

Invisible Itches: The Pain and Problem of Delusory Parasitosis

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It shouldn't take much imagination to think of a time when you felt like a bug was crawling on you



A feeling of itchiness, tingling, or pins and needles often sets our mind to working and our fingers searching for an arthropod cause (formication)

Because of evolutionary history, our tendency to infer, and social/personal experiences we jump to “bugs!”



Itchiness and the feeling of our fine hairs moving do seem associated with our history of ectoparasites- like lice

In most situations, the sensation is fleeting, as is the belief in an arthropod cause



Once we scratch or look we realize that we were wrong (or maybe right) and then we move on from the experience

However, there are situations where this predisposition towards arthropods can play havoc with our brain/senses



The brain is a powerful object, this can lead to three different situations involving formication; *Hallucinations, Illusions, and Delusions*

Hallucinations of insects involve a manifestation of false external stimuli



Hallucinations of insects are usually associated with alcohol withdrawal or the abuse of drugs like cocaine or meth

Illusions of infestation are borne from real external stimuli that are misattributed to arthropod causes



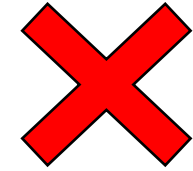
An example could be the feeling of static electricity on your skin being attributed to bed bugs crawling on you

A famous example of this involved a physics research facility in the 1960's



Workers had the feeling of crawling and pin-prick bites on their skin, a thorough investigation revealed that rockwool particles were the culprit

Usually, the illusions are dispelled, and the client is then able to move on from the experience



In some instances, the illusion becomes a belief and this is what can lead to delusions of parasitosis

**Delusions of parasitosis also involve a real external stimuli,
something is happening to the person's skin**


$$2 + 2 = 5$$

Unfortunately, the illusion or misconception of an arthropod cause has become a delusion (aka a strongly held false belief)

At this point we would say this person has delusory parasitosis, delusions of infestation, or simply invisible itches



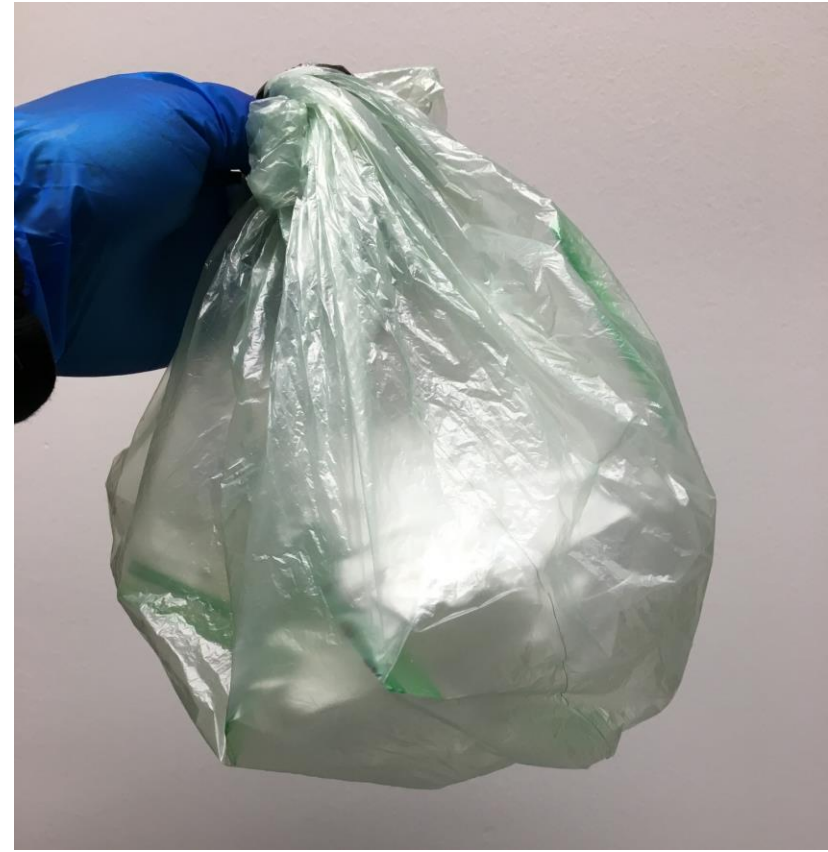
You may also hear references to Ekblom's Syndrome or Morgellons's Disease

Clients with delusory parasitosis can be some of the most upsetting and difficult cases we deal with



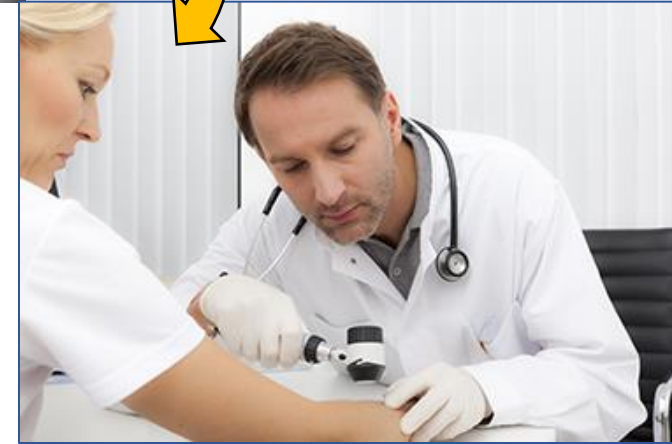
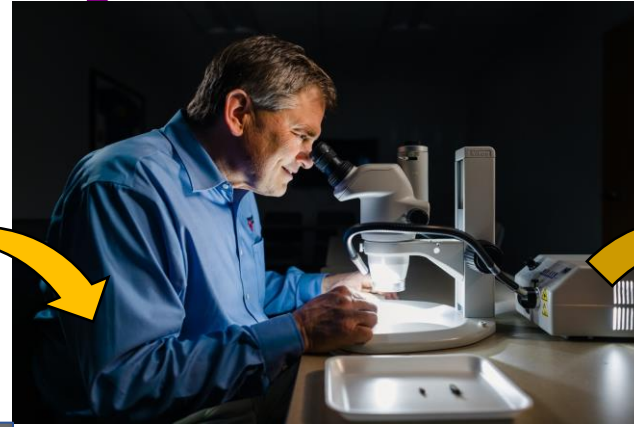
Often the person is truly suffering, and they are pleading for someone, anyone to help them

