

COMPOSING WORLDS WITH ELEPHANTS Interdisciplinary dialogues

Edited by Nicolas Lainé Paul G. Keil Khatijah Rahmat

> ژ**ک** Éditions

collection [mondes vivants]

COMPOSING WORLDS WITH ELEPHANTS

Interdisciplinary dialogues

> Edited by Nicolas Lainé Paul G. Keil Khatijah Rahmat



Editorial coordination Corinne Lavagne Copy editing Octopus editing Proof reading Anne Causse Graphic design Alan Guilvard - Format Tygre Page layout Aline Lugand – Gris Souris Photo engraving IGS-CP

Cover: © Paul G. Keil The mahout, Oupe, caringly hand-feeding the sub-adult female, Rohila, before she returns to the forest for the evening (Kamrup, Assam, 2014).



This publication is open-access and made available to the public under the terms of the Creative Commons license CC BY-NC-ND 4.0, which can be viewed at https:// creativecommons.org/licenses/by-nc-rednd/4.0/deed.en. Under this license, the original work can be freely distributed as long as the authors and publishers are credited and a link to the license CC BY-NC-ND 4.0 is provided. Modifications are not authorised and the work must be published in its entirety. The material may not be used for commercial purposes.

© IRD, 2023

FRENCH NATIONAL RESEARCH INSTITUTE FOR SUSTAINABLE DEVELOPMENT

Paper ISBN: 978-2-7099-2993-6 PDF ISBN: 978-2-7099-2994-3 Epub ISBN: 978-2-7099-2995-0

CHAPTER 10

NĀGĀDHYAKSHAÇARITHA*

Elephant-mahout relationships in two communities of southern India

Sreedhar Vijayakrishnan, Anindya Sinha

INTRODUCTION

nāgādhyakṣastu dhīmān narapatisadrśēā dhārmikaḥ svāmibhaktāḥ śud'dha: satyapratijñēā vyasanavirahitāḥ samyatākṣēā vinītāḥ utsāhī dr̥ṣṭakarmā priyavacanarata: sadgurēārāttaśāstrēā dakṣēā dhīra: śaraṇyēā gadaharaṇacaṇēā nirbhaya: sarvavēttā

Shloka 1, Chapter XII, Mātangalīla

"The supervisor of elephants should be intelligent, king-like, righteous, devoted to his lord, true to his undertakings, free from vice, controlling his senses, well behaved, rigorous, tried by practice, delighting in kind words, his science learned from a good teacher, clever, firm, affording protection, renowned for curing disease (in elephants), fearless, all knowing" (Translation: EDGERTON, 1931).

* Tales of Elephant-Guardians

The treatise *Mātangalīla*, the *Elephant Lore of the Hindus*, supposedly written by Tirumangalath Nilakantha sometime between the 15th and 16th century CE (GEETHA, 2013), closes with a detailed discussion of—what we would like to call "*Nāgādhyakshaçaritha*" or Tales of the Elephant-Guardians—the qualities of elephant-men or mahouts, prescribing that such individuals should be intelligent, righteous, in control of his emotions and senses, and well behaved (EDGERTON, 1931). A detailed chapter on mahouts in such a classic magnum opus on elephant care indicates the importance of having the right handlers for elephants. Animals brought into captivity from the wild, deprived of their natural behaviour, including ranging or sociality, tend to undergo immense stress. One of the most significant roles of a mahout is to ensure that the individual is managed with the least stress possible (Figure 1).

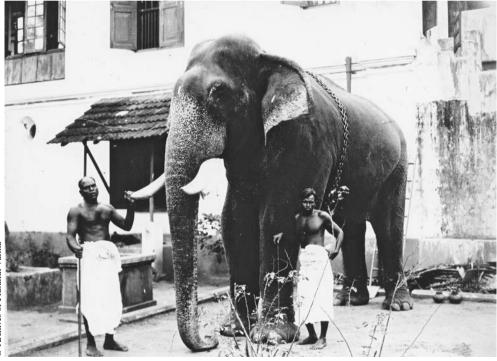


Figure 1 | The tusker Koodalattupuram Ramachandran, his mahout Gopalan Nair, and his *kavadi*, photographed by the late Krishna Rao c. 1930.

