

Jolly, Cliff

ERIC DELSON

Lehman College, City University of New York,
United States; American Museum of Natural
History, United States; CUNY Graduate Center,
United States; New York Consortium in
Evolutionary Primatology, United States

Clifford James (Cliff) Jolly (born 1939) has broadened the impact of primatology on physical anthropology through integration of genetic, paleontological, and behavioral data with evolutionary theory. He has drawn on primate models to illuminate aspects of human evolution and combined diverse data to synthesize novel ideas and hypotheses about primates as well as people. Over his more than 50-year career, he has undertaken research on almost every conceivable area of primatology, and (at the time of this writing) he continues to do so.

Cliff Jolly earned a B.A. in Anthropology (1960) and a Ph.D. (working under the supervision of John Napier and Nigel Barnicot) in Physical Anthropology (1965) at the University of London, where he taught for two years before moving to New York University (NYU). He was faculty at NYU from 1967 to 2008, when he became Professor Emeritus. He has held visiting appointments at Makerere University in Uganda and Addis Ababa University in Ethiopia. He directly supervised over 20 Ph.D. students at NYU and mentored countless more, many of whom have gone on to establish their own careers and produce their own “offspring” in Biological Anthropology (see <http://www.physanthphylogeny.org/>). He was a core faculty member of the New York Consortium in Evolutionary Primatology (NYCEP) since its inception in 1991; since his retirement he has been a resource faculty member.

Cliff Jolly’s publication record extends back to 1963, when as a Ph.D. student he wrote a short paper which combined morphology and behavior in an analysis of the evolutionary origin of the exaggerated mane of some baboons (Jolly 1963). It was in 1970 that his range of knowledge and his

impact on the field first became clear with four important publications. Chance and Jolly (1970) was one of the earliest book-length comparisons of social behavior in nonhuman primates and humans, although Jolly’s input was limited but important. Jolly (1970a) reviewed the “adaptive array” of baboons, mandrills, and geladas in the landmark volume *Old World Monkeys*, edited by John and Prue Napier. Jolly (1970b) is perhaps his most famous paper, “The Seed Eaters: A New Model of Hominid Differentiation Based on a Baboon Analogy,” in which he explained the derived adaptations of stem hominins compared to their predecessors by analogy to those of extant *Theropithecus* compared to *Papio*; the “T-complex” of the geladas has been cited in innumerable texts and articles evaluating the lifeways of australopiths. A fourth paper (Jolly 1970c) took the concept one step further in explicating the adaptations of the Malagasy subfossil primates *Hadropithecus* and *Archaeolemur*. One of his last forays into paleoprimatology (Jolly 1972) was a monographic treatment of the extinct forms of *Theropithecus* whose morphological conclusions continue to be supported.

By 1973, Jolly had moved away from fossils toward primate genetic studies, building on his graduate work with Barnicot. Jolly and Brett (1973) discussed hybridization between what were then considered species of *Papio* and concluded that these taxa were perhaps better considered subspecies, beginning a long thread of taxonomic analyses. Twenty years later, Jolly (1993) reviewed alternative species concepts theoretically and as regards baboons especially. His conception of “phenostucture” and “zygostructure,” contrasting morphological patterns and genetic continuity, is a potentially major advance which has not yet been fully appreciated. His suggestions to recognize numerous subspecies of a single *Papio* species while avoiding too intense a search for the “correct” taxonomy in complex situations like these are still meritorious.

Jolly has undertaken field work in Kenya, Uganda, Ethiopia, Tanzania, Sierra Leone, Gabon, Zambia, Pakistan, Yemen, Venezuela, and Nicaragua. His primary long-term study

The International Encyclopedia of Primatology. Edited by Agustín Fuentes.

© 2017 John Wiley & Sons, Inc. Published 2017 by John Wiley & Sons, Inc.

DOI: 10.1002/9781119179313.wbprim0434

has been the population structure, genetics, and natural history of the Awash National Park hybrid baboon populations, co-directed with Jane E. Phillips-Conroy since 1982, and recently extended (with the addition of Jeffrey Rogers) to the little-known Kinda baboon and its hybrid zone with grayfoot and yellow baboons in Zambia (Jolly et al. 2011). He also works with a team of geneticists and neurophysiologists to seek the proximate causes of differences in social behavior between baboon varieties (be they species or subspecies in current interpretation; see Jolly et al. 2013).

