# KENNETH MONRAD WEISS

# <u>CONTACT INFORMATION</u>: *email* kmw4@psu.edu *phone* (814) 865-0989 *fax* (814) 863-1474 *web page:* http://www.anthro.psu.edu/weiss\_lab/index.shtml

# EDUCATION:

Oberlin College	B.A.	1963	Mathematics
St Louis University	Certificate	1965	Graduate Program in Meteorology
University of Michigan	M.A.	1969	Anthropology
	Ph.D.	1972	Biological Anthropology

# **EMPLOYMENT HISTORY:**

1960-63	Computer Programmer	US Pub Health Svce; Radiological Health	
1964-68	Meteorologist	US Air Force (Captain)	
1969-70	Lecturer and Tchg Fw	Univ of Michigan, Dept of Anthropology	
1972-73	Research Associate	Univ of Michigan, Dept Human Genetics	
1973-85	Assistant Professor	Univ of Texas, Center for Demographic and Population Genetics	
	to Professor	& School of Public Health, Houston	
1977	Visiting Scholar	Stanford Univ, Dept of Genetics	
1980-82	Adjunct Assoc Prof	Rice Univ, Dept of Anthropology	
1985-94	Head, and Professor of	Dept of Anthropology, The Pennsylvania State University	
	Anthropology and Biology		
1986	Adjunct Professor	Human Genetics, Univ of Pittsburgh School of Public Health	
1990	Visiting Scholar	University of Oxford	
1992	Visiting Fellow	Dept of Biology, Yale University	
1994	Distinguished Professor	Depts of Anthropology & Biology, Penn State University	
2000	Evan Pugh Professor	Depts of Anthropology & Biology, Penn State University appointments also in the Integrative Bioscience Genetics and Cell & Deveopmental Biology programs, and in the Science, Technology, & Society program	

# A SELECTION OF FELLOWSHIPS, PRIZES, HONORS, ETC.:

Juan Comas Prize, American Association of Physical Anthropology, 1972 NIH Research Career Development Award (RCDA), 1976-81 Harriet Cunningham Citation for Scientific Writing, Texas Medical Assoc., 1986 Faculty Scholars Medal, Life and Health Sciences, Penn State University, 1993 Fellow, American Association for the Advancement of Science, elected in 1995 Evan Pugh University research Professor, 2000 ---External Faculty member, Santa Fe Institute, 2004— External Faculty member, Dept of Genetics, Southwest Foundation for Biomedical Research Bea Fowlow Lectureship in Medical Genetics, Univ of Calgary, 2009

## PUBLICATIONS I. BOOKS AND MONOGRAPHS:

- *Model Life Tables for Pre-Industrial Populations* (1972) PhD Thesis, University of Michigan (University Microfilms)
- *Demographic Models for Anthropology* (1973) Memoir No. 27, Society for American Archeology, Washington, D.C.
- *Demographic Genetics* (1975) KM Weiss and P Ballonoff (eds). Dowden, Hutchinson, & Ross, Stroudsburg, Pa (Benchmark Papers in Genetics).
- *The Demographic Evolution of Human Populations* (1976) RH Ward and KM Weiss (Eds). Academic Press, London.
- *Radiation Carcinogenesis in Man* (1988) with WJ Schull, F Fagnani for the United Nations Scientific Committee on the Effects of Atomic Radiation. Annex F, in Sources, Effects, and Risks of Ionizing Radiation, 1988 Report to the General Assembly. New York: United Nations Press, pp. 405-543.
- *Genetic Variation and Human Disease: Principles and Evolutionary Approaches*. (1993; reprinted 1995, 1997 with corrections, 1999). Cambridge University Press.
- *Variation in the Human Genome* (1996) Chadwick, DJ, Cardew, G Eds. London: Ciba Foundation Press. (a symposium organized by myself and RH Ward)

Genetics and the Logic of Evolution, K Weiss, A Buchanan, New York: J Wiley (2004)

*The Mermaid's Tail: Four Billion Years of Cooperation in the Making of Living Things.* Cambridge, MA: Harvard University Press, 2009.

# II. PAPERS IN SCIENTIFIC JOURNALS, BOOK CHAPTERS, REVIEW ARTICLES: 1972

Weiss, KM A generalized model for competition between hominid populations. J. Hum.Evol.,1:451-456. Weiss, KM On the systematic bias in skeletal sexing. Am. J. Phys. Anthropol., 37: 239-250.

Livingstone, FB, and KM Weiss The future of physical anthropology. Yearbook of Phys. Anthropol., 16: 148-154.

Weiss, KM A general measure of human population growth regulation. Am. J. Phys. Anthropol., 37: 337-344.

## 1973

Weiss, KM A method for approximating age-specific fertility in the construction of life tables for anthropological populations. Hum. Biol., 45:195-210.

# 1975

Weiss, KM The application of demographic models to anthropological data. Hum. Ecol., 3: 87-103.

Weiss, KM Demographic disturbance and the use of life tables in anthropology. Soc. for Am. Archeol., Memoir 30: 45-56.

Weiss, KM The mysterious adventures of *Electro sapiens*: a critical review of computer simulation in anthropology. Rev. Anthropol., 2:183-191.

Neel, JV and Weiss, KM (1975) The genetic structure of a tribal population, the Yanomama Indians. XII. biodemographic studies. Am. J. Phys. Anthropol., 42: 25-51.

Smouse, PE and KM Weiss Discrete demographic models with density-dependent vital rates. Oecologia, 21:205-218.

#### 1976

10. Weiss, KM, PE Smouse The demographic stability of small human populations. J. Hum. Evol., 5: 59-73.

Weiss, KM, T Maruyama Archeology, population genetics, and studies of human racial ancestry. Am. J. Phys. Anthropol., 44: 31-49.

Ward, R, K Weiss The demographic evolution of human populations. J. Hum. Evol., 5: 1-23.

Weiss, KM Demographic theory and anthropological inference. Ann. Rev. Anthropol., 5: 351-81.

## 1977

Schull, WJ and KM Weiss Genetic epidemiology: cohorts of families and malignant disease. 3rd Nat. Cong. Hum. Genet., Monterrey, Mexico, Proceedings.

