# Founders of the Animal Behavior Society

Founders & Friends at the 1984 ABS Meeting in Cheney, WA

Donald A. Dewsbury

ABS Historian

Updated Jan 2023, Sue Margulis, ABS Historian

# ABS Brief Chronology

- 1946 Establishment there of a Committee for the Study of Animal Societies under Natural Conditions
- 1956 Formal establishment of the Section of Animal Behavior and Sociobiology of the Ecological Society of America (ESA)
- 1958 Establishment of a Division of Animal Behavior of the American Society of Zoologists (ASZ) (now the Society for Integrative and Comparative Biology, SICB)
- 1964 Formal establishment of the Animal Behavior Society in December in Montreal as an outgrowth of the ESA section and the ASZ division

# Definition of "Founder"

A founder is defined as a person active in the period prior to 1966 who held at least two administrative positions, elected or appointed, in ABS or the ESA Section on Animal Behavior and Sociobiology or the ASZ Division of Animal Behavior as recorded by the ABS Historian. In addition, 4 animal behaviorists honored as founders before this definition was adopted are included.

# 37 Founders of the Animal Behavior Society

| | | |
|---|---|---|
| Altmann, S. A. | Davis, D. E. | Marler, P. |
| Aronson, L. R. | Denniston, R. H. II | McKinney, F. |
| Bakken, A. | Dilger, W. C. | Schein, M. W. |
| Banks, E. M. | Eisenberg, J. F. | Scott, J. P. |
| Barlow, G.W. | Emlen, J. T., Jr. | Shaw, Evelyn |
| Bartholomew, G. A. | Etkin, W. | Southwick, C. H. |
| Beach, F. A. | Frings, H. W. | Stokes, A. W. |
| Braddock, J. C. | Fuller, J. L. | Tavolga, W. N. |
| Calhoun, J. B. | Guhl, A. M. | Tobach, E. |
| Carpenter, C. C. | Hale, E. B. | Verplanck, W. S. |
| Carpenter, C. R. | King, J. A. | Winn, H. E. |
| Collias, N. E. | Lanyon, W.E. | Young, W. C. |
| Davenport, D. | | |

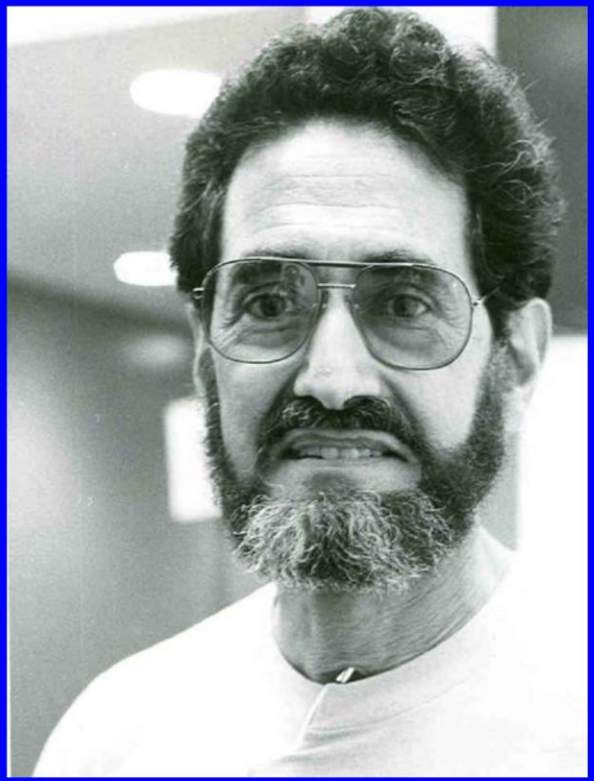
# Honoring the Founders

- The following 37 slides honor the 37 founders of the Animal Behavior Society, as now defined
- For each there is a photo, where available or an article or book where no photo was located; along with the date and place of birth; date of death if relevant and known; PhD school & date; primary affiliation during the formative years of ABS; research specialty; and ABS activities during the period of 1956-1965.

The last ABS founder passed away in 2017.

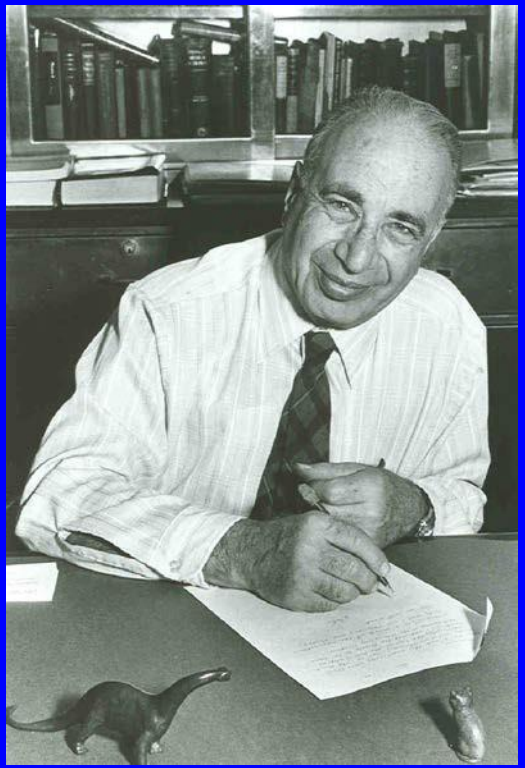
# Stuart A. Altmann

- b: June 8, 1930, St. Louis, MO; d. Oct 13, 2016
- PhD: Harvard, 1960
- Affiliation: Alberta
- Research: Social communication and social behavior in primates
- ABS: Research facilities & Primatology Committees (Later Pres.)



