminous, symbiotic, plant-microbe systems.  
Native leguminous plants of grasslands and their associated rhizobia.

Professional and Honorary Societies:

American Society for Microbiology	Canadian Society of Microbiologists
AAAS	South Dakota Academy of Science
Gamma Sigma Delta	Sigma Xi
AIBS	

Publications, Technical Reports:

- Pengra, R. M., M. A. Cole, and M. Alexander. 1968. Cell walls and lysis of *M. parvispor* Hyphae. *J. Bacteriol.* 97:1056-1061.
- Todd, R. L., R. M. Pengra, and P. R. Middaugh. 1967. Acetylene and nitrogen fixation by *K. pneumoniae*. *Proc. Can. Soc. Microbiol.* p.2. (Abstr.)
- Patil, R. B., R. M. Pengra, and D. C. Yoch. 1967. Effects of nitrogen supplements on nitrogen fixation by *Aerobacter aerogenes*. *Biochem et Biophysica Acta* 136:1-5.
- Yoch, D. C. and R. M. Pengra. 1966. Effect of amino acids of the nitrogenase system of *Klebsiella pneumoniae*. *J. Bacteriol.* 92:618-622.
- Pengra, R. M. 1964. A survey of some culture of the genus *Aerobacter* for nitrogen fixation. *Bacteriol. Proc.* A48. (Abstr.)

Name: Rex D. Pieper

Born: 1934

Academic Training:

Degree	Year	Institution	Major
B.S.	1956	University of Idaho	Wildlife Management
M.S.	1958	Utah State University	Range Management
Ph.D.	1963	University of California, Berkeley	Plant Ecology

Professional Experience:

Date	Position	Institution
1957-1958	Research Assistant	Utah State Univ.
1959-1963	Research Assistant	Univ. California
1963-	Assistant Professor, Range Science	New Mexico State Univ.

Professional and Honorary Societies:

American Society of Range Management  
Ecological Society of America  
Sigma Xi  
AAAS  
American Society of Animal Science  
AIBS

Major Interests:

Productivity and nutrient cycles in terrestrial ecosystems; role of grazing animals in range ecosystems; vegetative manipulations

Publications, Technical Reports:

- Pieper, R. D., C. W. Cook, and L. E. Harris. 1959. Effect of intensity of grazing upon nutritive content of the diet. *J. Animal Sci.* 18:1031-1037.
- Pieper, R. C. and H. H. Bixwell. 1961. Relationship between trees and cattle in ponderosa pine. *California Agr.* 15:12.
- Gibbens, R. P. and R. D. Pieper. 1962. The response of browse plants to fertilization. *California Fish & Game* 48:268-281.
- Pieper, R. D. 1963. Production and chemical composition of Arctic tundra vegetation and their relation to the Lemming cycle. Ph.D. Thesis, Univ. California, Diss. Abstr. 24:3943.
- Groce, V. L. and R. D. Pieper. 1967. Cover, herbage production and botanical composition on foothill range sites in southcentral New Mexico. *New Mexico State Univ. Agr. Exp. Sta. Res. Rep.* 128.
- Dwyer, D. D. and R. D. Pieper. 1967. Fire effects on blue grama-pinyon-juniper rangeland in New Mexico. *J. Range Manage.* 20:359-362.

Pieper, R. D. 1967. Comparison of vegetation on three grazed and ungrazed sites in southcentral New Mexico. J. Range Manage. 20th Annu. Meeting. (Abstr.)

Pieper, R. D. and D. D. Dwyer. 1968. Response of blue grama vegetation to cholla cactus control. J. Range Manage. 21st Annu. Meeting. (Abstr.)

Pieper, R. D. 1968. Comparison of vegetation on grazed and ungrazed pinyon-juniper grassland sites in southcentral New Mexico. J. Range Manage. 21:51-53.

Hatch, C. F., A. B. Nelson, and R. D. Pieper. 1968. Correlations among chemical constituents and nylon bag dry matter disappearance of range grasses. Western Sect. Amer. Soc. Anim. Sci. Proc. 19:289-294.

Name: Larry O. Pochop

Born: 1940

Academic Training:

Degree	Year	Institution	Major
B.S.	1962	South Dakota State Univ.	Agricultural Engineering
M.S.	1964	University of Missouri	Agricultural Engineering
Ph.D.	1967	University of Missouri	Agricultural Engineering

Professional Experience:

Date	Position	Institution
1962-1963	Research Assistant, Agricultural Engr.	University Missouri
1963-1967	Instructor, Agricultural Engineering	University Missouri
1967-	Assistant Professor, Agricultural Engr.	University Wyoming

Professional and Honorary Societies:

American Society of Agricultural Engineers  
Registered Professional Engineer - Wyoming  
Phi Kappa Phi Honor Society  
Gamma Sigma Delta Honor Society  
Alpha Epsilon Honor Society

Major Interests:

Micrometeorology  
Plant and animal environment.

Current Professional Activities:

Teaching: Area of livestock environment.  
Research: Description of climatic patterns and variation by analysis of weather records.

Publications, Technical Reports:

- Pochop, L. O. and M. D. Shanklin. 1966. Sky cover photogram: a new technique. *Weatherwise* 19:198-203.
- Pochop, L. O. and M. D. Shanklin. 1966. Total hemispheric radiation correlated with sky cover photograms. Paper presented at the Fourth International Biometeorological Congress, New Brunswick, New Jersey, September 1966. Abstract published in *Bull. Amer. Meteorol. Soc.* 47:470.
- Pochop, L. O. 1967. Sky cover influence on total hemispheric radiation. Ph. D. Dissertation, Univ. Missouri.
- Pochop, L. O. and M. D. Shanklin. 1967. Sky cover measured by scanning photograms. (Accepted for publication by the American Society of Agricultural Engineers, St. Joseph, Missouri.)

- Pochop, L. O. and M. D. Shanklin. 1968. Sky cover influence on total hemispheric radiation during daylight hours. *J. Appl. Meteorol.* 7:484-489.
- Pochop, L. O. 1969. Dynamics of the atmosphere in the grassland ecosystem, p. 89-100. *In* R. L. Dix and R. G. Beidleman [ed.] *The grassland ecosystem: a preliminary synthesis.* Colorado St. Univ. Range Sci. Dep. Sci. Ser. No. 2. 437 p.



Name: Lynn K. Porter

Born: 1929

Academic Training:

Degree	Year	Institution
B.S.	1953	Utah State University
M.S.	1954	Utah State University
Ph.D.	1957	North Carolina State College

Professional Experience:

Date	Position	Institution
1957	Res. Soil Sci., Agr. Res. Serv., Member Grad. Fac.	Colorado State University

Major Interests:

Chemistry of soil nitrogen and soil organic matter, plant metabolism and synthesis.

Professional and Honorary Societies:

American Society of Agronomy  
Western Soil Science Society  
American Society of Plant Physiologists  
Sigma Xi

Publications:

Author or coauthor of 25 publications. Pertinent or recent publications are listed below:

- Stewart, B. A. and L. K. Porter, 1964. Effect of sulfur on cellulose decomposition and nitrogen immobilization in soils. Amer. Soc. of Agron. (Abstr.).
- Porter, L. K. 1965. Enzymes--methods of soil analysis. Part II. Chemical and microbiological properties. Amer. Soc. Agron. Monogr. No. 9:1536-1947.
- Stewart, B. A., L. K. Porter and F. G. Viets, Jr. 1965. Effect of sulfur content of straws on rates of decomposition and plant growth. Amer. Soc. Agron. (Abstr.).
- Porter, L. K. 1966. The thermal release of ammonium nitrogen from ammonium chloride-treated and nontreated soils. Soil Sci. Soc. Amer., Proc. 30:369-370.
- Stewart, B. A., L. K. Porter and F. G. Viets, Jr. 1966. Sulfur requirements for decomposition of cellulose and glucose in soil. Soil Sci. Soc. Amer., Proc. 30:453-456.

Stewart, B. A., L. K. Porter and F. G. Viets, Jr. 1966. Effect of sulfur content of straws on rate of decomposition and plant growth. Soil Sci. Soc. Amer., Proc. 30:355-358.

Porter, L. K. 1967. Factors affecting the solubility, extraction and possible fractionation of soil and leonardite organic colloids in organic solvents. J. Agr. Food Chem. 15:807-811.

Name: George Post

-178-

Born: 1918

Academic Training:

Degree	Year	Institution
B.S.	1947	University of Wyoming
M.S.	1948	University of Wyoming
Ph.D.	1963	Utah State University

Professional Experience:

Date	Position	Institution
1943-1944	Toxicologist	U.S. Army Chemical Warfare Service Field Lab. Co.
1944	Field Laboratory Director	Chemical Corp, U.S. Army Wyo. State Veterinary Lab.
1946-1947	Medical Lab. Technician	Murray Hospital, Montana
1947-1948	Laboratory Assistant	Wyo. State Veterinary Lab.
1948-1960	Game and Fish Research Lab.	University of Wyoming
1960-1964	Fish Pathologist and Nutritionist	Utah Dep. Fish and Game Exp. Sta.
1964-1966	Assistant Cooperative Fishery Unit Leader	Colorado Coop. Fishery Unit, Colorado State University
1966-	Associate Professor, Fishery and Wildlife Biology	Colorado State University

Major Interests:

Diseases and parasites of Fish and Wildlife, Zoonotic diseases of humans and wild animals.

Professional and Honorary Societies:

Sigma Xi  
Wildlife Disease Association  
American Fishery Society  
American Association for the Advancement of Science

Publications, Technical Reports:

- Post, G. 1965. A review of advances in the study of diseases of fish: 1954-1964. Prog. Fish Cult. 27:3-12.
- Post, G. 1965. The immune response of rainbow trout (*Salmo gairdneri*) to *Aeromonas hydrophila*. Utah Dep. Fish Game, Bull. 63-7.
- Post, G. and M. M. Beck. 1966. Toxicity, tissue residue and efficacy for hexamitiasis of enheptin when given orally to rainbow trout. Prog. Fish-cult 28:83-88.
- Post, G. 1967. Methods of field sampling and preserving material for laboratory examination. Pruett Press, Inc., Boulder, Colo. 67 p.

Name: Horace Floyd Quick

Born: 1915

Academic Training:

Degree	Year	Institution	Major
B.S.	1937	Pennsylvania State University	Forestry
M.S.	1940	University of Michigan	Forest Biology
Ph.D.	1956	University of Michigan	Ecology-Conservation

Special Training:

Post-graduate work, zoology, Syracuse University, 1938.

Professional Experience:

Date	Position	Institution
1946-1947	Assistant Professor	Colorado State University
1950-1956	Assistant Professor, Forestry	University of Maine
1956-1962	Associate Professor, Forestry	University of Maine
1964	Research Associate	Institute of Arctic and Alpine Research
1965-	Associate Professor, Department of Geography	University of Colorado

Major Interests:

Ecology, conservation, game and forest management, population and mountain geography.

