

## **Obituary: Toshisada Nishida (March 3, 1941– June 7, 2011)**

**John C. Mitani · Frans B. M. de Waal ·  
Kazuhiko Hosaka · William C. McGrew ·  
Michio Nakamura · Akisato Nishimura ·  
Richard W. Wrangham · Juichi Yamigiwa**

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Toshisada Nishida, a pioneer in the study of primate behavior, died on June 7, 2011 following a prolonged battle with cancer. He was 70 years old.

Nishida began his career while still an undergraduate student at Kyoto University, where he was inspired by Kinji Imanishi. In 1962, he investigated interactions between two groups of Formosan macaques that had been translocated to Japan. He followed this in 1963 with a study of Japanese macaques living at the northern limit of their geographical distribution. He continued to study Japanese macaques from 1964 to 1965 for his Master's thesis at Kyoto. Working under the supervision of Junichiro Itani, he described the life of solitary male macaques and how they transfer

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J. C. Mitani (✉)  
Department of Anthropology, University of Michigan, Ann Arbor, MI 48109, USA  
e-mail: mitani@umich.edu

F. B. M. de Waal  
Living Links, Yerkes National Primate Research Center, Emory University, Atlanta, GA 30322, USA

K. Hosaka  
Faculty of Child Studies, Kamakura Women's University, Kamakura 247-8512, Japan

W. C. McGrew  
Department of Archaeology and Anthropology, University of Cambridge, Cambridge CB2 1QH, UK

M. Nakamura  
Wildlife Research Center, Kyoto University, Kyoto 606-8203, Japan

A. Nishimura  
Iwakura Kino-cho 251-28, Kyoto 601-1125, Japan

R. W. Wrangham  
Department of Human Evolutionary Biology, Harvard University, Cambridge, MA 02138, USA

J. Yamigiwa  
Laboratory of Human Evolution Studies, Department of Zoology, Kyoto University, Kyoto 606-8502, Japan

between groups. At a time when many believed that there was little or no movement between primate groups, this finding set the stage for future research on dispersal. It was the first in a series of significant discoveries made by Nishida.

Nishida is best known and will be remembered for his long-term study of the chimpanzees in the Mahale Mountains. Following the advice of his advisor, Itani, Nishida traveled to this remote location in western Tanzania in 1965. Itani instructed him to habituate the chimpanzees there by provisioning them with food. He dutifully established a sugar cane plantation and waited six long months for the first chimpanzee to arrive. His patience and determination paid off in the end as chimpanzees began to frequent the provisioning station, making observations of them and their behavior possible. He spent the following 18 months collecting data and returned to Japan to publish his first paper on the Mahale chimpanzees in 1968. This paper formed the basis of his Ph.D. thesis and was a tour de force. It broke new ground conceptually, theoretically, and methodologically. Conceptually, he documented carefully, and in unprecedented detail, the fission-fusion nature of chimpanzee society. Theoretically, he showed how the roots of the human family, as envisioned by his mentors, Imanishi and Itani, were not likely to be found in the behavior of chimpanzees. Methodologically, he set a new standard for the quantitative analysis of primate social structure by developing and implementing the twice-weight association index.

Immediately after earning his Ph.D. degree, Nishida returned to the Mahale Mountains to continue his research on chimpanzees. He would do so for the rest of his life. In 1973, he made a trip to Zaire to conduct a survey of bonobos. He subsequently informed his good friend and colleague, Takayoshi Kano, about his experience and urged him to begin studying these rare and elusive apes. This led to Professor Kano establishing his own long-term research on bonobos at Wamba.

Nishida assumed his first academic position as an Assistant Professor in the Department of Anthropology at the University of Tokyo in 1969. He remained there until 1988 when he became the Head of the Laboratory of Human Evolution Studies in the Department of Zoology at Kyoto University. He retired from Kyoto University in 2004. During his career, Nishida published 20 books and over 100 papers regarding the Mahale chimpanzees. Several important findings emerged from this body of work. Along with Kenji Kawanaka, he was the first to describe the process of female dispersal in chimpanzees. With his students, Nishida went on to document the only known case of a chimpanzee group dissolving. In additional collaborative work, he brought attention to the surprising fact that chimpanzees use plants for medicinal purposes. Nishida's field research at Mahale also contributed in important ways to current research on female chimpanzee social relationships, male primate coalitionary behavior, and primate culture.

