No one who desires to protect his crops against insects should object to birds getting a small share. A young robin consumes 40 per cent. of ani nal food more than its own weight in 12 hours in its first stages. A pair of cobins having a nest of young ones will perform a vast amount of work in a season, as each pair will raise from two to three broods.

Growing Ir sh Potatoes.

To insure a good crop of Irish pota toes either in dry or wet weather after plowing the first time, cover the ground with straw or other litter. It will keep the ground moist and you will increase the crop of potatoes with less work. If cour are troubled with moles in your garden or potato patch, go around the edge, dig down and find their paths; out poison on small pieces of sweet po atoes, peanuts or corn and leave in it their road. Cover the pieces over so as not to obstruct their passage. They will continue to travel the road and eat the poison until there will be no mole

The Germination of Seeds.

The influence of certain chemical fertilizers upon the germination of seeds was studied by the late Gilbert H. Hicks and the results have been reently published in a bulletin by the United States department of agricul ture. The fertilizer was used in much arger proportion than obtains in actual practice and at the rate of 2000 to 3000 pounds per acre, but it showed that muriate of potash and nitrate of soda when used in such large quantities were detrimental to the germina-tion of seeds whether applied directly or mixed with the soil.

The chief injury to germination is inflicted after the young sprouts leave the seed cont and before they appear thove the soil. Fertilizers composed of phosphoric acid and lime are less in jurious and not harmful unless used in The results of the trial show that chemical fertilizers do not favor germination and that they should never be brought in direct contact with germinating seeds. However, when applied at the usual rate there is little or no injury to be feared unless the seed is dropped from the same spout at the time and covered up with the fertilizer.

Pretty Feature in a Garden.

A sunken garden is a pretty feature in outdoor decoration, where some natural depression makes such an adaptation practicable. It may either a wild or a form I garden. In the latter case the sunken space is regular and the sides terraced down to it, with a broad flight of stone steps leading down to the garden proper, which is a perfectly flat surface, laid out in geometrical beds and, if possible, a water space in the centre, filled with aquatic lilies; not a fountain, but a clear sheet of water in a large concrete receptacle, the top of which is flush with the surrounding grass. This is finished with a stone coping, and the water is supplied, as it would be in a bathtub, from the house supply, with a drain pipe to keep The lilies are planted in tub it fresh. with what earth is necessary for their growth and maintenance. A sunken garden, deep in its green terraced setting, with its formal beds all ablaze with color, is a lovely sight.

A wild sunken garden imitates luxuriant nature as closely as possible; the surrounding ground is sloped instead of terraced, the access is a rocky path and the garden itself an assemblage of wild flowers appropriately grouped to-

Wintering Bees.

If we wish to have bees in the best winter shape, we must begin operations early as possible. We cannot put bees in winter quarters, and wait to complete the job until winter is on, and have coionies in the best condition. We must keep wintering in view al most during the entire season, and es pecially so from the close of the honey

The first thing to look after is queens The queen is the all important factor of the hive, and to have good thrifty colonies, we must have good prolifi queens. Many queens are not worth retaining in the hive, and the products from the colony from the honey seas is evidence whether or not the queer

at fault. So then to start with, we hould have first-class queens in every aive. It is an easy matter now to secure good breeding queens cheaply, as many aplarists are engaged in rearing them, and they can be bought cheap during the fall months.

A large number of colonies will be found without the necessary supplies to carry them through the winter, and this cause alone many die in ter from starvation. It is criminal negligence to rob colonies of their stores to such extent that they are short of food in winter, and thus let th starve, but it is frequently done. frequently, owing to honey failures, need feed in autumn, even if they did not furnish any surplus the season pre vious. Owing to a bad season, that the bees could not find any honey to gath. er, some will say that they deserve star. vation for not working better. It is just as sensible to say that we should arve for not raising a crop when the drouth cut off the crops in spite of all

Feed the bees, and feed them early so they can seal up their stores during warm weather. Late feeding is not nearly so good on this account, and early fed colonies will breed a good quantity of young bees that is of much importance in successful wintering.-A. H. Duff, in Farm, Field and Fireside,

Barn Cured Hay.

