most of their customers, but it would put them to some extra expense and inconvenience if government purchases are made in the best market. Whether this international system should be exclusively metric is a matter of policy requiring careful consideration. The yard may be lengthened to equality with the meter, or the meter may be lengthened to forty inches, or many British units may be discarded and some metric units may be substituted for them, while some British units are retained. In any case the change, whatever it be, must tend toward unification and simplicity. It must necessarily cause initial increase of confusion, which will pass away without unreasonable delay in great commercial centers. Outside of such centers the people may be expected to hold on to their old habits; and in the remote rural districts hundreds of years may be insufficient to bring about uniformity. The essential desideratum is definiteness in value and simplicity in mutual relation among the units adopted. The mere nomenclature is of subordinate importance. Old names will certainly be retained by the masses even if values are modified, just as a dozen different values existed a few years ago for what was called foot, fuss, pied, etc. The change in values will be much easier for the masses if the old names are retained by legal provision; but this is a matter for which there is plenty of time. The Archimedean lever is indeed unknown, but even the English inch has been 'moved' in the past and Mr. Halsey's 'impossibilities' are no greater than what have been gradually overcome in the past and what may be gradually overcome in the future.

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WASHINGTON AND LEE UNIVERSITY,
October 3, 1904.

## PROFESSOR WILLIAM MORTON WHEELER ON THE KELEP.

IN SCIENCE of September 30 (p. 437) Professor William Morton Wheeler has discussed the introduction into the United States of the kelep or Guatemalan cotton-protecting ant, and has reached decidedly adverse conclusions. Every new proposition must, of course, run the gauntlet of criticism, scientific and unscientific. Professor Wheeler claims special 'liberty to comment' because of 'exceptional opportunities,' but he nevertheless disregards several facts which might have mitigated the confidence of the prophecy.

It becomes apparent that the Poneridæ with which he is acquainted must be very different from the kelep. After observing colonies of *Ectatomma* and *Odontomachus,* both in nature and in captivity, I am ready to follow Mayr and Ashmead in assigning these genera to separate families, as unlike, indeed, as rats and rabbits. Whatever may be true of other Poneridæ or Odontomachidæ, it seems that the species of *Ectatomma* are widely distributed, enterprising ants. The kelep, instead of being a rare 'archaic' curiosity, is decidedly the dominant and most abundant insect of the Guatemalan cotton fields. The colonies, too, are several times as large as supposed by Professor Wheeler. They contain, usually, between 200 and 300 individuals, instead of from 40 to 50. There are seldom less than 100, and sometimes 400 or more.

The adaptability of the kelep is further shown by its association with the cotton for the sake of its nectar, as well as by its skill in stinging the boll-weevil. It is true, as Professor Wheeler says, that there are other pugnacious ants which 'attack' boll-weevils (or, for that matter, anything else which comes in their way), but they let them go again, and have no standing as 'destroyers.' To sting, disable, carry off, dismember and consume the pest, is still the unique distinction of the kelep.

Like some editors of newspapers Professor Wheeler will not be satisfied with the ants unless they absolutely exterminate the weevils, 'chase them into the Gulf of Mexico,' etc. The planters would probably be grateful, however for an addition of even ten per cent. to their crop—which illustrates the difference of standpoints. That the keleps make a regular practise of killing weevils renders them of distinct agricultural interest; the question is no longer whether they are useful, but whether we can get enough of them. Just how effi-

cient they might be made, even in Guatemala, is still unknown, for there the tree cottons are perennial sources of infestation, and all the climatic and cultural conditions favor the weevils. In Texas where the winter season will greatly assist in reducing the numbers of the beetles the utility of the ants may be correspondingly accentuated.

Of course it was highly improbable from *a priori* considerations that such an ant should be found, colonized in Texas, and made of practical use to the cotton industry. The chances are still very much against it, no doubt. It was obvious to Professor Wheeler from the first that the case was hopeless, but his warning has come too late, like the doctor whose patient had recovered. Plenty of difficulties remain, but the *post facto* prognosis is already in need of revision. The kelep is not being studied for the sake of results of 'negative, scientific value,' whatever that may mean, but because it appeared to the authorities of the Department of Agriculture that in so serious a difficulty every clue should be followed to some concrete conclusion. Unless the insurmountable obstacles can be pointed out more definitely it may be necessary to continue to seek them on experimental lines.

O. F. Cook.

Victoria, Texas,
October 4, 1904.

## *SPECIAL ARTICLES.*

### THE BRAIN OF A SWEDISH STATESMAN.

Retzius, in Vol. XI. of his extensive 'Biologische Untersuchungen,' presents a morphological study of the brain of a noted Swedish statesman. This is the fourth of a series of brains of eminent persons to be described by this investigator, the other three being those of the astronomer Gyldén, the mathematician Kovalevski, and the physicist and pedagog Siljeström. Retzius, in view of the rather negative results of older investigators in the field of cerebral morphology, and with the wish of satisfying himself whether the brains of persons of superior intellectual capacity were or were not to be distinguished from ordinary brains by special anatomical characters proposed, some time ago in conjunction with the physiologist Tigerstedt, that his colleagues in Stockholm bequeath their brains for scientific purposes. The forms of bequests received the signatures of just two men; viz., Retzius and Tigerstedt. Better results had been obtained by the Société mutuelle d'Autopsie (founded 1881) which now possesses ten brains or more, among them those of Gambetta, Bertillon, Vèron and G. de Mortillet. The Cornell Brain Association, founded by Professor Wilder in 1889, has bequeathed to it seventy brains of orderly educated persons, of which thirteen are already preserved in the Neurological Laboratory at Cornell. The American Anthropometric Society, formed in Philadelphia in 1890 possesses six brains of eminent scholars, and a number of others are promised. But such promises sometimes fail to be fulfilled, as happened in the case of Mrs. Elizabeth Cady Stanton. Her brain-bequest to Cornell, embodied in her will, was not read until after the funeral—designedly, it is stated, for her wishes on this head were well-known—because of the objections of relatives. It is indeed difficult, even under more favorable circumstances, after the death of a person eminent in human affairs to request—and obtain—the permission of the afflicted family for the removal, preservation and study of the brain.

In view of such adverse circumstances, Professor Retzius considers himself fortunate in having obtained, from time to time, the brain of some known person of superior mental power; and though the smallness of number of brains in this collection obviates the formulation of positive conclusions, he still deems it his duty to record descriptions of all brains of notable persons that might become available, before the problem of the interrelation of cerebral surface morphology and the mental aptitudes is entirely abandoned. The value of investigations of this kind has been repeatedly urged by Bischoff, Waldeyer, Manouvrier, Wilder and the writer ('Study of the Brain of the late Major J. W. Powell,' *American Anthropologist,* N. S., Vol. V., No. 4, 1903).

The identity of the Swedish statesman