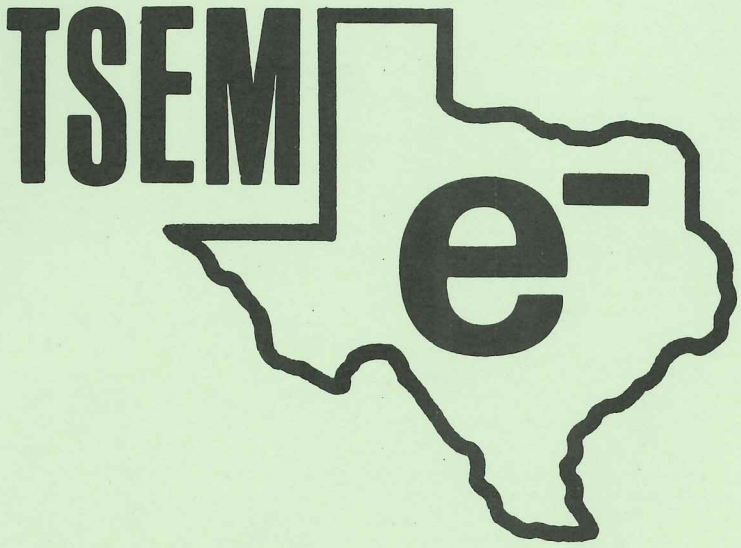


TEXAS SOCIETY FOR ELECTRON MICROSCOPY

TEXAS SOCIETY FOR ELECTRON MICROSCOPY

NEWSLETTER

Vol. 3 No. 1

Winter, 1971

Letters and Inquiries to:

Dr. C. Ward Kischer
Editor, TSEM Newsletter
Department of Anatomy
UTMB
Galveston, Texas 77550

Current Membership Strength: 274 individuals
15 corporations

The Diamond Knife Dilemma-Revisited

We are happy to see that our parent organization has launched its first issue of EMSA BULLETIN, which will subsequently be issued on the 15th of each November, March and July. Could it be they may have been spurred even a trifle by our local publication? If so, we would be pleased our efforts may not have gone unnoticed.

One of the articles appearing in the first issue was on the current attitudes expressed by a sample of current users on the quality and quality control of diamond knives. Written by Dr. Diane L. Van Horn of the Wood Veterans Administration Center in Milwaukee, Wisconsin, the article reports results obtained by a questionnaire Dr. Van Horn distributed at the 1970 EMSA annual meeting and at the 1971 meeting in Boston.

Apparently, the mounting dissatisfaction with suppliers of diamond knives has culminated in some efforts to effect a greater responsibility by the suppliers toward the exercise of more and better quality control.

There are good diamond knives and bad diamond knives, and the only way we as consumers can make that determination is to record the results of cutting our particular tissue and its particular plastic matrix. Among the several revelations discovered by Dr. Van Horn was that only DuPont routinely sectioned with their knives prior to selling them and then selected only one out of every four new knives for this check.

Dr. Van Horn also informed me personally that Hacker Instruments had no electron microscope by which to check sections. To the subject of quality control we would add still another dimension to the list of complaints. What about the matter of liabilities and guarantees?

Note that the specification sheet for DuPont states their knives "may be readily resharpened provided they have not been allowed to become too dull or are not badly chipped or cracked." The statement is headed RESHARPENING. Whereas, Hacker Instruments states under the heading of GUARANTEE, "we further guarantee that the diamond knives can be resharpened three times if in a typically dull condition."

Ladd Industries catalog makes essentially the same statement concerning resharpening, but Mr. Sklar of their organization states this is not a guarantee. Dr. Van Horn indicates that DuPont is doing everything possible to satisfy consumer complaints and now will make good with a replacement any non-resharpened knife which is lost through resharpening. Apparently not so with other suppliers, in spite of guarantees, written or implied. Can you imagine the blow to send a <u>good</u> knife in to the supplier for resharpening and later to be informed, cooly, that the knife either did not withstand the resharpening process or could not be resharpened!

Your Editor was in the midst of pleading a case of a non-resharpenable diamond knife by one of our members to a minor supplier when he was informed that his own knife could not be resharpened to a usuable edge before the diamond was lost. All I have received for my trouble so far has been a returned empty boat!

Now, there are certain questions which come to mind (other than how to revive your Editor from apoplectic shock): First, has the quality of diamond knives increased within, say, the last 5 years? Yes, says Eugene Sklar of Ladd Industries and also agreed to by Dr. Van Horne, Yet, Mr. Sklar says this should not mean any lesser ability to resharpen knives. He should be right. It seems to me if anything an increase in quality should mean a greater ability to resharpen the knives. Second, should a knife be expected to be lost through a first resharpening, if not badly dulled chipped or otherwise damaged, and if resharpened by the original manufacturer? Here the respondents differed. However, it would seem very unlikely, given the manufacturer using proper care, Should the diamond become loosened in its shank it would also seem feasible and likely it could be reset. After all the diamonds are originally set in the metal shank. Why can they not be set again? Third, what are the ethics involved? Even without a guarantee is it reasonable for a firm to advertise resharpening especially in terms which are facilitating, then to excuse themselves from any liability in the event the knife is lost?