Depending on your workload and your location, your interactions with these kinds of clients can vary



In my previous job as a county extension agent in Nebraska, I averaged about 1 case of DP every week

Delusory parasitosis clients often find us in the middle of a lengthy journey to find answers



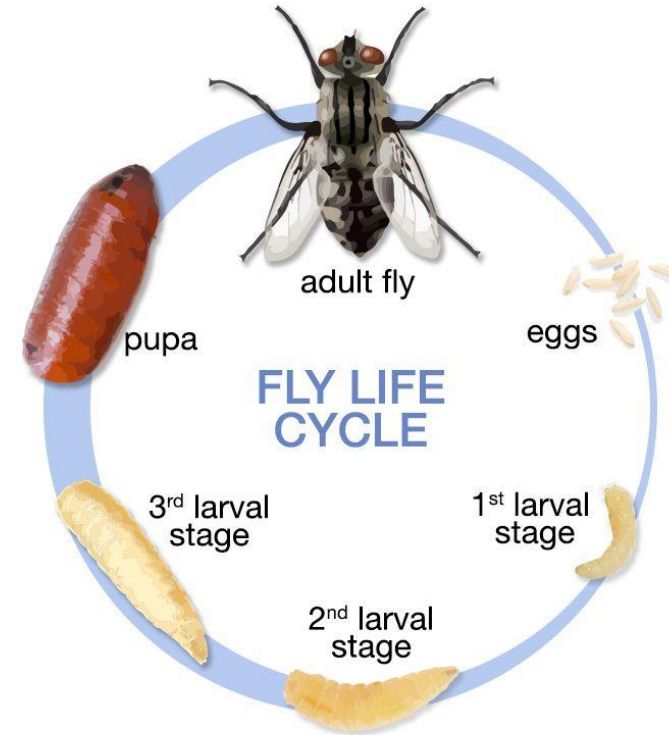
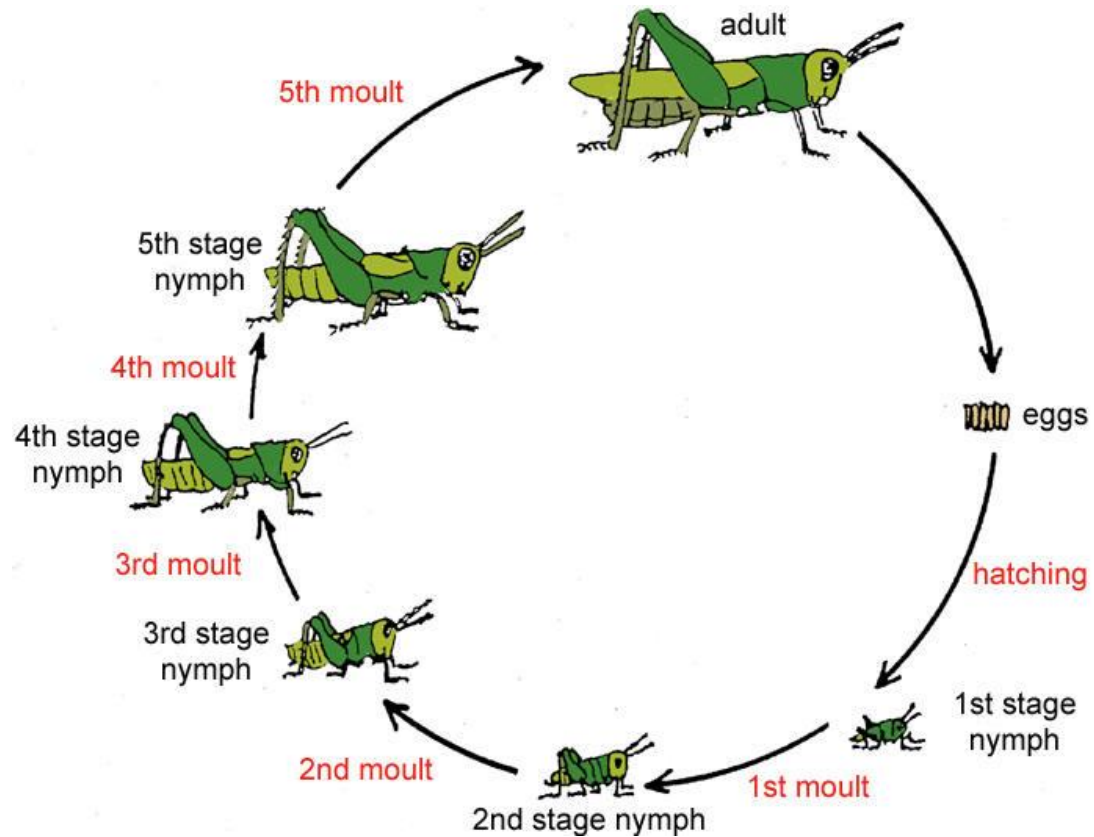
When they first contact you, you might receive a lengthy email or voicemail that describes their entire ordeal

They will often say things like “You are my last hope...”



