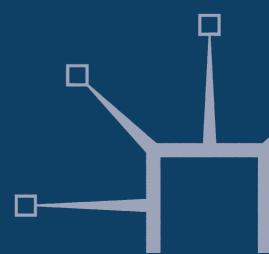
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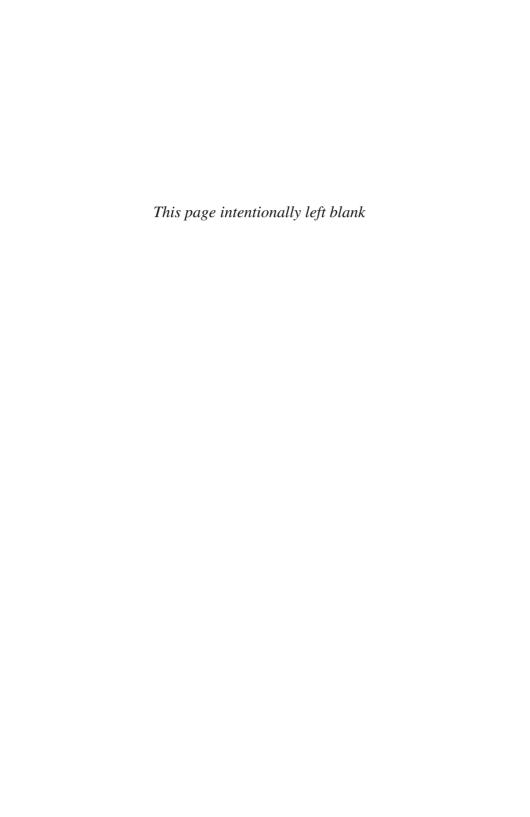
## Mad Dogs and Englishmen

Rabies in Britain, 1830-2000

Neil Pemberton and Michael Worboys



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#### List of Abbreviations

APRHAC Association for Promoting Rational Humanity

towards the Animal Creation

BMJ British Medical Journal

BVA British Veterinary Association CD(A)A Contagious Diseases (Animals) Act DOPA Dog Owners' Protection Association

EC European Community

EU European Union

LCC London County Council LGB Local Government Board

MAFF Ministry of Agriculture, Fisheries, and Food

MOH Medical Officer of Health

NA National Archives

NCDL National Canine Defence League

PETS Pets Travel Scheme

QRC Quarantine Reform Campaign

RSPCA Royal Society for the Protection of Animals

RVC Royal Veterinary College

SPCA Society for the Protection of Animals

SPH Society for the Prevention of Hydrophobia and

the Reform of the Dog Laws

WHO World Health Organisation

#### Acknowledgements

The origin of this book was a chance conversation we had about neglected topics in medical history and the decision to explore the events behind the headline 'M. Pasteur v. The Chief Constable of Clitheroe', which appeared in the British Medical Journal in June 1890. Research, mainly in Lancashire newspapers, revealed an imagined contest over the treatment of rabid dog victims between the world's most famous scientist and the flamboyant head of police in a small East Lancashire town. On 28 January 1890 a rabid dog had run amok in towns east of Manchester; in Stalybridge it had bit four people and then another three in Hyde. The latter were sent to Paris to be treated at the internationally renowned Institute Pasteur, while the Stalybridge victims' treatment was organised by the Chief Constable of Clitheroe, who brought with him a herbalist from Colne – J. R. Hartley. The British Medical Journal presented a narrative of state-of-the-art science versus herbal hokum, made newsworthy by the death of a Stalybridge victim and the opportunity to attack unorthodox medical practice. In contextualising this story we soon realised that we had discovered a large, fascinating and, yes, truly neglected topic, not only in medical history but also in British veterinary, social, and political history.

In pursuing the many facets of rabies backwards and forwards in time, and in exploring other regions and the national scene, we have benefited greatly from the assistance of librarians, archivists, and fellow academics. We would like first to thank the librarians, archivists, family historians, and local historians in Manchester and Lancashire whose assistance revealed the richness of rabies as a research topic. In particular, we must acknowledge the help of Christine Bradley, Margaret Heap, Bill Jackson, John Strachan, and Craig Thornber. As the topic grew we benefited from the assistance of staff at the following libraries and archives: Special Collections at John Rylands University Library Manchester; Manchester Archives and Local Studies; Manchester Central Library; the British Library St Pancras; British Newspaper Library Colindale; National Archives Kew; the University of Sheffield Library; Sheffield Local Studies Library; the Record Office for Leicestershire, Leicester & Rutland; the West Yorkshire Archive Service; the Local Studies Library Bradford; Southampton Central Library; Exeter Central Library; Plymouth Central Library; Clitheroe Public Library; Stalybridge Public Library; Tameside Record Office; Rochdale Public Library; Preston Public Library; the Central Library Halifax; the Royal Society for the Protection of Animals; the Kennel Club; the Dogs Trust; and Battersea Dogs Home. Next we must thank the following for permissions for illustrations: the Wellcome Library, London; the National Library of Medicine, Bethesda; the Cushing/Whitney Medical Historical Library, Yale University; PortCities Hartlepool; the RSPCA; Express Syndication; News International; and Lady Fretwell.

