

***The elephant in the room: histories of place, memory and conflict with wildlife along a southern Indian forest fringe***

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**Abstract**

*This paper traces past and present entanglements between people and elephants along a forest-agriculture fringe in Kerala's Western Ghats. In doing so, it explores the evolution of conservation linked conflict and its problematic impacts. Over the centuries, the region's elephants have played a dominant role in its mountain landscapes: as antagonists to cultivators; as sources of ivory, labour and revenue to forest traders, local rulers and imperial administrators; and, as cultural and religious icons straddling forests and countryside. Environmental protection arrangements in recent years ushered in a new elephant, a charismatic flagship beloved of conservationists, but also a key actor involved in fluctuating tensions along the forest edge. In this study, I explore long-term engagements between people and elephants by interrogating three critical phases in history, each incorporating a changing identity for the place in question: as a bountiful, ivory-rich forest at the turn of the Christian Era, as a site of capitalist production during the colonial period, and eventually as a contested conservation landscape. I show that these identities are predicated as much by extra-local processes such as migration and capitalist enterprises, as they are by embedded engagements with non-human agency. Contemporary conflict is, therefore, a complex ongoing narrative fuelled by a dynamic interaction between the persistence of human and animal memories as well as by multi-scale socio-political catalysts with long histories of influence. By ignoring historical contingencies and diverse discourses, contemporary conservation interventions may overlook the proverbial and sometimes literal elephant in the room.*

## Introduction: entangled geographies and histories of the forest fringe

Wild or captive, sentient or indifferent, elephants in India often find representation through a series of powerful imageries and representations. In southern India, they appear in ancient maps, documents, coinage and inscriptions; in the iconography of temples and churches; in ancient bardic poetry; in colonial documents and hunting memoirs; and in contemporary accounts chronicling forest loss and conservation.<sup>1</sup> Their representation as symbols of significance in the trading networks of the successive ruling dynasties of Āy, Venad and Travancore<sup>2</sup>, culminating in their adoption as modern Kerala's emblem in 1960, is complemented emphatically by the numerous 'pestilence discourses'<sup>3</sup> that implicate the elephant as a problem species in local contexts. Such 'complex entanglings of human-animal relations with space, place, location, environment and landscape'<sup>4</sup> have been the subject of the emerging field of animal geographies. This field investigates human influences on animal lives (and vice versa) through the examination of shared physical and material spaces as well as their placement in social, cultural and symbolic arenas.<sup>5</sup>

Wildlife conservation debates investigating conflict have begun to draw from this this body of scholarship as it provides insights into social and representational elements that have been missing from the field. The analysis of human-wildlife conflict<sup>6</sup> (and the related issue of conservation conflict<sup>7</sup>) in numerous post-colonial Asian and African contexts has, however, tended to focus on contemporary drivers and proximate causes, with a limited evaluation of local and subaltern perspectives. As pointed out in recent scholarship, there is a requirement for studies that unearth the hidden conflicts embedded within historical, socio-political and cultural contexts, especially those which investigate the reproduction of historical inequalities and the continued marginalisation of communities living in close proximity to dangerous wildlife. In India, a number of useful beginnings have been made in this direction.<sup>8</sup> Yet, considering the vastness of the country and the diversity of its megafauna, further research along these lines is warranted. More significantly, there also exists a need for a 'longer view' of landscapes and engagements that straddle different historical periods and use multiple sources of information.<sup>9</sup> This is crucial as an over-emphasis on the last two centuries especially of imperial and independent India sometimes obscures significant longer term ecological and human-made interventions.<sup>10</sup> In southern India, long-term histories of species such as elephants can complement the very significant ecological and behavioural studies that have already been undertaken<sup>11</sup>. Such explorations can qualify as well as correct currently available macro explorations and provide fresh insights into social-ecological change.

This study attempts to trace such a history of interactions between people and elephants along a southern Indian forest-agriculture fringe. As a site of multiple entanglements, the fringe serves as an

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<sup>1</sup> For a comprehensive overview of elephants in Indian history, see Sukumar 2011.

<sup>2</sup> This is the region of interest in this study. The Āy dynasty which ruled parts of southern India from the Early Sangam period (3<sup>rd</sup> century BC) to the 12<sup>th</sup> century AD transitioned into the feudal state of Venad (12<sup>th</sup> century AD to 1729 AD). In 1729, Marthanda Varma, the expanded Venad into a unified Travancore, which remained as an independent kingdom till 1949.

<sup>3</sup> Knight 2000.

<sup>4</sup> Philo and Wilbert 2000, p. 4.

<sup>5</sup> Coates 1998, Philo and Wilbert 2000, Whatmore 2002, Urbanik 2012.

<sup>6</sup> The distinction between the impacts of wildlife on people (wildlife-human conflict) and that of people of wildlife (human-wildlife conflict) has also been made. See Sukumar 1994.

<sup>7</sup> Redpath et al. 2013.

<sup>8</sup> Examples include Rangarajan 1996, 1998, Gold and Gujar 2002, Hughes 2013, and Rangarajan and Sivaramakrishnan 2014.

<sup>9</sup> Rangarajan and Sivaramakrishnan 2014, p. 7.

<sup>10</sup> Morrison 2014, Rangarajan and Sivaramakrishnan 2014.

<sup>11</sup> For a summary, see Sukumar 2003, 2011.

ideal location to explore how humans and animals negotiate relationships and transgress across each other's spatial (and symbolic) boundaries to define deviant behaviours and to generate conflict. Over the centuries, this process has been characterised by distinct, yet dynamic spatialities that are associated with the changing socio-political and ecological conditions backgrounding such junctures. These begin with a fluid forest landscape characterised by diffuse or non-existent boundaries, followed by the emergence of the fringe as a shifting, ambiguous entity shaped by animal depredations and human resistance, as an expanding colonial frontier, and finally as a contested conservation landscape where a top-down state-imposed conservation ethic has engendered widespread opposition and subversive local resistance. The latter view firmly situates people on one side and animals on the other.

In this manuscript, the evolution of conflict is evaluated through three critical phases in history, and is analysed through the lenses of place, memory and social formations. Early historical to early medieval (approx. 300 BCE to 700 CE)<sup>12</sup> engagements situating elephants in trade, tributes, war and shifting cultivation are explored with the help of several snapshots drawn from archaeological findings and literary representations. Colonial accounts from the 18th to the 20th centuries provide insights into a region transformed by an emerging agricultural capitalism that simultaneously placed elephants as opponents to agriculture and as accessories to colonial projects including forestry, sport hunting and ivory extraction. An analysis of the study region of the 1920s to the present is enabled by first person accounts of marginalised migrant settlers whose interactions at the fringe not only entailed uneasy encounters with elephants but increasing depredations from other species whose impacts are exacerbated by protectionist conservation.

While the overarching region of interest is the Western Ghats,<sup>13</sup> a mountain hotspot in southern India, in framing the geographies of investigation, this study adopts a fluid focus of enquiry that relates best to the time period of interest and the information available for that period. Early engagements are examined predominantly through archaeological findings and bardic poetry relating to the mountain landscapes of the Tamil macro region, incorporating parts of the old Cēra and Āy chiefdoms. Enquiries for the colonial period resonate best with the erstwhile princely state of Travancore (nested within the historical Tamil macro region), and are carried out using colonial reports, memoirs and published information. The exploration of post-colonial and contemporary situations are restricted to a sub-region within it. Select settler pockets surrounding the Ranni Forest Division in Central Travancore, currently encompassed within the modern state of Kerala form this study region. The oral testimonies of migrant settlers offer insights into the evolution of conflict during this period. In addition to local processes, both historical and contemporary dynamics of the fringe have antecedents and drivers far removed from the region. These political ecological linkages and networks have been explored where appropriate.

### **The 'elephant filled forests of Āy'<sup>14</sup>**

In 1985, the discovery in Egypt, of the *Muziris Papyrus* (Papyrus Vindobonensis G 40, 822),<sup>15</sup> a

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<sup>12</sup> See Gurukkal 2010 and Veluthat 2012 for definitions of these periods.

<sup>13</sup> Running parallel to the western coast of peninsular India, the *Sahyadri* or the Western Ghats are a major complex of hill ranges which include some of the highest mountains south of the Himalaya. The high levels of species diversity and endemism, along with significant global populations of large mammals such as elephants has resulted in these mountains being listed as one of the eight 'hottest' global biodiversity hotspots in the world. The history of human occupation in this region dates back to Palaeolithic settlements dated to over 12,000 years BP. With a diverse range of natural diversity and human influences, the ghats serve as a unique biogeographical and cultural entity, distinct from the rest of peninsular Indian landmass.

<sup>14</sup> The reference here is to the ancient kingdom of Āy (Paranar, *Kurinji Thinai*, *Akanānūru* 152). Stretching from the Pamba River (River Baris to the Romans) in the north to Kanyakumari in the south, this kingdom encompassed present day central and south Kerala, Gurukkal 2010.

mid-2<sup>nd</sup> century Roman document relating to the trading vessel *Hermapollon* provided critical new evidence on the extensive trade between southern India and the Mediterranean during the first few centuries of the Christian Era.<sup>16</sup> While the recto (front side) recorded a detailed loan agreement between a creditor and a trader outlining the overland transport of the *Hermapollon's* precious consignment to Alexandria, it is the details of the cargo manifest jotted carelessly on its verso (reverse), that sheds light on the ivory trade on the Indian Ocean. Along with extensive quantities of pepper, cinnamon, spikenard and tortoise-shell, the consignment included 167 elephant tusks (listed as sound ivory, weighing 3228 kg)<sup>17</sup> and 538 kg of *schidai* (shavings and fragments from the tusks of captive elephants). If the quantity of cargo mentioned on the *Hermapollon* did not represent an unusual peak (and the evidence seems to point to this volume of trade as typical),<sup>18</sup> this points to a thriving trans-oceanic trade in ivory, pepper and other forest produce from the Western Ghats.

Archaeological scholarship, literary representations and geographical accounts throw a great deal of light on the scale of these exchanges as well as some of the oldest recorded engagements between people and elephants in this region. The anonymous, first century *Periplus*<sup>19</sup> describes export centres such as Muziris, Nelcynda and Tyndis located in *Cerobothra* (Kingdom of the Cēra, modern day Kerala) which attracted large ships specially constructed for servicing this vast trade. Here, collection centres such as *Cottonara* (modern day Kuttanad) sourced the best pepper, cinnamon, ivory and other hill produce from the interior forests. According to De Romanis, several lines of evidence point to the Western Ghats as the source of ivory carried by the *Hermapollon*.<sup>20</sup> The chieftains who controlled the rich interior forests abundant in elephants and pepper were most likely under the suzerainty of the Cēra kings who controlled the port of Muziris from where the ship departed. Cēra coinage of this period from the archaeological site of Pattanam depicts elephants.<sup>21</sup> The Peutinger Table,<sup>22</sup> an illustrated itinerarium of the Roman Empire, also shows the possible location of a mountain range (*Mons Lymodus*) with a caption which translates to, 'in this place elephants are born'<sup>23</sup>. Depicted as immediately east of Muziris, these mountains are unlikely to be any other than the Western Ghats.