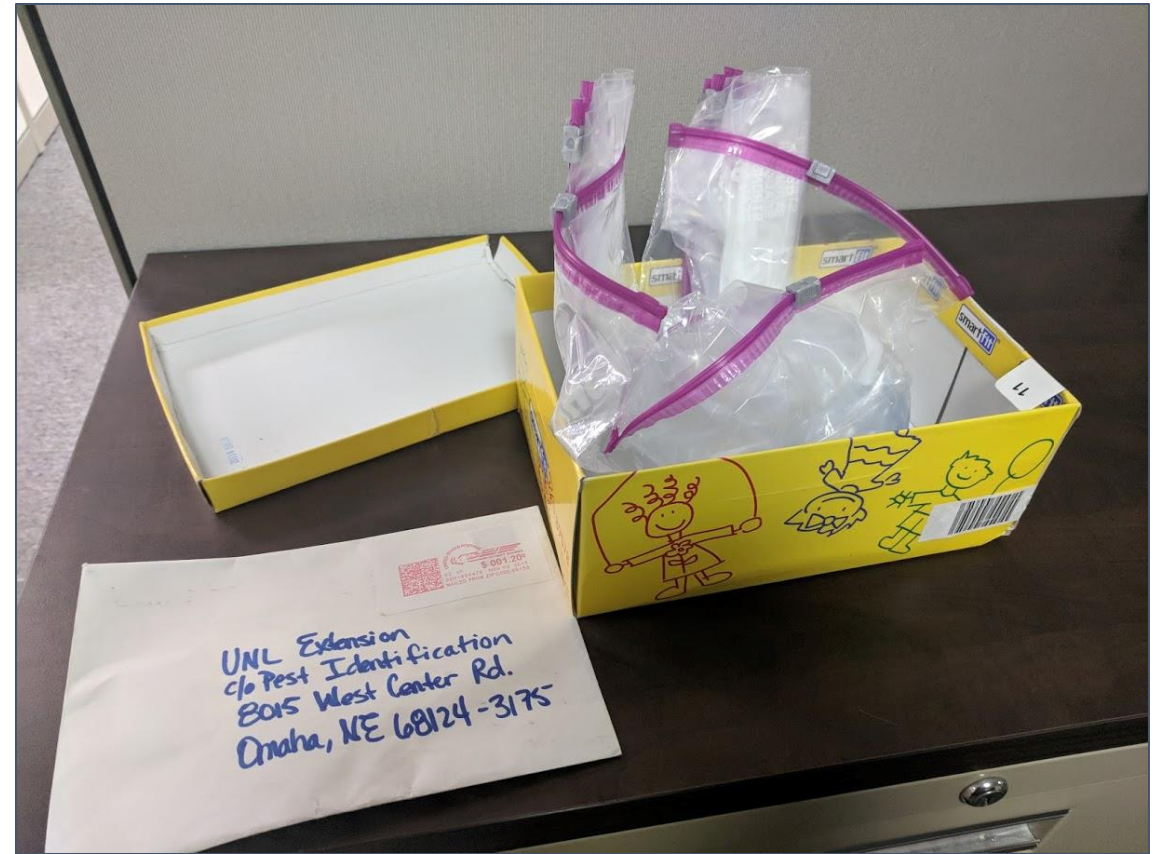
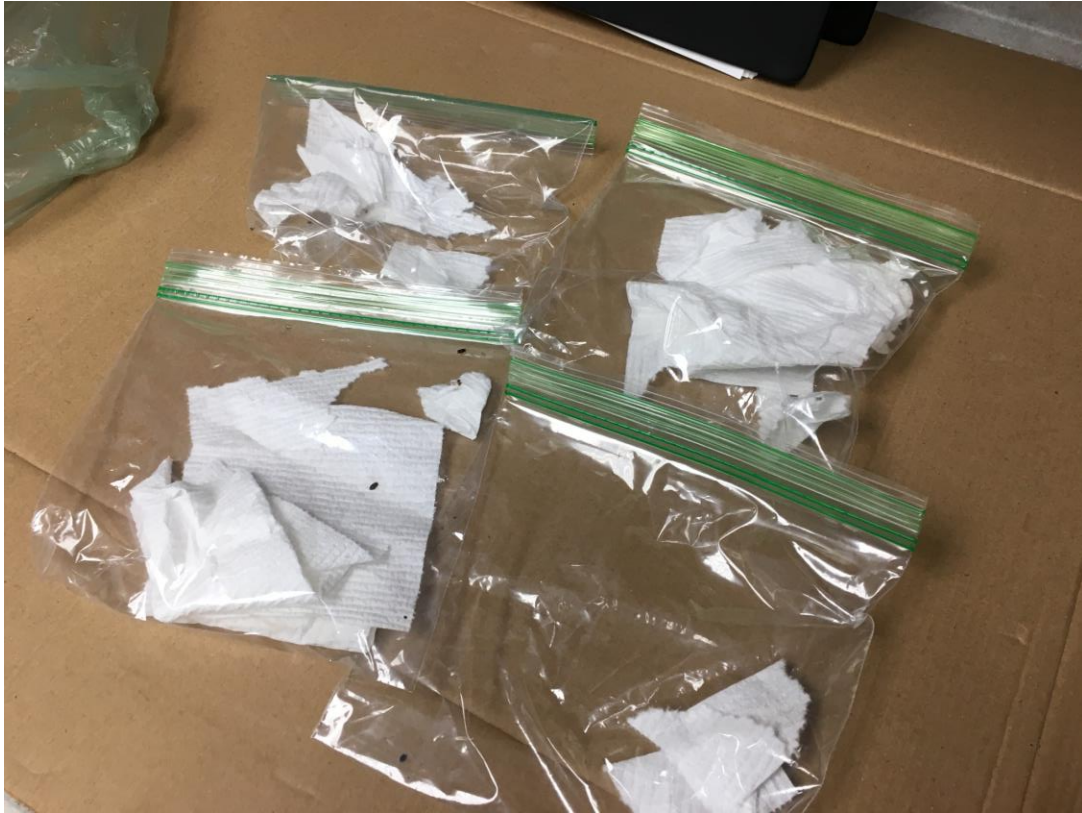
Also, “Please don’t think I am crazy.” “Nobody is taking this seriously.”
“How many people do you have complaining about this?”

