

The modern age is an age of electricity.

People are so used to electric lights, radio, televisions, and telephones that it is hard to imagine what life would be like without them.

When there is a power failure, people grope about in flickering candlelight.

Cars hesitate in the streets because there are no traffic lights to guide them, and food spoils in silent refrigerators.

Yet, people began to understand how electricity works only a little more than two centuries ago.

Nature has apparently been experimenting in this field for millions of years.

Scientists are discovering more and more that the living world may hold many interesting secrets of electricity that could benefit humanity.

All living cells send out tiny pulses of electricity.

As the heart beats.

it send out pulses of recorded electricity; they form an electrocardiogram, which a doctor can study to determine how well the heart is working.

The brain, too, sends out brain waves of electricity, which can be recorded in an electroencephalogram.

The electric currents generated by most living cells are extremely small-of-ten so small that sensitive instruments are needed to record them.

But in some animals, certain muscle cells have become so specialized as electrical generators that they do not work as muscle cells at all.

When large numbers of these cells are linked together, the effects can be astonishing.

The electric eel is an amazing storage battery.

It can send a jolt of as much as eight hundred volts of electricity through the water in which it lives.

An electric house current is only one hundred twenty volts.

As many as four fifths of all the cells in the electric eel's body are specialized for generating electricity, and the strength of the shock it can deliver corresponds roughly to the length of its body.