While these scattered historical sources provide some idea (especially outsider viewpoints) about this region as the source of ivory and its significance in trade, the best snapshots of everyday engagements with elephants and other wildlife emerge from the unlikely source of bardic poetry exemplified in the Sangam literary tradition of the Early Historical period (300 BCE to 300 CE).<sup>24</sup>

<sup>15</sup> Casson 1986, Rathbone 2000.

<sup>16</sup> The *Hermapollon* is believed to have set sail from the port of Muziris (on the Kerala coast) to Berenike or Myos Hormos on the Red Sea. Indo-Roman exchange flourished roughly from the fag end of the Ptolemaic dynasty in Egypt (about 30 BC) till the 11<sup>th</sup> century, Sidebotham 2011, McLaughlin 2014, see also Gurukkal 2013.

<sup>17</sup> Sound ivory is most likely to have been from wild elephants as it would have been unlikely to collect such quantities from captive elephants.

<sup>18</sup> Multiple strands of evidence points to extensive trade. e.g. Sidebotham 2011; Gurukkal 2013; McLaughlin 2014. At the same time, many of these ports were conduits that imported products from other regions. For instance, Warmington 1974 brings to our notice the import and re-export of some amount of ivory from Africa.

<sup>19</sup> *Periplus maris Erythraei* (*The Periplus of the Erythraean Sea* literally translated as 'A Guidebook to the Arabian Sea'), translation annotated by Wilfred H. Schoff, Longmans Green & Co., NY, 1912.

<sup>20</sup> De Romanis 2014.

<sup>21</sup> Ramanatha Ayyar 1924, Shajan et al. 2004.

<sup>22</sup> *The Tabula Peutingeriana*, a 13<sup>th</sup> century Roman map derived from a 4<sup>th</sup> or 5<sup>th</sup> century original.

<sup>23</sup> *in his locis elephantum nascuntur*, *Tabula Peutingeriana*, seg. 11.

<sup>24</sup> This literature encompasses the extensive anthologies of heroic poems of the *Tamilakam* or the Tamil macro region, covering present day Kerala and Tamil Nadu, and the southern parts of Andhra Pradesh and Karnataka. The poems serve as a critical window to the early history of the region, and are significant in terms of their embodied ecosemiotic significance. A key feature of this Dravidian poetics is the division of the Tamil macro region into five key ecotypes/ landscapes/ terrains (*aintinai*) each metaphorically symbolising a specific emotional theme or sentiment which that landscape was likely to spontaneously evoke. For example, the poetics of the forested mountains of the Western Ghats characterised by the *kurinji* plant, aroused 'the libidinal passion of lovers enjoying

Within these romantic anthologies, the *kurinji tinai* (mountain forests where the *kurinji*, *Strobilanthes* sp. blooms, i.e., the landscape of the Western Ghats) with its luxuriant forests and waterfalls formed the backdrop for the secret meetings of lovers. Its embodied theme of lovers' union routinely co-opted frolicking elephant families into its picturisations. For example, the poet Ilanthēvanār's depiction of a scene where '...a naïve female elephant that has given birth to her first calf eats bamboo, ...(and) is lovingly stroked by her mate, as she sleeps in the beautiful mountain with banana trees'<sup>25</sup> is typical of this form of poetry. Female elephants (like the heroines of the poems) are portrayed as naïve and innocent; males, though frequently stereotyped as noble, enraged and destructive, were occasionally endowed with attributes such as tenderness and caring. In this vein Māmoolanār compares a 'white-tusked male elephant' to a 'brave man who embraces his wife'<sup>26</sup> and a cow elephant looking for its lost calf to '... women who search for their children in panic and confusion, placing their hands on their heads!'.<sup>27</sup> In the romantic mountain landscapes of the *kurinji thinai*, allusions to sentience and empathy abound, showing that the equation of human and animal experiences is not just a modern phenomenon, but one that was actively pursued by the Sangam poets two millennia ago.<sup>28</sup>

Representations from the *kurinji tinai* are, however, not all reflective of benign engagements, but show a diversity of relationships with elephants. Fear and conflict find frequent mention. Lovers entreat their paramours from the country not to travel in the 'thick of darkness' where 'tusked elephants roam the forest paths'.<sup>29</sup> There are numerous references to 'small-eyed elephants [that] roam around killing people'<sup>30</sup>. More significantly, this literature portrays the *kurinji* landscape – despite its location in the interior mountains – as a very much peopled landscape.<sup>31</sup> As suggested by the names of mountains,<sup>32</sup> these millet-rich hill chiefdoms and their shifting cultivation, seem to have been the target for crop raiding animals. Here, 'mountain dwellers plant(ed) millet and *aivanam* grain' and 'guard(ed) their crops from wild boars and elephants'.<sup>33</sup> Kapilar, the most celebrated poet of this period refers to '... the sky-touching mountains, where a tall, fine elephant moves away in fear, on seeing torches lit by a guard, protecting a field with beautiful, small-eared millet, and is startled by the sudden brilliance of a shooting star ...'.

But occasionally seduced by the *kurinji* ethos, both crop-protection and even crop-raiding sometimes took a romantic turn. Chēnthankoothanār describes a scene where '... a mountain dweller who has the strength of a maned lion, is on a lookout platform in a huge millet field with mature millet, happily drunk with liquor, and in the gently moving breeze, his wife puts her fingers through and dries her perfume-rubbed, thick, long hair, and sings songs in *kurinji* tune in the lofty mountains, and a brave young elephant, not eating the clusters of millet, and not moving away, puts his green, sleepless eyes to sleep quickly...'.<sup>34</sup> Reflecting a contemporary pattern, bull elephants were frequently to blame for crop-raiding misdemeanours.<sup>35</sup> The Akananuru mentions the heroine's desire for 'a noble young man with sandal-rubbed chest, carrying a strong bow...' who 'came with his angry dogs following him, and asked, "Good people! Have you seen a bull elephant with lifted

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the undisturbed union that the ecological setting of the forest quite naturally evokes', Gurukkal 2010, p. 85.

<sup>25</sup> Mathurai Panda Vānikan Ilanthēvanār, *Kurinji Thinai, Akanānūru* 328.

<sup>26</sup> Māmoolanār, *Pālai Thinai, Akanānūru* 197.

<sup>27</sup> Māmoolanār, *Pālai Thinai, Akanānūru* 347.

<sup>28</sup> Similar cultural perceptions of human-animal comparisons can be found in other early cultures as well. E.g. Sterckx 2002.

<sup>29</sup> Kapilar, *Kurinji Thinai, Ainkurunūru* 282.

<sup>30</sup> Ōthalānthaiyār, *Pālai Thinai, Ainkurunūru* 314.

<sup>31</sup> Kapilar, *Kurinji Thinai, Kurunthokai* 357.

<sup>32</sup> e.g. *Mutira* = millet, *payar* = lentils, *malai* = mountain in Tamil/Malayalam; Gurukkal 2010.

<sup>33</sup> Kapilar, *Kurinji Thinai, Ainkurunūru* 201-300.

<sup>34</sup> Mathurai Ilampālāsiriyan Chēnthankoothanār, *Kurinji Thinai, Akanānūru* 102.

<sup>35</sup> The propensity of bulls to raid crops has been discussed extensively in ecological literature. See Sukumar 2011.

tusks come this way to your millet field in pain with wounds caused by my arrow?"<sup>36</sup>

Adding to this repertoire of engagements, the hunting of elephants and the consumption of their meat by forest-dwellers has also been described in several accounts.<sup>37</sup> Tholkapiar describes '... a mountain dweller who went hunting on the huge mountain slopes with his strong bow and arrows with thick joints, killed an elephant, took the white tusks, and used them to dig for gold ...'.<sup>38</sup> While, the hill tribes used elephant tusks as digging tools, fence posts and as pestles to pound grain<sup>39</sup>, most often, ivory wound up as a significant item of exchange and trade. But as Morris, argues, the relationship of exchange between the hill communities and chieftains was likely to be unequal or coercive. Citing the *Silappatikaram*, he points to an account of the King resting on the banks of the Periyar river to whom the hill-tribes appeared as 'vanquished kings' offering luxurious tribute.<sup>40</sup> There is explicit mention of acquisition and exchange of ivory not only by the hillmen, but also by the *illaiyar* (wandering bandits) who operated along the fringes of the Cēra empire, '... barter(ing) the meat along with white tusks of wild elephants for alcohol, in the gold-selling shopping districts of towns hugging the mountains'.<sup>41</sup> Ivory was therefore a valuable product of exchange which was often caught up in vice be it hillmen or traders. Inducement through alcohol no doubt played a role in the creation and sustenance of these widespread trade networks.<sup>42</sup>

As southern India's three major powers (the *mūvēntar*), the Cērar, Pāñṭiyar, and Coḷar required elephants for labour, military use and trade. Elephant capture too was described in several contexts. The Akananuru mentions a time when a great king was in a rage 'because of the skirmishes while catching elephant herds with calves when they were trapped in pits'.<sup>43</sup> All three powers received elephants as part of tributes from low-ranking rulers and chieftains; Cēra and Coḷa armies had war elephants.<sup>44</sup> The *vēlir* or the hill chieftains (who were next in importance to the three chiefly lines the *mūvēntar*) often controlled rich forest tracts.<sup>45</sup> The elephant and pepper rich forests of the *Āy-vēlirs* (hill chiefs of the Āy kingdom) were instrumental in their eventual ascendancy as Travancore's Venad rulers.<sup>46</sup>

The domination by hill chiefs and the forest economies that they controlled had important consequences for how the landscape was structured and viewed. A defining feature of this early landscape and its perception by people was a lack of separation between forest (*katu*) and non-forest (*natu*) land.<sup>47</sup> In the wider landscape, the fringe barely existed for acceptable and deviant animal behaviours to be identified and separated. Elephants and other animals were as much a part of this landscape as were the people who lived in it. The dominance of the hill chiefs, their predatory raids and frequent destruction of agrarian settlements in the lowlands served as an effective block to agricultural expansion. These circumstances, however, saw a gradual change around the 5<sup>th</sup> century CE with a series of institutional and structural changes related to gifts of land by chieftains outside their traditional kinship relations to non-cultivating *Brahman* communities.<sup>48</sup> The expansion of

<sup>36</sup> Ootiyār, *Kuriñji Thinai, Akanānūru* 388.

