

Demonizing Diseases and other Scourges of Nature

Lessons from Thomas Jefferson and Hessian Flies



1776

The story begins with the American Revolution in 1776.

A new pest was attacking a staple, the wheat crop.

Jefferson wrote of this new scourge:

“In June the chrysalis bursts and the insect comes out, brown like a flax seed, a little longer, and with wings.

The egg is found from the joint nearest the ground ...

The stem decays in that part, turns yellow, the blades become erect, and the plant dies.”



1776: Mayetiola destructor



Modern genetic analysis suggests the fly causing all the chaos was Mayetiola destructor.

Originated in Asia and then migrated to Europe and North America.

1776: Mayetiola destructor



Precisely when the invading pest arrived in the fledgling United States is impossible say, but

what we do know is the first records available list the arrival port as Long Island, New York and the year as 1776

and so coincides with when Hessian troops arrived there to join the Crown to suppress the budding Revolution.

1776: Mayetiola destructor Spreads



At first the pest attacks were scattered and sporadic

but within a decade, Jefferson reckoned the fly was spreading west and south at a rate of twenty miles a year.

The Rumors Commence



Rumors spread that this still unnamed pest had come over in the straw beds of the Hessian mercenaries.

Soon the rumors became even more sinister

The fly was being used as a biological weapon

The Rumors Commence



An anonymous author penned

“The Prophet Nathan, or Plain Friend; Containing
Some Observations Respecting the Late Insects
Commonly called the Hessian Fly, Considering Them
as a Judgement Upon the Land.”

The Rumors Commence



“The Prophet Nathan, or Plain Friend; Containing Some Observations Respecting the Late Insects Commonly called the Hessian Fly, Considering Them as a Judgement Upon the Land.”

“the Hessians have brought over thousands of little insects, on purpose to destroy this country.”

Hessian Flies



There was, and is, no evidence whatsoever, that Hessians brought the pest over as a biological weapon.

No matter:

it might have happened that way

that was enough for George Morgan to dub it

the "Hessian fly."

Hessian Flies



Morgan was a member of the American Philosophical Society,

who had a personal score to settle with the pests that had ravaged his fields in Princeton.

The Invader Mindset



Morgan came to think that personifying and demonizing the fly as a Hessian of any sort

would tap into a “hatred-of-the-invader” mindset.

The Detestation in which the Human and Insect were Generally Held

George Morgan to John Temple, August 26, 1788

"The name of Hessian fly was given to this insect by myself and a friend early after its first appearance on Long Island ...

we agreed to use some industry in spreading the name to add, if possible, to the detestation in which the human and insect (were) generally held by our yeomanry

and to hand it down with all possible infamy to the next generation as a useful national prejudice.

It is now become the most opprobrious term our language affords and the greatest affront ... to call or be called Hessian."



Everything Disagreeable



New York's Samuel Latham Mitchell, a leading politician and intellectual of the day, agreed

writing in his "Short Memoir on the Wheat-Insect,"

that Americans were "ever fond of ascribing everything disagreeable to the Germans."

Jefferson Enters the Story



Though Jefferson may have learned of the fly earlier,

the first documented evidence comes from a 1787 letter he received in Paris

where he was serving as Minister Plenipotentiary.

A Pernicious Insect



William Hay to Jefferson, April 26, 1787:

“Your native country exhibits at present a very gloomy picture, the most striking traits of which are a degeneracy of manners and an unequal and slow administration of Justice.”

To make matters worse, Hay tells of farmers who have

“seen with sorrow ... the wheat and frequently the corn almost totally destroyed, for some years past, by a pernicious insect....

no remedy has been found out for them....

the same bug is known to the northward and is there denominated the Hessian Fly.”

A Calamity more to be Dreaded than the Ravages of War



A year later, Jefferson, still in France, read in The American Museum, an even drearier picture in which farmers

“dread its (the Hessian fly’s) approach

the prospect is, that unless means are discovered to prevent its progress

the whole continent will be over run

a calamity more to be dreaded than the ravages of war.”

Matters Unfolding in England

Matters unfolding in England also caught Jefferson's attention.

The Privy Council Committee on Trade, which was stocked with members still seething over the lost war

was warned of the dire consequences of the Hessian fly should the government continue to import wheat from America.



Matters Unfolding in England



Joseph Banks

Based on a report from Headed by Joseph Banks, president of the Royal Society of London,

The council recommended to King George III that

American wheat imports be banned to circumvent

“a calamity of much more extensive and fatal consequences than the admission of the plague.”

