variation within particular complexes of forms, which have previously been regarded as a single species, often reveals a discontinuity in size or other characters, indicating the occurrence of sibling species. By reason of certain facts it is assumed that the Rotatoria consist to a smaller degree of cosmopolitan forms than has been believed previously.

After the strenuous symposium it was a delight to be conducted along parts of Linnaeus's *Herbatio gottсандensis* by Prof. G. E. Du Rietz; it was described by Linnaeus in "*Herbationes upsaliensis*", 1753. Apart from the rich flora there was the satisfaction of seeing many plants which Linnaeus had demonstrated to his students. It was surprising to see *Fritillaria meleagris* growing in woodland. (On the journey back to headquarters the extensive 'King's Meadow' was visited, where it occurs in enormous numbers. It is there protected, and is so much an Upsala feature that it figures on the cover of the official guide.)

Other places of botanical interest were visited, and after lunch, Hammerby, Linnaeus's summer residence. Here there was a meeting of the Royal Society of Science of Upsala, and Prof. N. von Hofsten read a paper on "Linnaeus's Conception of Nature". Hammerby was looking at its best, and several of the plants introduced by Linnaeus were in full bloom.

The foreign members of the Symposium later all signed a memorandum recommending that *Herbatio gottсандensis* be set apart as a nature reserve.

Appropriately there was a dinner and reception in the evening at Smålands Nation, the student corporation of which Linnaeus was 'inspector'. An apple tree from his birthplace was planted in its 'native' soil, and the significance of this in Swedish lore explained by the inspector, Prof. C. Nylén, who later gave a short address on the Smålands Nation; Dr. A. Uggla spoke on Linnaeus as a Smålander and Mr. J. Beskow, the curator, on student life in Upsala.

The end-of-term ceremonies with the 'promotions' of doctors were held on May 31. For the most part they followed tradition, beginning at 7 a.m. with a salute by cannon, one for each doctor, to be followed at 8 a.m. by bell-ringing from the cathedral. At 12 a.m. a procession was formed, and passed into the aula of the University, everyone in white tie and evening dress and the honorary doctors in academic robes: the order of procession gives nineteen entries, individuals and groups. The proceedings began with a discourse by Prof. S. Hörstadius, promoter of the *Matematisk-naturvetenskapliga fakulteten*, on "*Linné, djuren och människan*". To accompanying orchestral music those to be promoted were grouped in the five faculties, each with its own promoter; first the jubilee doctors (of fifty years standing), then the honorary doctors, finally those who had achieved success by thesis. The name is called, the three steps of the cathedra superior ascended, a laurel crown (or a top-hat) placed on the head (accompanied by a cannon-shot without), a gold ring put on the finger, a diploma presented, a shake of the hand, a descent from the cathedra and a pause and a bow to H.M. the King of Sweden, who sat just below the platform. The three-hour ceremony was impressive and picturesque with its savour of the medieval and its national significance: it ended with the students acclaiming the jubilee and honorary doctors assembled on the steps of the University in song and speech.

The programme of the ceremony was adorned with a representation of a laurel wreath surrounding *Linnaea borealis* and the words "*Tantus amor florum*". It includes the "Promotions-formulär" employed by Linnaeus for the medical faculty on October 31, 1754.

Among the recipients of honorary degrees (Fil.Dr.) were H. H. Allan (New Zealand), Julian Huxley and J. Ramsbottom: A. H. Uggla, the well-known authority on Linnaeus, was promoted doctor of medicine.

Attention should be directed to the "*Inbjudningar till Doktors-Promotionerna*", as it has an appendix of four important papers: F. Berg, "*Linnés Systema morborum*" (132 pp.); A. Liljencrantz, "*Kungl. Vetenskaps-Societetens protokoll 1732-1784*" (97 pp.); G. E. Du Rietz, "*Linné som myrforskare*" (80 pp.) and Å. Holm, "*Specimina Linnaeana i Uppsala bevarade zoologiska samlingar från Linnés tid*" (68 pp.).

The menu card at the graduation dinner held in the Castle was a reproduction of the frontispiece to the rare "*Linnéska Institutets Skrifter*"—a few hand-coloured copies of this were found recently in the archives of the Royal Society of Sciences, Upsala.

The celebrations ended on June 2 with a commemoration meeting of the Swedish Linnean Society at Hammerby. The annual pilgrimage this year marked also the fortieth anniversary of the Society. The President repeated his discourse of Thursday, though this time in Swedish: he was followed by A. G. Boerman, a Dutch medical man, who attempted an analysis of Linnaeus's character by reference to his youthful notes and writings. In glorious weather about two hundred had an alfresco lunch, at the end of which the veteran student of Linnaeus, Prof. Robert Fries, spoke of the beginning of the Society of which he was co-founder, of its objects and of the Linnean tradition. The meeting ended at Linnaeus's old house and garden at Upsala—the headquarters of the Society.

It was a memorable week, and all who took part in the celebrations will long remember the courteous and lavish hospitality of our Swedish hosts, the understanding tributes to Linnaeus, the international friendliness of the symposium—and Upsala in spring.

NATURAL RUBBER INDUSTRY

RESEARCH AND DEVELOPMENT

THE natural rubber industry is made up of units varying enormously in size, ranging from very large estates with their own modern and well-equipped factories to smallholdings, some processing their rubber in primitive fashion, others making use of co-operative equipment. The organization of research and development schemes to assist these diverse elements began naturally enough with the creation, in Ceylon and Malaya, of institutes concerned in the main with agronomic problems and with the provision of advice to growers. The success of these institutes is reflected in the substantial increases in yield—per tree or per acre—which are now being obtained, and in a steady advance in the general quality of the rubber produced.