One of the earliest detailed photographs of a captive tusker, the image shows how and where a Malayali mahout and his assistant, the *kavadi*, position themselves next to their ward, the mahout usually holding the tusk and the *kavadi* standing close to the forelimbs of the elephant.

Over the years, the roles and responsibilities of a mahout have evolved to be specialised in different elephant-keeping cultures, although the overarching duty continues to be tending to the needs of the elephant. While elephant capture in India was brought to a halt legally in 1972, elephants continue to be removed from the wild, not in large numbers as earlier, but sporadically, as a conflict-mitigation strategy, under the provisions of the Wildlife Protection Act of 1972.

Capturing and training elephants for war and draught purposes are historically ancient, with their first-ever evidence harking back to the Indus Valley civilisation (SUKUMAR, 2003). Over the centuries, however, elephants have been employed for a variety of purposes, including the construction of architectural monuments and megastructures (KURT & GARAI, 2006) or the transport of water from streams and rivers to temples for religious purposes, a practice that continues in Tamil Nadu state in southern India. A simultaneous development was the gradually increasing involvement of elephants in temple pageantries, with their subsequent commercialisation leading to several elephants acquiring the status of matinee idols (VIJAYAKRISHNAN & SINHA, 2019). In this long history of elephant capture, training, and keeping, a rarely acknowledged facet is that of elephants being trained as *kumki* or *koonki*: individuals used to capture, or more recently, even drive wild elephants, or for other activities of the state forest departments.

While working-elephant management has been discussed in great detail by various authors in the past (Evans, 1910; MILROY, 1922; STRACEY, 1963), little emphasis has been laid on understanding the cultural practices of training and upkeep of elephants, traditionally developed and maintained till now by various communities. The purpose of this chapter is thus to discuss certain, often contrasting, mahoutship practices in elephant management across two different communities in southern India. We attempt to depict the nature of human-captive elephant relationships in a forest-camp setting through observations and historical notes and reflect on the deep bonding between elephants and the Malasar mahout community of the Anamalai hill tracts in Tamil Nadu. We simultaneously discuss some aspects of the traditional practices of the mahouts of Kerala, another southern Indian state, the trajectories that the human-elephant bond has taken in this state over the years, and how this relationship is inherently different from what the Malasar share with their animals. Numerous intricate practices of the past have faded away now, largely due to a lack of interest. Hence, we briefly record here some of the existing practices borne out of traditional knowledge and outline some pointers that could be further investigated in the future.

ELEPHANT CAPTURE IN SOUTHERN INDIA

Elephant capture and training have been practised principally across northeastern and southern India and in other parts of Asia since historical times, but the practices observed today appear to be an amalgamation of indigenous techniques with those adapted from Southeast Asia, primarily through colonial influences (KRISHNAMURTHY & WEMMER, 1995). The large-scale demands for elephants by the timber industry had prompted their capture from select landscapes, mainly across the southern and northeastern states of the country. The pit-fall method was widely practised across southern India, especially in the Madras Presidency since 1889 (VARMA et al., 2010), and timber camps were set up in various forested regions of the state. These are pits, fourteen to fifteen feet deep, padded with a layer of brushwood to prevent injuries to the animal, and covered with leaves, branches or twigs, excavated along routes frequented by elephants (STRACEY, 1963). Although these capture exercises wound up in the early 1970s, elephants continued to fall into these abandoned pits and had to be rescued and either left free or brought to camps, in case of ailments or injuries, until the 1980s.

In 1874-1875, George P. Sanderson, a British naturalist who worked in the public works department in the princely state of Mysore, introduced the *kheddah* technique, wherein elephants were driven into a fenced, ditched enclosure. This soon became the main technique of elephant capture in Northeast India and the forests of Mysore (STRACEY, 1963), although most other parts of the Western Ghats continued to have the pit-fall capture method, mainly performed by members of native communities. In the Nilgiri hills, the Paniya, Kuruba and Kattunaicka populations were largely involved in this profession while, in the Anamalai hills, the Malasar and Kadar performed these captures and the subsequent training of the captured elephants. The hill tracts of Anamalai belonged to the princely states of Kollengode and Cochin, from where elephants were captured by the native tribes for the *zamindar* or the landlords and used in forest-based activities, principally timber logging and transportation.