Zoology

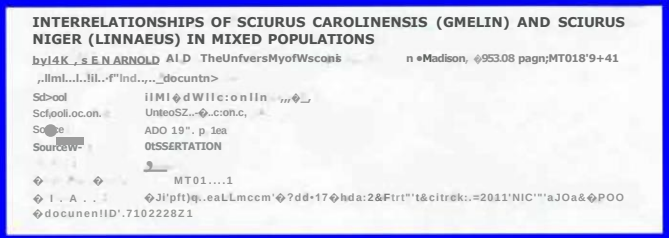
# Lester R. Aronson



- b: Apr. 9, 1911, New York, NY; d. Apr. 7, 1996
- PhD: NYU, 1945
- Affiliation: American Museum of Natural History
- Research: behavior, ecology, hormones, & physiology of vertebrates
- ABS: Chair; Editor; Nominating, Business, Independent ABS, Education, & Publications Committees

Zoology

# Arnold Bakken


INTERRELATIONSHIPS OF SCIURUS CAROLINENSIS (GMELIN) AND SCIURUS NIGER (LINNAEUS) IN MIXED POPULATIONS

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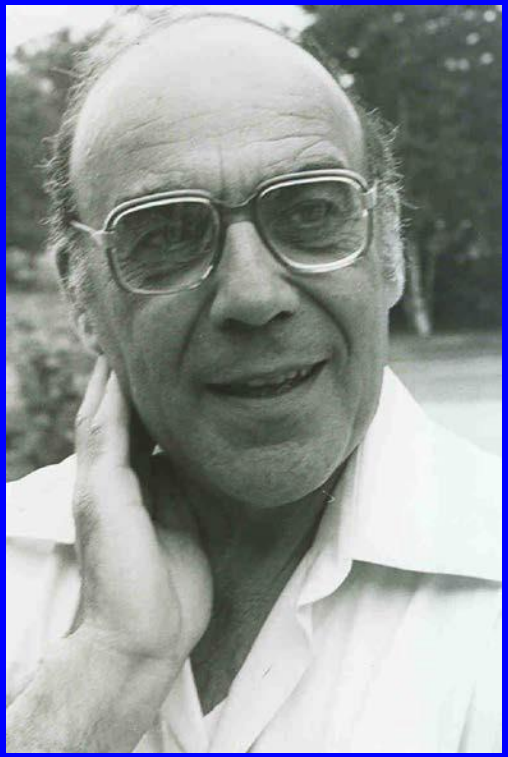
- b:Apr.9, 1911, Antelope, MT; d. Mar 2009
- PhD: Wisconsin, 1953
- Affiliation: Wisconsin, Eau Claire
- Research: Behavior of squirrels & lemmings
- ABS: Films & Scandinavian Literature Committees

Zoology

# Edwin M. Banks

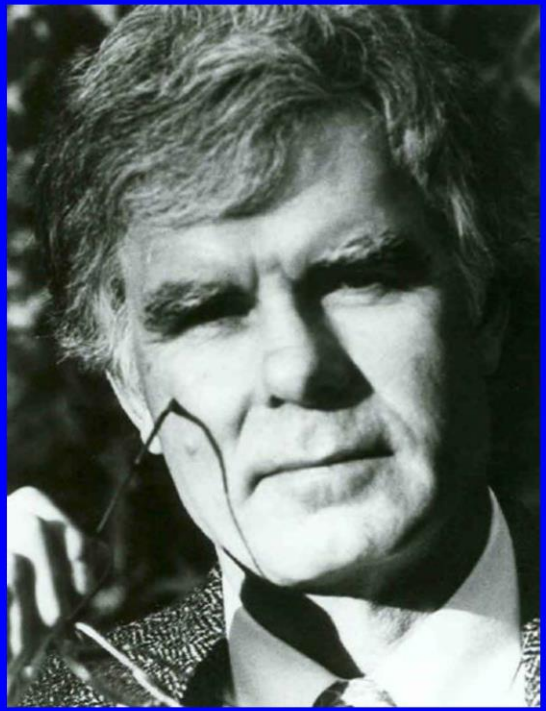


- b: Mar. 21, 1926, Chicago, IL; d. Mar. 26, 1985
- PhD: U, of Florida, 1955
- Affiliation: Illinois
- Research: Social behavior and organization of vertebrates
- ABS: Program Officer & Films Committee (Later Pres.)

Zoology

# George W. Barlow

- b: June 15, 1929, Long Beach, CA; d. July 14, 2007
- PhD: UCLA, 1958
- Affiliation: Illinois
- Research: Social behavior of cichlid and reef fishes; patterned movements; social systems
- ABS: Program Officer; Constitution & Bylaws Committee (Later Pres.)



Zoology

# George A. Bartholomew

- b: June 1, 1919, Independence, MO; d. Oct 2, 2006
- PhD: Harvard, 1947
- Affiliation: UCLA
- Research: Ecology & physiology of vertebrates
- ABS: Physiology & Mammalogy & Ornithology Committees

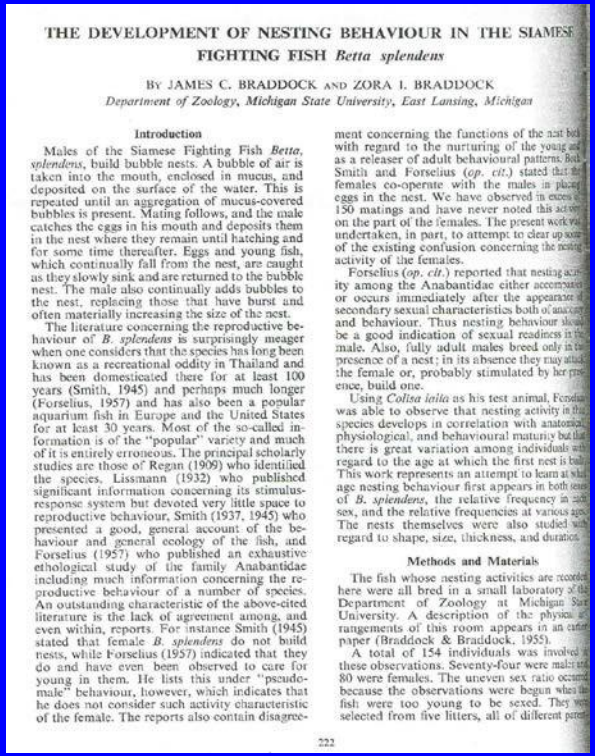
Zoology

# Frank A. Beach

- b: Apr. 13, 1911, Emporia, KS; d. June 15, 1988
- PhD: PhD Chicago, 1940
- Affiliation: U. California, Berkeley
- Research: Hormones and behavior, species-specific behavior, nervous system

Comparative Psychology

# James C. Braddock



THE DEVELOPMENT OF NESTING BEHAVIOUR IN THE SIAMESE FIGHTING FISH *Betta splendens*

BY JAMES C. BRADDOCK AND ZORA I. BRADDOCK

*Department of Zoology, Michigan State University, East Lansing, Michigan*

**Introduction**

Males of the Siamese Fighting Fish *Betta, splendens*, build bubble nests. A bubble of air is taken into the mouth, enclosed in mucus, and deposited on the surface of the water. This is repeated until an aggregation of mucus-covered bubbles is present. Mating follows, and the male catches the eggs in his mouth and deposits them in the nest where they remain until hatching and for some time thereafter. Eggs and young fish, which continually fall from the nest, are caught as they slowly sink and are returned to the bubble nest. The male also continually adds bubbles to the nest, replacing those that have burst and often materially increasing the size of the nest.

