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With Pradip Krishen's opening statement: "I like trees. especially wild ones", I recognise a kindred spirit! After spending a year in 1994 in a Ugandan rainforest as a chimpanzee field researcher, how could I not love trees? My love affair with jungle trees began there, far from India, but I felt the same uplifting emotions surrounded by trees in the Bandhavgarh National Park. Instead of the tumultuous green hues of the moist tropical Ugandan rainforests where evergreen trees dominate, the deciduous trees of Bandhavgarh were decked out in colourful autumn leaves. I vividly remember my first glimpse of a sleek tigress crossing the road in front of us, before she dragged a small deer kill through the bushes. It was on this trip in 2013 that I first heard of Krishen's soon to be released book from Saravana Kumar, who was our local tour guide and a passionate field assistant of Krishen's, helping him to photograph and collect data about the trees in the book. This book sits on my office desk as a constant reminder to promote empathy for trees as well as for animals. Trees used by tigers as scratching posts may soon serve as important 'non-invasive' conservation tools, as it is possible to identify DNA from tiger scent marks, allowing identification of individual animals, thereby helping with population monitoring (Caragiulo et al. 2015). This technique may potentially be more reliable for estimating tiger abundance than pug mark or camera trap surveys (Karki et al. 2015).

Reviewing this book is timely, as scientists, conservationists, and policymakers are increasingly focusing on trees and global forest health as evidenced by a special section devoted to this issue in the preeminent journal *Science* (Lugo 2015). Human disturbances or anthropogenic changes across all habitats are so widespread that many scientists are adopting the term 'Anthropocene' to refer to the current epoch (Hockings et al. 2015). Saving forests ultimately will depend on people viewing trees as more than just a resource. Instead, people must learn to care about trees as living entities and feel empathy for them. In Australia, the term 'tree-hugger' can be derogatory, ascribed to people who love trees to the detriment of industry or development, with protestors who try to stop tree felling viewed as ecological extremists. One such 'eco-warrior' is Miranda Gibson, who lived in a 400 year old *Eucalyptus* tree in Tasmania (Australia) for 449 days, on a platform with solar panel and computer, blogging

FOR THE LOVE OF JUNGLE TREES

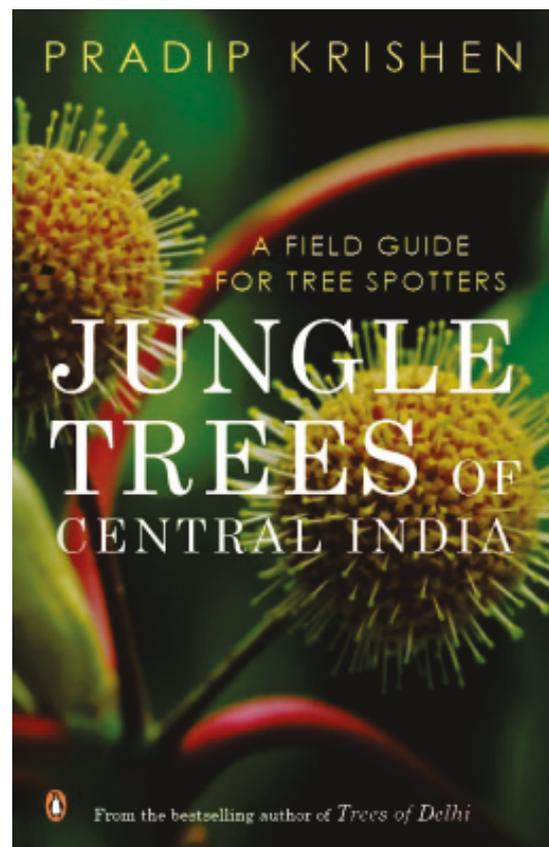
Carla A. Litchfield

School of Psychology, Social Work and Social Policy, University of South Australia, St Bernards Road, Magill, SA 5072, Australia
carla.litchfield@unisa.edu.au

and communicating through video conferencing from her 'Observer tree' about the destruction of the forest around her (Gibson, 2013). Public outcry resulted in the temperate rainforests of the Tasmanian wilderness being listed as one of 107 World Heritage forest sites (<http://whc.unesco.org/en/forests/>).