## 1978

Weiss, KM Large studies, small populations. Rev. Anthropol., 4: 329-

337.Weiss, KM Archeological approaches to population inference. Am. Antiq., 43: 773-776.

Weiss, KM Age patterns of birth and death: the contribution of demographic anthropology to our understanding of present disease patterns and population structure. In: Anthropology for the Future. D. Shimkin, S. Tax, and J. Morrison, eds. Urbana, Ill: Univ. of Illinois Press, pp. 132-135.

Weiss, KM and WJ Schull Demography and the measurement of Darwinian fitness. Proc., 1977 Conference of Int. Union for the Sci. Study of Popul., vol. III: 391-407.

Chakraborty, R, WJ Schull, and KM Weiss Heredity and risk of disease. Environ. Internat., 1: 371-377.

# 1979

Mueller, WH and KM Weiss Color blindness in Colombia. Annal. Hum. Biol., 6: 137-145.

- 20. Chakraborty, R, KM Weiss, and WJ Schull A test for the randomness of the occurrence of a disease trait in familial or other similar ordered sequences of epidemiological data. Proc. Nat. Acad. Sci., 77: 2974-2978.
- Weiss, KM, R Chakraborty, D Rossmann, and S Norton Wherefore art thou, Romio? Name frequency patterns and their use in automated genealogy assembly. In: B Dyke and W Morrill (eds). Genealogical Demography. New York, Academic Press, pp. 41-61.
- Chakraborty, R, KM Weiss, D Rossmann, S Norton Distribution of last names. In: B Dyke and Morrill (eds). Genealogical Demography. New York, Academic Press, pp. 63-69.
- Shows, TB et al. (incl. KM Weiss) International system for human gene nomenclature. Cytogenet. and Cell Genet., 25: 96-116.
- Weiss, KM Identity crisis in anthropology. Spectra of Anthropol. Prog. (India), 2: 32-33.

Chakraborty, R, KM Weiss, and RH Ward Evaluation of relative risks from the correlation between relatives. Med. Anth., summer (1980): 397-414.

Weiss, KM, R Chakraborty, WJ Schull, D Rossmann, S Norton The Laredo epidemiology project. In: J Cairns, JL Lyons, M Skolnick (eds). Cancer Incidence in Defined Populations. Cold Spring Harbor Laboratory, Banbury Reports, No. 4: 267-284.

#### 1981

- Weiss, KM Evolutionary perspectives on human aging. In: P Amoss & S Harrell (eds). Other Ways Growing Old. Stanford University Press, Stanford, Ca., Chapter 1, pp 25-51,251-253.
- Weiss, KM Voices of our ancestors. In: J Mielke and M Crawford (eds). Current Developments in Anthropological Genetics. I. Theory and Methods. New York, Plenum Press, Chapter 1, pp. 1-17.
- Schull, WJ and KM Weiss Genetic epidemiology: four strategies. Epidemiol. Rev., 2: 1-18. 30. Weiss, KM Biomedical and other researches on whole-population surveys of vital records:
- problems and strategies for data analysis. So. Asian Anthropol. (India),1: 57-67.
- Smouse, PE, KM Weiss, R Chakraborty A simple test for aggregation of disease occurrence in genealogical data. Hum. Hered., 31: 334-338.
- Norton, SL, AV Buchanan, DL Rossmann, R Chakraborty, KM Weiss Data entry errors in an on-line operation. Computers in Biomed. Res., 14: 179- 198.

#### 1982

- Weiss, KM and R Chakraborty Genes, populations, and disease: a problem- oriented review, 1930-1980. In: F.Spencer (ed). Physical Anthropology: 50 Years of Progress. NY, Academic Press, pp. 371-404.
- Schull, WJ and KM Weiss Genetic and familial factors in cancer: a population genetics perspective. Proc., Symp. on Host Factors in Human Carcinogenesis. Int. Agency Res. Cancer Scientific Monographs No. 39: 87-106. IARC, Lyon.
- Weiss, KM, Chakraborty, R, Majumder, PP Problems in the assessment of relative risk of chronic disease among biological relatives of affected individuals. J. Chron. Dis., 35: 539-551.
- Chakraborty, R and KM Weiss Comment on 'bioassay of kinship in populations of Middle Eastern origin and controls' by N Morton, R Kennett, S Yee, and R Lew. Curr. Anthropol., 23: 163-164.
- Buchanan, AV, RJ Schwartz and KM Weiss An equivalence class name libarary for given names [surnames] from Laredo, Texas. 1st [2d] C.D.P.G. Reports, Center for Demographic and Population Genetics, Houston.

- Weiss, KM, R Chakraborty, AV Buchanan, RJ Schwartz Mutations in names: implications for assessing identity by descent from historical records. Hum. Biol., 55: 313-322.
- Weiss, KM The evolutionary basis of alcoholism: a question of the neo-cortex. In: J Hartford and T Samorajski (eds). Alcoholism and Aging: Social, Biological, and Medical Topics. New York, Raven
- 40. Weiss, KM and WJ Schull Identifying groups at high risk of colorectal cancer. In: J Ingall and A Mastromarino (eds). Prevention of Hereditary Large Bowel Cancer. Prog. Clin. and Biol. Res., vol. 115, pp. 81-103. New York, Raven Press.

Majumder, PP, R Chakraborty, KM Weiss Relative risks of disease in the presence of incomplete penetrance and sporadics. Stat. in Med., 2: 13-24.

Weiss, KM Aging and disease rates. J.Am.Med.Assoc., 249: 2328.

## 1984

- Schwartz, RJ, KM Weiss and AV Buchanan Looking into the black box: Practical approaches to record linkage. Annales de Demographie Historique (France), 84: 119-128.
- Strong, LC, J Herson, C Haas, K Elder, R Chakraborty, K Weiss, P Majumder Cancer mortality in relatives of retinoblastoma patients. J. Nat. Cancer Inst., 73: 303-312.
- Katz, RL. and KM Weiss Diagnosis and epidemiology of condyloma acuminatum. J. Am. Med. Assoc., 251: 1028-29
- Weiss, KM and CL Hanis All silent gallstones are not silent. New England J Med., 310: 657-658.
- Weiss, KM The number of members of the genus Homo who have ever lived, and its evolutionary implications. Human Biology, 56:637-49.
- Weiss, KM and R. Chakraborty Multistage risk models and the age pattern in familial polyposis coli. Cancer Inv., 2: 443-448.
- Buchanan AV, Weiss KM, Schwartz RJ, MacNaughton NL, McCartan, Bates S Reconstruction of genealogies from vital records: the Laredo epidemiology project. Comp. Biomed. Res., 17: 326-351.