Professional and Honorary Societies:

Association of American Geographers  
AIBS  
Ecological Society  
Arctic Institute of North America (Charter Associate)  
Phi Sigma  
Sigma Xi  
Xi Sigma Pi

Current Professional Activities:

Teaching: Biogeography, animal/plant ecology, game management/conservation, natural resources policy and management.

Research: Small mammal population ecology, natural resources, game management.

Publications, Technical Reports:

Quick, H. F. 1943. Habits and economics of the long-tailed weasel. J. Wildlife Manage. Vol. 8 (1).

Quick, H. F. 1946. New rope for mountaineers. Trail and Timberline, Colorado Mountain Club.

- Quick, H. F. 1947. The white-winged scoter in Wyoming. Wyoming Wildlife, June-September.
- Quick, H. F. 1947. Winter food of white-tailed ptarmigan in Colorado.
- Quick, H. F. 1948. Opportunities for ecological research along the Alaska Highway. J. Forest. 48 (4).
- Quick, H. F. 1951. Notes of the ecology of weasels in Gunnison County, Colorado. J. Mammal. 32 (3).
- Quick, H. F. 1952. A biometric analysis of a muskrat marsh. The Forester, University of Maine.
- Quick, H. F. 1953. Hunter-landowner relationships. The Forester, University of Maine.
- Quick, H. F. 1953. Occurrence of porcupine quills in carnivorous mammals. J. Mammal. 34 (2).
- Quick, H. F. 1953. Some characteristics of wolverine fur. J. Mammal. 33 (2).
- Quick, H. F. 1953. Wolverine, fisher and marten studies in a wilderness region. North Amer. Wildlife Conf., Trans. 18.
- Quick, H. F. 1954. Small mammal populations on the University Forest. Univ. Maine, Forest. Tech. Paper No. 28.
- Quick, H. F. 1955. Small mammal populations in northern British Columbia. Canadian Field Natur. 68 (3).
- Quick, H. F. 1955. Effects of exploitation on a marten population. J. Wildlife Manage.
- Quick, H. F. 1955. Changes in small mammal populations on the University Forest. Univ. Maine Forest. Tech. Paper No. 41.
- Quick, H. F. 1955. Conserving our natural resources, Shirley W. Allen. A review. J. Forest. 55 (2).
- Quick, H. F. 1955. Food habits of marten. Canadian Field Natur.
- Quick, H. F. 1956. Analysis of exploitation as criteria of the management of fur resources. North Amer. Wildlife Conf., Trans. 21.
- Quick, H. F. 1957. Land management practices in Scandinavia. The Forester, University of Maine.
- Quick, H. F. 1957. Forestry and game management in Scandinavia. Maine Forester.
- Quick, H. F. 1958. Estimating the effects of exploitation by life tables. North Amer. Wildlife Conf., Trans. 23.

- Quick, H. F. 1959. Game management and land policy. *Maine Forester*.
- Quick, H. F. 1960. African report. *The Forester*, University of Maine.
- Quick, H. F. 1960. Animal population analysis. *Manual of Game Investigational Techniques*, Wildlife Soc., Sect. 7.
- Quick, H. F. 1961. Wildlife Camp, 1960. *Maine Forestry Yearbook*, Univ. Maine.
- Quick, H. F. 1961. Wildlife educational program. *The Forester*, University of Maine.
- Quick, H. F. 1962. Population dynamics of white-tailed deer. *First Symposium on Deer Diseases*. University of Georgia, Athens, Georgia.
- Quick, H. F. 1963. Population analysis. *Wildlife Investigational Techniques*. Wildlife Soc., Chap. 7.
- Quick, H. F. 1964. Timber survey of Boulder city watershed: Append. AEC contract.
- Quick, H. F. 1964. Survey of mammals: Natural History of the Boulder Area. Univ. Colorado Museum.
- Quick, H. F. 1965. Small mammal population ecology of the Boulder City Watershed. *Radioecology of the Colorado Front Range*, William S. Osburn, Prin. Investigator, AEC.
- Quick, H. F. 1965. Ecology of the African elephant. *Biol. Curr. Studies Pamphlet 21*, D. C. Heath, Boston.
- Quick, H. F. 1965. Population studies in small communities of Portugal. *Bull. Ecolog. Soc.*
- Quick, H. F. 1966. Editorial Staff, 3rd ed., *Wildlife Tech. Manual*, Wildlife Soc.
- Quick, H. F. 1967. A Review. *Ecological Studies in Southern Africa*, (for) Biology and Medical Branch, AEC.
- Quick, H. F. 1969. Geographic dimensions of human ecology, AAAS Symposium, Boston.
- Quick, H. F. 1969. Perspectives on population and resource problems in East Africa. *Rocky Mountain Social Sci. Assoc.*, Lubbock, Texas.
- Quick, H. F. Geographic dimensions of human ecology. *National Nutrition Symposium*. (In press).
- Quick, H. F. 1969. Population ecology in relation to natural resources. *Annu. Meeting Soil Cons. Soc. Amer.*, Fort Collins.

Name: Ralph J. Raitt

Born: 1929

Academic Training:

Degree	Year	Institution	Major
B.A.	1950	Stanford Univ.	Biology
Ph.S.	1959	Univ. of Calif. - Berkeley	Zoology

Professional Experience:

Date	Position	Institution
1958-present	Instructor to Professor of Biology	New Mexico State Univ.

Professional and Honorary Societies:

American Ornithologists' Union	Animal Behavior Society
Cooper Ornithological Society	Ecological Society of America
Wilson Ornithological Society	Sigma Xi
Society for the Study of Evolution	Southwestern Association of Naturalists
Society of Systematic Zoology	American Institute of Biological Sciences

Major Interests:

Density and diversity in desert bird communities; ecology, behavior and taxonomy of neotropical thrushes; ecology, behavior and phenological adaptation of New World quails.

Current Professional Activities:

Editor, The Condor, Journal of the Cooper Ornithological Society.

Teaching: General Ecology, Advanced Animal Ecology, Vertebrate Natural History, Ornithology.

Research: Molts of *Philortyx fasciatus*, ecology and behavior of sympatric species of *Turdus* in Venezuela.

Publications, technical reports:

Raitt, R. J. 1959. Rocky Mountain race of the Williamson sapsucker wintering in California. Condor 62:142.

Raitt, R. J. 1960. Breeding behavior in a population of California quail. Condor 62:284-292.

Raitt, R. J. 1961. Plumage development and molts of California quail. Condor 63:294-303.

Raitt, R. J. 1964. Dynamics of a population of California quail. Wildlife Manage. 28:127-141.

- Raïtt, R. J. 1966. Annual cycle of reproduction and molt in Gambel quail of the Rio Grande Valley, southern New Mexico. *Condor* 68:541-561.
- Raïtt, R. J. 1967. Relationships between black-eared and plain-eared forms of bushtits (*Psaltriparus*). *Auk* 84:503-528.
- Raïtt, R. H. 1968. Sex and age ratios in Gambel quail of the Rio Grande Valley, southern New Mexico. *Southwest. Natur.* 13:27-34.
- Raïtt, R. H. 1968. Densities and species composition of breeding birds of a creosotebush community in southern New Mexico. *Condor* 70:193-205.
- Raïtt, R. H. 1968. Annual cycle of adrenal and thyroid glands in Gambel quail of southern New Mexico. *Condor* 70:366-372.
- Raïtt, R. H. 1970. Relationships between two sibling species of montane thrushes (*Catharus*) in Mexico. *Auk* 87. In press.



Name: James L. Rasmussen

Born: 1936

Academic Training:

Degree	Year	Institution	Major
B.A.	1958	St. Olaf College	Mathematics
B.S.	1959	Univ. Utah	Meteorology
M.S.	1963	Colorado State Univ.	Atmospheric Science
Ph.D.	1968	Colorado State Univ.	Atmospheric Science

Professional Experience:

Date	Position	Institution
1958-1961	Weather Officer	U. S. Air Force
1961-1963	Graduate Research Assistant	Colorado State Univ.
1963-1968	Instructor	Colorado State Univ.
1968-	Assistant Professor	Colorado State Univ.

Professional and Honorary Societies:

Sigma Xi  
American Meteorological Society  
American Geophysical Union

Major Interests:

Climatology, Dynamics of Weather Systems, Atmospheric Water Resources

Current Professional Activities:

Teaching: Graduate Courses in Atmospheric Science

Research: Water Resources Research (Dep. Interior), Weather Modification Research (Bur. Reclam.), Climatology (IBP)

Publications, Technical Reports:

Rasmussen, J. L. 1969. Water balance of an extra tropical cyclone. Archive for Meteorology, Geophys. and Bioclimatol. 18:3-4. p. 275-289.

Rasmussen, J. L. 1970. Atmospheric water balance and hydrology of the Colorado River Basin. Water Resources Res., Feb. 1970.

Name: John O. Reuss

Born: 1927

Academic Training:

Degree	Year	Institution	Major
B.S.	1949	Montana State College	Soils
M.S.	1958	Montana State College	Soils
Ph.D.	1963	Utah State University	Soils Chemistry

Professional Experience:

Date	Position	Institution
1949-1956	Farm and Ranch Operator	
1956-1957	Research Assistant	Huntley, Montana
1957-1960	Instructor	Montana State College
1960-1961	Research Fellowship	Utah State University
1961-1965	Ext. Soils Specialist and Asst. Agronomist	Colorado State University
1965-1967	Soil Fertility Spec.	Colorado State University Nigeria Contract
1967-	Asst. Prof. of Agronomy	Colorado State University

Major Interests:

Soil nitrogen transformations, soil fertility, and chemistry

Professional and Honorary Societies:

American Society of Agronomy  
Soil Science Society of America  
Western Soil Science Society  
Sigma Xi

Publications:

Author or coauthor of 10 publications. Pertinent or recent publications are listed below:

- Reuss, J. O. 1961. Reclamation of fine textured salty soils on the Huntley Reclamation Project. Montana Agr. Exp. Sta. Circ. No. 38.
- Reuss, J. O. and R. E. Campbell. 1961. Restoring productivity to leveled land. Soil Sci. Soc. Amer., Proc. 25:302-304.
- Reuss, J. O. and R. E. Campbell. 1961. Improve your salty soils. Montana Extension Folder No. 72.
- Reuss, J. O. and R. L. Smith. 1962. Nitrite decomposition in soils. Div. 83. Cornell University, Ithaca, New York.
- Reuss, J. O. and W. L. Lindsay. 1963. Do Colorado crops need zinc and iron? Colorado Ext. Pamphlet 63.
- Lindsay, W. L., S. D. Romsdal and J. O. Reuss, 1964. The problem of supplying available iron to grain sorghum on calcareous soils. Div. 88

Name: Richard W. Rice

Born: 1931

Academic Training:

Degree	Year	Institution	Major
B.S.	1953	University of Nebraska	Animal Husbandry
M.S.	1958	University of Nebraska	Animal Husbandry
Ph.D.	1960	Michigan State University	Animal Nutrition

Professional Experience:

Date	Position	Institution
1956-1957	Graduate Research Assistant	University of Nebraska
1957-1960	Graduate Research Assistant	Michigan State University
1960-1966	Assistant Professor	University of Wyoming
1966-	Associate Professor	University of Wyoming

Professional and Honorary Societies:

Sigma XI  
Gamma Sigma Delta  
American Society of Animal Science  
American Dairy Science Association  
American Society of Range Management

Major Interests: Diet selection and intake of grazing animals;  
Forage evaluation, supplementation and utilization;  
Ruminant nutrition and physiology

Current Professional Activities:

Research: Intake and utilization of the diet of steers grazing shortgrass range (IBP funded); Intake, performance and utilization of range grazed continuously or by rotation by sheep; Factors influencing forage intake and utilization.

