

there they take root and develop new trees which lean outward since the mother tree shades them on one side. With a fairy ring of young beech trees growing on the outside of the spread of the tree, it presents a very peculiar and striking appearance. Those near the base of the tree (6-10 ft. high) have been cut free from the tree and the portion of the branch between the rooting point and the main trunk have been removed, so that the new trees are now independent, the trunks of some of them being 10-20 cm. in diameter. The *Polyporus giganteus* are growing under this tree from the roots, the clumps some of them at the base of the tree, others one to three or four feet away. There were three clumps of the *Polyporus* within a space four feet in diameter, each clump being about eighteen inches in diameter and fully as high, while there were a half dozen other clumps younger between these and near by. What a fine photograph it would make. So we determined to return in a day or two and photograph it, for a life time might not yield another such fine opportunity. We found also *Phallus impudicus*, two eggs. One I took up and set in a covered jar in the laboratory to await its opening to see if a veil is present as in *Dictyophora ravenelii*. We found *Psalliota russophylla*, according to Masee, which I believe is same as Peck's *Psalliota diminutiva*. Found also *Russula ochroleuca*, *R. fellea* and *R. sardonica*. *Boletus badius* was abundant,

so Marasmius urens which Masee thinks is identical with M. personatus was abundant. At 12 we returned, Masee going to Faling where his family is staying, while I go to my rooms at 40 Forest Road. Look over the fungi, write notes on them and the names, and leave them to take to-morrow to the boiler house to dry.

I then asked Mr. Richards where I could go to spend a pleasant afternoon. He suggested Hampton Court, a famous Royal residence, Henry eighth, and other Henry's, etc. When I went to lunch I asked the Armenian waiter where would be a good place. He also suggested Hampton Court. So I took the electric tram, seat on top. It was a fair though partially cloudy afternoon. The ride was a pleasant one. We stopped at Hampton Court by the Lion Gates. I passed on ^{to} the Royal residence, once the home of Woölsy, who gave it to the King. It is now devoted to an art gallery, and in addition to many old and rare works of art, there are some of the old tapestries still hanging, and some of the royal bed rooms with the old furniture are still kept on exhibition. From the art galleries I went outside and saw the sign "This way to the vine". I followed along and came to a glass house on one side of a building, the glass house being about 100 feet long and 30 feet wide. A single grape vine is trained here. It arises at one end of the house with a trunk a foot or more in diameter and soon breaks up into four or

five branches which develop and are trained the length of the house overhead next the glass, and smaller branches extend off from these so that the entire overhead is interlaced and covered with foliage underneath where hang the now ripe clusters of grapes, the clusters being 6-9 inches long and fine. There were on the vine at this time 700! bunches of grapes. But this is a bad year. Some years it has borne as many as 2250 or more bunches! It was planted 135 years ago and is the oldest and largest cultivated grape vine known. There are several daughter vines from this in existence, which have been obtained by cuttings. One is in the garden of the Carleton House at Kew Gardens near Kew Bridge, and the landlord's wife, or landlady, being a sister of Mrs. Richards, some of the grapes from the vine were at the Richards and I was asked to sample some of them. They are very fine. The Thames, a small winding stream here, passes close by Hampton Court. Boathouses, small steam craft and the irrepressible oarsmen in singles, doubles, 4s and 8s furnish enjoyment for those fond of the water. I returned at night fall after having as a final experience, gone through the "maze" formed by winding hedges of Crataegus, a maze one-half mile long covering a small area. The guards said I made it in record time, and remarked, "O you Americans are keen"!!

Monday Sept. 21, 1903. 1907.

While working as usual in the herbarium this morning the attendant announced that Mrs. Coffin was in the hall and wished to speak with me. I found Mrs. Coffin, Stephen Walter Coffin, and Miss Coffin, sister of the husband of Mrs. Coffin. Mrs. Coffin greeted me very cordially and introduced her son a lad of about 14 years. This I now find is the young man who wrote me a few days before I sailed from America, from "Bedales" School in Hampshire, England. This explains where "Hants" is. I had letter from a young girl at the same school and a few days later from this lad. Both of them had written from "Hants" which I now find is the abbreviation for Hampshire. They had not said whether Hants was in England or not. But the boy had said that in a few days he would return to Passaic, Mortlake road, Kew Gardens for the summer, so I supposed "Hants" was somewhere in England. I was surprised to find the letter was from such a young lad. I thought it was from a teacher in this school (Bedales) and I thought also the girl who wrote me was also a teacher somewhere in "Hants". Both had written me that they had been "using" my book on Plant Life, and were greatly delighted with it, but they had observed the interchange of the words oxygen and nitrogen in giving the percentage of each in the air, making the oxygen 79% and the nitrogen 21%. Stephen now says

that they were reading that part in school one day and the teacher said, "See here, how is this". Then Stephen had said that his father was a graduate of the same College in America that the author of the book was, and the teacher suggested that he write me. Mrs. Coffin invited me to come this evening to dinner (Monday Sept. 21st) to their house to dinner at 6:30. This I did. They live on Mortlake road 16. Name of the place Passaic. Here I met Mr. Coffin the elder, the one who graduated at Cornell about '74. He retains a very strong interest in Cornell and Cornellians. The evening was a very very pleasant one. They asked about my work, my trip to Sweden, about Mr. Tyler, and Mr. and Mrs. Austin. Mr. Coffin knew our Moses Coyt Tyler very well and admired him greatly. The Tyler's have on several occasions visited the Coffin's at Kew, and a year ago Mrs. Tyler and the Austin's visited them. Mr. Coffin also inquired about prosperity of Cornell. Was shocked to hear of the typhoid epidemic. I met, of course, Mrs. Coffin, Stephen Walter Coffin and Miss Coffin, a cousin of the elder Coffin, also Mrs. Coffin the elder, mother of Mr. Coffin, a fine, old, portly lady who still appears young.

Dinner was served. A good dinner. There came at the close, English walnuts. I was surprised to find them fresh and green, and more surprised to learn that this is the way in which English people

eat them. When they get dry they send them to America!!! The nuts are cracked and peeled because the thin membrane surrounding the meat is bitter when fresh. It is a somewhat tedious process but the nuts are good. I cannot say, however, that I like them quite so well as I do the dried ones, perhaps because I have not become accustomed to them. After dinner the gentlemen remained in in the dining room a short time. There was a brother of the elder Coffin present, agreeable and pleasant but he seemed somewhat eccentric. Perhaps I do him an injustice for I did not have much of an opportunity to make his acquaintance. He was so overshadowed by Stephen, his father and mother, Grandmother and aunt, whose brother was leading actor in the Country Girl in London and I must be sure to go to hear him. Saw his admirable sister. Mrs. Coffin urged me to go ahead and smoke if I was a smoker. They did not smoke. I did not and they seemed pleased. Coffee was then served. More chat for a long time in the evening. But soon after coffee Stephen Walter's mother said it was time for the lad to go to bed and he came forward in a manly way and bade me good night and good bye and thanked me for replying to the letter of a small boy. He goes off to Bedales school to-morrow for another year. Mr. Coffin sends his boy here because he thinks it a school with better influences and with a trend in a better direction than most of England's

fitting schools.

Good evening.

Tuesday Sept. 22, 1903.

By appointment last evening, Mr. Masseur and I met at Curator's gate at 9 o'clock this morning to go to photograph the gigantic specimen of *Polyporus giganteus* under the beech tree which we had discovered Sunday morning (see Sunday's account). We took a stool from Jodrell laboratory to stand camera on. When we reached the tree and had climbed within the enclosure we saw not a vestige of *Polyporus giganteus*! Mr. Masseur looked in blank amazement and I stood in bewilderment and disappointment at the loss of such a fine picture. Then Mr. Masseur said that the workmen had several years ago been given instructions to clear out and burn everything of this kind so soon as they saw it. This had been done Monday afternoon (yesterday), the workmen having reached that part of the garden in cutting grass and clearing out blown down trees. Mr. Masseur spoke to one of the workmen near about it and he replied, "well sir, we were only carrying out your own orders". Well the "milk is spilt". We then visit the place where on Sunday we found *Phallus impudicus*. I collect an egg of this and some of the spawn with earth and leaf mold shipping it by mail to Mr. Whetzel with directions to plant it in sterilized sawdust and leaf mold. The

egg I take to the Jodrell laboratory. The egg which we brought in Sunday is now open and the plant fully elongated. It has a very thin membranous veil homologous with that of Dictyophora ravenelii. I section the eggs and then photograph the fully developed one and section of egg.

Wednesday 23rd, Thursday 24th and Friday 25th.

These days were put in at work as usual in the herbarium, nothing of interest happened except in connection with study of plants notes of which I have. One thing, however, a *Lepiota* was brought in from the hot houses which both Masee and I thought was new. General aspect of a small *Lepiota acutesquamosa*, but scales conic, pyramidal and easily falling off leaving a gray silky ground. Masee did not know where to place it. I said I believed it was something new and said he ought to describe it. No, he did not believe in describing species (so he had emphasized before in our conversation). I said when a plant was so characteristic as this, it was right to describe it. Well, if I would do him the honor of associating my name with his he would do it!! We talked some on the appropriateness of the name. I said something which would indicate the caducous character of the scales with "lépis" for the last part would be suitable. So after looking up in the lexicon he asked me how eleuthrolépis would do. Good, so it stands Lepiota eleuthrolépis

Massee and Atkinson n.sp.!

Friday I studied the Harpochytrium which Lagerheim gave me from Patagonia and also the Harpochytrium hedenii Wille which Wille had kindly sent me at my request. I wrote him when I was in Stockholm. I made sketches of these, and then Friday night amended the manuscript which I had sent Sydow for November number of Annales Mycologici, on the Genus Harpochytrium in the United States.

Saturday Sept. 26, 1903.

By arrangement for several days Massee and I met at Kew Garden Station about 7:45, took 3rd class to London. Mr. Watson came along. Three of Massee's children were with him. They were each given a penny to put in a penny in the slot machine to get chocolate candy or whatever they chose. One of his children was at home so an extra penny was given for one of them to draw something for her. Massee, Watson and myself altogether in same compartment. On reaching London we went a short distance to the Euston Station of the Great Northern Road, Euston Station being right against the Midland Station St. Pancras, but the roads leading to different parts of England. We have blanks filled out entitling us to fare of 1-1/4 for the round trip, according to arrangements for all such societies. This was the 176th Annual Fungus Foray of the Mycological Section

of the Yorkshire Naturalist's Union. Mr. Masee led the way to the booking office, and went to window No. 1. Here the man after looking at our filled blanks, said "go to No. 4". As we approached window No. 4 I saw in large letters above it, "Horses, Carriages, Dogs, etc.!!!" I asked Mr. Masee if this was a special classification for us or for the Mycological Section! He thought that we were neither horses, carriages or dogs, and so we must come under the "etc."

We travelled along at a good clip in many instances 60 miles per hour. Travelled 3rd class. Corridor, train and a dining car on, so we had lunch on train. Masee is very cordial and friendly and I like him. We seem to be to a certain extent, "hail fellows well met", though not completely so, though there is good feeling and I think a respect for each others "abilities"!!! Masee told me how he first became interested in fungi. His home was in Scarborough (on North Sea) in Yorkshire. A large specimen (about 18 inches across) of *Daedalea quercina* was brought into the house. It interested him. He was ~~then~~ only seven years old. From this he became more interested in plants and especially fungi. This *Daedalea quercina* he has always kept and has it in his home now.

Masee was a student at Cambridge for three years and had he stayed one year longer he would have gotten his degree. But an

opportunity came to go to Brazil. Here he went for several years. Comes back to England, he did not want to stop active work to complete his course. They had given him some kind of a promise that his work in Brazil would be accepted, but in addition to this they wanted some kind of a thesis, or examination or something of the kind. It would not have been much, but Masseur being rather independent, and thinking they ought to give him the degree, stood out against the thesis or examination and lost his opportunity. He has rather regretted it since for as he says, it has rather left him out of the close associations of friendship and alumniship which are the possessions of those who graduate. A few years ago the authorities at Heidelberg in their efforts to build up their library further without incurring too great cost begged books. They wrote Masseur, told him how great his contributions to science had been, how much his works would be prized in their library, and said if he would send them a set of his published works, they would give him the degree of Doctor of Philosophy!! Masseur was disinclined to purchase the degree this way! and yet it could be looked upon as an honorary degree conferred because of their recognition of his distinguished services to science.

About 2 P.M. we reach York, where we change to take train to Helmsley. Here we meet Wager, Mr. Crossland, secretary of the

Mycological Section. Mr. , secretary of the Yorkshire Naturalist's Union. Mr. Cheeseman a "young amateur"!! whom I also met at Southport. Mr. Clark of York, who does fine work in photographing fungi. Mr. Gibbs also from near York, a beginner in thorough study of fungi. Mr. Thwaitz, a younger beginner, and Mr. Needham, a veteran collector.

Mr. Crossman has always been a butcher by profession. For several years past he has gone out of active work himself but goes to the shop every day to look after things. For many years he has been an active student of the fungi, and does some good critical work, especially in the discomycetes. He has published in the Proceedings of the Yorkshire Naturalist several new species. He is a short man, now about 65, gray, earnest, serious, but still with a place for humor. He is very kind hearted and is always trying to do something to help some one. The Mr. Needham, the veteran collector, is a middle sized spare man with large and serious eyes, dark complexion and a "nutmeg grater" beard. He used to be a heavy drinker, often tight and sometimes dead drunk. One day while he was so tight he could hardly walk he met Mr. Crossman who had a basket of mushrooms. "What's them thar things" said Needham. Mr. Crossman, kind hearted as he is, stopped, told him something about them. Needham seemed interested. Crossman said to him,

"come around to-morrow when your head is clearer and I will tell you more". Needham came around and Crossman took the trouble to tell him much about the plants. Took him on several trips. Needham became a great collector, left drink alone, became steady in his work, and was trusted by his firm, so that they let him often have a half day or so off without prejudice to salary when Masseur or some one else wants something. Masseur says he is one of the greatest collectors we have. He may describe something he wants to Needham and Needham will go to hunt for it and is almost sure to bring it in. He has a good eye for observation, and came to know well the things he has collected before. While he may not remember names he remembers plants, so he lets the common things go and collects only the rare or new to him things. These things Masseur told me about Clark, Crossland and Needham while on the way from London to York. Clark and Masseur are fond of spirits, and seem to be kindred spirits in this respect. So soon as greetings were over, Clark said he was thirsty, Masseur was too. So they went into the bar in the Station to slake their thirst. It took them some time. Clark is about six feet, two inches tall, and about two feet broad, corpulent, with a large chest, a large head, the fat creeping around his eyes, his double chin coming into mortal combat with his cheek, but the latter can never be conquered!!,

while he is scarcely constricted at the neck. His legs and feet match. He is either drinking, or smoking, or telling yarns!! Train time comes for the train York to Helmsley. There is a crush. Our party try to hold two compartments, but other energetic gentlemen crowd us apart. Masee and Clark of course gravitated into one compartment. In another are Wager, Thwaitz, Needham, Crossman, Cheeseman and myself and perhaps some others, not now remembered. I did not try to remember them, because they seemed according to Masee's statement to be black sheep so far as the Fungus Foray was concerned. Those people who know nothing about the subject, are always hanging on and asking you what is this? what is that? not even trying to remember the names but always asking and bothering in order to get a little cheap notoriety as an amateur!!

Well, our crowd have a great and jolly time. Tales, etc., varying so far from the sublime that at one station Wager called attention to the appropriateness of a sign printed in large letters on a barn, "I call upon all men to repent"! As we approach the Yorkshire hills there appears the "white horse", a large place on a mountain side bared of vegetation and earth the shape of a horse, and the rock being white it stands out with great distinctness so that it can plainly be seen twenty or more miles away. There was originally a bare spot here nearly the shape of a horse. The resemblance

was so close that it was made closer by clearing away the earth so that the outlines were graceful and perfect and it is kept in repair now.

We reach Helmsley about 4 or 5 o'clock. A few of the party go out collecting near. I hunt up a place where I can dry my fungi. I find through the suggestions of Mr. Barker, proprietor (or husband of the proprietress) of the hotel where we stay, a Mr. Beecroft who runs (though does not own) the gas making plant. The gas manufactory is just in the rear of the house where he lives. It is reached by going through the hall in the middle of the house, which is characteristic of all Yorkshire village houses. In the gas house is an old photograph room. Here is a gas connection, and a place under the roof not covered by the skylight so that it will not leak. I explain to Mr. Beecroft what I want and tell him how to make the oven. He makes an oven by placing a sheet iron about two and one-half feet square on brick on their edges (for bottom), then he fits a sheet of tin for each of the four sides and holds them in place with brick. Two pieces of tin make the cover. The door is a piece of tin which can be taken down at will. Bricks are then placed on edge on the sheet iron next inside of the tin sides and on these two fine wire screens are placed. Two other shelves are made above this in like manner by using perforated zinc

which Mr. Beecroft had. A small gas stove was then placed underneath and it made a fine oven for drying. Dinner is now ready.

After dinner, evening is spent in conversation. It was amusing when we first arrived to see how the rooms were parcelled out.

Messrs. Crossland, Masee and Clark were detained in getting up from the depot because they had more luggage. The hotel had not booked us for rooms although all of us had written and Mr. Wager had written for me. Mr. secretary of the Yorkshire Naturalist's Union said the only way to do would be to take the letters, see the dates and book the rooms for the first applicants, since there were not enough rooms for all, and the later applicants could then go to another hotel. The landlady then began to take the letters off the spindle. Mr. Wager and I were out of it, that is, out of the hotel because our application was so late. Just then Mr. Crossland came in, learned what was going on. He turned everything upside down, said the rooms were engaged for the mycologists and he would see to assigning the rooms. Consequence was that Wager and I were put in a room with two beds, Crossland and some one else in another, Clark and Masee in another, some one else and Gibbs in another, while Mr. secretary of the Yorkshire Naturalist's Union, Mr. Needham, Mr. so and so went out to another hotel. Wager and I retired early since I was tired.

Helmsley, Yorkshire, Sunday Sept. 27, 1903.

Day dark and cloudy and foreboding. Had breakfast at 9 o'clock. At 10 o'clock started on an excursion up lead by Mr. H. Slater, school master at Helmsley. The woods where we went were very poor in fungi, being grown up for most part with the Mercury weed, and nearly all leaf mold being raked down the hillside or washed down by rains, and the valley of course in meadow. We, however, found a few things, among them found what Masee said was *Agaricus silvaticus*. It is a large agaric, with adpressed, fibrous scales and does not turn red when bruised. It was a very imperfect specimen, being nearly eaten up by snails. It now begins to rain. Masee, Clark and Crossland turn back, the rest of us go on, pass over a large pasture, to another woods, down a wooded ravine (wooded on side) and return by another pasture. Occasionally it would rain a little, but on the whole it was fair though cloudy. In pastures we found many mushrooms in fairy rings, among them *Hygrophorus niveus*, *H. virgineus*, *H. pratensis*, *H. puniceus*, *Tricholoma panaeolum*, *Clitocybe geotropa*, *Marasmius oreades*. Found in pastures what also seemed to be *Agaricus augustus*. Masee said it was. Stem is, perhaps it is Masee's *A. peronatus*. However, very scaly with white coarse floccose scales. The stems of all specimens badly eaten by insects and the older specimens nearly

rotten from bacteria and insect work so that good mature specimens could not be collected.

Dinner at 6 o'clock. Then the party spread out fungi and studied them. At 9 o'clock the first regular meeting is held. Massee presented a very interesting paper in his characteristic way, on the development of *Nectria solani*. He described three conidial stages. The first is truly parasitic, feeds on the starch. The second, *Fusisporum*, semiparasitic follows the first. The third is nearly quite saprophytic, follows *Fusisporum* and is a (*Sporocéphalum?*). Then comes *Nectria* stage, purely saprophytic. He has his paper illustrated by fine charts in color. The *Nectria* spores can then infect the living potato. Mr. Crossland spoke to the paper. Then Mr. Wager who called attention to the interesting fact that the ascus stages probably preceded by fertilization reinvigorated the plant so that the spores could infect the living host. Mr. Wager than asked for an expression of opinion from me. I spoke of it as it seemed to me an interesting and important paper and pointed out the important features of Mr. Massee's investigation, the relation of the different spore forms to their environment. Some others then spoke and Mr. Massee followed again, made some kind references to me and my visit to Europe, what I wanted to accomplish and the help I wanted to get from Europeans, and said he was certain

all of them could learn something from me. Mr. Crossland then very kindly referred to my visit and its purpose and hoped all the members would bring in and save specimens for me. I could, of course, not fail to thank them.

Note Wager's match box trick, which "end goes off first", also the "cigarette trick" turn the stub in the mouth and out again.