Elephants were also captured in large numbers by the Raja of Nilambur and the Koyappathodi Haji, primarily from the Nilgiris, most of which were used for timber-logging purposes (DANIEL, 1998). The surplus elephants and those that did not fit the timber-logging work were auctioned out and went to the stables of temples and landlords, and to zoos. Such sales of elephants, through large *mela* or fairs, were also prevalent in northern India; these included the famous Sonepur Mela of Bihar state, where hundreds of elephants were once traded alongside other livestock. As recently as in the late 1980s, following the ban on capture and auction of wild elephants, several hundred elephants used to be a common sight at the mela, and the supply from this fair helped increase and maintain the captive populations in the state of Kerala (CHEERAN, 2012).

In Tamil Nadu, the association of elephants with temples dates back several centuries, as indicated earlier, although the departmental use of elephant power started largely in the 1850s. The formal capture of elephants in the state was commissioned by the Imperial Forest Department towards the end of the 1800s, with the current camps being established much later, during the early-to-mid 1900s (VARMA et al. 2010). While temporary or seasonal camps were frequently established at various places in the past, largely depending on the availability of water and forage availability, as well as pending work assignments, Theppakadu in the Mudumalai Tiger Reserve and Topslip in the Anamalai Tiger Reserve are presently the only two permanent forest elephant camps in Tamil Nadu.

DHRE, JHEREK... THE MALASAR AND THEIR BONDING WITH WILD ELEPHANTS

The Kollengode Rajas of the erstwhile province of Kochi in Kerala and the Gounder community of Vettaikaranpudur in Tamil Nadu used to regularly capture elephants from the Anamalai hills, with help from the Malasar in the early- to mid-1900s. The animals were calmed down and trained inside a *kraal*—large, wooden enclosures with typical dimensions of 3.7 m x 3.7 m x 4.3 m, often aided in their construction by elephants themselves (Figure 2)—within which individual elephants would be maintained for a period of about 90 to 120 days until basic training was complete.

The elephant commands used by both the Kuruba and Kattunaicka in Mudumalai and by the Malasar in Anamalai are largely a mix of Urdu and Assamese, indicating the influence that northeastern Indian techniques have always had on the training practices in the southern parts of the country. What is most striking, however, is that the training protocols practised in these regions are different from most others, with their primary focus being on establishing close bonding with the animals rather than asserting one's dominance. As compared to several other training systems across the world, the Malasar techniques include a combination of primarily positive, reward-based reinforcement techniques, with minor punishment only to correct undesirable behavioural acts. The training thus starts by feeding the elephants sugarcane and jaggery, besides the regular rations and cut fodder. This constitutes the first step of training the individual, as it invites the elephant to come close to



Figure 2 | A captured elephant in a *kraal*, Anamalai hills.

the bars of the *kraal* to collect either the sugarcane or the supplementary feed, handed over to their trunk or directly placed in their mouth. *Dhre* is the command given by the mahout for the elephant to collect the sugarcane using their trunk and *Jherek* for them to stand by the bars while the mahout reaches out to touch the animal—the first instance to get them acclimatised to human touch—or to place food in their mouth.

The first two weeks of training usually involve attempts to subdue the aggression of the elephant—which repeatedly strikes the bars in attempts to break free—through constant attention, feeding and tending to its every need. Once the mahout perceives positive responses from the animal and the animal begins to calm down, training progresses to the next phase, wherein the mahout enters the *kraal* and begins to interact with the elephant physically and more intensely, with only a crossbar separating the duo. This is the phase when the mahout starts using a combination of positive reinforcement and mild punishment to train the individual with basic commands. This is followed by attempts to gently sit atop the elephant, which is initially typically resisted by the animal through a vigorous shaking of the body. This mode of interaction reduces over time to the point when the individual allows the mahout to sit atop and slowly begin issuing commands.

The Malasar were initially brought to the hill tracts of the Western Ghats during the elephant-capture days, after which they settled there, eventually becoming native to the hills (T. Panneerselvam, pers. comm.). Unlike the Kuruba and Kattunaicka, who speak their own dialects, however, the Malasar have incorporated Tamil, the local language, into their own over the years, with the improvised commands they now use for the elephants displaying a smattering of Tamil words as well. Many of these Malasar mahouts seem not to know the comprehensive list of 48-odd commands that the community previously used to train their elephants, using only about one-third of that vocabulary, having maintained only those necessary for their day-to-day work. There is, therefore, a dire need to urgently preserve this dying traditional knowledge and the skills that accompanied the Malasar elephant-training procedures.