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NEIL PEMBERTON AND MICHAEL WORBOYS

#### Introduction

Everyone can find dogs frightening. Almost all of us have been snapped at by a dog and many of us have crossed the road to avoid a potential confrontation with an aggressive animal. Now imagine that such dogs might be carrying a deadly disease, which, if you were bitten, might paralyse your body and unbalance your mind, before producing an inevitable agonising death. Rabies was and is such a disease. It was prevalent in Britain until its eradication in 1902, producing a regular death toll from its human form – hydrophobia. In this book, we return to the Victorian era when potentially rabid dogs lurked everywhere: at home, in the yard and on the street, in the press, in novels, in figures of speech, in popular memory, and in the imagination. The dread of rabies and hydrophobia was a constant presence and perpetual concern for the whole nineteenth century, and the threat of its re-emergence from imported animals continued throughout the twentieth century. The actual number of hydrophobia deaths was very small: only 1,225 were recorded between 1837 and 1902. But Victorians had to worry about any dog bite they received, and there were many because of the sheer number of stray and wild dogs around.1

Many commentators have observed that the public profile of rabies in Britain has been out of all proportion to its actual threat to health, but this misses the point that perceptions of risk are never rational and that, as this book will show, reactions to disease are socially and culturally revealing. In the late twentieth century, European states complained that the British government and its officials exaggerated the threat of imported rabies for political reasons, whilst the tabloids worried about foreign dog smugglers and foxes slipping into Kent through the Channel Tunnel. Indeed, Britain's rabies-free status became a feature of national identity; for example, it was used rhetorically by Margaret

Thatcher in the 1980s to exemplify the country's essential difference to Continental Europe – an island people, enjoying security and liberty behind secure borders. Yet, in popular culture the term 'Mad Dog' has become separated from rabies and associated with aggression and violence, as with the Ulster paramilitary leader Johnny 'Mad Dog' Adair, the 'bite-yer-legs' footballer Martin 'Mad Dog' Allen, and youth gangs like the Benchill Mad Dogs in south Manchester. Our medical and veterinary history of rabies is thus as much about the socio-cultural history of dogs and British identity, as it is about the understanding, prevention, and treatment of the disease.

This book is mostly about the Victorian era, with a final chapter on the twentieth century. We tell the story of how the incidence of rabies and hydrophobia waxed and waned over the nineteenth century, before their eradication in 1902.<sup>2</sup> We follow the interactions between medical. veterinary, government, and public knowledge and attitudes to rabies and hydrophobia, and explore the conflicts between these groups about how to control these diseases. Victorians were regularly reminded of the threat of rabies in popular memory, by word of mouth and through reports in newspapers. When rabies was present or feared, street posters warned of 'MAD DOGS' and 'HYDROPHOBIA', and instructed owners to keep their dog muzzled, on a lead or indoors. These notices were often posted during the Dog Days, the period from early July to early August that began with the rise of Sirius, the Dog Star, and coincided with the hottest time of the year. While rabies and hydrophobia were usually regarded as different forms of the same disease in different species, many professional and lay 'experts' held contrary views. Maybe they were quite distinct diseases, rabies in dogs being a physical disease and hydrophobia in humans being a mental disease. Or, perhaps, they were both imaginary, as many rabid dogs were assumed just to be aggressive, while many humans were thought to have the hysterical condition of spurious hydrophobia. By 1900, medical, veterinary, and lay opinion had closed around the view that rabies was a specific, contagious disease that was spread by the inoculation of a virus carried in saliva. Laboratory tests had made it possible to distinguish viral infection from spurious cases in fierce dogs and anxious people. Greater security had also been brought in 1885 by Louis Pasteur's preventive vaccine treatment for hydrophobia, which has an iconic status in medicine as being the world's first modern, medical breakthrough.3

