



# Science News-Letter

The Weekly Summary of Current Science

Reg. U. S. Pat. Off.

A Science Service Publication



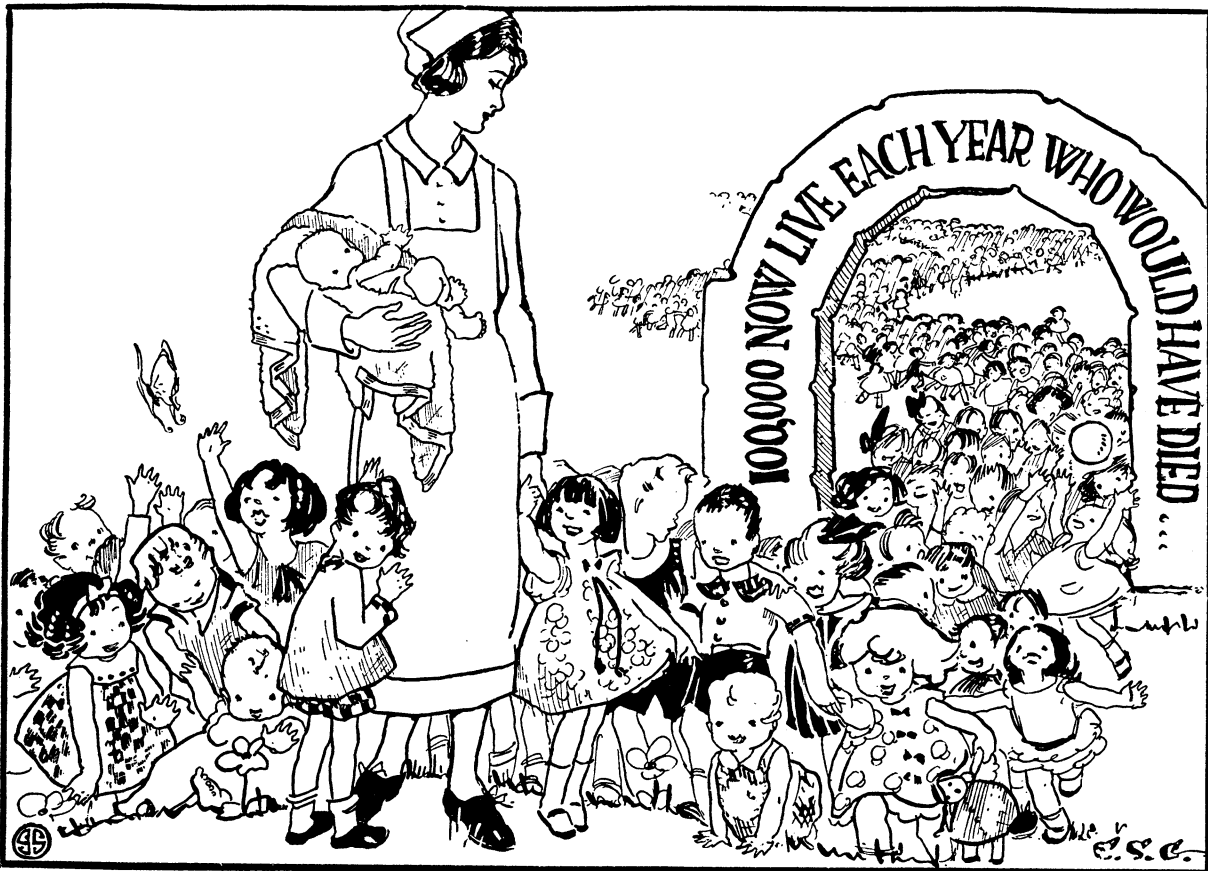
Edited by Watson Davis  
Vol. XII No. 335



10¢ a copy \$5 a year  
September 10, 1927

HYGIENE

## How Healthy Are Your Children?



IN THE LAST TWENTY-FIVE YEARS THE NUMBER OF CHILDREN between the ages of one and four that die each year has been reduced from 21 to 6 in every thousand. Statisticians say the death rate should soon be reduced to 1 per 1000

By MARJORIE MACDILL,

The nation is beginning to awaken to its responsibility for the health of its children.

With vacation over, the annual autumnal process of cramping some 19,838,384 young wild Indians within the limits of blackboards and brick wall will soon be under way.