Comparable to mahout practices observed elsewhere (KEIL, 2017; LAINÉ, 2020), the Malasar interact with elephants as if they are members of their own family, with all members of the mahout's family, in turn, often developing close bonds with the elephants, a historical tradition that continues even today.

An interesting consequence of the strong familial bonds that develop between the Malasar and their elephants is that mahoutship has not been a male preserve in this community, a unique divergence from what is usually seen in other mahout communities. Topslip, for example, had a woman mahout, Kaliyamma, who habitually took care of the tusker Pandiyan, one of the Tamil Nadu Forest Department's largest bulls in the 1980s and 1990s, in the absence of her mahout husband.

ELEPHANT MANAGEMENT BY THE MALASAR

The Malasar are particularly known for their skills in managing individual elephants with behavioural issues of unpredictability, which often results in undesirable interactions with humans (V. Kalaivanan, pers. com.). Punishing such individuals is usually counterproductive, as the pain threshold of the animal is easily crossed, making them more averse to humans, and leading to other negative interactions. Such individuals begin to distrust humans, and the only way to rectify the situation is to gain their trust once again-a long and complex process for which the Malasar community seems to have an exceptional talent. In general, the forest camp elephants of southern India appear to be far less stressedas they are usually free to graze in the wild-than their completely captive counterparts in temples and other private establishments (KUMAR et al., 2014). The forest camp elephants, therefore, seldom display any kind of stereotypic behaviour as compared to individuals maintained under strictly confined conditions. The few camp elephants that exhibit such behaviour had either returned after being initially sent to temples or had been kept in prolonged confinement elsewhere owing to their behavioural unpredictability. This is, however, a relatively novel phenomenon, resulting from changes in the present-day handling practices from earlier, when elephants had never been rigorously confined by their mahouts.

The elephant-keeping culture in the forest camps of Tamil Nadu is perhaps the only one across Asia where there is no use of the *ankush*—the sharpened goad with a pointed hook that has been used ubiquitously in managing captive Asian elephants and which first appeared in India in the 6th to 5th century BCE—in controlling the animal, either within the *kraal* or during their handling at other times. The Malasar, Kattunaicka and the Kuruba of Tamil Nadu only use long *Diospyros* sticks to manipulate their elephants, with most controls being exercised from atop the elephant through foot commands. The management of musth is also different in these communities from what is typically observed at other locations, with the animal being left alone, tethered on extended—often 30 m or even longer—chains, close to water bodies, to ensure free access to water and food (Figure 3).

Another rather common practice among the mahouts in the forest camps is to regularly use dikamali oil, a concoction prepared from neem *Azadirachta indica* oil, dikamali *Gardenia gummifera* resin, camphor and



Figure 3 | A Malasar mahout feeds his elephant in peak musth with a ball of *ragi* or finger millet. Most other management systems typically secure tuskers in musth and avoid any contact, given their behavioural unpredictability at the time. garlic. Dikamali oil prevents infections quite common in these areas by preventing insects from laying their eggs along the tusk groove and on the nails of elephants.

RELIGIOUS BELIEFS AND PRACTICES

The Malasar are known to worship their local deities at a few sites in the Anamalai hills, where annual festivals are typically held as well. Before every new initiative undertaken by a mahout, such as capturing an elephant, starting their training inside a *kraal*, bringing the individual out of the *kraal* or taking the animals out for work, special rituals are followed, and offerings of food and flowers made to these deities. The community primarily worships *Amman*, a form of Goddess *Durga*, at a shrine inside the *shola* forests in these hills. Offerings are also made to *Amman* after rain showers during drought years, as water is the most essential of commodities for the survival of both humans and nonhumans in these often-sparse habitats, critically important, as it were, for the production of graze and browse. All along the hill roads that lead to an elephant camp are little niches where *Amman* and the other gods reside and where the community members stop to light a lamp or an incense stick, especially when going out to work with their elephants.

