disease is common the ash never grows to be a very large or very old tree. It is said that in Forest Park, St. Louis, nearly all of the white ash trees are diseased. Susceptibility to the disease, mode of entrance of the parasite, the microscopic changes of the wood, and remedies, are discussed in this bulletin. Five excellent plates serve to make the matter plainer than is possible by text alone.

Charles E. Bessey.
The University of Nebraska.

THE BRAIN OF SILJESTRÖM.

The brain of Professor Per Adam Siljeström, of Stockholm, has recently been described by Retzius.* Siljeström was an eminent physicist and pedagogue who died in 1892 at the age of seventy-six. He was connected with the Paul Gaimard Polar Explorations, and is best known for his valuable researches on Mariotte's law, and for his efforts in behalf of the reformation of the school systems in Europe. Most of his work in this line was done subsequent to his visit to the United States in 1849–50, where he studied the various school systems and published his views. His intellectual abilities are spoken of as having been of the highest order.

Retzius adds his description of this brain to those of the astronomer Hugo Gylden and the mathematician Mme. Sonya Kovalewski. Siljeström's brain weighed 1,422 grams and is splendidly developed. Its convolutions are particularly rich in the frontal and parietal association areas, and it appears in most respects more complex than do those of Gylden and Kovalewski. The brain shows that special order of normal asymmetry so typical of the higher brains. As in Gylden's and Kovalewski's brain, the right Sylvian fissure proper is shorter (47 mm.) than the left (58 mm.), and the marginal gyre shows a similar complexity; these features are of interest in their possible relation to the mathematical abilities of these persons.

A small abscess of the size of a hazelnut involved the right subfrontal gyre.

E. A. S.

* *Biologische Untersuchungen*, Neue Folge, X., 1902 (Stockholm).

THE NEW ALGOL VARIABLE.

The Algol variable, 4.1903, recently discovered by Mme. Ceraski, proves to be an object of unusual interest. The Carnegie grant has enabled an examination of the photographs, taken with the Draper telescopes, to be made. This has shown that the star has a period of 1.3574 days $= 1^d\ 8^h\ 34^m.7$, and a range of 2.4 magnitudes. About half an hour before minimum, the rate of diminution in light amounts to between two and three magnitudes an hour, and is probably greater than that of any other star yet discovered. A minimum was predicted here, and was observed photographically and photometrically, 1903, March $19^d\ 16^h\ 24^m$, G. M. T.

Edward C. Pickering.
Harvard College Observatory,
March 24, 1903.

SCIENTIFIC POSITIONS UNDER THE GOVERNMENT.

The Civil Service Commission announces that on May 5, 1903, an examination will be held for the position of assistant physicist. The subjects and weights are:

1. Education and experience..... 50
2. Thesis (each competitor will be required to present a thesis of not less than 2,000 nor more than 2,500 words on some subject appropriate to the line of work indicated by the special subject of the examination below which he proposes to take; thesis to be prepared prior to date of examination and to be given to examiner on that date. In preparation of thesis, competitor may consult such books or publications as he desires, but the thesis must be entirely his own composition and must be accompanied by an affidavit to this effect) 20
3. Any one, *and only one*, of the following four subjects:
   (*a*) Magnetic testing and research and the absolute measurement of electrical quantities, such as currents, resistances, capacities, inductances, etc.
   (*b*) Electrical testing and photometry. This includes the testing of instruments used for the measurement of both direct and alternating currents, of the various switchboard, portable,

and laboratory types. Also the photometric testing of incandescent and arc lamps, and such experimental and research work as may be involved in developing methods of testing.

(*c*) Radiation, pyrometry and phytometry. The study of thermal radiation and the determination of high temperatures and luminous intensities by radiation measurements; also the investigation of various standards of light.

(*d*) Mechanics, hydraulics and engineering, especially as applied to the study and testing of gas and water meters, pressure gauges and the various instruments for measuring high and low pressures, anemometers, engine indicators, speed counters and other engineering instruments..... 30

Total 100

Applicants must show that they have been graduated from colleges or technical schools or that they have attained an equivalent education. A preliminary rating will be made of the first subject as shown by the application and accompanying vouchers, and those competitors who fail to attain at least 70 per cent. on this portion of the examination will not be given a rating on the thesis under the second subject nor the examination test under the third subject. From the eligibles resulting from this examination it is expected that certification will be made to fill four vacancies in the position of assistant physicist in the National Bureau of Standards, two at a salary of $2,200, one at $1,800, and one at $1,600 per annum, and to other similar vacancies as they may occur.

On April 21, 1903, there will be an examination for the position of scientific assistant, the subjects and weights being:

1. College course with bachelor's degree (including a certified statement in detail of courses of study pursued and standing in each) 40
2. Post-graduate course or special qualifications (including a certified statement in detail of courses of study pursued and standing in each)..... 30
3. Thesis, or other literature (on a scientific subject bearing upon the work the applicant desires to pursue)..... 30

Total 100

Applicants who comply with the preliminary requirements may be examined in one or more of the following subjects. Each of these subjects, however, is rated independently and constitutes a distinct examination in itself: Agricultural statistics; agrostology; chemistry, agricultural; chemistry, analytical, methods for the detection of food adulteration; chemistry, analytical, official methods, except food adulteration; chemistry, analytical, qualitative and quantitative, including analytical chemistry used in connection with important industries; economic botany; entomology; forestry; horticulture (candidates in this subject should state their qualifications for service in Porto Rico and Hawaii); library science; physiology and nutrition of man; plant bacteriology; plant breeding; plant pathology; plant physiology; pomology; rural engineering, especially as applied to irrigation and drainage; seed testing.

From the eligibles resulting from this examination it is expected that certification will be made to the position of scientific assistant in the Department of Agriculture and to other similar vacancies as they may occur.

THE DESERT BOTANICAL LABORATORY.

THE Desert Botanical Laboratory of the Carnegie Institution will be located at Tucson. Mr. Frederick V. Coville and Dr. D. T. MacDougal, the advisory board of the laboratory, after a trip in January and February through the deserts of Texas, New Mexico, Arizona, California, Chihuahua and Sonora, reported in favor of locating the laboratory at Tucson, and the executive committee of the Carnegie Institution has approved the selection. The actual site of the building is on the shoulder of a mountain two miles west of the city of Tucson. This mountain and the adjoining mesas bear a splendid representation of such characteristic desert forms as *Cereus giganteus, Fouquiera, Opuntia, Echinocactus, Covillea* and *Parkinsonia.*