

The Song of the Lower Classes.

BY ERNEST JONES.

AIR—"The Brave Old Oak."

We plough and sow—we're so very, very low,
That we delve in the dirty clay,
Till we bless the plain—with the golden grain,
And the vale with the fragrant hay.
Our place we know—we're so very low,
'Tis down at the landlord's feet;
We're not too low the bread to grow,
But too low the bread to eat.

Chorus: We're not too low the bread to grow,
But too low the bread to eat.

Down, down, we go—we're so very, very low,
To the hell of the deep-sunk mines,
But we gather the proudest gems that glow
When the crown of a despot shines,
And whenever he lacks—upon our backs
Fresh loads he deigns to lay;
We're far too low to vote the tax,
But not too low to pay.

Chorus: We're far too low to vote the tax,
But not too low to pay.

We're low—we're low—mere rabble, we know,
But at our plastic power,
The mould at the lordling's feet will grow
Into palace and church and tower—
Then prostrate fall—in the rich man's hall,
And cringe at the rich man's door;
We're not too low to build the wall,
But too low to tread the floor!

Chorus: We're not too low to build the wall,
But too low to tread the floor!

We're low—we're low—we're very, very low,
Yet from our fingers glide
The silken flow—and the robes that glow
Round the limbs of the sons of pride,
And what we get—and what we give,
We know, and we know our share;
We're not too low the cloth to weave,
But too low the cloth to wear.

Chorus: We're not too low the cloth to weave,
But too low the cloth to wear!

We're low—we're low—we're very, very low,
And yet when the trumpets ring,
The thrust of the poor man's arm will go
Through a heart of the proudest king.
We're low—we're low—our place we know,
We're only the rank and file,
We're not too low—to kill the foe,
But too low to touch the spoil.

Chorus: We're not too low to kill the foe,
But too low to touch the spoil.

Entomology.

We invite the attention of farmers, especially of young farmers, and of farmers' children, the girls as well as the boys, while yet at an age for keen observation, to the articles appearing in our Journal, on those insects at once so insignificant and yet so fearful, that they sometimes desolate whole countries, constituting the subject of entomology. Let no one think the science insignificant because it treats of life in a small way.

Those insects which can, and often do, baffle all the efforts of man, are not too insignificant to deserve our attention. In confirmation of our views of the importance of this subject, we quote from T. Glover, Esq., the distinguished entomologist, connected with the Agricultural Bureau of the United States Patent Office. Let us invite all our readers, and above all the boys and the young men, to what he says about the birds as destroyers of insects. The birds are our best friends.—Don't kill the birds.—[Plough, Loom and Anvil, Oct.-56 Mr. Glover says:—

"A close study of the habits and transformations of any one of the pernicious insects, (bail worm, wheat midge, caterpillar, &c.) by the practical and intelligent farmer, would prove not only a source of great pleasure, as leading him to a keener sense of the beautiful and wonderful works of nature, as exemplified in the singular transformations insects undergo before they assume the perfect or fly-state, but also a source of great profit, as by experimenting upon them in all the stages of their existence, he might perchance discover some practical method by which their extermination could be effected.

Indeed, it is absolutely necessary that a farmer should be able to recognize the insects that destroy his crops, in all their various and wonderful transformations, before any effectual remedy can be applied; as in one stage of their life they may be suffered to live and enjoy themselves; nay, even sometimes be protected, while in another stage we persecute and destroy them by every means in our power.

For example, the beautiful butterfly of the papilio asterias. Any humane and kindhearted farmer, unversed in entomology, who should see his children chasing and killing the beautiful black and yellow spotted butterfly that was flitting joyously over his vegetable garden, in the spring or early summer, apparently leading a life of mere harmless pleasure, would, no doubt, reprove them for wantonly destroying such a pretty, harmless insect; and yet, if the truth was known, this pretty and much-to-be-pitied insect is the parent of all those nauseous-smelling green and black spotted worms that later in the seasons destroy his parley, celery, parsnips and carrots.

Yet by merely crushing the parent fly at one blow early in the season, before it has deposited its eggs, he would be spared the vexation of either seeing his plants devoured and seed destroyed, or having the disagreeable task of picking off, one by one, some hundreds of caterpillars later in the season. This fact will be more apparent when I state how in credibly fast some insects multiply, especially in the warmer climate of the South, where there is little frost to destroy vegetable life, and

there are several generations in one season. Dr. John Gamble, of Tallahassee, Fla., assisted by myself, dissected a female ball-worm moth or miller, (an insect which, in the caterpillar state, is most destructive to cotton), and we discovered a mass of eggs, which, when counted, amounted, at the least calculation, to five hundred, duly hatched, for the first generation, say one-half males, the rest females; the second generation, if undisturbed, would amount to 125,000, and the third be almost incalculable.

