

Forensic Entomology

Entomology



Study of insects

How to use insects to determine time of death?

Forensic Entomology

Dead body



Starts to smell



Detected very quickly by insects

Insects can arrive and lay eggs as soon as 20 minutes after death

Forensic Entomology

Females lay eggs on dead body



Maggots assured of
good food supply

Forensic Entomology

Regular life cycles

Find maggots
on corpse



Estimate time
of death



Maggots

Forensic Entomology

1 Species



Collect live maggots from the corpse



Rear to adulthood



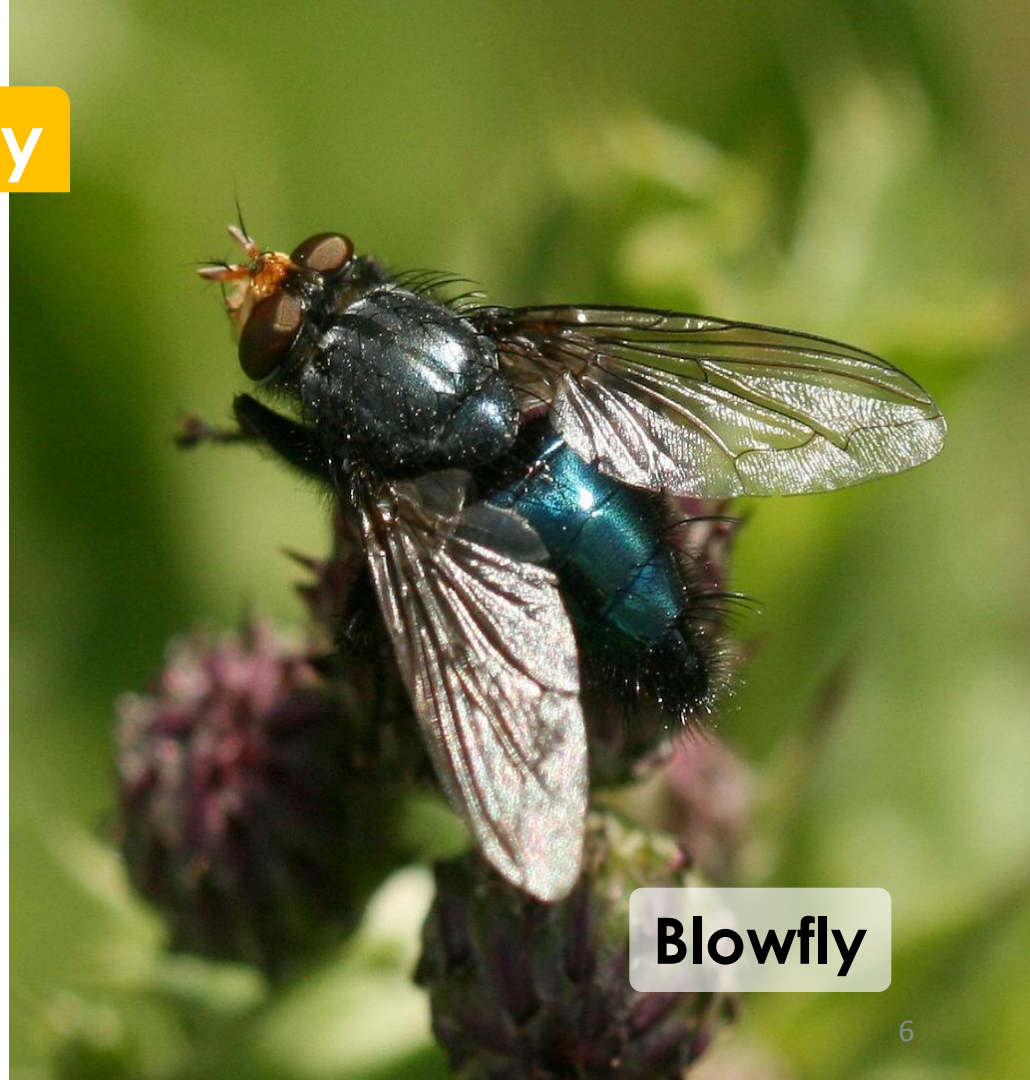
Determine species

Forensic Entomology

1 Species

2 Life cycle

Back calculate age



Blowfly

Peter Thomas

Peter Thomas, 1964

Body found in the woods (Bracknell, Berkshire)



Covered in maggots

Police assumption



6 - 8 weeks

Professor Keith Simpson

Forensic expert



“At least 9 or 10 days,
not more than 12 days”



June 16th or 17th

A black and white portrait of Professor Keith Simpson, a middle-aged man with a receding hairline, wearing a suit and tie, looking slightly to the left.

Prof. Keith Simpson

Suspect

William Brittle



Financial dealings with Peter Thomas



Dispute over money?

Time of death?

