EASTBOURNE NATURAL HISTORY SOCIETY.

The sixth ordinary meeting of the season was held at the Society's room, in the Lismore road, on Friday, March 16 h. Present: Dr. Ogier Ward, in the chair (elected in the absence of the president and any vice-president), and about 18 members and their friends.

The minutes of the previous ordinary meeting having been read and confirmed, the Rev. A. K. Cherrill was called upon to read a paper by Miss W. L. Hall, entitled—

NOTES ON THE FERTILISATION OF PLANTS BY INSECTS.

The following notes were not originally intended to take the form of a paper, but were jotted down for private use during the perusal of works by Lubbock and Darwin; they are therefore necessarily somewhat disconnected, and are intended rather to create an interest in the subject, than to give any very detailed information respecting it.

To the German naturalist, Sprengel, is due the first discovery of the intimate relations which exist between plants and insects. In the year 1787, while observing minutely *Geranium sylvaticum*, he found in the corolla a number of delicate hairs, and convinced, as he says, "that the wise Author of nature would not have created even a hair in vain," he endeavoured to ascertain the use of these hairs, and satisfied himself that they served to protect the honey from rain. He proceeded to examine other flowers, and was surprised to find how many points in their construction could be explained by their relation to insects. The study has been perfected in our own day by Mr Darwin, Sir John Lubbock, and others of our native botanists; and it is now very certain that the forms and colours of our wild flowers are mainly owing to the unconscious selection exercised by insects.

The visits of insects to plants are of supreme importance, in transferring the pollen from the stamens to the pistil; for in many plants self-fertilisation is impossible, because—

Firstly—The stamens and pistils are situated on separate flowers; or

Secondly—Because of the relative position of stamens and pistils; or

Thirdly—They do not arrive at maturity at the same time.

Therefore transference of pollen from stamen to pistil is effected—either (1) by the wind; (2) in a few cases by birds; (3) more generally by insects.

The visits of insects are due to the presence of honey; the sweet scent and bright colours of the flowers attract them; the lines and circles on the corolla guide them to the right spot; and there are numbers of curious contrivances all tending to show that, as Sprengel said, "Nature does not wish any complete flower to be fertilised by its own pollen," and, therefore, the importance of insects to plants consists in their transferring the pollen, not merely from the stamens to the pistil, but from the stamen of one plant to the pistil of another. A flower fertilised from another plant is much stronger than if fertilised by its own pollen; *e. g.*, six crossed and six self fertilised seeds of *Spomea purpurea* were grown in the same pots; the former grew 7 feet high, the latter 5 feet 4 inches. In many cases plants are more fertile if supplied with pollen from another variety, or even another species. In some cases pollen has no effect whatever, unless transferred to a different flower. Müller records some species even in which the pollen, if placed on the stigma of the same flower, has acted like a poison; the flower fades, the pollen grains and stigma shrivel up and decay.

We often find that flowers are as necessary to the existence of insects as insects are indispensable to the existence of flowers; hence there has been an interaction of insects upon flowers, and of flowers upon insects, resulting in the gradual modification of both. An interesting example of insects having been gradually modified so as to profit by their visits to plants, may be seen in the mouth and legs of bees and butterflies. The bees belonging to the genus *Prosopis* build their cells in sand, or in the centre of dry bramble sticks, lining them with mucous, which they smooth down with their trowel-like lower lip. The mouth of *Prosopis* probably represents that of the ancestors of hive bees before their mouth parts underwent modification. The *Prosopis* can only obtain honey (for feeding their young) from those flowers in which it is on the surface; but in the genera *Andrena*, *Halictus*, *Panurgas*, *Halictoides*, and *Chelostoma* we see various stages in the elongation of the lower lip, till it reaches the extreme form in hive and humble bees. In butterflies and moths it is still longer, probably from their having no need to use the mouth for domestic purposes, as with bees.

In the same ways, the *legs* of *Prosopis* hardly differ from those of genera which supply their young with animal food; but in succeeding genera the hairs for carrying pollen gradually develop, till, in the hive bee, hairs are no longer scattered, but arranged in regular rows, and the tibial spurs entirely disappear. The same remarks apply to the hairs on the body; *Prosopis* having only simple hairs, whereas in humble bees the whole body is covered with long feathered hairs.

