Carnicom Institute Research

2017

Acknowledgements

Mission Statement

Carnicom Institute is a non-profit organization working solely for the benefit of humanity. Our goal is to provide the public with beneficial and responsible information through scientific, educational, environmental, and health research for the public welfare. The Institute has devoted significant effort to the important issues of geoengineering and bioengineering.

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License

Morgellons : Biofilm Production

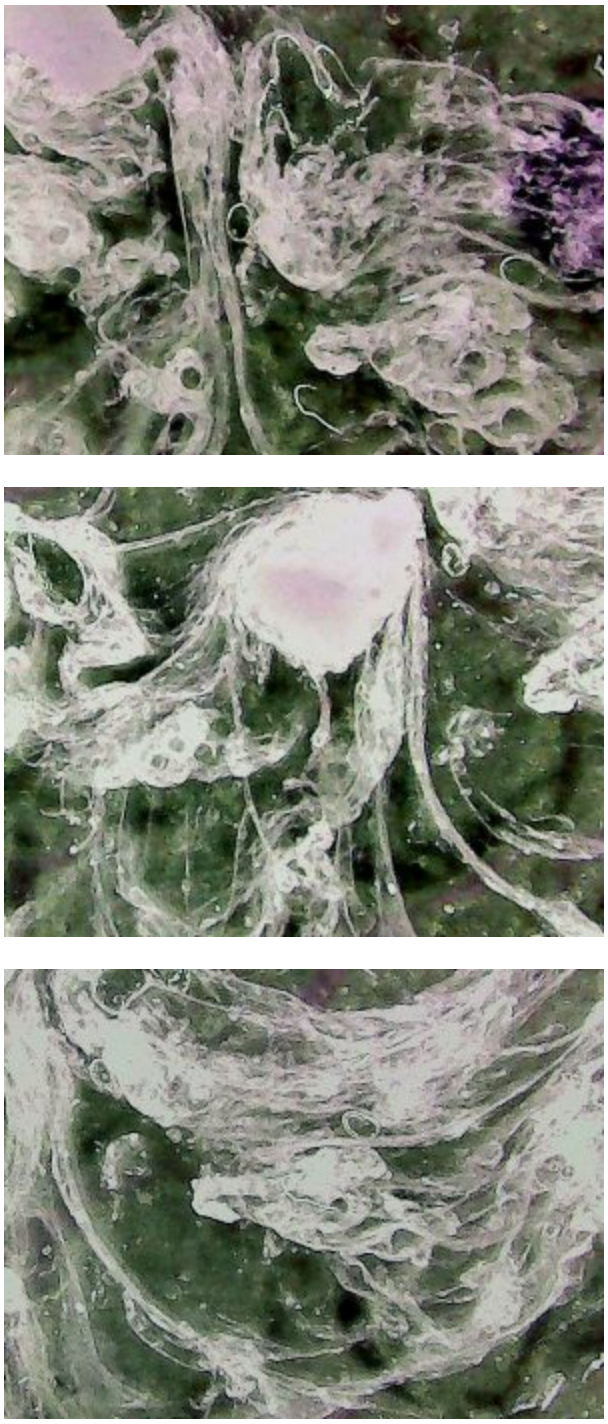
by
Clifford E Carnicom
April 24, 2017

Note: Carnicom Institute is not offering any medical advice or diagnosis with the presentation of this information. CI is acting solely as an independent research entity that is providing the results of extended observation and analysis of unusual biological conditions that are evident. Each individual must work with their own health professional to establish any appropriate course of action and any health related comments in this paper are solely for informational purposes.

The existence of biofilm within the microbial growth characteristic of the “Morgellons” condition has been established with certainty. A method of reliably extracting the biofilm from the body and testing the biofilm for the principal components has also been developed. The work here is an extension to earlier work that has been presented.

Biofilms are a highly effective defensive measure by microorganisms to ensure their survival. The encasement of the microorganism within a shield of mucus or slime material creates a highly impervious shield to dispersal or elimination of the bacterial or microbial form. Biofilm removal is generally a costly and difficult process under the best of circumstances; industrial processes (e.g. pipeline efficiencies) and water treatment are two examples of where challenging environments for removal exist. The existence of biofilms is an especially important topic with respect to human health, and they are commonly associated with chronic conditions that are difficult to ameliorate. There are some beneficial biofilms within the body, however, many of them contribute to disease by evading the immune system and allowing the proliferation of harmful microbial species within. According to the National Institutes of Health, approximately 80% of all chronic infections are associated with biofilms.

Biolfim sample under examination developed from vitamin biochemical extraction techniques.



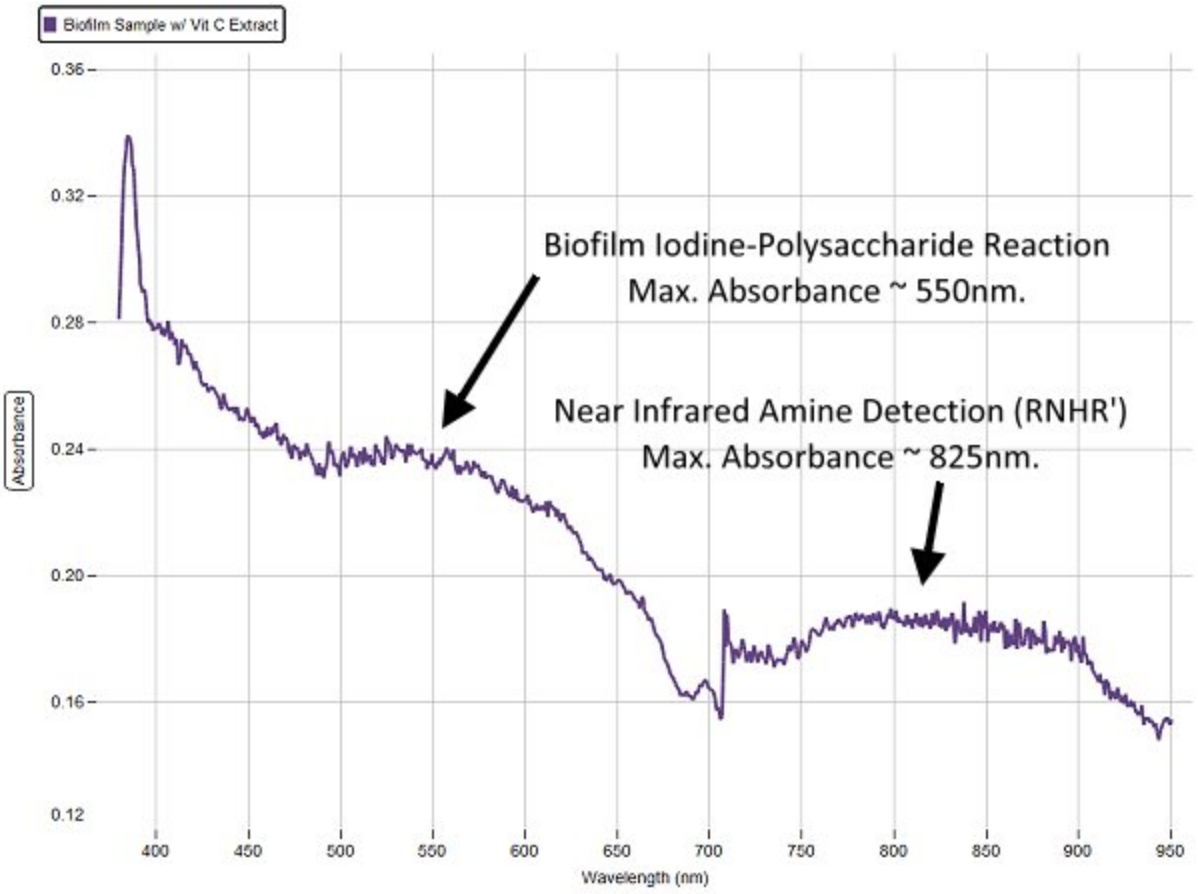
Biofilm images under low power microscopic examination (~20x).

The production of the biofilm shown above has been verified to result directly from the growth of the microorganism (CDB) that has been established as the root source of the “Morgellons” condition. This has been accomplished with the use of culture techniques that are, in turn, based upon the use of the biofilm. The culture equivalency has been established with the use of visual and physical properties of growth, microscopic observation, and visible and near infrared spectrometry. In addition, a sensitive test method for nitrite detection and concentration has been developed, and it has been applied to the cultures with

success. Blood, urine, body fluids, and solutions in general can now be tested for nitrite concentrations. The existence of nitrites in this specific microbial growth has now been established as one of several significant markers of the existence of the microorganism.

In addition, the composition of the materials as biofilm has been confirmed by chemical analysis, in addition to the visual and physical properties. The biofilm is known to be composed of both polysaccharides and amines; these are each hallmark components of biofilm composition.

In the course of this work, additional sensitive colorimetric tests have been developed to test for protein existence and concentration; these methods exceed the sensitivity of the Biuret reagent method by roughly one order of magnitude. These methods may also be applied to body fluids and other solutions in general. The colorimetric tests that have been developed are of high value in enhancing general laboratory procedures that are commonly in use and need.



Visible light spectrometry techniques applied to the analysis of the biofilm composition.

The existence of biofilm with a direct connection to the Morgellons condition exists as one of the most important health issues to recognize and contend with. As mentioned above, biofilms are commonly associated with chronic health conditions and pathology and their

removal or reduction presents special and complex challenges. The methods and discoveries of this paper yield a pathway toward the mitigation of the some of the symptoms and effects that are known to accompany biofilm production within the body.

Clifford E Carnicom
(born Clifford Bruce Stewart, born Jan 19 1953)

Morgellons : Unique Protein Isolated & Characterized

Morgellons:

Unique Protein Isolated & Characterized

by
Clifford E Carnicom
Aug 13 2017
Edited Oct 01 2017

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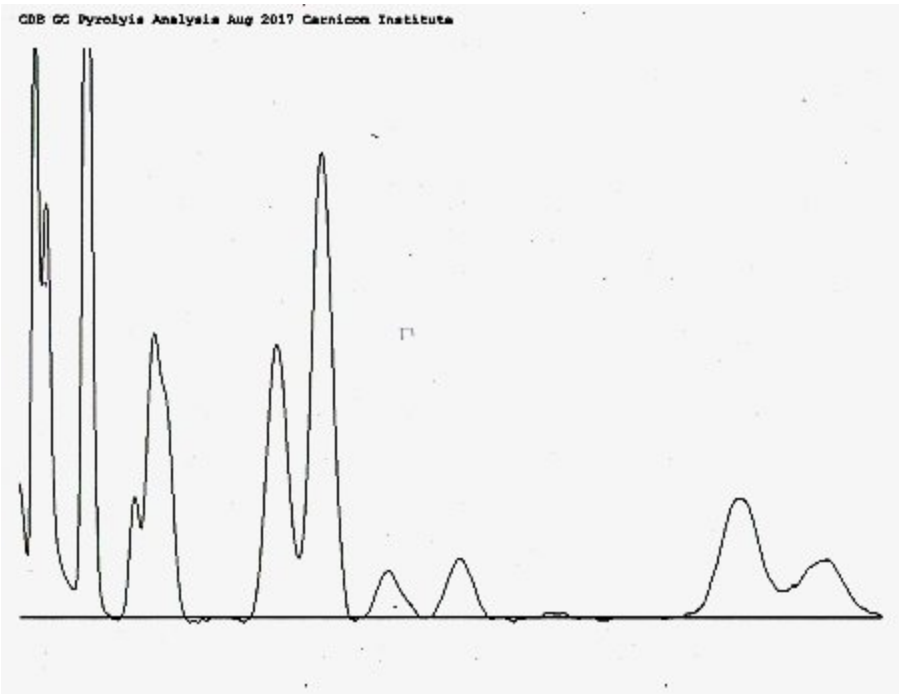
A protein generated by the microorganism associated with the Morgellons condition (tentatively classified in past research as a “cross-domain bacteria”, i.e., CDB) has been isolated and characterized in several ways. There is little doubt that this protein is at the heart of the physiological and biochemical changes that occur within the body by those affected. Related research has been conducted with success for some time, however, the recent work represents a different and separate approach from previous accomplishments. Proteins are at the crux of biochemistry and biological research, and they have great importance in relation to biological structure. There are usually numerous applications (beyond health aspects alone) that develop with the advent of a new or isolated protein, and it is expected that the current work can eventually follow this suit.

Only the general nature of the protein will be described at this point. The protein is organometallic in nature, highly water soluble, and strongly acidic. Additional resources of significance and support from the health communities will be required to develop the series of discoveries into tangible benefits.

Some of the methods that been employed to define the unique nature and characteristics of the protein include:

1. The molecular weight of the protein has been estimated with laboratory methods.

2. The solubility and polarity of the protein has been assessed.
3. Pyrolysis with gas chromatography (GC) has been applied to the protein to examine its thermal decomposition into various subcomponents.
4. Headspace methods have been used to examine the nature and volatility of gaseous metabolism of the microorganism.
5. Infrared (IR) analysis has been used to identify the primary functional groups of the protein, along with the analysis of various GC trapped components.
6. Ultraviolet (UV) analysis of the protein has been conducted.
7. Candidate amino acid composition, at least to a partial extent, has been established.
8. The pH of the protein has been measured.
9. The isolectric point of the protein has been determined via titration.
10. Precipitation methods for the protein have been developed.
11. A metallic nature of the protein has been verified.
12. The index of refraction for the protein has been determined by measurement.
13. A concentration-dilution model for the protein has been developed based upon the index of refraction.
14. The polarimetric nature of the protein has been examined.
15. The electrical conductivity of the protein as a function of concentration and dilution has been determined.
16. The Oxidation Reduction Potential (OPR) of the dilute protein has been measured.
17. A colorimetric test for the existence of the protein has been established.
18. Initial molecular models proposals have been established for some of the simpler components of the headspace-pyrolysis components with GC – IR coupling.
19. Initial anticipated impacts upon physiology, i.e., absorption levels, are under investigation.
20. The Bradford reagent identification test for protein identification has been applied via visible light spectroscopy.



GC Pyrolysis Chromatogram of Numerous Components of CDB Isolated Protein
(significant hydrocarbon structure is identified within)

The isolation and characterization of this particular protein and its properties are of importance and uniqueness in the research related to the Morgellons condition. The attributes identified are numerous and specific to the microorganism that has been extensively identified, examined and researched. The uniqueness of the protein is essentially guaranteed. The method of development of the protein also represents a distinct and recent advance in the history of CI research, and it is hoped at some point that the work will be placed to the advantage and benefit of the public.

Clifford E Carnicom
Aug 11 2017
Edited Oct 01 2017

Born Clifford Bruce Stewart
Jan 19 1953

A Point of Reckoning : Part I

A Point of Reckoning:
Part I

by
Clifford E Carnicom
Aug 19 2017
Edited Aug 21 2017
Edited Aug 25 2017

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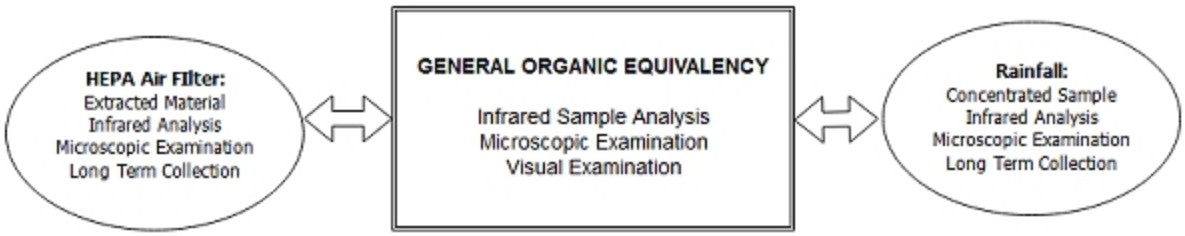


A general equivalency between the organic nature of materials collected with the use of HEPA (High Efficiency Particulate Arrestance) air filters (indoor and outdoor) and a series of concentrated rain samples has been established. This conclusion is based upon the use of infrared analysis, microscopic examination, and visual examination of the materials. The inherent similarity between the historically designated “environmental filament” and the filaments known to be clearly associated with the so-called “Morgellons” condition must also be accepted as a part of this analysis.