Are Johnny and Mary all ship-shape and in good physical trim to take their part in the ordeal?

Preparation for school these days is coming to mean something more than blowing the dust off the books that were parked on the closet shelf

last June and a trip downtown with Mother to try on the bargains of Get Ready for School Week. Mary's adenoids make almost as much commotion in the grammar grades as her deficiency in arithmetic. If Johnny continues to hold his book up in front of his nose and is still minus glasses, a better quality parental alibi should be forthcoming than the one cooked up by Johnny to account for the marks on his monthly report card.

It is being strongly urged by public health officials that children should come back to school with their health defects corrected and their physical

plumbing all in order to meet the demands of the coming year. It is hard to curtail a fellow's activities during vacation but the future will probably see organized health drives for this end instigated in June. Then all the "healthy" jobs of glasses fitting, tonsil removing, diphtheria immunizing, not to mention the remedying of more serious handicaps, can be accomplished without wasting school time and the patients will have the chance to recuperate out-of-doors.

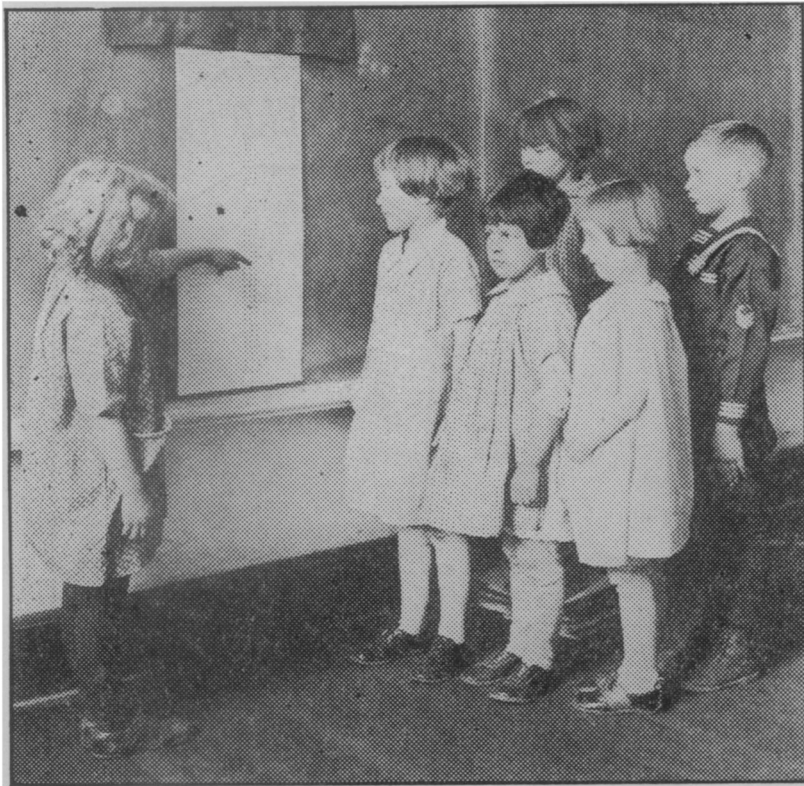
The health inventory against which Johnny and Mary can be

(Just turn the page)



