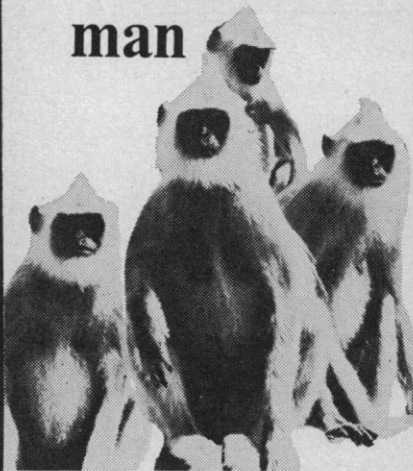


From other primates— lessons for man



LEMUR BEHAVIOR

A Madagascar Field Study
by Alison Jolly

A description of the behavior of troops of *Lemur catta* and *Propithecus verreauxi*—which compares them with other primate societies. Isolated for fifty million years, and now facing extinction, lemurs have evolved many types and give scientists an independent evolutionary line to compare with the old and new world monkeys. This field study provides one of the few descriptions of their individual behavior, troop structure, and their feeding, sleeping, and sexual habits. Illustrated with maps, figures, tables, and photographs.

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SOCIAL COMMUNICATION AMONG PRIMATES

Edited by Stuart A. Altmann

The published proceedings of the international symposium on Communication and Social Interactions in Primates (American Association for the Advancement of Science meeting, Montreal, 1964.) An interdisciplinary approach with contributions from such diverse fields as psychiatry, linguistics, anthropology, and zoology, revealing the major recent research trends in this vital field. Illustrated with numerous charts, graphs, and photographs.

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part of a common multienzyme system; and (iii) rapid proliferation of ER, primarily smooth ER membranes. Experiments with actinomycin D and puromycin indicated that these events reflect the synthesis of new proteins. Experiments which changed the lipid composition of the membranes (by dietary changes, or by the addition of various lipids to defatted membranes) suggested that these lipids do not play a critical role in the differentiation process. Kinetic experiments showed that the activity of the microsomal constitutive enzymes appears first in the rough and then in the smooth ER. Pulse-labeling experiments revealed that the same applies for total, newly synthesized membrane proteins. The results were considered in terms of a series of models which assume that new membrane is produced in the cell either in a one-step operation or in a multistep operation. In the latter case, a "primary" membrane is presumably laid down in a first step and various enzymes are added to it in subsequent steps. Each of these models could apply to a homogeneous membrane within which all constitutive proteins are randomly distributed, or, alternatively, to a mosaic membrane in which each tessera represents a multienzyme system or an aggregate of identical enzymes.

More recent results, which may narrow the choice between these various models, were reported by T. Omura. He showed that in fully differentiated hepatocytes the turnover of microsomal membrane lipids, as followed by regression of labeling with ^{14}C -glycerol, is much faster (half life ~ 40 hours) than the half life of the total membrane proteins (half life ~ 100 hours). Two constitutive enzymes which at present can be isolated and purified from microsomal membranes also proved to have different half lives. Hence, ER membranes appear to be continuously synthesized, even in the fully differentiated hepatocytes of the adult animal. The general turnover rate is relatively high and appears to be different for some of the membrane components. In this situation, it is possible to check on adult animals, under more favorable experimental conditions, some of the results previously obtained in newborns. For instance, kinetic studies on labeled membrane proteins can be carried out at the level of individual, satisfactorily purified enzymes (cytochrome b_5 and NADPH-cytochrome c reductase). The results

show that these enzymes are produced in the rough ER, presumably by attached ribosomes, and subsequently transferred to the smooth ER. They also suggest a superimposed and relatively rapid process of membrane exchanges between the rough and the smooth ER, which leads in time to an equilibrium of the label.

So far, the findings exclude the existence of a homogeneous membrane in which all components turn over in synchrony, and favor a multi-step assembly model, probably of the mosaic version.

