amount of vertebrate paleontological material still entombed there. Possibly as the result of such promptly and properly executed excavations many bones, if not complete skeletons, of those missing members of the American Pleistocene fauna, *Equus complicatus, Tapirus haysii, Mylodon harlani, Ursus americanus,* and some representatives of the exceedingly rare *Canidae* and *Felidae,* neither of which are now known in Kentucky, may be recovered, with consequent enrichment of our knowledge of the mammalian scene immediately south of the continental ice sheet during the last stages of the Glacial age.

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Why Not?

Settlement of the atomic bomb question is the most urgent of all Government problems. While our statesmen play Pearl Harbor politics in the house of state the conflagration of a Third World War is already smoldering in the basement. The public is fast asleep or unaware of its implications. I suggest that the AAAS take the lead in getting all state academies and science clubs to present the facts in terms of destruction by the atomic bomb to the public, labor organizations, American Legion, etc., furnishing them with a plan of action.

LYELL J. THOMAS

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An Appeal

We the undersigned, wives of American scientists, have read with interest and concern the "News from Abroad" in recent issues of *Science.* We want to help these scientists, victims of the Axis, and we suggest the desirability of supplementing the work of the established relief agencies by sending gift packages of clothing and food directly to individual scientists and their families. Some of us have already sent packages to friends whose present addresses are known, and the acknowledgments we have received leave no doubt of the urgent need which these packages are helping to meet. Used clothing and shoes are genuinely appreciated.

American scientists who would like to send packages to colleagues of the occupied countries may obtain names and present addresses from the Secretary of this group. It is suggested that you indicate the country of your greatest interest and the ages of the children for whom you can supply clothing. We have just received from the Netherlands the names of some forty families with suggestions as to what clothing, etc., would best help them. Warm clothing and shoes seem to constitute their greatest need.

A package sent *now* is worth six sent next spring.

LANGHORNE H. BRICKWEDDE, LOUISE MCD. BROWNE, EMILIE H. CONDON, LOLA S. DEMING, EDITH O. HENDRICKS, MILDRED R. MASI, GRACE H. RUARK, GRACE H. SMITH, *Secretary.*

National Bureau of Standards

Ch'ang Shan, a Chinese Antimalarial Herb

Ch'ang Shan, the roots of *Dichroa febrifuga* Lour., has long been used in China for malaria, but as far as we are aware, no scientific studies had ever been made on its antimalarial action until 1942, when a solid extract of this herb was tried on 13 clinical cases of tertian malaria. A dose of 0.03–0.06 gram of the extract (equivalent to about 7.5–15.0 grams of the crude drug) was administered by mouth twice or three times daily for an average of 5 days. In comparison with the results of 152 quinine-treated cases, Ch'ang Shan appeared to be as prompt as quinine in controlling the fever, but its antiparasitic effect was a bit slower, requiring one more day than quinine in converting positive smears into negative.

Both the antipyretic and antiparasitic effects of Ch'ang Shan were demonstrable in experimental animals. A simple decoction of the crude drug was able to reduce the febrile temperature of rabbits inoculated with *B. coli* vaccine. Chicks infected with *Plasmodium gallinaceum* run a course of malaria which is almost invariably fatal if not treated. Ch'ang Shan (1 gram/kgm.), given by stomach tube twice a day for 1 to 7 days, controlled the infection in all cases, as shown by the conversion of positive smears into negative and the prolongation of the survival periods. Such treatment did not, however, prevent relapses, which usually occurred sooner or later. In doses of only about one-fifth that of Ch'ang Shan, the leaves of the same herb (Shuu Chi) were found equally effective.

In the Chinese Book of Herbs (*Pen Ts'ao Kang Mu*), Ch'ang Shan belongs to the category of poisonous herbs. Nausea and vomiting were, however, the only toxic reactions observed in our clinical cases. Acute toxicity tests were made on 5 dogs, 37 ducklings, and 56 chicks, L.D. 50 being 20 grams/kgm. (approximate), 22 grams/kgm., and 14 grams/kgm., respectively. Fatal doses of Ch'ang Shan produced in dogs intense congestion with numerous hemorrhagic patches throughout the whole gastrointestinal tract. Aside from some congestion, no specific lesions were found histologically in the liver, spleen, and kidneys.

With a view to isolating the active principle or principles, our chemical studies were checked at every step by testing on chicken malaria. Up to the present time we have succeeded in isolating from both Ch'ang Shan and Shuu Chi four crystalline substances. Two of these are neutral principles: Dichrin A (m.p. 228–230° C.) and Dichrin B (m.p. 179–181° C.); the other two are alkaloids: Dichroine A (melting at 230° C. with decomposition) and Dichroine B (melting at 237–238° C. with decomposition). In the doses tried, only Dichroine B was found to be effective for chicken malaria, while the other three were all inactive.

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