If we assume that suppliersand/or manufacturers are truly and sincerely involved in the art of their product as well as the profit, then we must conclude that restitutional or guarantee policy may well force them out of business through loss of profit. If this is so, we may also conclude the attrition rate in original manufacture is high, perhaps unusually so. This could explain, in part, the high cost of diamond knives. Yet, if suppliers must adhere to such a policy they should be required to (1) subscribe to guidelines set forth by state societies or the national organization; or (2) be required to put up a surety bond, for handling knives returned for resharpening, or (3) get out of the business altogether.

Sad but true, most companies and manufacturers will improve their products and customer service only at the pressure by the consumer.

You must make your complaints heard! If manufacturers or suppliers become recalcitrant, force them into ethical practice. Persevere! Otherwise, the diamond knife dilemma may not only be revisited, it may become an accepted hazard of the profession.

Ward Kischer
Editor

PRESIDENT'S MESSAGE

Our first meeting of the current year, in Houston, saw some 110 persons in attendance. Registrants included members and guests from the entire state as well as neighboring ones. I believe that the numbers reflect a growing interest in our organization. If we continue to display this degree of enthusiasm then we shall continue to grow scientifically. At our Houston meeting we heard excellent presentations from Drs. Daniel Pease, Ned Feder, Arnold Seligman and S. J. Singer.

The present meeting represents the first joint symposium of the Louisiana and Texas Societies for Electron Microscopy. The EMSA generously provided us with $500.00 to support our guest speakers which include Drs. Keith Porter, Lee D. Peachey and Robert M. Fischer. A combined meeting of this type hopefully will become an annual event with the next one scheduled for New Orleans in 1973. Our Executive Committee would like to express their appreciation to Ernest Couch, Dmitirij Lang, Venita Allison and Katy Jo Miller for excellent arrangements here in Fort Worth.

The next meeting of the Texas Society for Electron Microscopy will be held in Huntsville in May with Dr. Terry Hoage serving as Chairman of Local Arrangements. The program will emphasize student presentations, abstracts of which will appear in the Texas Reports for Biology and Medicine.

Robert D. Yates
President

A POTPOURRI OF FAVORITE OR UNUSUAL ELECTRON MICROGRAPHS

Fig. 1 Rhabdomyosarcoma from the gluteus maximus muscle. J. C. Stinson and R. A. Turner. Scott-White Hospital, Temple. X24,000.

Fig. 2 "The Original Smiley" found in kidney glomerulus of monkey. Wilhelmina I. Butcher, School of Aerospace Medicine, San Antonio. X8,500.

Fig. 3 Mouse paraganglion cell. J. A. Mascorro and R. D. Yates, The University of Texas Medical Branch at Galveston. X7,500.

Fig. 4 "Male Nucleolus". Bill Winborn, The University of Texas Medical School at San Antonio.

Fig. 5 Inclusion containing virus-like particles from an adrenal tumor cell line. W. B. McCombs and A. Leibovitz. Scott-White Hospital, Temple. X14,000.

Fig. 6 Spheroid body found in an adrenal tumor cell line. W. B. McCombs and A. Leibovitz. Scott-White Hospital, Temple. X14,000.

Fig. 7 Yolk deposition in Rana oocyte. T. R. Hoage, Sam Houston State University. X6,3000.

Fig. 8 Centriole elimination during honeybee spermatogenesis. T. R. Hoage, Sam Houston State University. X17,500.

Fig. 9 Amyloidosis of the rectum. J. C. Stinson and R. A. Turner, Scott-White Hospital, Temple.

Fig. 10 "Hangman's Noose". A portion of a scorpion sperm flagellum (from Centruroides vittatus), air dried on coated grid and shadowed with Pt-Pa. Robert W. Riess, University of Texas at Austin. X6,000.

Fig. 11 "Corn on the Cob". Unidentified bacilli obtained from fractionation and differential centrifugation of Amoeba proteus. Shadowed with paladium-platinum. C. W. Kischer, The University of Texas Medical Branch at Glaveston. X55,000.

Fig. 12 Tip of a glass microelectrode pipette made by Mrs. Tasaki in 1961. Outside diameter of the tip is less than one third of a micron. Donald Duncan and Ricardo Morales. The University of Texas Medical Branch at Galveston.

Fig. 13 Erythrocyte's view of the interior of a mosquito's stomach, gazing down at the microvilli about to attack him. The outline of a single cell is plainly visible, the surface of which has been barely grazed near the center and is surrounded by microvilli cut in cross section. Donald Duncan and Ricardo Morales, The University of Texas Medical Branch at Galveston.

