

## MOUNTAIN FAUNA.

MR. PRESIDENT, LADIES AND GENTLEMEN,—

The title which our Secretary has given, "Mountain Fauna," embraces a very large field, and in the present paper I have neither the knowledge nor the space to do more than touch on a few points of this deeply interesting subject; but if these few observations cause anyone to take a deeper interest in this study, I shall feel amply repaid.

We notice as we ascend into the higher altitude, that the flora and fauna change in their character completely. In some instances this change is gradual; in others there is a distinct line of demarkation. I notice the latter in a very marked degree in the Vermillion Pass.

In ascending the mountain side, the Balsam gradually decreased in size, and at about 7,000 feet entirely disappeared. Immediately above this was a belt of Lyall's Larch or Tamarack, some of the trees attaining a diameter of over two feet. Above this belt of some 300 or 400 feet all timber disappeared.

Just at timber line I observed several specimens of *Oeneis*; I think it was *chryxus*, but as none were captured the species could not be determined.

At an elevation of 8,000 to 10,000 feet we observed *Oeneis norna*, fairly common. The color of this insect makes it very difficult to see, as the under side of the wing has the appearance of a rock covered with lichen, and it has the peculiar habit of dropping on its side as soon as it lights.

At about the same elevation we occasionally see that very rare and showy tiger-moth, *Neoarctia yarrowi*, variety *remissa*. I saw nine or ten of these moths last year, two of which I captured. I have never seen it below 8,500 feet.

Some of our common butterflies are found at quite high elevations, the swallow-tails, *Papillio rutulus*, *eurymedon* and *zolicaon*, also the whites, *Pontia occidentalis*, *napi* and *rapae*, the orange-tips, the painted lady, the tortoise-shells, and the sulphurs, we find as high as 9,000 feet.

In our mountain valleys, at an altitude of 4,000 to 7,000 feet, we find a great variety of insect life. The wood-boring beetles and horn-tail flies are very noticeable. In fact the mountains are the happy hunting ground for a lover of nature.

We move up from the temperate zone and in a few hours are in the arctic, with all the vegetable, insect and animal life we would find in the Arctic Circle.

This heritage, I regret to say, is not properly appreciated by the people who live amongst these mountains. There is too great a tendency to value everything by the standard of dollars and cents.

When seated on some rocky spur above the timber-line we study and survey nature in her primitive grandeur and fail to see the work of man anywhere; then for a short time we lose sight of the almighty dollar and feel that it is good to be alive.

Before closing I should like to call the attention of this meeting to the advisability of encouraging the study of systematic Entomology which appears in this Province to be on the decrease. Even our own Society which a few years ago was composed almost entirely of systematic men has given place largely to economic men. It is well for us to remember that the foundation of Entomology is systematic and without this work the economic man is quite unable to cope with our insect pests. Indeed, if you ask the latter a question off hand he can seldom answer you until he has referred to the work of some man who has taken up this study purely for the love of it.

The systematic Entomologist has been treated more or less in all ages as a joke, and even some of our leading economic Entomologists in Canada today refer to him as an "amiable old gentleman who runs around with a net and a bottle catching butterflies." Remarks like this are very humorous and will always cause a laugh in a mixed audience, but this "amiable old gentleman" has been working away catching butterflies, and incidentally many other insects, for many generations, without any pecuniary reward, and the result of his labours is Entomology as we know it today.

Any of us who are profiting by his researches would be showing very poor taste in trying to belittle his work. If we had men like this scattered over our Province at the present time we should have no difficulty in determining the distribution of any insect.

The late Dr. Fletcher thoroughly appreciated this fact, and gave all possible encouragement to young entomologists and collectors. It is only now, after several years, without his kind counsel and assistance that we appreciate the irreparable loss we have sustained by his untimely death.

A. H. BUSH.