



BIOGRAPHICAL MEMOIRS

ELWYN LAVERNE SIMONS

July 14, 1930–March 6, 2016

Elected to the NAS, 1981

*A Biographical Memoir by Ian Tattersall and
John Fleagle*

THE TWIN SCIENCES of vertebrate paleontology and paleoanthropology lost a giant on March 6, 2016, with the death of Elwyn LaVerne Simons in Peoria, Arizona, at the age of 85. Elwyn had boundless energy and insight and did more than anyone in his lifetime to expand our knowledge of key areas of primate evolution, including the discovery of at least ten extinct primate genera. He combined a genius for finding fossils in the field with an ability to rapidly digest and express the importance of what he had found, and he nurtured the careers of a large number of students who have gone on to be leaders in diverse areas of biology that range from paleontology and paleoanthropology to systematics and behavioral ecology.

Elwyn Simons was born in Lawrence, Kansas, on July 14, 1930, and was raised in Houston, Texas. From early childhood he exhibited a fascination with animals, and in remarks delivered to the Society of Vertebrate Paleontology in 2012 he recalled how his particular interest in fossils began. When he was three years old and was being carried on his father's shoulders past a Chicago World's Fair exhibit of huge, animated model dinosaurs, one of them made a "loud moaning noise ... [that] ... scared me, so I said, 'take me away!' and Dad did so and carried me out of sight ... then I shouted, 'take me back!'" But there was in reality no turning back. From then on, Elwyn eagerly collected fossils whenever he could: crinoids and brachiopods in eastern Kansas on family visits and Pleistocene shells near his home in Houston. And he developed a specific interest in human evolution: one of

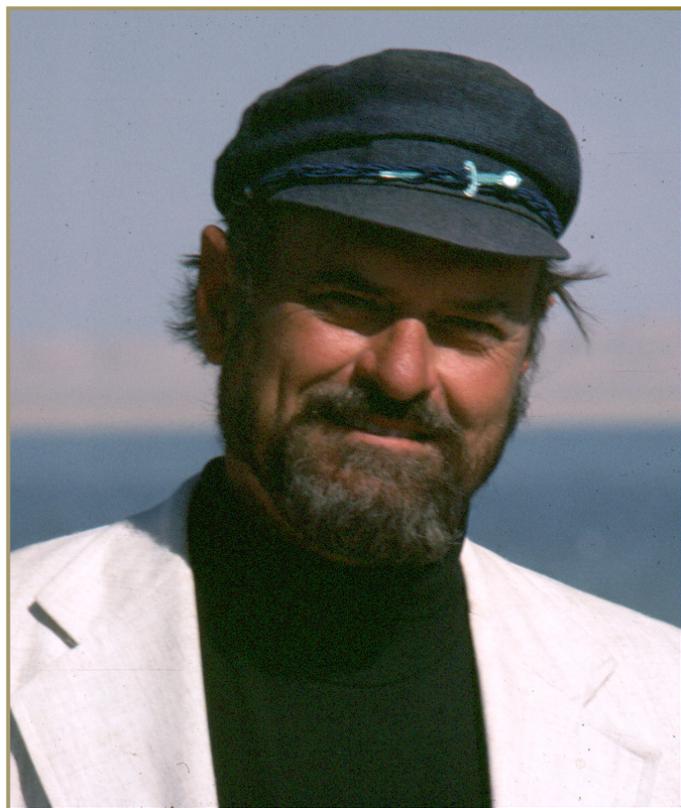


Figure 1 Elwyn Simons circa 1975. Photograph by Al Coleman.

his high school teachers had worked in the Peking Union Medical College, home of the famous Peking Man fossils, and inspired him in his early teens to create a gallery of extinct hominin portraits.

Following early graduation from high school and a brief stint at the University of Texas (during which he memorably attended a lecture by South African paleontologist and paleoanthropologist Robert Broom), Elwyn transferred in 1949 at his father's insistence to Houston's Rice University. Predictably, he elected to study in the Department of Biology, which happened to have been set up by noted evolutionary theorist Julian Huxley. A major influence there



was the charismatic if eccentric Joe Davis, who had come to the department as Huxley's right-hand man and remained after the latter's departure. Even in Huxley's absence, Davis not only made sure that Elwyn got an excellent general grounding in evolutionary biology, with an emphasis on the mammals (he emerged with many a story about armadillos, in particular), but also incidentally instilled in him a lifelong fondness for beekeeping.