Defense

Three eyewitnesses



Peter Thomas seen alive on June 20th or 21st

Maggots vs eyewitnesses

Defense

Called an entomologist



Prof. McKenny-Hughes



Agreed with Simpson



June 16th or 17th

Jury



Believed the maggots

Danielle van Dam

Danielle van Dam, 2002

Feb 1st evening

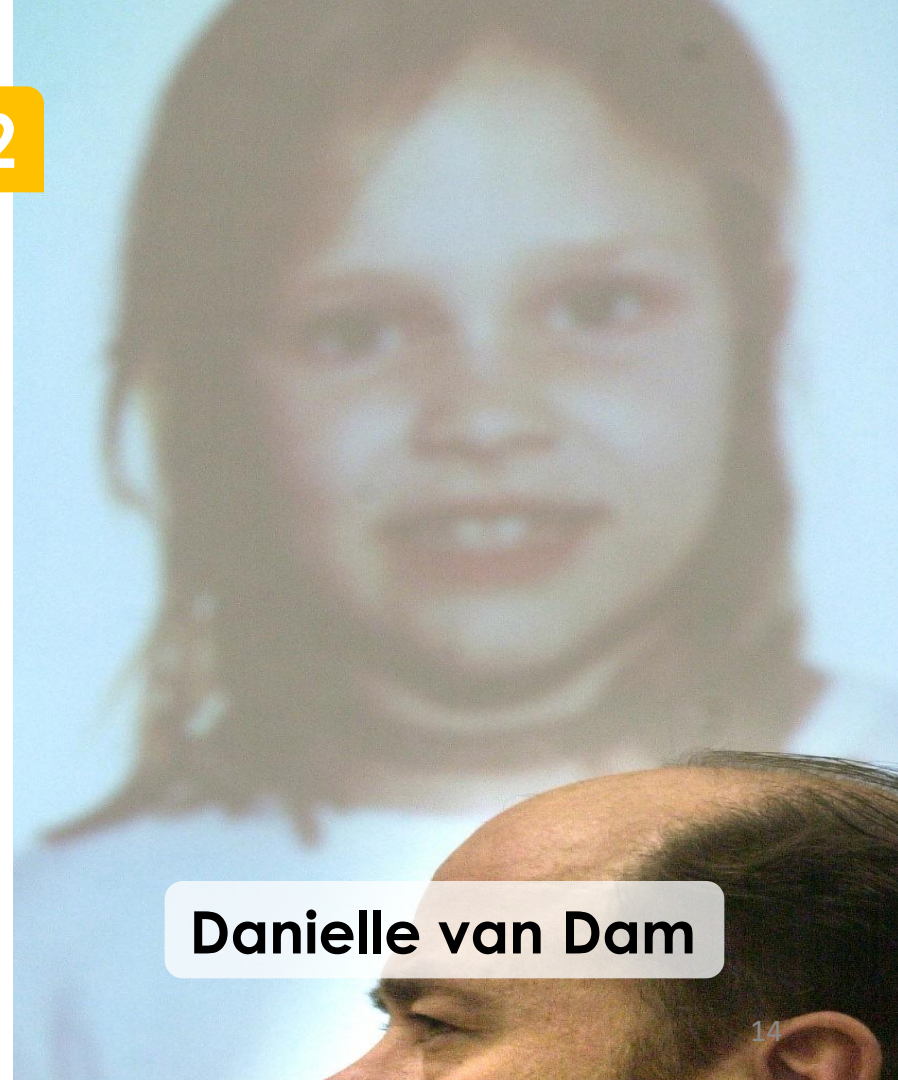


Put to bed

Feb 2nd morning



Reported missing



Danielle van Dam

Suspect

Went on a desert trip



Feb 2nd to 5th

Under police surveillance



Feb 5th onwards



David Westerfield

Danielle van Dam

Body found on Feb 27th



Badly decomposed



Attacked by animals



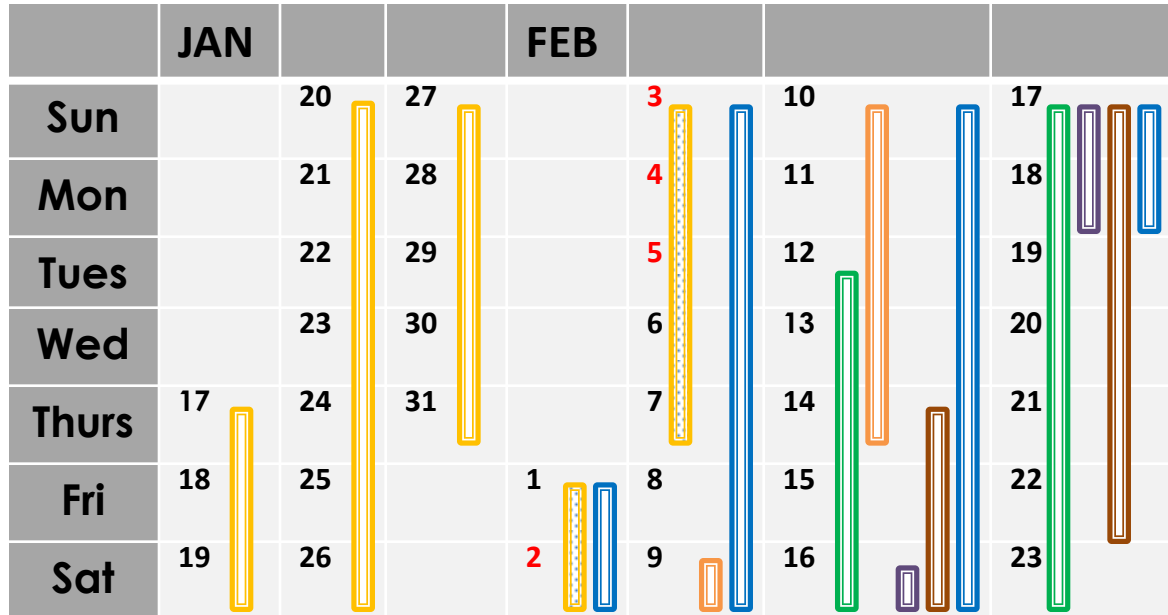
Identification by fingerprinting

Questions

1 When did Danielle die?

2 When was her body dumped in the mountains?

Likely time of death



Body discovered: Feb 27th

Rodriguez

Hall

Goff

Faulkner

Haskell

Medical examiners

What went wrong?

Weather



Variable

Microclimates



South face warmer
than north face

Covering of body

Westerfield innocent?

**Californian
mountains**

What went wrong?

Westerfield found guilty



Sentenced to death by lethal injection

Evidence of medical examiners

One fingerprint, blood spots, hair from van Dam family dog in his vehicle