



*Yours very truly
Cyrus C. Carpenter*

CYRUS CLAY CARPENTER.

Governor of Iowa, 1872-'76, and Member of Congress, 1879-'83. The above portrait was copied from a lithograph which appeared in "Andreas' Atlas" in 1875. While the engraving is a coarse one, it was considered a fair likeness of Mr. Carpenter at the time he was Governor.

THE GRASSHOPPER INVASION.

BY THE LATE EX-GOV. CYRUS C. CARPENTER.

One of the serious calamities which befel the early settlers of Northwestern Iowa was the grasshopper invasion of 1867, and subsequent years. It is one of the phenomena of pioneer life that the people are usually visited by the scourges incident to an untamed frontier, in the inverse ratio of their ability to endure them. The writer retains a vivid remembrance of reading in Greeley's "Recollections of a Busy Life," an account of his first visit to his father's family after they had moved into Western Pennsylvania from Vermont. After describing the country, covered as it then was with heavy timber of beech, maple, hemlock, elm, ash, etc., and the toil and deprivation of the early settler who slowly excavated a hole in the great forest, in order to draw from the penurious soil a meager subsistence, he says: "But the crops grown among green roots, in a small excavation from the vast, tall forest, are precarious and scanty at best, being preyed upon by pigeons in myriads, and by all manner of four-footed beasts, and the pioneer's family must somehow live while he slowly transforms the stubborn wilderness into fruitful fields and orchards." It is true that the pioneers of the prairie are exempted from many of the vicissitudes, and much of the toil incident to the lives of the men who hewed their homes out of the forest, but they experienced many of the hardships and reverses which those who enjoy the fruits of their toil would hardly think endurable. One of the most serious of the pioneer experiences of Northwestern Iowa was the grasshopper invasion. The reader who did not see the destruction wrought by the grasshoppers, and the strange phenomena of their coming and going, will be very apt to regard the story of even an eye-witness as incredible. They made their first appearance in 1867. Hon. Charles B. Richards, at that time a citizen of Fort Dodge, and interested in

many business enterprises, gives the following account of their coming:

The first appearance of these pests was on the 8th of September, 1867, when, about noon, the air was discovered to be filled with grasshoppers, coming from the west, settling about as fast as the flakes of an ordinary snow-storm; in fact, it appeared like a snow-storm when the larger flakes of snow fall slowly and perpendicularly, there being no wind. They immediately began to deposit their eggs, choosing new breaking and hard ground along the roads, but not confining themselves to such places, and being the worst where the soil was sandy. They continued to cover the ground, fences and buildings, eating everything, and in many places eating the bark from the young growth of apple, pear, cherry, and other trees, and nearly destroying currants, gooseberries and shrubs; generally eating the fruit buds for the next year. They disappeared with the first frost; not flying away, but hid themselves and died.

No amount of cultivating the soil and disturbing the eggs seemed to injure or destroy them. I had two hundred acres of new breaking, and as soon as the frost was out commenced dragging the ground, which exposed the eggs. The ground looked as if rice had been sown very thickly. I thought the dragging, while it was still freezing at night, thus exposing the eggs, breaking up the shell or case in which the eggs, some twenty or thirty in each shell, are enclosed, would destroy them; but I believe that every egg hatched.

As the wheat began to sprout and grow the grasshoppers began to hatch, and seem to literally cover the ground; they being about the eighth of an inch long when first hatched. They fed on all young and tender plants, but seemed to prefer barley and wheat in the fields, and tender vegetables in the garden. Many keep the wheat trimmed, and if it is a dry season it will not grow fast enough to head. But generally here, in 1868, the wheat headed out and the stalk was trimmed bare, not a leaf left, and then they went up on the head and ate that, or destroyed it. Within ten days from the time wheat heads out they moult. Prior to this time they have no wings, but within a period of five or six days they entirely changed their appearance and habits, and from an ordinary grasshopper became a winged insect capable of flying thousands of miles.

In moulting they shed the entire outer skin or covering, even to the bottom of their feet and over their eyes. I have caught them when fully developed and ready to moult, or shed their outside covering, and pulled it off, developing their wings neatly folded, almost white in color, and so frail that the least touch destroys them. But in two days they begin to fly—first short flights across the fields where they are feeding, and then longer flights; and within ten days after they moult all the grasshoppers seem instinctively to rise very high and make a long flight—those of 1867 never having been heard of after leaving here, and all leaving within ten days after they had their wings.

