

IN MEMORIAM

Hilda Florence Rosene

Hilda Florence Rosene was born March 26, 1897, in Chicago, Illinois. Her parents were Charles Emil, who was of Swedish and French descent, and Martha Wilhelmina Steffan, who was of German parentage.

In 1900 the Rosene family settled on a dairy farm in the Snoqualme Valley, 26 miles east of Seattle, Washington. The six Rosene children were all very active on the farm and were avid readers and good scholars.

Hilda Rosene attended the nearby country grade school and the first three years of high school at Novelty, Washington, and left home to attend Lincoln High School in Seattle for her senior year. She was an excellent student at all times and was interested in sports, especially basketball, hiking, fishing, and mountaineering.

Following high school, she attended Western Washington College of Education (1915-1917), graduating with a two-year teaching diploma. For several years she was very active in studying and teaching at the Puget Sound Biological Station, now Friday Harbor Laboratories, doing research during summers. It was in this period that she became very interested in physiology and marine life.

An outstanding student, she received a Bachelor of Science degree from the University of Washington in Seattle in 1922, doing work in zoology, physiology, and chemistry. From 1922 to 1924, while working for her Master's degree, Dr. Rosene instructed in zoology at the University of Washington, and in 1924 received her Master of Science degree and was elected to Sigma Xi.

From 1924 to 1929 she taught zoology and physiology at the Washington State Normal School in Bellingham, continuing with research at Friday Harbor during the summers.

In 1929 Rosene began graduate work in zoology and physiology at the University of Texas at Austin, and in 1931 was offered a position as Technical Research Fellow. Here she received the Doctor of Philosophy degree in 1933. Dr. Rosene studied under the supervision of the late Professor E. J. Lund, whom she later married, on April 4, 1955. They first met at the Puget

Sound Biological Station where Dr. Lund, then a Professor at the University of Minnesota, was on the summer faculty. They worked together closely until his death on November 28, 1969.

During her teaching career at The University of Texas, she served as Instructor beginning in 1933, as Assistant Professor beginning September 1, 1937, and as Associate Professor from 1943-1944 until her retirement from the Department of Zoology at the end of the 1957-1958 Long Session.

Dr. Rosene took great pride in her teaching. She was enthusiastic about her subject and gave unstintingly of her time to students. During her early years on the faculty she developed courses in human anatomy and human physiology. After a few years, enrollment in each had to be limited to students who were required to take them. She offered two elective seminar courses in human physiology which were attended by graduate students majoring in such areas as biochemistry, bacteriology, home economics, physical education, pharmacy, and psychology.

Between the years of 1943 and 1956, Dr. Rosene supervised the work of sixteen M.A. students and three Ph.D. students. She also served on numerous supervisory committees, not only in her own department but also in at least eight others, as well.

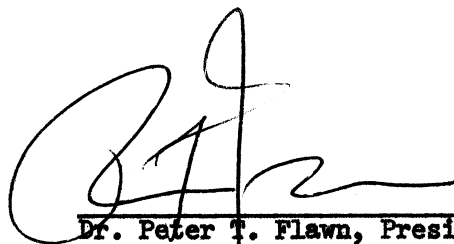
Dr. Rosene published about forty-five papers during her career. The work that attracted the most attention dealt with the absorption of water by plant roots and the factors that influence it. She developed an imaginative technique that permitted the quantitative measurement of the amounts of water taken up by a single root hair. This work was begun while she held a John Simon Guggenheim Fellowship in 1939-1940. Her accomplishments were cited in leading textbooks on plant physiology published at that time. She was invited during the 1950's to participate in and to organize symposia held during meetings of her professional societies both in this country and abroad. She held appointive and elective offices in sections of the American Society of Plant Physiologists and the Botanical Society of America.

Dr. Rosene and the late Dr. Marie Morrow of the Department of Microbiology were the only two women at The University of Texas who held tenured positions in the natural sciences beginning in the late 1930's and continuing

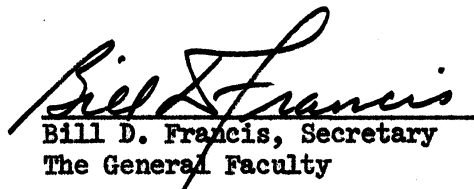
through the 1950's. Their presence on the faculty provided encouragement to a number of women undergraduate and graduate students at a time when very little other encouragement was given them to pursue careers in the biological sciences.

Dr. Rosene was a member of the American Association for the Advancement of Science, the American Institute of Biological Sciences, the Biophysical Society, Society of General Physiologists, Scandinavian Society of Plant Physiologists, American Society of Plant Physiologists, Botanical Society of America, Iota Sigma Pi (National Chemical Honor Society), Sigma Delta Epsilon (graduate women in science), an emeritus member of American Society of Plant Physiologists, Sigma Xi, Kappa Alpha Theta, and a member of the Chancellor's Council, The University of Texas.

Dr. Hilda Rosene passed away in an Austin, Texas, hospital December 21, 1978. She is survived by three sisters, Mrs. Elsie E. Jellum, Sun City, Arizona; Mrs. Martha L. Neff, Tucson, Arizona; and Mrs. Johanna Powell, Walnut Creek, California.



