

CURRICULUM VITAE  
(May 1997)

KATHERINE ESAU  
Professor of Botany, Emeritus  
Department of Biological Sciences  
University of California  
Santa Barbara, California 93106

Born 3 April 1898, Yekaterinoslav (Ekaterinoslav, now Dnepropetrovsk),  
Ukraine, Russia (now USSR); d. of John Esau and Margrethe Esau (b. Toews).

Naturalized 2 July 1928, San Francisco, California, certificate 2775757.

Education

Primary schools in Russia 1905-16; Golitsin Women's College of Agriculture,  
Moscow, USSR, 1916-17; Agricultural College, Berlin, Germany, 1919-22;  
graduate work, University of California, Berkeley and Davis, California,  
1928-31. PhD, Berkeley, 1931.

Honorary degrees

Dr. Sci. Mills College, Oakland, California, 1962. L.L.D. University of  
California, 1966.

Employment

Sloan Seed Company, Oxnard, California, plant breeding, 1923-24; Spreckels  
Sugar Company, Spreckels, California, breeding sugarbeets for resistance to a  
virus, 1924-28; University of California, College of Agriculture, graduate  
assistant in botany, 1928-31; same institution, academic and experiment  
station ranks: instructor & junior botanist, 1931-37; assistant professor &  
assistant botanist, 1937-43; associate professor & associate botanist,  
1943-49; professor & botanist, 1949-1963; transfer to University of  
California, Santa Barbara, California, professor, 1963-65; professor emeritus,  
recalled, 1965-; without salary since 1972.

### University Instruction

Plant Anatomy, Morphology of Crop Plants, Systematic Botany, Microtechnique. Graduate instruction since 1951 when a Graduate Division was established in Davis: 14 students completed their PhD dissertations and 12 had them published. One more student completed the PhD requirements in Santa Barbara and had the dissertation published in 1981. Served as the Graduate Advisor in Botany at Davis 1953-56, 58-62, including supervision of foreign language examinations and of graduate seminars. Additional service on graduate committees for qualifying examinations and PhD dissertations.

### Committee Service

(Some committees combined Berkeley and Davis faculties.) Academic Senate Com.; Davis Budget Com. 1952-56 (chm. 56); Interdivisional Budget Com. 1958-60; Com. on Com., Northern Sect. 1961-62; Com. on Com., Davis Division 1961-62 (chm. 62); Com. on Graduate Matters, 1961. Administr. Com.: Grad. Group in Botany, Ex. Com. 1953-56, 58-62, chm. 54-56, 61-62. Other Univ. Com.: Research Com. on Agric. Projects, 1953-63; Com. for planning Biol. Sci. Unit 1 Bldg. 1955-56; Com. on Grad. Fellowships and Scholarships for Coll. Agric. 1955; Various promotion and appointment com. Some com. service in Santa Barbara, 1963-65.

### Membership in Scientific and Scholastic Societies

Phi Beta Kappa; Sigma Xi (Pres. Davis Chapter 1949-50; Pres. Santa Barbara Chapter 1970-71); Amer. Assoc. Adv. Sci. (Fellow); Bot. Soc. Amer. (Pres. 1951); Int. Soc. Plant Morphologists; Amer. Soc. Plant Physiol.; Amer. Acad. Arts & Sci.; Nat. Acad. Sci. (Com. on Planning Bot. Res. 10 years ahead; Editorial Board of Proceedings, 3 yrs.; Council of the Academy, 3 yrs.); Amer. Philos. Soc.; Swedish Roy. Acad. Sci.

### Listings

American Men and Women of Science; Who is Who in America; World Who's Who; The International Who's Who; Centennial Record, University of California, Berkeley, California; McGraw-Hill Modern Men of Science.

#### Special Honorary Appointments

- 1950 Vice Pres. Morphology Sec. Seventh Int. Congress of Botany, Stockholm, Sweden.
- 1953 Delegate for AIBS & Bot. Soc. Amer. to inauguration of Clark Kerr as President of the University of California, Berkeley, California.
- 1954 Delegate for National Academy of Sciences and National Research Council to Eighth Int. Congress of Botany, Paris, France.
- 1968 Vice Pres. Eleventh Int. Congress of Botany, Seattle, Washington.

#### Awards and Honors

- 1940 Guggenheim Fellowship for research at Harvard University.
- 1956 Certificate of Merit on Golden Jubilee Anniversary of the Botanical Society of America: "For outstanding contributions in the advancement of botanical science."
- 1969 Medal at the eleventh Internat. Botanical Congress of Botany, Seattle, Washington.
- 1974 New York Botanical Garden Award by selection of a Committee of the Botanical Society of America "for recent publications on the ultrastructure of virus-host relationships in sugarbeets and other plants."
- 1989 National Presidential Medal of Science.
- 1991 Dedication of the Katherine Esau Electron Microscope Facility at the University of California, Santa Barbara

#### Research Support

Financial support of research on ultrastructure of plant tissues, especially phloem, and on effects of plant viruses on the cytology of their hosts was continuously made available through grants from the National Science Foundation beginning with 1961. Termination date of the latest grant is February 28, 1987.