Monday Sept. 28, 1903.

Rose at 7 o'clock, found that Masee and Crossland had been up since 6 o'clock studying with microscope, etc. I attended to my drying room, photo'd some plants, and had breakfast at 9. Mr. Wager took his departure to-day and urged from Mrs. Wager that I visit them if possible in case I should return by way of Liverpool. Then at 10 all go out on another excursion, this time to the estate of Lord Feversham, who owns nearly all Helmsley and the surrounding country. It is an old name, going back into Feudal times. Lord Feversham lives in a mansion not far from the village. Ruins of two castles of the family stand closer to the town. One ruin right by the side of another. Now there is a tennis court between the ruins. The old moat, a double one is still to be seen. In Feversham's place in a large field of several hundred acres I saw as many as 700 to 800 deer. On this trip I saw fine specimens of Armillaria

mucida on a beech. Photo'd it on tree and collected a quantity, also found fine clump of Polyporus giganteus at foot of a Quercus robur. Photo'd it and collected it. Also found specimen of Polyporus dryadeus on Quercus robur. A young lad by name of Willie carried a large basket for me. I had him yesterday (and Willie Beecroft another lad of about same age accompanied me yesterday). I paid Willie two shillings per day. He is a fine looking fellow and bright. In the course of the day we found another beech tree with many clumps of Armillaria mucida on it. I photographed this with Mr. Crossland standing by it. After dinner and the first study of fungi, the second meeting was held.

Mr. Gibbs read a rather technical paper on cultures of some dung inhabiting fungi, describing them, giving measurements, etc. Nearly every one "discussed" the paper, admiring the energy of Mr. Gibbs and flattering him in the usual British way with sweet and encouraging speeches, all of which took time but made them feel good, especially Mr. Gibbs, and will undoubtedly encourage Mr. Gibbs who is only a beginner but is earnest and started in the right way. This was followed by Mr. Masee on a paper on the work of bacteria dealing with tubercles of legumes, ^a sugar cane disease, the ginger beer plants, etc., illustrated with colored charts, Mr. Masee was at his best, and with cleverness presented the history of these organisms so that any one could understand

that any one could understand. It was characterized by wit and simile which made it intensely interesting and brought forth frequent applause. The legume sends down into the root hair asparagin which attracts the bacteria from soil. Likened this to our baiting for fish. "well sometimes the worm was taken off", etc. In speaking of the ginger beer plant he described the two organisms the yeast and the bacterium. The yeast grows for a time, but after a time one of the ferments accumulates so that the growth and activity of the yeast is inhibited. Now the bacterium slips out of its sheath, it is fond of this ferment which inhibits the yeast, consumes it so the yeast can grow again and so on. Referring to Marshall Ward's work on this, he said that Marshall Ward had never studied other yeasts and bacteria and therefore did not know any with which to compare them and so described them as new species. This little satirical cut on Marshall Ward was not quite understood by the company. So some one asked him afterward if Ward's species of yeast and bacteria were really new species. Masee said yes, he thought the work of Ward was all right. Speaking of this Masee told me on one of our trips, in reference to Ward's recent statement that hosts (among the grasses) of Uredineous plants could be determined and differentiated by testing the growths of uredineae on them. He said that Freeman following up Ward's suggestion, had gotten seeds

of a number of different species of Avena and had by cultivation of various forms of a Uredinea found that these species were all clearly separated by a test of the biological character of the parasites. He had a fine array of facts ready for publication with elaborate tables, when these different species of Avena grown from the supposed different seeds, were examined critically by Mr. Saph, the specialist. He pronounced all of them to be but one species!! So fell Mr. Ward's theory and Freeman's elaborate paper was never published.

Massee and Clark go down to get something to drink as usual and tell tales. I go to bed about 11 o'clock. Mr. Crossman has kindly put me in another room where there is only one bed, as several have gone and there is now more room.

Tuesday Sept. 29, 1903.

Every morning we are awakened by the church bell at 6 o'clock. It peals forth with a great clang, then begins to die out, then strokes coming farther and farther apart until you are sure this one is the last and you can get to sleep again, then another stroke comes and surely this is the last, and yet the dying strokes come. Then they come more frequently and finally **crescendo** into a great pandemonium of bells ! Then about every fifteen minutes on one

pretense or another it rings. Speaking of this at table one day, and Mr. Farrah (a great Yorkshire character by the way) said not long ago some man was very ill. When he recovered he went to the bell ringer and gave him ten pounds because he enjoyed the bells so much when he was deathly ill !! Farrah is a baker living somewhere in Yorkshire. I have never heard the name of his home. He had been at Helmsley some few days before the party arrived (his son also about 18 or 20 years old), and they occupied the room off from the room used for general meetings by us. It is said his income from his baking clears him about four or five thousand dollars yearly. I never saw Mr. Farrah with his coat on. He is about six feet, two inches. Legs not very large yet stout enough for his body, which is "sub" corpulent, breast broad, head large, forehead massive, but a little sloping, head surmounted, flanked and brought up in the rear by a heavy growth of long dark gray hair, eyes large, mild and appealing yet with humor hidden under the large dark lashes, chin and cheek with a patriarch beard for size, but of the same color as his hair, and a neck well constructed, the nose not massive nor puny but yet present, and ears could be mentioned if one wished to make sure that the reader would know that his physiognomy did not lack these important organs of sense and beauty. Mr. Farrah always carved, now the hams, then the beef, one day at one end of

the table, the next day at the other end. He always stood. When talking he would close the operation of carving, flourish his hands and arms, carving knife and fork, stand erect, his subcorpulent body not quite in contact with the fat so-called English ham which he declared was imported from America (Canada). He could tell it by the smell and taste from the real English ham, yet it was enough to cut it. The way the knife felt as it was going through the ham would tell him whether or not it were an English ham, and if anything else were lacking the proportion of meat depth to bone would stamp it as an American ham and not one of English home production. Many were the jokes he would get off on Masseur and Clark, and they often would get back at him. When they brought in some unexpected thrust at him he would appear stunned, would simply stare and make no reply.

Some one referred to this one time and he said he was like the man, a noted swearer, who ripped out oaths on all occasions. He was the champion for profanity in all the regions round about. One day he was going to market with a wagon load of potatoes, the potatoes being loose in the box. On the way up hill the end board slipped out. The potatoes all rolled out of the wagon box and beat a retreat down the long hill. The champion for profanity turned around and watched the joggling stream but said not a word. Finally some one asked

him why he did not swear. He replied that he would but in all his extended repertoire he did not know a word or a combination of words that would in the faintest manner express his feelings!!

To-day we go west of town?

Mr. Gibbs accompanied us a short distance and then returned to take a train home. He is very nice, serious, slender, gray, tall, with a well modulated, pleasant voice. In saying adieu I expressed my pleasure at meeting him. It took him about three minutes talking modestly, as he does, to tell me how much pleased he was to meet me. He repeated it so many times, and said it with new turns. Collecting was not very good, yet we got some good things. Fine specimens of *Hygrophorus calyptriformis*, which I photographed when I returned. We returned about 4 o'clock.

Tuesday night after the usual study, the usual meeting was held. Mr. Clark spoke on some methods used by him for copying drawings and photographs. Mr. Cheeseman then asked permission to show photographs of *Monotropa uniflora* which Mr. Masee I think exhibited at Southport and I think he had cooked it up with Masee who took the chair to-night to ask me for a little discussion of this plant and its methods of nourishment. I gave a brief synopsis of *Mycorrhiza* and spoke of the probability that in *Monotropa* there might be a combination, the *Mycorrhiza* obtains nutriment through the agency of

of the fungus and then there being small slender roots which perhaps enabled the plant to obtain food in a **saprophytic** manner. After this stories were told until Mr. Crossman and Clark could not work. At 10:30 o'clock Masseur, Clark, Crossman and I went into the dining room below and beverages of various kinds, especially whiskey and soda were served, pipes and cigarettes were smoked, stories were told, and I felt that I must join in the story telling or they would think I was holding aloof from them. At 12:30 I thought I would go to bed. We went up stairs. The others sat up a long time afterward telling stories.

Wednesday Sept. 30, 1903.

After breakfast Mr. Farrah complimented me on my stories of the night before. He said he had heard that I had told some racy ones. He said that the Yorkshire people were accustomed to telling such stories. He said he thought a great deal more of me and respected me more for telling them for it showed that I was not holding aloof from them!!

To-day we make the last excursion. Go to Rievaulx Abbey, a splendid ruin of the Feudal times. We drive nearly there, then collect and walk home. I was much interested in the old ruins. We came first to the Terrace near the Hill top, a well kept terrace of lawn, curving around the hill and giving a magnificent view of

the valley and the abbey below. The hillside otherwise than a part of the terrace is covered with forest. I take some snap shots of the ruins. Photo also an old residence of one of the poor peasants in the valley. Thatched roof, overgrown with moss, row of beehoves (beehives of two kinds, box and basket), small stable by side and two small children standing on steps. In front a poorly kept garden, but still a garden. Fungi are few. Masseur, Clark and I (my caddie of course too) finally get separated from the rest of the company. Masseur and Clark have the ever accompanying flask of brandy and occasionally take sips from it to slake their thirst. Offer it to me but I do not care for any. Finally we get on the road leading homeward. As it is one o'clock we sit down for lunch. Brandy again and this time I indulge in a little sip. As we proceed on our way home I fall a little behind, get out my camera, point it at Mr. Masseur and call out in a somewhat startled tone "Oh Mr. Masseur!" He turns with an expression on his face I shall never be able to describe and I snap it! He asked me if my camera was an instantaneous one. I said yes. For said he I had a most indescribable smile on my face. Masseur is characteristic and hard to describe, so I have not attempted it before. He is medium height and a little more than medium spare, sandy complexion, slightly stooped, wears glasses and an English outing jacket with its loose band, has a soft hat or a cap usually, and when walking along in a

hurry his chin is thrust forward and he leans strongly in that direction also. He has a coarse sandy mustache which is properly allowed to grow at will and is not curled up with a curling iron to imitate the horns of a Texas steer or the hair lip of a German Willie. His nose is of the subaquiline type, or a cross between that and a mild pug. His hair is thin and has long since become extinct on the front part of his head and now holds mild possession of the flanks and rear with some scattered ^{over} the top to maintain communication with the lateral groups, this cutting off in the rear another smooth and circular spot. His eyes are keen but partly obscured by the strong wrinkles in his face. His hair on the top of his head is combed back, while the sides have an artistic flourish. His mouth is small and the chin somewhat narrow when seen from the front. He walks with a gliding, swaying motion, as if his legs would not bend. When he looks at you he sometimes looks at other things, he seems to be drawn way back within himself. He looks at you when he is interested in what you are doing either pleasantly or otherwise. He crawls back when not interested or when preoccupied with something else, or sometimes when a momentary sensation of modesty or quiet comes over him. When he is alive he is alive, and will entertain you by the hour with witty turns, hits, take offs, flashing from one thing to another, sometimes half completing sentences and knowing that you understand the rest he does not take the trouble

to tell you the rest but quickly rushes on to something else, giving one example and then without enumerating others says "and that sort of thing." While thus speaking he is rapid, all earnest and intense. He often reminds me when in such a mood of Dr. Farlow. I like Masee. He is all right, if he is occasionally wrong on some determination of a fungus, and if he is often very incomplete and unsatisfactory in his systematic work. He is a jolly good fellow, and has his own views and ways of doing things, stands up for them and likes to make his thrusts at you to see if he can stir up the hornet's nest in you. If he can he is delighted. Therefore, keep cool when debating any point with Masee. He says he delights to pitch into Underwood because Underwood takes it so seriously and dances all around the room in his excitement, ^u when Masee pitches into him on the nomenclature question !!!

^A little further on the way home I get another snap shot at Masee while he is busy talking with Clark. This is a side view. I was walking along on the south side and the sun was favorable and I made the shot while walking along. We reached the hotel about 2:30. My caddie had been left to collect *Polyporus hispidus* from a maple tree in the country. Clark, Masee and I went into the bar to get something "bitter" to slake our thirst. Clark calls for three glasses. We put these away talking and smoking the while. Then Masee calls for three glasses. These disappear. Then I call for three, and likewise

these disappear. Then Clark starts in with three more. Masseur and
it
Clark be remembered had had considerable brandy during the day.
We are having a jolly time, conversation and laughter. Talk turns
somehow on illustrations of fungi and finally it led up I do not
know how to Cooke's illustrations. Masseur told me how they were
gotten up. They were started with bonafide colored plates
from living specimens. The sale was good and there was a demand
and call for the complete work. They did not have any illustration
or specimen of some one species which was badly wanted. So they
(Cooke & Masseur) set about making one to order! From the descrip-
tion they constructed one, making changes here and there until it
seemed to suit. Then with others which were wanted. Masseur would
work on some and Cooke on others. They would meet once a week and
compare notes. The form of the pileus of this one was not just
right, or the color was too dark or too light, the scales on the
pileus or stem should be more prominent or less so. The annulus
should be more distinct, or turned up or down, plain or ragged.
These things were all attended to, and by this time the illustration
was a real thing!! It did not, however, bear the signature of the
artist!! This would do to tell where you are sure of your audience
but it must not leak out in the wrong place. It would, Masseur said,
make a good story in about fifty years from now. Would it not

make racy reading now?

I shall be careful where it goes. Does it not help me to understand European Mycology!! Another side light comes from what Masee says of Lindau's and Hennings' appointment as curator's of mycology and lichens. Masee says Engler wanted some one to study the lichens and told Lindau to take them up though he was more interested in something else. So Hennings was trained for other work. Engler wanted some one to take the fungi and told Hennings to take that field !!

This evening was the last one in which we would all be together. We spent it in a quiet study and comparison of the species collected. Masee and I working together most of the time. Crossland said it was the best evening we had together, and was more like old times. The other evenings had been too much interrupted by those hangers on who were not students. On a previous evening Masee had shown that I was wrong in putting *Scalerous pileated forms* of *Daedalea confragosa* into *Trametes rubescens*. Tonight I had my revenge. He handed me a specimen and said, "This is *Tricholoma virgatum*". I said "it does not look like it to me" and I demonstrated that it was *Entoloma prunuloides*. In another case what he said was *Polyporus chioneus* I thought to be *Polyporus lacteus* and he afterward, agreed.

Thursday Oct. 1, 1903.

The party leaves. I stay to dry and pack my fungi. Mr. Farrah and son remained because in the afternoon they expected their family to come and they would all stay some time. John Farrah the son took the photograph yesterday and kindly offered to send me prints of them. Mr. Farrah kindly offered to send me some books on the old Feudal times of Yorkshire, on its agriculture, etc, with illustrations, when he learned that I wanted to learn of these things. I packed up all of my fungi but the Polyporus giganteus which was not yet dry.

Friday Oct. 2, 1903.

This morning I finish packing. Settled the rest of my bill (Masseie I found had paid my bill up to Thursday morning. Very generous of him. But he said on several occasions "when we come to America we shall expect you to put it up!"). I got off on the 7:57 train, young John Farrah very kindly going down to train with me. Took my box of fungi along as baggage(trunk). At Euston Station (reached here about 2 o'clock) I shipped the box by express to Mr. E. L. Williams. Attended to some errands, then took train for Kew Gardens and reached 40 Forest Road about 7 o'clock.

Saturday Oct. 3, 1903.

Studied further at Kew Herbarium, going over certain genera and then looking up certain species. Found letters here from Farmer inviting me to dinner at his home near London, Claremont, Common, Wimbledon, Saturday night and to stay over Sunday. I could not possibly get him word. I soon found that Mr. Hill was invited and we both arranged to take the evening train together from Kew Bridge to Putney walk five minutes to East Putney and take train to Claremont. We arrived at Wimbledon at 7 and drove to his home, Claremont, where we made our change of clothing. Professor Moore who has been associated with Professor Farmer in several pieces of work was here too. Met of course Mrs. Farmer and their young girl about ten years old. Had a very pleasant dinner. It seemed so like old times to be with Farmer again. Farmer we know of old, but it might be said that he is tall and slim and "sang froid" in demeanor, but "vif" or intellectually "bon vivant", in fact, he is "liu - meme", 6 ft. 3, spare, blond, short sack coat and long breeches, a thin blond mustache growing "willy nilly", sparkling, happy and friendly eyes, a high metallic, joyous ring to his voice, which makes his laughter the par excellence of delight; a frail nose, a clear and slightly sloping forehead whose perspective is heightened

by the sparcity of hair on the antero superior cerebrum, with a thin crop elsewhere, making more conspicuous his eager expectant ears. Moore is not quite so tall, but nearly so, frail slender body and legs, thin weak chin and jaws but his upper cranial etage sufficiently broad, his forehead encephalic, eyes sufficiently large but with a sort of a squint, a promising black mustache of no special character; bright eager, happy, confident face and high pitched, metallic but not sonorous voice; black hair and ruddy face slightly askew. Hill does not need description, he is too much like the average man, but still not commonplace, short medium size, well balanced physique, dark complexion, well balanced face with rosy complexion and petit black mustache, black hair and smiling eyes; promising young fellow and no doubt will be heard from.

Mrs. Farmer!!! She is not just the one I should have selected, but no doubt she suits Farmer's matrimonial tastes (or did he suit hers). A woman of fine character, a charming hostess, but but not beautiful, slender but with large head, sandy hair and face, large bones and nose, "sang froid", "elle-meme".

Farmer and Moore have recently presented before the Royal Society a preliminary paper on reduction of Chromosomes in plants in pollen mother cells, in which they claim that reduction in the Weissman sense (transverse division of the chromosomes) takes place in the

first division). Farmer said that I was wrong in my paper on Trillium and *Arisaema*. I asked him if he referred to my paper in his preliminary one which was published in Proceedings Royal Society. He said "no because I had not sent him a separate!!! He was not taking the Gazette at the time. Do you know then that I have in my paper claimed that there was a transverse division of the chromosomes during the first division in *Arisaema*? No, he said. But he and Moore said my described method of reduction was wrong! "How do you know" I said "if you have not seen the paper". I then sketched how it takes place in *Arisaema* and they both said it was right. They asked me for a separate of my paper and I promised to send them one if I had one I could spare. Hill and Moore departed about 11 o'clock.

Sunday Oct. 4, 1903.

After breakfast Farmer and I go to Royal College of Science to see his rooms and to look at his slides of liverworts (*Pallavicinia*, *Fossenbronnia* and *Pellia*) on which his paper published in Annals of Botany several years ago was based. Davis has recently said that the quadripolor spindle, as well as the centrosoms, does not exist in these plants. Farmer showed his preparation to Coulter and Coulter did not say much. Farmer wished me to see them. The janitor had, however, locked up his microscope. We tried

to burglarize the case. Farmer insisting that he would break open the large glass, but I would not encourage it. He then said he would take his slides over to the Jodrell Laboratory Monday morning to show them to me in Dr. Scott's room. After lunch we walked across Wimbledon Park, a natural preserve of about 800-1000 acres, to Richmond and called on Dr. Scott and Mrs. Scott who live in a portion of the Richmond palace. Had tea with them at 5:30 P.M.

Dr. Scott I met to-day for the first time. He is short, a little stooped, slender, but gradually broadening upward and his head large, nearly of the **encephalic** type; gray, large half restless eyes; gray short beard and mustache; a small voice, the words quickly cut at the beginning but with a breath at the finish and slightly rasping. He busied himself in passing the four tiered cake and sandwiches to the guests, there being two ladies and a gentleman in besides ourselves. Mrs. Scott, a typical stout 250 lb. English woman presided at the tea stand in a princess style and when the tea was done I blew out the spirit flame for her! At 6 P.M. Farmer and I went to train and had missed by ten minutes the one we intended to take, took train to Putney and then walked to Claremont, making in all about eleven miles walk. We found Dr. Daniel Oliver on our return. He had been invited to dine Sunday evening. He was in evening dress and we were in our traveling suit. Dr. Oliver is a

fine looking man, dark complexion, black hair, smooth shaven face, with strong features sometimes reminding me of Dr. Schurman, but voice utterly different. The voice is rather quick at times, or drawn out at others when he is describing something. He is a paleobotanist, but in summer vacations interests himself in ecological matters in Switzerland, France or on the sandy shores of Brittany. He smokes incessantly, and when he is talking, especially giving description of plants or scenes he makes long and slowly winding gestures with his arms, hands and fingers. At 12 o'clock "adieu", "Good bye". I wish I had had time to visit his laboratory and see some of his preparations.

Monday Oct. 5, 1903.