<sup>37</sup> Varadarajaier, E.S. 1945, pp. 22-23: *Narrinai* 144; See also Sukumar, 2011.

<sup>38</sup> Tholkapiar, *Kuriñji Thinai, Akanānūru* 282.

<sup>39</sup> Varadarajaier, E.S. 1945, p. 77, *Kalithogai* 42.

<sup>40</sup> Morris 1986, refers to translation by Dikshitar, 1939, p. 204-205. See also Trautmann 2015.

<sup>41</sup> Pālai Kouthamanār, *Pathitruppathu* 30.

<sup>42</sup> Mathurai Pālāsiriyaer Nappālanār, *Kuriñji Thinai, Akanānūru* 172; De Romanis 2012.

<sup>43</sup> Māmoolanār, *Pālai Thinai, Akanānūru* 211.

<sup>44</sup> Trautmann 2015.

<sup>45</sup> These relationships were exploitative and predatory. In fact, a poem cautions a chieftain not to behave like an elephant in a sugarcane field that destroyed more than what it could consume, Gurukkal 2010, 2013.

<sup>46</sup> Gurukkal 2010.

<sup>47</sup> Gurukkal 2010.

<sup>48</sup> The hiring of agricultural labour and the development of agrarian villages that could resist raids by the hill-chiefs

these new relations of production led to the formation of different *jatis* (castes) and *Brahmadeyas* (agrarian villages). The resultant opposition between forest and non-forest (and its imprinting in people's perceptions) began around the 7<sup>th</sup> century CE with wet-rice agriculture eventually subsuming forest cultures across much of the region.<sup>49</sup>

These early literatures and records not only demonstrate the significant economic and strategic roles that elephants likely played in the region and in far flung networks, but emphatically point to the evolution of a landscape of long-term hostility for them. Yet, within these representations we also find an ethos related to elephants that is romantic, sentient and empathetic.<sup>50</sup> Generalising from recent studies such as those carried out in Sri Lanka, we can also speculate that the 'mixecologies' which emerged from disturbances associated with practices such as shifting cultivation are likely to have been evolutionarily beneficial for elephants, supporting greater numbers than in undisturbed primary forests.<sup>51</sup> At the same time, high levels of extraction would have entailed a continuing process of artificial manipulation of populations.<sup>52</sup>

### Victoria's (sordid) secret

During the height of the British Empire, an exquisitely carved ivory throne and footstool made its way from Travancore to the Great Exhibition of London (1851). Nudged by the British administrator, the Maharajah of Travancore sent it as a present to Queen Victoria. The Maharajah was thanked graciously in the form of an autographed letter which was received with fanfare at a resplendent reception, as if the monarch herself had descended on the capital city. The throne made an official appearance in Victoria's portrait as the 'Empress of India',<sup>53</sup> where she is shown seated on her 'magnificent chair' (her own pet name for the throne). Though ivory carving was centuries old in Travancore, the mastery of its native artisans caught the attention of European high society in a spectacular way, prompting the government to establish a department of ivory carving in the 1870s to keep up with the sudden demand.<sup>54</sup> From its intended destination, the throne made several forays to various exhibitions with its most recent appearance in 2010 at Queen's Gallery in Buckingham Palace. However, in the recent politics of conservation, ivory has gone out of fashion, and this symbol of imperial excess and a native state's sycophantic art has been banished out of sight. Statements from an heir to the throne wanting to create a bonfire of the ivories have been received with both criticism and accolades, albeit from different quarters. These trajectories, reveal a great number of misunderstandings: of the extractive nature of colonialism itself, of resource politics at the local scale, and of the poorly informed and selective nature of celebrity support for conservation.

The enhanced ivory trade of the late 1800s was only the tip of the colonial iceberg. Despite Travancore's status as an independent state, British imperial policies impacted its forests in a big

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catalysed the eventual transformation of the land through plough agriculture, Gurukkal 2010, Veluthat 2012.

<sup>49</sup> Gurukkal 2004, Veluthat 2012.

<sup>50</sup> While one may question the accuracy of depictions as seen through the lens of the bards, analysts such as Gurukkal, 2010, affirm to a high degree of ecosemiotic veracity, robustness and historicity in the poetic abstractions of this period.

<sup>51</sup> Fernando 2000, Fernando et al. 2005.

<sup>52</sup> Stating the importance of aboriginal influences in Africa, Kay, 2013 points out that a slightly more than 3% increase in population could stop the growth of an elephant population, where as a 4% increase was likely to drive them to extinction.

<sup>53</sup> Field Marshal Lord Roberts recounts that the one hundred and one gun salute at the opulent Proclamation Durbar in Delhi (1877) was unfortunately not a joyous occasion for the elephant procession. According to him, 'As the *feu-de-joie* approached nearer and nearer to them, they became more and more alarmed, and at last scampered off, dispersing the crowd in every direction. When it ceased, they were quieted and brought back by their mahouts, only to start off again when the firing recommenced...!', Tappan, p. 184-190.

<sup>54</sup> Thurston 1901.

way. During the lead up to the colonial era, the landscape was already one of widespread agricultural expansion and increasing demarcation between forests and cultivated countryside.<sup>55</sup> In the southwestern part of the Tamil country, the Venad dynasty (12<sup>th</sup> century – 1729 AD, descended from the Āy hill-chieftains) had become a powerful entity, its success in no small part was owed to the wealth of its forests. Access to spices was the driver of European trading engagements which started in southern India, and the cause of conflicts between the Portuguese, the Dutch, the French and the British. The historical spatial unit of our interest, Travancore (*Thiruvithamkoor*) was unified into a large state only by the middle of the 18<sup>th</sup> century by the Venad ruler Marthanda Varma who consolidated the state into a strong administrative and military power. However, in later years, trading partnerships (especially for pepper) and numerous military alliances with the English East India Company gradually effected a significant drain on the financial resources of the kingdom. This resulted in Travancore's administrative transition from strategic ally to political subordinate. From 1800 onwards, a company appointed British Resident dictated the terms to Travancore.<sup>56</sup>

From the perspective of forest cover, colonial activities entailed the generation of several spatialities which had consequences for interactions between people and wildlife. Colonial monopolies of forest products such as pepper and cardamom not only prompted excessive collection, but also catalysed a shift to cultivation, and the transformation of lowland ecologies to support activities in the hills. During the early part of the nineteenth century, revenue demands especially for imperial shipbuilding necessitated the incorporation several hardwood timbers on a large scale into imperial forest policies. An emerging focus towards agricultural production and the impetus on generating other forms of revenue from land, especially forests was emphasised especially around 1858, when lands were transferred to the British Crown.<sup>57</sup>

In Travancore's hills, local entanglements between people and elephants reflected these dynamics. Conflict was already a recurring phenomenon in the shifting cultivation landscape of the hill tribes. By the beginning of the nineteenth century, numerous hill communities had emerged who were identifiable based on their differing engagements with forests. Shifting cultivators such as the Urali and the Mala Arayar located their settlements and cultivation in ravines, amid overhanging rocks and steep slopes inaccessible to elephants, and also built substantial tree houses.<sup>58</sup> The nomadic Hill Pandaram shifted camp more frequently, and were dependent on rock shelters. Shifting cultivators often devised ways to guard crops, using fire, sling shots and muzzle loaders.<sup>59</sup> Moreover, as the plains became more populated, lowland agriculturalists moved to the proximate hills in search of virgin cultivable land. These forays resulted in a variant of shifting cultivation, locally referred to as *virippu* or *malamkrishi* in which rice, millets and tapioca were planted (and were frequently under threat from elephants). The forest officer T.F. Bourdillon paints this as a fluid landscape marked by the frequent migrancy of lowland peoples and the presence of scattered ruins all over North and Central Travancore. He attributes the presence of the latter to the local population being driven out of their settlements by wild animals, particularly elephants.<sup>60</sup> Troublesome rogues, man-eating tigers and cattle-lifting leopards begin to make appearances in the records of Travancore.<sup>61</sup> Bourdillon noted that local people '... must have suffered a great deal from fever, and from the invasions of elephants, ... the villages of the inland show signs of having been built so as to be out of the reach of these animals ... at Rani<sup>62</sup> itself, the compounds surrounding the houses are protected by high stone revetments, rising 8 or 10 ft. above the path ways, and the houses themselves are only

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<sup>55</sup> Gurukkal 2010, Veluthat 2012.

<sup>56</sup> Varghese 2009.

<sup>57</sup> Amruth 2009. See also Ludden 1999.

<sup>58</sup> Mateer 1883.

<sup>59</sup> Mateer 1883.

<sup>60</sup> Bourdillon 1893.

<sup>61</sup> Report of the Administration of Travancore, 1877-78, Bourdillon 1893, Amruth 2009.

<sup>62</sup> Ranni is now a bustling township and one of the largest commercial centres in Pathanamthitta District.

accessible by single pieces of stone let into the revetment, or by wooden bridges from one compound to another'.<sup>63</sup>

With the heightened demand for timber, shifting cultivation came to be viewed as a wasteful practice that destroyed valuable trees. Active efforts at sedentarisation of hill communities was pursued, potentially reducing the availability of rice and millet forage for elephants. This change redefined the entire context of human-elephant interaction, though its implications became evident only with the passage of time.