### Dedication of Books

- 1977 Fruits of Angiosperms. By Ingrid Roth. Encyclopedia of Plant Anatomy. Spezieller Teil. Vol. X, Part 1. 675 p. Gebrüder Borntraeger, Berlin, Stuttgart.
- 1984 Contemporary Problems in Plant Anatomy. Richard A. White and William C. Dickison, editors. 598 p. Academic Press, Orlando, Florida.

### Reviewing Service

American Journal of Botany, Editorial Com. 1956-58.  
Reviewing articles submitted for publication: Amer. J. Bot., 10 years; also some for Bot. Gaz., Can. J. Bot., Science; J. Ultrastruct. Res., member of the Editorial Board since 1971.  
Consulting Editor in Plant Anatomy, McGraw-Hill Encyclopedia of Science and Technology 1958-59. Advisory Editor for the same 1962-65.  
Book reviews: 5, Quarterly Review of Biology; 1 each, American Scientist, Botanical Gazette, Torrey Botanical Club.  
Proposals for research grants: NSF, 1953-65 (49); Guggenheim Foundation, 1954-61 (16).  
Service on AAAS Annual Newcomb Cleveland Prize Com. 1954.

### Selected Invitational Lectures and Symposia

- 1946 Faculty Research Lecture, University of California. "Anatomical Research in the Service of Plant Science."
- 1956 Special Lectures Spring 1956 (4 lectures April 3-6). The University of Texas, Department of Botany and the Plant Research Institute. "Vascular Differentiation in Higher Plants."
- 1958 The University of Nebraska, Department of Botany, Lincoln 8, Nebraska. 3 lectures, April 23-25. Phloem, Vascular Differentiation, and Relations Between Plant Viruses and the Tissues of the Host.
- 1960 John M. Prather Lectures in Biology 1959-1960. 3 lectures, April 12, 19, 21 and a seminar. Published: "Plants, Viruses, and Insects." Harvard University Press, Cambridge Massachusetts, 1961.
- 1963 Rutgers. The State University. College of Arts and Sciences. New Brunswick, New Jersey. Seminar arranged by graduate students.

- 1963 Columbia University in the City of New York, Department of Botany, New York 27, N.Y. Seminar for students.
- 1963 Symposium "The Formation of Wood in Forest Trees." M.H. Zimmermann, ed. Academic Press, New York, 1964. K.E.'s topics: "Structure and Development of the Bark in Dicotyledons." Pp. 37-50; "Aspects of Ultrastructure of Phloem." Pp. 51-63. Held, 1963, Harvard University, Harvard Forest, Petersham, Massachusetts.
- 1964 Symposium "Cellular Ultrastructure of Woody Plants." W.A. Coté, Jr., ed. Syracuse University Press, Syracuse, New York, N.Y. Book dedicated to I.W. Bailey, Harvard University. K.E.'s topic: "On the Anatomy of the Woody Plant." Pp. 35-50. Held Sept. 20-26, 1964, at Syracuse University's Pinebrook Conference Center, Upper Saranac Lake, New York.
- 1965 A Sigma Xi-Resa National Lecture 1965-66 Series. Southwest Tour Oct. 15-22 including Chapters or Clubs in Arkansas, Arizona, New Mexico, Texas, and Oklahoma. "Explorations of the Food-Conducting System in Plants." Amer. Sci. 54: 141-157. 1966.
- 1968 Second J.C. Walker Conference in Plant Pathology. University of Wisconsin, Madison, WI. 1968. Three lectures published as five subdivisions under the title: "Viruses in Host Plants. Form, Distribution, and Pathologic Effects." The University of Wisconsin Press, Madison, Milwaukee, and London, 1968. 136 electron micrographs.
- 1973 John Wesley Powell Lecture at 49th Meeting of the Southwestern and Rocky Mountain Division of AAAS, April 19, 1973. "Exploring Plant Virus-Host Cell Relations with the Electron Microscope."
- 1984 University of California Davis 75th Anniversary Celebration including a Department of Botany Symposium. K.E.'s contribution to this symposium, "Communication Channels Between Cells and Their Origin in Higher Plants." (Has been published as Special Paper in the American Journal of Botany 72(10): 1641-1653, 1985, with J. Thorsch as the second author.)
- 1992 The Katherine Esau International Symposium on Plant Structure: Connections, Concepts and Challenges. University of California, Davis 1992.