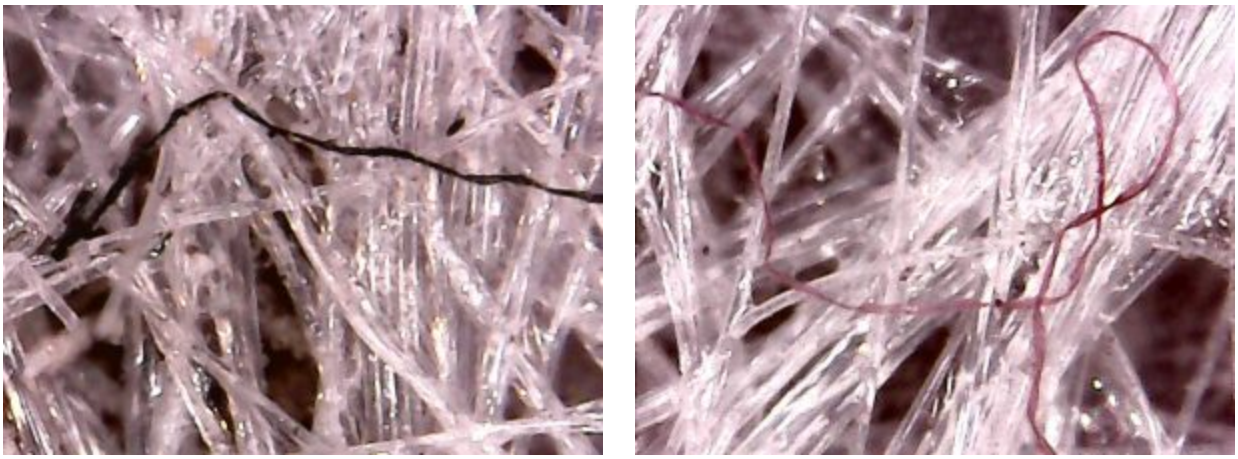
This more recent work has been conducted over a period of roughly two years with careful repetitions and redundancies. Fundamentally, the conclusion is logical but nevertheless sweeping in impact; what is in the air is in the water. Furthermore, what is in the air and the water has an important relationship to marked changes in health that affect the general public. What is in the air and in the water is in our bodies. This state has developed in a global and ubiquitous sense for more than two decades, and we must now all share some responsibility to acknowledge and proclaim our condition on the planet.

The details of the methods will only be briefly summarized here; they involve long term sample collection and a variety of laboratory analyses over extended time. The photographs below will demonstrate the essence of comparison.

The similarity of the infrared plots reveals to us that the basic organic structure of the extracted materials from the air filters and the rain samples are the same. The details of molecular structure inherent within the plot will be reserved for future discussion; the signature aspect of infrared spectroscopy is sufficient at this point to advance the argument.

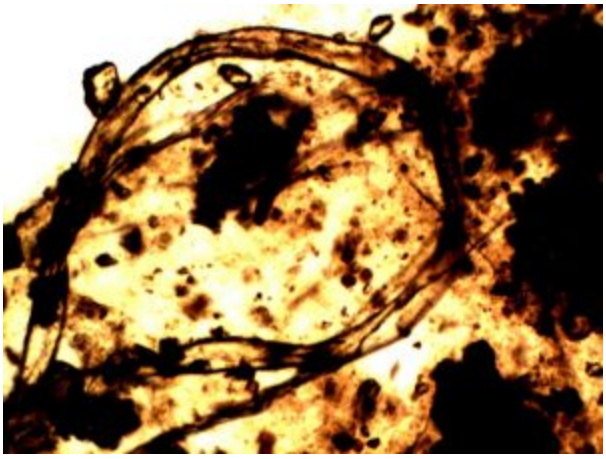
In addition, microscopic examination reinforces that the air and rainfall biological filament samples are identical. There is little doubt that this biological equivalency is also at the root of the infrared analysis of organics mentioned above.

Additional notes on some of the details of sample types and preparation follow at the end of this report.

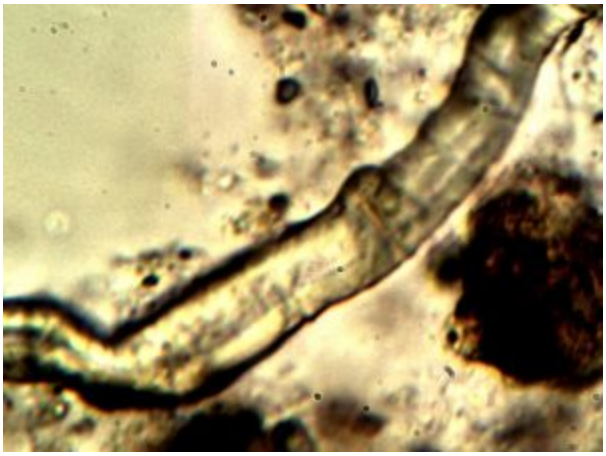


Representative “environmental” filaments collected on indoor HEPA Air filter (blue to left, red to right).
Analysis of the filaments demonstrates properties that are common with filaments that have been collected from the concentrated rain sample. These filaments are also representative of those that are associated with the “Morgellons” condition.
The background mesh network (white filaments) is the HEPA air filter itself.
Magnification Approx 150x.

Indoor – Outdoor HEPA Air Filter Comparisons:
Representative “environmental” filaments also collected on an outdoor air HEPA filter under forced air. These filaments were collected within a 24 hour exposure to a new filter element. Results are identical between indoor and outdoor exposures.
Magnification Approx 150x.

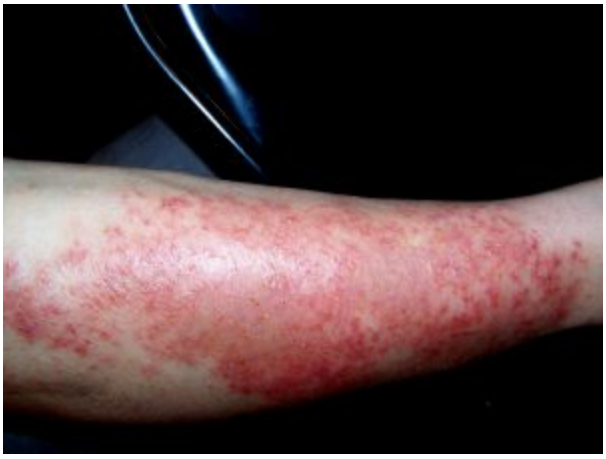


Magnification Approx. 1500x

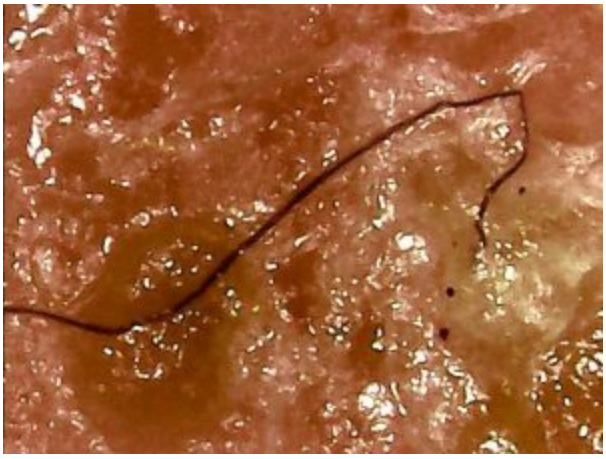


Magnification Approx. 5000x.

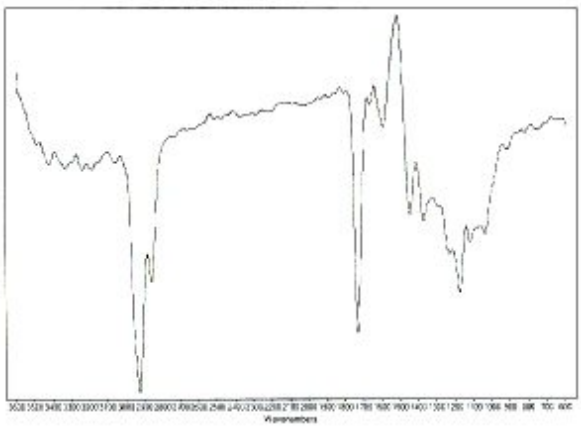
Filaments collected from rainwater concentrate sample.
Analysis demonstrates properties that are common with filaments collected in the HEPA air filter.
The filaments also demonstrate these same properties that are associated with the “Morgellons” condition.



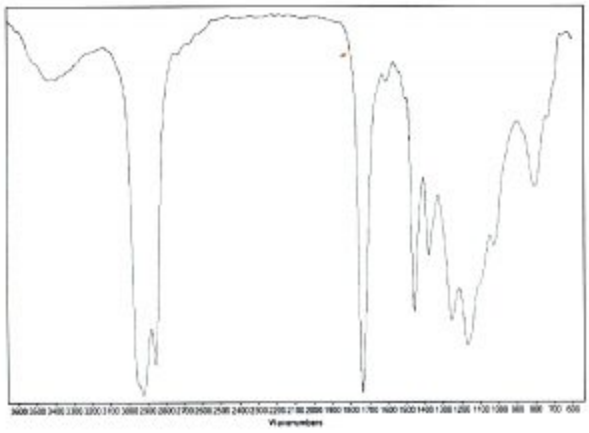
Observed skin that exhibits symptoms characteristic of the Morgellons condition.



Filament sample recorded (one of several) within a portion of the skin condition shown to the left. Magnification approx. 150x.



Infrared Plot of HEPA Air Filter Extract



Infrared Plot of Rainwater Concentrate Sample

Infrared plots to compare the organic nature of the
HEPA air filter extract against the organic nature of the rainfall concentrate.
The samples contain organic materials that are fundamentally of the same nature.

Additional notes:

HEPA Filter(s):

HEPA filters are air filters that are quite effective at trapping materials to the micron size level. They have an interesting history and origin, as they were developed as a part of the Manhattan Project in the 1940's to trap radioactive materials. This filter type is now in common use and affordable. There is a fair amount of usage of HEPA filters in the history of Carnicom Institute (CI) research, as they are a very effective means of collecting air particulates.

They are also used in commercial aircraft. One of the ironies of the aerosol investigations over the last two decades is that a ready source of sample collection material has always existed; the difficulty is that of access to the samples. CI has long advocated that designing any single aircraft test for sampling the atmosphere is an inefficient, deficient, unnecessary and expensive approach to acquire information about the state of pollution in the atmosphere. This singular test approach has been advocated fruitlessly by several parties over the course of time. The situation is that a massive collection of particulate samples already exists for examination and analysis, but that access to it is not forthcoming. On a hearsay basis, there is information to indicate that the disposal of the filters is carefully controlled (potentially designated as radioactive?).

It is also of interest to mention that, at a very early point of the research, I was given anonymous access in confidence to such a filter from a commercial airliner, along with a laboratory test of the filter for certain metallic elements. That individual remains unknown but he remains deserving of thanks from all of us. To my knowledge, there is no similar test by a member of the public since that time, apparently due to the access issues mentioned above.

That particular filter did show unusual levels of barium in the test results (and calcium to my recollection), and it was one of the harbingers of testing for atmospheric metals that was to follow. At the time of receipt, no laboratory facilities of any kind were available to CI and the physics of the aerosol operations were unknown to the level acquired during subsequent research over the years. Credit is also overdue to AC Griffith, now deceased, for his early role in stimulating interest in the electromagnetic aspects of the aerosol issue. The interplay between ionizable materials and electromagnetics subsequently became a dominant theme of CI research, and the contributions of both of these individuals are to be recognized in that history.

In the case of the current research, two indoor and one outdoor HEPA filters have been examined. The indoor filters were exposed to long term collection (6-12 months) and the outdoor filter is exposed under short term forced air conditions. Laboratory testing depends upon the sensitivity of the instruments employed and with that sensitivity comes cost. One of the methods of compensating for decreased sensitivity is to allow for an increased time of collection. This is the preference here. As such, one indoor filter was allowed to run its course for approximately 6 months, and the second indoor filter ran close to one full year. All filters are operated approximately 20 feet above ground level. The history of work includes the use of additional outdoor HEPA filters.

Some of the larger pollutants, e.g., the filament samples, can appear quite readily subject to the microscope. The longer term goal in this project was to collect the micron size material that is invisible to the eye until sufficient mass has been collected. This is the source for chemical and spectroscopic testing in this case.

Sample preparation for instrument use is one of the greatest demands in the laboratory environment. It consumes far more effort and time than most people recognize, other than by those involved in the field. In the case of infrared (IR) spectrometry, water is the bane of the testing process and is generally to be avoided in all respects. The HEPA particulates in this case have been dissolved into ethanol, which is a suitable solvent for the preliminary overview that is covered here. The evaporation of the solvent on a suitable substrate will allow the formation of a film which is well suited to infrared spectroscopy. The IR spectra acquired serves two primary purposes:

1. It serves as a unique fingerprint of the compound(s) in solution
2. It serves as a useful tool for introductory examination of the molecular structure of the compound(s) in solution

In the case of this paper, the emphasis is only upon the signature aspect of the spectra, as the purpose here is to compare to sampling from a different environment, namely, that of rainfall. This comparison is what is shown above and the point of equality or high similarity is made in the process.

Rainfall Sample:

Rainfall presents even greater difficulties in the sample prep arena. The sensitivity issue discussed above is front and center, and the solution to the problem in this case is to acquire a greater volume of rainfall. Adequate sample volume is definitely an issue, and fortuitous periods of rain will be required. Non-detrimental evaporation and condensing of the sample will require a fair amount of patience, but it can be accomplished. The samples of this paper were collected in 2016 and were condensed to roughly 5% of their original volume.The organic materials were then removed from the water using a non-polar solvent extraction method for subsequent infrared analysis. Additional extensive studies were completed on these samples in the previous year, and they have been recorded in a series of papers on this site.

Clifford E Carnicom
Aug 19 2017
Edited Aug 21 2017
Edited Aug 25 2017

Born Clifford Bruce Stewart
Jan 19 1953

Environmental Filament Project : Metals Testing Laboratory Report

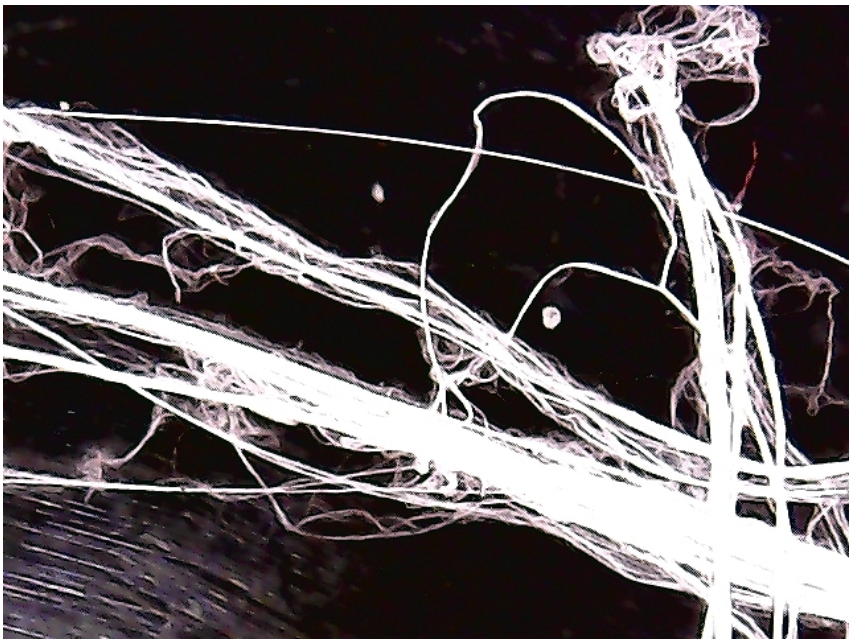
Environmental Filament, Project:
Metals Testing Laboratory Report

by

Clifford E Carnicorn
Aug 21 2017

A unique form of “environmental filament” material has long been under study at Carnicom Institute. Those familiar with the work here know that the early history of study involves a refusal by the U.S. Environmental Protection Agency to examine that material, and those events are well documented on this site. Many readers are also familiar with the biological components that have accompanied this sample type and the similar refusal by any authoritative agencies to acknowledge the realities of these environmental and health dangers to the public.

