

NATIONAL ACADEMY OF SCIENCES

SHERWOOD LARNED WASHBURN
1911–2000

A Biographical Memoir by
F. CLARK HOWELL

*Any opinions expressed in this memoir are those of the author
and do not necessarily reflect the views of the
National Academy of Sciences.*

Biographical Memoirs, VOLUME 84

PUBLISHED 2003 BY
THE NATIONAL ACADEMIES PRESS
WASHINGTON, D.C.



Ricco-Mazzuchi Photography, Berkeley, California

S. L. Washburn

SHERWOOD LARNED WASHBURN

November 26, 1911–April 16, 2000

BY F. CLARK HOWELL

FOR CLOSE ON TO FOUR decades Sherwood Washburn sought to encourage, urge, insist, and cajole practitioners of biological anthropology—particularly the core of human evolutionary studies—to shift away from outdated methodologies, abandon outmoded or questionable precepts, adopt modern perspectives of an emergent evolutionary biology, and practice analytical, comparative, and experimental methods relevant to elucidation of the nature and roots of the human condition. His epiphany emerged progressively and sweepingly across prevalent biological and social science and wrenched but did not utterly revolutionize scientific praxis in biological anthropology as he sought and overtly intended it should. The expansion and elaboration of a number of attendant natural sciences relevant, indeed critical, to such study did play the requisite roles and thus exemplified the transformation essential to paradigm shift. Nonetheless Washburn played a unique and manifestly invaluable role in the refashioning—even restructuring—of human evolutionary studies as they emerged, diversified, and ultimately flourished in the later twentieth century.

Sherwood Larned Washburn (always known as “Sherry”) was born on November 26, 1911, and grew up in Cam-

bridge, Massachusetts. His father, a minister and one-time professor of church history, was dean of the Episcopal Theological School in Cambridge. Washburn always had an advantaged upbringing and youth, private school education in Cambridge and at Groton (1926-31), and ready admittance to Harvard, attended by his elder brother (Henry Bradford, a junior) and following on the Washburn male elders. He graduated summa cum laude (B.A., 1935), continued on to graduate studies, and subsequently received the doctorate in anthropology in 1940. His undergraduate honor's thesis was supervised by the mammalogist Glover M. Allen, who a few years later would produce the first exhaustive checklist of African mammals. Always short and wiry, Washburn at times lamented his lack of participation in sports (or performance of "feats of physical prowess"), although he performed superiorly in his weight class at college wrestling and had played soccer at Groton, suffering successive broken wrists as a consequence, which forever constrained his writing, driving, and dissecting proficiencies.

As boy and youth he pursued varied interests in natural history, both in mammalogy and in ornithology, including enhancing the Groton Museum with discarded stuffed mounts and keeping of captive raptors, both hawks and great horned owls. As a youngster he had familiarity with and entrée to Harvard's Museum of Comparative Zoology (MCZ), its exhibits and collections, where the director was a family friend and staff was encouraging, and where he happily worked over secondary school vacations. Upon entering Harvard's graduate school his projected major was zoology, possibly ultimately even medical school. An introductory general anthropology course, taught there by a close family friend and stimulating lecturer, Alfred Tozzer, served to reveal its cross-disciplinary roots and to capture permanently his in-

terest in its breadth of scope and scientific relevance for the human condition. He never looked back thereafter.

Following completion of his initial graduate year, 1935-36, an opportunity was afforded him to participate as an assistant in a zoological collecting expedition to southern Asia. This Asiatic Primate Expedition was formulated, promoted, and largely funded by Harold J. Coolidge, zoologist and conservationist, and included primate morphologist Adolph Hans Schultz (1891-1976) of Johns Hopkins University, comparative psychologist Clarence Ray Carpenter (1905-1975) then at Columbia University, and MCZ technicians. The experience was to have a profound effect on Washburn's perspective on and approach to evolutionary problems not unlike experiences of naturalists a century earlier. A university (Sheldon) traveling fellowship enabled him a year's freedom to indulge himself in the necessary endeavors of human and then comparative anatomy, having just finished a year's immersion in the later and in vertebrate paleontology with A. S. Romer at Harvard. An intensive summer course at the University of Michigan afforded in-depth experience of human gross anatomy, much facilitated by an obliging laboratory assistant, W. T. Dempster, who then and subsequently was interested in human locomotion and was a proponent of joint functional mechanics. This experience was followed by an autumn term at the University of Oxford in the United Kingdom and an opportunity to gain from the masterly lectures of Wilfred Le Gros Clark (1895-1971), a major contributor to systemic ("pattern") approaches to primate and human morphology, particularly the central nervous system and tissue systems of the human body.

