

as assistant in the laboratory, at six dollars a week, with two rooms at the top of the house.

Not long thereafter, Davy, rich and famous as a scientist, travelled on the Continent for a year and a half, and took Faraday along as his amanuensis and valet. To the youth, who had never before been above twelve miles from London, such travel was most helpful, despite the fact that the haughty Lady Davy chose to regard him only as a servant. He met the leading scientists of the day—Ampere, Humboldt, Volta, etc. At Florence, he saw "Galileo's own telescope—a simple tube of paper and wood, with lenses at each end—with which he discovered Jupiter's satellites." At Paris he got a glimpse of Napoleon, just back from the disastrous Russian campaign.

Upon his return to London, Faraday was again engaged as assistant in the laboratory of the Royal Institution, his salary being raised to seven dollars a week. The fascination of the guest of the unknown was now fully upon him, and his fame as an investigator steadily advanced. So great was his "fanaticism for veracity" that his respect for a fact amounted almost to reverence. "I could trust a fact, and always cross-examined an assertion." "Criticise one's own view in every way by experiment—if possible, leave no objection to be put by others." By such a method his genius soon yielded startling results—the liquefaction of chlorine, diamagnetism, and the magneto-electric currents, the principle upon which all our modern dynamos are based. These triumphs are the more wonderful when you consider his ignorance of mathematics. His success excited the jealousy of Sir Humphry Davy, who even petulantly voted against making Faraday a Fellow of the Royal Society. The rising scientist, nevertheless, remained loyal to the master who had once befriended him. Loyal, also, he remained to pure science, declining the social attentions pressed upon him by the most distinguished people, and turning his back upon all professional work for money, in spite of the fact that he and his wife were then living in poverty. "We were living on the parings of our own skin," he afterwards said.

This, from the diary of Crabb Robinson, is of interest: "May 8, 1840.—Attended Carlyle's second lecture. It gave satisfaction, for it had uncommon thoughts and was delivered with unusual animation. In the evening heard a lecture by Faraday. What a contrast to Carlyle! A perfect experimentalist, with an intellect so clear." In his religious life he was as simple as he was great in science. As his father before him, he belonged to the obscure sect known as Sandemanians, a small body which separated from the Presbyterian church about 1750, poor and primitive in many of their views. While they esteem the lot a sacred thing, retain feet-washing, object to second marriages, deem it wrong to save up money, and do not pay their preachers, yet they hold, also, that Christianity cannot be the established religion of any nation without subverting its essential principles, that religion is an affair of the soul, and that the Bible alone is the sufficient guide for the soul. Faraday was a zealous member of this little band, even serving as preacher. His eldership was, however, interrupted. "It was expected of an elder that he should attend every Sunday. One Sunday he was absent. When it was discovered that his absence was due to his having been 'commanded' to dine with the Queen at Windsor, and that, so far from expressing penitence, he was prepared to defend his action, his office became vacant." He was, of course, later restored as elder.

Faraday himself is a signal instance of the truth of Emerson's characteristic comment upon his lecture on "Diamagnetism" (or cross-magnetism): "He showed us various experiments on certain gases, to prove that, whilst ordinarily magnetism of steel is from north to south, in other substances, gases, it acts from east to west. And further experiments led him to the theory that every chemical substance would be found to have its own, and a different, polarity: One fact is clear to me, that diamagnetism is a law of the mind, to the full extent of Faraday's idea—namely, that every mind has a new compass, a new north, a new direction of its own, differentiating its genius and aim from every other mind." —Religious Herald.

Some Birds that are Helpful.

Among the birds that may be looked upon as helps to the farmer, we do not include the birds of prey, as the eagles, hawks or owls, though it may be that some species of the two latter do help the farmer to a certain extent by keeping down the number of squirrels, gophers and field mice, that might become a nuisance if too abundant, and the screech owl does destroy some of the night-flying beetles and moths, and perhaps some varieties of caterpillars, but the others, like the crow, are too fond of the eggs and young of other insect-eating birds to please us, to say nothing of the liking of the crow for the sprouting corn. The black-billed cuckoo has also a fancy for robbing the nests of smaller birds, and sometimes for small fruits, but it is so cowardly as to be driven away by almost any one of the other birds, if detected. But its food is said to be principally insects and

larva, which are almost the exclusive diet of the yellow-billed varieties.