50. Weiss, KM, RE Ferrell, CL Hanis (1984) A New World Syndrome of metabolic diseases with a genetic and evolutionary basis. Ybk Physical Anthrop, 27:153-178.

- Schull, WJ, KM Weiss. The status of human risk estimation.
- Chakraborty, R, KM Weiss, PP Majumder, LC Strong, J Herson (1984) A method to detect excess risk of disease in structured data: cancer in relatives of retinoblastoma patients. Genetic Epidemiol., 1:229-244.

Weiss, KM, RE Ferrell, CL Hanis, PL Styne (1984) Genetics and epidemiology of gallbladder diseases in New World native peoples. Am J Human Genet., 36: 1259-78.

# 1985

- Weiss, KM The biology of aging, and the quality of later life. In C Gaitz and T Samorajski (eds). Aging 2000: Our Health Care Destiny, Vol. I: Biomedical Issues. New York, Springer, 29-49.
- Weiss, KM Phenotype amplification, as illustrated by cancer of the gallbladder in New World peoples. In R Chakraborty and E Szathmary (eds). Etiology of Complex Diseases in Small Populations: Ethnic Differences and Research Approaches. New York, Alan R Liss, 179-198.
- Weiss, KM The Biology of Aging and the Quality of Later Life. Home study course (CME Accredited) for family physicians. New York: Audio Visual Medical Marketing; cassette with manual.
- Schwartz, RJ, Weiss, KM, Buchanan AV Error control in a biomedical data base. MDComputing: Computers in Med. Prac., 2: 19-25.
- Buchanan, AV, Weiss, KM, Chakraborty, R, Anderson, DE, and MacNaughton, N Breast Cancer Epidemiology in Laredo, Texas. J. Natl. Cancer Inst., 74: 1199-1206.
- Weiss, K. Comment on article by D Schindler. Curr Anth 26: 490- 491.
- Weiss, KM. Diseases of environmental transition in Amerindians and related peoples. Collegium Anthropologicum (Yugoslavia) 9: 49-61.

- 60. Weiss, KM, Chakraborty, R, Smouse, PE, Buchanan, AV, Strong, LC Familial aggregation of cancer in Laredo, Texas, a generally low-risk Mexican-American population. Genetic Epidemiol., 3:121-143
- Weiss, KM. Avarice aforethought and the fundamental premise of sociobiology (Commentary). Brain and Behavioral Sciences, 9:210-211.
- Weiss, KM and Katz, RM Infection with Human Papillomavirus in women with cervical disease in Laredo, Texas, 1960-1980. Texas Med., 82:21-25.
- Chakraborty, C, and Weiss, KM The frequencies of complex diseases in hybrid populations. Am J Phys Anthropol, 70: 489-503, 1986.
- Weiss, KM, Woolford, E Comment on 'The settlement of the Americas: a comparison of the linguistic, dental, and genetic evidence', by J Greenberg et al. Curr Anthropol, 27:491-2.

- Chakraborty, RC, Weiss, KM Detection of excess disease risk in family data: response to Lubin and Bale. Genetic Epidemiol., 4:454-456.
- Weiss, KM, Georges, E, Aguirre, A, Gonzalez Francis, J, Ruiz, R, Levy, BM, Buchanan, AV. Cleft lip/palate in Mayans the state of Campeche, Mexico. Human Biology, 59:775-783.
- Katz, RL, Veanattukalathil, S., Weiss, KM Human Papillomavirus infection and neoplasia of the cervix and anogenital region in Hodgkin's disease. Acta Cytologica, 31:845-854.

# 1988

- Weiss, KM. In search of times past: gene flow and invasion in the generation of human diversity. In CGN Mascie-Taylor and GW Lasker, eds, Biological Aspects of Human Migration. Cambridge, Cambridge University Press, pp. 130-166.
- Weiss, KM Adaptation and the Aging Human. In: Schaie, KW and Schooler, C,
- eds., Social Structure and Aging: Psychological Processes. Hillsdale, NJ: Erlbaum, pp. 79-84. 70. Chakraborty, R, and KM Weiss Admixture as a tool for finding linked genes and detecting that
- difference from allelic association between loci. Proc. Natl. Acad. Sci. US 85: 9119-9123. Ferrell, RE, Kamboh, MI, Sepehrnia, BS, Adams-Campbell, LL, Weiss, KM Genetic variation in the
- apolipoproteins C-II and C-III. In, Malmendier, CL, ed., Eicosanoids, Apolipoproteins, Lipoprotein Particles, and Atherosclerosis, New York, Plenum, 1988, pp. 81-85.

# 1989

Weiss, KM, Chakraborty, R Age-specific risks for cancer as determined by multi-stage models of carcinogenesis. In T Krishnan, ed., Statistics in Mediicine, Bombay, Himalaya Pub House, pp. 64-91.Weiss, KM A survey of human biodemography J Quant Anthropol 1:79-151, 1989.

- Weiss, KM Japan: certainties and uncertainties. Proceedings, IBC technical conference, The Effects of Small Doses of Radiation, IBC, London, 1989.
- Weiss, K, Ulbrecht, J, Cavanagh, P, Buchanan, A Diabetes mellitus in American Indians:

characteristics, origins and preventive health care implications. Med Anthropol., 11: 283-304, 1989. Weiss, KM Are the known chronic diseases related to the human lifespan and its evolution? American Journal of Human Biology, 1: 307-319, 1989.