Publications, Technical Reports:

Matsushima, J., R. W. Rice, T. W. Dowe, and C. H. Adams. 1957. Protein-energy ratios for fattening cattle. J. Anim. Sci. 16:1053 (Abstr.).

Rice, R. W., R. L. Salsbury, J. A. Hoefler, and R. W. Luecke. 1962. Relation of certain end products of rumen fermentation to forage feeding value. J. Anim. Sci. 21:418-425.

Rice, R. W. 1963. Dairy bull calf feeding. Feedstuffs 35(49):27.

Greichus, Y. A., T. R. Varnell, G. J. Miller, and R. W. Rice. 1963. Effect of fiber on rumen VFA and body composition in sheep. West. Sect., Amer. Soc. Anim. Sci., Proc., 14:25-31.

- Rice, R. W. and G. E. Nelms. 1964. Effect of injectable iron on blood constituents and weaning weight of range calves. West. Sect., Amer. Soc. Anim. Sci., Proc., 15:52.
- Paules, L. H., W. P. Miskimins, and R. W. Rice. 1964. Use of dried beet pulp for fattening swine. Wyoming Mimeo. Circ. 205.
- Rice, R. W. 1965. Hay and grain processing and digestibility and rate of passage. J. Anim. Sci. 24:901 (Abstr.).
- Rice, R. W. and L. H. Paules. 1965. Comparison of a fifty per cent hay and a no-hay ration with or without supplemental vitamin A for beef production from young dairy calves. J. Dairy Sci. 48:1668-1671.
- Blackstone, J. B., R. W. Rice, and W. M. Johnson. 1965. A study of the esophageal fistula technique. West. Sect., Amer. Soc. Anim. Sci., Proc., 16:65-61.
- Kercher, C. J., R. W. Rice, C. P. Stroble, and J. J. Belus. 1965. Effect of winter gain on performance and body composition of cattle. J. Anim. Sci. 24:891.
- Varnell, T. R., G. J. Miller, R. W. Rice, and Y. A. Greichus. 1965. Influence of diet on the fatty acid composition of sheep tissues. J. Anim. Sci. 24:590 (Abstr.).
- Greichus, Yvonne, R. W. Rice, and G. Miller. 1966. Effect of physical form of the ration on ruminal volatile fatty acids and body fat composition of sheep. South Dakota Acad. Sci., Proc., 41:178-184.
- Miller, G., R. W. Rice, T. R. Varnell, and J. Matz. 1966. Effect of diet and bile on the fatty acid composition of intestinal contents. West. Sect., Amer. Soc. Anim. Sci., Proc., 19:199-204.
- Rice, R. W. and W. M. Johnson. 1967. Intake and digestion estimates of grazed forage. West. Sect., Amer. Soc. Anim. Sci., Proc., 18:267-272.
- Rice, R. W., J. Matz, and P. Menke. 1967. Passage of food in the alimentary tract of sheep. West. Sect., Amer. Soc. Anim. Sci., Proc., 18:261-266.
- Rice, R. W., G. E. Nelms, and C. O. Schoonover. 1967. Effect of injectable iron on blood hematocrit and hemoglobin and weaning weight of beef calves. J. Anim. Sci. 26:613-617.
- Jefferies, N. W. and R. W. Rice. 1967. A comparison of techniques for range digestibility studies. J. Anim. Sci. 26:935 (Abstr.).
- Miller, G. J., T. R. Varnell, and R. W. Rice. 1967. Fatty acid composition of certain ovine tissues as affected by maintenance level rations of roughage and concentrate. J. Anim. Sci. 26:41-45.

- Cundy, D. R. and R. W. Rice. 1968. Salivary contamination by esophageal collection with steers. West. Sect., Amer. Soc. Anim. Sci., Proc., 19: 49-54.
- Strasia, C. A., R. W. Rice, and D. R. Smith. 1968. Diet and gain of free vs. herded sheep on alpine range. J. Anim. Sci. 27:1186.
- Falkenburg, J. A., H. D. Radloff, and R. W. Rice. 1968. Relationship between milk production of holstein dams and performance of steer progeny. J. Dairy Sci. 51:958 (Abstr.).
- Rice, R. W. 1969. Stomach content analyses: A comparison of the rumen vs. esophageal techniques. U. S. Forest Service Misc. Pub. No. 1147, p. 127-132.
- Rice, R. W., M. P. Botkin, and C. J. Kercher. 1969. Hay and grain processing on the rate of passage of stained hay, grain and chromic oxide. J. Dairy Sci. 52:909 (Abstr.).
- Jefferies, N. W. and R. W. Rice. 1969. Nutritive value of clipped and grazed range forage samples. J. Range Manage. 22:192-195.
- Gibbs, F. O. and R. W. Rice. 1969. Rate of passage of alfalfa hay and low and high moisture alfalfa silage measured with strontium or dyed forage. J. Anim. Sci. 28:858. Also West. Sect., Amer. Soc. Anim. Sci., Proc., 20:343-348.
- Jefferies, N. W. and R. W. Rice. 1969. Forage intake studies on short grass rangelands. West. Sect., Amer. Soc. Anim. Sci., Proc., 20:343-348.

Name: William H. Rickard, Jr.

Born: 1926

Academic Training:

Degree	Year	Institution	Major
B.A.	1950	Univ. Colorado	Botany
M.A.	1953	Univ. Colorado	Botany
Ph.D.	1957	Washington State Univ.	Botany

Professional Experience:

Date	Position	Institution
1950-1953	Field Assistant	Univ. Colorado Inst. Arctic & Alpine Res.
1953-1957	Research Assistant	Washington State Univ.
1957-1960	Assistant Professor of Botany	New Mexico Highlands Univ.
1957-1960	Proj. Leader, Bot. Field Res.	Nevada Test Site
1960-	Res., Terrestrial Ecol. Div.	Butelle Northwest

Professional and Honorary Societies:

Professional Honorary Society  
Ecological Society of America  
American Society of Range Management  
AAAS  
Northwest Scientific Association  
Pacific Northwest Bird and Mammal Society

Major Interests:

Soil-plant relationships of desert steppe plants, productivity of abandoned agricultural fields and the ecological role of ground-dwelling beetles in desert steppe ecosystems

Publications, Technical Reports:

- Rickard, W. H. 1960. The distribution of small mammals in relation to the climax vegetation mosaic in eastern Washington and northern Idaho. *Ecology* 41:99-106.
- Rickard, W. H. 1961. Notes on bird nests found in a desert shrub community following nuclear detonations. *Condor* 63:265-266.
- Rickard, W. H. 1962. Comparison of annual harvest yields in an arctic and a semi-desert plant community. *Ecology* 43:770-771.
- Rickard, W. H. and L. M. Shields. 1963. An early stage in the plant recolonization of a nuclear target area. *Radiat. Bot.* 3:41-44.

- Rickard, W. H. 1963. Cesium-137 in dried milk products in relation to phytoclimatic zones. *Nature* 197:197-198.
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- Rickard, W. H. 1965. The influence of greasewood on soil moisture penetration and soil chemistry. *Northwest Sci.* 39:36-42.
- Rickard, W. H. and J. C. Beatley. 1965. Canopy-coverage of the desert shrub vegetation mosaic of the Nevada test site. *Ecology* 46:523-529.
- Rickard, W. H. 1965. Sodium and potassium accumulation by greasewood and hopsage leaves. *Bot. Gazette* 126:116-119.
- Rickard, W. H. and J. F. Cline. 1965. Mineral transfer in a greasewood community and ion uptake by grasses. *Health Phys.* 11:1371-1374.
- Rickard, W. H. 1965. Field observations on fallout accumulation by plants in natural habitats. *J. Range Manage.* 18:112-114.
- Rickard, W. H., J. J. Davis, W. C. Hanson, and D. G. Watson. 1965. Gamma-emitting radionuclides in Alaskan tundra vegetation 1959, 1960, 1961. *Ecology* 46:352-356.
- Rickard, W. H. 1965. Cesium-137 in *Bromus tectorum* in relation to precipitation regimes and harvest yield. *J. Range Manage.* 18:343.
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- Rickard, W. H. 1966. Cesium-137 in litter and understory vegetation. *Northwest Sci.* 40:25-30.
- Rickard, W. H. and R. E. Nakatani. 1966. The length of deer mice in relation to natural vegetation belts in southeastern Washington and northern Idaho. *Murrelet* 47:49-50.
- Rickard, W. H. 1967. Onset of winter dormancy in lizards and beetles. *Northwest Sci.* 41:92-95.
- Rickard, W. H. 1967. Seasonal soil moisture patterns in adjacent greasewood and sagebrush stands. *Ecology* 48:1034-1038.

- Rickard, W. H. 1968. Field observations on the altitudinal distribution of the side-blotched lizard. *Northwest Sci.* 42:161-164.
- Rickard, W. H. and R. F. Keough. 1968. Soil-plant relationships of two steppe desert shrubs. *Plant and Soil* 29:205-212.
- Hakonson, T. E. and W. H. Rickard. 1968. Radionuclide deposition and elimination in a darkling beetle. *Northwest Sci.* 43:23-28.
- Hinds, W. T. and W. H. Rickard. 1968. Soil temperatures near a desert steppe shrub. *Northwest Sci.* 42:5-13.
- Rickard, W. H. 1969. Fallout accumulation in Cascade Mountain vegetation-1966. In D. J. Nelson and F. C. Evans [ed.] *Symposium on radioecology*. Clearing-house for Fed., Sci., and Tech. Inf., Springfield, Virginia.



Name: Joseph T. Riker III

Born: 1940

Academic Training:

Degree	Year	Institution	Major
B.S.	1952	Oregon State University	Animal Science
M.S.	1964	Oregon State University	Zoology
Ph.D.	1966	Purdue University	Physiology - Nutrition

Professional Experience:

Date	Position	Institution
1962-1964	Graduate Research Assistant	Oregon State University
1964-1966	Graduate Research Assistant	Purdue University
1966-1969	Assistant Professor, Animal Science	University of New Hampshire
1969-	Assistant Professor, Animal Science	Colorado State University

Major Interests:

Environmental physiology and nutrition. Bioclimatology.