Matters Unfolding in England



What was especially galling to Jefferson

was that there was scant evidence either way about whether the fly larvae would survive the trip to Britain

Banks set an impossible standard to meet:

“positive proof that no danger whatever exists”

reinforcing the notion that this was retribution for a lost war.

Matters Unfolding in England

Thomas Paine wrote Jefferson

that the ban “was only a political manoeuvre of
the Ministry.”



Matters Unfolding in England

Jefferson concurred.

He wasn't worried about the effect of the ban per se,

as England imported only a small proportion of
America's wheat exports

but the ban might scare other countries like
France, which imported much greater quantities.



Matters Unfolding in England



Jefferson decried to his friend Benjamin Vaughn that the report was little more than

“libel on our wheat ...

which can have no object but to do us injury

by spreading a groundless alarm in those countries of Europe where our wheat is constantly and kindly received.

It is a mere assassination.”

Jefferson's Return Stateside



On his return back to the United States, Jefferson had his hands full.

Washington had appointed him the country's first Secretary of State and he was also Vice President of the American Philosophical Society.

Both positions would play a role in his growing connection to the Hessian fly.

Hessian Flies in the Mail

In 1791, Jefferson received an unusual parcel from Ezra L'Hommedieu in Long Island:

L'Hommedieu wrote

Since I saw you at this Place I have received from Colo: Sylvester Dering of Shelter Island some Observations he had made on the wheat Insect commonly called the hessian fly,

which I send you herewith inclosed with some Stubble of the yellow bearded wheat (as little subject to Injury by the Insect as any we have).

By carefully examining this Stubble, by opening the Straw near the Roots and first Joints you will find many of the Insects in their chrysolis State still alive and their Inclosure or Case very Tender...

is easy to see that the Insect might be brought from Germany to New York or carried from us to Europe in the Straw or Stubble

but not in the wheat except by much trouble and by design.



The Best Means of Preventing or Destroying the Insect

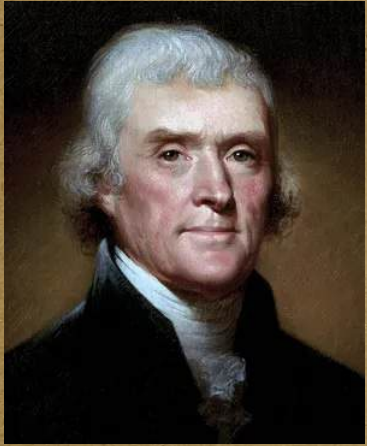


In 1791, Jefferson took it upon himself

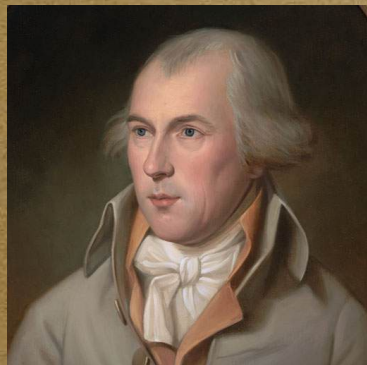
to create and chair an American Philosophical
Society committee to study the Hessian fly to
determine

"the best means of preventing or destroying the Insect."

James Madison Enters the Story



Jefferson would soon get the chance to gather some of that Hessian fly data himself.

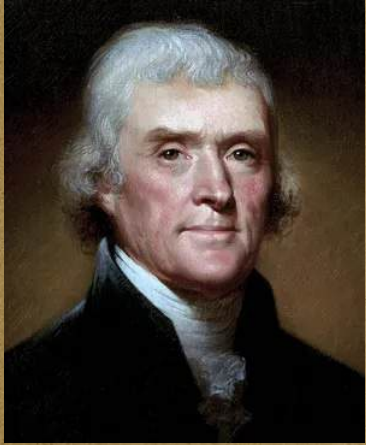


His friend and protégé, James Madison,

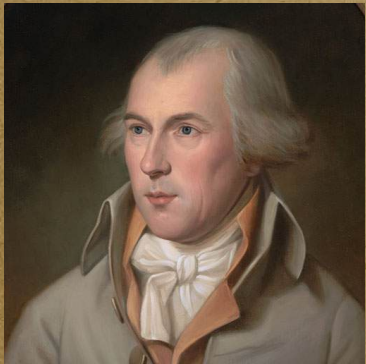
suggested that they take a month-long excursion to the lands and lakes of New York, Connecticut, Vermont and New Jersey with

“health, recreation and curiosity” driving the journey.