Fig. 14 Scanning electron micrograph of an Acanthocephalon. Venita Allison and J. E. Ubeloker, Southern Methodist University, Dallas, X50.

Fig. 15 Scanning electron micrograph of tetrad spore of Polytrichum moss plant. A. J. Mia, Bishop College, Dallas, and Venita Allison, Southern Methodist University, Dallas. X16,500.

Fig. 16 Transverse section of a portion of a rabbit heart cell depicting A, I, and Z bands, thick and thin filaments, mitochondria, nucleus, Golgi, T tubule, sarcoplasmic reticulum and glycogen. Ann Goldstein, Baylor College of Medicine, Houston. X17,000.

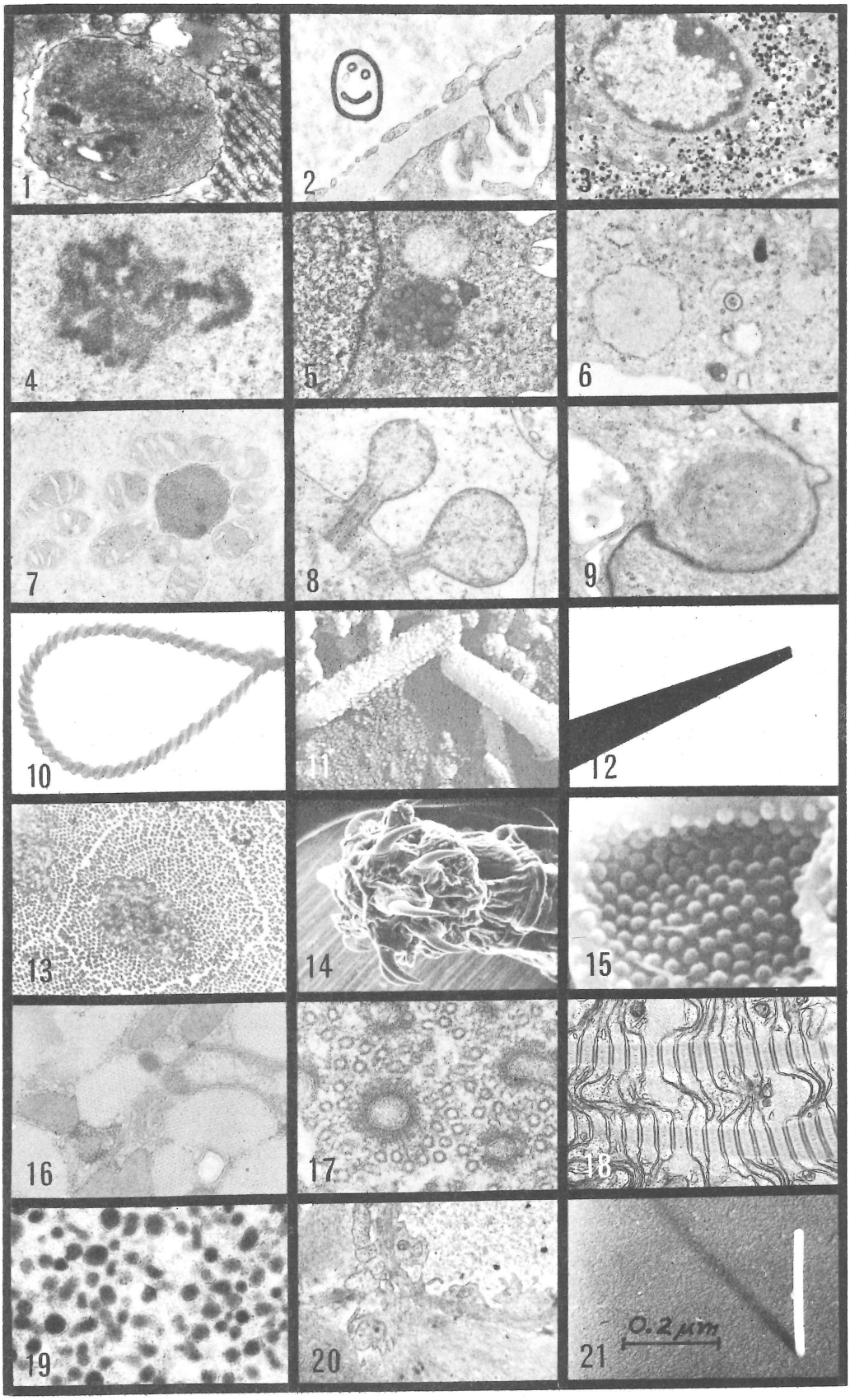
Fig. 17 Apical section of an epithelial cell of larval insect cuticle showing the radial arrangement of microtubules around the finger-like indentation of the plasma membrane. The microtubules are oriented normal to the myoepidermal junction and parallel to the tonofibrillae of the cuticle and thus give great tensile strength to the epidermal cells so that they withstand tensions exerted by tne contracting muscle. Ann Goldstein, Baylor College of Medicine, Houston. X60,000.

