

## Book Reviews

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JEAN THÉODORIDÈS, *Histoire de la rage. Cave canem*, with preface by P. Lépine, Paris, Masson, 1986, 8vo, pp. 289, illus., Fr. 200.00 (paperback).

In 1901, when Pasteur had been dead for six years and his rabies vaccine had been used in man for sixteen years, Emile Roux, Pasteur's trusted medical adviser, friend, and collaborator, wrote: "None among the acute infectious diseases has a more fascinating history than rabies." Medical scientists of his day would have agreed with him; so would generations of physicians and writers since the days of Aristotle; only a poll of social historians and demographers of our own century would be likely to show a very different result. For part of the fascination of rabies has always been its unpredictability and sporadic choice of victims, even at times when epizootic spread among wild animals brought the potential of infection close to centres of human habitation. However dramatic its manifestations and however tragic the outcome of individual cases, the actual numbers of its human victims could never by any stretch of the imagination be said to have a significant impact on population densities. There will always be room for further analysis of aspects of the great epidemics of plague and of smallpox; but it is hard to imagine the demographers ever turning their attention to rabies. It is only in the history of ideas that the disease can claim our interest.

Now, in a book published hard on the heels of the centenary of the first post-exposure vaccination administered to Joseph Meister in July 1885, Jean Théodoridès, the authority *par excellence* on the history of rabies, has put between covers comprehensive information on all its medical, literary, artistic, and philosophical aspects from antiquity to the present day. Handsomely illustrated and carefully compiled, this scholarly book proceeds chronologically, beginning in the Mesopotamia of the twenty-third century BC and taking us through to the latest improvements in rabies vaccines which, based on non-infective yet immunogenic parts of virions grown in purified cell-culture rather than mammalian tissue, would have amazed and delighted Pasteur by their quality and low risk of contamination.

In chapter I, on rabies in antiquity, the erudite author presents us with a multitude of quotes and references from the surviving texts of Eastern and Middle-Eastern civilizations, as well as the classical texts of Greece and Rome. He is well aware that not all of the material cited necessarily refers to rabies; any severe dog-bite might lead to general sepsis (especially in the conditions then prevailing), and, conversely, symptoms of hydrophobia and encephalitis could be produced by causes other than dog-bite. As he proceeds through texts from the early Middle Ages until the end of the eighteenth century, the descriptions quoted by Dr Théodoridès became increasingly factual and less equivocal, although the remedies recommended show scant signs of development, let alone improvement. The many herbal concoctions, the roast liver of rabid dog, even the submersion of patients in sea-water, can have done little to alleviate the suffering; only immediate suction and painful cauterization, recommended since Dioscorides' treatise on *materia medica*, could hold out any hope of long-term results.

During the sixteenth and seventeenth centuries came increasing understanding of the disease, culminating in Fracastoro's insight into the path of transmission. He stated explicitly that, unlike certain other diseases, rabies was not transmissible through fomites or at a distance, but only through intimate contact and laceration of skin by the teeth and saliva of the rabid dog. The author's immense erudition ensures that the reader gets a complete picture of writings on all known aspects of rabies in previous centuries. We get the views of numerous authors, some well known, others less so, who over the centuries have written on the disease, on its nature, symptoms, and possible therapy and probability of recovery—or rather prevention, since it also seems soon to have been recognized that once clinical disease had manifested itself there was little hope of recovery. Until the end of the eighteenth century, the idea of spontaneous occurrence of rabies was generally accepted; alongside the knowledge of transmission by saliva in bite wounds, many authors had room for serious discussion of the spontaneous development of the disease in dogs, and in man, due to adverse environmental conditions, especially excessive heat and drought, as well as hunger and stress-related psychological problems of grief, anger, sexual frustration, and despair.

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Théodoridès' survey of more recent rabies literature from 1800 onwards is also extensive. It includes a *History of rabies* published in 1810 and written not by a physician but by a hospital administrator who happened to be the father of Honoré de Balzac. Balzac père did well to distinguish between rabies and hydrophobia which could be caused by psychological factors unrelated to the disease proper; and he appealed for tighter controls on stray dogs. He also made a moving plea that such cases of "non-infectious psychological hydrophobia" made it of paramount importance to avoid hasty decisions to use euthanasia as was then sometimes done—usually by the pillow-smothering method.

Rational experimental work began early in the nineteenth century, developing from slow beginnings in Germany and in France, where Magendie performed transmission experiments in the Paris dog-pound. The great achievement of that century was, of course, the development of Pasteur's post-exposure vaccine; here Théodoridès is rightly at pains to emphasize the contributions of Pierre-Victor Galtier who, in the late 1870s, began a study of rabies in rabbits. The rabbit develops a "dumb" paralytic, non-furious (non-biting) type of rabies and therefore provides a convenient subject for experimentation. Galtier, who believed the seat of the disease to be exclusively in the lingual glands and the saliva, made an extensive study which he reported to the Academy of Medicine and the Academy of Science. His reports provided a convenient point of departure for Pasteur's more immediately and more obviously successful work on rabies.

The book proceeds via the work of Pasteur and his team on rabies vaccine to later studies of Negri's inclusion bodies and related theories to the final revelations, in the 1960s, of the nature, dimensions, and properties of rabies virus as we now know it. As a final icing on the cake, we also get Dr Théodoridès' extensive guide to literary sources on rabies—from Theocritus, Virgil, and Ovid via Rabelais and Montaigne to Joyce, Noel Coward, and even Patrick White—and many more.

In its entirety, the present volume is a formidable compilation of all that is worth knowing of rabies. It must be welcomed as an invaluable and definitive work of reference.

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DANIEL PANZAC, *La peste dans l'empire Ottoman 1700–1850*, Louvain, Editions Peeters, 1985, 8vo, pp. 659, FB.2580 (paperback).

The Ottoman Empire was literally "the sick man" of Europe. One of the conclusions of this rich and detailed monograph is that the population of the empire was stagnant in the eighteenth and the first half of the nineteenth centuries due, in part, to continual plague epidemics. By exploiting primarily the contemporary European evidence, Daniel Panzac has given a more refined account of plague occurrences and their consequences in the Middle East and the Balkans than is possible for the medieval period. Yet, the general picture is consistent with that of the earlier period, and the epidemiological behaviour of plague epidemics between 1700 and 1850 is compatible with the modern understanding of the disease. The author is particularly informative about the recent scientific study of plague and applies it successfully to the historical evidence. Also of considerable value is Panzac's survey of Ottoman population, especially his analysis of the census of 1831. He is, then, able to place the impact of plague within its demographic context. The responses of Ottoman society to these periodic reductions of population were complex, and they are carefully delineated. The economic effects, particularly, are fully discussed because of the availability of European commercial records. Similarly, by drawing on the European diplomatic records, Panzac is able to describe the preventive measures that were used by Europeans in the empire and the adoption of such measures by the native rulers in the first half of the nineteenth century.

In general, Panzac follows the "French school" of plague studies that emphasizes the importance of human ectoparasites, especially *Pulex irritans*, as plague vectors and of the various methods of quarantine in ending plague epidemics. The cessation of plague in the Middle East in the early nineteenth century cannot, however, be attributed entirely to the introduction of western-style sanitary measures. The author suggests that this enigmatic disappearance of