

Every Tree a Wireless

Potential Telegraphy in Nature's Growth Is Revealed by Army Officer

Discovery that every tree is a potential wireless tower was announced recently by Major General Squier, chief signal officer of the army, revealing another war secret and telling the story of how, while hostilities were on, the American army, with a string of stations using tree tops as antennae, read messages from ships at sea and the principal European radio stations.

General Squier made his disclosure in a paper read before the Physical Society of America, meeting in Washington, D. C., at the United States bureau of standards.

Afterward he took the scientists out into the woods near the bureau and demonstrated a portable field laboratory erected there for experiments in development of the discovery.

He showed how nature's wireless tower was nothing more than a tall tree, preferably eucalyptus, with a small wire netting spread below and an insulated wire hanging from a spike driven near the top.

"From the moment an acorn is planted in fertile soil," said General Squier, "it becomes a 'detector' and a 'receiver' of electro-magnetic waves, and the marvelous properties of this receiver, through agencies at present entirely unknown to us, are such as to vitalize the acorn and to produce in time the giant oak. In the power of multiplying plant cells it may indeed be called an incomparable 'amplifier.'"

MY CATBIRD

Prime cantante!
Scherzo! Andante!
Piano, pianissimo!
Fresto, prestissimo!

Har! are there nine birds or ninety and nine?
And now a miraculous gurgling gushes
Like nectar from Hebe's Olympian bottle.
The laughter of tune from a rapturous
throat!
Such melody must be a hermit thrush!
But that other caroler, nearer,
Outrivaling rivalry with clearer
Sweetness incredibly fine!
Is it oriole, redbird or bluebird,
Or some strange un-Auduboned new
bird?

All one, sir, both this bird and that bird!
The whole flight are all the same catbird!
The whole visible and invisible choir you
see

On one lithe twig of yon green tree,
Flitting feathery Blondell!
Listen to his rondo!
To his lay romantic,
To his sacred canticle,
Hear him fitting,
See him fitting,
His saucy head and tail are fluttering
While uttering
All the difficult operas under the sun,
Just for fun!
Or in tipsy revelry,
Or at love deviltry,
Or, disdainful his divine gift and art,
Like an imitable poet
Who captivates the world's heart,
And doesn't know it,
Hear him fit!
See him fit!

Then he suddenly stops,
Peers about, flirts, hops,
As if looking where he might gather up
The wasted ecstasy just split
From the quivering cup
Of his bilas overrun.
Then, as in mockery of all
The tineful spells that e'er did fall
From vocal pipe, or evermore shall rise,
He snarls, and mews, and flies.
—William Henry Venable.

\$15,946,000 Lent to Farmers During the Month of March; Total of 185,643 Ask Loans

During March \$15,946,000 was lent to 4,630 farmers by Federal Land Banks on long-time first mortgages, according to the monthly statement of the farm loan board. The Federal Land bank of Omaha leads in amount of loans closed, \$4,565, with the Federal Land bank of St. Paul running second in amount, \$1,893,200.

The other banks closed loans as follows: Houston, \$1,838,000; Spokane, \$1,528,000; Louisville, \$1,142,000; St. Louis, \$1,125,000; Columbia, S. C., \$923,000; Wichita, \$775,000; New Orleans, \$741,000; Berkeley, \$547,000; Springfield, Mass., \$525,000, and Baltimore, \$336,000.

On April 1 the total amount of mortgage loans since the establishment of the federal land banks was \$198,609,000, with 79,949 borrowers. Altogether 185,643 have applied for loans under this system, aggregating \$492,966,733.

Gets 125 Bobcats and 200 Coyotes in Three Years

With a record of 125 bobcats and 200 coyotes to the credit of a North Yakima (Wash.) government trapper operating in the mountains and valleys of that region, it is estimated by ranchers that he has saved them 24,000 head of sheep and 80,000 game birds in the past three years. Basing their estimate on the known destructiveness of these wild pests, the money value of the stock saved is computed by them at \$240,000. The fur of the beasts killed or trapped was worth \$16,000.

HERE AND THERE

Fools begin a lot of things that wise men finish.
Cash is the password to many a secret organization.
A man of ripe experience is too wise to monkey with green fruit.
Every time a battle is fought another scrap of history is made.
When a man is up and doing, much depends on what or whom he is doing.
Don't get the idea that distance lends enchantment to man's view of pay day.