- Weiss, KM, Chakraborty, R Multistage models and the age-patterns of cancer: does the statistical analogy imply genetic homology? In Herrera, L, ed., Familial Adenomatous Polyposis, New York, Alan Liss, pp 79-89.
- Weiss, KM Transitional diabetes and gallstones in Amerindian peoples: genes or environment? Armelagos, G and A Swedlund, (eds) Health and Disease of Populations in Transition: Epidemiological, and Anthropological Perspectives, Bergin & Garvey, pp. 103-121.
- Weiss, KM Biology, homology, and epidemiology. In Adams, J, Lam, DA, Hermalin, AI, and PE Smouse (eds.) Convergent Questions in Genetics and Demography, New York, Oxford University Press, 189-206.
- 80. Ferrell, RE, Kamboh, MI, Majumder, PP, Valdez, R, and KM Weiss Genetic studies of human apolipoproteins. XIII. Quantitative polymorphism of apolipoprotein C-III in the Mayans of the Yucatan peninsula. Hum Heredity, 40: 127-135.
- Schurr, TG, Ballainger, SW, Gan, Y-Y, Hodge, JA, Merriweather, A, Lawrence, DN, Knowler, WC, Weiss, K, Wallace, DC Amerindian mitochondrial DNAs have rare Asian mutations at high frequencies suggesting a limited number of founders. Am J Human Genetics, 46: 613-623.
- Weiss, KM The biodemography of variation in human frailty. Demography, 27: 185-206.
- Weiss, KM Basic concepts in population genetics. Chapter in Text Manual,
- "Medical Genetics: 1990", Bethesda, NIH.
- Weiss, KM Selected quantitative aspects of genetic counseling. Chapter in Text Manual, "Medical Genetics: 1990", Bethesda, NIH.

Weiss, KM Duplication with variation: metameric logic in evolution from genes to morphology. Yearbook of Physical Anthropology, 33: 1-23.Weiss, KM Cancer models and cancer genetics. Epidemiology 1: 486-90.

# 1991

- Kamboh, MI, Weiss, KM, Ferrell, RE Genetic studies of human apolipoproteins. XVI. APOE polymorphism and cholesterol levels in the Mayans of the Yucatan Peninsula, Mexico, Clinical Genetics, 39: 26-32.
- Weiss, KM Natural and unnatural crosses. (Editorial) Ethnicity and Disease, 1:231-235.
- Frayer, DW and Weiss, KM Obituary: Janos Nemeskeri. Am. J. Physical Anthropol., 84: 213-218.
- 90. Weiss, KM Aspects of contemporary disease problems: are chronic diseases 'genetic'? Coll. Anthropol. (Yugolsav.), 15:87-99
- Ahn, Y.I., Valdez, R, Reddy, A.P., Cole, S.A., Weiss, K.M., and Ferrell, R.E. DNA polymorphisms of the apolipoprotein AI/CIII/AIV gene cluster influence plasma cholesterol and triglyceride levels in the Mayans of the Yucatan Peninsula, Mexico. Human Heredity 41: 281-289.
- Kidd, JR, Black, FL, Weiss, KM, Balazs, I, Kidd, KK Studies of three Amerindian populations using nuclear DNA polymorphisms. Human Biology, 63: 775-794.
- Chakraborty, R., Weiss, KM Genetic variation of the mitochondrial DNA genome in American Indians is at mutation-drift equilibrium. Am. J. Phys. Anthropol. 86: 497-510

# 1992

- Thomas, D, Darby, S, Fagnani, F, Hubert, P, Vaeth, M, and Weiss, K. Definition and estimation of lifetime detriment from radiation exposures: principles and methods. Health Physics, 63: 259-272.
- Schull, WJ and KM Weiss Radiation and human cancer. Adv. Radiation Biol., 215-258.
- Buchanan, AV, Weiss, KM Infant mortality in a Mexican-American Community, 1950-77. Social Biology, 38: 233-241.
- Weiss, KM Individual vs Population Admixture. (Letter) Am. J. Epidemiol., 135: 835-837.
- Torroni, A, Schurr, TG, Yang, C-G, Szathmary, EJE, Williams, RC, Schanfield, MS, Troup, GA, Knowler, WC, Lawrence, DN, Weiss, KM, Wallace, DC Native American mitochondrial DNA analysis indicates that the Amerind and the Nadene populations were founded by two independent migrations. Genetics, 130: 153-162

Weiss, K., Kidd, K., Kidd, J. A Human genome diversity project. Evolutionary Anthropology, 1: 80-82.

100. Wood, JW, Weiss, KM, Buchanan, AV Hazards models for the human life course. Yearbook of Phys. Anthropol., 35: 43-87.

Wood, JW, Milner, GR, Harpending, HC, Weiss, KM The osteological paradox: problems of inferring prehistoric health from skeletal samples. Current Anthropol., 33: 343-370.

Weiss, K.M., Cavalli-Sforza, L.L., Kidd, K.K. A letter to American anthropologists about the human genome diversity (HGD) initiative, and a call for help (letter), Anthropology Newsletter, 33: 50-52.

- Weiss, KM Medieval mappaemundi and the conceptual map of genetics. In Sing, CF and Hanis, CL (eds) Genetic Variability in Human Diseases: Cells, Individuals, Families and Populations. Oxford Press, pp. 1-38.
- Valdez, R., Seidell, J.C., Ahn, Y I, Weiss, KM (1993) A new Index of abdominal adiposity as an indicator of risk for cardiovascular disease. A cross- population study. Int. J. Obesity 17: 77-82.
- Weiss, KM, Buchanan, AV, Moore, JH, Valdez, R, Campbell, J Amerindians and the price of modernization. In Smith, M, Bilsborough, A, Schell, L, Watts, E (eds), Urban Ecology and Health in the Third World, Cambridge Univ. Press, 221-243.
- Kidd, J.R., Kidd, K.K., and Weiss, K.M. The human genome diversity initiative. Human Biology, 65:1-6.
- Weiss, KM, Connor, A, Weeks, S Evolutionary models of quantitative disease risk factors. Human Biology, 65: 917-940.
- Buchanan, AV, Sherry, St, Weiss, KM, McGarvey, ST, Neel, JV, and Stoneking, M. Extraction of DNA from frozen red blood cells. Human Biology, 65: 647-654.

Weiss, KM American Origins. Invited Commentary, PNAS, 91: 833-835.