In the twentieth century, most Britons saw rabies as a foreign, exotic disease which quarantine regulations kept out. It was associated first and foremost with dogs in Continental Europe and irresponsible owners who

might reintroduce the disease by evading quarantines. However, in the 1920s rabies was increasingly experienced as a tropical disease by doctors working in the Indian or Colonial Medical Services and by Britons serving overseas. It was, of course, in this context that Noel Coward's 'Mad Dogs and Englishmen' song, first performed in 1932, found resonance. However, rabies was not 'tropical' because of climate; rather, it was present in locations where street dogs were tolerated and where people lived close to the wild animals that could transmit the disease. By the end of the 1930s, most industrialised countries had followed Britain and had dog rabies under control, but in the 1940s a new situation emerged as rabies went 'wild'. For example, in the United States the threat came from racoons and skunks and in Europe from foxes and wolves. In the early twenty-first century rabies continues to be prevalent in many countries and is estimated to cause around 50,000 deaths worldwide each year, 44 per cent in Africa, and 56 per cent in Asia.<sup>4</sup> If treated early enough, almost of these people could be saved, but rabies remains typical of many disease problems in poor countries, where the issue is the lack of resources and infrastructure to deliver services.

What is rabies? Well, we would prefer not to tell you at this point. We would rather you learnt what rabies was and how understandings changed with our historical actors, so that you reach the current state of knowledge at the end of the book. This way you will better appreciate past ideas and actions in context, and be less likely to interpret them through today's understanding. It is a fundamental requirement of historical scholarship that we think ourselves into the mindset of past generations and understand their world in their terms. Furthermore, it is essential that we do not regard past ideas and actions that are different to ours as simply wrong or foolish. This approach has to be adopted in the history of medicine in exactly the same manner as in other areas. So, with diseases we have to approach the views of past generations as we do approach their views of politics or religion, to be understood relative to time and place, and to be explained in context, not judged against modern knowledge.<sup>5</sup> For example, understanding tuberculosis in the nineteenth century requires that we discuss it as the inherited affliction that Victorians knew it to be, not as the communicable disease we know today. It can be harder to be historically relativist about medicine because of the assumption that knowledge of the body and disease is cumulative and progressive; in other words, today's knowledge is 'right' and closer to the 'truth' than that of the Victorians. But remember that today's scientific experts on rabies are also 'relativists'. They accept that their knowledge of the disease is changing and will change;

indeed, most are research scientists working towards that very end! That said, if you cannot wait and want to know the current state of play with rabies in animals and humans, then this is discussed in Chapter 6. In addition, and in the spirit of historical relativism, we have included online sources for following future changes, should you be reading this book some years or decades hence.<sup>6</sup>

#### Why rabies?

Why have we written a book on rabies? Indeed, why a book just on rabies in Britain – a country where the disease was stamped out a century ago, and where before then it was comparatively rare?<sup>7</sup> Our answer is that this narrative reveals important yet neglected features of the history of disease and medicine, and of British social and cultural history. Specifically, we highlight four themes: the relationships between human and veterinary medicine, the interactions of professional and popular understandings of disease, the role of state in controlling disease, and the changing place of the dog and dog ownership in British society.

Diseases that are communicable from animals to humans, and bridge veterinary and human medicine, have recently attracted a lot of attention, for example, Salmonella, variant CJD, and Avian influenza. Many such conditions are emerging diseases, either truly novel or newly recognised, but infections transmitted from animals to humans also seem to be new because until recently they were not a serious danger to human health. They tended to be few in number, not transmit easily, and to be confined to certain groups. For example, anthrax was only caught by workers in the wool industry, glanders by those who spent a lot of time with horses, and psittacosis by those who sold or kept parrots. Also, few of us worry about catching diseases from our pet cats and dogs. The great livestock diseases – rinderpest, foot-and-mouth, and pleuropneumonia – do not affect humans; indeed, the main threat was and is food poisoning from meat.

