THE ENTOMOLOGIST.

What Specimens Can Be Found on Rossland's Hills.

RARE MOTHS AND BUTTERFLIES

The Cares and Troubles of a Collector—Description of Day Flies, Dawn Flies and Night Flies that Can Be Captured Hereabouts—An Interesting Study.

With its short summer, long winter, hardly enough of either spring or autumn to call seasons, the ordinary Rosslander would doubt very much whether the hills and dales surrounding that wonderful mineral city contained sufficient inducement to the entomologist to lure him from foreign parts, or even from the Pacific coast, for the express purpose and with the determination of invading the passes and scaling the rugged heights of its mountains to their very summit, in search of specimens for his cabinet. Yet so it is, and that person would be in great error who for one moment entertained such a doubt. But few persons know anything about the joys and troubles of collecting butterifles and moths. Almost everyone has seen children chasing the beautiful winged creatures, and after capturing one or more, piercing their bodies with pins and sticking the wiggling beauties about the house. Or some hopeful touched by the magic wand of science, may go a step further, and procuring an outfit from a dealer, begin what he fondly imagines to be a veritable collection. He spreads and dries his butterflies (or moths as the case may be) and stows them away in cigar boxes with some chemical as a preservative. He is a collector, and has a collection. But between this juvenile effort, which deserves every possible encouragement and commendation, and a genuine scientific collection, there is a wonderfully great difference.

It will doubtless surprise many to hear that thousands of people make a living by collecting insects. These rank from the men who have become celebrated for their work and discoveries in the field, to the natives who are trained by them, and by missionaries, to catch and preserve the flitting children of the sunshine. A few of the professional collectors, who have become world renowned among the scientists are Bates, who hunted along the Amazon and who wrote, "The Study of Butterflies, creatures selected as the types of airiness and frivolity, instead of being despised, will some day be valued as one of the most imported branches of biological science." The Marquis Antinori, in Abyssinia; Stanley, Baron Wissmann and Professor Pogge, in the Dark Continent, McClay, in Australia; and also the late Henry Edwards, the actor, whose collection was acquired by the Museum of Natural History in New York; Doherty and Ribbee, in New Guinea; and Captain Yankowsky in Western China and Thibet. Besides these, as hinted, are the missionaries. Sent to the furthest ends of the earth, they are nearly always commissioned to collect insects by some of the great museums, dealers, or private collectors. These in turn, besides converting the ignorant natives, train them to the work, and thus are taken insects which inhabit jungles impenetrable to any but these native hunters. On the north American continent, north of Mexico, which latter country is counted in the tropical belt, much valuable collecting has been done by Morrison in the south and southwestern states; Bruce in Colorado; Wright in California; Cunningham in Oregon; Jacob Doll in Arizona; Captain Giddes, Bean, Danby and C. de B. Green in British Columbia; Lieutenant Schwatka in Alaska; Professor James Fletcher in Ontario; and Corporal Israel of the Greely expedition, in the frigid locality of Lady Franklin bay.

Many and varied have been the experiences which they have encountered; extremely perilous have been their adventures on hundreds of occasions. In the cause of science they have been indefatigable, working day and night. They have encountered the wild men in the jungle, the wild beasts of the forests, the fevers of the swamps and the snow storms of the mountain tops, to say nothing of fatigue, privation, hunger, thirst, and the heat and glare of tropical suns. On one occasion, Jacob Doll, hunting in the Rocky mountains with Indian guides, saw an odd-looking insect, sail over a cliff. Lying prone along the edge of a precipice thousands of feet deep he saw the butterfly feeding upon flowers that blossomed a hundred feet below. A rope was quickly tied about his waist and the Indians lowered him into the depths until he captured the prize. This insect is the only one of its kind ever found and is now in the famous collection made by the late B. Neumoegen, with whom the writer was personally acquainted for many years.

Before describing the various genera represented by species to be found in the mountains around to Rossland and in Trail Creek district of British Columbia, it may be as well to interject a few words as to the methods employed in collecting. It is not alone by means of the net that butterflies and moths are captured, for they must be sought for by night as well as day. Through the darkness they are attracted by light set to lure them. Since the advent of electricity in Rossland many fine and rare species have been discovered to inhabit this part of the Rockies, and hundreds of specimens taken of species which were not hitherto known to be part of the fauna of the Rossland hills. Many of the most beautiful creatures can be had by trapping and baiting only. By baiting is meant the smearing of trees with material having powerful odors, to which the moths come in hundreds. A most curious fact in this connection is that while in the temperate zone the bait is made of sweet and sour, or sweet and bitter mixtures, such as rum, beer, and molasses; in the tropics the most gorgeous insects are attracted by putrescent fish, soiled clothing soaked with perspiration, and such ill smelling material. Surrounded as they are by aburdant and rich vegitation, the sweet smells are common and unattractive. Scientific training will best equip the hunter for his work, for the habits of individual species must be studied if specimens are to be obtained. Several butterflies found in and near Rossland can only be captured by such study.

