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| POLISH POLAR RESEARCH (POL. POLAR RES.) POLSKIE BADANIA POLARNE | 6 | 4 | 613-613 | 1985 |
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BOOK REVIEW

Antarctic Earth Science, eds. R. L. Oliver, P. R. James and J. B. Jago,
 Cambridge University Press, 1984, 679 pp.

Texts of 174 papers delivered at the Fourth International Symposium on Antarctic Earth Science in Adelaide, South Australia, 16-20 August 1982, are presented in the book in full form or as abstracts.

This material illustrates clearly the achievements in recognition of the structure and evolution of Antarctica realized in the period of 5 years from the previous Symposium (Madison, 1977). A broad range of field and analytical works at application of the newest techniques and methods of research enable to collect a rich material concerning many Earth Sciences branches, mainly geology and geophysics. Decidedly prevail papers presenting the results of detailed specialistic elaborations, whereas relatively few are papers of a broad synthetic approach to the given problematics or a wide area.

Many new stratigraphical, structural, petrological, paleontological and geophysical data concerning the territory of Antarctica and Subantarctic Islands are presented. Attention deserves considerable number of geological works from East Antarctica and especially from the Enderby Land region, where the activity of Australian scientists concentrates with reviewing summary given in the paper by P. R. James and R. J. Tingey, of a synthetic approach to the structure and development of the East Antarctica metamorphic shields, corroborated by numerous new geochronological data. The problem of East Antarctica-West Antarctica Boundary is broadly reported in many geological and geophysical works completed by the reviewing paper by C. Craddock, in which current views on the nature and tectonics behaviour during Cretaceous and Cenozoic are quoted. Among paleontological papers highly interesting is the paper by M. R. A. Thompson dealing the discovery in Upper Eocene of the Antarctic Peninsula of the remains of marsupials — the first remains of the continental mammals, which were found up to now in Antarctica.

Many new data concerning the crustal structure and development have been obtained also in aeromagnetic and heat flow measurement from Magsat while making use of the new geochronological data. The present state of knowledge about the crustal structure of Antarctica is outlined from the geological point of view by C. R. Bentley and its geophysical aspect is discussed in the paper by I. M. Kadmin, R. G. Kurinin, V. M. Masolov and G. E. Griukurov.

The results of works in the field of Marine Geology, Glacial Geology, Cenozoic Tectonics and Climatic, proving many mutual connexions have brought many new pieces of information of an essential importance for recognition of the history of the Antarctica development in Cenozoic as well as for sedimentology and oceanography. The progress reached in these studies, surely the greatest among those noted within the last few years of the Antarctica research, has been ensured owing to wide seismographic investigations, introduction of new techniques for bottom drilling and sampling, use of satellite techniques (e.g.

interpretation of Landsat pictures, radar altitude measurements), applied many different methods of absolute datings.

The presented material of the Symposium works illustrates clearly the progress reached in the Antarctica research, particularly in detailed specialistic questions. This greatly enriches the world-wide science, both descriptive and theoretical, in particular branches of the Earth Sciences. At the same time the necessity of further widening of the international interdisciplinary cooperation in the Antarctica research becomes more and more evident.

In my opinion, the level of the papers presented in and the editorial form of this volume deserve a full acknowledgment and can arouse the interest of specialists in particular Earth Science branches. Especially for scientists specializing in geology and geophysics of the Antarctica.