The Bugs That Won't Go Away
Your role in delusional infestation

The webinar will begin promptly at 11am EDT (GMT -04:00).
Please make sure your computer speakers are on.
There is no call in number.

Use the chat box (to everyone) for any questions.

STOP Pests in housing
www.StopPests.org

This webinar is brought to you by the StopPests in Housing Program.
The Northeastern IPM Center receives support from the US Department of Housing and Urban Development's Office of Healthy Homes and Lead Hazard Control through the US Department of Agriculture, NIFA to facilitate this program.

stoppests@cornell.edu @StopPests facebook.com/StopPests

Your Speakers

Dr. Peter Lepping
Consultant Psychiatrist & Visiting Professor at Glyndwr University

Dr. Nancy Hinkle
Extension Veterinary Entomologist for the University of Georgia

Moderator: Allison Taisey, BCE
Project Coordinator for the StopPests in Housing Program

DELUSIONAL INFESTATION

Prof Peter Lepping

In cooperation with my research partners
Prof Roland Freudenmann (Ulm, Germany), Dr Anthony Bewley (London, UK) and Dr Markus Huber (Bruneck, Italy)

DELUSIONAL INFESTATION
BEFALLSWAHN

What's new?

Was gibt es Neues?

Manchester, Liverpool, Berlin, London, Wrexham, Mysore

Definition

- Delusional Infestation (DI):
  characterised by the fixed belief that one (or one's environment) is infested with insects, parasites, inanimate objects or small living creatures; absence of medical evidence for this
- Can be primary, secondary or by proxy
- Also known as delusional parasitosis, Dermatozoenwahn, Ekbom's syndrome etc.

Clinical presentation

- Usually to GPs and dermatologists, rather than psychiatrists, prevalence remains difficult to establish
- Specimen or matchbox sign (collection of "pests")
- Excessive cleaning, scratching, use of pesticides
- Secondary itching and super-infections
- Reduced social contacts, avoidance of own accommodation, reduced quality of life
- Occasionally dangerous attempts "to get rid of the pests" (pesticides, bleach)

WHY CALL IT DELUSIONAL INFESTATION?

- Content of delusions has changed over time (BrJDerm, 2010;Acta Derm Venerol, 2010;CMR, 2009)
- Imagined pathogens: 19th century – scabies, typhus, pest; 20th century – first insects, then parasites, later viruses, bacteria, non living pathogens; 21st century – fibres, threads, unknown species (Morgellons in English and German speaking countries), insects remain common
- Alleged pathogens (2010): Organic (77%): insects most common, parasites (only 13%), mites, animals, lice, worms; Non-organic (23%): fibres, threads
- The name "infestation" *does* emphasize the constantly changing pathogens and covers all present and future variations of the theme that are bound to arise

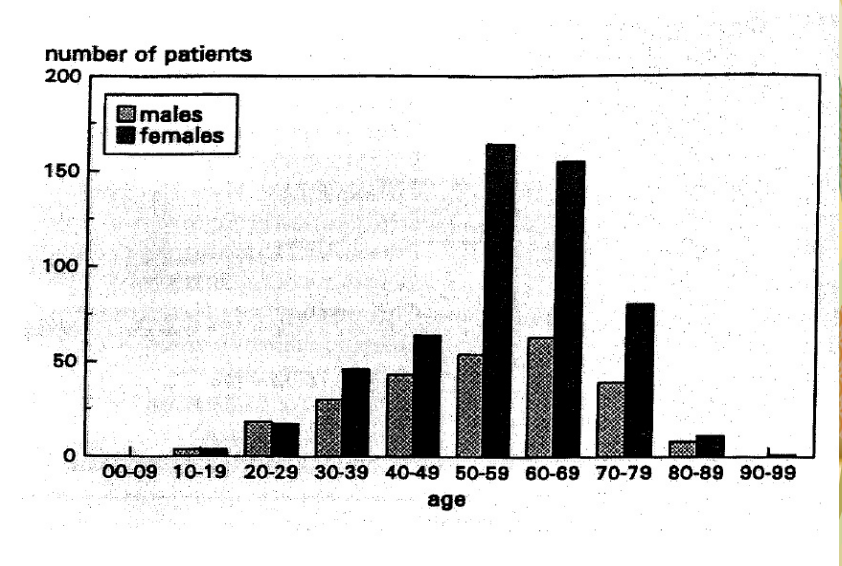
Aetiology of delusional infestation

- Primary as an F22.0 persistent mono-delusional disorder
- Special form as a shared delusion (folie à deux, trois or by proxy)

Secondary as symptom of

1. **psychiatric illness, esp. major depression, schizophrenia, dementia**
2. **Medical illness, esp. sec. to brain disorders or illness with paraesthesia like diabetes, uraemia, jaundice or cancer**
3. **Substance induced, esp. cocaine, amphetamines, antibiotics, steroids, NSAID**

Age and sex distribution



Specimen sign

- Hylwa, 2011: skin biopsies of patients with presumptive DI (n=108). No evidence for a true infestation of the patients' skin. Specimens were non-pathogenic insects. 74% of patients had a positive specimen sign, the highest rate reported in a larger sample, but not a single matchbox was used as a container.
- Our recent study (2012, n=148) showed 48% with specimen sign, 4% used matchboxes as containers.