Professional and Honorary Societies:

American Society of Animal Science  
AAAS  
Sigma Xi  
Phi Sigma Society

Publications, Technical Reports:

- Riker, III J. T., T. W. Perry, R. A. Pickett and T. M. Curtin. 1967.  
Influence of various grains on the incidence of esophagogastric ulcers  
in swine. J. Animal Sci. 26:731-735.
- Riker, III J. T., T. W. Perry, R. A. Pickett, C. J. Heidenreich and T. M.  
Curtin. 1967. Influence of controlled ambient temperatures and diets on  
the incidence of esophagogastric ulcers in swine. J. Animal Sci. 26:736-740.
- Riker, III J. T., T. W. Perry, R. A. Pickett and C. J. Heidenreich. 1967.  
Influence of controlled temperatures on growth rate and plasma ascorbic  
acid values in swine. J. Nutr. 92:99-103.
- Mitchell, J. R. and J. T. Riker III. 1969. Improved horse pastures for  
New Hampshire. New Hampshire Cooperative Extension Service Information  
Guide No. 10.

Name: Paul G. Risser

Born: 1939

Academic Training:

Degree	Year	Institution	Major
B.A.	1961	Grinnell College	Biology
M.S.	1965	University of Wisconsin	Botany
Ph.D.	1967	University of Wisconsin	Botany-Soil

Special Training:

1961-1963 Research Assistant, Jackson Laboratory, Bar Harbor, Maine  
Plant Physiology

Professional Experience:

Date	Position	Institution
1967-	Assistant Professor of Botany	Oklahoma University

Professional and Honorary Societies:

American Society of Range Management	Ecological Society
AIBS	British Ecological Society
AAAS	Botanical Society
Sigma Xi	

Major Interests:

Physiological Ecology-shade tolerance and adaptation to environment.  
Production Ecology-biomass and gas exchange.  
Community Ecology-diversity, structure and pattern of grassland and forest communities.

Current Professional Activities:

Consultant American Zinc Company

Teaching: Plant Ecology, Botany

Research: Herbage Dynamics on a tall grass prairie.

Publication, Technical Reports:

Risser, P. G. 1964. Somatic mitosis in cells of *Picea glauca* cultivated *in vitro*. Science 143:591-592.

Risser, P. G. and P. R. White. 1964. Some basic parameters in the cultivation of spruce tissues. Physiol. Plant. 17:600-619.

- Risser, P. G. and P. R. White. 1964. Nutritional requirements of spruce tumor cells *in vitro*. *Physiol. Plant.* 17:620-635.
- Risser, P. G. 1965. Breaking dormancy of some spring ephemerals. *Bull. Ecol. Soc. Amer.* 46:106.
- Risser, P. G. and G. Cottam. 1967. Influence of temperature on the dormancy of some spring ephemerals. *Ecology* 48:500-503.
- Risser, P. G. 1967. Physiological ecology of some spring ephemerals. Ph.D. Thesis, Univ. Wisconsin, Madison.
- Risser, P. G. 1968. An evaluation of the grassland quarter method. *Ecology* 49:1006-1009.
- Risser, P. G. 1968. Carbohydrate cycles in the bulbs of some spring ephemerals. *Bull. Torr. Bot. Club* 95:359-369.
- Risser, P. G. 1969. Competitive relationships among herbaceous plants and their influence on the ecosystem function in grasslands, p. 153 to 172. In R. L. Dix and R. G. Beidleman [ed.] *The grassland ecosystem: a preliminary synthesis.* Colorado State Univ., Range Sci. Dep. Sci. Ser. No. 2. 437 p.
- Risser, P. G. 1969. Effects of scopoletin on growth, CO<sub>2</sub> exchange rates, and concentration of scopoletin, scopalin, and chlorogenic acids in tobacco, sunflower, and pigweed. *Torr. Bot. Club*, (in press) with F. Einhellig and E. Rice.

Name: Francis L. Rose

Born: 1935

Academic Training:

Degree	Year	Institution	Major
B.S.	1959	University of Georgia	Zoology
M.S.	1962	University of Georgia	Zoology
Ph.D.	1965	Tulane University	Zoology

Professional Experience:

Date	Position	Institution
1965-1966	N.I.H. Post-Doctoral Fellowship	University of Florida
1966-1968	Assistant Professor, Biology	Texas Tech College
1968-	Associate Professor	Texas Tech College

Publications, Technical Reports:

- Neill, W. T. and F. L. Rose. 1949. The nests and eggs of the southern dusky salamander, *Desmognathus fuscus auriculatus*. *Copeia*, 1949:234.
- Rose, F. L. 1954. Records of the green water snake, *Natrix cyclopian floridana*, in South Carolina and Georgia. *Copeia*, 1953:127-128.
- Rose, F. L. 1959. Albinism in *Thamnophis sauritus proximus* Say. *Herpetologica*, 16:233.
- Rose, F. L. 1960. Notes on a breeding colony of grackles and recent avian invaders in Athens, Clarke County, Georgia. *Oriole*, 25:1-5.
- Rose, F. L. 1962. A case of albinism in *Rana pipiens* Schreber. *Herpetologica*, 18:72.
- Martog, B. S., and F. L. Rose. 1962. The taxonomic status of the plethodontid salamander, *Desmognathus planiceps*. *Copeia*, 1962:727-732.
- Rose, F. L. 1963. The comparative osteology of the anterior cranial elements of the salamanders *Gyrinophilus* and *Pseudotriton*. *Copeia*, 1963:727-732.
- Rose, F. L. 1963. Geographic variation in southern populations of *Desmognathus ochrophaeus*. *Amer. Mid. Nat.*, 69:376-425.
- Rose, F. L., and J. L. Dobie. 1963. *Desmognathus monticola* in the Coastal Plain of Alabama. *Copeia*, 1963:564-565.
- Rose, F. L. and F. M. Bush. 1963. A new species of *Eurycea* (Amphibia: Caudata) from the southeastern United States. *Tulane Stud. Zool.*, 19:121-128.
- Rose, F. L. 1963. Delayed melanism in tadpoles of *Rana pipiens*. *Herpetologica*, 18:274-275.

- Rose, F. L. 1965. Hepatic glycogen depletion during induced anoxia in *Amphiuma*. *Science*, 147:1467-1468.
- Rose, F. L. 1966. Homing to nests by the salamander *Desmognathus auriculatus*. *Copeia*, 1966:251-253.
- Rose, F. L. 1966. Reproductive potential of *Amphiuma means*. *Copeia*, 1966:598-599.
- Rose, F. L. 1966. Weight change during starvation in *Amphiuma means*. *Herpetologica*, 22:312-313.
- Rose, F. L. and J. Zambarnard. 1966. Cardiac glycogen depletion in *Amphiuma means* during induced anoxia. *J. Morph.*, 120:391-396.
- Rose, F. L. and W. G. Weaver. 1967. Two new species of *Chrysemys* (= *Pseudemys*) from the Florida Pliocene. *Tulane Stud. Geol.*, 5:41-48.
- Rose, F. L. 1967. Systematics, fossil history, and evolution of the genus *Chrysemys*. *Tulane Stud. Zool.*, 14:63-73.
- Rose, F. L., 1967. Seasonal changes in the lipid levels of the salamander *Amphiuma means*. *Copeia*, 1967:662-666.
- Rose, F. L. and R. B. Drotman. 1967. Anaerobiosis in a frog, *Rana pipiens*. *J. Exp. Zool.*, 166:427-432.
- Rose, F. L. and C. D. Barbour. 1968. Ecology and reproductive cycles of the introduced gecko, *Hemidactylus turcoicus*, in the southern United States. *Amer. Mid. Nat.*, 79:159-168.
- Rose, F. L. 1968. Ontogenetic changes in the tooth number of *Amphiuma tridactylum*. *Herpetologica*, 24:182-184.
- Rose, F. L. and H. L. Lewis. 1968. Changes in weight and free fatty acid concentration of fat bodies of paedogenic *Ambystoma tigrinum* during vitellogenesis. *Comp. Biochem. Physiol.* 26:182-184.
- Rose, F. L., R. Drotman, and W. G. Weaver. 1969. Electrophoresis of chin gland extracts of *Gopherus* (tortoises). *Comp. Biochem. Physiol.* 29:847-851.
- Rose, F. L. 1969. Desiccation rates and temperature relationships of *Terrapene ornata* following scute removal. *Southwest. Naturalist* 14:67-72.
- Rose, F. L. 1968. Fossil history and evolution of the genus *Chrysemys*. *Amer. Philo. Soc. Yearbook*, p. 330-332.
- Lewis, H. L. and F. L. Rose. 1969. Effects of fat body fatty acids on ovarian and liver metabolism of *Ambystoma tigrinum*. *Comp. Biochem. Physiol.* 30:1055-1060.

Accepted for Publication

Rose, F. L. Amphibians in xeric habitats - A review. Published to International Center for Arid and Semi-Arid Land Studies. 1970 scheduled publication date.

Rose, F. L. Tortoise chin gland fatty acids: behavioral significance. Comp. Biochem. Physiol.

Name: Ronald A. Ryder

Born: 1928

Academic Training:

Degree	Year	Institution	Major
B.S.	1949	Colorado State University	Game Management
M.S.	1951	Colorado State University	Game Management
Ph.D.	1958	Utah State University	Wildlife Management

Special Training:

Office of Naval Research, Computer Short Course, Texas A & M - August 1968  
Office of Naval Research, Oceanography, Oregon State University - July 1969

Professional Experience:

Date	Position	Institution
1949-1951	Research Assistant	Colo. Coop. Wildl. Res. Unit
1951-1954	Deck Officer	U. S. Navy
1955-1957	Research Assistant	Utah State University
1957-1958	Instructor in Biology	Wartburg College, Iowa
1958-1963	Assistant Professor of Wildlife	Colorado State University
1963-1968	Associate Professor of Wildlife	Colorado State University
1968-	Prof. & Chmn., Wildl. Biol. Maj.	Colorado State University

Professional and Honorary Societies:

Sigma Xi	Cooper Ornithological Society
The Wildlife Society	Fort Collins Bird Club
American Ornithologists' Union	Colorado Field Ornithologists
Society of American Mammalogists	Colorado-Wyoming Academy of Sciences
Western Bird-Banding Association	National Audubon Society
Wilson Ornithological Society	Intl. Oceanographic Foundation
Xi Sigma Pi	Phi Kappa Phi
Beta Beta Beta	

Major Interests:

Ornithology; avian ecology particularly population dynamics, movements and migration.  
Waterfowl and upland game bird ecology and management.

