ascorbic acid which has proved itself non-toxic when administered intravenously to either experimental or human subjects and has been used in this clinic for the treatment of secondary anemias.[3] This salt was found by us to have a highly antiscorbutic property when given intravenously, daily, over a period of six days to a patient with severe scurvy. A daily dose of 250 mgm was sufficient to bring the plasma ascorbic acid level from .02 mgm per cent. to 1.2 mgm per cent. and the withdrawal of marked scorbutic symptoms.

With the cooperation of Dr. Alexander and Dr. Townsend, these findings were confirmed in scorbutic guinea pigs and in normal subjects. An interesting feature in the use of the salt, as is especially demonstrated in normal subjects, is the slow rise in the plasma ascorbic acid content as determined by the method of Pijoan and Klemperer,[4] following its intravenous injection as contrasted to the slope of the values obtained after the injection of ascorbic acid. It would appear from these biological tests that the compound of iron ascorbate breaks down slowly. Chemically, after precipitating the ferrous iron by H_2S as ferrous sulfide and the reduction of the ascorbic acid by H_2S, we were able by the method of Emmerie[5] to recover 97 per cent. of the ascorbic acid. This would indicate that in the salt the double bond of the ascorbic acid molecule is still present, which alone would allow for further reduction to ascorbic and titration with 2.6 dichlorophenol indophenol. The salt as synthesized by us and by Messrs. Hoffman-LaRoche contains 20 per cent. iron and in a 1 M. solution is of pH 6.9. At this pH only one of the hydrogens at the double bond could be replaced by iron. In conclusion, this salt is not only successful in bringing ferrous iron into the treatment of secondary anemias but has valuable antiscorbutic properties in which single daily doses produce prolonged and increased plasma ascorbic acid values.

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THE MAYNARD PLUM—A CARRIER OF THE PEACH MOSAIC VIRUS

SINCE 1935 plum trees have been suspected of being carriers of the peach mosaic disease in the Palisade district, Colorado, though they show no apparent symptoms of the disease. To investigate this possibility, fresh roots and twigs were taken from six Maynard plum trees growing in an area where heavy losses had been incurred from peach mosaic.

On September 4, 1936, buds from each of these plums were grafted into five one-year-old peach seedling trees, making a total of 30 budded seedling trees. With the beginning of growth in the early spring of 1937, 15 seedling peach trees grafted with buds from parent plum trees Nos. 1, 5 and 6 showed typical symptoms of peach mosaic. The remaining 15 trees grafted with plum buds from parent plum trees Nos. 2, 3 and 4 remained healthy. All buds made growth unions. Twenty-eight seedling peach trees used as control remained healthy. The experiment was conducted in an isolated planting in a remote valley many miles from the mosaic-infected region.

On March 23, 1937, roots collected from the six Maynard plum trees were grafted on roots of 34 two-year-old peach seedling trees. Peach mosaic symptoms were observed on May 15 of the same year on 15 of the 17 peach seedling trees, which were root grafted, using plum trees Nos. 1, 5 and 6 as stock. Two root grafts failed to make growth unions and the peach trees remained normal. Seventeen peach seedling trees root grafted with roots from plum trees Nos. 2, 3 and 4 remained normal also. Thirty-three peach seedling trees used as controls remained free of infection.

From these experiments it appears that plums may be carriers of the peach mosaic virus, though the trees do not show the symptoms evident in the peach.

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A COMPANION WORD FOR PLANKTON

IN SCIENCE for September 25, 1936, I asked for a new word to rank with plankton, but indicating food that is found in the top layer of mud, feeding perhaps as many forms of life as the ones depending upon plankton.

The numerous answers made too extensive text for publication as a group in the limited space that could be devoted to them, but I have selected the gist of the material for brief presentation. Incidentally, in my original letter I should perhaps have added *Accipenser* and larval *Petromyzon* to the group using this food.

Dr. Wm. Rienhoff, Sr., of Baltimore, Md., suggested either Iloen or Ascion, expressing in slime-imbedded organic particles serving as animal foodstuffs in contrast to plankton, expressing free floating material.

Dr. W. A. Dayton, of the U. S. Forest Service, suggested "ilyophagous organisms." He said the Greeks had a word for mud feeder, "borborophagous."

Dr. Carl L. Hubbs, curator of fishes, University of Michigan, suggests "hyperbius."

Dr. Dorothy Cobb Adams, of the Johns Hopkins Hospital, suggested "limous plankton" from *limus*—mud or slime.

[4] M. Pijoan and F. Klemperer, *Jour. Clin. Invest.*, 16: 3, 443, May, 1937.

[5] A. Emmerie, *Biochem. Jour.*, 28: 268, 1934.