Fig. 18 Serial desmosomes in the epithelium of the fresh water weakly electric fish Gnathonemus. R. Bruce Szamier, The University of Texas Medical School at Houston, Houston. X13,500.

Fig. 19 Catecholamine-containing granules in Hamster paraganglion cells. J. A. Mascorro and R. D. Yates, The University of Texas Medical Branch, Galveston. X20,000.

Fig. 20 Amyloidosis of the conjunctiva. J. C. Stinson and R. A. Turner, Scott-White Hospital, Temple. X14,000.

Fig. 21 "The Micro-telephone Pole". An unusual orientation of an unidentified mineral needle (possible rutile) found in the 0.08-0.2μ size fraction of a local clay mineral sample. Drop mounted from an aqueous suspension on a carbon substrate and Pt-Pd shadowed. Tom McKee, Texas A&M.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
0.2 μm

THE BOOK NOOK

INTRODUCTION TO ELECTRON MICROSCOPY - Saul Wischnitzer 1970, Pergamon Press

MODERN DEVELOPMENTS IN ELECTRON MICROSCOPY- Benjamin M. Siegel 1964 Academic Press

THE WORK OF THE ELECTRON MICROSCOPE - Ralph W. G. Wyckoff 1968 Yale University Press

TECHNIQUES FOR ELECTRON MICROSCOPY - Desmond H. Kay Ed. 2nd Ed. 1965, Oxford Press.

INTRODUCTION TO ELECTRON MICROSCOPY - C. E. Hall 1966 McGraw-Hill

ELECTRON OPTICS - B. Paszkowski 1968 Elsevier

ELECTRON MICROSCOPY OF CELLS AND TISSUES - Fritiof S. Sjöstrand 1967, Vol. 1 Academic Press

HISTOLOGICAL TECHNIQUES FOR ELECTRON MICROSCOPY - Daniel C. Pease 1964 2nd Edition Academic Press

SOME BIOLOGICAL TECHNIQUES IN ELECTRON MICROSCOPY - D. F. Parsons, Ed. 1970 Roswell Park Memorial Institute, Buffalo, New York

AN ATLAS OF FINE STRUCTURE OF THE CELL - Don W. Fawcett 1967 W. B. Saunders Co.

ELECTRON MICROSCOPIC ANATOMY - Stanley M. Kurtz, Ed. 1964 Academic Press

ELEKTRONENMIKROSKOPISCHE UNTERSUCHUNGS UND PREPARATIONS-METHODEN - L. Reimer 2nd Ed. 1967 Spring Verlag

CELLS AND TISSUES BY LIGHT AND ELECTRON MICROSCOPY - Edmund B. Sandborn Vol. I 1970 Academic Press

CELLS AND TISSUES BY LIGHT AND ELECTRON MICROSCOPY - Edmund B. Sandborn Vol. II 1970 Academic Press

AN ATLAS OF ULTRASTRUCTURE - Johannes A. C. Rhodin 1963 W. B. Saunders Co.

ELECTRON MICROGRAPHS - BIOLOGY 2, E. Yamada, K. Fukai, and Y. Watanabe, Eds. 1966 (This publication accompanys HITACHI electron microscope)

THE ELECTRON MICROSCOPE IN MOLECULAR BIOLOGY - G. H. Haggis 1966 Longmans

ELECTRON MICROSCOPY: A Handbook for Biologists - E. H. Mercer and M. S. C. Birbeck 2nd Ed. Oxford Press.

ATLAS OF VERTEBRATE CELLS IN TISSUE CULTURE - G. Rose 1970 Academic Press

ADVANCES IN OPTICAL AND ELECTRON MICROSCOPY - R. Barer and V. E. Cosslett, Eds. 1966 Academic Press

ELECTRON MICROSCOPY OF THIN CRYSTALS - P.B. Hirsch 1965 Butterworth

LECTURES ON ELECTRON MICROSCOPY - Robert W. Horne 1965 Instituto superiore di sanita, Rome, Italy

ATLAS OF ELECTRON MICROSCOPY OF CLAY MINERALS AND THEIR ADMIXTURES - H. Beutelspacher and H. W. Van der Marel 1968 Elsevier Publishing Co.

EXPLORING THE STRUCTURE OF MATTER - Jean - Jacques Trillat 1959 Interscience Publishers Inc.

ELECTRON MICROSCOPY AND MICROANALYSIS OF METALS - J. A. Blek and A. L. Davies 1968 Elsevier Publishing Co.