More Rumors



Jefferson saw it as a chance not just to relax,
but also to survey farmers and the like about the Hessian fly along
the way.



Jefferson and Madison decided to meet in New York City on
May 19 and to commence on their holiday from there.

That was a mistake.

New York City was a hotbed of Federalism, and the
adopted home of Jefferson's nemesis, Alexander Hamilton.

More Rumors



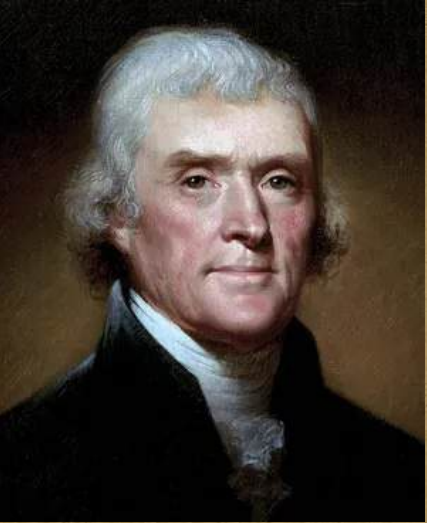
The Federalist rumor mill began turning:

Alexander Hamilton's son John was convinced that

“under the pretext of a botanical excursion to Albany,”

Jefferson and Madison were instead meeting with New York's anti-Federalist Governor George Clinton to scheme against his father's party.

More Rumors



The British Consul General, Sir John Temple, was convinced that Jefferson and Madison had

“gone to the Eastern States, to proselyte as far as they are able to a commercial war with Great Britain.”



More Rumors



Alexander Hamilton

Hamilton's allies saw the visit as a step to undermine their leader, and, more generally, the Federalists.

New York State Assemblyman Robert Troup wrote to Hamilton, his friend and King's College roommate.

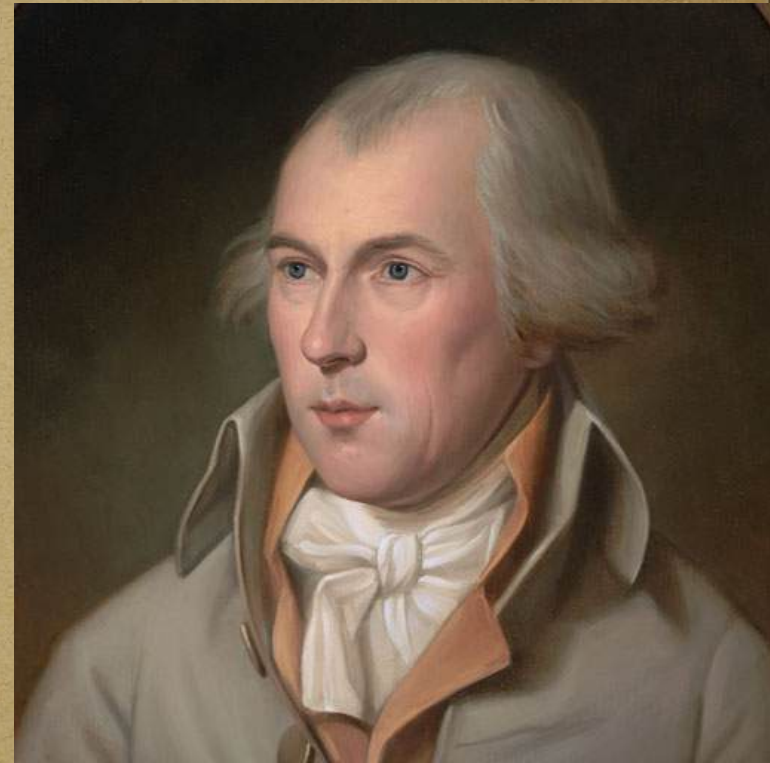


Robert Troupe

"Delenda est Carthago [Carthage must be destroyed] I suppose is the Maxim adopted with respect to you

If they succeed they will tumble the fabric of the government in ruins to the ground."

More Rumors



Neither the journals Jefferson and Madison kept during their trip nor their writings afterward
even hint at a plot against the Federalists
a meeting with Clinton
or a commercial war against Britain.

