

INTRODUCTION

Karl A.E. Enenkel – Paul J. Smith

Early modern zoology

‘The cervix of the lion does not consist of cervical vertebrae, but of a single bone’, states Conrad Gesner in his *Historia animalium*, volume I, of 1551, when investigating the intriguing anatomy of the mammals. This short remark contains in a nutshell the dazzling complexity of early modern zoology. It obviously reflects a vivid interest in anatomy, one of the new scientific methods of research which are generally associated with the scientific progress ascribed to the early modern period. This progress is thought to be connected with the replacement of ‘bookish’ knowledge with empirical study. But what was the basis of Gesner’s anatomy of the lion? The lion was present in quite a number of 16th-century menageries – did Gesner, who was a medical doctor and a zoologist at the same time, dissect a lion? Or, did he eventually use the dissection reports of others?

The invention of zoology is only one of the fascinating features that the re-definition of the animal and animal species in the early modern period brought about. The discovery of the new world confronted intellectuals with surprising and hitherto unknown species, which challenged the existing systems of animal classification. By the expeditions into the New World, new information was gathered about a strange and exotic fauna. Exotic and European wild animals, as well, were brought together in new places of knowledge – e.g. courtly menageries, curiosity cabinets or academic collections. Artistic progress in the visual arts offered new options for animal description, which were reinforced by the printing press and the reproduction of identical graphic illustrations and their dissemination among larger audiences.

To us, these features may seem very familiar. They suggest close connections between the early modern and modern periods. Nowadays, zoology, as a main branch of biology, is totally established in the system of sciences. Modern zoology is based on empirical methods

and furnished with highly developed technical means. By these means, zoology participates in the spectacular progress modern science achieves almost on a daily basis. Furthermore, a large popular interest in zoology exists. Books on animals and animal encyclopedias, both enriched with attractive illustrations, belong to the stock of general book stores. Zoos are spread all over the world and form an indispensable part of the modern entertainment sector. Animal films are popular to a degree that television stations came into being which are exclusively dedicated to nature programmes.

Nevertheless, these striking familiarities may be highly deceptive. It is not a given fact that modern zoology did indeed develop from its early modern counterpart. Its general aims, interests, research methods, organisation of knowledge etc. may differ fundamentally. It seems questionable, for instance, whether its scope was identical. Modern zoology, for example, studies animals for their own sake, and it pays much attention to the endangered status of many species. It has become clear that the animals' most dangerous enemy is man, who rules all over the world. Early modern zoology shows a completely different approach: it departs from the dogma that man has the full right to exploit animals – that their only *raison d'être* is that they serve man, providing food, clothes, means of transport, medicines, entertainment and so on. Furthermore, in early modern zoology one may detect a vivid interest in classification which at first sight seems to be similar to the modern science's approach – but are the principles of classification compatible? As a result of Darwin's evolutionary theory, the understanding of classification has changed profoundly. In addition, it is not clear whether early modern anatomy and physiology, especially their methods and organisation of knowledge, really correspond to their modern counterparts.

In the last decades, an increasing interest in the history of science has come into being, which also affects biology. The history of biology has been the scope of a number of larger projects, e.g. Ilse Jahn's *Geschichte der Biologie*¹ (first edition 1982) or Anne Bäumers² (1991) and Ch. Hünemörder's³ works with the same title. Erik Jorink has researched the approach to nature by Dutch scholars and scientists 1575–1715

¹ Hamburg: 2004 (following the second, corrected special issuing Heidelberg – Berlin: 2002 of the third edition Jena: 1998).

² Frankfurt a.M.: 1991.

³ Stuttgart: 1985.

(2006).⁴ Paula Findlen has analysed the representation of ‘nature’ in early modern collections (1994).⁵

In the studies on the history of biology, botany has received considerably more attention than zoology. In his recent monograph, *The Science of Describing. Natural History in Renaissance Europe* (2006), which is almost entirely dedicated to botany, Brian Ogilvy ascribes this emphasis to the ‘preeminence of botany’ over early modern zoology: ‘My periodization has focussed on botany, the chief focus of natural history in the Renaissance. [...] In fact, zoology generally lagged behind botany in the Renaissance; developments that occurred in botany often took a decade or two to appear in zoology’.⁶

