His wife, who is a qualified surgeon, accompanies him and will act as medical officer to the expedition. The expedition includes biologists, chemists, botanists, zoologists and geographers.

Dr. Yonge stated that:

> Each member of the party is a specialist, and so the work done on the reef will be simply an extension of the investigations which have already been carried out in Britain. In addition to our inquiry into problems which have at the present only an academic interest, we intend to tackle several important economic problems, but our work will be very definitely limited by the means at our disposal.
>
> Many species of edible fish abound in the channel between the reef and the shore, but for a full investigation of these from the commercial aspect a steam trawler would be necessary, so we do not hope for any striking results in that direction. The search for sponges of commercial value will be similarly limited. The culture of the pearl oyster and of the trochus shell, both very valuable articles in the world's trade, will probably yield good results, for we will be able to experiment with these during our thirteen months' stay on the reef.
>
> Molluscs are comparatively easy to rear, and from my experience of the oyster beds on the French coast I believe that it should be possible to produce these in large quantities on several parts of the reef. We hope, too, to begin work on the migrations of the edible turtle and the hawk's-bill turtle, from which the valuable "tortoise-shell" of commerce is obtained Until the wanderings of these animals are understood, it is hopeless to attempt to frame legislation to protect them by controlling the industry. The one thing certain is that promiscuous killing of them will ruin a valuable commercial asset.

The expedition will cost £10,000, of which £8,000 has already been subscribed by various scientific and other bodies, the Commonwealth of Australia and a number of private individuals. The chief purpose of the enterprise is research into the composition and formation of the coral reefs and their biology, and in order to examine the growth and feeding of the coral polyps in every season the expedition will continue work for more than a year.

THE FOREST PRODUCTS LABORATORY OF THE FOREST SERVICE

WITH one man in four of the technical staff in the field, the forest products laboratory of the Forest Service, U. S. Department of Agriculture, has carried on more investigations outside its own walls this summer than it has for some years past.

Twenty members of the staff have been detailed to studies in forests and sawmills from the Appalachian region to the Pacific Northwest. Some of the men were out for a few weeks only. Others have been away from the headquarters at Madison, Wis., for several months.

The increased amount of field work has been occasioned largely by the efforts being made to get fundamental lumber moisture data, and by the increasing tendency of laboratory studies to dovetail with management problems of the Forest Service on the national forests. The National Lumber Manufacturers' Association, through its trade extension organization, is cooperating with the laboratory in the moisture content study.

R. D. Garver, J. B. Cuno, Ray Miller and A. C. Wollin have been in North Carolina and Virginia for several months on an Appalachian logging and milling study similar to the studies already completed for the Lake States and Arkansas regions.

E. M. Davis, R. P. A. Johnson, G. C. Morbeck and F. E. Durfey are making observations on characteristic defects of western species in Montana, Idaho, Washington, Oregon and California.

Rolf Thelen, L. L. DeFlon, E. C. Peck, E. C. Rietz and O. W. Torgeson are obtaining information on the shipping moisture content of lumber at mills in California, the Inland Empire and the Pacific Northwest.

F. L. Browne is engaged in inspections of paint test fences in the southwest, in California, in the Pacific Northwest and at intermediate points.

A. O. Benson is in northern Wisconsin on a study of small dimension stock production.

W. K. Loughborough is making a survey of moisture content of lumber at southern pine mills for the Southern Pine Association. The objective of the association in this study is eventually to be able to make moisture content a part of specifications for each lumber grade.

R. F. Luxford has been in California for two months collecting redwood logs for mechanical tests.

J. D. MacLean is visiting western states from Montana to New Mexico to get information on the preservative treatment of Rocky Mountain tie species and Coast Douglas fir.

M. Y. Pillow is studying the occurrence of compression wood in western species in the California-Pacific Northwest-Inland Empire region.

R. M. Wirka is engaged in an inspection of treated crossties in service in Idaho, Utah, Wyoming, Nevada and Arizona.

THE GRADUATE SCHOOL OF THE U. S. DEPARTMENT OF AGRICULTURE

THE 1928–29 sessions of the graduate school of the Department of Agriculture will open with the week beginning October 15.

According to tentative plans, probably four graduate courses will be offered and conducted by the school if justified by demand. These courses are:

(1) Soil genesis, classification and erosion; (2) Plant genetics; (3) Plant physiology; (4) Instrumentation (second semester).