The first appearance of synthetic rubber was probably a major stimulus in bringing some of the industry's leaders to feel that a more substantial and broadly-based effort in research and development was called for if natural rubber was to advance, or even hold its own, in a more challenging situation. The catastrophically low prices of the early 1930's showed that the industry was exceedingly vulnerable.

The British Rubber Producers' Research Association and the Natural Rubber Development Board (as it is now called) were formed some twenty years ago, and have been financed mainly by money raised by the Malayan rubber industry. Throughout their existence they have co-operated with the Eastern institutes and with sister organizations set up about the same time by the Dutch and French rubber growers. They have, however, retained their essential independence, under the control of their several boards.

In recent years the bulk of the income of the two British bodies and of the Rubber Research Institute of Malaya has been obtained from a single fund derived from a cess on Malayan rubber exports. The Malayan Rubber Producers' Council very reasonably decided some time ago that it would be useful to review the whole organization which had grown up and to consider what changes, if any, were now desirable. The report of the committee charged with this task has now been published*, and gives an overall impression of general approval, modified by some criticisms of detail.

The membership of the committee had a strong agricultural bias, and many will feel it unfortunate that the rubber manufacturing industry was unrepresented. This unbalanced composition has led to a corresponding unbalance in the report: whereas the programmes of the Rubber Research Institute are subjected to detailed criticism, the work of the British Rubber Producers' Research Association and of the Natural Rubber Development Board is not examined in quite the same way. At the same time, the most valuable features of the report are probably the review of the objectives of the three bodies considered together rather than separately, and the recommendations as to administrative changes which are considered desirable. Numerous detailed recommendations are made, most of them of interest primarily to those directly concerned with the several bodies involved. In general they appear very sound and reasonable, and their acceptance would seem probable. The need for higher salaries to attract the right men, especially for service in the East, is cogently argued, and puts the correct emphasis on quality.

The implementation of this report will cost the industry more money: it is recommended that the cess on rubber exports be increased by 50 per cent, to yield an annual income of approximately a million pounds sterling. It is pointed out that this will still represent a substantially lower percentage of the sales than is normal in the chemical industry, which—as the supplier of synthetic rubbers—must be considered the chief competitor. The natural rubber industry has through the years been fortunate in the quality and vision of its leaders. It can be confidently assumed that this report will receive the attention and action it deserves.

G. GEE

* Report of the Advisory Committee enquiring into Production Development and Consumption Research in the Natural Rubber Industry. Pp. v+49. (Kuala Lumpur: Rubber Producers' Council of the Federation of Malaya, 1957.) 2 Malayan dollars.

THE MEDICAL RESEARCH COUNCIL

REPORT FOR 1955-56

THE report of the Medical Research Council for the year 1955-56* follows the pattern of earlier reports in giving only summaries of the work of the Council's many separate research establishments. The fullest account of their work is contained in the scientific papers published by the Council's staff, bibliographical references to which occupy sixty-six pages of this report. The main part of the report discusses general trends in medical research, a discussion which is, as the introduction emphasizes, selective and omits many investigations in which the Council's workers take part. The introduction also reminds us that virtually every conspicuous advance in knowledge depends on a mass of unspectacular, but indispensable, work done by many individuals, or by teams of workers, who bring different kinds of knowledge and skill to bear upon complex problems and are often themselves unable to make the final contribution to which outstanding advances are due.

It is, of course, impossible to review in a short space all that this report contains. Apart from the details it gives of the personnel employed by the Council, the various committees which direct the work done, the research units and the summaries of the work that these units are doing, there are, in the report, articles on clinical investigations and on research in genetics, as well as forty-seven pages devoted to various aspects of medical research.

The clinical research dates back to 1951-52, when the annual report of the Council reviewed the effect of recent scientific and administrative developments on the organization of such work. Later, the Council was invited to discuss with the Standing Medical Advisory Committee of the Ministry of Health how clinical research could be encouraged and developed in relation to the National Health Service, and an interdepartmental committee, under the chairmanship of Lord Cohen of Birkenhead, was set up to examine the question. Its report, published as a White Paper in 1953, recommended that the Medical Research Council should appoint a Clinical Research Board, and in 1953 this was done.

The Council has always maintained that its investigations should neither supplement nor replace those carried out in universities, medical schools or hospitals, but should be complementary to work done in these centres, and this report describes, in considerable detail, how the Council is doing this. In general, the Council supports clinical research by setting up units made up of its own staff, by appointing its staff to work at centres other than the Council's own establishments, by making temporary grants to workers not on the Council's staff, by making awards for the training of research workers and by organizing co-operative clinical studies. The Council is concerned with three clinical research establishments in the tropics—at Fajara in the Gambia, at the Infantile Malnutrition Research Unit at Kampala in Uganda, and at the Tropical Metabolism Research Unit at Kingston, Jamaica; and the Council hopes to develop links between these centres and clinical research units in Britain. The estimated cost of the expanded programme of clinical research for the

* Committee of Privy Council for Medical Research. Report of the Medical Research Council for the year 1955-1956. Pp. vii+270. (Cmd. 130.) (London: H.M. Stationery Office.) 9s. net.