G. PALADE

K. PORTER

Rockefeller University, New York,
and Harvard University,
Cambridge, Massachusetts

Forthcoming Events

April

11-13. **Nursing Service and Hospital Administration**, American Hospital Assoc., Chicago, Ill. (E. J. Lanigan, AHA, 840 N. Lake Shore Dr., Chicago 60611)

12-14. **Optical Soc. of Amer.**, Columbus, Ohio. (Miss M. Wurga, OSA, 1155 16th St., NW, Washington, D.C. 20036)

12-14. **Shock Tube Symp.**, 6th intern., Freiburg, West Germany. (R. G. Fowler, Dept. of Physics, Univ. of Oklahoma, Norman 73069)

13-14. **Teaching of Mathematics to Physicists**, Inst. of Physics and Physical Soc. and Inst. of Mathematics and Its Applications, conf., Exeter, England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

13-15. **American Assoc. for Cancer Research**, 48th annual mtg., Chicago, Ill. (Secretary-Treasurer, The Association, 7701 Burholme Ave., Philadelphia, Pa.)

13-16. **British Medical Assoc.**, annual clinical conf., Londonderry, Northern Ireland. (Secretariat, Tavistock Sq., London, W.C.1, England)

14-15. **Echoencephalography**, intern. symp., Univ. of Erlangen-Nurnberg, West Germany. (W. Schiefer, 8520 Erlangen, Krankenhausstrasse 12, West Germany)

14-21. **French Physical Soc.**, 61st exhibition, Paris. (The Society, 33 rue Croulebarbe, Paris 13^e)

15-16. **American Soc. for Artificial Internal Organs**, annual mtg., Atlanta, Ga. (P. M. Galletti, Dept. of Physiology, Emory Univ., Atlanta)

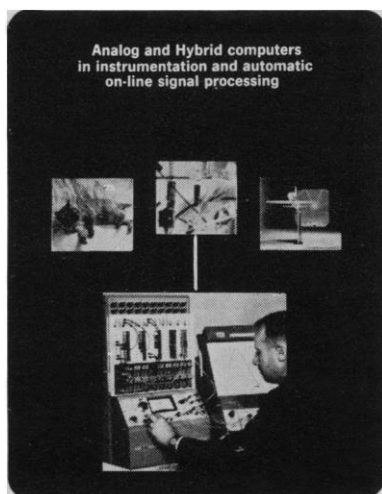
15-16. **Histochemical Soc.**, 18th annual mtg., Chicago, Ill. (G. M. Lehrer, Div. of Neurochemistry, Mount Sinai School of Medicine, 11 E. 100 St., New York 10029)

15-16. **Nucleic Acids Symp.**, Santa Monica, Calif. (M. S. Dunn, 9325 Venice Blvd., Culver City, Calif.)

17-19. **Elementary Particles**, Inst. of Physics and Physical Soc., conf., London,

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England. (Meetings Officer, Inst. of Physics and Physical Soc., 47 Belgrave Sq., London, S.W.1)

17-19. Technical Assoc. of **Pulp and Paper Industry**, 4th annual water conf., Philadelphia, Pa. (Technical Secretary, 360 Lexington Ave., New York 10017)

17-19. Institute of **Electrical and Electronics Engineers**, Jackson, Miss. (J. E. May, 1120 Auburn Dr., Jackson)

17-19. **Urban Transportation**, 2nd intern. conf., Pittsburgh, Pa. (W. H. Shepard, P.O. Box 1291, Pittsburgh 15230)

17-20. American **Geophysical Union**, annual mtg., Washington, D.C. (F. R. Boyd, Eastern Natl. Mtg. Committee, AGU, 1145 19th St., NW, Washington, D.C. 20036)

17-21. American Assoc. of **Immunologists**, Chicago, Ill. (Executive Secretary, Massachusetts General Hosp., Boston)

17-21. American Inst. of **Nutrition**, annual mtg., Chicago, Ill. (Secretary, The Institute, Dept. of Foods and Nutrition, Michigan State Univ., East Lansing)

17-21. American Soc. of **Biological Chemists**, Chicago, Ill. (Secretary, The Society, c/o Harvard Univ., 12 Oxford St., Cambridge, Mass.)

