

Guinea around 1300 B.C. and reaching New Zealand by A.D. 1000. The Eskimo culture developed on the Siberian side of the Bering Strait around A.D. 1, and between A.D. 500 and 1100 it spread eastward across the American Arctic. The traditional interpretation postulating the arrival around 300 B.C. of the Japanese people to expand and displace the indigenous Ainu is wrong. The Tainos, the people encountered by Christopher Columbus, are one of the peoples whose cultures underwent parallel developments in the Antilles, following a population movement out of South America around the time of Christ.

These are Irving Rouse's conclusions as he examines the four examples, illustrating how prehistoric population movement should be studied and how "migrationism," which has been in disrepute for the last few decades, is still "a viable pursuit, provided it is done properly and under favorable circumstances" (p. 18).

Circumstances were favorable in the four cases mentioned above, but they were not in the case of the Bantu, which Rouse originally intended to include but abandoned because of the inadequacy of archeological data. The proper way to approach the study of prehistoric migration is to emulate the methodological rigor of hard scientists who use multiple testable hypotheses and strong inferences. Hypotheses to be considered in inferring population movements are local development, transculturation, and acculturation. In the case of the Japanese, Rouse believes that a population movement of Altai speakers through Korea did take place but that it occurred before 2500 B.C. Transculturation in the interaction sphere across the Korea Strait resulted in the local development in northwestern Kyushu of the Yayoi culture by 300 B.C. This "original Japonoid" culture then spread throughout the archipelago through acculturation and migration, processes that continued into this century.

For archeological testing of a migration hypothesis, Rouse recommends examination of patterns of change and continuity in archeological remains, aided by visual inspection of a chronological chart on which hierarchically defined archeological units are entered. The hypothesis should also be tested against other kinds of data, from linguistics and physical anthropology. As subfields of anthropology are increasingly specialized, Rouse's call for a unified anthropological approach to the old problem of migration is comfortably familiar to my generation of anthropologists, as are the archeological unit concepts Rouse meticulously defines—horizon, tradition, style, phase, series, and cultural norm. By contrast, the question of

causality and regularity (how and why prehistoric populations moved and adapted to natural and social environments), which has preoccupied anthropological archeologists in recent years, receives but a cursory treatment in this book.

Case studies seem to show how difficult it is to be really systematic in applying the rigorous methodology advocated. For one thing, relevant data are often unavailable. In addition, judgment regarding patterns of cultural change is inevitably qualitative and subjective. I suspect that if Rouse had considered more archeological traits than Jomon-like appearance of Yayoi ceramics in northern Honshu, which he judges "superficial" (p. 93), and had compared these with northeast-southwest clines of human biology (cranial morphology, blood types, and fingerprints) and isoglosses of the Japanese language, he could have reached an entirely different conclusion regarding the inference of population movement for Jomon-Yayoi transition in northern Honshu. On the other hand, exhaustive refutation of all the alternative hypotheses at every step would have made the book excruciatingly tedious. The latest contribution by Rouse is in fact a very readable exposé of a topic to which he has devoted a great deal of thought during his eminent career.

FUMIKO IKAWA-SMITH
*Department of Anthropology,
McGill University,
Montreal H3A 2T7, Canada*

African Populations

The Peoples of Southern Africa and Their Affinities. G. T. NURSE, J. S. WEINER, and TREFOR JENKINS. Clarendon (Oxford University Press), New York, 1985. xvi, 409 pp., illus. \$69. Research Monographs on Human Population Biology.

Nurse, Weiner, and Jenkins have set out to write an integrated history of human cultural and biological groups and their interactions in southern Africa. The result is a very wide-ranging monograph that touches history, politics, geography, epidemiology, and population genetics. There are gaps, and many of their assertions and suggestions are poorly supported, but nevertheless the book should become a valuable reference for historians, anthropologists, and epidemiologists and a rich source of ideas and hypotheses.

Introductory chapters review the geography of southern Africa and the record of archeology and human paleontology. These are followed by separate treatments of the

major populations of the region: the Khoi and San (Hottentots and Bushmen in an older terminology), the invasions by Bantu-speaking black peoples from the north and Dutch- and English-speaking Europeans from the south. The last survey chapter describes the formation of various hybrid communities, the Cape "Coloured," the Basters, and the Griqua being the better-known of these. For each group the authors summarize what is known of its prehistory and its history, with special attention to gene movement in and out of the population and to specific patterns of disease.

Not so long after European populations started pouring into the Americas, others commenced expanding into southern Africa. Both colonist groups encountered indigenous technologically primitive populations, but the outcome of the contact was very different on the two continents. American Indian populations had been isolated from the Old World for many thousands of years, and they collapsed rapidly in the face of new pathogens. Southern African indigenes, the San and Khoi, were isolated yet reachable from the rest of the Old World. They were not so devastated by contact, and their descendants are numerous in southern Africa today, dispersed among a number of populations.

The survival of these earliest inhabitants is the more remarkable because they were invaded by black peoples, from the north, shortly before the European onslaught from the south. The southernmost of the Bantus, perhaps in response to pressure from the edge of the wave of Europeans, erupted in a grand bout of war and mass population movements in the early 19th century, so the cultural geography of Bantu-speaking southern Africa today reflects the falling out from this unstable period.

The above is all familiar, but there are numerous peoples who don't quite fit into this story. There are, for example, Khoisan-speaking hunting and gathering peoples in the Mopane belt of southern Angola, northern Botswana, and Zimbabwe whose genetic affinities are with black-skinned Bantu-speaking peoples rather than with the lighter-skinned Khoisan speakers to the south. There are hints of other older layers of racial and ethnic diversity in this part of the world, buried under its dramatic recent history.

