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The features marked with a star (*) are based entirely on material taken straight from standard research (and other Official and Therefore Always Correct) literature. Many of the other articles are genuine, too, but we don't know which ones.

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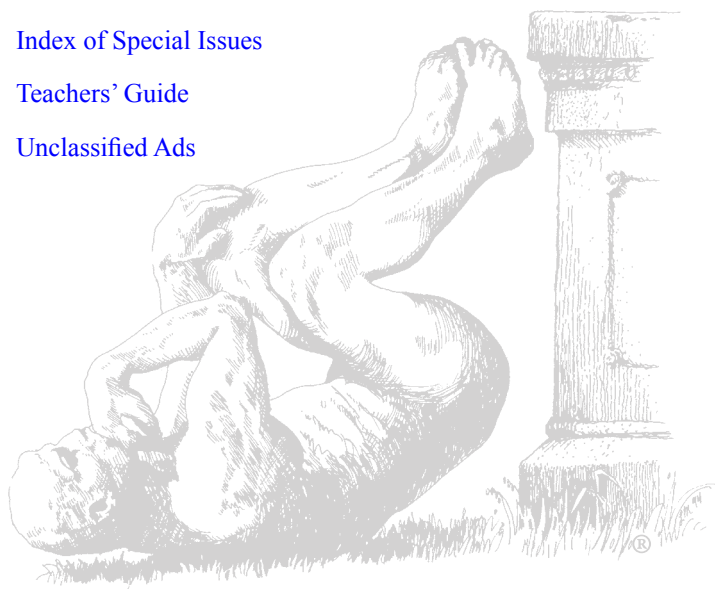
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Ig[®] Nobel

ANNALS OF

IMPROBABLE RESEARCH



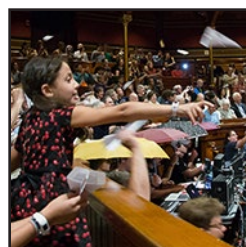
On the Front Cover

Identical twins Dr. Andy Aguirre and Dr. Aaron Aguirre help demonstrate some of the principles involved in the research that led to the Cognition prize. Photo: Alexey Eliseev.



On the Back Cover

Audience members launch paper airplanes, during the 27th First Annual Ig Nobel Prize ceremony. Photo: Howard I. Cannon.



Some Coming Events

See IMPROBABLE.COM for details of these and other events:

November 2017

EMBL, Heidelberg, Germany

January 21, 2018

Princeton U, USA

February 2018

SLAS Conference, San Diego, CA, USA

Salk Institute, La Jolla, CA, USA

AAAS Annual Mtg, Austin, TX, USA

Atlanta, GA, USA

March/April 2018

Ig Nobel Spring EuroTour

April 26, 2018

Portland, Oregon, USA

July 2018

Ig Nobel Ceremony Tickets go on sale

September 2018

Ig Nobel Prize Ceremony, Harvard U

Ig Informal Lectures, MIT

Fall 2018

Ig Nobel Fall EuroTour

Japan

Where There's More

There's always new improbable — it's not what you expect! — stuff on the **Improbable Research blog** at IMPROBABLE.COM



MAY WE RECOMMEND: THE MAJOR MALODOROUS SUBSTANCE FROM THE ANAL GLAND OF THE STOAT

An item that merits an extra look

compiled by Stephen Drew, *Improbable Research* staff

"2-Propylthietane, the Major Malodorous Substance From the Anal Gland of the Stoat (*Mustela Erminea*)," D.R. Crump, *Tetrahedron Letters*, vol. 19, no. 52, 1978, pp. 5233-5234.

2-PROPYLTHIETANE, THE MAJOR MALODOROUS SUBSTANCE FROM THE ANAL GLAND OF THE STOAT (MUSTELA ERMINEA)

D.R. Crump

Chemistry Division, D.S.I.R., Private Bag, Petone, New Zealand.

Recently several sulphur containing constituents of mammalian scent materials have been identified including 5-thiomethylpentane-2,3-dione from the striped hyena¹, 3-methyl-1-thiomethylbut-3-ene and 2-phenyl-1-thiomethylethane from the red fox², and 2,2-dimethylthietane, 3,3-dimethyl-1,2-dithiolane, and di-(3-methylbutyl) disulphide from the mink³. We now report the structure of the major malodorous component from the anal gland secretion of the male stoat (*Mustela erminea* L.).

Gas chromatographic analysis of a diethyl ether extract of the viscous yellow fluid obtained from the anal glands of male stoats⁴ revealed four volatile components. G.C.-M.S.⁵ showed the major (50%) and most volatile of these to have the composition C₆H₁₂S (m/e 116,101,87,82,74,73,69,67). The presence of one sulphur atom was confirmed by the characteristic relative intensities of the M+1 and M+2 peaks in the spectrum. The component of molecular weight 116, which was separated by preparative g.c.(0.2mg), exhibited the p.m.r. spectrum shown in the figure⁶.

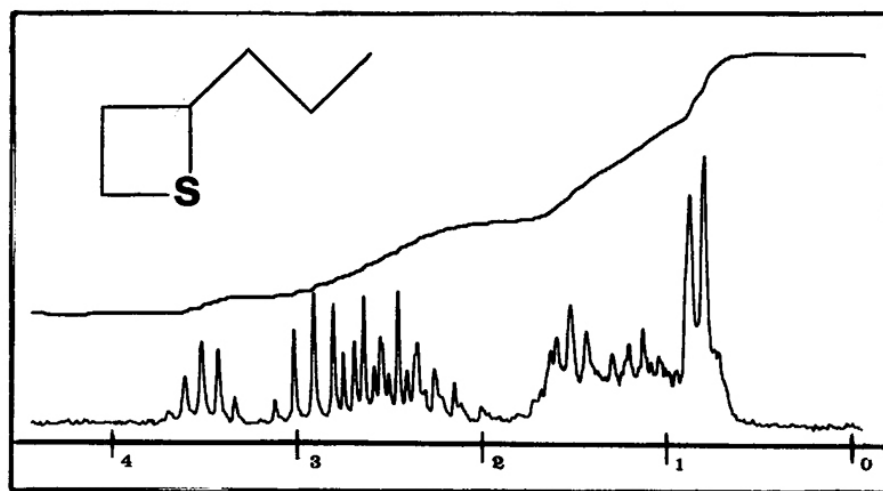


Figure. P.M.R. Spectrum of 2-propylthietane

Detail from the study.