physiological restoration to health. No lives can be saved by such drugs that would not be saved merely by artificial respiration. Artificial respiration is harmless, in contrast to the ill effects of some of these drugs upon the heart. The only drug that can displace carbon monoxide from the blood, and replace it with oxygen, is oxygen. The only drug that can replace the carbon dioxide that the blood and tissues have lost, and recall the blood alkali into use in normal amount, is carbon dioxide. Carbon dioxide is also nature's own respiratory stimulant.

The treatment now used by the rescue crews of fire and police departments and of city gas and electric companies has demonstrated its effectiveness.[2] It consists of the inhalation of oxygen and 7 to 10 per cent. carbon dioxide. Unless the heart or brain is already severely damaged, resuscitation is almost always achieved. Many hundred inhalators for this purpose are now in use and are saving thousands of lives. The newspapers persist in calling these inhalators by the name of a discarded mechanical appliance, the "pulmotor." Every case of asphyxiation that recovers after a hypodermic injection of some drug is heralded as a brilliant cure. The victim would probably have recovered, and would certainly have felt much better next day, without the injection. Hypodermic medication in asphyxia is harmful rather than beneficial.

YANDELL HENDERSON
LABORATORY OF APPLIED PHYSIOLOGY
YALE UNIVERSITY

CHROMOSOME NUMBERS IN FLAX (LINUM)

ACCORDING to Tine Tammes, of the University of Groningen, The Netherlands, common flax, *Linum usitatissimum,* has 15 chromosomes (haploid), as has also *L. angustifolium,* a species native to southern Europe and which may be crossed readily with the cultivated flaxes. M. Kikuchi, of Japan, found 9 chromosomes (haploid) in *L. perenne* of Europe and in *L. lewissi* of North America. The writer is indebted to Dr. A. E. Longley, Division of Genetics and Biophysics, Bureau of Plant Industry, U. S. Department of Agriculture, for the determination of the number of chromosomes in five additional species and varieties of Linum, as follows:

Linum rigidum Pursh. (Mandan, N. Dak.)	15 chromosomes (haploid)	
L. sulcatum Riddell (Mandan, N. Dak.)	15 chromosomes (haploid)	
L. perenne Asiaticum (Caspian Sea plains)	9	do
Flax, Hoshangabad (India)	15	do
Flax, Bison (N. Dak. Agr. Exp. Sta.)	15	do

It is noteworthy that the two species, *L. rigidum* and *L. sulcatum,* which are very different from common flax, have, however, the same chromosome number as *L. usitatissimum.*

The variety Hoshangabad, C. I. 40, was obtained in February, 1914, from the Central Provinces, India, and later as Indian Type 1, from Gabrielle L. C. Howard, formerly second imperial botanist for India. It also was obtained from Luther Burbank in February, 1918, under the name "Burbank Flax." This variety has very large yellow seeds and pale pink flowers. Bison is a new wilt-resistant variety of seed flax developed by the North Dakota Agricultural Experiment Station.

This note is reported so that Dr. A. E. Longley may have credit for these additional chromosome determinations.

A. C. DILLMAN
DIVISION OF CEREAL CROPS AND DISEASES
U. S. DEPARTMENT OF AGRICULTURE

DANTE'S BONES

DANTE ALIGHIERI died in 1321 and was interred at Ravenna. Despite some vicissitudes, the bones of the poet seem to have been sufficiently cared for and kept marked. On the occasion of the 600th anniversary of Dante's death his tomb was opened and the bones committed for study to the care of Professor F. Frassetto, who with Giuseppe Sergi published a note on them in 1923. The definitive report has recently been published by Frassetto in a quarto of 205 pages with 95 figures. The cranium (without the lower jaw and teeth) is in excellent preservation and has been most exhaustively measured. The outline of the skull has been superimposed upon various extant busts of Dante. The fit is generally good except in the forehead; but then the existing portraits of Dante do not agree with each other and the fit with the Vela bust is excellent in all respects. The sumptuous volume can be obtained of Frassetto, University of Bologna, price bound ("di lusso, in pergamena") at L. 160.

C. B. D.

SCIENTIFIC BOOKS

RABER'S PLANT PHYSIOLOGY

CONGRATULATIONS are due any biologist when his book requires a second edition within five years; and further congratulations should be offered him when the second edition is such a marked improvement over the first.

Both of these statements apply to "The Principles of Plant Physiology" (The Macmillan Company,

[2] Y. Henderson, "Fundamentals of Asphyxia," *Journal of American Medical Association,* 101: 261–266, 1933.