Karl Jaspers

- Criteria for delusions, 1913
- (i) an “extraordinary conviction” and a “subjective certainty” (“subjective Gewißheit”)
- (ii) which cannot be influenced by experience or logical conclusions (“imperviousness”), although
- (iii) “their content is impossible” (“Unmöglichkeit des Inhalts”)
- Wahnarbeit (delusional elaboration)

Wahnarbeit (Delusional elaboration)

- Real perceptions, facts, and their own past are misinterpreted by the same thought process, which is “trying to link them harmoniously” in order to erase all doubts. Jaspers called this process Wahnarbeit, delusional elaboration; a dysfunctional “belief evaluation system” in current terminology.
- Particularly in chronic, lucid psychotic disorders, such as monothematic delusional disorders, this work can absorb all intellectual capacities of an individual. The result is a “delusional system” (“Wahnsystem”).

From: Freudenmann, Lepping. Delusional infestation. CMR, 2009

Using Jaspers's criteria properly

- Psychiatrists identify delusions not primarily by judging the reality or falsity of the content of the belief, although this might seem the most obvious.
- They (i) use the criterion that patients maintain their belief despite all evidence to the contrary (second Jaspers criterion) and (ii) look at the patients' explanations and proofs, which can often easily be falsified, in contrast to the content of the delusion itself.
- Accordingly, the best practice in diagnosing delusions is to look at the form of reasoning, not the contents, because the third Jasperian criterion of delusions (impossibility) can be a pitfall.

Symptom Formation

- Belief of being infested with something arises unexpectedly
- Falsely ascribed to the presence of an infestation
- highly unlikely possibility that an infestation is the cause is favoured because of “errors in probabilistic reasoning”
- Cognitive biases such as selective attention and an attention shift to skin sensations contribute to both formation and maintenance of such a wrong belief
- Infestation gets blamed for the itch
- Ultimately, cognitive “belief evaluation system” fails and does not reject the hypothesis that an infestation is present
- Criticism or alternative views are no longer allowed by the dysfunctional belief evaluation system

Recent developments

- Hylva et al (2011): In 108 patients with suspected delusional infestation, neither skin biopsies nor examination of patient-provided specimens provided objective evidence of skin infestation.
- Our group (2012): 148 consecutive patients with DI, specimen examined: Mostly skin particles, followed by hair and others. 35% mentioned parasites, then mites, worms, insects, and vermin. 17 % inanimate pathogens. No true infections found.
- CDC: No infections or infestations found in patients with self declared Morgellons (Pearson, 2011)

Treatment

- Antipsychotics work
- Surprisingly high aggregate response and remission rates. We can treat successfully!
- Engaging the patient is essential
- Examine all specimens
- Dermatological complications are common (scratching, super-infections, consequences of topical chemical use)
- Advise patient to see a doctor

What to do?

* **Dermatologists/GPs etc should treat with antipsychotics, as psychiatric referral is usually not accepted by patient**
* **Specialist clinics may work**
* **Consider neutral diagnoses like "unexplained dermopathy" in first instance**
* **Neuroleptics (more neutral than saying "antipsychotics") may help "against distress patient experiences"**
* **Treat dermatological complications**
* **Use of Mental Health Act legislation may be needed (consider risk to others, esp children)**

Thank you very much

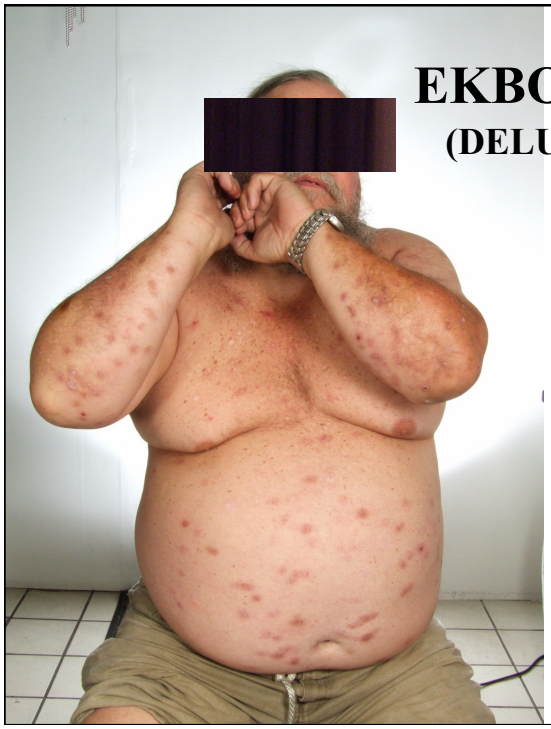
Diolch yn fawr

Contact:
peter.lepping@wales.nhs.uk

For further reading see
http://www.ncbi.nlm.nih.gov/pubmed/?term=lepping+p%2C+delusional+infestation