A stint of collecting in Ceylon (now Sri Lanka), then over four months in northern Siam (now Thailand) focused on the collection of lar gibbons and in observations of their

naturalistic behavior, was followed by several months of further collection in Sabah in eastern Malaysia devoted to collection of diverse colobine monkey species, several macaque species, and even a few orangutans. Here was a splendid opportunity to acquire from freshly obtained material first-hand experience of structure and morphology within and between lesser and greater apes and both arboreal and more terrestrial cercopithecoid monkeys. This experience afforded insights fundamental to Washburn's perceptions of primate evolution as it had in years past in some similar circumstances equally to Arthur Keith and to Wilfred Le Gros Clark. Washburn was to continue preparation work on these extensive collections upon return to Harvard, often assisted by Gabriel Lasker, where he also had an opportunity to teach a course on primates upon an offer to do so by his major advisor, E. A. Hooton (1887-1954).

Washburn accepted a position in anatomy at Columbia University's College of Physicians and Surgeons in 1939 and remained there for eight years. He had married Henrietta Pease, daughter of an academic in the classics and college president, in 1938. His doctorate at Harvard was awarded the following year, the first there in anthropology to be focused on nonhuman primates, in this instance metrical appraisal of adult skeletal proportions among Asian macaques and langurs. At Columbia, Samuel R. Detwiler (1890-1957) headed the department and was himself a major practitioner of developmental biology. This environment encouraged the young instructor to practice and ultimately to urge others to implement experimental procedures to garner further insights and comprehension of body structure and links to adaptation, and thus to attack the nature of evolutionary transformations among primates, human and non-human.

A series of papers between 1941 and 1948 dealt with

matters of both research procedure and with efforts to elucidate morphology through experimental approaches. Some of these and associated efforts directed to the elucidation of development and growth of bone were to be pursued by his own students subsequently. Other figures with whom he became well acquainted at this time in New York and who played influential roles in his intellectual development included Theodosius Dobzhansky (1900-75) of Columbia University; William King Gregory (1876-1970) and George Gaylord Simpson (1902-84), both at the American Museum of Natural History; and particularly Paul Fejos of the nascent Viking Fund, founded in 1941. Fejos (1897-1963), of Hungarian background, a doctor of medicine, ex-cavalry officer of the Great War, and former cinema and ethnographic film director, became both a fast friend and major supporter of matters anthropological, when the field was still limited in practitioners and in scope. In 1946 under the auspices of Columbia University's summer school and with the underwriting of the Viking Fund (to become the Wenner-Gren Foundation for Anthropological Research in 1951) and the strong support of its director of research, the first of a succession of summer seminars in physical anthropology were held in New York City. Washburn was then secretary of the American Association of Physical Anthropologists; with former Harvard classmate and close friend Gabriel W. Lasker (1912-2002) (anatomy, Wayne State University) as supporter, twice-weekly discussion gatherings and demonstrations were held over a six-week period. At Washburn's encouragement Lasker consequently inaugurated a series of attendant annuals, titled *Yearbook of Physical Anthropology*, offering reportage on such workshop gatherings and re-publication in lithographic form of significant and relevant recently published contributions to the field. The summer workshops continued through 1951. (The

yearbook was to continue for 22 volumes, until 1979, whereupon it became an important and welcome annual supplement to the association's official serial *American Journal of Physical Anthropology*.)

This quotation, excerpted from the overview of their initial summer seminar, drafted by Lasker's subsequent wife, Bernice Kaplan, encapsulates the mood and underlying intent behind the organization of this seminal gathering.