Left Farmer's early, took train to Lapham Station (by mistake in getting on wrong train, I should have gone to East Putney and walked to Putney, but ticket agent said, after I had purchased ticket to East Putney, train standing by platform was my train. There was little time to take it and I rushed, but as all compartments were full, the guard put me in the guard's compartment just as the train was starting. Here I had to stand). At Lapham Station caught the same train I would have gotten at Putney, but one of the station agents at Lapham hunted me out to make me pay 2 pence more because the route I had taken by mistake of the ticket agent was a little

longer. Reached Kew Bridge on time about 9:15, went to room 40 Forest Road. Although I told Mrs. Richards I would be gone away over Sunday and would not be at breakfast Monday morning she purchased a "chop", cooked it for me and included it in my bill!! At 10:15 P.M. looked up a few more species and got specimens of few more types from Masseur from Herbarium, packed my large trunk which was to be left in basement of herbarium to be shipped by Masseur on my order. Bade Masseur good bye and expressed my great obligations to him. He repeated what he had said many times that if there was anything in the herbarium I wanted a sample of he would send it to me at any time. I hope he will visit America sometime. He expects to and I think he will include Cornell University in his trip, or at least, some place in America where I happened to be at the time. At 11:30 by appointment I met Farmer in Dr. Scott's office in the Jodrell Laboratory. Look at his slides under oil immersion.

Fossombronia. Quadripolor spindle positively present. Centrosomes and centrospheres also positively present.

Pallavicinia. Quadripolor spindle positively present. Centrosomes appear to be, but preparations faded out somewhat.

Pellia. Quadripolor spindle positively present.

"Adieu" Farmer.

Dr. Scott then kindly took half an hour to show me through the greenhouses, and also through the palm house. A striking thing

in palm house is a cactus about 50 feet high and close to it across the walk an euphorbia the same height which looks almost exactly like a cactus, but at the top the appearance is somewhat different. Palms are very fine, also fine collection of Cycadaceae, orchids in orchid houses and Nemapenthis and Victoria regia in Victoria regia houses. Dr. Scott said in parting he was sorry he had not met me sooner so that he could have had me over to his house. I am glad to know Dr. Scott, he is a fine man. "Adieu".

Pack up all my things, take train at Kew Bridge for London, Waterloo Station. Cab to American Express office, 3 Waterloo Place, Pall Mall, London. Look up and determine my route. London, via. Harwick to Hook von Holland (steamer), to Osnabrück, Hamburg, Berlin, Leipzig, Halle, Frankfurt, Mainz, Bonn, Coeln, Rhein, Paris, Dieppe, London. Cost of ticket first class on steamer, and second class by rail about \$45.00. Here the American Express took up several of the United States checks and issued me some of their own which are much more convenient. Took cab to Victoria Station. Had steamer trunk. This cost me to Hamburg from London 6 shillings extra baggage, as only 56 (kilos or lbs ?) are allowed on the continent. About 9 o'clock left London. About 10 o'clock sailed from Harwick. Went to bed before boat was on channel. On channel it was quite rough, but I was in bed and all right. By the time we

were called up in the morning boat was in quiet water in bay.

Tuesday Oct. 6, 1903.

Hook von Holland. Rise early, small breakfast on boat, coffee, two eggs, rolls and jam. Take train, Schnellzug, Hook von Holland for Berlin, Hamburg, via Rotterdam, Bentheim and Osnabrück. This part of Holland mostly low. Many drainage canals nearly full of water. Many wind mills as one might expect. Through one part country was sandy. Old sand dunes and some in motion now. Here in general land is higher. In some places trees along road or along fence lines or streams show their use for wood by the system of pollarding. Some agriculture, culture of root crops, grasses, etc. but much pasturing and meadow land and much stock (cattle) grazing. At Bentheim baggage is examined. We all have to take our baggage, grips, etc., into the station. Here it is examined. Then we must go out through another room and door in order to get on the train again. I did not know this. I had my baggage attended to quickly and returned by the same route by which I went in. The conductor would not let me get on train. I had to go back and join the others in the waiting room and come out along the "German chalk line" with the others after much tiresome waiting.

As we near Osnabrück where I change for Hamburg I went in dining

(Speisewagon)

car for lunch, arriving at Osnabrück just as I was finishing lunch.

I rushed out bare headed forgetting my soft gray hat which I left on rack just after the train left. Some one asked me if I left a hat in the dining car. I said "yes". He said he saw a gentleman running after me with my hat, but he could not find me. It was the gentleman probably who sat at same seat at dining table with me. He failed to find me and I do not know what he did with the hat.

Had he left it on the rack I think I could have found it again for I wrote a card from Osnabrück to the "Deutschland's Speisewagon Gesellschaft" at Berlin telling them that I had left a soft gray hat in the dining car on Tuesday, Oct. 6, 1903 at Osnabrück and would call for it at Berlin. Reached Hamburg about 6 o'clock P.M. At

Kaiserhof Hotel asked, "Haben Sie schlaffzimmer für vier Marken".

"Ja für 4⁵⁰ Marken mit Frühstück". So I took this room. Good room.

I then telephoned to Professor Zacharius to know if I could see him in the morning. A Fraulein answered the telephone call and said Professor Zacharius was in Ganf, Switzerland, So my trip was for nothing here. I should have written ahead as I did in other places.

enroute Hamburg-Berlin.

Wednesday Oct. 7, 1903.



Took early train for Berlin. Some agriculture, root crops, etc., but also much grazing for cattle.

Reached Berlin about noon. As I had left my Baedeker for

Berlin in Kew I was at a loss to know where to go. So I inquired at station. A fellow handed me a card of the Dintz Hotel and said it was a good hotel. When I arrived I found it was a wretched place. They took me immediately to a room and on seeing it I said I did not want a room but "etwas zu essen". I was then shown into the "dining room". It was about 10x15 and small dingy table. While the dirty looking maid went out of the room, I slipped out with my baggage and saw nearby the Central Hotel. I inquired, "Haben Sie schlaffzimmer für vier marken?" "Nein, aber wir haben ein für sex marken". It was a fine large room and the hotel one of the best in Berlin on Freiderich strasse by Central Bahnhof. So I took the room for my four days stay. After noon I wrote a note to Dr. Magnus announcing my arrival and asking him if he could call Thursday morning at about 10:30 o'clock, that he would find me either in my room, or in Schredbezimmer. I then wrote some. Toward night fall walked two blocks to Unter den Linden Strasse, up this to the Brandenburg Thor, through to the Reichstag, Bismark's Denkmal, Then Denkmal to Siegesallee, across the Thiergarten and down Sieges Allee and again across a part of Thiergarten. Then down Unter den Linden, stopped at American Line office and made arrangements for passage to New York. Agent knowing I was thinking of returning on Nord deutsche Lloyd agreed to get me a good double room which he assured

me he thought he could keep for me alone. Cost of room \$80.00 (16 pounds). He telegraphed and got room 110 on New York SS, sailing from Southampton, November 7, 1903. As this was the first sailing under winter schedule many people are waiting for it to take advantage of the new rates, so I thought it better to engage room ahead. Lowest rooms are 15 pounds but they are behind the engines in rear. My number (110) is forward under the dining room which will make it more convenient. I then continued down Unter den Linden to the Berlin University, the old Palace and the Present Palace the home of Emperor William.

I was writing in the schreibezimmer when Dr. Magnus called about 11 o'clock. He is the same old Dr. Magnus, tall, straight, but not corpulent, stubbed head, nose and ears, square jaws and chin, short cropped dark gray beard and mustache, gray hair, smiling medium eyes, and a face that does not know whether it wants to be sober or smiling. He took me at once to Schöneburg bei Berlin, where are the Botanical Museum, the Garden and Greenhouses. We went by way of Electriche Strassebahn on Franzosischestrasse to Potsdam Strasse and walked from here. He first took me into the main museum. Introduced me to Dr. Engler and (Amer?). We just greeted each other. Then he took me into the Victoria regia house where is a fine plant with margin of leaves high upturned, more so than the one at Kew, which by the way Dr. Scott said was this year

exceptionally low. The one at Berlin was in blossom, a large rose colored flower. Dr. Magnus gave me illustrated post card of the house, the Victoria regia, and of one part of garden. Then we crossed the street from Museum building to the building containing herbarium of fungi and met Dr. Hennings. Dr. Hennings is an interesting man, and I like him. He looks quite old probably 65 and suggests Jewish extraction. He is about 5 feet 8, slender, spare, considerably stooped, long black hair that does not quite reach his shoulders, black beard and mustache, Jewish nose, black, long eyelashes and eyebrows, piercing and yet kind eyes. His eyes a little crossed or irregular. He walks with a decided limp, a sort of a combination between a short chop and a shuffle, and thus goes jogging along, head now down, now up, etc., his eyes glancing around. His voice is sharp almost rasping at times, and his ah  and a  long drawn out with a rasping sound are very characteristic. There is a fine collection of Phalloids in spirits in the museum, and also in his working room, besides many fine specimens in spirits of his rare genera and species, as well as those of Möller, of Cordyceps and others. We looked these all over, rather hastily, of course. We looked through the Balansias, some of the Dothidias, and he gave me examples of a number of types. I saw one of the originals of Patouillard's *Dussiella* and Hennings confirms my belief that Patouillard was wrong in thinking this spec-

imen identical with Berkeley's *Hypocrea tuberiformis*. He accepts my genus *Echinodopsis*. Says that Patouillard included two different genera, and three different species in his *Dussiella*, so the genus *Dussiella* is no good. The plant in the Berlin Museum on which Patouillard based his *Dussiella* is Hennings *Ascopolyporus* of which now there are several species, some very fine. I saw three species in spirits.

Dr. Hennings and I arranged for a trip to Finkenkrug, a suburb of Berlin for to-morrow. There are fine forests here and sometimes the fungi very numerous. Dr. Magnus and I now visited the palm house where are some fine palms, also the orchid house and some of the other greenhouses. Then he took me to a restaurant and we had lunch. I accepted an invitation to dine with him at his apartments, 15 Blumeshof W. at 3:30 Saturday. He now directed me to Sydow's residence in Goltz strasse 6. (Dr. Magnus could not go with me for Sydow and he do not speak. Dr. Magnus once infected a *Populus* in his own yard with *Caeoma* spores and when he got results Sydow took it up and published it as his own before Magnus published. This is the cause of the bad feeling). There I found Paul Sydow. His son H. Sydow, editor of the *Annales Mycologici* had just gone to the Post and was expected back at any moment. P. Sydow could not find the proof of my article on "The Genus *Harpochytrium* in the U.S." so I sat down to chat with him in German until his son returned.

We talked of my trip to Sweden and in England, I then naturally drifted to speak of the Uredineae and H. P. Sydow's work on them. He showed me the part of his great work on the Uredineae which is thus far published. He has not yet completed the genus Puccinia. This genus alone will make a large octavo volume. There will be 1200 to 1400 species of Puccinia. Sydow is short and well built, light brown hair perhaps, and mustache which he does not train in true German style. His speech and movement are quick. When he speaks he almost always moves his body as well as his hands and arms in quick jerky gestures. His temperament is placid I should say and expression pleasant and satisfied indicating, that he does not worry. It was quite dark and I could not see him well.

H. Sydow did not come, so I arranged for him to bring the proof this evening to the Central Hotel. Bade P. Sydow adieu and just as I was going down stairs I met a young man whom I thought might be H. Sydow. I inquired if it was H. Sydow. He said yes. Then I introduced myself. He seemed greatly pleased to meet me. He is about 5 feet 7, slender, spare, dark complexion, dark hair and dark small mustache, with dark, tired, nervous eyes, and a somewhat tired, half pitched voice. We returned to the dining room. He brought out half of the manuscript and said he could get the other half on the morrow when he would bring it to the Central Hotel. He thanked me several times for sending them such an interesting and valuable


article. He said there were many articles now in for the January and March number. He had one from Copeland on new species of *Morchella*, *Coprinus*, *Agaricus*, etc., in California, with good pen and ink drawings. I was surprised to see a systematic article on mushrooms from this young botanist since heretofore we have only heard of him as a plant physiologist. He is now in Leland Stanford jr. University. I expected to see the name of his name. He is not Pearce, but one of Barnes students. At the close of his article he has a rather self contradictory paragraph on the cystidia of *Coprinus*.

I saw here for the first time the September number of the *Annales Mycologici* and observed that Sydow had my name on the title page as one of the *Mit arbeiter* or Collaborators. He wrote me when I was in Sweden asking permission to use my name thus. His letter was not received until I reached England. I had never replied to it as I thought I would soon see him in Berlin and could speak to him about it. I did not want my name used in the *Annales Mycologici*, at least, at present and he had used it without permission. I did not mention it to him now and he said nothing about it. But when I return to Cornell University I will write asking him to withdraw the name. I bade him "adieu" and returned to hotel by way of Leipzigerstrasse on the Electric strasse bahn,

to Freiderichstrasse and from here walked to Central Hotel. I read the proof of first half of article and then retired.

Trip to Finkenkrug.

Friday Oct. 9, 1903.

At the appointed time I met Dr. Hennings at the Bahnhof and we purchased tickets to Finkenkrug, 3rd class. Dr. Hennings cannot speak or understand a word of English, so it was a splendid opportunity for me to practice German and I improved it as I had on yesterday. The day was somewhat threatening as we started from station, but cleared up and was a beautiful day. The woods at Finkenkrug are close by the station, a large pine forest, mostly Scotch pines. Although Dr. Hennings expected to find many fungi we did not see many and he was considerably disappointed, although we collected about 50 species. I took them back to hotel, but as there was no place there, or at museum where I could dry them, I left them in Dr. Hennings office. Among other things we collected *Sparassis crispa* which I had not yet seen in Europe. There were only two species which I had not seen in Europe. Dr. Hennings was amazed ~~glad~~ at the number I knew and often he would at first say the plant was one thing, when I would suggest something else. "Na  " he would drawl out. Then in a short time he

would say. "Ja, - ja - ja - Sie haben recht. Meine augen sind nicht gut ohnegläser". We returned at about 3 o'clock first having a glass of beer together at Finkenkrug and he shared two sandwiches with me which he brought.

Dr. Hennings always wore a long Prince Albert coat with large tail pockets and inside side pockets. He says he never carries a basket or other receptacle to collect fungi. He stuffs them in his pocket, the large and harder ones in his tail pockets (probably for greater safety to the fungi in case he should sit down), and the more delicate ones in his side pockets. This reminds me of what Masee said of Dr. Stahl the old German botanist. He used often to go to Kew to study. Nearly every day he would go fishing in the ponds and aquaria in the garden for algae. He would take paper with him. When he saw something that interested him in the water he would make a dive for it with his hand, wrap it in paper, stuff it in the tail pocket of a long Prince Albert coat which he always wore. After he was well loaded with specimens he would walk to the herbarium and coming into Masee's room, leaning backward, so that his coat tails would not draggle on his legs, with two large protuberances in the end of his coat tails and two streams of water running down on the floor, he would say in a long harsh drawl, "Well Mr. Masee I think I have got some interesting things."

At Central Hotel found the balance of proof of my article from H. Sydow. Corrected it and left it at office addressed to H. Sydow.

Saturday Oct. 10, 1903.

In the morning called by appointment at Dr. Hennings' office. He looked over my fungi and he gave me a number more of interesting things. Among them was his new species *Lepiota psalliotoides* which I think is identical with the *Lepiota naucina* of Author's. He also gave me a fine series of *Cronartium ribicolum* on leaves of a number of species of *Ribes* grown in the Berlin Botanical Garden. See Hennings' account of an epidemic, etc. Then he showed me large numbers of undetermined collections from Brazil, Java, etc. Some dried material and some in spirits. Showing me a lot of material in spirits from Java he said "Wunderbar Sammlung der Pilze aus Java. Wunderbar, wunderbar!!" Picking up two or three bottles he found the spirits dried out and said "Ach lieber Gott, ausgetrocknet, ausgetrocknet, a., wegworfen, wegworfen, wunderbar, wunderbar!" Then he took me into the room where Dr. Hieronymus is working on ferns, I had some conversation in German with him. Then over at the museum he introduced me to several others. Then we went outside to see a large cluster of *Clitocybe conglobata* which he had told me of. I wanted to photograph it. I asked him "Bitte, stehen Sie hier". He then stood by the side of

the Clitocybe looking at it. He had a cigar in his mouth. Hope
will
picture, come out good. We could not find Dr. Lindau in although
we called both at his working room and at his residence. I now
bade him a hearty good bye, "adieu, aufwiedersehen", and I was off
to 15 Blumeshof to attend Dr. Magnus' dinner, first going to my
room in Central Hotel, and mailing from Postamt the package of fungi
which Dr. Hennings had given me.

I reached Dr. Magnus' apartments precisely at 3:20 just ten
minutes in advance of the time set for the dinner. He had caution-
ed me to be punctual, to set the time either at 3 or 3:30, but which-
ever time I chose, I must be there promptly for when dinner is
ready we must have it served! Kind old Dr. Magnus! How hearty
and pleasantly did he greet me. How eagerly he asked again about
Clara and Kerr. I must be sure to take his compliments to them.

Dr. Magnus lives in luxurious apartments, finely furnished.
Reception room opening into dining room, then across hall kitchen
and two large rooms devoted to his herbarium which is a very large
one and must be valuable. One room contains the fungi and the
other room mostly seed plants, etc.

The dinner was a full course one, with two kinds of wine.
He proposed the toast to the health of Mrs. Atkinson, Kerr and Clara.
Dinner was very nicely served and splendidly cooked. After dinner

we went to reception room where we had coffee, cigars and cognac. We talked of various things until 7 o'clock when he went to attend the meeting of the Geographical Society to which he had invited me as his guest. But I felt obliged to decline as I was tired, had had little sleep for some time, had considerable writing to do and might leave on the early morning train for Leipsic.

I had gotten tired of paying so much extra for baggage on my trunk, so I bought for 40 marks a travelling wrap, a blanket also for 40 marks, took out of trunk most needed things and shipped it in bond to Southampton for steamer New York to sail November 7. Packed up at Central Hotel and retired 11P.M.

Sunday Oct. 11, 1903.

Settled bill at Central Hotel (24 marks for room for 4 days), took Schnellzug 7:40 A.M. from Anhalter Bahnhof Berlin to Leipzig. Rainy day. Reached Leipsic between 10 and 11 A.M. First and second class carriages here! As usual in Germany the agent for carriages stands at the door and to get a cab one must first get the metal ticket from him with number of the cab before cabby will take you. I tried the second class. Bahnhof quite a long distance from center of city where is Kaiserhof Hotel. Cabby's rate 90 pf. Kaiserhof Hotel not far from Kaiser Augustus Platz, good hotel, secured room for 3 marks. Rate in room is marked 4 marks at this season while in "Messe" it is 6.50. Sent a note to

Dr. Pfeffer on Linnestrasse to learn if I could call at 8:30 on Monday morning. Messages cost 50 pfennige. Replied that he would be pleased to greet me at 8:30 frisch. Wrote -, at 10 o'clock took lunch in restaurant in west end of Theater on Kaiser Augustus Platz. As it was raining I wrote also in afternoon. Dinner at same place, about 2 marks. Retired early.

Monday Oct. 12, 1903.

Called on Pfeffer at 8:30 in the Botanisches Institut. He lives on second floor. Several rooms at the entrance on second floor and in front form his private dwelling rooms. Then the rear ones in front form office, private laboratory and library. I was received into office which is furnished more like a home room. Has library here and it is his writing room. He has a Yost typewriter and writes all his letters (?) as well as all manuscript on this. Wrote the manuscript for his book on physiology first by hand, then copied it himself on the typewriter. Is now reading proof of Zweite Hälfte and expects it will be out in February, 1904.

Dr. Pfeffer is tall and slender, looks rather frail. (Dr. Strasburger inquired how he was, said he had lung trouble and thought he was ill. I found him, of course, up and better than Strasburger thought). Pfeffer is perhaps 5 feet 11, or 6 feet, rather narrow chested and only slightly stooped, full beard, dark hair and dark

beard, both slightly sandy. He is very pleasant, features rather fine and mild, pleasant smiling eyes, hair light. After some general conversation, in which I found that the semester does not open until last of October and first of November. He took me to see the laboratory suggesting that we put our hats on as the rooms are not yet heated. The laboratory and lecture rooms are on the first floor. On the front side (east) beginning at north end are two rooms for advanced students.

Beginning at south end and going along on east side are first two rooms for advanced students. 1st, (bacteriological cultures for) 4 students here, 2nd, for 3. Then is 2nd assistant's room (Nathorst Asst. private), it is a chemical room which on a pinch will accommodate one student more. These rooms are for advanced students who need more apparatus. There is a large room with long tables where 12 or 13 advanced students work, usually those who do not need so much apparatus. In each of these rooms is a hydraulic apparatus for creating vacuum. Tables for microscopic work (individual tables) are near the window. Certain tables resting on a stone slab in the center give solidity and firmness to prevent jarring, so fixed

narrow tables to wall between windows give firmness for certain experiments, cases and some reagents in each room. On north end are two laboratories connecting, for elementary students. In northeast one is center case for apparatus, Klinostat, measuring growth in length, microscopes for observing growth of root tips, etc. Also wall case on south side for similar apparatus and some reagents.

