

Det der prikker,  
stikker, sårer og  
giver åndenød

INSPIRATION OG ENKELTE SLIDES FRA FORELÆSNING VED  
HANNEKE OUDE ELBERIN OG KYMBLE MARTIN SPRIGGS



Skin Reactions to Pine  
Processionary Caterpillar  
*Thaumetopoea pityocampa* Schiff

[HTTPS://WWW.YOUTUBE.COM/WATCH?V=SFXAZTNRGX4](https://www.youtube.com/watch?v=SFXAZTNRGX4)

# Papulo-urticarielt og strophulus lignende udslæt. Kan give bulløse sår og nekroser



Direkte toksisk  
Histaminerg reaktion  
IgE sensibiliserende  
70 proteiner  
7 allergener karakteriseret

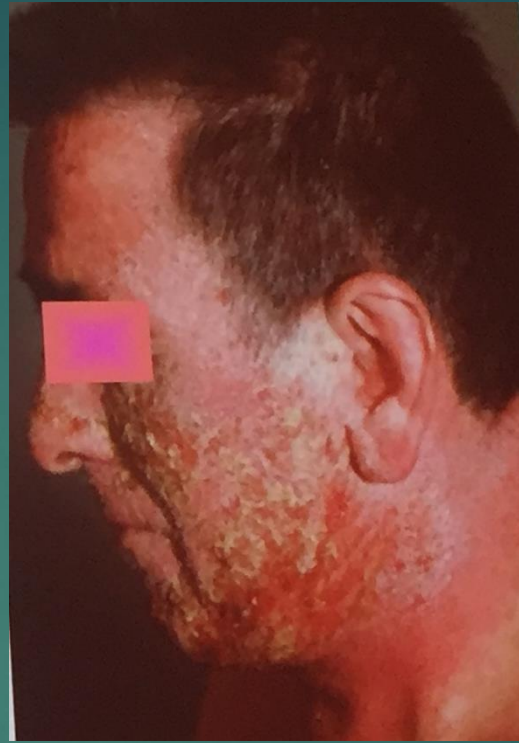
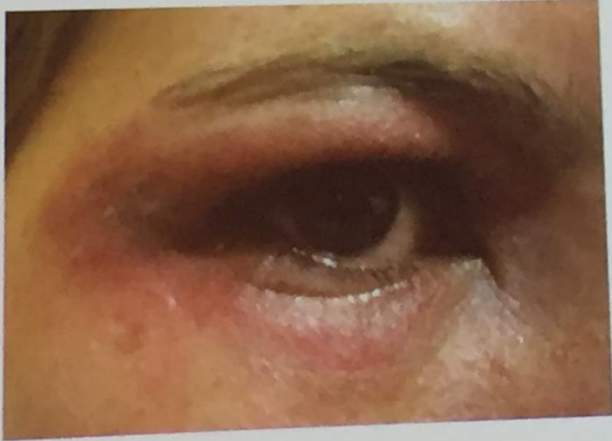
Direkte hudkontakt og Indånding

Laver spind som er fyldt med hår

Flere varianter til forskellige træer

# Beetle Dermatitis

Nairobi eye



*Paederus*-Species  
Paederin

- irritant contact dermatitis characterized by sudden onset of erythematobullous lesions on exposed areas.
- *Paederus* does not bite or sting, but brushing against or crushing the beetle over the skin provokes the release of its coelomic fluid, which contains paederin, a potent vesicant agent.

# Blister beetles - Melioidae



2100 x 1400  
Blister Beetle in Horses - Symptoms, Causes, [www.pedigree.com](http://www.pedigree.com)



Blister beetle - Wikipedia  
[en.wikipedia.org](http://en.wikipedia.org)



Blister beetle - Wikipedia  
[en.wikipedia.org](http://en.wikipedia.org)



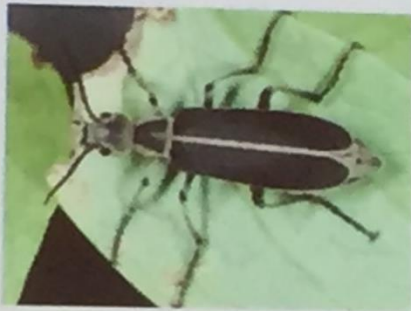
Blister Beetle Poisoning - Horses | Poisons  
[patind.com](http://patind.com)