ELECTRON FRACTOGRAPHY - ASTM Special Technical Publication No. 436 1968 American Society for Testing and Materials

FUNDAMENTALS OF TRANSMISSION ELECTRON MICROSCOPY - R. D. Heidenreich 1964 Interscience

TRANSMISSION ELECTRON MICROSCOPY OF METALS - G. Thomas 1962 Wiley

ELECTRON MICROGRAPHS OF LIMESTONES AND THEIR NANNOFOSSILS - A. G. Fischer, S. Honjo, R. E. Garrison 1967 Princeton

INSTRUMENT AND CHEMICAL ANALYSIS ASPECTS OF ELECTRON MICROANALYSIS AND MACROANALYSIS - H. A. Elion 1966 Pergamon Press

BIOLOGICAL TECHNIQUES IN ELECTRON MICROSCOPY - C. Dawes 1971 Barnes and Noble

ELECTRON MICROSCOPY AND ANALYSIS - Edit., W. C. Nixon 1971 Proc. 25th Meeting of EMAG London Institute of Physics

INTRODUCTION TO THE FINE STRUCTURE OF PLANT CELLS - M. C. Ledbetter and K. R. Porter 1970 Springer-Verlag

INDEX TO MICROSCOPY IN THE ASTM LITERATURE - N. Myers 1971
Order from G. G. Cocks, ASTM Comm. E-25, Olin Hall, Cornell Univ., Ithaca, N. Y.

METALLOGRAPHIC POLISHING BY MECHANICAL METHODS - L. E. Samuels 1971 Pitman and Sons

PRACTICAL ELECTRON MICROSCOPY FOR BIOLOGISTS - G. A. Meek 1970 John Wiley and Sons

PRINCIPLES AND TECHNIQUES OF ELECTRON MICROSCOPY: BIOLOGICAL APPLICATIONS, Vol. 1 - M. A. Hayat 1971 Van Nastrand Reinhold Co.

THE ELECTRON-OPTICAL INVESTIGATION OF CLAYS - Edited by J. A. Gard 1971 Mineralogical Society 41 Queen's Gate, London

Many thanks to the following corporate members who generously contributed financial aid for the TSEM/LSEM Joint Symposium:

ADVANCED METALS RESEARCH CORP.
Mr. Thomas Baum, Southwest District Office

OLYMPUS CORPORATION
Mr. Richard O. Geist

CARROLLTON OPTICAL
Mr. John Allison

Special recognition to Southern Methodist University for its financial contribution as Co-Host University, and to the Electron Microscope Society of America for a $500.00 grant to defray the expenses of invited speakers Keith Porter, Lee Peachey and Robert Fischer.

LETTER TO THE EDITOR

Dear Ward:

I would like to remind our members about the EMSA presidental traveling scholarships which are available to students. Besides being a tremendous opportunity for a graduate student, TSEM can show its support for EMSA by urging students to apply for the scholarships. The scholarship covers airfare to the EMSA annual meeting as well as registration fees. The student may stipulate when entering his or her abstract that it be withdrawn if a scholarship is not subsequently awarded.

If we are to become THE strongest and largest state society in the nation as advanced in the president's message of our previous Newsletter then I say this is one place to start. There were no 1971 scholarship entries from our strong biological segment. Other state societies were well represented, let's see that ours is in the future. Complete information is in the recently initiated EMSA Bulletin.

Sincerely,

Tom McKee
Texas A&M

Area News

DALLAS

The University of Texas Medical School, Department of Cell Biology:

Three new members to TSEM:

1) Mary Jo Harrod who received her Ph. D. in October from Southwestern and is on the teaching staff in Cell Biology.

2) Charles R. Hackenbrock, a Ph. D. new to the Cell Biology Department from Johns Hopkins, Baltimore. He is doing some very outstanding work on freeze-etching of membranes and mitochondria.

3) Glenn L. Decker is a new Research Associate to the Cell Biology Department. He works with Dr. Hackenbrock and is from Baltimore, also.

The Cell Biology Department is adding two new scopes to their existing three--a Joelco 100B and a Philips 300. These will be in Dr. Hackenbrock's lab. Delivery is expected within a month.

We are very excited about moving to our new facilities in the Research Bldg (which will be completed in March). The Cell Biology Electron Microscopy Laboratory will be in the basement. Dr. Hackenbrock will be the director of the E. M. lab.

Dr. Bill Neaves presented a seminar here recently entitled "Correlation of Ultrastructure of Testis with the Testosterone Levels in Plasma of Some African Mammals". He now has s joint appointment with Harvard and Nairobi. He will join our department in March.

Dr. Ernest April of Columbia has also presented a seminar recently "Structural Dynamics of Striated Muscle".

Department of Microbiology:

A recently published paper: "Electron Microscopy of Tissue Culture Cells Infected with Brucella abortus. J. Bacteriology, October 1971, 108:535, by B. A. Hatten, S. Y. Huang, M. L. Schulze and S. E. Sulkin.

Southern Methodist University, Department of Biology:

Mrs. Robin Cotton, a graduate student, is a new member to TSEM. Venita F. Allison has recently been awarded a NSF Institutional Grant: Travel $894.00 FY 72-73 to Wayne State University School of Medicine: Collaboration in S.E.M. with Dr. Jeanne Riddle.

SMU also reports that Cronar COS 7 Film makes excellent "lantern slides" of Polaroid PN-55 Scanning Electron Microscope negatives.

