

**AMERICAN
MEN AND WOMEN
OF SCIENCE
BIOLOGY 1977**

AMERICAN MEN AND WOMEN OF SCIENCE

BIOLOGY 1977

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About This Book

In order to present the scientific community with alternatives to maintaining the complete seven volume set of **AMERICAN MEN AND WOMEN OF SCIENCE**, the editors have compiled several specialty volumes in which the entries from the recently published 13th edition are grouped by subject. In addition to this section of the specialty series, there are directories covering Chemistry, Medical and Health Sciences, and, combined in one volume, Physics, Astronomy, Mathematics, Statistics and Computer Science.

This book contains alphabetically listed biographical sketches of approximately 20,000 scientists whose activities are concentrated in the research and teaching of biology. The information is identical to that appearing in the 13th edition and each sketch gives name, discipline, education, past and present full time positions, past and present concurrent positions, memberships in scientific societies, research interest, and address.

An effort has been made to contain the scope of this directory to the specialties basic to biology, but in some cases there are extensive crossover interests. This is reflected in the discipline index provided at the back of the book. Scientists are listed under both their primary and secondary fields, and the index reveals activity in many areas of science, including agriculture, medicine, and statistics. A geographic index is also included for the convenience of the user.

Comments and suggestions on any aspect of the book are invited and should be addressed to The Editors, *American Men and Women of Science*, Jaques Cattell Press, P.O. Box 25001, Tempe, Arizona, 85282.

May, 1977

Abbreviations

AAAS—American Association for the Advancement of Science
 abnorm—abnormal
 abstr—abstract(s)
 acad—academic, academy
 acct—account, accountant, accounting
 acoust—acoustic(s), acoustical
 ACTH—adrenocorticotrophic hormone
 actg—acting
 activ—activities, activity
 addn—addition(s), additional
 Add—Address
 adj—adjunct, adjutant
 adjust—adjustment
 Adm—Admiral
 admin—administration, administrative
 adminr—administrator(s)
 admis—admission(s)
 adv—adviser(s), advisory
 advan—advance(d), advancement
 advert—advertisement, advertising
 AEC—Atomic Energy Commission
 aerodyn—aerodynamic(s)
 aeronaut—aeronautic(s), aeronautical
 aerophys—aerophysical, aerophysics
 aesthet—aesthetic(s)
 AFB—Air Force Base
 affil—affiliate(s), affiliation
 agr—agricultural, agriculture
 agron—agronomic, agronomical, agronomy
 agrost—agrostologic, agrostological, agrostology
 agt—agent
 AID—Agency for International Development
 Ala—Alabama
 allergol—allergological, allergology
 alt—alternate
 Alta—Alberta
 Am—America, American
 AMA—American Medical Association
 anal—analysis, analytic, analytical
 analog—analogue
 anat—anatomic, anatomical, anatomy
 anesthesiol—anesthesiology
 angi—angiology
 Ann—Annal(s)
 ann—annual
 anthrop—anthropological, anthropology
 anthropom—anthropometric, anthropometrical, anthropometry
 antiq—antiquary, antiquities, antiquity
 antiqn—antiquarian

apicult—apicultural, apiculture
 APO—Army Post Office
 app—appoint, appointed
 appl—applied
 appln—application
 approx—approximate(ly)
 Apr—April
 apt—apartment(s)
 aquacult—aquaculture
 arbit—arbitration
 arch—archives
 archaeol—archaeological, archaeology
 archit—architectural, architecture
 Arg—Argentina, Argentine
 Ariz—Arizona
 Ark—Arkansas
 artil—artillery
 asn—association
 assoc(s)—associate(s), associated
 asst(s)—assistant(s), assistantship(s)
 Assyriol—Assyriology
 astrodyn—astrodynamics
 astron—astronomical, astronomy
 astronaut—astronautical, astronautics
 astronr—astronomer
 astrophys—astrophysical, astrophysics
 attend—attendant, attending
 atty—attorney
 audi—audiology
 Aug—August
 auth—author
 AV—audiovisual
 Ave—Avenue
 avicult—avicultural, aviculture
 b—born
 bact—bacterial, bacteriologic, bacteriological, bacteriology
 BC—British Columbia
 bd—board
 behav—behavior(al)
 Belg—Belgian, Belgium
 bibl—biblical
 bibliog—bibliographic, bibliographical, bibliography
 bibliogr—bibliographer
 biochem—biochemical, biochemistry
 biog—biographical, biography
 biol—biological, biology
 biomed—biomedical, biomedicine
 biomet—biometric(s), biometrical, biometry
 biophys—biophysical, biophysics

bk(s)—book(s)
 bldg—building
 Blvd—Boulevard
 Bor—Borough
 bot—botanical, botany
 br—branch(es)
 Brig—Brigadier
 Brit—Britain, British
 Bro(s)—Brother(s)
 bryol—bryology
 Bull—Bulletin
 bur—bureau
 bus—business
 BWI—British West Indies
 c—children
 Calif—California
 Can—Canada, Canadian
 cand—candidate
 Capt—Captain
 cardi—cardiology
 cardiovasc—cardiovascular
 cartog—cartographic, cartographical, cartography
 cartogr—cartographer
 Cath—Catholic
 CEng—Corps of Engineers
 cent—central
 Cent Am—Central America
 cert—certificate(s), certification, certified
 chap—chapter
 chem—chemical(s), chemistry
 chemother—chemotherapy
 chmn—chairman
 citricult—citriculture
 class—classical
 climat—climatological, climatology
 clin(s)—clinic(s), clinical
 cmdg—commanding
 Co—Companies, Company
 coauth—coauthor
 co-dir—co-director
 co-ed—co-editor
 coeduc—coeducation, coeducational
 col(s)—college(s), collegiate, colonel
 collab—collaboration, collaborative
 collabr—collaborator
 Colo—Colorado
 com—commerce, commercial
 Comdr—Commander
 commun—communicable, communication(s)
 comn(s)—commission(s), commissioned

ABBREVIATIONS

- comnr—commissioner
comp—comparative
compos—composition
comput—computation, computer(s), computing
comt(s)—committee(s)
conchol—conchology
conf—conference
cong—congress, congressional
Conn—Connecticut
conserv—conservation, conservatory
consol—consolidated, consolidation
const—constitution, constitutional
construct—construction, constructive
consult(s)—consult, consultant(s), consultant-ship(s), consultation, consulting
contemp—contemporary
contrib—contribute, contributing, contribution(s)
contribr—contributor
conv—convention
coop—cooperating, cooperation, cooperative
coord—coordinate(d), coordinating, coordination
coordr—coordinator
corp—corporate, corporation(s)
corresp—correspondence, correspondent, corresponding
coun—council, counsel, counseling
counr—councilor, counselor
criminol—criminological, criminology
cryog—cryogenic(s)
crystallog—crystallographic, crystallographical, crystallography
crystallogr—crystallographer
Ct—Court
Ctr—Center
cult—cultural, culture
cur—curator
curric—curriculum
cybernet—cybernetic(s)
cytol—cytological, cytology
CZ—Canal Zone
Czech—Czechoslovakia
- DC—District of Columbia
Dec—December
Del—Delaware
deleg—delegate, delegation
delinq—delinquency, delinquent
dem—democrat(s), democratic
demog—demographic, demography
demogr—demographer
demonstr—demonstrator
dendrol—dendrologic, dendrological, dendrology
dent—dental, dentistry
dep—deputy
dept—department(al)
dermat—dermatologic, dermatological, dermatology
develop—developed, developing, development, developmental
diag—diagnosis, diagnostic
dialectol—dialectological, dialectology
dict—dictionaries, dictionary
Dig—Digest
dipl—diploma, diplomate
dir(s)—director(s), directories, directory
dis—disease(s), disorders
Diss Abstr—Dissertation Abstracts
dist—district
distrib—distributed, distribution, distributive
distribr—distributor(s)
div—division, divisional, divorced
- DNA—deoxyribonucleic acid
doc—document(s), documentary, documentation
Dom—Dominion
Dr—Drive
- e—east
ecol—ecological, ecology
econ(s)—economic(s), economical, economy
economet—econometric(s)
ECT—electroconvulsive or electroshock therapy
ed—edition(s), editor(s), editorial
ed bd—editorial board
educ—education, educational
educr—educator(s)
EEG—electroencephalogram, electroencephalographic, electroencephalography
Egyptol—Egyptology
EKG—electrocardiogram
elec—electric, electrical, electricity
electrochem—electrochemical, electrochemistry
electrophys—electrophysical, electrophysics
elem—elementary
embryol—embryologic, embryological, embryology
emer—emeriti, emeritus
employ—employment
encour—encouragement
encycl—encyclopedia
endocrinol—endocrinologic, endocrinology
eng—engineering
Eng—England, English
enrg(s)—engineer(s)
enol—enology
Ens—Ensign
entom—entomological, entomology
environ—environment(s), environmental
enzym—enzymology
epidemiol—epidemiologic, epidemiological, epidemiology
equip—equipment
ESEA—Elementary & Secondary Education Act
espec—especially
estab—established, establishment(s)
ethnog—ethnographic, ethnographical, ethnography
ethnogr—ethnographer
ethnol—ethnologic, ethnological, ethnology
Europ—European
eval—evaluation
evangel—evangelical
eve—evening
exam—examination(s), examining
examr—examiner
except—exceptional
exec(s)—executive(s)
exeg—exegeses, exegesis, exegetic, exegetical
exhib(s)—exhibition(s), exhibit(s)
exp—experiment, experimental
exped(s)—expedition(s)
explor—exploration(s), exploratory
expos—exposition
exten—extension
- fac—faculty
facil—facilities, facility
Feb—February
fed—federal
fedn—federation
fel(s)—fellow(s), fellowship(s)
fermentol—fermentology
- fertil—fertility, fertilization
Fla—Florida
floricult—floricultural, floriculture
found—foundation
FPO—Fleet Post Office
Fr—French
Ft—Fort
- Ga—Georgia
gastroenterol—gastroenterological, gastroenterology
gen—general
gencal—genealogical, genealogy
geod—geodesy, geodetic
geog—geographic, geographical, geography
geogr—geographer
geol—geologic, geological, geology
geom—geometric, geometrical, geometry
geomorphol—geomorphologic, geomorphology
geophys—geophysical, geophysics
Ger—German, Germanic, Germany
geriat—geriatric(s)
geront—gerontological, gerontology
glaciol—glaciology
gov—governing, governor(s)
govt—government, governmental
grad—graduate(d)
Gt Brit—Great Britain
guid—guidance
gym—gymnasium
gynec—gynecologic, gynecological, gynecology
- handbk(s)—handbook(s)
helminth—helminthology
hemat—hematologic, hematological, hematology
herpet—herpetologic, herpetological, herpetology
Hisp—Hispanic, Hispania
hist—historic, historical, history
histol—histological, histology
HM—Her Majesty
hochsch—hochschule
homeop—homeopathic, homeopathy
hon(s)—honor(s), honorable, honorary
hort—horticultural, horticulture
hosp(s)—hospital(s), hospitalization
hq—headquarters
HumRRO—Human Resources Research Office
husb—husbandry
Hwy—Highway
hydraul—hydraulic(s)
hydrodyn—hydrodynamic(s)
hydrol—hydrologic, hydrological, hydrology
hyg—hygiene, hygienic(s)
hypn—hypnosis
- ichthyol—ichthyological, ichthyology
Ill—Illinois
illum—illuminating, illumination
illus—illustrate, illustrated, illustration
illusr—illustrator
immunol—immunologic, immunological, immunology
Imp—Imperial
improv—improvement
Inc—Incorporated
in-chg—in charge
incl—include(s), including
Ind—Indiana
indust(s)—industrial, industries, industry
inf—infantry
info—information
inorg—inorganic

ABBREVIATIONS

ins—insurance
inst(s)—institute(s), institution(s)
instnl—institutional(ized)
instr(s)—instruct, instruction, instructor(s)
instrnl—instructional
int—international
intel—intelligence
introd—introduction
invert—invertebrate
invest(s)—investigation(s)
investr—investigator
irrig—irrigation
Ital—Italian

J—Journal
Jan—January
Jct—Junction
jour—journal, journalism
jr—junior
jurisp—jurisprudence
juv—juvenile

Kans—Kansas
Ky—Kentucky

La—Louisiana
lab(s)—laboratories, laboratory
lang—language(s)
laryngol—laryngological, laryngology
lect—lecture(s)
lectr—lecturer(s)
legis—legislation, legislative, legislature
lett—letter(s)
lib—liberal
libr—libraries, library
librn—librarian
lic—license(d)
limnol—limnological, limnology
ling—linguistic(s), linguistical
lit—literary, literature
lithol—lithologic, lithological, lithology
Lt—Lieutenant
Ltd—Limited

m—married
mach—machine(s), machinery
mag—magazine(s)
maj—major
malacol—malacology
mammal—mammalogy
Man—Manitoba
Mar—March
Mariol—Mariology
Mass—Massachusetts
mat—material(s)
mat med—materia medica
math—mathematic(s), mathematical
Md—Maryland
mech—mechanic(s), mechanical
med—medical, medicinal, medicine
Mediterr—Mediterranean
Mem—Memorial
mem—member(s), membership(s)
ment—mental(ly)
metab—metabolic, metabolism
metall—metallurgic, metallurgical, metallurgy
metallg—metallographic, metallography
metallogr—metallographer
metaphys—metaphysical, metaphysics
meteorol—meteorological, meteorology
metrol—metrological, metrology
metrop—metropolitan
Mex—Mexican, Mexico
mfg—manufacturing

mfr(s)—manufacture(s), manufacturer(s)
mgr—manager
mgt—management
Mich—Michigan
microbiol—microbiological, microbiology
micros—microscopic, microscopical, microscop
mid—middle
mil—military
mineral—mineralogical, mineralogy
Minn—Minnesota
Miss—Mississippi
mkt—market, marketing
Mo—Missouri
mod—modern
monogr—monograph
Mont—Montana
morphol—morphological, morphology
Mt—Mount
mult—multiple
munic—municipal, municipalities
mus—museum(s)
musicol—musicological, musicology
mycol—mycologic, mycology

n—north
NASA—National Aeronautics & Space Administration
nat—national, naturalized
NATO—North Atlantic Treaty Organization
navig—navigation(al)
NB—New Brunswick
NC—North Carolina
NDak—North Dakota
NDEA—National Defense Education Act
Neb—Nebraska
nematol—nematological, nematology
nerv—nervous
Neth—Netherlands
neurol—neurological, neurology
neuropath—neuropathological, neuropathology
neuropsychiat—neuropsychiatric, neuropsychiatry
neurosurg—neurosurgical, neurosurgery
Nev—Nevada
New Eng—New England
New York—New York City
Nfld—Newfoundland
NH—New Hampshire
NIH—National Institutes of Health
NIMH—National Institute of Mental Health
NJ—New Jersey
NMex—New Mexico
nonres—nonresident
norm—normal
Norweg—Norwegian
Nov—November
NS—Nova Scotia
NSF—National Science Foundation
NSW—New South Wales
numis—numismatic(s)
nutrit—nutrition, nutritional
NY—New York State
NZ—New Zealand

observ—observatories, observatory
obstet—obstetric(s), obstetrical
occas—occasional(ly)
occup—occupation, occupational
oceanog—oceanographic, oceanographical, oceanography
oceanogr—oceanographer
Oct—October
odontol—odontology

OEEC—Organization for European Economic Cooperation
off—office, official
Okla—Oklahoma
olericult—olericulture
oncol—oncologic, oncology
Ont—Ontario
oper(s)—operation(s), operational, operative
ophthal—ophthalmologic, ophthalmological, ophthalmology
optom—optometric, optometrical, optometry
ord—ordnance
Ore—Oregon
org—organic
orgn—organization(s), organizational
orient—oriental
ornith—ornithological, ornithology
orthod—orthodontia, orthodontic(s)
orthop—orthopedic(s)
osteop—osteopathic, osteopathy
otol—otological, otology
otolaryngol—otolaryngological, otolaryngology
otorhinol—otorhinologic, otorhinology

Pa—Pennsylvania
Pac—Pacific
paleobot—paleobotanical, paleobotany
paleont—paleontological, paleontology
Pan-Am—Pan-American
parasitol—parasitology
partic—participant, participating
path—pathologic, pathological, pathology
pedag, pedagogic(s), pedagogical, pedagogy
pediat—pediatric(s)
PEI—Prince Edward Islands
penol—penological, penology
periodont—periodontal, periodontic(s), periodontology
petrog—petrographic, petrographical, petrography
petrogr—petrographer
petrol—petroleum, petrologic, petrological, petrology
pharm—pharmacy
pharmaceut—pharmaceutic(s), pharmaceutical(s)
pharmacog—pharmacognosy
pharmacol—pharmacologic, pharmacological, pharmacology
phenomenol—phenomenologic(al), phenomenology
philol—philological, philology
philos—philosophic, philosophical, philosophy
photog—photographic, photography
photogeog—photogeographic, photo geography
photogr—photographer(s)
photogram—photogrammetric, photogramme, photogrammetry
photom—photometric, photometrical, photometry
phycol—phycology
phys—physical
physiog—physiographic, physiographical, physiography
physiol—physiological, physiology
Pkwy—Parkway
Pl—Place
polit—political, politics
polytech—polytechnic(al)
pomol—pomological, pomology
pontif—pontifical
pop—population
Port—Portugal, Portuguese
postgrad—postgraduate