They will provide an extremely detailed description of the pest and its life cycle



These descriptions often become fantastical, especially when confronted with the actual biology of pests

They can and will provide you with copious amounts of samples



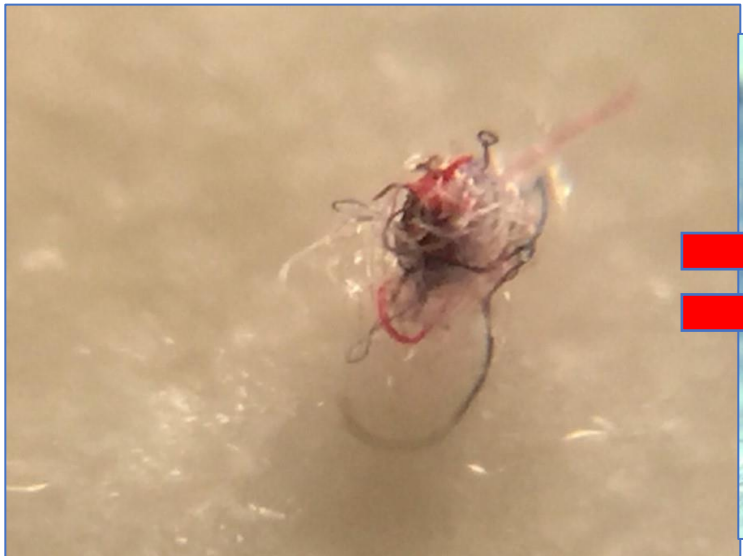
In the past this was called the “matchbox sign” but for modern times I would argue it should be called the “Ziploc sign”

Samples generally contain various bits of debris common to a home





It can be easy to see how some objects get construed as bugs



Samples can also contain actual bugs, which complicates things



The average American home can be populated by over 100 different species of arthropods

They may offer a detailed description of their method of relief



This can include extreme cleaning habits, excessive grooming, and dangerous misuse of pesticidal products

With descriptions like these some may be tempted to imagine a caricature of an asylum patient



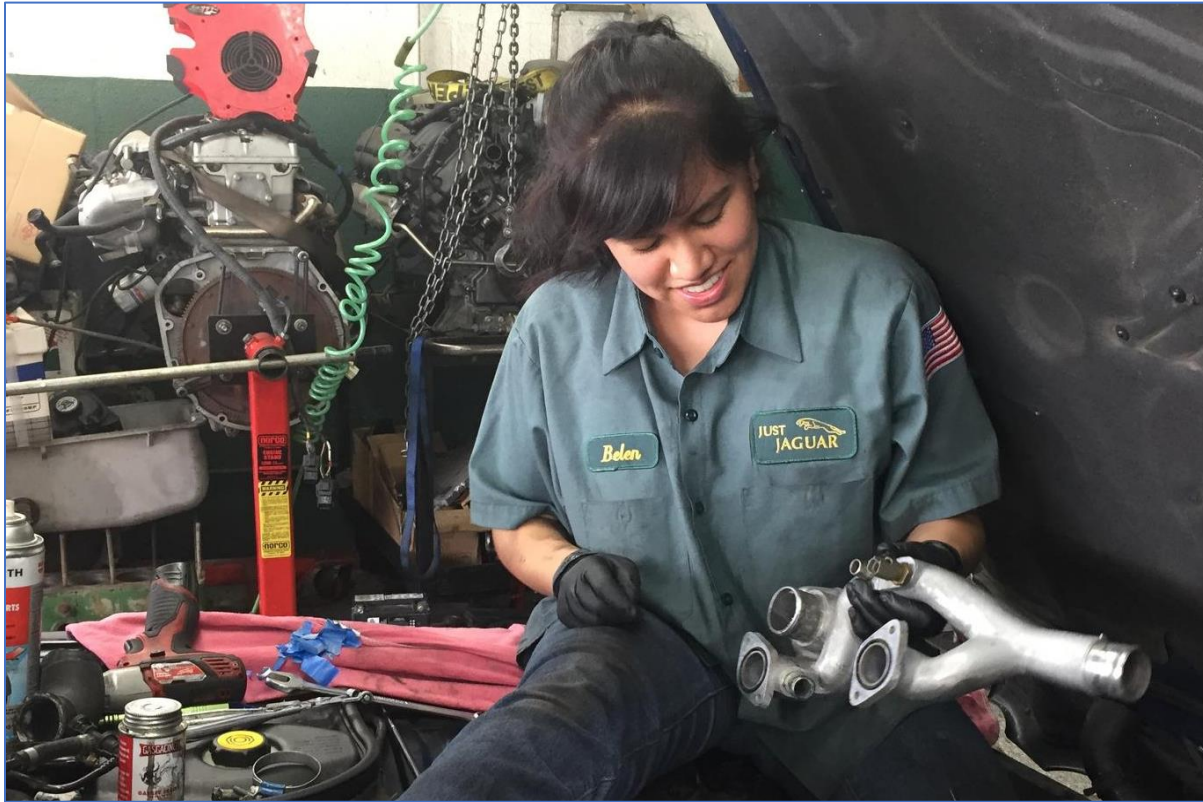
The truth is that aside from these delusions, most DP clients will appear and behave in an outwardly “normal” way