However, his interest in human evolutionary history was always just below the surface. His 1974 New York Wenner-Gren Foundation Conference (Jolly 1978) brought together established specialists on African early humans and younger researchers employing new methods. As a result, he participated in Ethiopian research with Jon Kalb, whose work in the Awash Valley led to the discovery of the Bodo *Homo* cranium, as well as a variety of *Theropithecus* fossils (Conroy et al. 1978). His annual luncheon address to the American Association of Physical Anthropologists (AAPA) in 2000 (Jolly 2001) further explored the insights into human evolution to be gained from the analogy of baboons and related monkeys.

Cliff Jolly has been widely honored. He was awarded the AAPA's Charles R. Darwin Lifetime Achievement Award in 2011. He was the focus of a Wenner-Gren conference "Evolutionary Anthropology at the Interface: A Celebration of Cliff Jolly's Contributions to the Field" in 2008 (see Phillips-Conroy and Rogers 2009). He is also a Fellow of the American Association for the Advancement of Science.

REFERENCES

- Chance, Michael R. A., and Clifford J. Jolly. 1970. *Social Groups of Monkeys, Apes and Men*. London: Jonathan Cape.
- Conroy, Glenn C., Clifford J. Jolly, D. L. Cramer, and J. E. Kalb. 1978. "Newly Discovered Fossil Hominid Skull from the Afar Depression, Ethiopia." *Nature*, 275: 67–70.
- Jolly, Clifford J. 1963. "A Suggested Case of Evolution by Sexual Selection in Primates." *Man*, 22: 177–178.
- Jolly, Clifford J. 1970a. "The Large African Monkeys as an Adaptive Array." In *Old World Monkeys*, edited by John R. Napier and Prue H. Napier, 141–174. New York: Academic Press.
- Jolly, Clifford J. 1970b. "The Seed Eaters: A New Model of Hominid Differentiation Based on a Baboon Analogy." *Man*, 5: 5–26.
- Jolly, Clifford J. 1970c. "*Hadropithecus*, a Lemuroid Small-Object Feeder." *Man*, 5: 525–529.
- Jolly, Clifford J. 1972. "The Classification and Natural History of *Theropithecus* (*Simopithecus*) (Andrews, 1916), Baboons of the African Plio-Pleistocene." *Bulletin of the British Museum (Natural History). Geology*, 22: 1–123.
- Jolly, Clifford J., ed. 1978. *Early Hominids of Africa*. London: Duckworth.
- Jolly, Clifford J. 1993. "Species, Subspecies, and Baboon Systematics." In *Species, Species Concepts, and Primate Evolution*, edited by William H. Kimbel and Lawrence B. Martin, 67–107. New York: Plenum.
- Jolly, Clifford J. 2001. "A Proper Study for Mankind: Analogies from the Papionin Monkeys and their Implications for Human Evolution." *Yearbook of Physical Anthropology*, 44: 177–204.
- Jolly, Clifford J., and Fred L. Brett. 1973. "Genetic Markers and Baboon Biology." *Journal of Medical Primatology*, 2: 85–99.
- Jolly, Clifford J., Andrew S. Burrell, Jane E. Phillips-Conroy, Christina Bergey, and Jeffrey Rogers. 2011. "Kinda Baboons (*Papio kindae*) and Grayfoot Chacma Baboons (*P. ursinus griseipes*) Hybridize in the Kafue River Valley, Zambia." *American Journal of Primatology*, 73: 291–303.
- Jolly, Clifford J., Jane E. Phillips-Conroy, Jay R. Kaplan, and J. John Mann. 2013. "Monoamine Neurotransmitter Metabolites in the Cerebrospinal Fluid of a Group of Hybrid Baboons (*Papio hamadryas* × *P. anubis*)." *International Journal of Primatology*, 34: 836–858. DOI:10.1007/s10764-013-9698-4.
- Phillips-Conroy, Jane E., and Jeffrey Rogers. 2009. "A Celebration of Clifford Jolly's Contribution to Biological Anthropology." *Current Anthropology*, 50: 183–186.