

**Green Corn for Pigs.**

In the summer and early fall feeding of pigs, we have found sweet corn one of the best and most convenient kinds of fodder. Pork is made to the best advantage by putting the pigs, as soon as they are weaned from the sow and have learned to eat milk and meal, into the pen, and keeping them there under full feed until they are ready for slaughter in November or December. With a good breed of swine there is no difficulty in making March pigs weigh from 250 to 300 pounds at eight or nine months old. With plenty of Indian meal and skimmed milk they will grow rapidly until the corn is large enough for cutting. About the first of August, this should be given as an additional ration. The pigs will eat the green stalks and leaves with the greatest relish after the ears have been plucked. It is an excellent appetizer, helps the digestion of more solid food, and promotes the thrift of the animals. Field corn may not be quite so nutritious, but no better use can be made of that, after the ears are in milk, than to cut and feed it to fattening swine. It costs much less to make pork in summer than in cold winter weather.—*American Agriculturist.*

**How to Handle Bees.**

A bee raiser in Ireland communicates to the *Farmers' Gazette* (Dublin) his experience in the management of bees, from which we extract as follows:

Some people get into a fury of excitement whenever they see a bee or hear its hum, though it be only intent on gathering a little honey from the nearest flower. They shout and wallop about them with hands or handkerchiefs, as if they were being attacked by an enemy. Such are just the people who generally get stung. Let the bee alone, even though it be buzzing close to your face. In all likelihood it is only animated by curiosity. Make a fuss about it, strike it, or get it entangled in your clothes or hair, and blame yourself if you feel its javelin. When engaged in collecting honey or pollen from the flowers, no amount of teasing will cause it to sting unless you hurt or entangle it. Even when a swarm fills the air you may safely walk about in the midst of it, only let your motions be slow and deliberate. Should they alight on your hands or face, never mind, they will soon fly again; they are only resting. In such a case go slowly aside, and give yourself a gentle shake or two, but refrain from brushing or beating at the bees. Avoid, however, standing in the line of the flight of bees going from or returning to their hives. At such times they have such an impetus that before they are aware of your presence they get entangled in your hair, and are apt to resent your obtrusiveness. So much for one's passive behavior. Let us now suppose ourselves engaged in necessary action. First let us learn these principles:

1. Bees never attack when their stomachs are filled with honey or other liquid sweet. This is their normal condition when swarming, and therefore they are then harmless, as also when returning laden to their hives.

2. Neither do they attack when thoroughly frightened. We frighten bees by blowing smoke among them, or by rapping rather violently on their hives.

3. When bees are alarmed in a hive by smoke or concussion, their first impulse is to fill their honey bags from their combs.

4. Bees in a hive that is constantly being rapped against will in a few minutes rush bodily out from among their combs into any empty skep or box set over them.

Suppose now we wish to get all the bees out of a common straw hive. We provide the needful empty skep and four wood or iron pins, six or seven inches long, a roll of burning rags, unless we possess a modern bellows, smoker, or tobacco pipe, and a stool or empty pail, on which to steady the hive while operating. We now approach the hive, blow three or four whiffs of smoke into the entrance to drive in any loiterers, gently raise the edge from the floorboard, and repeat the smoking. Without the least jar, now lift the hive boldly up, and gently turn the mouth upward. If the bees show any sign of being ill-natured, give them a puff occasionally. Set the crown of the hive on to the stool or pail, and see that it is steady, and having the side where the bees are thickest raised an inch or two, now fix the empty skep over the other by sticking two of the pins into the lower hive, about an inch or two below the highest part of its edge, so as to support the edge of the empty skep. The other pins, sharpened at both ends, are placed as supports between the skeps. They will thus touch each other at one side, the other being open so as to give a full view.

Now commence rapping, gently at first, but gradually with more force, against the sides of the lower hive. In a few seconds the bees will commence to run as if for life to the upper hive. Among them may be seen the queen if a sharp lookout be kept. The great art here is in keeping the bees in one continuous, steady stream. Once they take a stand it is not so easy to dislodge them. Five to ten minutes should suffice to finish the operation if the room be warm. The driven bees may now be shaken about or tumbled from one hive to another without the slightest risk of stings.

If the weather be cold, or the operation be performed at a season when there is no unsealed honey in the hive, a little warm sirup should be sprinkled on the bees before commencing to drive.