17-21. Central **Service Management**, American Hospital Assoc., Miami Beach, Fla. (E. J. Lanigan, Conv. and Mtg. Bureau, 840 N. Lake Shore Dr., Chicago, Ill. 60611)

17-21. Use of Isotopes and Radiation in **Plant Pathology** Studies, Intern. Atomic Energy Agency and Food and Agriculture Organization, symp., Vienna, Austria. (J. H. Kane, Chief, Conf. Branch, Div. of Technical Information, Atomic Energy Commission, Washington, D.C. 20545)

18-2. International **Hydrographic Bureau**, intern. conf., Monte Carlo, Monaco. (Contre-Amiral Charles Pierre, Quai des Etats Unis, Monte Carlo, Monaco)

18-19. Applications Related Phenomena in **Titanium Alloys**, American Soc. for Testing Materials, symp., Los Angeles, Calif. (The Society, 1916 Race St., Philadelphia, Pa. 19103)

18-20. **Computer Conf.**, Atlantic City, N.J. (American Federation of Information Processing Societies, 211 E. 43 St., New York 10017)

18-20. **Space Instrumentation for Industry**, southeastern instrument conf., Cocoa Beach, Fla. (A. L. Keith, 1127 S. Patrick Dr., Satellite Beach, Fla. 32935)

18-21. National Council of **Teachers of Mathematics**, 45th annual, Las Vegas, Nev. (J. D. Gates, NCTM, 1201 16th St., NW, Washington, D.C. 20036)

19. Intensity of **Casual Relationships in Schizophrenia**: Living in Imagination, Assoc. for the Advancement of Psychoanalysis, New York, N.Y. (The Association, 329 E. 62 St., New York 10021)

19. **Oral Cancer Symp.**, 5th, St. Francis Hospital, Poughkeepsie, N.Y. (M. A. Engelman, 1 E. Academy St., Wappingers Falls, N.Y.)

19-20. 1967 **Electronics and Instrumentation Conf. and Exhibit**, Cincinnati, Ohio. (G. McVey, Procter & Gamble Co., Ivorydale Technical Center, Cincinnati 45227)

19-21. **Extended Care Facilities in General Hospitals**, American Hospital Assoc., Miami Beach, Fla. (E. J. Lanigan, Conv.

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and Mtg. Bureau, 840 N. Lake Shore Dr., Chicago, Ill. 60611)

19-21. **Child Dental Health**, intern. symp., London, England. (D. S. Berman, British Paedodontic Soc. London Hospital Dental Inst., Stepney Way, London, S.E.1)

19-21. Institute of **Electrical and Electronics Engineers**, southwestern conf., Dallas, Tex. (Office of Technical Activities Board, IEEE, 345 E. 47 St., New York 10017)

20-21. Middle Atlantic States **Textile Industry Conf.**, Charlotte, N.C. (G. L. Bassett, Micro Switch, 2410 Dunavants, Charlotte 28203)

20-22. **Biological Energy Conversion**, conf., NASA Ames Research Center, Moffett Field, Calif. (Letters and Science Extension, Univ. of California, 2223 Fulton St., Berkeley)

20-22. **Ohio Acad. of Science**, 76th annual mtg., Dayton, Ohio. (J. H. Melvin, Executive Officer, The Academy, 505 King Ave., Columbus, Ohio 43221)

20-23. **German Roentgen Soc.**, 48th congr., Baden Baden. (H. Poppe, 34 Göttingen, Gosslerstrasse 10, West Germany)

21-24. **American Oil Chemists' Soc.**, Memphis, Tenn. (C. H. Hauber, Executive Secretary, 35 E. Wacker Dr., Chicago, Ill.)