Northwest room is somewhat larger and here some lectures are held, a desk, blackboard, and tables for work. Then on west is I think store room, and next on west is Corren's room, next then is the 1st assistant's room. Then reading room and library for students which opens into lecture room but students are not permitted to go through this way. The Hörsaal (lecture room) is arranged like a medical lecture room, demonstrations, seats in a semicircle and on a steep grade backwards. Lecture desk contains drawers and a sink in front for lectures and out of sight of students. On desk arrangements for connecting electricity for light, etc. Two fine blackboards which lift easily exposing white wall for lantern views. Students enter from garden on west side (through gates from street on same side), to a semicircular ground floor vestibule, this being under the elevated seats. At the ends of the semicircular vestibule on either side stairs lead up to the top of lecture room where they enter at rear and come down to seats. In center of room is a lantern, with water chamber for cooling and place in front where

the different instruments are set on a sliding arm so that microscope for projection can be put on, this removed and the kinematograph put on, and then lantern slide arrangements, etc. Microscope put in also with root tip so that it can show growth of root tip on screen! These different pieces of apparatus kept in reading room adjoining, or some in case in lecture room. Charts are all rolled up and are kept in compartments, in the hall the charts stood up and were numbered and then a catalogue of them made. In dark room next this, large room, tables for holding cultures. Used also as photograph dark room and here is the photo kinematograph apparatus made at a cost of over 1000 francs, run by electricity. In the basement is the workshop. It looks like a manufactory.

1 { Room where the engine (gas) is for running shafting which extends through length of building on both sides of basement, so that connection can be made in different rooms for operating apparatus.

2 { Room for work shop, anvil, large iron clamps, wood work shop, gas blast, lathe and apparatus for turning screws, etc.

3 { Room for centrifuge also press for getting ferment out of yeast, also centrifuge for 100 revolutions per second which Mottier run matter used, ^{run} by the shafting; apparatus (rather cumbersome) for swaying plants back and forth, also apparatus giving blow to

board underneath potted plants (Verschlittungs app. ?) run by electricity. Clock pendulum makes this constant at regular intervals; constant temperature run with 27° C. at floor and 33° C near ceiling. Shelves between provide for different temperatures. Thermostat also in here.

Two rows one on either side for storage of coal. Then room on east side for storage of many glass jars, flasks, double walled glass chambers, etc. Room on west side for storage of glass tubing, etc., to be used in making apparatus, also storage of alcohol, etc. Room for making distilled water. In distilled water room also room for making oxygen, also room for autoclaves, sterilizers, etc.

After we had finished looking through rooms went to Pfeffer's study and commented. While here Koernicke came in from Bonn. He is going to work one semester with Pfeffer. After a few minutes Pfeffer excused himself from Koernicke and showed me through gardens and greenhouses. The Botanisches Institut, Leipsic stands in a small garden of about three hectares at the end of Linnestrasse, at the convergence of this street with another, the garden widening somewhat then opposite the convergence of these streets. We first walked through systematic part of garden which lies south of the Institut, small plots of different families of plants are here.

Then we came to the *Gewächshäuser*, of which there are several, some warm for palms, orchids, etc., others cold for the plants from cooler regions. The cool houses which had at this time no heat, of course, would be heated somewhat in winter. Between and around the houses are open bare courts into which the palms, ferns, arancarias, etc., etc., are moved during the summer and make a handsome outdoor tropical garden and the plants in the area between the houses are protected to some extent from wind. Returning past the garden house situated west of the north end of the Institut I requested permission to photograph Dr. Pfeffer. He very graciously and smilingly consented and stood on the grass near some shrubs and posed as I suggested. Then he took me into the rear of the Botanisches Institut between this and the convergence of the streets where *Correns* is carrying on his experiments on bastards and double fertilization. I said I wanted to photograph the experiment plot and Pfeffer thought I wanted to photograph him again, so he smilingly again stood with hat, overcoat and umbrella, in the midst of *Correns*' experiment plot while I snapped both. We had put on our overcoats on going out since it was a little cool.

I then said farewell. Pfeffer accordingly saw me outside the gate and showing the way to Kaiser Augustus Platz, "adieu, aufweidersehen", smiles, bows, and lifts hat, and the kind and courtly Pfeffer

was gone, a man whose genius in construction of apparatus for demonstrating with precision plant phenomena has done much to advance the course of pure science. We spoke altogether in German. I photographed the Botanisches Institut from Linnestrassé, went to hotel, gathered up baggage, took Schnellzug from the Thüringen bahnhof at 2:47 and was off - through Halle, where we changed cars, and then had direct connection to Mainz which I reached at 11:30. On way Halle to Frankfurt met Mr. and Mrs. Etting from Copenhagen. They had three children but all are dead. Two daughters married, but recently died. Saddest of all was their only son 27 years old, who had studied until he became a finished scholar in Denmark and Germany, knew and spoke three languages "Kennt alles so schön, etc." Was taken sick one morning and by night was dead.

The old, white haired couple, short, stout, jolly, young in mind, have had their sorrows. They are wealthy and well known bankers in Denmark. Are now on way to Wiesbaden and from there will go to Italy for winter. Invited me strongly to come to Copenhagen to see them when I next visit Europe.

Went to Central Hotel in Mainz, room for 2 marks.

Tuesday Oct. 13, 1903.

Left Mainz 10:15 A.M. on Dampfschiff Hansa. Day fair, partly

cloudy and often sunshine, air clear on Taunus range and stands out clear and fine. Pass under new iron railroad bridge between Mainz and Wasbodin, then stop at Biebrech, near by a chemical and cement works,

Farther on come to the beautiful valley between the Taunus range and Rhine, known as Rheingau valley, and mountains covered with beautiful vineyards, vines trained to short, upright poles in rows. At Ostrich I photographed beautiful and broad valley, 1st photograph shows an old tower, castle, in clump of trees near shore, and the village back near the mountains. Two more photographs with same village in center and the broad valley with vineyards in distance. Next photograph Ostrich as we approach it (10 and 11 Roll 20). Johannesburg schloss and Johannesburg, where celebrated Johannesburg wine costing 20 marks or more is made, or where it was first made and now gets its name. Most of the grapes according to Captain are grown in a distant region where they can be grown cheaper and wine not all manufactured there. So with the famous Rudesheim wein, which gets its name from Rudesheim which we pass immediately after passing Johannesburg. Stop at Rudesheim. I photograph old church. Then we turn across Rhein to the famous Bingen am Rhein and make a stop. Rain shower comes up now and I photograph Bingen just as we are leaving it with rain in sunshine. Then I make several photographs of terraced vineyards just opposite Bingen on

steep mountain side, with very old castle in center. In places the drainage canals are well shown which bring the water down the hillside, while the terraces on a low side grade lead water into them. Photo No. 8 Roll 21, just past the old castle "Ehrenfels".

Lorch

I did not learn the New York lawyer's name, but while a pleasant and obliging young or middle aged fellow I do not think he will ever do any distinguished service for the New York Bar. There was a rather good looking young woman on board, perhaps 25, who lives at Kiel in Schlessweg-Holstein. The New York lawyer made her acquaintance by speaking to her of the "schöne Bilder des Gebirge" and of the "schöne Leute (er meint Licht!) an die Bärge". I had been very busy with my photographs and taking notes, and as evening came on and I could photograph no more I put camera away, and happened around where they were, and knowing him I soon of course in course of general conversation was talking with Fraulein Anna Grimm vom Keil in Schlessweg-Holstein. While the New York lawyer had heard me say a few words of Deutsch to those near me at the table, he now had the opportunity of hearing more of my "fluent" use of the language after having been in Deutschland for only seven days.

He said, "you would improve your German if you would have regard for your icks. You say 'ick' and you ought to say 'ick'!!". I replied, "Ich sage ich". "Yes" he said, "but it is not right, you should not say 'ick' you should say 'ick'". I replied, "Ich sage dass Ich, Ich, sage". "I isn't right, you should say 'ick', 'ick', 'ick' --Do you see"? Yes I saw but "Ich sage dass, Ich Ich sage, aber I sage nicht dass es richtig ist. Man sollte ichs sagen, aber erste wünsch ich zu sprechen so als de deutsche leute

mich verstehen kann, und dem kann ich. Ich hoffe meine spräche zu verbessern." Then the New York lawyer said to me in English that I had command of more words than he had but that he spoke the language much more correctly. Fraulein Grimm all this time was very much puzzled because she could not speak a word of English nor understand a single syllable. So to relieve her and to get some confirmation of his statement he struggled painfully to say to her, "Ich sage, dass he hat --- --- more. wort. dass ich, aber- --aber, aber, er spreck nit so gut, so correcte as ick. Er sagte ick and er--er -- er-- sulte say ick. Denk Sie niche so Fraulein? Denk sie das ick, ist es nicht recht dass ick, pro - pro.-pronounce besser as he Fraulein?" Fraulein looked puzzled and said, "Ich verstehe nicht pronounce, pronounce, was meint das?" "Pronounce" he said. "Es ist de 'pronunciation' der wort, de sound" said he. I said "Fraulein, er meint accent". "Ach, ja accent, Ich verstehe." Turning to the New York lawyer to reply to his question, for he was eagerly awaiting the confirmation from Fraulein. She said, "Ich denke dass er sehr reinige deutsche spricht". "Aber" said the New York lawyer "er sagte 'ick' und er sulte sagte 'ick'. Fraulein replied, "aber Ich dachte dass Sie 'ick' sagten" Collapse, but frank acknowledgement with loud laughter that he was outdone by Fraulein!!

He had spoken several times of stopping off at Bonn, where I was going to stop for a day to see Strasburger and his laboratory and Mr. Miyake, and he hoped we could have a drink together. This was before the Fraulein incident. As we neared Bonn and all who were to stop were getting things ready I saw him sitting on upper deck hat off, and said, "I thought you were going to stop at Bonn." "I am", he said, "but there is plenty of time." He did not get off at Bonn, however. After the Fraulein incident I saw quite a bit of her, and had a pleasant tete-a-tete. Twilight and darkness came on, and the Arrthal and Siebengebirge became more and more obscure, The light shown out from the buildings where the life of the present day was sheltered and protected from the elements, and the old castles, some well preserved, others in "ruins" with dark and crumbling walls or pillars standing as sombre specters of that strenuous life of the past which represents the transition period from savage life to the present civilization, just as the savage represents the transition from the unconscious animal man to the conscious savages.

As we neared Bonn and the gang plank was put out, I bade good bye to the elderly deutscher Mensch and his Frau, who had been so friendly, and said "adieu, aufwiedersehen" to Fraulein. Just as I crossed the gang plank I met Dr. Miyake, the same, energetic, cordial and appreciative young fellow as I knew him at Cornell. He accom-

panied me to the Rheineck Hotel just across the street from where the boat landed. I get a room on second floor for 2 marks. Dr. Miyake and I talked in the room until 10:30 P.M. I had forgotten all about supper. After Mr. Miyake left, as it was rather late for supper, I called for a glass of milk before retiring. It had a peculiar taste as of scorched milk, and it was as thick as curd. Mr. Miyake told me that in Germany the people think fresh or raw milk is unwholesome, so they boil it as soon as it comes in the house, but why it should be thick I cannot understand. Dr. Miyake said that Dr. Coulter was here some time in June with his family and stopped at the same hotel. Dr. Coulter visited the laboratory twice. He spoke English because he could speak no German and Strasburger spoke German. Miyake was glad to learn that I had been speaking German in Deutschland for Strasburger would like it so much better.

Wednesday Oct. 14, 1903.

Rose at 6:30 o'clock. Breakfast at 7:15, 2 eggs, pot of coffee bread and butter and some marmalade, cost 1.40. Room 2 marks, breakfast 1.40, glass milk .20 = 3.60 Wrote for about one-half hour and then Miyake came about 9 o'clock. We went to bookstore and purchased two kodak films because I was on the last (25th) and to get some postal card views. Then went direct to laboratory.

On way from hotel passed through University grounds which begin very near the river. There is a steep grade, a pair of stairs and in the grove at this entrance. The university buildings were an old schloss, and originally used as the Electoral Palace, and the rooms are not the best appointed ones for University purposes. The main building is a very long one, the library in one end. It faces a large open court, a green, on the opposite side of which is the art museum.

The Botanisches Institut is a half mile away at the further end of Poppelsdorfsalle. It is in an old schloss, (residence of the Electors) in what was once the village of Poppelsdorf. As Poppelsdorf and Bonn grew they came together and streets of the two meeting make the Poppelsdorf Allée, a fine street, broad, and with a row of trees, many of them horse chestnut (*Hippocastaneus*). The schloss furnishes accommodations for the Botanisches Institut on the south corner including the southeast and southwest side. It is a rectangular building on the outside, the center being circular and with a circular court in the center. Besides Botanisches Institut is Geological Department and I believe Zoology on ground floor, Physics perhaps also. Chemistry has a new building. The rooms of the Botanical Department are small and very poorly furnished, everything having the appearance of great simplicity, age, etc. There are in the main laboratory three plain tables about six feet long by three wide and two students

worked at such a table. The tables are piled with reagent bottles stains, etc.!! and give the appearance of work.

On a center table are arranged three, short necked flasks, filled with (ammonia copper carbonate, blue!) For fitting the light for microscopic work, in the center is a Welsbach light, and the flasks are on three sides set in a board cut to let the light through. Three students can thus work at this table.

I met here Mr. Oliver, Mr. Fügii, Mr. Gatin, the latter is going in a few days to Paris (he is a Frenchman) where he has a position in the Sorbonne as assistant. I also met Diener Sieben, who fixes, infiltrates, imbeds sections and stains all Strasburger's materials and teaches methods to the American students who do not know them. He is "Geheimrath der Zweite". He has for many years worked for 800 marks, but has recently had a raise to about 1000 marks.

Mssrs. Miyake, Oliver, Fügii and Gatin show me through the labor-

atory and in lecture room. This is not a large room, with plain, old fashioned, wooden, straight benches with backs, and the tops along the backs for rests on which to write. The rostrum is a small low affair in one corner, with a desk. Behind are two or three very small blackboards, about 3x4 feet. On the walls are hung maps of plant structures, etc. The maps are about 3x3 feet on a stiff paper board. These are filed away in compartments, which are more or less open, but can be covered by a cloth movable curtain. They are stood on edge. The compartments are in a small room adjoining the "hörsaal". Adjoining is a dark room of good size. Sieben's (the Diener) room opens off from the main laboratory for advanced students, and opening off from this is a long room for elementary students. The rear tables are elevated on platforms so that the light can come over those next the windows. There are a few gas jets in the room hanging from center. Strasburger says when the days are bright the light is quite good, but on dark days it is very poor and very difficult to use the microscopes.

Geheimrath Strasburger came in to see me and greeted me cordially. He asked me if I would not come to his rooms to dinner at 1 which I gladly accepted, and then he asked Olive, Miyake, and Fügii. Then excused himself to speak to his "Leute" and he had already asked Miyake, Olive, etc. to show me the laboratory. He also said I ought to see the wonderful preparations which Mr. Miyake had of *Zamia*.

After going through the rooms we all go over to the Agricultural School to see Dr. Noll and his laboratory. We found Dr. Noll in a "dressing gown" in a small private laboratory used perhaps for his office, at work at some experiment which he did not explain. He greeted me cordially. He is a tall, stout, heavy man of light complexion, and a rather thin but somewhat coarse beard, and a pleasant, burly satisfied expression. He took us into the Physiological room which has glass on the northwest side and on the roof, a room with a north of west exposure. Here he is testing the effect of the electric stream in plants. Electrical current goes from b to a, i.e., one is positive and the other negative. The electric battery is in another room and current is brought in and across other end of the room by several wires. I photographed the experiment with Dr. Noll sitting near. I then photographed the other end of room showing wires across, and Dr. Noll, Miyake, Fūgi, Olive, and Gatin stood in end of room. In one corner of room is a perpendicular moist chamber. The two sides against wall have small pebbles fastened against wall, down this water trickles into a hollow box below and then overflows. The two sides exposed to room have glass walls. Moisture in air in

this room is very great. He has a very fine dark room opening off from this, two quite large windows of ruby glass which opens on hinges so can get daylight when wanted. So when wanted this door is opened and a curtain of yellow paper can be drawn down. Conveniences in way of chemicals; etc. in room.

Another room, physiological room for growing plants, has conveniences for potting, table for same, pots, tools, earth, labels, etc.

The room for root experiments is narrow and long and rather low, about 8 feet high and 3-4 feet wide by 16 long. Large glass surfaces slightly inclined from above away from room, form the inner wall of the larger box which contains earth, this box opening on top of the room to the outside. The seeds are planted then on top of the house outside and next the glass, or cuttings are set in the same way. The stem and leaves of the plants are thus under normal conditions in the open, a screen of yellow glass above the room admits light so that one can see, but the yellow light does not effect root growth.

Cuttings of grape vines grow roots in a lateral direction, while seeds grow the root downward. Then he has a small room for chemical work connected with plant physiology. The garden is to the north of west and adjoins the building. Here various experiments are carried on. For example, ground is thrown into large and rolling

ridges, and the surface is thus increased, so that a larger crop can be grown than on level ground. The plants on top of the ridge are not so good as the others but the others are enough better to make this up and the yield is thus increased. In another place is a space 16 x 8 enclosed by fine wire screen to keep out flying insects, etc. Here cucurbits were grown and staminate flowers were removed before pollination. Fruit is developed without pollination. Noil calls this (parthenocarpy)?

In another enclosed place he has *Marchantia* growing on different kinds of soil, clay, sand, poor, rich, on rich leaf mold, or street sweepings. Great difference in vigor or growth results with different peculiarities of nutriment, but male plants remain male and female plants remain female. Sexuality is firmly fixed in *Marchantia*, and it thus differs from prothallia of *Equisetum* or of the fern prothallia (or of *Arisaema*). I photographed house from outside.

We enter again, sit for a few moments and chat, and then take leave to go and see Miyake's preparations of *Zamia*.

Looked at spermatogenesis and saw fine blepharoplasts. The protoplasm of egg is most interesting. It has a fibrous structure. Then in some eggs fibers are collected into pencil like tufts radiating from one point out into a broad cone-shaped brush. The cytoplasm as well as the faint spot indicating position of nucleus is

filled with them and in the nuclear spot they are larger. In one case a small spindle with red stained spirem thread was by side of nuclear spot. Are the eggs degenerating? This is material which Miyake put up at Cornell, the cones being shipped from Florida. At same time I looked at one of Mr. Olive's preparations of nuclear structure of Cyanophyceae. They are very interesting. I did not get genus but thread looked like a short celled Oscillataria. Nucleus is elongated, and fills the large hollow cylinder of cytoplasm. There seems to be no nuclear membrane, subglobose masses of chromatin are distributed on a sort of irregular reticulum. The nucleus begins to divide at the end, the inward development of cell wall seeming to pierce this. The nucleus becomes bifurcate at each end, and splits down transverse to axis of algal thread the development of wall following it. Fibers of cytoplasm or nucleoplasm? extends from the nuclear reticulum and chromatin bodies (or granules?) to the wall. Did not have time to look for more for Strasburger came in.

Strasburger is showing age. He is a man of strong personality and individuality. Not tall, about 5 ft. 8, slightly stooped, a good sized head with a receding forehead and his now thin, grayish sandy hair brushed back, his long aquiline prominent nose helping to make up his individuality of expression in his face. Penetrating somewhat restless and yet soft, mild, sympathetic eyes, a strong

mouth, but not the firm fixed mouth of a man who holds to his views first last and all the time, while his jaws and chin are rather small, showing the lesser development of animal instinct and giving a fine and well balanced poise to his well developed brain. He gestures much when he talks and the movements of hands and arms are flexible and graceful. Has a mustache but is not particular to train it in the "Wille" style. Rest of his face shaven and shows the rough and somewhat reddish surface of the aged and "weatherbeaten" blond German. After a little conversation on Miyake's preparations we go to dinner. Strasburger thinks possibly the peculiar appearance of cytoplasm and nucleus in egg of *Zamia* may be due to its being overheated in travelling from Florida to Ithaca in mail car. Regrets that Hollis has not published his book, and is out of patience that he has not done so. I suggest that perhaps it is on account of cost. "Oh that cannot be so in America" said he in German. It is now time to go to lunch and Strasburger leads the way, insisting that at each door I precede him. He follows and then Olive, Miyake and Fugil. We pass first through Sieben's room, then through the elementary laboratory, then through Strasburger's private work room (here he has near the window a tall, heavy and narrow table for microscopic work when he stands for his work at microscope, but if tired of standing uses a tall heavy oak chair which he keeps near

one end. Has on this table a flask of the blue ammonia carbonate copper). Next we pass through his literary and writing room, and then into dining room.