The literature concerning the reproductive behaviour of *B. splendens* is surprisingly meager when one considers that the species has long been known as a recreational oddity in Thailand and has been domesticated there for at least 100 years (Smith, 1945) and perhaps much longer (Forselius, 1957) and has also been a popular aquarium fish in Europe and the United States for at least 30 years. Most of the so-called information is of the "popular" variety and much of it is entirely erroneous. The principal scholarly studies are those of Regan (1909) who identified the species, Lissmann (1932) who published significant information concerning its stimulus-response system but devoted very little space to reproductive behaviour, Smith (1937, 1945) who presented a good, general account of the behaviour and general ecology of the fish, and Forselius (1957) who published an exhaustive ethological study of the family Anabantidae including much information concerning the reproductive behaviour of a number of species. An outstanding characteristic of the above-cited literature is the lack of agreement among, and even within, reports. For instance Smith (1945) stated that female *B. splendens* do not build nests, while Forselius (1957) indicated that they do and have even been observed to care for young in them. He lists this under "pseudo-male" behaviour, however, which indicates that he does not consider such activity characteristic of the female. The reports also contain disagreement concerning the functions of the nat[ural] with regard to the nurturing of the young and as a releaser of adult behavioural patterns. Both Smith and Forselius (*op. cit.*) stated that the females co-operate with the males in placing eggs in the nest. We have observed in excess of 150 matings and have never noted this activity on the part of the females. The present work was undertaken, in part, to attempt to clear up some of the existing confusion concerning the nesting activity of the females.

Forselius (*op. cit.*) reported that nesting activity among the Anabantidae either accompanies or occurs immediately after the appearance of secondary sexual characteristics both of anatomy and behaviour. Thus nesting behaviour should be a good indication of sexual readiness in the male. Also, fully adult males breed only in the presence of a nest; in its absence they may attack the female or, probably stimulated by her presence, build one.

Using *Colisa lalia* as his test animal, Forselius was able to observe that nesting activity in this species develops in correlation with anatomical, physiological, and behavioural maturity but that there is great variation among individuals with regard to the age at which the first nest is built. This work represents an attempt to learn at what age nesting behaviour first appears in both sexes of *B. splendens*, the relative frequency in each sex, and the relative frequencies at various ages. The nests themselves were also studied with regard to shape, size, thickness, and duration.

**Methods and Materials**

The fish whose nesting activities are recorded here were all bred in a small laboratory of the Department of Zoology at Michigan State University. A description of the physical arrangements of this room appears in an earlier paper (Braddock & Braddock, 1955).

A total of 154 individuals was involved in these observations. Seventy-four were males and 80 were females. The uneven sex ratio occurred because the observations were begun when the fish were too young to be sexed. They were selected from five litters, all of different parents

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Zoology

- b: Sep. 20, 1913, New York, NY; d. March, 1978
- PhD: Chicago, 1942
- Affiliation: Michigan State
- Research: Social behavior of fishes; amphibians; fresh-water limnology
- ABS: Treasurer, Newsletter Editor; Nominating, Glossary, Russian Literature, & Education Committees

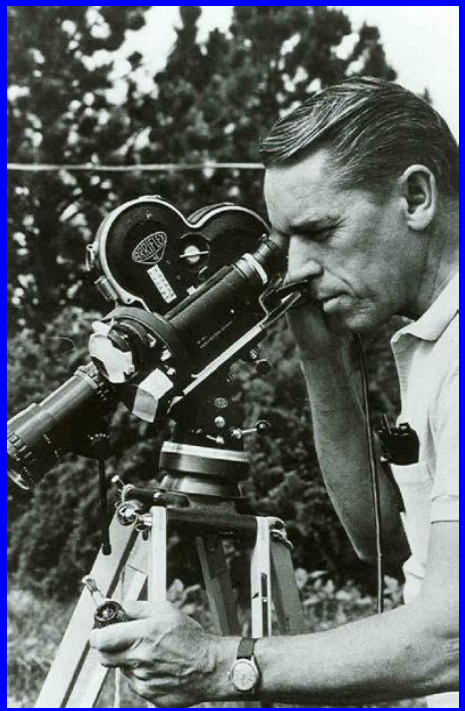
# John B. Calhoun

- b: May 11, 1917, Elkton, TN; d. Sep. 7, 1995
- PhD: Northwestern, 1943
- Affiliation: NIMH
- Research: Vertebrate ecology esp. Norway rats; activity rhythms; population & mental health; emotion & motivation
- ABS: Research facilities and Comparative & Experimental Psychology Committees

Ecology

# Charles C. Carpenter

- b: June 2, 1921, Denison, IA
- PhD: Michigan, 1951; d. Jan 10, 2016
- Affiliation: Oklahoma
- Research: Herpetology; Ecology, Behavior, Populations, & Spatial organization of vertebrates
- ABS: Nominating, Glossary, & Ichthyology/Herpetology Committees



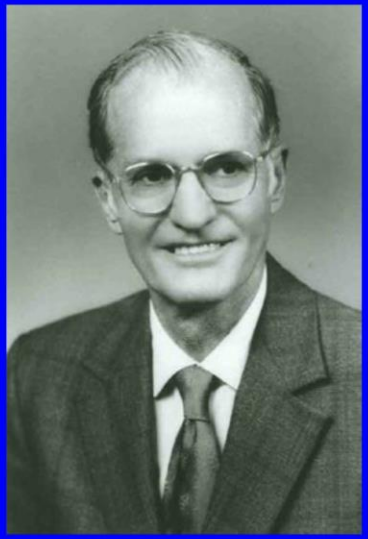
Zoology

# C(larence) Ray Carpenter

- b. Nov. 28, 1905, Lincoln Co., NC; d. Mar. 1, 1975
- PhD: Stanford, 1932
- Affiliation: Penn State
- Research: Primatology, social behavior, technology in education
- ABS: Films committee