## INDEX TO THIS ISSUE

Allegany State Park.....	173	Dublin, L. K.....	167	Johnson, G. H.....	173	Physiology, Human.....	166
American Chemical Society.....	163	Earth Heat.....	166	Katz, S. H.....	164	Pleistocene Man.....	165
Antartica.....	165	Eels.....	171	Keith, Sir Arthur.....	165	Pure Chemistry, Value of.....	163
Anthropoid Origin of Man.....	165	Enceladus.....	175	Keyes, D. B.....	163	Pyramid Building.....	171
Archimedes.....	169	Englishmen Growing Taller.....	165	Labor Statistics Handbook.....	173	Pyroxilin Fabrics.....	163
Arctic.....	165	En-Shag-Kush-Anna.....	173	Lassell.....	175	Radio Waves Like Light.....	173
Arthur, John M.....	175	Family Food Supply.....	173	Lobeck, A. K.....	173	Radio Waves, Short.....	173
Ashman, Richard.....	173	Food, Energy Consumed.....	175	Magellan.....	175	Robinson, D. S.....	173
Bananas Abundant.....	175	Frevert, H. W.....	164	Magoffin, R. V. D.....	169	Rosengarten, George D.....	163
Being Well-Born.....	173	Geer, William C.....	164	Man, in Pleistocene.....	165	Rubber, Artificial.....	164
Bradshaw, Hamilton.....	163	Genes, Liability of.....	170	Merrill, Paul W.....	173	Rubber, Reclaimed.....	164
British Association Adv. Sci.....	165	Grape, New Seedless.....	175	Methods of Reasoning.....	173	Sandals.....	169
Brown, R. N. Rudmose.....	165	Grinding Machinery.....	164	Milbank Memorial Fund.....	162	Stars, Temperature of.....	173
Carbon Monoxide.....	164	Guyer, Michael F.....	173	Milligan, Lowell H.....	164	Stout, A. B.....	173
Children, Health of.....	161	Health of Children.....	161	Mougey, H. C.....	163	Textile Fabrics.....	173
Clay Roads.....	164	Herschel.....	175	Munns, E. N.....	171	Trees from Big Seed.....	171
Coated Fabrics.....	163	Hodgson, John L.....	166	Nature Ramblings.....	171	Typhoid in Oyster Juice.....	171
Darwin Upheld.....	165	Humason, Milton L.....	173	Niewland, J. A.....	164	Ultra-Violet Glass.....	175
Dawkins, W. Boyd.....	165	Hyperion.....	175	Orton, W. A.....	175	Universe, Size Measured.....	166
Descent of Man.....	165	Ice Age Man.....	165	Oysters and Typhoid.....	171	Upham, Charles M.....	164
Douglas, C. G.....	166	Inventions for Automobiles.....	163	Park, Wm. A.....	171	Vinyl Chloride.....	164
		Jennings, H. S.....	169	Parsons, F. G.....	165	Weigall, Arthur.....	171
				Pharmacists' Jubilee.....	175	Whittaker, E. T.....	166
						Science News-Letter, Sept. 10, 1927	166



DIPHTHERIA immunization puts tots on this honor roll. This scene was taken at a Milbank Memorial Fund health demonstration in Syracuse, N. Y.

### Are Your Children Healthy?

(Continued from page 161)

checked should lead off with small-pox vaccination and diphtheria immunization. The first is required in most public schools anyway and its benefits need no elucidation. Diphtheria deaths among children under five years in this country have dropped from 12,300 in 1910 to 5,000 in 1925, due largely to the curative antitoxin and the preventive treatments which assure a child of protection from this disease for many years, if not for life.

Everyone realizes that care of children's teeth is only another form of insurance. Some 80 per cent. of school children, according to figures from the U. S. Public Health Service, have decayed teeth. During the

sixth year the first permanent molar arrives and upon the health of this tooth the shape of the jaw and regularity of the dental arches largely depend. So this is a critical period when a trip to the dentist should be made.

Eyes and ears should be tested if there is any indication that either sight or hearing are not up to normal and suspicious tonsils should go where all bad tonsils belong. It has been found that children whose tonsils have been removed are less likely to suffer not only from tonsillitis but from heart disease, rheumatism and scarlet fever as well.

An all-round health examination will also uncover any indications of

(Turn to page 167)



SCIENCE NEWS-LETTER. The Weekly Summary of Current Science. Published by Science Service, Inc., the Institution for the Popularization of Science organized under the auspices of the National Academy of Sciences, the National Research Council and the American Association for the Advancement of Science.

Publication Office, 1918 Harford Ave., Baltimore, Md. Editorial and Executive Office, 21st and B Sts., N. W., Washington, D. C. Address all communications to Washington, D. C.

Entered as second class matter October 1, 1926, at the postoffice at Baltimore, Md., under the act of March 3, 1879. Established in mimeograph form March 13, 1922. Title registered as trade-mark, U. S. Patent Office.