In addition to his long-term behavioral research on the Mahale chimpanzees, Nishida was an ardent conservationist and worked hard throughout his life to ensure that chimpanzees at Mahale and elsewhere would continue to be protected. His efforts led to the Tanzanian government establishing the Mahale Mountains as a National Park in 1985. He co-organized and helped to establish the Mahale Wildlife Conservation Society in 1994. He lobbied for the conservation of great apes as a Patron of the United Nations Environment Programme's Great Ape Survival Partnership and led an attempt to establish great apes as a "World Heritage Species."

Throughout his career, Nishida contributed in multiple ways to the profession. He served as the President of the International Primatological Society from 1996 – 2000 and

as the Senior Program Officer in Biology for the Japan Society for the Promotion of Science between 2003 and 2006. Following his retirement from Kyoto University, he became the Executive Director of the Japan Monkey Centre in Inuyama, a position he held at the time he died. He served as the Editor-in-Chief of the journal *Primates* from 2004 until his death. Nishida was a member of the Editorial Boards of several journals, including *African Primates*, *Anthropological Sciences*, *Human Evolution*, the *International Journal of Primatology*, and the *Journal of Human Evolution*. In 1994, he established *Pan Africa News*, a publication devoted to the dissemination of news about research concerning the behavior and ecology of chimpanzees; he served as its Editor from 1997 to 2011.

Nishida was an active member of several professional societies and assumed administrative duties in many of them: Anthropological Society of Nippon (Council); Committee for Conservation and Care of Chimpanzees (Executive Council); International Primatological Society (Special Consultant for Primate Conservation, Conservation Committee); Japan Association for African Studies (Council and Board of Directors); Japan Monkey Center (Council); IUCN (member Primate Specialist Group, African Section); Japan Ethological Society (Board of Directors); and Primate Society of Japan (Council, Board of Directors, Conservation Committee, President).

Nishida's pioneering research on chimpanzees was widely recognized and honored. In 2008, he was the recipient of the International Primatological Society's Lifetime Achievement Award. That same year he and Jane Goodall received the Leakey Prize awarded by the L.S.B. Leakey Foundation.

Nishida continued to work until he passed away. His 21<sup>st</sup> and last book about the chimpanzees of the Mahale Mountains, "Chimpanzees of the Lakeshore: Natural History and Culture at Mahale," was published posthumously by Cambridge University Press at the end of 2011.

Nishida is survived by his wife, Haruko, daughter, Ikuko, son, Toshimichi, and grandson, Kengo.



Toshisada Nishida with veteran field assistant, Ramadhani Nyundo. (Photo courtesy of Agumi Inaba)

### **Toshisada Nishida remembered**

In the following, some of Toshi's colleagues remember him as a scientist, mentor, and friend.

#### **Frans B. M. de Waal**

Toshisada Nishida met “my” chimpanzees about a decade before I met “his.” He visited the Yerkes Primate Center Field Station, in Georgia, and I showed him around the way I do many guests. One big difference, however, was the reaction of the chimpanzees. Normally, they do not like strangers, which they express by spitting, throwing, displaying, and the like. But with Toshi, there was no reaction at all. He was standing next to me, leaning sideways a little (as I later saw him do also at Mahale), walking quietly without abrupt moves, and the apes seemed to think that this man was perfectly fine.