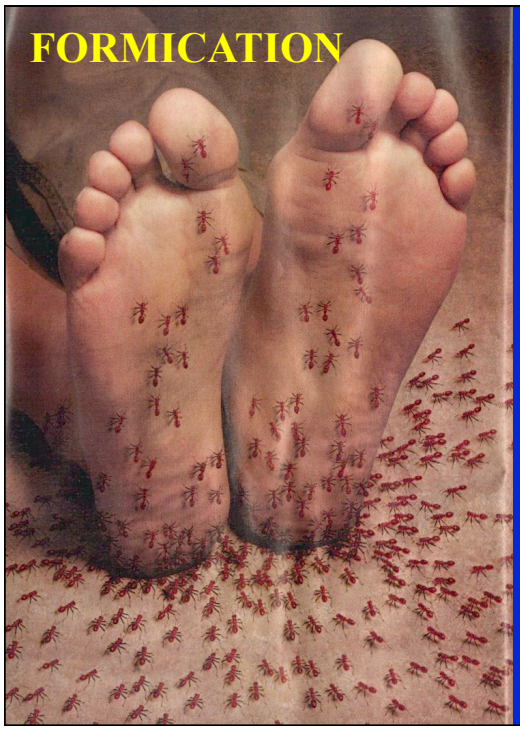
Differentiating Actual Arthropod Infestations from Delusory Infestations

Nancy C. Hinkle, Ph.D.
Dept. of Entomology
University of Georgia

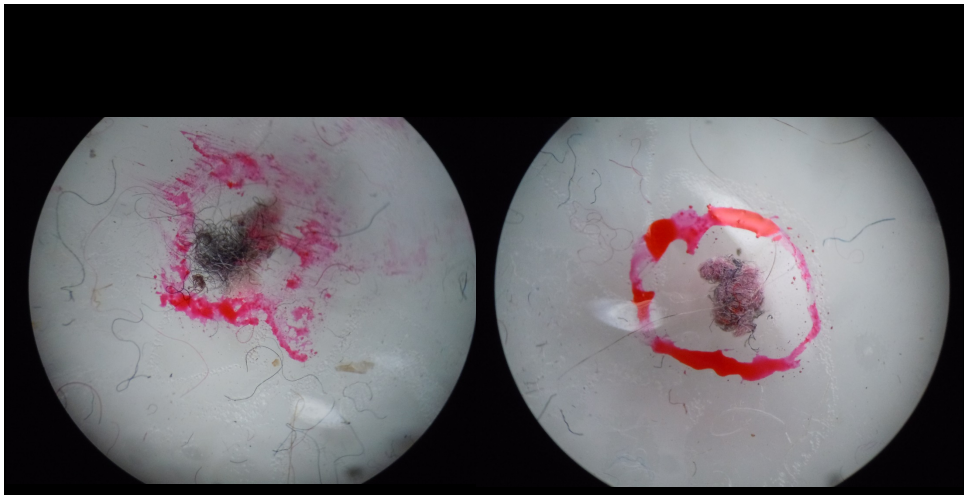


EKBOM SYNDROME
(DELUSORY PARASITOSIS)

A condition in which the individual considers himself infested by invisible bugs.



Formication – a tactile hallucination involving the belief that something is crawling on the body or under the skin.