After graduating from Rice, Elwyn went on to Princeton University, to which he had been enticed for graduate study by mammal paleontologist Glenn Jepsen. The key attraction was a promise that he would be able to write his doctoral thesis on Jepsen's extensive collections of the Paleocene primate *Phenacolemur*: an irresistible lure for one already deeply interested in primate and human evolution. But upon arriving in Princeton, Elwyn discovered that the *Phenacolemur* specimens had been sent elsewhere for study, and in their absence Jepsen offered instead to supervise a "feces thesis" on coprolites (fossil excrement). Unenthused by this prospect, Elwyn began bargaining, and he ultimately wrote his dissertation on the Pantodonta, a rather obscure group of large, extinct herbivorous Paleocene mammals. His Princeton experience was nonetheless formative, because he acquired from Jepsen a love of paleontological fieldwork, particularly in Wyoming, a place to which he repeatedly returned throughout his career. At the same time, he acquired an abhorrence for the literary indecisiveness, or, as he put it, "the inability to choose between a comma and a semicolon" that severely limited Jepsen's written output. The take-away for Elwyn, despite his Princeton acquaintanceship with critic V. S. Pritchett, was that ideas and sheer productivity trumped style every time. Along with the example of the helpful and hyperprolific American Museum of Natural History paleontologist George Gaylord Simpson, it was this lesson that drove his extraordinary later output (his curriculum vitae lists 366 publications between 1958 and 2017).

Still anxious to study fossil primates, on completing his doctorate in 1956, Elwyn applied for a Marshall Scholarship to cross the Atlantic and study at the University of Oxford. His application was sponsored by Joseph Weiner, a major player in the then-recent exposure of the Piltdown fraud. In Oxford, Elwyn established a close relationship with noted anatomist and paleoanthropologist Wilfrid Le Gros Clark, who granted him his longstanding wish by agreeing to supervise a master's thesis on Eocene omomyoid and adapoid primates: work that was ultimately judged to merit the award of a doctoral degree. It was also during his time based in Oxford that, rummaging through the collections at the American Museum in New York City, Elwyn found an unidentified primate frontal bone from what were then thought to be Oligocene sediments west of Egypt's Fayum Depression. It was

this serendipitous find that was to spark Elwyn's long and extraordinarily productive collecting career in the Fayum.

Upon receiving his second doctorate from Oxford in 1959, Elwyn was appointed to an assistant professorship in the Department of Zoology at the University of Pennsylvania, where he was proud to have occupied a post last held by famous nineteenth-century paleontologist Edward D. Cope. He nonetheless decamped the next year to the Division of Vertebrate Paleontology of Yale University's Department of Geology, where he was to remain for seventeen incredibly prolific years. He particularly relished the notion that Yale had been the home of Cope's arch-rival Othniel C. Marsh, whose position he now also filled. And almost immediately, on the heels of an exploratory trip to the Fayum in 1960, he began to organize the long series of field expeditions to Egypt that were to cement his reputation as the leading field investigator of the primate fossil record.

A hot, sandy desert today, the area to the west of the Fayum oasis was covered in lush forests during the late Eocene and early Oligocene (some 35 to 32 million years ago), the time when the higher-primate suborder to which we belong was just emerging. Those forests were populated by a diverse mammal fauna, and the fossil-rich Fayum sediments consequently provide a unique window into the primate life of the period. Elwyn's primate findings alone eventually came to include the new genera *Aegyptopithecus*, *Qatrania*, *Proptopithecus*, *Catopithecus*, *Afrotarsius*, *Plesiopithecus*, *Aframoniis*, *Saharagalago*, and *Wadilemur*, in addition to a profusion of new and beautifully preserved specimens of genera already described. A bounty of other vertebrate fossils also included specimens key to understanding afrothere diversification and cetacean evolution. Before Elwyn began his investigations, Old World primates from around the Eocene-Oligocene boundary were barely known; now the period is documented in unprecedented detail. What is more, Elwyn proved to be an effective and supportive mentor, and the documentation and study of these paleontological riches provided opportunities for numerous students—many of them now leaders of the profession—to cut their teeth both in fieldwork and in laboratory analysis. And the field experience was unparalleled: despite the harsh environment, nobody ever came back from one of Elwyn's Fayum field camps without an ample stock of fond and usually hilarious stories.