ABBREVIATIONS

PQ—Province of Quebec	RD—Rural Delivery	sr—senior
PR—Puerto Rico	rec—record(s), recording	St—Saint, Street(s)
pract—practice	redevelop—redevelopment	sta(s)—station(s)
practr—practitioner	ref—reference(s)	stand—standard(s), standardization
prehist—prehistoric, prehistory	refrig—refrigeration	statist—statistical, statistics
prep—preparation, preparative, preparatory	regist—register(ed), registration	Ste—Sainte
pres—president	registr—registrar	steril—sterility
Presby—Presbyterian	regt—regiment(al)	stomatol—stomatology
preserv—preservation	rehab—rehabilitation	stratig—stratigraphic, stratigraphy
prev—prevention, preventive	rel(s)—relation(s), relative	stratigr—stratigrapher
prin—principal	relig—religion, religious	struct—structural, structure(s)
prob(s)—problem(s)	REME—Royal Electrical & Mechanical Engineers	stud—student(ship)
proc—proceedings	rep—represent, representative	subcomt—subcommittee
proctol—proctologic, proctological, proctology	repub—republic	subj—subject
prod—product(s), production, productive	req—requirements	subsid—subsidiary
prof—professional, professor, professorial	res—research, reserve	substa—substation
Prof Exp—Professional Experience	rev—review, revised, revision	super—superior
prog(s)—program(s), programmed, programming	RFD—Rural Free Delivery	suppl—supplement(s), supplemental, supplementary
proj—project(s), projection(al), projective	rhet—rhetoric, rhetorical	supt—superintendent
prom—promotion	RI—Rhode Island	supv—supervising, supervision
protozool—protozoology	Rm—Room	supvr—supervisor
prov—province, provincial	RM—Royal Marines	supvry—supervisory
psychiat—psychiatric, psychiatry	RN—Royal Navy	surg—surgery, surgical
psychoanal—psychoanalysis, psychoanalytic, psychoanalytical	RNA—ribonucleic acid	surv—survey, surveying
psychol—psychological, psychology	RNR—Royal Naval Reserve	survr—surveyor
psychomet—psychometric(s)	RNVR—Royal Naval Volunteer Reserve	Swed—Swedish
psychopath—psychopathologic, psychopathology	roentgenol—roentgenologic, roentgenological, roentgenology	Switz—Switzerland
psychophys—psychophysical, psychophysics	RR—Railroad, Rural Route	symp—symposia, symposium(s)
psychophysiol—psychophysiological, psychophysiology	rte—route	syphil—syphilology
psychosom—psychosomatic(s)	Russ—Russian	syst(s)—system(s), systematic(s), systematical
psychother—psychotherapeutic(s), psychotherapy	rwy—railway	
Pt—Point	s—south	taxon—taxonomic, taxonomy
pub—public	SAfrica—South Africa	tech—technical, technique(s)
publ—publication(s), publish(ed), publisher, publishing	SAm—South America, South American	technol—technologic(al), technology
pvt—private	sanit—sanitary, sanitation	tel—telegraph(y), telephone
	Sask—Saskatchewan	temp—temporary
	SC—South Carolina	Tenn—Tennessee
	Scand—Scandinavia(n)	Terr—Terrace
	sch(s)—school(s)	Tex—Texas
Qm—Quartermaster	scholar—scholarship	textbk(s)—textbook(s)
Qm Gen—Quartermaster General	sci—science(s), scientific	text ed—text edition
qual—qualitative, quality	SDak—South Dakota	theol—theological, theology
quant—quantitative	SEATO—Southeast Asia Treaty Organization	theoret—theoretic(al)
quart—quarterly	sec—secondary	ther—therapy
	sect—section	therapeut—therapeutic(s)
radiol—radiological, radiology	secy—secretary	thermodyn—thermodynamic(s)
RAF—Royal Air Force	seismog—seismograph, seismographic, seismography	topog—topographic, topographical, topography
RAFVR—Royal Air Force Volunteer Reserve	seismogr—seismographer	topogr—topographer
RAMC—Royal Army Medical Corps	seismol—seismological, seismology	toxicol—toxicologic, toxicological, toxicology
RAMCR—Royal Army Medical Corps Reserve	sem—seminar, seminary	trans—transactions
RAOC—Royal Army Ordnance Corps	sen—senator, senatorial	transl—translated, translation(s)
RASC—Royal Army Service Corps	Sept—September	translr—translator(s)
RASCR—Royal Army Service Corps Reserve	ser—serial, series	transp—transport, transportation
RCAF—Royal Canadian Air Force	serol—serologic, serological, serology	treas—treasurer, treasury
RCAFR—Royal Canadian Air Force Reserve	serv—service(s), serving	treat—treatment
RCAFVR—Royal Canadian Air Force Volunteer Reserve	silvicult—silvicultural, silviculture	trop—tropical
RCAMC—Royal Canadian Army Medical Corps	soc(s)—societies, society	tuberc—tuberculosis
RCAMCR—Royal Canadian Army Medical Corps Reserve	soc sci—social science	TV—television
RCASC—Royal Canadian Army Service Corps	sociol—sociologic, sociological, sociology	Twp—Township
RASCRC—Royal Canadian Army Service Corps Reserve	Span—Spanish	
RCEME—Royal Canadian Electrical & Mechanical Engineers	spec—special	UAR—United Arab Republic
RCN—Royal Canadian Navy	specif—specification(s)	UK—United Kingdom
RCNR—Royal Canadian Naval Reserve	spectrog—spectrograph, spectrographic, spectrography	UN—United Nations
RCNVR—Royal Canadian Naval Volunteer Reserve	spectrogr—spectrographer	undergrad—undergraduate
Rd—Road	spectrophotom—spectrophotometer, spectrophotometric, spectrophotometry	unemploy—unemployment
	spectros—spectroscopic, spectroscopy	UNESCO—United Nations Educational Scientific & Cultural Organization
	speleol—speleological, speleology	UNICEF—United Nations International Children's Fund
	Sq—Square	univ(s)—universities, university
		UNRRA—United Nations Relief & Rehabilitation Administration

ABBREVIATIONS

UNRWA—United Nations Relief & Works Agency
 urol—urologic, urological, urology
 US—United States
 USA—US Army
 USAAF—US Army Air Force
 USAAFR—US Army Air Force Reserve
 USAF—US Air Force
 USAFR—US Air Force Reserve
 USAR—US Army Reserve
 USCG—US Coast Guard
 USCGR—US Coast Guard Reserve
 USDA—US Department of Agriculture
 USMC—US Marine Corps
 USMCR—US Marine Corps Reserve
 USN—US Navy
 USNAF—US Naval Air Force
 USNAFR—US Naval Air Force Reserve
 USNR—US Naval Reserve
 USPHS—US Public Health Service
 USPHSR—US Public Health Service Reserve
 USSR—Union of Soviet Socialist Republics
 USWMC—US Women's Marine Corps

USWMCR—US Women's Marine Corps Reserve

Va—Virginia
 var—various
 veg—vegetable(s), vegetation
 vent—ventilating, ventilation
 vert—vertebrate
 vet—veteran(s), veterinarian, veterinary
 VI—Virgin Islands
 vinicult—viniculture
 virol—virological, virology
 vis—visiting
 voc—vocational
 vocab—vocabulary
 vol(s)—voluntary, volunteer(s), volume(s)
 vpres—vice president
 vs—versus
 Vt—Vermont

w—west
 WAC—Women's Army Corps

Wash—Washington
 WAVES—Women Accepted for Voluntary Emergency Service
 WHO—World Health Organization
 WI—West Indies
 wid—widow, widowed, widower
 Wis—Wisconsin
 WRCNS—Women's Royal Canadian Naval Service
 WRNS—Women's Royal Naval Service
 WV—West Virginia
 Wyo—Wyoming

yearbk(s)—yearbook(s)
 YMCA—Young Men's Christian Association
 YMHA—Young Men's Hebrew Association
 yr(s)—year(s)
 YWCA—Young Women's Christian Association
 YWHA—Young Women's Hebrew Association

zool—zoological, zoology

AMERICAN MEN AND WOMEN OF SCIENCE BIOLOGY 1977

A

- AALDERS, LEWIS ELDON**, b Kentville, NS, July 19, 33; div. CYTOGENETICS. Educ: Acadia Univ, BSc, 52, MSc, 53; Cornell Univ, PhD(cytogenetics), 57. Prof Exp: HORTICULTURIST PLANT BREEDING, RES STA, CAN DEPT AGR, 53- Mem: Am Pomol Soc; Am Soc Hort Sci; Can Soc Hort Sci; Genetics Soc Can. Res: Cytogenetics and breeding of fruit crops; breeding of lowbush blueberry, strawberry and raspberry; culture of lowbush blueberry. Mailing Add: Res Sta Can Dept of Agr Kentville NS Can
- AARON, CHARLES SIDNEY**, b Jonesboro, La, Feb 17, 43; m 64; c 2. MOLECULAR GENETICS, MUTAGENESIS. Educ: La Tech Univ, BS, 68; La State Univ, Baton Rouge, PhD(biochem), 72. Prof Exp: Teacher chem, Episcopal High Sch, Baton Rouge, 71-72; RES ASSOC CHEM MUTAGENESIS, LA STATE UNIV, BATON ROUGE, 72- Mem: Am Chem Soc; Sigma Xi; Environ Mutagen Soc; Genetics Soc Am; AAAS. Res: Development of quantitative chemical mutagen dosimetry methods for assessing environmental hazard to man; theoretical-practical aspects of distinction of exposure to mutagen from dose-to-target; experimental determination of dose-to-target vs genetic response correlation using *Drosophila melanogaster*. Mailing Add: Dept of Zool Life Sci Bldg La State Univ Baton Rouge LA 70802
- AARONSON, SHELDON**, b New York, NY, Oct 9, 22; m 48; c 4. MICROBIAL BIOCHEMISTRY. Educ: City Col New York, BS, 44; Univ Pa, MA, 48; NY Univ, PhD(protoistology), 53. Prof Exp: Lectr biol, City Col New York, 48-53; from instr to assoc prof, 53-64, PROF BIOL, QUEENS COL, NY, 65- Concurrent Pos: Res assoc, Haskins Labs, Inc, 49-65, sr staff mem, 65-68; pres fel, Am Soc Microbiol, 57; NSF sci fac fel, 59-60. Mem: Fel AAAS; Am Soc Microbiol; Soc Protozool; Am Soc Cell Biol; Phycol Soc Am. Res: Biochemistry of microorganisms; biochemical phylogeny; cellular action of drugs; microbial ecology. Mailing Add: Dept of Biol Queens Col Flushing NY 11367
- AASLESTAD, HALVOR GUNERIUS**, b Birmingham, Ala, Sept 6, 37; m 60; c 4. VIROLOGY. Educ: La State Univ, BS, 59, PhD(microbiol), 65; Pa State Univ, 61. Prof Exp: Nat Acad Sci-Nat Res Coun fel, US Army Biol Ctr, 65-66, prin investr microbiol, 66-68; asst prof, Univ Ga, 68-70; asst prof, Wistar Inst, 70-73; sr scientist, Cancer Res Ctr, Nat Cancer Inst, Frederick, Md, 73-76; EXEC SECY DIV RES GRANTS, NIH, 76- Mem: Am Soc Microbiol. Res: Virology; virus and phage biochemistry and genetics. Mailing Add: Div of Res Grants Nat Inst of Health Bethesda MD 20014
- ABBASI, QAMAR ALI**, b Amroha, India, July 8, 41; m 70; c 1. SYSTEMATIC ENTOMOLOGY. Educ: Aligarh Muslim Univ, India, BS, 59, MS, 62; Karachi Univ, Pakistan, PhD(zool), 75. Prof Exp: Res asst entom, Indian Agr Res Inst, New Delhi, 62-67; res fel, Dept Zool, Univ Karachi, 67-71, lectr zool, 71-73; RES ASSOC BIOL SCI, UNIV ILL, CHICAGO CIRCLE, 73- Res: Morphotaxonomy of super family Pentatomoidea with reference to phylogeny of the group; biological control of insect pests and taxonomy of Chalcidoidea, Hymenoptera. Mailing Add: 2422 N Sawyer Ave Chicago IL 60647
- ABBATIello, MICHAEL JAMES**, b New York, NY, June 19, 21; m 45; c 1. ZOOLOGY, BIOLOGY. Educ: Hofstra Col, BA, 54, MA, 57; St John's Univ, NY, PhD(zool), 66. Prof Exp: Tech asst hort, 47-53, from jr instr to assoc prof biol, 53-66, PROF BIOL, STATE UNIV NY AGR & TECH COL FARMINGDALE, 66- Mem: AAAS; Entom Soc Am; Nat Asn Biol Teachers. Res: Biology and ecology of oribatid mites. Mailing Add: Dept of Biol State Univ of NY Agr & Tech Col Farmingdale NY 11735
- ABBE, ERNST CLEVELAND**, b Washington, DC, Aug 21, 05; m 30; c 2. BOTANY. Educ: Cornell Univ, BS, 28, MS, 30; Harvard Univ, AM, 31, PhD, 34. Prof Exp: Asst bot, Cornell Univ, 27-30 & Harvard Univ, 31-32; Nat Res Coun fel biol, Columbia, Harvard & Cornell Univs, 33-35; from instr to prof, 35-74, chmn dept, 44-47 & 62-67, EMER PROF BOT, UNIV MINN, MINNEAPOLIS, 74- Concurrent Pos: Botanist, Grenfell-Forbes exped, Labrador, 31; mem, Arnold Arboretum Exped, BC & Alta, Can, 32; leader, Univ Minn Expeds to Hudson Bay, 39, Southeast Asia, 59-60 & Mt Kinabalu, 62; res assoc & Guggenheim fel, Harvard Univ, 41-42; Fulbright prof, Univ Singapore, 61-62; inv investr, Forest Dept, Sarawak, 64. Mem: Bot Soc Am; Linnean Soc London. Res: Phylogeny of Amniferace; phytogeography of Eastern Subarctic; morphogenesis in relation to genetical constitution. Mailing Add: Dept of Bot 220 Bio-Sci Ctr Univ of Minn St Paul MN 55108
- ABBEY, ANTHONY ALFRED**, b Brooklyn, NY, Apr 11, 17; m 39; c 2. BACTERIOLOGY. Prof Exp: Asst dept bact & immunol, LI Col Med, 36-39; asst biol control dept, Schering Corp, 39-43; bacteriologist, Antibiotics Res & Develop Div, Heyden Chem, 43-54; SUPVRY GROUP LEADER, MICROBIOL LAB, AGR DIV, AM CYANAMID CO, 54- Mem: AAAS; Am Chem Soc; Am Soc Microbiol. Res: Microbiological evaluation and application of antibiotics; chemotherapy; foods; bioassay and quality control. Mailing Add: 18 School St Milltown NJ 08850
- ABBOTT, DONALD PUTNAM**, b Chicago, Ill, Oct 14, 20; m 43; c 1. INVERTEBRATE ZOOLOGY. Educ: Univ Hawaii, BA, 41; Univ Calif, MA, 48, PhD(zool), 50. Prof Exp: Instr educ, Univ Hawaii, 42-43, instr zool, 46; from instr to assoc prof biol, Stanford Univ, 50-64, PROF BIOL, STANFORD UNIV, 64-, ASSOC DIR HOPKINS MARINE STA, 66- Concurrent Pos: Mem & later leader, Pac Sci Bd Ifaluk Atoll Exped, W Carolines, 53; Sulu Sea Exped, 57; Galapagos Int Sci Proj, 64; chief scientist, Te Vega Exped Cruise 5, Indian Ocean, 64, Cruise 18, East Trop Pac, 68, Cruise 22-2, Queen Charlotte Strait, 70, mem Cruise 23-2, Hawaii, 71; asst dir, Hopkins Marine Sta, 62-66. Mem: Am Soc Zool; AAAS; Soc Syst Zool; Ecol Soc Am. Res: Budding and taxonomy of ascidians; functional anatomy, behavior and autecology of marine invertebrates. Mailing Add: Hopkins Marine Sta Stanford Univ Pacific Grove CA 93950
- ABBOTT, FRANK SIDNEY**, b Ottawa, Ont, Apr 12, 28; m 63; c 3. ANIMAL PHYSIOLOGY. Educ: Carleton Univ, Ont, BSc, 53; Univ Toronto, MA, 57; Univ Alta, PhD(zool), 66. Prof Exp: Tech officer, Geol Surv Can, 53-56, admin officer, Dept Northern Affairs & Nat Resources, 58-63; from asst prof to assoc prof biol, Sir George Williams Univ, 66-74; SCI PROC MGR, SCI CTR, DEPT SUPPLY & SERV, GOVT CAN, 74- Concurrent Pos: Nat Res Coun Can res grants-in-aid, 67-70. Mem: Can Soc Environ Biologists; AAAS; Am Inst Biol Sci; Can Soc Zoologists; Can Physiol Soc. Res: Physiology of melanophore response to background tint in *Fundulus heteroclitus*. Mailing Add: 33 Moorcroft Rd Ottawa ON Can
- ABBOTT, HERSCHEL GEORGE**, b Woodstock, Maine, May 4, 21; m 43. FORESTRY. Educ: Univ Maine, BS, 43; Harvard Univ, MF, 52, MA, 59. Prof Exp: Forester, Chadbourne Lumber Co, Maine, 46-50; from instr to assoc prof forestry, 53-70, PROF FORESTRY & WILDLIFE MGT, UNIV MASS, AMHERST, 70- Concurrent Pos: Vpres & treas, Rich Tree Farms & Forestry Corp, 64- Honors & Awards: Distinguished Serv Award, Soc Am Foresters, 75. Mem: Soc Am Foresters. Res: Silviculture. Mailing Add: Dept of Forestry & Wildlife Mgt Univ of Mass Amherst MA 01002
- ABBOTT, ISABELLA AIONA**, b Hana, Hawaii, June 20, 19; m 43; c 1. PHYCOLOGY, MARINE BIOLOGY. Educ: Univ Hawaii, AB, 41; Univ Mich, MS, 42; Univ Calif, Berkeley, PhD(bot), 50. Prof Exp: Lectr bot, Univ Hawaii, 43-46; res assoc & lectr phycol, 60-70, PROF BIOL, STANFORD UNIV, 71- Honors & Awards: Darbaker Award, Bot Soc Am, 69. Mem: Int Phycol Soc (treas, 67-71); Phycological Soc Am; Bot Soc Am; Brit Phycological Soc. Res: Life histories, development and systematics of marine red algae, particularly Pacific marine algae. Mailing Add: Hopkins Marine Sta Stanford Univ Pacific Grove CA 93950
- ABBOTT, JOAN**, b Newton, Mass, Aug 5, 32. DEVELOPMENTAL BIOLOGY. Educ: Conn Col, BA, 54; Wash Univ, MA, 57; Univ Pa, PhD(develop biol), 65. Prof Exp: Asst prof biol, Barnard Col, Columbia Univ, 65-67, asst prof dept biol sci, Columbia Univ, 67-72; ASSOC, MEM SLOAN-KETTERING CANCER CTR, 72-, ASST PROF BIOL, SLOAN-KETTERING DIV, GRAD SCH MED SCI, CORNELL UNIV, 73- Mem: AAAS; Am Soc Cell Biol; Soc Develop Biol; NY Acad Sci. Res: Definition of precursor cell compartments in murine lymphocyte ontogeny using serological assays for cell surface markers; analysis in vitro of molecular events associated with sequential passage through these compartments. Mailing Add: Sloan-Kettering Inst Cancer Res 1275 York Ave New York NY 10021
- ABBOTT, MARIE BOHRN-LAMBERT**, b Buenos Aires, Arg, Dec 30, 22; US citizen; m 66. MARINE ZOOLOGY. Educ: Hunter Col, AB, 42; Columbia Univ, AM, 45; Univ Conn, PhD(zool), 71. Prof Exp: Instr geol & paleont, Mt Holyoke Col, 47-49; geologist, US Geol Surv, Washington, DC, 49-52; instr geol & paleont, Mt Holyoke Col, 55-56; instr geol, Smith Col, 56-57; spec consult biol & geol, Niskayuna Schs, NY, 64-66; lectr geol, Russell Sage Col, 66; CUR GRAY MUS, MARINE BIOL LAB, WOODS HOLE, 71- Concurrent Pos: Consult, Normandeau Assoc, NH, 72- Mem: Am Soc Zoologists; Geol Soc Am; Soc Syst Zoologists; Soc Econ Paleontologists & Mineralogists; Sigma Xi. Res: Autecology of Cheilostome Bryozoa; systematics of colonial animals, particularly Bryozoa; structure and diversity of marine epibenthic communities. Mailing Add: RD 2 Box 18 High St Coventry CT 06238
- ABBOTT, MAXINE LANGFORD**, b Carpenter, Tex, Oct 31, 15; m 39; c 2. PALEOBOTANY. Educ: Tex Tech Col, BS, 37, MS, 39, PhD(paleobot), 56. Prof Exp: Asst bot, Univ Cincinnati, 49-54, inst, 57-58; cur, J H Hoskins Mem Paleobot Collections, 58-64; instr paleobot, Univ Cincinnati, 64-66; assoc prof biol, Western State Col Colo, 66-69; PROF BIOL, SUL ROSS STATE UNIV, 69- Concurrent Pos: NSF grant, 59-64. Mem: AAAS; Int Orgn Paleobot; Int Union Biol Sci; Torrey Bot Club; Bot Soc Am. Res: Paleozoic paleobotany; compression floras of Pennsylvanian period. Mailing Add: Dept of Biol Sul Ross State Univ Alpine TX 79830
- ABBOTT, ROBERT TUCKER**, b Watertown, Mass, Sept 28, 19; m 46; c 3. MALACOLGY. Educ: Harvard Univ, BS, 46; George Washington Univ, PhD, 55. Prof Exp: From asst cur to assoc cur, Div Mollusks, US Nat Mus, 46-54; Pilsbry chair malacol,