However, unlike in the case of other species which came to be protected only with the emergence of modern conservation policies, elephants represented a paradox: on the one hand, they were problem animals with a hearty appetite for crops and a propensity to attack cultivators, on the other, the state needed ivory for revenue and elephant labour to haul timber. Their low fecundity, long time to maturity and long gestation period meant that it was more economical to capture elephants from the wild than to depend on captive breeding. The Travancore government therefore had to walk the tight rope in order to sustain elephant populations, while at the same time ensuring some amount of safety to its people. Therefore, elephant capture, extermination, and protection went hand in hand. After timber operations, elephant capture was the state's next biggest priority. According to Trautmann, by this time, the 'war elephant', which once formed a formidable backbone of several historical kingdoms had become obsolete and the captive niche was largely taken by the 'timber elephant'.<sup>64</sup> Iyer commenting on the neighbouring forests of Cochin during this period attests to this remarking: 'It has been said, that, but for the Kadar<sup>65</sup> and the elephants, the Cochin forests would have been useless ... But for the elephants none could lift a log, and if it were not for the Kadar, none dare move an inch in the forest.'<sup>66</sup>

Areas constituting what are currently demarcated under the Konni, Ranni and Achenkovil Forest Divisions were centres of elephant capture in Travancore. Capture was carried out using pits constructed along elephant trails, and the capture and training processes entailed a detailed understanding of the terrain and elephant behaviour. Labour provided by forest tribes such as the Urali were essential in this process as were specially trained elephants that assisted with the extraction and transport of the captives. Not all animals were retained. Sub-adults were preferred; untrainable animals were occasionally released. Bourdillon refers to the extraordinary number of pits in the Central Travancore forests.<sup>67</sup>

The imperial planting era also witnessed a great deal of crop raiding. According to the English missionary, Samuel Mateer, the growth of plantations themselves played a role in the 'limitation of the wild beasts'.<sup>68</sup> Nevertheless, elephants, deer and wild boar, however, made frequent attacks on young plantations in many localities; in some cases, they were the difference between success and failure.<sup>69</sup> An incident relating to the Pasumalai estate (in Vandiperiyar) in which elephants destroyed thousands of rubber trees aptly illustrates the agency of non-human species in this landscape. Out of a total of 27,000 trees, only 35 remained after a rampage, prompting the planter to shift to tea.<sup>70</sup>

The colonial period is also known for the sport-hunting of elephants. Hunting was often carried out

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<sup>63</sup> Bourdillon 1893, p. 15.

<sup>64</sup> Trautmann 2015.

<sup>65</sup> The Kadar are a small hill tribe of the Cochin-Travancore region.

<sup>66</sup> Iyer 1909, p. 15.

<sup>67</sup> Bourdillon 1893. Krishnamurthy and Wemmer 1995 also point to this method in parts of Madras Presidency.

<sup>68</sup> Mateer 1883, p. 237.

<sup>69</sup> Baak 1997.

<sup>70</sup> Baak 1997; Amruth 2009.

under the pretext of assistance with exterminating crop-raiding elephants. Sukumar records the enthusiasm of Mr. A.F. Hudleston, residing in Malabar, writing to inform his mother of an impending '... grand elephant hunt next month, in the hills between here and Coimbatore; ordered by Government to check the elephants' crop damage...'.<sup>71</sup> Sometimes, elephant capture with hill tribes such as the Uralis and sport hunting segued into a single event. According to Lovatt, this was a regular practice in places such as the Cardamon Hills where, "... the herds are driven to the top of a natural pass near the head of the Dindigul valley, [Kumili ?], ... and having been harassed by fires and hunger and being driven by hunters in their rear, they at length rush through an opening between two rocks, so narrow as to admit but one elephant at a time. The descent being thus rapid they rush down and fall into pits prepared for their reception...the ground here is chequered like a chessboard with these pits...several of the elephants fall into them in the first rush, when the rest, making a precipitous retreat occupy the ground between the entrance and the lines to the pits. Here they are shot by sportsmen posted on both sides." In one such holocaust 63 elephants were destroyed by "Mantons and Purdeys"<sup>72</sup> in four hours'.<sup>73</sup> Further, as elephant killings were abolished and the law more strictly implemented, planters sometimes turned to rogues for sport. Amruth (2009) reports of an incident where the Travancore government expressed surprise when certain individuals requested an increase in reward for the killing of rogues, stating that 'it was difficult to assume that a European planter would refrain from killing proscribed elephant merely because the reward was low, and he was inclined to think that a planter would enjoy an elephant hunt'.<sup>74</sup>

While many species of wildlife were considered to be outright detrimental to the objectives of imperial production landscapes (and hence classified as vermin),<sup>75</sup> elephants represented a challenging dilemma to classification. At one end of the spectrum, they were most problematic of the animals which resisted the indiscriminate expansion of what was to become permanent agricultural landscapes along the forest fringe, as well as a hindrance to plantations and shifting cultivation plots located in the forest interior. In this way, perceptions towards these animals, reflected the emerging economic modernity of the times, especially the priority accorded to commodity agriculture. At the other end, they were worthy quarries in sport, and indispensable for timber work and countryside operations, not to mention their valuable ivories which generated revenue and prestige for the state. Ivory extraction, hunting and elephant capture were thus deeply embedded in the wider spatial networks of international and regional demands. It could even be speculated that the commercial importance of elephants was a key reason for their eventual survival in Travancore's colonial forests. At the same time, in an age of greater differentiation between forest and field, elephants that had a tendency to stray out into the field were considered trespassers. Their place was identified firmly with the forest. The emergence of both hunting and colonial conservation policies strengthened this position and further cemented state control over forests, turning elephant forests into landscapes that were out of reach of local people, and more or less ending a centuries-old set of organic engagements between the two.<sup>76</sup> In Travancore, elephant trajectories display elements of imperial conservation ideologies and public ownership as proposed by MacKenzie, as well as those of privatisation and commercialisation as argued by van Sittert.<sup>77</sup>

## Elephants and pigs

In 1941- 42, as Burma fell to the Japanese forces, the British political and military elite withdrew into India to regroup. An interesting event in this retreat was the role played by the Elephant

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<sup>71</sup> Sukumar 2011. Original source: D HUD 13/6/9, Record held at Cumbria Archive Centre, Carlisle.

<sup>72</sup> Purdeys and Mantons refer to some of the finest hunting weapons of the era.

<sup>73</sup> Lovatt citing an incident that occurred in 1843 as reported by Lt. Jarvis; Lovatt and de Jong 1993, p. 10.

<sup>74</sup> Amruth 2009, p. 111, citing Circular No. 20.1090. dated 16-02-1915 (TFM 1917:387), cross-reference.

<sup>75</sup> Rangarajan 1996, 1998.

<sup>76</sup> See Amruth 2009, for a detailed conservation trajectory of Travancore's forests.

<sup>77</sup> MacKenzie 1988, van Sittert 2016.

Company (under the leadership of Lt.-Col. James Howard Williams/ Elephant Bill), which itself under threat of capture from the Japanese Imperial Army, assisted in numerous war related building operations, at the same time evacuating citizens to safety. Field Marshal William Slim, commander of the Fourteenth Army praised the role of this elephant force in one of the bloodiest, yet forgotten campaigns of World War II.<sup>78</sup> While this daring retreat of the elephants resulted in a happy ending for them, it was the void left by the British and the eventual mass exodus of Indian labour from the Burma delta that had adverse consequences for Travancore's forests.<sup>79</sup> Travancore's dependence on imported rice was centuries old, and Burma, located on another corner of the subcontinent was the primary supplier.<sup>80</sup> As chains of explanations go, the cessation of rice from Burma, and the ongoing famine in Bengal (and other parts of eastern India), resulted in an equally desperate situation in Travancore that was further accentuated by war time exigencies and local conditions.<sup>81</sup>

To combat the food crises (which had become widespread across India), the Grow More Food Campaigns were initiated in 1942 by the imperial government and the various provincial and state governments.<sup>82</sup> In Central Travancore, a key remedy was agrarian expansion via targeted forest clearance in the Ghats through the agency of agriculturalists from the plains. Following the precedent set by migrants to the northern forests of Malabar in the previous decades,<sup>83</sup> further waves of migrations to Malabar as well as Travancore's own *ghats* began in the 1940s and continued through to the 1960s. During this period, agricultural self-sufficiency and food security also reverberated in the developmental ethic of a newly independent India. The migrants were labelled 'forward looking peasants' and 'national assets' in need of 'every kind of encouragement and assistance in the great battle they are waging against nature for the agricultural development of the country'.<sup>84</sup> In the early years of the migrations, with almost a third of Kerala classified as forests, it was morally difficult for the Forest Department to restrict access as forests seemed the perfect safety outlet against an ongoing humanitarian crisis. However, with the end of the Grow More Food Campaign in 1952-53, the newly-independent government began to look at settlements and encroachments in an unfavourable light, prompting a series of long-term tussles and the eventual creation of land tenure uncertainty in the Ghats.

The incoming migrants not only brought their crops and practices into the landscapes of arrival, but also their memories of deprivation and an emerging cultural ethic which aimed to transform empty spaces (i.e., forests) into productive spaces.<sup>85</sup> Their translocation to the forest-fringe entailed a clash not only with the elephants and other wildlife, but also with the different forest-dwelling communities already living there. For the migrants, their new home proved to be a harsh and impenetrable frontier, whose hostility was compounded by the unwelcome presence of wildlife. Whether one was from a distant place, or a nearby village in the plains, what set this place apart in more distinct terms than any other, was the presence of elephants. Here, the fear of elephants assumed enormous proportions. Few were familiar with elephant jungle. George Varghese, a seventy one year old settler from Kalliseri jokes about his lack of familiarity, '...this was the first time for me, for what elephants could you see in Kallisseri, other than the domestic ones?'

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<sup>78</sup> Foreword in Williams 1950.

<sup>79</sup> Adas 1974.

<sup>80</sup> Woodcock 1967.

<sup>81</sup> Unlike the famine in Bengal, Travancore's deprivations received less publicity. Travancore and its neighbour, the princely state of Cochin, suffered enormously, witnessing widely accepted famine symptoms such as high death rates, starvation, malnutrition, disease and migrancy (Sivaswamy 1945, Knight 1954, Raghavan 2016).

<sup>82</sup> This project carried on for several years into the post-Independence period. This period was marked by permissive policies relating to the removal of problem wildlife and accelerated land clearing. (Knight 1954, Rangarajan 2001).

<sup>83</sup> The migrations of Travancorean peasants to the northern province of Malabar from the 1920s were backgrounded by a series of socio-economic and political transformations that encouraged mobility and agrarian capitalism. For details, see Jeffrey 1976, Joseph 1988, Varghese 2009.

<sup>84</sup> Sivaswamy et al. 1945, p.3, cross-referenced from Varghese 2009.

<sup>85</sup> Varghese 2009.

