

AN  
INAUGURAL DISSERTATION

ON

*Malaria*

SUBMITTED TO THE

PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY

OF THE

University of Nashville,

FOR THE DEGREE OF

DOCTOR OF MEDICINE.

BY

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OF

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Malaria, is the parent of a class of diseases, known to prevail in all that portion of the north American Continent south of the  $56^{\circ}$  of latitude north, embracing South America. In short so far as man has yet gone, in a southern direction, the malarial element, is found and its influences witnessed and felt.

It shall be our purpose in this dissertation, to give an opinion, as to the source of the malarial poison and to show by such facts as we can, that a very great error has been committed, by those, both of the olden times, as well as many of the present day.

Those who were and are called,  
and who in very many respects  
were and are, Luminaries in the  
Medical profession. when they  
teach that the decay of vege-  
table matter yields the malarial  
element.

Marsh Miasmata is a term  
much employed, by those who  
claim that vegetable decomposition,  
gives out the chill and fever  
creator, and right here we  
would ask, why is it that  
those teachers, have such  
a wonderful love for swamps,  
Marsh Miasmata say they, and  
it would seem ~~to~~ the superficial  
reader and careless student,  
that there was no vegetable



decomposition going on except in  
marshes, and perhaps the immed-  
iate region round where Frogs  
and Reptiles are wont to jump  
and crawl, This fact (for it  
is referred to as a fact,) is claimed  
by the advocates of the old  
Theory, as evidence which gives  
support, to their teachings,

This argument is far fetched  
when thus applied, and only  
supports the theory which we  
adopt, which is that water  
confined under peculiar cir-  
cumstances, is the element, and  
heat, is the agent in the prod-  
uction of malaria, our opinion  
is that if vegetable decomposit-  
ion were to cease and not

another root, stem, sprig, or leaf, was to decay, There would be but little perceptible diminution, in the occurrence of Malarial fevers, But we are told by those, whose theory and opinions we war against, that Malarial diseases occur most frequently, in the latter part of summer and autumn.

By the kindness of providence our lot, has been cast in a locality where we were kindly permitted to enjoy occasionally a good, old fashioned Ague varied by a fever, which to say the least soon made us warm enough for comfort, and this being the case we happen to

know for ourself, that such is not true, and that malarial fevers actually prevail to a greater degree in mid summer as a general rule than at any other period, True we do have some malarial disease in the latter part of summer and in the fall, but we have but few cases of what we term Bilious fever after the middle of September though we frequently meet with chills and fevers in October, November and December, but when we come to get at the history of a majority of those October November and December chills and fevers, we will find that



in nine cases out of every ten, that the patients, had, had either Intermittent or Remittent fever in June, July, or August, and simply from the fact, that those persons did not take Quinine enough in summer, they must take a larger amount of chill and fever, and worry as best they may through a good portion if not all the Fall and winter seasons. We have now shown, that the teachings of the old and popular theory, (but we are pleased to know, that it is now on the wane) are in an error respecting one very important fact bearing upon the

period of occurrence of malarial fevers, now if it be true that malarial fevers occur more frequently in June, July, and August, than in the latter part of summer and in Autumn.

We hold that this alone is sufficient to overthrow the old, and establish upon a foundation, as firm, as that upon which rests the rock of ages, the theory which we endorse, and designate as the new theory, no one will contend that the decay of vegetable matter is more rapid in midsummer, than in autumn, the reverse of this being true, thus it happens that at that period of the year, when vegetation



is in its most prosperous and flourishing, condition, namely in June, July, and August, we have to combat most fiercely and unceasingly, the Malarial element,

And that just about the time that the decomposition of vegetable matter is progressing most rapidly, we find the Malarial element fading out;

As we have established the negative of our position, we will now take up the affirmative, and by referring to a few facts, we hope to establish our position.