This paper will present the data from a high level analytical chemistry examination of this same sample type for metals content. The method of examination is that of inductively coupled plasma mass spectrometry (ICP MS) The testing procedures conform to requirements at the detection level of parts per million (ppm, mg/kg). The original observation of the sample is airborne. A low power microscopic image of a second collected sample (identical in nature to that analyzed in the laboratory) follows immediately below:



The test results show the clear presence of numerous metals, frequently to excess levels:

Aluminum
Barium
Calcium
Chromium
Copper
Iron
Lead
Magnesium
Manganese
Nickel
Potassium
Titanium
Vanadium
Zinc

White Filament

Analyte	Result	Reporting Limit	Units
Total Recoverable Metals			
Aluminum	**12300**	431	mg/kg
Antimony	ND	17.2	
Arsenic	ND	17.2	
Barium	**150**	34.5	
Beryllium	ND	8.6	
Boron	ND	86.2	
Cadmium	ND	17.2	
Calcium	**12700**	172	
Chromium	**95.2**	17.2	
Cobalt	ND	86.2	
Copper	**95.6**	34.5	
Iron	**19800**	34.5	
Lead	**17.8**	17.2	
Lithium	ND	34.5	
Magnesium	**7800**	86.2	
Manganese	**619**	17.2	
Molybdenum	ND	17.2	
Nickel	**33.8**	17.2	
Potassium	**4800**	345	
Selenium	ND	34.5	
Silver	ND	34.5	
Sodium	ND	345	
Strontium	ND	86.2	
Thallium	ND	34.5	
Thorium	ND	172	
Tin	ND	86.2	
Titanium	**1230**	86.2	
Vanadium	**40.8**	34.5	
Zinc	**249**	34.5	

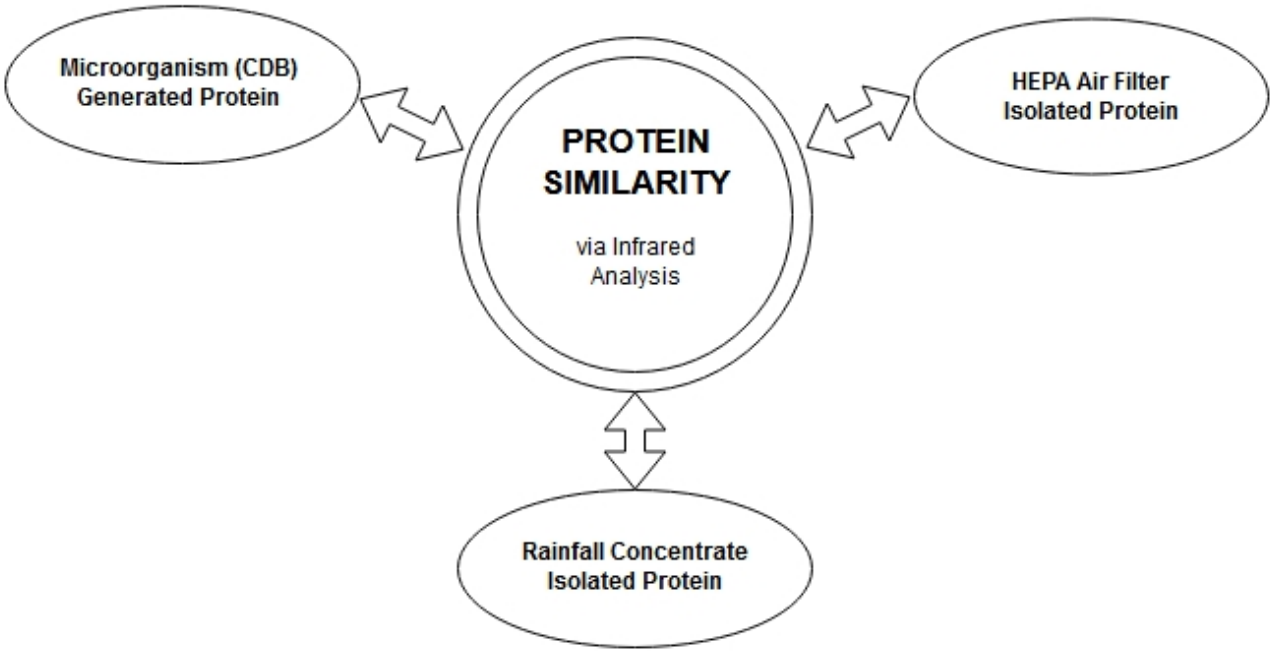
Clifford E Carnicom
Aug 21 2017

A Point of Reckoning : Part II

A Point of Reckoning:
Part II

by

Clifford E Carnicom
Sep 13 2017



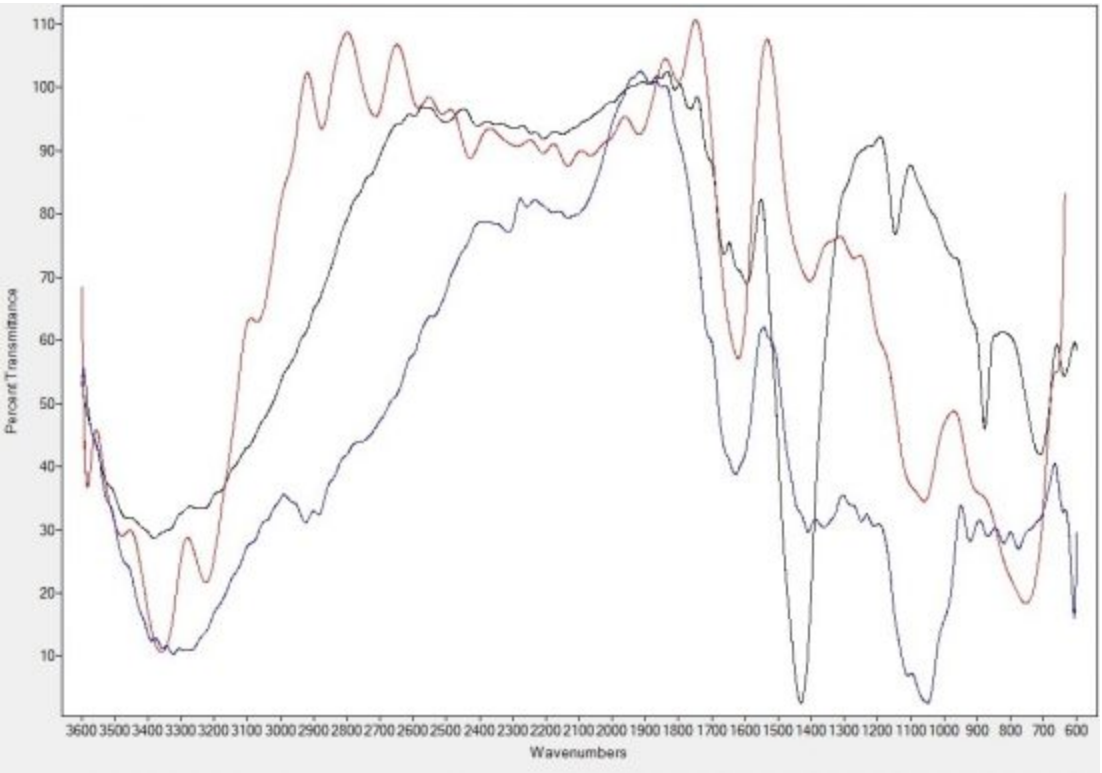
The organic signature of various proteins that have been isolated from differing sample types and environments has been established to a high level of similarity. The various protein samples have been isolated from:

1. An identified microorganism (tentatively designated as a cross-domain bacteria, CDB) that has been studied extensively and that is associated with the “Morgellons” condition.
2. A High Efficiency Particulate Arrestance (HEPA) air filter.
3. A concentrated rainfall sample.

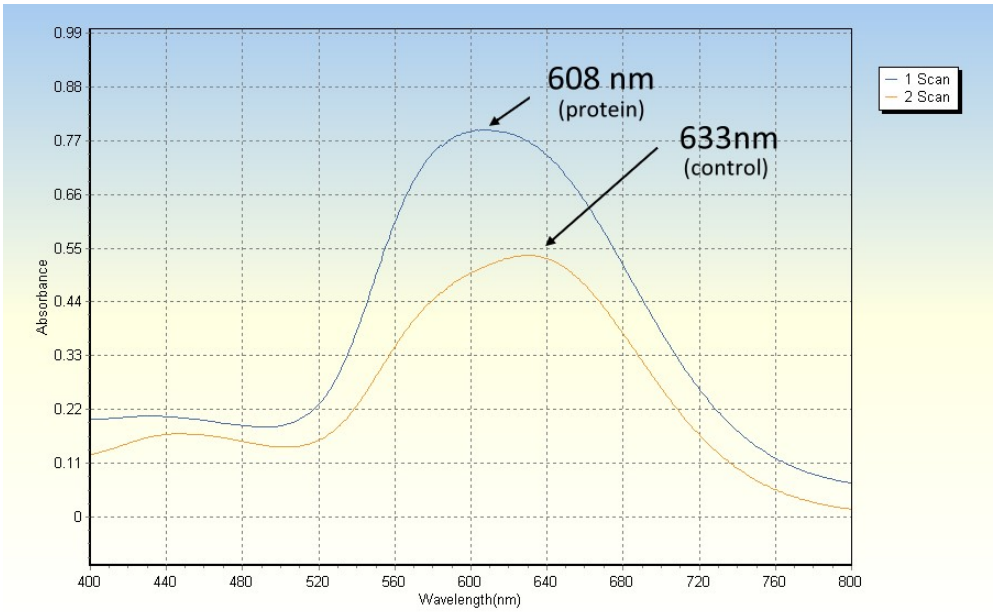
The laboratory methods of analysis include that of:

1. Organic extraction methods
2. Liquid column (low pressure) chromatography
3. Ultraviolet spectroscopy
4. Visible light spectroscopy (colorimetric test)
5. Bradford test for protein
6. Infrared Analysis

Additional relevant papers on these and related samples also appear on this site within the research library.



Infrared analysis and comparison of proteins isolated from a microorganism (CDB) culture, HEPA air filter and rainfall concentrate sample. The concentrations of the samples and the methods and complexity of preparation and protein isolation are vastly different in all cases; nevertheless, a high degree of similarity is apparent with specific functional group signature features. This is especially the case within the ‘functional group’ window within the spectra. The presence of the thiocyanate/isothiocyanate functional group in all samples is an additional highly significant and distinctive feature posing important health considerations.



An example of visible light spectral analysis of the Bradford colorimetric test for proteins applied to the rainfall concentrate sample. The Bradford reagent test and VIS-IR spectral analyses have been applied to all sample types identified within this report.

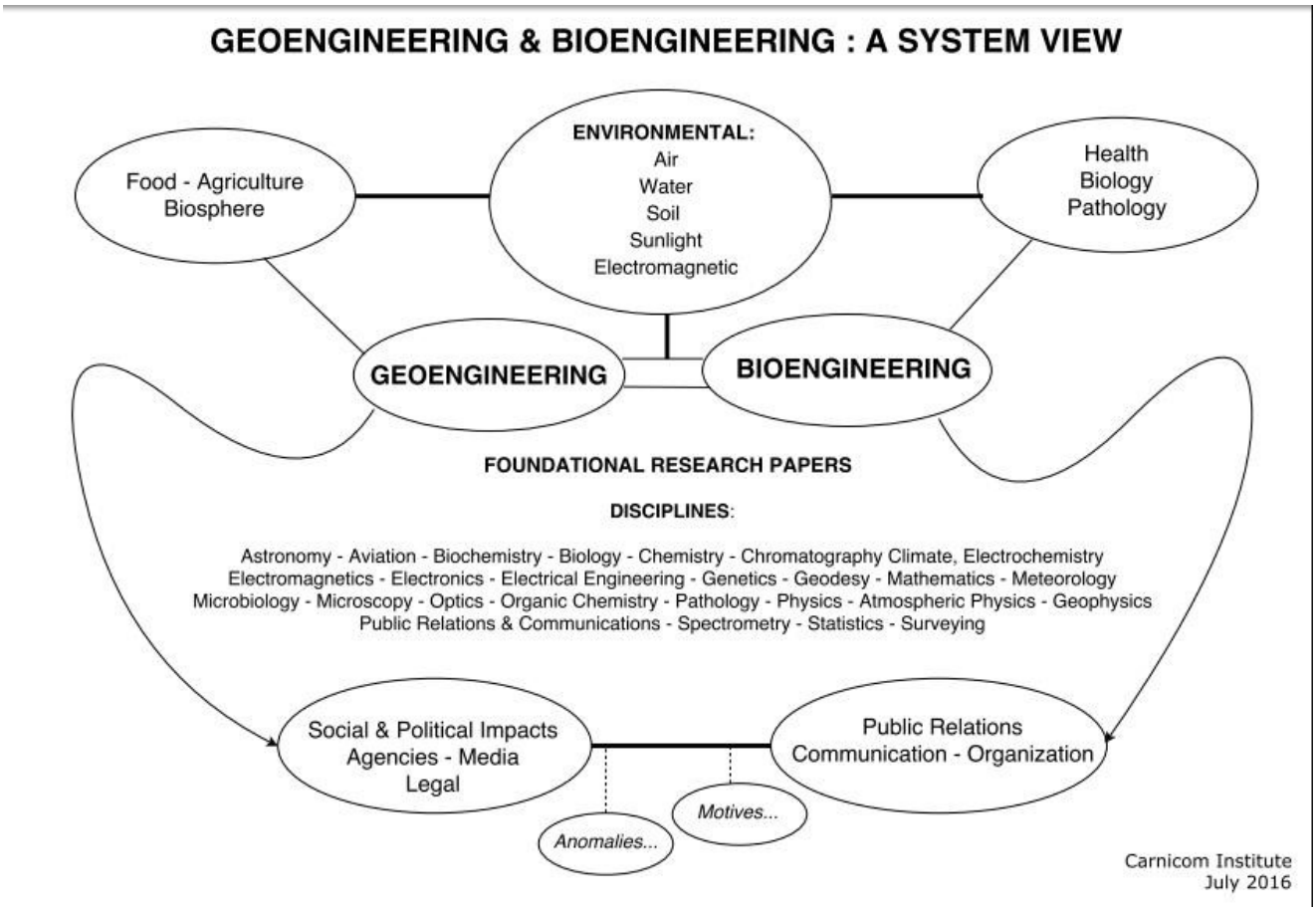
Bradford colorimetric test for protein within rainfall concentrate sample.

Clifford E Carnicom
Sep 13 2017

Born Clifford Bruce Stewart
Jan 19 1953

Carnicom Institute Presentation : 2016 – Summary Papers

> All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident.
>
> —
>
> *Arthur Schopenhauer, German philosopher (1788 – 1860)*



Carnicom Institute - Outline for NHFC: 1 ¼ hours estimated + 10 min questions.