Karthiyayani, now in her nineties, and one of the first women to move to the Ranni landscape from a neighbouring village recounts, '...when we crossed the river and came around the corner at Moonnukallu, we would hear elephants.....we would advance, trembling, calling *sharanam*'<sup>86</sup>

On their arrival at the fringe, the immediate priority for the settlers was to ensure that they were safely out of reach of elephants. As soon as clearing got underway, and an appropriate tree was selected, a *madom* or *machan* (a raised platform) was built for the family to spend the night in and a small shed was constructed underneath it for use during the day. Once crops were planted, a series of smaller *erumadoms* (smaller platforms) were constructed along the crop-fields for guards to stay. Settlers used a variety of tactics to scare elephants. Apart from hollering and making loud noises, they lit fires, built trenches, kept dogs that would warn them at night of approaching elephants, used slingshots, and even the occasional firearm. Despite their best efforts, they lost a great deal of crops. Rice and banana crops were raided frequently by elephants, temporary huts and sheds were targeted for fruit, salt and stored provisions. While at work during the day, they sometimes encountered elephants. Recalling the old days, Karthiyayayni says: 'Even now when I think about it, I feel like screaming in terror'. Mathachan, 90 who lives in the same locality says: 'We lived on *madoms*, both day and night, in those days the elephants even used to come during the day, we used to sit on the *madom* and throw stones at them...once I even dropped the *arakallu* (grinding stone) from the top, it didn't fall on the elephant.' Nearly every settler family had similar experiences.<sup>87</sup>

In some ways, along with the extensive clear felling of forests that was carried out during the period, the *madoms* or tree houses became the defining physical structures of settler place-making and remembrances across the region. Interactions with elephants are among the first things that settlers mention when asked about their experiences in the area: they identify themselves first and foremost as the people who lived in the trees and suffered enormous sacrifices to make a living.<sup>88</sup> With changes in the landscape, however, these structures are no longer essential elements of settler lives. They find occasional occupation by men who guard wood depots, forestry nurseries and crop-fields. The odd *madom* on the forest fringe, however, signifies a lingering presence of elephants, and that after all these years, this is still an elephant landscape with the potential for occasional visits, raids on crops and threats to life and property. These man-made structures are not only the most easily detectable symbols of elephant presence but also emblematic of conflict, both past and current.<sup>89</sup>

Over the years, there are indications of a distinct dissipation of the levels of conflict with elephants.<sup>90</sup> As clearings and habitation increased, incessant crop raiding shifted to occasional depredations closer to the forest boundary. During the initial years, the damage caused by elephants was expected by the settlers. The allure of ripening paddy catalysed daily raids, but after a few years, a number of additional factors rendered cultivation of the crop unviable. This shift in cropping and the associated fall back by elephants to their original pattern of occasional raids entailed a move towards tolerance. Over a period of time, there have been adjustments on both sides with respect to coexistence in shared spaces. Settlers became better accustomed to elephant behaviour, avoiding the accidental conflict and direct confrontations that were commonplace during

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<sup>86</sup> A form prayer, an entreaty for protection.

<sup>87</sup> At the same time, there are unconfirmed accounts of a number of settlers taking part in elephant poaching in collusion with incoming gangs of poachers from Tamil Nadu.

<sup>88</sup> Tint, 2010, points to the tendency among people to disproportionately remember highly emotionally charged, traumatic events than those without a great deal of emotional intensity.

<sup>89</sup> Oral histories of first generation settlers reveal a very strong sense of place, especially in the identification of specific localities related elephant encounters, large trees (that afforded space for *machans*), etc. This is consistent with studies which report the use of this form of expression to 'anchor' or 'fix' events in terms of locales so that they can serve as mnemonics, e.g. Tilley 1994.

<sup>90</sup> It has to be clarified that this is not a universal phenomenon in Kerala. In many parts of the southern Western Ghats, elephant conflict has declined, whereas in others such as the Wayanad region of Kerala, conflict is still ongoing.

the initial years. In other words, they have been finding ways to become local,<sup>91</sup> both mentally, such as in the acceptance of a certain level of conflict, as well as physically, pertaining even to basic activities such as walking quietly in the forest, so as to be listening out for elephant activity.<sup>92</sup> Elephants too appear to have learnt to avoid zones of conflict, their advances into cropland declining over the years. In this respect, elephants are seen as starting to respect anthropogenic boundaries. This reflexivity, a likely consequence of experience and sharing space is evident in the statement of a 90 year old veteran, Mathachan, who notes in retrospect, 'Elephants have nothing against us, it is not as if they are out to get us, if we bump into them, they attack us accidentally, they are also afraid of us...'. K.N. Cherian, a second generation settler, points out that in the old days, '...we entered their territory and lived there, and they attacked us....'. There is a distinct admission that these places belonged to elephants, and people encroached into elephant territory in the initial years. Some first generation settlers display what could almost be classified as a sense of nostalgia for their old enemies.<sup>93,94</sup>

While for some settlers, there has been a gradual reconciliation with elephants and an accommodation of their visits (at least in comparison with the new and more formidable opponent, the wild pig), for a few like Sivankutty (a farmer now in his seventies), the fear persists, reflecting a diverse spectrum of local attitudes. According to him, 'I was scared of the forests then, I am scared of forests now. Among animals, I am most fearful of elephants, I am terrified of them, that's why I don't go to the forest.' Sivankutty has been steadfast in his avoidance of the forest, he never took up any forest-based labour which most men in his generation did. In fact, he maintains that the only occasion he ever went was the time he returned from a visit to a pilgrimage centre many hours away and the bus which brought him back was diverted, holding him captive as it followed a circuitous route through the forest. Though he lived here for several decades, this was the only occasion that glimpsed the interior of the forest. When asked if there was any incident in the past (an uneasy encounter with an elephant, perhaps), that could explain this irrational fear, he laughs nervously: 'I don't go anywhere near them, how will they chase me?'. At the same time, much to his dismay, the forest seems to be advancing towards Sivankutty's doorstep as more and more wildlife are spilling over to raid his crops.

It can be argued that place-making along the fringe was an interactive process that entailed a significant involvement of non-human actors. In the initial phase, elephants played a decisive role in where people lived and worked. Elephant forays decreased with declining forest cover and increasing number of settlements. At the same time, as rice gave way to a other crops, the landscape became more hospitable to a different complement of species. Among the new crops, it was the introduction of tapioca (*Manihot esculenta*) that precipitated a different form of conflict.<sup>95</sup> Wild boar which were initially unfamiliar with the crop soon took a liking towards it, as did deer, porcupines and bandicoots. However, during the initial years, boars could be exterminated and the settlers managed to control populations. Many of these species were welcome additions to the kitchen menu. Now with protection from the government, settler plots have been under attack.

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<sup>91</sup> Raffles 2002.

<sup>92</sup> As forest-dwelling groups have shown, for people used to the jungle, elephants, especially herds are fairly easy to detect and avoid, and are predictable along a number of behavioural axes.

<sup>93</sup> It could be argued that as people learnt about elephants through experience, increasingly adopting avoidance-based strategies, elephants came to be viewed in a more positive light. For instance, Bird-David, 1999, explains, that among the Nayaka, elephants that pass by without reacting to people are sometimes referred to as elephant *devaru* (superpersons), while those that are encountered in conflict are referred to just as 'elephants'. This discrimination, she says is situational and contingent on 'affordances' or forms of engagements.

<sup>94</sup> It is also interesting understand local and regional differences especially with respect to the contrasting situation in Wayanad in Malabar. Here, Münster et al., 2012, report an increase in conflict over the years, likely due to increases in the numbers of elephants as a consequence of protection.

<sup>95</sup> For more details, see Joseph 1988.

In the eyes of the settlers, wild pigs have become the symbol of government apathy towards them. Unlike the elephant with its occasional visits and displays of sentience, the highly adaptable boar, especially one which has lost its fear of humans is relentless in its purpose.<sup>96</sup> Along the fringe, pigs are agents of landscape transformation as people are forced to modify their agricultural choices due to extreme crop damage. In some instances, this amounts to the cessation of agriculture. And unlike elephant visits that are infrequent and easily detectable, wild boar raids are typically nocturnal, silent and stealthy requiring almost constant night-time vigilance that frustrates farmers. K.N. Cherian summarises settler attitudes when he says, 'this animal which we call the pig, there is nothing that it doesn't eat.....it eats whatever you cultivate, it digs up the earth and eats earthworms, it is a really lowly/ filthy/ disgusting (*mlecham*, Mal.) animal... people fear it the most....not just because it attacks you physically, ....it damages everything, even the rubber plant,... if you buy tapioca from the market, it will enter your kitchen and eat it....when the jackfruit ripens, 25-30 animals turn up at one time.... tiny babies to large ones...it is the most problematic animal, and it has multiplied'. This impression of the boar as an animal that devours everything in its path and destroys whatever is left by digging, trampling and wallowing is a common one among settlers. Chandrasekharan Nair, a 55 year old second generation settler, adds that in order to save tapioca – the staple of poor peoples' livelihoods and a symbol of settler agriculture – one would soon have to keep it in a museum. Additionally, most pigs head back to the forest at daybreak (although a few brazen animals which have completely lost their fear of man have started staying back in agricultural land) furthering the impression among settlers that they do indeed belong to the forest and the government, and the latter offers them safe refuge.

There are several angles to conservation conflict in settler landscapes along the fringe. The Indian Wildlife (Protection) Act of 1972, the main protectionist legislation, entailed a discontinuity from previous local engagements with wildlife.<sup>97</sup> Since the top-down imposition of this legislation has been homogenous and hardly locality or context specific, pockets of conflict remain. The widespread colonial legacy of first exterminating problem species and then turning them into 'ownerless and priceless assets protected by law'<sup>98</sup> constituted a problematic backdrop to the post-Independence scenario. Elephants transitioned from valuable economic assets to problem animals to be eliminated, and then eventually as conservation flagships to be protected. The lower priority accorded to areas outside reserved spaces for conservation and the protection accorded to animals within reserves resulted in a perception of modified landscapes as those where wildlife should not be occurring. The delineation of protected areas, therefore resulted in changed social expectations of acceptable and deviant behaviour both for wildlife and people.<sup>99</sup> In the light of coercive enclosure, the forest fringe became a divide that not only ensured physical and ecological separation but also one with social and material consequences for transgressors, both human and non-human.

In this context, what we also see is a conflicting interaction between romantic views of place and nature with that of a utilitarian perspective. For settlers, elephant raids and frequent depredations by pigs are still problematic issues that infringe on daily livelihoods. The prevalent local ethic in these situations, i.e one of eradication of animals is overruled by the Forest Department and urban conservationists who lack lived experiences in these systems and remain less empathetic to the travails of the fringe dwellers. For the conservationist or the urban visitor, the forest it is a place of

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<sup>96</sup> Knight, 2003, 2004, points to the widespread hatred of wild pigs among farmers in many cultures and their propensity to cause famines. See also Sunseri 1997, Walker 2001. In their analysis of oral histories from the northwestern Indian state of Rajasthan, Gold and Gujar (2002) describes the 'sorrows' of the local peasants as they struggled to protect their crop fields from the ravages of wild boars. The latter enjoyed protection from the local ruler of Sawar.

<sup>97</sup> As emphasised by Rangarajan, 1998, the lead up to the conservation era was one of protracted conflict with dangerous animals and their extermination.

