light received by these pens was filtered through glass. Pens 1 and 2 received a thirty-minute treatment of ultra-violet light each day from a quartz mercury arc lamp. In this way Pen 1 received both the direct sunshine and ultra-violet light from the mercury arc lamp. Pen 2 received sunlight filtered through glass and light from the mercury arc lamp. Pen 3 received direct sunshine, while Pen 4 received only the glass-filtered sunshine. The hens were placed on the experiment October 1, 1924, and the experiment to determine the relative vitamin content of the eggs was begun six months later, April 1, 1925.

Four lots of growing chicks were used to test the relative anti-rachitic vitamin content of the eggs from these four pens of hens. These pens of chicks were kept in the nutrition laboratory on a basal ration and under conditions which would cause them to develop rickets in about four to six weeks. In addition to this basal ration each pen of twelve chicks received one egg a day from one of the pens of hens. Pen 1 of chicks received an egg each day from Pen 1 of hens, etc. This feeding experiment was continued for eight weeks at which time the chicks in each lot were killed for chemical analyses. The chicks in Pens 1 and 3, which received eggs from hens receiving direct sunshine, developed normally as shown by their general appearance as well as by chemical analyses of their blood and bones.

The chicks in Pen 2, which received the eggs from the hens that received sunlight filtered through glass and a thirty-minute exposure to the mercury arc lamp, developed some rickets; but they were in much better shape than the chicks in Pen 4, which received eggs from the hens that received no ultra-violet light except that which came through the glass window.

This test with the growing chicks has been repeated a second time with results in agreement with the first trial. From these results we conclude that the anti-rachitic vitamin content of eggs will vary with the amount of ultra-violet light the hens receive when their feed is low in this substance.

In this experiment the eggs from Pen 1 hatched 67 per cent.; Pen 2, 72 per cent.; Pen 3, 75 per cent.; and Pen 4, 53 per cent. These results, as well as the results we obtained last year, indicate that the anti-rachitic vitamin content of eggs is one factor in the development of a strong vigorous chick. Cod-liver oil at the rate of ½ cc per hen per day produced eggs which hatched as well as those from hens receiving direct sunshine.

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ANENT THE "HARMLESS" CORAL SNAKE

THE coral snake is poisonous, but not vicious. Two of the largest dealers in live snakes of the south and southwest know them to be poisonous from personal experience and are so cautious that they handle mimic scarlet king snakes with the same care. In spite of the fact that we have captured, studied and photographed alive about every species of snake from Georgia to Arizona, we nevertheless almost unconsciously use the same extreme caution with several species of non-poisonous scarlet king snakes.

It is true that one very rarely encounters authentic cases of fatal coral snake bite. It would, however, be unwise to call the species harmless. For example, in Georgia, one of our party who was barefooted stepped on a cottonmouth in the water. The same day he reached into a wood rat's nest and, when he withdrew his hand, a cottonmouth presently came out of the nest. In neither case was he bitten. Nevertheless, he respects this snake as poisonous and will never again stick his hand in such a nest. In July and August, 1925, we saw two men who handle and have handled more gila monsters than any one else in the U. S. A. Both were bitten this summer by gila monsters with no bad effects, yet these gentlemen respect these poisonous reptiles. They feel it was their good fortune to escape. Like many of us, they do not consider these creatures vicious and make pets of them.

The coral snake is a burrower, is secretive and is most active at night or after rains. The collector or the average individual seldom encounters it. It is not vicious. One example will suffice. On the 75-mile practice-march of the five thousand U. S. soldiers from Ft. Sam Houston this summer, one soldier picked up a pretty snake. He and his fellows treated it as a pet for two or three days. In the end he asked the Y. M. C. A. director to care for it. This gentleman did and asked me for its identification one week later. Many Y. M. C. A. men for a week played with it. None of these were bitten. This coral snake was good-natured, yet potentially very poisonous.