1. **Intro** : Background, CI History, Independent Researcher
2. **Goals** of presentation:
    a. **Definition, Introduce the scope** of the work and relationships
        i. System View (1500 – 400 – 30 – 1 – Picture)
    b. Let you know where to find **more information** (one place).
        i. www.carnicominstitute.org
        ii. Research Library
            1. Chronological
            2. Categorical (recent)
        iii. CI work is evidence and science based (not agenda); standards are those of the courtroom.
        iv. The **List of Seven**
    c. Impart **responsibility for seeking of truth** upon you
    d. Understand **responsibility for caring for future generations and stewardship** of the planet.
    e. *Some* examples of the work
        i. **AIR** : (set of 4 papers)
            1. Then and Now
            2. PM 2.5 Meter demo and results (Mechanical vs. Constituents)
            3. EPA STANDARDS, MONITORING & ENFORCEMENT PROBLEMS
        ii. **WATER**: (set of 4 papers)
            1. Rainfall Analysis: 4 progressive stages thus far.

iii. **ELECTROMAGNETIC**

1. ELF Confirmed

iv. **HEALTH & BIOLOGY**

1. Email Example
2. New Biology – Food - Life
3. Informed Consent? Organic Farming? Health Freedom?
4. Senate Hearings 1977
5. MRP Survey Summary
6. Relationship of Health to Environment

v. **DOCUMENTARY** Aerosol Crimes (100min) – Cloud Cover(45 min)

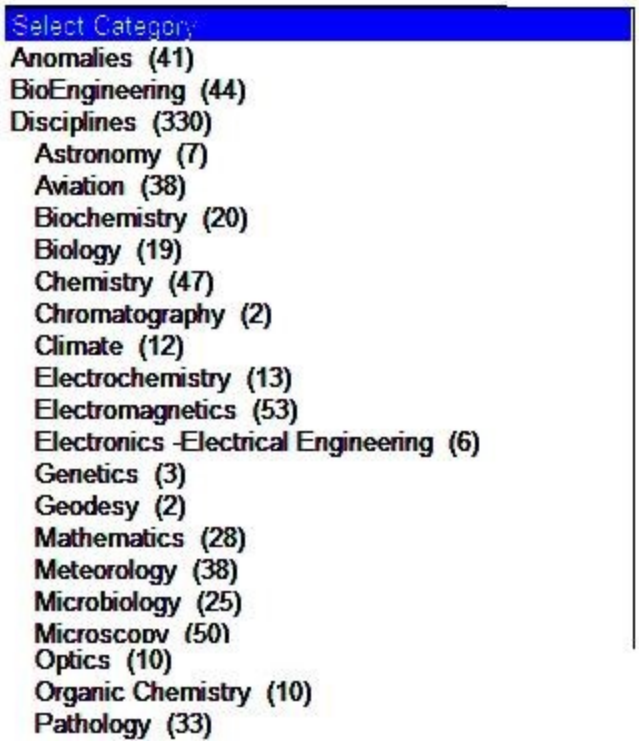
vi. ALL WORK REMAINS CONSISTENT

vii. **SOCIAL & POLITICAL IMPACTS – PUBLIC RELATIONS – ORGANIZATION**

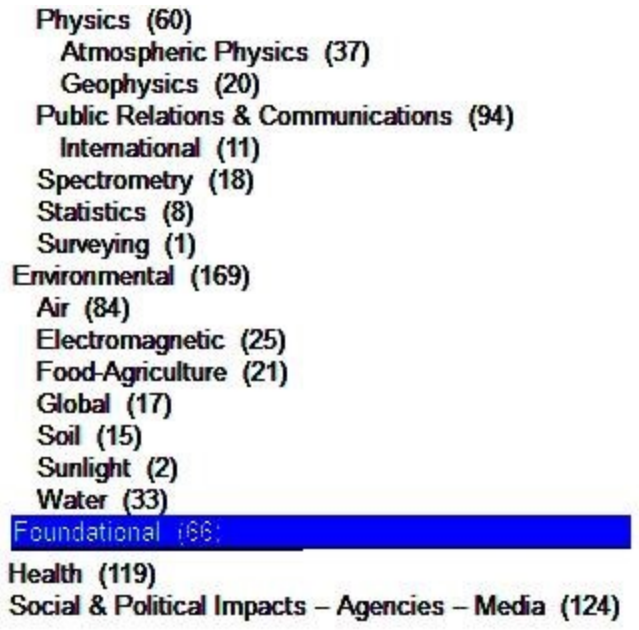
1. List of "Visitors"
2. EPA Response
3. Official Responses
4. Clash of Evidence Paper
5. Higher level of organization, strategy and momentum is now appropriate.
6. SGG Outgrowth & Future? SGG – NHFC Roles?
7. Luxury of infinite time of 'debate' and 'study' Is not available, future welfare of the planet and our generations requires current accountability, participation, applying oneself and demonstrable action.

Ask ourselves what do we wish to accomplish collectively in our future **Consent**?

CI Research Paper Categories



CI Research Paper Categories



THE LIST OF SEVEN :

(Why?)

1. Environmental Modification and Control
    a. (Climate is one aspect only; regional vs. global)
    b. Temperature, moisture, wind, pressure, ionization, weather, agriculture, electrostatics, electromagnetic, etc.)
    c. Be prepared to burst the "Mitigation of Global Warming" bubble.
    d. Please visit the Clash of Evidence paper, 2016. (troposphere, stratosphere, "SRM", Teller, etc.)
2. Electromagnetic Operations
3. Military Operations
4. Biological Operations
5. Geophysical Applications
6. Surveillance Prospects and Capabilities (e.g., LIDAR)
7. Detection of Ionic Disturbances or Anomalies

MORGELLONS RESEARCH PROJECT (MRP)

CARNICOM INSTITUTE

SUMMARY:

1. Several years in the making.
2. Purpose is to collect objective data surrounding a generally unrecognized and unaccepted emerging health "condition" known as "Morgellons".
3. Format : Online Survey (Short Form and Long Form)
4. One year of data collection – now completed.
5. Professional medical consultation / IRB development for the survey.
6. Strong scientific evidence for an environmental origin

GENERAL OVERVIEW STATISTICS:

1. Short Form :
    a. 150 questions/data points.
    b. 220 surveys completed, 730 partial, completion ratio approx. 1 in 4.
2. Long Form :
    a. 1800 questions/data points
    b. 250 surveys completed, 800 partial, completion ratio approx. 1 in 4.

SCOPE OF OUTPUT:

1. Short Form : Approx. 2500 pages of data collection.
2. Long Form : Approx 15,000 pages of data collection.

TOPICS OF SURVEY:

1. Consent	12. Musculoskeletal
2. Demographics	13. Digestive System
3. General Health	14. Endocrine System
4. Skin & Nails	15. Neurological System
5. Head & Hair	16. Cognitive & Psychological
6. Eyes & Vision	17. Immune System
7. Ears & Hearing	18. Reproductive System
8. Nose & Sinuses	19. "Morgellons" & Associated Conditions
9. Mouth & Throat	20. Environmental
10. Cardiovascular System	21. Free Response
11. Respiratory System	22. Submittal

MORGELLONS RESEARCH PROJECT (MRP)

CARNICOM INSTITUTE

INITIAL SURVEY SYMPTOM RESULTS (20th Percentile):
NO MEDICAL CLAIMS BEING MADE – SURVEY ONLY.

1. Materials or substances emerging from skin
2. Open and/or slow healing lesions
3. Rashes or other skin conditions
4. Itchy scalp
5. Change in the quality of vision (e.g., blurry or fatigued)
6. Unusual & chronic ringing in the ears
7. Unusual dental conditions
8. FATIGUE (6 overlapping sections of survey)
9. Shortness of breath, persistent or excess mucus or sputum
10. Stiffness in joints

11. Constipation, bloating, unusual weight gain
12. Anxiety, nervousness, irritability
13. Headaches, dry eyes & mouth
14. Forget events
15. Reliance on external memory aids (calendar, notes)
16. Loss of train of thought or flow of thread of conversations
17. Difficulty diagnosing, identifiying or explaining the illness
18. Skin problems
19. Associated conditions (diagnosed or examined) :
    a. Lyme's Disease
    b. Chronic Fatigue
    c. Herpes

CONCLUSION:

WHERE DO WE GO FROM HERE?

1. We must decide if the problem is real.

2. We must, because of our capabilities as humans, understand the role that we have as stewards of the planet.

3. We must accept and act upon our responsibility to become a part of the SOLUTION.

4. We must accept our responsibility for future generations and the welfare of the planet.

CONSENT OF THE GOVERNED?

"The people lay down the conditions which the king is bound to fulfill. Hence they are bound to obedience only conditionally, namely, upon receiving the protection of just and lawful government...the power of the ruler is delegated by the people and continues only with their consent. (1579 Theodore Baza).

Governments are instituted among Men, deriving their just powers from the consent of the governed (Declaration of Independence, 1776)

Do you consent?

How much power are you willing to claim?

How much power are WE willing to claim, collectively?

Mustard Seed Germination: Initial Report

Mustard Seed Germination: Initial Report

by

Clifford E Carnicom
Sep 20 2017

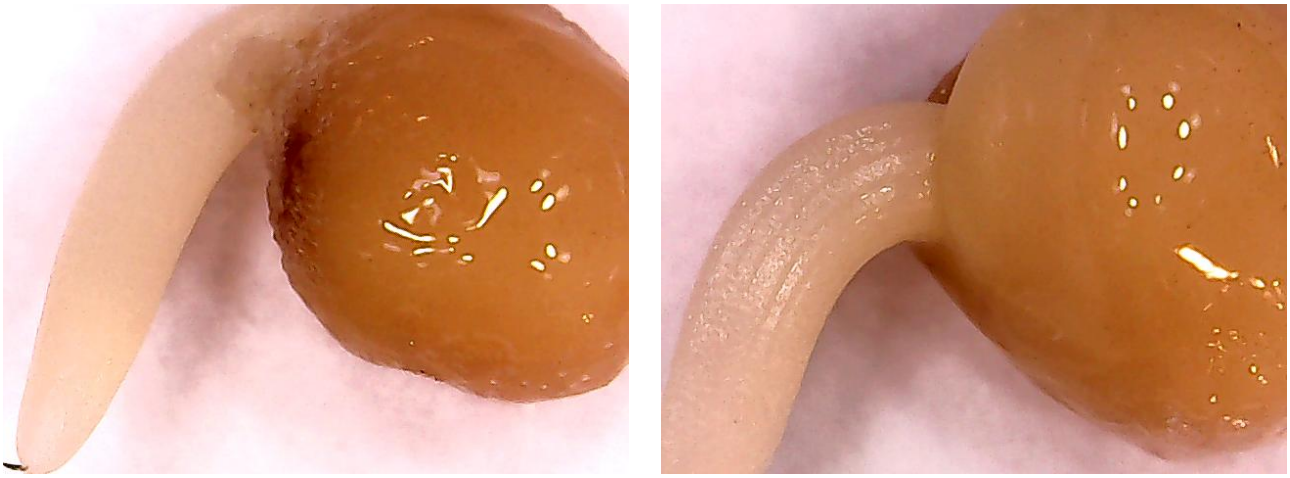
A series of biological experiments and trials that involve the application of an isolated protein to various growth processes has commenced. This protein is described in greater detail in the paper entitled, *Morgellons: Unique Protein Isolated and Characterized* (Aug 2017). This protein is derived from the microorganism tentatively identified as a 'cross-domain bacteria' (CDB) as described more extensively on this site.

The purpose of the current trial is to explore the impact of the protein upon various plant germinations. A series of germinations is underway; the current report is limited to the advanced germination of mustard seeds within a 48 hour period. The protein solution applied to the seeds is 2% concentration by weight. Control solutions with the use of water alone are conducted in parallel for comparison.

The result of this experiment, at this early stage, is that germination of the seeds is delayed or impeded by the application of the protein solution. This suggests that the early growth of this particular plant is negatively impacted with the inclusion of this protein as a (potential) nutrient source.

The overwhelming majority of the mustard seeds subjected to the protein have not germinated during this brief time period. An optimistic selection of seeds that have been subjected to the protein are shown below; they demonstrate that sprouting to some degree is possible during this same 48 hour period.

The vast majority of the control seeds (i.e., water alone) have germinated normally and they appear to be healthy at this point.



Mustard seeds germinated in control water nutrient solution (alone). 48 hour germination period.
Germination appears to be normal at this stage.
Magnification approx. 20x

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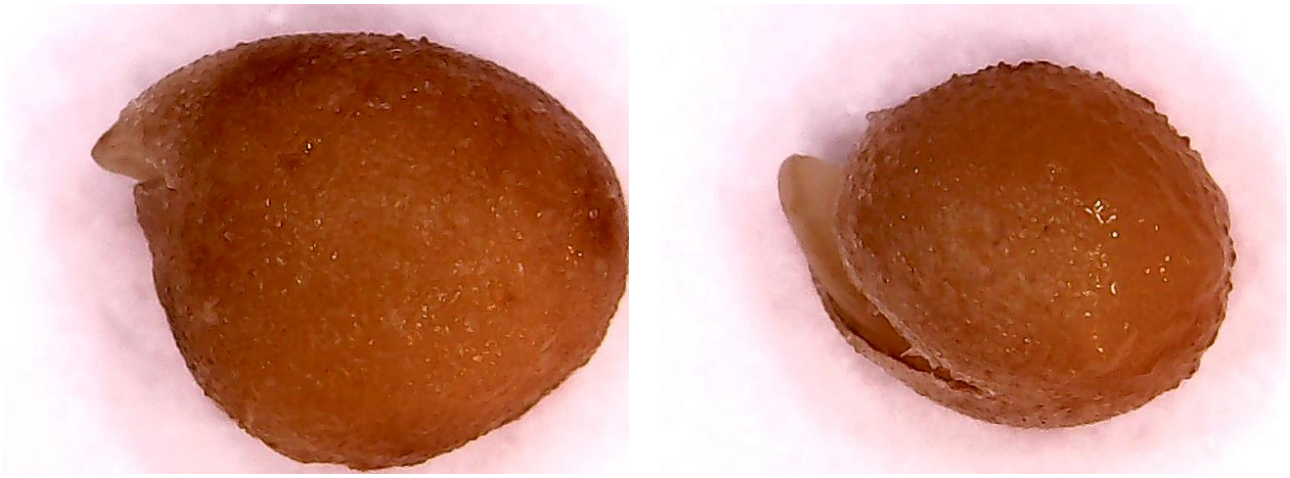


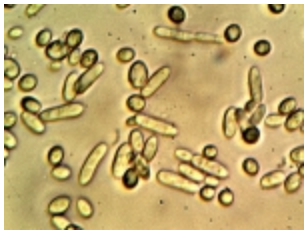
Mustard seeds germinated in 2% (by weight) protein solution. 48 hour germination period. The delay and stunting of the germination process is evident. The vast majority of mustard seeds subjected to the protein solution show no visible germination at the end of the 48 hour period. Variation in the surface texture of the seeds in comparison to that of the controls is also apparent. Magnification approx. 20x.

The growth process of this seed trial, along with that of other seed types, will continue to be monitored.

Clifford E Carnicom
Sep 20 2017

Born Clifford Bruce Stewart
Jan 19 1953

Yeast Deformation: Initial Report



Yeast Deformation: Initial Report

by

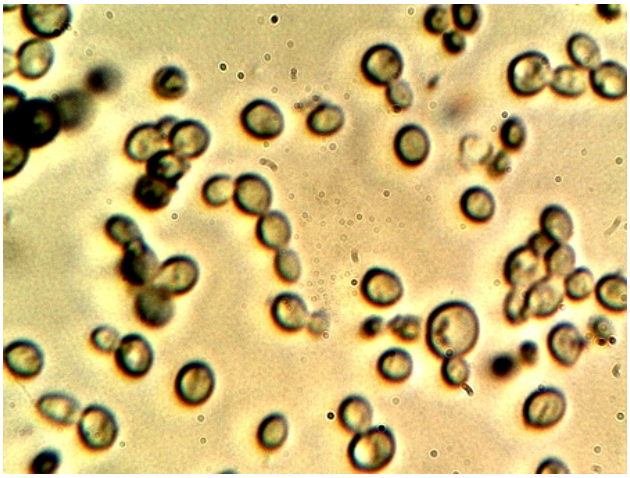
Clifford E Carnicom
Sep 22 2017

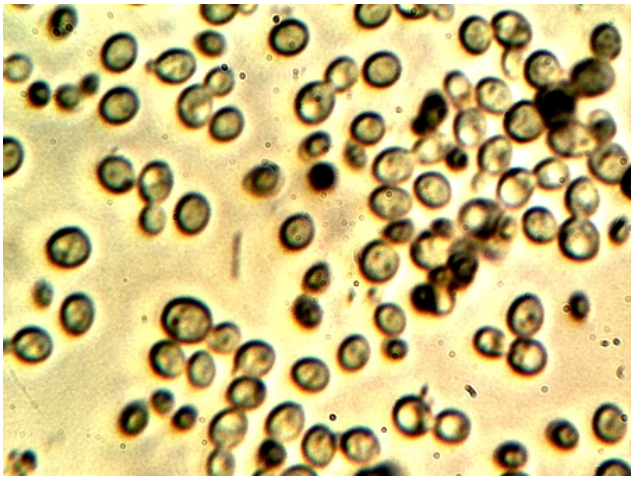
A yeast culture that has been subjected to an isolated protein is under study. This protein is described in greater detail in the paper entitled, *Morgellons: Unique Protein Isolated and Characterized* (Aug 2017). This protein is derived from the microorganism tentatively identified as a 'cross-domain bacteria' (CDB) as described more extensively on this site.