For the most part the emphasis was on the advisability of redefinition of problems and reorientation of the methodology with which to approach the several facies of the field in general. It was believed that the older methods of approach to the overall problems, while yielding valuable information, had now reached a point where redundancy rather than additional insight was resulting from their use. The need for an intensive investigation of a specific problem chosen for study was frequently brought out as probably more fruitful than the approach through surveys of the physical characteristics of the people of this or that geographic region. Although historically all sciences, physical anthropology included, had begun with description and then proceeded to analysis, the opinion was advanced and supported that it would now be better first to analyze problems, to define what was being looked for and why, and then to organize the technical procedures to the closer understanding of what is to be analyzed—moving from this to those larger, more inclusive and more meaningful descriptions which can best be done when the analytic work has been completed.

In 1947 Washburn joined the anthropology faculty at the University of Chicago, where he was to remain over the ensuing 11 years. He succeeded Wilton Marion Krogman (1903-87), who held a doctorate in anthropology from Chicago with a thesis devoted to an analysis of craniofacial growth in anthropoid apes, the first such done within that department. Krogman held a joint appointment in anthropology and anatomy at Chicago, as he had previously at Case Western Reserve. In spite of a thwarted promise of a joint appointment in anatomy (cum laboratory facilities) Washburn continued and accelerated his efforts at rejuve-

nation and redirection in human evolutionary studies through the practice of biological anthropology. (Subsequently when Washburn served as editor of the association's professional journal [1955-57], he sought among the association membership repeatedly, and failingly, to change its title to Human Evolution; ultimately two other serials were to bear that name.) Facilities of a laboratory nature were scarcely even minimal at Chicago; nonetheless laboratory-oriented work was pursued and doctoral dissertations on cranial growth and development, aspects of cranial bone structure and adaptation, on chimpanzee growth, on brachiation and its adaptive correlates, among others, were forthcoming. Several graduate students were holdovers from Washburn's predecessor, and others—including myself—were newly demobbed veterans at war's end.

The first of three journeys to sub-Saharan Africa by Washburn occurred over some months in the spring of 1948. All these field trips were supported by the Wenner-Gren Foundation and encouraged by its director, Dr. Paul Fejos. The first included visits to South Africa and an opportunity to see and examine australopithecine fossils in Pretoria and in Johannesburg and to meet with those who were charged with their retrieval, preparation, and study. A following stay in Uganda, hosted at Makerere College in Kampala, enabled the observation and particularly the collection of a large series of cercopithecine monkeys of several taxa on which Washburn was able to make substantial quantitative assessments of muscle weights, proportions, and morphology in the course of their preparation. This activity followed directly his similar activity in Southeast Asia a decade earlier. This and later journeys led to reciprocal visits to the United States, particularly Chicago, by Africa-based scientists and others from elsewhere for as much as an academic term. Among them were Robert Broom (1866-1951),

Raymond Dart (1893-1988), Alexander Galloway (1901-65), John Robinson (1923-2001), Ronald Singer, Phillip Tobias, and Kenneth Oakley (1911-81), all of whom were assisted in their travel by the foresaid foundation and often were associated with our departmental seminars and made courses and other visits at institutions elsewhere.

In June 1950 a major international symposium of the Cold Spring Harbor Biological Laboratory was devoted to the "origin and evolution of man." The program was developed by Washburn and Theodosius Dobzhansky, and its 37 principal participants (among 129 people who registered) were drawn from cultural and biological anthropology, primatology, genetics, evolutionary and paleobiology, and medicine. Three of the major contributors to the "Evolutionary Synthesis" were present as were a number of outstanding scientists from abroad. This assembled mix of scientists, the focus and scope of the symposium, and near immediate publication of the resultant volume in the laboratory series unquestionably had a major effect on its consequent impact on an emergent biological anthropology, perhaps even more so than the summer seminars (which were largely restricted to practitioners within that field). Similarly in 1952 the Wenner-Gren Foundation's conference "Anthropology Today," held in New York City, was both critical examination and stocktaking, coupled with an envisioning of developments to come and worthy directions to pursue. Washburn played a significant role there in its planning, along with colleagues Sol Tax and Alfred Kroeber (University of California, Berkeley). In a contribution there ("The Strategy of Physical Anthropology") and another a year previously at the New York Academy of Sciences ("The New Physical Anthropology") Washburn sought to set the course for the ultimate emergence of a full-fledged program of human evolutionary studies. Such was not to emerge fully

for another several decades, but its components were to grow and even to diversify in the interim.

