

Ontario Wild Flowers

By Linda Kershaw. 2002. Lone Pine Publishing, 10145-81st Ave., Edmonton, AB V6E 1W9. 144 pp., illus. \$19.95.

This book will be a most valuable introduction to Ontario wildflowers not only to young people, who are just beginning to admire the plant colours as the flowers develop through the spring and summer, but also for all ages beyond.

The first five pages present a colour guide to the flowers of the 101 species presented in this book. This is followed by "Why Learn More About Wild Flowers?", "What is a Wildflower?", "Tips for Identifying Wildflowers", "To Pick or Not to Pick", "Danger, Beware!", "Organization of the Guide", "Information for Each Species", "Fun with Flowers", and "Using a Key to Identify Wildflowers". All these present useful and most informative information. The "Key to the Wildflowers in This Book" has a key layout I have never seen before. Fine line drawings of the flower parts of all the wildflowers treated in this book are a part of the key and are accompanied by the common name and the page number on which each of the 101 may be found. On each of these pages there are two beautiful

pictures, the larger one which displays the plant and the smaller one which displays the close-up of the flower or flowers. Beside these flower pictures is a most interesting paragraph on the history, reproduction, uses, and association with insects, animals, and people. This is followed by a short description of the plant, its leaves, flowers, fruits, time of flowering, habitat, distribution, and suggestions about picking or not picking.

This most interesting and colourful part is followed by a glossary which describes the various parts of the plants accompanied by fine line drawings of the various parts, suggested reading of other publications, a wildflower checklist, and common and scientific family names with page numbers where they may be found and an index of common and scientific names. An excellent photo of Linda Kershaw and her family completes the work. Congratulations!

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ENVIRONMENT

Remote Sensing for Sustainable Forest Management

By S. E. Franklin. 2001. Lewis Publishers, Boca Raton, 407 pp. U.S. \$99.95.

This book sets new standards on forestry and remote sensing. It is a must for foresters as well as for remote sensing scholars and people interested in the management of landscapes. It is not only "about understanding pixels", it is about the world we live in and its sustainable management. It shows how peaceful satellite imagery can be used to manage one of the most precious resources for the benefit of mankind: the global forests. Remote sensing applications are often applied as a technological fix. Instead, and as emphasized in the text of this book, remote sensing and other data are still not sufficiently used by forest managers to make best-informed and wise decisions. How easy does one have to make it for the managers so that good and long-term decisions are made towards a healthy planet? Indeed, the text shows that translating remote sensing data into valuable information is not always a simple task. Forestry as well as remote sensing are multidisciplinary research fields; a concept that most agencies and their bureaucrats worldwide still have difficulties coping with. It is easy to comprehend that only a valid research design converts remote sensing data into relevant information.

Based on his successful career in the field of remote sensing, author Franklin knows his material intimately. The reader will appreciate the inclusion of the history of remote sensing. The breakthrough of remote sensing came in 1968 but challenges still remained; e.g., with aerial photography still competing with remote sensing imagery for some applications, even trying to put specific remote sensing applications into doubt. In many cases, geo-referenced pixels (from remote sensing or orthophotos) are statistically more powerful than polygons (from interpreted aerial photography). Obviously, the field of remote sensing has still not even reached its level of maturity; thus, it will become the technique of the future. However, in the field of remote sensing there is still the conflict between the producer and the user. "It can be done with Remote Sensing" but "is this of use to you"? This book definitely helps to solve that issue.

As shown in the book, remote sensing has one of its strengths in forest management applications dealing for instance with forest cover types, determination of forest conditions, landscape change detection, fire and forest defoliation. In addition, the book shows nicely how remote sensing has itself established as the method of choice for forest inventory, and estimations of biomass and even forest structure. Ecological research topics like the role of scale and of modelling are also

discussed. It is nice to learn also about remote sensing applications in situations where modern forest harvesting practices such as partial harvests are used. In addition, hot topics like remote sensing and landscape metrics, as used in the new field of landscape ecology, are delivered in a very readable and informative fashion. The classification of remote sensing images makes up another major component in this book.

In order to achieve its goals and expectations, remote sensing requires a technological and organizational infrastructure. As Franklin emphasizes, the advantages of remote sensing applications are its costs, its accuracy, and the effort, for instance when compared with a large-scale aerial photo approach-based inventory.

The book includes also excellent reviews on the currently available 19 sensors such as LIDAR, IKONOS, IRS, AVHRR, Landsat TM, MSS, RADARSAT, CASI airborne and many others. Forthcoming sensors of the future are explained as well. Certainly, in order to be useful, remote sensing needs to be freely available and easy to use in order to warrant that the best possible management decisions are done. This subject was devoted an entire chapter of its own: The acquisition of imagery. A very relevant discussion on criteria and indicators of sustainable forest management is presented over many pages. Fitting into the context, important issues like biological diversity, conservation of soil and water and global ecological cycles are included, too. The text is lively but words are carefully chosen; the formerly Calgary/Alberta-based author uses many local examples, but also applies data from his work in Canada and elsewhere; he cites his colleagues worldwide in a representative fashion.

Based on my own work experience, I found the following citation in the book "... casual attitude towards geographical information and mapping sometimes found in forestry ..." to be very true for many professional fields, such as biology. It is also true that "...GIS is no simple process". As Franklin points out nicely, every remote sensing product will eventually be used in a GIS application, and thus, one still wonders why the remote sensing and GIS fields have not merged, yet, or develop products in shared formats?

This book brings all these points across by using an error-free, structured, well written, and clear text. Some

readers might find the book extensive, but the information delivered is superb and unique for its kind. The strength of this book is that it summarizes for the first time the complex remote sensing and forestry and management topic. For my taste, the chapter on sustainable forest management could perhaps place stronger emphasis on the key concept that "not more wood may actually be cut than what is really re-growing". Accurate inventories are needed. Using the soft term "sustainable forest management" could be somewhat misleading, and could be interpreted as a play with words; perhaps "sustainable forestry" is the clearer definition. However, these things are well compensated and clarified when the author talks about "Forestry in Crisis". "There is ample evidence for a global failure by society to practice sustainable management...", or "By some accounts, almost half of the original Earth's surface is gone, much of it removed within last 30 years". No doubt, remote sensing has contributed to these statements and to global landscape conservation. Nevertheless, political will and public education are also required to implement these findings, produced by complex machines located in the orbit, into the "global society" in a democratic way. Perhaps in a future update of this book it could also be elaborated on how the "undeveloped" world has benefited from remote sensing applications, and who funded these.

The text is based on 60 pages of scientific references, all correctly cited and without apparent typos. The very well-organized index makes this book an outstanding reference for forest managers, students and environmental landscape scientists alike. For the sake of a healthy planet, one really wishes that many forest managers and decision-makers will actually read, understand, and apply this book. After the publication of this book they have no excuse anymore.

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