Current Professional Activities:

President, Colorado Field Ornithologists  
President, Western Bird Banding Association  
Local Arrangement Chairman, Joint Cooper-Wilson Ornith. Meeting

Teaching: Wildlife Management Techniques; Waterfowl Management; Spec. Studies in Wildlife Biology

Research: Waterfowl-Water Temperature Relationships; Avian Populations of the Pawnee Site (IBP); Migrations of Snowy Egret

Publications, Technical Report:

- Ryder, R. A. 1950. Great blue heron killed by a carp. *Condor* 52:40-41.
- Ryder, R. A. 1950. New breeding records for Colorado. *Condor* 52:133-141.
- Ryder, R. A. 1951. Waterfowl production in the San Luis Valley, Colorado. M. S. Thesis, Colorado A & M Coll., Fort Collins, Colorado. 166 p.
- Ryder, R. A. 1951. The San Luis Valley - a Colorado waterfowl factory. *Colorado Conserv.*, March:22-25.
- Ryder, R. A. and J. R. Grieb. 1952. Waterfowl records for north-central Colorado. *Condor* 54:65-67.
- Ryder, R. A. 1952. Bird notes from southern Colorado. *Condor* 54:317-318.
- Ryder, R. A. 1955. Long gone goslings. *Colorado Conserv.* 4:12-14.
- Ryder, R. A. 1955. A preliminary analysis of waterfowl recoveries in Colorado with notes on trapping and banding. *Colorado Game & Fish Dept. Final Proj. Rep., Proj. W-37-R.* 72 p.
- Ryder, R. A. 1955. Eight-year hunter check, South Platte management area. *Colorado Game & Fish Dept. Final Proj. Rep., Proj. W-37-R.* 23 p.
- Ryder, R. A. 1956. Summer banding on Utah marshes. *News from the Bird Banders* 31:45.
- Ryder, R. A. 1957. Coot-waterfowl relations on some northern Utah marshes. *Utah Acad. Arts, Letters & Sci. Proc.* 34:65-68.
- Ryder, R. A. 1957. Avian-pinniped feeding relationships. *Condor* 59:68-69.
- Ryder, R. A. 1958. Coot-waterfowl relations in northern Utah. Ph.D. Diss., Utah State Univ., Logan. 219 p.
- Ryder, R. A. 1959. Interspecific intolerance of the American coot in Utah. *Auk* 76:424-442.
- Ryder, R. A. 1960. Recoveries of waterfowl banded by the Colorado Cooperative Wildlife Research Unit. *Colorado Coop. Wildl. Res. Unit Qtr. Rep.* 14:35-36.
- Ryder, R. A. 1960. The grouse of Colorado. *Colorado Outdoors* 9:1-7.
- Ryder, R. A. 1960. Coot and duck productivity in northern Utah. *North America Wildl. & Cons. Conf. Trans.* 26:134-147.
- Ryder, R. A. and L. A. Roper. 1961. Recent waterfowl records for Colorado. *Condor* 63:418.
- Ryder, R. A. 1962. Bird banding - hummingbirds to pelicans. *Colorado Coop. Wildl. Res. Unit Qtr. Rep.* 16:1-2.



- Ryder, R. A. 1962. Recoveries of waterfowl banded by the Colorado Cooperative Wildlife Research Unit. Colorado Coop. Wildl. Res. Unit Qtr. Rep. 16:17-18.
- Ryder, R. A. 1962. Banding activities in Colorado. Western Bird Bander 37:50.
- Ryder, R. A. and J. R. Grieb. 1963. White pelicans breeding in Colorado. Wilson Bull. 75:92.
- Ryder, R. A. 1963. Mottled duck and knot in Colorado. Condor 65:333.
- Ryder, R. A. 1963. Some results from Colorado banding. Western Bird Bander 38:39-40.
- Ryder, R. A. 1963. Migration and population dynamics of American coots in western North America. Proc. XIII Intern. Ornith. Congress:441-453.
- Ryder, R. A. 1963. Movements and migrations of some Colorado gulls. J. Colorado-Wyoming Acad. Sci. 5:50-51.
- Ryder, R. A. 1964. White pelicans. Colorado Outdoors 12:24-29.
- Ryder, R. A. 1964. California gull nesting in Colorado. Condor 66:440-441.
- Ryder, R. A. 1964. Migration and mortality of mallards banded in northern Colorado. J. Colorado-Wyoming Acad. Sci. 5:48. (Abstr.)
- Ryder, R. A. 1964. A partial bibliography of references on the sage grouse (*Centrocercus urophasianus*). Colorado State Univ., Fort Collins, Colorado. 28 p. mimeo.
- Ryder, R. A. and L. Jensen. 1965. Breeding behavior of the white-tailed ptarmigan near Aspen, Colorado. J. Colorado-Wyoming Acad. Sci. 5:52-53. (Abstr.)
- Ryder, R. A. 1965. Review of *Waterfowl tomorrow*. J. Soil & Water Conserv. 20:113.
- Ryder, R. A. 1966. Some movements of ring-billed gulls color-marked in Colorado. The Blue Jay 24:73-75.
- Ryder, R. A. 1966. Review of *Black Brant: Sea Goose of the Pacific Coast*. J. Wildl. Manage. 30:444.
- Ryder, R. A. 1967. Distribution, migration and mortality of the white-faced ibis (*Plegadis chihi*) in North America. Bird Banding 38:257-277.
- Ryder, R. A. 1967. Distribution, migration and mortality of the white-faced ibis (*Plegadis chihi*) in North America. J. Colorado-Wyoming Acad. Sci. 5:78.
- Ryder, R. A. 1967. Migration and movements of gulls color-marked in Colorado. Colorado Field Ornith. 2:16-20.
- Littlefield, C. D. and R. A. Ryder. 1968. Breeding biology of the greater sandhill crane on Malheur National Wildlife Refuge, Oregon. North American Wildl. & Natur. Res. Conf. 33:444-454.

- Ryder, R. A. 1968. Color-marked gulls reported in Colorado. Colorado Field Ornith. 4:16.
- Ryder, R. A., A. J. Pakulak, and C. D. Littlefield. 1969. Black brant observed in Larimer County, Colorado. Colorado Field Ornith. 5:5-7.
- Ryder, R. A. and D. A. Cobb. 1969. Birds of the Pawnee National Grasslands in northern Colorado. J. Colorado-Wyoming Acad. Sci. 6:5.
- Ryder, R. A. and C. D. Marti. 1969. Food habits of four grassland inhabiting owls. J. Colorado-Wyoming Acad. Sci. 6:50.

Name: Jack A. Seilheimer

Born: 1935

Academic Training:

Degree	Year	Institution	Major
B.S.	1960	Western Michigan University	Biology
Ph.S.	1963	University of Louisville	Zoology

Professional Experience:

Date	Position	Institution
1960=1962	Aquatic Biologist	Ohio River Valley Water Sanitation Comm.
1962	Instructor	University of Louisville
1963-1964	Instructor	Southern Colo. State College
1964-1967	Assistant Professor	Southern Colo. State College
1968-	Associate Professor	Southern Colo. State College

Major Interests:

Limnology (plankton ecology, primary productivity, aquatic invertebrates, and water pollution). Ichthyology and Herpetology.

Professional and Honorary Societies:

Sigma Xi  
American Society of Limnology and Oceanography  
International Society for the study of Theoretical and Applied Limnology  
Midwest Benthological Society

Publications:

Author or coauthor of 4 publications.

Seilheimer, J. A. 1963. The dynamics of potamoplankton populations in the Ohio River at Louisville. Doctoral Thesis, Univ. of Louisville. 290 p.

Seilheimer, J. A. 1963. Interrelationships between light and phytoplankton photosynthesis in the Ohio River. Final report for AEC Res. Contract AT-(40) 2848. 51 p.

Seilheimer, J. A. 1963. Ecology of phytoplankton blooms. III. The dynamics of potamoplankton populations in the Ohio River at Louisville, Kentucky. 1960-1962. U. S. Public Health Service, Research Grant WP-00068-3, Prog. Rep. 220 p.

Seilheimer, J. A. 1963. A comparison of algal growth in cultures exposed and unexposed to solar radiation. Amer. Microscop. Soc., Trans. 82:78-83.

Name: Barbara Sherman

Born: 1938

Academic Training:

Degree	Year	Institution	Major
B.A.	1961	Coe College, Cedar Rapids, Iowa	Biology
M.S.	1963	University of Iowa	Microbiology
Ph.D.	1968	Oregon State University	Botany

Professional Experience:

Date	Position	Institution
1959-1961	Departmental Assistant, Biol. Dep.	Coe College
1961-1963	Graduate Assistantship	University of Iowa
1963-1964	Research Assistant	University of Iowa
1964-1966	Instructor, Dep. Microbiology	Oregon State University
1966-1968	Graduate Teaching Assistant	Oregon State University
1968-Present	Teaching, Dep. Biology	Univ. Colorado Center

Professional and Honorary Societies:

Phi Beta Kappa  
Phi Kappa Phi  
Iota Sigma Pi  
Pi Delta Epsilon  
Phi Sigma

Current Research:

Consultant to the IBP concerned with aquatic studies involved in the Grasslands Biome Project.

Publications, Technical Reports:

Thesis Titles: "Studies on an anti-antibody," involving the immune response to viruses and to antibody proteins. "Benthic algal communities of the Metolius River."

Sherman, B. 1969. Benthic algal communities of the Metolius River. Submitted to Ecology, November 1969.

Name: Robert J. Sherman

Born: 1940

Academic Training:

Degree	Year	Institution	Major
B.A.	1962	Coe College	Biology
M.S.	1966	Oregon State University	Botany
Ph.D.	1968	Oregon State University	Botany

Professional Experience:

Date	Position	Institution
1962-1964	High School Teacher	College Community School Dist. Cedar Rapids, Iowa
1963-1964	Biology Dep. Asst.	Coe College
1964-1968	Graduate Teaching Asst. & Part-time Instructor	Oregon State University
Present	Asst. Prof. of Biology	University of Colorado Colorado Springs Campus

Professional and Honorary Societies:

Ecological Society of America  
Colorado-Wyoming Academy of Science  
International Botanical Congress  
Sigma Xi (Associate)  
Phi Sigma

Phi Kappa Phi

Current Professional Activities:

Teaching: Biology, Plant Ecology, Plant Geography

Research: Successional patterns in a recently burned mountain forest,  
Transport of radioactive phosphorous in a sagebrush community.

Publications, Technical Reports:

- Sherman, R. J. 1966. Spatial and chronological patterns of *Purshia tridentata* as influenced by *Pinus ponderosa* overstory. M.S. Thesis, Oregon State Univ.
- Sherman, R. J. 1968. Spatial and developmental patterns of the vegetation of Black Butte, Oregon. Ph.D. Thesis, Oregon State Univ.
- Sherman, R. J. 1969. Spatial and chronological patterns of *Purshia tridentata* as influenced by *Pinus ponderosa*. (Submitted to Ecology).