Washburn served as president of American Association of Physical Anthropologists (1951-52) and as department chair at Chicago (1952-55) in those years. The venue of the Third Pan-African Congress on Prehistory in Livingstone, Northern Rhodesia (now Zambia), in 1955 occasioned for him a second and summer visit to central Africa. He sought there to assemble a collection of baboon skeletons, which was duly accomplished, as the animals were then and there considered vermin in agricultural settings. Moreover, it also led to substantial time spent by him in naturalistic observations near Victoria Falls in the Hwange (formerly Wankie) Game Reserve (Zimbabwe) on baboon troops already somewhat conditioned to human presence due to the touristic circumstance. Washburn gained an appreciation of diet, feeding behavior, sleeping practices, predator avoidance, social structure, dominance, and local environmental adaptation such that the hook was already well set for his near future shift toward concerns with the social behavior of primates in natural habitats, as an especially important comparative, if analogical, window into events in human evolution. He was able to pursue this perspective further in the course of two multidisciplinary symposium gatherings in 1955 and 1956, which eventuated in the volume *Behavior and Evolution* (1958) in which many aspects of evolutionary biology were explored with reference to adaptation and behavior.

This perspective was elaborated in the later part of 1959 during a third visit to Africa, in this instance Kenya, where a graduate student, Irven DeVore, had initiated a field study of olive baboon (*Papio anubis*) troops in Nairobi National Park. There and later at Amboseli National Park, near the Tanzanian border, Washburn was enabled to observe

primates and associations with other large mammals in natural settings and to develop further perspectives on adaptations of mammal communities in African savanna environments. His wife, Henrietta, and son Stanley accompanied him on this trip; during this period her first symptoms of Parkinsonism were evidenced, to which she succumbed many years later. Washburn had spent an earlier year, 1956-57, at the Center for Advanced Study in the Behavioral Sciences in Palo Alto, California, at which time his African field experiences of animal behavior were refined and expanded both in cross-disciplinary seminar contexts and in due course with his developing collegial relationship with David Hamburg, a psychiatrist with wide-ranging interests in stress, coping behavior, human adaptation, and ultimately evolutionary biology. Hamburg, after medical school and military service, had served at the National Institute of Mental Health and then joined the faculty of Stanford's School of Medicine; he subsequently presided over the Institute of Medicine from 1975 to 1980, founded a new division focused on health policy and education between the Kennedy School of Government and the Harvard Medical school; he ultimately became president of the Carnegie Corporation and served as well as president of the American Association for the Advancement of Science in 1984-85.

Washburn joined the faculty of anthropology at the University of California, Berkeley, in 1958 and served just over two decades until retirement in 1979. Thus, his overall career in anthropological academia was to span 32 years. At Chicago Washburn had elaborated his perspectives on a concern with human evolutionary studies within the emerging concepts of a modern evolutionary synthesis. A major yearlong survey course there involved joint teaching across the range of biological, prehistoric, and archeological aspects of the human evolutionary career. Undergraduate

enrollments were minor and the audience therefore minimal within the prevalent Robert Maynard Hutchins college structure. At Berkeley a major attraction in a larger (and growing) departmental framework was the opportunity to confront a larger, and undergraduate, body of over a thousand in the course structure of a year, in a course of one's own design, offer a few chosen graduate seminars or labs as wont, and to seek to expand and refine the scope of primate and human evolutionary studies within a very much larger university context. A live-animal facility suitable for the maintenance and observation of primates was also developed jointly with a member of the department of psychology. It was to expand ultimately.

Washburn's success in undergraduate education proved unparalleled, as reflected in greatly enlarged enrollment, forthcoming financial support of teaching assistance, and consistent appreciation of his charismatic lectures. A pool of new doctorates emerged from an expanded cadre of graduate students. In 1958-61 he quickly established a program on the evolution of human behavior with extramural financial assistance of the Ford Foundation; subsequently there was a longtime program on primate behavior underwritten by the National Institutes of Health. A fellowship in the campus Miller Institute for Basic Research in Science afforded released time for this undertaking. The anthropological faculty was progressively diversified and strengthened with appointments to represent various aspects of biological anthropology, prehistory, and paleoanthropology, very much at his counsel and urging. Washburn served briefly (1961-63) and grudgingly as department chair, resigning after disputations on proposed faculty appointments.