In addition to their noticeable worship of the forest deities, there is a widespread belief, prevalent even today, that the Malasar are involved in sorcery and that their witchcraft practices and the use of special spells allow them to bring elephants under their control. Some of these beliefs appear to be fuelled by the occasional presence of flowers, lemons or chillies—often hung up outside homes in southern India to ward off evil spirits—at sites where the Malasar tether their elephants.

Interestingly, these practices are rather similar to those observed amongst several Malayali mahouts in Kerala, who make special offerings and conduct certain rituals to keep elephants exclusively under their control, not allowing other mahouts and *kavadis*—assistant mahouts—to handle them. Such practices, of course, warrant separate, detailed anthropological and psychological analyses to understand how they generate confidence in one's abilities in these contexts.

NŪŖ PAŖAÑÑ ĀŖ ŌŅŅI ORAŢI... THE MAHOUTS OF KERALA

The title of this section—derived from a classic statement popular among Malayali mahouts, the origin of which is lost in the mists of antiquity refers to the process by which an elephant needs to be corrected during its training. It literally translates to "say a hundred times, act like you are about to punish six times, and then punish once" and intends to establish the apparently time-tested observation that punishment should only form a minor component of controlling an elephant in captivity. This lesson, one of the key learnings imparted by senior Malayali mahouts to their apprentices in earlier days, now appears to be long forgotten.

Unlike most other Indian states, Kerala has had a long history of intimate association with elephants in captivity, with the animals having come a long way from being war machines of past battlefields, to symbols of pride and status for landlords in bygone eras, as drought animals in timber yards of the recent past, to religious icons carrying idols of deities in temples, a role in which many tuskers have now become celebrities on social media (VIJAYAKRISHNAN & SINHA, 2019). In this complex history of elephant-keeping in Kerala, however, elephants have broadly been categorised into two main groups: festival and timberlogging elephants. The work culture of the mahouts, involved with the maintenance of these two classes of elephants, accordingly, also evolved differently from one another. The former primarily involved training elephants to be docile and relaxed during temple rituals and festivities, given their routine exposure to loud percussion ensembles and noisy crowds, while the latter was about treading rugged terrains, hauling heavy logs from inaccessible areas to motorable roads and ferry points. It is not surprising, therefore, that the timber elephants never attracted enough attention to historically feature in written or visual records over the years, unlike their temple counterparts. One of the most majestic of the temple tuskers even had a biographical film-Guruvayur Kesavan, directed by Bharathan in 1977-made after him. Several communities of mahouts, who worked in the timber coupes, also, unfortunately, failed to be acknowledged in the annals of the elephant-mahout history of Kerala. Northern Kerala, for instance, had numerous families engaged in this profession, but as most of the elephants in this part of the state, where pageantries have always been a rarity, were timber animals, the family histories of these mahouts have never been recorded. In contrast, several temple elephant mahouts find mention in different classical texts, such as the *Aithihyamala*, *A Garland of Legends*, an early 20th-century text in eight volumes by Kottarathil Sankunni that documents the lives of a vast spectrum of eminent personalities of the state. With timber logging being banned across the country following the landmark Supreme Court judgement of December 1996 (https://indiankanoon. org/doc/298957/), most members of the timber-elephant mahout communities slowly phased themselves out of the trade.

Notably, there are also differences between the work culture of mahouts of northern, central and southern Kerala, largely dictated by the differential nature of the work in which their elephants have been involved. The elephants of central Kerala, for example, have largely been festival elephants, seldom deployed for other purposes. Such individuals usually have three mahouts attending to them, with the chief mahout having the greatest control over the animal while the other two assist him in their daily chores. Similarly, the restraining items typically used by Malayali mahouts, including a stout stick, the *thotti*—a Kerala-specific version of the *ankusb*—and a *valiya kol*—a long pole with a distal tapering end, armed with a sharp pin, and a blunt base, made of a hard, iron piece—also vary in their usage across the state, with mahouts from certain localities preferring to use either of them more often than the other, depending on the nature of their work.

Erstwhile techniques of training an elephant, while being largely dependent on dominance establishment, as is typical, were never imposed forcefully but through constant engagement and tending to the animal's needs, thereby building trust. This was largely possible in earlier days when the transportation of elephants was on foot, and the long distances thus travelled gave enough time for mahouts to understand and predict the behaviour of their elephants and act accordingly. Long scrubs, when the elephants were bathed in streams, rivers or tanks during such travel, also improved bonding and reduced tension between the duo, another rare sight today, wherein the commercial mushrooming of pageantries has forced them to rapidly cover long distances in trucks that are a cause of enormous stress (VIJAYAKRISHNAN & SINHA, 2022).