Again, many species have certain hours of flight only, and cannot be seen at any other time, so that to make a complete collection of lepidoperous insects, that belong to Rossland and its vicinity, necessitates working or collecting at all hours of the night; hence it is, that collectors bait the trees about dusk, and examine their traps during the dark hours. But it is not alone the perfect insect, the imago, that the hunter must seek. He must also capture the caterpillars, and by supplying them with food, being careful, of course, to give them their proper food plant, raise them until they reach the age of transformation from the larval or caterpillar state to the imago or perfect state, with the wings unmarred by flight. Such insects are, as valued by the scientific collector of butterflies and moths, as proof coins are by the numismatist, and in certain instances are as valuable as the highest priced coin. There are many places in the hills surrounding this lovely city of Rossland, and that, too, without going far from its limits, where at any time during the warmer months, thousands of caterpillars may be found feeding on their respective food plants. In this way often the ova, or eggs, of very large species, which would suffer in transit if shipped as butterflies or moths are forwarded to remote parts of this continent by collectors who have a wide or large correspondence, and by means of this contact with the outside world, so to speak, many insects local here, though perhaps common locally, are exchanged for a species found in remote parts, and which the local collector could hardly hope to capture himself without great expense. This is enough to show that the collector of butterflies and moths has not a sinecure; that the gathering of a collection is not a mere pastime. To do either the collector must have an enthusiastic love of this specialty of science exceeded by no other. Butterflies belong to an order of insects called lepidoptera, which means "scaly wings." Science sub-divides it into three groups, namely:

Butterflies, or "day flies"—Rhopalocera.
Hawk-moths, or "dawn flies," and
Noctuas, or "night flies."

The two latter groups being commonly called moths—Heterocera. The line of distinction is somewhat arbitrarily drawn, although the most prominent features or points are, that the butterflies have threadlike antennae (commonly called feelers) knobbed or clubbed at their ends; their wings are erect when at rest, except in the Hesperidae, which, when at rest, have the upper wings erect, the hind wings being horizontally flattened out. This group, considered the lowest in structure of the day flies, shows evidence of distant relationship to the Noctuas. They fly by day only.

The Hawk-moths (Sphinges) or Sphinx moths have the (feelers) antennae thickened in the middle, tapering at the end and frequently hooked at the end or tip; the wings are narrow in proportion to their length, and are confined together by a bristle or bunch of stiff hairs. When at rest the wings are more or less inclined like a roof, the upper ones covering the lower wings. A feew fly by day, but the majority in the morning and evening twilight. The Moths have the antennae neither knobbed nor thickened in the middle. They taper from the base, where they join the head, to the extremity, and are either naked, like a hair or bristle or are feathered on each side; as a rule the hair-like antennae denotes that the moth is a female, and the feathered or plumose antennae denotes it to be a male. The wings are confined together by bristles and hooks, and when at rest the first pair (nearest the head) covers the hind wings and are more or less sloping. They fly mostly by night. To now give a more specific description of the various species known by the writer to inhabit the hills and woods of Rossland it is necessary to state, that having had but little time and few opportunities of hunting in this district it by no means follows that the following list is complete. Far from it. The fact is, Rossland is such a large field to the true "Ento" that it will take years to find out what really does occur inor inhabit the mountains and valleys of this district. Of course it is absolutely necessary before trying to form a collection to provide the necessary apparatus for collecting, preserving and storing the winged beauties as soon as convenient after they are captured. Then again, to breed successfully, one needs cages in which to feed the caterpillars, or for compelling the female insect to deposit her eggs (ova) various implements are essential to success also, and next week we will mention what apparatus is necessary for those intending to take up this lovely and exhilerating study of entomology, the great fascination of which is—that the more we learn of its mysteries the less we seem to know, and the more eager are we to still learn.

RANCORA.

VALE! NARROW GAUGE CARS.

They Will Be Seen No More in Rossland After Thursday.