**A typical client is most likely to be a woman,
over 55, post-menopausal, and socially isolated**



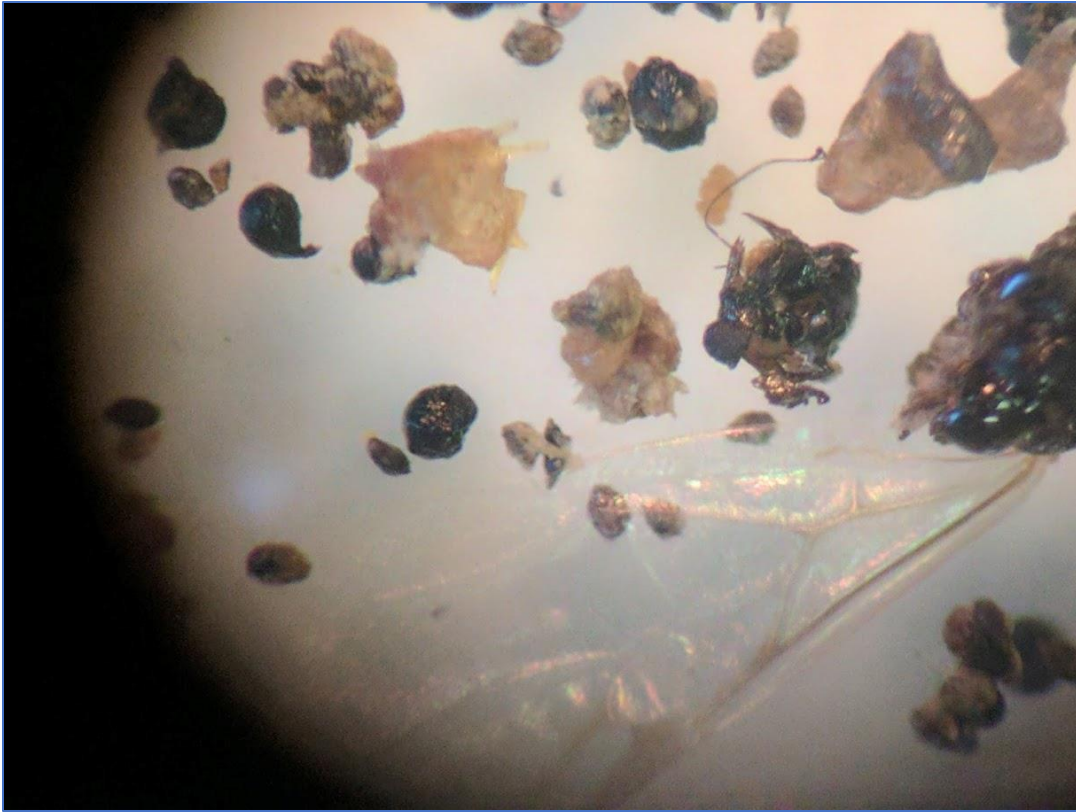
In my experience sufferers come from many walks of life and I have dealt with teachers, nurses, lawyers, retirees, factory workers, etc.

How do you respond: Use your empathy and sympathy skills to establish rapport



Acknowledge their dilemma, I think about how I would want to be spoken to by a mechanic or a doctor when I am relating an issue to them

How I begin my examinations: Perform due diligence, check every sample for pests



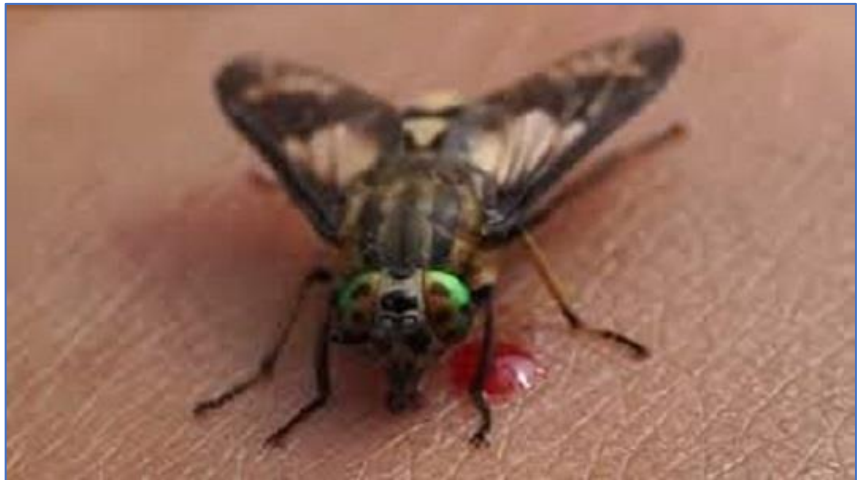
While red flags may tell me things are amiss, I try to never assume that the case is absolutely a delusory case

Protect yourself physically: When examining samples be mindful, they often have blood, feces, or other fluids



Protect yourself financially: document your process of examination and your findings as you go, write it down

Common biting and blood feeding pests of KY:



Non-normal biting pests: Not blood feeders



Thrips



Hackberry lace bug



Fowl mites

While these cannot live on humans or survive feeding on them, they do induce pin prick sensations and itchy red-welts

If things are not adding up though or there is a lack of arthropod evidence, you have to be honest



State clearly, “there were no biting pests found in your sample” or “your descriptions don’t match the biology of any known pests”

Don't be surprised when they doubt your expertise or your professionalism



If they aren't hearing what they want, it conflicts with the delusion and therefore their world, they can be defensive and aggressive

Have the courage of your convictions and don't waffle when pressure is applied



Don't reinforce the delusion by saying there's other possibilities or by giving pest control advice for something that's not there