Now, these mother-flies are not very numerous early in the season, owing to the birds devouring them, the rigor of winter, and various other accidental causes, and if practical means were found to destroy them as early in the spring as possible, the immense ravages of the second and third generations might be prevented. In one female (æsteticus) case or hangworm, so destructive to the shade trees, I counted nearly eight hundred eggs, although the specimen was but small.

Now, were all these cases taken from every infected tree in the winter, when they can most easily be seen, owing to the fall of the leaf, and then immediately burned, the trees would be comparatively free the next season; and by following this plan for one or two years more, the work growing gradually less and less, the insect might finally be exterminated, inasmuch as the female never leaves her case, but omits her nest of eggs inside; and yet these noxious pests are suffered, year by year to increase, when so little trouble would destroy them. Other insects again have other habits, which, if fully known, would likewise lead to their destruction.

Cranberry Culture.

The soil most suitable for the growth of cranberries is low, wet, marshy ground, on sandy or light substratum. They also do well on muck, or any poor, swampy land, where nothing else will grow—they grow naturally on watery bogs and marshes—on the border of streams and ditches, and by draining wet land, and then taking off the top of the ground to remove the wild grass or vegetable matter, and carry to the manure heap, then cart on beach or other sand to the depth of two or three inches, to level the ground and prevent grass and weeds from choking the vines, and to keep the ground loose around the plant.

They bear abundantly on marshes covered with coarse sand, entirely destitute of organic matter of any kind, but accessible to moisture—on pure peat covered with sand, and on every variety of soil, except clay, liable to bake or become hard in dry weather, on soil that can be worked with a plow and harrow—it can be prepared as you would do it for planting out garden and other plants; sometimes it can be burned over, so as to get it in a condition to set out the plants. They can also be raised on moist loam, where corn and potatoes will grow, but not so abundantly on dry or sandy soil, unless covered two or three inches with muck or spent tan.

A more simple mode where there is hardly any thing but bushes and bogs, then strike a hoe into the soil, and raise it a little to insert the roots and press the soil slightly with the foot. No animal or vegetable manure should be used, as the fruit draws most of its moisture from the atmosphere. The poorer the soil, the less cultivation is needed. Lay out the grounds as you would for setting out cabbage, strawberry, or other plants—have a pointed stick or dibble, and make a hole for the plant—have the roots emerged in muddy water so to adhere to the root—place it in the hole, and press the dirt very closely around it. To have the rows uniform, draw a line and put the plants, 18 by 20 inches, in rows—where small patches are desired, which can be kept clean with a hoe—the nearer they are together, the quicker they cover the ground—but where acres are planted, it will save much labor by putting them 2 to 2½ feet apart, then a plow or harrow can be used to keep out the grass and weeds.

After one or two years' cultivation to keep out the grass, they will take care of themselves. At 18 inches apart, it will take 19,000 plants; 2 feet, 10,000; 2½ feet, 7,000 plants to the acre. They can be planted out in the fall at the North, from Sept. until the ground freezes, or in the spring until the middle or last of May. At the South and West, if possible, they should be planted out in Autumn and December; if received too late for planting out, the roots can be covered with dirt in a box or in a cellar (but not in the ground out of door) until early in spring.

Where land for cranberry culture can be overflowed (which is by no means necessary), fall is the time to plant. The first year they often bear 50 bushels to the acre, and increase every year, until sometimes they bear from 200 to 300 bushels per acre—perhaps the net average is from 100 to 150 bushels per acre. They usually bring from \$2 to \$4 per bushel—never less than \$2.00.

Cultivated fruit is less likely to be affected with drought than wild fruit. One man, with a rake made for the purpose, will gather from thirty to forty bushels a day, with a boy to pick up the scattering ones.—[Selected.

The following table gives the years of the most important inventions and discoveries:

Glass windows first used, 1189; chimneys in houses, 1226; lead pipes for conveying water, 1253; tallow candles for lights, 1290; spectacles, invented by an Italian, 1299; paper first made from line, 1302; woollen cloth first made in England, 1331; printing invented 1449; watches made in Germany, 1470; variations in compass, noticed, 1532; pins used in England, 1540; circulation of blood, by Harvey, 1619; first newspaper published, 1637; first fire-engine invented, 1653; first steam engine improved, by Watt, 1763; steam cotton mill erected, 1783; stereotyping invented in Scotland, 1785; animal magnetism, by Mesmer, 1789; invention of the electro magnetic telegraph, by Morse, 1843.

[From Doctor Draper's "Human Physiology."]

What the Asiatics have Done.

