crab apples and cherries have already been planted by the arboretum staff on the Case estate.

THE Army-Navy "E" Award was presented on December 29 by Major General Benjamin W. Chidlaw, assistant chief of staff of the Engineering and Material Division of the U. S. Army Air Forces, to the Nylon Research Laboratory and Pilot Plant of the du Pont Company. The award of lapel pins to employees was made by Captain C. A. Bonvillian, U.S.N., of the Industrial Department, Philadelphia Navy Yard. This will be the sixteenth official presentation among seventeen "E" awards which have been made to plants of E. I. du Pont de Nemours and Company.

THE council of the British National Farmers' Union has decided to ask the Ministry of Agriculture to send a representative to the United States, New Zealand, and any other countries where drying of foodstuffs is being carried out on a commercial scale in order to secure full information regarding processes of dehydration.

The Times, London, states that plans for the world after the war were discused at two meetings in London on November 20. Allied physicians of the nations who spoke on medical aid to stricken Europe agreed that steps would have to be taken by instruction and propaganda, possibly through broadcasting, to restore suitable standards of nutrition and to prevent an increase in infection in the occupied territories. The physicians who work as a technical advisory committee under the Allied Post-war Requirements Bureau have also agreed upon a basic list of drugs which will be needed in the occupied territories as they are liberated. At the second meeting representatives of allied departments met at the Board of Trade to discuss questions relating to the post-war economic structure. Mr. Harcourt Johnstone, parliamentary secretary to the Department of Overseas Trade, presided.

DISCUSSION

FIGMENTS OF THE IMAGINATION

MOST residents of the United States who have not had tropical experience look on the tropics with dread because of the "snake-infested jungles." This idea has been built up over a long period of time by highly imaginative travellers who apparently feel that they must impress their audiences with the great dangers they encountered and overcame in their arduous explorations of these terrible regions; the curious thing is that they always live to tell their harrowing experiences with these deadly reptiles. They are always encouraged to expand on the subject by the enterprising newspaper reporter and popular writers who must make a story. The result is that the average individual, visiting the tropics for the first time, expects to see poisonous reptiles behind every tree and bush and even hanging from the branches ready to do their deadly work. These traveller's tales, told over and over again, and losing nothing in the telling, have resulted in establishing an ingrained fear of the tropics on the part of our general public, and this in turn proves to be distinct dis-service to the thousands of our soldiers and marines who, of necessity, must now serve in one part of the tropics or another.

As a matter of fact in no part of the Old World tropics with which I am personally familiar are poisonous snakes either common or numerous, and I speak on the basis of twenty-two years actual experience. Much of this time was spent in the forests and jungles in all parts of the Philippines, with some experience in the Malay Peninsula, Java, and Borneo. On many trips lasting from two to six weeks each, on some of them being constantly in the forests and jungles, and seeing no other persons than the members of my own party, I have never actually seen a single snake, poisonous or otherwise; on other trips one might average seeing perhaps one snake in a week. The snakes are there, but if one is interested in snakes one must know where, how, and when to look for them. They are mostly timid and disappear at the slightest disturbance. Interested in checking on my own personal experiences I asked Dr. Frans Verdoorn, who spent two years prosecuting intensive field work in botany in the Malay Peninsula, Sumatra and Java, and he reports that he almost never saw a snake in the jungle. I asked Colonel Arthur S. Fisher, who was evacuated from Corregidor shortly before that fortress fell to the Japanese, and who for three months was in active service on Bataan Peninsula after the fall of Manila, and he stated that he saw exactly four snakes in three months, and two of these were brought to him by soldiers. My personal experiences in the American tropics are limited to six trips to Cuba; and I never saw a snake in Cuba. Professor Oakes Ames informs me that in his trips to parts of Mexico, Yucatan, Panama, Honduras, Costa Rica, Colombia, Venezuela, Ecuador, and Brazil, he saw a total of three snakes.

As a matter of fact there is infinitely less chance of an individual operating in the tropical forests and jungles being bitten by a poisonous snake than there is in any part of the United States where the water moccasin and the rattlesnake occur. On any pleasant

day in summer, on a day's trip through the fields and woods, even in New England, one will actually see many more snakes than one would encounter in any part of the tropics with which I am familiar, if one excepts the seasonal sea snakes. These reptiles, at certain seasons, may at times be seen literally by the thousands, particularly when they leave the sea to breed. All or most of them are poisonous, but their mouth parts are so constructed that they can not possibly strike a flat surface (they might be able to strike a small surface like one's finger). It is rather amusing to note how indifferent the native fishermen are when they happen to draw a net and bring in large numbers of them; they kick them about with their bare feet and nonchalantly pick them up and throw them back into the sea—so much for poisonous snakes.