Washburn participated from the beginning in the Wenner-Gren Foundation's overseas activities at their splendid castle Burg Wartenstein, situated in southern Austria. He first

chaired a conference on "The Social Life of Early Man" in 1959 (published 1961), the conception of which originated largely with others, and whose format and composition he only partially controlled. Nonetheless its 19 participants constituted a significant cohort of international scientists and a good mix of scientific disciplines. He succeeded vastly better at another significant gathering, in 1962, for another conference, "Classification and Human Evolution" (published 1963), that proved to constitute a landmark in the development of modern primate evolutionary studies within the time of the emergence of molecular biology.

At this time, in 1960, Washburn received the Viking Fund Medal of the Wenner-Gren Foundation (among the last awarded), was elected a fellow of the American Academy of Arts and Sciences in 1961 and a member of the National Academy of Sciences in 1963. He served as president of the American Anthropological Association, and at its 1962 annual meeting his insightful and definitive presidential address on the meaning and meaninglessness of the concept of race and of racial categorization among humans elicited both praise and shock. Early in his career, during the war years, he had spoken out in an educational journal on the use and misuse of race concepts. This was not, however, either his interest or area of expertise, although his grasp of the problem was surely substantial enough. Moreover, he had long ago overcome the still frequent affliction of typological thinking and use of stereotypes. In this instance he returned to the subject, at the insistence of the association's board and on the occasion of a major trade publication, *The Origin of Races* (Knopf, 1962) by Carleton S. Coon (1904-81), which presented an ill-conceived and poorly founded perspective on human evolutionary processes, events, and trajectories. His address was thoughtful, direct, and courageous at a time of national unease, controversy,

and a resurgence of active segregationists; it constituted another landmark event at a moment too critical to be missed. Washburn noted and demonstrated that "racism is based on a profound misunderstanding of culture, of learning, and of the biology of human species" and "is equally a relic supported by no phase of modern science." Mark Twain long before had nailed it "a fiction of law and custom." On another occasion Washburn received that association's Distinguished Service Award.

Washburn and David Hamburg encouraged formation of a major study group devoted to an extensive survey of current primate field studies convened at the Center for Advanced Study in the Behavioral Sciences in 1962-63. This nine-month effort, in which 20 investigators were to participate, resulted in the first major volume, *Primate Behavior: Field Studies of Monkeys and Apes* (I. DeVore, ed., 1965), to represent this field in an evolutionary, inclusive, and widely accessible perspective. Its impact on anthropology, ethology, and primatology was timely and momentous. Similarly Washburn played an important role in a wide-ranging study dedicated to *The Teaching of Anthropology* (published 1963), a major effort directed to the current status and future direction of the burgeoning field and its growing, and fissioning subdisciplines. In a conference in 1969 on coping and adaptation (published, 1974), Washburn co-authored with David Hamburg, as was the case on several other occasions as well, an important paper on social adaptation among nonhuman primates. Here as elsewhere the effort was directed to place aspects of the human condition and its disaffections in a comparative and phylogenetic perspective. In 1965 Washburn received in London the Ciba Foundation Annual Lectureship Medal on the occasion of a conference there dedicated to aggression. Two years later he received the Huxley Medal of the Royal Anthropological

Institute (London) and in 1968 he was an invited lecturer on "The Study of Human Evolution" for the Condon Lectures at the University of Oregon.

Washburn played a central role in planning and urging development of national primate research centers throughout the country. His national and international impact on the growth of primatology was formally recognized at the fourth International Primatological Congress in Portland in 1972. This expansive meeting was dedicated to Washburn, as was a hefty issue of the *American Journal of Physical Anthropology* (vol. 38, no. 2, 1973). In 1975 the University of California honored him with the title of University Professor, a prized and indeed rare recognition. He retired as emeritus University Professor in 1979 and was awarded the Berkeley Citation for meritorious service. In subsequent years he was to receive a Walker Prize of the Boston Museum of Science, an honorary D.Sc. from Witwatersrand University, Johannesburg and the Charles Robert Darwin Award of the American Association of Physical Anthropologists.