<sup>98</sup> Butler 2007, p.62.

<sup>99</sup> Gieryn 2000.

exhilarating, exotic (and typically fleeting) experiences, with their sentiment most likely conditioned by Western romanticist writings and imagery or Orientalist interpretations of eastern traditions.<sup>100</sup> Settlers question the favourable treatment of animals over people. Protection for erring wildlife is regarded as a foreign, elite, urban-centred, animal-loving ethic, and especially as a frivolous aberration embodied within people with poor ties to land. They emphasise the difference between watching elephants in a national park or studying them to that of actually living in and working in an elephant landscape. They actively question the ideologies spouted by elite groups and protest this forced imposition of extra-local morality into rural landscapes. Whatever their differences on other matters, resistance to conservation which places wildlife ahead of people is a unifying narrative that cuts across differences in the community.

### **Cognitive entanglements in negotiated spaces**

During the region's early history, the separation between forest and cultivation was at best tenuous. With increasing human influences, the forest fringe became a dynamic, shifting entity shaped by the interactions between elephants and people.<sup>101</sup> Human and non-human agency played a critical role in creating these geographies. In other words, this was a negotiated space, the boundaries of which were drawn by fear and mutual respect on both sides. Eventually this resulted in the modern binary of forest and countryside, one set aside for wildlife and the other for people. It continues to remain a porous boundary with occasional transgressions on both sides. It is useful to view some of these historical and contemporary engagements in the light of currently circulating theories of cognitive responses relating to both people and wildlife. These include theories such as the 'merits of margins' hypothesis<sup>102</sup> which proposes the idea of the fringe as a beneficial landscape for both wildlife and for people. Further, it has been proposed that food crops confer higher nutritional benefits than wild forage, translating to higher receptivity and perhaps even addiction in herbivore brains.<sup>103</sup> The ecological implications of fear as well as aspects such as anticipation of risk and predation and their role in the generation of 'landscapes of fear'<sup>104</sup> are equally applicable to people and wildlife. Crop-raiding which has historically been considered a high-risk, high-gain behaviour with potential evolutionary benefits and could be viewed in the light of contemporary protection which results in low-risk, high-gain environments.<sup>105</sup> Cognition studies have shown that species with significant behavioural plasticity such as elephants and pigs can perceive the changing nature of risk. As a consequence, both species are known to modify their foraging repertoires to avoid detection.<sup>106</sup> The agency of non-human actors is also conducive to evolutionary change, learning and adaptation. Human cognitive responses to conflict are an interesting complement to the behaviour of wildlife. Recent studies have begun to examine psycho-social and physiological impacts on the well-being of marginalised populations at the fringe.<sup>107</sup> The significant literature that evaluates the disparate impacts of chronic and episodic stress is also useful towards evaluating responses to different species involved in conflict.<sup>108</sup> In present day conflict along the fringe, settlers view the daily depredations of pigs with greater trepidation than the occasional catastrophic raids by elephants. The psychological and physiological impacts of such chronic and episodic stressors cannot be underestimated.

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<sup>100</sup> Inden 1986, Gissibl 2014.

<sup>101</sup> Bourdillion 1893.

<sup>102</sup> Peterson, 1977.

<sup>103</sup> See Sukumar, 2003.

<sup>104</sup> Brown et al. 1991, Laundré et al 2010.

<sup>105</sup> Sukumar and Gadgil 1998, Sukumar 2003.

<sup>106</sup> Chiyo et al. 2011, Sih and Del Giudice 2012. Rangarajan's (2013) exploration of lions in India's Gir forests traces a number of behavioural modifications related to habituation and conflict that may have adaptive consequences.

<sup>107</sup> Barua et al. 2013, Zahran et al. 2015.

<sup>108</sup> See Sapolsky 1998 for the conceptualisation of this idea.

Entanglements along the fringe can also be analysed in terms of past experiences and memories. Although human activities in the pre-migration era are rarely recalled within contemporary frames of memory, historical evidences of human use of the region are many. The cumulative effect of colonial and post-colonial processes that excluded people resulted in both the material and symbolic transformation of productive forests into 'pristine' spaces. In this sense, there has been a break with long-term (and in some cases, centuries-old) lived experiences of place, memories, identities, oral and occupational traditions of the hill communities. The influx of settlers into the forested areas of Travancore and the marginalisation of the hill communities living there entailed yet another articulation and creation of forest-centred experiences, memories, and identities, this time of different kind altogether. Here, settlers shaped by their histories and experiences of the cultivated plains refocused their ideologies and expectations as they came into contact with the forest and its occupants. Forests were seen as spaces to be conquered.<sup>109</sup> Their latent memories of famine and deprivation are reflected in the importance people give to growing food crops and the careful tending of agricultural plots however small. Despite persistent animal raids on nearly every food crop, settlers continue to spend a great deal of effort in planting, erecting fences and guarding crops. Though rubber is a revenue bearing cash crop, in most instances it is grown with other food crops which invite animal depredations. Memory can perhaps explain what may otherwise seem as counterintuitive land use choices, and one would need to look back in time to the memories of scarcity to understand some of these choices. These in turn reflect the 'inner landscapes' referred to often by analysts of memory and of the recreation of familiar landscapes which travel with people.<sup>110</sup>

The collective memories of settlers, especially their common experiences of hardships in which elephants played a central role, have resulted in the formation of a distinct identity centred on place. A 'settler' identity forged by common experiences of isolation and the overcoming of obstacles seems to have gained primacy over caste- and class-based identities that define the same communities in the plains. One could say that previously this cohesiveness was borne out of collective efforts in clearing the forest and defending against marauding wildlife, but later on it acquired the form of organised resistance against evictions and in articulating demands for the community as a whole. As amply demonstrated by the scholarship on the intergenerational transmission of experiences related to trauma and conflict, memories of poverty and hardships tend to be deeply ingrained across generations.<sup>111</sup> This could also explain why memories of the long periods of distress from food shortages are strong among settler communities of the fringe, as opposed to the plains of Central Travancore where this is a more or less forgotten history.

As a complement to the exploration of human memories, cognitive mechanisms including the generational transmission of responses of long-lived species such as elephants to long-term conflict are relevant here. Literary accounts, colonial literature and formal research have established elephants as animals of memory. This indicates that while superior cognitive development enables their learning in many spheres, disruption of these pathways either through the elimination of matriarchs or persistent persecution can result in problematic outcomes.<sup>112</sup> Even in contemporary times, the Periyar landscape which is encompassed within the wider geographic enquiry of this study was a hotbed of ivory poaching for several decades resulting in skewed sex ratios and demographics.<sup>113</sup> In the adjacent locality of Konniyur, Bourdillon talks about elephants starting to avoid the *keddah* site, as a consequence of which this form of capture was discontinued after just

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<sup>109</sup> Varghese 2009.

<sup>110</sup> Stewart and Strathern 2003.

<sup>111</sup> e.g. Tint 2010.

<sup>112</sup> See McComb et al. 2001; Bradshaw et al 2005; ; Graeme et al. 2013 for research on these aspects in African elephants.

<sup>113</sup> See Sukumar 2003, 2011.

ten years of operation.<sup>114</sup> That elephants would have displayed behavioural modifications in response to local conditions is not a far fetched idea.

In popular perception too, sentience and superior cognitive skills have been attributed to elephants, particularly resulting in the generation of unique bonds between man and elephant.<sup>115</sup> The *Matangalila*, an ancient treatise on elephant-lore, considers elephants different from other domesticates in that they typically retain some memory of their past life in the forests, and some actually successfully readjust to a life in the forest if freed.<sup>116</sup> In a recent, local context concerning the Western Ghats, Vyloppilli Sreedhara Menon's *Sahyante Makan (Sahya's Offspring, Son of Sahyadri/ Western Ghats)* is another example of this partial perception about domestication. Regarded as among the most powerful literary representations in Malayalam literature, this poem recounts the thoughts going through the mind of a caparisoned tusker in musth, carrying the idol at a temple festival, just before it runs amok. His nostalgic travel back in time to the freedom of the forests is portrayed alongside his bewilderment and irritation at the cacophony of the thronging crowds, drums and fireworks. His musth-addled brain, is overpowered by memories of familiar scents and intoxication, ('What's this scent? Fragrance of new devil tree? Flowers or aroma of toddy dripping from wild palms... He stood awhile, searching the light breeze with his trunk'). At the end of the bloody rampage, when the elephant is shot, his cry reverberates through the Sahya Ranges (the Western Ghats): 'The man's gun roared once, helplessly weeping and calling someone, the rutting elephant collapsed, Did the God of man slumbering within the fine temple hear that sky shaking call, Yet it reached and echoed, in the heart of the Sahya Ranges, disconsolate at a son's grief.'<sup>117</sup> The symbolism of elephants as the offspring of the Ghats is also relevant to their ownership of the forests.

## Learning from history

Drawing upon suggestions and limitations identified in past studies,<sup>118</sup> this study attempted an infrequently adopted long-term exploration to illustrate the wide repertoire of human-elephant entanglements. Insights from these engagements can be used to identify significant historical themes that can contribute to contemporary debates on human-wildlife and conservation conflict. Several key implications emerge:

The long-term histories of engagements with elephants and other crop-raiding wildlife paint the forest fringe as a dynamic space, where human and non-human agency actively transformed each other as well as the landscape. In this region, the fact that there were never really any people-free elephant landscapes or vice versa, challenge long-held assumptions about both harmony and conflict. The most frequent among such assumptions is the notion of the pre-colonial era as one of "green" and happy equilibrium' followed through in recent histories by a fall from grace and 'expulsion from the garden' as a consequence of human profligacy.<sup>119</sup> Among the diversity of engagements with wildlife, elephant pestilence on crops has been a recurring theme, while at the same time tempered with coexistence, where both elephants and people made occasional adjustments. What have been forgotten are the longer histories of forests and 'the famous millet-rich

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<sup>114</sup> Bourdillon 1983.

<sup>115</sup> For instance, the notion of the bond between a mahout and his elephant is a particularly strong one in public perception. For example, in the 1940s, in central Kerala, an elephant and his senior *mahout* were treated as partners in crime in the murder of a junior elephant handler. Local accounts refer to the elephant as a wholehearted accomplice to his favourite *mahout* (Ipe M. Ipe and M.O. Ipe *pers comm.*).

<sup>116</sup> Trautmann 2015.

<sup>117</sup> Translation by Variath Kutty, 2013. Available at: <https://sonofsahyaranges.wordpress.com/>

<sup>118</sup> Knight 2003, 2004; McGregor 2005; Lorimer 2010; Jepson et al 2011; Rangarajan and Sivaramakrishnan 2014.

