CAMBRIDGE CHRONICLE.

VOL. XI. NO. 700

"THE END OF EVERY GOVERNMENT SHOULD BE THE WELFARE OF THE PEOPLE."

NEW SERIES--VOL 2. CAMBRIDGE, Md.---Saturday Morning, December 9, 1837. NUMBER X

THE CAMBRIDGE CHRONICLE
Is edited and published every Saturday morning,
BY
ECCLESTON & JACKSON.

—TERMS.—

The CAMBRIDGE CHRONICLE is published every *Saturday Morning*, at TWO DOLLARS & FIFTY CENTS per annum, payable half yearly, *in advance*. Subscriptions will not be taken for less than six months. No paper will be discontinued until all arrears are paid, unless at the option of the publisher; and the failure to order a discontinuance previously to the expiration of the time already subscribed for, will be considered as a new engagement.

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In cases where the number of insertions is not limited, advertisements will be continued until direction to omit them is received, and charged accordingly.

At a meeting of the Dorchester Agricultural Society, held in Cambridge on the 4th of November, 1837, the following resolutions were adopted:

Resolved, That the thanks of this Society be tendered to the President, Dr. Joseph E. Muse, for his able and highly interesting address delivered on the 2nd inst. to the Society, and a large assemblage of the citizens of Dorchester and some of the adjoining counties.

Resolved, That he be requested to furnish a copy of his address for publication

Resolved, That the address be published in pamphlet form for the purpose of distribution.

Resolved, That the publishers of the Cultivator, New York; Farmers Register, Virginia; Cambridge Chronicle, and Aurora, be requested to give the same an insertion.

Resolved, That Thomas Hayward Esq. and Dr. Hooper, be a committee to carry the foregoing resolutions into effect.

ADDRESS

TO THE

DORCHESTER AGRICULTURAL SOCIETY

Held in Cambridge, November 2, 1837.

BY JOSEPH E. MUSE,

PRESIDENT OF THE SOCIETY.

ADDRESSING an audience so highly respectable, intelligent and informed—and too, upon a theme so full of dignity utility and science, as the present, it is natural that I should feel embarrassed in the undertaking, and solicit their favourable indulgence; resting my claim upon the integrity of the purpose and the excellence of the cause, rather than upon the hope of a successful performance of the task

The character of *agriculture*, the great object of our present devotions, has, from the earliest memorials of man, been highly estimated—because, it had been ordained by the *author of all good*, and was coessential and coincident with human life and sustenance—from the remotest periods of *civil history*, it has occupied an elevated rank, correspondent with that of the human intellect; and at the *present day*, the *impress* of its *divine authority*, is to be found in the loftiest eminence of the natural sciences.

In this sublime group of omniscient creation, we behold the faithful *confederates* of *agriculture*, in unremitting attentions upon this '*alma mater*' of the universe. At the shrine of this dignified majesty, we behold her numerous votarists, 'geology,' 'mineralogy,' 'zoology,' 'chemistry,' 'physiology,' 'botany,' 'meteorology,' and a host of others, offering up their daily contributions.

Before an audience, so enlightened as that by which I am now honoured, to dwell upon the merits and excellence of an object of universal admiration, by all whom providence has blessed with capacity to admire, would be vain and superfluous—to demonstrate the importance of agriculture, it has been justly said, would be 'like demonstrating the advantage of having food to eat, and clothes to wear, and the *classic 'Ovid,'* before the period of the Christian era, has registered in strong and comprehensive terms, the devotion of the Roman citizen to this *tutelar divinity*, '*prima dedit fruges—prima dedit leges—cereris sunt omnia munus.*'

I shall therefore call your attention to such topics as may appear to come within the immediate scope of the purposes of our society, and to form the great motives of our *institution*—the promotion of this *dignified character*—a few of the reasons why she *slumbers*—and some of the measures which may contribute to her *revival*.

These are the grave and weighty subjects of consideration, which hang upon the minds of all her advocates—of all who are worthy of estimation in the community. Who is not her *friend*, is *her foe*—and *her foe* is the *foe* of *mankind*. Will this sentiment be controverted by the plea, 'I am a lawyer' a 'physician'—a 'divine?' Are *these* not concerned—*deeply concerned* in the promotion of agriculture? Shall these honourable member of society say, 'we have no crops—no stocks—no articles for exhibition, or premium, and our moneys shall not be wasted in this idle pageant? I hope the day may not arrive, when experience too late may teach the error of this evasion—when too late, they may revoke their judgment and expiate their delinquency by the adverse destinies of their country, themselves and their posterity.

