

WORLD ASSOCIATION FOR THE HISTORY
OF VETERINARY MEDICINE
(WAHVM)

45th International Congress

FONDAZIONE INIZIATIVE ZOOPROFILATTICHE E ZOOTECNICHE
BRESCIA - ITALY

Scientific Director: Prof. MARIO COLOMBO

WORLD ASSOCIATION FOR THE HISTORY OF VETERINARY MEDICINE (WAHVM)

45th International Congress

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August 31st - September 3rd 2022



BOOK OF ABSTRACTS

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Please note that the oral presentation abstracts are listed in order of presentation following the session themes:

- 1) History of animals, vets and the military*
- 2) Historical intersections of human, animal and environmental health*
- 3) Free topics*
- 4) Informal contributions*

WELCOME ADDRESS

And so it is that in spite of the pandemic, the war in Ukraine, and the economic and social impacts bearing down upon us, the Italian Association for the History of Veterinary Medicine and Farriery has achieved its longed-for and long-awaited goal. Against a backdrop that seems devoid of all certainty and the only thing to fall back on is hope, the 45th Congress of the World Association for the History of Veterinary Medicine is in point of fact taking place.

Against all odds, a group of committed and hard-working volunteers working tirelessly behind the scenes have turned what many called a pipe dream into a reality, enabling the 45th Congress to materialise in a truly meaningful way. Not by chance, but because it was planned and implemented with determination, perseverance, dedication and a great many sacrifices. As the summer of '22 approaches, Italy's 2023 twin Capitals of Culture, Brescia – known as the Lioness – and nearby Bergamo, are set to bring together beloved friends from all over the world. The Italian Lioness roars again, extending her vigorous welcome to all those who value knowledge, culture, and, in particular, the history of veterinary medicine. This book is the distillation of a staggering amount of research and inquiry that now cast a new and brilliant light upon time-honoured and cherished testimonies of the human art of veterinary science, restoring them to their original dazzling splendour.

Countless fascinating, engaging and startling topics are to be addressed, albeit in the short space of a few hours. The long-established and venerable bond between humans and animals; the use of various animal species for practical human purposes; caring for and ensuring the optimal conditions of those animals, including training them; analyses of innumerable species and their potential

uses; the veterinary approach throughout history and in all four corners of the world; biosecurity and experimental research... and much, much more. In order to apply scientific criteria and standards to explore and address a slew of information and data in the time available, the event is divided into a number of different sessions and summarised in these proceedings, made possible thanks to the patronage of the Zooprohylactic and Zootechnical Initiatives Foundation. This volume will live on for posterity, leaving a lifelong trace of the great work of scientists, experts and admirers of this riveting subject.

The President
Fondazione Iniziative
Zootecniche e Zooprofilattiche
Dr. **COSTANTINO VITALI**

The Scientific Director
Fondazione Iniziative
Zootecniche e Zooprofilattiche
Prof. **MARIO COLOMBO**

WELCOME SPEECH

Dear Delegates,
I am delighted to welcome you all to the 45th International Congress of the World Association for the History of Veterinary Medicine.

The biennial WAHVM Congress is the largest and most international meeting of veterinary historians in the world. Bringing together current and former members of the veterinary profession with academic historians who specialise in veterinary topics, it creates a unique forum for exchange. The Congress is always an exciting and enriching occasion, and after the events of the last two years, it feels particularly special to be able to gather together again.

The WAHVM Board is incredibly grateful to the Italian Association for the History of Veterinary Medicine and Farriery for offering to host this meeting in BRESCIA. Organising a conference of this kind is extremely hard work. I extend heartfelt thanks to the Italian Organizing Committee and their President Dr. Mario Piero Marchisio, for working efficiently, effectively and with good humour to make this conference happen.

I hope you enjoy the Congress, and I look forward to meeting you.

President of WAHVM
Prof. **ABIGAIL WOODS**

Dear Professors, Colleagues and Friends,
as President of the Italian Association for the History of Veterinary Medicine and Farriery I welcome you all to BRESCIA.

We are hosted by the “Fondazione Iniziative Zooprofilattiche e Zootecniche”, a Scientific Foundation that annually organizes scientific events, meetings, symposia and that since the 1990’s has published the volumes of the proceedings of our Congresses on the History of Veterinary Medicine.

I would like to thank the Foundation for its cooperation and for showing great interest towards historical studies related to Veterinary Medicine.