First, soup (vegetable) is served. A white wine is passed. Potatoes come next, then boiled chicken, bread, salad, tart. The tart looks like stewed cherries or canned cherries, but is in reality canned rosa hips and is quite good, though not of very marked taste. Chicken is served around again. Champagne comes, then warm water in a glass size of tumbler in a large bowl. This you drink a swallow of to rinse your mouth. Then comes swéitzer cheese and a small glass of something like benedictine. It is time now for us to take our leave in order to catch train for Drachenfels. Strasburger passes cigars and cigarettes but there is not time to smoke them. Just before we rise from table Strasburger delivers a Vortrag of ten or fifteen minutes length speaking of the characteristics of science, culture and life in Germany, France, England, Italy and America. The Americans he characterizes as an excessively practical nation, but in the future is destined in culture and science as well to overshadow Europe.

Conversation at table was in German. I spoke of some of my experiences in Sweden brought out by Strasburger's questions, also in Germany. Strasburger related some of his in Italy this summer.

We talked of Dangeard whom Strasburger thinks is not a very careful worker.. I related case of Harpochytrium.

On leaving, Strasburger shook my hand warmly and I did his. I told him what a great pleasure it had given me to meet him, urged him to come to America and visit me at Cornell University. "Adieu, aufwiederschen" and we are gone with pleasant and lasting impression of the greatness of this remarkable botanist, who has had so much to do in leading thought in Cytological questions and who has dared to show the world how easily one should change his mind with new investigations which give a different aspect to scientific subjects.

Miyake, Fügii, Oliver and I then take train to the ferry across Rhein, then eisenbahn to foot of Drachenfels and the cog railway to top. On Drachenfels is the remains of an old castle the broken wall of which stands up like a bare rock. A grand view of the Rhine and broad valley to east with village, and Löwenberg, Lörberg, etc., of the Sieben Gebirge on the left, the winding Rhein with its vessels in center, and on the right the old convent Nonnenberg on an island. Then on the hillside to the right an old castle ruin, where (Rolandseck) a knight spent his last days, where He was to be married to a beautiful maiden but he was called to the war. Was seriously wounded. It was reported that he was killed. His girl then took the veil and went into the convent on this island. The knight returned but

the maiden was in the convent never to return, so the knight built this castle on the hillside overlooking the Rhein and convent Nonnenberg where he could look down upon his love, and spent his last days here in rigid celibacy!!!

East Harford
Green

I photographed valley to east and the Löhrburg and Löwenburg, the latter twice. Then we walked down the Drachenfels to Rhein ferry, crossed, took eisenbahn back to Bonn. Bade Fügii and Olive good bye. Miyake and I took street car to bridge, travelled to hotel, got my baggage, expecting to go back to station and take train for Coeln, but just as we were coming out of door of hotel the "Rheindampschiff" came along more than an hour late (it was now near 9 o'clock) so I took the boat instead. Miyake gave me one of his photographs. I bade him good bye, was off. Had supper on boat. Reached Coeln about 10 o'clock went to Hotel de Nord for the night.

Thursday Oct. 15, 1903.

In morning walked up to Dom Hotel from Hotel de Nord. Another time I would have stopped at Dom Hotel. I think it is better. Stands right across from the celebrated Dom cathedral of Gothic architecture. Walked in side door of cathedral to get general impression. Then drove to station and took "Schnellzug" 9:07 A.M. for Paris. No extra fare nor seat "platz" here. Train was in fact a slow one. Wanted to take "Nord" express, which left Coeln at 7:45 A.M. but as my ticket was second class I would have had to pay about 24 marks more to bring it up to value of first class ticket. First class tickets only allowed on this train. It reaches Paris two hours earlier than the train I took. Our train was one hour late so we reached Paris about 9:30 Paris time one hour later than Berlin. Ride was the most tiresome I have had in Europe and scenery uninteresting except in Belgium where it is more hilly. Villages of a dark gray stone, Flemish architecture, agriculture crude, some few vineyards in hilly section. In lowland all way from Coeln to Paris much land for cattle grazing. We had quite an interesting company in an apartment, -German, French, Italian, American and seven languages were spoken. I was the only one who could talk English so I spoke German. A Parisian was on board and I thought he might help me to a few sentences that would help me in engaging

cabby, "Droschen" and at hotel. So I asked him how I should ask cabby price to Grand Hotel. I thought one would say "Combien la prix au Grand Hotel". But he said this was not the polite form. One would say, "Comme cher au Grand Hotel" (How dear to Grand Hotel). Then I wanted to know how I should ask if the hotel had a room for six francs. I should have said "Avez vous chambres pour six francs". But he said it was more polite to say, "Est ce que vous avez les chambres a six francs?"

When I alighted at Paris I made for the "Sortie" better known in German as the "Ausgang" and in America as "exit". There was printed at the exit, " " (in Russian), "sortie", "way out" and "ausgang". Almost any one under the circumstances should be able to get out. Just as I was about to make a "sortie", a customs' officer seized me and shook his arms wildly and I shook mine wildly. He jabbered in French and I in English but to no purpose. I had to open my bag although we were all examined at the "Grenz" or boundary. When we had finished I said, "I don't see the sense of this, it was examined on the train": Shrugging of shoulders, waving of hands, loud laughter from customs officers, and I now made the "sortie". Then I sought out a cabby whom I thought might understand polite parisian speech and shouted "Comme cher au Grand Hotel". "Que" said he. "Comme cher au Grand Hotel". He shook his head. Then I

walked some distance to another who looked a little more polite and shouted to him "Comme cher **au Grand Hotel**". He waved his hand and shook his head. I repeated it several times to no purpose. In despair I said "**déux francs au Grand Hotel?**" "Wie, wie, Monsieur, wie, wie, **Montez!**" At Grand Hotel I found English spoken so I was saved trouble in this way. I asked if they had a room for five francs. "Yes". I was shown to it on sixth floor. Window in ceiling, which was inclined roof, about two feet square and no way to ventilate room, very small and terribly furnished. Electric light had burned out. I then thought I would take a look at some other hotels. Getting on the street I noted the vast crowds which were beginning to collect when we drove up to hotel. In fact cabby started to drive from **Gare de Nord** to Grand Hotel by way of Place de l'Opera, but were stopped here by policeman and sent around Opera House and hotel to the entrance on Boulevard des **capucins** by another route. The Place de l'Opera, Ave. de l'Opera, Boulevard des Italiens Boulevard des **capucins**, Boulevard de Madeleine, Rue Royal, Ave. de la Champs Elysiées, Rue Montmartre, Boulevard de Poissonnerie, B. Bonne Nouvelle, Boulevard St. Denis and St. Martin, Place della Republic, etc., were illuminated with triumphal arches of a lace work of electric fire. Great crowds lined and filled the streets and policemen had hard work in keeping them **free for traffic**. Mounted

militia guarded the streets at Place de l'Opera and of entrance to Boulevard de Italiens/Avenue de l'Opera and Boulevard de Capucins at the end of Grand Hotel to keep back the crowds. The King and Queen of Italy and a distinguished company of invited guests and Monsieur Loubet and Mme. Loubet were going to attend the opera. I was off looking over the city in the direction of rue Royal, Ave. de champs Elysees and did not get back until about 11 P.M. I did not see the Royal party go to the opera. But the crowds still hung around, and the jam was even greater. Hawkers cried their wares, maps of the city, pictures of the King and Queen of Italy, and souvenirs, and barkers sang in a staccato monotone the charm of various vaudeville theaters, crowds of merry youth half filled with poor wine promenaded the streets singing and shouting, coachmen and omnibus drivers cracked their whips as only a Parisian driver can crack the whip, so that it can be heard for a long distance, and the tout of automobiles tuned to different pitches, and the rumble of wheels, "tuff, tuff" of automobiles "a la vapeur" created a joyous and never to be forgotten pandemonium. On Place de l'Opera and the entrance from the adjoining avenues and Boulevards, while mounted militia kept the crowds off the street, they allowed a few to pass who could give a good account of themselves, as "au Grand Hotel", etc., but the sidewalks were literally jammed and were be-

coming more congested every moment. By Cafe de la Paix on corner of Place de l'Opera and Boulevard de Capucins planks were laid on stools and chairs and standing places were sold by common laborers at 1 franc each. Others were standing on chairs appropriated from the sidewalk of the cafe. I took one of these. After waiting half an hour military closed in, ten abreast, headed the procession. Crowds poured out of the opera. Saw carriage come along with King and Queen of Italy. Crowds cheered. Military mounted guards either side of the carriage, then came another file of militia, then carriage with Monsieur and Mme. Loubet. Again cheering. I now returned to hotel. Myerbeer corner of Ave. de les Champs Elysées and Rue Montague, and lowest rooms were 7.50. So I inquired again at Grand Hotel. They put me in a room for 8 francs on the fifth floor ~~out-~~ looking on Opera, but room very small, no writing desk and no steam radiator, velvet carpet, good furnishing and fine bed as well as curtains heavily darkening the room.

Retired at 1 A.M. while pandemonium was still going on in the streets. Awoke 8:45. Pretty good sleep, perhaps better because room was so well darkened. Breakfast in Grand Hotel, coffee and bread 1.50. I had two eggs which brought it up to 2.50, very dear, and bread was not for me good, not nearly so good as at Central Hotel in Berlin or Kaiserhof in Leipsic, or Hamburgerhof in Hamburg.

At these places also honey was furnished in addition, and then bread, coffee (of course with warm milk) and two eggs, cost 1.65. At Coeln and Bonn instead of honey a jam was furnished. At Grand Hotel Paris no fruit or honey.

Started out to see something of city and also to look at different hotels as I proceed, along ~~the~~ Route down Ave. de l'Opera, on left side passed Hotel des Deux Monde but did not go in. Interesting small stationery, etc. in one store. At foot of Ave. de l'Opera, Theatre Fracaise, Magazine du Louvre, at left is Palais Royal but did not go in it now. At right Hotel du Louvre, did not go in. Returned on opposite side of street. Some dark arab created a sensation in native dress, carrying over shoulder a hanging tray on which he had taffy, etc., for sale. He would shout a sing song in loud voice and attract a great crowd, jolly them, and they would jolly him, and the sale progressed as he moved along the street. Passed Cafe de Paris, Coming again to Place de l'Opera I turned down Boulevard des Italiens on right side, I soon coming to one of the Duval restaurants, I went in for lunch, or the late dejeuner. Had soup, meat, bread, bread, and quart bottle of a French beer (which I did not especially relish), cost 2 francs. Then I moved on down etc., the Boulevard past brasseries, taverns, until I came to Rue Montmartre, on this street is Coq-d'Or restaurant. Turned to right on Rue

Vivienes, came to the Paris Bourse, which I had not thought of. First was attracted by the great and strenuous shouting. Looking to left I saw the Bourse with its Grecian pillar and stone steps. In front men and messenger boys were running here and there. I entered the gate, climbed the stairs and on the porch or landing outside of the building were two or three circles in the center, some one crying off stocks, while in the surrounding circle men were waving hands and making bids, repeating as often as possible, while others were making counter bids, often throwing their hands and words into the face of those on the other side. Finally the seller marks it off to one, and then they start another. Entering the building there is a large room. The floor in the center is covered with slightly raised circular platform on an incline a railing, and on the inside the seller, and the bidder outside. There may have been ten or twenty of the selling stalls all crowded, one great mass of struggling and shouting humanity. How any one could tell what any one else said I cannot see.

selling (circular) booths on

floor of Bourse. Some were

excited and anxious, some in despair, some sober and were being encouraged by smiling remarks of some friend (or enemy?). Others

were elated and happy! From the Bourse, passed down the Rue further

to Palais Royal, passed through building, past Jardin de Palais Royal and out to Theatre de Francais, etc., and through to Palais de Louvre, Place du Palais Royal, Ministère des Finances, Gambetta, Place de Concourse, arc de Triomphe of the Tuileries, to Place du Rivoli, past Rue de Tuileries, past Hotel Regina, then past Jardin de Tuileries, Rue Castiglione, where is Hotel de Londres, etc. Continued along from Rue de Rivoli to Ave. Gabriel, past Place de la Concorde and Obelisque de Louqsor, Palais de l'Elysée. Turned over to Ave. des Champs Elysées, to Place de l'Etoile, arc de Triomph. Inquired at a place on Ave. d'Iena where I had seen "chambres" for rent. They had only "pension", small one for 500 francs for three months and would not rent for shorter time than three months. I then walked back to Hotel Metropole on Rue Castiglione. Rooms for three francs up in attic, last étage by narrow stairs. There are 4 étage rooms for five francs, but place seemed not very clean. Then inquired at Hotel Continental. First floor reading room, etc., fine, but when one goes up to rooms on fourth and fifth floor, where they are the rooms do not look any too clean, though room is larger than one I have in Grand Hotel and bed is good, not such thick curtains for shutting out light, and not so near center of city. Clerk thought in a day or two he could give me better room lower down for seven francs. So I got option on this room until 7 P.M. It was now 5:30.

Hailed cabby, said to him "Combien au Grand Hotel et retour." "deux francs" was the quick reply. Drove to Grand Hotel, said I would leave. All right. Then after going and giving reason I thought perhaps they could give me a slightly better room for 8 francs. I had 826. They gave me 834. Had a slightly better outlook to front of opera, but is very little larger, and much better arranged, so there is room for a small writing desk. There is a clock which is run by electricity from some central time piece which probably runs all the clocks in the hotel. Was a clock in 826 but it did not run. Had supper (or dinner) at Boullion Restaurant Boulant on corner diagonally across from Grand Hotel on Boulevard Capucins. Ice 10 c., roast beef with tomato sauce .60, one-half bottle white wine \$.60, Chautobriand \$2.50, cheese \$.20 and then one pays for "couvert" (napkin), etc., .25, altogether 4.25, then I gave waiter .20 for tip. .50 for tip. Evening great crowd on sidewalks going out to see illuminations which are still on buildings. Arches still across street, but not illuminated, except the royal ones at head and foot of Ave. de l'Opera. I strolled down Boulevard des Italiens to Rue Montmartre and back, and it took me three hours! Crowds were interested in many places by poor violinists with poor legs, by stereopticon views of advertisements thrown on a screen, and with views of scenery or other things of interest or supposed interest thrown in.

It is surprising how little a thing will interest a parisian crowd of the middle and lower classes. At all restaurants, rooms as well as half the sidewalk crowded with chairs and the elite as well as mediocre sit here long into the night over wine, beer, absinthe, cigars, food, stories and silence, watching the still less fortunate passers by who jam the sidewalk and envy the ones drinking. The muddy streets (for it is raining) are crowded with vehicles (cabs, automobiles, omnibuses, etc.). I retire at 10 o'clock thinking to get a good sleep. I get a fair one, but long into the night and early morning the pandemonium continues, automobiles, hawkers' shouts, drivers cracks of whip, rumbling, etc., continue. In fact I do not believe it ever ends, or takes a night or holiday in Paris.

Paris, Saturday Oct. 17, 1903.

Rain all day. I passed the time writing.

Sunday oct. 18, 1903.

Rain all day. Nothing of interest. Wrote until about 5 P.M.

Monday Oct. 19, 1903.

To-day I devoted most of the time hotel hunting and looking for an instructor in French from whom I might have a few lessons to aid me. I walked down Boulevard de Capucins and Boulevard de la Made-

leine. Inspected the hotels.

Near Place de la Madeleine on a side street prices reasonable but hotels old and not too tidy. Then I walked down Rue Royal, up Ave. Champs Elysées and at Place de Rond Point de Champs Elysées I turned off to the west. Finally found the Hotel d'Iena, fair hotel, steam heat, and a very obliging young clerk, Mr. Hinton. I engaged a room for Wednesday night at 4 francs per day, small but neat, small steam radiator and with southern exposure. Mr. Hinton gave me the addresses of several instructors of French. Two gentlemen who live not far from Hotel d'Iena. Charges 3 to 4 francs per hour.

I passed by one of the places but determined first to call and see Madame W. Vernon, 194 Rue de Rivoli, whom Mr. Hinton had recommended, as her charges he said were only 2 francs per hour. After some difficulty I found Madam Vernon's apartments. Two blocks of the Rue de Rivoli bear the number 194. One block "194 bis" and the other 194. After finding the right entrance (for there are several) I still had to inquire of the "concierge" and was directed up a flight of dark stairs at the far end beyond the court. Here in a few small rooms Madame Vernon lives. I had one lesson with her today. She charges only 1 franc 50 cents! per hour. I had written out quite a number of sentences which I wanted to use in speaking with Boudier and Patouillard. She wrote them for me in French in

the spaces I had left for the same, at the same time speaking them aloud. When they were written she went over them once with me so that I could get some indication of the sound. Madam Vernon's time is very much taken up with lessons. She has lessons all day and often in the evening up to ten or eleven o'clock. She could only give me scraps of time, 11:40 to 12:30 and sometimes 1:30 to 2:30 and sometimes at 9 P.M. or 7 P.M. I concluded I could not take the room at the Hotel d'Iena for it was too far away. Madam Vernon's place is very near Hotel Regina and the Jardin de Tuileries, also not far from Rue Castiglione, where Hotel Continental is on corner of Rue de Castiglione and Rue de Rivoli, Hotel de Londres 5 Rue de Castiglione stands by the side of Hotel Continental and opposite Hotel Metropol. At Hotel de Londres I found a fine large room, not well furnished on the fifth floor (cinque etage) for 4 fr. 50 cents This I engaged. At Grand Hotel I then packed my things and studied my french lesson so that I might be able to say a few things to Monsieur Boudier, drove to Hotel de Londres to leave such baggage as I should not need in Montmorency. Took the train at Gare St-Lazare for Montmorency, changed at Enghiers and reached Montmorency at about 7:30. From my Baediker I had selected the Hotel de France at Montmorency. This is but a few steps from the station up a flight of stairs since the station is in something of a valley.

There is another hotel near but Hotel de France I think is the best one in Montmorency which is not saying very much. It is a French country villa hotel. The usual "Brasserie" arrangement for outdoor seats next the side walk and a combination ("salle mange") dining room and billiard room and bar inside. The kitchen opens directly into this combination and all the savory odors of French country cooking permeates it and even escapes into the street. If the night had been as black as the ace of spades one could have traced this hotel by the scent of onions! No one here could speak a word of English. So by the use of a few words (they had no "a la carte") and by an exceptional use of pantomime I managed to get dinner. In fact I left it largely to the stout French maid (la ^{bonne}), The only change in the menu I made was when she brought me some veal which it had taken them nearly a half hour to prepare, I changed it for beef steak. I then made some inquiries to learn if they knew of Monsieur Boudier. It was a long time before I could make them understand because I accentuated the er (a) at the end of Boudier. They knew the name only when lightly spoken with no accent on the er and giving it also the sound of short e (eh). I had at least a comfortable bed. But it seemed much colder at Montmorency than at Paris.

Tuesday Oct. 20, 1903.

Rose at 7:30. Breakfast (dejeuner) (Pain, beurre, cafe, deux

œufs, a la coche) was brought to my room at 8 o'clock by la bonne. After this sallied forth Baedeker in hand to find 22 Rue de Gretry where is the "maison" de Monsieur Boudier. I had no difficulty in finding it. Most of the streets here are "walled", i.e., the homes are secluded by a high wall. At Monsieur Boudier's maison the wall is 10-12 feet high. At one end there is a gate (porte) in the wall. I opened the gate and as it swung in the yard a bell rang. In an instant the middle aged, stout, round faced, well fed, pleasant maid opened a window on the second etage, thrust out her head and shouted something in French. I said "Monsieur Boudier ici?" She did not understand, so I repeated my question being careful not to accent the "er" and she replied with a smile "wie, wie, wie, wie, wie Monsieur." She descended and opened the door. I gave my card. Entered and met Monsieur Boudier in the hall. I managed to say "Je suis heureux de vous voir", but after that I was lost. We talked pantomime and so did the maid. It had been raining and there were the clean floors and especially the clean stairs and Monsieur's study on the second floor. So la bonne after sputtering away in French and flourishing her arms wildly around and often pointing in the direction of my feet, finally picked up a rug, threw it at my feet and saying "Monsieur" began scraping her feet on the hall floor! Instantly without stooping, I quietly kicked off my rubbers. What a surprise party it gave her to see my shoes cleaned so quickly!