In the Victorian era the boundary between animal and human health was not so secure; indeed, the pioneering work after 1870s on how germs caused infection began with studies of diseases that crossed species barriers – anthrax, tuberculosis, and, of course, rabies. <sup>10</sup> But none of these conditions was straightforwardly 'catching': anthrax and rabies were spread by the inoculation of poison-germs through the skin, while tuberculosis and rabies had long, variable incubation periods. Also, such diseases often produced distinct symptoms in animals and man; for example, in rabies dogs were thirsty while in humans they were

hydrophobic. Thus, through the history of rabies we can analyse how doctors and veterinarians understood and dealt with complex problems that were at the margins of their professional practice, and to the struggles over who had reliable knowledge and hence authority.<sup>11</sup> Rabies also reveals the problems posed to public policy by diseases with variable patterns of spread and development, and where it is not always clear who has appropriate expertise. Dog fanciers and the public often presented themselves to be as 'expert' as vets, doctors, and scientists, even after Louis Pasteur showed rabies to be a germ disease and introduced an anti-rabies vaccine. This is somewhat paradoxical as Pasteur's work has been celebrated by medical scientists as revolutionary, producing the first fruits from experimental laboratory investigations of disease, the type of medical research that has dominated medical research since.12

Our second theme is the differences between professional and lay understandings of disease. Throughout the nineteenth century doctors claimed that the gap between their knowledge and popular understandings was nowhere greater than over hydrophobia. For example, doctors admitted that it was the one disease for which they could offer no useful treatment once symptoms developed, whereas the public tried all manner of therapies, from literally applying the 'hair of the dog' to taking the remedies offered by local chemists. The idea that rabies was associated with heat, thirst, and perhaps solar influences persisted amongst many social groups. One problem was that there was no medical consensus on hydrophobia until the 1890s; indeed, there were many different groups producing understandings from different starting assumptions, by different means and to different ends. For example, doctors observed, treated, and wrote about a fatal disease in individuals, which some saw as wholly physical, others psychological, and others both. Thus, rabies has much to tell us about changing ideas about the relations between body and mind, especially phobias and what we now term psychosomatic illnesses. Veterinarians saw rabies in individual dogs, and as an epizootic – an imported animal plague – in the canine population. <sup>13</sup> But rabies had other 'experts': the police who had to control dogs on the street, social reformers who saw the disease as a metaphor for the culture of the poor, animal welfare activists who were certain it was caused by cruelty, dog fanciers and owners who had their pet theories about breeds and gender, government officials who saw rabid dogs as a proxy for actual or potential social disorder, and, of course, the public who knew, it seems, a 'mad dog' when they saw one, and almost certainly knew someone who had an infallible remedy. Knowledge was often geographically or socially specific, and meanings given to the disease and its treatments were contingent. We will use the notion that there were many 'experts' to show the social basis for the struggles over the nature of rabies and its management.

Our third theme is the role of the state in the control of animal and human diseases. The contests over the appropriate measures for rabies were part of wider public debates over the extent of government intervention in the private lives of its citizens, the values of a liberal society, and the politics of class that were taking shape in the reconfiguration of the meanings, forms, and boundaries of the nation and the polity. In the first attempts to introduce dog controls in the 1830s, legislation was rejected in part because the public saw the muzzled dog as symbolic of political oppression at the critical moment of the Reform crisis of 1830–32. <sup>14</sup> This was also a time when the English people celebrated the ferocious bull-dog as their icon.

How to control rabies was also shaped by gender politics. Rabies was typically male and associated with Englishmen rather than women with street life, cruelty to dogs, and aggression. But at the end of the century, women led the fight against the compulsory muzzling of dogs, pointing to the innocence and passiveness of lap dogs and seeing the muzzle to be as oppressive as the corset and a symbol of male domination. They were offended that sporting dogs – in the male worlds of hunting, coursing, and dog racing - were exempt from muzzling. The taming of rabies was in part the story of the desired and idealised character and qualities of the English, as well as about individual freedoms and liberties. It reminds us how in the Georgian era Englishness was famed for its aggressiveness and tenacity - symbolised in the figure of John Bull and the blood sports enjoyed by men of all classes. Over the Victorian era this was replaced by a mild-mannered and tamed temperament, associated with the middle classes, who were proud of their sensitivity towards animal suffering and over time led the British to become a nation of dog lovers. These shifts have been discussed for the late Victorian period by John Walton in a pioneering article, which remains the best introduction to the social history of dogs and rabies.<sup>15</sup> We aim to extend his analyses both back and forward in time, and to deepen it using the tools of the social history of disease and medicine.16