We are really proud to host, for the second time, the International Congress of the World Association for the History of Veterinary Medicine – WAHVM in Italy.

The 35th WAHVM Congress, hosted by the Veterinary Faculty of Grugliasco (Turin) in 2004, was a wonderful experience that we still remember with great pleasure.

At the same time we will never forget the President in charge at that time, our beloved and sorely missed Professor Alba VEGGETTI. The Organizing Committee has done a huge work to make this Congress memorable. I know all the Members of the Committee very well and I do believe that, at the end of the International Congress, it will remain deeply imprinted in our hearts.

A special thanks goes to Professor Abigail WOODS, to her Staff and to all the Members of the WAHVM who believed in us.

Please enjoy the 45th WAHVM Congress.

Long live the History of Veterinary Medicine!

A.I.S.Me.Ve.M. President
Col., Ita Army Vs., Dvm.
MARIO PIERO MARCHISIO

DAILY SCHEDULE

Wednesday, 31 August 2022

13h00	WAHVM board members lunch		
15h00	WAHVM board meeting		
16h00	Participant registration opening		
18h00	Closing of secretary desk		

Thursday, 1 September 2022

ROOM 1		ROOM 2	
08h00	Participant registration opening	08h00	
09h00	Welcome and opening Welcome speeches and special post cancellation <i>Session chair: Mario P. Marchisio</i>		
10h00	Keynote lecture Reshaping the veterinary curriculum in the early 19th century: Napoleon's imperial "Moscow Decree" B.475. Nr°8692 (1813) <i>Bols P.E.J., Van Kootwijk F.J. (Belgium – Netherlands)</i>		
10h40	Coffee break <i>Session chair: Marco Galloni</i>	10h40	Coffee break <i>Session chair: Peter Koolmees</i>
11h00	The first military veterinary students at the Alfort School in 1769 <i>Dumas E. (France)</i>	11h00	John Norborn, dog doctor <i>Howard-smith S.A. (U.K.)</i>
11h20	"Red Star" mercy among arms <i>Menteş Gürler A., Sanal Ş. (Turkey)</i>	11h20	The Tractat de les mules by Manuel Díez: state of the art <i>Ribugent g. (Spain)</i>
11h40	A short description of the Norwegian veterinary corps in the years 1966-1971 <i>Aurstad J.F. (Norway)</i>	11h40	Seeing and knowing cattle lameness in Britain, 1930-85 <i>Woods A. (U.K.)</i>
12h00	The pioneering role of military veterinarians in the history of veterinary medicine in Turkey <i>Dinçer F., Basagac Gul R.T. (Turkey)</i>	12h00	The dissectory activity on animals by the Danish anatomist Niels Stensen (1638-1686). General considerations with a case study <i>Aliverti M. (Italy)</i>
12h20		12h20	Snakes and ladders – the process of professionalisation of the veterinary surgeon in Britain <i>Davidson J. (U.K.)</i>
13h00	Lunch <i>Session chair: Emmanuel Dumas</i>	13h00	Lunch <i>Session chair: Abigail Woods</i>
14h00	Hobilar and hobby horses medieval Irish mounted infantry and their mounts <i>O'Reilly P.J. (Eire)</i>	14h00	The amazing story of Satyr: from impotent stallion to "Napoleon's horse" <i>Rinaldi C., Mariani M., Modina S.C. (Italy)</i>
14h20	Historical role of military veterinarians <i>Marchisio M.P. (Italy)</i>	14h20	Durham x Chianina: history of a failed crossbreeding (1856-1859) <i>Luatti L. (Italy)</i>

ROOM 1

14h40	Tetanus Seroprophylaxis in the Italian Army during World War I <i>Peragallo M.S. (Italy)</i>
15h00	An evaluation of the five-year work of the military veterinary practice school and hospital <i>Özgür A. (Turkey)</i>
15h20	<i>Coffee break</i>
16h00	WP Book Presentation Susan Jones and Peter Koolmees: a concise history of veterinary medicine
17h00	Close of day 1
18h30	Welcome all-together

ROOM 2

14h40	A horseman unmasked. Jean Tacquet and his haras des chevaux (1618) <i>Berns J.B. (Netherlands)</i>
15h00	The project of the graduates registry of the Milan Veterinary Medicine School (1812-1933) <i>Twardzik S., Di Giancamillo M., Conca Messina S.A. (Italy)</i>
15h20	<i>Coffee break</i>
16h00	
17h00	
18h30	