In passing, it is worthy of notice that Mr Darwin finds it an invariable rule that, when a flower is fertilised by the wind, it never has a gaily-coloured corolla. Conifers, grasses, birches, poplars, &c., are of this class. In such plants a much larger quantity of pollen is required than in entomophilous plants; showers of pollen are produced by the Scotch fir, and it is an advantage to these plants to flower before the leaves are out, as they would interfere with the access of pollen to the female flower. Hence, such plants, as a rule, flower in early spring. Again, in such flowers the filaments of the stamens are generally long, and the pollen less adherent than in entomophilous plants, so that it can be easily detached by the wind. Wind-fertilised flowers generally have the stigma branched or hairy, evidently to increase the chance of catching pollen.

Notwithstanding, however, that bright colours and sweet odours are sufficient to attract the attention of insects, these would be insufficient inducement for *constant* visits, were it not for the more substantial attraction of pollen and honey. The honey is secreted by different parts of a flower, even within the same order; for example, in *Ranunculaceæ*, the honey glands are found on the *calyx* in certain peonies, on the *petals* in buttercups and hellebore, on the *stamens* in pulsatilla; and on the *ovary* in caltha. That bees are attracted by, and can distinguish colour, has been directly proved by Sir John Lubbock, who placed slips of glass with honey on different-coloured papers; and after accustoming different bees to visit special colours, he transferred the papers, and found that the bees invariably followed the colour, irrespective of its position.

But to pass on more especially to the cause and manner of insect fertilisation. It may, perhaps, be as well first briefly to notice the component parts of a flower.

A complete flower consists of—

1. An outer envelope, or *calyx*, sometimes tubular, sometimes consisting of separate leaves called *sepals*.
2. An inner envelope, or *corolla*, sometimes tubular, sometimes composed of separate leaves called *petals*.
3. Of one or more *stamens*, consisting of a stalk or *filament*, and a head or *anther*, in which the *pollen* is produced.
4. A *pistil* or ovary, containing one or more seeds or ovules, and consisting of a stalk or *style*, and a *stigma*, to which the pollen must find its way in order to fertilise the flower. In some cases the style is absent, and the stigma is consequently sessile.

Notwithstanding that the pistil is thus surrounded by stamens, at first sight quite capable of self-fertilisation, this is prevented much more frequently than might be supposed, and this for three reasons—

1st. Many species are *diclinous*—*i.e.*, the stamens and pistil are situated on different flowers (if on the same *plant*, termed *monœcious*; if on different plants, *diœcious*.)

2nd. Other species are *dichogamous*—*i.e.*, though pistil and stamens are in the same flower, they are not mature at the same time, and the pollen cannot therefore fertilise the pistil. (Sometimes, as in the arum, the pistil matures before the anther, called then *proterogynous*; more often the anther matures before the pistil, called then *proterandrous*.)

3rd. Some plants, within the limits of the same species, are *heteromorphous*—*i.e.*, have two or more kinds of flowers differing in the relative position of the stamens and pistil, which are so placed as to favour the transference by insects of the pollen from the anther of one flower to the pistil of another. (Some have two kinds of flowers, and are called *dimorphous*; others have three, and are called *trimorphous*.)

But even in plants not belonging to these categories, there are minor modifications which tend to prevent self-fertilisation, so that probably no plant invariably fertilises itself.

In some species where the stamens surround the pistil, and so might be expected to fertilise themselves, the anthers do not open towards the pistil, but on the sides, in a very unfavourable position for the transference of pollen. In most of the *Cruciferæ* the anthers at first have the side which opens turned towards the pistil, but before the anthers mature, they turn their backs to the stigma. Again, in pendant flowers, where the pistil hangs below the anthers, the stigmatic surface is never the upper one, but is so placed as to come in contact with any insect approaching the flower from below. In many cases, though the pollen comes in contact with the pistil of the same plant, fertilisation does not take place; *e.g.*, *Pulmonaria*, *Verbascum nigrum*, &c.

Again, the pollen from another plant is generally more effective; and though insects may visit a flower they do not necessarily fertilise it with its own pollen, because they touch the anther with one side of the proboscis and the stigma with the other.

In most cases bees confine themselves in each journey to a single species of plant, except in very closely allied forms—for instance, *Ranunculus acris*, *repens*, and *bulbosus* are not distinguished by bees, or at least are visited indifferently by them, as are also *Trifolium fragiferum*, and *T. repens*, &c., &c.