Jungle Trees of Central India
Pradip Krishen

Date of publication: 2014
Publisher: Penguin Books India
Pages: 400pp
Price: ₹1,499/-



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Date of publication: 26 October 2015 (online & print)

Krishen starts with an extensive overview of trees (or tree-like bushes), soil and rock types, forest types, seasons and history of forestry management in India. Central India according to his criteria covers a massive area (about the size of France or 3.5 times larger than England) and includes: most of Madhya Pradesh, a 'sliver' of northern Maharashtra, a 'slice' of Chhattisgarh, 'tiny outliers' of southern Uttar Pradesh, and a 'wedge' of eastern Rajasthan (p.16). This region includes most of the tiger reserves in India, providing excellent places for spotting some of the 165 species of trees catalogued in the book. Forty pages of exquisite photos provide a key to use for tree identification based on bark, flowers or fruit. The rest of the book is a Tree Catalogue grouped into sections based on leaf types: (1) simple leaves (untoothed, toothed or lobed); and (2) compound leaves (digitate, pinnate or twice-pinnate). A simple icon for each tree species shows the relative size difference between a person and the tree. Scientific names and local names are given (e.g., Maharukh tree is also known as tree of heaven), as well as social and cultural information (e.g., peepal fig trees are worshipped by Hindus, as the tree under which Gautama Buddha meditated and achieved enlightenment), medicinal or practical uses of parts of trees (e.g. mahua or honey trees flowers are eaten or fermented for liquor, and oil from seeds is used for cooking and oil lamps), as well as scientific information and photographs to identify the species.

This book should not only be read by tree enthusiasts or people visiting central India. It serves as a tribute to trees, a means of connecting people with trees by developing awareness, respect, awe, and even empathy or love based on scientific knowledge and beautiful imagery. Krishen states that hope for saving forests in India will only dissipate if 'tree-shrines' disappear, which represent: "the faith that venerates trees as embodiments of wholesome wellness, as sanctuary, peace and a source of life-giving water" (p.44). As a field researcher in Uganda, I would have loved to have a book such as this to help me identify the trees in my rainforest habitat. The most knowledgeable tree experts were always our Ugandan field assistants, who conducted monthly phenology transects to carefully measure trees and stages of their life cycle. My favourites were the massive *Ficus* trees, with their above ground buttress roots, a natural drum for Chimpanzee communication, and with fruits that form the basis of Chimpanzee diets (Tweheyo & Lye 2003).

There is a growing global interest in giant, heritage, ancient, notable, and champion trees (e.g., [\[gianttrees.com.au\]\(http://gianttrees.com.au\), <https://www.americanforests.org>\), with official national tree registers set up and even competitions for 'Tree of the Year' \(e.g., <https://www.woodlandtrust.org.uk>\). In India 'celebrity' giant trees are awarded the 'Mahavriksha Puraskar' by the Ministry of Environment, Forests and Climate Change \(Government of India, <http://envfor.nic.in/citizen/award/mp.html>\). The majestic 'Kannimara Teak' tree is a recipient of this award, standing about 40m tall in the Parambikulam Tiger Reserve in Kerala \(<http://parambikulam.org/kannimarateak.php>\), with a girth of about 7m. This is one of the largest living teak trees, is more than 450 years old, and is considered 'sacred' by local communities. If visiting the 'Kannimara Teak' tree, tourists can stay at the Treetop Hut Parambikulam \(<http://parambikulam.org/treetophutparambikulam.php>\), thereby combining a nature experience focused on both trees and tigers. Tourism experiences focused around forests include tree canopy walks and zip-lining, as well accommodation in tree houses or hotels \(e.g., the Tree House Hideaway near Bandhavgarh National Park, <http://www.treehousehideaway.com>; the Tree House in Kerala, <http://www.vythiriresort.com>; the bird's nest room at the Treehotel in Sweden, <http://treehotel.se>\). Yet, love for trees that results in pilgrimages to special trees or holidays in and around trees must be tempered with respect. This may include keeping parts of forests or forest corridors free of people, to allow animals and ecosystems to remain as unaffected by humans as possible.](http://</p>
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There is a growing demand for applications ('apps') on mobile phones, which provide tourists with locally-relevant 'on demand' natural history information (e.g. iTrees) or allow them to contribute data to Citizen Science projects (e.g. <http://www.seasonwatch.in>). However, reliance on mobile phones is problematical in many wilderness areas where there may be limited connectivity to cellular or Wi-Fi networks (Goldsmith 2015). In the absence of reliable 'apps', ebook editions could help field guides flourish in the digital age, since tourists may be reluctant to carry books on their travels, particularly when multiple field guides are needed to identify trees, mammals and birds. While my copy of *Jungle Trees of Central India* remains in pride of place at home in Australia, I hope that a copy of Krishen's book will be available in my vehicle next time I visit the national parks of central India!

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