Friday, 2 September 2022

ROOM 1

08h30	Participant registration opening <i>Session chair: Joaquim Sanchez De Lollano Prieto</i>
09h30	Keynote lecture Leonardo's horses. Morphological and zoognostic elements <i>Brunori Cianti L., Cianti L. (Italy)</i> <i>Session chair: Floor Haalboom</i>
10h10	Dogs and the city: medicine and public health in ancient Mesopotamia <i>Nicolás S., Vives A. (Spain)</i>
10h30	Historical traces on the use of branding in large livestock (cattle and horses), with particular reference to Sardinia <i>Piras P. (Italy)</i>
10h50	Ole Olsen Malm (1854-1917) - an early advocate for one health <i>Hektoen H. (Norway)</i>
11h10	Shipping live cattle or 'dead meat': animal disease and welfare policy in the nineteenth-century transatlantic cattle trade <i>Kastner J.J., Heinen L., Davis L. (U.S.A.)</i>
11h30	<i>Coffee break</i> <i>Session chair: Allison Skipper</i>
11h50	Lost in battle: the remarkable life and work of dr. Gerrit De Hoog (1784-1812) <i>Koolmees, P.A. (Netherlands)</i>
12h10	The ecology of feeding factory farms: early warnings from the heart of intensive livestock farming in the Netherlands (1935-1965) <i>Haalboom F. (Netherlands)</i>

ROOM 2

08h30	
09h30	
	<i>Session chair: Giorgio Battelli</i>
10h10	200 years of veterinary education in Zurich, Switzerland <i>Pospischil A. (Switzerland)</i>
10h30	The cholera congress of Constantinople, 1866, with observations of a British rapporteur <i>Genç S.V., Basaran B.H. (Turkey)</i>
10h50	Viral spaces: laboratory research and biosecurity in North America, 1946-2022 <i>Kaplan, R.S. (U.S.A.)</i>
11h10	From night-blindness to nonsense nucleotides The international history of canine retinal disease <i>Skipper A.M. (U.K.)</i>
11h30	<i>Coffee break</i> <i>Session chair: Tamay Basagac Gul</i>
11h50	Aleen Cust, first female vet to work in Ireland and Britain <i>Connolly D.J. (Eire)</i>
12h10	Development trend of women graduates in veterinary medicine from Sassari University in the 20th century (ayay 1981/1982 - 1999/2000) <i>Pinna W., Solinas N., Spanedda F.I. (Italy)</i>

ROOM 1

12h30	First zoos in Europe, Vienna (1752) and Madrid (1774). Parallelism of the evolution of veterinary activity <i>Sánchez De Lollano Prieto J., García-Espantaleón Artal M., Benítez Prián N., Lafuente Nicolás H. (Spain)</i>
12h50	Traces of snake woman shahmeran as a medicinal item in southern Anatolia <i>Basaran B.H. (Turkey)</i>
13,15	Lunch
	<i>Session chair: Andreas Pospischil</i>
14h30	The influence of Italian universities on early Slovene veterinary science <i>Pengov A. (Slovenia)</i>
14h50	History of the mediterranean zoonoses control programme of the world health organization: facts and considerations <i>Seimenis A., Battelli G. (Greece – Italy)</i>
15h10	Proteinizing and mineralizing diets in the interests of humanity and economy: the colonial discovery of interspecies malnutrition in Nigeria <i>Williams O.O. (Nigeria)</i>
15h30	Veterinary medicine and international cooperation for development: a historical contribution <i>Venturi L. (Italy)</i>
15h50	From the discovery of antibiotic drugs, through the antibiotic resistance till post antibiotic era in veterinary medicine <i>Vercelli C., Gambino G., Amadori M., Re G. (Italy)</i>
16h10	Coffee break
17h00	Close of day 2
20h00	Gala dinner

