

reflecting simply the widespread and proper view that this is a matter of great public importance, or does it consider that there are lines of research which could profitably be opened up in Britain? And how does the council's view square with the view that in population control, the most urgent need is the application of existing techniques? It may not follow from this that research has no part to play, but it would be good to know whether the council considers that its own contribution could include the kind of social research and experiment which is likely to be necessary if the application of population control is ever likely to be efficient.

#### MOON ROCK

### Next Steps with Samples

It is clear that the analysis of the lunar samples is going to take all of the five months which NASA has allowed. The plan is for the material to be distributed to 142 selected teams of investigators—including fifteen groups in Britain—towards the end of September or early October. This allows a quarantine of 50 to 80 days, depending on the results of biological tests in the Lunar Receiving Laboratory. The investigators then have three months with the samples before a conference in Houston planned for the beginning of January next year when all the results will be presented. Until then, investigators will be forbidden to publish their findings, and the ban extends to publication through the newspapers. NASA has only recently reminded the British investigators through the Science Research Council what the rules are.

The ban apparently does not extend to the scientists of the Lunar Receiving Laboratory, and the first descriptions of the rock have been reported. The latest estimate of the weight of material brought back is about 80 pounds, considerably less than the 130 pounds allowed for in the lunar landing module. First indications are that all the samples are covered in a layer of black dust, some of which is glassy and possibly a product of the heat generated by impacting meteorites. Some of the rocks seem to have a volcanic origin, and there is a report of a glassy object four inches long in one of the core samples. Clearly there is a wide range of material to be studied.

The Lunar Receiving Laboratory has facilities for biological quarantine tests and for a battery of physical tests—in particular those which depend on an analysis of samples as soon as possible after collection from the lunar surface. One of the tests, conducted by L. W. Alvarez of the University of California, Berkeley, is a search for magnetic monopoles. The preliminary testing should also ensure that the investigators get the kinds of samples which they requested.

The latest plan for Apollo 12 is for launch on November 14 and a landing 3° south of the lunar equator, near the crater Lansberg in Oceanus Procellarum. This is the location of the soft-lander Surveyor 3, and the intention seems to be to examine the condition of a spacecraft which has been on the surface since April 1967. This time there are to be two moonwalks by each crew member (Charles Conrad and Alan Bean), going up to hundreds of feet from the module.

While Apollo 11 was on the last lap home, NASA

announced that two design studies for a manned space station are to be carried out, by McDonnell Douglas and by North American Rockwell, each costing \$2.9 million for eleven months. The intention is to design a space station to accommodate twelve men in Earth orbit, to be operational in 1975 and to have a life of ten years. The two companies have also been asked to look at a fifty-man space station to be assembled in Earth orbit towards the end of the next decade.

#### MEDICAL RESEARCH

### New Look for MRC

THE Medical Research Council's annual report for 1968-69 (HMSO, £1 8s) is subtly different from its predecessors. It attempts to outline how the council reaches its policy decisions and as an example prints the report of the Radiobiology Committee set up last year under the chairmanship of Professor W. D. M. Paton to review the whole field of radiobiology. It was on the basis of this report that the council decided to cut by roughly a half the Radiobiological Unit at Harwell and to seek ways of providing extra accommodation at the Cyclotron Unit at Hammersmith Hospital.

The council's decision to publish the evidence on which it bases its policy decisions will be warmly welcomed, and Dr J. A. B. Gray, the new secretary, said this week that future annual reports will be very different from those of the past few years. Next year, the directory of units, groups and individuals receiving support will be published separately, and the report proper will contain more information on what the MRC is doing. The long review articles which have become a feature of the annual reports—this year's cover the twenty year period during which Sir Harold Himsworth was secretary—will be discontinued.

The council's policy-making machinery hangs on the annual review of all the work it supports, backed up by periodic special reviews of selected fields by expert committees—the radiobiology review and the review of biochemical aspects of psychiatric diseases which is currently under way, for example. Another innovation has been the establishment of two grants committees for vetting grant applications. Initiative for a new project can clearly come from such applications or from the council, which is currently eager to foster work at all levels of biological organization on arterial diseases, particularly thrombosis, population control and drug dependence including smoking. And in the universities the council would like to see further research in eight fields, ranging from dentistry to virology and mycology. The council has most problems in recruiting staff for short term and small scale projects with a practical object in view and it has recently decided on the radical step of entering into research contracts with the universities and industry for projects of this kind.

The most important influence on the council's policy is to ensure that it keeps abreast of rapidly changing areas of research. With little to guide it, the council turned out to be exceptionally prescient when it decided to back molecular biology and radiobiology in a big way. Molecular biology continues to grow although radiobiology has lost some of its importance. The Paton report, the publication of which will