But the Fayum was not enough to absorb all of Elwyn's boundless energies. Having found the Fayum frontal at the American Museum of Natural History, he began combing through Yale's Peabody Museum collections as well. He soon found an unusual fragment of upper jaw that had been discovered in northern India in 1932 and had been given the name *Ramapithecus*. Intrigued by differences he saw between that maxilla and its counterparts in modern apes, Elwyn



Figure 2 Collecting fossils in the Fayum, Egypt, 1982. From left to right: Dan Gebo (standing), Prithijit Chatrath, Rick Madden, Tab Rasmussen (standing), and Elwyn Simons. Photograph by John Fleagle.

suggested in 1961 that in spite of its great age (which was then estimated at 12 million years), it might have belonged to an early member of the human lineage. After David Pilbeam left the University of Cambridge in 1963 to become Elwyn's graduate student, the two began energetically promoting *Ramapithecus* as an early hominin. A complex saga then ensued, in which, as Elwyn put it in an unpublished memoir, "some ... players ... were right for the wrong reasons, while others were wrong for the right reasons." And although the claim that *Ramapithecus* was a hominin eventually collapsed, there is no doubt that the debate fomented by that claim reinvigorated the study of hominin origins and gave the topic a focus it had not previously possessed.

More significantly during this time, Simons and Pilbeam collaborated on two projects, both published in 1965, that were absolutely formative in the paleoanthropology and paleoprimatology of the time. The first was their meticulous revision of the fossil ape record, which reduced a bewildering variety of Miocene ape taxa (some twenty-five genera and fifty species) down to a small handful (one genus, three subgenera, and seven species) that excluded *Ramapithecus*. This reduction later proved to be overzealous, but it constituted an essential housecleaning that was absolutely necessary before further progress could be made. The second project was a reappraisal of the hominin fossil record, essentially in the light of the announcement of the new species *Homo habilis* the year before. It involved one of the first explicit applications of the principles of the Modern Evolutionary Synthesis to the entire hominin fossil record, and the issues it raised could have profitably been kept in mind as new hominin fossils continued to proliferate during the 1970s.

Even before the 1967 war between Egypt and Israel brought paleontology to a decade-long halt in the Fayum, which became part of a military reserve, Elwyn was casting

his eyes toward northern India, whence *Ramapithecus* had come. He negotiated an agreement with a colleague at Panjab University in Chandigarh to work in the Miocene sediments of the Siwalik Hills that had yielded the putative hominin, and by 1969 he and the colleague were able to announce the discovery there of the type mandible of the new and very large ape species *Gigantopithecus bilaspurensis*. Sadly, various pragmatic difficulties then intervened, with the result that the Panjab agreement was rapidly terminated—although, very happily, not before Elwyn had struck up the highly productive relationship with his imperturbable Sikh right-hand man, Prithijit Chatrath, that was to last the remainder of both their careers. Because the Siwalik sediments straddle the India-Pakistan border, Pilbeam was able to continue paleontological operations in Pakistan's Salt Range; but for his part, Elwyn turned his sights upon Libya: an enterprise that, sadly, did not outlast Col. Muammar Gaddafi's coup d'état a mere few months later.

Following a difficult first marriage, in 1972 Elwyn married German primatologist Friderun Ankel, who had come to his laboratory as a postdoctoral student. From then on, the two were inseparable, sharing many adventures in the field although they never published together. A son, Verne, and a daughter, Cornelia, soon followed. A significant change in both Elwyn's and Friderun's lives came in 1977, when Elwyn abruptly left Yale to assume the directorship of the Duke University Primate Center (now the Duke Lemur Center). This unique facility for breeding lemurs had been set up in the early 1960s by Elwyn's former Yale colleague John Buettner-Janusch, and it had entered a period of decline after the latter's departure for New York University in 1973.

Elwyn faced an uphill battle in restoring this remarkable place to its former excellence, but he proved entirely up to the task. Within what seemed like mere days, he had learned the names and the genealogies of each of the center's several hundred inhabitants, and he energetically set out to extend its living holdings, besides establishing within it the Division of Fossil Primates. The expansion of the lemur population at the center necessitated visiting the island of Madagascar, to which lemurs are endemic and from which a large variety of extinct "subfossil" lemurs was already known. So, inevitably, besides bringing back living representatives of such exotic lemur species as the aye-aye and the golden-crowned sifaka (which he named for science), as soon as the opportunity presented itself in the early 1980s Elwyn established a vigorous program aimed at broadening our knowledge of the subfossil lemurs. This he did even though in the eventful year of 1977 he had also resumed fieldwork in Egypt—with hugely impressive results, but with a corresponding call on his time and attention. We should be grateful for Elwyn's prodigious multitasking ability, though, for his paleontological work in

Madagascar vastly extended our knowledge of the distributions of extinct (and living) lemurs on the island and yielded a complete skeleton of *Babakotia*, an entire new genus of the extinct sloth lemurs. In the process, moreover, the Madagascar fossil surveys opened up huge field and laboratory opportunities for students interested in both extinct and living lemurs.