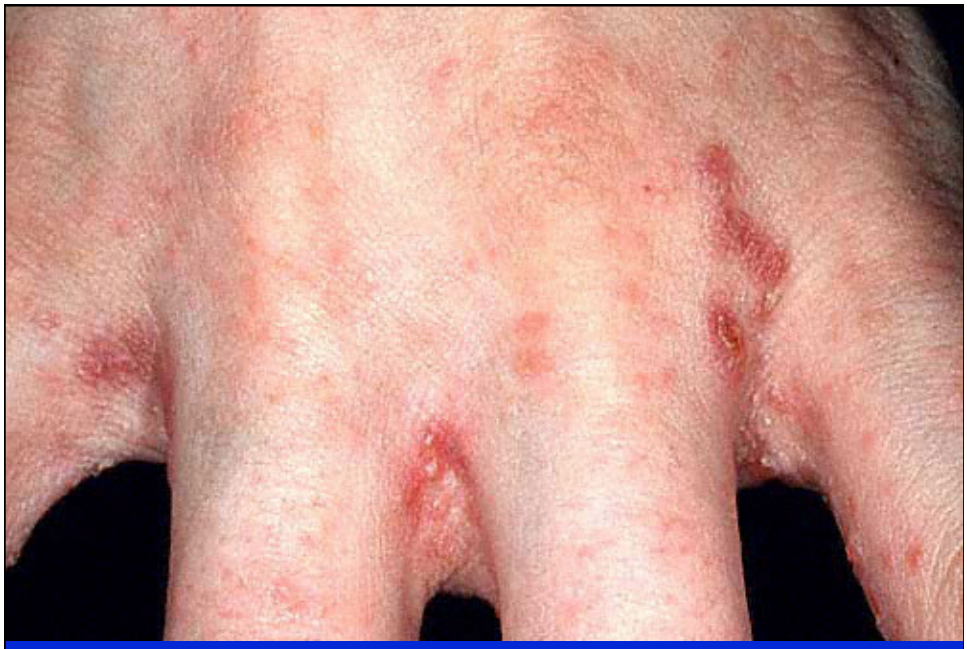
Lint and fabric pilling

PEOPLE BLAME

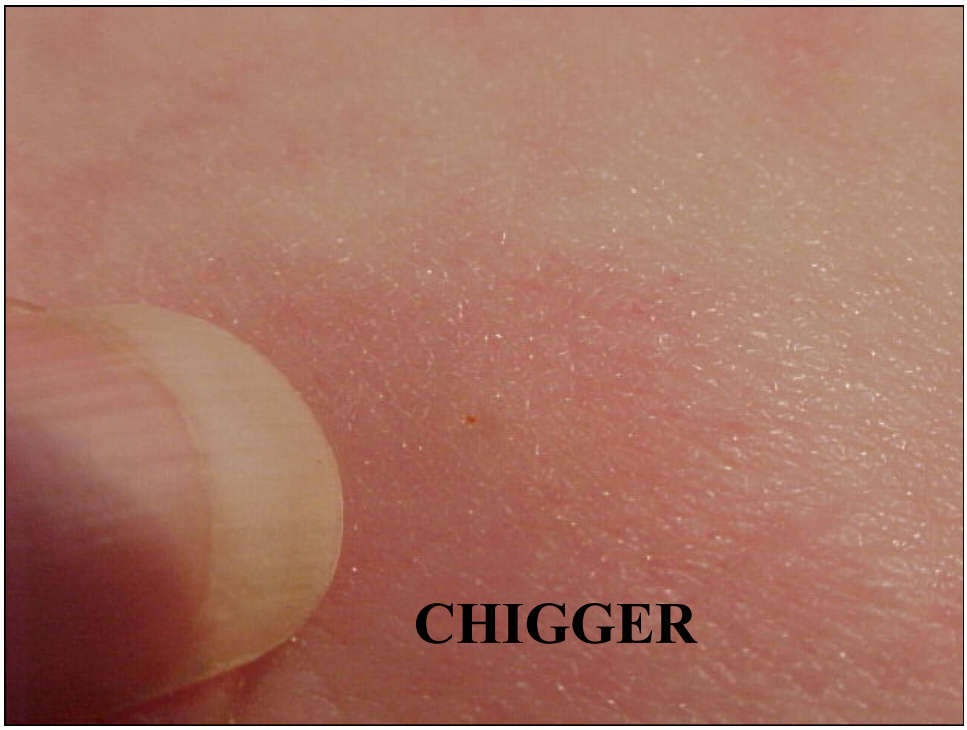
- SPIDER BITES
- BED BUGS
- SCABIES
- CHIGGERS
- SPRINGTAILS
- BIRD OR RODENT MITES

