

“Adam”

Thames, 2001

Torso found



Missing head



Missing arms

Professional cuts

Blood drained



Evidence

1 A torso

2 A pair of shorts



Shorts

Made in China



Manufacturer found



Batch identified



Sold in West Germany

DNA

Fingerprints

Fibre Analysis

Poison

Blood

Torso

Stomach contents examined

1 Food

2 Pollen



Identify plant



Identify origin



Northern Europe

Torso

Stomach contents examined

1 Food

2 Pollen

3 Clay

4 Calabar beans



Toxic



From Africa

Torso

Stomach contents examined

1 Food

4 Calabar beans

2 Pollen

5 Gold particles

3 Clay

Items 3, 4, 5 associated with African black magic

From Evidence

Murder?



Human sacrifice

How to continue with the investigation?

Where did Adam come from?

You Are What You Eat

Bones



Calcium phosphate
in protein matrix



Calcium derived from diet



Other metals
incorporated into bones

Traditional Societies

Eat home-grown food



Minerals from local soil



Incorporated into bones

You Are What You Eat

Relative abundance of trace elements in bones



Indicate geographical origin



Strontium, copper, lead



Analyze Adam's bones

You Are What You Eat



Strontium
Copper
Lead



Summary

1 How spectroscopic methods work



Emission spectroscopy



Absorption spectroscopy

2 EDX & SEM-EDX

3 Neutron Activation Analysis