

bowhead whale. The "irretrievable loss of the Eskimo viewpoint" on the whaling era, to which he refers, might have been lessened by seeking out those few Inuit, still alive during the nineteen sixties, who had witnessed the closing decades of whaling, and had heard from their parents about the industry in its heyday.

All told, however, the book is excellent. The abundant maps and tables are clear and striking, the notes thorough, the references exhaustive, and the two photographs evocative. The small print used by the National Museum of Canada publishers is hard on the eyes, but the strain is compensated for by a pleasing layout, a firm register and bold headings.

The author has dedicated his book to the late Dr. Don C. Foote, and was inspired in part by the late Dr. Diamond Jenness. He does them both honour.

Keith J. Crowe

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CYTOTAXONOMICAL ATLAS OF THE ARCTIC FLORA. BY ASKELL LÖVE AND DORIS LÖVE. *Lehre, Germany: Cramer 1975. 9 x 6 inches, hard cover, 598 pages. DM 200.*

In this book are listed all of the chromosome numbers that have been published for the vascular plants that occur naturally in the Arctic. Introduced weeds and obvious aliens, even though long naturalized, are excluded. The area covered is the tundra, broadly defined as the practically treeless islands of the northern oceans and the mainly treeless lands north of the continuous taiga forests in the mainland areas. The atlas also serves as a checklist of the genera and species found in the Arctic. The authors accept 404 genera and 1,629 species of vascular plants, compared to 230 genera and 892 species in Polunin's 1959 book *Circumpolar Arctic Flora*. The differences in the numbers of genera and species recognized are due to the quite divergent taxonomic views taken by the respective authors.

Polunin's taxonomic treatment was very conservative, whereas Askell and Doris Löve have split not only genera and species but also families. They have divided the family *Caryophyllaceae* into three families, *Illecebraceae*, *Alsinaceae* and *Caryophyllaceae* and the genus *Polygonum* into five genera, *Polygonum*, *Bistorta*, *Persicaria*, *Aconogonon* and *Fallopia*. They use the basic chromosome numbers of groups of taxa as a diagnostic character delimiting genera. Fortunately the authors have cross-indexed the unfamiliar family and generic names to the scientific names that are familiar to most readers. However, they have recognized many species solely upon the outmoded concept that every good species has only one chromosome number. The authors consider chromosome number to be a characteristic that can be considered as a criterion independent from all other taxonomic criteria. Consequently they have recognized many species that are of dubious value.

The one species — one chromosome number — concept is partially abandoned when they recognize the chromosome numbers  $2n = 28, 42$  and  $56$  for *Eutrema edwardsii* R. Br. However, the three chromosome numbers for *Braya humilis* (Meyer) Robinson of  $2n = 28, 42$  and  $56$  reported by me in 1965 are conveniently listed in the atlas only as  $2n = 42$  for *Torulularia arctica* (Böcher) Löve and Löve. I do not know how the authors reach this conclusion since they never saw the voucher specimens of *Braya humilis* that are in the herbarium in Ottawa. They state that "chromosome studies by numerous workers have already been instrumental in solving critical taxonomic problems or misconceptions of at least two scores of genera and more than two hundred species pairs represented in the arctic tundra". There is no doubt that chromosome numbers have often been instrumental in revealing the presence of taxa that had previously gone undetected. However, to recognize taxa solely on differences in chromosome number is mischievous and ignores the findings of most recent cytotaxonomists.

In spite of these limitations, the atlas contains a wealth of information on vascular plants of the Arctic and could be extremely useful to all students concerned with them. The book is well-organized and has a format far superior to that of any of the recent chromosome atlases. The bibliographic completeness is of the high standard to be expected of a master of cytotaxonomic compilation. Unfortunately the price is probably beyond the means of most readers.

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