Acad Natural Sci, Philadelphia, 54-69; DUPONT CHAIR & ASST DIR, DEL MUS NATURAL HIST, 69. Concurrent Pos: Zoologist, Harvard-Archbold Exped, Melanesia & Polynesia, 40-41 & Pac Sci Bd, EAfrica, 51; assoc ed, Johnsonia, Harvard Univ, 42-69; ed, Indo-Pac Mollusca, 59- & Nautilus, 68-; trustee, Bermuda Biol Sta. Mem: Fel AAAS; Am Malacol Union; Soc Syst Zool. Res: Marine mollusks; medical malacology; popular conchology. Mailing Add: Del Mus of Natural Hist Box 3937 Greenville DE 19807

ABBOTT, ROBINSON SHEWELL, b Philadelphia, Pa, June 23, 26; m 56; c 4. ECOLOGY. Educ: Bucknell Univ, BS, 49; Cornell Univ, PhD(biol), 56. Prof Exp: Teacher pub sch, LI, 50-51; asst bot, Cornell Univ, 53; asst, Wiegand Herbarium, 53-54, econ bot, 55-56; instr bot, Smith Col, 56-61; from asst prof to assoc prof biol, 61-71, chmn div sci & math, 64-68, PROF BIOL, UNIV MINN, MORRIS, 71- Mem: Bot Soc Am; Ecol Soc Am; Phycol Soc Am; Int Phycol Soc. Res: General ecology, especially beach and salt marsh ecology; use of filamentous algae as ecological indicators; environmental effects of the growth and development of algae. Mailing Add: Dept of Biol Univ of Minn Morris MN 56267

ABBOTT, ROSE MARIE SVELKOUK, b Chaska, Minn, Feb 7, 31; m 56; c 4. PLANT MORPHOLOGY. Educ: Univ Minn, BA, 53, MS, 55; Cornell Univ, PhD(plant morphol), 59. Prof Exp: Instr biol, Smith Col, 57-58; instr plant morphol, 64- INSTR GENETICS, UNIV MINN, MORRIS, 66- Mem: Bot Soc Am. Res: Developmental anatomy of primary xylem elements; development of shoot apices; developmental anatomy of Berberidaceae. Mailing Add: Div of Sci & Math Univ of Minn Morris MN 56267

ABBOTT, URSULA K., b Chilliwack, BC, July 30, 27; m 54; c 2. DEVELOPMENTAL GENETICS. Educ: Univ BC, BSA, 49, MSA, 50; Univ Calif, PhD(genetics), 55. Prof Exp: Asst poultry, Univ BC, 48-50; res asst poultry genetics, Univ Calif, Berkeley, 50-54; prin lab tech, 54-55, lectr & asst specialist, 55-56, instr & jr poultry geneticist, 56-57, from asst prof & asst geneticist to assoc prof & assoc geneticist, 57-67, PROF AVIAN SCI & GENETICIST, UNIV CALIF, DAVIS, 67- Concurrent Pos: Prog dir develop biol, NSF, 68-69. Honors & Awards: Hon prof, Univ BC, 67. Mem: Am Genetic Asn; Poultry Sci Asn; Am Physiol Soc; Soc Study Develop & Growth; NY Acad Sci. Res: Experimental embryology and teratology. Mailing Add: Dept of Avian Sci Univ of Calif Davis CA 95616

ABEGG, ROLAND, b Perth Amboy, NJ, Dec 14, 14; m 38; c 3. ZOOLOGY. Educ: Univ Mich, BA, 36; La State Univ, MS, 39, PhD(zool), 48. Prof Exp: Supt La State Univ aquil farm, La Dept Wildlife & Fisheries, 37-42; analyst, Cities Serv Ref Corp, 43-45 & Esso Standard Oil, 45-46; assoc prof biol, Northwestern State Col La, 48-50; from assoc prof to prof biol, Southeastern La Col, 50-59; PROF ZOOL & HEAD DEPT, LA TECH UNIV, 59- Mem: Am Heart Asn. Res: Waste control and pollution in relation to game fishes; cytology and genetics. Mailing Add: Dept of Zool La Tech Univ Ruston LA 71270

ABEL, JOHN H. JR., b Painesville, Ohio, Feb 25, 37; m 58; c 3. CELL BIOLOGY. Educ: Col Wooster, BA, 59; Brown Univ, MA, 64; PhD(cell biol), 66. Prof Exp: Chmn dept high sch, Ohio, 59-61; teacher high sch, Ill, 61-62; instr cell biol, NY Med Col, 66-67; from asst prof to assoc prof, 67-75, PROF CELL BIOL, COLO STATE UNIV, 75- Concurrent Pos: Consult, Ciba Chem & Dye Co, 66-68; ed consult, McGraw-Hill Bk Co, 66-; guest prof, Univ Bonn, Fed Repub Ger, 74-75. Honors & Awards: Sr US Scientist Award for Res & Teaching, Alexander von Humboldt Stiftung, Fed Repub Ger, 73. Mem: Am Soc Cell Biol; Am Assoc Anatomists; NY Acad Sci; Soc Study Reproduction & Fertil; AAAS. Res: Endocrine and neuroendocrine control of ovarian and adrenal function; osmoregulation in euryhaline birds. Mailing Add: Dept of Physiol & Biophys Colo State Univ Ft Collins CO 80523

ABELES, ANN LINDSTROM, b Tracy, Minn, Sept 23, 42; m 62; c 2. BIOPHYSICS. Educ: Univ Minn, BA, 63; Univ Md, PhD(biophys), 69. Prof Exp: Asst prof, 70-74, ASSOC PROF SCI, FREDERICK COMMUNITY COL, 75- Mem: Am Chem Soc. Res: Study of tree growth to determine the possible effects of air pollution from a generating system station on the growth of surrounding trees. Mailing Add: Dept of Biophys Frederick Community Col Frederick MD 21701

ABELSON, JOHN NORMAN, b Grand Coulee Dam, Wash, Oct 19, 38. MOLECULAR BIOLOGY, MOLECULAR GENETICS. Educ: Wash State Univ, BS, 60; Johns Hopkins Univ, PhD(biophys), 65. Prof Exp: Fel, Lab Molecular Biol, Cambridge Univ, Eng, 65-69; asst prof, 69-73, ASSOC PROF CHEM, UNIV CALIF, SAN DIEGO, 73- Mem: Am Soc Biol Chemists; Am Chem Soc. Res: Genetic control mechanisms; nucleotide sequences of DNA and RNA; RNA synthesis and post-transcriptional processing. Mailing Add: Dept of Chem B017 Univ of Calif La Jolla CA 92093

ABERCROMBIE, JAY, b Akron, Ohio, Sept 10, 42; m 68. ENTOMOLOGY. Educ: Univ Akron, BS, 64; Cornell Univ, PhD(parasitol), 70. Prof Exp: Entomologist, Walter Reed Army Inst Res, 71-72; chief entomologist, Mil Asst Command, Vietnam, 72-73; entomologist, Walter Reed Army Inst Res, 73-75; ENTOMOLOGIST, US ARMY ENVIRON HYG AGENCY, 75- Concurrent Pos: Taxonomist, Med Entom Proj, Smithsonian Inst, 73- Mem: Entom Soc Am; Asn Trop Biol. Res: Taxonomy and biology of aquatic Diptera, especially Culicidae, Sciomyzidae and Simuliidae. Mailing Add: US Army Environ Hy Agency Regional Div North Ft George G Meade MD 20755

ABERCROMBIE, WARREN FULTON, b Leeds, Ala, June 8, 11; m 43; c 4. ZOOLOGY. Educ: Howard Col, AB, 31; NY Univ, MS, 33, PhD(entom), 35. Prof Exp: Asst biol, NY Univ, 31-35; asst prof, Howard Col, 35-41; asst prof & head dept, Erskine Col, 41-42; tech ed & actg chief info sect, Med Div, Army Chem Ctr, Md, 46-48; pub ed in-chg tech reports & libr sect, Commun Dis Ctr, USPHS, 48-56, training officer, Training Br, 56-57; training officer in-chg radiol defence sch, Off Civil Defense Mobilization, 58-59; dep chief, Training Br, Div Emergency Health Serv, USPHS, 59-74, actg chief, 65-67, EDUC SPECIALIST, PERSONNEL TRAINING & DEVELOP BR, BUR MED SERV, USPHS, 74- Mem: AAAS; Am Micros Soc; Am Asn Anat; Am Pub Health Asn. Res: Effects of iodine compounds on the thyroid gland; growth of Japanese beetle larvae; effects of chemicals on the cockroach. Mailing Add: Personnel Training & Develop Br Bur of Med Serv USPHS 6525 Belcrest Rd Hyattsville MD 20782

ABERNATHIE, JAN W., b Anna, Ill, Oct 21, 29; m 52; c 4. HORTICULTURE. Educ: Univ Ill, BS, 51, MS, 52, PhD, 59. Prof Exp: Asst mgr, Caribbean Gardens, Fla, 56-58; asst prof ornamental hort, Univ Ky, 59-67; ORNAMENTALS HORTICULTURIST, VA TRUCK & ORNAMENTALS RES STA, 67- Mem: Am Soc Hort Sci. Res: Floricultural physiology, especially growth substances and effect on flowering. Mailing Add: Va Truck & Ornamentals Res Sta PO Box 2160 Norfolk VA 23501

ABLE, KENNETH PAUL, b Louisville, Ky, Feb 5, 44; m 67; c 1. BEHAVIORAL & COMMUNITY ECOLOGY. Educ: Univ Louisville, BS, 66, MS, 68; Univ Ga, PhD(zool), 71. Prof Exp: ASST PROF BIOL, STATE UNIV NY ALBANY, 71- Concurrent Pos: NSF res grant, 74. Mem: Animal Behav Soc; Am Soc Zoologists; Ecol Soc Am; Am Ornithologists Union; AAAS. Res: Migration and orientation of birds; structure of forest bird communities. Mailing Add: Dept of Biol Sci State Univ of NY Albany NY 12222

ABLES, ERNEST D., b Hugo, Okla, Jan 13, 34; m 60. WILDLIFE ECOLOGY, ZOOLOGY. Educ: Okla State Univ, BS, 61; Univ Wis, MS, 64, PhD(wildlife ecol), 68. Prof Exp: From asst prof to assoc prof ecol, Tex A&M Univ, 67-73; PROF ECOL, UNIV IDAHO, 73-, ASSOC ACAD DEAN, COL FORESTRY, WILDLIFE & RANGE SCI, 74- Mem: Ecol Soc Am; Wildlife Soc; Am Soc Mammal; Am Inst Biol Sci; Wilderness Soc. Res: Home range and activity studies of red foxes by radio tracking; radio tracking studies of impala in Africa; ecology of exotic ungulates in Texas; infrared scanning for censusing. Mailing Add: Col Forestry Wildlife & Range Sci Univ of Idaho Moscow ID 83843

ABNEY, THOMAS SCOTT, b Galatia, Ill, July 25, 38; m 62; c 3. PLANT PATHOLOGY, MYCOLOGY. Educ: Southern Ill Univ, BS, 60, MS, 64; Iowa State Univ, PhD(plant path), 67. Prof Exp: Res assoc corn dis, Iowa State Univ, 64-66; RES PATHOLOGIST, CROPS RES DIV, AGR RES SERV, USDA, 67-; ASST PROF BOT & PLANT PATH, PURDUE UNIV, WEST LAFAYETTE, 67- Mem: Am Phytopath Soc. Res: Diseases of plants, particularly organisms that attack Midwest field crops; nature of resistance; physiology of parasitism. Mailing Add: Dept of Bot & Plant Path Purdue Univ West Lafayette IN 47906

ABODEELY, ROBERT ASSAD, b Worcester, Mass, Feb 18, 42; c 2. MICROBIOLOGY. Educ: Clark Univ, BA, 64; Univ Conn, MS, 66; Univ Miss, PhD(microbiol), 70; Rutgers Univ, MBA, 75. Prof Exp: Fel, St Jude Children's Hosp, 70-71; sr scientist microbiol, 71-75, MGR REGULATORY AFFAIRS, ETHICON, INC DIV, JOHNSON & JOHNSON, 75- Mem: Am Soc Microbiol; Tissue Cult Asn; Soc Indust Microbiol. Res: In vitro biologic screening of materials intended for human implant; sterilization; biological indicators. Mailing Add: Ethicon Inc Rte 22 Somerville NJ 08876

ABOU-EL-SEUD, MOHAMED OSMAN, b Cairo, Egypt, Apr 6, 21; m 49; c 4. MYCOLOGY. Educ: Cairo Univ, BSc, 43; Ain Shams Univ, Cairo, Dipl Educ, 59; Ohio State Univ, MSc, 62, PhD(mycol), 64. Prof Exp: Sec sch teacher, Egypt, 45-51; tech secy, Sci Div, Egyptian Ministry Educ, 51-54; asst prof bot, Teachers Col, Cairo, 54-60; res assoc, Southern Ill Univ, Carbondale, 64-65; prof, Ain Shams Univ, Cairo, 65-67; lectr, 68-69, asst prof, 69-71, ASSOC PROF NATURAL SCI, MICH STATE UNIV, 71- Mem: Am Inst Biol Sci; Soc Indust Microbiol. Res: Lipid and protein synthesis by fungi; light effect on sporulation and pigmentation of fungi. Mailing Add: Dept of Natural Sci Mich State Univ East Lansing MI 48824

ABOU-SABE, MORAD A., b Cairo, Egypt, Apr 3, 37; m 60; c 2. MOLECULAR BIOLOGY. Educ: Univ Alexandria, BSc, 58; Univ Calif, Berkeley, MS, 62; Univ Pittsburgh, PhD(bact), 65. Prof Exp: Instr agr, Univ Alexandria, 58-59; asst prof genetics, Cairo Univ, 66-68; asst prof, 68-74, ASSOC PROF BACT, RUTGERS UNIV, 74- Mem: Am Soc Microbiol; Genetics Soc Am; UAR Soc Microbiol. Res: Gene enzyme interactions; specific genetic control mechanism in bacteria; cyclic adenosine monophosphate regulation of cell growth and growth control. Mailing Add: Dept of Microbiol Rutgers Univ New Brunswick NJ 08903

ABOUL-ELA, MOHAMED MOHAMED, b Damanhur, Egypt, Mar 10, 18; US citizen; m 51; c 6. PLANT PHYSIOLOGY. Educ: Univ Cairo, BA, 40; Iowa State Univ, MS, 47, PhD(plant physiol), 50. Prof Exp: Teacher high sch, Damanhur, Egypt, 40-42; from instr to asst prof crops, Univ Alexandria, 42-55; assoc prof, Univ Bagdad, 55-56; assoc prof, Univ Alexandria, 56-62; fel plant sci, Tex A&M Univ, 62-65; asst prof, 65-67, ASSOC PROF BIOL, TEX WOMAN'S UNIV, 67- Mem: Consult, Agrarian Reform Ministry Egypt, 56-62. Mem: AAAS; Am Inst Biol Sci. Res: Crop production; cotton defoliation; harvest aids; plants recovery from radiation injury. Mailing Add: Dept of Biol Tex Woman's Univ Denton TX 76204

ABPLANALP, HANS, b Zurich, Switz, Apr 22, 25; m 54; c 3. GENETICS. Educ: Inst Technol, Zurich, Ing Agron, 49; Wash State Col, MS, 51; Univ Calif, PhD(genetics), 55. Prof Exp: Res asst genetics, Wash State Col, 49-51 & Univ Calif, 51-53; asst specialist statist & genetics, Div Poultry Husb, 53-56, asst prof genetics, 56-69, PROF AVIAN SCI, UNIV & POULTRY GENETICIST, EXP STA, UNIV CALIF, DAVIS, 69- Mem: Genetics Soc Am; Am Genetic Asn; Soc Study Evolution. Res: Population genetics; application to breeding; basic research in underlying genetic mechanisms. Mailing Add: Div of Avian Sci Univ of Calif Davis CA 95616