Our fourth theme is the history of dogs in Britain. We cannot answer the question why and how Britain became a nation of dog lovers, but we do offer insights into changing attitudes towards dogs and the changing character of dog ownership. Throughout the nineteenth century battles raged over the sight and treatment of animals, over the proper place, use and treatment of draught animals and livestock, and over the alleged cruelty to animals in popular culture, particularly sport and entertainment. 17 There are no histories of the dog and pet-keeping in Britain, though a number of studies of animals consider the subject. Keith Thomas's magisterial Man and the Natural World charts the development of domestic pets as part of his larger study of the waning of anthropocentrism and the growth of sentimental attitudes towards animals, for example, giving dogs names and keeping them in the home as companions. Thomas attributes this development, first seen amongst the wealthy, to the declining economic role of animals and the separation of domestic life from immediate contact with the exploitation and killing of animals. In addition, he points to the influence of radical Christian sects, natural philosophy, and the Enlightenment in general, all of which combined to open the emotional and social space for the sentimentalisation of animals. However, the extent to which any section of society was insulated from contact with working animals and livestock, even after 1800 when Thomas's study ends, is a moot point. All kinds of beast were omnipresent in Victorian cities, and links between town and country remained close. In the case of attitudes to dogs after 1830, we have found every shade of opinion from those, exemplified by owners of lapdogs, who regarded their pet as equal to or above humanity, not least through the virtues of loyalty and affection, to those, typified by owners of draught dogs, who treated their animals as mere economic assets.

Harriet Ritvo's discussion of dogs in The Animal Estate remains the most detailed and convincing account of the place of dogs in Victorian culture. 18 Sources for the history of dogs are not extensive, though Ritvo skilfully uses 'uncommon' phenomena on which documentation is rich, such as dog shows and rabies, to illuminate the 'common' and everyday. Her main point, like Thomas, is that attitudes to animals were never simply that, but were also about people and society, and hence, were shaped by, and in turn shaped, cultural ideas and actions. In the case of Victorian Britain, Ritvo highlights the link between dogs and social class, with dog shows a symbol of social divisions and distinctions, and rabies associated with the lower orders, 'unsettling social forces', and programmes of social discipline.<sup>19</sup> Rabies was also a resource for metaphorical reflection on the 'self'; Victorians, like Charles Darwin, wrote about having 'rabid' feelings, not least on matters of scientific controversy, and novelists such as George Eliot and Anthony Trollope had characters who behaved like mad dogs.<sup>20</sup> Indeed, more has been said about the rhetorical uses of rabies than on the disease itself, or attempts at control.<sup>21</sup> We endeavour to follow Jonathan Burt's appeal to historians of animals and human–animal relations to 'move away from emphasis on the textual, metaphorical animal ... to achieve a more integrated view of the effects of the presence of the animals'.<sup>22</sup> Our approach to dogs, dog–human relations, and the management of dogs in the Victorian period stresses the materiality of dogs and their diseases, and the situatedness of knowledge and practices in time, place, and social relations.

#### Mad dogs and Englishmen

The narrative of the book moves in broad chronological order through the prevailing understandings of rabies and the measures taken to control the disease, beginning in 1830 with the 'Era of Canine Madness' and ending in 2000 with the introduction of Pet Passports. We focus mainly on England. In fact, most rabies outbreaks and hydrophobia deaths were in London, Lancashire, and Yorkshire, though Wales, Scotland, and Ireland will figure as necessary and at certain points were critical – the last known human death in Britain from indigenous rabies was in South Wales in 1899. We identify and discuss many constructions and meanings of rabies, which can be characterised by period. In Chapter 1, Rabies Raging, we discuss the growing problem of rabies and hydrophobia in Britain in the 1820s and its significance in the crisis year of 1830. In Chapter 2, Rabies at Bay, we cover the period from 1831 to 1863 when the incidence of the diseases declined, but show how they remained important in the popular imagination, being kept there by remembered experiences, local authority dog control campaigns, and above all by the actions of animal welfare reformers. In Chapter 3, Rabies Resurgent, we show how the return of rabies brought tougher controls and new understandings of the disease in dogs and humans. In Chapter 4, Rabies Cured, we follow the development and introduction in Britain of Louis Pasteur's preventive treatment, from initial scepticism to acceptance a decade later. In Chapter 5, Rabies Banished, we tell the story of the control of rabies in the 1880s and 1890s, which through ever stricter measures led to its eradication in 1902. In Chapter 6, Rabies Excluded, we discuss how rabies was kept out of Britain in the twentieth century by the application of rigid quarantines on imported dogs, cats, and other mammals. Unbending measures remained in place until 2000, when controls were relaxed with the introduction of Pet Passports for dogs whose owners have had them tagged with a microchip, vaccinated, tested, and certificated.