Inexperienced Man Can Make Good as Manager of a Big Baseball Club

A couple of years ago the dopsters generally were of the opinion that an inexperienced man could not step in and make a success as manager of a major league club. Hugh Bezdek proved an exception. He didn't know much more about handling a baseball club than a rabbit does about Sunday, but he knew how to handle men and he knew baseball players by reason of scout work and



Hugo Bezdek.

studying the game. Bezdek was famous as a gridiron coach and last fall handled the Penn State squad.

Bezdek's appointment as manager of the Pirates was one of the surprises of baseball. In 1917 the team finished last. In 1918, after fighting along most of the season in third place, Bezdek finished in fourth place with an average of .520. This season the club is considered a dangerous one in the fight for the pennant. Several stars have returned from army service and with one of the strongest staffs of hurlers in the National league the Pirates are picked by many dopsters to finish in the running.

KEEPING BOOKS ON THE HENS

These days, knowing the hen's exact board bill is next in importance to knowing her exact production of eggs in a given length of time. Some testing work carried on by the Ohio experimental station with a flock of 24 Leghorn hens for three years has furnished valuable data on the amount of feed consumed by a flock of layers when kept until three years old, and no less important is the number of eggs these hens laid during the three years of their lives.

This flock of Leghorns was fed a fairly well-balanced ration of mixed grains and dry mash, containing meat scraps, also green feed, shell and grit. The hens consumed an average of 174½ pounds of grain and mash during the three years, from November 24, 1912, to October 6, 1915, which during that period cost \$2.27 per hen. The hens laid an average of 351 eggs each, or 117 eggs per hen each year, and yielded a total profit of \$4.18 per hen. The feed cost of the eggs was 7½ cents a dozen. At the end of three years there were 17 of the hens still alive, the mortality having been 29 per cent.

If we triple the feed cost per hen to approximate present feed prices, and make the average price of eggs 35 cents a dozen, hens of same average quality would return an annual profit above feed cost of better than \$1 each for three laying years. On the same basis, 1,000 hens would return to the poultryman a fair living above expense of investment, depreciation, interest, etc.

PERSONAL MENTION

Fred Belcher came up from Denver Wednesday evening.

Geo. L. Hamllik went to Denver Wednesday afternoon to take charge of the funeral of Mrs. Nelson Bishop.

Sam Thomas went to Denver this morning.

Mr. and Mrs. James Johns left for Denver this morning. Mr. Johns has been sick and went to the valley to recuperate.

Mr. and Mrs. Thomas Cudahy went to Denver Sunday.

Miss Martha Davidson went to Arvada Saturday. She returned Monday evening with her sister, Miss Lulu.

Miss Laura Trenoweth and mother arrived from Boulder Monday evening.

Mrs. Richard Fraser went to Denver Tuesday morning to see Mr. Fraser who is in the hospital but is getting along nicely.

Prof. W. H. Wolfe left Tuesday afternoon for Kansas, where he has a farm.

Mrs. John Lemkuhl returned Monday evening from a visit to Denver.

Sol Bacharach was in Denver this week.

J. R. Rule went to Greeley yesterday and will bring his family back with him.

Mr. and Mrs. Henry Becker came up from Denver Friday afternoon to visit relatives and friends.

Mrs. E. L. Clark went to Denver Sunday.

Misses Faith and Dovey Plummer left Sunday afternoon for Minnesota.

Dick Rodda and wife and Harry Garlick and two sisters drove up from Arvada Sunday to visit the Morgan family.

Geo. L. Hamllik, Neil McKay, R. I. Hughes and Dr. G. N. Towers went to Denver Monday to appear before the Highway Commission to protest against the wretched condition of the Guy hill road.

Will Gobel arrived from Denver Monday evening. He came over with the 59th, after seeing service in France. He was gassed, but is getting over it all right.

Jas. E. Cody and wife came up from Denver Friday night. Mr. Cody was with the U. S. troops in France and was then placed in the Army of Occupation. He enjoyed his experience and will be Johnny on the spot when the next war breaks out.

Mrs. C. I. Parsons and children arrived from Boulder Friday morning, after visiting two or three months with the Henderson family.

Mrs. Will Zeigi went to Denver Sunday to visit her daughter, Mrs. Wm. Mitchell.

Miss Jane Grenfell and girl friend came up from Denver Sunday to visit Mrs. Edith Williams.

