

Anniversaries of Science

March 30, 1861—Crookes announced the discovery of the new metallic element Thallium.

Some years previous to 1861 Crookes had been engaged in the extraction of selenium from a seleniferous deposit which he had obtained from the sulphuric-acid manufactory at Tilkerode in the Hartz Mountains. Some residues, left after the purification of the selenium, and supposed to contain tellurium, were set aside and not examined until 1861, when, needing tellurium, Crookes vainly tried to isolate it by various chemical methods. At length he resorted to spectrum analysis, and tested some of the residue in the flame. The spectrum of selenium appeared, and as it was fading, and he was looking for evidence of tellurium, a new bright-green line flashed into view. The element whose presence was thus indicated received the name Thallium, from *thallus*, a budding twig.

—Browning: *Introduction to the Rarer Elements*.

April 4, 1617—John Napier, inventor of logarithms, died.

Napier's conception of a logarithm involved a perfectly clear apprehension of the nature and consequences of a certain functional relationship, at a time when no general conception of such a relationship had been formulated or existed in the minds of mathematicians, and before the intuitional aspect of that relationship had been clarified by means of the great invention of coordinate geometry made later in the century by Rene Descartes. A modern mathematician regards the logarithmic function as the inverse of an exponential function; and it may seem to us, familiar as we all are with the use of operations involving indices, that the conception of a logarithm would present itself in that connection as a fairly obvious one. We must, however, remember that, at the time of Napier, the notion of an index in its generality, was no part of the stock of ideas of a mathematician, and that the exponential notation was not yet in use.

—Hobson: *John Napier and the Invention of Logarithms*.

April 5, 1827—Birth of Lord Lister, pioneer in antiseptic surgery.

Early in his hospital experience, Lister had been deeply impressed with the high mortality from such surgical pests as septicemia, pyemia, erysipelas, tetanus, and hospital gangrene. . . . These were the days of "laudable pus," yet Lister had already begun to think of the old Hippocratic healing by first intention as the surgeon's ideal. Noticing that the latter, when attainable, was always dissociated from putrefaction, his attention was actually drawn to Pasteur's work, and, immediately grasping its tendency, he set out definitely to prevent the development of microorganisms in wounds. Perceiving that Pasteur's heat sterilizations would avail nothing here, he turned to chemical antiseptics, and, after trying out chloride of zinc and the sulphites, he hit, by lucky chance, upon carbolic acid, which had been employed, a short while before, in disinfection of sewage at Carlisle. . . . Modern surgery, it is true, has become almost entirely aseptic, in the sense

of discarding strong antiseptics in the dressing of wounds, but in both the Listerian ideal of avoiding sepsis remains the same.

—Garrison: *History of Medicine*.

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ENTOMOLOGY

Insects Infest Skies

A new sport has been inaugurated—fishing for insects in the clouds. It is far more exciting than catching butterflies in the fields, for it involves an aeroplane ride or else use of the kite, beloved since boyhood.

That insects actually are present as much as half a mile above the ground has been demonstrated by Dr. E. P. Felt, New York State entomologist and Dr. B. R. Coad, U. S. entomologist of Tallulah, La. By means of traps using tanglefoot and attached to aeroplanes, Dr. Felt has caught flies of two species and an adult corn root maggot, at elevations of from 1,000 to 3,000 feet. One species of fly was identified as an insect that is ordinarily found close to the ground and in the shade. It was commonly believed that the insect could not occur more than ten feet above the ground. The Experiments of Dr. Coad at Tallulah indicate the general occurrence of small insects at even greater altitudes than the ones where they were trapped by Dr. Felt.

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BOTANY

"Greens" Sprout Best in Chill

Plant your garden greens early next spring if you want to get the most of your seeds to sprout. This section of the garden seems to prefer cool soil to sprout in, and some of the plants even seem to like it downright chilly. These indications are among the results of experiments by Dr. Felix Kotowski, of the College of Agriculture, Warsaw, Poland. He planted large numbers of seeds in sand, which he kept at several uniform temperatures until the young plants came up. In general, the warmer the soil the larger was the proportion of seeds that germinated, but one group of vegetables, including spinach, lettuce, parsley, cabbage and beets, gave better results at lower temperatures. The optimum temperature for spinach was 36 degrees Fahrenheit, not much above freezing. Parsley seeds germinated most abundantly at 45 degrees, and beets at 51 degrees.

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Helium, the non-explosive gas used in airships, exists in the air in the proportion of one part in 185,000.

Scientific Poetry Prizes

This week's scientific poetry prize, the fourth in our series, goes to Freeman Weiss, of Washington, D. C. Mr. Weiss got his inspiration from the columns of the Science News-Letter itself; perhaps you, too, can find in some item in this issue a theme upon which to grow lyrical.

Conditions: Poems, verses, rimes, jingles or what-have-you must be original and unpublished. They must express accurately some scientific fact or situation. Address: Poetry Editor, Science Service, 21st and B Sts., Washington, D. C. Keep a copy, as unavailable contributions can not be returned.

Prizes: One poem will be published each week. A prize of \$5.00 will be paid for each poem published.

BIOLOGY—CHEMISTRY

Geraniolorelei

This week's prize winning poem in the Science Service scientific poetry contest.

O Bugman! Say it presages
Defeat of a dreaded foe:
An item from NEWS-LETTER pages
Will not from my memory go;
The day is warm and the sun shines,
And sweet is the summer air,
A peach tree stands on the skyline
Or maybe it is a pear.

Craftily placed in its branches
A trap for a beetle haul;
A fragrant substance entrances,
Seductive Geraniol,
Wafts on the summer breezes
A potent aroma,
One that mightily pleases
Popilia japonica.

And every Japanese beetle
That dwells within a mile
Hastes to the baited peach tree
Lured by its potent wile;
Blind to the deadly spray gun
Which takes a terrible toll.
Then is the beetle's day done:
Thanks to Geraniol!

—Freeman Weiss.

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Benjamin Franklin thought the wild turkey most suitable as the American national bird.

The Chinese often paint their houses with a mixture of powdered oyster shells and water.

Fossilized footprints of three-toed prehistoric animals were found in New England over 100 years ago, but were considered ordinary bird tracks.