of a marked arteriolar contraction during anaphylaxis in the rabbit and by Rose and Weil's observations that an actual increase in plasma histamine can sometimes be detected. That the increase in plasma histamine in the intact animal is not more marked than it is, is probably due to the rapidity with which histamine is removed from the circulating blood. There is undoubtedly some release of histamine from other tissues as well as blood cells during anaphylaxis in the rabbit. We have been able to demonstrate this in the case of the lungs, using saline perfusion instead of blood. The amount that is liberated is quantitatively very small compared with that for the blood, however, so that it could not compensate for the histamine imprisoned with the leukocytes in the various capillary beds of the circulatory system.

There is substantial reason for believing, therefore, that histamine plays a significant rôle in the anaphylactic reaction in the rabbit, notwithstanding the fact that the total blood histamine value is reduced during the reaction.

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THE UTILIZATION OF IRON BY ANEMIC RATS

IN the issue of SCIENCE for February 9, 1940, a paper appeared by Miss Louise Otis and Dr. Margaret Cammack Smith on "Further Evidence of Sex Variation in the Utilization of Iron by Anemic Rats." I would like to point out that the finding of these investigators was previously established by Dr. Helen J. Hubbell and reported in the *Journal of Nutrition*, January, 1938, Vol. 15, pp. 91–102. This paper seems to have been overlooked by Dr. Smith and Miss Otis. That there is a sex difference in the utilization of iron was first suggested by Dr. Helen S. Mitchell in 1932, and shortly afterwards this observation was confirmed by Rose and Kung. In 1938 the influence of sex was quantitatively investigated by Dr. Hubbell, who found about 12 per cent. more iron in the bodies of female than of male rats which had been depleted to about 4 gms of hemoglobin per 100 cc of blood, and then given equivalent dosages of iron per gram of body weight until their hemoglobin reached the level of 14 gms per 100 cc of blood.

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THE "BABOON BOY" OF SOUTH AFRICA[1]

ON the basis of evidence which was at that time believed to be accurate and complete, the writer gave a brief account[2] of Lucas, the so-called "baboon boy" of South Africa, who has at various times been described in the popular press. In addition to excerpts from newspaper accounts, the writer published the contents of a letter written by Lieutenant Colonel O. J. T. Horak, deputy commissioner of the South African police commanding Cape Eastern Division, in which hearsay evidence regarding the discovery of Lucas among baboons was reported. A statement made by Constable W. J. Coetzer was also reproduced, in which he described in detail the story of Lucas' reported capture as told to him in 1921 by ex-Lance Sergeant Venter (now deceased). A brief statement of 152 words by Lucas himself, made before Constable G. G. Wright on May 8, 1939, was also reproduced, the statement describing his (Lucas') previous animal-like existence among the baboons. It was also reported that Lucas had been captured and taken to the Mental Hospital by the police, and that inquiry to date had failed to reveal a record of previous admission.

Since the time of the initial report, however, largely through the efforts of Dr. Dru Drury, 120 High Street, Grahamstown, and Dr. J. A. van Heerden, the present physician-superintendent of the Grahamstown Mental Hospital, additional information has been discovered. Dr. Drury has been able to interview and to examine Lucas, and has communicated with every available person who might possibly have had knowledge of the case.

It is now revealed that Lucas was admitted to the Grahamstown Mental Hospital as an indoor pauper on March 30, 1904, nothing being known about him or his people. He was certified at Burghersdorp by Drs. Herbert Caiger and J. Tandy Bolger on February 19 and 20, respectively. Upon admission, he was described as a Kafir boy approximately thirteen years of age, and the cause of admission was described as "injury to the head." He was said to show a "foolish and nervous manner," and was "destructive to his clothes and dirty in habits." When admitted, he was emaciated, and was described as suffering from a previously fractured right tibia and as having a large semilunar indentation over the left side of the skull for about five inches from tip to tip which, Lucas claimed, was the result of a kick from an ostrich. He was diagnosed as "acute mania," but being "neither epileptic, suicidal, nor dangerous," he was discharged as recovered on June 15, 1904. No mention of the baboon story was made in the Mental Hospital records.