Indeed, over the course of his long sojourns at both Yale and Duke, Elwyn fostered the careers of a remarkable number of undergrads, graduate students, postdocs, and others, many of whom went on to become significant and influential scientists in their own right. At Yale, they included Len Radinsky, David Pilbeam, Ian Tattersall, Philip Gingerich, Richard Kay, Glenn Conroy, Art Horn, Michael Gibbons, David Roberts, Peter Ettel, John Fleagle, Ken Rose, John Kappelman, and Tom Bown; at Duke they included Herbert Covert, Dan Gebo, Tab Rasmussen, Rick Madden, Mario Gagnon, Anne Yoder, Patricia Holroyd, Callum Ross, Erik Seiffert, Marcelo Sanchez-Villagra, Charles Lockwood, and Patricia Wright, as well as visitors from other institutions, among them Bill Jungers, Ellen Miller, and Kathleen Muldoon. Perhaps remarkably, none of those individuals closely resembles him intellectually; they form an astonishingly varied group that is vastly more noteworthy for its diversity than for any adherence to a scientific philosophy or even subdiscipline.

Still, if you were quite reasonably to conclude from the sheer number of those whose careers he indelibly influenced that Elwyn was of a consciously nurturing disposition, you would be entirely wrong. Because he was something better than that. Immensely approachable and relatable, he was always much less like an academic advisor than like an elder brother, someone from whom you learned by observation and osmosis, rather than through the application of any didactic ideal. Although he was a performer who loved an audience, he never tried to interpose himself; and it was this approach to science and to life that allowed him to step back and let his students follow their own noses to their own destinations, whether as paleontologists, or as systematists, or as behavioral ecologists. Despite this, he somehow made sure that all his students learned two things, not from sitting in lectures but through observation and participation. The first of these was the key importance in paleontology of fieldwork, and of getting your methods right while doing it. And the second was the sheer personal exhilaration and intellectual reward of making a hard-won discovery, whether that came in the form of finding a fossil in the field, of making a new observation in the forest or the laboratory, or of simply connecting the dots in some new way.

Elwyn's largely laissez-faire (but not expectation-free) pedagogical attitude was underwritten by a brilliant intuitive intelligence that consistently allowed him to make the

most productive use of whatever circumstances presented themselves, whether they involved strategic opportunities, fortuitous discoveries in museum drawers, or tactical decisions in the field. But if you had asked him exactly how he accomplished what he did, both as a researcher and a teacher, we suspect he would have had difficulty telling you, lover of words and stories as he very certainly was. And really, that would hardly be surprising. Because, after all, nobody could be taught to be another Elwyn Simons. He was truly one of a kind, with accomplishments to match, and paleoanthropology and vertebrate paleontology are much diminished without him.

SELECTED BIBLIOGRAPHY

- 1959 An anthropoid frontal bone from the Fayum Oligocene of Egypt: The oldest skull fragment of a higher primate. *Am. Mus. Novit.* 1976:1–16.
- 1961 The phyletic position of *Ramapithecus*. *Postilla* 57:1–9.
- 1962 *A New Eocene Primate Genus, Cantius, and a Revision of Some Allied European Lemuroids*. Bulletin of the British Museum (Natural History) Geology, Vol. 7. London: BM(NH).
- 1965 With D. R. Pilbeam. Preliminary revision of Dryopithecinae (Pongidae, Anthropeidea). *Folia Primatol.* 3:81–152.
- With D. R. Pilbeam. Some problems of hominid classification. *Am. Sci.* 53:237–259.
- 1967 The earliest apes. *Sci. Am.* 217:28–35.
- 1969 With S. R. K. Chopra. *Gigantopithecus* (Pongidae, Hominoidea): A new species from North India. *Postilla* 138:1–18.
- 1972 *Primate Evolution: An Introduction to Man's Place in Nature*. New York: MacMillan.
- 1989 Description of two genera and species of late Eocene Anthropeidea from Egypt. *Proc. Natl. Acad. Sci. U.S.A.* 86:9956–9960.
- 1992 With L. R. Godfrey et al. A new giant subfossil lemur, *Babakotia*, and the evolution of the sloth lemurs. *Folia Primatol.* 58:197–203.
- 1994 With D. T. Rasmussen. A remarkable cranium of *Plesiopithecus teras* (Primates, Prosimii) from the Eocene of Egypt. *Proc. Natl. Acad. Sci. U.S.A.* 91:9946–9950.
- 2001 The cranium of *Parapithecus grangeri*, an Egyptian Oligocene anthropeidean primate. *Proc. Natl. Acad. Sci. U.S.A.* 98:7892–7897.