

ing on saline soil.' They must balance the osmotic effect of the salt in the soil by a similar salt concentration in the cell sap. True halophytes will greedily take up salt from normal soil. The chloride ions cause a swelling of the particular proteins of these plants and result in succulence. Other halophytic relationships are mentioned including sulphate-halophytes, alkalihalophytes with organic anions, and salt-excreting plants like *Tamarisk*.

On competition and limits of distribution he has this to say: "The natural limit of distribution of a particular species is reached when, as a result of changing physical environmental factors, its ability to compete, or its competitive power, is so much reduced that it can be ousted by other species." Further: "Only at the absolute distribution limit, in arid or icy desert, or where the forest shade is at its deepest, are the physical environmental factors (usually one particular extreme factor) of direct importance."

Walter's treatment is concrete and replete with examples. It is a rare page that does not contain exact quoted figures of evidence and example. His style is succinct, clear, and readable. Possibly because this book is an abridgment of a much larger work the examples and evidence adduced

so consistently to make the point under discussion usually lack references to their sources or authors.

The admirable emphasis on eco-physiology extends throughout the accounts of the major ecosystems of the world. This analysis of the vegetation of the world is the best and most understandable treatment I have encountered. It is well illustrated with black-and-white halftones, climatic diagrams, distributional maps, and many physiological charts. Minor faults include a very few typographical spelling errors, and the lack of a glossary. I made an incomplete list of 142 technical terms freely and well used but often without explanation. A final summary presents estimates of phytomass and yearly primary production of plant material in the whole biosphere and its component major parts.

I recommend Walter's book highly to both ecologists and the interested general reader, providing he is willing to decipher some terminology.

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## Forestry in Newfoundland

By Graham Page, W. C. Wilton, and Tony Thomas. 1974. Canada Department of the Environment, Forestry Service. 118 pp. Free on request from the Newfoundland Forest Research Centre, P.O. Box 6028, St. John's, Newfoundland.

This colorful booklet, primarily designed to entice Newfoundland high-school students into forestry, does so quite successfully by the ingenious approach that forestry is not just another industry but is in fact a complex biological system which can be manipulated, through careful management, into serving the economic and recreational needs of the province. The nine chapters touch all bases: from a short history of the Newfoundland forest industry to a life history of a forest; from a review of legislation germane to forestry, including timber rights, to a consideration of the future of forestry in Newfoundland. Some chapters are curiously ambivalent. On the one hand, the authors recognize that forest fires are an integral part of the boreal-forest ecosystem while on the other they exhort all good Newfoundlanders to prevent forest fires. "Smokey the Bear" is not dead, he has been banned to Newfoundland.

All in all this is a very useful book which, according to Information Canada, will be reprinted and distributed throughout Canada in their bookstores. Before this reprinting occurs, however, I would call on the authors to correct a few errors and omissions: mature trees do not become decadent—societies perhaps, but not trees. The omission of black ash, the only ash which occurs in Newfoundland, from their list of trees found in Newfoundland is difficult to understand. I know it is not commercially important but then neither is red pine, which is discussed. And finally, measurements should be given in SI units, especially since today's high-school student thinks metric. Moreover, since the federal government is pushing ahead with its plans for metrication it might be useful for government departments and their agencies to provide an example.

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Vander Kloet, S. P. 1975. "Forestry in Newfoundland, by Graham Page, W. C. Wilton, and Tony Thomas [Review]." *The Canadian field-naturalist* 89(4), 482–482. <https://doi.org/10.5962/p.344969>.

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**DOI:** <https://doi.org/10.5962/p.344969>

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