In our modern hives we use less ceremony in dislodging the bees. After a whiff of smoke, we simply lift the frames of comb one at a time, give them a shake in front of the hive or skep we want to get the bees into, and in a minute whisk off the few that remain with a feather.

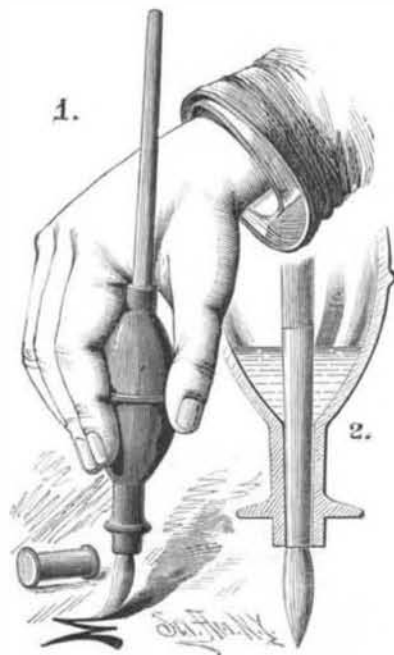
In getting bees into a hive we either pour them down in front of it, directing their course to its entrance with a feather, or shake them at once on the top of the frames, and cover instantly with a cloth.

To secure a swarm that has issued and clustered on a tree or bush, we advise, if possible, to cut the branch off after all are settled. If this be done gently, the bees can then be carried to the stand they are to occupy, laid down at the door of their new hive, and directed with a feather, as before; otherwise we hold an inverted skep below the cluster, give the branch one sharp rap, cover the skep, into which the bees will fall, with a cloth, and carry it to its future abode.

To make a simple examination of a colony in a bar frame hive, the quilt is removed, a puff or two of smoke given, and the frames are lifted one at a time, with as little jar as possible. Both sides can be examined, the queen seen and captured if desired, and the entire secrets of the hive discovered without hurting a bee or receiving a sting.

**FOUNTAIN ATTACHMENT FOR MARKING BRUSHES.**

A rubber bulb is provided with necks at opposite ends, through which the handle of a marking brush of the usual construction is passed. The lower end of the brush handle is flush with the end of the lower neck, which has a vent extending from its lower end up into the bulb. The lower neck is flanged so as to keep the brush proper away from a table or surface upon which it may be laid. A cap is passed over the lower end when the brush is not in use.

**FOUNTAIN ATTACHMENT FOR MARKING BRUSHES.**

To fill the fountain bulb, its sides are pressed together, the air being thereby expelled, and its lower end dipped into the ink. When the pressure is removed, the bulb expands and the ink is drawn into it through the vent. A slight pressure on the bulb forces a small quantity of ink through the vent to the brush. Fig. 2 plainly shows the construction. The attachment can be applied to any brush of the common form, and can easily be taken from one and applied on another. The handle need not be changed in any way to adapt it to be used with the fountain bulb.

This invention has been patented by Mr. P. C. Forrester, of Leavenworth, Kansas.

**To Photograph Silverware.**

Says the *Brit. Jour. of Photo.*, is somewhat difficult, owing to the white or frosted parts impressing the sensitive film before the burnished portions, which in silver, under certain conditions, are practically black.

But if the burnished portions be dulled, much of the difficulty vanishes.

One method of dulling the surface is by dabbing the burnished or excessively bright parts lightly but evenly with a piece of common glazier's putty. This produces a dead surface which photographs remarkably well, and enables the most delicate designs to be clearly depicted.

After the photograph has been made the putty is easily removed by brushing it over with clean, dry whiting, or better still precipitated chalk.

If the putty itself is made of precipitated chalk, all chance of scratching the surface of the silver will be avoided. A little of the chalk mixed with almost any kind of oil will answer.

Another method is to dull the surface with moisture by causing a dew to form upon the surface of the silver in the following manner:

After the image is focused and the plate is ready for exposure, a piece of ice is placed inside the vessel. The metal being a good conductor of heat soon becomes very cold, and moisture of the atmosphere quickly condenses upon it in the form of dew, and so dulls the surface.

When this occurs the exposure must be made immediately, before the formation of tear drops.

A long exposure should be made, and the development restrained, in order that the detail in the darker portions may be fully brought out. Some skill is required in arranging a set of silver pieces as to light and shade, so that each may be brought out in good relief.