- 110. Weiss, KM A toe, a tooth, and a vertebra: the genetic dimensions of complex morphological traits. Evol. Anthropol. 2: 121-134.
- Wood, JW, Weeks, SC, Bentley, GR, Weiss, KM Human population biology and the evolution of aging. In Crews, DE and Garruto, RM, eds., Biological Anthropology and Aging: An Emerging Synthesis, Oxford University Press, pp.19-75.
- Russell, ME, Weiss, KM, Buchanan, AV, Etherton, TD, Moore, JH, Kris-Etherton, PM Plasma lipids and diet of the Mvskoke Indians. J. Clin Nutrition, 59: 847-852.
- Long, KZ, Wilson, R, Wood, JW, and Weiss, KM Proportional hazards analysis of diarrhea due to enterotoxigenic Escherichia coli and breast feeding in a cohort of urban Mexican children. Am. J. Epidemiol., 139: 193-205.
- Weiss, K.M., Bollekens, J., Takashita, K., and F.H.Ruddle Distal-less and other homeobox gene family members in the evolution and development of the dentition. J. Exper. Zool., 270: 273-284.
- Weiss, KM, Buchanan, A., Daniel, C, Stoneking, M. Optimizing utilization of DNA from rare or archival anthropological samples. Hum. Biol., 66:789-804.

# 1995

Weiss, KM, Ruddle, FH, Bollekens, JA Dlx and other homeobox genes in the morphological development and evolution of the dentition. Connective Tissue Research, 32: 35-40.

Weiss, KM Report to National Science Foundation on Molecular Biotechnology for Genome Diversity Archiving (public, but not formally published).

Weiss, KM What recapitulates what? Genetics and the Evolution of Development, Evolutionary Anthropology, 3:216-222.

Weiss, KM Implications of genetic variation within and between human populations. Pop. Res. and Policy Rev., 14:315-325.

#### 1996

120. Weiss, KM Variation in the human genome. Ciba Bulletin 42: 9-11.

Weiss, KM Biological anthropology (letter). Nature 379: 293.

- Weiss, KM Biological variation is inherent in humanity. Cultural Survival, 20: 26-28.
- Santos, F, Rodriguez-Delfin, L, Pena, S, Moore, J, Weiss, K North and South Amerindians may have the same major founder Y chromosome haplotype. Am. J. Hum. Genet., 58:1369-1370.
- Weiss, KM Is there a 'paradigm' shift in genetics? Lessons from the study of human diseases. Molecular Phylogenetics and Evolution, 5:259-265.
- Nakamura, S, Stock, D, Wynder, K, Bollegens, J, Takeshita, K, Nagai, B, Chiba, S, Kitamura, T, Freeland, T, Zhao, Z, Minowada, J, Lawrence, J, Weiss, K, Ruddle, F Genomic analysis of a new mammalian Distal-less gene: Dlx7 Genomics, 38:314-324.
- Stock, DW, Buchanan, AV, Zhao, Zhiyong, Weiss, KM. Numerous members of the Sox
- family of HMG box-containing genes are expressed in mouse teeth. Genomics, 37:234-237.
- Stock, DW, Ellies, D, Zhao, Z, Ekker, M, Ruddle, FH, Weiss, KM The evolution of the Dlx gene family. PNAS 93: 10858-10863.

#### 1997

Stock, DW, Weiss, KM, Zhao, Z T Developmental and evolutionary genetics of the mammalian dentition. BioEssays, 19: 481-490.

Weiss, KM New and renewed opportunities in anthropological genetics. In Boas, NT, Wolfe, LD, eds. *Biological Anthropology: The State of the Science*, 2<sup>nd</sup> Ed. Oregon State University Press.

130. Weiss KM, Cavalli-Sforza LL, Dunston GM, Feldman M, Greely HT, Kidd KK, King M, Moore JA, Szathmary E, Twinn CM; North American Regional Committee of the Human Genome Diversity Project, Proposed model ethical protocol for collecting DNA samples. Houst Law Rev. 1997; 33(5):1431-74

- Weiss, K, Zhao, Z, Stock, D Dynamic interactions and dental patterning. Cr Rev Oral Biol and Med, 9:369-398
- Weiss, K, Stock, DW, Zhao, Z, Ruddle, F, Shashikant, S The genetic basis of dental patterning. Eur J Oral Sciences, 106 (Supp.):55-63.
- Ellies, DL, Stock, DW, Hatch, G, Giroux, G, Weiss, KM, Ekker, M Relationship between the genomic organization and the overlapping embryonic expression patterns of the zebrafish *dlx* genes. Genomics, 45:580-590.
- Nickerson, D, Taylor S, Weiss, K, Clark, A, Hutchinson, R, Stengard, J, Salomaa, V, Vartianinen, E, Boerwinkle, E, Sing, C DNA sequence diversity in a 9.7kb region of the human lipoprotein lipase Gene. Nature Genetics, 19:233-240.
- Clark, A, Weiss, K, Nickerson, D, Taylor, S, Buchanan, A, Stengard, J, Salomaa, V, Vartianinen, E, Boerwinkle, E, Sing, C Haplotype structure and population genetic inferences from nucleotide sequence variation in human lipoprotein lipase. Am J Human Genet, 63:595-612.

Weiss, KM In search of human variation. Genome Res., 8:691-697

Weiss, KM Coming to terms with human variation. Ann Rev Anthropol, 27: 273-300.

Stengard, J, Weiss, K, Sing, C An ecological study of association between coronary heart disease mortality rates in men and the relative frequencies of common allelic variations in the gene coding for apolipoprotein E. Human Genetics, 103: 234-241..

Terwilliger, J, Weiss, K. Linkage disequilibrium mapping of complex disease: fantasy or reality? Curr Op Biotechnol, 9:578-594..

# 1999

- 140. Weiss, KM, Stock, DS, Zhao, Z Homeobox genes. In Ulijaszek, S, Johnston, F, Preece, M eds, Cambridge Encyclopedia of Human Growth and Development, Cambridge University Press.
- Weiss, KM, Stock, DS, Zhao, Z Growth factors. In Ulijaszek, S, Johnston, F, Preece, M eds,

Cambridge Encyclopedia of Human Growth and Development, Cambridge University Press.

Weiss, KM, Stock, DS, Zhao, Z Tooth development. In Ulijaszek, S, Johnston, F, Preece, M eds, Cambridge Encyclopedia of Human Growth and Development, Cambridge University Press.