23-26. **European Congr. of Neurosurgery**, 3rd, Madrid, Spain. (S. Obrador, Eduardo Dato, 23, Madrid 10)

23-27. **American Soc. of Mechanical Engineers**, Chicago, Ill. (Meetings Manager, The Society, 345 E. 47 St., New York 10017)

27-28. **Care of Animals for Medical Research**, symp., Kingston, Ont., Canada. (D. B. Jennings, Dept. of Physiology, Queen's University, Kingston)

27-29. **Southwestern Psychological Assoc.**, 14th annual, Houston, Tex. (Mrs. C. Cleland, Southwestern Psychological Assoc., 2104 Meadowbrook Dr., Austin, Tex. 78703)

27-29. **Wildflower Pilgrimage**, 17th annual, Great Smoky Mountains Natl. Park. (Dept. of Botany, Univ. of Tennessee, Knoxville 37916)

28-29. **Biology Colloquium**, 28th annual mtg., Corvallis, Ore. (W. P. Lowry, 1967 Biology Colloquium, Dept. of Statistics, Oregon State Univ., Corvallis 97331)

28-29. **Physics of Superconducting Devices**, symp., Univ. of Virginia, Charlottesville. (B. S. Deaver, Jr., Organizing Committee, Dept. of Physics, Univ. of Virginia, Charlottesville 22903)

28-30. **Wisconsin Acad. of Sciences**, Arts and Letters, annual mtg., Wisconsin State Univ., Oshkosh. (J. Thompson, Birge Hall, Univ. of Wisconsin, Madison 53706)

29. **American Soc. for Clinical Nutrition**, annual mtg., Atlantic City, N.J. (A. B. Eisenstein, 818 S. Meramec Ave., St. Louis, Mo. 63105)

29-4. **American Ceramic Soc.**, 69th annual mtg., New York, N.Y. (Technical, Secretary, The Society, 4055 N. High St., Columbus 14, Ohio)

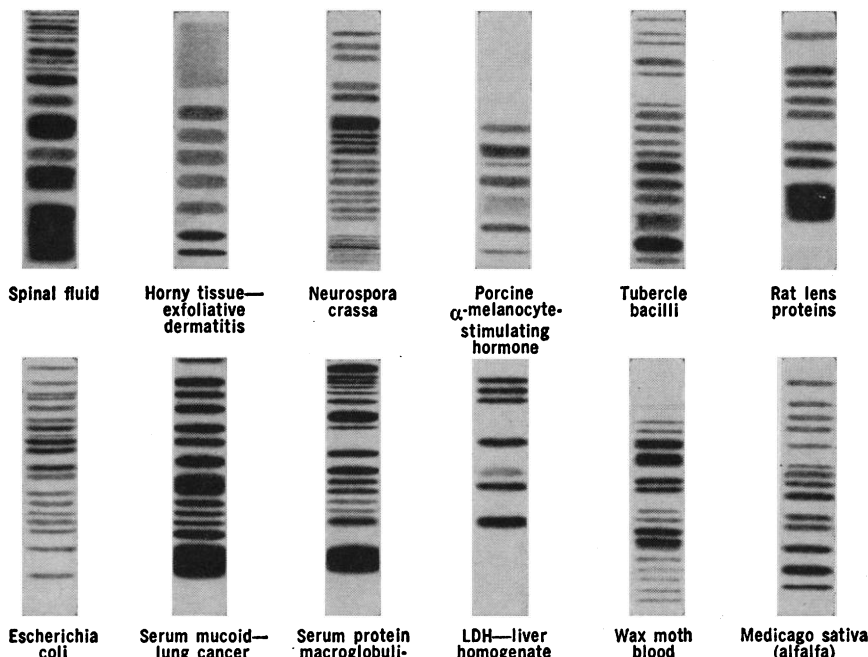
30-3. **Underwater Technology Conf.**, American Soc. of Mechanical Engineers, Hampton, Va. (Meetings Manager, The Society, 345 E. 47 St., New York 10017)

30-5. **International College of Surgeons**, congr., Bal Harbor, Fla. (S. E. Henwood, 1516 Lake Shore Dr., Chicago, Ill. 60610)

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