Nevertheless, it does not seem adequate to consider early modern zoology only as a kind of appendix to early modern botany. Zoology deals with different topics and the early modern zoologist struggled with problems, difficulties and challenges that differ considerably from the botanist’s. Animals are more complex organisms than plants and they are much more difficult to be analysed and observed. Their mobility and their tendency to hide make observation complicated, to say the least. Their much more complex interior organisation requires advanced research methods, e.g. on the fields of anatomy and physiology. It is also very tricky to captivate and keep animals, especially in the case of exotic and higher organised species. In captivity, they often show a different and atypical behaviour. Empirical anatomy and physiology were comparatively new research interests that required special technical understanding and skills. Just how difficult the understanding of the processes of life was is illustrated by the fact that e.g. the circulation of blood was discovered not earlier than in 1628, by William Harvey.⁷

Already from this small number of arguments it seems rewarding to pay separate attention to zoology. The second volume of Anne Bäumer’s *Geschichte der Biologie*, which offers a first description of the

⁴ Jorink E., *Het Boek der Natuere. Nederlandse geleerden en de wonderen van Gods schepping 1575–1715* (Leiden: 2006).

⁵ Findlen P., *Possessing Nature. Museums, collecting, and scientific culture in early modern Italy* (Berkeley: 1994).

⁶ Ogilvie B., *The Science of Describing. Natural History in Renaissance Europe* (Chicago – London: 2006) 49.

⁷ *Exercitatio anatomica de motu cordis et sanguinis in animalibus* (Frankfurt, G. Fitzer: 1628).

zoological treatises of the ‘Renaissance’, is a pioneering publication in the field.⁸

The editors would like to make clear that the present publication does not have the slightest ambition to compete with this compendium, or the related parts in other compendia, let alone to replace them. It does, however, have the intention to highlight other aspects, to focus attention on different tendencies, to shed light on certain intriguing details and to investigate early modern zoology in connection with the use of animals in various fields, theory and practice alike, such as hunting, horsemanship, veterinary medicine, courtly life, jurisdiction, literature and the visual arts. These aspects are studied by Suzanne Walker, Pia Cuneo, Louise Hill Curth, Annemarie Jordan-Gschwend and Almudena Pérez de Tudela, Susanne Hehenberger, Johan Koppenol, Franziska Schnoor, Vincent Buyens, Paulette Choné and Sarah Cohen. Various aspects of the science of zoology are investigated by Karl Enenkel, Paul Smith, Vibeke Roggen, Erik Jorink, Karin Leonhard, Thea Vignau-Wilberg, Florike Egmond and Rebecca Parker Brienen. The last three articles focus on a specific part of the science, the zoological illustration.

If one looks at general tendencies and methods of approach, the studies in this volume differ in important points from previous works. Ever since Boas’s *The Scientific Renaissance 1450–1630*⁹ there has been a general tendency to interpret the achievements of early modern science in a teleological way, viz. as forerunners of modern science. Many a time, the attention was focused in a one-sided way on aspects that could be used to demonstrate the scientific progress or, vice versa, the failure to effectuate scientific progress.

With this respect, the history of zoology is no exception. The teleological approach is prominently present in Anne Bäumer’s *Geschichte der Biologie*. In general, she interprets the early modern zoologists as forerunners of their modern counterparts. She states that ‘die Entwicklung der modernen zoologischen Disziplinen’ ‘nimmt in der humanistischen Zoologie ihren Anfang’.¹⁰ The ‘bewusste Rückbesinnung auf antike methodische Ansätze’ directly leads to scientific progress, among others to the differentiation of the ‘zoologischen Spezialgebiete

⁸ *Zoologie der Renaissance – Renaissance der Zoologie*, in eadem, *Geschichte der Biologie*, vol. 2 (Frankfurt a.M. – Bern – New York – Paris: 1991).

⁹ (New York: 1962).

¹⁰ Cf. her own summary of her monograph in “Zoologie der Renaissance – Renaissance der Zoologie”, in Döring K. – Wöhrle G. (eds.), *Antike Naturwissenschaft und ihre Rezeption*, Bd. I und II (Bamberg: 1992) (275–295) 279.