Mrs. M. Ross left Wednesday for a two days' trip to Estes park with her sister-in-law, Mrs. E. T. Perry, of Wyoming.

C. D. Hughes left for Denver Monday afternoon and may locate permanently in the valley.

Wm. Brenton was in Denver Sunday to get a lease on a good mine.

H. J. Teller went to Denver last Friday to attend the funeral of his aunt, Mrs. Willard Teller.

South African Timber.

It is not so very long ago that South African timber was, taken all round, considered of little value. Now that imported timber has gone up in the market, many virtues have been discovered in the native timber which previously were unknown. In consequence, South African timber has come to the front, so that it figures prominently in many instances. Sawing timber, such as Cape pine, poplar, yellow wood, blue gum and other varieties, cut into standard deals of 3 by 9 inches, is quoted at 10½ pence to 1 shilling per foot. This timber is used mostly for boxes and packing cases, as well as substitutes in the mines and buildings for the imported Baltic woods.

Russia's Greatest Ruler.

St. Petersburg, the modern capital of Russia, now known as Petrograd, was founded in 1703 by Peter the Great, who died 194 years ago. Peter first built a small hut for himself and a few wooden hovels. The majority of nobles, however, preferred that Moscow should remain the seat of government, but Peter was determined to build a new capital, and in 1711 he laid, with his own hands, the foundation of his palace, which was built of brick. Peter was an extraordinary character and Russia's rise to a great power was entirely due to his genius.

The Observer—\$2.00 a year.

RED CROSS NOTES

Colorado Home Service sections of the Red Cross have just submitted to Division headquarters in Denver figures that show 1,399 American soldiers have returned to this state, more or less disabled as a result of their big adventure abroad. Practically every county in Colorado is represented in the list. One county alone has 700 sick or disabled Yanks, one has 178 another 92.

With the same indomitable courage and will that marked their assault on many a German stronghold the majority of these Colorado heroes have begun an assault on the trenches of the future—they have commenced training for new professions or trades. The Red Cross figures, compiled with the assistance of the Federal Vocational Training Board, indicate that Colorado Yanks are not of the calibre that is content to sit around with folded hands, feeding on war memories.

An even larger proportion of the men would now be in training for new vocations, if more of them could be shown the advantage and opportunity that the government is offering. The Red Cross, thru its Home Service sections, of which there is one in virtually every town in the state, is now engaged in the effort to enlist the balance of the sick or otherwise disabled men. The Red Cross is not appealing to the men alone; rather it is trying to prevail upon the relatives and friends of the men to induce the latter to take up training.

Many men are not aware they will receive a minimum of \$75 a month while taking this training. Many men are not even aware that they are entitled to compensation during the period of their disability. Many do not know that the government insurance that they, perhaps, allowed to lapse can be reinstated. It is these things and a thousand other services that the Red Cross stands ready to render to the soldier or his family.

There is a Home Service representative in this jurisdiction. Soldiers and their families should communicate with it on any and all problems.

Advertise in the Observer and overcome the impression that seems to prevail on the outside that the place is dead.

Salvador is to have a presidential election without contest, as the voluntary retirement from the race of Dr. Tomas Garcia Poloma, thus leaves the field to Dr. Quinones Molina alone. That little republic has recently appeared to be carefully studying how to avoid all internal controversy, that it might be the better prepared to take advantage of external opportunities, opportunities which, by the way, have been greatly improved as a result of her open and pronounced sympathy with the United States and the allies.

The landing of a cargo of sand for trench work in the Egyptian desert by command of somebody high up in the British war office recalls the story of that earlier order to a British admiral to sail up the Bronx river with his squadron and give battle to the Revolutionary army.

The Germans still cherish hopes that America will stand their friend at the peace table. The sinking of the Lusitania and the bombing of American Red Cross hospitals are, of course, strong and convincing reasons why we should feel kindly toward them.

Norway wants 1,000,000,000 crowns indemnity from Germany for ships sunk. It looks like a solid claim to us. One of the chief embarrassments about defeat is to settle for the furniture that was smashed during the height of the spree.

Von Bethmann-Hollweg is disloyal enough to declare that his former master, the kaiser, did not tell the truth in what he said about the cruise in Norwegian waters. The lion must truly be dead!

It is said that the former crown prince of Germany spends most of his time with his favorite greyhound, showing that a greyhound has not enough judgment to take advantage of its superior speed.