Their second appearance was in the summer of 1873, when they seemed

to be driven by a series of southwest winds over the country, not coming in such clouds, but spreading in flocks over a territory—taking Fort Dodge for the southeast corner, running north into Minnesota, and west how far I do not know. Only comparatively few settled in Webster county, and those in small swarms in the northern townships along the Des Moines river. Probably the counties of Clay, Buena Vista and Dickinson suffered as much as those already named. This time they were early enough in the season to nearly destroy all the crops of those counties; evidently having been hatched farther south, and having attained maturity much earlier than those of 1867. They went through exactly the same process of depositing eggs, hatching and destroying crops, as before; and were identical in every respect. The only difference was in their mode of leaving. They made many attempts to leave, rising *en masse* for a long flight, when adverse winds would bring them down; for it is a fact well demonstrated that their instinct teaches them in what direction to fly; and if the wind is adverse they will settle down within a few hours; when if the wind was in the direction they desired to go they never would be heard of again within hundreds of miles.

Wherever they deposit their eggs in the fall, crops are very certain (that is, small grains and gardens) to be destroyed the next season. But, as a general thing, corn is not destroyed or injured, unless it is done in the fall, when the old grasshoppers first come in. So, if farmers know eggs are deposited (and they may be certain they are if there is a swarm of old ones in the country in September or October, or if a swarm has come any time in the season from a distance and settled down and remained any length of time), they should ignore small grain for that season, and plant corn or potatoes.

I am not certain but that grasshoppers will be a blessing instead of a scourge, if their coming will have the tendency to make farmers devote less time and money to raising wheat, and do a more general system of farming.

I have copied this article as it was written by Mr. Richards at the time, because it not only gives a description of the ruin wrought by this invasion, but it goes with particularity into the habits and characteristics of the itinerating grasshopper. Persons who were not conversant with this invasion can hardly realize with what anxiety the people scanned the heavens, for several years after, at each return of the season when they had put in an appearance on the occasion of their previous visit. The great body of the invaders were generally preceded a day or two by scattering grasshoppers. In a clear day, by looking far away towards the sun, you would see every now and then a white winged

forerunner of the swarm which was to follow. Years after they had gone there was a lurking fear that they would return. And if there were any indications of their appearance, especially when during two or three days the prevailing winds had been from the southwest, people would be seen in a clear day standing with their hands above their eyes to protect them from the vertical rays of the sun, peering into the heavens, almost trembling lest they should discover the forerunners of the white-winged messengers of destruction.

To illustrate the absolute fearfulness of the grasshopper scourge, I have recalled a few of the incidents of their visitation. And fearing the reader who has had no personal experience with grasshoppers, might be inclined to regard the story as "fishy," I have taken pains to fortify myself with the documents. I have a letter from Mr. J. M. Brainard, the editor of *The Boone Standard*, relating incidents of his own experience during three years. I give his letter in full, as it furnishes details which show the utter helplessness of a farmer in the presence of the grasshopper:

BOONE, IOWA, SEPT. 3, 1895.

Hon. C. C. Carpenter, Fort Dodge, Iowa:

DEAR SIR:—In a familiar conversation with Mr. Charles Aldrich the other day he said that he had persuaded you to write the tale of the "Grasshopper Invasion," for a future number of THE ANNALS. Since, it has recurred to my mind that I know something personally of that occasion, and I will give it to you for use if you see fit, though it is but a trifle. I negotiated for *The Council Bluffs Nonpareil* in the summer of 1868, living at that time in Nevada. That fall I made frequent trips over the Northwestern road from my home to Council Bluffs, and the road was not a very perfect one at that time, either in its roadbed or grades. One day—it was well along in the afternoon—I was going westward, and by the time we had reached Tip-top (now Arcadia), the sun had got low and the air slightly cool, so that the hoppers clustered on the rails, the warmth being grateful to them. The grade at Tip-top was pretty stiff, and our train actually came to a stand-still on the rails, greased by the crushed bodies of the insects! This occurred more than once, necessitating the engineer to back for a distance and then make a rush for the summit, sanding the track liberally as he did so. I think I made a note of it for my paper—*The Story County Ægis*—for, in 1876, on visiting my old Pennsylvania home, a

revered uncle took me to task for the improbable statement; and when I assured him of its truthfulness he dryly remarked: "Ah, John, you have lived so long in the west that I fear you have grown to be as big a liar as any of them!" That same year some of our Nevada people had removed to Boone, and the grasshoppers having eaten up all the garden products at Boone, their friends in Nevada were in the habit of sending them a barrel of "truck" each week, to give them a taste of green food. The grasshopper extended as far east, on this parallel as Ames; beyond that, eastward, all was serene. I think Albert Head could give you some financial returns from that visitation, for he invested a "pile" in deserted lands which added greatly to his wealth. In fact, his brother at Montezuma got scared at his drafts for money, thought Albert had lost his wits and took train to call him off; but on arriving, and seeing the situation, he joined the draft-drawing business with greater unction, much to their future advantage.