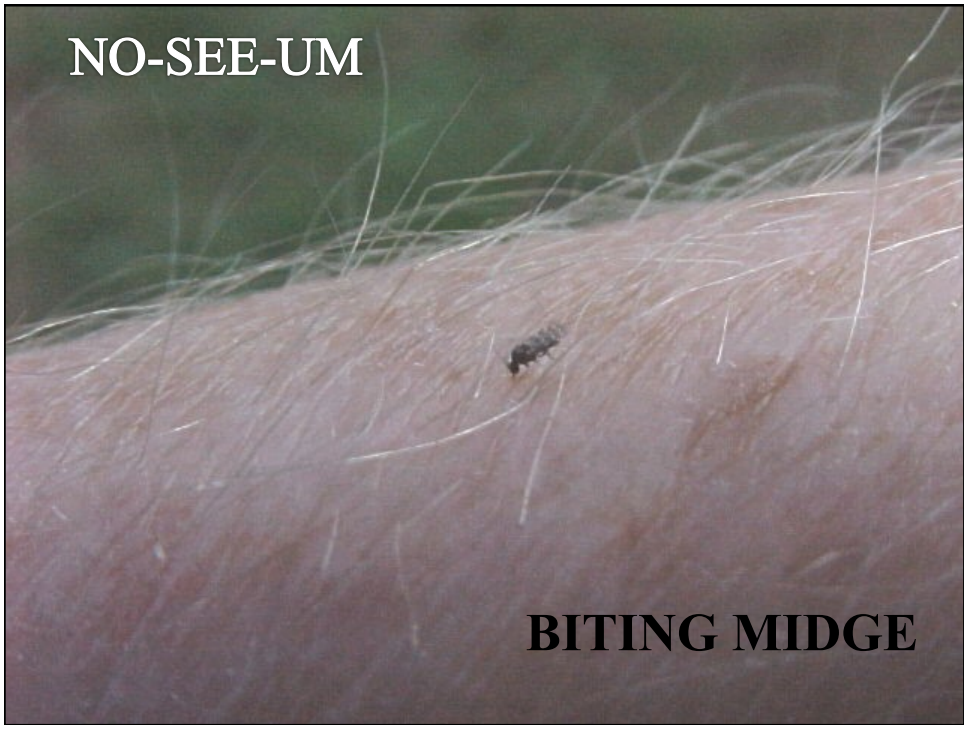

SPIDERS DO NOT BITE HUMANS

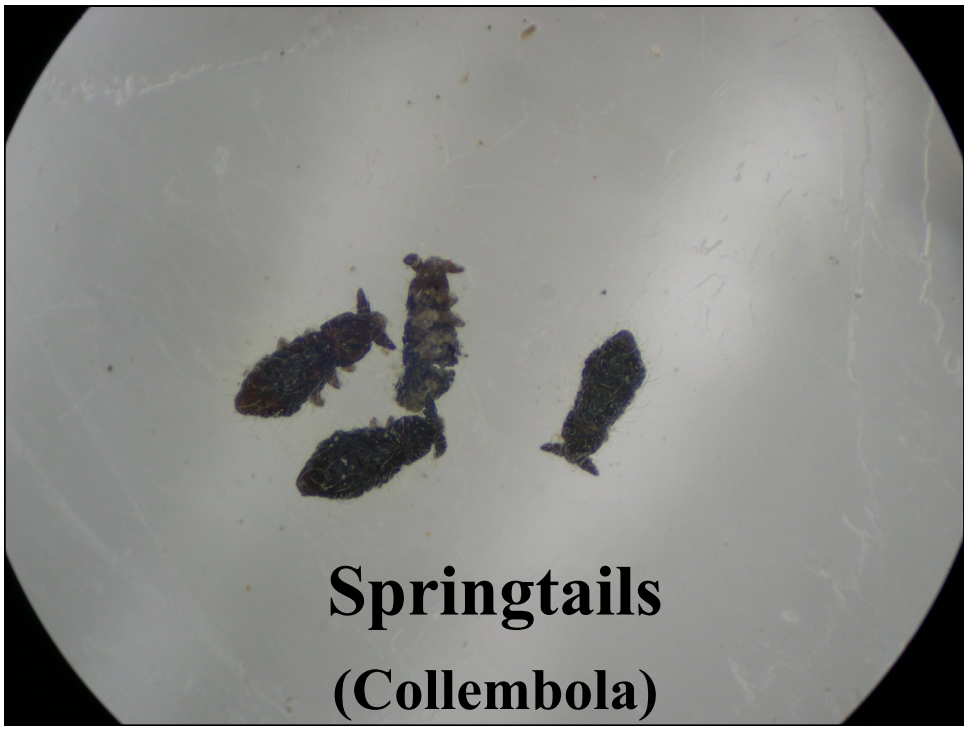

BED BUGS ARE NOT INVISIBLE



Scabies = *Sarcoptes scabiei* infestation




NO-SEE-UM
BITING MIDGE

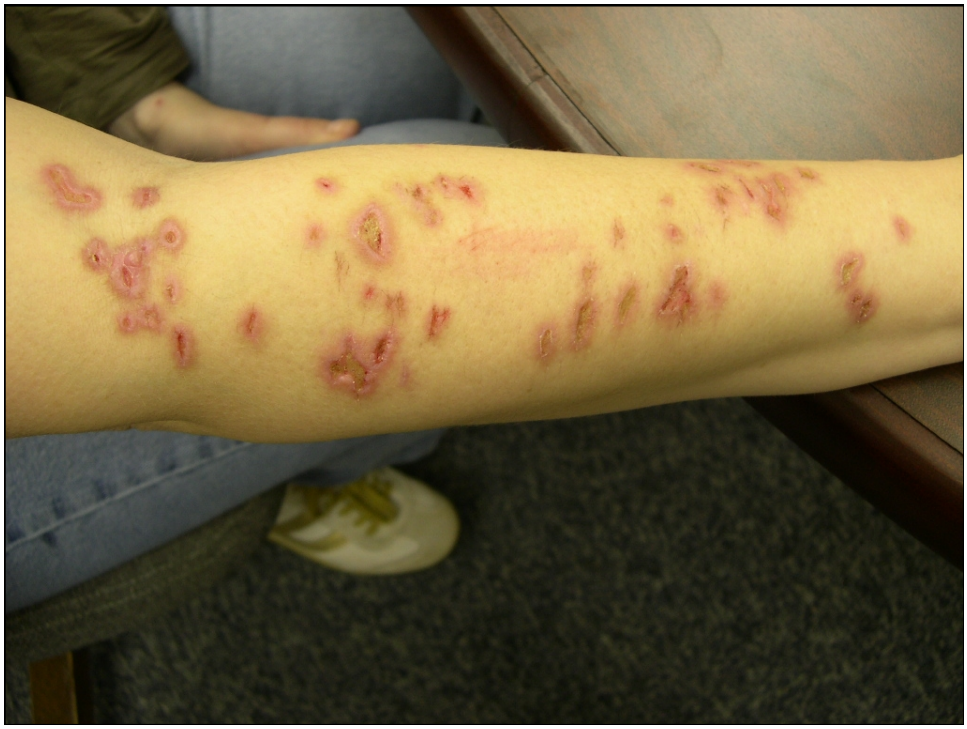

Springtails
(Collembola)

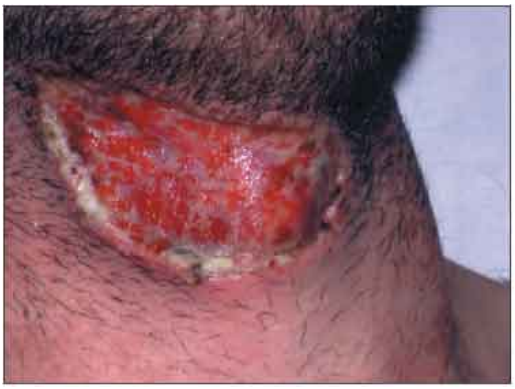
birdmites.org
education & research

"Dedicated to finding effective solutions for bird mite infestations of humans and their environment, encouraging those afflicted, facilitating research and a better understanding of human parasitosis."

BIRD MITES

(FEED ONLY ON BIRDS)