**Electric Girls.**

The introduction of illuminated ballet girls has greatly added to the attractions of the spectacular stage. Girls with electric lights on their foreheads and batteries concealed in the recesses of their clothing first made their appearance a year ago, but as yet the use of illuminated girls has not spread beyond the stage. There is, however, a great future awaiting the grand idea of incandescent girls, and there is reason to believe that in a very short time private houses will be lighted by girls instead of stationary electric lights.

The formation of the Electric Girl Lighting Company is an event second in importance only to the invention of electric lights. This company proposes to supply girls of fifty candle power each in quantities to suit householders. The girls are to be fed and clothed by the company, and customers will, of course, be permitted to select at the company's warehouse whatever style of girl may please their fancy.

A very beautiful design for a front hall girl is now on exhibition at the company's office, No. 409 Gold Street. The present system of lighting the front hall of a dwelling house has the disadvantage that the light—whether it be a gas light or an electric light—must be kept burning all the evening, and that a servant must be employed to answer the bell. Thus there is a double expense—the cost of the light and the cost of the servant. The Electric Girl Lighting Company will furnish a beautiful girl of fifty or a hundred candle power, who will be on duty from dusk till midnight—or as much later as may be desired. This girl will remain seated in the hall until some one rings the front door bell. She will then turn on her electric light, open the door, admit the visitor, and light him into the reception room. One girl thus performs the duties of lighting the front hall and answering the bell, and her annual cost is much less than that of a servant and a gas light. If, however, any householder should desire to keep the electric girl constantly burning and to employ another servant to answer the bell, there can be no doubt that the electric girl, posing in a picturesque attitude, will add much to the decoration of the house.

Under the present system electric lamps or gas burners are fixtures, and cannot be moved from place to place. The electric girls, on the contrary, are movable. One girl can be made to give as much light as a large sized drawing room chandelier, and she can be moved from one room to another, leading the way to supper, for example, and placed wherever she can do the most good. There can be no comparison between a beautifully designed and chastely executed electric girl and a massive chandelier that constantly threatens to fall on somebody's head; and every householder of æsthetic instincts will be glad to exchange his chandeliers for girls.

An inexpensive electric girl of one or two candle power will be of great use when a person desires to go from one room to another in a dark house. Instead of having to carry a candle in his hand and incur the risk of dropping it or of having it blown out by a draught of air, the happy possessor of an electric girl can turn her on and send her before him to light the way. The student who is now troubled by the flicker of his gas light, or his inability to move the electric light from one part of his desk to another, can be made perfectly happy by an electric girl with a ground glass shade, who will take any position that the student may desire in order to throw light on his book or paper. No one who becomes accustomed to such a girl will think of returning to old fashioned methods of lighting.

The new company propose to furnish the new light at a little less than the charge made by the Edison and Brush Companies, and promise that in a short time their light will be decidedly cheaper than gas. Their plant already comprises 2,500 girls, and both electric boys and footmen will be at the command of the public as soon as certain experiments as to the possibility of enabling electric boys to give a steady light are completed.—*N. Y. Times.*

**A Watch Made to be Pounded.**

When a visitor to the office of the American Bank Note Company sat down to talk to Mr. Lee, that gentleman put a piece of white paper under a stamp, pounded on it, and laid the paper aside. When the visitor arose to go away, Mr. Lee put the paper under the stamp again, and pounded it once more. "You talked eight minutes," said he; "that wasn't bad." He showed the piece of paper to the caller, who saw upon it two printed clock dials. One showed the hands at four minutes to 4 o'clock, the other showed them at four minutes past 4 o'clock. "We keep that stamp," he said, "so that you sha'n't go away and say you came here at 11 o'clock in the morning, or that you had to wait an hour and a half, or make any other misstatements which can be guarded against."

"No," he added a moment later; "that stamp is the latest wrinkle in office furniture. It is an ordinary stamp with a clock attachment. The hour hand is simply a raised point upon a movable circle. The minute hand is an arrow on another revolving circle. The usual inked tape passes over these indicators and the outer circle of hour figures. Beside the clock face is a cylinder with several faces, each bearing a word—one is 'approved,' another is 'wired,' another is 'answered,' others are 'delivered,' 'Lee,' 'received.' Thus a business man is able whenever he sends away a letter, telegram, or package, receives an order, or transacts any business whatever, to record the precise moment at which the thing was done. It costs \$20. I did not invent it. I bought it."—*N. Y. Sun.*

