Perhaps Professor Herskovits's conception of a stock or racial difference is that it is an all-or-none affair. This need not be the case in order to be an important difference. Two stocks or races may be considered significantly different if they differ markedly with respect to the frequencies with which a variation occurs. In fact most of the anatomical differences which have been used by anthropologists for the differentiation of stocks and races are proportional differences rather than total ones. Certainly many of the characters used for the differentiation of accepted subdivisions of species among lower animals are not of the all-or-none kind.

What seems important to emphasize in this day and age is not that there are not stock and racial differences (even physiological and inherent psychological differences), for they will in all probability be found to be numerous, but that there is no reason for considering one racial group inherently superior or inferior to another. The racial dogma of inherent superiority of one racial group over another has no basis in fact.

Perhaps the author of the present note has misinterpreted Professor Herskovits. If so he is apologetic. He wishes only to see the question of racial differences weighed in the light of existing facts. It would be unfortunate if the current racial dogmas which have created so much trouble should cause the pendulum of opinion to swing unduly far in the other direction.

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INGESTED THIAMIN CHLORIDE AS A MOSQUITO REPELLENT[1]

THIAMIN chloride (vitamin B_1 hydrochloride) has been reported by Shannon[2] to relieve the itch of mosquito bites and to prevent further biting. A dose of 80 to 100 mgms on the first day and about 10 mgms per day thereafter was considered sufficient when taken by mouth. Military demands for a repellent taken orally justified further tests on this material at the Naval Medical Research Institute.

In preliminary experiments a subject ingested 505 mgms of thiamin chloride in three days. After taking 385 mgms he had a thiamin blood level of 6.9 gamma/100 cc. Mosquitoes (*Aedes aegypti*) were not repelled then or later when 505 mgms had been taken. In another test 100 mgms were ingested and the subject then exercised in an attempt to sweat the thiamin chloride to the surface of the skin. While the mosquitoes did not bite on his control arm (covered with indalone), his other arm was readily bitten.

In a second series of tests (Table 1), three subjects ingested 120 mgms of thiamin chloride per day for three days (30 mgms four times daily). Repellency tests were started on the second day of treatment. Neither the rate of biting by the mosquitoes nor the subject's reactions to the bites differed materially from the controls.

TABLE 1

BITES PER MINUTE (SECOND SERIES OF TESTS)

Test subjects	1st day	2nd day	3rd day	Average
1	3.2	61.5	16.2	26.9
2	55.0	72.6	39.8	55.8
3	21.6	91.0	49.2	53.9
Controls				
1	88.4	96.0	...	92.2
2	76.0	63.2	39.8	39.7
3	96.0	...	59.8	77.9

These results have been confirmed by subsequent tests undertaken by the U. S. Department of Agriculture and the National Institute of Health.

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PRUNE DWARF AND THE CHERRY VIRUS COMPLEX

STUDIES begun in 1935 and carried on for approximately nine years on the cherry virus complex now indicate that several viruses are present in the sour cherry—yellows, ringspot, green-ring yellows, rosette and (?) mottle—and two in the sweet cherry—ringspot or tatter leaf and chlorotic spot or mottle. In addition, strains seem to exist in some of the viruses. For example, two strains of the cherry yellows virus are readily distinguishable based on the symptoms produced on peach seedlings.[1]

As the result of cross-inoculation studies repeated on three successive years it now appears that strain 1 of the sour cherry yellows virus and one strain of the sweet cherry chlorotic spot or mottle virus are in reality strains of the prune dwarf virus.

Comparative studies with prune dwarf virus, 10 different cultures of sour cherry yellows and ringspot viruses alone or mixed, and 2 different cultures of sweet cherry chlorotic spot virus on 12 different varieties or species of stone fruits (including sour

[1] The material in this article should be construed only as the personal opinion of the writers and not as representing the opinion of the U. S. Navy Department.

[2] W. Ray Shannon, "Thiamin Chloride—an Aid in the Solution of the Mosquito Problem," *Minnesota Med.*, 26: 799, 1943.