I have met Toshi many times over the years, and once stayed three months in Kyoto. While I wrote *Chimpanzee Politics* (de Waal 1982), he and his students were documenting strikingly similar power games among wild chimpanzees (Nishida 1983; Nishida and Hosaka 1996). We shared an intense interest in social cognition. And here I do not mean the presently popular experimental approach, but the application of strategic intelligence in everyday life. It is harder to document, of course, but also far more exciting as there is so much more at stake, such as lives and matings. It was therefore a thrill for me to meet the aging Kalunde on a visit to the Mahale Mountains, in 2003. I watched Kalunde, who figures prominently in Toshi's accounts, play the game of “allegiance-fickleness” that allows old males to carve out a key position by regularly switching sides in alliances with younger adult males.

Toshi lived up to his reputation in the field, being incredibly knowledgeable not only about the primates he studied, but about the forest as a whole. Not satisfied with bookish knowledge, he personally tasted every leaf or fruit that he saw chimpanzees consume. He was also remarkably generous, having allowed so many visitors and students to work at his site that the list of publications that has come out of Mahale is truly impressive. I will miss his typical asides about the work of colleagues. Without criticizing anyone directly, he would pose penetrating questions about their claims or findings in a way that gave away his passion for primatology and his vision of where it should be heading. He showed this passion until the very last. About one year before his death he told me that he absolutely wanted to finish his books, but also that he was certain they would be his last. I will miss him.

#### **Kazuhiko Hosaka**

Toshisada Nishida perplexed me at the start. In February 1991, I finished my senior thesis and rushed to Kyoto to meet him to ask what I should study before entering his lab as a graduate student. He did not seem to hear my question, but instead burst into rapid speech. At first, I did not understand what he meant, but the next day I realized that he had invited me to Mahale!

It was an exciting time for the M group chimpanzees. Ntologi, the alpha male for 11.5 years, had been overthrown and ostracized by a group of males who had formed an alliance against him. In August 1991, Nishida-san took me to Mahale. Kalunde, the new alpha male, maintained his status by taking advantage of the shifting power balance among males. Nishida-san instructed me to follow the adult males until I recognized all of the chimpanzees. It took me 10 days to begin following them by myself.

To be honest, I was not completely comfortable with Nishida-san during this first field trip. His moods would change, and he could be difficult to talk to. But he was also a delight to be with, frequently acting like a playful kid. When he saw a chimpanzee acting in a funny way, he laughed and looked back to see how I reacted. Every night back at the research camp, we enjoyed gossiping about chimpanzees.

I continued to stay after Nishida-san returned to Japan. In January 1992, a surprising event occurred. Kalunde lost power, challenged by his younger ally, Nsaba. I expected that Ntologi might return now that the alliance against him had collapsed. I made the long journey to town to phone Nishida-san and report what had happened. Three weeks later, Ntologi regained his alpha status with support from Kalunde, his long-time rival but now reliable ally. I wrote several letters to Nishida-san because I knew he longed to hear the news. Fifteen years later, he reminisced about the first part of the 1990's, saying, "I enjoyed that time at Mahale the most." The chimpanzees were very well habituated and observed more frequently than before. The political interactions between the adult males were quite dramatic and provided some fascinating observations and data.

In August 2009, I accompanied Nishida-san during his final, two-week journey to Mahale. At first, he got tired quite quickly even after a short walk. But his strength improved each day. He focused his observations on the play behavior of juvenile chimpanzees. He was lucky to witness a successful hunt of red colobus monkeys. The current alpha male, Pim, shared meat with Kalunde, now a low-ranking but lively old male.

Nishida-san was relaxed in the forest and in camp. I felt comfortable with him this time. Every night, he enjoyed talking about the chimpanzees while eating his favorite fish from Lake Tanganyika washed down with beer. He never said that this was the last time he would be with the chimpanzees. On August 27, 2009, Nishida-san left Mahale with a boat full of tourists. I watched him as he drifted out of sight. He gazed at Mt. Nkungwe, the highest peak in the Mahale Mountains chain standing loftily and nobly against the serene sky, perhaps in the same way he looked at it 44 years before.