It is a matter of experience to determine when hay is sufficiently cured to put away in the barn. Some cure the hay until it is as dry as chips before storing it away, and others put it away in a state of greenness that seems to threaten it with destruction by fermen. tation. A fact I have noticed that is against all experience of a careful na-ture is that some will cure their hay thoroughly before putting in the barn, and only half cure that put in stacks outside. Just the reverse really should be the case. Hay stacked outside needs to be more thoroughly dried than that intended for the barn. It may not be easy to explain this fact, but it is one that has been established by long experience.

Good hay is spoiled by curing it too much before storing in the barn, is a mistake made more often than any other in hay making. We have heard and read so much about barn sweating and fermentation that many dread it as though it were a scourge. But barn sweating of hay under proper conditions, and if not too active and extensive, is good for the hay and improves its quality. The hay comes forth better in the winter, and it is not at all dried up and brittle, with all the nutriment taken out from it. The sweating or fermentation comes from the pres ence of the sap in the hay, and the heating process which follows drives this sap out of the mass. In passing through this fermentation in the barn stalks of hay are gradually relieved of their surplus moisture without losing any of their nourishing qualities. This fermentation should be allowed to proceed in a dry barn, with the doors and windows closed. This old practice of leaving open the doors and windows of the barn where new hay has been stored is a mistake. cool outside air then comes in and causes the vapor arising from the hay to condense, and wherever this condenses and collects on the hay, decomposition will follow. Let the vapor escape upward toward the roof, and it will disappear through the holes and cracks which are found in every roof. The only real danger to the hay comes from the presence of water or dew on the hay either at the time of storing or by leaking through the roof. This moisture will produce blackened, mildewed and musty hay. Nothing can prevent it. Where there is any possible danger of leaks through the roof cover the surface of hay with a layer of straw and the danger will be averted. But so far as danger from sweating of properly cured hay comes one may rest his mind in peace so long as the barn is tight and dry.— W. E. Farmer, in American Cultivator.

Drought and Culture.

The comparative success of most farm crops this year in spite of the worst drought that the country has had for many years shows value of improved culture over the old system of neglect. In nearly all instances where the soil has been enriched with manures and fertilizers, and the crop continuously cultivated, the loss has not been sufficient to discourage farmers. Indeed, a normal crop is reported in most parts of the country a larger crop than usual in others. This looks very much as if we had at least broken the grip and the terror of the old-time dry summer, which in the west at least meant the loss of millions of dollars and the ruin of thousands of farmers. A good deal of this success in the face of disquieting success in the face of disquieting weather conditions, of course, is due to the superiorirrigation methods adopted in many states, which makes the farmalmost independent of the weather. But irrigation alone could not account for the change. It is the su-perior methods of culture that have gradually been adopted in all parts of this country. It is really the fruit of that campaign of scientific and intensive farming which has been carried on by the department of agriculture state experiment stations, and in dividual progressive farmers for the

plication of plenty of the right kind of food to the soil and then the cultivation of the soil sufficiently to keep the crops in excellent condition. must be rich to produce good crops, but waste of fertilizers is not what is need ed. We can apply too much of these to the land so that the soil gets clogged and suffers, as it were, from indiges It is unable to assimilate fertilizer and turn it into fit condition er gives his soil only so much manure it can readily absorb and then keeps the soil well-stirred to enable the rain and sunlight to touch every part of the iand and make them ready for plans The cultivation of the soil is of even more value than the fertilizing for in too many cases the mechanica conditions of the soil are such tha neither moisture nor food can pene trate it nor in any way become tegral part of it. Prequent cultivation of the soil alters all this, and helps the soil to retain the moisture and it times of drought enables the plants to draw up moisture from the underground reservoirs. Thorough and con stant cultivation of crops this pas-summer has undoubtedly saved mil lions of dollars to the farmers country.-W. E. Edwards, in the lo

To sum this up briefly, it is the ap

SCIENCE NOTES.