The purpose of the project is to explore the impact of the protein upon more rudimentary life forms; in this case, a fungus. The protein concentration solution applied to the yeast culture is 0.5% by weight. Control solutions with the use of water and sucrose alone are conducted in parallel for comparison.

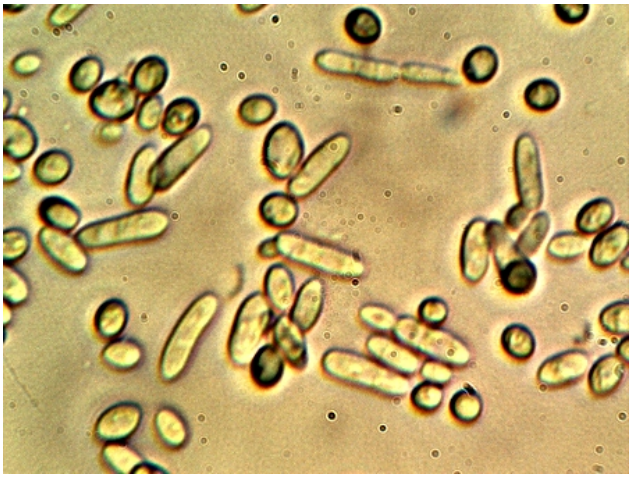
The result of this experiment, at this early stage, is that a cellular deformation or alteration of significant proportion has taken place. This suggests that the early growth of this particular fungus is modified in a significant fashion with the inclusion of this protein in the nutrient medium. The act of mutation must be considered as a distinct possibility in this case.

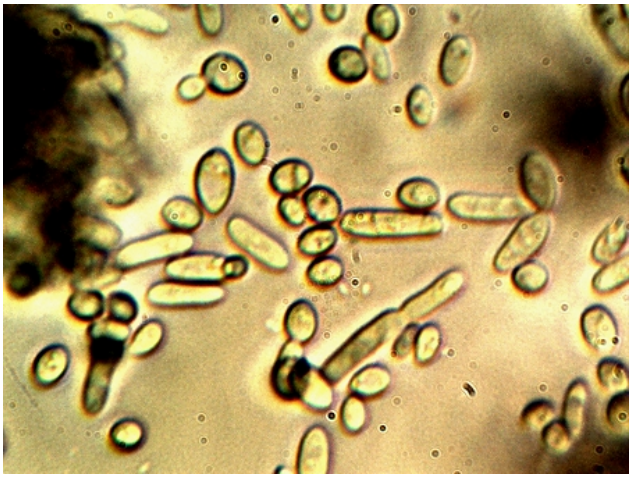
The change occurs primarily upon a surface layer that forms within the culture; this same layer does not develop within the control culture of water and sucrose alone. The act of change is a division process that appears to frequently "join" cells into doublets or triplets, as opposed to a full bud spherical division as expected.





Control growth yeast cells in sucrose and water solution. 72 hour growth period. Cells are generally circular in shape and symmetric. Normal budding and division reproduction process. The appearance of the culture is normal and stable. Magnification approx. 5000x.





Yeast culture subjected to water, sucrose, and specific protein solution. The isolation of the protein is described further within the research of this site. Concentration of the protein is 0.5% by weight. 72 hour growth period. Unusual growth alterations are evident. Doublet and triplet cell formation appears to be common within the population. Magnification approx. 5000x.

The growth process of the yeast culture will continue to be monitored.

Clifford E Carnicom
Sep 22 2017

Born Clifford Bruce Stewart
Jan 19 1953

Mustard Seed Report: Growth Termination

Mustard Seed Report: Growth Terminated

by

Clifford E Carnicom
Sep 24 2017

The growth of mustard seeds that have been subjected to a specific and isolated protein for one week is now complete This protein is described in greater detail in the paper entitled, *Morgellons: Unique Protein Isolated and Characterized* (Aug 2017). This protein is derived from the microorganism tentatively identified as a 'cross-domain bacteria' (CDB) as described more extensively on this site.

The concentration of the protein solution that was applied to the seeds is 2% by weight. Control solutions with the use of water alone are conducted in parallel for comparison.

The result of this experiment is that germination and growth from the seeds is essentially terminated by the presence of this protein at this concentration level. The control seeds have germinated and flourished normally. Additional trials with a lower concentration of the protein in solution are planned.

Photographs that demonstrate the condition of growth in both cases are shown below:

Mustard seeds germinated in control water nutrient solution (alone). One week growth period.
Healthy and flourishing growth is evident. Centimeter rule on left photograph; magnification on right photograph approx. 10x.

Mustard seeds subjected to 2% (by weight) protein and water solution. One week growth period.
The termination of the growth process is evident. The early stages of germination can be observed in isolated cases. The vast majority of mustard seeds subjected to the protein solution show no visible germination at the end of the one week period. Centimeter rule on left photograph; magnification on right photograph approx. 10x.

This report suggests that the agricultural, biological and health impacts from this particular protein may be highly significant and detrimental. Additional tests underway support this concern.

Clifford E Carnicom
Sep 24 2017

Born Clifford Bruce Stewart
Jan 19 1953

Protozoa Motility and Mortality

Protozoa Motility and Mortality

by

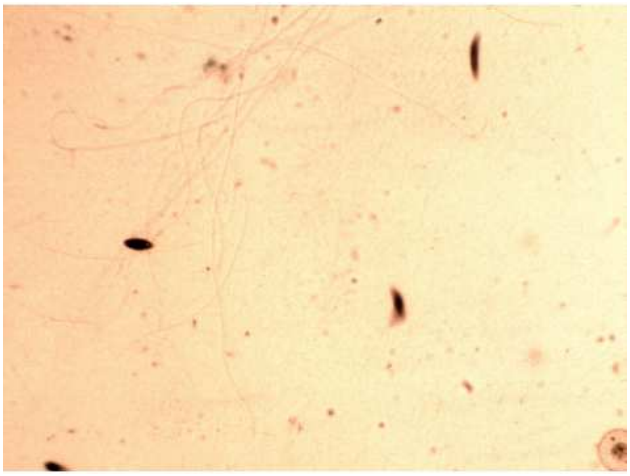
Clifford E Carnicom
Sep 29 2017

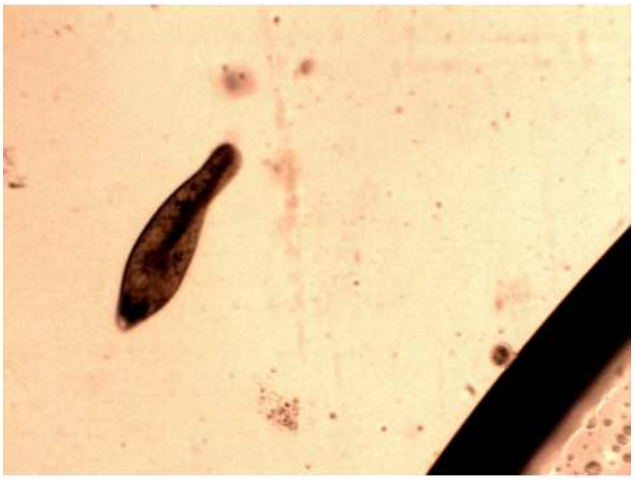
A protozoa culture has been subjected to a specific and isolated protein. This protein is described in greater detail in the paper entitled, *Morgellons: Unique Protein Isolated and Characterized* (Aug 2017). This protein is derived from the microorganism tentatively identified as a 'cross-domain bacteria (CDB) as described more extensively on this site.

The concentration of the protein concentration that is applied to the protozoa is approximately 0.1% by weight to volume of water; this is a rather weak solution in comparison to other biological trials that are underway. Control solutions with the use of water alone are conducted in parallel for comparison. The protozoa culture is dominated by common species, such as paramecium, euglena, stentor, volvox, and amoeba.

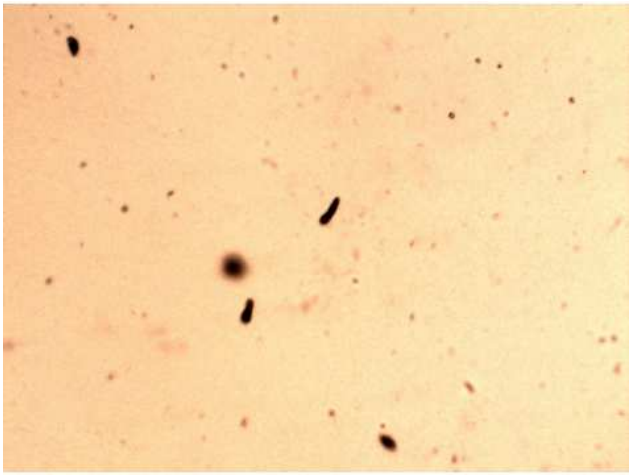
The result of this experiment is that the motility of the protozoa is diminished significantly after a specific time period in comparison to that of the control culture. The mortality rate of the protozoa is also increased in a corresponding fashion in comparison to that of the control and the rate of the mortality appears to be in direct proportion to the size and mass of the species. The control protozoa have not demonstrated any harm or degradation during an extended observation period.

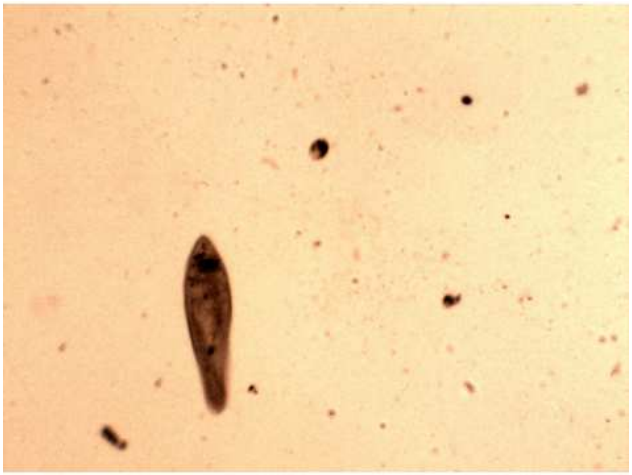
Time lapse images which demonstrate some of the observed changes in the viability of the culture are shown below.





Time lapse images of protozoa cultured in control water infusion nutrient solution. These images were captured after the extended time interval of approximately 3 hours. Behavior and motion appear normal in all respects. The species on the left are euglena; the species on the right side is a paramecium. The rate and direction of motion for the paramecia often makes it difficult to capture the organism at this level of magnification. Magnification approx. 600x.





Time lapse images of protozoa that have been subjected to a 0.1% protein solution by weight. These images were captured after a period of exposure to the weak protein solution for approximately 45 – 90 minutes. Euglena are visible in the left photograph (~45 min.) and both paramecium and euglena are visible in the right photograph (~90 min.).The origin and general nature of this particular protein has been described within additional research papers on this site. Behavior and motion do not appear normal. Both species types are significantly impaired in their motion. The vast majority of the euglena appear to be expired at the end of the 90 minute period. The paramecia show a gradual deterioration with very erratic, confused and generally confined motion. Some of the individual paramecium roll into a ball or spherical structure and spin repeatedly until expiring. Magnification approx. 600x.

This report suggests that the biological and health impacts from this particular protein may be highly significant and detrimental. Additional tests underway support this concern.

Clifford E Carnicom
Sep 29 2017

Born Clifford Bruce Stewart
Jan 19 1953

Bean Growth Report

Bean Growth Report

by

Clifford E Carnicom
Oct 03 2017

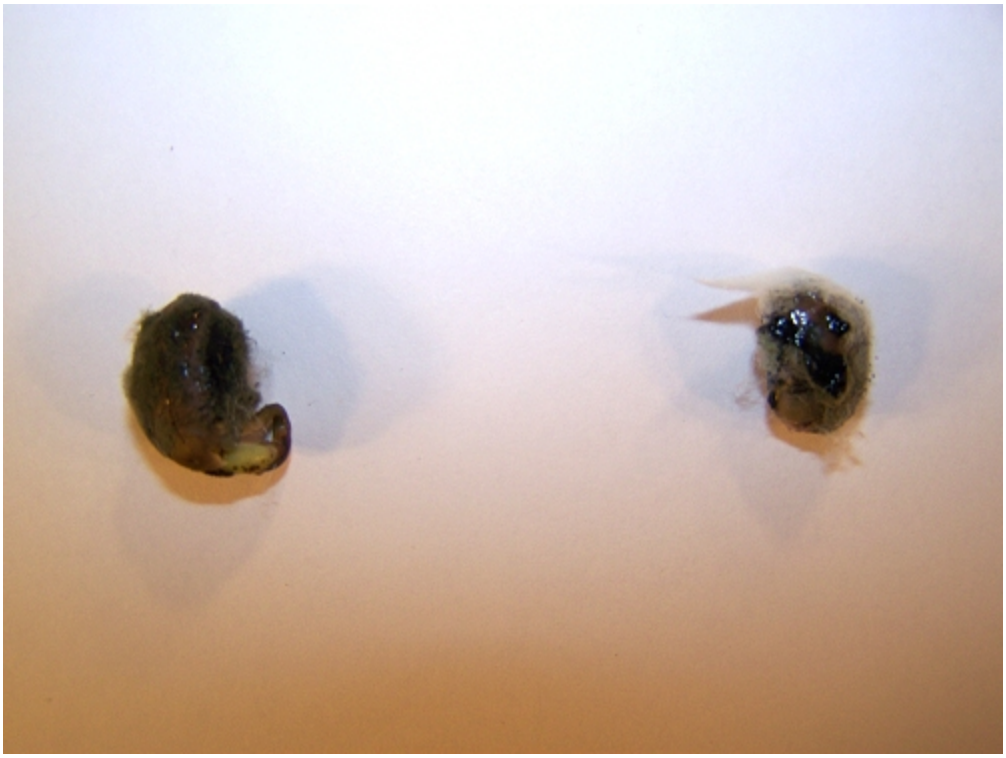
The growth of beans (Vigna unguiculata) that have been subjected to a specific and isolated protein for two weeks is now complete This protein is described in greater detail in the paper entitled, *Morgellons: Unique Protein Isolated and Characterized* (Aug 2017). This protein is derived from the microorganism tentatively identified as a 'cross-domain bacteria (CDB) as described more extensively on this site.

The protein concentration solution applied to the seeds is 2% by weight. Control solutions with the use of water alone are conducted in parallel for comparison.

The result of this experiment is that germination and growth from the beans is essentially terminated by the presence of this protein at this concentration level. The control seeds have germinated and flourished normally. Additional trials with a lower concentration of the protein in solution are planned.

Photographs that demonstrate the condition of growth in both cases are shown below:

The growth of beans (Black eyed pea) under control conditions of water nutrient solution alone is recorded above. Growth appears to be entirely normal and healthy over the two week period. A bean that remained under the water level in the control solution is trapped by the root of the plant to the right.



The halted and damaged growth of the same bean species after being subjected to the isolated and specific protein under study. The origin and nature of this protein have been described within the research on this site. The concentration of the protein solution is 2% by weight. The time period for growth is two weeks. The growth process has been terminated and it shows significant harm to the plant; in addition, the solution has fostered a fungal attack upon the seeds. A highly stunted from of germination occurs at the lower right of the seed shown to the left; there is no germination of the seed shown to the right. The vast majority of the beans subjected to the protein show no visible germination.

This report demonstrates that the agricultural, biological and health impacts from this particular protein are likely to be significant and detrimental. Additional tests reported and underway support this finding.