## 1

## Rabies Raging: The 'Era of Canine Madness', 1830

In June 1830, the Home Secretary, Robert Peel, received a letter with the following observation:

In the eventful history of this Kingdom there have occurred few calamities of a more appalling nature than those recorded by Hydrophobia, particularly within the last few weeks – indeed, the future historian may not aptly distinguish it by the 'Era of Canine Madness' that began to show itself some years previously – and annually increased until 1830 – when it was hardly safe to walk abroad.<sup>1</sup>

The writer was reflecting on a situation where London and other towns were in the grip of a 'great and almost universal alarm' about mad dogs and hydrophobia.<sup>2</sup> The press was full of harrowing reports of fearful scenes, bloody injuries, frightful symptoms, and tragic deaths. In London 'thousands and tens of thousands of dogs kept by the Poor' were reported to be roaming the streets, snapping and biting at anyone and anything in their path – people, other dogs or the other animals that inhabited the crowded thoroughfares. There were similar reports from around the country.<sup>3</sup> Everywhere stray dogs were rounded up or shot on the street. (See Figure 1.1.) T. L. Busby's cartoon published in 1826 shows two armed groups converging on a mad dog and conveys the horror and humour of such episodes.

All reports claimed that the nation's dog population was out of control and that public order was in jeopardy. Canine madness had belonged to the working-class streets and the dogs that infested them, though it was now spreading to respectable streets and squares, threatening homes, shops, and schools – according to the *Evening Mail*, the 'grim monster'

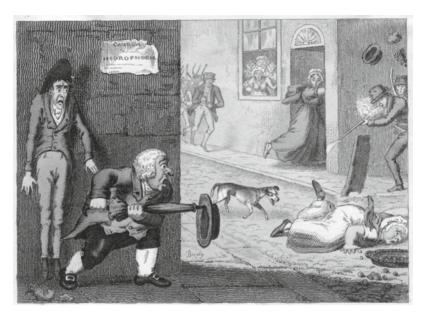


Figure 1.1 T. L. Busby, 'Mad Dog', 1826.4 Courtesy of the Cushing/Whitney Medical Historical Library, Yale University.

had the country 'in its horrific sway'. 5 Thus, 'canine madness' referred not only to a disease in individual dogs, but also to the feeling that the canine population of London, major towns, and perhaps the whole country was suffering from a collective mania and out of control.

Reports for 31 May 1830 illustrate events and the public mood. At Bow Street Court a superintendent reported that 'the number of dogs in the streets without owners was frightful' and that a four-year old had been bitten on the lip. At Queen's Square Magistrates' Court there were reports of several people bitten in York Street the previous day, and no sooner had the magistrates' proceedings opened than they were interrupted by a dog bite victim. He had been attacked earlier that morning, had been to Westminster Hospital to have his wound 'cut out', and had come to court to ask if anything could be done to require owners to restrain or muzzle their dogs. Within an hour there was another application from a York Street victim, who had been bitten along with six others. The magistrates were considering a confinement order when a beadle entered the court with a dog; however, it was not the alleged rabid dog but with an ownerless cur, of which he said there were hundreds in the district. Confinement orders were introduced which allowed stray dogs to be rounded up, owners reclaiming dogs to be fined £5, and unclaimed dogs to be destroyed. A writer to The Times on 4 June asked 'who is there among us ... that leave his home in the morning, and say that he may not return in a few hours, brought back in a state that would reduce him to the desperation, and phrenzy (sic) of a demon, and from which a horrible death can alone relieve him?'6

The prospect of a terrifying illness and death was bad enough, yet any victim had to endure the surgical removal of tissues around the bite, cauterisation of the wound, and weeks of worry over whether they would be the unlucky one in ten, or was it one-in-hundred, that developed hydrophobia. A man from Hackney wrote to Peel pleading for government action after his son had been bitten by a dog that ran into the school playground, 'my fine boy had been tortured by cutting and cauterising, but at the moment he may be hanging between life and death, & oh! such a death'. The next day Peel received a letter that urged him to give attention to 'the state of misery in which thousands are kept at their (perhaps unfounded) apprehension of mad dogs. This, with many accounts of agonising terror, depriving them of sleep and rest!'8 Over these dread days and throughout the summer, the city was covered with posters - headed HYDROPHOBIA or MAD DOGS - that warned everyone to be on their guard and instructed that all dogs should be confined, and only be taken out muzzled and on a lead. The papers carried advertisements for popular remedies – specifics such as the Ormskirk Medicine and general remedies such as Morison's Universal Medicine - and medical men wrote in with their favourite means of halting the advance of the disease.

