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could have usefully been incorporated, and among the local winds and regional terms one or two from Québec, such as the *Nordet.*

In adding the word *standard* to the title of the dictionary, and with his categorical statement in the english preface : « This reference book, with its contents drawn from authoritative sources, *standardizes* * the use of a multitude of specialized terms . . . », M. Proulx has shown that he is intrepid. However, the fact that the author does not express exactly the same philosophy in his french version of the preface shows that he is not foolhardy, and recognises that this is little less than throwing down the gauntlet. By chance, the first french term that the reviewer needed to check was degree-days. According to several french writers (among them Grissolet, Guilmet and Arléry, of the Météorologie Nationale de la France), and generally in Québec, the plural from is *degrés-jours.* In the *Standard dictionary, degrés-jour* is given ; as the same version is found under the english/french and french/english sections, this appears to be no misprint. The WMO publication does not offer a solution. The question of usage is also an interesting one. In Québec, *degré-jour de chauffage* has become accepted parlance, and the *degré-jour de chauffe,* first seen in the WMO vocabulary, came as a surprise to many francophones. Since the degree-day concept in heating is North American, one wonders whether the term in current use here may not have been kept, just as differences between American and British english are acceptable. Was there in fact a term for this in France and Belgium, or was it coined especially ? Again, *Indian summer* is generally known here as *été des sauvages* or *été des indiens ;* the translation given in the WMO report and now in the *Standard dictionary* is *été indien.* A further query can be made concerning *île de chaleur* and *îlot thermique.* These few examples, taken at random, are included merely to suggest that the word *standard* is misleading as yet, although perhaps in time this work may become so. In the meantime, there will probably be much healthy, heated discussion.

This is a most welcome and indispensable reference book, for which many people will be very grateful.

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MUNN, R.E. (Editor), **Boundary-Layer Meteorology** (an international journal of physical and biological processes in the atmospheric boundary layer), Dordrecht - Holland, D. Reidel Publishing Company, 1970 —.

One immediately despairs at the thought of any further proliferation of scientific literature by the creation of a new journal. In the case of *Boundary-Layer Meteorology,* the addition will be welcomed by all those interested in environmental problems. The journal is edited by Dr. R.E. Munn of the Canadian Atmospheric Environment Service, who has already done so much to further the exchange of ideas between those disciplines involved with the physical and biological processes in the boundary layer (the lowest 1 000 m, of the atmosphere). This is the layer of greatest importance to life, where complex interactions between the earth's surface and the atmosphere take place in the form of energy transformations and fluxes, where the roughness of the surface profoundly influences the atmospheric flow and where many aspects of such fields as Geography, Engineering, Architecture, Ecology, Hydrology and Oceanography are closely intertwined with Meteorology, Climatology and Aerodynamics.

According to the announcement, the articles to be published will cover both experimental investigation (including new instrumentation) and the development of realistic

* Italics added by the reviewer.

theoretical models, the emphasis in all cases to be on the micro and meso-scales. On the physical side, the subject matter includes the structure of turbulence, diffusion processes, heat transfer, evaporation, air-sea interaction, the dynamic response of tall structures to the wind, valley flows, sea-breezes and urban meteorology ; on the biological side, heat, water and CO_2 transfers to and from plants, animals and human beings will be considered, with a view to revealing the fundamental mechanisms, including biological response to atmospheric stresses.

In the issue received for review (volume I, no 3, January 1971), the articles are largely theoretical in nature or based on laboratory experiments, and deal with a wide range of the physical aspects. Particularly intriguing perhaps to Geographers, as an example of interdisciplinary study, is the paper by Wigley (in Mechanical Engineering) and Brown (in Geography), in which the theory of heat and mass transfer in turbulent pipe flow is demonstrated as applicable to cave microclimate studies, mine ventilation problems and to water flow in free-flow karst aquifers. The following number contains an article by Dr. Oke (formerly of the Department of Geography, McGill University, Montréal) and Dr. East (formerly of the École de Santé Publique, Université de Montréal) on the *Urban boundary layer in Montréal* (Volume 1, no 4, pp. 411-437). This is an important contribution to the study of the climate of this city.

The physical and biological problems which are encountered in the boundary layer are complex and difficult to define and to resolve, either in theory or by measurement. The new journal does not in general make for easy reading.

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NORD

WAHL, Eberhard, W. and LAHEY, James, F., **A 700 mb Atlas for the Northern Hemisphere,** Madison, University of Wisconsin Press, 1969, 147 pages.

Following the publication of their *Atlas of 5-day normal sea-level pressure charts for the Northern Hemisphere* in 1958, the same authors now offer a similar series of maps for the 700-mb pressure surface (about 10 000 ft). These charts have been prepared from data for the 15-year period 1951 to 1965 provided by the U.S. National Oceanic and Atmospheric Administration (NOAA), consisting of height values (in feet) at the intersection points of a diamond grid, with latitude and longitude spacing of 5° and 10° respectively. From January 1, the year has been divided into 73 discrete 5-day periods, for each of which 3 maps are presented ; these show : (i) the 5-day mean height pattern of the 700-mb surface ; (ii) the spatial distribution of the standard deviation of the daily values from the mean ; (iii) the pattern of height change from the 5-day mean period in question to the following pentade.

General circulation normals are most often treated by month, and this break-down into 5-day periods provides valuable, more detailed information on the behaviour of the atmosphere. The choice of 5 days is in keeping with the Extended Forecast programme in the United States, which is based on 5 and 30-day periods. By including a measure of the variability of the daily patterns around the mean, the value of the normal maps has been greatly enhanced, since the relative stability of the normal pattern within each period can be assessed. At the 700-mb level, the atmospheric flow in most areas is essentially free from the surface influence, and indicates the principal direction of steering of surface sytems. The maps showing the height change from one pentade to the next are of particular interest ; as the authors note in the introduction, at certain times the magnitude of the