Your response can be firm but still respectful



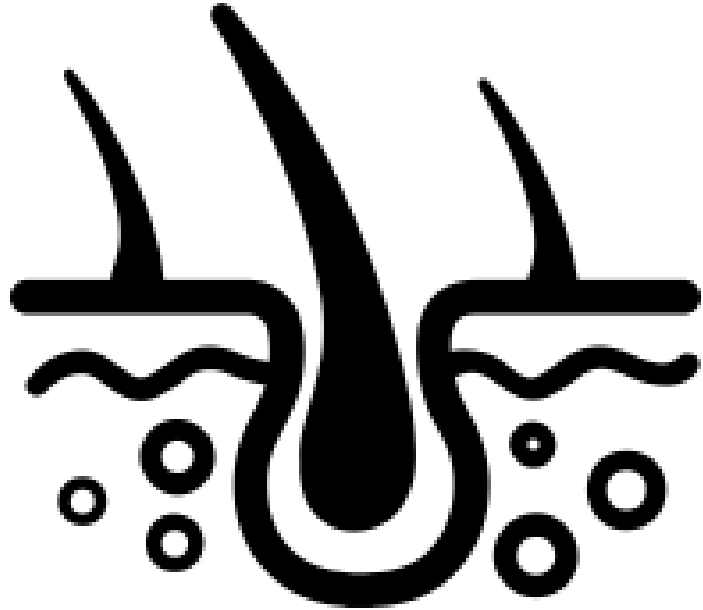
Don't say they are "crazy" don't tell them they are delusional, you can't assert that, and it will shut down the conversation

You can try to plant a seed of doubt when responding, other options for symptoms

Consider statements such as:

“Something is clearly happening to your skin. I couldn’t find any insects in your samples but there are other things that can cause these sensations”

What are these other things?



Best presented as a list of options to avoid the perception of diagnosis, there are physical, chemical, and biological alternatives to insects/mites

Physically they could be experiencing problems with irritants contaminating the home



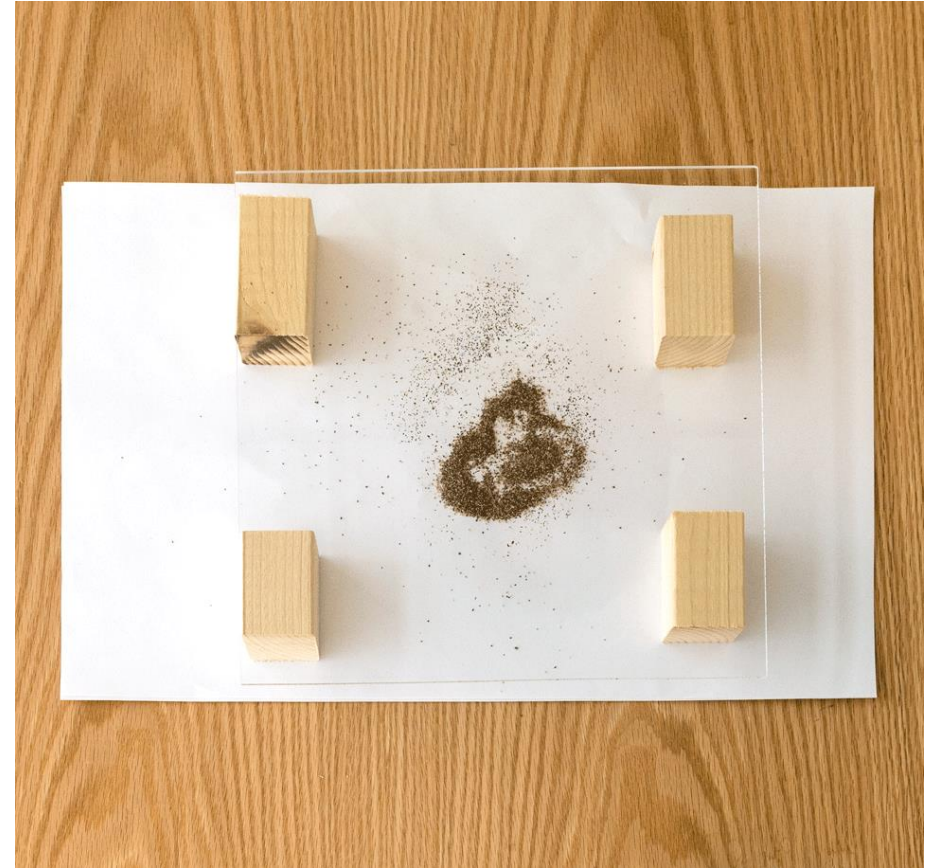
Fiberglass, paper, and fibers can reproduce crawling sensations, certain chemicals can induce itchiness

Insecticides that are easy to obtain and often used in DP cases can induce itchiness



The active ingredients can cause irritation, rash, and cause the person to scratch more after application

Everyday occurrences can be misconstrued as insects or other arthropods



One of the most common is the feeling of static electricity, which can also cause debris to move (like when a bug jumps/flies)

Anecdotally, I have dealt with this situation more often in the winter



Winter is tough on skin: Skin tends to be dry, cracked, and sensitive in the colder period of the year

The physical aspect can be a vicious cycle as itching introduces contaminants, leading to more itching



This can lead to a constant presence of wounds or scars

Physiologically, clients may be suffering from an allergic reaction, issues with nutrition, or from interactions between medicines



Food allergies can cause symptoms that can lead to delusions of parasitosis (egg, milk, soy, wheat, nuts, etc.)

Atopic dermatitis (eczema) can be induced by skin allergies to soaps, detergents, deodorants, etc.



Broken, itchy skin leads to irritation and possibly secondary infection

The symptoms of DP can occur because a client is dealing with an unmanaged case of diabetes or thyroid issues