Blister Beetles | MDC Discover Nature  
[nature.mdc.mo.gov](http://nature.mdc.mo.gov)



Blister Beetles | Ask A Biologist



blister beetles



Don't be bugged by cicada killers, blister bee...



blister beetles



Blister beetles: Handle with care - MSU

Blister beetles release a defensive compound when threatened: cantharidin, a bicyclic terpenoid, is quite different from pederin, an amide.<sup>1</sup>

Cantharidin, a poisonous chemical causing blistering of the skin ( used medically to remove warts)

# Bladluseløven eller mere kendt som Guldøje (Chrysopa spp.)



Kan også forgribe sig på mennesker og ikke kun suge saft og kraften ud af bladlus og give kløende papler. Anvendes i væksthuse

# Myg (*Aedes communis*)



Store og små lokalreaktioner  
af urticariel karakter

Store senreaktioner

Almen utilpashed efter mange stik

Anafylaksi er kasuistisk beskrevet

Der kan udføres test med  
Helkrops ekstrakt

Specifik IgE analyse i71

Table 1 *Aedes aegypti* salivary proteins

Protein name	Allergen name	Molecular weight (kDa)	cDNA sequenced	Biological functions
$\alpha$ -Amylase 1 apyrase	Aed a 1	81.5 68	Yes Yes	Unknown Antiplatelet
$\alpha$ -Glucosidase (maltase-like 1) Esterase	Aed a 4	67 65	Yes	Sugar digestion Unknown
Anticoagulant-factor Xa Aed a X <sub>1</sub>	Aed a X <sub>1</sub> ?	54 44	Yes	Anticoagulant Unknown
Aed a X <sub>2</sub>	Aed a X <sub>2</sub> ?	37		Unknown
Female-specific protein, D7	Aed a 2 Aed a 3	37 30	Yes Yes	Unknown Unknown
Sialokinins Antitumour necrosis factor		1.4 Unknown	Yes	Vasodilator Antitumour
Lysozyme		Unknown		Bacteriolysis

Reproduced from Peng and Simons [1].

Peng, Zhikang; Simons, F  
Current Opinion in Allergy & Clinical Immunology. 7(4):350-  
354, August 2007.

# Klæg (Tabanidae)



Urticarielle papler

Store lokal reaktioner

Anafylaksi beskrevet

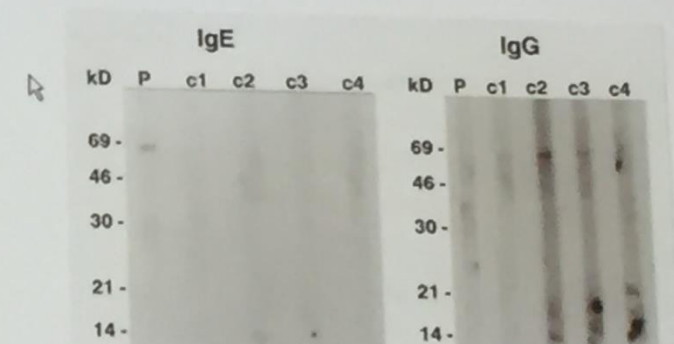
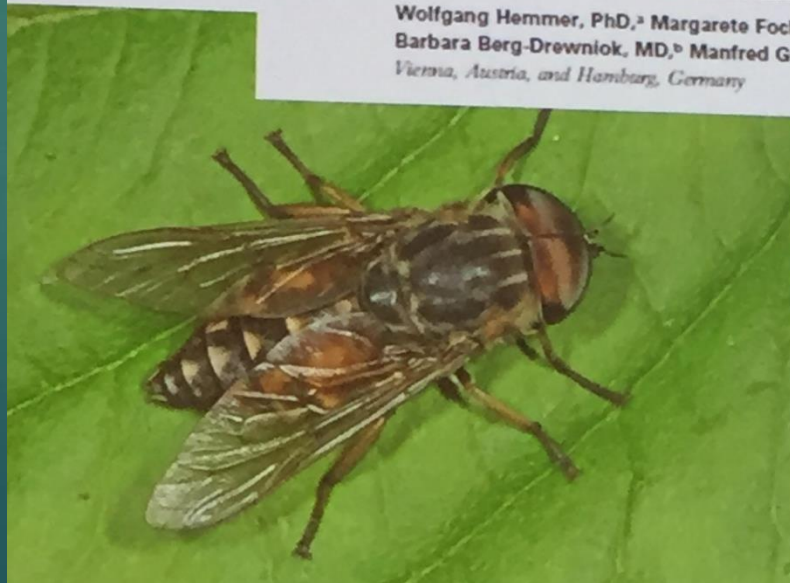
Kunne være det ukendte insekt