<sup>119</sup> Morrison 2014, p. 48,49.

hill chiefdoms<sup>120</sup> of the Ghats which both people and elephants coveted. The crux is that conflict with forest-dwellers seems to have been an enduring refrain from the early historical period onwards and is not just symptomatic of contemporary interactions with local agriculturalists along the fringe.<sup>121</sup>

There is, however, a distinction between the historical and contemporary situation: while the former was played out in the form of direct conflict, the contemporary situation is also characterised by tussles between different interest groups, i.e. conservation conflict<sup>122</sup>, and complicated by the imposition of extra-local, top-down conservation strategies that pay scant attention to context specificities or local sentiments. Building on large-scale historical processes such as colonialism and agrarian capitalism, the differentiation between forest and farmland was set in motion in the colonial period and cemented in the conservation era to create problematic exclusionary spaces separating people and nature. Paralleling a process common across many colonial landscapes, an 'uninhabited wilderness' that did not exist before was created by enclosing a forest that had been worked for millennia. As pointed out aptly by Cronon for North America, this new view of place embodies a central paradox: of wilderness as a place that symbolises 'a dualistic vision in which the human is entirely outside the natural', and one that represents a flight from reality and history.<sup>123</sup>

On a related note, local discourses and memories, bring attention to several first hand, marginalised, subaltern accounts of conflicts and especially the 'non-European modes of speaking for the elephant',<sup>124</sup> that are typically missing from studies on conflict. This has enabled a more realistic representation of local views of elephants as problematic entities, an issue typically downplayed in both conservation literature as well as in the emerging calls within post-humanist and critical animal studies (CAS) scholarship that call for greater compassion, companionship and ethical frameworks that de-centre the human.<sup>125</sup> Although emotive elements of conviviality and sentience can no doubt be found in encounters between elephants and humans, it is important to take note of Jepson et al's very significant caution that to classify them as such might (at least in terms of commonly assumed terminologies) amount to trivialising the often catastrophic conflict and violence that those living in close proximity to them have to contend with.<sup>126</sup> It is also relevant to be aware of the significant cautions against literature that in Neumann's opinion, indulges in 'moral extensionism'<sup>127</sup> or the attribution of anthropomorphic moral standing to organisms traditionally located outside human spheres of morality and ethics.<sup>128</sup> It is therefore important to adequately interrogate calls for tolerance. As McGregor points out, it is typical of the Global North that intense media attention and public outrage – at what are often only single-digit incidences of conflict – lead to the subsequent elimination of species such as wolves and mountain lions. Yet at the same time, the same media calls for tolerance and reconciliation with wildlife in places like Africa while ignoring the significant losses of human life, impoverishment and persistent pestilence.<sup>129</sup> This calls for consideration of a relational ethics that takes into account embedded local relationships and sentiments.

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<sup>120</sup> Gurukkal 2010, p. 124.

<sup>121</sup> Conversely, a series of positive engagements also come to light for these phases, pointing to a range of complex interactions for the pre-colonial period as well as later.

<sup>122</sup> Redpath et al. 2013.

<sup>123</sup> Cronon 1995, p.11.

<sup>124</sup> Jepson et al. 2011, p. 170.

<sup>125</sup> e.g. Lorimer 2010.

<sup>126</sup> Jepson et al. 2011.

<sup>127</sup> Neumann 2004.

<sup>128</sup> Using the African poaching scenario as an example, Neumann, 2004, proposes that by constructing elephants as near-human cousins, we may end up dehumanising those who engage in activities such as poaching and tolerate extra-judicial executions and violations of human rights as can be seen in several conservation contexts.

<sup>129</sup> McGregor 2005.

Recent enquiries such as those by McGregor, point out the significance of understanding local perceptions embedded in the pestilence discourses of local communities, and practices which enable the sharing space with elephants and other wildlife on the fringe. While local communities may condemn or urge the destruction of animals causing depredations, many studies including the current one show that the actual relationships on the ground are much more complex and diverse, involving long-standing cultural relationships and representations.<sup>130</sup> Significantly, this shows that killing and compassion frequently co-exists at several levels. In this context, the provision of narrow economic benefits (e.g. monetary incentive and insurance schemes), or the evocation of religious or symbolic significance alone – both practices which are often the defining features of many modern day conservation projects – call into question the efficacy of dealing with issues such as elephant conservation where the species has complex relationships with people. Monetary incentives or penalties when inserted into systems that are driven by intrinsic or social motivation can result in problematic outcomes. As pointed out by others, it is also critically important to view local situations of conflict in the light of existing dichotomies of exclusionary spaces where conservation flagships are viewed as privileged and protected entities.<sup>131</sup> In practice, this calls for effective dialogue with and associated empowerment of marginalised groups for the betterment of both people and wildlife and in creating solutions that avoid reproducing historical inequalities that numerous conservation projects till date have precipitated.

To summarise, different material and cultural visions of nature and wildlife are embedded in categorisations of place and history. In the *kurinji* eco-semiotics, elephants assumed multiple personalities situated along a continuum between fierce and rampaging crop-destroyers, providers of ivories and role models for familial harmony. Even as they fought elephants, traditional peoples benefited from them. The colonial period, though primarily focused on utilitarian gains even from its animals, nevertheless portrays a rich array of local knowledges, hunting encounters and interactions with local agency. In the present day, for conservationists, elephants have come to represent an idealised vision of wilderness, one that is preferably devoid of people. In the eyes of the settlers on the forest fringe (in no small effect due to the depredations of other species), the elephant transitioned from a species that symbolised fear and isolation of the frontier, to a more benevolent, sentient being. As pointed out in other contexts<sup>132</sup>, there is no definable, essential character for elephants or humans, but a changing set of behavioural repertoires shaped by experience and their history of engagements with each other. Learning from these histories can offer important lessons for coexistence in the future.

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### Bibliography

- Adas, M. 1974. *The Burma Delta: Economic Development and Social Change on an Asian Rice Frontier, 1852-1941*. Madison: The University of Wisconsin Press.
- Amruth, M. 2009. Changing regimes of forest management: institutional change and modes of participation in the Western Ghats of Kerala. Ph.D. Thesis, Mahatma Gandhi University.

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<sup>130</sup> Bird-David 1999, Knight 2000.

<sup>131</sup> McGregor 2005.

<sup>132</sup> See Lorimer and Whatmore (2009) for Sri Lanka.

- Baak, P.E. 1997. *Plantation Production and Political Power: Plantation Development in South-West India in a Long-term Historical Perspective, 1743-1763*, New Delhi: Oxford University Press.
- Barua, M., et al. 2013. 'The Hidden Dimensions of Human-wildlife Conflict: Health Impacts, Opportunity and Transaction Costs'. *Biological Conservation* 157: 309-316.
- Bird-David, N. 1999. '“Animism Revisited”: Personhood, Environment and Relational Epistemology'. *Current Anthropology* 40(S1): S67-S91.
- Bourdillon, T.F. 1893. *Report on the Forests of Travancore*. Thiruvananthapuram: Government Press.
- Bradshaw, G.A., et al. 'Elephant Breakdown'. *Nature* 423:807.
- Brown, J.S., et al. 1999. 'The Ecology of Fear: Optimal Foraging, Game Theory and Trophic Interactions'. *Journal of Mammalogy* 80: 385-399.
- Butler, M-J. 2007. Landscapes sublime: imperialism, wilderness ideal and the history of conservation in Tanzania. M.A. Dissertation, University of Witwatersrand, 127 pages.
- Casson, L. 1986. 'P. Vindob G 40822 and the Shipping of Goods from India'. *BASP* 23.
- Chiyo, P.I., et al. 2011. 'No Risk, No Gain: Effects of Crop Raiding and Genetic Diversity on Body Size in Male Elephants'. *Behavioural Ecology* 22(3):552-558.
- Coates, P. 1998. *Nature: Western Attitudes Since Ancient Times*. Berkeley: University of California Press.
- Cronon, W. 1995. 'The trouble with wilderness, or, getting back to the wrong nature', in W. Cronon (ed.), *Uncommon Ground: Rethinking the Human Place in Nature*, New York: W.W. Norton & Co., pp. 69-90.
- De Romanis, F. 2012. 'Playing Sudoku on the Verso of the 'Muziris Papyrus''. *Journal of Ancient Indian History* 27:75-101.
- De Romanis, F. 2014. 'Ivory from Muziris'. *ISAW Papers* 8. Available at: <http://dlib.nyu.edu/awdl/isaw/isaw-papers/8/#footnote-72>.
- Dikshitar, V.R.R. 1939. *The Silappadikaram (The Story of the Anklet)*, Trans. & Ed., New Delhi: Oxford University Press.
- Fernando, P. 2000. 'Elephants in Sri Lanka: Past, Present and Future'. *Loris* 22(2):38-44.
- Fernando, P., E. et al. 2005. 'Perceptions and Patterns of Human-elephant Conflict in Old and New Settlements in Sri Lanka: Insights for Mitigation and Management'. *Biodiversity and Conservation* 14:2465-2481.
- Gieryn, T.F. 2000. 'A place for space in sociology'. *Annual Review of Sociology* 26:463-496.
- Gissibl, B. 2014. 'National parks as cosmopolitics', in, C. Mauch, and L. Robin (eds.), *The Edges of Environmental History: Honouring Jane Carruthers*, Rachel Carson Centre Perspectives, pp. 47-52.
- Gold, A.G. and B. R. Gujar. 2002. *In the Time of Trees and Sorrows: Nature, Power and Memory in Rajasthan*. Durham and London: Duke University Press.
- Graeme, S., et al. 2013. 'Effects of Social Disruption in Elephants Persist Decades after Culling'. *Frontiers in Zoology* 10 (1). p. 62.
- Gurukkal, R. 2010. *Social Formations of Early South India*. New Delhi: Oxford University Press.
- Gurukkal, R. 2013. 'Classical Indo-Roman Trade: A Misnomer in Political Economy'. *Indian Historical Review* 40(2): 181-206.
- Hughes, J. 2013. *Animal Kingdoms: Hunting, the Environment and Power in the Indian Princely States*. New Delhi: Permanent Black.
- Inden, R. 1986. 'Orientalist constructions of India'. *Modern Asian Studies* 20(3): 401-446.
- Iyer, L.K.A. 1909. *The Cochin Tribes and the Castes, Volume I* (Madras: Higginbotham & Co.
- Jeffrey, R. 1976. *The Decline of Nair Dominance: Society and Politics in Travancore, 1847-1908*. New Delhi: Vikas Publishing House (Pvt.) Ltd.
- Jepson, P., et al. 2011. 'Towards an Intra-disciplinary Biogeography: A Response to Lorimer's 'Lively Biogeographies' of Asian Elephant Conservation'. *Transactions of the Institute of British*

*Geographers* 36: 170-174.

