

C. Eugene Settle, Ph.D.

Department of Physiology
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EDUCATION

- Ph.D.** **Genetics** specializing in the cytogenetics of polyploids. The University of Arizona, Tucson. 1993. *Minor*: Higher Education with emphasis on instructional methods and course development. *Dissertation*: Characterization of the crumpled-mottled mutation in *Gossypium hirsutum* L.
- M.S.** **Ecology and Evolutionary Biology** emphasizing mammalian physiological ecology, systematics, and evolution. The University of Arizona, Tucson. 1981.
- B.A.** **Zoology and Psychology** focusing on human ecology, genetics, and developmental behavior. University of Colorado, Boulder. 1971.

HONORS AND AWARDS

University of Arizona Foundation Teaching Award

Phi Sigma Society

CERTIFICATION AND REGISTRATION

International Academy of Cytology

Arizona State Board of Directors for Community Colleges

PROFESSIONAL INTERESTS

Science Teaching / Curriculum Development and Implementation / Reproductive Physiology
Chromosome Pairing and Fertility / Transgenic Organisms / Physiological Genomics

PROFESSIONAL EXPERIENCE

- 2000-Present **Lecturer**, Department of Physiology, College of Medicine, The University of Arizona, Tucson, AZ. Team-teach (fall semester) in the upper division Introduction to Cell Physiology course (PSIO 403). Teach one of the lower division Human Anatomy and Physiology courses (PSIO 202) in the summer sessions. Coordinate and oversee all administrative matters for upper division cell and systems physiology courses including arranging teaching schedules and assignments for course teaching assistants. Provide course content tutoring and counseling for enrolled undergraduate students. Coordinate and oversee three medical student laboratory exercises (ECG, Pulmonary Function, and Human Renal) and the cardiovascular laboratory for Physiological Sciences graduate students. Teach, or assist with the instruction of, undergraduate colloquia. Substitute as lecturer (on a temporary basis) for tenure-track faculty in upper division undergraduate courses when emergencies arise. Provide support and assistance for faculty in the development of course materials including syllabi, handouts, and course examinations. Serve on the Physiological Sciences Graduate Teaching Committee; and the Physiological Sciences Undergraduate Major Coordinating Team.
- 1999-2000 **Assistant Specialist (Physiology)**, Department of Physiology, College of Medicine, The University of Arizona, Tucson, AZ. Directed the Human Systems Physiology Graduate Colloquium (PSIO 580) and taught the PSIO 480 Honors Section. Provided course tutoring and counseling for enrolled undergraduates. Coordinated the ECG, Pulmonary Function, and Renal laboratories for first year medical students and the Cardiovascular laboratory for Physiological Sciences graduate students. Provided support and assistance for faculty in the development of course materials. Supervised the instructional activities of Physiological Sciences doctoral students. Co-taught the introductory Human Anatomy and Physiology course (PSIO 201) during the first summer session.
- 1996-1999 **Adjunct Faculty**, Department of Life Sciences / Chemistry, Pima Community College East Campus, Tucson, AZ. Taught laboratory-based courses in Human Anatomy and Physiology, Allied Health Biology, Environmental Biology, and General Biology for majors. Member, Inquiry-based Science Teaching Project.
- 1995-1999 **Adjunct Assistant Professor**, Department of Ecology and Evolutionary Biology, The University of Arizona, Tucson, AZ. Developed and taught (fall semester only) a general vertebrate physiology course. Integrative in approach, this writing-emphasis course was designed to meet the needs of students from several disciplines for a systems-level understanding of physiological processes and homeostasis.

- Spring 1998 **Course Coordinator**, Department of Plant Sciences, The University of Arizona, Tucson, AZ. Coordinated all course instructional activities for the introductory genetics course. Lectured on selected topics. Directed the professional activities of five graduate teaching associates and fourteen undergraduate laboratory assistants. Liaison for CeDRR and S.A.L.T. students enrolled in the course.
- 1995-1996 **Development Reviewer**, W. H. Freeman & Co., New York City, NY. Reviewed, for instructional effectiveness, several chapters from *Eckert Animal Physiology, 4th Edition*. The new edition, substantially revised and reorganized after Eckert's death, incorporated both new chapters and contributions from new authors.
- 1994-1995 **Research Associate**, Department of Plant Sciences, The University of Arizona, Tucson, AZ. Evaluated guayule germplasm for facultative apomictic traits, co-authored research reports, organized symposia presentations, and mentored undergraduate researchers. Directed summer laboratory / field experiences for visiting Malaysian scientists.
- 1989-1993 **Graduate Teaching/Research Associate**, Department of Plant Sciences, The University of Arizona, Tucson, AZ. Developed instructional materials for the new laboratory portion of an expanded genetics course. Co-authored new genetics laboratory manual. Coordinated and supervised all laboratory preparation and teaching presentations. Evaluated all course materials, assessment measures, and examinations for teaching effectiveness. Taught in workshops and small group presentations organized by the department for visiting Egyptian scientists.
- 1988-1989 **Lecturer**, Department of Natural / Allied Health Sciences, Avila College, Kansas City, MO. Taught a traditional length course in pathophysiology. Developed and presented short courses in gerontology (*e.g.*, Biological Processes and Aging) for the Weekend College program. Responsible for the interdisciplinary courses in Human Sexuality and Human Genetics.
- 1982-1989 **Consultant**, Halcyon Associates, Mission Hills, KS. Established a small, private consulting business providing customized assistance with asset development, environmental remediation, and technical staffing problems.
- 1979-1982 **Cytology Coordinator**, Department of Pathology, Tucson Medical Center, Tucson, AZ. Designed and implemented start-up of a new cytopathology laboratory for a regional medical center. Responsible for nighttime operations and coordination of work flow for all shifts. Prepared technical protocols, staff procedures, and QC/QA guidelines. Organized and presented continuing education programs and exhibits.