[1] E. M. Hildebrand, *Phytopath.*, 33: 6, 1943.

cherry (1), sweet cherry (3), peach (2), plum (3) and seedlings of Myrobalan plum (1), Mahaleb cherry (1) and peach (1), clearly indicate that the typical strain 1 of cherry yellows virus[2] which induces rosette and stunting of peach seedlings produces symptoms simulating prune dwarf[3] on Italian prune and Lombard plum. Also one strain of sweet cherry chlorotic spot virus invariably induces typical prune dwarf symptoms on Italian prune and Lombard plum. Chlorosis and stunting of Damson plum results from the cherry yellows strain but not from either the typical prune dwarf strain—obtained originally from masked Damson plum—or from the sweet cherry strain obtained from the Yellow Spanish variety.

On the basis of severity of symptoms on Italian prune the strains from Damson plum, sweet cherry and sour cherry fall in descending order. The same order also applies for the severity of rosette, stunting and necrotic symptoms on Rochester peach.

Indexing strain 1 of sour cherry yellows and the above sweet cherry strain on Montmorency cherry regularly induced typical cherry yellows symptoms within one year. Thus it may be concluded that three strains of prune dwarf virus exist identified with plum, sweet cherry and sour cherry. Detailed results will be published elsewhere.

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ENZYMES IN DEHYDRATED VEGETABLES

ADEQUACY of blanching (scalding) of vegetables before dehydration is usually judged by absence or presence of positive peroxidase reaction in the dried products, except for cabbage in which catalase is used as the indicator.

In 1942, it was observed in tests for peroxidase made upon unblanched (raw) dehydrated cabbage, asparagus, carrots, peas, string beans, spinach and squash stored for six months at 30° C. and tested for peroxidase with dilute H_2O_2 plus dilute guaiacol or dilute benzidine, were devoid of positive peroxidase reaction. Dried raw potatoes, similarly stored, showed a faint positive peroxidase reaction.

A number of experiments have been made in the past two years in which various vegetables were dehydrated raw, and also after blanching five minutes at about 65.5° C. (150° F.), about 71° C. (160° F.), about 77° C. (170° F.), about 82° C. (180° F.) about 88° C. (190° F.), about 93° C. (200°F.) and 100° C. (212° F.). In one experiment, cabbage, potatoes, carrots, asparagus, string beans and squash so treated were stored one year and then tested. Of these only potatoes blanched at 65.5° C. showed any peroxidase activity, faint even in this case. All other samples were negative in reaction for peroxidase.

In other experiments, lightly blanched carrots and string beans (63° C. and 77° C.) became negative in peroxidase reaction in storage at 35° C. in less than 30 days; and peas in less than 90 days. Squash and potatoes showed slightly positive reactions even after 120 days' storage, but squash became negative by the end of ten months' storage. Dried potatoes, in another test, blanched at 77° C. (170° F.) and stored 18 months at 30° C. showed moderately positive peroxidase reaction. In this case and all other cases, however, the positive reaction in potatoes decreased markedly during storage.

Peas, blanched even at 100° C., showed positive "catalase" reaction (evolution of gas with dilute H_2O_2) after drying and during storage. This observation was confirmed by several individual experiments made on peas gathered at various seasons. The positive catalase reaction in other dried vegetables blanched below the death temperature of catalase decreased in intensity on storage and in some cases disappeared. Perhaps the reaction for peas is not that of a true catalase, but is due to some other catalyst.

The principal conclusion is that the positive peroxidase reaction in most inadequately blanched dehydrated vegetables rapidly decreases and finally disappears on storage; and decreases markedly in potatoes.

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STARS IN AMERICAN MEN OF SCIENCE

IN the June 30 issue of SCIENCE, you published a letter from Mr. Stephen S. Visher, of Indiana University, concerning starred individuals in "American Men of Science." This has been of interest to me for many years. Outstanding individuals in specialized fields are not necessarily known to men in the main branches of science and are, therefore, apt to be overlooked when individuals are starred. For this reason, I favor the suggestion which was made to have a greater number of subdivisions and ask for the starring of a proportionate number of men under each subdivision. There might be a subdivision assigned to "Ceramics and Glass."

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[2] E. M. Hildebrand, *Phytopath.*, 32: 712–719, 1942.
[3] E. M. Hildebrand, *Phytopath.*, 32: 741–751, 1942.