berculosis, a major problem for the Soviets, is almost identical to ours. In contrast, tuberculosis surgery is not as adequate.

Infant and maternal mortality rates were found to have been sharply reduced during the past 5 years as the result of a nearly universal adoption of "natural childbirth" techniques. After a 1-month period of "psychoprophylactic orientation," 85 percent of Soviet mothers deliver without anesthesia.

Soviet psychiatrists reject Freud and do not use psychoanalysis. Instead they employ a "reflectory conditioning" program that consists primarily of a drugged sleep from which the patient is only gradually released. This procedure clearly reflects the work of Pavlov.

The Schafers were told of an impressive blood-transfusion program in which whole blood is preserved for as long as 100 days. In addition, they were shown bars made from dense red blood cell aggregates; these bars are used as intramedullary pegs in acute fractures of long bones and as onlay grafts for nonunions. The Schafers also saw an efficient burn dressing in the form of a pliable perforated film made from bovine serum.

Particularly impressive were the infirmaries at Soviet industrial plants. One Moscow factory provides 75 beds for workers who have been incapacitated and who probably would not have been able to return to work in this country. By living in the factory's "preventorium," the patients are able to put in a half-day's work.

The Schafers report that everywhere they were received in a very friendly and hospitable fashion. Soviet physicians repeatedly emphasized their desire to establish contact with their American colleagues. In a conversation at the conclusion of the visit, Deputy Minister of Health Kochergin summarized this attitude when he said that Soviet officials would respond "instantaneously and favorably" to conversations with the United States relating to the exchange of medical delegations, postgraduate students, original scientific medical manuscripts, published medical periodicals, and personal medical correspondence.

Marine Borer Chemists and Biologists

At this year's AAAS meeting in Atlanta, on Friday, 30 Dec., at 1:30 P.M., in Committee Room 1 of the Municipal Auditorium, there will be an organizational meeting of a proposed Society of Marine Borer Chemists and Biologists. All interested persons are invited to attend.

Since the inception of the AAAS, a great many scientific societies have been founded at annual meetings of the association. The Society of Systematic Zoology, organized at the annual meeting of the AAAS in Chicago, 1947, and the Socicty for the Advancement of General Systems Theory, organized at the Berkeley meeting, 1954—both of which are meeting with the AAAS this year—are but two instances—R.L.T.

News Briefs

■ The Swedish deep-sea expedition on the *Albatross* in 1947–48 studied meteoritic enclosures in deep sea sediments. The small magnetic spheres generally considered to be of meteoritic origin that are found in such sediments have now been investigated in much greater detail than before by H. Pettersson, who has reported his findings in *Naturwissenschaften* [**42**, 387 (1955)].

Heretofore these spheres, which are about 0.2 millimeter in diameter, had been thought to exist only in the amount of about 1 milligram per kilogram of sediment. However, by use of a strong electromagnetic extractor, it has been found that the occurrence of these iron spheres in the sediment of the Pacific Ocean is about 20 to 40 times greater than was previously reported.

Furthermore, it has been thought that the spheres exist only in the uppermost 2 to 4 centimeters of sediment, but Pettersson has found them at depths of at least 3 meters, which corresponds to a sedimentation time of 1.5 to 3 million years. Therefore a considerable number of meteorites fell on the earth during the Tertiary period.

Plans are now being made to compare the frequency of distribution of these magnetic spheres in sediments that have been taken from various parts of the ocean. Such a study will provide statistics on the frequency of meteorite falls during the past millions of years and also will contribute to knowledge of the geochronology of the ocean floor.

■ The developing shortage of scientists and engineers is meeting with increasing attention from all groups of scientists and educators. In the *American Scientist* [**43**, 385 (July 1955)] another strong voice is added to the chorus of warning. Joseph W. Barker, president of the Research Corporation of New York, and the new president of Sigma Xi, points out that "while the situation now is critical, a continuation of this trend for another 10 years could prove disastrous to the future welfare and defense of our country."

The crux of the problem, as many committees have realized, lies in the secondary schools. The salaries of high-school science teachers are so badly out of line with the salaries commanded by college graduates who have majored in the sciences, mathematics, or engineering and who go into industrial positions that virtually all of last June's graduates in these fields were preempted by industry.