- Johnsingh, A.J.T. et al 2013. 'Order Proboscidea: Asian Elephant', in A.J.T. Johnsingh and N. Manjrekar (eds.), *Mammals of South Asia*, Orient Blackswan.
- Joseph, K.V. 1988. *Migration and Economic Development of Kerala*. Delhi: Mittal Publications.
- Kay, C.E. 2013. Aboriginal influences and the original state of nature. <http://www.usu.edu/ipe/wp-content/uploads/ipePublications/Aboriginal-Influences-and-the-Original-State-of-Nature.pdf>.
- Knight, H. 1954. *Food Administration in India, 1939-1947*. Stanford: Stanford University Press.
- Knight, J. (ed.). 2000. *Natural Enemies: People-Wildlife Conflicts in Anthropological Perspective*. London: Routledge.
- Knight, J. 2003. *Waiting for Wolves in Japan: An Anthropological Study of People-Wildlife Relations*. Honolulu: University of Hawaii Press.
- Knight, J. (ed.). 2004. *Wildlife in Asia: Cultural Perspectives*. Routledge, Curzon.
- Krishnamurthy, V. and C. Wemmer. 1995. 'Timber elephant management in British India (1844-1947) with special emphasis on the Madras Presidency', in J.C. Daniel and H. Datye (eds.), *A Week with Elephants: Proceedings of the International Seminar on Asian Elephants*, Bombay Natural History Society.
- Laundré, J.W., et al. 2010. 'The Landscape of Fear: Ecological Implications of Being Afraid'. *The Open Ecology Journal* 3: 1-7.
- Lorimer, J. 2010. 'Elephants as Companion Species: The Lively Biogeographies of Asian elephant Conservation in Sri Lanka'. *Transactions of the Institute of British Geographers* 35:491-506.
- Lovatt, H. and P. de Jong. 1993. *Above the Heron's Pool: A Short History of the Peermade/Vandiperiyar District of Travancore*. London: British Association for Cemeteries in South Asia.
- Ludden, D. 1999. *An Agrarian History of South Asia*. Cambridge: Cambridge University Press.
- Mateer, S. 1883. *Native Life in Travancore*. London: W.H. Allen & Co.
- McComb, K. et al. 2001. 'Matriarchs Act as Repositories of Social Knowledge in African Elephants'. *Science* 292:491-494.
- McGregor, J. 2005. 'Crocodile Crimes: People versus Wildlife and the Politics of Postcolonial Conservation on Lake Kariba, Zimbabwe'. *Geoforum* 36:353-369.
- MacKenzie, J.M. 1988. *The Empire of Nature: Hunting, Conservation and British Imperialism*. Manchester: University of Manchester Press.
- McLaughlin, R. 2014. *The Roman Empire and the Indian Ocean: The Ancient World Economy and the Kingdoms of Africa, Arabia, and India*. Barnsley: Pen and Sword Books: Maritime, .
- Morris, B. 1986. 'Deforestation in India and the Fate of Forest Tribes'. *Ecologist* 16(6): 253-257.
- Morrison, K. 2014. 'Conceiving ecology and stopping the clock: Narratives of balance, loss and degradation', in M. Rangarajan and K. Sivaramakrishnan (eds.) *Shifting Ground: People, Animals and Mobility in India's Environmental History*, Oxford University Press, pp. 39-64.
- Morrison, K.D. and L.L. Junker (eds.). 2002. *Forager-Traders in South and Southeast Asia: Long-term Histories*. Cambridge: Cambridge University Press.
- Münster, U., D. Münster, and S. Dorondel (eds.). 2012. *Fields and Forests: Ethnographic Perspectives on Environmental Globalisation*. Rachel Carson Centre Perspectives, Munich: Rachel Carson Centre for Environment and Society.
- Neumann, R.P. 2004. 'Moral and discursive geographies in the war for biodiversity in Africa'. *Political Ecology* 23:813-837.
- Peterson, J.T. 1977. 'The merits of margins', in, W. Wood (ed.) *Cultural Ecological Perspectives on South East Asia*. Papers in International Studies, South East Asia Series, No. 41, Athens: Ohio University Press.
- Philo, C., and C. Wilbert. (eds.). 2000. *Animal Spaces, Beastly Places: New Geographies of Human-animal Relations*. London: Routledge.
- Raffles, H. 2002. *In Amazonia: A Natural History*. Princeton: Princeton University Press.
- Raghavan, S. 2016. *India's War: The Making of Modern South Asia, 1939-1915*. (Gurgaon: Allen Lane.
- Ramanatha Ayyar, A.S. 1924. *Stone and Copper Plate Inscriptions of Travancore*. Travancore

- Archaeological Series, Government of Travancore, Trivandrum: Government Press.
- Rangarajan, M. 1996. *Fencing the Forest: Conservation and Ecological Change in India's Central Provinces, 1860-1914*. 245 pages, New York: Oxford University Press.
- Rangarajan, M. 1998. 'The Raj and the natural world: The war against 'dangerous beasts' in colonial India'. *Studies in History* 14: 265-299.
- Rangarajan, M. 2001. *India's Wildlife History: An Introduction*, New Delhi: Permanent Black.
- Rangarajan, M. 2013. 'Animals with Rich Histories: The Case of the Lions of Gir Forest, Gujarat, India'. *History and Theory Theme Issue* 52:109-127.
- Rangarajan, M. and K. Sivaramakrishnan, (eds.). 2014. *Shifting Ground: People, Animals and Mobility in India's Environmental History*, New Delhi: Oxford University Press.
- Rathbone, D. 2000. 'The Muziris Papyrus (SB XVIII 13167): Financing Roman Trade with India', in Muṣṭafā al- 'Abbādī, Mohammed Abd-el-Ghani (eds.), *Alexandrian Studies in Honour of Mostafa el Abbadi, Volume 2*, pp. 39 - 50 *Bulletin de la Societe d'Archaeologie d'Alexandrie* 46.
- Redpath, S. et al. 2013. Understanding and managing conservation conflicts. *TREE* 28(2): 100-110.
- Sapolsky, R.M. 1998. *Why Zebras Don't Get Ulcers: A Guide to Stress, Stress Related Disorders and Coping*. New York: W.H. Freeman Publishers.
- Shajan, K.P., et al. 2004. 'Locating the ancient port of Muziris: fresh findings from Pattanam'. *Journal of Roman Archaeology* 17:312-320.
- Sidebotham, S.E. 2011. *Berenike and the Ancient Maritime Spice Route*. University of California Press.
- Sih, A., and M.D. Giudice. 2012. 'Linking behavioural syndromes and cognition: a behavioural ecology perspective'. *Philosophical Transactions of the Royal Society B* 367:2762-2772.
- Sivaswamy, K.G. 1945. *Food, Famine and Nutritional Diseases in Travancore* (Coimbatore: Servindia Kerala Relief Centre.
- Stewart, P.J. and A. Strathern (eds.) 2003. *Landscape, Memory and History: Anthropological Perspectives*, Sterling, VA: Pluto Press.
- Sterckx, R. 2002. *The Animal and the Daemon in Early China*. New York: State University of New York Press.
- Sukumar, R. 1994. Wildlife-human conflict in India: an ecological and social perspective. In, R. Guha (ed.) '*Social Ecology*', New Delhi: Oxford University Press, pp. 303-317.
- Sukumar, R. and M. Gadgil. 1998. 'Male-female Differences in Foraging on Crops by Asian Elephants'. *Animal Behaviour* 36: 1233-1235.
- Sukumar, R. 2003. *The Living Elephants: Evolutionary Ecology, Behaviour and Conservation* Oxford University Press.
- Sukumar, R. 2011. *The Story of Asia's Elephants*. Marg Publications.
- Sunseri, T. 1997. 'Famine and Wild Pigs: Gender Struggles and the Outbreak of the Majimaji War in Uzaramo (Tanzania)'. *The Journal of African History* 38(2): 235-259.
- Tappan, E.M. (ed.) 1914. *The World's Story: A History of the World in Story, Song and Art, Vol. II: India, Persia, Mesopotamia, and Palestine*. pp. 184-190, Boston: Houghton Mifflin.
- Thurston, E. 1901. *Monograph on the Ivory Carving Industry of Southern India* (Madras: Government Press.
- Tilley, C. 1994. *A Phenomenology of Landscape, Places, Paths and Monuments*. Providence: Berg Publishers.
- Tint, B. 2010. 'History, Memory and Intractable Conflict'. *Conflict Resolution Quarterly* 27(3): 239-256.
- Trautmann, T. 2015. *Elephants and Kings: An Environmental History* (Chicago: The University of Chicago Press.
- Urbanik, J. 2012 *Placing Animals: An Introduction to the Geography of Human-Animal Relations*. Plymouth: Rowan & Littlefield Publishers, Inc..
- Van Sittert, L. 2005. 'Bringing in the Wild: The Commodification of Wild Animals in the Cape colony/ Province c.1850 – 1950'. *The Journal of African History* 46(2): 269-291.

- Varadarajaier, E.S. 1945. *The Elephant in Tamil Land*. Annamalai University Press.
- Varghese, V.J. 2009. 'Land, labour and migration: understanding Kerala's economic modernity'. Working Paper 420. Thiruvananthapuram: Centre for Development Studies.
- Veluthat, K. 2012. *The Political Structure of Early Medieval South India*. Orient Blackswan.
- Walker, B.L. 2001. 'Commercial growth and environmental change in early modern Japan: Hachinohe's wild boar famine of 1749'. *The Journal of Asian Studies* 60(2): 329-351.
- Warmington, E.H. 1974. *The Commerce Between the Roman Empire and India*, New Delhi: Vikas Publishing House.
- Whatmore, S. 2002. *Hybrid Geographies: Natures, Cultures, Spaces*. London: Sage Publications Ltd.
- Williams, J.H, Lt.-Col. 1950. *Elephant Bill*. Long Riders' Guild Press 2001.
- Wolch, J, and J. Emel (eds.). 1998. *Animal Geographies: Place, Politics, and Identity in the Nature-Culture Borderlands*. New York: Verso.
- Woodcock, G. 1967. *Kerala: A Portrait of the Malabar Coast*. Faber and Faber.
- Zahran, S., et al.. 2015. 'Stress and Telomere Shortening among Central Indian Conservation Refugees'. *PNAS* 112(9): E928-E936.