**Sumac.**

Ever since the war sumac has been an article of regular production in the United States. Previous to that time the use of sumac grown in this country had been comparatively insignificant, while we imported a good deal annually from Europe. After the war the negroes and poor whites in Virginia were encouraged to gather the leaves of the sumac, then growing abundantly in a wild state there, by the ready sale it commanded, and mills for its grinding were set up in Richmond, Petersburg, Lynchburg, and other places. This was immediately heralded by the newspapers as a new industry, which was the fact, but far greater importance was given to the matter than it really deserved. The American sumac was from the first, and is still, a direct competitor, for many uses, with that raised in Sicily, but the latter has steadily sold at a materially higher price, its value in the market to-day being \$100 to \$110 per ton, as compared with \$75 to 80 per ton, which is the selling figure for the American. The article is used in dyeing, as a mordant, and in tanning, for the manufacture of goat skins into morocco. The American sumac is said to be fully as strong in tannin as the Sicilian, although the analyses made have varied greatly, which is probably mainly due to the different plants tested, and the different stages of their growth; American sumac, however, has a greater proportion of coloring matter than the former, but is not, as a rule, as carefully gathered, cured, and ground as the Sicily article. The plant has been carefully cultivated in Sicily for generations, while most of that gathered here is of wild growth, although the probability that it would make a good paying crop, under proper cultivation, has been repeatedly urged.

The owners of sumac mills urge upon collectors the following points: The leaf should be taken when full of sap, before it has turned red, begun to wither, or been affected by the frost; either the leaf bearing stems may be stripped off, or the entire stalk cut away, and the leaves allowed to wither before carrying to the drying shed, but they must be neither scorched nor bleached by the sun. The Virginia crop reaches from seven to ten thousand tons annually, and is collected between the 1st of July and the earliest frost.

**Characteristics of Criminals.**

Recently, in France, considerable attention has been paid to an examination of the criminal class with reference to its physical and associated characteristics. M. Lacassagne has drawn attention to the frequency of tattooing among criminals, and the violent nature of the scenes depicted by them in this voluntary mutilation. The same writer has also pointed out that criminals, as a class, are tall; thus in 800 subjects examined by him, 623 were taller by 6 centimeters than the average, and some exceeded the normal height by 10 and 20 centimeters. These observations were corroborated by M. Ferri, in Italy.

In 1882 Dr. Manouvrier has remarked that among criminals, notoriously with murderers, the jaw is more developed than is usual; and that while the cranio-mandibular index normally varies between 12.8 and 13, among the convicts it attains the remarkable number of 14.7.

MM. Heger and Dallemagne, in a comparative study of the skulls of assassins and ordinary persons, have confirmed the statement that the forward projection of the skull is greater among the former. They have also shown that criminals have a larger facial index and smaller vertical index than the peaceable citizens, but no difference is observed in the cephalic index.

M. Heger has affirmed the larger capacity of the criminal skull over that of the usual type, the relative proportions being as 1,538 is to 1,490. But this has been contradicted by a number of observers who claim the reverse, but it is suggested that this may be explained by supposing that the former examined the crania of murderers only, while in the later studies those of all classes were included, among which the incendiaries are said to have small heads. M. Flesch has said that affections of the heart exist among criminals to the extent of 20 per cent; the persistence of Botal's orifice, 10 per cent; contraction of the vascular system, 5.5 per cent. But his researches upon cerebral lesions are much more important. He has demonstrated a certain atavism in the cerebral convolutions, already indicated by Benedikt, as, for instance, the medium lobe of the brain being shaped as among the mammals, the separation of the eulcarian fissure from the occipital, the opening of the fissure of Sylvius, and the formation of an operculum of the occipital lobe.

Histology has also detected certain anomalies in the brains of those criminals whose autopsy has been made. Thus Spika has found the pigmentation of the nucleum of the tenth, seventh, and fifth pairs in a murderer's brain; also Golgi and Marchi have detected the pigmentation of the nervous cells in the brain of a convict.

The school of criminal anthropology in Italy has also made important contributions to this list of facts. M. Mano has examined the hands of criminals, and he has discovered among individuals convicted of murder, among those guilty of inflicting wounds, a great preponderance of large and short hands; while with thieves the frequency of long and narrow hands is less considerable. As to the question of tattooing, he finds that the larger number of tattooed persons is among the assassins and assailants.