The coral snake, as Professor Dunn contends, can open its mouth wide enough to bite a human being. We had one captive coral snake, which frequently opened its mouth a few days previous to its approaching death. Also one evening about 8:30 P. M. (darkness) my wife discovered a coral snake at the ranch gate. The instant we laid a stick on it, it resisted capture with great vigor, and constantly opened its

mouth in defense. No individual, scientist or layman could play loosely with the open mouth of that snake.

A. H. WRIGHT

CORNELL UNIVERSITY

ADDITIONAL evidence for the poisonous character of the coral snake has recently been given by the professor and students in the summer forestry school of the Louisiana State University at Bogalusa, Louisiana. To those of us who live in the territory of the coral snake it seems extremely important that the poisonous nature of this snake be emphasized whenever and wherever possible.

The article by E. R. Dunn, of Smith College, in SCIENCE for October 2, is thus further reinforced by the following facts:

A beginning student in the forestry school of the State University at Bogalusa, Louisiana, was bitten at eight o'clock in the morning by a snake which he believed to be non-poisonous. The professor in charge helped other students apply a tourniquet and sent the boy at once to the nearest hospital. The physician who looked at the wound treated it as one would any other, removed the tourniquet and sent the boy home. By three o'clock that afternoon the boy was feeling so ill that his family sent for the best physician available. The doctor saw that a slow paralysis was already setting in and ordered the boy to the hospital. But in spite of all that could be done the patient died before six the next morning. The wound was on the finger and though deep was certainly not of such a nature as to have produced death except from the venom. Subsequent comparison of the accounts of the onlookers (the snake unfortunately escaped) establishes as a practical certainty the identity of the snake as *Elaps*, our coral snake.

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NOMENCLATURE OF VITAMINES

FUNK'S proposal in the matter of the nomenclature of the vitamines[1] proves the desirability of an international agreement.

The term D accepted by Funk for the designation of the yeast growth promoting factor is already used by others for the anti-rachitic factor.

This, however, is termed by Funk E; unfortunately, E is claimed by Barnett Sure to use instead of Ewan's and Bishop's substance X, or the reproduction factor, which in Funk's scheme is termed F!

E. C. VAN LEERSUM

DIRECTOR, NETHERLAND INSTITUTE OF NUTRITION, AMSTERDAM

[1] SCIENCE, 62, 157, 1925.

QUOTATIONS

INTERNATIONAL COOPERATION IN SCIENCE

ONE section of the work of the League of Nations which received prolonged consideration at Geneva during the recent assembly is that known as intellectual cooperation. A year ago the assembly authorized the establishment in Paris of an International Institute of Intellectual Cooperation, to be under the control of the league, but subsidized by the French government. The choice of Paris was criticized at the time because it suggested that France had some preeminence in culture, but ultimately the proposal secured something like unanimous approval. The institute has now been definitely constituted, and will be in full working order during the present year. The French government is supporting it at an estimated annual cost of two million French francs. The director is M. Julien Luchaire, inspector-general of public education in France and laureate of the French Academy. M. Luchaire a fortnight ago gave the delegates assembled at Geneva an account of what has been already done and what it is proposed to do. He said that the institute had been organized in seven sections—namely, general relations, university relations, bibliography and science, legal relations, literature, art and information. The chiefs appointed to these sections are, respectively, an Englishman, a Pole, a German, a Spaniard, a Chilian (a lady), a Belgian and an Italian. To the science section a very ambitious program is committed. In the first place, it will endeavor to organize an international analytical bibliography in all branches of science. So far as physics is concerned, a large number of reviews publish articles on this subject, and there are three reviews which prepare a fairly wide analytical bibliography, but hitherto these have competed uselessly with one another, while being individually incomplete. The Committee on Intellectual Cooperation has had a meeting with the directors of these three publications, and an agreement has been reached whereby, through a division of the work, physicists of all nationalities will have an opportunity of becoming fully and immediately informed of the immense production throughout the world in this branch of science. Another task before this section of the institute is to create a liaison between the libraries of all countries, particularly with a view to arranging specialized centers for the collection of scientific documents. A system for the international loan of books and the exchange of scientific publications is also to be brought into being. Investigations are to take place with a view to the set-