

## GENERAL SCIENCE

# Science-Minded Youth

**Urgent problem is to interest young people in all fields of science, since present shortage of technically trained persons is acute and will continue for many years.**

► HOW TO get young people to become the scientists and engineers of the future is a problem that the world faces. The colleges are not turning out enough creative and technological brains to do all the jobs that industry and defense will demand in the future.

There is now an acute shortage of scientists and engineers. There will be an unfilled need in future years.

The starting point for these scientists and engineers of tomorrow is in the high schools. Many schools are not doing what they should in solid basic courses in science and mathematics, inspiringly taught. Many boys and girls do not learn of the opportunities before them. They do not realize what the world needs. Some can accomplish much more than the courses designed for the average will afford.

The youngster who does a science experiment or project as a hobby, outside the school room, is often the scientist of the future. Many of the great scientists of today got their start by making "ham" radio sets, collecting insects or minerals, tinkering with automobiles and engines, and doing a hundred other such things.

Today a third of a million boys and girls are in 15,000 science clubs in the nation's secondary schools. In over half a hundred areas they can enter their projects in science fairs, which means that about 40,000 to 50,000 such exhibits will be made and shown this spring. About a hundred winners of the local science fairs will compete in the Fifth National Science Fair to be held May 13-15 at Purdue University.

This great science club-fair movement, as well as the National Science Talent Search, is fostered nationally by SCIENCE SERVICE. All these youth activities are coordinated under Science Clubs of America, a SCIENCE SERVICE activity.

Many industries and professional scien-

tific and engineering societies are alert to the need of more young people entering training for science and technology. There is both an Engineering Manpower Commission and a Scientific Manpower Commission. These bodies, created by professional societies, will coordinate their programs for informing and inspiring high school students during 1954.

Creative youths in every part of the nation will thus have a chance to do the most that their ability allows. Parents, neighbors and teachers can now do something about the enthusiastic youths who get excited about remaking the world and discovering more about the universe. In every part of the nation, there are competent persons who will help.

(An inquiry to SCIENCE SERVICE in Washington will put the youth in touch with someone who is interested.)

Science News Letter, January 23, 1954

## GENERAL SCIENCE

## Future Science Manpower Hurt by Teacher Shortage

► AMERICA'S FUTURE scientific manpower is being hit hard by a growing shortage of high school science teachers.

In a 48-page report just published by Harvard University, 23 U. S. educators pointed out that the shortage will grow even more acute in the next decade.

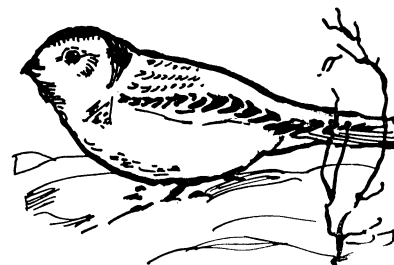
Unqualified persons already are teaching science in some cases. In addition to giving poor instruction, these persons also may endanger their pupils by exposing them unwittingly to harmful chemicals, dangerous electrical devices and infectious bacterial agents, the educators warned.

The group foresaw the possibility that incompetent science teachers could present such a classroom "caricature of science" that promising students would develop a repugnance for the subject.

Overwork and low pay in the teaching profession were cited as the main reasons why college science graduates are turning to occupations other than teaching.

The educators recommended that colleges and universities undertake a vigorous campaign for recruiting secondary school teachers, especially in science and mathematics. High school teachers were asked to encourage their pupils to consider science teaching as a profession. The group also recommended that a five-year college training program for teachers be made a mandatory minimum.

Science News Letter, January 23, 1954



Winter Guests

► WINTER BIRDS do not have too hard a time of it in ordinary winter weather. Chickadees and nuthatches and their cheerful little kindred are used to cold weather—even seem to like it, for they do not fly on farther south as they easily might.

They make a pretty good living by prying insect pupae and egg masses out of crevices in the bark of trees, harvesting the seeds of weeds that stick up through the snow, and exploiting other sources of food that human beings would never think of.

Heavy snowfalls, especially if they are followed by light rain or partial thaw that puts a hard crust of glaze-ice on top, are apt to make life difficult on even the hardiest of "snowbirds."

There are many kinds of "snowbirds"—small birds that do not fear the snow and even like it. One of the less frequently seen of these is the snow bunting, which comes south from its real home on the wide, treeless tundras of the North only in the winter.

If you have taken up the admirable practice of caring for winter birds, by setting out offerings of food and by suppressing cats in your neighborhood, you may be blessed with a visit of these hardy little Northerners.

Unlike many of our birds, the snow buntings of both sexes look alike. Their winter plumage, in which we of course see them, is brown on top of the head, lighter on the neck, with white on the sides. The back is brown, streaked with black, the throat and underside of the body white, with a broad brownish band across the breast.

The brown upper parts blend with the white underside in a sort of brownish wash. The wings are sharply black and white, with some of the feathers brown-edged. The inner tail feathers are black, the outer white. All round, they are very well-dressed little birds.

Science News Letter, January 23, 1954

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