Despite this, there was a shortage of 4000 even to replace the losses in industry resulting from death or retirement. Obviously, with the present demand, government and college positions cannot be filled, to say nothing of the need for teachers that will arise as the effect of the increased wartime birth rate makes itself felt at the college level. The crest of the growing population is just now entering the high schools, and the demand for science teachers, among others, will be most serious just when the supply is practically zero.

Sigma Xi is inaugurating a prize competition (first prize, $1000; second prize, $500; third prize, $100) to be awarded to those chapters, branches, or clubs whose plan for alleviating this situation is judged most promising. Some valuable suggestions may result.

Meanwhile, let us point out that since public education in the United States is a local responsibility, no effective remedy can be expected except on the local scene. School boards, town and city officials, and ultimately the individual taxpayer, must be alerted to the crisis and apprised of its national significance. Scientists must take time to assume this local responsibility of educating their own communities.—B.G.

■ A diagnostic test for rheumatoid arthritis is now available to the country's physicians through the Grace–New Haven Hospital in New Haven, Conn. This was announced on 9 Nov. by Ronald W. Lamont-Havers, associate medical director of the Arthritis and Rheumatism Foundation at 23 W. 45 St., New York.

Rheumatoid arthritis can be treated in 70 percent of the cases effectively enough to prevent pain and crippling if it is detected early. One diagnostic problem has been that the condition is difficult to differentiate from more benign forms of arthritis. Also, the disease is difficult to detect at all in the very early stages when therapy is most effective.

The new test is an outgrowth of an observation first made in 1947 at Columbia–Presbyterian Hospital, New York. At that time it was noted that the serum of blood from victims of rheumatoid arthritis causes solutions of sensitized sheep blood cells to clump together in a distinctive way. The reason for this effect of the rheumatoid arthritis serum is still

unknown. Nevertheless, the test is a sensitive and accurate diagnostic means. It is now known that a blood factor present in persons with rheumatoid arthritis causes the clumping of sheep cells. This factor is inhibited by a second factor that prevents clumping. The second factor predominates in normal individuals.

A few years ago the sheep-cell test was only 50 percent accurate. Research at the Columbia University College of Physicians and Surgeons, the New York University College of Medicine, the Yale University School of Medicine, and the Grace–New Haven Community Hospital has since increased the accuracy of the test to more than 90 percent. The test also is valuable because it is positive in a high percentage of early cases.

Instructions on how to submit blood samples to the New Haven laboratory for analysis may be obtained by physicians by writing to the Streptococcus Laboratory of the Grace–New Haven Hospital, 789 Howard Ave., New Haven, Conn.

■ The Scientists' Committee on Loyalty and Security, 2153 Yale Station, New Haven, Conn., has become the Scientists' Committee on Security, Inc., at the same address. The members of the committee hope that this change to formal incorporation will allow them to work more effectively and to make better use of the volunteer manpower of the group.

The new committee will try to keep in touch with responsible opinion, to answer inquiries and perform a general clearing house function, to collect information on security matters, and to promote a better popular understanding of the problems of science and security. The committee solicits comments and suggestions from scientists, particularly with regard to security problems.

■ Banding is proving that the monarch butterfly is a true migrant, and first migrant to be confirmed in the insect world. Under Fred Urquhart, director of zoology at the Royal Ontario Museum, Toronto, Canada, a research team of 250 observers in Canada and the United States has put gummed labels on the wings of 33,000 monarchs. The group plans to finish the 4-year study with the banding of 40,000 more specimens in 1956.

Already the project has proved that millions of monarchs born in Ontario and the northeastern states fly south for the winter and instinctively return in the spring to their birthplaces to die. The longest recorded flight was from Hanlan's Point, Ontario, to Virginia Beach, Va.—a straight-line distance of 1000 miles.

Banding is being carried on by a volunteer corps of university professors, government employees, and amateur naturalists. An extremely high birth rate and an equally high casualty rate reduce the chance of a banded butterfly's being recovered to about one in a thousand.