M. Lombroso, together with M. Mano, has studied criminality among infants. They examined 980 infants, and especially 160 from the houses of refuge. They found that the criminal type could be recognized at that age, associated with bad tendencies in the proportion of 7.4 per cent. The

loss of a moral sense was recognized in 44 per cent, and a veritable propensity to crime in 10 per cent. Out of 29 infants they have observed the disappearance of the criminal tendencies partly through non-inheritance, partly under the beneficial influence of their surroundings, and partly because their criminal passions existing at a certain period disappear in maturity.

The typical criminal physiognomy has been recognized among murderers in Germany in the proportion of 36 per cent, among thieves in that of 25 per cent, among insolvents and persons convicted of bigamy to the extent of 6 per cent. Among females this type was found in 28 per cent. With ordinary men and women this type was only found 14 times among 815 individuals, 8 of whom were doubtful.

Tomasira, Bono, and Depaoli have asserted the great capacity of the orbits or eye sockets and prevalent daltonism. M. Bono also insists upon the swiftness of vision among criminals.

But perhaps the most curious observations were made upon the different strength of the two hands. By means of the dynamometer MM. Mano and Lombroso observed that 23 per cent of the criminals examined possessed more power in the left hand, while the number of ordinary subjects having this peculiarity was only 14 per cent. In addition, in examining left-handed people their number among the criminals far exceeded that among others, with a stronger showing to this effect among women than men.

It was also found among criminals that the right lobes of their brains were more developed than the left, while the weight of the brain was in many cases excessive. In general sensitiveness and in sensitiveness to pain the criminals fell below the average. In ruddiness of the skin, criminals are very deficient, requiring three and five drops of nitrate of amyl to provoke a blush.

M. Henri Ferri has shown that the jaws of criminals are large, that in fact a jaw of large dimensions coexists not only with the greatest development of the negative functions, but with greater ferocity and stubbornness, being greatest among murderers, smaller among thieves. Criminals' skulls are flattened.

These scattered facts, selected from many others, indicate to what interesting and possibly useful conclusions this study of criminal anthropometry may lead.

**A Strange Coincidence.**

PROF. R. A. PROCTOR, the English astronomer, and also editor of *Knowledge*, has contributed to that journal a series of articles on Coincidents and Superstitions, many of which he relates as occurring in his own experience; others are obtained from various sources.

But the circumstance I am now to relate, says Professor Proctor, seems to me to surpass in strangeness all the coincidences I have ever heard of. It relates to a matter of considerable interest apart from the coincidence.

When Dr. Thomas Young was endeavoring to interpret the inscription of the famous Rosetta Stone, Mr. Grey (afterward Sir George Francis Grey) was led, on his return from Egypt, to place in Young's hands some of the most valuable fruits of his researches among the relics of Egyptian art, including several fine specimens of writing on papyrus, which he had purchased from an Arab at Thebes, in 1820. Before these had reached Young, a man named Casati had arrived in Paris, bringing with him from Egypt a parcel of Egyptian manuscripts, among which Champollion observed one which bore in its preamble some resemblance to the text of the Rosetta Stone. This discovery attracted much attention, and Dr. Young having procured a copy of the papyrus, attempted to decipher and translate it. He had made some progress with the work when Mr. Grey gave him the new papyri. "These," says Dr. Young, "contained several fine specimens of writing and drawing on papyrus; they were chiefly in hieroglyphics, and of a mythological nature; but two which he had before described to me as particularly deserving attention, and which were brought, through his judicious precautions, in excellent preservation, both contained some Greek characters, written apparently in a pretty legible hand. That which was most intelligible had appeared at first sight to contain some words relating to the service of the Christian Church." Passing thence to speak of Casati's papyrus, Dr. Young remarks that it was the first in which any intelligible characters of the enchorial form had been discovered among the many manuscripts and inscriptions which had been examined, and it "furnished M. Champollion with a name which materially advanced the steps leading him to his very important extension of the hieroglyphical alphabet. He had mentioned to me in conversation the names of Apollonius, Antiochus, and Antigonus, as occurring among the witnesses, and I easily recognized the groups which he had deciphered; although, instead of *Antiochus*, I read *Antimachus*, and I did not recollect at the time that he had omitted the *m*."