Embryologie, Physiologie, Vergleichende Anatomie'.¹¹ In her opinion, the early modern zoological compendia (Pierre Gilles, Michael Herr, Adam Lonitzer, Edward Wotton, Conrad Gesner etc.) 'wiesen in ihren methodischen Ansätzen der zukünftigen Forschung den Weg'.¹² Their attention for anatomy provided the 'entscheidende Kriterien zur Einteilung (classification) der Tiere [...]. Damit waren alle Ansätze für eine adäquate Behandlung des Tierreichs gegeben, die neuzeitliche Zoologie war begründet'.¹³ Bäumer identifies Renaissance zoology with the early modern scientific revolution: 'Die Renaissance der zoologischen Forschung ist hier gleichzusetzen mit dem, was man gemeinhin als wissenschaftliche Revolution bezeichnet'.¹⁴

Progress, however, although one of the best accepted dogmas of modern science, is not an adequate tool for the understanding of the functioning and organisation of *early modern* science. The authors of this volume, therefore, do not depart from a teleological conception of the history of science. They make an effort to investigate the various discourses in which animals are discussed in zoological treatises and other genres of literature and art. Their approach is characterised by awareness that these discourses may differ fundamentally from modern ones, and that they are connected to specific historical contexts, interests, needs, and literary, theological, philosophical and artistic traditions. If one carefully studies these parameters, a rich and complex picture of early modern zoology appears, with a broad spectrum of varieties and differentiations. It is a sparkling and intriguing picture, which is characterized above all by *its striking alterity and discontinuity from modern science*.

The authors of this volume do not think that in early modern zoology there is a clear chronological development from bookish to empirical knowledge, from "traditional" to "objective" description, from symbolical to "realistic" illustration etc. Various methods of animal description may occur at the same time or in "reverse" order. Most important are the specific historical contexts, interests, needs and the literary, theological, philosophical and artistic discourses. By investigating within those discourses and contexts, it appears that early modern men did not so

¹¹ Ibidem.

¹² Ibidem 280.

¹³ Ibidem.

¹⁴ Ibidem 285.

much objectively describe or depict animals; rather, they *construct* animals according to the above mentioned parameters.

Karl Enenkel analyses the discourses in which the mammals were constructed in two most important zoological compendia, Edward Wotton's *De differentiis animalium* and Gesners *Historia animalium*, volume I, with special reference to the species *Panthera leo*; Paul Smith investigates the remarkable descriptions of the exotic toucans and hornbills, which appear to be based to a much higher degree on intertextuality than one may suppose at first sight. Erik Jorink demonstrates that "advanced" microscopical research and "traditional" emblematic understanding of insects existed side by side, at the same time and sometimes by the same person. Suzanne Walker investigates the puzzling construction viz. deconstruction of the stag in early modern hunting treatises such as Jacques du Fouilloux's *La Vénerie* or George Gascoigne's *The Noble Art of Venerie or Hunting*. Pia Cuneo shows how a "traditional" animal like the horse was fundamentally re-constructed in early modern German theory and practice. Karin Leonhard demonstrates in which way the knowledge of shells was organized in early modern curiosity cabinets and chonological treatises. Almudena Pérez de Tudela and Annemarie Jordan Gschwend shed light on the role exotic animals played at the Habsburg courts of Iberia and central Europe.

In general, the editors have made an effort to have represented in this volume the most important categories of animals. *Mammals* are treated in the studies of Karl Enenkel, Rebecca Brienen, Suzanne Walker, Pia Cuneo, Louise Hill Curth, Johan Koppenol, Franziska Schnoor, Sarah Cohen and Vincent Buyens; *birds* by Paul Smith, Vibeke Roggen, Rebecca Brienen, Johan Koppenol and Vincent Buyens; *fishes* by Florike Egmond; *insects* by Erik Jorink and Thea Vignau-Wilberg; lower organised animals by Karin Leonhard.

Because of the discovery of the New World it is of course tempting to understand early modern zoology by the descriptions of exotic species. Indeed, in recent publications exotic animals have received much more attention than species from the "Old World". In this collection of essays, however, we tried to find a kind of equilibrium between exotic and traditionally known species. Indigenous animals like the horse (Cuneo, Hill Curth, Koppenol), the cow (Hill Curth, Hehenberger), the crane, swan and beaver (Buyens), the dog, cat, sheep (Koppenol), the deer (Walker, Cohen, Koppenol) get as much attention as exotic species from the New World (Pérez de Tudela – Jordan Gschwend, Smith, Brienen, Koppenol) or the Old World (Enenkel, Koppenol, Leonhard, Smith). It appears that the species of the New World do not offer us a key to

understand the systems of animal classification used in the early modern period. Much more so, the zoological discourses of the early modern period were dominated by the literary tradition of classical antiquity. The authorisation of zoological knowledge by Aristotle, Pliny, Athenaeus and others even in cases in which empirical knowledge *was* available, forms in fact one of the fascinating features of early modern zoology.

