

Our warrior no longer wears mail and carries the cumbrous shield, spear, and battle ax, but we arm him with the Krag-Jorgensen and he strikes his blow from as far away as he can see his man.

Who will set the limits to our advance? As our knowledge becomes more exact, the application of our analysis will widen till it embraces man and nature in all their essence and relations.

WOOLLEN'S GARDEN OF BIRDS AND BOTANY. BY W. W. WOOLLEN.

Woollen's Garden of Birds and Botany is situated due northeast from the city of Indianapolis, on the south bank of Fall Creek, and is nine miles from the Indiana Soldiers' Monument, the center of the city, and four and a half miles from its corporate limit. It consists of forty-four acres of land, being four acres larger than Shaw's Garden, near the city of St. Louis. About twenty-nine acres of the garden is woodland, and the remaining fifteen acres are in cultivation.

It has a river front of one-third of a mile, and this is covered with timber and vines. The cultivated portion, most of which is rich bottom land, lies between the river front and the woodland. This is divided by strips of timber into three irregular parts and susceptible of being made very useful and attractive. In it, with little expense, two lagoons can easily be made for the growing of water plants. The river front can be admirably adapted to the same use.

The timber land consists of three hills, extending from the south to the north, the projections of which gracefully slope to the cultivated land, forming two perfect amphitheatres overlooking the cultivated land. These amphitheatres are exceedingly beautiful, the line of timber on them coming down to the very edge of the cultivated land and encircling it on the north with curved lines as true as could be drawn by a landscape gardener.

The hills are from one hundred to one hundred and twenty-five feet high, and divided by spring rivulets, which have rocky bottoms and beautiful meanderings. On one of these hills, in the very depths of the forest, is an immense boulder, and on another a very considerable mound, which tradition says is the grave of an Indian chief. None of the hillsides are precipitous, and because of this, every inch of their surface is adapted to

the growing of something, and in fact is covered with wild plants. On the projection of one of these hills are to be found more hepaticas and trilliums than at any other place in this section of the country, and on one of the hillsides about three-fourths of an acre is covered like a meadow with celandine poppies.

The native wild plants have never been disturbed in this piece of forest, it having never been pastured, and here I have found growing a greater variety of trees, shrubs, vines, herbaceous plants and fungi than in any other place that I have seen in all the tramping that I have done, and I have been a tramp all of my life. No amount of money or labor that could be expended by man could make such a garden as has here already been created by God. Truly, it has been written: "The heavens declare the glory of God, and the firmament showeth His handiwork." "His works are done in truth;" "the earth is full of the goodness of the Lord."

The primary idea I have in mind is to preserve these "wondrous works," just as they are, for all time to come. My second thought is that to this garden shall be brought, planted and preserved every tree, shrub, vine and plant not already growing in it, which now grows, or has heretofore grown, in Indiana; in other words, that the garden shall represent the botany of Indiana.

Of the birds it is written, "and not one of them is forgotten before God." Then, why not we have considerate care for them? Again, it is written: "Yea, the sparrow hath found an house, and the swallow a nest for herself, where she may lay her young." This embodies my thought as to what the garden is to be for the birds. That is, that it is to be their home, and a place where they can have their nests and raise their young without molestation. The garden is peculiarly favorable for both land and water fowls, and every effort will be made to make it a favorable stopping and breeding place for them. In doing this, special attention will be given to the planting of trees, shrubs and vines that produce fruits, berries and nuts, so that they, the squirrels and the like, may have plenty of food.

My hope is that provision may be made for a library and appliances for the study of natural history, in connection with the garden, and that the whole may be in charge of a curator.

I was born in the city of Indianapolis; what little college education I have was obtained at Butler College, and the Indiana Academy of Science

has honored me with membership in it. And so I have it in mind to vest the title to the garden in the city of Indianapolis, and when I have done with it, to place it under the control of the Superintendent of the Schools of Indianapolis, the President of Butler College and the President of the Indiana Academy of Science for the joint benefit and use of the bodies represented by them. In doing this, I expect to have the hearty support of these bodies, and the labor and pleasure of developing the garden shared by them.

At my time of life and with my limited means, I can not hope to do more than to get the garden fairly under headway. I have, however, an abiding faith that ultimately it will become "a beautiful book of living nature."

PLANS FOR THE NEW BUILDINGS OF THE BIOLOGICAL STATION.

BY CARL H. EIGENMANN.

The Indiana University Biological Station, established on Turkey Lake in 1895, will be moved to Eagle Lake (Winona Lake), eighteen miles from its present location. Buildings will be erected by the Winona Assembly and Summer School Association after the plans 1, 2, 3 and 4.

Plan 1. Lower floor of the zoological building.

- (a) Director's office.
- (b) Private laboratory.
- (c) Private laboratory. Assistant in charge of the building.
- (d) Private laboratory. Dr. Dennis.
- (e) Photographic room.
- (f) Assistants' room.
- (g) Lake survey laboratory.
- (h) Dark room under the stairs.

Plan 2. Second floor of the zoological building.

- (i) General zoological laboratory.
- (j) Dr. Slonaker's private laboratory.