

A CONTRIBUTION TO THE PERMIAN - UPPER
CARBONIFEROUS PROBLEM AND AN ANALYSIS
OF THE FAUNA OF THE UPPER PALAEOZOIC
(PERMIAN) OF NORTH-WEST BASIN, WESTERN
AUSTRALIA.

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INTRODUCTION.

IN a recent paper by Raggatt (1) a brief discussion of the fauna of the Upper Palaeozoic of North-West Basin, Western Australia, was given. In attempting to analyse the revised faunal lists more critically, it became necessary to examine the range of certain of the species in Eastern Australia, India, and adjacent regions. We were thus led to examine the arguments which have been put forward in determining the boundary between the Permian and Carboniferous Systems in those regions. We found that our conclusions had a bearing on the age of the Lower Gondwana rocks of South Africa and South America; hence some discussion on these beds is given. Incidentally, also we make reference to the Upper Palaeozoic glaciation. Thus, this paper may be considered as a contribution to the discussion inaugurated by Schuchert (2) and continued by David and Susmilch (3).

The order of arrangement of this paper is that which was found necessary to achieve the object of determining the age of the Upper Palaeozoic beds of the North-West Basin. The New South Wales "Permo-Carboniferous" section and the criteria which have been put forward to determine the limits of the Permian and Carboniferous Systems in Australia are discussed first. Next, the bearing of this evidence on the age of the beds in India and Kashmir which contain Australian species is stated. Brief reference is then made to the Upper Palaeozoic succession in South Africa and South America. Finally, an analysis is made of the Western Australian fauna, mainly in terms of the range of species in India and Eastern Australia.