Very truly yours,

JNO. M. BRAINARD.

The fact that railroad trains were impeded may seem a strange phenomenon. But there was a cause for the great number of grasshoppers which drifted to the railroad track, hinted at by Mr. Brainard. Those who studied their habits observed that they were fond of warmth, even heat. The fence enclosing a field where "they were getting in their work" indicated the disposition of the grasshopper. Towards evening the bottom boards on the south side of the fence, would be covered with them, hanging upon them like swarms of bees. When the suggestion of the autumn frost began to cool the atmosphere, the grasshoppers would assemble at the railroad track and hang in swarms on the iron rails which had been warmed by the rays of the sun.

The effect of this invasion upon the business of Northwestern Iowa was most appalling. It is safe to say, that one-fourth of the farmers sold out at merely nominal prices and left the country. In order to show this effect by one entirely engaged in business, both as banker and as an extensive owner of farms, I received the following letter from Hon. Albert Head of Jefferson:

JEFFERSON, IOWA, MAY 22, 1896.

Hon. C. C. Carpenter, Fort Dodge, Iowa:

MY DEAR SIR:—Yours of the 19th inst. was forwarded me from Des Moines, and is just received. In reply will say that in the fall of 1867 the

grasshoppers came in clouds from the northwest and destroyed much vegetation. I think it was the last of August they first appeared; but in September and October they were most numerous. They were so thick that they actually stopped trains of the C. & N. W. R. R. on the heavy grades west of this place. Hogs and poultry fattened on them. The fences and trees were covered with them all over this county. They laid their eggs by the millions, and stayed till killed by the frost. The following spring, 1868, these eggs hatched out millions on millions of 'hoppers, and they destroyed all gardens and much grain. They stayed till full grown, and able to fly; when they left—I think flying in a southwesterly direction. The effect on individuals and the country was depressing—land depreciated about one-half, and the people were much discouraged. Farms were sold for half they were worth. It was difficult to collect debts. Business of all kinds suffered. I was in business here and suffered great loss by reason of the depression. In the fall, or late summer, of 1874, the hoppers again invaded this county, but were not so numerous as in 1867-8, yet they did much damage and caused much loss in 1874-5, and some in 1876. I think they were much worse in the newer counties in the northwestern part of the State in 1874-5-6. This county was better settled then and the 'hoppers did less damage than in sparsely settled portions of the State. Many people left here during the scourge of 'hoppers, believing that they were to be permanent settlers in the country.

Truly yours,

ALBERT HEAD.

The last appearance of the grasshopper in northwestern Iowa was in 1876. Hon. J. D. Hunter, editor of *The Hamilton Freeman*, kindly ran over his files for the years 1876 and 1877, and sent me the following excerpts from its columns for those years. I can give no more vivid description of this visitation than to copy them:

First mention of grasshoppers was on August 30, 1876: The grasshoppers in their skipping about the country have not ruined us altogether. During the past week they have been coming in quite plentifully, but, so far as we have been able to learn, are doing no serious damage. They seem to be migrating; and farmers from different portions of the county tell us they do not discover any alarming results from their presence.

September 6: During the past ten days portions of our county have been the scene of a genuine grasshopper invasion. At times they have filled the air until they looked like fleecy clouds around the sun. Careful observers seem to think we have had more of them this time than we did nine years ago, on the occasion of their first visit. The damage to gardens, groves and crops must be very considerable. Late corn has been greatly damaged. But from the millions and millions of eggs being deposited in the ground there is general apprehension that destruction next

year will be great. But before, when the grasshoppers were here, they perforated the ground everywhere with their egg deposits, and yet there was no damage to speak of the next year.

September 30: The grasshoppers have pretty nearly abandoned this region of country. During Thursday and Friday of last week they flew in myriads to the southeast, and only a few stragglers are left here.

In *The Freeman* of June 30, 1877, mention is made of the fact that the 'hoppers have hatched out in large numbers and are doing considerable damage to the growing crops, but are much less destructive than it was feared last summer they would be this year. We do not anticipate any serious results from the 'hoppers hatched here.

August 1, 1877: Crowds of grasshoppers have been passing over town (Webster City) during the past few days. In several localities they came down in the harvest fields and on the prairies like a furious hail storm. But they only stay a short time in one place and we have heard of no serious damage being done by them in this region.