This monograph is perhaps too ambitious. It contains many suggestions about the adaptation of these populations to local environments without adequate documentation and testing. But biological history is an interesting and worthy enterprise, and interactions among local selection, migration, and genetic drift are still poorly understood

in anthropology. The authors have dropped a vast number of hints and suggestions for others to confirm or deny.

The last chapter reports the results of serogenetic surveys carried out by the authors over the last 15 years, along with 50 pages of tables of the original gene and genotype frequency data. Many of the markers studied have direct relevance to health, whereas others are probably selectively neutral. As the genetic uniqueness of individuals becomes more and more important for medical and public health practice, collections such as this gain direct applied relevance.

Apart from the occasional wry comment, the book is free of political posturing. But no one can read about the creation and demise of ethnic groups, the loose mapping between genes and culture, and the manipulation of ethnic identity by individuals and regard with anything but amused cynicism attempts by governments to codify either ethnicity or race.

HENRY HARPENDING
Department of Anthropology,
Pennsylvania State University,
University Park, PA 16802

Books Received

At the Crossroads. The Mineral Problems of the United States. Eugene N. Cameron. Wiley-Interscience, New York, 1986. xxiv, 320 pp., illus. \$35.95; paper, \$22.95.

The Athenian Agora. Excavations in the Heart of Classical Athens. John M. Camp. Thames and Hudson, New York, 1986 (distributor, Norton, New York). 231 pp., illus. \$29.95. New Aspects of Antiquity.

The Auditory Brainstem. A Review of the Structure and Function of Auditory Brainstem Processing Mechanisms. D. R. F. Irvine. Springer-Verlag, New York, 1986. xii, 279 pp., illus. \$49.50. Progress in Sensory Physiology, vol. 7.

Biomolecular Stereodynamics. Proceedings of the Fourth Conversation in the Discipline Biomolecular Stereodynamics (Albany, NY, June 1985). R. H. Sarma and M. H. Sarma, Eds. Adenine, Guilderland, NY, 1986. Vol. 3, 306 pp., illus. \$75. Vol. 4, 324 pp., illus. + plates. \$75.

The "Discovery" of Sudden Infant Death Syndrome. Lessons in the Practice of Political Medicine. Abraham B. Bergman. Praeger, New York, 1986. xiv, 239 pp. \$42.95.

Drought Management and Its Impact on Public Water Systems. Water Science and Technology Board, National Research Council. National Academy Press, Washington, DC, 1986. viii, 127 pp., illus. Paper, \$7.50. From a colloquium, Washington, DC, Sept. 1985.

Electromagnetic Principles of Integrated Optics. Donald L. Lee. Wiley, New York, 1986. xvi, 331 pp., illus. \$39.95.

Fundamentals of Surface and Thin Film Analysis. Leonard C. Feldman and James W. Mayer. North-Holland (Elsevier), New York, 1986. xx, 354 pp., illus. \$47.50.

Gas Chromatography/Mass Spectrometry. H. F.

Linsens and J. F. Jackson, Eds. Springer-Verlag, New York, 1986. xvi, 304 pp., illus. \$79. Modern Methods of Plant Analysis, New Series, vol. 3.

Genetics, Development, and Evolution. 17th Stadler Genetics Symposium (1985). J. Perry Gustafson, G. Ledyard Stebbins, and Francisco J. Ayala, Eds. Plenum, New York, 1986. xii, 361 pp., illus. \$49.50. Stadler Genetics Symposia Series.

The Geological Interpretation of Well Logs. M. H. Rider Blackie, Glasgow, and Halsted (Wiley), New York, 1986. xii, 175 pp., illus. Paper, \$54.95.

National Policies for Developing High Technology Industries. International Comparisons. Francis W. Rushing and Carole Ganz Brown, Eds. Westview, Boulder, CO, 1986. xiv, 247 pp. Paper, \$26.50. Westview Special Studies in Science, Technology, and Public Policy.

Neurotransmitter Enzymes. Alan A. Boulton, Glen B. Baker, and Peter H. Yu, Eds. Humana, Clifton, NJ, 1986. xxvi, 619 pp., illus. \$69.50. Neuromethods, 5.

Neurotransmitters, Seizures, and Epilepsy III. Giuseppe Nisticò *et al.*, Eds. Raven, New York, 1986. xxii, 505 pp., illus. \$70.50. Based on a workshop, Soverato, Italy, Sept. 1985.

No Ivory Tower. McCarthyism and the Universities. Ellen W. Schrecker. Oxford University Press, New York, 1986. x, 437 pp. \$20.95.

Nonmetallic Materials and Composites at Low Temperatures 3. Günther Hartwig and David Evans, Eds. Plenum, New York, 1986. xii, 220 pp., illus. \$49.50. Cryogenic Materials Series. From a symposium, Heidelberg, FRG, Aug. 1984.

Plate Tectonics. How It Works. Allan Cox and Robert Brian Hart. Blackwell Scientific, Palo Alto, CA, 1986. xxiv, 392 pp., illus. Paper, \$29.95.

Polymers in Solution. Theoretical Considerations and Newer Methods of Characterization. William C. Forsman, Ed. Plenum, New York, 1986. xii, 304 pp., illus. \$52.50.

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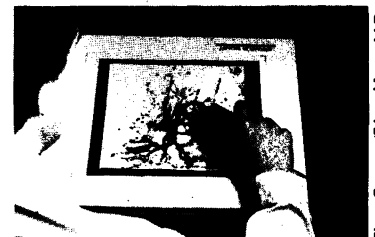


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