Dr. Kristina Tybicks of Rice University visited SMU's Department of Biology and presented a seminar in Parasitology reviewing reproduction and development in certain helminths.

Papers accepted for publication from the EM lab:
Allison, V. F., Ubeloker, J.E., and Cooper, N.B. The Fine Structure of the Cystiarcoid of Aymenolepis diminuta II. The Inner Wall of the Capsule. Z. Parasitenk. 1972 (In press).

Allison, V. F., Sharman, S.P. and Sohal, R. S., Fine Structure of Nerve Cells in the Brain of the House Fly, Musca domestica (Diptera) 29th Ann. Proc. Electron Microscopy Soc. American, Boston, 1971.

Sohal, R. S. and Allison, V. F. Origin of 'Giant' Mitochondria in the flight muscle of the House Fly, Musca domestica. (Abst.) 11th Annual Meeting of the American Society of Cell Biology, New Orleans, 1971.

Sohal, R. S. McCarthy, S. L. and Allison, V. F. The Formation of 'Giant' Mitochondria in the Fibrillar Flight Muscles of the House Fly, Musca domestica L. J. of Ultrastructural Research, 1971 (In press).

Note: The total number of publications from S. M. U.'s E. M. lab during 1971 was 22 (including papers, notes and abstracts). Workers from this lab presented papers at 4 national meetings (in Parasitology, Cell Physiology, Gerontology and at E. M. S. A.).

COLLEGE STATION

Texas A&M, EM Center: John E. Harris, former student of Dr. Whitehouse, completed his Ph. D. in Oceanography. His dissertation was entitled, "Characterization of suspended matter in the Gulf of Mexico and Northern Caribbean Sea."

Dennis B. Barr, also a former student of Dr. Whitehouse completed his Ph. D. in Physics. Title of his dissertation was, "Phase Contrast Polymerography: Enhancement of Image Details In Polymer Electron Microscopy."

GALVESTON

The University of Texas Medical Branch-Department of Pathology:

Norman Granholm, Ph. D., has recently become technical Director of the Lab and a Research Associate in the Div. of Experimental Pathology-Immunology.

1. Characterization of Lymphocytes in Calf Thoracis Duct Lymph. G. A. Beathard, J. C. Fish, D. S. Folse, H. E. Sarles, A. R. Remmers and S. E. Ritzmann, J. of Reticuloendo. Soc. 10: 293, 1971.

2. Lymphocyte-Lymphocyte Interactions in Normal Bovine Thoracic Duct Lymph. G. A. Beathard, J. C. Fish, D. S. Folse, H. E. Sarles, A. R. Remmers, Jr., and S. E. Ritzmann, J. of Reticuloendo, Soc. 10:330, 1971.

3. Characterization of Bovine Hemal Node. D. S. Folse, G. A. Beathard, R. B. Marshall, J. C. Fish, H. E. Sarles, A. R. Remmers, Jrs., and S. E. Ritzmann, J. of Reticuloendo. Soc. 10:461, 1971.

Department of Anatomy: Paper accepted for publication, "On the origin of the hypertrophic scar", H. Linares, C. W. Kischer, M. Dobrkowsky and D. L. Larson. J. Trauma.

Dr. Ward Kischer has recently received a contract from The Shriner's Burns Institute for studies on hypertrophic scarring. The Kent-Cambridge SEM is now installed in the EM laboratory at S.B.I.

We also welcome back from the army 1st. Lt. Franklin Bailey, who will assume the management of the SEM laboratory as Research Associate working with Dr. Kischer.

Department of Human Genetics and Biological Chemistry:

Dr. Bill Brinkley has accepted the position as Director of the division of Cell Biology at the Medical Branch. He will arrive officially on June 1. Dr. Jeffrey Chang is also joining Dr. Brinkley as Professor of Cell Biology and will arrive approximately the same time.

HOUSTON

University of Texas Medical School, Department of Neurobiology: New instrument acquired for the EM lab - LKB Ultratome III. Recent seminars present:

Jeffery Lee Johnson, Ph.D.
University of South Dakota
"Glutamic Acid as a Transmitter Candidate in the Dorsal Sensory Neuron"

Anthony L. F. Gorman, Ph.D.
National Institute of Mental Health
"The Origin of a Neuronal Membrane Potential"

John S. McReynolds, M.D.
National Institutes of Health
"Comparative Physiology of Hyperpolarizing Photoreceptors"

Photios A. Anninos, Ph.D.
University of California at Los Angeles
"Dynamics and Functions of Neural Structure"

M. D. Anderson Hospital, Department of Virology:.

Dr. Shunkichi Hiraki is a new member to TSEM. He joined the Department on October, 1971 as Project Investigator for a period of 1 year.

Dr. Dmochowski has been appointed as an Associate Editor for Cancer Research for the period 1972-1975.