This retrospective concerning Sherwood Washburn reflects in great measure my own experience and association with him over a period of some 50 years. We met momentarily when he first visited the University of Chicago in the spring of 1947 before his acceptance of a faculty position in anthropology later that same year. I was a newcomer to college after naval service in World War II and was infused with a renewed hope to study biological anthropology as a profession with a focus on the study of human evolution. Washburn was to become my principal advisor, although I worked closely with others in prehistoric archeology (R. J. Braidwood, 1908-2003), paleontology (E. C. Olson, 1910-93), and various natural sciences. My initial instructorship in anatomy, at Washington University, after the doctorate in 1953, was cut short by a request to return to the anthro-

pology faculty at Chicago. We served together there for three years. In 1970 we again came to be associated on the anthropology faculty at the University of California, Berkeley, when I accepted a proffered position, recently open consequent to the death of Theodore D. McCown (1908-69).

Washburn made a lasting and singularly important impact on biological anthropology throughout his career. This is of course reflected to an extent in the recognition and honors afforded him, but most particularly it stands by the changes and transformations effected as a consequence of his presence and the positions he espoused. He was neither shy nor deferential; the postures he assumed and the stances and beliefs he opposed were always serious, even pressing matters and thus warranted outright proselytism on his part. He was surprisingly skeptical and iconoclastic, given his background. In my experience he was open to suggestions, welcomed information pertinent to his position(s) and interest(s), but scarcely gave quarter against open opposition to views he adamantly upheld. Washburn was a mine of ideas, often showered in profusion like sparks from an anvil, often times surprisingly innovative and fruitful, always provocative but sometimes off the mark. On an occasion early in our acquaintance I recall he carried a copy of Richard M. Weaver's newly published *Ideas Have Consequences* (Chicago, 1948), and which Washburn then extolled at great length, adding that "our own science" sorely needed "house cleaning" and such new "envisionings." After that moment of revelation I had a real grasp of his own perspectives and intentions; it enabled a relationship of near parity despite our 14-year age difference. As our birthdays were only a day apart, for some years we shared in their celebration.

Washburn's initial focus was directed at overall body

structure and transformation of its components within the course of primate evolution, and particularly that of higher anthropoids and mankind. Of course he recognized the necessity to approach and delineate scientific problems feasible of solution given available knowledge and technological capacities. Hence, it was incumbent to define evolutionary complexes (rather than mere isolated traits); to compare and contrast variations in such complexes and their adaptive correlatives; to elucidate underlying biology, including functional mechanics, and genetics of such complexes; to recognize conditions propitious for selection of such adaptations; and thus to improve capacity and quality of phylogenetic inferences (reconstructions) through better theory, better methods, and scientific responsibility. I do not recall him to be unduly preoccupied with all the niceties of scientific method; some history of science may have afforded grist for his mill, whereas the (formal) philosophy of science largely did not. Gabriel Lasker, in his autobiography, *Happenings and Hearsay* (1999), considered that transformations attendant on redirections toward “new physical anthropology” resulted in a “true paradigm shift within the discipline.” Washburn was ultimately to direct his (and others’) attention to many other concerns, including naturalistic behavior of primates, cultural learning through education, citizenship, values, and society, all espoused in an evolutionary framework, and as well early on the value and implications of work in molecular genetics. He deprecated the emergence and called out the evils and limitations of sociobiology.

Washburn’s approach was both analytical and reductionist. He dismissed trivia, minutiae, (much) given truth or received wisdom. In all these respects I gained vastly from knowing him. Over his career his interests broadened increasingly, exploring and ultimately engulfing other areas

of relevance as he sought to comprehend and to explicate the origin and nature of the human condition within a naturalistic framework. As a consequence his encouragement of many aspects of the practice of what was indeed to become a new physical anthropology was meaningful and repeatedly fruitful. This is to say his success rate was high, in spite of the fact that he hardly ever had a personal research record in depth in any particular topic, problem set, or technology. He neither established laboratory facilities nor pursued a rigorously defined research agenda after leaving Columbia. At those times institutional structure was definitely a limiting factor toward such resources. His focus was programmatic across a general concern, fortunately having at best fuzzy boundaries; in fact his mode of thought (or play) was to ignore, to transgress such traditional limits and to usurp or to engulf the useful and the relevant, regardless of disciplinary and historical priority. He was openly and frankly iconoclastic in such respects and thus pan-disciplinary in vision. Such are the features that Washburn brought so effectively and individually across social and natural sciences, and as have a number of the many students he mentored. He is remembered for all his efforts directed toward the growth and realization of a field of scientific study still nascent upon his appearance on the scene.