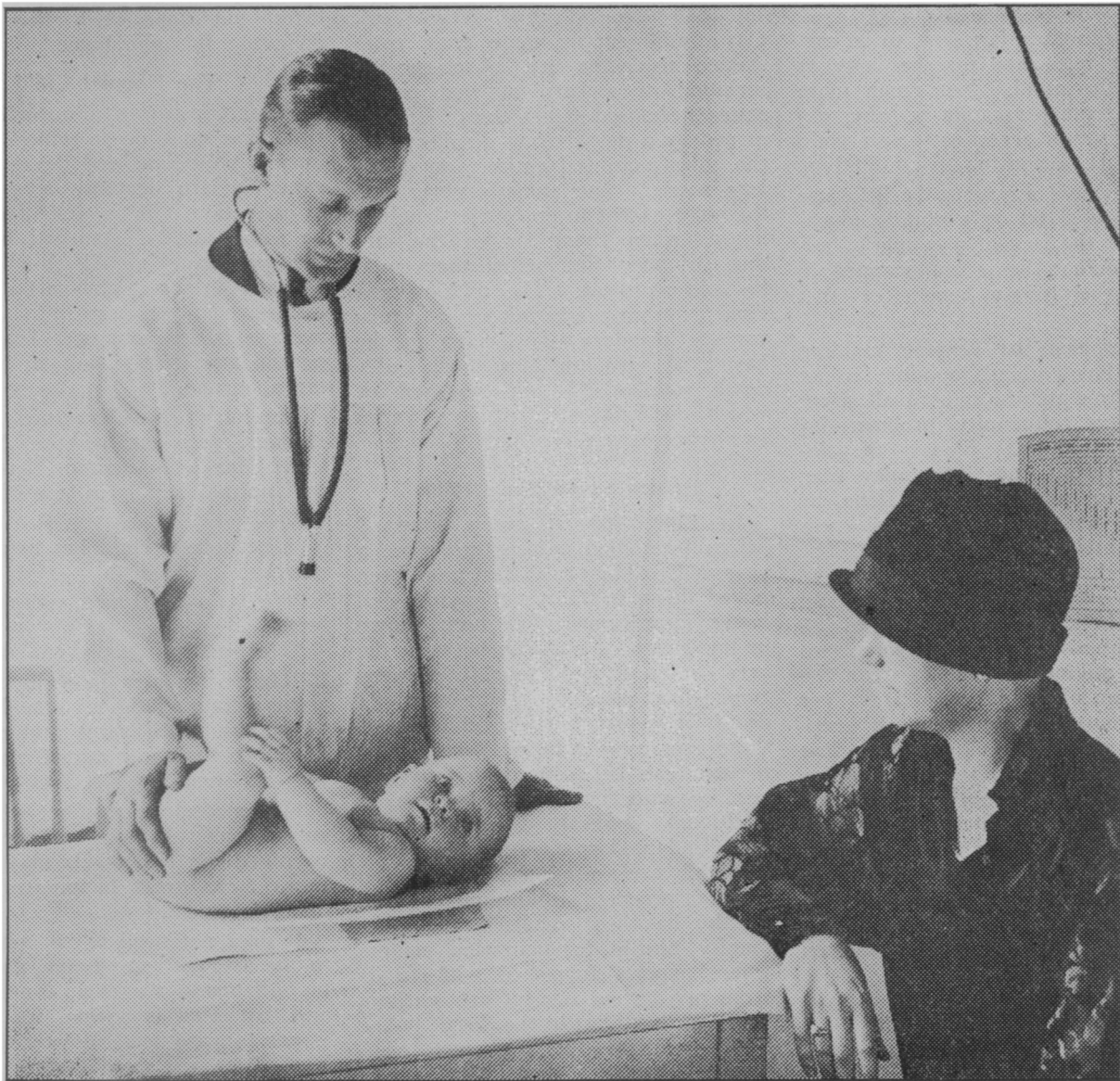
Subscription rate—\$5.00 a year postpaid. 10 cents a copy. Ten or more copies to same address, 6 cents a copy. Special reduced subscription rates are available to members of the American Association for the Advancement of Science.

Advertising rates furnished on application.

Copyright, 1927, by Science Service, Inc. Reproduction of any portion of the SCIENCE NEWS-LETTER is strictly prohibited since it is distributed for personal, school, club or library use only. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service, details and samples of which will be gladly sent on request.

Staff of Science Service—Director, Edwin E. Slosson; Managing Editor, Watson Davis; Staff Writers, Frank Thone, James Stokley, Emily C. Davis, Marjorie MacDill, Gladys Moon Jones; Sales and Advertising Manager, Hallie Jenkins.