In Europe, the career of improvement is in the society; in Asia, it is in the individual—the unknown, starving, illiterate, but strong-willed soldier of to-day, is the pasha, the emperor, the caliph to-morrow. The castes of India form but a trifling exception to the fact that, in the midst of a universal despotism, the primest democratic element is concealed, for the career is open to talent. Through this, Asia has asserted her superiority again and again. Europe has never produced a great lawgiver. Asia has produced many. Generations of three hundred millions of men have followed the maxims of Confucius for more than two thousand years; three hundred millions are the followers of Mohammed. The faiths which govern the daily life of two thirds of the human race may well be an awful spectacle to us—the more awful because we know that they are a delusion.

If the talent for command and the capacity of a statesman are to be measured by the grandeur of under sittings and their success, it still remains for Europe to produce a soldier the equal of Jenghis Khan, and a king like Tamerlane. These great capitals held almost all Asia in their iron grasp. The opinions we commonly hold respecting these illustrious men have come to us through perverted channels. Such prodigious successes as theirs imply the highest intellectual powers. Their true character appears when we compare them with their European contemporaries. At the same time that Charles VII of France was mystifying his people with the imposture of Joan of Arc, and Henry VI of England, was engaged in the burning of necromancers who had attempted his life by melting an enchanted wax image before the fire, Ulug Beg, the grandson of Tamerlane, was determining with precision the latitude of Samarcand, his capital, with a mural quadrant of 180 feet radius, and making a catalogue of the stars from his own observations, which more than two hundred years subsequently was printed at the University of Oxford!

If the European wishes to know how much he owes to the Asiatic, he has only to cast a glance at an hour of his daily life. The clock which summons him from his bed in the morning was the invention of the East, as were also clepsydras and sun-dials. The prayer for his daily bread, which he has said from his infancy, first rose from the side of a Syrian mountain. The linens and cottons with which he clothes himself, though they may be fine, are inferior to those which have been made from time immemorial in the looms of India. The silk was stolen by some missionaries for his benefit from China. He could buy a better razor than that with which he shaves himself, in the old city of Damascus.

The coffee he expects at breakfast was first grown by the Arabians, and the natives of Upper India prepared the sugar with which he sweetens it. A school boy can tell the meaning of the Sanscrit words "sacchara cauda."

If his tastes are light, and he prefers tea, the virtues of that leaf were first pointed out by the industrious Chinese. They also taught him how to make and use the cup and saucer in which to serve it. His breakfast tray was lacquered in Japan. There is a tradition that leavened bread was first made of the waters of the Ganges. The egg he is breaking was laid by the fowl whose ancestors were domesticated by the Malaccans, unless she may have been—though that will not alter the case—a modern Shanghai.

If there are preserves and fruits on his board, let him remember with thankfulness that Persia first gave him the cherry, the peach, the plum. If in any of these delicate preparations he detects the flavor of the alcohol, let it remind him that that substance was first distilled by the Arabians, who have set him the praiseworthy example, which it will be for his benefit to follow, of abstaining from its use. When he talks about coffee and alcohol, he is using Arabic words.

A thousand years before it had occurred to him to enact laws of restriction on the use of intoxicating drinks, the Prophet of Mecca had accomplished the same object; and what is more to the purpose, has compelled to this day, all Asia and Africa to obey it.

We gratify our taste for personal ornament in the way the Orientals have taught us, with pearls, rubies, sapphires, diamonds. Of public amusements it is the same; the most magnificent fireworks are at this day to be seen in India and China.

And as regards the pastimes of private life, Europe has produced no invention which can rival the game of chess. We have no hydraulic constructions as great as the Chinese canal; no fortifications as extensive as the Chinese wall. We have no artesian wells that can at all approach in depth some of theirs; we have not yet resorted to the practice of obtaining coal gas from the interior of the earth; they have borings for that purpose more than 3000 feet deep.

Similar observations may be made if we examine the Asiatic contributions to science. While the learned of Europe were forbidding as a heresy, the doctrine of the globular figure of the earth, the Caliph Al Maimon was measuring the length of a degree along the shore of the Red Sea. He and his successors repeatedly determined the obliquity of the ecliptic. A Saracen constructed the first table of signs, another explained the nature of twilight, and showed the importance of allowing for atmospheric refraction in astronomical observations. Algebra itself was invented and brought into Europe by the Mahomedans, who gave it the name it bears. The same may be said of chemistry.

It is needless to pursue these statements, for whoever will take the trouble to look into the history of any branch of science existing in the 17th century, will find how deep are its obligations to Asia. I shall, therefore, add but one fact more: the invention of the figures of arithmetic, which in reality gave birth to that science, and

laid knowledge and commerce equally under obligations. For its simplicity, beauty, and universality, this invention alone is enough to command the gratitude of the human race. The manner of using the cipher, and placing the figures, is one of the happiest suggestions of the genius of man.

