



ALBERT CARRINGTON.....EDITOR

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"GRASSHOPPERS" OR LOCUSTS.

The destructive insects that have been doing so much damage in and around this city recently, as well as in other parts of the Territory, and that have been passing apparently southeast in such innumerable myriads for some time, flying at a great altitude, have excited no little interest as to what they are, where they come from, and their probable destination. Though commonly known as "grasshoppers," their destructive habits, their power of flight, and immense numbers, led to the belief among entomologists here that they are of the locust family; and on examination they have been found to be so, though not the insect commonly known as the locust throughout this country. The following extract from a very elaborate article on Entomology, published in the Agricultural Report of 1862, commencing page 383, will be found interesting:

Another division or family of the *Saltatorial orthoptera* is that which includes the *Locusts*, the most voracious and destructive insects belonging to this or any other order; but more destructive in foreign countries than they have been, thus far, in the United States. In speaking of these orthopterous insects by that name it is hardly necessary to admonish the reader that I do not, even the most remotely, allude to those insects which have incorrectly received the name of *locusts* in the United States—but which belong to an entirely distinct order of insects—such, for instance, as the "Summer locust," the "Seventeen-year locust," &c. In no other country has a similar blunder been made in the vulgar nomenclature of this insect, and the correction may as well be made first as last. It will be seen in the course of these papers how far these names may be properly applied to these insects, and the benefits resulting from a proper application of names. Our *locusts* agree in their forms, their habits, their economies, and their modes of propagation, with the locusts of Africa, Asia, Europe, and especially with the Egyptian locust, of whose destructive qualities we read in Holy Writ and elsewhere.

If priority of nomenclature is entitled to precedence in speaking and writing of any object of natural history, it is the same whether the name is a common or a technical one; and when we know that an insect indigenous to our own country has the form of one belonging to a foreign country, and also agrees with it in all other respects, then, in common language at least, it ought to be called by the same name, where a name has been previously given. This is precisely the case with a family of our "Grasshoppers"—so called without distinguishing between them and the true Grasshoppers—but which all *locusts* in all the essentials which constitute that family of destructive insects. This also clearly illustrates the necessity of the scientific names of animals, else we could not be generally understood when speaking or writing of any animal by the common names which it may have received in the various localities where it exists.

These insects differ from the crickets and the grasshoppers by having the antennæ short and of equal thickness; by the abrupt deflexion or roof-shape of their wing-covers, which entirely cover the lower wings; by the females not having the sword-shaped ovipositor protruding from the end of the abdomen; and by having the legs shorter and more robust, and therefore better adapted

to leaping than the true grasshoppers; and by having the power of flight also much greater than the last-named insect, the wings being in most cases very large, the wing covers narrow, and the muscular power of the thorax much developed. These insects, when occurring in large numbers, make a great noise in their flight, the cause of which is not easily explained. Some species, when fully developed, which is usually about the end of August, are in the habit of poisoning themselves in the air, making a curious rickety noise, seeming to be trying their powers of flight, and perfectly intoxicated with delight at its efficiency.

Asia and Africa, particularly, have suffered greatly at different times from the ravages of locusts, and the ground over which they have passed has presented the appearance of having been scorched by fire, so completely has the vegetation thereon been removed, and hence we have the name *locust*, which is derived from the Latin *locus* and *ustus*, which means "a burnt place." Famine and great distress, as well as pestilential diseases, have followed the appearance of the locusts in those countries, and consequently all that has been written in the Scriptures concerning these insects has been fully confirmed by the observations and experiences of travellers and others in those countries where they abound. In Central and South America, in Mexico, as well as in some of our Pacific States, allied species of these insects have often occurred in vast numbers and not much less destructive than those of Asia and Africa—and especially has this been the case in New Mexico, Arizona and Utah. Smaller species have at various times abounded in the eastern, the western, the middle, and the southern States, which have been more or less destructive to the blades of young corn, to meadow grasses, and, in short, to almost every vegetable of an edible character where they exist.

Locusts are generally comprized under three generic divisions, all of which are in a greater or less degree destructive, but still sufficiently unlike to warrant such a separation of species, when arranging them symmetrically. They are so well known under the common but mis-called name of grasshoppers, that it is perhaps necessary in this place to do little else than just to give a few illustrations and a passing notice of some of them.

After classifying the locusts found in the States in three classes, he treats upon each at length; and under the name *Acridium* (*Caloptenus*) *femurrubrum*, usually known as the "red-legged locust," he describes, in the insect which has been doing so much damage here, the most numerous and most destructive of all the locust family in the United States. His description of the insect need not be given, for if any one will take the trouble to carefully examine a specimen of the "grasshoppers," or locusts, that have been swarming around, they will have it before them.

An idea has been entertained very extensively that these insects pair in September and October, and that immediately after the female deposits her eggs, which remain unhatched until the ensuing spring. This is true of some kinds of grasshoppers and locusts; but the "red-legged" locust is capable of a much more rapid increase, one generation succeeding another in the same season, and all possessing an immense voraciousness from the time they are expelled from the egg. This accounts for the different sizes and different stages of development in which they are found at the present time; and for the terrible damage which they do to young crops from the time when the first generation hatches out in spring. They also possess powers of flight, and a capability of migrating from one district, when devastated, to another where they can recommence operations, such as, it is believed, no other insects are endowed with.