Board of Trustees of Science Service—Representing the American Association for the Advancement of Science, J. McKeen Cattell, Treasurer, Editor, Science, Garrison, N. Y.; D. T. MacDougal, Director, Desert Laboratory, Tucson, Ariz.; M. I. Pupin, Professor of Electromechanics, Columbia University, New York City. Representing the National Academy of Sciences, John C. Merriam, President, Carnegie Institution of Washington; R. A. Millikan, Director, Norman Bridge Laboratory of Physics, California Institute of Technology, Pasadena, Calif.; Dr. David White, Chairman of the Division of Geology and Geography, National Research Council; Representing National Research Council, Vernon Kellogg, Vice-President and Chairman of Executive Committee, Permanent Secretary, National Research Council, Washington, D. C.; O. G. Abbot, Director, Astro-Physical Observatory, Smithsonian Institution, Washington, D. C.; Victor C. Vaughan, Professor Emeritus of Hygiene, University of Michigan. Representing Journalistic Profession, John H. Finley, Associate Editor, New York Times; Mark Sullivan, Writer, Washington, D. C.; Marlen E. Pew, Editor of Editor and Publisher, New York City; Representing E. W. Scripps Estate, W. E. Ritter, President, University of California; Robert P. Scripps, Scripps-Howard Newspapers, West Chester, Ohio; Thomas L. Sidlo, Cleveland, Ohio.



*STARTING RIGHT.* This young husky is getting one of the physical examinations recommended by the U. S. Children's Bureau

### Are Your Children Healthy?

*(Continued from page 162)*

incipient tuberculosis or heart defects that can be brought into subjection more readily than if allowed to develop unsuspected. In some regions it is wise for children to be immunized to typhoid fever in addition to diphtheria.

### Prevention Better Than Cure

These are a few of the high spots of health to which every child should be carried. With the exception of yellow fever, which has been fairly effectively stamped out in civilized countries, very few of the great discoveries of preventive medicine have been applied to anything like their fullest possibilities. There are effective ways of preventing smallpox, typhoid fever and diphtheria and yet

flare-ups of these highly fatal diseases continue to exact a needless toll of human life.

It is beginning to trickle slowly through the consciousness of the American people, through the constant warnings of doctors, the demonstrations of health experts, and figures of statisticians, that waste of life is waste of money and that health like education pays.

### Every Baby Boy Worth \$9000

Dr. Louis I. Dublin, statistician of the Metropolitan Life Insurance Company, estimates that the lives of 110,000 babies under a year old and 52,500 children from one to fifteen years of age can be saved each year if communities would only wake up to their opportunities of controlling the conditions which destroy the lives of

children and apply modern preventive medicine. Since studies by Dr. Dublin show that the potential value of a new-born baby is \$9,000 and that a boy at the age of 15 is worth in excess of \$25,000 to society, the preventable deaths of children represent an economic loss that runs into millions even when the sufferings of little children and the griefs of their parents are not considered.

### The Doctor Bill for Children

As a people we are not a bit parsimonious in matters of education. From the very beginning we have believed that it is worth what it costs. The more advanced communities spend well over \$100 on the training of each child every year and think the money well used. This liberal policy

*(Just turn the page)*



## Are Your Children Healthy?

(Continued from page 167)

is only beginning, however, to be carried over into care for the body as well as the mind. Not much more than 60 cents per capita is being expended in the largest cities on child health work, according to Dr. Dublin.

There would appear to be little use in spending \$100 on a child's education if for the lack of a couple of additional dollars he is handicapped in reaping the fullest benefit of that training.

The problem of keeping children well, in Dr. Dublin's opinion, is not so much one for the individual parent as it is a community problem for common solution. Today the individual parent does little more than attempt to repair damage done by disease. yet the cost of sickness among children is astounding. The average child is sick from four to eight days a year, and his doctor and nursing bills are not less than \$5 a year, imposing a tax of some two hundred millions of dollars upon the nation annually. If only \$1.50 per capita annually were spent on keeping the children well, totaling less than the loss due to child sickness alone, the waste of neglected children would be prevented. From \$2 to \$2.50 per child would be a more adequate sum. With this an ideal health department could carry on activities of child welfare that would lead to the saving of the lives of 162,500 children in this country annually.