F. W. Peters, district freight agent of the Canadian Pacific railway, was in the city yesterday from Nelson, and left on the evening train for home. In speaking of the standardizing of the Columbia & Western railway, between this city and Trail, he said: "On Thursday of this week, unless the unexpected happens, the narrow gauge cars and locomotives will all be taken to Trail and will be seen no more in Rossland. Even that superb passenger coach which was formerly used by Brigham Young, the ruler of the Mormons as his private car, when he was in the flesh, will be relegated to disuse for the time being at least. The next cars that will be seen will be of the broad gauge type, and the first broad gauge train will probably be the passenger that will arrive shortly before midnight on Thursday. The completion of this broad gauge will be a great convenience to the people of Rossland, as it will avoid the breaking of bulk at Trail, where goods consigned to this city had to be taken off broad gauge cars and put on narrow gauge cars. It will save considerable time, too, as the operation of loading and unloading was the source of considerable delay in freights consigned to this city. The Imperial transcontinental train will be started on the 18th, and on the same day a daily passenger service will be inaugurated on the Crow's Nest railway."

Compressor at Ainsworth.

Mr. W. S. Norman has, it is understood, just put in at Ainsworth a compressor which is run by means of a mountain stream and which, it is claimed, is sufficiently powerful to supply all the mines in the district with air. The patent is by a Mr. Taylor of Montreal. One of these compressors has been working satisfactorily at Magog, Que., for about nine months, it is sa...

The Masonic temple, which was virtually destroyed by fire on Friday night, will be rebuilt. All the details of the building have not been agreed upon, but it is thought that the structure will be made larger and better than the old one. It is claimed that the sum of $5,000 will be spent on the proposed building. The loss on the building and regalia will be about $3,500, most of which will fall on the Blue lodge of Masons. The loss is only partially covered by insurance.

DEADMAN'S ISLAND.

A New Claimant For the Property Has Turned Up.

It is not generally known, says the New Westminster Columbian, that a new claimant for the possession of Deadman's Island has turned up in the person of Mr. John Collier, one of the proprietors of the Central hotel in this city.

Owing to the great publicity given to the dispute between the Dominion government, which has leased the island to Mr. Ludgate, the Provincial government, and the city of Vancouver, the situation has become well known wherever Canadian, and particularly British Columbian newspapers circulate. In England the progress of events was closely followed, especially by those who had lived here, or whose friends are here, and among these was a friend of Mr. Collier, who, after looking into the matter, wrote him, and informed him that in 1843, Deadman's Island was purchased, or pre-empted, by his father, Thomas Collier, who was then in this country. Mr. Collier is ignorant of anything beyond the fact that his father owned the island, and that his patent to the property, together with other documentary evidence, was recorded at Somerset House, and will be duly forwarded. In about a fortnight's time, Mr. Collier says he will be in a position to give more particulars of the estate to which he, as eldest son, has fallen heir, and, in the meantime, the various claimants can chew the cud of reflection.

WANT OF PRESSURE.

The Water System Showed Up at the Masonic Hall Fire.

The fire at the Masonic hall early yesterday morning afforded an alarming and instructive object lesson anent the present waterworks system in this city. When the second hose was attached to the temporary hydrant at the corner of Le Roi avenue and Butte street, and the water turned on, the assembled crowd had the spectacle presented to them of the firemen being forced to climb on the roof of a shed attached to the hall in order to pour the water on the fire, there being so little force available that this was the only way the branch could be utilized. To understand why this was the case, a glance at the source of supply is instructive. From a point a little west of Lincoln street on Columbia avenue to St. Paul street the sub-main is only four inches, and from the last mentioned point to the temporary hydrant referred to the supply pipe is only a three-inch one, hence the want of power stated.

Under the system certified by the city engineer to be necessary in order to provide adequate fire protection, the two submains referred to would be eight and six inches respectively. With this new equipment entirely taking the place of the present one, there would be no necessity of climbing up to pour water down upon any conflagration that might occur.

A New Industry.

Mr. Edward Grizzelle, F. R. H. S., manager of the Invertavish Nurseries of Victoria for the past eight years, has decided to settle in Rossland and establish a florists business here. Mr. Grizzelle visited the various towns in the Kootenays, and decided on Rossland as the best point for his business. He is now seeking a site for the conservatories he will erect, and will put up about 10,000 feet of glass. He expects to have an acre of land under cultivation. The industry will undoubtedly thrive here. Mr. Grizzelle is interested in amateur theatricals and music, and will in this particular be an acquisition to the social community.

The Kootenay Diocese.

Yesterday was held at the offices of the Hon. T. Mayne Daly, a meeting of the diocesan committee of the Kootenays. There were present Archdeacon Pentreath of the diocese of Columbia, Rev. H. Akehurst and W. Johnston of Nelson, Rev. H. Irwin, Hon. T. Mayne Daly, and A. W. Dyer of Rossland. It will be remembered that this provisional committee was appointed last August by the Anglican Synod of British Columbia, for the purpose of formulating the method of erecting the Kootenay into a diocese which should be separate from New Westminster. This is practically accomplished, and there only remains the formal approval of the committee's proposals by a meeting of the Kootenay churchmen, which will be called this summer, and then ratification by Bishop Dart of New Westminster, who is expected out from England this month. The committee are confident that the present prospects of the Kootenays justify its action, and that the newly organized diocese will arouse still greater interest in Anglican church matters.