FOR THIS MEMOIR I have relied largely on my own acquaintance with Washburn for some 50 years. I have also profited from obituaries by R. H. Tuttle (*American Anthropologist* 102[4]:865-69, 2002), J. Marks (*Evolutionary Anthropology* 9[6]:225-26, 2000), and A. L. Zihlman (*American Journal of Physical Anthropology* 116:181-83, 2001). Washburn's full bibliography appears in the volume *The New Physical Anthropology: Science, Humanism and Critical Reflection* (S. C. Strum, D. G. Lindburg, and D. Hamburg, eds., pp. 277-85. Upper Saddle River, N.J.: Prentice-Hall, 1999) and it contains appreciations of him and his work by some former students, as well as reprintings of some of his own

most influential papers. His activities and intellectual influences are also explored at length by Donna Haraway in a chapter titled "Remodeling the Human Way of Life: Sherwood Washburn and the New Physical Anthropology, 1950-1980" in *Bones, Bodies, Behavior: Essays on Biological Anthropology* (George Stocking, ed. Madison: University of Wisconsin Press, 1988). Two further resources were "S. L. Washburn. Evolution of a Teacher" in *Annual Review of Anthropology* (12:1-24, 1983), and "An Interview with Sherwood Washburn" by Irvn DeVore (*Current Anthropology* 33(4):411-23, 1992). In his own autobiography (*Happenings and Hearsay: Experiences of a Biological Anthropologist*. Detroit, Mich.: Savoyard Books, 1999), Gabriel Ward Lasker, a classmate and candid admirer of Washburn, has useful thoughts about his colleague and the state of the discipline in those earlier days.

SELECTED BIBLIOGRAPHY

1942

Skeletal proportions of adult langurs and macaques. *Hum. Biol.* 14:444-72.

1943

With S. R. Detwiler. An experiment bearing on the problems of physical anthropology. *Am. J. Phys. Anthropol.* 1:171-90.

The sequence of epiphysial union in Old World monkeys. *Am. J. Anat.* 72: 339-60.

1944

Thinking about race. *Sci. Educ.* 28:65-76.

1951

The analysis of primate evolution, with particular reference to the origin of man. *Cold Spring Harb. Sym.* 15:67-78.

With B. Patterson. Evolutionary importance of the South African "man-apes." *Nature* 167:650-51.

The new physical anthropology. *Trans. N. Y. Acad. Sci.* 13:298-304.

1954

An old theory is supported by new evidence and new methods. *Am. Anthropol.* 56:433-41.

1956

With L. W. Mednick. The role of the sutures in the growth of the braincase of the infant pig. *Am. J. Phys. Anthropol.* 14:175-91.

1957

Australopithecines: The hunters or the hunted? *Am. Anthropol.* 59:612-14.

Ischial callosities as sleeping adaptations. *Am. J. Phys. Anthropol.* 15:269-76.

1958

With V. Avis. Evolution of human behavior. In *Behavior and Evolu-*

tion, eds. A. Roe and G. G. Simpson, pp. 421-36. New Haven: Yale University Press.

1959

Speculations on the interrelations of the history of tools and biological evolution. *Hum. Biol.* 31:21-31.

1960

With F. C. Howell. Human evolution and culture. In *Evolution after Darwin*, vol. II, ed. S. Tax, pp. 33-56. Chicago: University of Chicago Press.

Tools and human evolution. *Sci. Am.* 203:63-75.

1961

With I. DeVore. Social behavior of baboons and early man. In *The Social Life of Early Man*, ed. S. L. Washburn, pp. 91-319. New York: Viking Fund.