In taking a view of the agricultural interests of Dorchester—indeed of the Eastern Shore of Maryland, and perhaps of the state at large, the first alarming fact presented to the mind, anxious for the welfare of its *native home*, is the rapid emigration of its citizens, to other growing and rival sections—and the menacing prospect of *depopulation* and *impoverishment*.

The question naturally occurs, 'whence comes this fatal course of events? Why should Maryland, whose geographical position and geological resources are equal to any in the Union, *loiter* in the *rear* of other sections of our promising territory, and when they are *swimming* in the flowing tide of successful experiment, is *she sinking* in the stagnant pool of adversity? With every natural advantage, which providence could reasonably bestow upon her, she is on the brink of *perdition—yes merited perdition—spontaneous* and *suicidal* Whence comes then, this imminently impending fate, at once so *wanton* and so *unnatural?*

This is a grave question, full of consequences, and one which it becomes our duty to our *country*, to *ourselves*, and to our *children*, to investigate, and remedy by all the moral force we can command—by all the intelligence and information we can acquire—by all the physical abilities we can bring into action—without the concurrent influence of these powers, our native and beloved state will be abandoned, forlorn and desolate—our children impoverished, and our memories handed down to posterity, as *just* and *fit subjects* of *desecration* and *contempt*

Whence comes then, I repeat, these physical and moral evils?

With due respect to the honourable body of our legislature, I maintain that *their apathy* and *their injustice* have contributed largely to these misfortunes.

I am conscious of the obnoxiousness of this sentiment—but I wish to be understood as applying my remarks to the principle, 'ad rem, and not 'ad personam,' not to the agent but to the action. That honourable body have refused a fostering hand, when supplicated for assistance, and under circumstances of the most *imminent peril;* when redemption and preservation were within their command. When other interests were regarded and sustained—rail roads and *canals* indefinitely countenanced—*rocks* and *mountains excavated—embankments erected* upon *valleys*, at the cost of *millions*—all these bounteous acts of beneficence have been conferred upon other interests, when the needy and supplicant farmer has been rejected, and refused a dollar from the munificent chamber and its overflowing coffers; with a sad and ominous *veto* upon his *last hope*—yes, upon his *rightful claim* and *demand*, he is told to *retire*. *we have other bantlings* to nourish, more deserving of our favour, more congenial to our fancy; you are a *passive subordinate* creation; others there are more bold, more prominent—when they are satisfied, you shall have the fragments, if any there be, remaining of the feast.'

When this *key-stone* of the *ark*, of safety, wealth and independence, is already loosened, and the *great fabric* is *tottering* before the eyes of that honourable body, when in this perilous condition, this devoted class, 'the tillers of the soil,' are driven from their native attachments by successive and continuous losses and misfortunes, in their professional occupations, to a land of *strangers*—to the west and south, where the youthful vigour of nature, has not yet been impaired—or to the north and east, where, under the *auspices* of a more liberal and propitious policy the menacing approach of decay is arrested; and the consequent impending evils averted by legislative wisdom—by bounties, and premiums for the growth and manufacture of new species of crops, which an *altered climate* and other circumstances had demanded, in place of the old and accustomed routine—when these things were known to the most uninformed—this depressed class is rejected—unassisted—unheeded—and unregarded

While I have the faculty of speech, to utter the sentiments of my heart, and to express the convictions of my mind, I will *denounce*, because I *abhor* this action of our legislature, as a violation of the principles of political justice, and true political economy—and leading to the ruin of the best interests of our country;—it inclines me to exclaim with the astonished poet, '*proh superi; quantum mortalia pectora, cæcæ noctis habent.*'

In concurrence with other causes of a *physical* character, this policy—this false judgment of that honourable body, has nearly *extirpated* the *last hope* of *agriculture* in Maryland. And without a speedy relief, this radical interest, from which *all others spring*, and upon which they *subsist*, with its numerous retinue of dependents, will *languish* and *irrevocably* be lost.

