surements of the heat evolved when an antigen (hemocyanin of *Busycon canaliculatum*) reacts with an immune serum containing the corresponding antibody. In the region of antibody excess, where no precipitate is formed, a value of about 3.0 calories per gram of antigen nitrogen was found (measured at 31° C.). Since the molecular weight of the antigen is 6,800,000, this corresponds to about 3,300,000 calories per mol of antigen. It is believed that this value is probably accurate to about 20 per cent. By extrapolation from analyses of specific precipitates, it was calculated that the above result corresponds to about 40,000 calories per mol of antibody. The magnitude of the result would presumably be different when the antibody and antigen were mixed in different proportions, and would probably be different for antigens of different molecular weights, on account of the different numbers of specific combining groups. Details will be published elsewhere.

WILLIAM C. BOYD

EVANS MEMORIAL HOSPITAL,
BOSTON UNIVERSITY SCHOOL OF MEDICINE

JOHN B. CONN
DONALD C. GREGG
G. B. KISTIAKOWSKY
RICHARD M. ROBERTS

HARVARD UNIVERSITY

LINNAEUS ON MAN'S NATURAL HISTORY

I HAVE just received, from Miss R. E. Dosé, from the Department of Agriculture, dated October 23, 1940, the note given below, which may be of general interest. It is an extract from a book containing correspondence of John George Gmelin with Carl Linnaeus and others, edited by Dr. William Henry Theodore Plieninger, and published at the order and expense of the Royal Academy of Sciences of St. Petersburg, Stuttgart, 1861.

On page 55 of this book there is a letter written by Linnaeus to Gmelin from Upsala on February 14, 1747. Here is a translation of a part of this letter:

> It would not please, if I placed the man among the anthropomorphous; but man knows himself. Let us abandon words, I do not care what words we use; but from thee, and from the whole world I want an answer to this: What is the difference between man and ape, difference which would be based on natural history? Most definitely I see no difference. I wish some one could show me even one distinction! Should I call a man "ape" or an ape "man," all the theologians would be after me. Yet, for the sake of science, I should have done it.

ALEŠ HRDLIČKA

U. S. NATIONAL MUSEUM

RESIGNATION OR EQUANIMITY?

THE system of weights shared by the English-speaking world is often regarded as a cross to be borne with resignation. In our opinion it should be borne with cheerful equanimity: its minutiae test the memory and sharpen the wit. The table we have prepared may be useful to the student of science who is trained to think in terms of the metric system within the laboratory and in the English system elsewhere. Though not very useful to foreign students visiting our laboratory, this table at least entertains them. They are presented with a copy but are not asked to memorize it.

ORDINARY SYSTEM OF WEIGHTS

	1 grain (pearls)	50 mg.
1.296 grains (pearls)	= 1 grain (ordinary)	64.8 mg.
3.086 grains (ordinary)	= 1 carat (m.)	200 mg.
1.027 carats	= 1 carat (1877)	205.6 mg.
6.30 carats (1877)	= 1 scruple (apothecary)	1.296 g.
1.200 scruples (apoth.)	= 1 pennyweight (Troy)	1.355 g.
1.140 pennyweights (Troy)	= 1 dram (avoirdupois)	1.772 g.
2.194 drams (av.)	= 1 dram (apothecary)	3.888 g.
7.29 drams (apoth.)	= 1 ounce (av.)	28.350 g.
1.097 ounces (av.)	= 1 ounce (Troy & apoth.)	31.103 g.
12.00 ounces (Troy & apoth.)	= 1 pound (Troy & apoth.)	373.241 g.
1.215 pounds (Troy & apoth.)	= 1 pound (avoirdupois)	453.59 g.
14.00 pounds (av.)	= 1 stone	6.350 kg.
2.00 stones	= 1 quarter	12.701 kg.
2.68 quarters	= 1 flask (mercury)	34.019 kg.
1.333 flasks (Hg)	= 1 keg (nails)	45.359 kg.
1.00 keg (nails)	= 1 short hundredweight	45.359 kg.
1.120 short hundredweight	= 1 long hundredweight	50.802 kg.
1.607 long hundred weight	= 1 small barrel (lime)	81.65 kg.
1.089 small barrels (lime)	= 1 barrel (flour)	88.90 kg.
1.020 barrels (flour)	= 1 barrel (fish)	90.72 kg.
1.400 barrels (fish)	= 1 large barrel (lime)	127.00 kg.
3.571 large barrels (lime)	= 1 kip	453.59 kg.
2.00 kips	= 1 short ton	907.00 kg.
1.120 short tons	= 1 long ton	1016.04 kg.

Inspection shows that with few exceptions the definers of our units have successfully avoided the monotonous uniformity of the metric system by allotting no more than an equitable share of zeroes to the ratios between successive units. In order to bring into line the few exceptions which did slip by we suggest that the simple change of redefining a stone as 13 5/7ths pounds instead of 14 would make the stones and quarters accord more closely with the rest of the system, leaving only the ounces, the keg and the kip to be dealt with.

W. H. FORBES
D. B. DILL

HARVARD UNIVERSITY