#### 2000

Templeton, AR, Clark, AG, Weiss, KM, Nickerson, DA, Boerwinkle, E, Sing, CF. Recombinational and Mutational Hotspots within the Human Lipoprotein Lipase Gene. Am J Hum Genet. 66: 69-83.

- Zhao, Z, Stock, D, Buchanan, A, Weiss, K. Expression of Dlx genes during murine dental development, Dev, Genes, Evol., 210: 270-275.
- Zhao, Z, Stock, DW, Weiss, KM Development and evolution of dentition patterns and their genetic basis. In M, Ferguson, M, and Smith, P., eds. *Development, Function and*
- Evolution of Teeth, Cambridge Univ. Press, pp 152-172.
- Weiss, K. Revisiting phenotypes in an age of genotypes. Am J Phys Anthropol, 111: 295-299.
- Weiss, K, Fullerton, SM Phenogenetic Drift and the evolution of genotype-phenotype relationships Theor. Pop. Biol, 57: 187-195.

Weiss, K, Ward, R James V Neel (1915-2000): founder effect (obituary). Am J Hum Genet 66: 755-761. Ward, R, Weiss, K. Obituary for JV Neel. Anthropology Newsletter, (May)

150. Mattevi, V, Fiegenbaum, M, Salzano, F, Weiss, K, Moore, J, Monsalve, MV, Hutz, M. Beta-globin gene cluster haplotyes in two North American indigenous populations. Am J Phys Anth, 112:311-317.

- Liu H, Labeur C, Xu CF, Ferrell R, Lins L, Brasseur R, Rosseneu M, Weiss KM, Humphries SE, Talmud PJ.Characterization of the lipid-binding properties and lipoprotein lipase inhibition of a novel apolipoprotein C-III variant Ala23Thr. J Lipid Res. 41:1760-71.
- Weiss, K, Terwilliger, J How many diseases do you have to study to map one gene with SNPs? Nature Genetics, 26: 151-157.

Templeton, A, Clark, A, Weiss, K, Nickerson, D, Boerwinkle, E, Sing C. Cladistic Structure within the Human Lipoprotein Lipase Gene. Genetics, 156:1259-75

Weiss, K, Buchanan, A Rediscovering Darwin after a Darwinian Century, Evol Anth., 9: 187-200 Nickerson DA, Taylor SL, Fullerton SM, Weiss KM, Clark AG, Stengard JH, Salomaa V, Boerwinkle E, Sing CF. Sequence diversity and large-scale typing of SNPs in the human apolipoprotein E gene. Genome Res.10:1532-45.

- Fullerton SM, Clark AG, Weiss KM, Nickerson DA, Taylor SL, Stengard JH, Salomaa V, Vartiainen E, Perola M, Boerwinkle E, Sing CF. Apolipoprotein E variation at the sequence haplotype level: implications for the origin and maintenance of a major human polymorphism. Am J Hum Genet. 67:881-900.
- Weiss KM. A view on the science: physical anthropology at the millennium. Am J Phys Anthropol. 111:295-9.

#### 2001

Buchanan, A, Risch, G, Robichaux, M, Sherry, S, Batzer, M, Weiss, K. Long DOP-PCR of rare archival anthropological samples. Human Biology, 72: 911-926.

- Weiss, K. Consulting the Oracle: Reverence, but Circumspection. Analytic book review of McKusick V, et al. Eds, *Mendelian Inheritance in Man*, 12<sup>th</sup> ed, Genetic Epidemiol 19: 468-472, 2001.
- 160. Weiss, KM \*Omics: A Quick Guide. Physical Anthropol (Newsletter item), 1(4):3-4
- Weiss, K. Legitimate and illegitimate views of the HGDP, Politics and the Life Sciences 12:334-335.
- Thomas, D, Borecki, I, Thomson, G, Weiss, K, Almasy, L, Blangero, J, Nielsen, D, Terwilliger, J, Zaykin, D, MacCluer, J Evolution of the simulated data problem. Genetic Epidemiol.21 (Supp 11): S325-S331.
- Little, M, Badgley, C, Beall, C, Balick, M, Munstermann, L, Weiss, K, Bert, T, Chernoff, B. A framework for a program in the Human Dimensions of Biodiversity. Biol. Internat 42: 3-15.

- Weiss, K, Clark, A Linkage disequilibrium and the mapping of complex human traits. Trends in Genetics, 18:19-24.
- Sumiyama, K, Irvine, S, Stock, D, Weiss, K, Kawasaki, K, Shimizu, N, Shashikant, C, Miller, W, Ruddle, F. Genomic structure and functional control of the Dlx3-7 bigene cluster. Proc Nat Acad Sci 99: 780-785.
- Hlusko, L, Mahaney, M, Rogers, J, Weiss, K. A Comparison of Two Techniques to Describe Molar Crown Size: Estimated Crown Area versus Actual Crown Area. Am J Phys Anth, 117: 172-189.
- Weiss, K, Schull, W Perspectives fulfilled: The work and thought of JV Neel (1915 2000). Persp. Biol. Med, 45:46-65.
- Weiss, K We hold these truths to be self-evident (Crotchets & Quiddities; first installment of a regular column). Evol. Anth 10:199-203
- Weiss, K Biology's theoretical kudzu: the irrepressible illusion of teleology (Crotchets & Quiddities), Evol. Anth., 11: 4-8.
- 170. Weiss, K Goings on in Mendel's garden (Crotchets & Quiddities). Evol. Anth., 11:40-44.
- Weiss, K. Is the message the medium? Biological traits and their regulation. (Crotchets & Quiddities) Evol. Anth., 11: 88-93.
- Weiss, K., Hayashida, F KulturCrisis! Cultural evolution going round in circles. (Crotchets & Quiddities ) Evol. Anth., 11: 136-141.
- Weiss, K. Good vibrations: the silent symphony of life. (Crotchets & Quiddities ) Evol. Anth. 11: 176-182.
- Weiss, K. How the eye got its brain. (Crotchets & Quiddities) Evol Anth 11: 215-219.
- Stengård, J, Clark, A, Weiss K, Kardia, S, Nickerson, D, Salomaa V, Ehnholm, C, Boerwinkle, E, Sing, C. Contributions of 18 additional DNA sequence variations in the gene coding for apolipoprotein E to explaining variation in quantitative measures of lipid metabolism. Am J Hum Genet, 71: 501-517.
- Fullerton SM, Clark AG, Weiss KM, Taylor SL, Stengard JH, Salomaa V,Boerwinkle E, Nickerson DA. Sequence polymorphism at the human apolipoprotein AII gene (APOA2): unexpected deficit of variation in an African-American sample. Hum Genet. 2002 Jul;111(1):75-87.