### **William C. McGrew**

I first met Toshisada Nishida in the summer of 1974, at a Wenner-Gren conference at Burg Wartenstein on 'The Great Apes,' in the Austrian alps. We were the two most junior persons in a distinguished group that included Robert Hinde, Irvén DeVore, Junichiro Itani, and others. I felt somewhat cowed in the presence of those silver-backs, so I was surprised at one of the evening meals, when there was entertainment. Toshi volunteered to stand up to sing, *acapella*, some songs in the native language of Watongwe boatmen of Lake Tanganika. Very brave! I also recall seeing him playing Go, the Japanese board game, late into the night with Professor Itani, in the castle library. Progress of the game could be followed by listening to occasional non-verbal sounds from the two competitors!

We came to know one another better when Toshi hosted Caroline Tutin and myself on our first visit to Japan, in connection with the International Primatological Congress, held in 1974 in Nagoya. We were hosted in wonderful fashion with traditional Japanese cuisine, all of which was new to us. In those days, Japanese inns (*ryokan*) were very traditional, and I recall using observational learning to acquire the customs of the communal hot springs bathing. He took us to see the more rural

Japanese monkeys of Takagoyama, where we were fascinated to see them emerge from the undergrowth.

Once I took him to a baseball game in Chicago to watch the Cubs play in Wrigley Field. He admitted to not being a real baseball fan, but recalled going to a game when a boy. He was more interested in buying lots of memorabilia, such as caps, pennants, and the like, to take home as gifts, than in the game itself.

Toshi and I never managed to have time together in the field, though we spoke of doing so repeatedly. On other trips to Mahale I was lucky to work with Michael Huffman, Professor Itani, Kenji Kawanaka, Michio Nakamura, and Shigeo Uehara. We were deeply affected by the beauty and scale of the Mahale Mountains area, which are living testimony to the efforts of Toshi to secure their status as a national park.

I last saw Toshi in Inuyama, in September, 2010, after the IPS Congress in Kyoto. He gave us a tour of the Japan Monkey Centre, then hosted us for lunch. He was proud of what had been accomplished there, but also was apologetic about the housing of some of the primates, which needed improvement. Thus, my final memory of him is of his abiding thoughtfulness.

### **John C. Mitani**

I had the great and good fortune to be introduced to the behavior of wild chimpanzees by Toshisada Nishida. Toshi gave me my initial opportunity to study chimpanzees at the Mahale Mountains. I will always remember my first day with him in the field. I saw many of the behaviors that made the Mahale chimpanzees known to all primatologists: the grooming hand-clasp, leaf clipping and mating behavior, ant dipping, and at the end of day, a red colobus hunt. The hunt generated a feeding frenzy as the chimpanzees descended to the ground with the carcass. Toshi calmly walked over to the scum and peeked in. I kept a respectful distance, a bit horrified by the scene. After awhile, Toshi glanced over his shoulder and motioned for me to come closer. I took a few tentative steps toward him and watched chimpanzees devour the first of many red colobus monkeys.

The next morning, Toshi was astonished to see the old male Musa wash the remnants of the carcass from the previous evening in the Kasiha river. He had never seen such behavior in 25 years of fieldwork. This observation continued to fascinate him, and he would talk and write about it frequently over the years. This event illustrates why chimpanzees captivated Toshi. The endless variety of their behavior kept him returning to Mahale. Toshi was a dogged and determined fieldworker. He watched the chimpanzees closely and never tired of collecting his own data. He recorded every nuance in their behavior and kept meticulous notes of the minutest details of their lives, compiling them into seminal publications that are well known to readers of this journal.

One gets to know people, as well as the primates we study, in an intimate way in the field. As a consequence of the three times we spent together at Mahale, Toshi and I, like male chimpanzees, developed a strong, life-long bond. I benefited greatly from our friendship, and with many others in the international primatological community, mourn his passing deeply.

### **Michio Nakamura**

After I passed the exam to join the Laboratory of Human Evolution Studies at Kyoto University in 1993, I visited Nishida-san's office to seek his advice and to plan



a course of study for my Master's degree. I hesitantly told him that I was interested in the social behavior of the great apes, but that I had not yet decided which species to study or where. He replied instantly, "I will visit Mahale soon, so you can come along with me!" And with that, my career as a chimpanzee researcher began.