Cheer up, citizens, there'll be a new bond issue soon, and in the meantime there are thrift stamps, Red Cross contributions and other attractive investments in humanity.

Send the Observer east.

MERELY GIVEN LONG NAMES

Decoctions Prescribed by High-Priced Physicians Made From Familiar Wayside Herbs.

Many of the secrets hidden under the thatch of the wattle and daub cottages can be found in the pharmacopoeia of either the allopathist or the homeopathist, observes the London Daily Express.

Willow tea is but a crude form of the salicylates which have long been recognized as the orthodox anti-uric acid and anti-pyretic remedies.

Common mallow, called "pick-cheeses" by children, provides a tasteless mucilaginous liquid, which is worked up in various shapes and given for coughs. The leaves of the colts-foot, horehound and balm are all used, in liquid form mostly, for coughs and chest affections.

Foxglove cordial is given to old people suffering from palpitation of the heart, and does as much good as when it is called "tinc. digitalis."

Camomile and dandelion broths or teas are sold as tonics by the wise women who would be at a loss to say what was meant by Antheim's nobilis or Taraxacum.

Beautiful comfrey is used, both plant and root, as a poultice for cancerous and other growths, and a broth is made from it for kidney affections. This has obtained official recognition under the name of Symphitum officinale.

The "cure" for measles is saffron tea. This is prepared by pouring boiling water on the dried stigmas of the purple autumn crocus. An infusion of flaxseed cleanses and heals wounds. Self heal has cured quinsy; sage has many valuable qualities.

FIRST KNOWN USE OF CIGARS

Mentioned by Name in Book Published in 1740, but Were Smoked Before That Time.

The earliest known mention of cigars is in a book published in 1740 under the title of "Distresses and Adventures of John Cockburn." It appears that Cockburn was cast on a desert island in the Bay of Honduras, from which he swam to the mainland, and thence traveled afoot to Porto Bello, a distance of 2,000 miles. Here he met some friars who gave him some "seegars" to smoke. "These," he says, "are some leaves of tobacco rolled up in some manner that serves both as pipe and the tobacco itself." Though this is the earliest date at which cigars appear to be mentioned by that name, so far back as 1498 two soldiers sent by Columbus to explore Cuba told their companions on their return how the natives carried in their mouths a lighted firebrand made from the leaves of a certain herb, rolled up in maize leaves. The description of an Indian method of smoking given by Lionel Wafer, in his "Travels in the Isthmus of Darien," in 1699, shows that they then smoked cigars made just as we make them now. The manufacture and consumption of cigars in northern Europe only dates from the close of the seventeenth century.

Music and Thinking.

About 1000 A. D. a monk in an Italian monastery had been thinking about the long, laborious task of training singers for the church service. Ten years were required for a singer to memorize words and music of the various chants and hymns used! There was no system for learning a new tune independent of the words.

And while he was thinking he heard his choirboys practicing one of their lessons, a hymn that rose in pitch with the first syllable of each successive line, just as the scale series was formed.

Thought flashed!
And the result of his thinking was the use of the syllables ut (changed to do later), re, mi, fa, sol, la, si to facilitate scale learning. The immediate result was that Guido's choirboys learned all their tunes—and could take new ones—in six months as against ten years in the old way.

And the indirect result is that boys and girls in the schools of this country learn the scales by a process similar to that thought out by a monk in Italy nearly 1,000 years ago.

Aegean Islands.

The Aegean islands are Thasos, in the extreme north, off the Macedonian coast; Samothrace, Imbros, and Lemnos, near the Dardanelles; Euboea, the largest of all, lying close along the east coast of the Greek peninsula; the northern Sporades, including Skiathos, Skopelos, and Skyros, near Euboea; Lesbos, Ochos, Samos, and the large group of other Sporades, such as Rhodes, Cos, and Patmos, adjacent to the coast of Asia Minor; and, finally, the large group, the Cyclades, extending southward from Euboea toward Crete and including Andros, Delos, Naxos, Paros and Melos.—Literary Digest.

Military Correspondence.

"Why did you reject Col. Puffersby?"
"Too much military efficiency."
"How was that?"
"His last letter to me started off something like this: 'From Col. Puffersby, To Miss Gloria Piffle. Subject, Love.'"—Birmingham Age-Herald.

Flatterer.

She (relating experience)—Really, for a time I was quite beside myself.
He—You had a charming companion.—Boston Evening Transcript.