There are, then, three distinct classes of plants in which self-fertilisation is impossible:—

1. In diclinous plants.
2. In dichogamous plants.
3. In heteromorphous plants.

1. Under the diclinous species are those plants which formed the *Monœcia*, *Diœcia*, and *Polygamia* of Linnæus—such as *Euphorbia*, *Sagittaria*, *Quercus*, *Populus*, &c.

2. Under dichogamous species are those plants called proterogynous and proterandrous, the former comparatively rare, the latter very frequent, among British plants. An interesting example of proterogynous species is the common arum. The green leaf encloses a central pillar which supports several stigmas near the base, and anthers somewhat higher. It would seem, at first sight, easy for the pollen to fall on and fertilise the pistil, but this is not so; the stigmas mature before the anthers, and by the time the pollen is shed, have become incapable of fertilisation. Nor can the pollen be carried by the wind, for, when shed, it falls to the bottom of the tube, whence nothing but a hurricane could dislodge it; small insects, however, attracted by the showy spadix and prospect of honey, enter the tube while the stigmas are mature, but find themselves imprisoned by the fringe of hairs, which, like an eel-trap, permitted their entrance, but prevents their exit. After a while, however, the period of maturity of the stigma is over, and each secretes a drop of honey, thus repaying the insects for their captivity. The anthers then ripen and shed their pollen, which falls on, and adheres to the insects. Then the hairs gradually shrivel up, and set the insects free, which carry the pollen with them, so that those which visit another plant can hardly fail to deposit some of it on the stigmas. *Scrophularia nodosa*, *Aristolochia*, and some species of *Plantago*, &c., are proterogynous.

To the category of proterandrous plants belong some species of *Thymus*, *Dianthus*, *Epilobium*, *Geranium*, *Malva*, *Impatiens*, *Gentiana*, many of the *Labiatæ*, the *Umbelliferæ*, most of the *Compositæ*, *Lobeliaceæ*, and *Campanulaceæ*—in fact, the greater number of flowers which contain both stamens and pistil are more or less proterandrous.

The common pink is a well-known example of proterandrous species.

Another point of great interest in dichogamous plants is the spontaneous movement of the stamens and pistil, first observed by Kolreuter: he supposed that the object was to bring the stamens in contact with the pistil, whereas the real advantage is that, in consequence of this movement, the stamens and pistil successively occupy the same spot in the flower, and thus come in contact with the same part of the insect. For example, *Geranium pratense* has ten stamens, of which one half are longer than the remainder. When the flower first opens, the five lobes of the pistil are closely pressed together so that the stigmatic surfaces are not exposed, and the stamens lie on the petals at right angles with the upright pistil; as, however, they come to maturity, the five outer stamens raise themselves parallel and close to the pistil; after they have shed their pollen, they return to their original position, and the five inner ones go through the same process; lastly, after the pollen is all shed, the stigmas expand and attain maturity.

Similar movements take place in various other flowers. Thus, the four anthers of the foxglove are at first transverse, but as the two pairs ripen they successively become longitudinal. This flower is proterandrous, but appears to be capable of self-fertilisation if the visits of insects are delayed or prevented.

Campanula medium (bell-flower) is another proterandrous species. In the bud the large long anthers clasp the pistil, which is no longer than themselves. In the second stage the anthers have opened on the inner side and discharged their pollen, which adheres to the style; the anthers then shrivel up. Insects, in seeking for honey, are sure to clasp the style, when they necessarily dust themselves with the pollen. In this stage the flower is incapable of fertilisation. Gradually, however, the stigma unfurls, the pollen having been previously removed by insects, and it is evident that any bee which may have visited a younger flower, and dusted its under side with pollen, cannot fail to deposit some of it on the open stigma. It has often been thought that the hanging position of bell-shaped flowers has reference to the stamens and pistil, so as to enable the pollen to fall on the latter. But it is in reality to protect the honey from rain; for the stigmatic surface, instead of being turned upwards to receive the pollen as it falls, is always at the end of the pistil, and consequently turned downwards, proving that fertilisation comes from below, not from above.