Visitors, Lectures, Seminars:

Dr. Albert J.Dalton, Coordinator for Ultrastructure Studies, National Cancer Institute, Bethesda, Maryland, visited the Department of Virology October 11-12, 1971. Dr. Dalton gave a seminar entitled "Further details on the structure of type C particles" on October 11, 1971.

PAPERS ACCEPTED FOR PUBLICATIONS FROM EM LABORATORY

"Studies of the presence of particles resembling RNA virus particles in human breast tumors, pleural effusions, their tissue culture and milk" by G. Seman, H. S. Gallager, J. M. Lukeman, and L. Dmochowski. Proceedings of the Second National Conference on Breast Cancer in Cancer 1971.

"Symposium: Viruses and Breast Cancer - Introduction" by L. Dmochowski. Proceedings of the Second National Conference of Breast Cancer in Cancer 1971.

"Studies on mouse mammary tumor virus (MTV) and mouse leukemia virus (MuLV) by immunoelectron microscopy" by T. Shigematsu, L. Dmochowski, and W. Clydell Williams, Cancer Research 31, 2085-2097, December 1971.

"Cross-species retrieval of tumorigenicity of rat bone tumor virus (SD-MSV-M) in mice, rats, and hamsters" by L. Dmochowski, M. L. Lewis, T. Shigematsu, J. M. Bowen, and J. L. East, Cancer Research.

"Immunoelectron microscopic studies of type C virus particles in ESP-1 and HEK-1-HRLV cell lines" by T. Shigematsu, E. S. Priori, L. Dmochowski, and J. R. Wilbur, Nature 234: 412-414, December 17, 1971.

"Studies on ultrastructure of Ewing's sarcoma of bone" by K. Hou-Jensen, Elizabeth Priori, and L. Dmochowski, Cancer.

SAN ANTONIO:

A PHS 3 Year Grant for Immunocytologic Studies on Pituitary Gonadotrophins was recently awarded to Dr. Edward G. Rennels.

On December 7, 1971, Dr. A. V. Schally and two of his associates, Dr. L. Debuljuk and Dr. Vehara from the V. A. Hospital, Endocrine and Polypeptide Laboratory, New Orleans, visited the Anatomy Department.

On November 5, Dr. Claude Kordon, Department of Anatomy, UCLA School of Medicine, presented a seminar entitled "Hypothalamic catecholamine and serotonin--containing neurons involved in the regulation of pituitary gonadotropic release in the rat".

Papers accepted for publications from EM lab: Edward L. Sloger, Leonard L. Seelig, Jrs., and Edward G. Rennels, Endocrinology 89: 1223, 1971, Effects of Dehydroepiandrosterone and Cyano-Ketone on Ovarian Weight, Cholesterol Content, and Ultrastructure in PMS-HCG Treated, Immature Rats.

Masataka Shiino, Akira Arimura, Andrew V. Schally and Edward G. Rennels, Ultrastructural Observations of Granule Extrusion from Rat Anterior Pituitary Cells after Injection of LH-Releasing Hormone, Z. Zellforsch. (In Press).

Masataka Shiino, Glenn Williams, and Edward G. Rennels, Ultrastructural Observation of Pituitary Release of Prolactin in the Rat by Suckling Stimulus, Endocrinology (In Press).

TEMPLE

Scott and White Clinic, Department of Pathology:

The following abstracts are being presented at the following meetings:

1. Mr. R. A. Turner and Dr. J. C. Stinson, "Electron Microscope-Useful or Ornamental," First Latin American Congress For Electron Microscopy, Maracaibo, Venezuela, May 24-30, 1972.

2. Dr. J. C. Stinson, "Electron Microscope-Useful or Ornamental," Texas Society of Pathologists, Houston, Texas. January 28-30, 1972.

3. A. Leibovitz, J. C. Stinson, W. B. McCombs, and D. Johnston. "Virus-like-particles in a Human Adrenal Tumor Cell-Line." American Society for Microbiology, Philadelphia, Pennsylvania.

HUNTSVILLE

Sam Houston State University, Department of Biology:

Dr. Terry Hoage reports his new graduate students and their research areas are:

Mrs. Fannie Smith - Ultrastructure of Spermatogenesis in the Nutria.

Mr. Ron Gruener - Comparative ultrastructure of salt glands in Rallidae.

Mr. Thomas Poole - Spermatogenesis in the Texanus group of Orthoptera.

DENTON

North Texas State University, Department of Biology:

The following papers have been accepted for publication:

Tom D. Rogers and Steve Kimsey. Rapid Scanning Microspectrophotometry of Colorless Euglena gracilis and Astasia longa. A Basis for Differentiation. Journal of Protozoology 19 (1): 150-155, 1972.

Tom D. Rogers, Vernon E. Scholes, and H. E. Schlicting, Jr. An Ultrastructural Comparison of Euglena gracilis Klebs, Bleached Euglena and Astasia Longa Pringsheim. Journal of Protozoology 19 (1), 133-139, 1972.