Zoology and the arts

Most studies of animals in early modern literature and the visual arts tend to foreground the symbolic significance of the animals represented, neglecting somehow their zoological reality or their natural-historical conceptualisation. An example of this ‘symbolist’ approach is the recently published *Lexikon der Tiersymbole* (2004) by Sigrid and Lothar Dittrich.¹⁵ Although this impressive work does not totally neglect the animals’ reality and early modern reflection on them, its main accent – as indicated by its title – is on their symbolism. Studies that follow a more ‘naturalistic’ perspective, such as Arianne Faber Kolb’s recent monograph on Jan Brueghel’s *Entry of the Animals into Noah’s Ark*,¹⁶ which looks at the painting as ‘a visual catalogue of animals and birds function[ing] as a type of microencyclopedia’,¹⁷ are indeed rare.

The art historical and literary contributions of the present volume of *Intersections* aim to continue along this naturalistic line of approach: how are the zoological reality and early modern reflection on natural history thematised in the literary and visual arts? How are animals de- and re-constructed, as it were, in the arts? This emphasis on the zoological reality and early modern reflection on the natural world comes to the fore in the article by Johan Koppenol on animals in Dutch poetry of the sixteenth and seventeenth centuries. Although Koppenol also deals with the more traditional symbolic and moralising aspects of animals, his main focus is on the seventeenth-century poets’ vision of ‘wild’ and exotic animals and domestic animals in everyday life.

The contributions to the present volume show that the subject of the de- and re-construction of the animal from natural history to the field

¹⁵ Dittrich S. – Dittrich L., *Lexikon der Tiersymbole. Tiere als Sinnbilder in der Malerei des 14.–17. Jahrhunderts* (Petersberg: 2004).

¹⁶ Kolb A.F., *Jan Brueghel the Elder. The Entry of the Animals into Noah’s Ark* (Los Angeles: 2005).

¹⁷ Kolb, *Jan Brueghel* 27.

of the arts is highly problematic. Indeed, literature and painting are so much closely connected with zoology that it is often impossible to arrive at a clear-cut distinction between the fields. This is, for instance, the case – studied by Paul Smith – with the French eighteenth-century zoologist Buffon, *for whom the ideal zoological description is in fact a literary one*, based upon the predominance of style and stylistic variation. The same confusion can be observed with respect to the borderline between zoological illustrations (i.e. illustrations made for a zoological publication) and more ‘artistic’ paintings. In her contribution, Rebecca Brienen shows how Albert Eckhout and Georg Marcgraf, both appointed to document the newly found *exotica* during Johan Maurits’s expedition to Brazil, come up with very different results: Eckhout with highly artistic oil and chalk sketches, Marcgraf with rather flat but precise watercolours that were intended for publication, but did not end up in print as it should be, because of the inadequacy of the anonymous engraver.

These examples show us how important it is to study in detail the interconnections between watercolours, engravings and zoological texts. The general connections between illustrations and texts are more or less known, since for instance the well documented catalogues by Jan Balis, *Van diverse pluimage. Tien eeuwen vogelboeken* (1968) and Laurent Pinon, *Livres de zoologie de la Renaissance* (1995).¹⁸ These interconnections changed with the growing technical perfection of printing and illustrating – from the rather crude and clumsy woodcuts of the beginnings to the refined ones of the second half of the sixteenth century, and their gradual replacement by other techniques: copper engravings (seventeenth century) and lithography (eighteenth century). In this development the zoological discourse leans more and more on the illustration. This growing dependency can even imply a reversal: the illustration becomes more important than the text – a development also visible in other scientific fields, such as medicine and botany.