She smiled and flourished her arms in manifest approval of the rubbers. Monsieur led the way to his study up stairs. It is on the west side of the house and faces the street. His herbarium, library and work room all in one, a cozy, cheerful room with an open fire place, ^{but}, of course, no fire yet although it was surprisingly cold! After a few mechanical remarks he spoke in French and I managed to understand that he asked me if I would take "dejeuner" with him. I said I had had the "premier dejeuner" and he replied to indicate that he meant the "second dejeuner". I gladly accepted with a "wie, wie, merci", for to lunch with Monsieur Boudier in his cozy home would be at once an honor and a treat, for Monsieur Boudier looks like a very generous, kind hearted, happy dispositioned man, and the maid looks like a good cook! "Voila" he would go and tell the maid.

He showed me a few Polypori he had on the wall and table. Then he asked me what fungi I would like to look at. So we looked through Amanita, Lepiota, Agaricus and some others. Polypori, Clavaria, etc. He gave me a number of species, some of them parts of types or rare. Then I looked through a number of his illustrations as "Icones" the original colored illustrations, many unpublished. They are nearly all on uniform size heavy paper about 12 x 14. They are beautiful the best I have seen anywhere. They have the appearance of finish and correctness. Monsieur Boudier says they are "exacte, absolument".

It is a pity all his illustrations cannot be published in one work.

"Dejeuner" was served at 12:30 in the dining room on the first floor. Monsieur Boudier and I alone at the table, the maid serving soup, bread, fish, potatoes, baked chicken, "harlots" (very fine), salad (chicken), two kinds of wine, cheese and a small glass of cognac to finish. We chatted some, and often resorted to writing, and I preserved the paper as a souvenir. Once he asked me to say what I was trying to say in Latin. As I was trying to tell him that I saw Romell in Sweden, it was easy to put in Latin! We drank to each other's health, "a la santé" "boire a la santé". About 2 P.M. as it had cleared we started out for a promenade in the woods. As we were leaving the house I asked Monsieur Boudier for permission to photograph him, so we passed into the garden in the rear of the house. There is a bit of greensward about 60 x 50 feet and back of this is the garden, vegetables, shrubs and flowers. Near this Monsieur Boudier stood, hat off, his face lit up with a cheerful smile and I "snapped" him. Then he stood near the rear of the house hat on and I photographed the rear of the house. Just as we passed out of the gate into Rue de **Gretry** I photographed the front of the premises showing the high wall, the top of the house beyond and Monsieur Boudier with his hand on the latch of the gate as if about to enter. This gate is locked at dusk.

Montmorency is situated on one of the hills distant from Paris,

so that there are fine views, but the woods which we visited are on a still higher part of the hill and the view is often commanding and fine. Much of the hill (about 1200 hectares) is planted to chestnut, which is grown for making

We collected about 50 species and saw several more. Collected some rare ones, for which see list.

We started on our return just as the sun was setting and at one spot we had a fine view of a really beautiful sunset. I said pointing in the direction of the setting sun "tres beaux." Mons. Boudier replied "wie, wie, en Amerique, aussis" with a smile. I said "wie, wie, wie, wie, wie." When we reached the "maison" it was quite dark and I had but little time to get my package of fungi which Monsieur Boudier had given me. He accompanied me to the train although he must have been very tired for he walks with difficulty. I packed up my baggage at hotel, purchased ticket to Paris, bade Monsieur Boudier "adieu, au revoir", and was soon down by the platform, and only a few minutes before a fast train for Paris came along which took me to Gare du Nord and here I took a cab to the Hotel des Londres. I asked a cocher "Combien la prix au Hotel des Londres ?" "Deux francs" said he. "non" said I "une franc". "Non, une franc, cinquante" said he and measured it off on his finger, by holding up one finger, and then marking it off in half with finger of the other hand. I slipped into the cab and was soon at my hotel, alighting I

handed him 1 franc 50 cents. He looked at it curiously and gave a doubtful shake of his head. I afterward learned that while \$1.50 is all they can charge for a single one way trip inside the fortifications, a "pourboir" of 25 cents is expected and this is what he shook his head about!

Monsieur Boudier is a jolly man, about 5 ft. 8 inches, stout, slightly inclining to corpulency, dark complexion, and head closely set on his shoulders, black hair, side whiskers and mustache, with a tinge of gray; a stout, slightly roman nose; bright shining eyes, but one eye injured and askew (the right eye). He is very courteous, companionable, cheery and enjoys life for the good of living and I believe also for the happiness of doing some good. He walks with a quick, regular and rather jerky step, his body swaying slightly side to side, but not gracefully and he breathes heavily when walking for he is soon "winded"! but still plods on with the heavy, almost asthmatic breathing. On parting with Monsieur Boudier he said "Je suis content de vous voir". I replied "Je suis charmé de faire votre connoissance"! These two phrases I had learned from Madam Vernon!

Wednesday Oct. 21, 1903.

Rain all day, look over my specimens collected at Montmorency, photographed some and put them to dry in a closet in my room where there is a little heat from a warm water pipe. Had also another

french lesson with Madam Vernon.

Had lunch at noon at Brasserie Universal, 31 Avenue de l'Opera. Fine place. Dinner at Marguery's Restaurant, Boulevard Bonne-nouvelle. It was much as F. Berkeley describes it in his "How Paris amuses itself". Monsieur Marguery did come around, and bowed graciously to me, a stranger, while he shook hands with friends and conversed with them. I confess I did not like the "Filet de sole au vin" even if Smith did recommend it. Perhaps it was because "Etienne" did not bring it, but the Chautaubriand was all right.

Thursday Oct. 22, 1903.

To-day according to plan I visited Patouillard at his "maison" and place of business as "chemist" on Rue du Roule, Neuilly sur Seine. Took the Metropolitain to the Fortifications on Ave. de Grand Armée and walked from there. Monsieur Patouillard was very cordial. We talked some, my "lessons" in French still aiding me, and we wrote some, or occasionally Patouillard would write. He told me that Long had sent him a specimen of my new Genus Dictybole and that it was a new genus and very interesting. He is very busy with his "shop" having to leave me every few minutes to go and wait on a customer. He has a small office between the dining room (on ground floor) and the store or retail room, and through the partition is a small glass window or "peep" hole. Sitting at his desk he can see who comes in at the door when the bell rings. He showed me some

of his colored illustrations of agarics and many of them are fine. He does not, however, save the specimens of his agarics or fleshy fungi. I felt that I could not stay long, nor could I ask him to go out collecting that day, as he was so busy. A short time before I departed he invited me to take a glass of wine with him. We sat at the table in the dining room, and Mrs. Patouillard and daughter were introduced and joined us in "a la santé". Mrs. Patouillard is of a light complexion and good looking and friendly. Her daughter is like her, not at all like Monsieur Patouillard.

We arranged to meet in the herbarium of the Museum of Paris, Rue Buffon #63 on Saturday afternoon, when Patouillard would show me Montagne's types and arrange with Monsieur Hariot, the curator, for me to have a small piece of the types for careful examination at home. I then bade him "adieu". Took lunch in Neuilly at restaurant kept by Monsieur Pardon. Bought a basket for 95 cent, and sallied forth to the Bois de Boulogne to collect fungi. Found 25 or 30 specimens. They are not very abundant. Occasionally it rained. Towards night fall I took the Métropolitain for Place ^{de la} Concorde and came to my hotel. Sent a note out to the Guide, Mr. Appel. He called at 8:30 P.M. and we visited the Cabarets, "Hell and Heaven" (l'enfer et la ciel) and some of the other sights of Nocturnal Paris. Returned to hotel about midnight. I took dinner at 7 P.M. at Tavern Royal at 25 Rue Royal, a good place.

Friday Oct. 23, 1903.

Did some writing. Took lesson at Madam Vernon's at 10 A.M. and at 4 P.M. In evening to dinner at Tavern de l'Opera at #26 Ave. de l'Opera. In the evening walked over to Montmartre to attend the Cabaret Boite de Fursy. This is reached from Boulevard Italiens by way of Rue de la Chaussée d'Antin and Rue Pigalle and is at 57 (?) Rue Pigalle. F. Berkeley Smith in his "How Paris amuses itself" describes this place well. I wished much to see it and to hear Odette Dulac sing. She is all he pictures her to be and I was charmed. There are new male Chansonniers here, however. Mons. Chippel is a charming imitator of humor, drama, comedy, etc. and his parts are mixed, representing various characters in talk or song. (in book, "Scraps from Europe") See program for illustrations of some of the chansonniers and Smith's book for account of the place and of Odette Dulac.

At 11:30 I left to go to Maxim's restaurant on Rue Royal to see the show, for this is one of the swell places after midnight for lunch, dinner, wine, smoke and the high class of demi-mondes. There is music from a fine string band. Beautiful women are some of them, and beautifully gowned in creations for them, which afterward set the pace for the fashion of the world! Perhaps this accounts for the questionable "morale" of many of the modes of dress which come out of Paris. As the morning hours wear on smoke and wine become thicker, parties join in singing along with the music, good

humor prevails and apparent happiness, and altogether with the handsome furnishing, the good wine and cigars, and the good cooking, with the prices at this time of night about treble for viands what they are during the day. I retire at Hotel de Londres about 2 A.M., Saturday.

Paris, Saturday Oct. 24, 1903.

In morning took lesson at 11:40 - 12:30. In afternoon by appointment met Patouillard at the ~~the~~ Jardin de Plantes at 63 Rue Buffon in the Herbarium Museum Paris. Here I met Monsieur Hariot, curator of the Cryptogamic collections. Monsieur Patouillard secured permission for me to get a small piece of the types of agarics of the United States described by Montagne and sent to him by Sullivant from Columbus, Ohio. He began taking out the species going over Amanita, Lepiota, Collybia, Tricholoma and Mycena. By this time Lloyd came in. This was quite a surprise for me. Evidently for Patouillard also. I did not know that Lloyd had returned from Sweden but he has been here a week or two. Patouillard now said "Voila"! folded up the agarics and put them away, tore up a paper on which he had written something to me to the effect that I was the first one to get any sample of Montagne's types. We then spent some time conversing with Lloyd. Finally I wrote in French to Patouillard asking if he would take out and send me small speci-

memens of the others of Montagne's types. I did this thinking he did not wish now to proceed to the other genera. He said I had seen all, that all the others had been eaten up by insects. I had by this time secured samples of about 15 species. The afternoon was then spent in conversing chiefly with Lloyd. At 4:30 I departed, and in the evening visited Montmartre to see **Moulin Rouge**, the cabaret **Quartz Arts**, and the restaurant **Coq. d'Or**, and attended "**Moulin Rouge**" performance until beginning of third act. It was disappointing and I left at 11 P.M. to go to Cabaret Quartz, Arts. This is not far from **Moulin Rouge** on Boulevard Clichy. It is a small place but one of the typical of the best Cabarets. In front is the small café filled with tables, chairs, men and women of the middle classes, and with smoke, a small bar and ticket office in one end. Floor bare, walls and furniture plain even to dilapidated, and the front on street curiously and quaintly decorated with stained glass, etc. There are from this room two entrances into the "chantant" or concert room, one on the right for the public, and one near middle left for entrance of the **chansonniers**. All enter from the café, and the **chansonniers** use the café as their rendezvous during the evening, going in by this entrance when it is their turn on the program. The piano and players are close against this entrance, so that the **chansonniers** can just squeeze past and reach the small platform on six inch logs, made of old boards picked from the street, and about seven inches high and four feet square this plat-

form being at left end of piano. The room is about 25 x 25 feet. All the space not occupied by the piano and platform is occupied with small tables and chairs. Sawdust on the floor. The room is then crowded with middle class and some aristocracy and much smoke and fumes of beer and wine. The attendant or "garcon" can just squeeze his way around and wait on the crowd. The chansonniers sing short or long pieces of their own composition, or recite some of them, always with some humor mixed in it and sometimes with a great deal. Usually they sing alone but in encore three sang together. In recent years two electric fans have been put in the rear wall to run the smoke out when it gets so dense that it can be cut with a knife. About 11:30 one of these fans was started and the electric wire connected runs entirely across the room about 30 cm. below ceiling, everything in the way of decoration and furnishings being crude, except some impressive illustrations of various chansonniers hung on the wall. When I first arrived the room was so packed I could not enter. The "concierge" could not understand much of my French or English either and he called one of the chansonniers, a Monsieur Boyer, who could speak English, and who last year travelled and sang in the United States. He was very kind and interested. Learned that I was from America and that I was interested in seeing the Cabarets. He said if I would wait a few min-

utes probably some one would come out and thus provide a place for me. Sure enough some one soon, came out of the entrance for the Chansonniers and I was admitted and took a seat against the elbows of the pianist, some sort of a light haired Bohemian who continually banged on the piano and smoked cigarettes. I could understand but little of the words, but enjoyed greatly the spirit of the Cabarets. As I entered the room Monsieur Boyer stuck his head in and shouted "Un Americain!! For several minutes I was an object of as great or greater interest than the tall, dark complexioned chansonnier who was entering upon his part. Once or twice Monsieur Boyer would say to me "Well, what do you think of this show?"! As out. I passed into the Boulevard at 12 P.M. a stout French maid who had regarded me with some interest during the proceedings said "What do you think of this place?" I said "It seems to be a very nice place." "Yes" she said "It seems to be very nice"!!

At Moulin Rouge as well as at Olympia on Boulevard de Capucins, and at many other of the variety and vaudeville places, as well as at some of the theatres there is a large promenade space back of the seats. Many tickets are sold to the promenade. Here is a place serving to promenade, also tables and seats for beer, wine, etc. These promenades always swarm with demi mondeshes who tug at you for a glass of beer, for a bouquet, for wine, and for what not!

On leaving the Quartz Arts Cabaret. I walked down Rue Pigalle, Rue de la Chaussée d'Antin and Boulevard des Italiens and then to Rue Montmartre, #149 and went in the Coq. d'Or restaurant for refreshments and some food. This seems to be visited by the middle classes and students chiefly and demi mondaines of the second and third class.

Sunday Oct. 25, 1903.

Slept until 12:30 P.M.! Did not get to bed until 2 A.M. Had dejeuner at Duval's establishment near Place de la Chatelet. Then (walked) visited the Museum and Jardin de Luxembourg, a formal garden of the renaissance type. From here walked to the Pantheon and visited the Tomb of Napoleon, a grand monument to this great general. The tomb rises from a deep circular pit, and rises so that it stands high above the level of the floor, while the dome of the Pantheon is far above. On the floor of the pit around the tomb are inscribed the names of his chief victories, Austerlitz, Pyramids, Moscowa, Wagram, etc. Above the vault (to the north of this) and on it is inscribed Napoleon's wish. "I desire that my ashes shall rest on the banks of the Seine in the midst (or among the thousands) of the French people whom I love."

From here I walked to the école Militaire, the Champs de Mars, ascended the Eiffel tower to the top (2 francs). In the top wrote a postal card to Kerr and Clara on Eiffel tower cards. After descending, walked over the Seine on the Pont d'Iena to Palais du Trocadéro to Place du Trocadéro. It is now dark. Then down the Ave. du Trocadéro to Place de l'Alma, down the Course la Reine to Grand Palais des Beaux-Arts, Petit Palais des Beaux-Arts, Jardin de Paris, Place de la Concorde, and Rue de Rivoli to Rue Royal to Place de la Madeleine and had dinner at Restaurant Durand, one of the fine restaurants, where some of the best people of Paris go. Retired about 9:30 P.M.

Monday Oct. 26, 1903.

Rain in the morning. Had french lesson at 11:40 to 12:30. In afternoon it cleared and I took the Metropolitan for Bois de Boulogne and collected about 20 to 25 species of fungi. The fungi were few but I got some interesting species like *Lepiota lilacina* variety *bucknallii*, *Marasmius calopus* (according to Patouillard). See list for others.

Paris, Tuesday Oct. 27, 1903.

Morning taken up with photographing and taking notes on fungi and with french lesson. In afternoon took the fungi to Herbarium

Museum Paris, 65 Rue Buffon, for Patouillard to see and have his opinion. Lloyd, Patouillard and Hariot all there. At my request all went to Jardin de Plants, and one side of the mound about half way up the labyrinth, each in turn stood in a spot where such sunlight as could get through an opening between the trees, shone on them, and I made a snap shot at them. Then as we were returning I advanced far enough in front of the Hall of Zoology to photograph all three together as they came across a patch of sunlight.

Patouillard is tall and spare, about six feet, light complexion, very gray hair and mustache, the latter long and coarse and somewhat "flaunting" but not cared for as is usual in the case of the continental mustache. His forehead is slightly receding, his nose romanesque, his eyes slightly sunken and receding behind, heavy eye lashes. He appears stong and is prompt in movement and rather slow in speech and inclined to draw out his words more than most french and his voice is rather heavy and of moderate pitch or a little below medium. He is only slightly stooping and walks with ease.

Hariot is a short, stout, "stubbed" man of a florid complexion, smooth round face, sparkling blue happy eyes, a ringing, musical rather high pitched voice. He talks sometimes with great rapidity, and always with animation, unless in running over characters of a plant as he is searching in the book for its name. In this manner

he always works with a long soiled linen coat on. His face is as "aforesaid" florid and round, his nose rather sharp and slightly roman, his forehead slightly receding and his light hair short and combed back and up. Being stubbed and with short legs his movements in walking are not most graceful, but when he runs he "glides like a goddess", his body moving along as if carried, while his short legs work rapidly like some automatic structure.

Lloyd is short, well built but neither stout nor slim. I think he always smokes. I have seen much more of him here than in Sweden and we have talked much together. He has not shaved very recently or else not very close, wears an ordinary grayish brown mustache of the waterfall type. His nose is American, not prominent; his eyes brown and lashes rather heavy, and dark grayish brown, medium eyes which are partly hidden by the eye lashes; jaws square; forehead full and slightly sloping; expression one of content, sometimes animated, sometimes half serious; hair full and same general color as eye brows and mustache. He is living in the Quatier Latin, 107 Boulevard St. Michel. He is studying and photographing gasteromycetes here. When cold weather comes will go to London for the winter. When I was about to leave I asked Hariot's permission to come Wednesday and look over the Clavariaceae and the rest of the Agariaceae and he very graciously and smilingly gave it.

Dinner at Tavern Pousset, #14 Boulevard des Italiens. Fairly good, but service poor. When I got the "addition" at close of dinner the bill lacked a sous of being even francs. I left the 5 cent, piece on the plate for the poorwaiter. He tossed his head and attended the next table. After I had finished my cigarette I departed and just as I was passing out of the door he rushed up behind me and held out the sous saying something I could not understand. I did not stop, however, but continued through the door and it appeared that some one within was calling him for he turned back quickly but held tightly on to the sous!

From here I walked up to Place Pigalle an Boulevard Clichy and attended the Cirque Mendrano. The "scenery" was very poor, but the last rider did some fine stunts in tossing and catching balls, clubs, torches, etc., while standing on the running horse.. He increased the number of balls from 3 to 5, also caught balls in a cup fastened to front and finally to back of head. After he had finished the equestrian performance, and he came in for a grand finale with the three torches, **the** lights were turned low, the band played an accompaniment and he tossed the torches in the air and caught them in rythm to the music, as the music would slow he would toss the torches higher and they always sailed aloft and downward in a graceful winding movement which was very beautiful and wierd. The best

thing on the program was the swinging and catching of clubs by two men. First each one alternately with three clubs, swinging and throwing them into the air in various ways catching them as they came down. Then one would walk up behind the other reach out his arms and take the clubs away without any break in the rythm to the feigned surprise of the one swinging them. Then each swung four clubs. Then as a grand finale each took three brilliantly colored gold and brown clubs and facing each other tossed and caught, occasionally each tossing a club over to the other. This they continued and stepped backward until they were 12-15 feet apart and at every other throw each turned a club over to the other. It was done in such perfect rythm and so rapidly that the clubs appeared like graceful living objects flying through the air and they appeared flexile and to bend as they curved in the various evolutions. As the last act came on I departed and walked back to hotel, retiring about 12:30.

Wednesday Oct. 28, 1903.

In morning went to Herbarium Museum Paris. Looked over Clavariceae and began the Agaricaceae. Found quite a number more of Montagne's types. Took dinner at Tav. du Châtelet on Place du Châtelet near Seine and across from end of Boulevard St. Michel. Dinner at 5:30 to 6:40. Found the restaurant nearly empty at this time and the garcon was a very fine young man. Told me how the

potatos were "souffled." Also showed me a picture of his sixteen months old baby. We talked entirely in French. Had my French lesson at 7 o'clock and retired early.

Paris, Thursday Oct. 29, 1903.