Only a month after formally joining the Lab, and even before meeting all of the Lab members (many of whom were in the field), I was on a plane with Nishida-san, heading for Tanzania. When we finally arrived at Mahale by boat, it was around 3 a. m. in the middle of the night. This was my first experience in Africa, and I was exhausted by the long journey. But we immediately set off from the lake shore to the research camp through the dark forest. After walking 15 minutes or so, Nishida-san suddenly started to hoot in the darkness! I was at a loss as to what was going on, but I soon realized that we had almost arrived at camp. Nishida-san was making arrival pant-hoots just as chimpanzees do. His alliance partner, Dr. John Mitani, was sleeping at camp but was woken by the loud pant-hoots and kindly prepared beds for us.

Nishida-san was not the type of supervisor who taught students much with his words. Rather, he taught largely with his deeds in the field. Nevertheless, I will never forget some words wisdom he passed on to me in which he explained his approach to science. When I once grumbled about the burden of writing English papers to Japanese researchers, he told me that science is a culture born in the West. Therefore, if we want to be understood in science, we must first try to understand its cultural background and use its language. Good ideas and work are worth nothing if they are not read and understood. He carried out his word. He wrote more English papers than any other Japanese primatologist of his generation and always kept up-to-date on new theories and discussions. Through his writings, Nishida-san had a tremendous influence on the international academic world, and his name will be remembered forever together with his work and his love for chimpanzees.

### **Akisato Nishimura**

I first met Toshisada Nishida in April, 1961, when I enrolled to study in the Department of Zoology at Kyoto University. He was a senior student and had just finished a two-year General Education Course, while I was admitted after studying in the Fisheries Department at Kyoto. Takayoshi Kano and Kosei Izawa, who became primatologists as we did, were in the same class. Jiro Tanaka was also our classmate. He was an alpinist and carried out fieldwork on Nilgiri langurs during an expedition to the Himalayas. He later went on to study the Kalahari Bushman.

I must have seen Nishida at every lecture and practicum in Zoology, but we did not talk to each other very much. He was usually reading at breaks, and both of us were quite taciturn at the time. In spite of this, I clearly recollect a short conversation with him in the fall of our first year together. I asked him what he was doing for his undergraduate thesis. "Saru (monkeys and apes)," he answered immediately. "I've read Imanishi's book, *The Gorilla*, and I hope I will be able to travel to Africa if I study monkeys and apes." Looking back, his simple answer was prophetic as the next 50 years of life were to show.

The Laboratory of Physical Anthropology was established in the Department of Zoology at Kyoto University in April, 1962. Kinji Imanishi and Junichiro Itani, who initiated the Kyoto University African Primate Expedition (KUAPE) the previous year, were appointed to lead the new laboratory as Professor and Associate Professor,

respectively. Thus, a favorable situation for Nishida to work in Africa arose sooner than expected. I was the first from our class to conduct fieldwork on chimpanzees. After I began my graduate studies in the new laboratory, Imanishi immediately sent me to Kabogo station along the eastern shore of Lake Tanganyika. This was the site of KUAPE's first attempt to study chimpanzees. I stayed there for 15 months working with Shigeru Azuma. Unfortunately, we only rarely were able to find and follow chimpanzees.

Nishida went to Africa in 1965 together with Kano and Izawa, all working under the supervision of Itani. Nishida's research on chimpanzees after that is well known. Although I changed my focus of study from chimpanzees to Japanese macaques, and then to woolly monkeys, I followed his work closely over the years. I was particularly excited and intrigued to find that the dispersal pattern of woolly monkeys was similar to chimpanzees as shown by Nishida.

I was not as close to Nishida as Kano, who was his chief rival in the Japanese board game *Go*. After we retired from our respective Universities, however, we talked often as we lived near each other. We reminisced about the old days, and I am happy that I was able to see him several times just before he passed away. He died peacefully in his home with his wife and son at his bedside.