ABPLANALP, PAUL LEROY, b Ridgway, Pa, Oct 6, 36; m 62; c 1. NEUROANATOMY. Educ: Pa State Univ, BS, 63; Mass Inst Technol, PhD(physiol psychol), 68. Prof Exp: ASST PROF BIOL, PA STATE UNIV, 68- Concurrent Pos: NIH res grant neuroanat, 69- Res: Comparative neuroanatomy of the visual system network; interconnections of the nucleus lateralis posterior and the cerebral cortex; visually guided behavior. Mailing Add: 321 Life Sci I Pa State Univ University Park PA 16802

ABRAHAM, VIVIAN CECIL, b London, Eng, Oct 19, 27; m 55; c 4. NEUROPHYSIOLOGY. Educ: Univ Edinburgh, BSc, 52, PhD(physiol), 55. Prof Exp: Asst lectr physiol, Univ Edinburgh, 52-54, lectr, 54-55; vis instr, Univ Pa, 55-56; Beit fel med res, Nat Inst Med Res, Univ London, 56-59, mem sci staff, Med Res Coun, 59-63; assoc prof, 63-67, PROF PHYSIOL, QUEEN'S UNIV (ONT), 67- Concurrent Pos: Med Res Coun vis scientist, Cerebral Functions Group, Dept Anat, Univ Col, Univ London, 70-71. Mem: Am Physiol Soc; Can Physiol Soc; Brit Physiol Soc; Brit Pharmacol Soc; Soc Neurosci. Res: Organization of sensory and effector systems in the brain stem. Mailing Add: Dept of Physiol Queens Univ Kingston ON Can

ABRAHAMSON, LILA, b Patterson, NJ, Dec 26, 27. PLANT BIOCHEMISTRY. Educ: Queens Col, NY, BS, 49; Brooklyn Col, AM, 55; Univ Mich, PhD(bot), 60. Prof Exp: Instr biol, Brooklyn Col, 53-54; from instr to asst prof, Cornell Col, 59-61; asst prof biol, Univ Chicago, 61-64, asst prof biol & bot, 64-67; ASSOC PROF BIOL, W VA UNIV, 67- Mem: AAAS; Bot Soc Am; Soc Plant Physiol. Res: Growth and development of plant tissue cultures, especially biochemistry of development; purification and characterization of homocysteine methyltransferase from plant seeds; methionone biosynthesis in higher plants. Mailing Add: Dept of Biol WVA Univ Morgantown WV 26506

- ABRAHAMSON, SEYMOUR**, b New York, NY, Nov 28, 27; m 53; c 1. **GENETICS**. Educ: Rutgers Univ, AB, 51; Ind Univ, PhD(genetics), 56. Prof Exp: USPHS fel, Univ Wis, 56-57; from instr to asst prof biol, Rutgers Univ, 57-60; from asst prof to assoc prof zool, 60-69. **PROF ZOOLOG & GENETICS**, UNIV WIS-MADISON, 69- Concurrent Pos: Mem, UN Sci Comt Effect of Atomic Radiation, 65-66 & 70; USPHS fel, Calif Inst Technol, 69; Ford Found biol adv, Agrarian Univ, Peru; mem radiation protection adv comt, Wis State Bd Health; mem, Nat Comt Radiation Protection & Measurements, adv comt biol effect of ionizing radiation, Nat Acad Sci & comt 1, Int Comm Radiation Protection. Mem: Radiation Res Soc; Genetics Soc Am; Environ Mutagen Soc. Res: Radiation genetics; induced mutation by radiation and other environmental mutagens. Mailing Add: Dept of Zool Univ of Wis Madison WI 53706
- ABRAHAMSON, WARREN GENE, II**, b Ludington, Mich, Mar 26, 47; m 69; c 1. **PLANT ECOLOGY, POPULATION BIOLOGY**. Educ: Univ Mich, Ann Arbor, BS, 69; Harvard Univ, AM, 71, PhD(biol), 73. Prof Exp: Res asst plant ecol, Univ Mich, 68-69; teaching asst biol, Harvard Univ, 69-72; tutor, 72-73; ASST PROF BIOL, BUCKNELL UNIV, 73- Mem: Ecol Soc Am; Soc Study Evolution; Am Inst Biol Sci; Sigma Xi. Res: Life history strategies of plants, vegetative and seed reproduction; environmental influences on life histories; effects of parasitism, insect, on life history parameters of goldenrods; fire ecology of south central Florida. Mailing Add: Dept of Biol Bucknell Univ Lewisburg PA 17837
- ABRAM, JAMES BAKER, JR**, b Tulsa, Okla, Dec 5, 37; m 61; c 2. **ZOOLOGY, PARASITOLOGY**. Educ: Langston Univ, BS, 59; Okla State Univ, MS, 63, PhD(zool), 68. Prof Exp: Teacher high sch, Okla, 59-62; from instr to assoc prof biol, Md State Col, Princess Anne, 63-70; assoc prof, 70-73. **PROF BIOL, HAMPTON INST**, 73- Mem: Am Soc Parasitol; Am Soc Mammal. Res: Helminths of muskrats; helminths of small mammals; ecological influences upon parasites. Mailing Add: Dept of Biol Hampton Inst Hampton VA 23368
- ABRAMOFF, PETER**, b Montreal, Que, Dec 28, 27; nat US; m 53; c 6. **ZOOLOGY, IMMUNOLOGY**. Educ: Univ Western Ont, BA, 50; Univ Detroit, MSc, 52; Univ Wis, PhD(zool), 56. Asst, Univ Detroit, 50-52; from instr to assoc prof, 55-67. **PROF BIOL, MARQUETTE UNIV**, 67- **CHMN DEPT**, 65- Mem: AAAS; Am Inst Biol Sci; Soc Exp Biol & Med; Reticuloendothelial Soc; Int Soc Exp Hemat. Res: Cellular and subcellular sites of antibody formation; hypersensitivity pneumonitis. Mailing Add: Dept of Biol Marquette Univ Milwaukee WI 53233
- ABRAMSON, IRWIN JEROME**, b Philadelphia, Pa, Aug 3, 35; m 59; c 2. **MICROBIOLOGY**. Educ: Pa State Univ, BS, 57; Va Polytech Inst & State Univ, PhD(microbiol), 71; Nat Registry Microbiologists, regist, 73. Prof Exp: Chief microbiol, Philadelphia Labs, Inc, 63-67; staff fel & res microbiologist, Baltimore Cancer Res Ctr, Nat Cancer Inst, 71-73; SR MICROBIOLOGIST, BIOQUEST DIV, BECTON DICKINSON CORP, 73- Concurrent Pos: Consult anaerobe lab apparatus, Kontes Glass Co, 72-74. Honors & Awards: Recognition Award, USPHS, 73. Mem: Am Soc Microbiol. Res: Development, design and testing of media and devices for collection, transport, and isolation of anaerobic and aerobic microorganisms from a clinical specimen; investigation of methods to improve growth of anaerobes on commercial media; effect of antimicrobial agents on Treponemas. Mailing Add: 6503 Copper Ridge Dr Baltimore MD 21209
- ABRAMSON, NORMAN JAY**, b Los Angeles, Calif, May 4, 27; m 51; c 1. **FISHERIES, BIOMETRICS**. Educ: Univ Wash, BS, 55. Prof Exp: Marine biologist, Calif State Fisheries Lab, 55-57, head biomet anal sect, 57-70; consult, Food & Agr Orgn, UN, 70; surv biometrician, Nat Marine Fisheries Serv, 71-72; fishery biologist, Tiburon Fisheries Lab, 72-74, DIR SOUTHWEST FISHERIES CTR, TIBURON LAB, 74- Concurrent Pos: Consult, Fisheries Res Inst, Univ Wash, 69. Mem: Biomet Soc; Am Statist Assn; Am Fisheries Soc; Am Inst Fishery Res Biologists. Res: Population dynamics of marine fishes and related statistical problems. Mailing Add: Tiburon Lab 3150 Paradise Dr Tiburon CA 94920
- ACEDO, GREGORIA N**, b Albay, Philippines, Apr 24, 36; m 65; c 1. **PLANT GENETICS, PLANT PATHOLOGY**. Educ: Univ Philippines, Los Banos, BSA, 59, MS, 65; Univ Mass, Amherst, PhD(plant path), 69. Prof Exp: Res asst plant path, Bur Plant Indust, Philippines, 59-62; res instr, Univ Philippines, 65-66; asst, Univ Mass, 66-69; fel plant path, 70-71, RES ASST PLANT GENETICS, UNIV MO-COLUMBIA, 73- Mem: Philippine Phytopath Soc. Res: Genetic aspect of disease resistance in plants; genetic control of flower differentiation; search for auxotrophs; tissue culture. Mailing Add: 803 Woodrow St Columbia MO 65201
- ACHEY, PHILLIP M**, b Lancaster, Pa, June 25, 39; m 64; c 4. **RADIATION BIOPHYSICS**. Educ: Franklin & Marshall Col, AB, 61; Pa State Univ, MS, 64, PhD(biophys), 66. Prof Exp: Fel, M D Anderson Hosp & Tumor Inst Houston, 66-67; asst prof biophys, 67-75, ASSOC PROF MICROBIOL, UNIV FLA, 75- Mem: Biophys Soc; AAAS; Am Soc Microbiol; Radiation Res Soc; Sigma Xi. Res: Biological and physical action of radiation on cells and DNA; repair of radiation damage. Mailing Add: Radiation Biol Lab 403 Nuclear Sci Bldg Univ Fla Gainesville FL 32601
- ACHOLONU, ALEXANDER DOZIE**, b Owerri, Nigeria, Nov 30, 32; m 67; c 5. **ZOOLOGY**. Educ: Howard Univ, BS, 58; Prairie View Agr & Mech Col, MS, 61; Colo State Univ, PhD(zool), 64. Prof Exp: Asst instr zool, Colo State Univ, 61-62; assoc prof, Southern Univ, 64-68, prof, 68-69; assoc prof, Inter Am Univ PR, San German, 69-70; prof zool & chmn dept biol, Inter Am Univ PR, San Juan, 70-72; prof & chmn res & develop, Cath Univ, PR, 72-73; actg chmn int & foreign area studies, 73-76, DEAN LIB STUDIES, STATE UNIV NY COL ONEONTA, 73- Concurrent Pos: Deleg, Int Cong Protozool, London, Eng, 65, Leningrad, USSR, 67 & Clermont Ferrand, France, 73; deleg, Int Cong Parasitol, DC, 70 & Munich, Ger, 74; guest lectr, Cath Univ, PR, 70; NSF inst grant; Sigma Xi grants-in-aid; Caribbean Inst & Study Ctr for Latin Am grant. Mem: Am Soc Parasitol; Soc Protozool; Wildlife Dis Assn; Am Micros Soc; Am Soc Trop Med & Hyg. Res: Hematozoa; taxonomy of helminth parasites; biology and life history of trematodes; human parasitism. Mailing Add: Dean of Lib Studies State Univ NY Col Oneonta NY 13820
- ACKART, WATSON BOUDINOT**, b New Brunswick, NJ, July 4, 20; m 44; c 2. **INDUSTRIAL MICROBIOLOGY**. Educ: Rutgers Univ, BS, 41, MS, 50, PhD(bact), 54. Prof Exp: Asst bact, Rutgers Univ, 41-42; assoc microbiologist, Merck & Co, Inc, 46-52; biochemist, 54-55, develop assoc, 55-62, proj scientist, 62-69, res scientist, 69-75, SPECIALIST GOVT LIAISON, UNION CARBIDE CORP, 75- Mem: Am Soc Microbiol; Inst Food Technol; Am Soc Testing Mat. Res: Food bacteriology and food preservation; food additives; biodegradation. Mailing Add: Union Carbide Corp River Rd Bound Brook NJ 08805
- ACKER, ROBERT FLINT**, b Chicago, Ill, Aug 24, 20; m 48; c 4. **MICROBIOLOGY**. Educ: Ind Univ, BA, 42, MA, 48; Rutgers Univ, PhD(microbiol), 53; Am Bd Microbiol, dipl, 65. Prof Exp: Microbiologist, Merck & Co, Inc, 48-50; Eli Lilly fel mold metab, Purdue Univ, 53-54; asst prof bact, Iowa State Univ, 54-59; asst prof off, Microbiol Assoc, Inc, 59-60, chief qual control dept, 60-62, chief prod dept, 61-62; head microbiol br, Off Naval Res, 62-69; prof biol, asst dean fac res & dir off res coord, Northwestern Univ, 69-74; EXEC DIR, AM SOC MICROBIOL, 74- Mem: Am Soc Microbiol; Soc Indust Microbiol; Brit Soc Gen Microbiol. Res: Science administration; virology; microbial physiology; bacteriophage; lysozyme; antibiotics. Mailing Add: Am Soc for Microbiol 1913 I St NW Washington DC 20006
- ACKERMANN, UWE**, b Greifswald, Ger, Dec 24, 39; m 66. **MAMMALIAN PHYSIOLOGY**. Educ: Univ Toronto, BASc, 66, MASC, 68, PhD(physiol), 73. Prof Exp: Asst prof physiol, Fac Med, Mem Univ, Nfld, 73-76; ASST PROF PHYSIOL, FAC MED, UNIV TORONTO, 76- Res: Mechanisms of extracellular fluid volume regulation. Mailing Add: Dept of Physiol Fac of Med Univ of Toronto Toronto PQ Can
- ACKLEY, WILLIAM BENTON**, b Portis, Kans, June 5, 18; m 41; c 2. **HORTICULTURE**. Educ: Kans State Col, BS, 40, MS, 47; State Col Wash, PhD(hort), 53. Prof Exp: Tech asst, US Bur Census, Washington, DC, 40-43; asst, Kans State Col, 46-47; res asst, 47-48, horticulturist, 48-64, PROF HORT, WASH STATE UNIV, 48-, CHMN DEPT, 64- Mem: Am Soc Hort Sci; Am Soc Plant Physiologists. Res: Water relations of plants; physiological disorders of tree fruits; orchard pest control. Mailing Add: Dept of Hort Wash State Univ Pullman WA 99163
- ADAIR, FRANK WILLIAM**, b Philadelphia, Pa, May 30, 40; m 65. **MICROBIOLOGY**. Educ: Pa State Univ, BS, 63; Rutgers Univ, MS, 65, PhD(microbiol), 67. Prof Exp: Instr microbiol, Univ Hawaii, 67-68; mgr anal microbiol, 68-74, ASST DIR ANAL MICROBIOL & BIOL CONTROL, PHARMACEUT DIV, CIBA-GEIGY CORP, 74- Concurrent Pos: Lectr, Dept Bact & Pub Health, Wagner Col, 69-71. Mem: AAAS; Am Soc Microbiol. Res: Mechanism of action of antimicrobial agents; physiology, metabolism, nutrition and ultrastructure of antibiotic resistant bacteria. Mailing Add: Dept of Microbiol Ciba-Geigy Corp Summit NJ 07901
- ADAIR, SUZANNE FRANK**, b Milwaukee, Wis, Aug 17, 41; m 66; c 1. **BIOPHARMACEUTICS**. Educ: Univ Wis, BS, 63; Univ Calif, San Francisco, PhD(pharmaceut chem), 76. Prof Exp: Actg asst prof pharm, Univ Calif, San Francisco, 74; ASST PROF PHARM, RUTGERS UNIV, BUSCH CAMPUS, 74- Mem: Sigma Xi; NY Acad Sci; Acad Pharmaceut Sci; AAAS. Res: Membrane transport and the in vitro absorption of drugs; effect of drugs and various agents on tissue electrical parameters; short-circuit current, potential difference, resistance. Mailing Add: Rutgers Univ Col of Pharm Busch Campus New Brunswick NJ 08903
- ADAMO, JOSEPH ALBERT**, b Jersey City, NJ, Oct 22, 38; m 64; c 2. **NEMATOLOGY**. Educ: Jersey City State Col, BA, 64; Fairleigh Dickinson Univ, MS, 67; Rutgers Univ, PhD(nematol), 75. Prof Exp: Instr bot, Fairleigh Dickinson Univ, 65-66; asst prof bot & zool, Jersey City State Col, 66-67; ASSOC PROF MICROBIOL, OCEAN COUNTY COL, 67- Mem: Soc Nematol; Am Phytopath Soc; Am Microbiol Soc. Res: Nematode behavior and physiology specifically related to the vertical migration, quiescence, and senescence of above-ground phytoparasitic forms. Mailing Add: Dept of Biol Ocean County Col Toms River NJ 08753
- ADAMS, BRUCE GORDON**, b Seattle, Wash, Mar 31, 42; m 65. **MICROBIOLOGY, MICROBIAL PHYSIOLOGY**. Educ: Whitman Col, BA, 64; Ore State Univ, PhD(microbial physiol), 68. Prof Exp: NSF fel biol, Mass Inst Technol, 68-70; asst prof, 70-74, ASSOC PROF MICROBIOL, UNIV HAWAII, HONOLULU, 75- Mem: AAAS; Am Soc Microbiol; Brit Soc Gen Microbiol. Res: Function and physiological forms of ergosterol in Saccharomyces cerevisiae; physiology and metabolism of blood flagellates; catabolism repression of inducible soluble enzymes in Saccharomyces cerevisiae. Mailing Add: Dept of Microbiol 2538 The Mall Univ of Hawaii Snyder Hall 202 Honolulu HI 96822
- ADAMS, CAROLINE LANDER**, b Chicago, Ill, Apr 23, 03; m 35; c 1. **CYTOLOGY**. Educ: Ill Col, AB, 25; Univ Chicago, MS, 28; Univ Wis, PhD(mycol), 33. Prof Exp: Instr bot, Hood Col, 29-30; teaching & res asst, Univ Wis, 30-34, Am Asn Univ Women fel, 35-36; res asst, Cotton Div, USDA, 34-35; from instr to prof, 46-72, EMER PROF BOT, GEORGE WASHINGTON UNIV, 72-; ASSOC PROF, NAT CATHEDRAL SCH, 62- Concurrent Pos: Chief dept sci, Nat Cathedral Sch, 52-62. Mem: AAAS; Bot Soc Am. Res: Morphological development and cytology of gasteromycetes. Mailing Add: 242 N Granada St Arlington VA 22203
- ADAMS, CLARK EDWARD**, b Algona, Iowa, Mar 18, 42; m 62; c 3. **MAMMALIAN ECOLOGY**. Educ: Concordia Teachers Col, BS, 64; Univ Ore, MS, 66; Univ Nebr-Lincoln, PhD(zool), 73. Prof Exp: Instr biol, St John's Acad & Jr Col, 64-65; ASSOC PROF ECOL, CONCORDIA TEACHERS COL, 66- Mem: Am Soc Mammalogists; Wildlife Soc; Sigma Xi; Nat Asn Biol Teachers. Res: Measuring territoriality in fox squirrels; Sciurus niger ruftuener pre and post weaning and pre and post mating. Mailing Add: Dept of Biol Concordia Teachers Col Seward NE 68434
- ADAMS, CURTIS H**, b DeKalb, Miss, Sept 12, 17; m 42; c 1. **ENTOMOLOGY, ZOOLOGY**. Educ: Miss State Univ, BS, 41, PhD(entom), 65; Henderson State Teachers Col, MSED, 63. Prof Exp: Assoc prof mil sci, The Citadel, 51-54; prof, Henderson State Teachers Col, 61-63; head life sci sect & chmn biol fac, 68-73, ASSOC PROF BIOL, UNIV ALA, HUNTSVILLE, 65- Mem: Wildlife Soc; AAAS; Am Inst Biol Sci; Entom Soc Am. Res: Insecticide resistance in beneficial insect parasites. Mailing Add: Dept of Biol Univ of Ala PO Box 1247 Huntsville AL 35807
- ADAMS, DAVID A**, b Lakewood, Ohio, Nov 26, 31; m 55; c 1. **RESOURCE MANAGEMENT**. Educ: NC State Col, BS, 53, MS, 57, PhD(plant ecol), 62. Prof Exp: Waterfowl proj leader, Wildlife Resources Comm, NC, 57; chief park naturalist, NC State Parks, 57-59; asst, NC State Univ, 59-62; cur, NC State Mus, 62-63; comrn, NC Div Com & Sports Fisheries, 63-68; sr staff mem, Nat Coun Marine Resources & Eng Develop, 68-69; PRES, COASTAL ZONE RESOURCES CORP & VPRES, OCEAN DATA