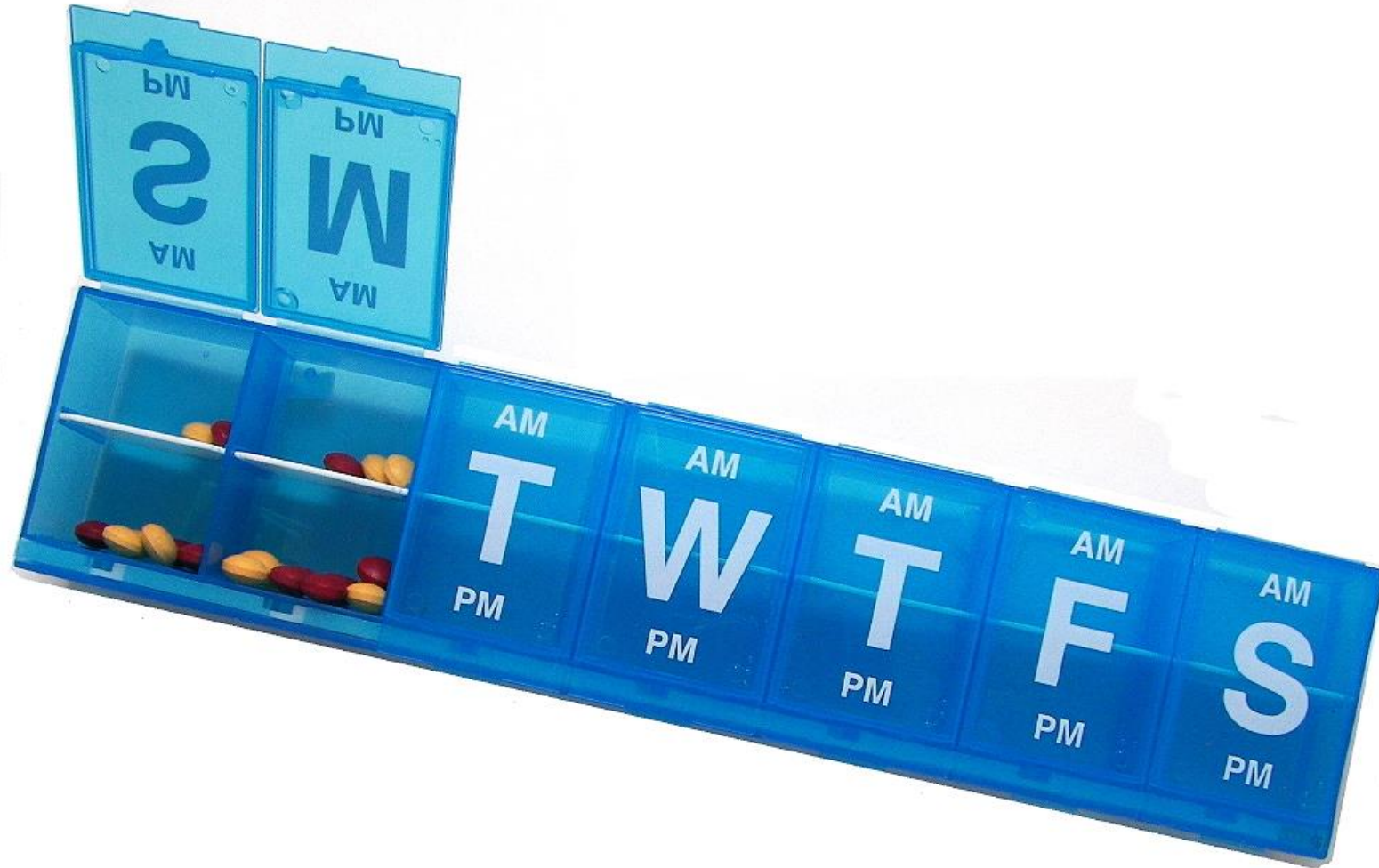
AIDS, autoimmune disorders, lupus, and more can lead to itchiness that is misattributed (this is where we hope a doctor can help)

Medications often list at least one of the symptoms of DP as a possible side effect



In 2019 it is estimated that there were over 4.3 billion prescriptions filled by Americans

Between 2013-2016 an estimated 13% of Americans were taking 5 or more prescriptions medications daily



Not only do individual medications occasionally induce symptoms that can lead to DP but interactions between multiple meds can as well

Brand Name	Generic Name	Drug Type	Erythema	Paresthesia	Pruritus	Rash	Urticaria
Trimox, Augmentin	Amoxicillin	antibiotic	X		X	X	X
Premarin, Prempro	Estrogens	estrogen	X			X	
Synthroid, Levoxyl	Levothyroxine	thyroid				X	X
Bancap, Lorcet	Hydrocodone/APAP	analgesic			X	X	
Prozac	Fluoxetine	antidepressant	X	X	X	X	X
Lanoxin	Digoxin	cardiovascular				X	
Prilosec	Omeprazole	ulcer	X	X	X	X	X
Vasotec	Enalapril	hypertension	X	X	X	X	X
Zithromax	Azithromycin	antibiotic				X	
Norvasc	Amlodipine	angina	X	X	X	X	X
Zoloft	Sertraline	antidepressant	X	X	X	X	X
Claritin	Loratadine	antihistamine	X	X	X	X	X
Coumadin	Warfarin	thrombolytic		X		X	X
Zocor	Simvastatin	cardiovascular	X	X	X		X
Furosemide, Lasix	Furosemide	hypertension	X	X	X	X	X
Paxil	Paroxetine	antidepressant	X	X	X	X	X
Albuterol, Ventolin	Albuterol	bronchodilator	X			X	X
Zantac	Ranitidine	ulcer	X			X	
Zestril, Prinivil	Lisinopril	hypertension	X	X	X	X	X
Procardia, Adalat	Nifedipine	hypertension		X	X	X	X
Cardizem	Diltiazem	hypertension	X	X	X	X	X
Biaxin	Clarithromycin	antibiotic				X	X
Bactrim	Trimeth/Sulfameth	antibiotic	X		X	X	X
Keflex	Cephalexin	antibiotic	X		X	X	X
Tylenol with Codeine	Acetaminophen/Codeine	analgesic			X		
Glucophage	Metformin	diabetes				X	
Cipro	Ciprofloxacin	antibiotic	X	X	X	X	X
Darvocet, Darvon	Propoxyphene N/APAP	analgesic				X	
Veetids	Penicillin VK	antibiotic					X
Pravachol	Pravastatin	cardiovascular	X	X	X	X	X
Dyazide	Triamterene/HCTZ	cardiovascular				X	
Ultram	Tramadol	analgesic		X	X	X	X
Motrin, Advil	Ibuprofen	analgesic	X	X	X	X	X

Psychologically, itching is a “displacement activity” that we perform when anxious



Stress, anxiety, and depression can drive us to itch and can contribute to development of DP symptoms

Unfortunately, there is a social stigma to accepting that there may be a psychological issue



DP clients also truly believe they are correct in their diagnosis and will be unwilling to accept other possible explanations

Often when talking with DP clients you will find there is preceding event that may have triggered the problem



Death of a loved one, job loss/retirement, previous insect issues, abuse, etc.