Name: L. B. Sherrod

Academic Training:

Degree	Year	Institution	Major
B.S.	1958	South Dakota State University	Animal husbandry
M.S.	1960	University of Arkansas	Animal nutrition
Ph.D.	1964		Animal nutrition

Professional Experience:

Date	Position	Institution
1964-present	Researcher, Anim. Sci. Dep.	University of Hawaii

Professional and Honorary Societies:

American Society of Animal Science  
Phi Kappa Phi  
Gamma Sigma Delta  
Sigma Xi  
AAAS  
AIBS  
Hawaii Academy of Sciences

Major Interests:

Factors influencing nutritive value of sub-tropical forages; Digestibility-nutrient retention studies; Evaluation of supplemental feeding and pasture fertilization for improving animal performance in sub-tropical areas.

Current Professional Activities:

Research: Range livestock nutrition; Studies on the nutritive value of various Hawaiian agricultural and industrial products and by-products in livestock rations.

Publications, Technical Reports:

- Sherrod, L. B. and A. D. Tillman. 1962. Effects of varying the processing temperatures upon the nutritive values for sheep of solvent-extracted soybean and cottonseed meals. *J. Anim. Sci.* 21:901.
- Sherrod, L. B. and A. D. Tillman. 1964. Further studies on the effects of different processing temperatures on the utilization of solvent-extracted cottonseed protein by sheep. *J. Anim. Sci.* 23:510.
- Furr, R. D. and L. B. Sherrod. 1965. Effects of supplemental feeding, stilbestrol, and vitamin A upon the performance of weanling steers on pasture, feedlot and carcass traits. *Western Sect. Amer. Soc. Anim. Sci., Proc.*, 16:LXVI.

- Sherrod, L. B., R. D. Furr, N. E. Nichols, and C. W. Garcia. 1965. Supplemental vitamin A for beef cattle. Hawaii Agr. Exp. Sta. Circ. 64.
- Sherrod, L. B., R. D. Furr, N. E. Nichols and C. W. Garcia. 1966. The effects of various supplemental feeding levels, stilbestrol implantation, and cobalt supplementation upon the performance of weanling steers on pasture, subsequent feedlot performance and carcass characteristics. Hawaii Agr. Ext. Misc. Pub. MP-31.
- Danke, R. J., L. B. Sherrod, E. C. Nelson and A. D. Tillman. 1966. Effects of autoclaving and steaming of cottonseed meal for different lengths of time on nitrogen solubility and retention in sheep. J. Anim. Sci. 25:181.
- Clifford, A. J., L. B. Sherrod and A. D. Tillman. 1966. Effect of amylase, chlortetracycline and diethylstilbestrol alone or combined upon growth of lambs fed purified diets. J. Anim. Sci. 25:263. (Abstr.).
- Sherrod, L. B., R. D. Furr, N. E. Nichols and C. W. Garcia. 1966. Short-term supplemental feeding of steers on pasture immediately prior to feedlot. Hawaii Agr. Ext. Misc. Pub. MP-32.
- Sherrod, L. B. and S. M. Ishizaki. 1966. Effects of substituting various levels of feed-grade macadamia nuts for grain upon the nutritive value of concentrate rations for sheep. J. Anim. Sci. 25:439.
- Sherrod, L. B. and R. D. Furr. 1966. Supplemental feeding levels, stilbestrol, and cobalt for improving performance of weanling steers on pasture, later feedlot and carcass traits. Western Sect. Amer. Soc. Anim. Sci., Proc., 17:313.
- Sherrod, L. B. and S. M. Ishizaki. 1966. Effects of stage and season of regrowth upon the nutritive value of kikuyu and pangola grass. Western Sect. Amer. Soc. Anim. Sci., Proc., 17:379.
- Sherrod, L. B. and S. M. Ishizaki. 1966. The use of feed-grade macadamia nuts in ruminant rations. Hawaii Farm Sci. 15. (In press.)
- Furr, R. D., L. B. Sherrod and G. Aoki. 1966. A comparison of the performance of bulls and steers on pasture. Hawaii Farm Sci. 15. (In press.)
- Sherrod, L. B. and S. M. Ishizaki. 1967. Further studies on levels of feed-grade macadamia nuts in concentrate rations for sheep. J. Anim. Sci. 26. (In press.)
- Sherrod, L. B. and S. M. Ishizaki. 1967. Effects of stage of regrowth and location upon the nutritive value of kikuyu and pangola grass. Western Sect. Amer. Soc. Anim. Sci., Proc., 18. (In press.)
- Sherrod, L. B., Y. N. Tamimi and S. M. Ishizaki. 1967. Effects of stage of maturity upon yield, composition and nutritive value of whole plant corn and forage sorghum. Hawaii Agr. Exp. Sta. Tech. Bull. No. 72.

- Sherrod, L. B. and S. M. Ishizaki. 1967. Effects of supplemental protein levels upon the utilization of kikuyu and pangola grass nutrients. Western Sect. Amer. Soc. Anim. Sci., Proc., 18. (In press.)
- Nichols, N. E. and L. B. Sherrod. 1967. Some factors influencing consumption of mineral supplement by grazing beef steers. Hawaii Agr. Ext. Misc. Pub. MP-41.
- Tamimi, Y. N., L. B. Sherrod, S. M. Ishizaki and T. Izuno. 1967. The effect of levels of nitrogen, phosphorus and potassium on beef production of kikuyu pasture. Hawaii Agr. Exp. Sta. Tech. Prog. Rep. (In preparation.)



Name: Moras L. Shubert

Born: 1912

Academic Training:

Degree	Year	Institution	Major
A.B.	1934	Nebraska State Teachers College	Ecology
	1935-1937	Iowa State College	
Ph.D.	1940	Iowa State College	Plant Ecology

Professional Experience:

Date	Position	Institution
1937-1942	Coop. Agent, Soil Conservation Service	USDA and Experiment Station, Iowa
1942-1943	Licensing Officer, Office of Export Control	Board of Economic Welfare
1946-1951	Assistant Professor	University of Denver
1951-	Associate Professor	University of Denver

Professional and Honorary Societies:

AAAS, Fellow  
AIBS  
Botanical Society of America  
Ecological Society of America  
Colorado-Wyoming Academy of Science  
(President, 1967-1968)

Sigma Xi  
(Numerous conservation societies)

Major Interests:

Plant ecology, soil plant relationships, general biology, soil-climate relationships.

Publications, Technical Reports:

Author or coauthor of 23 publications. Pertinent or recent publications are listed below:

- Kelly, M. and M. L. Shubert. 1949. A novel method of preparing permanent demonstration specimens of wild flowers. *J. Colorado-Wyoming Acad. Sci.* 4:46-47. (Abstract).
- Shubert, M. L. 1950. Some problems of aspen distribution in South Park. *J. Colorado-Wyoming Acad. Sci.* 4(2):53. (Abstract).
- Stimpfling, J. and M. L. Shubert. 1950. Iron fluctuation in *Acer Saccharinum*. *J. Colorado-Wyoming Acad. Sci.* 4(2):55-56.
- Hackbarth, W. P. and M. L. Shubert. 1951. Abscission of deciduous tree leaves. *J. Colorado-Wyoming Acad. Sci.* 4(3):65 (Abstract).

Shubert, M. L., W. Binder and E. L. Todut. 1962. Historical events in an ecological enigma. *Bull. Ecol. Soc. Amer.* 43(3):52 (Abstract).

Shubert, M. L., W. Binder and E. L. Todut. 1962. The ecology of the Black Forest re-examined. *J. Colorado-Wyoming Acad. Sci.* 5(3):57. (Abstract).

Shubert, M. L. Laboratory manual for plants. Life Science Series. W. A. Benjamin, Inc.

Name: Moras L. Shubert

Born: 1912

Academic Training:

Degree	Year	Institution	Major
A.B.	1934	Nebraska State Teachers College	Ecology
	1935-1937	Iowa State College	
Ph.D.	1940	Iowa State College	Plant Ecology

Professional Experience:

Date	Position	Institution
1937-1942	Coop. Agent, Soil Conservation Service	USDA and Experiment Station, Iowa
1942-1943	Licensing Officer, Office of Export Control	Board of Economic Welfare
1946-1951	Assistant Professor	University of Denver
1951-	Associate Professor	University of Denver

Professional and Honorary Societies:

AAAS, Fellow  
 AIBS  
 Botanical Society of America  
 Ecological Society of America  
 Colorado-Wyoming Academy of Science  
 (President, 1967-1968)

Sigma Xi  
 (Numerous conservation societies)

Major Interests:

Plant ecology, soil plant relationships, general biology, soil-climate relationships.

Publications, Technical Reports:

Author or coauthor of 23 publications. Pertinent or recent publications are listed below:

- Kelly, M. and M. L. Shubert. 1949. A novel method of preparing permanent demonstration specimens of wild flowers. *J. Colorado-Wyoming Acad. Sci.* 4:46-47. (Abstract).
- Shubert, M. L. 1950. Some problems of aspen distribution in South Park. *J. Colorado-Wyoming Acad. Sci.* 4(2):53. (Abstract).
- Stimpfling, J. and M. L. Shubert. 1950. Iron fluctuation in *Acer Saccharinum*. *J. Colorado-Wyoming Acad. Sci.* 4(2):55-56.
- Hackbarth, W. P. and M. L. Shubert. 1951. Abscission of deciduous tree leaves. *J. Colorado-Wyoming Acad. Sci.* 4(3):65 (Abstract).

Name: Phillip L. Sims

Born: 1940

Academic Training:

Degree	Year	Institution	Major
B.S.	1962	Oklahoma State University	Agronomy (Range Management)
M.S.	1964	Oklahoma State University	Agronomy (Range Management)
Ph.D.	1967	Utah State University	Range Science

Professional Experience:

Date	Position	Institution
1961 (Summer)	Student Trainee (Plant Ecology)	ARS
1962-1964	Graduate Research Assistant	Oklahoma State University
1964-1967	Graduate Research Assistant	Utah State University
1967-	Assistant Professor	Colorado State University

Professional and Honorary Societies:

Sigma Xi	American Society of Range Management
Phi Sigma	American Society of Animal Science
Xi Sigma Pi	American Soil Conservation Society
Alpha Zeta	British Ecological Society

Major Interests: Range animal nutrition and responses,  
Forage evaluation and grazing influences,  
Dynamics of herbage production,  
Palatability of forage plants.