3. Passing on to the heteramorphous species, the genus *Primula* is an interesting illustration. If several specimens of primroses and cowslips be examined, we find half of them have the pistil at the top of the tube, and the stamens half way down, while the other half have the stamens at the top, and the pistil half way down. (These differences are known even by school children, who call them respectively "thrum-eyed" and "pin-eyed.") The reason of this difference is obvious. An insect thrusting its proboscis down a primrose of the long-styled form would dust it at a part which, when it visited a short-styled flower, would come just opposite the head of the pistil, and could not fail to deposit some of the pollen on the stigma. Conversely, an insect visiting a short-styled plant, would dust its proboscis at a part further from the tip, which, when the insect subsequently visited a long-styled flower, would again come just opposite to the head of the pistil. There are also other points of difference in the two forms; the stigma of the long-styled form is globular and rough, that of the short-styled smoother and somewhat depressed. The pollen, too, of the long-styled is considerably smaller than that of the short-styled; 7-7000ths of an inch diameter against 10·11-7000ths. Much more seed is set if pollen from one form be placed on the pistil of the other form, than if the flower be fertilised by pollen of the same form, even though taken from a different plant; in fact, such unions in primula are more sterile than crosses between some nearly-allied though distinct species of plants.

Another interesting heteromorphous plant is *Lythrum Salicaria*—Loosestrife—which has three distinct forms of flower:—

1. The long-styled.
2. The middle-styled.
3. The short-styled.

This plant does not set its seeds if the visits of insects are prevented, and *perfect* fertility can only be obtained by fertilising each form with pollen from the pistils of corresponding length. Thus the long-styled form is naturally fertilised by pollen from the long stamens of the two other forms, though it can be so—but imperfectly—by its own two sets of stamens, and by the shorter stamens of the two other forms; it can, therefore, be fertilised, as Darwin expresses it, "legitimately" in two ways, and "illegitimately" in four ways; the same of course applies to the two other forms, so that eighteen modes of union are possible, six natural, and twelve more or less sterile.

The seeds also of the three forms differ remarkably one from another, 100 of the long-styled being equal to 121 middle-styled and 142 short-syled. The pollen grains, too, not only differ in size, the long-styled having the largest grains, but also in colour, being green in the longer stamens and yellow in the shorter; while the filaments are pink in the long stamens, and uncoloured in the shorter ones. Darwin considers the advantage of the trimorphous condition of this plant is, that if it were only dimorphous there would be but an equal chance of any two plants being of different forms, whereas, being trimorphous, the chances are two to one. In cowslips, primroses, &c., where large numbers grow together, this would be immaterial. Numerous instances of heteromorphism may be found, especially among the following genera:—*Hottonia*, *Primula*, *Linum*, *Lythrum*, *Pulmonaria*, *Plantago*, *Menyanthes*, *Polygonum*, &c., &c.; though it by no means follows that each species in these genera is of the same formation, for we constantly find monomorphous and heteromorphous species in the same genus.

It is impossible in a limited time like the present to refer to more than these few examples, but the subject is one of the deepest interest, and will richly repay intelligent study and research. In almost all the genera of British plants may be found instances of the marvellous provision for insect fertilisation, differing often considerably in detail, but all showing the impress of His hand Who bade us "consider the lilies of the field," that through them we might learn to adore the infinite wisdom and loving care of the great Creator, and Who

> "Ere one flowery season fades and dies
> Designs the blooming wonders of the next"

not disdaining in this great work to employ the agency of some of the most insignificant of His creatures.

The paper was illustrated by some good drawings on a large scale by the author. After a slight discussion the Chairman called upon Mr Cosstick to read his paper

ON THE GENERAL HISTORY OF ANTS, AND THEIR INSTINCTS.

