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Knowledge of the Moon has been increased over the last decade in a remarkable way by space techniques. The photogeology of the Moon was greatly improved as a result of the early orbiting satellites and finally the sampling of the surface by the manned Apollo mission and the Luna unmanned missions has enabled the scientific disciplines of petrology, physics and chemistry to be applied to the study of the lunar strata. The great accumulation of new data from these space missions has now been reviewed and important conclusions concerning the evolution of the Moon have been drawn. The Royal Society discussion meeting on the Moon was held in June 1975 at an appropriate time to provide a well-considered review of the new data. Papers were given by all the European and Commonwealth laboratories which have worked on lunar rocks and a representative group of the large number of U.S. laboratories. As a result, the proceedings of this meeting represent the most complete survey of lunar science yet undertaken. Each of the 66 papers reviews the earlier work in the field and the relationship of the findings to three crucial questions concerning the Moon:

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What diagnostic evidence is there concerning the origin of the Moon?
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(2) the filling of mare basins
(3) the history of the subsequent bombardment of the Moon
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THE NORTHERN GREAT BARRIER REEF

A Discussion held on 28 and 29 January 1976
Organized by D. R. Stoddart and Sir Maurice Yonge, F.R.S.

The Great Barrier Reef of Australia is the longest and one of the most diverse barrier reefs in the World. Reconnoitred by James Cook in 1770 and the subject of now classic studies by the Great Barrier Reef Expedition of 1928–29, it yet remains one of the least known of all coral reef areas.

There have been great advances in both concepts and methods applied to reef study since 1950. The Royal Society and Universities of Queensland Expedition to the northern Great Barrier Reef in 1973 was organized to bring these concepts and methods to bear on some of the more remote and least studied stretches of the Reef. Comprehensive investigations with four chartered vessels and support from the Royal Australian Navy concentrated on the fundamental problem of the evolution of the present surface features of the reefs in the period since the sea reached its present level following the last glaciation. Methods used included boomer, sparker and sidescan sonar techniques, shallow drilling, analysis of surface sediments, petrographic studies of limestones, and detailed morphological analysis of islands and other surface features.

Radiocarbon dating formed a major component of the study. Dates are reported in detail, together with an account of the rigorous procedures used to check all samples before dating. Perhaps no other reef area in the World has such a dense network of reliable dates as the study areas of the northern Great Barrier Reef.

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