and extensive although its highest part is far below timber-line. The expedition moved across the lake and passed Coeur d'Alene City, making a short stop on the north bank of the Spokane River, then northward, across a stretch of level prairie and the Northern Pacific Railroad, to the foot of a group of mountains whose highest peak is called Mt. Carlton. Sucker, Tesemini, and Fish Lakes were visited and some ascents were made.

In the latter part of July the camp was carried to the southwestern part of Lake Pend d'Oreille and located on the ranch of Mr. J. Lieberg, a miner and botanical collector who was of material assistance to the expedition in the excursions with packhorses made from this point to the mountains near the headwaters of the North Fork of the Coeur d'Alene River and to the top of Packsaddle Mountain on the eastern shore of the lake. The work here was carried on under great difficulties. The mountain slopes are very irregular, traversed by numerous cross cañons and covered with forests of spruce, fir, and pines, which have been in many cases invaded by fires throwing to the ground thousands of trees with the trunks lying across at every conceivable angle, forming extensive breastworks, which on the lower slopes are thickly grown with Ceanothus and higher with Menziesia so thickly as to form a nearly solid wall. A passage through such places was effected only by the liberal use of the axe — cutting small trees too near each other to permit the pack-loads to pass and logs too high to be taken by the pack animals. At times an animal would attempt to pass between rocks or trees narrower than the load, or loose its footing and roll to the bottom of the cañon below, necessitating a halt and rearrangement of loads. Such occurrences wrought many accidents to apparatus, material, and temper, and oftentimes made an advance of two or three miles a very creditable day's work.

Vast forest fires were raging at this time over northern Idaho, adjoining parts of Washington and Montana; all of the valleys, cañons, and lower levels were filled with a layer of smoke so that from the double crest of Packsaddle Mountain, the tops of the neighboring peaks, as far as the eye could reach, appeared as islands in this sea of pitchy fog. These fires are of widespread prevalence and of yearly occurrence, destroying thousands of acres of forest annually and threatening, in conjunction with the extensive snow slides that descend from the higher slopes, an almost entire destruction of the timber, forestalling, to some extent, the piratical timber-thieves that infest its borders.

The final work of the season was done from the northern end of the lake from near Hope, Idaho, and here at the end of the season the camp was broken and the corps returned eastward by rail.

Briefly summarized, the results of the expedition are as follows: The basins of Lakes Coeur d'Alene and Pend d'Oreille and of the Clearwater and Palouse rivers were explored; the botanically unknown area in Central Idaho now being limited on the south by the Snake River basin, on the west by the Snake River and the basin explored. About 25,000 specimens of dried plants were collected, representing nearly 1,000 species, many of them undescribed forms. Valuable facts concerning general distribution of plants were obtained, since the area explored is one where the Rocky Mountain flora meets and intermingles with the Pacific coast flora in a very interesting manner, while the opportunity afforded by numerous mountain slopes for the furthering of some problems of vertical distribution was not neglected.

BIRDS THAT SING IN THE NIGHT.

BY DR. MORRIS GIBBS, KALAMAZOO, MICH.

WE have no regular night-singers in Michigan, and, so far as I am able to learn, America does not equal the Old World nightingale, although we have diurnal songsters which excel. The famous English naturalist, Gilbert White, records three species of birds which sing at night in the British Isles. They are the reed-sparrow, which sings among the reeds and willows, the woodlark, singing in mid-air, and the nightingale, as Milton describes it,—

"In shadiest covert hid."

There are several species of owls which roll forth or screech out their notes at night, and also numerous shore-birds and waterfowl that issue their varied calls, and, especially these latter, are to be heard during the season of migration, as most birds are partial to night travel spring and autumn. Then, too, our well-known whip-poor-will confines his not unmusical, but monotonous jargon to the hours of darkness, while the scream of the night-hawk breaks on the ear between the setting and rising of the sun. But these birds are not, strictly speaking, songsters, although their notes undoubtedly fill their requirements as to harmony and expression.

The plain, domestic little chipping sparrow sometimes favors us with its simple reverberating chatter in the darkest of nights. The notes hardly deserve the name of song, but heard issuing from the surrounding gloom, the simple refrain commands our attention from its oddity at the unusual hour. The wood-peewee not rarely quavers forth its plaintive effort, sounding in the deep shade like a wail from a departed spirit. This favorite singer is a remarkably early riser, as he is also late in going to rest, and I have sometimes thought that his musical efforts at night were the result of an error on his part — an idea strengthened by the fact that the notes are rarely heard more than once during the night, and moreover the song is only occasional.

Two others, which are sometimes heard to burst forth in ecstatic melody, are the hermit and Swainson's thrushes. They are transients in my locality, but nest to the north of us. If I could describe the songs of birds, so that others could appreciate them as I do, I would feel that a partial acknowledgment had been made to the divine melody issuing from these birds' throats.

We often hear that the best singers are the ones of plainest plumages, but this is assuredly not so in all instances. If one is permitted to listen to the sweet song of the scarlet tanager in the night, it will be acknowledged that the brilliant coat of the songster does not compare in point of excellence to the owner's refrain.

These birds are the only species which sing during darkness, in Michigan, that I have met with, and not one of them is a regular night-songster.

NOTES AND NEWS.

THE College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about $180, will be made on July 14, 1893, providing that an essay deemed by the committee of award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the secretary of the college on or before May 1, 1893. The Alvarenga Prize for 1892 has been awarded to Dr. R. H. L. Bibb of Saltillo, Mexico, for his essay, entitled "Observations on the Nature of Leprosy."

— W. J. Waggener, Professor of Natural Philosophy, State University of Colorado, Boulder, writes: "During the present year, I have tried the experiment of making diagrams and pictures for projection by the magic and the solar lantern by printing the same with the ordinary printing press and engraved blocks, on sheets of transparent gelatine. The results were gratifying even beyond the expectations which I had long entertained for the process. It is safe to say that by this means excellent lantern-slides from diagrams and engravings of nearly if not quite all kinds can be made and multiplied as rapidly and almost as cheaply as paper prints. Having assured myself of the usefulness and the novelty of the process, I wish that its use may bring the unlimited benefits and pleasures of projected pictures to many who cannot afford the more expensive ones now in use. Especially I hope that all schools may soon be able to make use of this means of instruction. No patent will be asked for this process, but all are invited to make free use of it."

— Macmillan & Co. announce that the recently completed edition of Foster's "Text-Book of Physiology," in four parts, is to be supplemented by the issue of an appendix on "The Chemical Basis of the Animal Body," by A. Sheridan Lea, Sc.D., F.R.S. Dr. Lea is lecturer on physiology to the University of Cambridge, England.