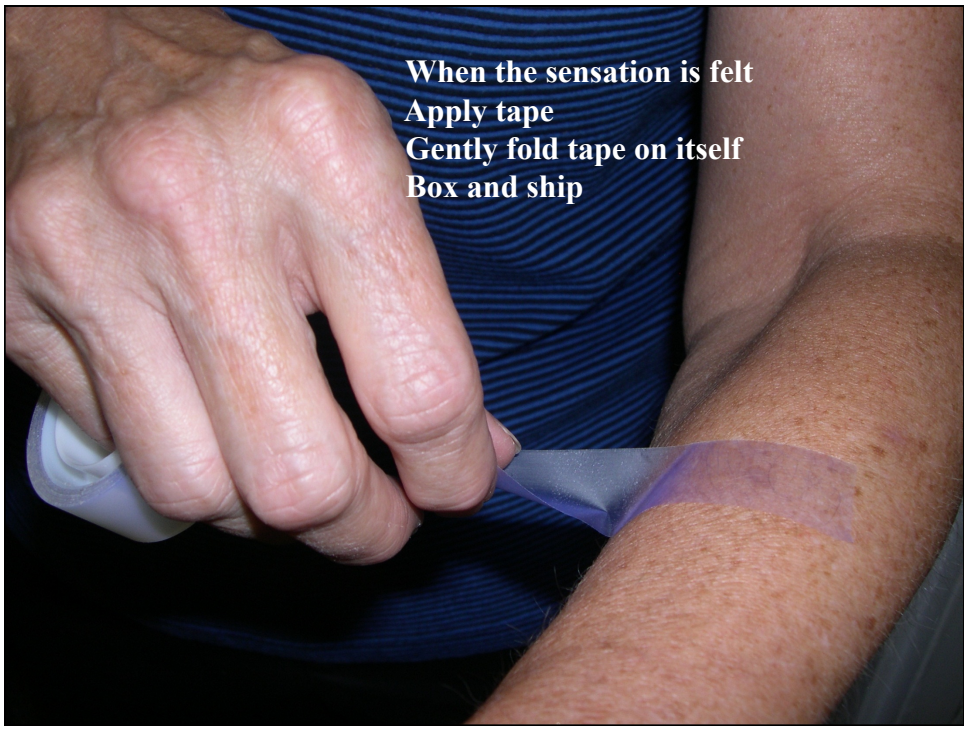


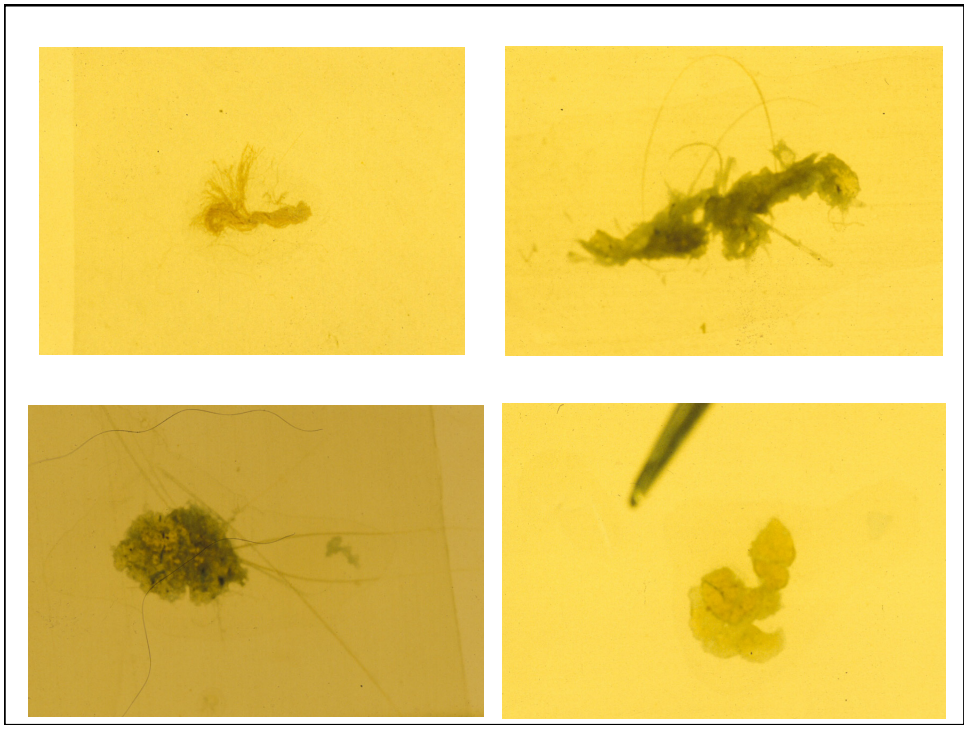


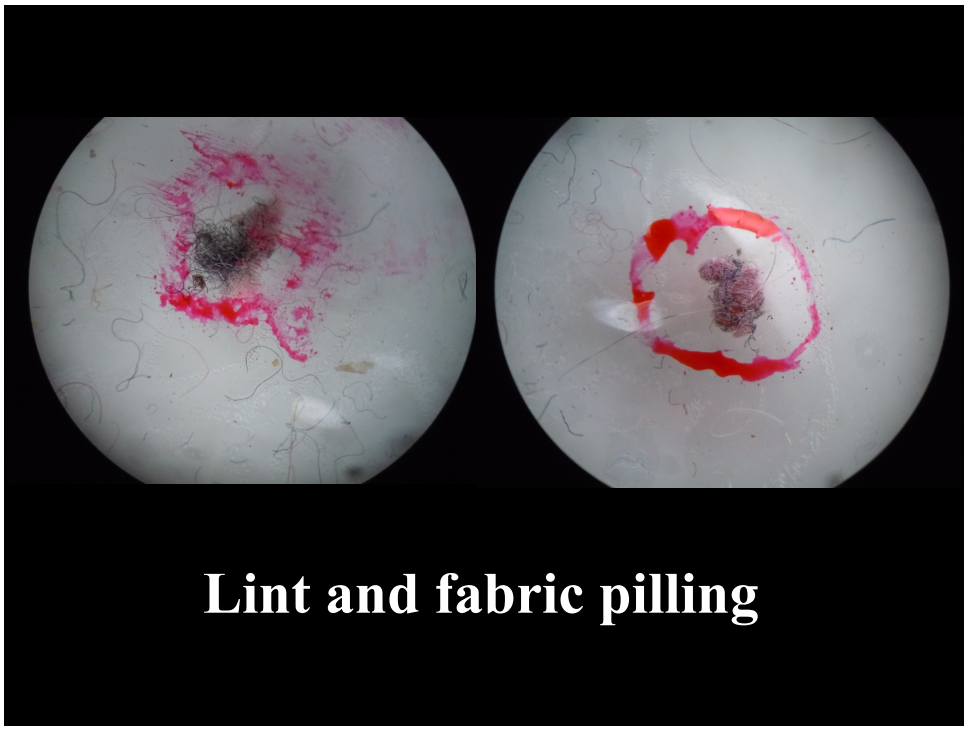
The patient complained of a worm infestation in his neck. He used a pair of scissors to excise the imagined worms.