From a teleological perspective, this development has sometimes had a negative influence on the history of zoology. There are indeed some well-known examples of inaccurate or fictitious illustrations, such as Dürer’s rhinoceros, which is uncritically reproduced in zoological works until the eighteenth century, or the illustration of the sloth, represented

¹⁸ Balis J., *Van diverse pluimage. Tien eeuwen vogelboeken* (Antwerp – The Hague – Brussels: 1968); Pinon L., *Livres de zoologie de la Renaissance. Une anthologie (1450–1700)* (Paris: 1995).

since Thevet's *Singularitez de la France antarctique* (1557), not as climbing or hanging upside-down in a tree, but as standing on its four legs. Other examples, studied in the present volume, are the imaginary toucan that Gesner constructed out of a bill and some incomplete descriptions of the bird he received from his informants, and the strange 'tattooed tuna', a fish with painted ships on its body, studied in detail by Florike Egmond.

All these instances point to the dangers of quick generalisation and the aforementioned 'teleological' perspective. Indeed, from a *non*-teleological perspective, the case of a zoologist like Pierre Belon shows us in his *Histoire de la nature des oyseaux* (1555) the complexity of the problem of intermediation in zoological works. On the one hand, Belon confesses that he is totally dependent on the work of the painters of his watercolours: 'il n'y a description ni portrait d'oyseau en tout cest oeuvre, qui n'est esté devant les yeux des peintres'.¹⁹ On the other hand, the engravings, based on the watercolours, do nothing but confirm the text. According to Philippe Gardon, in his edition of the *Histoire de la nature des oyseaux* 'tout se passe comme si Belon, et le ou les illustreurs [...], conscients de l'incomplétude foncière de leur mode de représentation, éprouvaient le besoin de mettre l'accent sur ce qui est déjà perceptible au niveau du texte, les marques, pour éviter que l'oiseau ne s'échappe du cadre qui lui est assigné'. This explains the conclusion of Belon, which will make a curious and paradoxical impression on the (modern) reader: 'admonestons le Lecteur, qu'il ait plus desgard à la description que luy en baillerons, qu'aux couleurs du peintre, et traicts du tailleur'. In the last instance, for Belon the printed word seems to be superior to the painted or printed image.

The case of Belon argues in favour of more detailed attention to the role of sketches and watercolours in the process of writing and printing. In her contribution, Thea Vignau-Wilberg studies the illustration of insects in the different media of watercolour, painting and print from Dürer to the generation of Joris Hoefnagel, Ulisse Aldrovandi, Thomas Muffet (or Mouffet) and their successors, while Karin Leonard studies with the same precision the interconnections between conchological sketches, printed illustrations and painted still-lives.

This attention is of recent date: one thinks for instance of the beautiful watercolours on which Aldrovandi based his illustrations, preserved

¹⁹ All quotations are from Pierre Belon du Mans, *L'Histoire de la nature des oyseaux. Facsimilé de l'édition de 1555*, ed. P. Gardon (Geneva: 1997), "Introduction" LXXV–LXXVI.

in the form of albums in the Aldrovandi Museum in Bologna and only recently made available in print and on internet.²⁰ Aldrovandi's albums, however, have another function too: they complete his own cabinet of curiosities, because a collection of *naturalia* alone can never do justice to the richness of Nature. Moreover, these albums are intended to document the collection, which is often composed of very transitory zoological material, due to the imperfections of contemporary taxidermy. The album of watercolours can function as a catalogue, as in the case of the watercolours of the Museum of Rudolph II²¹ and the paintings made by Anselmus De Boodt.²² In some instances these catalogues were put into print, as in the cases of Albert Seba (who had all the printed copies coloured by hand) and Ole Worm. In the present volume the contributions of Rebecca Brienen and Florike Egmond deal with the multifunctionality of this kind of album. Florike Egmond studies in detail the *libri picturati* painted in the Southern Netherlands during the 1560s under the patronage of the aristocratic collector Charles de Saint Omer and the 'Fish Books' made by Adriaen Coenen,²³ whereas Rebecca Brienen focuses on the *libri picturati* of Marcgraf and Eckhout.

Another important lacuna which the present volume tries to fill concerns the 'naturalistic' approach to the arts – an approach that is clearly different from more iconographical approaches. This volume does not pretend to cover the subject in its whole breadth, but it does present some interesting case studies, which will certainly stimulate other research in the field. Moreover, our point of departure differs from most other approaches, because we do not focus on the presence and symbolism of one particular animal species in one or more genres (like H.W. Janson's study of apes and ape lore in the arts, or Michael Bath's monograph on the iconography of the stag),²⁴ nor do we provide an

²⁰ Biancastella A. (ed.), *Les animaux et les créatures monstrueuses d'Ulisse Aldrovandi* (Arles: 2005). Also available on Internet: <http://www.filosofia.unibo.it/aldrovandi/default.htm>.