Comparative Psychology & Primatology

# Nicholas E. & Elsie C. Collias



Zoology

- b: July 19, 1914, Chicago Heights, IL & March 24, 1920, Tiffin, OH; d. Apr 18 2010 & Dec 17 2006
- PhD: Chicago, 1942 & Wisconsin, 1948
- Affiliation: UCLA
- Research: Animal sociology & ecology; Ornithology; Vocalization, Nest building, & Energetics
- ABS: Chair; Ethology, Education, Nominating, Policy, Independent Society, &Constitution & Bylaws Committees

# Demorest Davenport

SPECIFICITY AND BEHAVIOR IN SYMBIOSES

By DEMOREST DAVENPORT

*The University of California, Santa Barbara College*

With illustrations by Campbell Grant

"And, being fed by us, you used us so
As that ungentle gull the cuckoo's bird
Useth the sparrow..." *King Henry IV, Pt. I.*

INTRODUCTION

Since earliest times naturalists have been intrigued with the intimate and so often highly specific associations between species which we speak of as symbioses. They have asked: "What factors bring symbiotic organisms together?" and "How are they maintained in partnership?" Yet until recently few efforts to answer these questions have been made. It has, of course, long been recognized that separate disciplines within a science progress historically in a remarkably parallel way. We are all familiar with the more or less orderly progression: "taxonomy-morphology-physiology-behavior" in the development of so many of the Life Sciences. The study of animal associations appears to be now in somewhat the same state as such a science as entomology was at the beginning of this century. At that time a great body of literature had appeared on the taxonomy and morphology of insects, while the study of behavior based on a knowledge of physiology was in its infancy. So far, as one might perhaps expect, our most noteworthy advances in the study of associations have been made in the investigation of truly social organisms. In our study of insect societies we have passed through the great, but in the main descriptive, work of such men as Fabre, Forel, and William Morton Wheeler, to the dramatic experimental contributions of Karl von Frisch. As a result of these observations and the continuing ones of Schneirla and others, we have today an extensive knowledge of the integrative factors, both physiological and behavioral, which knit together the "organs" and "cells" of the hymenopterous society. Likewise our understanding of the mechanisms controlling vertebrate social behavior is at present rapidly increasing as a result of the investigations of Konrad Lorenz, N. Tinbergen, and their colleagues in Europe. The same cannot be said of our understanding of symbioses; we are at the present time in the formative years of the investigation of the mechanisms of control of these partnerships. As Maurice Caullery in his classic *Parasitism and Symbiosis* (1952) has so clearly seen: "The question is really one of analyzing by precise experiments the relations of [the partners]... and of careful comparison of their behavior in an isolated state and in association."

It is the primary aim of this review to point out the number of fascinating problems that confront us in the investigation of behavior in symbioses, as well as to show that most of these problems, with the passage of time, can undoubtedly be solved by careful experimentation. As will be seen, one can often, by the use of relatively simple techniques, precisely identify in symbionts those stimuli which control adaptive behavior serving to bring the partners together or to maintain them in partnership. Throughout, we shall direct our attention to that behavior of symbionts which is directly related to their unique habit; such behavior must be absent in their free-living relatives. In what is to follow, a number of very different types of associations will fall under discussion. With no intention whatever of being all-inclusive, these have been selected primarily to illustrate how a careful analysis of the adaptive behavior of their members may further elucidate not only the

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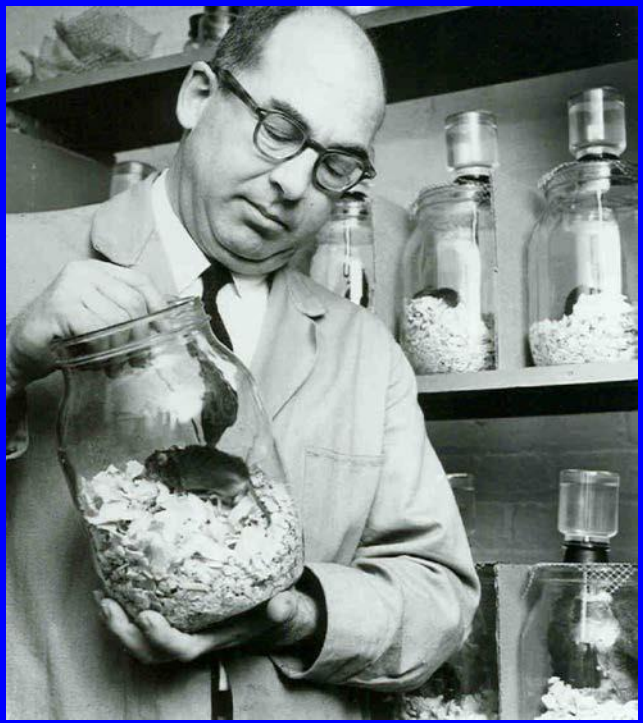
Quart. Rev. Biol., 1955, 30

Entomology

- b: Sep. 26, 1911, Utica, NY ; d. Jan 5, 2004
- PhD: Harvard, 1937
- Affiliation: U. Calif., Santa Barbara
- Research: Insect taxonomy; Pharmacology of invertebrate hearts; Behavior in symbiosis
- ABS: Glossary, Ethology, & Marine invertebrate Committees

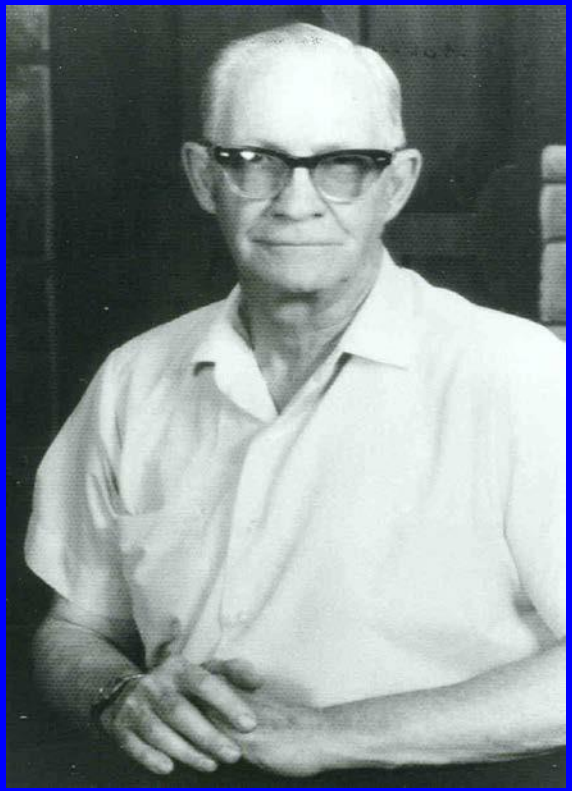
# David E. Davis



Ecology; Biology

- b: July 18, 1913, Chicago, IL; d. Oct. 31, 1994
- PhD: Harvard, 1939
- Affiliation: Penn State
- Research: Nesting of birds; Hormones and behavior; Rodent populations
- ABS: Editor; Nominating, Textbook, Mammalogy, & Independent society Committees