All the species of ants are social; there are none solitary, as is the case with bees and wasps. They are all more or less skilful in architecture, some employing masonry and others being carpenters, wood-carvers, and miners. They consequently afford much that is interesting to naturalists. To enter into a hundredth part of the instinct, providence, watchfulness, and good moral lessons these little folk hold out to us in their habits would require a paper ten times longer than this. I have prepared enough if it should be—and I hope it may be—the means of stirring up more of our members to a livelier sense of their duties, as members of a Natural History Society, in imitating these little industrious creatures. To me the apparent apathy, amidst all the talent we possess in this society, seems a cause for deep regret, and that out of a list of 101 members, as returned in our last annual report, of 1876, we cannot get up six papers in the winter months on natural history. No member can deny that lively and heart-stirring subjects in natural history are inexhaustible, and whichever branch of the science one may select, opportunities are not wanting in this, our excellent district, with its rich fields and woods, if we will but put our shoulders to the wheel. And again I say, imitate these little folks in their industry and perseverance. Few good observers, if members or non members, will fail to see and feel the deep meaning of the following extracts from Proverbs:—"Go to the ant, thou sluggard, consider her ways and be wise"; "Ants are a people not strong, yet they prepare their meat in the summer." It is worthy of remark that the latter sentence is more applicable to exotic ants, such as those of Africa or India and other hot climates, where they are industriously at work through the greater part of the year, whereas the ants which are indigenous are in a semi-dormant state throughout the winter months. Mason-ants are so called from building their nests of earthy materials. One of the most common of the ant-masons is the turf-ant, *Formica exspitum*, which is very small and of a blackish brown colour. Its architecture is not upon quite so extensive a scale as some of the others, but, though slight, it is very ingenious. Sometimes they make choice of a flat stone or other covering, beneath which they hollow out chambers and communicating galleries; at other times they are content with the open ground, but most commonly they select a tuft of grass or other herbage, the stems of which serve for columns to their earthen walls. This species often becomes a great nuisance to gardeners in flower-pots out of doors. If one could manage to save a plant which they inhabit there are few better natural chances of watching and studying their ingenious habits of masonry and providence, particularly if the plant be shifted from an earthen to a glass pot. Those who test this should not forget to watch them on a clear moonlight night after a heavy rain. They will find themselves amply repaid for study, as it is highly amusing, as well as instructive, to see them bringing out their stores to air them under the rays of a bright moon. *Formica flava*, or the yellow ant, is another very interesting species, particularly for their early activity in the spring; also for another peculiarity in their government—viz., that quantities of the young of the wood-louse (*Onicus armadillo*) are always found with perfect familiarity in the compartments with the ants, and they seem to be perfectly domesticated. I well remember, several years ago, when preparing for planting trees during severe frosty weather, so as to be ready when the weather broke up, finding several of these nests with the ants in a semi-torpid state and the wood-lice showing signs of life. This affords a lesson which all should apply their minds to—viz., that it is a proof of the fallacy of the commonly received opinion that cold is universally destructive to insect life. The brown ant (*Formica brunnea*), one of the smallest of the ants, is particularly remarkable for the finish of its work. Its body is of a reddish shining brown, its head a little deeper, and the antennæ and feet a little brighter colour, the body one line and two fifths in length. (A line is the twelfth part of the old French inch.) This ant is one of the most industrious of its tribe; it forms its nest in stories four or five lines in height. The partitions are not more than half a line in thickness, and very ingeniously constructed. The ant-hill contains sometimes more than twenty stories in its upper portion, and at least as many under the surface of the ground. By this arrangement the ants are enabled with the greatest facility to regulate the heat. When a too burning sun overheats their upper apartments they withdraw their little ones to the bottom of the ant-hill. The wood ant, *Formica rufa*—so called from its invariable habit of living in or near woods—may be readily distinguished from other ants by being larger and by the dusky black colour of its head and hinder parts, and the rusty brown of its middle. The structures reared by this species are often of considerable magnitude, and are sometimes found sufficiently large to fill a wheel-barrow. The materials of the nest are short pieces of wood and grass, and leaves, so ingeniously constructed, and so nicely put together, that they are seldom found wet more than three to four inches deep, even after a heavy thunder-storm; it is an interesting sight to observe how quickly they will repair a breach made in their nest. I once found the skeleton of a large snake on one of their nests in Abbott's Wood. The larva of this ant is much sought after by gamekeepers to feed pheasants and partridges when domesticated. It is a very interesting sight to see their habits of building by placing a large sheet of glass on one side of their nest. It is also worthy of remark that hours might be spent in profitable reflection watching the sports and gymnastics of the wood-ant, particularly at the time when the mid-day sun is shining on their nest. Let any one who is interested place himself in some conspicuous open spot in our adjacent woods, when the meridian sun is shining on them, when large portions of them seem to have ceased their original activity, and he may witness sports like the renowned John Gilpin. They also play the part of wrestlers, and all seems in the most apparent good humour; it has the appearance of school-boys having their gambols between the hours of study, for if you visit them at three or four o'clock in the afternoon you will find them busily engaged in running to and fro in their neatly cropped paths with the utmost activity and watchfulness. Let any one who is interested in their history watch them at work in these afternoon hours, and while watching them stamp his foot in the vicinity of their nest. Immediately he will see the whole colony in readiness, with defiant attitude and watchfulness, for they raise themselves on their legs, both in the paths and on all parts of the outside of the nest, and seem waiting for an immediate attack, and if he stands completely still for a few minutes, he may observe them settle down to their line of march in their paths and on their nest, but with the utmost watchfulness, using their antennæ in feeling all the byways of their paths with the utmost caution for several seconds. Many interesting facts might be written on the hybernation, drinking, lapping, decamping, pairing, migrations of males and females, and the forms of government of the various varieties, and even wars amongst them, and their method of capturing slaves for the internal management of their colonies. Another most interesting observation may be witnessed with a common magnifying glass viz., the ants feeding on the juices of the aphides; let any one go into the garden when the aphis are destroying the foliage of the peach and plum-trees, or on the young shoots of lime trees. The wall fruit trees are the most convenient for observation. The ants may be distinctly seen patting the sides of the aphis with their antennæ, in order to make them discharge their juices, which the ants devour at their leisure; it is also a curious fact to see them running busily about among the aphides till they come to one that is more filled with the sweet juice than the rest on the same leaf. Another noticeable fact is that the drop of fluid the aphis discharges is larger in appearance than the body of the ant, and yet it seems to march off without any inconvenience after devouring it. Another of our indigenous ants is the jet, or wood-destroying ant, which often proves very destructive in the woodwork of the glass-houses in horticultural establishments. This insect may be readily discovered from any of the other varieties by its jet black body and its habit of feeding on the wood by cutting out with its mandibles neatly formed chambers in the internal parts of the solid wood, wherein to rear its progeny and store its food.