In regard to the *physical causes* of the menacing condition of our agricultural interests, the *most general* and *prominent* may be found in the *fluctuations* of, '*climate*' and the present unfitness of '*station*' for the '*wheat*' crop—a term used by geologists, to denote that locality of animal and vegetable existence, where a combination of physical circumstances, favourable to the development of their respective organization, may have established them.

Many centuries ago, the classic farmer of Mantua, the immortal Virgil, impressively taught the importance of this inquiry—the *fitness* of '*station*'—and to 'learn the winds and the various qualities of the *climate*,' for successful cultivation, '*hic segetes, illic veniunt felices uvæ*,' and he adds, 'these laws and eternal regulations, nature from the beginning, ordained.'

Without occupying your time, to dwell upon the beauties of this arrangement—upon this conspicuous instance of providential wisdom, goodness and power, which all nature is daily unfolding to our view—it is sufficient for the present purpose, to notice the *fact* of the geographical distribution of the whole organic world, by this rule of specific self-adaptation, implied in the term '*station*'—it is one which is accepted as a *truth*, by the common consent of mankind, because it is founded in the natural and necessary sequence of cause and effect—it is one which offers a rational solution to the difficult problem that '*questio vexata*,' the loss of our wheat crop—and it is full of interest to all, more immediately, perhaps, to the agricultural class of our community. On this important fact, geologists too have instructed us—differing only on some relative questions of theory and individual opinion

At that eventful olden time, when the first creative hand converting chaos into form, consummated the great work by *organic life*, innumerable evidences are furnished in the fossil remains, 'that the animal and vegetable structure was simple and imperfect, in conformity with the rude condition of the 'earth,' 'climate' and other physical circumstances, under which they were placed. As this condition altered and improved, so did their structures become more perfect and more complex, until by an uninterrupted succession of physical events, we behold '*nature* as she is, enchanting to admiration, and in her sublime works of mechanism and design, bespeaking her *divine* authority; and by her infinite wisdom and power, confounding the infidel and establishing the conviction of his *folly* and his *imbecility*.

Whether this progressive improvement of animal and vegetable life, was effected by a successive *creation* and *destruction* of new species, or by a transmutation of the *originals*, and their progressive advancement to a more perfect state, are questions not essential to our purpose; as the important truth remains in either case unaffected, that fit '*stations*' are essential to the life and prosperity of the respective species, and they must find them or perish by the established laws of nature.

That many animal and vegetable species have become *extinct* since their first creation, cannot be reasonably questioned; numerous fossil evidences establish the fact, yet in the *general*, the doctrine of *progressive improvement* and *transmutation*, is consistent with experience and daily observation; and in the instance of our '*wheat*' plant, we have many of us witnessed and I have long since maintained upon good authority, its partial 'transmutation' against the bold assertions and inveterate dogmas of adversary opinionists, who seem to hold their creed of physiology as a code of moral law; and from their sentimental asperities it would seem, under equal penalties of transgression.

Upon the fact of 'transmutation' of the wheat plant, much evidence might be adduced; it is sufficient for the purpose to name that of a learned friend, 'Mr. Featherstonhaugh,' the United States' geologist, whose acute observation and high and well merited fame, and acquirements in the natural sciences, are ample pledges of its accuracy, 'that he has seen stocks of 'cheat' developed from a grain of wheat, under the most infallible circumstances; and I might name others which have no doubt, on my mind, of the fact of *transmutation* occasioned by the influence of various *physical accidents*.

The famed Lamarck quotes many examples of the changes of plants in their *forms, faculties*, and even in their *organization* by a change of the physical conditions under which they are placed; and he justly observes, what 'nature' brings about in a great lapse of time, *we* may occasion suddenly: some plants are made to lose their thorns; some, the *acridness* of their *juices;* others have their *ligneous* converted in *herbaceous* stems, and some, which are *perennials* become *annuals;* an unfavourable climate, exposure to winds, and other accidental causes, may give rise to a *stunted* and *altered race;* and *mutatis mutandis*.