[1] The writer is indebted to Dr. Raymond Dart, professor of anatomy, University of the Witwatersrand, Johannesburg, South Africa, for making available to him a copy of the documents and reports upon which this account is based.

[2] *Amer. Jour. Psychol.*, 53: 128–133, 1940; SCIENCE, 91 (2360): 291–292, 1940.

Thus a second and more plausible hypothesis regarding the boy's behavior would attribute the temporary "acute mania" to the injury in the region of Broca's area. Such an injury would especially account for his linguistic disabilities. The distance of Burghersdorp from Grahamstown, and the fact that there is no mention of the baboon incident in the hospital records, would likewise seem to discount the existence of a "feral" period in Lucas' life.

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FREEZING OF HOT AND COLD WATER

PROFESSOR THOMPSON[1] and his reply[2] to Professors Sanford, Lyon and Wakeham[3] stimulated an interesting discussion on the basis for the belief that hot water freezes more quickly than cold. Additional variables have occurred to me which I believe would have a considerable bearing on the explanation of this problem, in addition to the thermal factors mentioned in the above articles.

The freezing rates of liquids depend not only on temperature and rates of heat transfer and mass, but also on the freezing-points of the liquids.

Heating certain samples of water expels dissolved gases, decomposes bicarbonates, precipitates compounds whose solubilities decrease with increase in temperature, etc. This lowers the concentration of dissolved matter, and consequently raises the freezing-point.

Then, if the external temperature is between the freezing-points of the heated and unheated samples, the "hot" water will not only freeze first, but will be the only one to freeze, regardless of all other circumstances. These conditions could have been fulfilled unwittingly many times by kettles of water (alike or unlike) and by hot and cold water in pipes.

Many of us have observed a similar phenomenon in opening a bottle of carbonated beverage which had been outdoors in freezing weather. The liquid is not frozen and doesn't freeze on shaking (probably not supercooled), yet when the cap is removed, the liquid may suddenly freeze solid or become mushy with ice crystals. The temperature of the liquid was between the freezing-points of the liquid with and without the CO_2 lost by removing the cap.

Of course, even if the external temperature should be below the freezing-points of both the heated and unheated samples, occasional combinations of circumstances still might permit the heated sample to freeze first.

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I READ with great interest the letters in SCIENCE of April 19 under the title, "Roger Bacon Was Mistaken," and also Professor Thompson's recent letter. Whether it was Roger or Francis, here was a challenge:

> The belief that hot water does freeze more quickly seems to be firmly ingrained in the public mind so that many persons believe if hot water is placed in the ice-cube compartment of an electric refrigerator it will freeze faster than if cold water is placed therein. Perhaps it will if a large portion of it is lost through evaporation.

I went so far as to try the experiment myself. I report my results without explanation, not in order to confuse but to illustrate how seldom we know all about any experiment. I reserve my explanation so as to present this picture-puzzle. What is wrong with it?

A liter of water at 0° C was placed in the usual aluminum tray of the refrigerator and left to freeze without interruption for 60 minutes. The water left unfrozen was then poured out and measured. The volume was 720 cc. Apparently 280 cc of water had been frozen at 0°.

Then I heated to boiling another liter of water, put it into the same aluminum tray and into the same refrigerator compartment and left it also undisturbed for 60 minutes. Then I removed it and found only about 600 cc of liquid water and 400 grams of ice, which I thawed out and measured. In other words, the hot water had frozen faster.

Was Bacon really mistaken?

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SCIENTIFIC BOOKS

THE HYPOTHALAMUS

The Hypothalamus and Central Levels of Autonomic Function. Research Publications of the Association for Research in Nervous and Mental Disease, vol 20. Edited by JOHN F. FULTON, S. WALTER RANSON and ANGUS M. FRANTZ. xxx + 980 pp., 35 tables, 319 illustrations. Baltimore: Williams and Wilkins Company. $10.00.

THE pituitary body, or hypophysis, has been termed the master gland of internal secretion. It is attached to a small eminence at the base of the brain, and these two structures comprise the hypothalamus. In the brain of a fish or a salamander this part may be much more than a thirtieth of the total bulk of the brain, but in a man it is only one tenth of that. This is

[1] SCIENCE, March 29.
[2] SCIENCE, May 24.
[3] SCIENCE, April 19.