

leadership can be created in such a system: when teams are put to work to make important discoveries or inventions, they either fail dismally or are far too costly. He maintained that many laboratories in the United States are over-fond of gadgets and complicated equipment which often take more time to repair than to use. These instruments remove the investigator from his experiment; automatic research tools can thus be a great handicap to invention and progress. We have to offer the recalcitrant lone-wolf research worker some asylum since he is now menaced with extinction. His help is indispensable in the early stages of any new development and he acts like a scout, prospecting new territory before it is exploited by the crowd. The inventor or scientist needs self-expression and the affirmation of his personality: to try to depersonalize him in a team is psychologically a great mistake. Very great discoveries, in Dr. Kroll's opinion, are still so close to the surface that they can be unearthed with little expense by nonconformists with an inquisitive mind, with knowledge, the urge to create and who are prepared to accept sacrifice as a way of life.

### *Acta Meteorologica Sinica*

THREE issues of the periodical *Acta Meteorologica Sinica* have been received from the Institute of Geophysics and Meteorology of the Academia Sinica, Peking. Each contains six or seven papers. The papers themselves are in Chinese but each has a summary in either English or Russian, with roughly equal numbers of summaries in each of these languages. In the issues received, all the papers are on dynamical and synoptic meteorology with the exception of one on hygrometry. Frequent references are made to recent European and North American meteorological literature. Typical titles are "A Test for 24 and 48 hr. Numerical Forecasting with a Quasi-geostrophic Two-parameter Model" and "Statistical Investigation on the Blocking Situations over Asia". It does not seem that numerical forecasting with electronic computers is yet under examination in China, but Fjortoft's graphical method is in use. Study of the papers would be easier if titles in English or Russian were given to figures and tables and perhaps even isopleths might be labelled, and columns and rows headed in one or other of those languages. It would also be very helpful if personal names of authors could be given in Latin script as well as in the Cyrillic form.

### Cleveland Museum of Natural History, Ohio

UNDER the title of "A Reason for Pride" (Cleveland, Ohio: Cleveland Museum of Natural History, 1957) an attractive booklet describes how the site of the well-known Cleveland Museum of Natural History is required for a development plan of the city and the progress that the Trustees have made with a new building. At the outset, mention is made of the great assets of this Museum, and a brief résumé is given of the chief collections assembled during the past thirty-seven years. The new site is in Wade Park and covers eleven acres. Building is already in progress, and when completed will include a Hall of Nature, a Gallery of Man, a Hall of Science, and a Planetarium. In addition, the grounds surrounding the Museum will be made into a Nature garden containing outdoor exhibits of flowers, shrubs and trees native to the Cleveland district. All exhibits, both

inside and out, will be planned in sequence to cover systematically the subjects of Nature and science in all their phases.

### Agricultural Research

"FUNDS for Research in Agricultural Experiment Stations, 1953-54" is No. 8 in the series "Reviews of Data on Research and Development" issued by the U.S. National Science Foundation. Expenditures for research by agricultural experiment stations in the United States increased tenfold from 7 million dollars in 1920 to more than 74 million in 1953-54; 17 million for basic research and 57 million for applied research. Research funds for these stations came, for the most part, from the State governments and supplemented the core of support provided by the Federal Government. The States accounted for 45 million dollars; the Federal Government for 13.5 million, and other sources, such as sales and royalties, for 16 million. The 53 stations, practically all administered by the land-grant colleges and universities, are the fountainhead of agricultural research in the United States. The largest amounts were devoted to animal production and field crops; the smallest, to genetics and farm forestry. Copies of the report can be obtained from the National Science Foundation, Washington 25, D.C.

### Tetrahydrothiophen

TETRAHYDROTHIOPHEN (called tetrahydrothiophene in the trade) is a colourless liquid with a fairly high boiling-point (above 120°) but low flashpoint (64° F.) which is now in production in England by Robinson Bros. Ltd., Ryders Green, West Bromwich. The substance has a strong odour of coal-gas and is used in odorizing colliery methane and natural gas (see *Nature*, 180, 1444; 1957) and also re-formed petroleum gases before they are used in town gas supplies. These gases are otherwise practically odourless and in that condition would not betray their presence in case of leakage. The odorized gases, on the contrary, have the characteristic smell of ordinary coal-gas. Details are available from the manufacturers on request.

### Shelter Belts and Microclimate

A LINE of work in the Forest Products Laboratory with a probable future for research is connected with shelter belts. In the past century, in the south of Scotland and the north of England, shelter belts were planted by landowners for the protection of stock and crops. In order to save land, they were usually much too narrow and often consisted of Norway spruce. When the trees had attained a certain height and weight in the crowns a winter gale would either blow them down or more usually make a hole at one end from which successive gales would sweep away the plantation. The Forestry Commission has recently published its Bulletin No. 29 on "Shelter Belts and Microclimate" (London and Edinburgh: H.M. Stationery Office, 1957), by Dr. J. M. Caborn, of the Department of Forestry, University of Edinburgh, to whom it gave a grant and assistance in carrying out the research work. The investigation included wind, temperature, atmospheric humidity, evaporation and transpiration, soil moisture, precipitation and snow distribution, the economic significance of the influences of shelter belts and general conclusions on shelter-belt types, lay-out and structure. Help was received from the Department of Meteorology,