²¹ See Haupt H. – Vignau-Wilberg T. – Irblich E. – Standinger M., *Le Bestiaire de Rodolphe II. Cod. min. 129 et 130 de la Bibliothèque nationale d'Autriche* (Paris: 1990).

²² Maselis M.-C. – Balis A. – Marijnissen R.H., *De albums van Anselmus De Boodt (1550–1632). Geschilderde natuurobservatie aan het Hof van Rudolf II te Praag* (Tiel: 1989).

²³ See also Egmond F. – Mason P. (eds.), *The Whale Book. Whales and other marine animals as described by Adriaen Coenen in 1585* (London: 2003) and Egmond F., *Het Visboek. De wereld volgens Adriaen Coenen 1514–1587* (Zutphen – The Hague: 2005).

²⁴ Janson H.W., *Apes and Ape Lore in the Middle Ages and the Renaissance* (London: 1976); Bath M., *The Image of the Stag. Iconographic Themes in Western Art* (Baden-Baden: 1992).

exhaustive survey of the presence of all of the animals in the work of one particular artist (like Colin Eisler's study of Dürer's animals)²⁵ or author (like Lazare Sainéan's book on the natural history in Rabelais' novels).²⁶ Our starting point lies more in the work or works themselves and in the way they reflect upon animals.

In her contribution Paulette Choné studies the role of 'natural antipathy' in an illustrated architectural treatise by the French architect Joseph Boillot. This treatise deals with the ways in which the descriptive parameter of antipathy (the relationship of enmity between different zoological species, as explained by Gesner in section D of most of his zoological descriptions) can be used in the decoration of architectural orders.²⁷ Vincent Buyens deals with the perception of natural history in Willem van der Borcht's *Sedighe Sinne-beelden* (1642), a Dutch collection of animal emblems that goes back not to the medieval animal allegories, but to a Latin medical encyclopaedia: the *Historia medica* (1639) by the Brussels doctor Willem van den Bossche. Franziska Schnoor studies how knowledge about, and more generally human contact with animals are thematised in collections of proverbs of the fifteenth and sixteenth centuries, and her conclusion is that human relationships confer on the genre of the proverb its *raison d'être*.

One of the surprising new themes presented in two of the contributions to this volume concerns the much discussed hierarchy between man and animal. In his provocative *Apologie de Raymond Sebond*, the French sceptical philosopher Michel de Montaigne problematises the supposed superiority of humans to animals. Humans and animals are much alike: 'il se trouve plus de difference de tel homme à tel homme que de tel animal à tel homme'.²⁸ In this context Montaigne proclaims a certain empathy with animals: 'Quand je me jouë à ma chatte, qui sçait si elle passe son temps de moy plus que je ne fay d'elle?'²⁹ These provocative statements aroused reactions from, among others, Descartes, who considered the animal as a 'beast-machine'. In her contribution

²⁵ Eisler C., *Dürer's Animals* (Washington – London: 1991).

²⁶ Sainéan L., *L'histoire naturelle et les branches connexes dans l'oeuvre de Rabelais* (Paris: 1921).

²⁷ For the use of the same parameter in the work of Jan Brueghel the Elder, see Smith P.J., "Sympathy in Eden. On Rubens's and Brueghel's *Paradise with the Fall of Man*", forthcoming in *Intersections* 9.

²⁸ Michel de Montaigne, *Oeuvres complètes*, eds. Thibaudet A. – Rat M. (Paris: 1962) 444 (*Essais*, Book II, chap. 12).

²⁹ Montaigne, *Oeuvres* 430.

Paulette Choné demonstrates how, in presenting his animals as powerful, upstanding creatures, but all at man's service, Boillot enters into discussion with Montaigne's ideas on the resemblance between men and beasts. Sarah Cohen demonstrates that the Descartes-Montaigne controversy on animals is echoed in the Netherlandish game piece as practised by painters like Frans Snyders, Jan Fyt and Jan-Baptist Weenix.

The editors hope that the present volume offers a glimpse of the intriguing variety of discourses on animals among early modern scientists, writers and artists and that it will stimulate further research in this fascinating field.