With I. DeVore. The social life of baboons. Reprinted in *The New Physical Anthropology: Science, Humanism, and Critical Reflection*, eds. S. C. Strum, D. G. Lindburg, and D. Hamburg, pp. 254-60, 1999

1963

With I. DeVore. Baboon ecology and human evolution. In *African Ecology and Human Evolution*, eds. F. C. Howell and F. Bourliere, , pp. 335-67. Viking Fund Publications in Anthropology, No. 36. New York: Wenner-Gren Foundation for Anthropological Research.

Behavior and human evolution. Reprinted in *The New Physical Anthropology: Science, Humanism, and Critical Reflection*, eds. S. C. Strum, D. G. Lindburg, and D. Hamburg. pp. 261-69, 1999.

The study of race. Reprinted in *The New Physical Anthropology: Science, Humanism, and Critical Reflection*, eds. S. C. Strum, D. G. Lindburg, and D. Hamburg, pp. 237-243, 1999.

1965

With D. Hamburg. The implications of primate research. In *Primate Behavior*, ed. I. DeVore, pp. 607-22. New York: Holt, Rinehart, and Winston.

With P. C. Jay and J. B. Lancaster. Field studies of old world monkeys and apes. *Science* 150:1541-47.

1968

- Speculations on the problems of man's coming to the ground. In *Changing Perspectives on Man*, ed. B. Rothblatt, pp. 191-206. Chicago: University of Chicago Press.
- The study of human evolution. Eugene: Oregon State System of Higher Education.
- One hundred years of biological anthropology. In *One Hundred Years of Anthropology*, ed. J. O. Brew, pp. 97-115. Cambridge: Harvard University Press.
- With D.A. Hamburg. Aggressive behavior in Old World monkeys and apes. Reprinted in *The New Physical Anthropology: Science, Humanism, and Critical Reflection*, eds. S. C. Strum, D. G. Lindburg, and D. Hamburg, pp. 107-18, 1999.
- With C. S. Lancaster. The evolution of hunting. In *Man the Hunter*, ed. R. B. Lee, pp. 293-303. Chicago: Aldine. Reprinted in *The New Physical Anthropology: Science, Humanism, and Critical Reflection*, eds. S. C. Strum, D. G. Lindburg, and D. Hamburg, pp. 244-53, 1999.

1969

- The evolution of human behavior. In *The Uniqueness of Man*, ed. J. D. Roslansky, pp. 169-89. Amsterdam: North Holland.

1972

- Human evolution. In *Evolutionary Biology*, vol. 6, eds. T. Dobzhansky, M. Hecht, and W. Steere, pp. 349-60. New York: Appleton-Century-Crofts.

1973

- Primate studies in human evolution. In *Nonhuman Primates and Medical Research*, ed. G. H. Bourne, pp. 467-85. New York: Academic Press.
- The promise of primatology. Reprinted in *The New Physical Anthropology: Science, Humanism, and Critical Reflection*, eds. S. C. Strum, D. G. Lindburg, and D. Hamburg, pp. 43-46, 1999.
- With E. R. McCown. The new science of human evolution. In *1974 Britannica Yearbook of Science and the Future*, pp. 32-49. Chicago: Encyclopedia Britannica.

1974

With R. Moore. *Ape into Man*. Boston: Little, Brown.

Evolution and education. *Daedalus* 103:221-28.

With R. L. Ciochon. Canine teeth: Notes on controversies in the study of human evolution. *Am. Anthropol.* 76:765-84.

1975

With R. S. O. Harding. Evolution and human nature. In *American Handbook of Psychiatry*, vol. VI, eds. D. A. Hamburg and H. K. H. Brodie, pp. 3-13. New York: Basic Books.

1978

The evolution of man. *Sci. Am.* 239:194-98, 201-202, 204 passim.

Human behavior and the behavior of other animals. *Am. Psychol.* 33:405-18.

1982

Fifty years of studies on human evolution. *Daedalus* 35:25-39.

1985

Human evolution after Raymond Dart: Twenty-third Raymond Dart Lecture delivered January 28, 1985. Johannesburg: Witwatersrand University Press for the Institute for the Study of Man in Africa.

1993

Evolution and education. In *Milestones in Human Evolution*, eds. A. Almquist and A. Manyak, pp. 223-40. Prospect Heights, Ill.: Waveland Press.

