

Book review

Australian Atlas of Resources, Volume 4: Climate, Third series, edited by Geoff Parkinson (Division of National Mapping, Canberra, 1986) 60pp. ISBN 0642 51506 9. \$14.85.

A school or university student, engineer, or non-meteorological scientist when in need of some basic climatological data, probably consults the appropriate section of a contemporary atlas, the climate section of the *Australian Year Book*, or perhaps the Bureau of Meteorology's *Australian Climatic Atlas*. The climate volume of the *Australian Atlas of Resources* is a significant improvement on these other publications.

Those who are familiar with this atlas in its second series edition, will find the third series climate volume substantially altered. The presentation is much improved, the material completely rearranged, and the scope of the work extended with the inclusion of much additional data. The atlas begins with a section 'Weather and Climate' which gives a background to atmospheric circulation in the Australian region. The ensuing sections deal in turn with rainfall, sunshine and cloud, temperature, humidity, and wind. In the final section entitled 'Climate and People', there is a variety of material broadly concerned with how climate influences human activity. Here the reader will find data on, for example, climate and land use, droughts, bushfires, tropical cyclones, and the climate of the capital cities. Throughout, the maps of the atlas are supported by tabulated data, and an informative text. There also is a number of relevant, and excellent, colour photographs.

A strength of this publication is its presentation of the maps. This is everywhere excellently done, with colour used to the best advantage. The source of the map and the number of years of data used in its production are indicated, as is the method of calculation of the variable mapped (where this is not straightforward). The selection of maps for presentation is also good, and no obviously relevant material has been omitted. However, if one is hoping to find newly drawn climatic maps based on up-to-date data, one will be disappointed. Generally the maps have been adapted from those that have appeared in other publications (such as those listed

above), and, as most of the sources are fairly old, it is rare that data from the last ten to fifteen years are used. This detracts from the value of the atlas. However, there are some quite useful maps of a more recent origin, dealing with matters such as tropical cyclone characteristics or suitability of climate for various forms of outdoor activity, which have not been previously seen in publications such as this.

It is a pity that such an important map as 'Australian Median Annual Rainfall' could not have been drawn from stations of equal record length, as I should think that by now there would be sufficient stations of long enough record for this to be possible. Here, however, we see the usual map produced using stations of varying record length, with its consequent regions of spurious structure in the isohyets. (The text, at least, does warn the reader of this problem.)

Overall, the accompanying text is informative and generally accurate, and basic meteorological concepts are explained well (e.g. the various causes of rainfall). However the important opening section 'Weather and Climate' is somewhat confused. Through its trying to cover some of the subtleties of Australian region atmospheric circulation, the fundamentals were not conveyed clearly. In addition, the interpretational discussions, that accompany the climatic maps throughout the atlas, were often weak in that they tended to gloss over prominent features in the climatic data that could not be simply explained. There were some lapses in accuracy in the text; the most unfortunate of these was on page 14 where 'nine years in ten' was used when 'one year in ten' was clearly intended. This occurred in the discussion explaining 10% and 90% rainfall percentiles, and the lapse is likely to confuse those readers for whom the concept of percentiles is new.

It was disturbing to see included (page 20) the statement that the permanent winter snow cover of Australia exceeds the total area of Switzerland. One wonders at the origin of this fallacy. Even when one limits the comparison to just the permanent winter snow cover of the two countries, Switzerland's is not only larger, it is some forty times larger (Slatyer et al. 1984, *Search*, 15, 327). The unfortunate inclusion of this fallacy in this atlas will only serve to cement its place in the realm of popular misbeliefs.

Its inclusion also raises the concern that other anecdotal climatic information, that appears at times throughout the text, may not have been adequately checked.

It was pleasing to see that some effort was made to warn the user of the atlas that much important variation in climatic elements can occur on a scale much smaller than that able to be depicted on the maps, and indeed smaller than that able to be captured in the existing station network. I feel that this point could have been given even greater emphasis, given that this atlas will probably see a considerable amount of technical use. I have seen on a number of occasions in non-meteorological

scientific and technical literature rather ill-informed use of broadscale climatological data.

The value of this atlas lies mainly in its gathering into one well presented volume basic climatic information previously only obtainable from a number of scattered sources. Although not designed for the specialist, many professional meteorologists may find it a handy reference.

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