Dr. Peter T. Flawn, President
The University of Texas at Austin



Bill D. Francis, Secretary
The General Faculty

This memorial resolution was prepared by a special committee consisting of Professors L. J. Berry, chairman, and Joanne Ravel

Bibliography of Hilda F. Rosene

- Master's Thesis: The Morphology of the Butter Clam, *Saxidomus gigantea*, Deshayes.
- Doctoral Dissertation: Contributions to the Electro-Chemistry of the Cell.
- Effects of colchine on water transport and growth of roots. (Abstract). *Plant Physiology Supplement* 31 (1956) 15. (with Dorothy Pittman).
- Mercurial Inhibition of Oxygen uptake by Root Tissue and its Antagonism. (Abstract). *Plant Physiology Supplement* 31 (1956) 39. (with J. R. Lott).
- The effects of 4,6-dinitro-o-cresol on water influx and oxygen uptake of excised onion roots. *Amer. Journ. of Bot.* 43: 69-72. (with James R. Lott). 1956
- Effects of antibiotics on Water Transport and Growth in onion roots. (Abstract). *Plant Physiology Supplement* 30 (1955) 17. (with Kathryn Jones).
- The water absorptive capacity of winter rye root-hairs. *The New Phytologist* 54: 95-97. 1955
- Comparison of the velocities of water influx into young and old root-hairs of wheat seedlings. *Physiol. Plantarum* 7: 190-194. (with A. Am. Joekel-Walthall). 1954
- A comparative study of the rates of water influx into the hairless epidermal surface and the root-hairs of onion roots. *Physiol. Plantarum* 7: 676-686. 1954
- The water absorptive capacity of root hairs. VIIIth International Congress of Botany, Paris. S 11, (3): 211-218. 1954
- Reversible azide inhibition of water influx into individual root-hair cells. *J. Cell. and Comp. Physiol.* 44: 1-11. (with James N. Pratley). 1954
- Bioelectric Fields and Correlation in Plants. Pp. 219-252 in Growth and Differentiation in Plants. Monograph of the American Society of Plant Physiologists, Ed. Loomis, Iowa State Press, Ames. (Chapter by Hilda F. Rosene and E. J. Lund). 1953
- The effect of various tumor growths on the water content of the liver in mice and chick embryos. *Texas Rep. Biol. and Med.* 10, No. 4. Winter Issue, pp. 830-844. (By John Knox, Hilda F. Rosene and Alfred Taylor). 1952

- Human Physiology Outline: A Study Guide. 233 pp. Hemphills. Revised Edition. 1952
- The effect of anoxia on water exchange and oxygen consumption of onion root tissues. Cell. and Comp. Physiol. 35: 179-193. 1950
- Ageing and the influx of water into radish root-hair cells. J. Gen. Physiol. 34: 65-73. 1950
- The effect of anoxia on water influx of individual radish root hair cells. Comp. and Cell. Physiol. 36: 83-96. (By Hilda F. Rosene and Lewis Bartlett). 1950
- The invertebrate fauna of Texas coast jetties: Preliminary survey. Pp. 53-87 In Publ. Inst. Mar. Science I, Austin, Texas, pp. 53-87. (By H. L. Whitten, Hilda F. Rosene, and J. W. Hedgpeth). 1950
- Velocities of water absorption by individual root hairs of different species. Bot. Gaz. 111: 10-21. (By Hilda F. Rosene and A. M. Joekel-Walthall). 1949
- Bibliography of continuous bioelectric currents and bioelectric fields in animals and plants (with cross index). Pp. 301-391 in Bioelectric Fields and Growth, by E. J. Lund and Collaborators. University of Texas Press. 1947
- Reversible azide inhibition of oxygen consumption and water transfer in root tissue. Cell. and Comp. Physiol. 30: 15-30. 1947
- Anatomy Syllabus. Univ. Cooperative Society, Inc. 125 pp. 1947
- Human Physiology Outline. A Study Guide. 1946
- Effect of cyanide on rate of exudation in exercised onion roots. Amer. Journ. Bot., 31: 172-174. 1944
- Glass potometers for studies of absorption and exudation by excised roots. Pl. Physiol. 19: 170-172. 1944
- Quantitative measurement of the velocity of water absorption in individual root hairs by a microtechnique. Pl. Physiol. 18: 588-607. 1943
- Water balance in the onion root: Relation of volume intake to volume exudate of excised roots and isolated root sections. Pl. Physiol. 16: 447-460. 1941
- Control of water transported in local root regions of attached and isolated roots by means of the osmotic pressure of the external solution. Amer. Journ. Bot. 28: 402-410. 1941

- Comparison of rates of water intake in contiguous regions of intact and isolated roots. *Pl. Physio.* 16: 19-38. 1941
- Redirecting science education. *The Texas Outlook*, 24: 9-12. 1940
- Effect of an applied electric current on the external longitudinal polarity potentials of Douglas Fir. *Amer. Journ. Bot.* 24: 390-399.
- Distribution of the velocities of absorption of water in the onion root. *Pl. Physiol.* 12: 1-19. 1937
- The effect of 2, 4 dinitrophenol on the bioelectric potentials of frog skin. *Anat. Record* 64: Suppl. p. 85. 1935
- Linkage between output of electric energy by polar tissues and cell oxidation. *Plant Physio.* 10: 27-47. (By Hilda F. Rosene and E. J. Lund). 1935
- Proof of the principle of summation of cell E.M.F.'s. *Plant Physiol.* 10: 209-224. 1935
- Dependence of continuous bioelectric currents upon cell oxidation. *Proc. Soc. for Exp. Biol. and Med.* 31: 687-689. 1934
- Evidence from the effects of KNC for the linkage between polar growth, electric potentials and cell oxidation. *Publ. Pug. Sound Biol. Sta.*, 7: 336-344. (By Hilda F. Rosene and E. J. Lund). 1930