#### Medicine and hydrophobia

As the press reports in 1830 indicated, the summer months in previous years had also seen canine madness on the streets of English towns. Rabies canina, as it was then termed, was sporadic in the eighteenth century and was thought to have become more common after outbreaks in 1807 and 1808.9 Thereafter, reports of cases in dogs and humans increased, and as a newly prevalent affliction it became the subject of many studies and treatises. Published accounts were mainly written by doctors and focused on hydrophobia, with asides on the condition in dogs. The leading British expert was the Manchester surgeon Samuel Bardsley, who was incidentally the first person to suggest eradication.<sup>10</sup>

Most doctors accepted that there were two conditions in humans: hydrophobia due to the inoculation of a virus in the saliva of a dog; and spurious hydrophobia - an hysterical condition brought on by fear of the consequences of a dog bite. The word hydrophobia derived from a mental state, a fear of water, which always included choking and the inability to swallow, and sometimes even anxiety at the sound of water being poured. Many patients were sent into convulsions by draughts of air across their throat and face. The most common and immediate problem facing doctors in 1830 was what to do with the many dog bite victims seeking treatment. Clinical experience was that the risk of developing hydrophobia from the bite of an obviously rabid dog was around 1 in 15, a figure which was constant throughout the century. Yet, in the Dog Days of 1830 there were no ordinary dog bites; the public sought medical attention for these injuries more than previously and doctors knowingly 'over-treated' to reassure and alleviate fears. There were two forms of 'treatment' – preventive and curative. The former aimed to stop the absorption and spread of the poison after the bite, the latter aimed to manage and counter the full-blown disease. Preventive treatments were almost always effective, while curative treatments always failed.

So, what preventive treatments were available? The first and most important aim was to remove the virus or halt its absorption, so victims were advised to suck their wound and to wash it vigorously and then to seek assistance from medical practitioners, principally surgeons or surgeonapothecaries. Practitioners used two techniques – excision and cauterisation, and often both together. If the wound was on a fleshy part of the arm, leg, or trunk, then the surgeon would cut wide and deep to remove as much affected tissue as possible. If the wound was on the face, then surgeons endeavoured to destroy affected tissues by 'burning' with a hot iron or caustic chemical; lunar caustic (silver nitrate) was the most common agent. Dr Vaughan recommended that igniting gunpowder in the wound 'may have its uses' and in some cases amputation of a finger or part of a limb was undertaken. 11 William Lawrence wrote of the use of opium to induce sleep and slow the body's metabolism, while Magendie's inoculation of tepid water into a vein seems to have been aimed to dilute the poison. 12 The often lengthy time between the bite and the onset of symptoms led doctors to assume that the poison remained at the site of inoculation, possibly in nerves; hence, excision was tried for many days or weeks after the bite. Some doctors still resorted to cupping or bleeding, though these had lost favour generally and anyway it seemed that hydrophobia was a nervous rather than blood disease. That said, heroic interventions almost certainly had another purpose – avoiding spurious hydrophobia; treating a fearsome condition with formidable measures was one way of trying to reassure victims that hydrophobia was not inevitable and that anxiety was unnecessary.<sup>13</sup>

There were a great many remedies available to stop or counter the action of the poison for victims unable or unwilling to consult a surgeon. First, there were popular practices and superstitions, the best known being treating the wound with 'the hair of the dog that bit you' – treating like with like - which may have had resonances with homoeopathy. Related to this were the concoctions and remedies passed down in families and communities; many towns had a 'Mad Dog Man' who had advice on wound management and their own recipes for people and animals. Most local chemists and druggists had their own favourites or offered specifics such as the Ormskirk Cure, which as the name suggests was from Lancashire but had gained such a reputation that it could be found across the country.<sup>14</sup> Other popular remedies included chlouret of lime, inhaling the fumes of burning charcoal. alum, Armenian bole, calcined oyster shells, gall of the Dog Rose, liver and dried blood of a mad dog, cantharides, and immersion in sea water.<sup>15</sup> The London variation of this early form of aversion therapy involved finding a boat sailing down the Thames to Gravesend - the nearest point to the city where the salt content of the water was high enough for the required effect - and holding the victim under water until they nearly drowned.16

The situation regarding the therapies reported in the medical press was no less pluralist. In June 1830 the London Medical Gazette editorial lamented the great number of cures being canvassed by medical men, from bathing oneself (and one's dog) in sea water, to more drastic cures, such as amputation of the bitten limb. The author remarked that of 'the number of remedies which have been published within this fortnight, there is not one of them for any things indeed, they are calculated to do harm, by leading persons to place confidence where they will not find safety'. 17 This was followed by a statement that aimed to send a clear message about the severity and incurability of this disease, 'there is no cure and but a short period for prevention'. Finally, the editorial offered an alarming prognosis, 'We have known the disease come on though the part was cut out within half an hour after the receipt of the bite; the excision ought, therefore, to be instantaneous'. Those unfortunate enough to be bitten knew they might be living on borrowed time and this only heightened their anxiety and trepidation. Such assessments encouraged a search for methods of preventing rabies that aimed at controlling the recognised source of infection itself – dogs.