The monarch's migration pattern follows that of a number of birds. In summer many specimens go to southern Ontario and the northeast states, where milkweed—upon which the female lays her 400 eggs—is abundant. The female always dies within a few days after depositing eggs. The young monarchs begin to flock and start southward from Ontario in the last 2 weeks in August.

Scientists in the News

JOHN OLIVER LA GORCE was honored on 7 Nov. at a dinner in Chevy Chase, Md., in recognition of his 50 years with the National Geographic Society, and of the part that he has played in making its name a household word. The society's board of trustees presented him with the Grosvenor medal, which was created in 1949 by Gilbert Grosvenor, former president and editor and now chairman of the society's trustees.

Leading figures and geographic and scientific organizations in all parts of the world, from the Royal Geographical Society in London and the Association of Japanese Geographers in Tokyo to the Geographic Society of Finland in Helsinki, sent their good wishes to La Gorce in honor of his golden anniversary.

J. ROBERT OPPENHEIMER, physicist and director of the Institute for Advanced Study at Princeton, N.J., will give the William James lectures in philosophy and psychology at Harvard University in the spring of 1957. The lecture series, delivered every second year under the auspices of the departments of philosophy and psychology, was established by Edgar Pierce in memory of William James, who taught both subjects at Harvard.

ERNST H. BARANY of the University of Uppsala, Sweden, will present a lecture on 8 Dec. at the National Institutes of Health, Bethesda, Md. As guest of the ophthalmology branch of the National Institute of Neurological Diseases and Blindness, Barany will speak on "Factors controlling the resistance to flow through the chamber angle." All interested persons are invited to attend the lecture.

RONALD C. VICKERY, specialist in rare earths who was formerly a member of the Commonwealth Scientific Industrial Research Organisation in Australia, has become associated with the chemistry and metallurgy research staff of Horizons Incorporated, research organization in Cleveland, Ohio.

R. N. DOETSCH, associate professor of bacteriology at the University of Maryland, has been appointed a 1956 fellow of the John Simon Guggenheim Memorial Foundation at the Rowett Research Institute, Bucksburn, Aberdeenshire, Scotland. He will work with A. E. Oxford on some aspects of rumen microbiology.

PAUL W. KABLER, HAROLD F. CLARK, EDWIN E. GELDREICH, and HAROLD L. JETER, all of the Robert A. Taft Sanitary Engineering Center of the U.S. Public Health Service at Cincinnati, Ohio, have been selected for the 1955 Kimble Methodology Research award for outstanding contribution to the field of public health. They are being honored for their development of the use of a membrane filter technique for the bacteriological analysis of water samples. Through their method it is possible to incubate, count, and identify the bacteria from a sample of water in as little as 16 hours; conventional analysis methods require from 48 to 96 hours.

LAUCHLIN M. CURRIE has been appointed a vice president of Union Carbide Nuclear Company, a division of the Union Carbide and Carbon Corporation. Currie has been vice president of National Carbon Company, another division of Union Carbide.

SHIRLEIGH SILVERMAN of the Applied Physics Laboratory, Johns Hopkins University, has taken a year's leave, effective 1 Nov., to serve as director of the Physical Sciences Division, Office of Naval Research.

H. H. SMITH will be on leave from the department of plant breeding, Cornell University, until 1 Oct. 1956. During his leave, to be spent at the Brookhaven National Laboratory, special lectures and consultations with students will be offered by a series of visiting professors. These include: for the month of December 1955, M. WESTERGAARD, professor and head of the department of genetics, Copenhagen University; for the spring semester of 1956, A. H. SPARROW, Brookhaven National Laboratory, who will give a course in radiobiology; for June 1956, M. M. RHOADES, professor of botany, University of Illinois; for July 1956, S. G. STEPHENS, head of the genetics faculty, North Carolina State College; for August 1956, R. D. OWEN, professor of biology, California Institute of Technology.

JOHN J. GAVIN, former head of the biological control unit of Smith, Kline and French Laboratories, Philadelphia, Pa., has been appointed chief microbiologist for the Food Research Laboratories, Inc., Long Island City, N.Y.