Many sufferers may also be socially isolated; they may live alone, be homebound by illness, or be neglected by family



Isolation can lead to fixation, particularly on health-related issues

You may also find the delusions have become a social crutch that helps them to evoke attention/sympathy



In modern times delusions of parasitosis can also lead sufferers to online communities where individuals reinforce each others' beliefs

If they don't live alone, you may see cases where the power of suggestion has led to multiple house members complaining



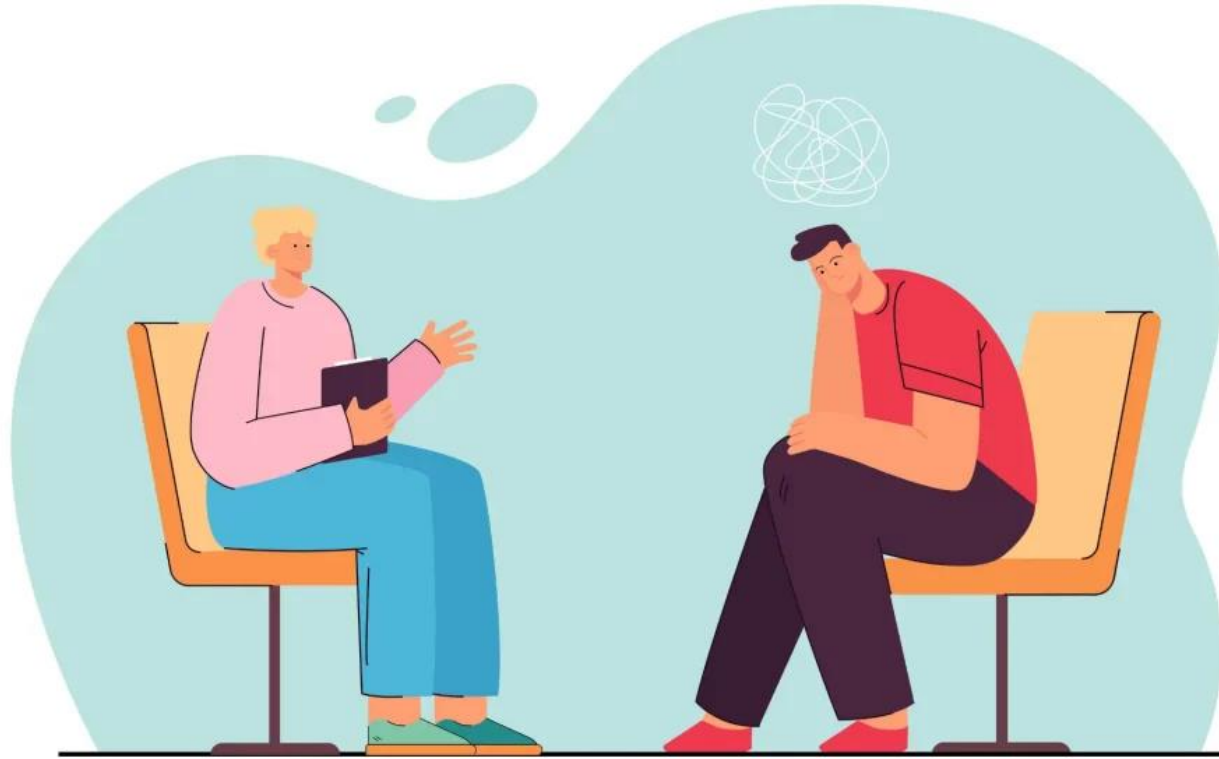
monkey see



monkey do

I have often found that just talking about these sensations or problems can evoke a scratch reflex in people

To conclude: This is a difficult situation for entomology/pest professionals and for the clients involved



It is best to try and guide these clients back towards the medical community, you don't have the tools needed to truly help them

When I look at images and videos from clients who are dealing with sensations of biting and crawling, I am looking for a few different organisms. Our most common biting pests in Kentucky are bed bugs, fleas, lice, and mosquitoes. Aside from those, there are some rare biting pests, but they are typically associated with odd situations, such as bird or mouse problems. When burrowing is suggested, there is only one option for that behavior in this state and it is with scabies mites. I cannot diagnose those; a dermatologist would have to take a skin scraping to do so.

When I looked through what you have provided here, I don't see any evidence of anything from my world of expertise that would be causing your symptoms. I don't say that to doubt what you are experiencing. I can tell that your skin is suffering but I am hoping you are willing to consider non-insect causes as I don't see the evidence here that they are involved. We would see pieces of insects or the things they leave behind and as I mentioned, we have only one under the skin parasite here. None of the other biters would perform that activity. I am willing to look at other images if you feel like there was something I missed.

I know you mentioned that people have lobbed accusations of drug use or other possibilities at you, and I don't want to come off as suggesting that. There are many things that can cause our skin to become inflamed and itchy and to even feel like something is under it. This can include side effects of medications, issues with autoimmune diseases, allergies to environmental contaminants, and a host of others. I am not sure if you have addressed any of these with your family doctor already. If you do, I would encourage you to ask questions about why your skin is inflamed and itchy, if you say you think insects are involved, they might send you off elsewhere. You might also consider a dermatologist or an allergist if you are willing to think about these alternative explanations.

I am sorry I can't provide you with recommendations beyond that based on the current evidence. Let me know if you have any questions and I will work to resolve them.