A modern perspective on rabies suggests that most preventive treatments of the 1820s and 1830s 'worked' because of the low infectivity of the virus and because most allegedly rabid dogs were probably not suffering from the disease. The same points were also made, albeit on different grounds, by contemporaries. Doctors pleaded repeatedly for biting dogs to be caught rather than killed so that the victim, the doctor, and the community could see if they had true rabies. This would soon be evident in the dog's worsening symptoms and death, and if it survived, victims might be spared radical wound treatment and weeks of anxiety. However, it was popularly believed that killing the dog denatured the poison; this may also have been the only way of getting hold of hair from the dog that bit you!

The initial symptoms of hydrophobia reported in 1830 were non-specific: a headache, pains in the chest and perhaps near the original bite, and general unease. Other characteristics were evident with hind-sight, such as difficulty in breathing and an agitated mental state, so that sufferers became jumpy and sensitive to noises, light, and movements. Patients were sensitive to draughts on their faces and even the sight of water could provoke choking and fits. In time the patient would experience delusions, salivate profusely, become aggressive, and suffer paroxysms. Symptoms would last from 18 hours to 3 days; they would come and go, with periods of quiet followed by furious episodes. In most cases the patient died exhausted. All witnesses agreed that it was the worst of all possible deaths.

Medical descriptions often gave little sense of the mental agonies of the sufferer, the dangers endured by their carers, nor of the crisis that the whole episode constituted. To begin with, if hydrophobia was suspected doctors whispered to each other and tried not mention it at all for fear of inducing the spurious form. Sufferers were also usually taken to a private room to avoid frightening family or other patients, and to contain the expected pandemonium.<sup>18</sup> Doctors' accounts of the human disease were in part refracted through knowledge of the ferocious dogs that laboured under rabies. These narratives also reveal the social distance between the doctors and the lower classes. The human victims, nearly all reported to be male and of poor or low occupation, were subject to disturbing hallucinations that destroyed their sympathetic faculties, making them insensible to reason. Descriptions of rabid fits almost always included the patient's attempts to bite others or themselves, or the bedclothes, along with physical violence and verbal abuse. The following is a typical account:

About noon on the Wednesday I saw him. He approached me with clenched fists in a menacing attitude accompanied with a hysterical laugh, and a kind of howling noise, and great contortions of

countenance. I naturally stepped back a little, when he composed himself, sat down, and told me I had no occasion to be frightened ... In about a minute he got up and rushed furiously across the room, then threw himself across the table like a person labouring under a violent fit of the colic 19

Here is another account, from May 1830, about which the doctor concluded, 'It could not be called aberration of intellect; it was ungovernable fury'.

At one of clock his irritability had augmented, the secretion of saliva was excessive, and he cast it about him in every direction. ... Another enema of guaco, as he refused to take it my mouth was proposed; this incensed him to a great degree, and it was necessary to threaten him with straps. His legs were secured, and on proceeding to confine his hands he, for the first time, showed a disposition to be vicious, for collecting saliva in his hands he discharged it in the face of the attendant. It was deemed necessary to secure him in a strait-jacket. ... No sooner, however, were his legs liberated, and one of his attendants had retired for the jacket, than, keeping others from him by spitting and throwing saliva upon them, he suddenly sprang out of bed, seized the large syringe which was filled with an injection of turpentine, and advanced against those present, spitting and discharging its contents at them. The gentlemen present thought it prudent to retire for a moment, and forgetting that the key was inside, shielded themselves behind the door.20

William Lawrence warned about mania and paranoia in a lecture that, indicating the public profile of the problem, was reprinted in *The Times* in July 1830.

The slightest causes will bring about a paroxysm, and the patient is pursued by a thousand fancies that intrude themselves upon the mind. He supposes he is holding converse with a great number of individuals; that persons are coming into the room to attack him; he fancies himself in danger, difficulty and distress. These thoughts come in rapid succession one after another, and keep the patient in a state of mental excitement.21

Such symptoms were typical of those shown by inmates of the new asylums; however, there is no evidence of asylum doctors showing any