The extravagance to which Lamarck has carried out this doctrine, should not vitiate his truths; that '*man*' should have sprung from a '*monad*' of animated matter, and by progressive improvement have arrived at his present state of superiority, is absurd; yet it is unphilosophic to reject, absolutely, physical, moral, or religious truths, because they may have been mingled with fanaticism or extended to absurdities. Gold is not contaminated by the base matrix in which it may be found, nor should the lights of truth, which this talented author may have thrown upon this interesting question, be extinguished by his casual follies, his lucid intervals make ample amends for his odious hallucinations

We will leave this controversy and revert to the important and settled truth, 'that plants as well as animals require certain physical conditions for their well-being,' an essential point of which is '*climate*,' which for causes not fully known, has been and continues to be suffering variations throughout the globe, and tending to a diminution of temperature, and consequently no locality continues to be suitable for the same vegetable or animal at all times; and if our crops are not changed with the change of climate, by the *force* of *intelligence* and *judgment*, they will perish and disappoint us; they will *change themselves* by the force of the *laws* of *nature*.

In the present regions of Siberia and many other northern countries, are found direct proofs of this fact, in the fossil remains of *living* species, the elephant, the lion, the tiger, the tree fern, the palm, and many others, 'as we are informed by Mr. Lyell and other distinguished naturalists,' inhabitants *now*, only of more temperate climates.

To this cause, then, this *gradual* but *continued* lowering of the temperature of the globe, may be referred the failure of our wheat crops; and hence may be seen the necessity to supply the loss by others, adapted to the *new physical condition* of the *country*.

Twenty years and more have borne witness to the fact, that this great staple with us, is annually declining; the progress of this evil, though *gradual*, has been with few exceptions *constant*, and within the last few years, alarmingly conspicuous; the progressive revolution of the climate has been equally manifest, to all who are in the habit of observation, clearly indicating the *cause* and the *effect;* this essential incident of '*station*,' once so congenial to the development of our favorite plant, has assumed a *new character* adversary to its *physiological* constitution

With the *decline* of the general temperature of the globe for ages past, and established upon accumulated and unquestionable evidences, collected by distinguished naturalists already named, another important and relevant fact is equally attested, 'that under the influence of this change, *plants* and *animals*, with the exception of a few individuals, have been from the most ancient periods of time, regularly and gradually *migrating* from higher to *lower* latitudes; the *latter* from the general decline of heat, having acquired *that degree*, for which they had been constituted; and which the *former* had *previously possessed* and *now lost*; hence, we have no reason to flatter ourselves with the hope that our wheat plant will continue; and resist the *instinctive impulse* given it *for its own preservation*, by the commanding hand of nature.

And *a priori*—it is deducible from causes, obviously still in operation, that a comparatively short period, perhaps half a century or a little more, will find the wheat plant flourishing only in the most southern sections of our vast empire; and *another period* still longer, may in all probability, *cancel* it from the catalogue of vegetable life.

Our sister states of higher latitudes, have long since experienced the effects of this mutation of climate upon their wheat crop; the 'Northern Farmer,' of New England, informs us that fifty years ago, their 'wheat' was a *certain* and *profitable* crop; and that *now*, they cannot by *any mode of practice* produce enough of this grain to defray the costs of cultivation

Thus by a diligent review of the *past*, we are enabled to direct our course for the *future;* we are furnished with a key to unlock the magnificent temple of nature, disclose her enchanting secrets, & contemplate her wise and providential plans, for the general good of her creation.

A fallacious ground has been assumed, and on very respectable authority, against the continuance of our wheat crop, which though leading to the purpose of my proposition to abandon this plant, is wholly untenable, 'that *land tires* of a species,' this in the *sense designed* is an unphilosophic notion, and may produce much error in practice.

The theory of '*rotation of crops*,' rests not upon this principle but upon the *appetency* of plants for *ultimate principles*, peculiarly essential for their sustenance; and respectively consumed in the different ratios of their natural demands; by a fresh supply of manures, the consumed principle will necessarily be furnished, and the capacity of the land for reproduction be restored, or perpetually preserved; but it is said by the advocates for the '*land tiring* doctrine' that the remedy of *manuring* is incompetent for a wheat crop, where formerly the plant flourished; true, because the '*station* has become materially *modified*, and for reasons already given, we must adopt others whose habits and constitutions are *conformable* to *this modification*.

Our desire to retain this crop, is founded on an amiable principle in man, often conducive to his interests; that of a venerable attachment to the *prescriptive law* of *usage;* yet it is a law, which like all others has its numerous exceptions, to be found in the *absence* of the *reasons*, from which they derived their *validity*. In regard to this *interesting question* of the *policy* of *continuing our 'wheat crop,'* another consideration may be offered, entitled to much weight.