All the woodpecker family are insect-eaters, preferring the eggs and larvae to the perfect insect. The red-headed woodpecker seems more fond of cherries, and sometimes of picking into large fruit or ears of green corn than the others; yet, as its food is mostly of insects, it, like the others of that family, may be said to be a help to the farmer. That any of them injures the tree by sucking sap or by the holes they make in hunting insects, or in which to build their nests, we very much doubt.

All of the swifths and swallows subsist upon such insects as they can catch while flying, though we have known them to fly so low as to catch grasshoppers, especially if they can get some animal to start them up. It used to be a pleasure to us to see them fly in front of a dog we owned and tempt him to chase them, while they swung backward and forward in front of him, catching the insects he started from the grass. When they had caught enough, they went back to the barn uninjured.

The whippoorwill and the night hawk or bull bat, and the churckwills widow of the Southern States are great destroyers of insects, working more in twilight or cloudy days than in bright sunshine or after dark. The king bird feeds mostly upon insects caught upon the wing, and so do those known as the fly catchers, whose habits well explain the name, and the pewee or phebe birds, of which there are two species in New England during the summer, going South in winter, as, indeed, do most of those which feed principally upon insects.

The several varieties of thrush and the robin are great devourers of insects, and it is on record that Mr. Trouvelot of Medford, when he was engaged in trying to make silk from the cocoons of the gypsay moth, said that the robin troubled him more than any other bird, or all others put together. He said that when he placed 2,000 of them on a scrub oak, they were all eaten by cat-birds and robins in a few days. We wish that had been his whole supply of them. The robin and the several thrushes are principal among those that seek out their food among the grubs, cut worms and other larvae in the soil, and either one of them will eat about one-half its own weight in a day. We ought not to be unwilling to contribute a few cherries or peas to such birds.

The brown or red thrasher, the cat bird, both of which have been called New England mocking birds, and the true mocking bird, are all insect eaters, and while they confine themselves more to the thick wood than to the orchard and garden, they prevent those places from being so over stocked as to swarm from there into the cultivated fields. The bluebird is also a well-known insect eater, seldom troubling even the weed seeds, as it migrates when the insect supply grows scarce.

The several species of native sparrow and finches, the bunting, the grosbeaks and the bobolinks, are principally seed eaters, though some of them do catch insects also, but none of them have been accused of damaging cultivated crops to any extent.

In this list we have included nearly all the birds that feed upon insects more than on other food, though the quail, whose call of "more wet" or "Bob White" used to be familiar, is said to destroy many insects, and some of the smaller water birds resort to the shore to pick up grasshoppers, crickets and probably other insects.

But the farmer should not destroy or let any one else destroy any of those we have classed as insect eaters. Protect them from gunners, crows, corn blackbirds and the English sparrow as far as possible, and by kind treatment encourage their visits to the cultivated fields, gardens and orchards, and we may hear less of the cry that insects increase every year. The list of the farmer's bird friends is scarcely complete without reference to that "quare burrd," a newly-imported help we once had on the farm called her mistress to see. It was a fine, fat toad, one whose voracious appetite would demand about half his weight in insects each day to satisfy. —Massachusetts Ploughman.

Answer to Prayer.

One of the most remarkable of modern answers to prayer has been published by the Rev. D. R. Breed, himself a witness of the fact, with regard to the visitation of locusts in the State of Minnesota in the years 1873 to 1877. The area seeded with their eggs was more than two-thirds of the state embracing about 50,000 square miles; and the farmers were threatened with starvation. Governor Pillsbury officially appointed April 26th as an occasion of fasting and prayer. The proclamation provoked much adverse criticism. Infidels, and even many of the nominal Christians, ridiculed an appeal to God, saying the locusts were there to stay, and represented that resort to prayer in such circumstances was an evidence of credulity and superstition.