Now comes the strange part of the story:

"In the evening of the day that Mr. Grey had brought me his manuscripts," proceeds Dr. Young (whose English, by the way, is in places slightly questionable), "I proceeded impatiently to examine that which was in Greek only, and I could scarcely believe that I was awake and in my sober senses when I observed among the names of the witnesses *Antimachus Antigoni (sic)*; and a few lines farther back, *Portis Apolloniis*, although the last word could not have been very easily deciphered without the assistance of the conjecture, which immediately occurred to me, that this

manuscript might perhaps be a translation of the enchorial manuscript of Casati. I found that its beginning was, 'A copy of an Egyptian writing,' and I proceeded to ascertain that there were the same number of names intervening between the Greek and the Egyptian signatures that I had identified, and that the same number followed the last of them. The whole number of witnesses was sixteen in each. . . . I could not, therefore, but conclude," proceeds Dr. Young, after dwelling on other points equally demonstrative of the identity of the Greek and enchorial inscriptions, "that a most extraordinary chance had brought into my possession a document which was not very likely, in the first place, ever to have existed, still less to have been preserved uninjured, for my information, through a period of near two thousand years; but that this very extraordinary translation should have been brought safely to Europe, to England, and to me, at the very moment when it was most of all desirable to me to possess it, as the illustration of an original which I was then studying, but without any other reasonable hope of comprehending it—this combination would, in other times, have been considered as affording ample evidence of my having become an Egyptian sorcerer."

The surprising effect of the coincidence is increased when the contents of this Egyptian manuscript are described. "It relates to the sale, not of a house or a field, but of a portion of the collections and offerings made from time to time on account or for the benefit of a certain number of mummies of persons described at length in very bad Greek, with their children and all their households."

**The Seventeen Year Locust.**

This is "seventeen year locust" season in Virginia. According to the *Prairie Farmer*, considerable alarm is felt in some quarters at the announcement. It is a blessing to the country that these voracious fellows are by nature prevented from making a raid all over the country the same year. The history of this insect is curious and interesting. The eggs are deposited in small slits made by the female in the branches of trees. In a short time the eggs hatch, and the young larvæ follow down the branches to the trunk, and down this to the roots, along the roots to their tips, where they fasten themselves by the beak, through which they draw sustenance. They also attach themselves to other succulent roots. Here they remain for nearly their entire existence of almost seventeen years without other change than a gradual increase in size. They come nearer the surface as the period of transformation approaches. They make cylindrical holes some half an inch in diameter, which they carefully cement and varnish, so as to be impervious to water. In this they remain for several days. They finally issue from the ground, crawl up a tree or stump, take a rest, and cast their skin. They come out in the evening, and by morning the perfect insect is ready for flight. They seem to prefer the oak to other trees, but will take up with many others, having rather a liking for the apple tree. They usually appear in the latter part of May, and they disappear in about six or seven weeks.

**Animal Remains in Coal.**

Professor Miall, F.G.S., in a lecture on "Animals of the Coal Period," recently delivered at York, England, said that there were to be found associated with seams of coal, and especially with beds of shale even below coal seams, the flattened impressions of various creatures which once had life. There had been seen shells and other fossils, and the squeezed impressions of the bodies of crustaceans or insects. These remains were, however, extremely fragmentary, and were as black as the shale in which they were embedded; it was, therefore, a matter of considerable difficulty to put them together in order to find out their original shape or to what sort of animal they belonged. But during the last 100 years a number of naturalists had engaged themselves in this task, and had brought to light a variety of results. Naturalists, indeed, believed that our common pond mussel was represented by an ally in that very remote period. It was found that the fresh water animals of the coal period were very much more like recent animals than were the marine forms of the earlier times like those of the present day. Many of the common shells of Europe were represented in extremely remote antiquity. But marine shells and other productions of the sea were not mixed up with the beds in which had been discovered land shells and the remains of land animals. All the marine productions kept, as it were, to themselves, and they were found in special beds or layers; but the marine beds seemed to mark the time when some low barrier which kept the sea at a distance was suddenly broken down, and the water of the ocean made an incursion upon either a fresh water area or a land area, and left behind it some marine shells.

Fossil centipeds, such as might now be commonly seen in our gardens and fields, had been discovered in coal measures. Scorpions, too, had been traced by their fossil remains, and thus proved to be closely akin to the scorpion of our own day. Cockroaches resembling in all essential features those with which most of us are familiar had been discovered in considerable numbers, and those of the present time formed perhaps one of the most ancient types of animal life now to be found upon our planet. Then there came the crayfish, which could be tolerably matched nowadays. But there had been animals which had disappeared from the earth altogether, without having left behind them any animal very similar to themselves.