Kerala, tragically, is now one of the few Indian states where humancaptive elephant conflict has increased significantly in the recent decades, with an average of about ten mahouts getting killed by their elephants in peak festival years. This is largely a result of recent management problems, including, perhaps most importantly, the frequent change of mahouts experienced by elephants, leading to a failure in the development of any kind of stable, positive relationship between the animals and their mahouts. The increasing demand for elephant participation in these pageantries has also increased the workload, and thereby stress, of the elephants involved in such festivities. There has been an inevitable recruitment of untrained mahouts, who are sorely unaware of elephant behaviour and biology, leading to an increase in incidents of conflict and often-unchecked animal cruelty within these newly developing elephant communities (VIJAYAKRISHNAN & SINHA, 2022).

It can thus be reiterated here that the participation of the indigenous mahout communities is gradually on the wane, and their special skills to manage elephants with minimal stress to the animal and with negligible negative interactions are rapidly disappearing (VANITHA et al., 2009). The situation in Kerala is particularly worsening, with the observed increase in conflict incidents and reported casualties in recent years being attributed to the presence of non-traditional mahouts, who are increasingly becoming the primary caregivers for most temple elephants across the state (PANICKER et al., 2003).

EPILOGUE

Elephant capture and training are primarily based on the principle of dominance establishment in almost all elephant-management cultures across South Asia. As local knowledge suggests, a mahout needs to replicate, in captivity, what has been experienced in the wild by an elephant, according to its age and to the best extent possible. Such caregiving could include providing allomothering care to rescued calves, minimal punishment to growing juveniles and subadults to correct their occasional undesirable behaviour and a combination of exercising dominance while providing reassurance to older individuals. Such practices are typically observed among the traditional mahout communities and accompanied by an overall healthy handling of elephants by these communities. On closer examination, it is evident that there are acceptable and relatively unacceptable practices amongst both Malayali and Malasar mahouts, to name just these two communities. Future elephant management protocols should comprehensively include the best practices from all possible systems.

The widening interface between elephants and humans has inevitably resulted in intense, often negative, human-elephant interactions, widely referred to as human-elephant conflict. Globally, most attempts at mitigating such conflict have almost invariably failed, making it one of the most significant conservation challenges of today. While reactive measures, such as captivity and translocation, have not produced desirable results in most cases, they continue to be used, often driven by public pressure and campaigns. The branding of certain elephants as problem individuals and their removal as a conflict-mitigation strategy has gained momentum in recent years, resulting in a gradual increase in captive elephant populations.

There will be inevitable circumstances in the future where elephants will need to be captured and brought into captivity to forest camps. In such cases, the requirement for skilled, passionate mahouts is also an inevitability, for such individuals alone can attend to the animals with minimal stress on either side. While the influx of elephants into captivity may be disputed on the grounds of animal rights and welfare, inevitable captures warrant ensuring elephant wellbeing in captive settings, and this is perhaps only possible in the forest camps. While it is essential that the carrying capacities and the local ecological conditions of these camps be assessed, what is perhaps even more important is that we continue to foster and care for the centuries-old traditions of mahoutship, which have nurtured many generations of elephants. These are practices that have long contributed to key infrastructural developments in elephant management and caregiving while guarding elephants and their forests for centuries. It is an urgent imperative that we recognise and preserve these traditions, continue to learn from the age-old custodians of these practices, and take these steps before all is lost to us forever.

REFERENCES

CHEERAN J. V., 2012 – Ceremonial elephants in Kerala, India and related issues. *Gajab*, *36*: 35-36.

DANIEL J. C., 1998 – *The Asian elephant: a natural history*. Dehradun, Natraj Publishers, 306 p.

EDGERTON F., 1985 [1931] – The elephant-lore of the Hindus: the elephant sports (Matangalila) of Nilakanth. New Delhi, Motilal Banarsidass Publishers, 129 p.

EVANS G.H., 1910 – *Elephants and their diseases: a treatise on elephants*. Rangoon, Myanmar, Superintendent Government Printing, 343 p.