# Rollin H. Denniston, II



- b: Dec. 16, 1914, Chicago, IL; d. Jan. 17, 1999
- PhD: Chicago, 1941
- Affiliation: Wyoming
- Research: Endocrinology, Ecology; Vertebrate behavior; Reproduction
- ABS: Nominating, Glossary, Comparative Psych., & Physiology Committees

Animal Behavior; Zoophysiology

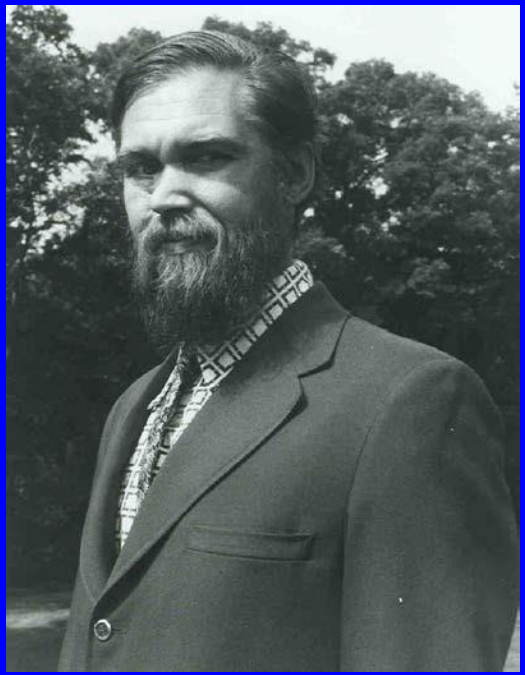
# William C. Dilger

- b: Apr. 20, 1923, White Plains, NY; d. Sept 17, 2015
- PhD: Cornell, 1955
- Affiliation: Cornell
- Research: Vertebrate ethology of birds & fishes; lovebirds
- ABS: Chair, Nominating, Mammalogy/Ornithology & Independent Society Committees

Vertebrate Zoology

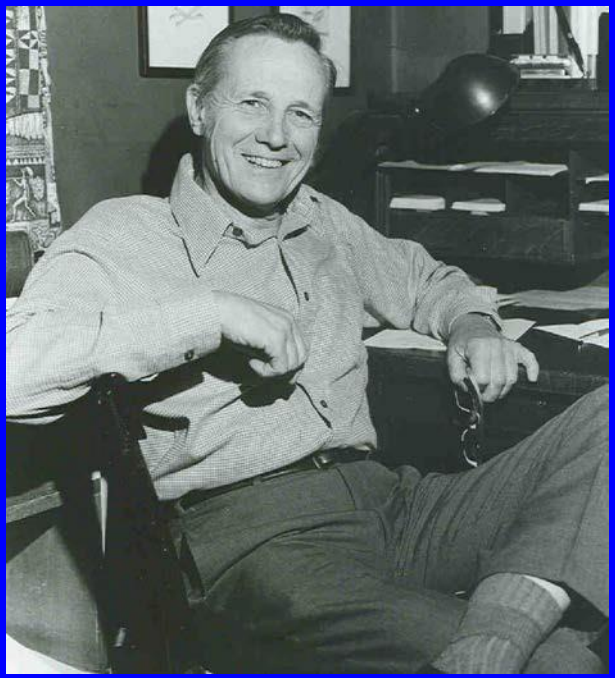
# John F. Eisenberg

- b: June 20, 1935, Everett, WA; d. July 6, 2003
- PhD: UC, Berkeley, 1962
- Affiliation: Univ. British Columbia
- Research: Mammalian social behavior
- ABS: Business Affairs Committee (later Pres.)



Zoology

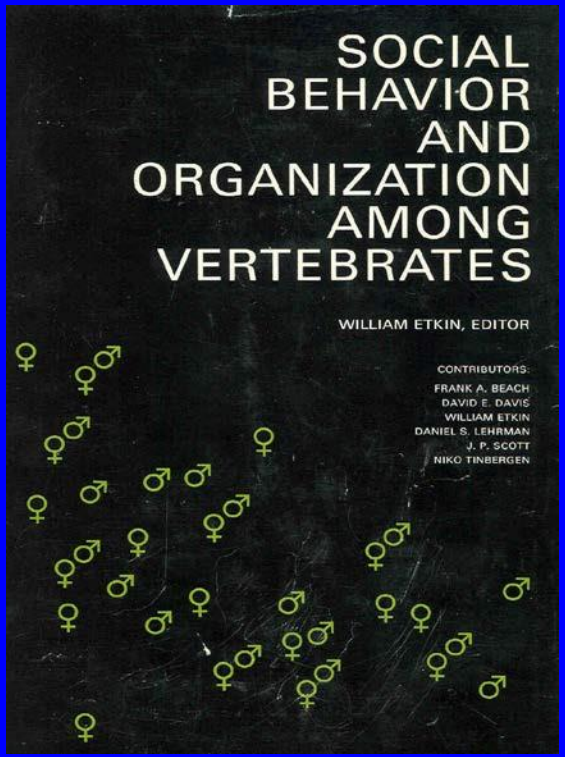
# John T. Emlen, Jr.