The fact that this invasion of 1876 was so much less destructive than that of nine years before shows that should one come now it would do comparatively little damage. The entire country now being in crops, the grasshoppers would spread themselves over so much more territory that they could live and still leave an abundance. Then, there was only here and there a farm, and the farms were but partially cultivated, thus they stripped bare the fields in crops. Nothing could look more dreary and disheartening than a wheat-field with the bare stalks standing, stripped of every leaf, and even the heads entirely devoured. People tried all sorts of experiments to drive the pests from their fields. I remember my brother, R. E. Carpenter, had a fine piece of wheat, and he bought a long rope—a hundred feet long—and hitching a horse at each end, he mounted one, and his hired man the other, and with horses a hundred feet apart, and abreast, they rode back and forth over the field three or four times a day, the rope swinging along between them, sweeping a strip a hundred feet wide. They would always ride their horses in the same paths, so that they destroyed but little grain, and kept the grasshoppers so constantly disturbed that they did but little damage. Another experiment which many adopted, and which proved very effective,

was the use of a machine called the "hopper-dozer." Mr. Charles Aldrich, who was then living on his farm near Webster City, made one of these machines and gave it this name in an item which he wrote for *The Freeman*, after which the name was generally adopted. The machine was constructed as follows:

Taking a plank about twelve feet long and twelve inches wide, a wagon-tongue was attached to the center in such manner as to keep the plank on edge. To each end was bolted a small piece of wood which being rounded down at the end extending beyond the plank, made an axle-tree upon which was fitted the wheels from an old mower. Attached to the front side of this plank were a succession of tin cups about twelve inches long and three or four inches deep. They were about four inches wide at the top and two inches wide at the bottom. The person using the machine would pour in water sufficient to cover the bottom of the cups about an inch deep, and then pour in about the same amount of kerosene. He would then drive back and forth over the grain, as if harrowing the ground, and every grasshopper that fell into this liquid was a dead 'hopper. At each end of the field the driver would have to clean the grasshoppers out of the cups. In this way millions were killed, and thus many enterprising farmers saved their gain in comparatively good shape.* Mr. Lorenzo S. Coffin, of Fort Dodge, made one of these "hopper-dozers," just as we have described, except that he attached to the front of the plank a tin trough, of the general shape of the cups described above, and extending the full length of the plank. Then, putting in the kerosene, he fought the grasshoppers effectively.

I think that one reason why a Divine Power, whose Wisdom and goodness are unquestioned, permits these scourges and disasters to blight the hopes, and bring want and sorrow to various sections of the country, is, in part, to enable those outside of the stricken territory, and exempted from its calamities to practically illustrate their humanity and generosity. Thus the State legislature, at the session of 1874,

*My recollection of how I constructed the "hopper-dozer" varies somewhat from the quotation made by Governor Carpenter. We used a two-inch plank twelve feet long and one foot in width, lying flat upon the ground, to the middle of which the tongue of a two-horse wagon was attached. The tin cups were about eight inches square by three inches deep. These were soldered together at the ends upon a strip of tin which was fastened lengthwise upon the flat surface of the plank. Water was poured into each to the depth of an inch or thereabouts, and a small quantity of kerosene added. The "hopper-dozer" thus made ready was easily drawn forward, covering a strip of ground twelve feet wide. The voracious but clumsy, half-grown insects would jump or fly upwards and fall into the cups or pans where they died. It seemed that if one wet a foot in the kerosene, it ended his career immediately. Several farmers in that section supplied themselves with similar machines by which myriads of the insects were destroyed and the crops saved.—C. A.

made an appropriation to buy seed for the farmers in the stricken district of Iowa. By this act, \$50,000 were appropriated; but it was confined to Iowa, and limited to the purchase of seed for the ensuing season. Under the act, making the appropriation, the governor was authorized to appoint a commission consisting of three persons who were to investigate the necessities of the people in Northwestern Iowa, and determine upon an equitable method of distributing to the worthy and necessitous, the seed provided by the appropriation. The governor appointed as the commission, John Tasker of Jones county, Dr. Levi Fuller of Fayette county, and O. B. Brown of Van Buren county. They traveled over the devastated counties, appointed local committees in each county to receive and issue the seed, covering the remainder of the appropriation back into the treasury. There was never a better investment than this appropriation. It undoubtedly determined a good many to stick to their farms, who, without this small encouragement, would have given up the unequal contest, sold their farms at a nominal price and moved away.