Lack of proper nesting places, too little water, the English sparrow, boys, collectors, birds on hats and the cat are among the causes of the decrease of song birds enumerated by D. Lang. He suggests protection and encouragement of the birds by planting trees and shrubs for them to live in, putting up nest boxes for breeding, providing er for feeding and bathing, and feeding in unfavorable weather.

Between Formosa and the coast of China lies a group of 21 islands, interspersed with innumerable reefs and ledges, which are called the Pescadores Islands. According to the investigations of a Japanese geologist, these islands have suffered in a remarkable manner from the northeast winds, which blow with savage violence there during nine months of the year. The original area of the islands has been greatly reduced by erosion, and their surfaces are barren and desolate, so that the wind-whipped group forms "a quasi-desert amidst the green island world of southeastern Asia."

It has been discovered that the effects produced upon a body by electrocution and by lightning are wholly different. It has always been supposed that the results were the same, but the experiments of a physician in New York have proven this to be an error, A physician in the coroner's office in New York City, has recently made an autopsy of the body of a man who was killed by lightning. The body was found to be hardened and there were no blood clots on the lungs or the pericardium. In electrocution, large clots of blood form on the lungs and on the pericardium, and the nervous system becomes pliable.

In support of the view that Death Valley in California was formerly the aed of a lake, is the discovery of traces of an ancient water-line running along the flanks of the enclosing mountains at a height of 600 feet. The bottom of the valley is 200 feet below sea-level. The winds from the Pacific cross four ranges of mountains before reaching the valley, and by that time they have been drained of their last drop of moisture. It is said that "no spot on earth surpasses Death Valley in aridity or Tophet-like heat." The lake that once filled it is believed to have been fed by a river which is now also vanished. The borax deposits of Death Valley are commercially important, but labor is all but imposible in a place where to be without water for a single hour In summer means death.

It is well known that the vibratory motion of the leaf of the aspen and other popular trees is caused by a flatof the petiole at its junction with the lamina. The lower part of the leaf stalk is elongated and rigid, thus forming a basis upon which the flattened portion of the stalk can, in virtue of its elasticacy, move to and fro as the wind acts upon the leaves of the tree. There have been several theories offered by botanists, none of them very satisfactory, however, to explain the origin of this curious structure and the purpose served by the 'trembling" of the leaf. H. J. Colburn, in a recent letter to Nature, suggests a new explanation. He thinks the vibration may be an adaptation for rapidity throwing off the excess of condensed moisture, which is liable to form the foliage of trees in marshy situa-

Dr. Manson, the malaria expert, bethat acclimatization, which so much is heard in India and tropical countries generally, depends "experience, education, and an intelligent adaptation of habits," than on any actual cha in the phsylological condition the body. It will be admitted change every one who has lived any length of time in the tropics that recklessness and carelessness are characteristic of the new arrival in any hot country. "He does not think much of exposing himself to the sun, the rain, and the wind; the old resident is very chary of going out without his sun hat and his white umbrella. The new-comer may look upon these precautions as signs of effeminacy. They are not so. Experience has told the old resident that neglect means an attack of fever. The and smokes as in Europe. The old resident goes to bed betimes and eats drinks, and smokes in moderation.'

Where Singing Birds Are Found,

Singing birds are esteemed in all countries, but in Japan the musical sounds emitted by certain insects are appreciated. Listening to these minute ingers has been for many centuries a favorite pastime of the Japanese, and birth to an original c merce. At Tokio, toward the end of May and the beginning of June, one sees suspended under the verandas of the houses little cages of bamboo from break upon the silence of the fresh twilight strange little whistlings modulations and light trills, which fill the air with a delicate music. It is habitually in the evening after the hour of the bath, that the cople of Tokio seat themselves listen to the shrill concert.