Continued work at Herbarium Museum Paris and also continued to talk with Lloyd. Lloyd has not had an opportunity to talk with an English speaking person for a long time and he is making up for lost time. Sometimes it is impossible to work and I hope I did not appear rude when after a long discussion I would turn to my work again. I finished the Agaricaceae except the genus Lactarius. I think I must have found altogether 50-60 or more of Montagne's types, although Patouillard thought they were all eaten up by insects!!

This day the riot occurred on the Place de la Republic before the Bourse de Travail between laboring classes and police. About one hundred injured and one hundred arrests. Furniture in neighboring cafes badly broken up. Wish I had been there but I was up to herbarium and knew nothing of it until next day.

Thursday french lesson at 7 P.M., but first a good dinner at the Brasserie Universalle Ave. de l'Opera. Then I walked over to the Bal Bullier at 10 o'clock, in the Quatier Latin. The Bal is far out on Boulevard St. Michel and it was a long and tiresome walk.

Two francs for entrance and trent cinq centimes for caring for overcoat and umbrella. The Bal is a large hall, dancing and promenade hall, with a sort of an arcade arrangement on three sides, raised about four feet, where are tables and chairs, and drinks, et al, are served here to the wierd students and grisettes of all nations. There is a band to play short waltzes or two steps or cake walk fandangos. During the music the people pair off and waltz, or execute wild cake walk movements or other grotesque movements as the theme strikes them. Those of the throng who do not wish to dance group themselves around parties of dancers or actors, and large numbers of these groups are found over the floor of the large hall. Singing and shouting also are indulged in, and the hall is filled with the usual clouds of nicotin and fumes of spirits. The grisettes are as active as the young men in all sorts of capers. Being tired I did not promenade long, but sought one of the seats, although I knew I would be pounced upon by one of the restaurant sharks. Very soon one of them came. I did not want to drink any of his vile concoctions so I said "Je ne parle pas francais". This stunned him. Then he enumerated the various drinks he could furnish me. I said "Je ne desire pas de boire." "Mais" he said flourishing his arms "le place, le place". He wanted me to purchase a drink if I kept the seat but when ever he touched on this subject, as I could understand his words I replied "Compre pas,

compre pas". He looked puzzled and after several attempts and getting no answer except "Je ne desire pas de boire" or "compre pas" he gave up the fight and I had my seat in peace until 11 o'clock, when, tired of the exhibition I departed, stopping at a restaurant near by to get a light lunch. Here were more grisettes and students and fumes and clouds and I had several requests to give drinks to thirsty grisettes. Walked back to hotel and retired at 12:30.

Paris, Friday Oct. 30, 1903.

In the morning walked to the Jardin de Plants and called on Monsieur Perrier, director. He was not at home, being "a la campagne" and so I left my card. Then called at Museum Paris in Cryptogamic herbarium to pay my respects to Monsieur Hariot and say good bye also to Mr. Lloyd. Monsieur Hariot had gone to the second dejeuner and so I left my card. I bade Mr. Lloyd good bye. He seemed to regret my going for he said he was hungering to talk English! Then I took a cab to make brief calls on other botanists in Paris.

Monsieur Bornet, the distinguished algologist I found at home. He is a charming man, petit and slender, very gray, his beard trained down to a point from his chin, which with his generally well groomed aspect, gives him a distinguished and erudite appearance.

His eyes are bright, generous, friendly and happy, and so is his disposition. His study, herbarium and working rooms are in connection with his "maison". I remained about half an hour and we had a jolly and friendly time talking altogether in french. I was surprised to find how much french I could speak but not surprised at the very poor way in which I used the language! But Bornet understood me and I understood nearly all he said. In only one instance was it necessary for me to ask him to write. His rooms are as tidy and well kept as himself even when he is at work, and his study is bright and sunny. As I was about to depart he permitted me to photograph him at his study table. He wished me "Bon voyage" and even made an "adieu" and "au revoir".

Next I called on Professor Van Tieghem, the distinguished author of a large volume on the classification, morphology and anatomy of plants. I have had some correspondence with Monsieur Bornet and his work on algae made me more familiar with him before I met him. But Van Tieghem!! He always seemed to me so far away, and I had never read or studied his work carefully. I could hardly realize that he was alive! I was ushered into the reception room on ground floor. Finely furnished and some statuary giving a learned and distinguished tone. The day was dark, it now was raining and the windows were rather heavily curtained. It gave a sombre and grave appearance to the room and it made me think that perhaps the sur-

roundings of this man had perhaps had something to do in shaping some of his vague theories. While I was waiting for him for I waited some time, everything was as silent as the grave and I even yet wondered if he were alive! Finally he came. He was a revelation. Tall (about 6ft. 2), spare; heavy and long mustache and "gottee" and rather long hair but not too long hair for his age, gray; high forehead; serious and friendly eyes; and graceful and so distinguished! It was food to look upon him and one could almost reverence such a man, ~~even if one could~~, as we much reverence the opinions of such a serious student even if we cannot accept a large part of his philosophy of plant relationships. We talked entirely in french. I was enabled to say quite a number of things, some poorly, some fairly well. In taking leave I begged the privilege of taking a photograph of him. He readily acquiesced, but very serious. I had him sit facing a window about eight feet from the window, so the light would come full (if not strong) on his serious but distinguished and scholarly looking features. I rested my camera on the piano in the corner. Stop 8, and exposure 10 seconds!!! I said "au revoir" and he said "au revoir", "bon sortie", "bon voyage"! and I was gone. Then I called on Guignard. He had just left his laboratory for the garden, but in the garden he had gone to the laboratory, but could no where be found.

Then I called on Bonnier (Professor of Botany at the Sorbonne)

at his home but he was not in. I then drove to Hotel de Londres. I had employed the driver just two hours and 45 minutes which would be called three hours at two francs per hour = six francs with a pourbois of fifty centimes. Was not well to-day. Took a cup of tea and some toast at Hotel Regina, Place de Rivoli. French lesson at seven, wrote some and retired at 10:30.

Paris, Saturday Oct. 31, 1903.

This morning packed up my fungi. Took bus to Place St. Michel and called at the Sorbonne to see if Gatin was in. Not present. I also asked for Professor Bonnier. He was not in. It was amusing the conversation I had with the garcon in french. Professor Bonnier is a mystery. He is in Paris the garcon insists, but he does not know where, although he is known not to be at home nor at the laboratory!! Returned to hotel, wrote some and at 2 P.M. took bus at Place de la Madeleine and rode along Boulevard de Madeleine, des Capucins, des Italiens, du Montmartre, de Poissonniere, de la St. Denis, St. Martin, bonne-Nouvelle, to Place de la Republic. Could see no evidences of the affray of Thursday, even in front of the Bourse de Travail. Took dinner at 3:30 at Tavern du Chateau d'eau, Place de la Republic, and had the best Chateaubriand for one franc I have had in Paris, although in some places it costs \$2.50. From here I went to my french lesson at 4:30. Madam Vernon invited me to take a cup of tea and

drank a bowl of it herself. I said "La stimulant fait vous de vivre" and she said "wie, wie, wie". We conversed for an hour in french. I paid her fiftenn francs for ten hours and gave the charming ten year old Odette Vernon one franc. Evening wrote, settled bill, preparatory to starting to-morrow morning for London.

Sunday Nov. 1, 1903.

Left Paris at 10:20 for Lendon by way of Dieppe. Cloudy but no rain. For some distance we travelled along the banks of the Seine, a beautiful winding stream in a valley. Numerous tunnels passed through which led us into the open country, and then back again to the Seine. Agricultural operations seen on entering Paris, gathering root crops. Numerous trees along fences, hedges and streams, show their use in pollarding to obtain fuel, etc. Often where the sprouts are cut off a number of trees a large knot-like swelling is formed at this point on the main trunk. In some trees the trunk is pollarded. In others only the side branches, and the pollarding is done so that the sprouts come out in successive whorls. The villages, small ones, are interesting, small and low gray stone houses, irregularly placed along irregular streets, roofs often thatched, some not, but many moss grown and breaking in though still inhabited. Stop at Rouen, next stop Dieppe reached about 1 P.M.

The passage across the channel is a good one the water only slightly rough, so that there is but little pitching of the boat. Arrive at Brighton? or New Haven? sometime before dark. Baggage inspected and get aboard the train in good time but it is an hour before we leave. Arrive at London Bridge 7 o'clock P.M. London time, which is about fifteen minutes slower than Paris time. Take hansom to Grand Hotel and go immediately to the 5/6 room which I had engaged in advance. After dressing go to Cafe Monico on Piccadilly circus for dinner. Good Cafe. I think better than Cafe Royal a little further along. Met at Cafe Monico Mr. Coffin, brother of whom I met at Mr. Coffin's in Kew Gardens. Write a few letters and retire.

London, Monday Nov. 2, 1903.

Rise at 7:30. Breakfast at Grand Hotel for 3/6. Take bus for Kentishtown which lands me at "bottom" of Castle Road. Here walk to 53 Castle Road where Cook lives. I had written him from Paris saying I would come. Found him ready. I had not formed much of an opinion of what kind of a man I should find, but I pictured a tall and large man, about six foot tall and broad shouldered, very gray and somewhat stooped. Imagine my surprise. He is a small man, not quite five feet or certainly not more, rather spare, but head of good size and the size emphasized by the bushy curly head of long almost white hair and similar full beard and mustache giv-

ing him something of a Longfellow look as to hair though not as to features and the hair more curled and disorderly and the mustache and mouth whiskers somewhat sandy stained. His forehead is high and slightly receding, nose slightly roman, jaws thin and small, expression rather cramped and eyes small, but expression and eyes are of ease and restfulness and quiet. Add to this a pipe and you have Mordecai C. Cooke. He greeted me cordially in his quiet slow speech, and led me into his study on same floor, where was an open coal fire, table in center and sofa by a small table between sofa and front window, the foot of the sofa near the fire, this end of the sofa is his favorite place for sitting as one can see by the deep depression here. He at once sat down in this place and took a half lounging half reclining position backward, holding the bowl of his pipe in his small left hand while he puffed away at the stem. With slow speech he complimented me on the Mushroom Book. Later he said he did not think any one had thought that the characters of mushrooms could be brought out so well by photographing until I published the first pamphlet. He gave me two old and rare popular German pamphlets on mushrooms as a recognition of the gift of my book to him. He inquired about my European tour. He permitted me to photograph him in his favorite position only it was necessary to turn the sofa around a little toward the fire in order to get the light from the window on his face. He also gave me a photograph

which his daughter had taken as he was leaning on a table and looking up from work, a good picture. I also photographed him in front of the door to the house, with hat on. Returned from here to hotel. Got a \$50.00 United States Express check cashed at American Express Office. Bought cap to replace soft gray hat left in speisewagon at Osnebrück, bought compass for self, 6/6, two smaller ones, 2/6 each for Kerr and Clara, also set of sewing instruments for Clara, 9/6 and a set of drawing instruments for Kerr, 21 shillings.

Took lunch at Monico's. Packed up preparatory to going to Seward's at Cambridge, leaving Liverpool Station G.E.R. at 4:30 P.M. Arrived at Cambridge about 6:00, drove to Westfield, Huntington Road (2/6). Met Mrs. Seward and three of the children. Her hospitality was shown at once in having a cup of tea ready. At 6:40 I started for Emanuel College, walking distance, about a mile, reached Mr. Seward's room at 7. At 7:10 we stepped into the combination room on ground floor across the court. Here I met Mr. Rose who presided at dinner, and at the entire function. The Master was not present, Mr. Rose taking his place. Mr. Rose is one of the teachers, or has been, is now rather old, i.e., a little over middle age. I met also a Mr. Edwards, a Mr. Bennett, mathematician, and others. At 7:15 Mr. Rose led the way to dinner across the hall. The guests follow, Mr. Seward saying to me you please follow Mr. Rose. I sit

at Mr. Rose's right (he at head end of table), Mr. Seward at my right, and Mr. Edward's at Mr. Rose's left, i.e., opposite me. The "fellows" table at which we sat is across the end of the long dining room. The students tables run lengthwise of the room, two of them, and the seats are long plain benches with no back. All have on black gowns. All stand and a young man at one of the students tables, with one foot on a stool, one hand in his pocket, reads in a perfunctory way but with a "go as you please" air, a short latin grace. All are then seated. Dinner a good one, with usual courses. Roast beef I think for the meat, white or red wine. The students finish long before we do and disappear. At close of dinner Mr. Rose reads a framed "blessing", framed in an oval frame with a handle. We then adjourn to the "Combination" room again, taking the same order. The Combination room is a room where the Governing Board of the college have their meetings. After the dinner they always come into the Combination room for a short social chat over cigars and "College" Port. Some do not smoke or drink. The gathering is very informal. If some are pressed with work they do not at the time come in. Others drop out as they feel inclined. But it is an unwritten law that they do not stay longer than 9 o'clock.

At Emanuel College the seats are arm chairs arranged in a semi-

circle around an open soft coal fire. Small tables are between each two chairs. On the right Mr. Rose (who takes place of the Master this evening) sits and I sit at his left at same table. Glasses are on the tables and on our table is a large "Caraffé" of fine old port wine. He passes me this and asks me if I will have some "College Port". I pour out a glass and hand it to him (he does not drink). He hands it to Mr. Seward at my right, and it then goes around the semicircle. The evening is a very pleasant one, general conversation, sharing with, conversation in pairs or in groups. At nine we break up. I expressing my pleasure to Mr. Rose at having the opportunity of seeing this interesting plan of college life as well as sharing the pleasure of the evening. All bid me a cordial good night. Mr. Seward and I walked to Westfield. Had tea with Mrs. Seward, conversed for about an hour, and retired.

Tuesday Nov. 3, 1903.

Was called at 7:15 A.M. The gong sounded at 7:45 and we had breakfast at 8. Tea, ham and eggs, toast, bread and butter, "jam", fruit (apples, pears, grapes for choice). Mr. Seward and I then walked to his college office, for a moment, and then over to the University Botanical Hall. I stopped in his room to await Professor Green who was to "show me around". At 9:30 Green appeared. We

looked over the new Botanical Hall first, then the Garden. The garden contains about forty acres, a pond and a small bog garden. In the herbaceous garden the beds are cut out of the lawn in irregular patches small ones being devoted to small orders, etc. The unpleasant regularity of the small rectangular beds is thus avoided and formal beds also avoided. This effect is pleasing. The greenhouses contain a fine illustrative collection. One feature originated I think here at Cambridge is the narrow high hall at the ends of the series of houses, making communication from one to another at the ends and the hall is used then for lianas which are trained on either side up the wall, getting what light they have from the narrow roof above. Since most lianas are shade plants this hall is an excellent place to grow them. In the garden I meet Mr. Lynch, the gardener, who loves to know all his plants and the "nooks" well. He is especially remarkable for the forcible way in which he says "yes" to almost everything you say!!

From the garden we start out to look over the grounds and exterior of several of the colleges. The colleges are all built around a court, entrance through large doors or arches. Usually a cross building connecting two sides cuts the court into two courts, or if a college, like Trinity, is large, there are more than two courts, or even separate buildings across the street. Trinity is one of the largest colleges and can house only about one-half its

students. I peeped into the dining room of this one and also into the combination room. Here there is a long table with seats all around. Kings College is one of the large fine and interesting ones. It was separately founded (separate buildings or colleges) by Henry VI, Henry VII, and then Henry VIII consolidated and enlarged them making thus "Kings" College. Over the portal of one is a relief of Henry VIII with hands close down in front at rest. At another place he holds objects in his hands in better position. The chapel of this college is a fine piece of architecture, ornamented outside and in, with "roses", "crowns", "Fleur de lis", the "royal arms", etc. The interior is very beautiful. Chapel is held every morning in here.

Kings College is one of five colleges which own property altogether along the banks of the Cambridge, a beautiful winding stream. The colleges are in order Kings, Clare (founded by wife of Henry VIII?), Trinity Hall, Trinity and St. John's. The fronts are toward the town and the buildings are on the town side of the Cambridge. The rear entrances are from Queen street and the Cambridge is crossed by pretty bridges, usually stone arch. **There** are large open green-swards on either side of the Cambridge, but along its banks are weeping willows and a few oak trees. Towards Queen street are more trees which together with some handsome old elms next the Queen's street and belonging to the town make a fine grove. The views

down or up the Cambridge are very lovely. In some cases avenues of trees are planted along the walks leading to the colleges. Each of the colleges has a "fellows" garden open only to fellows but they can take in friends, and some are open to public at certain hours, certain seasons.

From here it being 1 P.M. we go to Professor Green's apartments on top floor of a brick flat. Here he is very comfortably located in a fine suite of rooms; his sister Miss Green a refined, pleasant and congenial young woman, lives with him.

Lunched here, then had a smoke and talked until 4:30 when we set out to find Mr. Seward or Professor Marshall Ward to learn arrangements for evening, as Professor Marshall Ward had invited me to dine with him at Sydney College where he is a fellow. Just as we were leaving the Flat Mr. Seward came up looking for me. It was necessary for Professor Green to go to London (as he lectures there Wednesday and Thursday) to get lectures ready. He usually comes back every night. Works in Botanical Hall in Cambridge Monday, Tuesday, Friday and Saturday and is fellow (no pay) in one of the colleges. I am to meet Professor Marshall Ward at Sydney College at five minutes before 7 as dinner here is 7 o'clock. I called at the portal of the college just a minute after Professor M. Ward had entered. The porter showed me into the combination room.

Just after I entered the Master came in. He is a little beyond middle age, gray. Mr. M. Ward introduced him as the "Master". I thought he forgot to tell me the name, so I said "the name?" Mr. M. Ward repeated the "Master". I saw my mistake and the genial Master in his kind, free and quiet tone said slowly "you know my name very well. It is a name you are very familiar with, Smith!" I replied that the name Smith I knew well, but that I had not before the pleasure of knowing the Master's name of Sydney College. Others came in. Mr. Neville in physics, I believe. A Mr. Edwards (I think) in Greek, and others whose names I do not now remember. All in black gowns, I with sack coat, white shirt. The Master then led the way to the dining room. Mr. Marshall Ward said to me "you please follow the Master", and we single-filed into the dining room. The tables are arranged same as in Emanuel College. I was seated at the left of the Master, since he sat at the opposite end of the table (with reference to its relation to room) from that at which Mr. Rose sat at Emanuel, the object being in each case to have the visitor next the Master, or one presiding, and at the same time facing the student body in the dining room. Mr. Marshall Ward then sat at my left. Mr. Neville opposite me and Mr. Edwards opposite Ward. The conversation turned at once on organization of colleges, especially students relation to colleges. The Master inquired about Cornell in this respect and I described the frater-

nity system in which they were much interested.

White wine was served. Dinner a good one as usual, but not elaborate. Students finished and left long before we did. Just before sitting at table a member at the foot of our table turned half way around toward the student body and read in a matter of fact way a latin grace. As we rose to go the Master repeated a very short grace in six or eight words. Then he led the way into the combination room, I immediately following and the others in order. Table in combination room in Sydney College is a semicircular one in front of an open fire, with seats at the ends and on the convex side (away from the fire). At the right end were two chairs, the Master pointed to the second one and asked me if I would be seated there, at the same time pointing out that it was a very old chair, about one hundred and fifty years old, and had been patched up in a number of places. I remarked that probably many distinguished persons had perhaps sat in this chair and that it was quite an honor for me to be offered it as a seat. All then were seated, cigars passed and the Master first handed me the flask of "College Port" asking me if I would have some. I poured my glass and then asked permission to pour his, then I passed it to Ward. Conversation for some time ran on University organizations and the relation of Science students to Classical ones. They especially asked about Cornell and I had an opportunity of pointing out how Cornell led in America in placing science study on the same footing as classical

study.

The Master then showed me a "grace" announced in print this very day, November 3, 1903, in the Cambridge University Reporter to the effect that the Vice Chancellor was going to call the council together for the purpose of considering the amount of classical study to be required, etc. The matter has been discussed for some time. I was interested to see the attitude of mind taken by different members. Mr. Edwards, Greek, said his mind was still open. Mr. Neville, physics, said he thought it would be far better to study much less Greek, and more English. He deplored the meagre knowledge of English which the students have. For some time then there was discussed the possibility of bread disappearing in four hours and leaving nothing but an ash. Mr. Neville stated that a friend of his who was a keen observer said it actually disappeared. Professor Ward contended that we should have evidence as to the character of the observation whether mice, ants, etc. were around. I said I should want to sit directly over it and watch it at close range. Mr. Neville admitted that we needed evidence of this kind and that his friend had not supplied him with the evidence as to the nature of his observations. Mr. Neville said the belief was that some influence in the nature of an "enzyme" emanated from the walls of the room.

At 9 o'clock the pleasant meeting broke up and adieux were said.