REV. HENRY WARD BEECHER ON CREEDS.—"We know not" says the Christian Enquirer, "where to find a better protest against the abuse referred to, than the following, which we copy from an exchange paper:"

"There is nothing in the statement that the creed power is beginning to prohibit the Bible as really as Rome did, though in a subtler way.—During the whole course of seven years' study, the Protestant candidate for the ministry sees before him an unauthorized statement, spiked down and stereotyped, of what he must find in the Bible, or be martyred. And does any one acquainted with human nature need to be told that he studies under a tremendous pressure of motive? Is that freedom of opinion—the liberty where-with Christ maketh free?

Rome would have given that. Every one of her clergy might have studied the Bible to find the Pontifical creed, on the pain of death. Was that liberty? Hence, I say, that liberty of opinion in our theological seminaries is a mere form, to say nothing of the thumbscrew of criticism, by which every original mind is tortured into negative propriety. The whole boasted liberty of the student consists in a choice of chains—a choice of handcuffs—whether he will wear the Presbyterian handcuffs, Baptist, Methodist, Episcopal, or other evangelical handcuffs.

Hence it has now come to pass that the ministry themselves dare not study the Bible. Large portions thereof are seldom touched. It lies useless lumber; or, if they do study and search, they cannot show their people what they find there.—There is something criminal in saying anything new. It is shocking to utter words that have not the mold of age upon them."

RIFLE SHELLS.—I mentioned in my last Colonel Jacob's rifle-shooting at Kurrachee and his blowing up ammunition-wagons at 1200 yards. The feats I then recorded have since been surpassed.—The Colonel was desirous of trying his rifle shells at a greater distance, and accordingly 1800 yards were marked off from the object upon which their power was to be tested.

That object was a box 1½ feet square. It was double throughout, a space of one inch being left between the outer and inner boards, each of which was an inch and a quarter thick. This intervening space was filled with gunpowder, and was found to contain a charge of more than 500lb.—The box placed against the butt, well tarred over, and the shooting began. All shots were fired from the shoulder, no rests of any kind being used.

Four rifles were at work—one a 32 gauge, two 24's, and a 16. That used by the Colonel was one of the 24's. After the practice had gone on for some time, and steadily improving, Col. Jacob's 21st shell struck the box, and blew it up with a violent explosion. The morning was at first dark and cloudy, but shortly after the firing began it grew clearer, and became ultimately very favorable as regarded the light, though a fresh breeze blew steadily across the range.—[Letter from Bombay.

THE ANCESTORS OF THE BRITISH ARISTOCRACY.—The Normans came out of France into England worse men than when they went into it, one hundred and sixty years before. They had lost their own language, and learned the Romance or barbarous Latin of the Gauls; and had acquired, with the language, all the vices it had names for. The Conquest has obtained in the Chronicle the name of the "Memory of Sorrow." Twenty thousand thieves landed at Hastings.

These founders of the House of Lords were greedy and ferocious dragons, sons of greedy and ferocious pirates. They were all alike, they took everything they could carry, they burned harried, violated, tortured and killed until everything English was brought to the verge of ruin. Such, however, is the illusion of antiquity and wealth, that decent and dignified men now existing boast their descent from these filthy thieves, who showed a far juster conviction of their own merits, by assuming for their types the swine, goat, jackal, leopard, wolf and snake, which they severally resembled.—[Emerson.

PROPERTIES OF GUTTA PERCHA.—In some experiments made recently at the United States Naval Laboratory, upon gutta percha vestments, very interesting and valuable facts were adduced in regard to the characteristics of that material.—For instance, pea jackets made of gutta percha fabric were baled in the same manner as the cloth clothing for the navy, under a pressure of thirty tons.

They were then placed over a steam boiler in the yard, and remained for sixteen days, subject to an average temperature of 190 degrees, at times as high as 212 degrees. On examination, the garments were found in the same state as when packed. There was no adhesion of the folds, nor any decomposition of the gutta percha. One jacket was dipped in water, rolled up, and sewed in the corners, but not pressed, and subjected to the same heat for three consecutive days; on being examined it was found in a state wholly free from injury.

GERMAN GAMING HOUSES.—Evidence of a rather corrupt social system appears in a statement made by the Journal de Francfort. The paragraph is headed "The German Gaming Houses," and gives the information that the gaming tables at Wiesbaden and Ems have passed from the hands of two individuals to a Company for the "consideration" of 1,200,000 florins; that the Company is to pay the State 250,000 florins in addition to the price of the annual lease, which is 105,000 florins, to give to the theatre of Wiesbaden each year 10,000 florins, and pay about 50,000 florins to the support of the chapel.