- SYSTS, INC.**, 69- Concurrent Pos: Mem, Comn Marine Sci, Eng & Resources, 67-69; mem, Cape Fear Tech Inst Adv Comt & Res Adv Comt, US AID. Mem: Ecol Soc Am; Am Fisheries Soc. Res: Estuarine ecology; coastal fisheries management; mammal and bird distribution and ecology; salt marsh ecology; waterfowl management. Mailing Add: 4505 Franklin Ave Wilmington NC 28401
- ADAMS, FRANKLIN SCOTT**, b Philadelphia, Pa, July 31, 29; m 51; c 4. **BOTANY, MORPHOLOGY**. Educ: Johnson State Col, BS, 56; Univ Pa, MS, 59; Univ NH, PhD(bot), 67. Prof Exp: Asst prof biol, Pa State Univ, 67-74; ASSOC PROF BOT, UNIV MICH, DEARBORN, 74- Mem: AAAS; Am Inst Biol Sci; Bot Soc Am. Res: Plant anatomy and morphology, especially the biology of the higher aquatic plants. Mailing Add: Dept of Natural Sci Univ of Mich 4901 Evergreen Dearborn MI 48128
- ADAMS, GABRIELLE H M**, b Mateszalka, Hungary, Oct 29, 39; Can citizen; m 64; c 2. **MOLECULAR BIOLOGY**. Educ: McMaster Univ, BSc, 63; Carleton Univ, PhD(cell biol), 68. Prof Exp: Fel biochem, Nat Res Coun Can, 67-69; publ asst, Can J Bot, Nat Res Coun Can, 69-70; res assoc biochem, Nat Res Coun Can & Dept Biol, Carleton Univ, 70-75; PUBL SUPVR RES JOURNALS, NAT RES COUN CAN, 75- Mem: Can Soc Cell Biol. Res: Chemistry and function of nuclear chromatin proteins. Mailing Add: Rm 1157 100 Sussex Dr Ottawa ON Can
- ADAMS, JACK DONALD**, b Gary, Ind, June 3, 19; m 47; c 2. **GENETICS**. Educ: Purdue Univ, BS, 50, MS, 52; Wash State Univ, PhD(radiation genetics), 56. Prof Exp: Asst bot, Purdue Univ, 50-52; exp aide radiation genetics, Wash State Univ, 52-53, asst, 53-56; asst prof agron, NMex State Univ, 56-59; ASSOC PROF BIOL, CENT MICH UNIV, 59- Mem: Genetics Soc Am. Res: Plant genetics; cytology; cytogenetics; radiation genetics. Mailing Add: Dept of Biol Cent Mich Univ Mt Pleasant MI 48858
- ADAMS, JAMES NORMAN**, b Brooklyn, NY, Nov 4, 32; m 55; c 3. **MICROBIOLOGY, GENETICS**. Educ: Univ Ky, BS, 54; Univ Ga, PhD(bact), 61. Prof Exp: Bacteriologist, Dugway Proving Ground, Utah, 57-59; asst prof bact, Univ Ga, 62-63; from asst prof to prof microbiol, Sch Med, Univ SDak, 63-75. PROF & COORDR MED MICROBIOL, SCH MED, UNIV SC, 75- Concurrent Pos: USPHS fel, 61-62, grants, 62-63 & 64; consult ed, Aquarium Jour, 61-; Univ Minn fel, 62; Am Soc Microbiol pres fel, 62; NSF res grant, 64-; Nat Inst Gen Med Sci career develop award, 66- Mem: AAAS; Am Soc Microbiol; Genetics Soc Am; Brit Soc Gen Microbiol. Res: Genetics, cytology and taxonomy of the Nocardiae; bacterial taxonomy; cytology and physiology of fungi; Actinomycetes genetics. Mailing Add: Dept of Biol Univ of SC Columbia SC 29208
- ADAMS, JAMES RUSSELL**, b Independence, Pa, May 31, 14; m 40; c 3. **ZOOLOGY**. Educ: McGill Univ, BSc, 36, MSc, 37, PhD(zool), 40. Prof Exp: Demonstr zool, McGill Univ, 36-37; lectr biol, Sir George Williams Col, 37-40, from asst prof to assoc prof, 40-46; assoc prof, 46-55, PROF ZOOLOGY, UNIV BC, 55- Concurrent Pos: Nat Res Coun Can sr res fel, 62. Mem: AAAS; Am Soc Zoologists; Can Soc Zoologists; Wildlife Dis Assn. Res: Parasites of fishes and wildlife; host-parasite relations. Mailing Add: Dept of Zool Univ of BC Vancouver BC Can
- ADAMS, JANE N**, b Marion, Ind, Aug 28, 29; m 54. **MICROBIOLOGY, GENETICS**. Educ: Earlham Col, AB, 51; Purdue Univ, MS, 54; Univ Ill, PhD(bact), 59. Prof Exp: Instr biol, Univ Ill, 59-61; asst prof, 61-69, ASSOC PROF MICROBIOL, SAN FRANCISCO STATE UNIV, 69- Res: Bacterial and viral genetics. Mailing Add: Dept of Biol San Francisco State Univ San Francisco CA 94132
- ADAMS, JEAN BURNHAM**, b Fredericton, NB, July 8, 13; m 41. **INSECT PHYSIOLOGY**. Educ: Univ NB, BA, 35; Univ Maine, MS, 36. Prof Exp: Entomologist, 36-46, officer in charge field crop insect lab, 46-58, RES SCIENTIST, RES BR, SCI SERV, CAN DEPT AGR, 58- Honors & Awards: Hons for contrib to the natural sci, Nat Mus Natural Sci, Ottawa, Can, 75. Mem: Can Soc Zool; Entom Soc Can. Res: Host-parasite relationship as expressed by aphids and their host plants; mechanism of host selection and exploitation; aphid enzymology and the application to pest management. Mailing Add: Res Sta Box 20280 Canada Agr Fredericton NB Can
- ADAMS, JEAN RUTH**, b Edgewater Park, NJ, Aug 17, 28. **INSECT PATHOLOGY, ELECTRON MICROSCOPY**. Educ: Rutgers Univ, BS, 50, PhD(entom), 62. Prof Exp: Technician, Rohm and Haas Co, 51-57; res fel zool, Univ Pa, 61-62; RES ENTOMOLOGIST, AGR RES CTR, USDA, 62- Mem: Electron Micros Soc Am; Entom Soc Am; Am Soc Cell Biol; NY Acad Sci. Res: Electron microscopic investigations on histopathology of pathogens of insects; virus invasion and replication of insect pathogens in insect tissues and in insect tissue culture cells. Mailing Add: USDA Insect Path Lab Bldg 011A Rm 214 Agr Res Ctr West Beltsville MD 20705
- ADAMS, JOHN COLLINS**, b New Albany, Ind, Sept 18, 38; m 60; c 2. **MICROBIAL ECOLOGY, WATER POLLUTION**. Educ: Purdue Univ, BS, 62; Iowa State Univ, MS, 64; Wash State Univ, PhD(bact), 69. Prof Exp: Asst prof microbiol, 69-75, ASSOC PROF MICROBIOL, UNIV WYO, 75- Mem: Am Soc Microbiol; Water Pollution Control Fedn; Soc Gen Microbiol; AAAS; Sigma Xi. Res: Microbiology of black water associated with oil shale; microbiology of coal strip mines in the western United States; microbiology of fresh water; microbiology of game meat; fluorescent and denitrifying bacteria. Mailing Add: Div of Microbiol & Vet Med Univ of Wyo Box 3354 Univ Sta Laramie WY 82071
- ADAMS, JOSEPH EDISON**, b Middletown, NY, Nov 23, 03; m 29; c 2. **BOTANY**. Educ: Columbia Univ, PhG, 25, PhC, 27, AM, 32; Univ Mich, BS, 29; Univ Calif, PhD(bot), 35. Prof Exp: Instr mat med & bot, Columbia Univ, 25-32; from instr to prof, 35-69, EMER PROF BOT, UNIV NC, CHAPEL HILL, 69- Mem: Am Soc Plant Taxon. Res: Systematic botany; plant anatomy. Mailing Add: PO Box 333 Chapel Hill NC 27514
- ADAMS, JULIAN PHILIP**, b Windsor, Eng, Oct 30, 44. **POPULATION GENETICS**. Educ: Univ Wales, BSc, 65; Univ Calif, Davis, PhD(genetics), 69. Prof Exp: Fel genetics, Dept Pomol, Univ Calif, Davis, 69-70; asst prof bot, 70-75, ASSOC PROF BIOL, UNIV MICH, ANN ARBOR, 75- Mem: Genetics Soc Am; Brit Genetical Soc; Am Statist Assn; Am Soc Naturalists. Res: Population genetics of microorganisms; adaptive significance of diploidy; evolution at the level of the enzyme; human genetics. Mailing Add: Div of Biol Sci Univ of Mich Ann Arbor MI 48104
- ADAMS, MICHAEL STUDEBAKER**, b Houston, Tex, Aug 26, 38; m 64. **PLANT ECOLOGY**. Educ: Univ Calif, Davis, BS, 62, MS, 64; Univ Calif, Riverside, PhD(biol), 68. Prof Exp: NASA trainee, Univ Calif, Riverside, 65-68; asst prof, 68-72, ASSOC PROF BOT, UNIV WIS-MADISON, 72- Mem: AAAS; Ecol Soc Am; Am Inst Biol Sci; Am Soc Limnol & Oceanog; Int Asn Theoret & Appl Limnol. Res: Physiological ecology of aquatic macrophytes; analysis of littoral ecosystems. Mailing Add: Dept of Bot Univ of Wis Madison WI 53706
- ADAMS, PETER B**, b Concord, Mass, Apr 18, 36; m 58; c 2. **PLANT PATHOLOGY**. Educ: Univ Vt, BS, 59, MS, 61; Univ RI, PhD(plant path), 64. Prof Exp: Fel plant path, US Army Biol Lab, 74-75; PLANT PATHOLOGIST, SOILBORNE DIS LAB, AGR RES SERV, USDA, 75- Mem: AAAS; Am Phytopath Soc. Res: Ecology of soilborne pathogens and control of the diseases which they cause. Mailing Add: Soilborne Dis Lab Agr Res Ctr West Beltsville MD 20705
- ADAMS, PHILLIP A**, b Los Angeles, Calif, Jan 13, 29. **ENTOMOLOGY**. Educ: Univ Calif, BS, 51; Harvard Univ, AM & PhD(biol), 58. Prof Exp: From instr to asst prof zool, Univ Calif, Santa Barbara, 58-63; from asst prof to assoc prof, 63-71, PROF ZOOLOGY, CALIF STATE UNIV FULLERTON, 71- Concurrent Pos: Vis assoc prof biol & vis assoc cur insects, Yale Univ, 68-69. Mem: AAAS; Am Entom Soc. Res: Insect evolution; phylogeny and taxonomy of Neuroptera; Myrmeleontidae and Chrysopidae; insect thermo-regulation. Mailing Add: Dept of Biol Calif State Univ Fullerton CA 92634
- ADAMS, PRESTON**, b Madison, Fla, Jan 12, 30; m 63. **BOTANY**. Educ: Univ Ga, BS, 54, MS, 56; Harvard Univ, PhD(biol), 59. Prof Exp: Asst bot, Univ Ga, 54-56 & Gray Herbarium, Harvard Univ, 56-57; res assoc bot, Fla State Univ, 59-61; from asst prof to assoc prof, 61-73, PROF BOT, DePAUW UNIV, 74- Mem: Bot Soc Am; Am Soc Plant Taxon; Int Asn Plant Taxon. Res: Evolution of vascular plants; monographic studies of flowering plants, especially the family Guttiferae. Mailing Add: Dept of Bot DePauw Univ Greencastle IN 46135
- ADAMS, RANDALL HENRY**, b Milburn, Okla, Aug 24, 39; m 62; c 2. **ENTOMOLOGY, PLANT SCIENCE**. Educ: Okla State Univ, BS, 61, MS, 66, PhD(entom ecol), 72. Prof Exp: Res asst entom, Okla State Univ, 66-68; asst prof, NMex State Univ, 68-70, agron, 70-74; ASSOC PROF ENTOM & PLANT SCI, SOUTHERN STATE COL, ARK, 74- Concurrent Pos: Res consult entom & agron, Shell Chem Co, Dow Chem USA, PPG Chem Co, Thuron Indus & Cooper USA, 70- Mem: Sigma Xi; Entom Soc Am. Res: Evaluation of pesticides on animal and plant pests. Mailing Add: Dept of Agr Southern State Col Magnolia AR 71753
- ADAMS, ROBERT EVANS**, b Sodus, NY, Nov 20, 24; m 46. **PLANT PATHOLOGY**. Educ: Cornell Univ, PhD(plant path), 53. Prof Exp: From asst prof to assoc prof, 53-72, PROF PLANT PATH, W VA UNIV, 72- Mem: Soc Nematol; Am Phytopath Soc. Res: Deciduous fruit tree diseases; nematology. Mailing Add: 1292 Fairlawn Ave Morgantown WV 26505
- ADAMS, ROBERT PHILLIP**, b Denison, Tex, Dec 8, 39; m 62; c 2. **EVOLUTIONARY BIOLOGY, TAXONOMY**. Educ: Univ Tex, Austin, BA, 62, PhD(biol sci), 69. Prof Exp: Sys analyst comput prog, Control Data Corp, 62-64; farmer, 64-66; asst prof bot & biol, 69-74, ASSOC PROF BOT & BIOL, COLO STATE UNIV, 74- Concurrent Pos: Prin investr, NSF grant, 70-72. Mem: Phytochem Soc NAm; Bot Soc Am; Am Soc Plant Taxon; Int Asn Plant Taxon; Soc Syst Zool. Res: Chemosystematics; numerical taxonomy; computerized mapping of plant distributions; numerical approaches to population problems; seasonal variations in terpenoid production; terpene metabolism; gas-liquid chromatography. Mailing Add: Dept of Bot Colo State Univ Ft Collins CO 80521
- ADAMS, STUART LYLE**, b Louisville, Ky, July 30, 16; m 40; c 1. **BACTERIOLOGY**. Educ: Centre Col, AB, 38; Univ Louisville, MS, 42; State Col Wash, PhD(bact), 49. Prof Exp: Instr biol, Centre Col, 38-39; bacteriologist, Res Dept, 39-43, head fermentation div, 43-45, 46-47, asst dir res, 49-50, dir res, 50-61, TECH DIR, JOS E SEAGRAM & SONS, INC, 61- Mem: AAAS; Am Soc Microbiol; Am Chem Soc; Am Soc Testing & Mat. Res: Yeast fermentation; cereal grains; microbial enzymes; enzymatic hydrolysis of starch; 2-3 butylene glycol. Mailing Add: Jos E Seagram & Sons Inc 375 Park Ave New York NY 10022
- ADAMS, TERRANCE STURGIS**, b Los Angeles, Calif, Dec 14, 38; m 63. **INSECT PHYSIOLOGY**. Educ: Calif State Col Los Angeles, BA, 61; Univ Calif, Riverside, PhD(entom), 66. Prof Exp: RES ENTOMOLOGIST, METAB LAB, AGR RES SERV, USDA, 66- Mem: Entom Soc Am; Am Zool Soc. Res: Factors affecting insect reproduction; endocrine control of reproduction in dipterous insects. Mailing Add: Metab Lab Agr Res Serv USDA Univ Sta Fargo ND 58102
- ADAMS, THOMAS C**, b San Francisco, Calif, Nov 4, 18; m 57; c 2. **FOREST ECONOMICS, INTERNATIONAL ECONOMICS**. Educ: Univ Calif, Berkeley, BS, 40, AB, 41; Univ Mich, MA, 51, PhD(forestry), 52. Prof Exp: Forest economist, Pac Northwest Forest & Range Exp Sta, US Forest Serv, 52-55; asst prof forestry, Ore State Univ, 55-57; PRIN ECONOMIST, PAC NORTHWEST FOREST & RANGE EXP STA, US FOREST SERV, 57- Concurrent Pos: Consult, Stanford Res Inst, Ore, 55. Mem: Am Econ Assn; Soc Am Foresters; Am Agr Econ Assn; Regional Sci Assn. Res: Marketing, market development and international trade of forest products; economic analysis of new logging systems, thinning operations and forest residue reduction. Mailing Add: Pac Northwest Forest & Range Exp Sta US Forest Serv PO Box 3141 Portland OR 97208
- ADAMS, WALTER CHURCH**, b Newtown, Pa, Aug 22, 36; m 62; c 2. **ENDOCRINOLOGY, PHYSIOLOGY**. Educ: Drew Univ, AB, 58; Rutgers Univ, MS, 62, PhD(endocrinol), 63. Prof Exp: Res scientist, NJ Bur Res Neurol & Psychiat, 63-67; asst prof, 67-71, ASSOC PROF BIOL SCI, KENT STATE UNIV, 71- Mem: AAAS; Am Physiol Soc; Am Soc Zoologists. Brit Soc Endocrinol. Res: Interrelationships of hypothalamic control of gonadotrophin secretion and ovarian physiology with respect to abnormal ovarian responses; comparative reproductive physiology. Mailing Add: Dept of Biol Sci Kent State Univ Kent OH 44242
- ADAMS, WILLIAM HENSLEY**, b Nashville, Tenn, Aug 14, 29; m 51; c 3. **ECOLOGY**. Educ: Univ Tenn, AB, 51; La State Univ, MS, 56; Auburn Univ, PhD(zool), 59. Prof Exp: Asst, Auburn Univ, 56-59; sr game biologist, Tenn Game & Fish Comm, 59-60; prof biol & chmn div & dept, Tenn Wesleyan Col, 60-64; prof biol & dean col arts & sci, Tenn Tech