Another fetish is the terrible poisonous plants that one must guard against in the tropics. I suppose that here our imaginations have been fed by the marvellous tales of the deadly upas tree, and in modern times, by the terrible man-eating tree of Madagascar. Incidentally some years ago, an American soldier who couldn't let the Philippines be outdone by Madagascar, published a lurid Sunday supplement story about one he saw in the Philippines; just another case of *horribilia philippinensia*. Here again, as far as contact poisons are concerned, there is infinitely less chance of one's being poisoned in any part of the Old World tropics than there is in any part of the United States where the poison ivy, poison oak, and poison sumac occur. In the jungles of the Malay Peninsula, Borneo, New Guinea, or any other part of the Malayan region, one is infinitely safer, as far as dangerous plant species are concerned, than one would be in the suburbs of Boston or in the Berkeley hills in California, or even within the New York Botanical Garden or the Arnold Arboretum where poison ivy occurs. It is interesting to note that without exception, and no matter where they occur, those plant species that produce eruptions simulating *Rhus* poisoning, all belong in several genera of the same natural family, the Anacardiaceae. Thus in the Malay Peninsula, Sumatra, Java, and Borneo, there are various forest trees collectively known as *rengas,* belonging in such genera as *Gluta, Melanorrhoea, Melanochyla, Semecarpus,* and *Swintonia,* that have a distinctly poisonous sap; some of these genera have representatives in the Philippines and in New Guinea. The sap of several species of *Mangifera,* such as *M. caesia* (bingai), *M. odorata* (kwini), *M. kemanga* (kemang), *M. foetida* (bachang), cause bad skin eruptions; rarely one will note cases where individuals may be allergic to the common mango (*Mangifera indica*). Several of these "poisonous" species of *Mangifera* are actually cultivated for their edible fruits and occur about residences and in towns, but the local residents are not inconvenienced by them. Even the resinous sap in the pericarp of the fruit of the common cashew nut (*Anacardium*) is irritating. The remedy for any eruptions caused by contact with the sap of these species is the same as that indicated for poison ivy infections. In passing, it is interesting to note that while the sap of the trunk or branches, or occasionally the leaves may be irritating, yet in several of the genera mentioned above the fruits may be eaten with impunity (*Mangifera, Semecarpus,* and some species of *Gluta*).

Aside from the contact poisons among the representatives of the Anacardiaceae mentioned above, mostly large forest trees, and not likely to cause any trouble except if one actually cuts them down, all other plants with which one might come in contact in Malaysia and in Polynesia may be classed as minor nuisances. These are the few species that bear stinging hairs. The worst of these are the tree nettles (*Laportea*) of which about 100 species have been described. Contact with the hair-bearing parts instantly produces the sensation of having touched a piece of very hot iron. While the sting from these hairs (apparently caused by formic acid) is intense, it is not normally dangerous, for not even a cub Boy Scout would touch a plant a second time. Fortunately these shrubs or small trees are not common, and certainly none of them is to be feared. *Laportea* is merely a somewhat exaggerated stinging nettle.

The remaining category are those species, few in number, widely scattered, and often very rare, where the inflorescences, or the fruits, or both, may be supplied with stiff bristle-like stinging hairs, their tips supplied with minute retrorse barbs (*Mucuna*). These hairs are easily detached but are never poisonous, and are merely mechanical irritants. They are never dangerous, and again not even a cub Boy Scout, once stung, would touch a plant a second time. And we should remember that cowhage (*Mucuna*) hairs were formerly used as a remedy for tapeworm, the hairs being mixed with molasses and swallowed. The theory back of this remedy, I suppose, was that the tissues of the tapeworm are softer than the lining of the human stomach and would thus attract the stinging hairs which in turn would kill the tapeworm.

E. D. MERRILL

MORE ABOUT "DEFORMATION OF ROCK STRATA BY EXPLOSIONS"

MR. NETTLETON[1] is probably correct in rejecting the idea that the gravity anomaly found in Sierra Madera

[1] L. L. Nettleton, SCIENCE, December 4, 1942, Vol. 96, No. 2501, page 515; J. D. Boon and C. C. Albritton, Jr., SCIENCE, October 30, 1942, Vol. 96, No. 2496, pages 402–403.