Primate tales: memoirs from leaders in primatology

John C. Mitani¹

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During the early part of the twentieth century, Robert Yerkes (1925) in the United States and Wolfgang Kohler (1925) in Germany initiated research on primates. Both were psychologists motivated by questions about how the minds of nonhuman primates were similar or different from our own. Shortly thereafter, C. Ray Carpenter, another psychologist working under the supervision of Yerkes, completed the first successful field studies of primates with his pioneering research on mantled howler monkeys (*Alouatta palliata*) in Panama (Carpenter 1934) and white-handed gibbons (*Hylobates lar*) in Thailand (Carpenter 1940). Kinji Imanishi, however, ushered in the modern study of primates. Imanishi was an entomologist, who turned his attention to investigating the enduring question about how human societies arose (Imanishi 1952). This led him to the study of our closest living relatives, the nonhuman primates. Over the course of several years, he supervised a team of scientists, who conducted research on the one nonhuman primate endemic to Japan, Japanese macaques (*Macaca fuscata*). In 1957 Imanishi laid the groundwork for the discipline of primatology by establishing this journal, *Primates*, the first publication dedicated to research on nonhuman members of the Order.

Due to Imanishi's efforts, there is a long tradition of primate research in Japan. Two of his first students made fundamental discoveries. At a time when most considered primate groups to be random collections of individuals, Syunzo Kawamura (1958) documented the matrilineal group structure of Japanese macaques. Masao Kawai (1965) followed by describing Japanese macaques washing sweet potatoes in the water of a river, an observation that led to subsequent studies of primate cultural behavior. A third student, Junichiro

Itani, spearheaded field studies on African apes. In keeping with Imanishi's research program, the primary goal of these studies was to uncover the roots of the human family and society (Itani 1977). One of Itani's students, Toshisada Nishida (1968), established long-term research on chimpanzees (*Pan troglodytes*) at the Mahale Mountains, a study that continues to this day. Meanwhile, Itani's first student, Takayoshi Kano, conducted fieldwork on chimpanzees and other primates for his PhD thesis (Kano 1971a, b). Kano went on to start the first long-term field study of bonobos at Wamba in the Democratic Republic of Congo (Kano 1980), a project that is also still active. Primatology continues to thrive in Japan, and *Primates* remains an important outlet for Japanese primatologists and researchers from around the world to publish their latest findings on the behavior, ecology, and conservation of primates.

While primatology began to grow and flourish in Japan, a separate program of research was developing in the United States. In the late 1950s and early 1960s, Sherwood Washburn, an anthropologist, and David Hamburg, a psychiatrist, established a tradition of primate research, with the aim to shed light on human evolution and contemporary human behavior (Washburn and Hamburg 1965a, b). Meanwhile, Stuart Altmann, E.O. Wilson's first graduate student at Harvard University, conducted his PhD research on a colony of rhesus macaques (*Macaca mulatta*) transplanted by Carpenter to Cayo Santiago Island off the south coast of Puerto Rico (Altmann 1962). Altmann's subsequent studies of the Amboseli baboons (*Papio cynocephalus*) in Kenya, carried out with his wife Jeanne (Altmann and Altmann 1970), created a school of primate research in the United States distinct from the anthropological and psychological work of Washburn and Hamburg. Programs to study primates soon emerged in Europe. After Robert Hinde, an ornithologist, established a colony of rhesus macaques to investigate mother-infant relationships at Cambridge University's Sub-Department of Animal Behaviour (reviewed in Bateson et al. 2018), he turned his attention to fieldwork and subsequently

J. C. Mitani: Associate Editor, *Primates*.

✉ John C. Mitani
mitani@umich.edu

¹ Department of Anthropology, University of Michigan, Ann Arbor, MI, USA

trained an entire generation of primatologists, including Jane Goodall (Bateson 1991). A few years later, Jan van Hooff, a biologist educated in the classic ethological tradition by Niko Tinbergen at Oxford, started an important center for the study of primates at Utrecht in the Netherlands.

As this brief, and admittedly selective, review attests, primatology has a rich and varied history. Most of the aforementioned pioneers are no longer with us. Despite their passing, the discipline has continued to grow, and the study of primates has matured, generating novel findings and expanding into areas of research that the founders of the field could never have imagined. To help preserve the legacy and work of those who have paved the way for current primatological research, we are starting a new series of papers in *Primates*, called *Primate Tales: Memoirs from leaders in primatology*. For this series we are soliciting papers from individuals who have made major contributions to the study of primates. We expect to publish two or three papers a year and will give authors a wide berth to tell their stories. While all contributors will review the results of their research, we are encouraging them to provide personal details, including accounts about what brought them to the study of primatology and the challenges they faced while conducting their research. These narratives promise to furnish a glimpse into the myriad ways our science is conducted and how it has developed and evolved.

We are pleased to inaugurate *Primate Tales* in this issue with a paper by Professor Yukimaru Sugiyama. Professor Sugiyama has led a very long and distinguished career and is one of the unquestioned leaders of our discipline. His wide-ranging and extensive research program includes studies of Japanese macaques, Hanuman langurs (*Semnopithecus hypoleucos*), and chimpanzees. Along the way, he has made important observations and significant discoveries that have transformed our understanding of primates.

We hope that this series of papers provide readers, both young and old, a better understanding of our field and how we have come to know what we know about the lives of our closest living relatives, the nonhuman primates. We anticipate many illuminating papers that will inform and occasionally surprise.

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