Univ, 64-66; PROG MGR, NAT SCI FOUND, 66- Concurrent Pos: Sigma Xi res grant-in-aid, 59; mem, NSF insts radiation biol, Oak Ridge Inst Nuclear Studies, 61, comp anat, Harvard Univ, 62 & marine biol, Duke Univ, 63; NSF res partic, Highlands Biol Sta, 61; mem vis scientist prog, NSF-Tenn Acad Sci, 62-66; dir coop col-sch sci prog, NSF, 63-65; mem ed adv bd, Fed Notes, 73- Mem: AAAS; Am Soc Mammal (honorary, 59); Am Ornith Union; Ecol Soc Am; Cooper Ornith Soc; Wildlife Soc. Res: Vertebrate ecology at the population level; improvement of higher education. Mailing Add: 4004 Moss Dr Annandale VA 22003

ADAMSON, WILLIAM CHARLES, b Turin, Ga, Nov 17, 38; m 66; c 1. PLANT BREEDING. Educ: Univ Ga, BSA, 61, MS, 64; Auburn Univ, PhD(agron), 69. Prof Exp: RES PLANT GENETICIST, AGR RES SERV, USDA, 69- Mem: AAAS; Am Soc Agron; Crop Sci Soc Am; Am Genetic Assn. Res: Root-knot resistance in *Sericea lespedeza*, kenaf and roselle; kenaf production. Mailing Add: Rte 4 Box 433 Savannah GA 31405

ADDICOTT, FREDRICK TAYLOR, b Oakland, Calif, Nov 16, 12; m 35; c 4. PLANT PHYSIOLOGY. Educ: Stanford Univ, AB, 34; Calif Inst Technol, PhD(plant physiol), 39. Prof Exp: Asst, Stanford Univ, 34-37; teaching fel, Calif Inst Technol, 37-39; from instr to asst prof bot, Santa Barbara State Col, 39-46; assoc physiologist, Spec Guayule Res Proj, USDA, Calif, 43-44; from asst prof to assoc prof bot, Univ Calif, Los Angeles, 46-54; prof bot, 54-61, prof agron, 61-72, PROF BOT, UNIV CALIF, DAVIS, 72- Concurrent Pos: Sigma Xi grant-in-aid, 40; Fulbright res scholar, Victoria Univ, Wellington, NZ, 57; vis prof, Univ Adelaide, 66 & Univ Natal, 70. Mem: Int Soc Hort Sci; Am Soc Plant Physiol; Bot Soc Am; Can Soc Plant Physiol; Phytochem Soc Nam. Res: Morphology, physiology and ecology of abscission; abscisic acid; physiology of plant hormones. Mailing Add: Dept of Bot Univ of Calif Davis CA 95616

ADDICOTT, JOHN FREDRICK, b Santa Barbara, Calif, Dec 28, 44; m 66; c 2. ECOLOGY. Educ: Univ Calif, Davis, AB, 67; Univ Mich, MSc, 68, PhD(zool), 72. Prof Exp: Res asst prof biol, Univ Utah, 72-73; ASST PROF ZOO, UNIV ALTA, 73- Mem: Ecol Soc Am; Soc Study of Evol. Res: Competition in patchy environments; effects of predation on prey community structure. Mailing Add: Dept of Zool Univ of Alta Edmonton AB Can

ADELMANN, HOWARD BERNHARDT, b Buffalo, NY, May 8, 98. ZOOLOGY. Educ: Cornell Univ, AB, 20, AM, 22, PhD(histol, embryol), 24. Hon Degrees: ScD, Ohio State Univ, 62. Prof Exp: Asst histol & embryol, 19-21, from instr to prof, 21-74, chmn dept zool, 44-59, EMER PROF HISTOL & EMBRYOL, CORNELL UNIV, 74- Concurrent Pos: Nat Res fel, 27-28. Honors & Awards: William H Welch Medal, Am Asn Hist Med, 67; Pfizer Award, Hist Sci Soc, 67. Mem: Am Soc Zoologists; Am Asn Anatomists; Am Asn Hist Med; Hist Sci Soc; fel Int Inst Embryol. Res: Embryology; morphology and development of the neural tube and cranial ganglia in the rat, prechordal mesoderm of the chick and salamander, and eyes of the salamander; cyclopia and mesodermal somites; history of embryology. Mailing Add: Stimson Hall Cornell Univ Ithaca NY 14850

ADELSON, LIONEL MORTON, b Holyoke, Mass, Dec 29, 28; m 51. MARINE ECOLOGY, HISTOLOGY. Educ: Am Int Col, BA, 50; Drexel Inst Technol, MS, 57. Prof Exp: Res assoc neurol, 54-58, from asst prof to assoc prof biol, 58-62, chmn dept, 59-66, PROF BIOL, DEL VALLEY COL, 62-, CHMN DIV SCI, 66-, ASSOC DEAN, 73- Concurrent Pos: Grants, Nat Multiple Sclerosis Soc, 54-56, NIH, 56-58. Mem: AAAS; Am Chem Soc; Am Soc Microbiol. Res: Experimental in vitro demyelination; oyster bacteriology. Mailing Add: 300 Sandy Knoll Dr Doylestown PA 18901

ADKINS, ELIZABETH KOCHER, b Washington, DC, July 12, 45. BEHAVIORAL BIOLOGY, REPRODUCTIVE ENDOCRINOLOGY. Educ: Univ Md, BS, 67; Univ Pa, PhD(psychol), 71. Prof Exp: Asst prof psychol, State Univ NY Col Cortland, 74-75; ASST PROF PSYCHOL, NEUROBIOL & BEHAV, CORNELL UNIV, 75- Mem: AAAS; Animal Behav Soc; Am Ornithologists Union; Am Inst Biol Sci; Int Soc Study Aggression. Res: Role of sex hormones in the development and maintenance of social behavior in vertebrates, especially reproductive behavior. Mailing Add: Dept of Psychol Uris Hall Cornell Univ Ithaca NY 14850

ADKINS, RONALD JAMES, b Bremerton, Wash, June 28, 32; m 55; c 2. NEUROPHYSIOLOGY. Educ: Univ Wash, BS, 54, MS, 57, PhD(psychol, psychol), 65. Prof Exp: Res asst neurophysiol, Univ Wash, 57-59; instr psychol & sociol, Lower Columbia Col, 59-61; behavioral trainee psychol & psychol, Univ Wash, 61-65; instr psychol, NY Med Col, 65-66; asst prof zool & psychol, 66-71, ASSOC PROF ZOO & PHYSIOL, WASH STATE UNIV, 71- Mem: AAAS; assoc Am Physiol Soc. Res: Physiology of behavior; interaction among descending and ascending systems within the sensory apparatus, currently emphasizing the pyramidal tract and the dorsal column-medial lemniscal system in cats. Mailing Add: Dept of Zool Wash State Univ Pullman WA 99163

ADKINS, THEODORE ROOSEVELT, JR, b San Antonio, Tex, Dec 26, 30; m 49; c 3. ENTOMOLOGY. Educ: Auburn Univ, BS, 52, MS, 54, PhD(entom), 58. Prof Exp: Asst entom, Auburn Univ, 56-57; asst prof entom & zool & asst entomologist, 57-61, assoc prof entom & zool, 61-68, PROF ENTOM & ZOO, CLEMSON UNIV, 68- Mem: Entom Soc Am; Am Mosquito Control Assn. Res: Medical-veterinary entomology. Mailing Add: Dept Entom & Econ Zool Clemson Univ Clemson SC 29631

ADKISSON, CURTIS SAMUEL, b Little Rock, Ark, Feb 2, 42; m 69; c 1. ORNITHOLOGY. Educ: Oberlin Col, BA, 65; Miami Univ, MA, 67; Univ Mich, PhD(zool), 72. Prof Exp: Teaching fel zool, Univ Mich, 68-72; ASST PROF ZOO, VA POLYTECH INST & STATE UNIV, 72-; CUR ANIMAL COLLECTIONS, ROCKY MOUNTAIN BIOL LAB, 73- Mem: Am Ornith Union; Soc Study of Evol; AAAS. Res: Dialects in bird vocalizations; interspecific imitation in bird song; systematics and behavior of cardueline finches; habitat utilization in North American birds. Mailing Add: Dept of Biol Va Polytech Inst & State Univ Blacksburg VA 24061

ADKISSON, PERRY LEE, b Blytheville, Ark, Mar 11, 29; m 56; c 1. ECONOMIC ENTOMOLOGY. Educ: Univ Ark, BS, 50, MS, 54; Kans State Col, PhD(entom), 56. Prof Exp: Asst prof entom, Univ Mo, 56-57; asst prof, 58-63, PROF ENTOM, TEX A&M UNIV, 63-, HEAD DEPT, 68- Concurrent Pos: Fel, Harvard Univ, 63-64; consult, Int Atomic Energy Agency, Vienna; chmn sci adv panel agr chem, Gov of Tex, 70-71; mem panel of experts on integrated pest control, Food & Agr Orgn, Rome, Italy, 70-74; consult, Hazardous Mat Adv Comt, US Environ Protection Agency, 71; mem exec comt study prob

pest mgt, Environ Sci Bd, Nat Acad Sci- Nat Acad Eng, 72-; mem, Struct Pest Control Bd Tex, 72-; mem comt biol pest species, Nat Res Coun, 73-; mem ed bd, Ann Rev Entom, 74-; mem, US Insect Control Deleg to People's Repub of China, 75; mem UN-Food & Agr Orgn consult on pesticides in agr & pub health, Rome, Italy, 75; mem, US Directorate to UNESCO Man & Biosphere Prog, 75- Honors & Awards: J Everett Bussart Award, Entom Soc Am, 67. Mem: AAAS; Entom Soc Am (pres, 74); Am Inst Biol Sci; Sigma Xi; Int Orgn Biol Control. Res: Basic and applied research on cotton insects; insect photoperiodism. Mailing Add: Dept of Entom Tex A&M Univ College Station TX 77843

ADLER, BEATRIZ RAQUEL, b Havana, Cuba, Oct 29, 29; US citizen; m 51. BIOLOGY. Educ: Univ Havana, Dr nat sci, 53. Prof Exp: Parochial sch teacher, Cuba, 48-61 & Pa, 61-64; from instr to assoc prof biol & phys sci, 64-73, PROF BIOL, CALDWELL COL, 73- Res: Geographical survey and methods of fishery of early Cuban Indians. Mailing Add: Dept of Biol Caldwell Col Caldwell NJ 07006

ADLER, HOWARD IRVING, b New York, NY, July 1, 31; m 53; c 4. BACTERIOLOGY. Educ: Cornell Univ, BS, 53, MS, 55, PhD, 56. Prof Exp: Res assoc, 56-57, biologist, 57-69, dir biol div, 69-75, SR STAFF MEM BIOL DIV, OAK RIDGE NAT LAB, 75- Concurrent Pos: Sr staff mem, Inst Energy Anal, Oak Ridge Assoc Univs, 75-76. Mem: Am Soc Microbiol; Radiation Res Soc; Genetics Soc Am. Res: Mechanisms of radiation damage in microorganisms and control of cell division; bacterial mitogenesis and cytology. Mailing Add: Biol Div Oak Ridge Nat Lab Box Y Oak Ridge TN 37830

ADLER, KRAIG (KERR), b Lima, Ohio, Dec 6, 40; m 67; c 1. ANIMAL BEHAVIOR, EVOLUTION. Educ: Ohio Wesleyan Univ, 62; Univ Mich, MS, 65, PhD(zool), 68. Prof Exp: Asst prof, Univ Notre Dame, 68-72; ASSOC PROF BIOL, CORNELL UNIV, 72-, CHMN NEUROBIOL & BEHAV SCI DIV, 76- Concurrent Pos: Ed, Jour, Soc Study Amphibians & Reptiles, 58-63, miscellaneous publ, 61-; temporary cur, Mus Zool, Univ Mich, 65; co-ed, Int J Interdisciplinary Cycle Res, Neth, 70-; leader, Univ Notre Dame Exped Mex, 69. Mem: Soc Syst Zool; Am Soc Ichthyologists & Herpetologists; Soc Study Evolution; Animal Behav Soc; Soc Study Amphibians & Reptiles. Res: Photoreception, orientation, navigation and circadian rhythms of vertebrates; evolution, systematics and zoogeography of amphibians and reptiles; paleo- and archeozoology. Mailing Add: Langmuir Lab Cornell Univ Ithaca NY 14853

ADLER, VICTOR EUGENE, b New York, NY, Jan 18, 24; m 65; c 2. ENTOMOLOGY. Educ: Memphis State Univ, BS, 50; Kans State Univ, MS, 56. Prof Exp: Biol aide plant pest control, 56-57, entomologist, 57-61, res entomologist, Grain & Forage Insects Res Br, Agr Res Ctr, 61-65, Pesticide Chem Res Br, 65-66 & Pesticide Chem Res Div, 66-72, RES ENTOMOLOGIST, AGR ENVIRON QUAL INST, BIOL ACTIVE NATURAL PROD LAB, AGR RES CTR, USDA, 72- Mem: Entom Soc Am. Res: Safer chemical and practical applications of insecticide for controlling insect pests; study of insect attractant and repellents electrophysiologically. Mailing Add: Agr Environ Qual Inst Rm 108 Bldg 476 Agr Res Ctr East Beltsville MD 20705

ADLERZ, WARREN CLIFFORD, b Worcester, Mass, Apr 5, 28; m 52; c 1. ENTOMOLOGY. Educ: Univ Mass, BS, 53; Ore State Col, MS, 55, PhD(entom), 58. Prof Exp: Asst entom, 58-66, assoc entomologist, 66-74, ENTOMOLOGIST WATERMELON & GRAPE INVESTS LAB, AGR RES CTR, UNIV FLA, 74- Mem: Entom Soc Am. Res: Insect pollination; insect transmission of plant diseases. Mailing Add: Inst Food & Agr Sci Agr Res Ctr Box 388 Univ of Fla Leesburg FL 32748

ADMAN, ELINOR THOMSON, b New York, NY, Jan 3, 41; c 2. BIOLOGICAL STRUCTURE. Educ: Col Wooster, BA, 62; Brandeis Univ, MA, 64, PhD(phys chem), 67. Prof Exp: Sr fel crystallog, 67-71, RES ASSOC CRYSTALLOG, DEPT BIOL STRUCT, UNIV WASH, 71- Mem: AAAS; Am Crystallog Asn. Res: Determination and refinement of protein structures, iron-sulfur proteins. Mailing Add: Dept of Biol Struct SM-20 Univ of Wash Seattle WA 98195

AGEE, HERNDON ROYCE, b Cottonburg, Ky, Dec 21, 33; m 53; c 2. INSECT PHYSIOLOGY. Educ: Berea Col, BA, 58; Univ Minn, MS, 60; Tufts Univ, PhD, 68. Prof Exp: Asst entom, Univ Minn, 58-60; entomologist, Cotton Insect Br, Agr Res Serv, USDA, 60-75, RES ENTOMOLOGIST INSECT ATTRACTANTS, BEHAV & BASIC BIOL RES LAB, AGR RES SERV, USDA, 75- Mem: Entom Soc Am; Am Soc Zoologists. Res: Electrophysiological and behavioral studies of the sensory systems of insects; visual and acoustic responses; quality control. Mailing Add: Behav & Basic Biol Res Lab Agr Res Serv USDA Box 14565 Gainesville FL 32604

AGIN, DANIEL PIERRE, b New York, NY, May 19, 30; m 56; c 2. NEUROPHYSIOLOGY, BIOPHYSICS. Educ: City Col New York, BA, 53; Univ Rochester, PhD(psychol), 61. Prof Exp: NIH fel, 61-62; from instr to asst prof, 62-67, actg chmn dept, 68-69, ASSOC PROF PHYSIOL, UNIV CHICAGO, 67- Concurrent Pos: Vis prof, Max Planck Inst Biophys, 69-70. Res: Membrane biophysics; biophysical pharmacology. Mailing Add: Dept Physiol & Pharmacol Univ Chicago 5801 Ellis Ave Chicago IL 60637

AGNEW, ROBERT MORSON, b Cardigan, PEI, Nov 20, 32. IMMUNOBIOLOGY. Educ: Dalhousie Univ, BSc, 53, MSc, 55; Cambridge Univ, PhD(bact), 59. Prof Exp: Lectr bact, 58-64, asst prof biol, 64-69, ASSOC PROF BIOL, UNIV REGINA, 69- Concurrent Pos: Vis mem staff, Rheumatic Dis Unit, Univ Toronto, 70-71. Mem: AAAS; NY Acad Sci; Can Soc Microbiol. Res: Immunology; medical bacteriology; immune reactions in rheumatoid arthritis; tumor immunology. Mailing Add: Dept of Biol Univ of Regina Regina SK Can

AGRIOS, GEORGE NICHOLAS, b Galarinos, Greece, Jan 16, 36; US citizen; m 62; c 2. PLANT PATHOLOGY, VIROLOGY. Educ: Univ Thessaloniki, BS, 57; Iowa State Univ, PhD(plant path & genetics), 60. Prof Exp: Asst prof, 63-68, ASSOC PROF PLANT PATH, UNIV MASS, AMHERST, 69- Res: Plant viruses, particularly fruit trees and their transmission and identification; physiological effects of viruses on host plants; methods for virus detection. Mailing Add: Dept of Plant Path Univ of Mass Amherst MA 01002