- b: Dec. 8, 1908, Philadelphia, PA; d. Nov. 8, 1997
- PhD: Cornell, 1934
- Affiliation: Wisconsin
- Research: Population and behavioral studies of birds & mammals
- ABS:Chair, Nominating, Independent Society. Policy, & International Congress Committees

Zoology

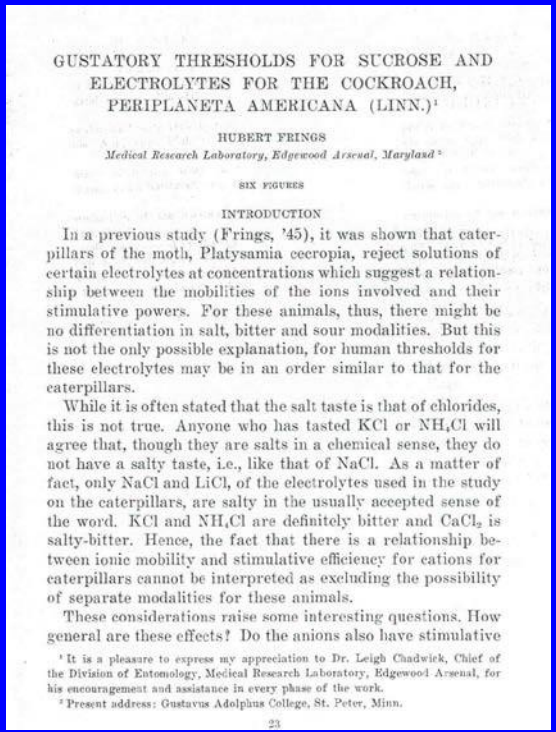
# William Etkin




- b: Dec. 10, 1910, New York, NY; d. Feb. 20, 1999
- PhD: Chicago, 1934
- Affiliation: CCNY
- Research: Hormones in development & behavior; social behavior; Amphibian metamorphosis; Experimental morphology
- ABS: Education, Textbook, & Physiology Committees

Zoology

# Hubert W. Frings



GUSTATORY THRESHOLDS FOR SUCROSE AND ELECTROLYTES FOR THE COCKROACH, PERIPLANETA AMERICANA (LINN.)[1]

HUBERT FRINGS
*Medical Research Laboratory, Edgewood Arsenal, Maryland*[2]

SIX FIGURES

INTRODUCTION

In a previous study (Frings, '45), it was shown that caterpillars of the moth, Platysamia cecropia, reject solutions of certain electrolytes at concentrations which suggest a relationship between the mobilities of the ions involved and their stimulative powers. For these animals, thus, there might be no differentiation in salt, bitter and sour modalities. But this is not the only possible explanation, for human thresholds for these electrolytes may be in an order similar to that for the caterpillars.

While it is often stated that the salt taste is that of chlorides, this is not true. Anyone who has tasted KCl or $NH_4Cl$ will agree that, though they are salts in a chemical sense, they do not have a salty taste, i.e., like that of NaCl. As a matter of fact, only NaCl and LiCl, of the electrolytes used in the study on the caterpillars, are salty in the usually accepted sense of the word. KCl and $NH_4Cl$ are definitely bitter and $CaCl_2$ is salty-bitter. Hence, the fact that there is a relationship between ionic mobility and stimulative efficiency for cations for caterpillars cannot be interpreted as excluding the possibility of separate modalities for these animals.

These considerations raise some interesting questions. How general are these effects? Do the anions also have stimulative

[1] It is a pleasure to express my appreciation to Dr. Leigh Chadwick, Chief of the Division of Entomology, Medical Research Laboratory, Edgewood Arsenal, for his encouragement and assistance in every phase of the work.

[2] Present address: Gustavus Adolphus College, St. Peter, Minn.

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- b: January 1, 1914, Philadelphia, PA; d. Sept 8, 2008
- PhD:Minnesota, 1940
- Affiliation: Penn State
- Research: Chemical senses in insects; Effects of sound on animals; Comparative physiology
- ABS: Invertebrate & Publication Committees

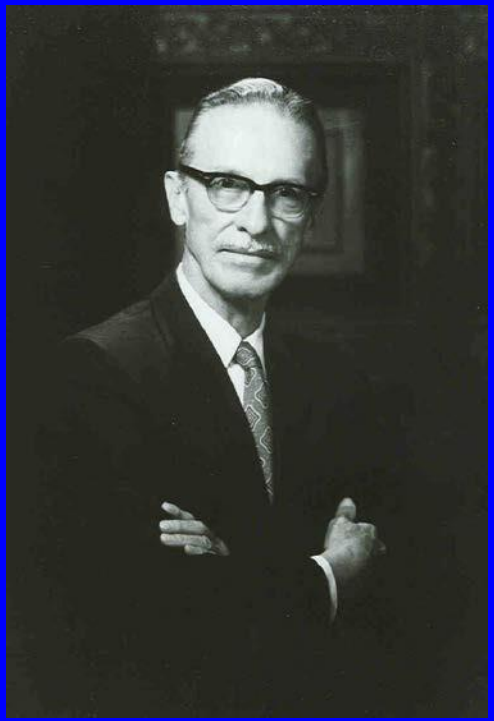
Comparative Physiology

# John L. Fuller

- b: July 22, 1910, Brandon, VT; d. June 8, 1992
- PhD: MIT, 1935
- Affiliation: Jackson Laboratory
- Research: Behavior Genetics, social behavior, development

Comparative Psychology, Biology

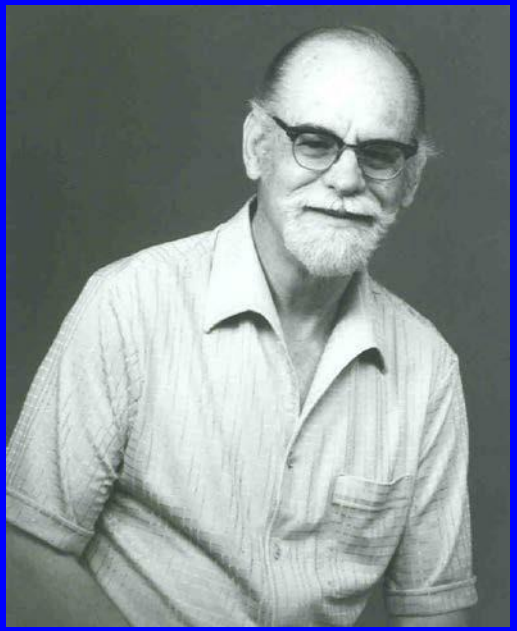
# Alphaeus M. Guhl



- b: August 14, 1898, Cleveland, OH; d. Aug., 1977
- PhD: Chicago, 1934
- Affiliation: Kansas State
- Research: Social behavior in animals including fowl
- ABS: Chair; Program Chair; Glossary, Nominating, & Independent society committees

