

## CURRICULUM VITAE

ALAN G. FIX

Department of Anthropology  
University of California  
Riverside, California 92521  
Telephone (951) 827-5527  
Email: agfix@ucr.edu

### EDUCATION

A.B.	Indiana University	1964	Anthropology
M.A.	University of Michigan	1967	Anthropology
Ph.D.	University of Michigan	1971	Anthropology

### DISSERTATION

Semai Senoi Population Structure and Genetic Microdifferentiation

### ACADEMIC POSITIONS

Assistant Professor of Anthropology, University of California, Riverside, 1970-1976  
Associate Professor of Anthropology, University of California, Riverside, 1976-1984  
Professor of Anthropology, University of California, Riverside, 1984-present  
Guest Member of Staff, Department of Human Genetics, University of Newcastle-upon-Tyne, England, January 1977-July 1977.

### FIELD RESEARCH EXPERIENCE

Malaysia, Semai Senoi, Demography and Genetics, 1968-1969, 1987.

### RESEARCH INTERESTS

Anthropological Genetics, Population Structure, Kin-structured Migration  
Demography of Small-scale Human Populations, Computer Simulation

My primary research interest involves the genetics and demography of small-scale human populations, particularly the role of socio-cultural factors, which structure local populations and influence their evolution. This research program is based on extensive fieldwork with a Malaysian "aboriginal" population, the Semai Senoi. Semai marriage and migration patterns have provided a number of insights into the role of population structure in microevolution, most notably the importance of kinship in structuring migrant groups. The implications of these processes such as kin-structured migration have been modeled using computer simulation.

On a broader scale, I have used culture-historical reconstructions of the origin and cultural differentiation of Malaysian aboriginal groups to study implications for their biology, including differential patterns of malaria incidence in the different groups and the consequent evolution of malarial-protective genes such as hemoglobin E. I have also proposed alternative models for the clinal pattern of gene frequencies across Europe and models for the initial colonization of the Americas. The common thread in all these studies is the elf-conscious use of the broad anthropological perspective, incorporating linguistic, socio-cultural, and archaeological components to understand human diversity and evolution.

## PROFESSIONAL ORGANIZATIONS

American Association for the Advancement of Science, Fellow  
American Association of Anthropological Genetics, Executive Committee  
American Anthropological Association, Fellow  
American Association of Physical Anthropologists  
Associate in Current Anthropology

## SELECTED PUBLICATIONS

- 1972 Haemoglobin E-hereditary elliptocytosis in Malayan Aborigines. *Acta Haematologica* 47:210-216. (L.E. Lie-Injo, A.G. Fix, J.M. Bolton, and R.H. Gilman).
- 1974 Neighbourhood knowledge and marriage distance: the Semai case. *Annals of Human Genetics* 37:327-332.
- 1975 Genetic microdifferentiation in the Semai Senoi of Malaysia. *American Journal of Physical Anthropology* 43:47-55. (A.G. Fix and L.E. Lie-Injo).
- 1975 Fission-fusion and lineal effect: aspects of the population structure of the Semai Senoi of Malaysia. *American Journal of Physical Anthropology* 43:295-302.
- 1977 The Demography of the Semai Senoi. *Anthropological Papers*, No. 62, Museum of Anthropology, University of Michigan, Ann Arbor. 123pp.
- 1978 The role of kin-structured migration in genetic microdifferentiation. *Annals of Human Genetics* 41:329-339.
- 1979 The anthropological genetics of small populations. *Annual Review of Anthropology* 8:207-230.
- 1981 Kin-structured migration and the rate of advance of an advantageous gene. *American Journal of Physical Anthropology* 55:433-442.
- 1982 Genetic structure of the Semai. In, *Current Developments in Anthropological Genetics: II. Ecology and Population Structure*. M.H. Crawford and J.H. Mielke, eds., pp. 179-204. N.Y.:Plenum.
- 1982 Endogamy in settlement populations of Semai Senoi: potential mate pool analysis and simulation. *Social Biology* 28:62-74.
- 1982 The mode of inheritance of ovalocytosis/elliptocytosis in Malaysian Orang Asli. *Human Genetics* 61:250-253. (A.G. Fix, A.Baer, and L.E. Lie-Injo).
- 1984 Kin groups and trait groups: population structure and epidemic disease selection.

- American Journal of Physical Anthropology 65:201-212.
- 1985 Evolution of altruism in kin-structured and random subdivided populations. *Evolution* 39:928-939.
- 1989 A model of kin-migration in plants. *Theoretical and Applied Genetics*. 77:332-336. (D.A. Levin & A.G. Fix).
- 1989 Semai Senoi mortality: Two census method. *American Journal of Human Biology*. 1:471-477.
- 1989 Semai Senoi fertility and population dynamics: Two census method. *American Journal of Human Biology*. 1:463-469.
- 1991 Changing sex ratio of mortality in the Semai Senoi, 1969-1987. *Human Biology* 63:211-220.
- 1993 Kin-structured migration and isolation by distance. *Human Biology* 65:193-210.
- 1994 Detecting clinal and balanced selection using spatial auto-correlation analysis under kin-structured migration. *American Journal of Physical Anthropology*. 95:385-397.
- 1995 Malayan paleosociology: implications for patterns of genetic variation among the Orang Asli. *American Anthropologist* 97:313-323.
- 1996 Gene frequency clines in Europe: demic diffusion or natural selection? *Journal of the Royal Anthropological Institute (ns)*2:625-643.
- 1997 Gene frequency clines produced by kin-structured founder effects. *Human Biology* 69:663-673.
- 1999 *Migration and Colonization in Human Microevolution*. Cambridge University Press. 236 pp.
- 2000 Genes, language, and ethnic groups: reconstructing Orang Asli prehistory. *Bulletin of the Indo-Pacific Prehistory Association* 19:11-16.
- 2001 CA\* Forum: Perspectives on Tierney's *Darkness in El Dorado*. *Current Anthropology* 42:266-268.
- 2002 Foragers, farmers, and traders in the Malaysian Peninsula: origins of cultural and biological diversity. In, K. Morrison and L. Junker (eds.) *Beyond the Forest: Long-term Histories of Forager-Traders in South and Southeast Asia*. Cambridge University Press. Pp. 185-202.
- 2002 Colonization models and initial genetic diversity in the Americas. *Human Biology*.

74:1-10

- 2003 Simulating hemoglobin history. *Human Biology* 75:607-618.
- 2004 Kin-structured migration: causes and consequences. *American Journal of Human Biology* 16:387-394.
- In Press Rapid deployment of the five founding Amerind mtDNA haplogroups via coastal and riverine colonization. *American Journal of Physical Anthropology*.

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