Ingen kommercielle test

Anaphylaxis induced by horsefly bites:  
Identification of a 69 kd IgE-binding salivary  
gland protein from *Chrysops* spp. (Diptera  
Tabanidae) by western blot analysis

JACI 1998

Wolfgang Hemmer, PhD,<sup>a</sup> Margarete Focke, PhD,<sup>a</sup> Dieter Vieluf, MD,<sup>b</sup>  
Barbara Berg-Drewniok, MD,<sup>b</sup> Manfred Götz, MD,<sup>a, c</sup> and Reinhart Jarisch, MD<sup>a</sup>  
Vienna, Austria, and Hamburg, Germany



# Due lopper (Argas reflexus)



Spredning fra dueslag til boliger i et fattigt område. 8 personer med reaktion

Allergy to pigeon tick (*Argas reflexus*) in Upper Silesia, Poland. Radoslaw Spiewak et al.  
*Ann Agric Environ Med* 2006; **13** (1): 107-112.

Kløende papler  
Lokaliseret uge varende inflammation  
Anafylaksi er beskrevet  
IgE og prik positive

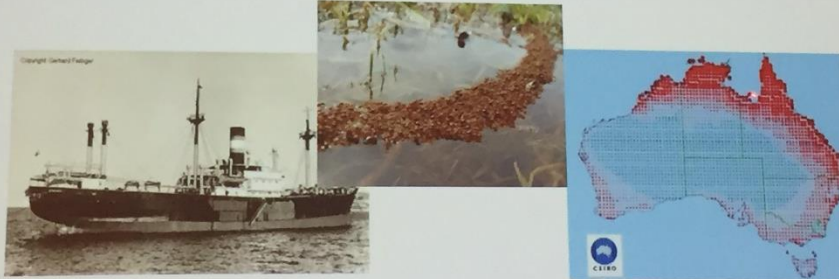
# Fire ant (Solenopsis sp.)



## Red imported fire ant *Solenopsis invicta*

Originally from **Brazil**

Around 1940 **Southern USA / Australia**



Reaktioner værre end kraftig insektstik

Papler  
Bulløse sår

Anafylaksi

Prik og IgE test

Immunterapi i USA og Australien

## 2. Stings



## 1. Bites

## Allergens of RFA

Sol i 1 Phospholipase  
cross-reacts with Wasps

Sol i 2 specific for Solenopsis

Sol i 3

Sol i 4 specific for Solenopsis

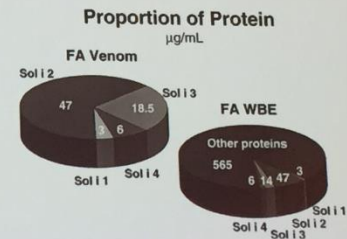
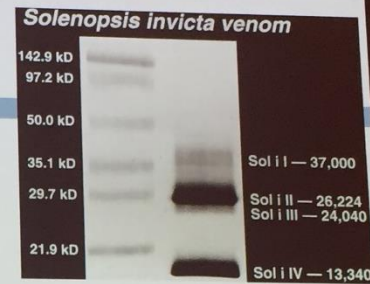


Figure 4. Left: Concentration Sol i allergens in fire ant venom. Right: Sol i allergen concentration compared to relatively large amount of extraneous body proteins in fire ant whole body extract.

Hoffman DR et al J Allergy Clin Immunol 1988;82:828-34  
Stafford T. Ann Allergy Asthma Immunol 1996;77:87-99.

