Essential Forensic Biology

Second Edition

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To Sarah, who believes that no evidence is required in order to find a husband guilty.
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Acknowledgements

Thanks to Sarah and to all of the academic and technical staff at the School of Biological & Earth Sciences, Liverpool John Moores University who helped me along the way.
Introduction

The word ‘forensic’ derives from the Latin *forum* meaning ‘a market place’: in Roman times this was the where business transactions and some legal proceedings were conducted. For many years the term ‘forensic’ had a restricted definition and denoted a legal investigation but it is now commonly used for any detailed analysis of past events i.e. when one looks for evidence. For example, tracing the source of a pollution incident is now sometimes referred to as a ‘forensic environmental analysis’, determining past planetary configurations is referred to as ‘forensic astronomy’, whilst historians are said to examine documents in ‘forensic detail’. For the purposes of this book, ‘forensic biology’ is defined broadly as ‘the application of the science of biology to legal investigations’ and therefore covers human anatomy and physiology, organisms ranging from viruses to vertebrates and topics from murder to the trade in protected plant species.

Although forensic medicine and forensic science only became specialised areas of study within the last 200 or so years, their origins can be traced back to the earliest civilisations. The first person in recorded history to have medico-legal responsibilities was Imhotep, Grand Vizier, Chief Justice, architect and personal physician to the Egyptian pharaoh Zozer (or Djoser). Zozer reigned from 2668–2649 BC and charged Imhotep with investigating deaths that occurred under suspicious circumstances. The codification of laws was begun by the Sumerian king Ur-Nammu (ca 2060 BC) with the eponymous ‘Ur-Nammu Code’ in which the penalties of various crimes were stipulated whilst the first record of a murder trial appears on clay tablets inscribed in 1850 BC at the Babylonian city of Nippur.

In England, the office of coroner dates back to the era of Alfred the Great (871–899) although his precise functions at this time are not known. It was during the reign of Richard I (1189–1199) that the coroner became an established figure in the legal system. The early coroners had widespread powers and responsibilities that included the investigation of crimes ranging from burglary to cases of murder and suspicious death. The body of anyone dying unexpectedly had to be preserved for inspection by the coroner, even if the circumstances were not suspicious. Failure to do so meant that those responsible for the body would be fined, even though it might have putrefied and created a noisome stench by the time he arrived. It was therefore not unusual for unwanted bodies to be dragged away at night to become another village’s problem. The coroner’s responsibilities have changed considerably over the centuries but up until 1980 he was still expected to view the body of anyone dying in suspicious circumstances.