But this appropriation was limited to the purchase and distribution of seed. How the people in Northwestern Iowa and in the territory of Dakota, which perhaps had been more thoroughly devastated than any portion of Iowa, were to be preserved from suffering was not determined by this legislation. This opened an avenue for the contributions of the benevolent throughout the country. As soon as the necessities of these people came to be understood, money, clothing, and the products of the field, from the portions of Iowa which had not suffered from the invasion, and from other states, even from New England, were tendered in generous profusion. The question of how to make an equitable distribution of these benefactions had to be determined. Accordingly a convention was called to meet at Fort Dodge to consider this and other matters in reference to obtaining and distributing supplies. Delegates were in attendance from

the various counties of Northwestern Iowa and from Dakota. Among these there was one man whose great heart was thoroughly aroused at the tale of woe which came from the stricken region, and who not only had leisure, but had the disposition to give his time and energies to the work of relief. I refer to Gen. N. B. Baker, the adjutant general of Iowa. He, with Col. Spofford of Des Moines, and the writer, then living at Des Moines, attended this convention. It was determined to appoint a committee to visit the various counties in Northwestern Iowa and Dakota, and upon consultation with the people appoint local committees through which the work of distribution could be intelligently performed. General Baker was made the chairman of this committee. This was in the early part of January, 1874. Upon the adjournment of the convention Gen. Baker, Col. Spofford, the writer, and several people from Dakota, who had determined to go farther east to solicit supplies, started for Des Moines. A fierce snow-storm had set in during the afternoon. Before the train reached Gowrie it was stalled in a snow-drift. We remained there nearly twenty-four hours, when, despairing of getting to Des Moines within two or three days by rail, we left the train, walked about five miles to Gowrie, and then hired a team to take us to Grand Junction, from which point we knew the railroad was open to Des Moines. We left Gowrie for Grand Junction just at dark, in a two-horse sleigh. It was a clear, cold, frosty night. But with buffalo robes and blankets we managed to keep ourselves fairly comfortable. There was in the party a gentleman by the name of McIntyre, from Dakota. He was a Baptist minister and a very intelligent man. After getting on the road, the conversation turned upon the dreary situation of the settlers, in their lonely cabins, away on the prairies of Northwestern Iowa and Dakota, shut in by impassable snow-banks, with the fierce wind howling around them; without sufficient clothing to protect them from the frost, and many of them lacking even the coarsest necessities in the way of food.

Gen. Baker gave vent to his overflowing sympathies; and then McIntyre broke in and repeated the entire chapter from Longfellow's "Hiawatha" describing the "Famine." The sad refrain of that beautiful song, as it rang out upon the frosty air, lingers in my memory to this day. Inserting here a brief extract to show its perfect adaptation to the occasion, I close this article:

Oh, the long and dreary winter!
 Oh, the cold and cruel winter!
 Ever thicker, thicker, thicker
 Froze the ice on lake and river;
 Ever deeper, deeper, deeper
 Fell the snow o'er all the landscape,
 Fell the covering snow and drifted
 Through the forest, round the village.
 Hardly from his buried wigwam
 Could the hunter force a passage;
 With his mittens and his snow-shoes
 Vainly walked he through the forest,
 Sought for bird or beast and found none,
 Saw no track of deer or rabbit,
 In the snow beheld no footprints,
 In the ghastly, gleaming forest
 Fell, and could not rise from weakness.
 Perished there from cold and hunger.

Oh, the famine and the fever!
 Oh, the wasting of the famine!
 Oh, the blasting of the fever!
 Oh, the wailing of the children!
 Oh, the anguish of the women!
 All the earth was sick and famished;
 Hungry was the air around them,
 Hungry was the sky above them,
 And the hungry stars in heaven
 Like the eyes of wolves glared at them!
 Into Hiawatha's wigwam
 Came two other guests, as silent
 As the ghosts were, and as gloomy;
 Waited not to be invited,
 Did not parley at the doorway,
 Sat there without word of welcome
 In the seat of Laughing Water;
 Looked with haggard eyes and hollow
 At the face of Laughing Water.
 And the foremost said: "Behold me!
 I am Famine, Bukadawin!"
 And the other said "Behold me!
 I am Fever, Ahkosewin!"
 And the lovely Minnehaha
 Shuddered as they looked upon her,
 Shuddered at the words they uttered,
 Lay down on her bed in silence,
 Hid her face, but made no answer;
 Lay there trembling, freezing, burning
 At the looks they cast upon her,
 At the fearful words they uttered.

Forth into the empty forest
 Rushed the maddened Hiawatha;

Gitchie Manito, the mighty!
 Cried he with his face uplifted
 In that bitter hour of anguish,
 Give your children food, O Father!
 Give us food or we must perish!
 Give me food for Minnehaha,
 For my dying Minnehaha!

FORT DODGE, IOWA, 1896.

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