Every individual *plant*, as well as *animal*, has its *respective tribes* of *parasitic insects*, which peculiarly belong to it, and which follow it, in its *progressive migrations*, before mentioned, at a less or greater period after its removal to its newly adopted '*station*.' The *longer* the time it shall have occupied its *new domicil*, the *greater* will be the hostile array of these predatory tribes upon it:—no better evidence can be required of this truth, than the instance of the 'Hessian fly,' which for many years, had not annoyed our wheat crop,—yet, has accumulated, until, alone, it is now competent to its destruction: and annually, we hear of new enemies, multiplying upon this plant; and, which, too, will never abandon their post, while we supply them with the choice forage, for which, they had made their incursions

From a change of climate, and other incidental circumstances, our rich harvests which, to ourselves, and our ancestors, had yielded a bounteous equivalent, for cost and labour, have degenerated into a fruitless heritage, continued solely, from ancestral veneration, and the irrefragable bond of usage

For occupying so much of your time, upon subjects of natural science which may have appeared abstract, and irrelevant to that of agriculture, I must make the apology of its necessity, to demonstrate an important proposition, 'that our wheat crop should be, at least, considerably curtailed—and, *new crops*, from other countries, substituted for it.'

From the view I have taken, too, some useful rules may be drawn, for the direction of those whose enterprise may lead them to discover, and introduce such new crops, as may, with the greatest prospect of success, supply our necessities.

The most obvious rule, that grows out of the premises for this purpose is, 'that the selection of plants be made, from *higher* latitudes, than those to which they may be transferred.

Since we have seen, that the *mean temperature* of the globe is *diminishing;* and, with this cause, necessarily, a general migration of the vegetable and animal species, regularly, though slowly progressive, from the *poles* towards the *equator*, in quest of new '*stations*,' which may have become more suitable to their habits and constitutions,—it follows, that our *selections* must come from *higher* latitudes, in conformity with the physical laws, under which they had been heretofore moving; and, with as wide a difference of climate as experiment may prove them capable of bearing: this removal will be only in *anticipation* of their *natural impulse*: and *what, this impulse*, would, in a *longer time*, have accomplished; and this principle of *selection* will afford a reasonable hope, *cæteris paribus*, of a longer enjoyment of the plant, than had it been found in the south, and brought back to a '*station*,' which possibly, it may have *deserted* for its *unfitness*.

It has been wisely said, 'we may command nature, only by obedience to her laws: under her well defined laws, as we have seen, the physical geography of the whole globe has been suffering a series of changes, from the earliest history of time—and, by a *rule, based* on *this fact* of natural science, the cultivator of the soil must *select* his crops, and *graduate* his system of cultivation.

Under this rule, the only hope remaining for a continuance of our favourite staple crop, will be found in *seed wheat* from *higher* latitudes; a spring wheat from Switzerland, and another from Florence, have recently attracted public attention; yet, but little is known of them; the '*common spring wheat* has heretofore disappointed us; how far these new varieties may supply the *desideratum*, is a question of *intense interest*, and merits the most prompt, and earnest investigation: I have purchased some small parcels for experiment, and shall be enabled, at the next autumnal exhibition, for the Eastern Shore of Maryland, to be held at Easton, to report the result

The hope of a change of climate, propitious to our *winter* wheat is delusive and groundless.

The extent of our continent, and its connection with the polar circle by a vast chain of high lands, have fixed upon us a climate of excessive *rigour* and *mutability*,—when the continent of Europe separated from these arctic regions by an *ocean*, enjoys in the *same parallels* of latitude, a climate more *temperate* and more *equable;* and it is much to be apprehended from well known physical causes, that the *excessive* character of our climate will increase rather than diminish.

The *felling* of our *forests* and the *cultivation* of our *lands*, as Mr. Lyell, and others have inferred; and the well known principles of philosophy teach us, will allow a copious absorption of heat, under our nearly vertical sun; which, radiated into the atmosphere will rarify it, and bring in upon us an influx of the condensed, freezing *currents* of the northern mountains, and, the transitions from heat, to cold, will probably become more *frequent*, more *sudden*, and more *considerable* in the direct ratio of *those causes*, which are progressive.