WERE MARVELS IN CHILDHOOD

Those Whom the World Has Recognized as Men of Genius Remarkable for Precocity.

One character common to genius and to insanity, especially moral insanity, is precocity. Cesare Lombroso, professor of legal medicine, University of Turin, relates that Dante, when nine years of age, wrote a sonnet to Beatrice; Tasso wrote verses at ten. Pascal and Comte were great thinkers at the ages of thirteen. Fornier at fifteen, Niebuhr at seven, Jonathan Edwards at twelve, Michel Angelo at nineteen, Gassendi, the Little Doctor, at four, Bossut at twelve, and Voltaire at thirteen. Pico de la Mirandola knew Latin, Greek, Hebrew, Chaldee and Arabic, in his childhood; Goethe wrote a story in seven languages when he was scarcely ten; Wieland knew Latin at seven, meditated an epic poem at thirteen, and at sixteen published his poem, "Die Vollkommenste Welt." Schiller was only nineteen when he wrote "Rauber." Victor Hugo composed "Irtamene" at fifteen. Pope wrote his ode to solitude at twelve, and Byron published verses at eighteen. Moore translated "Anacreon" at thirteen. Meyerbeer at five played excellently on the piano. Claude Joseph Vernet drew very well at four, and at twenty was a celebrated painter. At thirteen Wren invented an astronomical instrument, and offered it to his father with a Latin dedication.

Raphael was famous at fourteen. Beethoven composed three sonatas at thirteen. Elchorn, Mozart and Eybler gave concerts at six. Weber was only thirteen when his first opera, "Das Waldmarchen," was presented. Bacon conceived the "Novum Organum" at fifteen. Charles XII manifested his great designs at eighteen.

RIDICULOUS FAD OF FASHION

Description of Head-Dress Worn by Women Some Centuries Ago Appears Almost Incredible.

Fashion plays constant pranks with a woman's hair. Addison says in the Spectator of 1718: "There is not so variable a thing in nature as a lady's head-dress; within my memory I have known it to rise and fall above 30 degrees." In the reign of Henry VI, ladies wore horns, having on each side ears so large that when they would pass through the door of a room it was necessary to turn sideways and stoop. It was judged necessary to enlarge the doors of the Chateau de Vincennes. The correct angle for the hair was 45 from perpendicular, which entailed great strain upon the hair growing from the forehead. Little thought of what we call cleanliness or even decency was present at the hairdressing of that day. Not only was the hair left untouched for a most revoltingly long time, but materials were used in the dressing of the hair and making the rolls (as Anna Green Winslow related), which were most incredible. The Boston Gazette of May, 1771, tells of a young woman driving in Boston streets who was thrown from her carriage and her high tower partly torn off. It proved to be stuffed with yarn, tow, wool, curled hair, and even hay.

Solidified Alcohol.

Solidified alcohol has proved one of the most convenient forms of fuel, and is largely made use of at the present time for many purposes. There are many forms of cookers making use of this fuel, and the latest device of this character is a sterilizing apparatus to be made use of by doctors and nurses. The sterilizer consists of two containers, one to accommodate the instruments to be treated and the other for the gauze, bandages and similar material. A small quantity of water in the lower chamber is heated by the flame from the alcohol and the steam therefrom passes around the instruments, thoroughly cleansing them and then passing to the upper chamber, where it has the same effect on the contents of that compartment. The same principle is made use of in the construction of a food kettle for the use of aeronauts. The food is packed in the interior of the kettle and a small alcohol burner stowed away in the bottom is ignited and the heat from it will keep the food hot for several hours.

Explaining Knockout Blow.

When the lower jaw is struck on its point, especially with an uppercut, the bony portion of the ear inside is driven forcibly upward into the glenoid cavity of the skull, above and behind which is situated the delicate labyrinth of the inner ear. The jawbone strikes hard upon the thin plate of bone that supports these sensitive organs and gives a shock to the semi-circular canals that is instantly transmitted by them to the bulb, producing dizziness, nausea and momentary paralysis.

This explains why a sideways blow on the jaw is more effective as a knockout than one delivered directly upon the point of the jaw. For the shock of a sideways blow is received in one glenoid cavity, that on the side opposite the one on which it is struck, while the shock of a blow in the center is divided between the cavities on the two sides.

Wille's Joke.

"Pa, what a funny word 'wholesome' is."
"What's funny about it?"
"Why, take away the whole of it and you have some left."—Boston Transcript.