AGUAYO, CARLOS G, b Havana, Cuba, Dec 19, 99; m 31; c 1. MALACOLOGY. Educ: Univ Havana, ScD(zool), 25. Prof Exp: Asst prof biol, Univ Havana, 25-33, prof zool, 33-58; prof zool, 58-59, PROF BIOL, UNIV PR, 60- Concurrent Pos: Guggenheim Mem Found fel, 31-33; ed, Caribbean J Sci, 63- Mem: Am Malacol Union; Soc Study Evolution (vpres, 48); Soc Syst Zool. Res: Antillean mollusks; systematic malacology; zoogeography. Mailing Add: Dept of Biol Univ of PR Col Sta Mayaguez PR 00708

AHEARN, DONALD G., b Grove City, Pa, Feb 1, 34; m 59; c 3. **MYCOLOGY, MARINE MICROBIOLOGY.** Educ: Mt Union Col, BS, 57; Univ Miami, MS, 59, PhD(microbiol), 64. Prof Exp: Instr microbiol & marine biol, Univ Miami, 63-64, asst prof, Sch Med & Inst Marine Sci, 64-66; asst prof microbiol, 67-68; ASSOC PROF MICROBIOL, GA STATE UNIV, 68-. **DEAN, GRAD DIV. SCH ARTS & SCI, 70.** Concurrent Pos: Mem, Int Oceanog Found. Mem: Am Soc Microbiol; Soc Indust Microbiol; Mycol Soc Am; Int Soc Human & Animal Mycol. Res: Ecology, physiology and systematics of fungi, chiefly yeasts, in aquatic habitats; epidemiology of yeast-like fungi pathogenic to man. Mailing Add: Dept Biol Sch Arts & Sci Ga State Univ Atlanta GA 30303

AHEARN, GREGORY ALLEN, b Cambridge, Mass, Nov 28, 43; m 67. **COMPARATIVE PHYSIOLOGY.** Educ: Univ Calif, Los Angeles, BA, 65; Univ Hawaii, MS, 67; Ariz State Univ, PhD(zool), 70. Prof Exp: Teaching asst gen zool, Ariz State Univ, 67-68, teaching assoc, 68-69; res fel, Zoophysiol Lab A, August Krogh Inst, Univ Copenhagen, 70-72; ASST MARINE BIOLOGIST, HAWAII INST MARINE BIOL, 72. Concurrent Pos: Fel, Danish Res Coun; 70; Instnl grant, NSF, 75. Mem: Am Soc Zoologists; NY Acad Sci; Am Physiol Soc. Res: Membrane transport, epithelial biology, osmotic and ionic regulation, water balance, nutritional physiology, thermoregulation, environmental physiology. Mailing Add: Hawaii Inst Marine Biol PO Box 1346 Kaneohe HI 96744

AHEARN, JAYNE NEWTON, b Sheboygan, Wis, Dec 30, 42; m 67. **DEVELOPMENTAL GENETICS.** Educ: Univ Wis, Madison, BS, 66; Ariz State Univ, PhD(zool), 73. Prof Exp: Jr researcher genetics, 72-75, ASST PROF GENETICS, UNIV HAWAII, 76-. Mem: Am Soc Zool. Res: Gene control of gametogenesis; origins and genetic bases of reproductive interspecific isolating mechanisms; maternal effects; Drosophila developmental genetics. Mailing Add: Dept of Genetics Univ of Hawaii 1960 East West Rd Honolulu HI 96822

AHL, ALWYNELLE S., b Leesville, La, Mar 18, 41; m 63; c 1. **ZOOLOGY, MAMMALOLOGY.** Educ: Centenary Col, BS, 61; Univ Wyo, MS, 63, PhD(zool), 67. Prof Exp: Res asst biochem, Univ Wyo, 65-67; ASST PROF NATURAL SCI, MICH STATE UNIV, 67-. Mem: AAAS; Am Soc Mammalogists; Res: Comparative physiology and biochemistry; physiological and biochemical studies of mammals in their natural environment; altitude physiology; biochemical systematics of mammals. Mailing Add: Dept of Natural Sci Univ Col Mich State Univ East Lansing MI 48823

AHLBERG, HENRY DAVID, b Boston, Mass, Oct 9, 39; m 62; c 2. **BIOLOGY.** Educ: NPark Col, AB, 61; Boston Univ, PhD(biol), 69. Prof Exp: Asst prof biol, Northeastern Univ, 67-76; ASSOC PROF BIOL, AM INT COL, 76-. Mem: Wildlife Soc; Am Soc Zoologists; Am Soc Mammalogists. Res: Geographic variation of North American porcupine; seasonal variation of genital systems in rodents; aging in natural populations of rodents. Mailing Add: Dept of Biol Am Int Col Springfield MA 01109

AHLGREN, CLIFFORD ELMER, b Toimi, Minn, Apr 22, 22; m 54; c 2. **FORESTRY.** Educ: Univ Minn, BS, 48, MS, 53. Prof Exp: Forester, Iron Range Resources & Rehab, 48; res forester, 48-52, DIR, QUETICO-SUPERIOR WILDERNESS RES CTR, 52-. Mem: AAAS; Soc Am Foresters; Am Forestry Assn; Ecol Soc Am. Res: Vegetational succession following natural disturbances in wilderness areas; field grafting and breeding of northern coniferous species; ecological effect of fire on northern coniferous forests. Mailing Add: Quetico-Superior Wilderness Res Ctr 215 W Oxford St Duluth MN 55803

AHLGREN, GEORGE E., b Cloquet, Minn, Dec 20, 31; m 61; c 2. **PLANT PHYSIOLOGY.** Educ: Univ Minn, BS, 59, MS, 62, PhD(agr, plant physiol), 66. Prof Exp: Asst prof, 66-71, ASSOC PROF BIOL, UNIV MINN, DULUTH, 71-. Mem: Am Soc Plant Physiol. Res: Absorption and translocation of mineral ions and other substances by the plant. Mailing Add: Dept of Biol Univ of Minn Duluth MN 55812

AHLGREN, ISABEL FULTON, b Viroqua, Wis, Feb 11, 24; m 54; c 2. **BOTANY.** Educ: DePauw Univ, AB, 46; Ind Univ, PhD(bot), 50. Prof Exp: Asst bot, Ind Univ, 46-49, instr, 50; instr, Wheaton Col, Mass, 50-52 & Wellesley Col, 52-54; RES ASSOC, QUETICO-SUPERIOR WILDERNESS RES CTR, 55-. Concurrent Pos: Lectr, Univ Minn, Duluth, 55, 62-73. Mem: Bot Soc Am. Res: Boreal forest ecology. Mailing Add: Quetico-Superior Wilderness Res Ctr 215 W Oxford St Duluth MN 55803

AHLSTROM, ELBERT HALVOR, b Sharon, Pa, Feb 15, 10; m 54. **BIOLOGY.** Educ: Marietta Col, AB, 30; Ohio State Univ, MA, 33, PhD, 34. Prof Exp: Aquatic biologist, Div Conserv, Ohio Univ, 30; RES BIOLOGIST, FISH & WILDLIFE SERV, STANFORD UNIV, 35, 39-; ADMINR, FISHERY-OCEANOGRAPHY CTR, NAT MARINE FISHERIES SERV, 64-. SR SCIENTIST, CALIF CURRENT RESOURCES LAB, 67-. Concurrent Pos: Res biologist, Fish & Wildlife Serv, La Jolla, Calif, 49-54, asst chief, SPac Fishery Invest, 54-59, lab dir, 59-64; dir, Calif Current Resources Lab, 64-67; res assoc, Scripps Inst Oceanog, 51-67, adj prof, 67-. Honors & Awards: Gold Medal, US Dept Com, 73; Outstanding Achievement Award, Am Inst Fishery Res Biologists, 75. Mem: AAAS; Am Soc Ichthyologists & Herpetologists; Am Micros Soc; Am Soc Limnol & Oceanog. Res: Life history and ecology of pelagic marine fishes; taxonomy rotifera and fishes. Mailing Add: 2475 Chatsworth Blvd San Diego CA 92106

AHMADJIAN, VERNON, b Whitinsville, Mass, May 19, 30; m 56; c 3. **BOTANY.** Educ: Clark Univ, AB, 52, MA, 56; Harvard Univ, PhD, 59. Prof Exp: Lab asst, Clark Univ, 54-56; lab asst, Harvard Univ, 56, asst, Farlow Herbarium, 56-58; from asst prof to prof bot, Clark Univ, 59-68; prof, Univ Mass, 68-69; assoc dean grad sch, 69-71, PROF BOT & COORDR RES, CLARK UNIV, 69-. **DEAN GRAD SCH, 71.** Concurrent Pos: Vis prof, Univ Calif, Berkeley, 65-66. Honors & Awards: New York Bot Garden Award, 68; Antarctic Medal. Mem: AAAS. Res: Cryptogamic botany; mycology; lichenology. Mailing Add: Dept of Biol Clark Univ Worcester MA 01610

AHMED, ASAD, b Saharanpur, India, Nov 7, 39; Can citizen. **MOLECULAR GENETICS.** Educ: Aligarh Muslim Univ, India, BSc, 56, MSc, 58, PhD(plant path), 61; Yale Univ, PhD(biochem genetics), 64. Prof Exp: Fulbright scholar, Yale Univ, 60-64, univ fel, 61-62, Wadsworth fel, 62-63, Sterling fel, 63-64; res assoc, Inst Molecular Biol, Univ Ore, 64-65; res scientist biochem, Dept Nat Health & Welfare, Can, 66-67; asst prof, 67-70, ASSOC PROF MOLECULAR GENETICS, UNIV ALTA, 70-. Mem: Genetics Soc Am; Am Soc Microbiol. Res: Repression of methionine biosynthesis in *Escherichia coli*; insertion mutations in *Escherichia coli*; organization of histidine-3 region of *Neurospora*. Mailing Add: Dept of Genetics Univ of Alta Edmonton AB Can

AHMED, SAIED I., b Desna, Pakistan, Jan 5, 41; m 64; c 2. **MICROBIOLOGY, BIOCHEMICAL GENETICS.** Educ: Univ Karachi, BSc, 60; Univ Frankfurt, PhD(microbiol, biochem, bot), 63. Prof Exp: Sr res off microbiol & fermentation res, Pakistan Coun Sci & Indust Res, 64; Nat Res Coun Can fel biochem genetics, Univ Man, 64-66; NIH sr fel, Yale Univ, 66-69, res assoc, 69-70; vis scientist, Sch Med, 70-73, RES ASSOC, DEPT OCEANOGRAPHY, UNIV WASH, 73-. Mem: Am Soc Microbiol; Am Soc Plant Physiologists. Res: Mutation genetics in *Serratia* & *E. coli*; control mechanisms and regulations; enzymology; mutagenicity; pollution and environmental studies; marine bacteria and marine phytoplankton metabolism. Mailing Add: Dept Oceanog WB-10 Univ of Wash Seattle WA 98195

AHO, PAUL E., b Worcester, Mass, June 29, 34; m 57; c 3. **PLANT PATHOLOGY.** Educ: Univ Mass, BS, 56; Yale Univ, MF, 57; Ore State Univ, PhD(plant pathology), 76. Prof Exp: PLANT PATHOLOGIST, FORESTRY SCI LAB, FOREST SERV, USDA, 57-. Mem: Soc Am Foresters; Am Phytopath Soc. Res: Heart rots of western conifers; dwarf mistletoes; development of methods for estimating or predicting the extent of damage. Mailing Add: Forestry Sci Lab Forest Serv USDA 3200 Jefferson Way Corvallis OR 97331

AHSHAPANEK, DON COLESTO, b Milton, Del, Apr 29, 32; m 62; c 3. **PLANT ECOLOGY.** Educ: Cent State Univ, Okla, BS, 56; Univ Okla, MS, 59, PhD(bot), 62. Prof Exp: Asst prof biol, Kans State Teachers Col, 62-67, assoc prof, 67-71; instr biol, 71-73, CHMN DIV NATIVE AM CULT, HASKELL AM INDIAN JR COL, 73-. Mem: Ecol Soc Am. Res: Ecological research in causes of plant succession in grasslands with studies in phenology, plant inhibition and the inter-relations between micro-organisms and plant roots in the rhizosphere and rhizoplane. Mailing Add: Dept of Biol Haskell Am Indian Jr Col Lawrence KS 66044

AICHELE, MURIT DEAN, b Freewater, Ore, July 17, 28; m 52; c 1. **PLANT PATHOLOGY.** Educ: Wash State Col, BS, 52. Prof Exp: PLANT PATHOLOGIST, WASH STATE DEPT AGR, 55-. Mem: Am Phytopath Soc; Am Soc Hort Sci. Res: Pomology; ornamental horticulture; stone and pome fruit viruses. Mailing Add: Irrig Agr Res & Exten Ctr Wash State Dept of Agr Prosser WA 99350

AINLEY, DAVID GEORGE, b Bridgeport, Conn, Apr 3, 46. **MARINE ECOLOGY, ORNITHOLOGY.** Educ: Dickinson Col, Pa, BS, 68; Johns Hopkins Univ, PhD(ecol), 71. Prof Exp: Res mem antarctic ecol, Johns Hopkins Univ, 68-70; BIOLOGIST MARINE ORNITH, POINT REYES BIRD OBSERV, BOLINAS, 71-. Honors & Awards: Polar Res Medal, US Antarctic Res Prog, 74-76. Mem: Am Ornithologists' Union; Cooper Ornith Soc; Wilson Ornith Soc. Res: Marine ecology of seabirds in California, the Gulf of California and Antarctica; trophic relationships of seabirds in marine communities. Mailing Add: Point Reyes Bird Observ Bolinas CA 94924

AINSWORTH, EARL JOHN, b Indianapolis, Ind, May 18, 33; m 60; c 3. **TOXICOLOGY, RADIOBIOLOGY.** Educ: Butler Univ, AB, 55; Brown Univ, ScM, 57, PhD(biol), 59. Prof Exp: Trainee, Nat Cancer Inst, 57-59; resident res assoc, Argonne Nat Lab, 59-61; sr investr cellular radiobiol br, US Naval Radiol Defense Lab, 61-64, actg head, 64-65; head mammalian radiobiol sect, 65-69, prin investr, 69; biologist, Div Biol & Med Res, 69-73, GROUP LEADER, NEUTRON & GAMMA RADIATION TOXICITY PROG, ARGONNE NAT LAB, 73-. Concurrent Pos: Mem comt genetic stand, Nat Res Coun, 75. Honors & Awards: Gold Medal Sci Achievement, US Naval Radiol Defense Lab, 69. Mem: Radiation Res Soc; Sigma Xi; Int Soc Exp Hemat. Res: Radiation toxicology; life shortening neoplasia and late functional injury to the hematopoietic system. Mailing Add: Div of Biol & Med Res Argonne Nat Lab D-202 B 117 Argonne IL 60439

AINSWORTH, LOUIS, b Preston, Eng, June 4, 37; m 59; c 2. **REPRODUCTIVE ENDOCRINOLOGY.** Educ: Univ Leeds, BSc, 59; McGill Univ, MSc, 61, PhD(steroid biochem), 64. Prof Exp: Res assoc obstet & gynec, Case Western Reserve Univ, 64-65, res fel, 65-67, instr reproductive biol, 67-69; res scientist, 69-75, SR RES SCIENTIST, RES BR, CAN DEPT AGR, 75-. Mem: Endocrine Soc; Soc Study Reproduction. Res: Mammalian reproduction; hormonal control of reproductive cycles; mechanism of ovulation; development of procedures for increasing reproductive efficiency in domestic animals. Mailing Add: Reproductive Physiology Sect Animal Res Inst Ottawa ON Can

AIST, JAMES ROBERT, b Cheverly, Md, Feb 20, 45; m 67; c 2. **PLANT PATHOLOGY, PLANT CYTOLOGY.** Educ: Univ Ark, BS, 66, MS, 68; Univ Wis, PhD(plant path), 71. Prof Exp: NATO fel, Swiss Fed Inst Technol, 71-72; ASST PROF PLANT PATH, CORNELL UNIV, 72-. Mem: Biol Stain Comm; Am Phytopath Soc; Am Inst Biol Sci. Res: Time course, experimental and cytochemical studies of the role of a plant cell response, papilla formation, during fungal attack; nuclear studies of plant pathogenic fungi. Mailing Add: Dept of Plant Path Cornell Univ Ithaca NY 14853

AISTON, STEWART SAMUEL, b Africa, May 8, 19; nat US; m 42; c 5. **BACTERIOLOGY.** Educ: Guilford Col, BSc, 48. Prof Exp: Suprv blood plasma processing, 41-43, serum albumin processing & filtration, 43-44, typhus, Japanese b & influenza prod, 44-48 & all human viral & rickettsial prod, 48-55, supv human & vet viral & rickettsial prod, 55-59 & modified live virus poliomyelitis vaccine for clin trial, 59-61, adminr viral & rickettsial prod, 61-69, ADMINR CELL CULT VACCINE PROD, LEDERLE LABS, AM CYANAMID CO, 69-. Res: Viral and rickettsial production and research. Mailing Add: Lederle Labs Am Cyanamid Co Pearl River NY 10965

AKAGI, JAMES MASUJI, b Seattle, Wash, Dec 23, 27; m 60; c 2. **MICROBIAL PHYSIOLOGY.** Educ: Univ Ill, BS, 51; Univ Kans, MA, 55, PhD, 59. Prof Exp: Instr bact, Univ Kans, 58-59; fel microbiol, Sch Med, Western Reserve Univ, 59-61; from asst prof to assoc prof, 61-67, PROF MICROBIOL, UNIV KANS, 67-. Mem: Am Soc Microbiol. Res: Biochemistry. Mailing Add: Dept of Microbiol Univ of Kans Lawrence KS 66045

AKAMINE, ERNEST KISEI, b Hilo, Hawaii, May 10, 12; m 38; c 3. **PLANT PHYSIOLOGY.** Educ: Univ Hawaii, BS, 35, MS, 41. Prof Exp: Asst agr, 35-36, agron, 36-38, plant physiol, 38-42, assoc, 42-44, jr plant physiologist, 52-62, assoc plant physiologist & assoc prof plant physiol, 62-68, PLANT PHYSIOLOGIST & PROF PLANT PHYSIOL, EXP STA, UNIV HAWAII, 68-. Concurrent Pos: Mem sci invests, Ryukyu Islands Prog, Nat Res Coun, 52; consult, Nat Lexicon Bd, Ltd, 53; tech consult, New Wonder World Encycl, 57; vis consult, US Civil Admin Ryukyu Islands, US Dept Army, 62. Mem: AAAS; Am Soc Plant Physiol; Am Soc Hort Sci; Bot Soc Am. Res: Commodity shipment studies; postharvest physiology. Mailing Add: Dept of Bot Univ of Hawaii 3190 Maile Way Honolulu HI 96822