Zoology

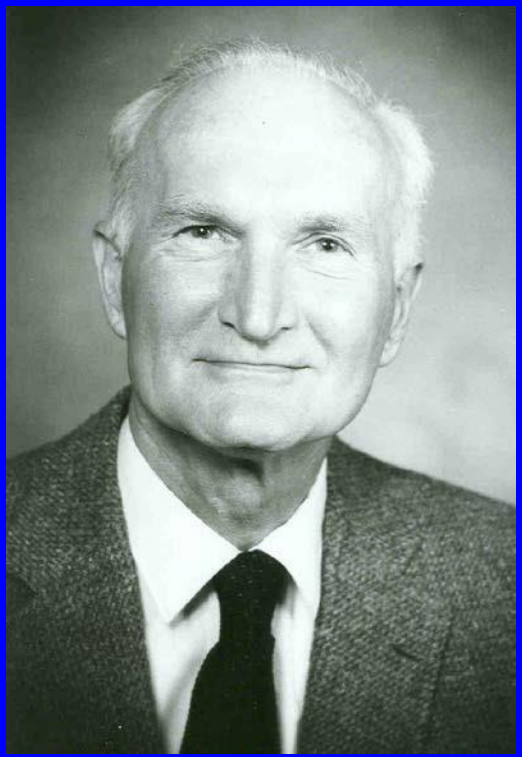
# Edgar Brewer Hale



Animal Behavior

- b: Feb. 13, 1917, Tulia, TX
- PhD: Chicago, 1950; d. Jan 1, 2011
- Affiliation: Penn State
- Research: Genetic, neural, endocrine, & stimulus effects on sexual & aggressive behavior; Rumen digestion
- ABS: President; Treasurer; Textbook, Liaison, Education; Independent Society, Conservation, Org. & bylaws, & Comparative psychology Committees

# John A. King



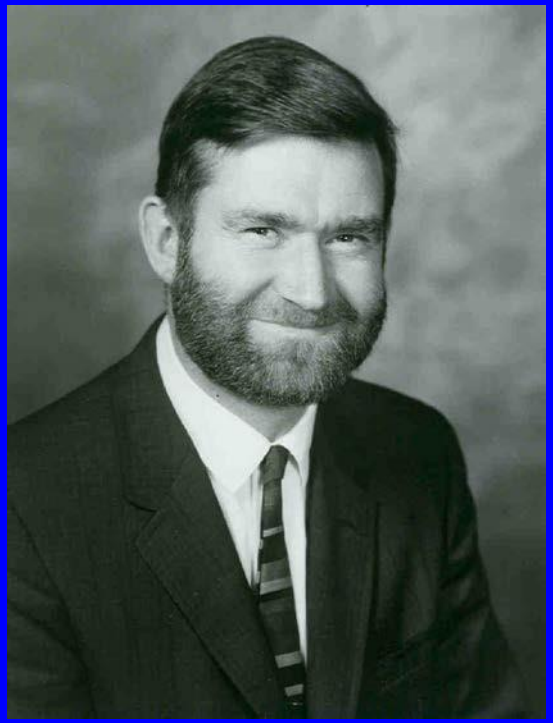
Zoology

- b: June 22, 1921, Detroit, MI
  d. Sep 22, 2014
- PhD: Michigan, 1951
- Affiliation: Michigan State
- Research: Sociobiology; Mammalian behavior; Early experience effects; Behavioral evolution
- ABS: Secretary, Membership, Business, Independent ABS, & Glossary Committees (Later Pres.)

# Wesley E. Lanyon

- b: June 10, 1926, Norwalk, CT; d. June 7, 2017
- PhD: Wisconsin, 1955
- Affiliation: Am. Museum of Natural History
- Research: Comparative behavior & ecology of birds; systematics; vocalization
- ABS: Mammalogy & Ornithology & Publications Committees

# Peter Marler



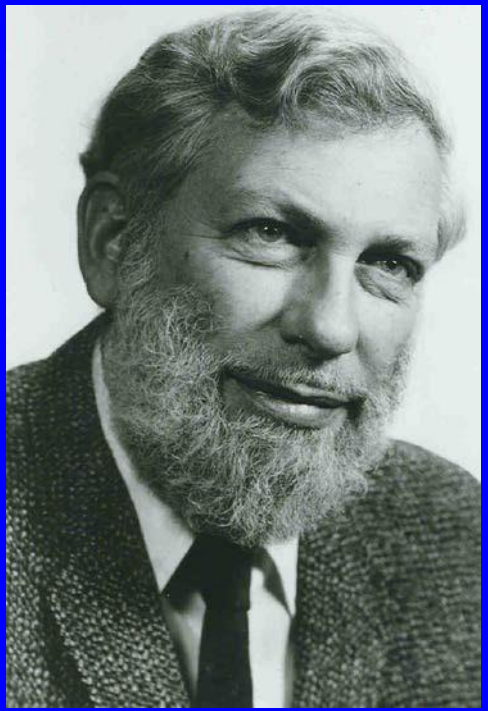
- b: Feb. 24, 1928, London England; d. July 15, 2015
- PhD: Cambridge, 1954
- Affiliation: U. Cal., Berkeley
- Research: Function & evolution of animal communication systems, esp. in birds & primates,
- ABS: Ethology & Policy Committees (Later Pres.)

Zoology

# Frank McKinney

- b: Oct. 23, 1928, Ballymena, N. Ireland; d. June 12, 2001
- PhD: Bristol, 1953
- Affiliation: Delta Waterfowl Res. Station
- Research: Behavior of waterfowl
- ABS: Mammalogy & Ornithology Committee

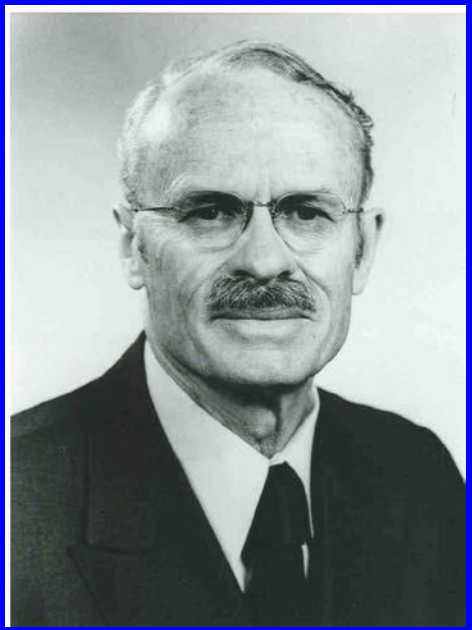
# Martin W. Schein



Ethology

- b: Dec. 25, 1923, Brooklyn, NY; d. Apr. 10,1998
- PhD: Johns Hopkins, 1954
- Affiliation: Penn State
- Research: Sexual, social, & feeding behavior in domestic animals; Education in biology
- ABS: President, Secretary; Program Chair; Films, Russian Literature, Education, Independent Society, Business, Policy, & Publications Committees