I accompanied Professor Marshall Ward to the laboratory to get a key and then he walked nearly home with me. Reached Mr. Seward's at 10:30. Mrs. Seward was still up. I had a soda and whiskey, then we retired. Mr. Seward not having yet returned from a formal dinner which he attended at St. John's College.

Wednesday Nov. 4, 1903.

Seward went down to an early meeting. I wrote in library until 9:45 and then walked to Botanical Hall to attend M. Ward's lecture to his advanced class in Fungi. There are eight in the class, four young men and four young women. He has lectured on Schizomycetes and Myxomycetes, began to-day Chytridinea but took up in history of study of fungi. 45 minutes. Then he began the Chytridinea, covered Olpidiaceae, Synchytriaceae. It seemed to me it was far too general and too indefinite and confused. The types he presented should be named and fairly well described. He illustrated and described several types, but did not name them, and did not separate one from the other and had some quite wrong, especially when he came to speak of Harpochytrium which I had just mentioned to him the night before speaking of the expanded disk which I found was in the middle lamella. He illustrated for his class a globose chytrid attached like Harpochytrium and remarked that "Professor Atkinson could probably tell him more than he knew himself about the chytrids"!

After the lecture I spent a little time in his room. Seward came in. We stepped into the grounds outside and I photographed each. I visited bookstore to get some pamphlets in Cambridge and just returned to Emanuel College in time to lunch with Mr. Seward. Mr. Seward had invited in to lunch with us Mr. Webster, one of the students, who is secretary of the College Rugby Union. I was to go alone in the afternoon to see a match between the Cambridge Varsity and the team of the Royal Naval College. Mr. Webster told me the formations, principal plays, scoring, etc., so that I could understand the game. We discussed to some extent both the Rugby and the American game. Mr. Webster gave me a copy of the rules.

Mr. Seward after lunch went with me far enough to show me the way to the field. I arrived just a few minutes before play began. Met the captain of Cambridge Varsity. Told him my wish to see the game and asked permission to work along the touch line to take some photographs. I also spoke to one of the ushers. I worked along the touch line in front of the grandstand, even stepped on the field close by where a goal was kicked and no one even said a word.

Royal Naval College team came on ground first, shirts and leggings with transverse blue and white stripes. All have legs bare below knee, but wear shoes. No padding, no masks or protection devices. Naval College took ball and faced sun. Kick off as in American game. Man who gets ball runs with it until he is tackled and downed, or he may of course kick back. Then comes the "scrum-

mage", or "scrum". Formation for scrummage.

Varsity

Royal

"scrum"

Five men on each side, all form, bend down and lock arms around bodies in solid mass. The two forms then crowd against each other. Fifteen on a side. When all are ready the halfback throws the ball in from side between the two formations of the "scrum" on the ground. No one can touch the ball with hands until it has been worked out of the scrum by the feet either at the side of the mass of feet or rear, the "scrummer" tries to work it out behind. An outsider can put one foot in the scrum to pull the ball out provided the other foot is not front of the ball. As soon as it is out of the "scrum" some one picks it up and runs for the goal. The opposite side try to tackle, and throw, or hold the ball, or to kick or knock it out of his hands. As one of the backs begins to run with it the opposite side are after him. He then passes the ball to the other half who is running along about 10-15 feet at the side and just a trifle in the rear so he will be on side and the ball not thrown forward. He then runs as far as he can and just as he is to be tackled he passes it to the next man in the row. It is part of

the game, of course, to keep a row so running that the ball can be passed along. The three quarter backs especially line up for this, and a full back may run up as play starts in order to be ready if he is wanted. No interference is allowed with any player except the one who has the ball. He can be tackled. No other one can be run against. When kicking the aim is to kick the ball in advance and across the touch line so as to get a scrummage again and thus another chance for the ball. When the ball goes in "touch" there may be a scrummage, or it may be thrown in over the heads or may be bounded in, in which case the thrower may try to catch the ball and run. When it is thrown in all stand in an "elongated" crowd at right angles to touch line with uplifted hands. The ball goes over their heads, some one catches it and is usually tackled immediately so that a scrummage is in order.

In a scrummage it sometimes takes 10-15 seconds to get the ball out of the mass of feet and legs and the "yoked" mass of humanity sways slowly sideways the feet working with the ball, and sometimes the mass revolves quarter way around. The appearance of the scrummage at first impresses one as if it were a great struggle, but it is more the tension of united arms and bodies and tension of leg muscles supporting the horizontal body, so no real struggle exists. The effort is first to get the ball when it is thrown in and then to work it out at the right time and place for the run.

Another way of working the ball along is for a crowd to gather

around it and work it along with their feet. Since no man has it no one can be tackled, but the other side can reach foot in and kick it out, or stand in the way I suppose.

A "try" is gained by touching ball down in goal. The kicking goal is same as ours, but the try counts three if goal is made, otherwise try counts nothing.

I made twenty-two exposures during first half. Sun low but fairly good. At close of first half Varsity had scored twice. After first score Royal Naval pushed them well for a time and came near scoring at one point. It was now too late to photograph more and I left field and walked to Mr. Seward's. Mr. Seward came in soon and we had tea. Mr. Seward had to leave to meet engagement. Mrs. Seward came in about 6:45, at 6:55 cab came and I departed for station taking Great Northern for Kings Cross Station and here to Grand Hotel.

Thursday Nov. 5, 1903.

Arose 5:30, took train at Euston Station at 7:10 for Oxford, changed at Bletchly to the miserable, slow, train from Cambridge to Oxford. Arrived at Oxford 9:30, walked up to Balliol College and then inquired for hotel. Student directed me to Randolph, a small place where they charge three prices for one, had a small breakfast here for 2/6, got warm, for it was dreadfully cold in the London fog, on the train, and at Oxford where the fog did not begin to clear

up until 11 A.M. Then I walked past several colleges to High street. Passed several more to Magdalen College and across from here is the Botanical Garden, and small Botanical Hall, library and herbarium. As I passed towards door I saw through south window Dr. Vines and two students working in laboratory. As I came to door one of the students opened it, and as I entered Dr. Vines came forward, extended his hand and greeted me, for I had sent him a telegram that I would call at Botanical Garden. He showed me the tryptophane test in quite a number of plants. Many plants have power by an enzyme of digesting peptone, breaking it up into leucithin, asparagin and tryptophane. The mushroom and the hyacinth bulb can digest fibrin to peptone and then this to the three above mentioned. Cut up and crush your plant in water, add a little thymol, or tolnol, or some antiseptic which will not inhibit the action of the ferments. Place in peptone and in the morning in some cases you can get the reaction. Should not be heated above about 40° C. To get reaction pour off some of the liquid, add a little acetic acid and then pour in a little chlorine water. A pink color is produced if tryptophane is present. Dr. Vines has kept some of these in the original bottles for 1-3 years and they now give the reaction. Good plan to have a number in stock, so that year to year can show reaction. Can filter to get clear, and Vries says by boiling and filtering gets rid of flocculent precipitate. See his paper in Annals of Botany for January, 1903 and June,

1903. Dr. Vines then took me into the elementary laboratory where I met Dr. Church who makes beautiful drawings of plants from measurements. He showed me a number of enlarged side view sections of drawings of flowers. The drawings are made as an architectural drawing would be made from measurements of the flower. After making the drawing the color is put in. The drawings are thus exact and look very fine. Dr. Vines then showed me through the small museum, arrangement morphological and economic. Then the library and herbarium are in a small building on the opposite side of the entrance to garden through arch. I photographed him as he stood at library door outside. We walked through greenhouses. On much the same plan as those at Cambridge but smaller and fewer plants, but still a fairly good representative lot. Hallway with lianas, patterned after Cambridge. Garden three or four acres, fairly good for such a small one. Then we visited several colleges. Christ College, I think a larger one. We went in the chapel and in the combination room, where Dr. Vines not having his gown had to pay two pence.

Many of the buildings were constructed of a soft stone near Oxford and are badly crumbled giving appearance of great age, i.e., appear very much older than they really are. Parts of some buildings have crumbled so badly they have been restored by patching with plaster work.

Now 1 o'clock and Dr. Vines took me to lunch in the Combination

room at Magdalen College which is the college he is connected with. After lunch we took train on Great Western Railway for the Paddington Station in London. Reached London at 4:15, half an hour late, and the train left half an hour late at Oxford.

Dr. Vines is a fine and handsome looking man, of good build, about five feet eight, fleshy but not real stout, well developed double chin, small thin mustache, thin hair parted in middle and hair brown, tendency to baldness over front and top of head. He is very sociable, pleasant when he talks, often shuts now one eye and then the other, but usually the left eye, for a time. Abhors athletics, is a supporter of Chamberlain's fiscal revision ideas. Vines invited me to take cab with him to his club on St. James street, From here we walked a short distance to the Hall (Burroughs?) on Piccadilly street where Linnean Society has its rooms. He invited me to attend meeting here at 8 P.M. From here I walked to Grand Hotel. Had lunch at Aerated Bread Co's depot, then walked to Monico's for a small glass of Munich, and from here to Linnean. They were just beginning. The paper which interested me most was by Dr. Weiss of Owens College, Manchester, on a fossil Mycorrhiza. A rhizome perhaps with structure and fungus similar to that of a mycorrhiza in *Psilotum*. He showed lantern slides of sections of both. After meeting I saw the slides of the fossil mycorrhiza under microscope. They are fine. I saw at meeting Farmer, Moore, Weiss, Wright, Scott, P. Groom, Vines, Boodle, Oliver, and spoke after

meeting to Weiss, Scott, Vines, Oliver and Wright. Oliver asked me to go to club, where I met Farmer and Moore, talked over meeting, also Paris and Paris botanists. At 11 o'clock adieux and I wended my way to hotel, having said adieu to Vines before going to club.

Friday Nov. 6, 1903.

Rose at 10 A.M. Spent day mostly in writing and not feeling very well.

I learned from Vines that at Oxford in some of the colleges a student can enter the college with no Latin and Greek. They study these subjects just a little in college to satisfy "sponsors", and take the "pass" degree for B.A., thus having very little Latin and Greek.

Seward is a fine man, about five feet six, inclined to stoutness, small mustache, rather thin, light brown hair, forehead a little more than medium height and breadth, jaws square, nose medium small and slight pug, with light blue pleasant eyes. He is doing a great deal of research work and is a very efficient Fellow and tutor in Emanuel College. Their home is embellished with many water color sketches which Mrs. Seward has made at places they visit. She showed me one made one the "Inlet" at Ithaca and one of part of Stockholm which I was familiar with. Some of her sketches are also in Mr. Seward's Emanuel Office and work rooms. See page 221.

Professor Marshall Ward is a type, a man with a strong and

rather harsh voice, and a man of a strong will and purpose. About five feet seven, thin and spare, with angular bony features, jet black hair just becoming tinged with gray; jet black mustache, heavy, stiff and of the waterfall type. Penetrating, serious eyes, and almost a scowl on his face. It is due to his energy, wisdom in selecting his co-workers, his stimulus to research that has built up botanical science at Cambridge to the point where it now is.

Saturday Nov. 7, 1903.

Take cab from Grand Hotel. Pay balance on S. S. ticket (55 pounds) at 3 Cockspur street. Buy second class ticket for Southampton for seven shillings, first class is eleven shillings. Take train at Waterloo Station. On board New York and sail at 12 noon. Find both trunks. Have letter from Mr. J. B. Willets Liverpool (Southport) giving card of introduction to Mr. H. B. Roper, manager of Leyland Line. He is coming on New York. (OLD man)

Sail to Cherbourg, France for passengers and mail. Leave Cherbourg at 5:30 P.M. At lunch I met at table Mr. A. J. Cleveland of Rutherford, N. J. Mr. Roper and Cleveland both fine men. Fine day for sail.

Sunday Nov. 8, 1903.

Weather fine, sea smooth. By 12 noon 346 miles. I invite Mr. Roper to come over to our table. I sit at end, Mr. Cleveland

at my left and Mr. Roper at my right. Rev. Mr. Lanehan at Mr. Cleveland's left.

Monday Nov. 10, 1903.

Sea getting rougher. Was sick in morning, so spent nearly all day in deck chairs where I was comfortable. Many others sick. Head wind, also at night. 448 miles.

Tuesday Nov. 11, 1903.

Very rough. Take much water on deck all day. Bow plunges into swells and ships water which washes for some time along promenade deck under our chairs. Still feel unwell when sitting up or standing. Take meals on deck. Head wind heavy. 437 miles.

Wednesday Nov. 12, 1903.

Sea not so high in afternoon, but heavy all night and caused us to slow down some. 413 miles.

Thursday Nov. 13, 1903.

Fine morning, afternoon rain. No sea in morning. Feel well and up most of day. Toward evening sea came up again with swells. Boat rocks and pitches some. Slightly uncomfortable during evening chiefly because digestion is not good. Fog afternoon and early evening. 470 miles.

Friday Nov. 14, 1903

Fine morning, a little roll and pitch. Fairly cool but makes air bracing, but as morning passes gets colder and chilly. 458 miles.

Mr. H. B. Roper, manager Leyland Line, 24 Trafalgar Road, Berkdale, Southport, England.

Mr. A. J. Cleveland, Rutherford, N. J., has home of three acres, heavily planted to trees, and wishes to cut out some adjoining in front three and one-half blocks, no buildings. Trees around on street. Also has very near thirty-five acres farming land which he contemplates dividing into building lots. Could sell it now for \$1000.00 per acre. Thinks of buying about eighteen acres adjoining this on the far side from town.

Interested in various companies. One a leather concern in England which he desires to sell.

Interested in new process for manufacturing white lead, which will greatly shorten time, and in which the white lead can be made with practically no cost, since the byproducts will pay for operations. Mr. Mills, a chemist in England (brother of Professor Mills, chemist at Glasgow University) has discovered a new solvent for the which shortens the process. Mr. Cleveland has had him employed for two years experimenting.

Banks of New York (chemist) has partly gone over work and par-

tially verifies Mills' results, but has not yet determined if the acid can be used over again, i.e., if the acid once used is the same and will have the same solvent action.

Mr. Cleveland has offered this to a company, has practically sold process to them with guarantee that it will lessen cost of white lead \$20.00 per ton. Process is patented in name of man or firm who proposes to buy it.

Old method of making white lead coils of sheet lead placed in cups, which have a well at bottom. In this well is placed acetic acid. Then many of them are piled up and covered with horse manure or spent tan bark which heats and works on lead and slowly dissolves it. In three or five months this is uncovered, dissolved lead removed and set up again. Process very slow and expensive, but is best process now known. There are other processes which are rapid, but white lead manufactured by them inferior.

Also interested in process to make fine cutting steel from iron which has a large percentage of phosphorus in it. His chemist has discovered process. Cleveland owns an iron mine which up to this time is of no value because there is such a large percentage of phosphorus in it.

Story.

Two sailors shipwrecked (all others lost). After clinging to spars for several days think they must die. Decide to pray. After some parley Jack prays, "O Lord we are in a bad fix. If you do not help us we believe we are going to die. We have never before asked you for anything. We are not like those drivelling sinners who are always asking something of you. Save us this time Lord and we will never ask you for anything else as long as we live!"

Three sailors,- shipwrecked. Jack tries to get the others to parly, not succeeding says "well lets'take up a collection for we ought to do something religious."

Pension agent, lawyers.

Old soldier. List of diseases and Firm's scrawl

I have etc. - - - except the last one, but of that's "bloody flux", I've had that too.

Story by Mr. Griffin Am.Consul at Limogen, France.

At restaurant in Paris. Newly married couple at next table.

George. Well dear, what will you have ?

Mary. O dear, you choose.

George. O no, my love, you choose.

Mary. No George dear, you know I'll take anything you wish.

George. Well darling, "beefsteak" is the only thing I know in French.

Mary. O dear George, you know we have only been married two days and we had beefsteak twice yesterday. Let's get something

else.

Mr. Griffin(Am. consul). Will you have somezing else ? Maybe I can help you.

Mary. O do you speak English ?

Griffin. I speak it a lèttle.

Mary. O please order the most french thing on the list!

Griffin. "Garcon ici. Portez vous pour Madam et Monsieur un filet de mignons a la Bordelaise."

Garcon. "Wie, wie Monsieur. Wie, wie, wie, wie."

Brings it. Mary and George eat with great relish.

Mary. Oh, this is lovely, isn't it George ? It's just delicious. It's the best we ever have had. How kind of this gentleman.

Griffin. Do you like ze horse ?

Mary. Oh Oh Oh!!!!!!!!!!!!!!WA a!!!!!! Horse. dreadful! I can't bear it. It's awful stuff. I can't eat a bit more.

Griffin. Would you like ze snail ?

Mary. Oh no. Come George dear let's go.

Seward's office Emanuel College. Large room 20 x 25 with open fire. Two rooms open off from this, one bedroom, other for private reception room if wanted, and for lunch room.

Large office being furnished large rug, large center table, 6 x 8, sofa, lounging chairs, portraits on walls. All furnishings by the fellow and tutor himself. As Fellow he is entitled to dinner every day, can have lunch by paying for it. Seward takes dinner about three times per week. He was formerly Fellow of St. Johns College, but was asked to accept position as fellow and tutor in Emanuel College where he has been about three years. As Fellow he gets 500 ? pounds per year but as University lecturer he gets only 100.

Office hours at Emanuel College from 5-7 every day. Has general oversight of the science men in Emanuel College much as our dean has charge of our students. Communicates with parents when necessary, looks over records of various tutors to see what the standing of students is and if they are falling behind he talks with them about it. In addition, as tutor he gives some talks or lectures, a few, to help them in their studies in geology, biology and botany. No tutoring by him in physics and chemistry.

The Master in a college with the fellows constitute the governing board (except in the larger colleges) and new Fellows are elected by this body, and other business transacted by them.

There are about sixteen colleges in the University besides the

University Building proper. Each college independent. Each determines its own entrance requirements, so that a student may be able to enter one college when he might not be able to meet the requirements of another. All degrees are given by the University, so that while the university does not impose conditions for entrance to the colleges, it does impose the conditions for the degrees. Sets the examinations.

Two grades for examinations.

1. Students taking honors must complete their college course in three years.

Once having taken examinations for honors and having failed they cannot (never) take another.

If they fail to secure honors in the examination, but examiners think they are worthy they may on this examination be given the ordinary degree.

If student thus registers for honorary course and tutors see that there is little likelihood of his being able to make it they advise him to take longer course for ordinary degree.

2. Students not standing for honors may and usually do take longer time, as students not so well prepared.

For cases see above.

Growth and history of University.

Monk period. Monks resident at Cambridge. Gave some instruction

- a. This led without any organization to other monks coming here to receive instruction.
- b. This then necessitated houses where they could live.
- c. So certain houses.
- d. In time ~~Peterhouse~~ and University organized. These houses were living houses for students, ex., Peterhouse
- e. Later these houses developed themselves into colleges, so different colleges grew up, and the University was composed of these, representing undergraduate work and the graduate work was done in University buildings proper. Peterhouse may be called either Peterhouse or Peterhouse College.
- f. Later new colleges were organized, of the present ones
 - a. some were originally only living houses.
 - b. some (the ^{more} recent) were organized at once as colleges.

All are now colleges.

Science. For many years there was some science work but work not encouraged, nor very efficient, A medical school. Some zoology and geology, a small attempt in botany. Dr. (Sir Michel) Foster in the medical school urged the improvement of science instruction and through his influence for thirty years the science department grew, though he met with great opposition from the classical interests.

It is generally conceded that to Dr. Foster's work and influence the great scientific development at Cambridge was made possible. For example, Professor Marshall Ward says he believes that it made possible the election of a man of his type instead of a purely systematist. Dr. Foster struggled under great difficulties for a number of years. At first gave lectures in rooms where dissections were made, students sitting at the work tables. (Would prick each other with dissecting needles and Foster would burst out a suppressed laugh holding mouth with hand).

Cambridge Described and Illustrated --- Atkinson & Clark.

Cambridge Historical and Picturesque --- J. W. Clark.

Governing Board of College.

Made up of the "Master" and the Fellows, unless college is large as in case of Trinity, where a council consisting of the Master and certain ones elected by the whole make the Governing Board.

Called Governing Board. Have a "Bursar". ^{G.B.} attends to all financial and other matters. Governing Board of the University called Council. Consists of (chancellor?) Vice chancellor (elected every year), four professors, (heads of departments), four Masters of Colleges, and eight M.A.'s, who may be Fellows in the colleges, or M.A.'s resident in Cambridge and not on teaching force.

Separate Finance Committee, i.e., of persons not on Council but from professors, masters or resident M.A.'s in Cambridge, having

some connection usually with the University.

Senate. Consists of all M.A.'s resident in Cambridge whether connected with teaching or administration force, or not. This is the final court which passes on all "graces", on policies, etc.