Bauer, Walkinshaw, Halliwell, and Scholes, 1972. Morphology of Nicotiana Tabacum Cells Grown in Contact with Lunar Material. Journal of Experimental Botany (In Press).

Croley, Walkinshaw, Baur, and Scholes, 1972. The use of Papanicolaou Staining Technique for Plant Cells. Bioscience. (In Press).

Holmgren, Hostetter, and Scholes, 1971. Ultrastructural observation of crosswalls in the blue-green alga Spirulina major. Journal of Phycology 7: 309-311.

Lindsey, Vance, Keeter, and Scholes, 1971. Spheroplast formation and associated ultrastructural changes in a synchronous culture of Anacystis nidulans treated with lysozyme. Journal of Phycology. 7: 65-71.

STILLWATER, OKLAHOMA

Oklahoma State University, Department of Physiological Sciences:

TSEM welcomes a new member: Dr. T. E. Staley. Dr. Staley has received a Postdoctoral Fellowship from NIH to study at the University of Washington, Department of Pathology.

Paper accepted for publication from the EM lab: Ultrastructure of neonatal calf intestine and absorption of heterologous proteins (Anat. Rec.) by T. E. Staley.

Public Health Gives Research Grant

The U. S. Public Health Service has granted $38,729 to Oklahoma State for the year ending Aug. 31, 1972.

The grant is continued support for research titled "The Intestinal Barrier in Newborn Ungulates" which is being conducted in the OSU College of Veterinary Medicine.

Dr. E. Wynn Jones, director of veterinary medicine research and graduate education, will serve as principal investigator in this research during one year's leave of absence for Dr. T. E. Staley, associate professor of veterinary anatomy.

NASA-MSC

The Cellular Analytical Section of the Clinical Laboratories at the NASA Manned Spacecraft Center, Houston, is a unique laboratory integrating several analytical techniques which may be of interest to members of TSEM. Operating within this group are a Siemens IA electron microscope, an Applied Research Laboratories EMX-SM electron probe microanalyzer, a Zeiss Universal Microspectrophotometer, a Zeiss Scanning Microspectrophotometer interfaced with a Digital Equipment Corporation PDP-12 computer, and, recently purchased, an ETEC Corporation Autoscan scanning electron microscope. Group members in TSEM include Dr. Stephen L. Kimzey, Head, Dr. Tom D. Rogers, Linda C. Burns and Harold Jordan.

Recent presentations:

"Electron Probe Microanalysis of Cellular Sodium and Potassium Distribution", S. L. Kimzey and L. C. Burns, the International Conference on Physico-Chemical State of Ions and Water in Living Tissues and Model Systems, sponsored by the New York Academy of Sciences, New York City, January 10-12, 1972.

"Some Applications of Rapid Scanning Microspectrophotometry and Automated Cellular Analysis to Biological Investigations", T. D. Rogers, an invited seminar, Division of Biology, University of Texas, Dallas, January 20, 1972.

CORPORATE MEMBER NOTES

Ladd Research Industries reporttwo new products: 1) The Tungsten Basket Evaporation Shield Unit. The holder is readily installed or removed from the vacuum evaporator in seconds. It is designed to hold a tungsten basket at aptimum height during evaporation of metals in vacuum. The complete unit sells for $115.00

The shieldunit sharply reduces deposits of evaporated metals on vacuum evaporator electrodes and bell jar. Specimen coating or shadowing is done through a slot in the Pyrex tube and a corresponding hole in the metal shield. Both pyrex tube and metal shield can be rotated to allow coating or shadowing from any desired angle. The unit cost is $109.00.

Polysciences can now supply the following items: HEPES and nine other good buffers, zwitterionic buffers especially synthesized for use in cell and tissue culture; acrylamide gel electrophoretic reagents and equipment; and concanavalin A, a protein which exhibits specific interactions with certain carbobydrates and glycoproteins.

Don't forget Polysciences has a microscopy catalog, alphabetically indexed, for both light and E.M. Additionally, a new data sheet is available called, MEDICAL APPLICATIONS OF POLYMERS. As for it

TSEM PLACEMENT SERVICE

Positions Wanted

Faculty Teaching and/or Research Position: Extensive experience in electron microscopy and knowledge of techniques for new physiology. Presently interested in fine structure and cytochemistry of glial and mesoderm response to retrograde neuronal atrophy and myelin breakdown. Teaching experience in microanatomy, embryology and neuroanatomy. Can teach gross anatomy. Ph.D., publications, Reference No. 721.

EM Technician: Experienced in ultramicrotomy, preparation techniques, darkroom work and use of the EM. B. A. Degree, male, available any time. Desires position in the Houston area. Reference No. 772.

Position Open

E.M. Technician: For EM laboratory, Dept. of Pathology, William Beaumont General Hospital, El Paso. RCA EMU 4 and a Siemens Elmiskop 101 plus LKB microtome. The interested person should be mainly able to section and to the fixation on biopsy and autopsy material. Pay range between G5-5 and G5-7.