### Milk in the Dark Past

It is a far cry from ideal health departments to the famous case of Mary Ellen that attracted wide attention some fifty years ago. This unfortunate Manhattan waif was rescued from the clutches of cruel and inhuman step-parents by the Society for the Prevention of Cruelty to Animals in 1866 because there was then no organization in existence that looked after the welfare of children.

In those days it was taken for granted that genus homo was particularly susceptible and friable in his early years. Babies and children died off more readily than grown-ups and that was all there was to it. They were cared for when they were sick and it occurred to no one to take special steps beyond ordinary care to keep them well. It was only in 1910 that these enlightened United States even published mortality statistics for babies under one year old.

Only twenty-five years ago the bacterial count of New York City milk was higher than ordinary sewage

and most cities were no better off. In 1840 five-sixths of New York City's milk supply came from cows stabled inside the city. A classic description of a barn of that period states it housed 2,000 cows. It was owned by a neighboring distillery and the cows were fed entirely on distillery waste. The animals never left the place except to go to the slaughter house, when dying or to the city dump if they died before they could be sold as meat. The milking was done by tramps and hoboes in return for the privilege of sleeping in the barns. At this time New York had a death rate of 25 per thousand of which one-half were children under five years of age.

### Babies Saved Since 1900

In 1900, 169 of every thousand babies born died before they were a year old. This rate has now been pulled down to 75 per thousand, and better improvement has been shown in the group of children between the ages of one and four. Whereas twenty-five years ago there were 21 deaths in every thousand children of these ages, now only six perish. This in turn can be reduced to only one per thousand, Dr. Dublin believes, if additional medical discoveries are made and modern facilities for nutrition and care are applied.

Great progress in keeping children healthy has been made in the community health demonstration centers where experts furnished with funds from private endowment are working hand in hand with the local public health officials. In one such community, that of Athens, Ga., a city of 16,000 inhabitants, no child died of diphtheria, whooping cough, measles or scarlet fever in the year of 1926.

Syracuse, N. Y., the scene of an interesting health demonstration undertaken by the Milbank Memorial Fund of New York, has not had any deaths from scarlet fever since 1924 and has had the lowest diphtheria death rate it has known in years.

The directors of this fund have undertaken the experiment of determining how long living can be prolonged in three typical sections of American life. One is in the rural county of Cattaraugus in southwestern New York, the second is in the medium-sized industrial city of Syracuse, while the third is in the heart of New York City. The fund affords expert consultants and provides money for services which would not otherwise be available. At the end of four years the health organization in the first two communities is partially self-supporting, showing that many citi-

zens are willing to pay the bills for better conditions when their value is definitely brought home.

### The Normal Child

What constitutes a normal healthy child is a question to which teachers, nurses, physicians and health workers generally are devoting a great deal of attention. It is felt there must be some sort of standard by which the well-being of all childhood can be gauged; for in the past even doctors have known very little about the average husky youngster because the normal was studied only to bring out the abnormal.

Secretary of Commerce Herbert Hoover, president of the American Child Health Association, has defined the normal child in the following terms:

"The normal child has firm, strong muscles.

"He has well formed, well enamelled teeth.

"He breathes deeply and easily.

"He participates in ordinary exercises without fatigue. He has pep, he shouts, yells, races and makes a noise; this is sheer animal spirits letting off steam.

"In mental terms he is neither superfluously happy nor deeply discouraged but his moods may vary at times from great happiness to deep discouragement."

It does not need to be pointed out to the average parent that no two of his offspring are ever exactly alike and that what is normal for one age is not for another. Yet on the other hand there are some factors that are common to all children of the same age. Science is all the time bringing to light new facts about child development and gradually health workers and parents alike are learning what to expect as they watch their children grow. Leaders in the medical profession admit that far too little stress has been placed on teaching the welfare of the child in the training of young medics, but the time when the doctor is called in only after the child is sick is passing. Paying the doctor to keep children well is on the verge of coming out of the idealist's Utopia into the realm of hard common sense.

Science News-Letter, September 10, 1927

The Isle of Pines gets its name from its remarkable tropical forests of pine trees.

Some kinds of weed seeds may live as long as 25 years under favorable conditions.