Current Professional Activities: Colorado Agricultural Research Station and  
IBP Grassland Biome research

Publications, Technical Reports:

- Dwyer, D. D., P. L. Sims, and L. S. Pope. 1964. Preference of steers for certain native and introduced forage plants. *J. Range Manage.* 17:83-85.
- Sims, P. L. and D. D. Dwyer. 1965. Pattern of retrogression of native vegetation in north-central Oklahoma. *J. Range Manage.* 18:20-25.
- Sims, P. L. and J. E. Butcher. 1966. Water source effect on rumen temperature of sheep. *J. Anim. Sci.* 25:590.
- Sims, P. L. 1967. The effect of stand density on characteristics of wheatgrasses. Ph.D. Thesis, Utah State Univ., Logan, Utah. 66 p.
- Sims, P. L. and C. W. Cook. 1967. Digestibility as influenced by density of forage stand. *J. Anim. Sci.* 26:939.
- Cook, C. W., L. A. Stoddart, and P. L. Sims. 1967. Effects of season, spacing and intensity of seeding on the development of foothill range grass stands. *Utah Agr. Exp. Sta. Bull.* 467. 73 p.

Name: James D. Smolik

Born: 1942

Academic Training:

Degree	Year	Institution	Major
B.S.	1965	South Dakota State University	Plant Pathology
M.S.	1969	South Dakota State University	Plant Pathology

Professional Experience:

Date	Position	Institution
1969-	Assistant in Plant Science	South Dakota State University

Major Interests:

Nematode diseases of plants

Professional and Honorary Societies:

Gamma Sigma Delta

Publications:

Smolik, J. D. 1969. *Tylenchorhynchus nudas* and other nematodes associated with turf in South Dakota. M. S. Thesis, South Dakota State University.

Name: Freeman M. Smith

Born: 1939

Academic Training:

Degree	Year	Institution	Major
B.S.	1961	Univ. Arizona	Botany
M.S.	1969	Univ. Arizona	Watershed Management
Ph.D. Candidate		Colorado State Univ.	Systems Ecol./Watershed Hydro.

Special Training:

Mathematical Methods in Hydrol. - Dec. 1968

Professional Experience:

Date	Position	Institution
1961-1962	Teaching Assistant	Univ. Arizona
1962-1963	Range Conservationist	USDA - ARS - SWC
1963-1965	Botanist	USDA - ARS - SWC
1965-1968	Research Botanist	USDA - ARS - SWC
1968-	Research Instructor	Colorado State Univ.

Professional and Honorary Societies:

Sigma Xi  
American Society of Range Management  
Ecological Society of America  
AAAS  
American Geophysics Union

Major Interests:

Biological Influences on Hydrologic Response.  
Stochastic Processes in Hydrology.

Current Professional Activities:

Teaching: Matrix Algebra (Short Course)

Publications, Technical Reports:

- Hamon, W. R., C. W. Johnson, G. R. Stephenson, and F. M. Smith. 1965. Development of coordinated hydrologic networks for a semi-arid watershed. Int. Ass. Sci. Hydrol., Symp., Design, of Hydrol. Networks, Extr. Pub. 68: 663-674.
- Cooper, C. L. and F. M. Smith. 1966. Color aerial photography: toy or tool? J. Forest. 64:373-378.
- Smith, F. M., C. L. Cooper, and E. G. Chapman. 1967. Measuring snow depths by aerial photo-grammetry: evaluation and recommendations. Western Snow Conf. Proc. Boise, Idaho.
- Smith, F. M. 1969. The relations of sagebrush leaf area to bush size. M.S. Thesis, Univ. Arizona. 54 p.

Name: Eugene E. Staffeldt

Born: 1926

Academic Training:

Degree

B.S.	1949	Northern Illinois State Univ.	Botany and Zoology
M.S.	1951	Iowa State University	Plant Pathology
Ph.D.	1953	Iowa State University	Plant Pathology & Soil

Professional Experience:

Date

1950-1953	Graduate Assistant	Iowa State
1953-1955	Assistant Professor	New Mexico State Univ.
1955-1957	Consultant, New Mexico State Univ.	Contract with Univ. Sind, West Pakistan
1957-1964	Associate Professor of Biology	New Mexico State Univ.
1964-1965	Visiting Professor	American Univ. Beirut, Beirut, Lebanon
1965-	Professor of Biology	New Mexico State Univ.

Professional and Honorary Societies:

Sigma Xi  
AAAS  
Society of Industrial Microbiology

Major Interests:

Soil microbiology, carbon and nitrogen

Publications, Technical Reports:

- Staffeldt, E. E. 1951. *Pythium* and other fungi colonizing sterilized straw in the soil. *Phytopathology* 42:22.
- Staffeldt, E. E. 1953. Effects of four crop rotations on soil fungi and corn root necrosis. *Iowa State J. Sci.*
- Staffeldt, E. E. and E. L. Sharp. 1954. Modified Lypohil Method for preservation of *Pythium* species. *Phytopathology* 44:213-215.
- Staffeldt, E. E. and P. J. Leyendecker, Jr. 1955. *Verticillium* wilt on two vegetable hosts in southern New Mexico. *Plant Dis. Reporter* 39:589-590.
- Staffeldt, E. E. and P. A. Fryxell. 1955. A measurement of disease reaction of cotton to *Verticillium* wilt. *Plant Dis. Reporter* 39:690-692.
- Qazi, A. Q., S. A. Khan, and E. E. Staffeldt. 1957. Identification of *Rhizoctonia bataticola*. *Pakistan J. Sci.* 13:136-137.

- Qazi, A. Q., A. A. Chand, and E. E. Staffeldt. 1957. Comparative study of different varieties of Jowar (*Andropogon sorghi*) as affected by *Tolyposporium ehrebergii* and *Collectotrichum* species. Pakistan J. Sci.
- Staffeldt, E. E. 1959. *Thielaviopsis basicola*; a part of the cotton (*Gossypium hirsutum*) seedling disease complex in New Mexico. Plant Dis. Reporter 43:506-508.
- Staffeldt, E. E. 1959. Elimination of *Verticillium albo-atrum* by composting cotton gin wastes. Plant Dis. Reporter 43:1150-1152. Reprinted in Compost Science.
- Staffeldt, E. E. and C. R. Maier. 1959. Cultural and pathogenic variability of *Rhizoctonia solani* isolates from cotton growing areas of New Mexico. Plant Dis. Reporter 43:1063-1066.
- Hunter, R. E., E. E. Staffeldt, and C. R. Maier. 1960. Effects of soil temperatures on the pathogenicity of *Rhizoctonia solani* isolates. Plant Dis. Reporter 44:793-795.
- Maier, C. R. and E. E. Staffeldt. 1960. Cultural variability of selected isolates of *Rhizoctonia solani* and *Thielaviopsis basicola*, and the variability in their pathogenicity to Acala and Pima cotton, respectively. Plant Dis. Reporter 44:956-961.
- Staffeldt, E. E. 1961. Observations of Lyophil preservation and storage of *Pythium* species. Phytopathology 51:259.
- Maier, C. R. and E. E. Staffeldt. 1963. Cotton seedling disease complex in New Mexico. New Mexico State Univ. Agr. Exp. Sta. Bull. 474. 41 p.
- Young, J. C., E. E. Staffeldt, and J. W. Clark. 1963. BOD on selected organisms. Water and Sewage Works 110:285-289.
- Staffeldt, E. E. and O. H. Calderon. 1964. Microbes isolated from missiles. Electro-Mech. Lab. Div. Intern. Mem. 9.
- Calderon, O. H. and E. E. Staffeldt. 1965. Occurrence of microorganisms in quality control studies vs. occurrence in service life studies. Missile Sci. Div. Intern. Mem. 20.
- Calderon, O. H. and E. E. Staffeldt. 1965. Colonization of organic traps by microorganisms in Kwajalein Island soils. Int. Biodet. Bull. 1:59-62.
- Calderon, O. H. and E. E. Staffeldt. 1965. Colonization of RTV silicone by microorganisms. Int. Biodet. Bull. 1:33-37.
- Calderon, O. H., M. R. Sandoval, and E. E. Staffeldt. 1966. Microbiol deterioration of engineering materials. 1966 IEE Conf. Record of 7th Annu. Conf.-Electronic Reliability, 21-1 to 21-9. Inst. Electrical and Electronic Eng.
- Staffeldt, E. E. and O. H. Calderon. 1967. Possible degradation of metals by microorganisms. Develop. Ind. Microbiol. 8:321-326.



- Burns, J., E. E. Staffeldt, and O. H. Calderon. 1967. Corrosion caused by organic acids reacting with three metals, with special emphasis on Krebs Cycle acids. *Develop. Ind. Microbiol.* 8:327-334.
- Calderon, O. H., E. E. Staffeldt, and M. R. Sandoval. 1967. Effects of temperature on amounts of copper salts formed when pure copper is exposed to organic acids. *Develop. Ind. Microbiol.* 8:335-338.
- McCowen, K. D., O. H. Calderon, and E. E. Staffeldt. 1967. Effects of acid dilutions on amount of copper salts formed when pure copper is exposed to organic acids. *Develop. Ind. Microbiol.* 8:339-344.
- Mueller, E., K. Schell, O. H. Calderon, and E. E. Staffeldt. 1967. Effects of corrosion products of metals on microorganism and bean products. *Develop. Ind. Microbiol.* 8:345-352.
- Staffeldt, E. E. and O. H. Calderon. 1967. Metal-organic acid corrosion and the effect of corrosion products on microorganisms. *The Rocky Mountain Sect. Amer. Astronautical Soc. Proc.*
- Staffeldt, E. E., O. H. Calderon, and R. S. Hutton. 1968. Microbial inhabitants of a tropical deciduous forest soil in the Canal Zone. *Develop. Ind. Microbiol.* 9:312-317.
- Hutton, R. S., E. E. Staffeldt, and O. H. Calderon. 1968. Aerial spora and surface deposition of microorganisms in a deciduous forest in the Canal Zone. *Develop. Ind. Microbiol.* 9:318-324.
- Calderon, O. H., R. S. Hutton, and E. E. Staffeldt. 1968. Deposition of microorganisms on missiles and related equipment exposed to tropical environments. *Develop. Ind. Microbiol.* 9:325-330.

Name: Charles L. Streeter

Born: 1940

Degree	Year	Institution	Major
B.S.	1962	South Dakota State University	Animal Science
M.S.	1964	University of Nebraska	Animal Science
Ph.D.	1966	University of Nebraska	Animal Science

Professional Experience:

Date	Position	Institution
1960-1962	Laboratory Technician	South Dakota State University
1962-1966	Research Assistant	University of Nebraska
1966-1968	Biochemist	Walter Reed Army Medical Center
1968-1969	Post Doctorate Research Assoc.	University of Kentucky
1969-	Assistant Professor	Colorado State University

Professional and Honorary Societies:

American Society of Animal Science	Phi Kappa Phi
American Society of Range Management	Gamma Sigma Delta
Sigma Xi	Alpha Zeta

Major Interests:

Ruminant Nutrition, Forage Utilization

Current Professional Activities:

Director Grasslands Laboratory, Grassland Biome, IBP

Teaching: Ruminant Nutrition

Research: Roughage and NPN Utilization by Ruminants

Publications, Technical Reports:

Streeter, C. L. 1964. The effect of stage of maturity, method of storage and storage time on the nutritive value of sandhills upland hay. M.S. Thesis, Univ. Nebraska, Lincoln, Nebraska.