Under the auspices of the school, probably eleven undergraduate courses, carrying credit in most cases, will be conducted. These courses are:

(1) Principles and practices in agricultural cooperation; (2) Elementary statistical methods; (3) Advanced statistical methods; (4) Prices and price relationships; (5) Review of mathematics; (6) History of American agriculture; (7) Poultry husbandry (second semester); (8) Scientific French; (9) Intermediate scientific German; (10) Commercial Spanish; (11) Advanced Russian.

The course in soil genetics, classification and erosion, which will run through one semester, probably will begin on December 17 in order to give field men who come into Washington for the winter opportunity to take the course, and also one or two other courses may for the same reason start some time in December.

In connection with the school it frequently is possible for adequately prepared students to arrange to do special work on definite problems under supervision in the department's research laboratories. Such work and the credit to be granted should be arranged through the deans of accredited graduate schools. A limited number of such problems probably will be available this year.

The tuition is $25 for two semesters of 30 hours each, or $15 for one semester.

In a recently published statement regarding opportunities for education in Washington, the United States Civil Service Commission said the following:

In addition to the courses given by the universities and schools of special class, both the Bureau of Standards and the Department of Agriculture give a number of valuable courses in technical and professional lines which, as in the case of the school classes, are arranged at hours so that government employees may attend them. Graduate work in these departmental courses is accepted by a number of the standard universities as credit toward a higher degree.

THE CONFERENCE ON BITUMINOUS COAL

TWELVE major topics for discussion at the Second International Conference on Bituminous Coal, to be held under the auspices of the Carnegie Institute of Technology, Pittsburgh, Pa., from November 19 to 24, are tentatively announced by Dr. Thomas S. Baker, president of the institution and chairman of the congress. About one hundred engineers and scientific men representing fifteen nations have already tentatively accepted invitations to speak or to send papers, and the number of speakers and delegates is growing daily. About sixty per cent. of the papers will be delivered by representatives of countries other than the United States.

Although the Second International Conference will be similar in purpose to the first congress held in 1926, preliminary plans for this year's meeting show that its scope will be considerably enlarged and the program will be more important and more international in character. The discussion of fixed nitrogen is one of the topics which will receive close attention. The liquefaction of coal, which was one of the principal subjects of discussion at the first meeting, will again occupy a prominent place in the deliberations. Low temperature distillation will be treated by representatives of at least a half dozen countries. High temperature distillation, power from coal, coal tars and oils, complete gasification of coal, origin of coal, coal washing, pulverized coal, catalysts and the general aspects of the bituminous coal industry are other topics that will be considered.

The subjects and speakers include:

The Economics of the Coal Industry: Lord Melchett, Dr. Friedrich Bergius, Professor Dr. Franz Fischer, Germany; André Kling and E. Audibert, France; Engineer Guardabassi, Italy; will deal with the subject of the liquefaction of coal.

Low Temperature Distillation: George E. K. Blythe, Dr. C. H. Lander, Harald Nielsen, Dr. E. W. Smith, England; Dr. A. Herz, Joseph Plassmann, Professor F. P. Kerschbaum, Germany; Henri Lafond, Professor Paul Lebeau, Antonie Vonk, A. Leante, France; Professor Dr. Granigg, Austria; Professor Yoskikiyo Oshima, Japan; Professor Samuel W. Parr, Professor Alfred H. White and F. C. Greene, United States.

High Temperature Distillation: Jean Bing, France; Professor Ernest Terres, Germany; Edgar C. Evans, England.

Power from Coal: Dr. J. E. Noeggerath, Germany; C. Simon, France; A. T. Stuart, Canada; W. B. Chapman and Professor A. G. Christie, United States.

Coal Tars and Oils: Henri Winckler, France; Dr. L. Edeleanu and Professor Dr. Fritz Frank, Germany, and Gustaf Egloff, United States.

Gasification of Coal: Dr. Karl Bunte and Dr. Alfred Pott, Germany; Paul Weiss, France.

Origin of Coal: Professor George L. Stadnikoff, Russia; Dr. Chozo Iwasaki, Japan; Dr. Reinhardt Thiessen and Professor E. C. Jeffrey, United States.

Fixed Nitrogen: A representative of L'Air Liquide Société, France; Rudolf Battig, Germany; Professor Harry A. Curtis, Louis C. Jones and Charles J. Brand, United States.

Coal Washing: A. France, Belgium; Professor Dr. Glinz, Germany; Dr. R. Lessing, England; F. R. Wadleigh, Dr. F. W. Sperr, James B. Morrow and Byron Bird, United States.

Pulverized Coal: Dr. I. P. Goosens, Rudolph Pawlikowski and Dr. P. Rosin, Germany; C. J. Jefferson, United States.