Clifford E Carnicom
Oct 03 2017

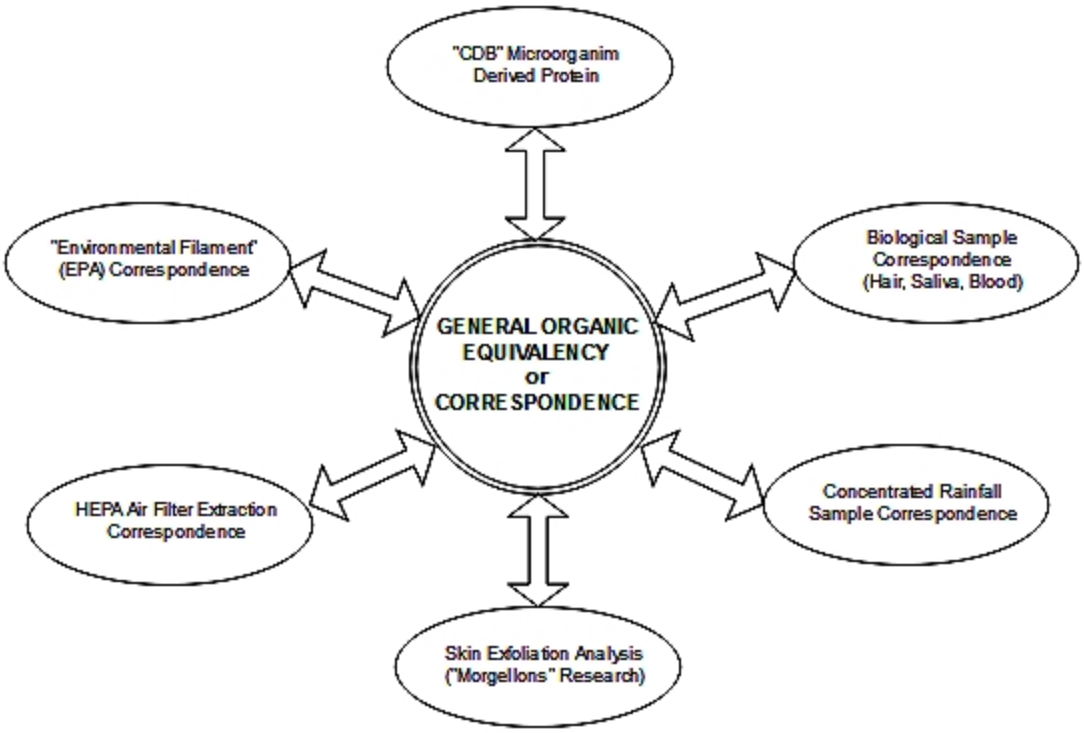
Born Clifford Bruce Stewart
Jan 19 1953

A Point of Reckoning: Part III

A Point of Reckoning – Part III

by

Clifford E Carnicom
Oct 06 2017



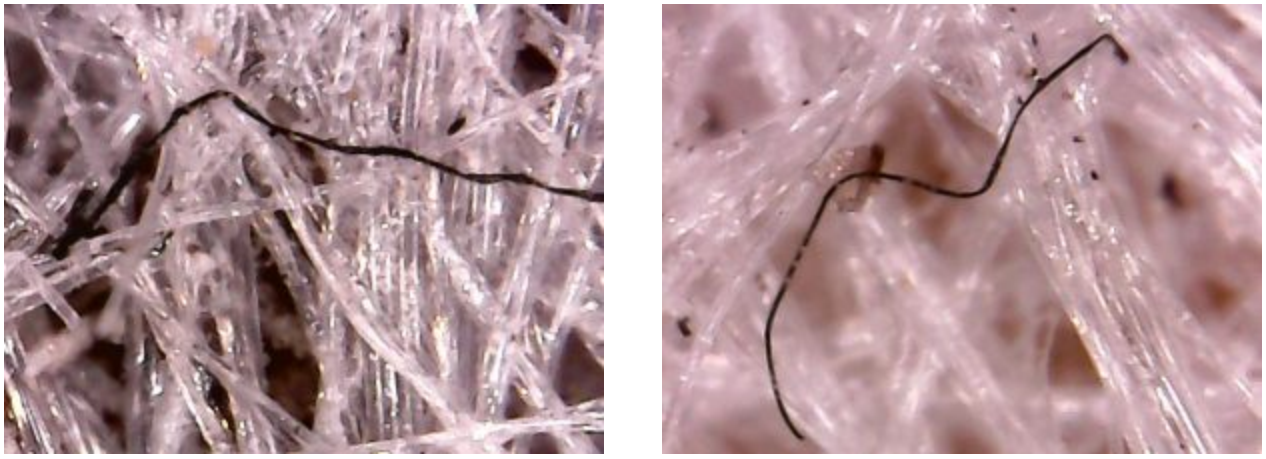
A common set of organic components has been identified within a wide variety of environmental and biological samples. These components are comprised of organic functional groups and structures that are found in each of the following sample types:

1. The “Environmental Filament” material that has been under investigation by Carnicom Institute for a period that now approaches two decades. This is the same material type that was originally sent to the U.S. Environmental Protection Agency in January of the year 2000 with a request for identification on behalf of the public welfare. The Agency refused to perform that investigation or examination.

Unusual airborne “Environmental Filament” material of identical nature sent to the U.S. Environmental Protection Agency in 2000. A request for identification was made at that time. The request was not fulfilled.

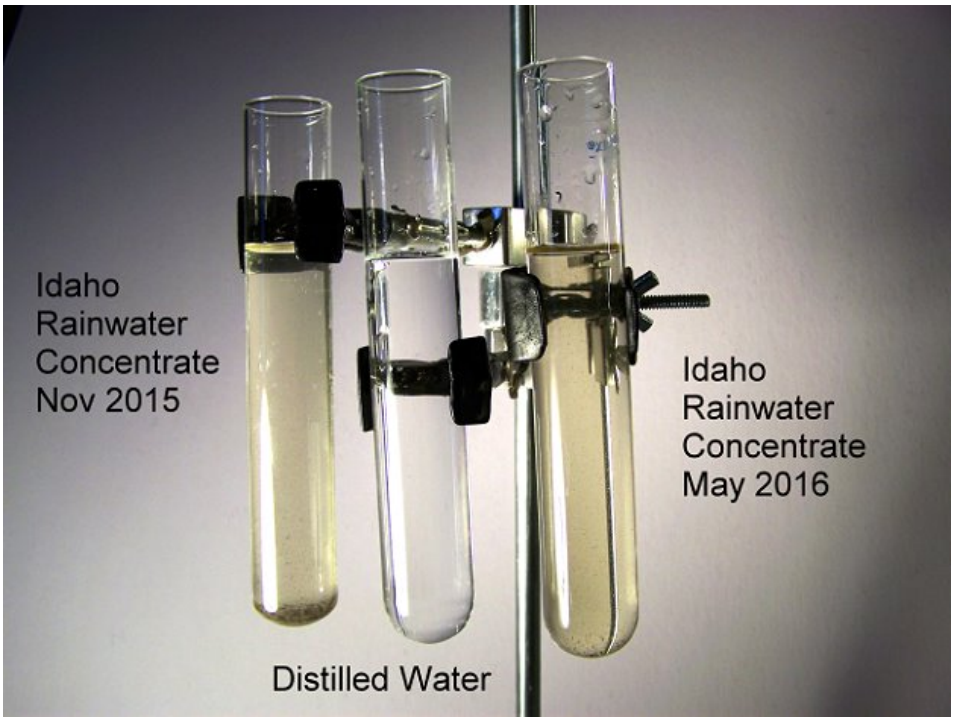
2. An isolated and specific protein that is derived from the microorganism tentatively identified as a ‘cross-domain bacteria (CDB) as described more extensively on this site. This protein is described in greater detail in the paper entitled, Morgellons: Unique Protein Isolated and Characterized (Aug 2017).

3. An extraction from a HEPA air filter that has run continuously for approximately one year. Filters that have been subjected to both indoor and outdoor air show similar sample materials to be collected.



Typical HEPA air filter (indoor and outdoor) sample material used for extraction and subsequent infrared analysis of organic composition. These samples are described in more detail in the paper entitled “A Point of Reckoning: Part I”, Aug 2017.

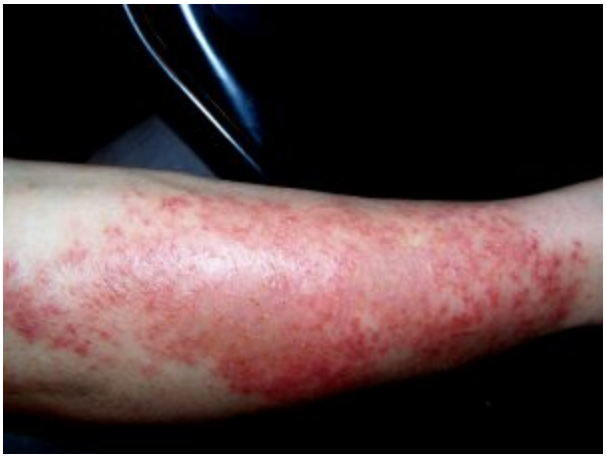
4. Organic extractions from concentrated and multiple rainfall samples.



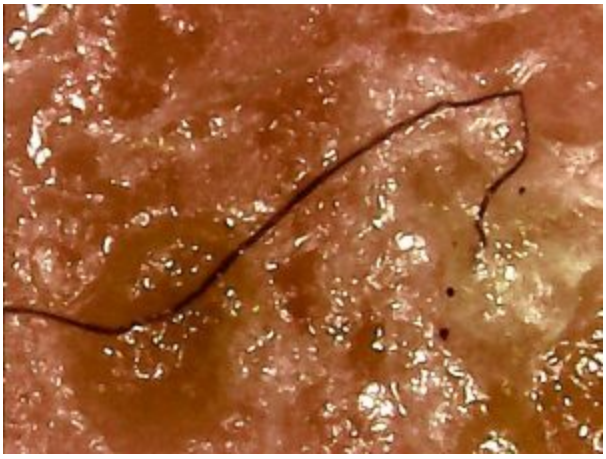
Concentrated rainfall samples in comparison to distilled water. Contamination of the water is visually apparent. Additional information regarding rainfall analyses is available on this site.

5. A set of biological samples, including that of human hair, saliva and blood have been examined via infrared analysis as a portion of this report. Hair samples require chemical digestion and all samples require the complete removal of water from the sample.

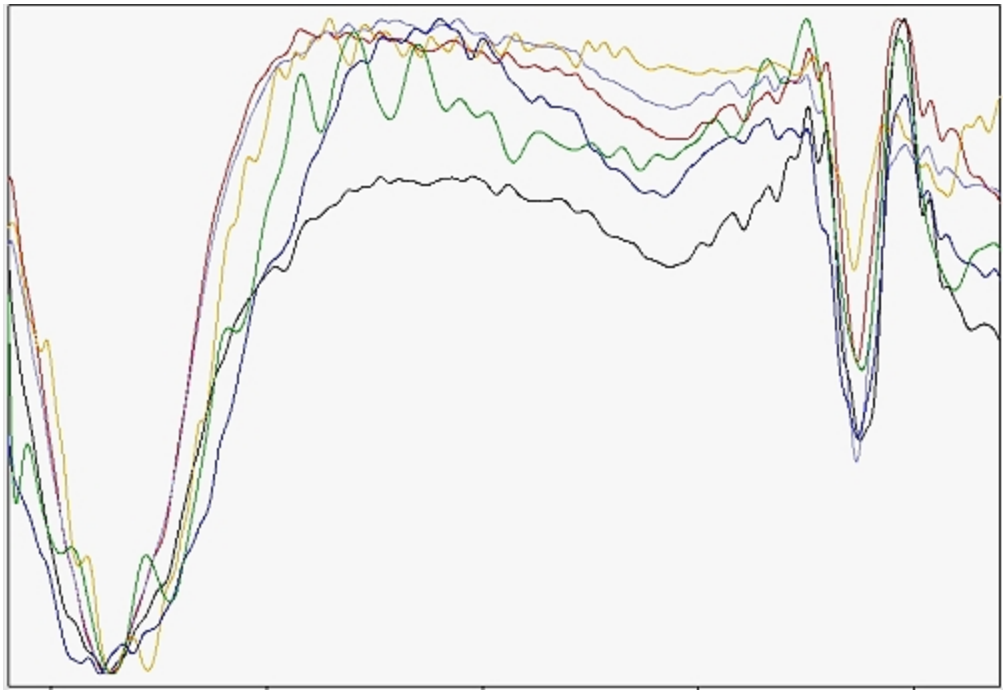
6. Skin exfoliation samples from an individual that exhibits symptoms characteristic of the Morgellons condition have also been examined via digestion, digestion and infrared techniques.



Observed skin that exhibits symptoms characteristic of the Morgellons condition.



Filament sample recorded (one of several) within a portion of the skin condition shown to the left. Magnification approx. 150x.



Infrared spectra of a variety of environmental and biological samples that share a common set of organic components. The sample types include the “Environmental Filament”, a specific and isolated microorganism protein, a HEPA air filter extract, a concentrated rainfall sample, hair, saliva and blood samples, and a skin exfoliate sample. Although all sample types have been collected and prepared by vastly different methods and are of varying concentrations, a set of organic functional groups is common to each sample. These occur within the ‘functional group window’ of the infrared spectra shown.

The laboratory methods of analysis include, in part, that of:

Organic extraction methods
Liquid column (low pressure) chromatography
Ultraviolet spectroscopy
Visible light spectroscopy (colorimetric test)
Bradford test for protein
Evaporative techniques
Near Infrared Analysis
Infrared Analysis.

A database of more than 6500 infrared spectra (National Institutes of Technology –NIST and collected) has been used to prepare this research paper.

The functional groups within the analyses that are of heightened interest and that appear to share commonality include those of the phenols, organic acids, isothiocyanates, and the amides. There are numerous implications within this set of functional groups and their combined properties that provide a basis for extended research, investigations trials,and the aggregation of resources and funding for the same in the future .

Clifford E Carnicom
Oct 06 2017

Born Clifford Bruce Stewart
Jan 19 1953

Global Validation

Global Validation:
(the spider web problem…)

by
Clifford E Carnicom
Nov 26 2017
Edited Dec 02 2017

The evidence of a chemical and biological assault upon the sanctity of this planet is at hand. For close to two decades, Carnicom Institute has patiently accrued and presented this record of violation to the global public. The circumstances, situations and reports that justify such serious claims are far beyond the point of “concern”, the need for “investigation”, or the entertainment of “conjecture”.

One of the primary materials repeatedly deployed in the operations is that of a unique “environmental filament”, as it has been designated over the decades on this site. The material has a long history of study, beginning with the failure of the U.S. Environmental Protection Agency (EPA) to identify an early sample sent to that agency in the year 2000. The prospect of a public health risk was included in that correspondence and this was the primary basis of the request for identification. The filaments have an airborne source. Unusual biological components were identified in that and similar samples at the time, and they were documented as such. The record of all correspondence with the EPA exists on this site.

An additional act of record from the year 1999 exists within the paper entitled “Environmental Filament: False Report”, (Jan 2013). This paper further documents the thwarting of efforts (paid for) to disclose the nature of this material to the general public.

If you are a novice to the subject, or if you are easily swayed by the words and reports of popular persuasion, you will be told that you are dealing with nothing more than some mildly unusual events that involve flying, or “ballooning spiders”. You will not be given any on-ground scientific study that documents this strategy of shaping perception, but you will be

told that it is so. Network media reports will promulgate the story line, with an inclusion of the purported arachnid family (e.g., Linyphiidae) to boot. If this approach is adequate for your needs then it may be best to simply move on to the next story or commercial of the day.

The samples examined by this researcher are NOT spider webs. All direct examinations demonstrate that they are of an unusual or artificial origin and of a complex chemical and biological nature. No spiders accompany the samples that have been received. Ironically enough, *the filaments do indeed share some physical and chemical characteristics with actual spider webs*, but this mimicry will hold only at a superficial level. Mainstream science reports recently announce to us that the creation of completely artificial spider webs is now commercially in place; realistically, we should not ignore the covert world of material science development along that path to public disclosure. The internal composition of the filaments differs dramatically from spider webs, and it is here that the truth will be found.

Nanotechnology is usually inaccessible to the general public, but the boundaries and frontiers of it are -with some creative hacking. As an understanding of the filament internal structure develops, examinations at the nanometer level will certainly be required to understand the intentions and design more clearly. In the meantime, fortunately, sufficient laboratory means to make the necessary distinctions between various forms and molecular structures exist.

A typical image of the airborne filament material at low magnification is as follows:

Environmental Filament Sample, Magnification approx. 20x.

Samples of this material (in some cases, multiple) have been examined from the following countries:

Representative countries that have collected and sent samples of the environmental filament material to Carnicom Institute over the past two decades.

It has taken some effort over time to coordinate the receipt of these samples across the globe.

This library of samples and the accompanying examinations have recently crossed an important threshold; a physical sample has been delivered from Ireland that accompanies the onsite video immediately below. This combination creates an irrefutable presentation of video and physical evidence that demands a verdict. Under the current climate, no one can speak of spider webs alone without proving their case.

