

SHORT CV**LYNN R. SYKES**

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Born: 16 April 1937, Pittsburgh, Pennsylvania

Present Position: Higgins Professor Emeritus of Earth and Environmental Sciences, Columbia University

Business Address: Lamont-Doherty Earth Observatory of Columbia University
Palisades, New York 10964

e-mail: sykes@ldeo.columbia.edu

Education: Ph.D., Columbia University in Geology, 1965; B.S. and M.S., Massachusetts Institute of Technology, Geology and Geophysics.

Fellowships, Awards, and Honors (Abbreviated List):

Member National Academy of Sciences; American Academy of Arts and Sciences.

Fellow American Geophysical Union, Geological Society of America, Royal Astronomical Society, American Association for Advancement of Science, Geological Society (London). Sloan Fellow, 1969; Guggenheim Fellow, 1988.

Public Service Award 1986, Federation of American Scientists.

John Wesley Powell Award 1991, U.S. Geological Survey.

Medal of Seismological Society of America, March 1998.

American Geophysical Union: Macelwane Award to outstanding young geophysicist for 1970; Walter H. Bucher Medal for "original contribution to the basic knowledge of the earth's crust", 1975.

Vetlesen Prize for development and testing of plate tectonic hypothesis, Jan. 2000.

Scientific Research:

Verification of nuclear test ban treaties; nuclear arms control; evolution of stresses and earthquake activity in California; earthquake prediction; earthquakes and state of stress in plate interiors; New York earthquakes.

Originated ideas of forming Southern California Earthquake Center and Alaskan Volcano Center. One of main contributors to establishment of plate tectonics.

Scientific Committees, Congressional Testimony, Advisory Boards:

Member U.S. Negotiating Team, Threshold Test Ban Treaty, Moscow, 1974.

U.S. Delegations on Earthquake Studies, U.S.S.R., 1973; China, 1974.

Seismological Panel on Yields of Soviet Nuclear Explosions, President's Science Advisor, 1977. Co-organizer of symposium "Verification of Nuclear Test Ban Treaties", American Geophysical Union, Baltimore, MD, June 1983.

Review committee for U.S. Federal Government's program on Earthquake Prediction and Hazards Reduction under President's Science Advisor, 1976.

Chairman, U.S. National Earthquake Prediction Evaluation Council, 1984-1988.

Testified before Congress 5 times on Verification of Nuclear Testing, 1972-1991.

Seismic Verification Advisory Panel, U.S. Congress, Office Technology Assessment, 1986-1987.

U.S. National Committee for the Decade for Natural Hazards Reduction, National Academy of Sciences, National Research Council, 1989-90.
Co-Organizer of symposia on Verification of Nuclear Test Ban Treaty, American Geophysical Union, May 23, 1993 + May 31, 2000

MOST SIGNIFICANT PUBLICATIONS (Of more than 135 to date):

1967 Sykes, L.R., Mechanism of earthquakes and nature of faulting on the mid-Oceanic ridge, *Journal of Geophysical Research*, 72, 2131-2153.

1968 B.L. Isacks, J. Oliver, and L.R. Sykes, Seismology and the new global tectonics, *Journal of Geophysical Research*, 73, 5855-5899.

1969 Molnar, P., and L.R. Sykes, Tectonics of the Caribbean and Middle America regions from focal mechanisms and seismicity, *Bull. Geol. Soc. Am.*, 80, 1639-1684.

1971 Sykes, L.R., Aftershock zones of great earthquakes, seismicity gaps, earthquake prediction for Alaska and the Aleutians, *J. Geophys. Res.*, 76, 8021-8041.

1972 Sbar, M.L., and L.R. Sykes, Contemporary compressive stress and seismicity in eastern North America: An example of intra-plate tectonics, *Bull. Geol. Soc. Am.*, 84, 1861-1882.

1978 Sykes, L. R., Intra-plate seismicity, reactivation of pre-existing zones of weakness, alkaline magnetism, and other tectonics post-dating continental separation, *Rev. Geophys. Space Phys.*, 16, 621-688.

1982 Sykes, L. R., and J. F. Evernden, The verification of a comprehensive nuclear test ban, *Sci. Amer.*, 247, no. 4, 47-55.

1984 McCann, W. R., and L. R. Sykes, Subduction of aseismic ridges beneath the Caribbean plate: Implications for the tectonics and seismic potential of the northeastern Caribbean: *J. Geophys. Res.*, 89, 4493-4519.

1984 Sykes, L. R., and S. Nishenko, Probabilities of occurrence of large plate rupturing earthquakes for the San Andreas, San Jacinto and Imperial faults, California, 1983-2003, *J. Geophys. Res.*, 89, 5905-5927.

1987 Sykes, L. R., and D. M. Davis, The yields of Soviet strategic weapons, *Scientific American.*, 256, no. 1. pp. 29-37.

1988 Byrne, D.E., D.M. Davis and L.R. Sykes, Loci and Maximum Size of Thrust Earthquakes and the Mechanics of the Shallow Region of Subduction Zones, *Tectonics*, 7, 833-857.

1990 Sykes, L.R., and S. Jaumé, Seismic activity on neighboring faults as a long-term precursor to large earthquakes in the San Francisco Bay area, *Nature*, 348, 595-599.

1992 Pacheco, J.F., C.H. Scholz and L.R. Sykes, Changes in frequency-size relationship from small to large earthquakes, *Nature*, v. 355, 71-73.

1996 Sykes, L.R., Dealing with decoupled nuclear explosions under a comprehensive test ban treaty, in *Monitoring a Comprehensive Nuclear Test Ban Treaty*, NATO ASI series E, 303, Kluwer Academic Publishers, Dordrecht, Netherlands.

1997 Triep, E. and Sykes L.R., Frequency of occurrence of moderate to great earthquakes in intracontinental regions, *J. Geophys. Res.*, 102, 9923-9948.

1997 Sykes, L.R., Small Earthquake near Russian Test Site leads to U.S. Charges of Cheating on Comprehensive Nuclear Test Ban Treaty, *F.A.S. Public Interest Report*, 50, no. 6, Federation of American Scientists, Washington DC., 12 p.

1997 Deng, J. and Sykes, L.R., Evolution of stress field in southern California and triggering of moderate-size earthquakes: A 200-year perspective, *J. Geophys. Res.*, 102, 9859-9886.

1999 Sykes, L. R., B. E. Shaw and C. H. Scholz, Rethinking Earthquake Prediction, *Pure and Applied Geophysics*, 155, 207-232.

1999 Kidder, Ray, Lynn Sykes and Frank von Hippel, "False Fears About a Test Ban" *Washington Post*, Op Ed column, October 10, page B7.

2006 Sykes, L. R., and W. Menke, Repeat Times of Large Earthquakes: Implications for Earthquake Mechanics and Long-Term Prediction, submitted *Bull. Seismol. Soc. Amer.*, 97.