But the day of prayer was kept, notwithstanding the protests of the Liberal League. Nevertheless, after the day of prayer, the locusts reappeared, and the skeptics triumphantly sneered. But a very remarkable change occurred within twelve hours. A large number of the locusts were destroyed by a terrific frost; and the insects

which were hatched and survived the storm disappeared mysteriously. They left the state without depositing their eggs in a single square foot of territory. The question whether they went has never been satisfactorily answered, but the fact is that they disappeared entirely, and the state at large garnered the largest harvest in its history, or about 40,000,000 bushels. The locusts that remained seemed to be diseased; a parasite fastened upon them, which destroyed their power to propagate the species. It feels have been slow to refer to the "Day of Prayer," of which they made at the time such unbounded ridicule.

That God answers prayer covering such conditions as the above, and in the whole realm of human interests and needs, is as well established as that God "maketh his sun to rise" and "sendeth his rain." There would be more marvels of divine interposition and help, if there were more prayer of faith.—The Evangelical.

Our Own Mistakes.

One of the experiences that is probably common to most of us is to look back over a period of five or ten years, and wonder how we could have been so foolish as to do things and say things on certain occasions which we too keenly remember. Today, as we recall the circumstances, we bitterly reproach ourselves that we could have been so fatuous and short-sighted. But probably five or ten years hence we shall look back upon these periods with much the same feeling. We are going to continue to do foolish things to the end of the chapter. By divine grace one may largely overcome sinful tendencies, but there seems to be no help for unwisdom and poor judgment and inability to adjust one's self to circumstances but the bitter discipline of experience. There is one ray of light, however, upon this course of reflection, and that is the fact that to recognize our mistakes in the past is the best sort of reason for believing that we are improving. We have got our eyes opened to some things; and though we shall probably make mistakes in the future, just as in the past, they will not be the same ones. The man who is standing on the mountain top and sees the path winding up, should be charitable to the man down in the valley who is losing his way in the thickets. We need to cultivate charity for our own mistakes.—Selected.

Feeble Saints.

It was an amusing distortion of a good hymn, but there was not a little sound philosophy in it when the old Negro preacher sang,

"Judge not the Lord by feeble saints."

And yet this is precisely what the great majority of unconverted men are doing all the time. They will not go to the Bible and give heed to what God himself says. They have no ear for his voice of mercy that offers them salvation for the taking. They do not pay any attention to the solemn warnings that the Scriptures utter. They judge the Lord by "feeble saints." They attempt to feed their starving souls on the imperfections of Christians—poor food enough they find it! Because God's people are not all that they ought to be, therefore these cavilers will keep aloof from the religion which they profess. Christians cannot claim exemption from criticism. They know that the eyes of the world are upon them. But they say to the believer, "If you who know the truth, go to the Word; go to him who is the truth; judge not the Lord by feeble saints."—Illustrated Christian Weekly.

The Mirage of Tomorrow.

Show me your today, and I can judge of your tomorrow. If tomorrow is to be strong and sweet and beautiful, then today must be devoted to the development of the graces desired. Tomorrow must get to be today before it comes to its kingdom. Today is the golden age of your life and mine. Today is the garden of our career. Today, the love of God broods over our souls. Today angels come on errands of sympathy and love to weary and tempted hearts. Today all things are possible to him that believeth. Today Christ is ready to bestow upon you the gift that will give you power to become a son of God. Today the air is like magic. Breathe it with faith and courage. Act not in some tomorrow vague and illusory, but now. "Today is the day of salvation."—Dr. Louis Albert Banks.

Sinal.—Ex. xix.

Lo, in the darkness of a cloud I'll come
And speak to thee, and men will hear and believe
Forever. Thus to Moses spoke the Lord,
With rolling clouds and lightning girt around,
The Mount did shake, the dreadful thunder rolled,
And peeled the trumpet loud, until with awe
The people knelt and trembled deep with fear.
Upon the Mount, that like a furnace smoked,
And quaked, in fire came the Living One;
And then the trumpet sounded long and loud,
And louder waxed, till Moses spoke and from
The flaming Mount the Lord did answer him.

ARTHUR D. WILMOT.