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favorable for haymaking, based on a threshold value of daily evaporation.

While any collection of this type tends to span a variety of themes, this *Festschrift* volume is a well-focused and worthy tribute to Professor Fliri's mark on the physical geography of the Tirol. The book is well produced and each of the papers has an English abstract.

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FLORA OF ICELAND. By Áskell Löve. With drawings by Dagne Tande Lid. Reykjavik: Almenna Bokafelagid, 1983. 40 pp. \$20.00.

This book is the fifth edition of Löve's popular flora (first published in 1945), but it is the first version to be presented in English. All of the 516 species are illustrated with line drawings and 16 color pages by Norway's most talented and justly famous botanical artist, Dagne Tande Lid, who has been honored by sets of fine porcelain dishes, and more recently, a series of postage stamps with her color plates on them. Scientific names, and English and Icelandic vernacular names, are given in bold face. The keys are simple to use, the descriptions are terse and to the point. Those who have seen Mrs. Lid's illustrations understand her unique accomplishment of conveying the essence of the generalized species with the fewest lines. A short ecological statement is given for each taxon, and its range within Iceland (a map of Iceland giving phytogeographical areas is provided). The book is printed on excellent paper and well-bound in a dazzling white cover decorated with Lid color pictures. The text reflects the author's lifelong interest in this flora in the field, and his extensive knowledge of related plants over the rest of the northern world.

Lloyd Shinnars said: "Blessed are they that write state and local floras. They discharge the taxonomist's elementary responsibility to the general public." Iceland is well-served by this little volume. It should be an object-lesson to the American taxonomic community and especially to our granting agencies and foundations, which still do not seem to realize that public support of our science is achieved more surely by our efforts to educate the lay and amateur public than by our erudite publications in scientific journals. A concrete knowledge of plants as species rather than as various shades of green vegetation is crucial to well-informed citizen participation in conservation of natural resources. In America we desperately need federal support of state and local floras like this one, because they are vital to our future. Private philanthropy, unfortunately, does not do the job.

This flora is much more than an excursion-book. For example, I know of no other popular regional flora in

which the chromosome number for every species is known and listed. Also, the nomenclature reflects the author's continuing preoccupation with realignments in generic concepts based on cytogenetic evidence, thus *Huperzia* for *Lycopodium selago*, *Phippsia* to include all of the former *Puccinellia* species, realignments in the genera of the Triticeae (Poaceae), Alsinaceae, Asteraceae, Brassicaceae, Gentianaceae, Orchidaceae, Polygonaceae, Ranunculaceae, Rosaceae, Saxifragaceae and others, for most of which the author was directly responsible as a research scientist. This is a completely new book that signals new directions in generic concepts. Those who claim this tendency to be a reversion to long-discredited notions of genera should realize that new evidence and research tools (palynology, SEM, chemotaxonomy, refinements of cytogenetics and plant breeding) are opening up the genus concept to serious scrutiny once again. It is no longer a case of loving the lumpers and hating the splitters. This is not a phenomenon restricted to the flowering plants, but is a revolution involving the genus (and family!) concepts throughout the plant kingdom, not the least among the lichens, bryophytes and fungi.

While *Flora of Iceland* up to now has been directed to Icelanders, an English version invites its use by tourists. There is intrinsic phytogeographic value to the volume as well, since a high percentage of the plants occur in the Arctic region and the mountain masses of both hemispheres. The rest tend to belong to Amphi-Atlantic distribution patterns. A very small percentage are endemic. Anyone working with a mountain or Arctic flora will find old friends in this book.

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PERMAFROST: FOURTH INTERNATIONAL CONFERENCE, PROCEEDINGS. Washington, D.C.: National Academy Press, 1983. xxv + 1524 pp. \$65.00.

This proceedings volume contains the bulk of the formal papers presented at the Fourth International Permafrost Conference in Fairbanks, Alaska, 17-22 July 1983. It is the second of three official proceedings volumes from the conference which consist of (1) the Abstract and Program volume, which has abstracts of poster sessions as well as the formal presentations and was published prior to the conference; (2) the present volume of 276 contributed papers; and (3) a final volume that will contain the panel and plenary presentations, a few additional contributed papers, and a list of participants. In addition to the proceedings, a series of five excellent field trip guidebooks are available from the Alaska Division of Geological and Geophysical Surveys, and a special bibliography of over 4000 permafrost citations was published by World Data Center A for Glaciology (Snow and Ice) in Boulder, Colorado, as *Glaciological Data Report* GD-14, 1983.

The organizing committee for the conference is to be commended for the seemingly impossible task of publishing this mammoth volume within the same year of the conference. This was possible only because the authors were responsible for preparing their own camera-ready copy of their papers prior to the conference. The result is a remarkable reference for anyone interested in the current state of research in cold regions (including Mars!).

The conference was divided into seven major themes, in the following list. The sessions, each containing three to six papers associated with each theme, give some impression of the scope of topics covered in the proceedings:

Civil Engineering	Pipelines Mechanics of Frozen Soil Foundations Embankments Excavations, Mining and Municipal Facilities Site and Terrain Analysis
Thermal/Mechanical	Thermal Engineering Design Thermal Analysis Thermodynamics and Transport Phenomena Roads and Railways, Thermal Aspects Frost Heave
Periglacial	Ice and Soil Wedges Pleistocene and Permafrost Conditions Mountain and Plateau Permafrost Frost Mounds and Other Periglacial Phenomena Ground Ice and Solifluction Patterned Ground and Rock Streams Cold Climate Rock Weathering

Remote Sensing and Planetary Permafrost	Remote Sensing and Planetary Permafrost Planetary (Waveform) Permafrost
Climate, Geophysics, and Subsea Permafrost	Permafrost and Climate Permafrost Geophysics Subsea Permafrost
Hydrology	Watershed Studies in Permafrost Regions Ground Water in Permafrost
Environmental	Effects in Man-made Disturbances Effects of Man-made and Natural Disturbances Ecology of Natural Systems

The proceedings volume, however, is not organized with the same format as the conference. The papers are arranged according to the alphabetical order of the first author. This would not be a bad approach if there were an adequate key word index. The volume contains a general subject index with only 25 subjects, which makes it difficult to find some papers by topic.

The quality of reproduction is excellent. There is little variation between papers with regard to typeface, format, and quality of line drawings. Nearly all the photographs are quite clear. There are a few typographical errors, but this is unavoidable in a volume of this nature, especially since the authors are from 25 different countries, including China and Russia. Overall, there is virtually nothing to criticize in this volume, which is in keeping with the quality of the excellent conference that was held last summer.

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