### **Richard W. Wrangham**

I met Toshisada Nishida in 1971 when he visited Gombe for a few hours on his way to Mahale. At the time I was a research assistant working for Jane Goodall, and there had been no interaction between his research team at Mahale and Goodall's team at Gombe. Toshi issued an open invitation to come to Mahale, and Margaretha (Mitzi) Thorndahl (another research assistant at Gombe) and I gladly accepted.

We went a few weeks later. Our journey from the port of Kigoma took two long days of boating, canoeing and walking, but despite its remoteness and mud huts Toshi's camp was a beautifully organized place in which he, his wife Haruko and their three-year-old daughter lived graciously and introduced us to Japanese culture. One night, during a meal of tilapia freshly caught from the lake, Toshi told of a curious dietary taboo applied to the Japanese Emperor. The only part of a fish that the Emperor was allowed to eat was the eye muscle. (Toshi helped us each find the eye muscles on our own fish. They were so small that the taste was hard to discern.) Why this prohibition? The Emperor had a large court. To produce enough eye muscles to feed the Emperor, an enormous number of fish had to be produced, and after their eye muscles had been removed the fish were enough to feed the whole palace. I used to think of this story in later decades as the data from Mahale swelled and 'fed' an ever growing number of researchers.

In the forest Toshi's field assistants staked sugar-canes into the ground and gave pant-hoots. Chimpanzees recognized the human calls as a food-signal, and came rather nervously to snatch the food and move away. They were less well habituated than the Gombe chimpanzees, and we spent more time searching than watching, including an all-day walk in search of (I think) the Bilenge community, with much time for discussion. Toshi was tireless, dauntingly knowledgeable, endlessly enthusiastic and encouraging. He was keen to initiate collaboration between Mahale and Gombe, and our observations of how chimpanzees from the two populations differed in their consumption of the same plants eventually led to some comparative papers.

Toshi remained a warm and supportive friend to the end. I was particularly impressed by the way he took the initiative on the Great Apes World Heritage Species



Project. He knew that the idea of creating a special category of conservation priority for the great apes flew in the face of established conservation practice. But he felt it was the right thing to do, and he leapt into the fray, kindly taking me with him. He established connections with UNESCO, raised money, and pushed for legislation. He was a fighter who played by the rules and had all the right instincts. His opening of a dialogue between Japanese and Western researchers was only one of many contributions that Toshisada Nishida made to international primatology.

### **Juichi Yamigiwa**

Before he began to battle cancer, Professor Nishida invited many researchers to the Mahale Mountains, where he conducted long-term research on chimpanzees. He also visited other great ape field sites, including mine in 1999 at Petit Loango Reserve, Gabon, where Yuji Takenoshita and I conducted research on a sympatric population of chimpanzees and gorillas. As far as I know, it was the first time he visited gorilla habitat. Unfortunately, he was unable to observe gorillas directly, but he nonetheless enjoyed tracking gorillas along their fresh trails. He tried to taste every fruit that he found on the trail of gorillas and concluded from this that gorillas ate delicious fruit. He encountered a group of chimpanzees, who threw branches at him from the canopy. He was excited by their display and told us that these chimpanzees appeared to be more violent than the Mahale chimpanzees. He also told us about his experience habituating chimpanzees at Mahale in the old days. At that time, the primary goal of ape field research conducted by Japanese primatologists was to seek the evolutionary roots of the human family. He tried to find evidence of this, but failed in the end. Instead, he found that chimpanzees resembled humans in other ways, such as male coalitions, food sharing, and meat eating. He believed that two key features that contributed to the social evolution of our human ancestors involved male coalitions and female transfer, another aspect of chimpanzee society that he discovered.

One night in camp, our field assistant collected crabs, and he used these to cook a delicious spaghetti dinner for us. It was a happy time talking about gorillas and chimpanzees. He spoke eloquently about chimpanzees that night, and I remember his eyes sparkling whenever he talked about them. I believe that his soul will remain forever with his chimpanzee friends in the African forest.

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