The toxicology screening of this patient was positive for cocaine, opiates, and tranquilizers.

FIRST –
IDENTIFY THE PEST






Lint and fabric pilling

HUMAN LOUSE

SCABIES MITE

THE ONLY ARTHROPODS THAT INFEST HUMAN BODIES ARE SCABIES MITES AND HUMAN LICE.

BECAUSE THESE LIVE EXCLUSIVELY ON HUMAN BODIES, THERE IS NO ROLE FOR PEST CONTROL IN THEIR TREATMENT.

THEY ARE STRICTLY MEDICAL CONDITIONS.

No insect or mite can live in the environment and switch to infesting the human body.

No insect or mite can feed on inorganic materials, so cannot survive on furniture or carpeting.

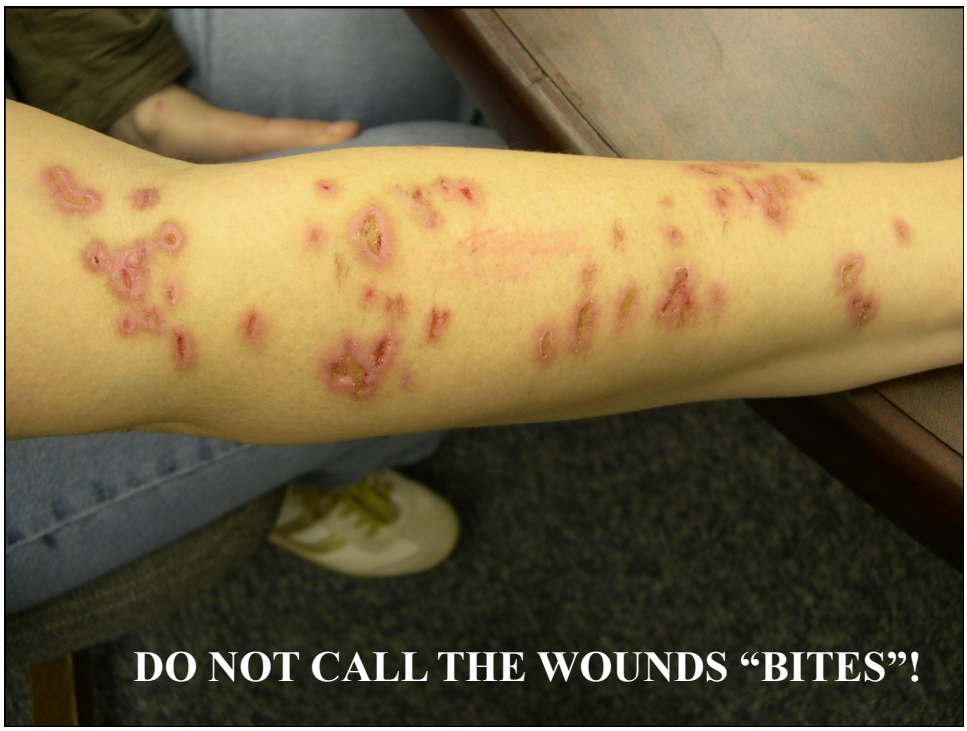
No winged insects infest human bodies.

No invisible mites or insects infest human bodies.

No external animal parasites can infest humans.

Bird mites cannot infest humans.

Human body infestation is a medical condition and must be treated by a physician.



You are the expert – don’t believe everything your caller says.

Monitor, evaluate, and treat only when a target pest has been identified.

“Why won’t you help me?”

Think about the consequences of your decision.

Q&A

The moderator is using questions from the chat box.

Follow Up

- E-mail stoppests@cornell.edu with any remaining questions
- Those who registered will receive an e-mail from stoppests@cornell.edu when the recording is posted
- Included in the e-mail will be an evaluation form and opportunity for you to suggest future webinar topics

stoppests@cornell.edu @StopPests facebook.com/StopPests

THANK YOU

- Drs. Lepping & Hinkle
- Our funders: HUD's Office of Healthy Homes and Lead Hazard Control & USDA's National Institute of Food and Agriculture
- All attendees and future viewers

stoppests@cornell.edu @StopPests facebook.com/StopPests