Middling Inns

Instead, Jefferson's journals from the trip show anything but politics.

He ranked each of the 28 inns in which they stayed (eleven "good," twelve "middling," and five "bad").

He recorded dozens of natural history observations.



300 Unquachog Words



During their trip, Jefferson and Madison visited a Unquachog Indian settlement of "about 20 souls" in Brookhaven, Long Island.

Jefferson spent a day talking with two women from the tribe

deciphering the English equivalent of almost 300
Unquachog words

cow, dog, sun, door, chimney, bread and more
so their language would not go extinct.

Notes on the Hessian Fly



What Jefferson's journal also shows is that the Hessian fly was front and center in his mind.

Between May 24 and June 18

He compiled a six-page document

"Notes on the Hessian Fly,"

for himself and the American Philosophical Society.

Notes on the Hessian Fly



Jefferson's first entry is logged sixteen miles north of Poughkeepsie, New York, where he writes of a Conrad Lasher who told him that

"The Hessian fly remains on the ground among the stubble of the old wheat...

soon after the wheat comes up they lay the egg in it, of the size of a nit...

the old fly dies in the winter.

In the spring they begin to grow."

Notes on the Hessian Fly



Twenty-miles away from there Jefferson learned that

“the fly came first in 1787 into this neighborhood and destroyed the crops of 87. 88. 89.”

Circular on the Hessian Fly



When Jefferson returned to Philadelphia his role as Secretary of State and his passion for studying the Hessian fly returned with him.

Working with his committee at the American Philosophical Society

Jefferson wrote up a "Circular on The Hessian Fly"

which was distributed and printed in newspapers around the country.

Circular on the Hessian Fly

At a meeting of the Committee appointed by the American Philosophical Society for the purpose of collecting and communicating to the Society materials for forming the Natural History of the Insect called the HESSIAN-FLY, as also information of the best means of preventing or destroying the Insect, and whatever else relative to the same may be interesting to Agriculture :

RESOLVED that, for obtaining information of the facts necessary for forming the natural history of this insect, before its entire evanishment from among us, it be recommended to all persons whose situation may have brought them into acquaintance with any such facts to communicate the same by letter addressed to Thomas Jefferson, Esq. Secretary of State to the United-States.

And that the proper objects of inquiry and information may be more particularly pointed out, the following *Questions* are proposed.

Circular on the Hessian Fly

§ 1.

In what year, and at what time of the year, was this animal observed for the first time? Does it seem to have made its appearance in this country only of late years, or are there any reasons for supposing that it was known in any part of the United-States previously to the commencement of the late revolution?

§ 2.

At what time of the year has this insect been observed in the *Egg-State*? At what time in the *Worm-State*? And at what time in the *Fly-State*? How long does it remain in each of these several states? Does it pass through more than one generation in the course of a year? If it does, which generation of the insect is at all times the most injurious?

Circular on the Hessian Fly

The circular did spur some replies.

David Redick wrote Jefferson:

"I can now inform the committee that the fly appears this season about six or seven miles south of this town [Washington]."



Circular on the Hessian Fly



Joseph Moore of West Chester, Pennsylvania wrote that the flies'

"depredations do not appear to be confined to any particular soil ... none with us have entirely escaped without Injury."

John Shepard noted that

"it seems most injurious to wheat sown on a low wet soil, its ravages appear much less in ground recently manur'd."

Circular on the Hessian Fly



The responses were hardly sufficient for Jefferson's committee to produce a report of any sort and soon the committee simply dissolved.



Circular on the Hessian Fly



From that point forward

Jefferson's passions drifted elsewhere

his political duties grew greater and greater,

and his obsession with the Hessian fly petered out and soon all but disappeared.

With a brief resurgence when the Hessian flies arrived in Monticello in 1811,

at which time he wrote fellow Virginian William Johnson

“we, of this state, must make bread, and be contented with so much of that as a miserable insect will leave us... for such swarms of the Wheat-fly were never before seen in this country.”



The Hessian Fly Legacy



Today, Mayetiola destructor continues to destroy, a worldwide menace of wheat and other crops.

From the moment they landed in the United States—perhaps, but just perhaps, in the straw beds of those Hessian mercenaries

Hessian flies had sown havoc.

The fly itself attacked not just our crops, but also our psyche

tapping into that fear of the other that so easily grabs hold of us.

Jefferson Was Constantly Drawn To All Things Natural History