In 1844, my residence was in Lauderdale County Tennessee, and within three miles of the

Forked-deer and sixteen miles of the Mississippi Rivers, both of those Rivers have wide spread bottoms, the soil being alluvial, and sandy.

The overflows of the Mississippi occur annually, but at irregular periods, some times as early as the first of March, and passing off by the 20<sup>th</sup> of the same month or the first of April, but the overflow, for the year before mentioned occurred late, that is to say about the 20<sup>th</sup> or the 25<sup>th</sup> of June and passed off about the 10<sup>th</sup> of July, and in ten or fifteen days there after malarial fever made its appearance, attacking at least two thirds and perhaps

four fifths of those persons who resided within the range of the malarial element. Hence it is that we are forced to the conclusion that after the overflow passed off, a very large quantity of water being left in the lakes, sloughs, and ponds, and the earth being perfectly saturated, and wherever found it was in a stagnant or confined condition, with a mid summers sun, with all its mighty force operating upon it "malaria was the product, here was an abundance of heat and moisture" the one operating upon the other, and producing, the malarial element, in great abundance. Malaria, when generated



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is taken up by the winds, and sent abroad, prostrating in its mighty march, whole families, and neighbourhoods, wreaking its vilest vengeance upon those living upon the highest points of the neighbouring hills.

Now the overflow of 1851 was also late, going off about the 10<sup>th</sup> of June, leaving a very large amount of water in lakes, ponds, and sloughs. And the weather being unusually warm for this season (June), about the 15<sup>th</sup> or 20<sup>th</sup> we had considerable amount of bilious fever, it was nearly, if not quite, equal to the year 1844.

Now let us compare the year

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1854 with 1844 and 1851, and  
behold the result; In 1854 the  
Mississippi and Forked-deer over-  
flowed their bottoms by the first  
of March, and passed off by the  
20<sup>th</sup> or 25<sup>th</sup>. Let it be borne in  
mind that the spring months  
of 1854 were cool, and that the  
months of March had none of  
the winds peculiar to that  
month, but about the first  
of April the winds came and  
continued throughout the month  
with a very little rain, the  
air being remarkably cool, for  
the season. In May there  
was some rain, but it was  
the coldest May ever witnessed  
in the same latitude;

June was cool and dry, July  
and August gave no rain  
but were as warm as usual,  
This year is remembered as  
the most healthy, year, known  
to the inhabitants of the  
locality before mentioned.  
And if asked why it was  
so, we should answer, that  
the overflow came and pass-  
ed of early, that the spring  
months, were unusually  
dry and remarkably cool,  
that the water which was  
left in the Lakes sloughs  
and ponds, had dried up,  
while that, in the earth, had  
receded so far that the sun  
was powerless upon it,



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And that when the hot sun  
of summer came it found  
no water to manufacture  
malaria from.

We do not claim that overfl  
ows alone afford the malarial  
element, but we have referred  
to them because they afford  
the most striking, and posi  
tive evidence of the correctness  
of our theory, but only  
claim that water from any  
source, whether from the  
overgrown and swelling tide,  
or poured out, by Heavens  
bounty, and subject to the  
piercing rays of a hot sum  
mers Sun, and being stagn  
ant and confined, is all that

is required for the elimination of  
the malarial element.

So familiar are the people  
of what are termed the river  
Counties of West Tennessee,  
that is, the Counties of Obion,  
Deer, Lauderdale, Tipton and  
Shelby, with the consequences  
of late overflows that they  
~~invariably~~<sup>invariably</sup> arm themselves  
with a bottle of Calomel  
and Quinine even before  
the overflow recedes, if it  
should occur late in the  
season, in anticipation of  
malarial fever in all its  
varied forms, an early overfl  
ow brings joy on its tide, but  
if it comes late the people mourn.

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Thus we leave our subject  
with a hope that, such facts  
as we have adduced, will  
suppice as reasons for our  
faith,

Jan. 22<sup>nd</sup> 1857  
Jas. L. Mitchell

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