- AKBAR, ABULFATAH MAKSOOD**, b Hyderabad, India. ENDOCRINOLOGY. Educ: Osmania Med Col, India, DVM, 59; Brigham Young Univ, MS, 68; Ore State Univ, PhD(physiol), 71. Prof Exp: Asst res officer vaccine prod & qual control, Biol Res Inst, India, 60-65; fel reproductive endocrinol, Ann Arbor, Mich, 71-72 & Colo State Univ, 72-73; DIR RADIO-IMMUNOASSAY LAB, DIV ENDOCRINOL, COOK COUNTY HOSP, CHICAGO, 73- Mem: Soc Study Reproduction, India; AAAS; Sigma Xi. Res: Elucidation of physiological and biochemical factors involved in the regression of corpus luteum in primates. Mailing Add: Div of Endocrinol Cook County Hosp 1825 W Harrison Chicago IL 60612
- AKINS, VIRGINIA**, b Lafayette Co, Wis. BIOLOGY. Educ: Univ Wis, BA, 37, PhD(bot), 40. Prof Exp: Asst bot, Univ Wis, 37-40; agent forage crops & dis, USDA, Wis, 42-43; asst forest prod technologist, Forest Prod Lab, US Forest Serv, 43-47; from teacher to assoc prof, 47-71, PROF BIOL, UNIV WIS-RIVER FALLS, 71- Mem: AAAS. Res: Cytology of flagellates and grasses; detection and effect of gelatinous fibers in wood; cytological study of *Carteria crucifera*. Mailing Add: Dept of Biol Univ Wis River Falls WI 54022
- AKRE, ROGER DAVID**, b Grand Rapids, Minn, Mar 27, 37; m 56; c 1. ENTOMOLOGY. Educ: Univ Minn, Duluth, BS, 60; Kans State Univ, MS, 62, PhD(entom), 64. Prof Exp: From asst prof to assoc prof, 64-74, PROF ENTOM, WASH STATE UNIV, 74- Honors & Awards: R M Wade Award Excellence in Teaching, 69. Mem: Entom Soc Am; Animal Behav Soc; Entom Soc Can. Res: Biology and behavior of arthropods associated with neotropical army ants; behavior of vespine wasps. Mailing Add: Dept of Entom Wash State Univ Pullman WA 99163
- AL-AIDROOS, KAREN MESSING**, b Springfield, Mass, Feb 2, 43. MICROBIAL GENETICS. Educ: Harvard Univ, BA, 63; McGill Univ, MSc, 70, PhD(biol), 75. Prof Exp: Res asst biochem, Jewish Gen Hosp, Montreal, 70-71; NIH FEL GENETICS, BOYCE THOMPSON INST PLANT RES, 75- Mem: Am Soc Microbiol. Res: Genetic manipulation of *Metarrhizium anisopliae*, a fungal pathogen of mosquitoes. Mailing Add: Boyce Thompson Inst Plant Res Yonkers NY 10701
- AL-LAMI, FADHIL**, b Baghdad, Iraq, Sept 6, 32; m 63; c 2. ANATOMY, PHYSIOLOGY. Educ: Univ Baghdad, BSc, 55; Ind Univ, MSc, 59, PhD(anat), 64. Prof Exp: Res assoc electron micros, Ind Univ, 66-67; researcher, Putnam Hosp, 67-71; ASST PROF IND UNIV, 74- Mem: Am An Anat. Res: Ultrastructure of the carotid body of normal anoxic mammals as well as the study of the effects of some cholinergic drugs on this organ. Mailing Add: Dept of Anat & Physiol Indiana Univ Bloomington IN 47401
- ALARIE, YVES**, b Montreal, Que, Mar 18, 39; m 60; c 4. PHYSIOLOGY. Educ: Univ Montreal, BS, 60, MS, 61, PhD(physiol), 63. Prof Exp: Physiologist, Hazleton Labs, Inc, 63-70; PROF OCCUP HEALTH, UNIV PITTSBURGH, 70- Concurrent Pos: Nat Inst Environ Health Sci spec fel, 70. Honors & Awards: Achievement Award, Soc Toxicol, 71, F R Blood Award, 74. Mem: AAAS; Soc Toxicol. Res: Respiratory physiology, effects of air pollutants on respiratory system; sensory irritation; chemoreceptors. Mailing Add: Grad Sch of Pub Health Univ of Pittsburgh Pittsburgh PA 15261
- ALBAN, EVAN KENNETH**, b Columbus, Ohio, July 5, 13; m 40. HORTICULTURE. Educ: Denison Univ, BA, 36; Ohio State Univ, MSc, 43, PhD(hort), 45. Prof Exp: Asst hort, 42-45, from instr to assoc prof, 46-59, asst, Res Found, 44-45, PROF HORT, OHIO STATE UNIV, 59- Concurrent Pos: Instr, Denison Univ, 45; asst, Ohio Exp Sta, 43-46. Mem: AAAS; Am Inst Biol Sci; Am Soc Plant Physiol; Am Soc Hort Sci; Weed Sci Soc Am. Res: Vegetable crop physiology; chemical weed control; post-harvest physiology; industrial and non-crop land vegetation control. Mailing Add: Dept of Hort Ohio State Univ Columbus OH 43210
- ALBAUM, HARRY GREGORY**, b Odessa, Russia, Feb 9, 10; nat US; m 36; c 1. BIOCHEMISTRY. Educ: Brooklyn Col, AB, 32; NY Univ, MS, 34; Columbia Univ, PhD(biol), 38. Prof Exp: Tutor, 34-38, from instr to assoc prof, 38-53, PROF BIOL, BROOKLYN COL, 53- DIR DIV GRAD STUDIES & DEAN GRAD STUDIES, 66- DEAN FACULTIES, 69- Concurrent Pos: Res grants, AAAS, Am Philos Soc, Am Cancer Soc, USPHS, US Air Force; Nat Res fel, Univ Wis, 42-43; res assoc, Univ Chicago, 43-44; exec officer, PhD prog biol, City Univ New York, assoc dean, 66-; biochemist, Edgewood Arsenal, Md, 44-45. Mem: Soc Exp Biol & Med; Am Soc Biol Chem; Soc Gen Physiol; fel NY Acad Sci. Res: Enzymes in tissue trauma; serum enzymes in cancer. Mailing Add: Dept of Biol Brooklyn Col Bedford Ave & Ave H Brooklyn NY 11210
- ALBEN, JAMES O**, b Seattle, Wash, July 13, 30; m 54; c 3. BIOCHEMISTRY. Educ: Reed Col, BA, 51; Univ Ore, MS, 57, PhD(biochem), 59. Prof Exp: USPHS res fel physiol chem, Sch Med, Johns Hopkins Univ, 59-62; from asst prof to assoc prof, 62-73, PROF PHYSIOL, OHIO STATE UNIV, 73- Concurrent Pos: NIH grant, 64. Mem: Am Chem Soc; NY Acad Sci; Coblentz Soc; Brit Chem Soc; Am Soc Biol Chemists. Res: Molecular spectroscopy and structure of heme proteins; Fourier transform infrared interferometry; hemoglobin structure and function; oxygen binding and transport; physical inorganic biochemistry of metal proteins; mechanisms of metal-enzyme catalysis. Mailing Add: Dept of Physiol Chem Ohio State Univ Columbus OH 43210
- ALBERSHEIM, PETER**, b New York, NY, Mar 30, 34; m 58; c 3. PLANT BIOCHEMISTRY. Educ: Cornell Univ, BS, 56; Calif Inst Technol, PhD(biochem), 59. Prof Exp: Fel biochem, Calif Inst Technol, 59; NSF fel, Swiss Fed Inst Technol, 59-60; from instr to asst prof biol, Harvard Univ, 60-64; assoc prof biochem, 64-67, PROF BIOCHEM, UNIV COLO, 67- PROF MOLECULAR BIOL, 70- Concurrent Pos: Fac fel Univ Colo, 70-71 & 75-76. Honors & Awards: Charles A Shull Award, Am Soc Plant Physiologists, 73. Mem: AAAS; Am Chem Soc; Am Soc Plant Physiol; Am Soc Biol Chem; Am Phytopath Soc. Res: Biochemistry of polysaccharides; function and nature of plant cell walls; mechanisms underlying disease resistance in plants and virulence in pathogens; mechanism of host selection by nitrogen-fixing bacteria. Mailing Add: Dept of Chem Univ of Colo Boulder CO 80302
- ALBERT, LUKE SAMUEL**, b Palmyra, Pa, Feb 19, 27; m 50; c 2. PLANT PHYSIOLOGY. Educ: Lebanon Valley Col, BS, 50; Rutgers Univ, MS, 52, PhD(plant physiol), 58. Prof Exp: Res plant physiologist, Biol Res Lab, Ft Detrick, Md, 53-55; res asst, Rutgers Univ, 55-58; plant physiologist, Am Cyanamid Co, 58-60; from asst prof to assoc prof, 60-70, PROF BOT, UNIV RI, 70- Mem: AAAS; Am Soc Plant Physiol; Ecol Soc Am; Bot Soc Am; Soc Gen Syst Res. Res: Physiological ecology; boron physiology; growth and development; systems research. Mailing Add: Dept of Bot Univ of RI Kingston RI 02881
- ALBERT, MARY ROBERTS FORBES (DAY)**, b Manchester, NH, Mar 2, 26; m 55; c 2. CYTOLOGY, BIOCHEMISTRY. Educ: Univ NH, BS, 48; Bryn Mawr Col, MA, 50; Brown Univ, PhD, 55. Prof Exp: Asst cytol, Brown Univ, 51-55; res fel med, Mass Gen Hosp, 55-61; instr, Northeastern Univ, 61-62 & Wellesley Col, 63-64; asst prof biol sci, Newton Col Sacred Heart, 64-75; DIR, BIOL LABS, BOSTON COL, 75- Res: Irradiation effects on mitosis in the rat and mouse; abnormal mitosis in HeLa cells. Mailing Add: 56 Chapin Rd Newton MA 02158
- ALBERT, PAUL JOSEPH**, b Edmunston, Can, Mar 11, 46. SENSORY PHYSIOLOGY. Educ: Univ NB, BSc, 68, PhD(biol), 72. Prof Exp: Fel, Univ Sask, 72-73; ASST PROF BIOL, CONCORDIA UNIV, 73- Mem: Can Soc Zool; Entom Soc Can. Res: Structure and physiology of insect sense organs. Mailing Add: Dept of Biol Concordia Univ Loyola Campus Montreal PQ Can
- ALBERTE, RANDALL SHELDON**, b Newark, NJ, June 7, 47. PLANT PHYSIOLOGY, BIOCHEMISTRY. Educ: Gettysburg Col, BA, 69; Duke Univ, PhD(bot), 73. Prof Exp: Res assoc, 73-75, NSF ENERGY-RELATED FEL BIOCHEM, UNIV CALIF, LOS ANGELES, 75- Mem: Am Soc Plant Physiologists; Soc Exp Biol; Bot Soc Am; AAAS; Am Inst Biol Sci. Res: Photobiology and adaptive physiology of photosynthesis; chloroplast development; organization of chlorophyll in vivo; membrane biochemistry; biochemistry and physiology of water stress and of the control of development and differentiation. Mailing Add: Dept of Biol Univ of Calif Los Angeles CA 90024
- ALBERTSON, JOHN NEWMAN, JR**, b New Haven, Conn, Jan 18, 33; m 55; c 7. MICROBIOLOGY, LABORATORY MANAGEMENT. Educ: Univ Conn, AB, 54; Hahnemann Med Col, MS, 64; Am Bd Microbiol, dipl. Prof Exp: US ARMY, 54-; comndg officer med dispensary, Munich, Ger, 56-57, asst chief dept immunol & serol, Med Lab, Landstuhl, Ger, 57-59, chief clin path & bacteriologist, Valley Forge Gen Hosp, Pa, 59-62, chief clin microbiol, Hahnemann Med Col, 62-64, chief bact div, First Med Lab, Ft George G Meade, Md, 64-68, chief med & biol sci br, Off Chief Res & Develop, Hq Dept Army, Washington, DC, 68-70, exec res, 70-71, comndg officer, 9th Med Lab, Repub of Vietnam, 71-72, exec officer, Walter Reed Army Inst Res, Washington, DC, 72-74, EXEC OFFICER, ARMED FORCES INST PATH, US ARMY, WASHINGTON, DC, 75- Concurrent Pos: Consult, Europ Command & partic coop study on Treponemal pallidum immobilization & other tests, WHO, Ger, 57-59. Mem: Fel AAAS; Am Soc Microbiol; Am Acad Microbiol; Sigma Xi. Res: Chemotherapy and bacteriology of tuberculosis; diagnostic microbiology. Mailing Add: 5226 Ferndale St Springfield VA 22151
- ALBRECHT-BUEHLER, GUENTER WILHELM**, b Berlin, WGer, Mar 8, 42; m 67; c 2. CELL BIOLOGY. Educ: Univ Munich, BSc, 63, dipl physics, 67, PhD(physics), 71. Prof Exp: Invest elec physiol, Ger Radiol Soc, 67-70; fel cell biol, Friedrich Miescher Inst, Basel, Switz, 70-73; fel, Univ Fla, 73-74; staff investr cell biol, 74-75, HEAD CELL BIOL DEPT, COLD SPRING HARBOR LAB, 75- Concurrent Pos: Training fel, Int Agency for Res of Cancer, Lyon, France, 73-74. Res: Motility phenomena in the surface of animal cells and their relation to cell communication and transformation. Mailing Add: Box 100 Cold Spring Harbor NY 11724
- ALBRECHTSEN, RULON S**, b Emery, Utah, Mar 12, 33; m 59; c 5. GENETICS, PLANT BREEDING. Educ: Utah State Univ, BS, 56, MS, 57; Purdue Univ, PhD(genetics), 65. Prof Exp: Res agronomist, Agr Res Serv, USDA, 57-59; res asst agron, Purdue Univ, 59-63; from asst prof to assoc prof, SDak State Univ, 63-69; PROF AGRON, UTAH STATE UNIV, 69- Mem: Am Soc Agron. Res: Genetics and breeding of barley, safflower, birdsfoot trefoil, oats, flax, rye, and wheat. Mailing Add: Dept of Plant Sci Utah State Univ Logan UT 84321
- ALBRIGHT, JOSEPH FINLEY**, b New Tazewell, Tenn, May 9, 27; m 51; c 2. ZOOLOGY. Educ: Southwestern Univ, Tex, BS, 49; Ind Univ, PhD(zool), 56. Prof Exp: Res assoc biol, Oak Ridge Nat Lab, 56-57; NIH fel, Nat Cancer Inst, 57-58; asst prof surg, Med Col Va, 58-61; biologist, Oak Ridge Nat Lab, 61-70; sr immunologist, Smith, Kline & French Labs, 70-71; PROF LIFE SCI, IND STATE UNIV, TERRE HAUTE, 71- PROF MICROBIOL, TERRE HAUTE CTR MED EDUC, 73- Mem: AAAS; Soc Study Develop Biol; Am An Immunologists. Res: Immunology; embryology; cellular physiology. Mailing Add: Dept of Life Sci Ind State Univ Terre Haute IN 47809
- ALBRIGHT, LAWRENCE JOHN**, b Owen Sound, Ont, July 22, 41. MICROBIOLOGY, OCEANOGRAPHY. Educ: McGill Univ, BSc, 63; Ore State Univ, MS, 65, PhD(marine microbiol), 67. Prof Exp: Asst prof, 67-72, ASSOC PROF MARINE MICROBIOL, SIMON FRASER UNIV, 72- Concurrent Pos: Grants, Nat Res Coun Can, 67- & Can Dept Environ, 71- Mem: Can Soc Microbiol; Am Soc Microbiol. Res: Physiology and biochemistry of marine microbes, microbe pollutant interactions in natural waters and sediments. Mailing Add: Dept of Biol Sci Simon Fraser Univ Burnaby BC Can
- ALBRIGHT, RAYMOND GERARD**, b Detroit, Mich, Apr 1, 26. ANATOMY, ZOOLOGY. Educ: Loyola Univ, Ill, BA, 49, MS, 53, PhD(anat), 55; WBaden Col, STL, 59. Prof Exp: From instr to asst prof, 60-66, chmn dept, 62-66, ASSOC PROF BIOL, UNIV DETROIT, 66- Mem: Am Soc Zoologists; Am Soc Ichthyologists & Herpetologists. Res: Functional morphology of chordates, especially reptiles. Mailing Add: Dept of Biol Univ of Detroit Detroit MI 48221
- ALBRIGO, LEO GENE**, b Palmdale, Calif, Aug 24, 40; m 59; c 3. HORTICULTURE, PLANT PHYSIOLOGY. Educ: Univ Calif, Davis, BS, 62, MS, 64; Rutgers Univ, PhD(hort), 68. Prof Exp: From res asst to res assoc pomol, Rutgers Univ, 64-68; ASST HORTICULTURIST, AGR RES & EDUC CTR, UNIV FLA, 68- Mem: Am Hort Soc. Res: Fresh fruit quality; environmental influences on fruit development. Mailing Add: Agr Res & Educ Ctr PO Box 1088 Lake Alfred FL 33850
- ALCORN, GORDON DEE**, b Olympia, Wash, Apr 6, 07; m 35; c 1. BOTANY, ORNITHOLOGY. Educ: Col Puget Sound, BS, 30; Univ Wash, Seattle, MS, 33, PhD(bot), 35. Prof Exp: Asst prof biol, Col Puget Sound, 32-33; asst bot, Univ Wash, Seattle, 34-35; asst prof, Univ Idaho, 35-37; vpres & head dept biol, Grays Harbor Col, 37-43, pres, 45-46; assoc prof biol, 46-47, dir grad studies, 70-72, PROF BIOL, UNIV PUGET SOUND, 47- CHMN DEPT, 51- PROF, SUMMER SCH, 30- EMER DIR GRAD STUDIES, 72- Concurrent Pos: Dir & cur, Puget Sound Mus Natural Hist, 51-73; ed, Murrelet. Mem: Cooper Ornith Soc; Am Ornith Union. Res: Air sacs in birds; salt glands. Mailing Add: Dept of Biol Univ of Puget Sound Tacoma WA 98416