Let us introduce this most recent report; on this occasion it comes to us from the grounds of Ireland:

On site video account in Wexford, Ireland, courtesy of Terry Lawton

What distinguishes this particular case in Ireland is that a physical filament sample has been sent in combination with the video evidence; these provide a more accurate assessment of the situation on the ground.

The filament material received in this case, in all respects known, is identical to that sent to the U.S. EPA close to 20 years ago. The material received from Ireland is NOT spider web material, and the observations on the ground reinforce that claim.

The conclusions of this paper are based upon numerous specific samples that have been received over a period of many years. These same materials are disturbingly known to be observed frequently and, as documented, are of global distribution. All of the filament samples received are identical in all respects at the microscopic level. There are numerous reports on this site of detailed analyses of these environmental samples and their visual and general organic equivalence to biological filaments symptomatic of the Morgellons health condition has been established

The ruse of proclaiming (along with puppet reporting) that spider webs are distributing themselves frequently and across the globe en masse has now played itself out. Ballooning spiders on a larger scale are a real but rare phenomenon; the extensively examined environmental airborne filaments unfortunately are also quite real, but they do not originate from spiders. Seasoned readers may recall the first publicized sample in 1999 from California that formed a ribbon of material approximately one half inch thick and spanned a length of about 20 feet on the highway. That would be a problematic spider. The environmental filaments can no longer be considered rare at this point. The materials repeatedly dispersed to ground level are a public health hazard as originally proposed to the

U.S. EPA approximately two decades ago. They are of a complex chemical and biological nature. These materials are known to be affecting the entire planet and all life that exists upon it.

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An additional purpose of this paper is to briefly present the various methods of laboratory analyses that have been used to establish that there are major differences between the filament field samples received and examined spider webs. These methods include the following:

1. Microscopic examination:

The simplest and most direct method to determine if there is a difference between the two samples (i.e., environmental filament and a spider's web) is simply to look at the samples under the microscope. The original samples have the following visual appearance:

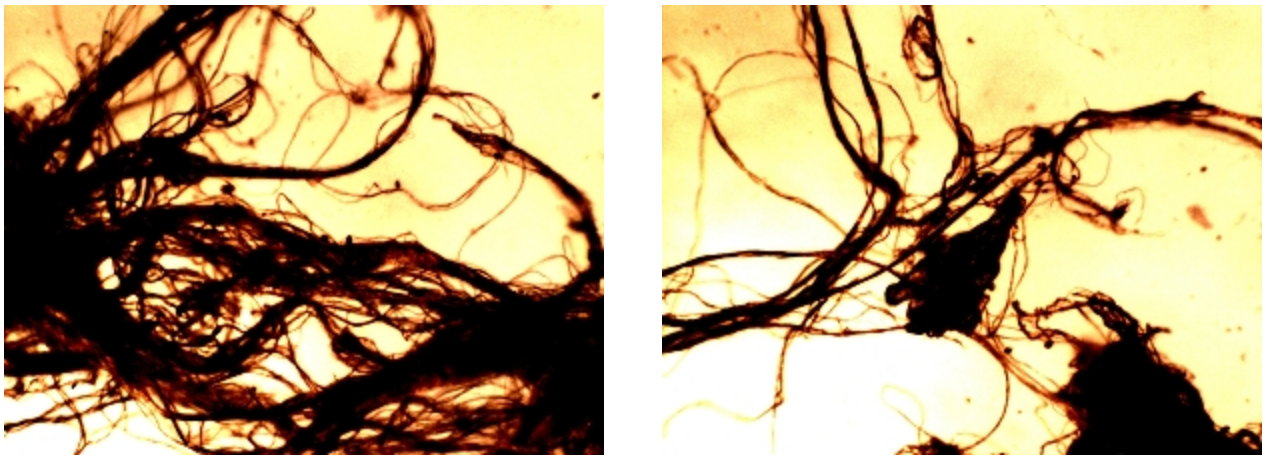
Environmental Filament Sample, Magnification approx. 20x.

Collected Spider Web Sample

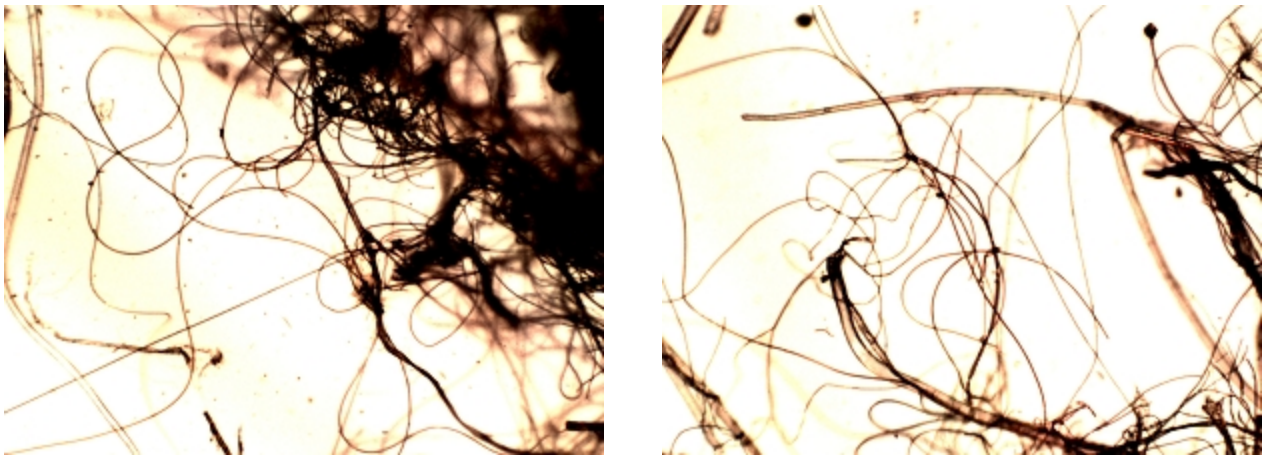
In this particular case, the environmental sample is quite clean. The spider web material to the right does have some debris captured within as expected; this occasional contamination is readily visually separated from the web filaments under the microscope. The spider web sample is composed of approximately one half dozen webs combined.

Next, the materials are examined under the microscope at various magnification levels. The first series is taken at approximately 500x magnification. The differences in appearance are not notable at this stage, however, it can be determined with careful observation that the

spider web filaments have a more linear quality to them than the environmental filaments do. This lower magnification level is not sufficient to readily identify the different structural nature between the two sample types.

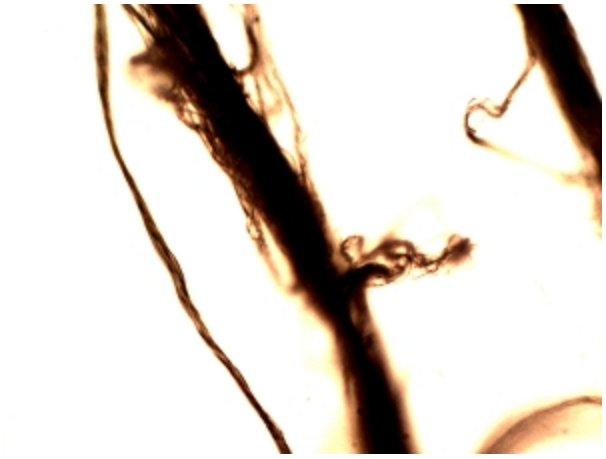


Environmental Filament – Microscopic Examination – An increase in the wavy texture of the environmental filaments versus the spider web is visible under close examination. Magnification Approx. 500x

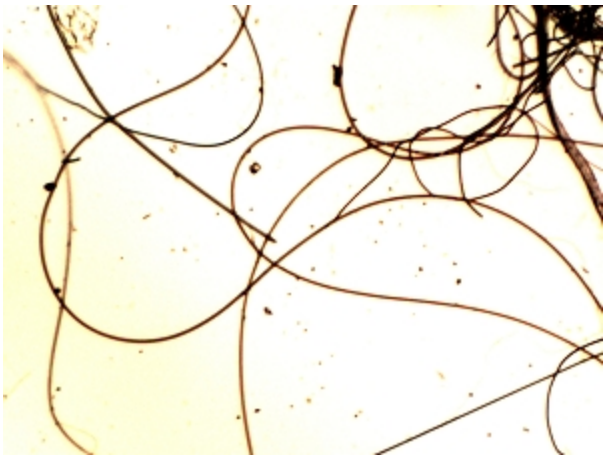


Spider Web Sample – A smoother and more linear structure is observable within the spider webs versus the environmental filament. The differences are not dramatic at this lower level of magnification. Magnification approx. 500x.

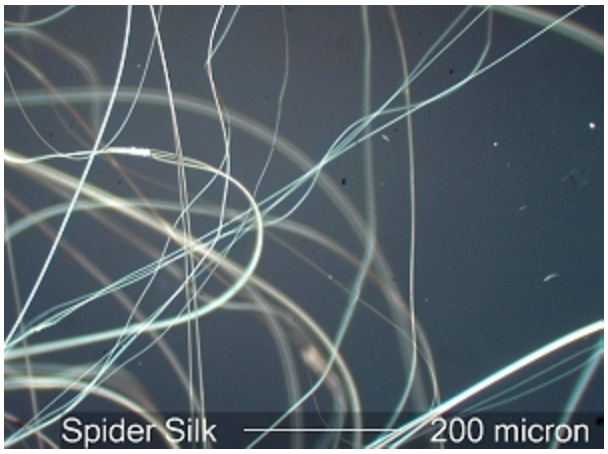
Next, the two samples are compared at a moderate level of magnification:



Environmental Filament examined under microscope at moderate magnification. It is here that important differences can be determined between the visual characteristics and structural nature of the two filament types. The environmental filaments show much higher variability in form and structure than the spider webs do. The environmental filaments do indeed have a much wavier appearance to them; this has direct bearing on the extreme adhesive and stretch qualities of the filaments as has been repeatedly observed over the years. In addition, the filaments demonstrate budding growth forms that demonstrate a clear biological nature to the filaments as opposed to inert spider web generation. It is at this level of magnification that the case of fundamental difference and distinction exists between the environmental filament and spider webs. It is insufficient and unjustified to make the claim for either type of filament existence without this minimum level of observation and analysis; this requirement exists for any journalistic or scientific reporting as well. Magnification approx. 1250x.

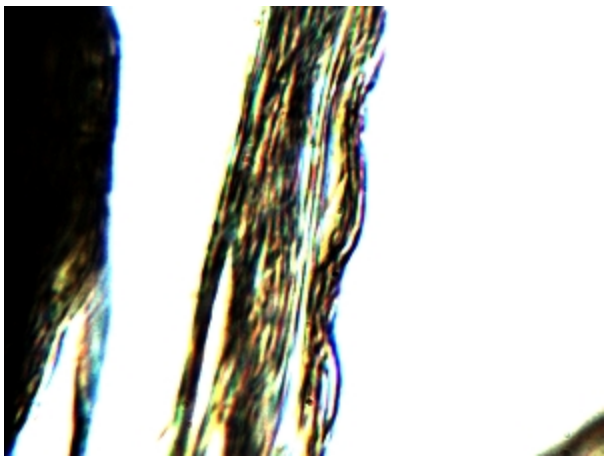


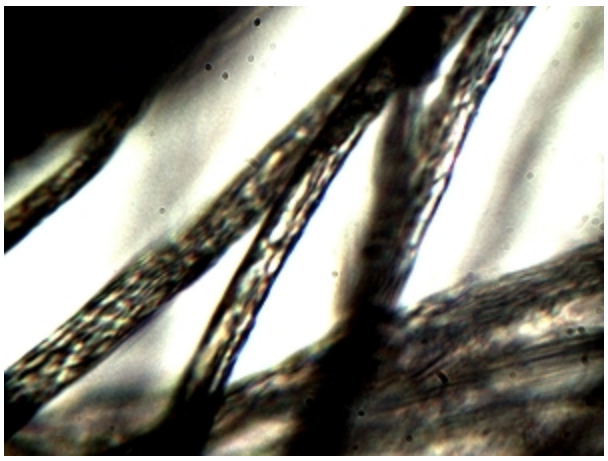
Spider webs at moderate magnification. The spider webs continue to show that they are simpler and more uniform in structure. There are no dramatic changes in the basic structure of the spider web that emerge at this level of observation. The geometry of the spider web is more linear, and of smoother geometry and texture. There are no ‘budding’ growth forms that take place in spider webs after their formation. Magnification approx. 1250x.

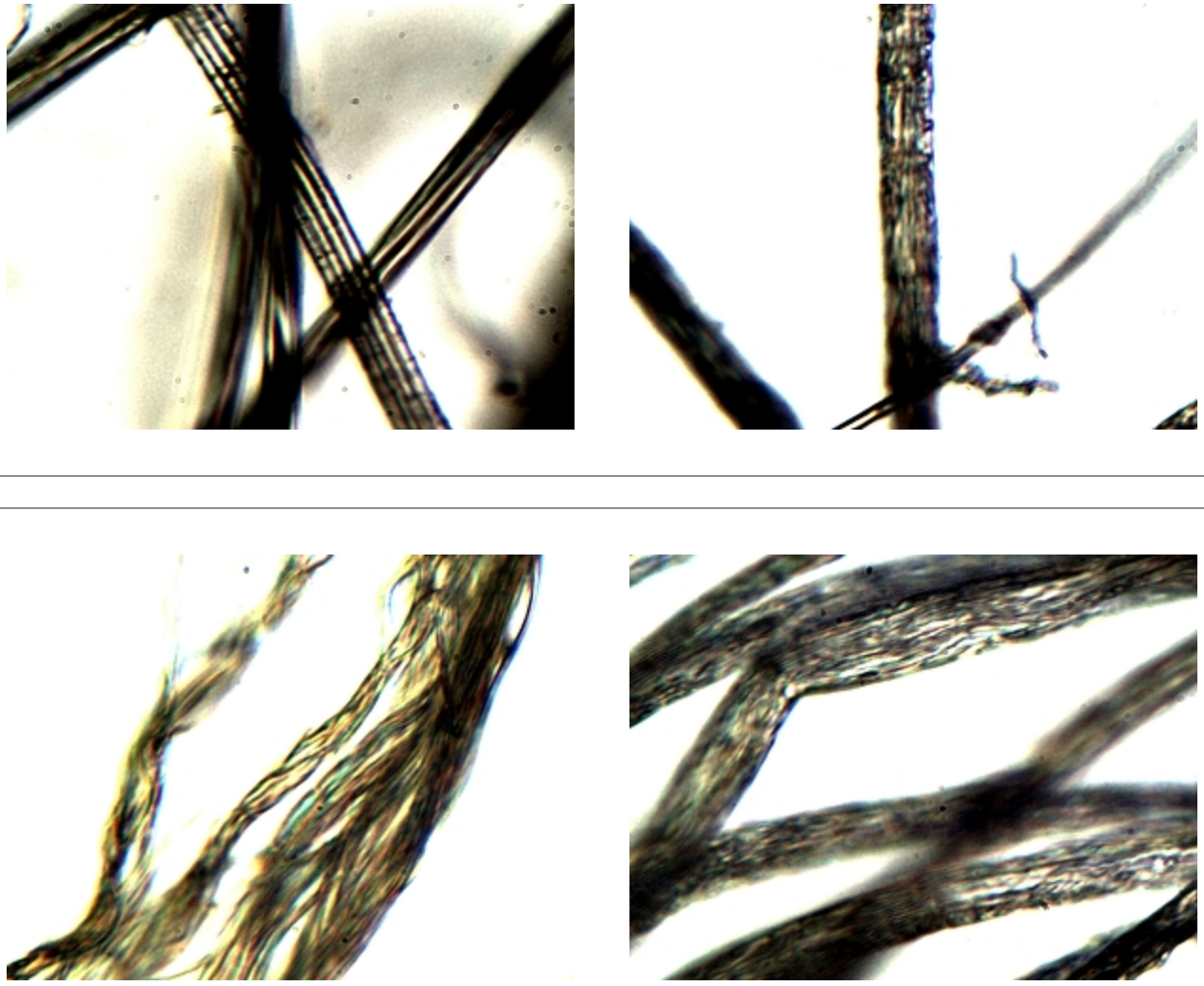


An independent microscopic image of spider webs (silk) at a similar magnification level for comparison. The qualities of this image match those that are presented within this report immediately above. Image source: www.microlabgallery.com