How Crows Talk.

A French gentleman has spent tw winters in the highways and hedges of his country, learning the language of crows. He says, states Nature Notes, that these birds have 25 words, expressing "here," "there," "hot," "cold," "take care," "armed man," "a nest."

THIS COUNTRY'S VICE-PRESIDENTS. Men Who Have Made Themselves Felt in

During the lifetime of the First Con gress, that which sat from 1789 to 1791, Vice-President Adams cast votes on even divisions in the Senate. Adams impressed his personality to such a degree or the legislation in those two years, in which the framework of the government was laid on the lines on which it has been run, in a consider

able degree, ever since that he weilded

almost as much power as the president. Of course, at the beginning of the government, when there were only thir-teen states in the Union, and the Senate was far smaller than it is now, ties in the votes of its members were much more frequent than they are today. the case of the tariff of 1846, which was put on the statute book by Dallas's casting vote, has often in later days than those of Adams in that office had a powerful influence on legislation. Moreover, the deference which the president and the leaders of his party paid to the late Mr. Hobart, and in the influence which he was known to have in devising and pushing legislation, show that the vice-president, when he is the right sort of a man, is a power in

the government.
Four vice-presidents—Tyler, more, Johnson and Arthur-went to the presidency on the death of their chief. Three vice-presidents—Adams, Jefferson, and Van Buren—were made presidents subsequently by election. At the beginning of the government the office of vice-president was looked upon as a stepping-stone to that of president.
The election to the second office aided Adams and Jefferson in getting the first office. Van Buren, who had been governor of New York (then, as now, the first state of the Union), United States senator, secretary of state and minister to London, deemed his election as vice-president to be a promotion. His acceptance of that post unquestion ably cemented the friendship between him and President Jackson, and did much to make him Jackson's successor

four years later. Some of the leading statesmen of their day have held the office of vice-president, among them, exclusive of the seven men who have been menoned, being Clinton, Gerry, Calhoun, Richard M. Johnson, Breckinridge, Hamlin, Colfax and Wilson. A recent and distinguished governor of New York—Levi P. Morton— held that post Many others accepted the candidacy for the office—Everett, Pendleton, Logan and Thurman among the numberthough they failed of election.

Hamilton said in the Federalist that the vice-presidency would usually be filled by characters preeminent for ability and virtue." It was the intention of the framers of the government to make this office really second only to that of president in dignity and power. No man ought to get it, they be-lieved, and no man would get it unless he was of full presidential stature Leslie's Weekly.

There is a Spanish law that no subject shall touch the person of king or

Alphonso XIII, king of Spain, nearly suffered a severe fall from this rule in his childhood. An aunt gave him a swing. When he used it for the first time the motion frightened him and he began to cry whereupon a lackey lifted him quietly out of it, and so, no doubt, preserved him from falling.

The breach of equitette, however, was flagrant and dreadful. The queen was obliged to punish the man by dismissing him from his post. At the same time she showed her real feelings on the subject by appointing him immediately to another and better place in the royal household.

In another case a queen of Spain nearly lost her life in a dreadful way owing to this peculiar rule. She had been thrown while out riding, and, her foot catching in the stirrup, she was dragged. Her escort would not risk interference, and she would have been interposition of a young man stopped the horse and released her from her dangerous position.

As soon as they saw she was safe her escort turned to arrest the traitor who had dared touch the queen's

Knowing well the penalty he had incurred, he made off at once-fled for his life-and did not stop until he had crossed the frontier.-Answers.

