

BOOK REVIEW

Sreetheran M. 2009 *Hazardous Trees*. Siri Alam dan Rimba No. 12. Forest Research Institute Malaysia, Kepong. 52 pp. ISBN 978-967-5221-04-0. USD23

The safety of trees in human settlements and intensive recreational areas has received a lot of attention in developed countries. Rather elaborate methods, supported by extensive arboricultural research, have been proposed to assess the hazard status of trees (e.g. Lonsdale 1999, 2000). The fundamental technique invariably involves a detailed visual tree assessment (VTA) followed by professional analysis and interpretations of results. Trees are often graded according to the degree of hazard they pose on targets that could include humans or properties. Whereas hazard tree assessment is an integral component of any good tree assessment procedure, its systematic and wide application in developing countries is yet to be realized.

Sreetheran's book is a timely and apt contribution to fill a rather glaring gap in the relevant realm of tree knowledge and technique in the developing world. It presents a wake-up call to tree managers, to expand their vista from a focus on tree care to the more embracing tree-cum-human care regime. The ambitious urbanization programmes of developing cities have significantly increased the number of urban trees, the frequencies of conflicts between trees and development, and the encounters between trees and people. Meanwhile, urban intensification and infilling have exacerbated the plight of existing trees in their struggle to survive the rampant human impacts. Such urban pressures on trees could compromise tree health and structure, and push trees towards unstable and unsafe condition. It is therefore all the more pertinent to conduct regular inspection of trees in fast-developing and redeveloping cities, to allow prompt identification and treatment of distressed trees.

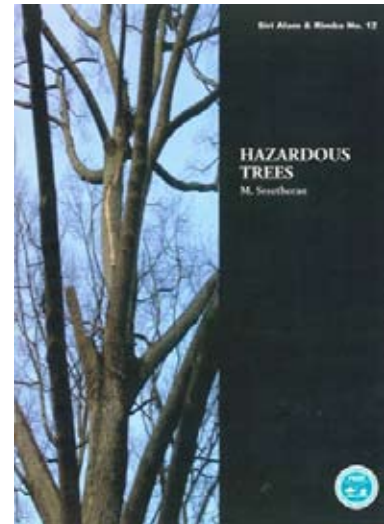
The book presents many colour photographs to illustrate the common symptoms of stressed trees. As such, it is principally a photographic guide to tree structural defects in the spirit of Shigo (1983) and Matheny and Clark (1994). Every hazard

item is explained concisely in a condensed paragraph with the help of an informative photograph.

Besides describing the specific symptoms, their possible causes and consequences in the absence of ameliorative or remedial measures are sometimes expounded. The principal aim of the book is to provide a succinct and portable guide to practitioners. Thus, the underlying causes of the defects have not been elaborated in the context of tree science. The author has thoughtfully winnowed the large array of available information and selected the most pertinent materials in order to ensure that the book is short and sharp. It contains some of the latest developments in the concepts and practice of arboriculture. The language is clear and succinct and suitably but not excessively technical, with a view to communicating effectively with the target readers especially the frontline tree care staff.

The practical hints and guidelines distilled from experience are particularly helpful to the field personnel. The measurement and monitoring of tree lean is a good case in point. The compilation of the scientific reasons to wean people from topping presents convincing arguments against the damaging yet still pretty common practice. More of such old-hand clues and advice will no doubt be earnestly welcome.

The handy manual could serve as teaching material to train arborists in the early part of their career. As well begun is half done, the practical guide could help the tree care staff to establish a fundamental knowledge base and to equip them for more advanced training at a later stage. Students in tree science could use the book as a basic reference to facilitate the learning of VTA. The fact that the photographs portray trees planted in Malaysian cities could



provide vivid real-world examples of local tree risk problems. Familiar trees in familiar situations could arouse interest and assist the learning process. Relevant tree science has been appropriately and successfully localized to meet the need of the regional professional and pedagogic market.

In case the book would go into a second edition, some additional topics are proposed for the author's consideration to enrich its contents and to inject more basic concepts that are relevant to the understanding and management of tree hazard:

- (1) introduction to key principles of hazard tree assessment based on VTA
- (2) introduction to the organization and function of tree structure
- (3) basic concepts of the body language of trees and tree mechanics as expounded by Mattheck and Breloer (1994) and Mattheck (1998)
- (4) more explanation of the CODIT concept and three-dimensional tree decay geometry in trees according to Shigo (1988, 1991)
- (5) the principle and practice of micro-drilling in decay detection
- (6) the principle and practice of sonic tomography in decay detection
- (7) the principles and practice of branch pruning as advocated by the International Society of Arboriculture
- (8) the distinction between tree health as shown by foliage and branches and tree structural defect
- (9) annotation of some pertinent features shown in some photographs
- (10) a proforma to help tree assessors to glean systematic data based on VTA in the field
- (11) higher quality photographs or better examples of tree defect photographs
- (12) dedicated sections on tree hazards associated with the following specific structural problems with important implications on tree safety:
 - (a) live crown ratio
 - (b) gap in crown
 - (c) curved trunk
 - (d) long and heavy branch
 - (e) bowed branch
 - (f) crossed branches
 - (g) branch dieback
 - (h) cracked trunk or branch
 - (i) tree struck by lightning

- (j) compression fork (crotch)
- (k) included bark
- (l) crotch split
- (m) ribs on trunk
- (n) seams on trunk
- (o) increment strips on trunk
- (p) bulge wood and other response wood on trunk and limbs
- (q) elbow branch joint
- (r) crowded branching habit
- (s) hanger
- (t) decayed branch stub
- (u) trunk and limb canker
- (v) paved soil within drip line
- (w) soil compaction and root growth
- (x) cracked or heaved soil or paving within drip line.

It is perhaps a truism to say that high quality tree workers beget high quality trees. The idea could be taken one step further to high quality tree books beget high quality tree workers. *Hazardous Trees* denotes the right step for other cities to follow.

REFERENCES

- LONSDALE D. 1999. *Principles of Tree Hazard Assessment and Management*. The Stationery Office, London.
- LONSDALE D. 2000. *Hazard From Trees: A General Guide*. Forestry Commission, Edinburgh.
- MATHENY NP & CLARK JR. 1994. *A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas*. Second edition. International Society of Arboriculture, Savoy.
- MATTHECK C. 1998. *Design in Nature: Learning From Trees*. Springer, Heidelberg.
- MATTHECK C & BRELOER H. 1994. *The Body Language of Trees: A Handbook for Failure Analysis*. HMSO, London.
- SHIGO AL. 1983. *Tree Defects: A Photo Guide*. General Technical Report NE-82. US Department of Agriculture Forest Service, Durham.
- SHIGO AL. 1988. *A New Tree Biology: Facts, Photos, and Philosophies on Trees and Their Problems and Proper Care*. Second edition. Shigo and Trees Associates, Durham.
- SHIGO AL. 1991. *Modern Arboriculture: A Systems Approach to the Care of Trees and Their Associates*. Shigo and Trees Associates, Durham.

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