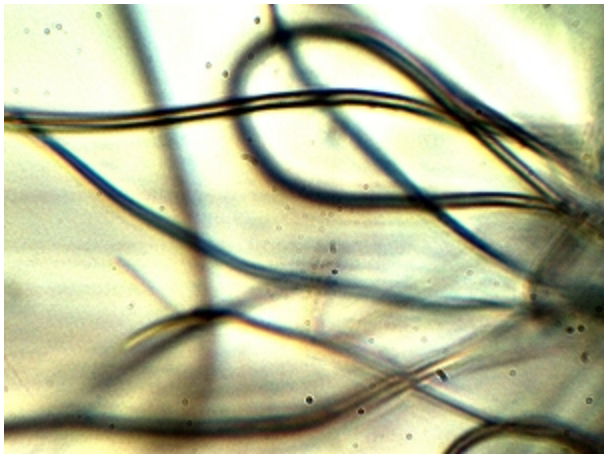
And lastly, we have a relatively high level of magnification:

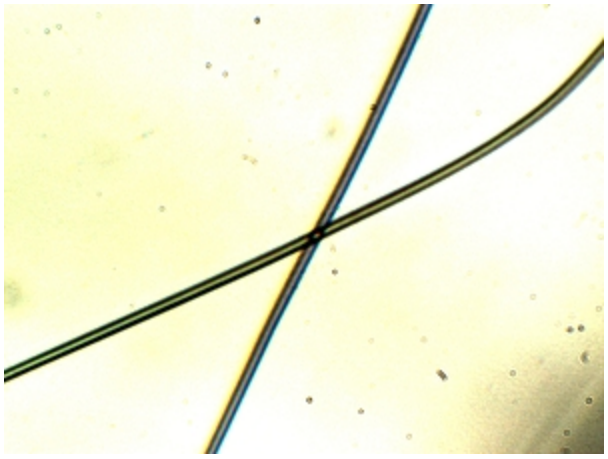






Microphotographs of the “environmental filament” at high magnification. The truly unique qualities of this material are shown much more clearly at this level of observation. It can be understood from these photographs that the driving structure and morphology of each filament lies INTERIOR to the filament. The bundled filament structure (sub-micron) interior to an encasing filament is a distinctive feature of many samples. The boundaries of nanotechnology are opened to further investigation at this point. Budding growth structure can again be observed within this set. It is only at this level that the tentatively designated “cross-domain” bacteria is first observed; this microorganism has become the subject of intensive study in association with the Morgellons health condition. A level of equivalency by numerous methods has been established between the environmental filaments and biological filament growths directly associated with the Morgellons health condition. Magnification approx. 5000x.





Spider webs at high magnification. The additional information available that can be acquired here is relatively uneventful. The geometry of the spider webs is again smoother and more linear in fashion. There is no variable and complicated inner micro structure visible at this stage within the spider webs. There is no budding or extension growth from the spider web. Magnification approx. 5000x.

The case that the “environmental filaments” are NOT “spider webs” is unequivocal and indisputable at this point of analysis.

It is sufficient to end this report at this time. I will, however, add some additional comments at a later point. The conclusions reached have been made many times over in the past. The imagery here hopefully makes the point more clearly to those that remain in need. In early years of work, these same conclusions were reached largely by qualitative chemical testing along with modest microscopy resources available at the time. Those conclusions were at the heart of the motive for seeking assistance from the U.S. Environmental Protection Agency close to two decades ago. This publicly funded agency failed in meeting its mission obligations at that time, and it remains in negligence today. The failure of that agency in its primary mission to protect the health and welfare of the general public bears some level of responsibility for the current state of ecology of the planet. The worldwide occurrence and distribution of the problem shows us that the responsibility is now shared at a global level and by all countries and citizens of the world. It remains our decision as a species and as stewards of the planet how we now choose to proceed. Nature is not under the control of human beings, as we can only assume a limited role on a much larger stage. We do, however, remain responsible for our actions to our existing generation, and to those that follow if we choose to care.

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END OF PRIMARY REPORT

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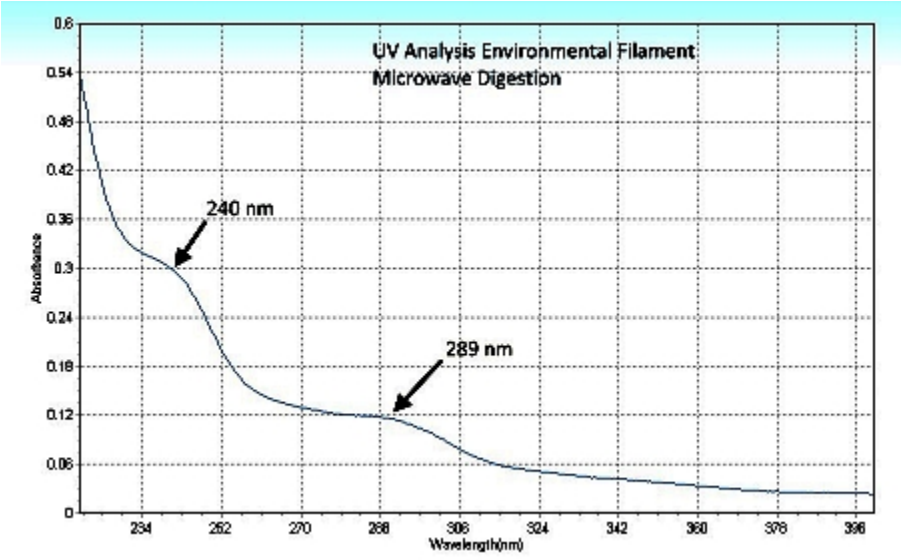
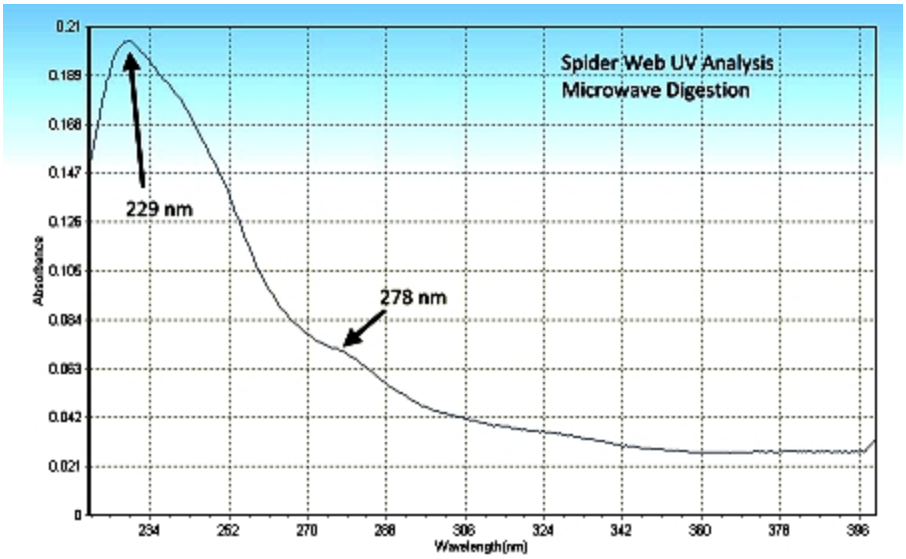
Brief comments on additional laboratory methods employed (to follow as time permits):

1.] Ultra violet spectroscopy:

There are many different methods to establish the uniqueness of materials. In this case, microscopy alone is more than sufficient. Subjecting a material to different portions of the electromagnetic spectrum is another mainstay in the pursuit of material identification and structure. This is the basis of spectroscopic methods.

In this case, the two filament materials are subjected to ultraviolet radiation. A difference between the spectra further demonstrates that there are internal molecular differences and structures between the filaments. The additional methods that are described will not be discussed at length, but they will serve the purpose of introducing the numerous methods by which the environmental filament and spider webs can easily be shown to differ from one another.

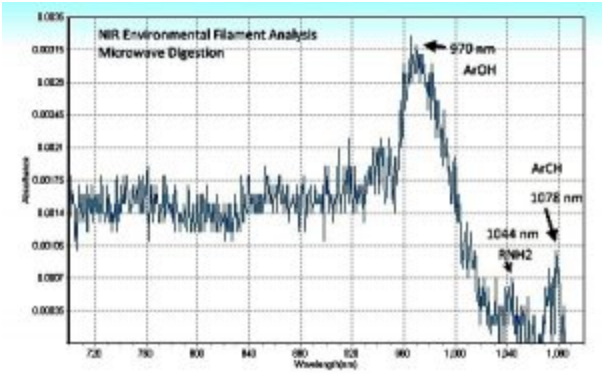


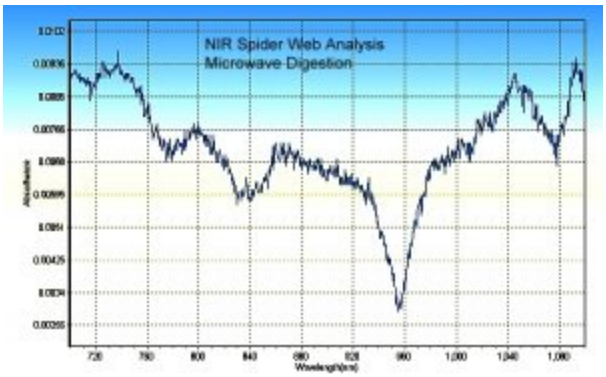


Comparison of UV Spectra
Environmental Filament to Top, Spider Web to Bottom
Differing absorbance maximums between the two materials are evident.

2.] Near Infrared spectroscopy:

The next method of comparison is that of NIR, or Near Infrared spectroscopy. The spectra range between 700 and 1100 namometers. The different absorption maximums between the two sample are again evident. NIR does have some value and utility in the identification of organic functional groups within a sample.





Comparison of NIR Spectra
Environmental Filament to Left, Spider Web to Right
Differing absorbance maximums between the two materials are evident.

3.] Metals Analysis – Inductively coupled plasma – Mass spectrometry

In this case, reference is made to an existing paper published on this site. In August of 2017, a paper was published on this site entitled, "Environmental Filament Project: Metals Testing Laboratory Result". The paper presents the results of a commercial laboratory test for metals within the environmental filament sample material. This particular method of testing is quite sophisticated and expensive, and it uses highly specialized laboratory methods and instruments. It has taken some effort to make these results available to the public. In this case the methods have been applied solely to the environmental filament; there is no counterpart analysis of spider web material available since that question was not a motive for the original test.

What is found from this testing is that the environmental filament contains a combination of numerous metals WITHIN the material. The analysis shows unusual or elevated levels of the following metals, as described within the report:

Aluminum
Barium
Calcium
Chromium
Copper
Iron
Lead
Magnesium
Manganese
Nickel

Potassium
Titanium
Vanadium
Zinc

What is significant here is that the environmental filament material is known to contain a complex distribution of metallic elements . This fact must now be coupled with the existence of an equally complex biological profile within it. This can be summarized by stating that environmental filament is known to have, therefore, a complex organometallic nature to it. It is quite certain that this knowledge adds to the uniqueness as well as uncertainties of impact from the material. It is quite reasonable to state that these uncertainties impose a level of unknown risk to its exposure.

[4.] Infrared Spectrometry

Infrared spectrometry provides especially interesting and intriguing insights into the nature of the environmental filament material. The primary interest here involves the exterior casing of the environmental filament; not the complex structures that exist within it. It has long been advocated that the filament form appears to be acting primarily as an encasing and delivery system, and that the composition of the exterior boundary is actually of secondary importance. This remains the case. The analysis by infrared spectrometry only further confirms this position.

Infrared spectrometry reveals that there is actually a great deal of similarity to be shared between human hairs, spider webs, and the environmental filament casing. The argument for keratin or keratin based compounds is endemic to all three, especially in light of detailed infrared comparisons and analysis, as well as in the literature for the former two.

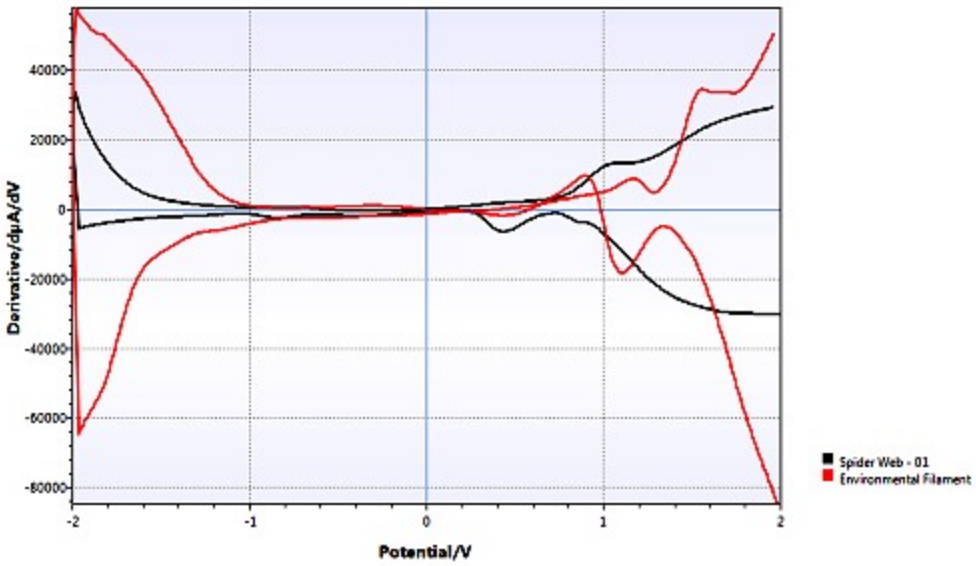
This fact can easily obscure and deflect the target of importance for the environmental filament, and that is its INTERIOR structure, – chemical and biological.

Citizens are advised to force the issue on this situation by demanding and requiring a broad and detailed examination of the material using a variety of technologies. Locally, close to a half dozen techniques have been employed in the background of this report. It is true that sufficient microscope examination will provide distinction of identification, and in many cases this will be sufficient for the cause. The true and full nature of the environmental filament will, however, only be properly revealed with the use of a multitude of advanced technologies.

[5.] Electrochemical Analysis

Electrochemical methods have also been used to establish additional distinction between the environmental filament and spider webs. In particular, the methods employed are those of:

1] Cyclic and differential cyclic voltammetry.



Differential Cyclic Voltammogram
(Red – environmental filament : Black – spider web)

The electrochemical properties of the environmental filament and the spider web are quite distinct from one another. The general interpretation from this plot is that the spider web is anticipated to be more electrochemically active than the spider web is; this interpretation coincides with the extensive metals that are present in the ICP-MS test results discussed above.

2] AC voltammetry and cyclic AC voltammetry.

3] Normal pulse voltammetry and cyclic normal pulse voltammetry.

4]Electrical impedance spectroscopy, including Randle’s circuit modeling methods.

The results from the five additional methods more than confirm the conclusions of this report.

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Additional Supplementary Notes:

There is no doubt that the ballooning spider phenomenon exists; some factors and questions around those events include:

1. Anticipated magnitude, frequency and scale of the events.
2. The appearance of masses of spiders in conjunction with the events in congruence with the volume and coverage of webbing observed.
3. Seasonal and species variations.
4. Dissolution of the web material, natural or synthetic, under environmental exposure must be examined in greater detail.
5. What is the behavior of the ballooning spider at the time of web formation?
6. Where is the ballooning spider located at the time the web was formed(e.g., elevation above ground) ?
7. What mass of material is expected to be produced in most cases?
8. What is the expected range and dispersal pattern of this mass?

In the absence of visible spider presence, there is now a requirement for laboratory analyses in conjunction with any claims of presumed spider origin. This demand is further supported by the current public disclosure of artificial web capabilities.

These questions are of interest to gain knowledge on, and I would encourage all readers to do so. The existence of natural webs does not preclude the existence of synthetic webs, or vice versa. The existence of either form does not provide a basis for dismissal of the other. Each situation must be addressed individually, comprehensively, and accurately; disingenuous or inadequate coverage does not obviate the need for honest investigation and disclosure.

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Many thanks to Terry Lawton in Ireland for providing information for the benefit of the public on this subject.

Clifford E Carnicom
Nov 26, 2017
Edited Dec 02 2017

Born Clifford Bruce Stewart, Jan 19, 1953.