GEETHA N., 2013 – *Elephantology and its ancient Sanskrit sources*. Doctoral thesis, University of Calicut, Kozhikode, India, 197 p.

KEIL P. G., 2017 – Uncertain encounters with wild elephants in Assam, northeast India. *Journal of Religious and Political Practice*, 3: 196-211. https://doi.org /10.1080/20566093.2017.1351173

KRISHNAMURTHY V., WEMMER C., 1995 – « Timber elephant management in British India (1844–1947), with special emphasis on the Madras Presidency ». *In* Daniel J. C., Datye H. (eds.): *A week with elephants: proceedings of the international seminar on Asian elephants*, Bombay, Bombay Natural History Society: 456-473.

KUMAR V., REDDY V. P., KOKKILIGADDA A., SHIVAJI S., UMAPATHY G., 2014 – Non-invasive assessment of reproductive status and stress in captive Asian elephants in three south Indian zoos. *General and Comparative Endocrinology*, 201: 37-44. https://doi.org/10.1016/j.ygcen.2014.03.024

KURT F., GARAI M. E., 2006 – *The Asian elephant in captivity: a field study*. New Delhi, Foundation Books, 360 p.

LAINÉ N., 2020 – Living and working with giants: a multispecies ethnography of the Khamti and elephants in northeast India. Paris, Muséum national d'Histoire naturelle, 272 p. https://doi.org/10.5852/nes02

MILROY A. J. W., 1922 – A short treatise on the management of elephants. *Indian Forester*, 49: 258-260.

PANICKER K. C., CHEERAN J. V., KAIMAL K. R., NAIR K. N., AJITKUMAR G., RAJEEV T. S., STHUMADHAVAN T. P., MADHAVAN M. R., 2003 – « Captive elephanthuman conflicts in Kerala ». In Jayardene J. (ed.): Endangered elephants: past, present, and future: symposium on human-elephant relationships and conflicts, Sri Lanka, September 2003, Colombo, Biodiversity and Elephant Conservation Trust: 21-22. STRACEY P. D., 1963 – *Elephant gold*. London, Weidenfeld and Nicolson, 227 p.

SUKUMAR R., 2003 – The living elephants: evolutionary ecology, behaviour, and conservation. New York, Oxford University Press, 478 p.

VANITHA V., THIYAGESAN K., BASKARAN N., 2009 – Socio-economic status of elephant keepers (mahouts) and human-captive elephant conflict: a case study from the three management systems in Tamil Nadu, southern India. *Gajah*, 30: 8-12.

VARMA S., VERGHESE G., SARMA K. K., KALAIVANA N., MANOHARAN N. S., ABRAHAM D., SUJATA S. R., PANDEY N., 2010 – *Captive elephants in forest camps* of India: an investigation into the population status, management and welfare significance. Bangalore, Compassion Unlimited Plus Action and Asian Nature Conservation Foundation, CUPA/ANCF Technical Report No. 17, 284 p.

VIJAYAKRISHNAN S., SINHA A., 2019 – Human-captive elephant relationships in Kerala: historical perspectives and current scenarios. *Gajab*, 50: 29-35.

VIJAYAKRISHNAN S., SINHA A., 2022 – « Musings from the Vrishchikotsavam of Tripunithura: the uncertain future of the performing temple elephants of Kerala ». In Turner C., Srinivasan S., Daboo J. (eds.): Performance at the urban periphery: insights from southern India, Oxfordshire, UK, Routledge: 179-190.

ACKNOWLEDGEMENTS

This short note about the Malasar and Malayali mahouts reflects Sreedhar Vijayakrishnan's experience spent working alongside both these communities. The manuscript has benefited immensely from our long, informative conversations with Thangaraj Panneerselvam, retired Range Forest Officer, Tamil Nadu Forest Department; N. S. Manoharan and V. Kalaivanan, both senior veterinarians who have served in the Tamil Nadu Forest Department. We thank Prasanth Varma for allowing us to use photographs from their wonderful collection. We express our sincere gratitude to Palanisamy, Mani, Prasad, Kethan, Late Alagesan, Murugan, C. Manikandan, Late P. Ramakrishnan, Bhaskaran Nair, S. Manikandan, Ramadas and an exhaustive list of other mahouts, with whom no day has passed by without us learning something new.