# Jack Jumper (*Myrmecia pilosula*)

Australia Jack jumper ant, *Myrmecia pilosula*, found mainly in the south-eastern states of Australia



- aggressive
- first report 1986
- 2000: first description of 4 JJA sting anaphylaxis deaths prevalence 2.7% in Tasmania



Meget kraftig reaktion ved stik

Flest systemiske reaktioner på Tasmanien

Spredt sig til "mainland", primært Victoria district

Prik og IgE test

VIT under udvikling

# Inhalations allergi for insekter

## Eksempler



**Asian ladybugs (*Harmonia axyridis*):  
A new seasonal indoor allergen**

Takuya Nakazawa, MD, PhD,<sup>a</sup> Shama M. Satinover, MS,<sup>a</sup> Lisa Naccara, BA,<sup>a</sup> Lucy Goddard, RN,<sup>a</sup> Bojan P. Dragulev, PhD,<sup>b</sup> Edward Peters, MD,<sup>a</sup> and Thomas A. E. Platts-Mills, MD, PhD<sup>a</sup> Charlottesville, Va, and Austin, Tex

**TABLE 1. Twenty patients reporting symptoms to AIB: environmental exposures and serum IgE antibody levels**

Age (years)/sex	Symptoms	Season	Year	Household	IBS	CR	WHA	CS	Other*
1	10/10/F	Itchy skin, cough	Winter	ND	+++	36	1.3	2.1	Neg. Mold
2	10/10/M	Cough, wheeze	Year-round	++	+++	36	5	200	100; Grass, mold, Berkeley beetle
3	14/10/M	Itchy skin, cough	Winter	++	+++	41	Neg	Neg	Neg. Grass
4	13/10/F	Itchy skin, cough	Winter	ND	+++	14	2.1	Neg	Neg. Grass, Berkeley beetle
5	11/10/F	Asthma, wheeze	Winter	++	+++	35	0.4	25	41; Dog, mold, grass
6	12/10/F	Asthma, wheeze	Winter	++	+++	1.6	0.6	0.4	Neg. Mold
7	10/10/F	Cough, wheezing	Winter	++	+++	4.1	Neg	Neg	Neg.
8	12/10/M	Asthma	Spring	ND	+	Neg	1.1	Neg	Neg. Mold
9	13/10/F	Asthma	Fall	++	+++	28	1.1	Neg	Neg. Mold
10	10/10/F	Asthma	Year-round	+	+++	1.6	2.3	1.1	100; mold, grass, Berkeley beetle
11	10/10/F	Asthma	Winter to spring	++	+++	0.6	Neg	Neg	Neg. Grass
12	12/10/F	Itchy skin	Spring/Fall	ND	+	Neg	Neg	1.2	Neg. Mold
13	10/10/F	Itchy skin, conjunctivitis	Fall	ND	+	24.5	Neg	1.0	Neg.
14	10/10/F	Chronic cough, wheeze	Year-round	ND	++	0.38	Neg	Neg	Neg.
15	10/10/F	Asthma, wheeze	Year-round	ND	++	0.1	Neg	Neg	Grass
16	10/10/F	Asthma, hives	Fall	ND	++	Neg	Neg	Neg	Mold
17	10/10/F	Itchy skin, cough	Winter	ND	+++	1.6	Neg	Neg	Neg.
18	10/10/F	Asthma	Winter	++	+++	Neg	Neg	Neg	Neg.
19	10/10/F	Asthma	Year-round	ND	++	Neg	0.2	1.1	100; mold
20	10/10/F	Asthma	Year-round	++	+++	0.68	0.67	0.6	0.7; Grass, mold

CR, C-reactive protein; CS, eosinophil count; IBS, immunoglobulin E antibody to cockroach; ND, not done; Neg, negative; WHA, wheezing hours a week.

\*Other allergens tested included dog, grass, mold, Berkeley beetle, and dog. Patients with reported allergy to any of the allergens tested are listed. (The IgE antibody responses to mold included 1 case with high level.)

Nakazawa J Allergy Clin Immunol 200

**Cockroaches**

**Cockroaches**



Stueflue  
 Mariehøne (også i væksthuse)  
 Kakerlakker  
 Natsværmere  
 Dansemyg  
 Bier  
 Etc.

# Sebastian Klein stukket af Stor gedehams

<https://www.bing.com/videos/search?q=sebastian+klein+gedehams+stik&go=S%3c3%b8g&q=ds&ru=%2fs%2fsearch%3fq%3dsebastian%2bklein%2bgedehams%2bstik%26go%3dS%25C3%25B8g%26qs%3dds%26form%3dQBRE&view=detail&mmscn=vwrc&mid=088A56B90AB93A33B2A8088A56B90AB93A33B2A8&FORM=WRVORC>