Weiss, K. Come to me my melancholic baby! (Crotchets & Quiddities). Evol. Anth. 12: 3-6.

Kawasaki, K, Weiss, K. Mineralized tissue and vertebrate evolution: the secretory calcium-binding phosphotprotein (SCPP) gene cluster. PNAS, 100:4060-4065.

- Weiss, K Not guilty by reason of doubt. Epidemiology, 14:1222-124.
- 180. Weiss, K Richard H Ward: Wild Ride of the Valkyries, obiturary, Am J Hum Genet. 71: 1079-1083.
- Weiss, K., Buchanan, A Evolution by phenotype. Persp. Biol. Med., 46: 159-182.
- Weiss, K Phenotype and genotype. In Hall, B, Olson, W *Keywords in Evolution and Development*, Harvard Press, 279-288.
- Weiss, K Ludwik Fleck and the art-of-fact. (Crotchets & Quiddities) Evol. Anth., 12: 168-172.
- Weiss, K. THINK! Being a student of Frank B Livingstone. Hum. Biol. 75: 625-628.
- Weiss, K., Aldridge, K What stamps the wrinkle deeper on the brow? (Crotchets & Quiddities) Evol. Anth., 12:205-210.
- Weiss, K., Sholtis, S Dinner at Baby's (Crotchets & Quiddities), Evol. Anth., 12:247-251
- Terwilliger, J, Weiss, K. Confounding, Ascertainment Bias, and the Quest for a Genetic "Fountain of Youth" Annals of Medicine, 35: 532-544.

#### 2004

Kittles, R, Weiss, K. Race, ancestry, and genes: implications for defining disease risk. Ann Rev Genomics and Human Genetics, 4:33-67.

Weiss, K. The frog in taffeta pants (Crotchets & Quiddities), Evol. Anth., 13:5-10.

190. Weiss, K. Doin' what comes natur'lly (Crotchets & Quiddities), Evol. Anth., 13?47-52

- Weiss, K. The unkindest cup. Lancet, 363: 1489-1490.
- Fullerton SM, Buchanan AV, Sonpar V, Taylor S L, Smith J, Carlson C S, Salomaa V, Vartiainen E, Stengård J, Boerwinkle E, Clark AG, Nickerson DA, Weiss KM Fine-Scale Investigation of Variation in the *APOA1/C3/A4/A5* Gene Cluster and the use of LD-based Marker SNPs to represent human genetic variation. Human Genetics, 115: 36-56.
- Weiss, K. Ponce de Leon and the Telomere of Youth (Crotchets & Quiddities), Evol. Anth., 13:82-88.
- Weiss, K. Thomas Henry Huxley (1825-1895) puts us in our place. J Exper Zool/Mol Dev Evol, 302:196-206

Kawasaki, K., Suzuki, T., Weiss, K. Genetic basis for the evolution of vertebrate mineralized tissue, Proc. Natl. Acad. Sci., 101: 11356-11361.

Weiss, K. The smallest grain in the balance (Crotchets & Quiddities), Evol. Anth., 13:122-126.

Weiss, K. Fetal flaws. New Scientist, 184:35-37.

# 2005

Weiss, K. Perfume (Crotchets & Quiddities), Evol. Anth., 13:205-210

200. Weiss, K. The phenogenetic logic of life. Nature Rev. Genetics, 6: 36-45.

Weiss, K. Cryptic causation of human disease: reading between the (germ) lines. Trends in Genetics, 21:82-88.

- Weiss, K., Buchanan, A. 'The' genetic code. (Crotchets & Quiddities), 14:6-11.
- Weiss, K. Seeing through a ceiling fan (Crotchets & Quiddities), 14:45-48.

Weiss, K. To bde or not to bde: sex and the bdelloid rotifer. (Crotchets & Quiddities), 14:93-98.

Sholtis, S, Weiss, K, Phenogenetics, Genotypes, Phenotypes, and Variation. In Hall, B and Hallgrimsson, B *Variation*, NY: Academic Press, 2005, pp 499-523.

- Weiss, K. 'Genetic': one word, several meanings. Invited chapter for Scriver, C. et al., eds,
- The Metabolic and Molecular Basis of Inherited Disease, Chapter 2.1.
- Kawasaki, K, Weiss, K Phenogenetic drift in vertebrate tooth evolution, PNAS 101: 11356-61.

Kawasaki, K, Weiss, K Evolutionary genetics of vertebrate tissue mineralization: the origin and evolution of the secretory calcium-binding phosphoprotein family. Mol. Dev. Evol./J Exper Zool., 306:295-316.

Weiss, K. The reluctant calf. (Crotchets & Quiddities), 14: 127-131.

210. Weiss, K., Buchanan, A. Concept of complex trait genetics. *Encyclopedia of Genetics, Genomics, Proteomics And Bioinformatics*, 8 vols., New York, J Wiley, Specialist Review Chapter 58.

Weiss, K Racing around, going nowhere (Crotchets & Quiddities), Evol. Anth. 14:165-169.

# 2006

- Weiss, K. Polymorphisms: origin and maintenance. In D. Cooper, Ed., *Encyclopedia of the Life Sciences*, 5 vols., New York, J. Wiley.
- Weiss, K. Allele spectrum in human genetic disease, In D. Cooper, Ed., *Encyclopedia of the Life Sciences*, 5 vols., New York, J. Wiley.
- Weiss, K., Lawson, H A metaphoric rise to stardom (Crotchets & Quiddities), 14: 213-217.

Weiss, K. The clergyman's wife and the parrot. (Crotchets & Quiddities), 15:3-7.