- 1977-1978 **Lecturer**, Department of General Biology, The University of Arizona, Tucson, AZ. Invited, after an unexpected faculty resignation, to teach a specialized introductory biology course for education majors. Lectured and prepared course examinations; designed new instructional objectives; wrote new interactive laboratory modules; and coordinated graduate teaching assistants.
- 1972-1980 **Cytotechnologist**, Department of Pathology, Veterans Administration Medical Center, Tucson, AZ. Examined cytologic material from a high risk respiratory disease population.
- 1971-1972 **Cytotechnologist / Cytogeneticist**, Department of Pathology, United States Air Force Academy Hospital, Colorado Springs, CO. Examined all types of exfoliative cytology material for evidence of malignancy or clinical abnormality. Cultured, stained, photographed, and examined hematologic material for karyotypic analysis. Advised senior cadets on cytopathology-related research projects.
- 1967-1970 **Chief Cytotechnologist**, Pathology Consultants, Denver, CO. Supervised the professional activities of four cytotechnologists and two laboratory technicians. Hired and trained new support personnel. Coordinated clinical cytology rotations for pathology residents from affiliated hospitals.
- 1965-1966 **Staff Cytotechnologist**, Pathology Consultants, Denver, CO. Screened all types of exfoliative cytology specimens for a private pathology laboratory affiliated with Presbyterian Medical Center.

CONSULTING

West Park County Hospital, Cody, WY

OST Laboratories / Baptist Hospital, Kansas City, MO

Becker and Thorpen, P.C., Casper, WY

S. M. Prather Ashe, P.C., Denver, CO

PUBLICATIONS

- Ray, D.T., C.E. Settle, and M.A. Shotwell. 2000. *Plant Genetics Laboratory Manual, 10th Ed.* Tucson: The University of Arizona. 182 pp.
- Settle, C.E. and D.T. Ray. 1994. Characterization of the crumpled-mottled mutation in *Gossypium hirsutum* L. *J. Arizona-Nevada Acad. Sci.*, 29: 22
- Settle, C.E. and D.T. Ray. 1990. *Laboratory Manual for Genetics.* Tucson: 112 pp.
- Settle, C.E. (ed.). 1978. *Foundations of Science--Life: A Laboratory Text and Guide.* Tucson: The University of Arizona Printing Services. 105 pp.
- Settle, C.E. and D.T. Ray. [pending]. Identification and separation of T8-12 from the *Crp* mutation in cotton utilizing a modified fluorochrome technique.
- Settle, C.E., D.T. Ray, and M.A. Shotwell. [pending]. Effect of the laboratory experience on retention and outcome measures in a large general genetics course: a comparative ten-year study.

PRESENTATIONS

- Settle, C.E. "Linking constructivist and inquiry-based approaches in college science teaching and assessment." Lecture-Demonstration presented to the Pima Community College Inquiry Method development team. December 1998.
- Settle, C.E. "Evaluating Pima Community College transfer student preparation for university-level course work in physiology." Critique given at the joint PCC-UA Biology 181 Curriculum Advisory Committee workshop. August 1997.
- Settle, C.E., D.T. Ray, and Y.-K. Cho. "Genetic variation associated with facultative apomixis in guayule." Presentation at 1st International Conference on Harnessing Apomixis, Texas A&M University, College Station, TX. September 1995.
- Settle, C.E. and D.T. Ray. "Separation of the T8-12 translocation from the *Crp* mutation in Arizona upland cotton." Paper given at the 38th Annual Meeting of the Arizona-Nevada Academy of Science, Glendale, AZ. April 1994.
- Settle, C.E. "The hunt for *speckled dwarf*: cotton genetics revisited." Seminar, Department of Plant Sciences, The University of Arizona, Tucson, AZ. October 1991.

PROFESSIONAL AFFILIATIONS

American Association for the Advancement of Science (*Physiology / Education*)

American Society of Mammalogists (*Life Member*)

Genetics Society of America

Genetics Society of Canada

CONTINUING EDUCATION (Representative)

Arizona Cytology Association Spring Meeting—Thin Prep Cytology Techniques. Tucson, AZ, May 1999.

Regulations and Standard Practice Guides for ADA/504 Compliance. Pima Community College District Training Program, Tucson, AZ. April 1998.

Arizona Society of Pathologists Meeting--Minimal Breast Lesions: Pathological Diagnosis and Clinical Management. Tucson, AZ. May 1996.

PROFESSIONAL SERVICE (Representative)

Faculty Senator, Pima Community College East Campus. Tucson, AZ. 1997-1998.

Judge, 47th International Science and Engineering Fair. Tucson, AZ. May 1996.

Guest Faculty, History of Genetics Seminar, Interdepartmental Committee on Genetics. The University of Arizona, Tucson, AZ. Fall 1993.

Founding President, Plant Sciences Graduate Student Organization. The University of Arizona, Tucson, AZ. Fall 1991.

MILITARY SERVICE

United States Air Force, 1961-1967. Specialist in Clinical / Anatomical Pathology.

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Professional References

1. William H. Dantzler, M.D., Ph.D.
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2. Karl W. Flessa, Ph.D.
Professor of Geosciences, and of Ecology and Evolutionary Biology
Departments of Geosciences, and Ecology and Evolutionary Biology
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3. Dennis T. Ray, Ph.D.
Associate Professor, Department of Plant Sciences
Forbes 415
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