The same authorities too, teach us, and the general principles of meteorology support the doctrine, 'that *forests* have the effect of *promoting rain*: they cool, and condense the atmosphere around them; which, mingling with the aerial currents flying over them, arrests their progress, and supplies us with genial *showers*, that otherwise, might have passed in *vapour*.'

From these considerations it would seem too clear to be questioned, that our *climate will not improve*, but, on the contrary, will become more *excessive*, and the mean temperature lowered; our winters more rigorous,—our summers more subject to *intense heat*, and *frequent drought*, and *wind;* and the *fluctuations* greater than formerly, or at present.

Hence, the necessity to summon fortitude,—and, by future wisdom, economy, and perseverance, to expiate out past follies:—adopting the golden motto, '*nec cede malis, sed contra, audentior ito*.'

Under a conviction of this truth, and from repeated abortive attempts with the old routine, I have made the experiment of many new crops,—and I regret to acknowledge I have not yet accomplished my views; yet, I have the consolation, that by the detection of many errors, I have advanced so many steps to my *final purpose*.

A cotton crop which I continued three years, produced on the second, a strong hope of success, yielding twenty-five thousand pounds of seed cotton, from thirty acres—the third crop on seventy acres was almost a total failure;—the texture was fine, and it commanded a better price, than the upland southern; yet I found it too precarious, for profit.

An experiment, a few years past with hemp, was flattering;—I have no doubt, that in our low black lands, the hemp crop would be a valuable acquisition.

I have this season, grown the 'sugar beet,'—the 'white Silesian,' and have a large product of fine roots which I contemplate manufacturing, when I receive my mill, which is contracted for;—having prepared all the other necessary implements. A faithful report will be made of the result.

Upon a fair trial of the Shipping bean, which had been highly commended, I experienced almost a total failure;—under the most favourable circumstances, it did not pay costs.

An experiment with the 'palma christi,' convinced me, though the growth was fine, that the tediousnes of the gathering was nearly equivolent to the product of the crop, and I have denounced it, as interrupting more time than it is worth.

My crops of Spanish tobacco, from seed directly from Cuba, which I have, for the last two years extended, in the growth and manufacture, to a large amount, have far exceeded my most sanguine expectations, in respect to both quality and number:—the impediment to this crop arises from the difficulty of obtaining the seed, annually, (which is essential) from its native soil and clime; in which, I have been disappointed, eight years in the last ten, either by the failure of the orders for it, or by its not vegetating, when received.

I have a few thousand mulberry stocks, Multicaulis, and White Italian, yet too young for the worm, without injury to their growth; this article, with its manufacture, needs no comment;—*produce it*—and *pro tanto*, you *produce wealth*:—yet, with *arms folded*, we invoke the aid of Hercules; unconscious of our own resources:—of our own abilities, to *extricate* the *wheel*.

Some saccharine and fainaceous roots,—'potatoes'—'beets' —'parsnips' —'carrots,' though not profitable for *field* culture, might occupy a few acres, to advantage, and would enable us, to send to to market, more of our Indian corn, which for several years, has been a scarce and costly article.

The '*turnip*' the '*ruta baga*,' and *all its varieties*, though its introduction into England, is said to have made a *memorable era* in the agriculture of that country I hold to be the *most worthless* of the *cultivated roots*—its *fibres* are chidfly *ligneous*—its *juices, aqueous*:—without meaning any disrespect to its numerous eulogists, I might fitly, and technically term it 'a simple *hydrate* of *wood*.' It may answer the mechanical purpose of filling the stomach, and enabling it to grapple the *nutritive* matters received in it, and but little else. One of the best analysts in England, Sir Humphrey Davy, reports the common turnip to contain only forty-two parts of soluble, or nutritive matter, in one thousand:—the ruta baga but little more.

In respect to the 'Indian corn,' a crop of the first magditude, it may seem superfluous to make a remark:—though well cultivated, on this Shore, particularly yet, it is a singular fact, that in the northern states, where the climate cannot be so favourable to its growth, as that of Maryland, their crops are much more productive, yielding 80 to 100 bushels per acre, on lands of moderate capacity: when, on our best land 30 to 40 is considered a good *field* average;—and one-half of this quantity is more than an ord