# John Paul Scott



Zoology

- b: Dec. 9, 1917, Kansas City, MO; d. Mar. 26, 2000
- PhD: Chicago, 1935
- Affiliation: Jackson Laboratory
- Research: Genetics & development in mammals
- ABS: 1st Chair; Nominating, Research facilities, Bylaws, Independent ABS, Liaison, Comp. & Exp. Psychology; & Policy Committees

# Evelyn Shaw

- b. Jan 19, 1927, Jersey City, NJ
- d. May 19, 2003. PhD: NYU
- Affiliation: Am. Museum of Natural History
- Research: Ecology & physiology of vertebrates
- ABS: Ichthyology & Herpetology & Publications Committees

Biology; Animal Behavior

# Charles H. Southwick

- b: Aug. 28, 1928, Wooster, OH; d. July 19, 2015
- PhD: Wisconsin, 1953
- Affiliation: Ohio U.
- Research: Vertebrate population dynamics, Stress physiology; Sociobiology; Primatology
- ABS: Glossary, Mammal, & Primate Committees (Later Pres.)

Zoology

# Allen W. Stokes

- b: Sep. 16, 1914, Philadelphia, PA; d. Jul. 28, 1996
- PhD: Wisconsin, 1952
- Affiliation: Utah State
- Research: Behavioral ecology
- ABS: Education, Nominating, Mammalogy & Ornithology, & Wildlife Committees (Later Pres.)

Animal Behavior;Wildlife Management

# William N. Tavolga

Animal Behavior; Embryology

- b: Feb,. 9, 1922, New York, NY; d. Apr 28, 2017
- PhD: NYU, 1946
- Affiliation: CCNY
- Research: Behavior & bioacoustics of fishes; parasitology, embryology, & endocrinology
- ABS: Research facilities, Publications, & Icthyology & Herpetology Committees

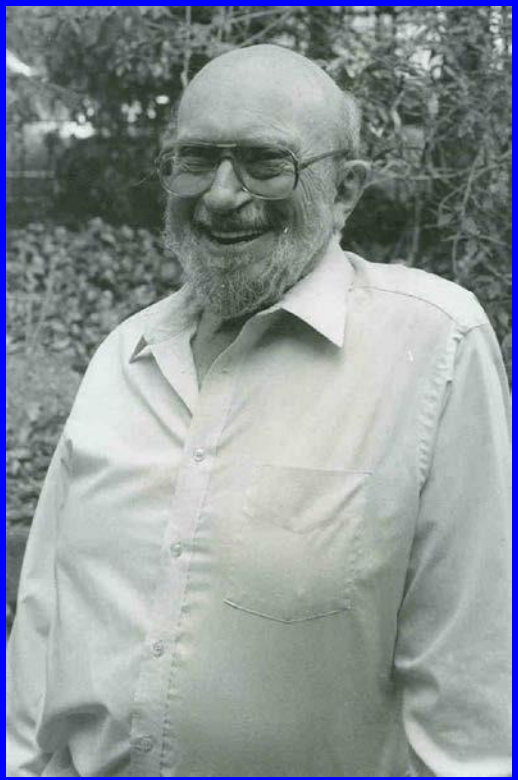
# Ethel Tobach

- b: Nov 7, 1921, Miaskovka, Russia
  d. Aug 14, 2015
- PhD: NYU, 1957
- Affiliation: Am. Museum of Natural History
- Research: Development & evolution of behavior; Emotional behavior; Social behavior
- ABS: Assistant Editor; Comparative psychology Committee

Animal Behavior; Comparative Psychology

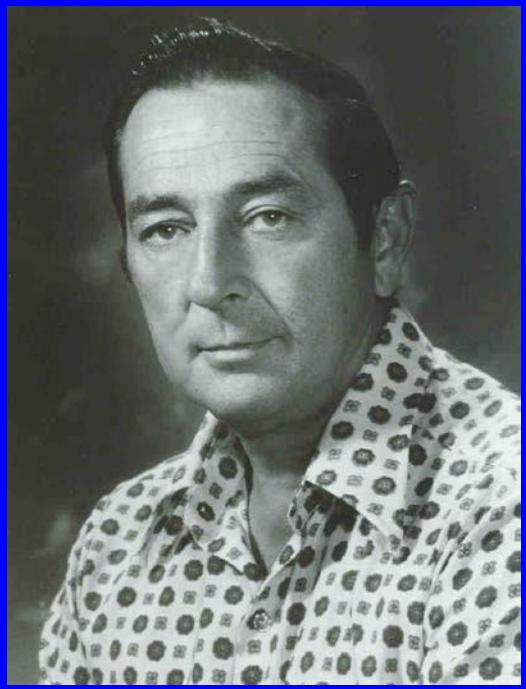
# William S. Verplanck

- b: January 6, 1916, Plainfield, NJ; d. Dec. 30,2002
- PhD: Brown, 1941
- Affiliation: Maryland, Research: Behavior theory; Language; Thinking; Animal behavior
- ABS: Glossary, Comparative & Experimental Psychology, & Liaison Committees



# Howard E. Winn

- b: May 1, 1926, Winthrop, MA; d. Aug. 13, 1995
- PhD: Michigan, 1955
- Affiliation: Maryland
- Research: Biology of fishes; Sound & communication in animals; Whales
- ABS: President; Independent Society, Ichthyology & Herpetology, & Foreign literature Committees



Oceanography, Bioacoustics

# William C. Young

Anatomy

- b: Sep. 8, 1899, Chicago, IL; d. Aug. 30, 1965
- PhD: Chicago, 1927
- Affiliation: Kansas
- Research: Physiology & Anatomy of Reproduction; Hormones & reproductive behavior
- ABS: Chair; Nominating, & Independent Society Committees