Honest Advice Free to Men.

The Rossland Miner is requested to publish the following: All men who are nervous and debilitated or who are suffering from any of the various troubles resulting from over work, excess or youthful errors, are aware that most medical firms advertising to cure those conditions cannot be relied upon. Mr. Graham, a resident of London, Ont, living at 437 1-2 Richmond street, was for a long time a sufferer from the above troubles, and after trying in vain many advertised remedies, electric belts, etc, became almost entirely discouraged and helpless. Finally he confided in an old clergyman, who directed him to an eminent and reliable physician, through whose skillful treatment a speedy and perfect cure was obtained.

Knowing to his own sorrow that so many poor sufferers are being imposed upon by unscrupulous quacks, Mr. Graham considers it his duty to give his fellowmen the benefit of his experience, and assist them to a cure by informing anyone who will write to him in strict confidence where to be cured. No attention can be given to those writing out of mere curiosity, but anyone who really needs a cure is advised to address Mr. Graham as above.

S. McPherson of Vancouver, has received a letter from his son who left recently for Atlin. He says that the outlook is rather discouraging there, as the gold found up to the present time is not in any substantial quantity.

The Westminster creamery is turning out about 400 pounds of butter daily.

Notice to Contractors.

The Umatilla Gold Mining company wishes to let a contract for sinking a shaft on the Umatilla mine on Sophie mountain, one hundred feet. Seventy-five per cent of the contract price will be paid each month; balance on completion of contract. A steam hoist and pump are on the ground. Bids will be received up to the 25th day of June. Address,

A. P. CAHILL,
Dayton, Wash.

VEGETABLE GARDENS.

Quite an Important Industry to the South of the City.

The vegetable gardens to the south of the city are beginning to blossom and bloom, and considerable of the lettuce, beets, carrots, radishes and onions now used in the city come from there. There are about 30 acres under cultivation, and these are divided off into six farms of about five acres each. The water for irrigation is obtained from Trail creek, and is led by little ditches all over the cultivated spaces. Many kinds of vegetables are raised on these little farms. There are two white men and four Chinese who lease this arable land, and they raise from three to four crops a year upon them. The growth is stimulated by means of fertilizers. The soil is naturally very rich and vegetables quickly mature in it. It is claimed that this year these gardens will produce at least $15,000 worth of vegetables. Some of the plats cultivated by the Chinese have as many as 10 gardeners employed during the busy season. The products of these farms find a ready sale in Rossland, as they have the merit of being fresh, which is one which it admired by users of vegetables.

A Narrow Escape.

C. O. Lalonde received a dispatch from his brother, Arthur Lalonde, yesterday, from Colorado City, denying the report telegraphed Wednesday that he was killed. A wild engine crashed into the express locomotive, of which he was in charge, and there resulted a bad wreck. The fireman was instantly killed, but Mr. Lalonde escaped with a few slight injuries. He has been in several accidents before and has always escaped.

Only a few left. The Rossland Miner's map of Rossland camp. Price reduced to 50 cents. tf

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Rev. Warren Bentley, writes:—"While in Newark, N. J., conducting religious services, I was troubled with catarrh and used Dr. Agnew's Catarrhal Powder. It gave me great relief and I have recommended it to many among whom I have labored." Hon. David Mills, Minister of Justice of Canada, has used this remedy and highly recommends it over his own signature. At all druggists.

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The company's property is situated on Forty-Nine creek, about eight miles from the city of Nelson, B. C., and in the well known free gold belt, in which are also the Athabasca and Poorman mines, which have yielded excellent profits of their owners. Two shafts 35 feet deep have been sunk on one vein, and numerous cuttings have been made, showing the continuity of the ore body for 1,000 feet. Assays from ore from these works are as follows: $80, $87, $246, $360 and $412. Dr. P. Langhammer, mining engineer, estimates this vein to average $43 in value and 20 inches in width. This showing has enabled the company to conclude arrangements for a plant to treat the ore, to be installed before snowfall. The gold being free and capable of extraction on the ground, the expensive charges of transportation and smelting are obviated, and the profits will be correspondingly larger than from a base ore of equal assay value. The company has thus its property proven, and arrangements made to mine profitably from its inception and to pay dividends at an early date.

A second quartz vein six feet in width, surface ore which gave assaye of $5, crosses the property. Exploratory work on this vein will be commenced about June 1st. The vein promises to be a valuable one upon development, and arrangements are already made for the enlargement of the reduction plant to keep pace with the output of ore.

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