- Buchanan, A, Weiss, K, Fullerton, SM Dissecting complex disease: the quest for the philosopher's
- stone? (a forum article with commentary and response) Int J Epidemiol, 35: 562-571 and 593-596
- Weiss, K. Had Reverend Jenyns said 'yes' (Crotchets & Quiddities) 15: 47-51.
- Weiss, K. Dark matter, coming to light. (Crotchets & Quiddities) 15:83-87.
- Kwasaki, K, Weiss, K, Genetic Basis for the Evolution of Vertebrate Mineralized Tissue. In, Baeuerlein, E, Ed., Handbook Of Biomineralization, Vol. 1: The Biology of Biominerals Structure
- Formation, Chapter 19, pp 331-347, Berlin, Wiley-VCH.
- 220. Weiss, K. Coding Fregoli's illusion. (Crotchets & Quiddities) Evo. Anth.15: 127-131.
- Weiss, K. Sherlock Holmes and the empty cab. (Crotchets & Quiddities) Evol. Anthropol., 15: 160-166.
- Weiss, K. Evolution in action in cells and organisms, Invited commentary, Int. J. Epidemiol., 35:1159-60
- Buchanan, Fullerton, Weiss. Response to Khoury & Gwinn. Int. J. Epidemiol. 35: 1364-65.

Weiss, K., Kawasaki, K. Reading the palimpsests of life. (Crotchets & Quiddities), 15:207-210.

# 2007

- Weiss, K., Smith, FH Out of the veil of death rode the one million! Neandertals and their genes. BioEssays, invited commentary, 29(2):105-110.
- Weiss, K. Evolution and complex human biomedical phenotypes. Henry Stuart Talks series, invited contribution (commercial powerpoint presentation series).
- Weiss, K. Filling the cup of alteration. (Crotchets & Quiddities), 16: 6-11.
- Weiss, K. On babies and bathwater (Commentary). Amer. Ethnol., 34:240-242.
- Kawasaki, K, Buchanan, A., Weiss, K Gene Duplication and the Evolution of Vertebrate Skeletal Mineralization, *Cells, Tissues, and Organs*, 186, 7 24.
- 230 Weiss, K. What big eyes you have, Grandma! (Crotchets & Quiddities), 16:43-48.

Weiss, K. Comments in Novartis Symposium book *Tinkering* (Halgrimsson, B; Lieberman, D, Eds., various pages)

- Mao, X, Bigham, A, Mei, R., Gutierrez, G, Weiss, K, Brutsaert, T, Leon-Velarde, F, Moore, L.,
- McKeigue, P., Shriver, M., Parra, E. A genome-wide admixture mapping panel for Hispanic/Latino populations. Am. J. Hum. Genet., 80:1171-1178.

Weiss, K Finding hippocampus minor (Crotchets & Quiddities), Evol. Anth., 16: 88-93

- Weiss, K. The Scopes trial (Crotchets & Quiddities), Evol. Anth., 16: 126-131
- Weiss, K. Overview thoughts on genetics: Walking the line between denial and dreamland, or genes are involved in everything but not everything is 'genetic'. Chapter 12 in Weinstein, M, Vaupel, J, Wachter, K, Eds. Biosocial Surveys. Washington, National Academies Press, pp 231-247.

Weiss, K, Bigham, A "So mortal and so strange a pang: A tribute to Paul T Baker" (Crotchets & Quiddities), 16: 164-171

Weiss, K, Kurland, J Going on an antedate. (Crotchets & Quiddities), 16:204-209.

#### 2008

Weiss, K. All roads lead to everywhere! (Crotchets & Quiddities), 17:88-92

- Kawasaki, K, Weiss, K SCPP gene evolution and the dental mineralization continuum. J Dent Res. 87(6):520-531.
- 240 Lambert, B, Terwilliger, J, Weiss, K *ForSim:* A tool for exploring the genetic architecture of complex traits with controlled truth. Bioinformatics, 24: 1821-1822, 2008.
- Weiss, K. The Good, the Bad, and the Ugli (Crotchets & Quiddities), 17:129-134
- Weiss, K. Clarissa's house. (Crotchets & Quiddities), 17: 166-170.

Weiss, K. Tilting at Quixotic Trait Loci (QTLs): an evolutionary perspective on genetic causation. Genetics, 179: 1741-1756.

Seikou Shintani, Naofumi Kamakura, Mitsuhiko Kobata, Satoru Toyosawa, Tomoyuki Onishia Akie Sato, Kazuhiko Kawasaki, Kenneth M. Weiss, Takashi Oshima. Identification and characterization of integrin-binding sialoprotein (IBSP) genes in reptile and amphibian, Gene, epub.

Weiss, K. A formidable shape...that seem'd Woman. (Crotchets & Quiddities), 17:208-212.

Weiss, K. Joseph Adams in the Judgment of Paris (Crotchets & Quiddities), 17:245-249.

# 2009

Weiss, K Darwin as anthropologist, anthropologist as Darwin. NSF web project for the Darwin Bicentennial, http://www.nsf.gov/news/special\_reports/darwin/.

Weiss, K. Boost, don't baste, "this prodigious number of children"! (Crotchets & Quiddities), 18:3-8.

Buchanan, A, Sholtis, S, Richtsmeier, J, Weiss, K. What are genes 'for' or where are traits 'from'? What is the question? BioEssays, 31:198-208.

250 Weiss, K, Long, J Non-Darwinian Estimation: My Ancestors, My Genes' Ancestors, Genome Research, in press.

Weiss, K. Boost, don't based "This prodigious number of children", (Crotchets & Quiddities), 18:3-8

Weiss, K. "There is no intra-specific struggle in nature", (Crotchets & Quiddities), 18:50-54.

# 2010

Weiss, K., Buchanan, A The cooperative genome. Invited paper in prep for a special issue on the evolution of complexity, Int J Developmental Biol., in press.

Weiss, K. Having a Jolly good time—together! or Evolution by Cooperative Interaction. Curr. Anthropol., in press.

Weiss, K. How lightning saved the Persians. (Crotchets & Quiddities), Evolutionary Anthropology

Weiss, K. Pieces of eight! (Crotchets & Quiddities), Evolutionary Anthropology

Weiss, K Gray's Anatomy. (Crotchets & Quiddities), Evolutionary Anthropology

Kawasaki, K, Buchanan, A, Weiss, K Biomineralization in humans: making the hard choices in life. Ann Rev Genet

Weiss, K The Fixed Period (Crotchets & Quiddities), Evolutionary Anthropology