To those of our society who have not studied the habits of the exotic ants of India and Africa, I think the following may prove highly interesting, as we find the descriptions which travellers give us of their nests and their governments something truly wonderful, for they construct their habitations of considerable size, and form large communities, consisting of king, queen, soldiers, and labourers. Such especially are the white ants, whose nests, formed entirely of clay, in many instances have been discovered twelve feet high, and with such profound solidity that buffaloes have been seen on them without materially destroying their structure, and have been mistaken on many occasions, for Indian villages, and are, in fact, occasionally, larger than the dwellings of the natives. The proportions of their structure have been measured, and calculations have been made by travellers in the following proportions: That were our houses built in the same proportions as their nests, they would be twelve or fifteen inches higher than the Monument of London, and with corresponding dimensions with the basement of the edifices, they would be four or five times higher than the Pyramids of Egypt. The termites alluded to do not stand above a quarter of an inch high, while their nests are frequently twelve feet. Other of the species (for there are several) exercise the art of miners by penetrating beneath the door-posts, &c., of the houses, which they devour, with the exception of the thin coating of the outside of the post, &c., and so cleanly do they execute this that, when the interstices are filled up (which they carefully fill up with clay, moistened with their saliva), to an unpractised eye, the posts appear sound, whereas if one should kick them with his foot, or strike them with a hammer, they would crumble to pieces. The peculiarity of this destructive species is they invariably feed on dead wood, which they hollow out with such nicety, in such soft woods as the pine and fir, in the vast forests, that the surface has the appearance of being perfectly whole. Felled and dried wood seems their favourite food, as they have not been known to feed on live wood. The termites alluded to, which construct nests twelve feet high, is *Termis bellicossus*, the female of which produces 31 356,000 eggs in one year.

A vote having been carried thanking Miss Hall and Mr. Cossick for their interesting papers, the meeting terminated.

A RITUALISTIC FUNERAL.—On Wednesday, at St. Mary's Church, Cardiff, which has long been noted as a Ritualistic place of worship, a corpse, after being paraded about the church grounds, was conveyed into the church and deposited by the altar. The pall was blue, edged with ermine. On this being removed the coffin was seen to have a glass front, through which the dead body was apparent. The service generally was ornate. The many hundreds of persons present were allowed to go up to the coffin and gaze on the body. The sisters connected with the church were present, besides the surpliced choir and the clergy of the parish. The proceedings occupied an hour and a half.