We said in the first sentence that they have been passing apparently south east over this city. That they

have come from the north there is no question, for they have marked their way southward to this city and beyond; but from what part of the northern region they have come does not seem to be yet exactly known. They came into Cache Valley last fall, declaredly from the Yellow Stone district, and having done considerable damage there and in some parts of Box Elder county, deposited their eggs, and when the young were hatched out this spring they destroyed a vast amount of vegetation before growing sufficiently to take wing. But the myriads which have been passing over this city surely were never all hatched out from eggs deposited in that section of the country? It does seem, that if they were to alight, enough have passed over here to eat up all the cultivated lands in Cache in forty-eight hours. Being first seen here on Saturday, the 27th ult., day after day, for hours each day, clouds on clouds were on the wing, moving steadily and rapidly overhead, while myriads on myriads alighted in the city, in the fields south and west for miles, on the benches and mountains around, seemingly resting for a few days; and in that time they left abundant evidences of their terrible voracity.

We have been informed that the greater number of them came from the Salmon River region; and we learned that the southern part of Cache County, which was almost delivered from them on the morning of Sunday the 4th, was visited by another cloud during that day which likewise came from the north. In North Weber Valley there have been great numbers which have done immense damage; and in Davis County, on their way south, they have destroyed much of the corn, stripped apple trees, and otherwise manifested their destructiveness.

The mode of their operations in this city and neighborhood has been very simple. After flying for a time at a very high altitude, numbers of them began on Sunday afternoon, the 5th, to fly low, and towards evening settled down covering trees and every kind of vegetation, hanging in clusters from twigs and tender branches, and covering the ground under foot. Apple trees, pear trees, carrots and corn seemed their favorite food, for they stripped them of every leaf in an incredibly short time. Peach trees suffered some in the fruit, which was eaten clean away from the pits; but the leaves were mostly uninjured. Oats, barley and wheat, where not ripe, suffered severely. It was a curious looking spectacle to see apple trees stripped of everything except the fruit, and much of that eaten into the core on one side, after the voracious insects had cleaned them of leaves, in some instances devouring the tender twigs.

The amount of damage done in this city and around it would be difficult to estimate. It is probable that in Cache County there will not be more than one-third of a crop left. In Box Elder County, North Weber Valley, Weber County and Davis County they have been very destructive in places; and in various parts of this County south of this city, they have devoured much unripe grain, and destroyed vast numbers of fruit trees.

There seems no way of successfully driving them off when they settle down in a locality. They can be dislodged from particular trees by kindling small fires of straw, a little damp, underneath, and shaking the branches. Then they will rise, and the smoke compels them to leave. They can also be caught in large quantities with bag nets, or similar contrivances, in early morning be-

fore the heat of the sun gives them that vitality which they possess during the day; or they can be so caught in a dull cloudy day, when the sun is not shining, for then they keep near the ground. When thus caught they are sometimes boiled and fed to hogs and poultry, the latter being particularly fond of them.

That they are a destructive agent whose advent all dread, whose departure all rejoice at, none can doubt; and coming as they do, unexpected and in such vast quantities, every one should seek to be ever prepared for the worst contingency that might follow their appearance.

THE GATHERING OF MONARCHS.

With the waning summer the show glitter and attraction of the Paris Exposition will fade away, and before many months elapse the whole will be a part of the history of the past. Paris glittered with crowned heads and the retinues; with princes and nobles; with notables from many lands. The representatives of many rival nations had met there in harmony. Hereditary enemies, as they have been called, had apparently fraternized together. It had been a gathering of monarchs, a holiday for France, and a period of festivities to the cosmopolitan crowds gathered in the licentious capital of the gayest nation on the earth.

Outwardly all has been joy, peace, harmony, good feelings and fraternal desires, among the potentates who accepted Napoleon's hospitalities. The Emperor of Russia and the Sultan of Turkey; the King of Prussia and high dignitaries from Austria; Japan was represented in the son of its Tycoon; England by the Prince of Wales; and other nations by the highest nobles short of royalty, while the rulers of lesser dominions were numerous; all meeting in Paris during the present summer. And, to look at it casually, many would think, as was said of the World's Fair in London, in 1851, that a new era of peace was inaugurated, and war would become a thing of the past.

But amid all the show of amity manifested by the crowned heads and national representatives who were the guests of the French Emperor, but few who viewed them imagined for a moment that there was anything permanent in it. The surmise, freely thrown out, that they were but seeking to disguise each other's purposes, trying to understand each other's hidden policy and endeavoring to find out how each could most successfully pursue his schemes to a successful issue, tells how thinking men viewed the hollow pretensions of friendship which were then so abundant. When returning from the show, and gaining again their own dominions, thoughts of triumphs over their enemies, victories on the battle field, extended dominions, greater power, and more subjects to be awed by their frowns or elated by their smiles, probably occupied a large share of their minds, unmixed with the groans of the thousands to be slaughtered in accomplishing their purposes.

With the close of the Exposition, the probabilities are that war will be rapidly prepared for by more than one power on the continent of Europe; and that the seeming peace, glitter and show, which were the special marks of the monarchical gathering, were but like the intensely brilliant sun-shine and the sultry heat of the summer day, which precede the fierce and gathering thunder-storm.

STORM.—On Saturday we had a regular rain storm of some hours duration, duly inaugurated with thunder and lightning. The rain fell heavily and steadily, until the ground was well saturated.