Streeter, C. L. and D. C. Clanton. 1964. Variation in the use of chromic oxide impregnated paper and plastic particles as external indicators for cattle. West. Sec. Amer. Soc. Anim. Sci. Proc. 15:63.

Hoehne, O. E., C. L. Streeter, and D. C. Clanton. 1965. Esophageal fistula for measuring species preference. West. Sec. Amer. Soc. Anim. Sci. Proc. 16:75.

Streeter, C. L., D. F. Burzlaff, D. C. Clanton, and L. R. Rittenhouse. 1966. Effect of stage of maturity, method of storage and storage time on nutritive value of sandhills upland hay. J. Range Manage. 19:55.

- Streeter, C. L. 1966. Methods of estimating the digestibility and voluntary intake of range forage consumed by grazing cattle. Ph.D. Thesis, Univ. Nebraska, Lincoln, Nebraska.
- Streeter, C. L., D. C. Clanton, and O. E. Hoehne. 1966. Factors influencing the voluntary intake of grazing cattle. West. Sec. Amer. Soc. Anim. Sci. Proc. 17:367.
- Hoehne, O. E., D. C. Clanton, and C. L. Streeter. 1967. Chemical changes in esophageal fistulae samples caused by salivary contamination and sample preparation. J. Anim. Sci. 26:628.
- Streeter, C. L. and W. N. Fishbein. 1967. A simple chlorination-heat procedure for the detection of hydroxamic acids and amides on paper chromatograms. J. Chromatog. 32:424.
- Hoehne, O. E., D. C. Clanton, and C. L. Streeter. 1968. Chemical composition and *in vitro* digestibility of forbs consumed by cattle grazing native range. J. Range Manage. 21:5.
- Streeter, C. L., D. C. Clanton, and O. E. Hoehne. 1968. Influence of advance in season on nutritive value of forage consumed by cattle grazing western Nebraska native range. Nebraska Exp. Sta. Res. Bull. 227.
- Bush, L. P., C. L. Streeter, and R. C. Buckner. 1968. Inhibition of ruminal *in vitro* cellulose fermentation by peroline. Manuscript in preparation.
- Fishbein, W. N., J. Daly, and C. L. Streeter. 1969. Preparation and some properties of stable and carbon-14 and tritium-labeled short-chain aliphatic hydroxamic acids. Anal. Biochem. 28:13.
- Streeter, C. L., R. R. Oltjen, L. L. Slyter, and W. N. Fishbein. 1969. Urea utilization in wethers receiving the urease inhibitor, acetohydroxamic acid. J. Anim. Sci. 29:88.
- Streeter, C. L. 1969. A review of techniques used to estimate the *in vivo* digestibility of grazed forage. J. Anim. Sci. (In press).
- Fishbein, W. N. and C. L. Streeter. 1969. Physiologic disposition of short chain aliphatic hydroxamates in the mouse. I. The one-through-four carbon hydroxamates: excretion and conversion to amides. (In press).
- Fishbein, W. N. and C. L. Streeter. 1969. Acetohydroxamate-1-<sup>14</sup>C: physiologic disposition in the mouse. Manuscript in preparation.
- Obioha, F. C., D. C. Clanton, L. R. Rittenhouse, and C. L. Streeter. 1969. Sources of variation in chemical composition of forage ingested by esophageal fistulated cattle. J. Range Manage. (In press).

Name: Gordon Swartzman

Born: 1943

Academic Training:

Degree	Year	Institution	Major
B.S.	1964	Cooper Union	Electrical Engr.
M.S.	1965	University of Michigan	Electrical Engr.
Ph.D.	1969	University of Michigan	Industrial Engr.

Professional Experience:

Date	Position	Institution
1969-	Assistant Professor, Range Science	Colorado State University

Professional and Honorary Societies:

Operations Research Society of America (ORSA)  
 Tau Beta Pi )  
 Eta Kappa Nu ) National Engineering Honor Society

Major Interests:

Ornithology, ethnology, travel, community and political action, and environmental quality.

Current Professional Activities:

Book Chairman for coming ORSA meeting

Research: Modelling; philosophy of modelling; special problem session: the effects of urbanization upon the environment.

Publications, Technical Reports:

Swartzman, Gordon. 1969. Scheduling in a hospital system. Paper presented at National ORSA meeting.

Swartzman, Gordon. 1969. Some results on hospital scheduling. Paper presented at National ORSA meeting.

Swartzman, Gordon and R. L. Disney. 1970. The effect of scheduling outpatients -- Health Services Research.

Swartzman, Gordon. 1970. A first pass bird model. IBP Technical Report #3.

Swartzman, Gordon, et al. 1970. Some concepts of modelling. IBP Technical Report #32 (coordinator).

Swartzman, Gordon. 1970. Eco tactics. Paper presented at the conference on environmental quality, Boulder, Colorado.

- Striffler, W. D. 1964. Sediment, streamflow, and land use relationships in northern lower Michigan. Lake States Forest Exp. Sta. Res. Paper LS-16. 12 p.
- Striffler, W. D. 1965. The selection of experimental watersheds and methods in disturbed forest areas. Symp. Budapest, Representative and Exp. Areas, Vol. 2. IASH Pub. No. 66. p. 464-473.
- Striffler, W. D. and R. F. May. 1965. The forest restoration of strip-mined areas. Annu. SAF Meeting, Detroit, Michigan, Proc. p. 105-108.
- May, R. F. and W. D. Striffler. 1965. Watershed aspects of stabilization and restoration of strip-mined areas. Int. Symp. on Forest Hydrol., Pennsylvania State Univ., Proc. p. 663-671.
- Striffler, W. D. 1967. Restoration of open-cast coal sites in Great Britain. J. Soil and Water Conserv. 22:101-103.
- Striffler, W. D. 1969. A review: "Principles of hydrology." R. C. Ward. J. Soil and Water Conserv. 24:28-29.
- Striffler, W. D. 1969. The grassland hydrologic cycle, p. 101-116. In R. L. Dix and R. G. Beidleman [ed.] The grassland ecosystem. Colorado State Univ., Range Sci Dep. Sci Ser. No. 2. 437 p.
- Striffler, W. D. 1969. Surface mining disturbance and water quality in eastern Kentucky. Paper presented at Int. Symp. on Ecol. and Revegetation of Drastically Disturbed Areas. Pennsylvania State Univ. (In press).
- Hubbard, J. E. and W. D. Striffler. 1969. Distribution of cesium - 137 in a small Alpine watershed. Presented at Western Nat. Meeting of Amer. Geophys. Union. San Francisco.

Name: Gordon Swartzman

Born: 1943

Academic Training:

Degree	Year	Institution	Major
B.S.	1964	Cooper Union	Electrical Engr.
M.S.	1965	University of Michigan	Electrical Engr.
Ph.D.	1969	University of Michigan	Industrial Engr.

Professional Experience:

Date	Position	Institution
1969-	Assistant Professor, Range Science	Colorado State University

Professional and Honorary Societies:

Operations Research Society of America (ORSA)  
 Tau Beta Pi )  
 Eta Kappa Nu ) National Engineering Honor Society

Major Interests:

Ornithology, ethnology, travel, community and political action, and environmental quality.

Current Professional Activities:

Book Chairman for coming ORSA meeting

Research: Modelling; philosophy of modelling; special problem session: the effects of urbanization upon the environment.

Publications, Technical Reports:

- Swartzman, Gordon. 1969. Scheduling in a hospital system. Paper presented at National ORSA meeting.
- Swartzman, Gordon. 1969. Some results on hospital scheduling. Paper presented at National ORSA meeting.
- Swartzman, Gordon and R. L. Disney. 1970. The effect of scheduling outpatients -- Health Services Research.
- Swartzman, Gordon. 1970. A first pass bird model. IBP Technical Report #3.
- Swartzman, Gordon, et al. 1970. Some concepts of modelling. IBP Technical Report #32 (coordinator).
- Swartzman, Gordon. 1970. Eco tactics. Paper presented at the conference on environmental quality, Boulder, Colorado.

Name: Charles Terwilliger, Jr.

Born: 1918

Academic Training:

Degree	Year	Institution	Major
B.S.	1941	Colorado A&M College	Range Science
M.F.	1947	Colorado A&M College	Forestry
Ph.D.	1960	University of Wyoming	Plant Science

Professional Experience:

Date	Position	Institution
1950-1953	Instructor, Range Science	Colorado State Univ.
1953-1959	Assistant Professor, Range Science	Colorado State Univ.
1959-1967	Associate Professor, Range Science	Colorado State Univ.
1967-	Professor, Range Science	Colorado State Univ.

Professional Activity:

Teaching: Range Science.

Research: Range Conservationist, Colorado Agricultural Experiment Station, 1967 to date.

Professional and Honorary Societies:

Society of American Foresters  
American Society of Range Management  
American Institute of Biological Science

Publications, Technical Reports:

Terwilliger, C., Jr. 1953. The antelope, a range asset. Colorado Conserv. 2:24-25.

Terwilliger, C., Jr. 1957. Analysis of range reseeding results, Springfield land utilization project. Colorado Agr. Exp. Sta. Gen. Ser. Paper No. 666.

Terwilliger, C., Jr. 1960. Effect of temperature and day-length on floral induction and development in Russian wildrye. Ph. D. Thesis, Univ. Wyoming. 103 pp.

Miller, R. V., Jr. and C. Terwilliger, Jr. 1960. The effect of nitrogen fertilization on Nordan crested wheatgrass. Colorado Agr. Exp. Sta. Gen. Ser. Paper No. 732.

Miller, R. V., Jr. and C. Terwilliger, Jr. 1961. Nitrogen fertilizer improves the palatability of crested wheatgrass. Crops Soils 13:21.

Terwilliger, C., Jr. 1962. Range and watershed management. Colorado State University. 54 p.

- Terwilliger, C., Jr. and R. V. Miller, Jr. 1963. Lamb gain as influenced by fertilized crested wheatgrass, p. 12. *In* Eleventh annual progress report of Colorado Fertilizer conference. (Colorado Agr. Exp. Sta.).
- Terwilliger, C., Jr. 1964. The grazing value of the lodgepole pine type in the central Rocky Mountains. *Soc. Amer. Forest., Proc.*
- Hyder, D. N., R. E. Bement, E. E. Remmenga, and C. Terwilliger, Jr. 1965. Frequency sampling of blue grama range. *Range Manage.* 18:90-94.
- Hyder, D. N., R. E. Bement, E. E. Remmenga, and C. Terwilliger, Jr. 1966. Vegetation-soils and vegetation-grazing relations from frequency data. *Range Manage.* 19:11-16.