Some Irish Bulls The Irish bull has of late been wax-

ing fat and kicking, assisted by Mr. MacNeil asking why some Rhodes-Chamberlain correspondence, which he was told had never existed, "was not produced," and the Australian editor who announces that anonymous contri butions "cannot be returned unless stamped envelope bearing the name stamped envelope bearing the name and address of the writer is inclosed." A correspondent of a sporting paper says that "Mr. Brown, or rather his brother, died yesterday," and a lectur-er in Scotland that "in Adam himself were implanted hereditary criminal instincts." And a Dublin gentleman the other day invited a friend to dinner by "to give him a surprise,"-London Chroniele

The Nature of Her Activity.

"Penelope Jopps is an active club member, isn't she?" "Active? I think so. She has already this menth resigned from three clubs and started four new ones."-Indianapolis Journal.

Combination Lamp-Post.

A lamp-post has been introduced in England which combines a fire hydrant, tap and fire alarm box. The hydrant can be used for fire purposes, filling watercarts and for street flushing, while the small tap can be used by an individual for domestic water supply. There is a water meter and siphon at the bottom by which the water is shut off from the hydrant, thus preventing it from freezing.

Take LARATIVE BRONG QUIMINE TABLETS. druggists refund the money if it falls to E. W. GROYE's signature is on each box.

Mrs. Winslow's Soothing Syrup for children teething, softens the gums, reduces inflamma-tion, allays pain, cures wind colic, 25c, a bottle,

Kissing is almost unknown in Japan. A mother never kisses her child, a lover never kisses his sweetheart.

Motherhood



How shall a mother who is weak and sick with some female trouble bear healthy children? How anxious women ought to be to give their children

the blessing of a good constitution!

Many women long for a child to bless their home, but because of some debility or displacement of the female organs,

they are barren. Preparation for healthy maternity is accomplished by Lydia E. Pinkham's Vegetable Compound more successfully than by any other medicine, because it gives tone and strength to the parts, curing all displacements and in-

flammation.

Actual sterility in women is very rare. If any woman thinks she is sterile, let her write to Mrs. Pinkham, Lynn, Mass., whose advice is given free to all expectant or would-

Mrs. A. D. Jarret, Belmont, Ohio, writes:

"Dear Mrs. A. D. Sairiet, Definioni, Olio, Willes"Dear Mrs. Pinkham:—I must write and tell you what your Vegetable Compound has done for me. Before taking your medicine I was unable
to carry babe to maturity, having lost two—one at six months and one at
seven. The doctor said next time I would die, but thanks to Lydia E.
Pinkham's Vegetable Compound, I did not die, but am the proud
mother of a six months old girl baby. She weighs nineteen pounds and
has never seen a sick day in her life. She is the delight of our home."

Mrs. Whitney's Gratitude.



"DEAR MR. PINKHAM:—From the time I was sixteen years old tfil I was twenty-three I was troubled with weakness of the kidneys and terrible pains when my monthly periods came on. I made up my mind to try your Vegetable Compound, and was soon relieved. The doctor said I never would be able to go my full time and have a living child, as I was constitutionally weak. I had lost a baby at seven months and half. The next time I continued to take your Compound: and I said then, if I went my full time and my baby lived to be three months old, I should send a letter to you. My baby is now seven months old, and is as healthy and hearty as any one could wish. I cannot express my gratitute to you. I was so bad that I did not dare to go away from home to stay any length of time. Praise God for Lydia E. Plinkham's Vegetable Compound; and may others who are suffering do as I did and find relief. Wishing you success in the future as in the past, and may many homes be brightened as mine has been."—Mrs. L. Z. WHITNEY, 4 Flint St., Somerville, Mass."

The medicine that cures the ills of women is

The medicine that cures the ills of women is

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There is one flavor in pork and beans that all people like. It was devised in the rural homes of New England. It has made Boston the synonym of beans.

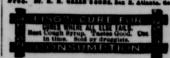
In our kitchen we get exactly that flavor. Our beans are cooked by an expert. We put them up in key-opening cans. Your grocer will supply you.

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