ROOM 2

12h30	Animal symbols in the works of the Seljuk period: Ahlat Museum example <i>Mehmet Y., Sanal Ş. (Turkey)</i>
12h50	
13,15	Lunch
	<i>Session chair: Rebecca Kaplan</i>
14h30	Historiographic survey on the "vets" born in the village of Bitti (Sardinia-Italy) in the twentieth century <i>Bitti M., Cocco G., Pinna W. (Italy)</i>
14h50	"Per il piede" forging system as fine podiatric intellectual tool box: rise and evolution of an invaluable cultural phenomenon <i>Favre M. (Italy)</i>
15h10	The veterinarian and the ballerina <i>Moreno Lazo J.M. (Cuba)</i>
15h30	Microbial communities and bioaerosol in horse facilities: historical evolution of hygienic management <i>Rampacci E., Stefanetti V., Pisano G., Forsoni F., Porciello F., Passamonti F. (Italy)</i>
15h50	
16h10	Coffee break
17h00	
20h00	

Saturday, 3 September 2022

ROOM 1

09h00	Opening secretariat
09h30	Assembly WAHVM
10h30	Coffee break
11h30	Close of Congress
12h00	Lunch
13h30	Tour to Brescia, departure of guests

09h00	
09h30	
10h30	
11h30	
12h00	
13h30	

LIST OF POSTERS

THEME	AUTHORS	TITLE
pTh1_1	Arnauld Des Lions J., Chesnay A., Dumas E.	The French army veterinary service and equestrian competition
pTh1_2	Dumas E., Cabre O., Marié J.I., Demoncheaux J.P.	List of honor of the French military veterinary corps
pTh1_3	Dumas E. Deniau J.M., Arnauld Des Lions J.	Evolution of the French military veterinarians uniform
pTh1_4	Dumas E.	1769-2019: evolution of the ranks, numbers and missions of French military veterinarians
pTh1_5	Genç S.V., Topcan A.S.	Turkish military veterinarian's uniforms
PTh1_6	Marchisio M.P., Zoccarato I., Galloni M.R., Santone S., Bigozzi M., Mazzucco H.	The veterinary medicine in World War One
pTh1_7	Marchisio M.P., Zoccarato I., Graglia G.B., Santone S., Martucci P., Paolino V., Mazzucco H.	The military farriers in the First World War
pTh2_1	Perrone V.	Toxoplasmosis: an example of one health
pTh3_1	Basagac Gul R.T.	Post-truth in historiography and an example from Turkish veterinary medicine
pTh3_2	Chun M.S., Sim Y.J., Joo S.	A proposal for world veterinary heritage
pTh3_3	Cinotti S., Vanti S., Gentile A., Famigli Bergamini P.	50 Years of educational journal clubs (congressini) at the Institute of Veterinary Internal Medicine of the University of Bologna
pTh3_4	Demeneghi D., Villamil L.C., Zoccarato I.	The Italian veterinarians contribute to the development of the veterinary schools in South America in early 19th century
pTh3_5	Fausone M.	Veterinary medicine educational tables in the University of Turin
pTh3_6	Galloni M.R.	Angelo Lombardi: animals in front of the movie lens
pTh3_7	Galloni M.R., Peila P.	Scientific discoveries in correspondence: a letter from Rivolta to Micellone
PTh3_8	Grandis A., Balsamo P., Cavicchioli L., Chersoni C., Coli A., Fiore M., Gazza F., Parmeggiani A., Perazzo M.G., Pugliese A., Quaranta A., Riva F., Salucci S., Scalise E., Signorelli C., Spaterna B., Solinas N., Peila P.	The first ever female graduates in veterinary medicine from each of Italian universities
pTh3_9	Guarda F., Biagini D., Chiappino L., Zoccarato I.	The history of veterinary medicine told through stamps
pTh3_10	Guarda F., Biagini D., Chiappino L., Zoccarato I.	The veterinary sciences and the philately
pTh3_11	Perrone V., Viñas Portillo M.	Notes on the history of veterinary ophthalmology
pTh3_12	Sali G., Gentile A., Peli A.	The development of buiatrics in Italy in the last century
pTh3_13	Weissengruber G.E., Dobrokes B.	Breeding history of the black slavonian pig
pTh3_14	Yarim G.F., Gokceoglu A., Yarim M., Sanal S.	A historical approach to the importance of taurine for cats
pTh4_1	Genç S.V.	An analysis of six works written in old Turkish on the history of Turkish veterinary medicine
pTh4_2	Pugliese A., Radici Colace P.	<i>De medicina equorum</i> - Giordano Ruffo di Calabria (13th century) 6th book <i>De accidentalibus infectionibus et laesionibus equorum</i>

1

KEYNOTES AND SPECIAL SESSIONS



RESHAPING THE VETERINARY CURRICULUM IN THE EARLY 19TH CENTURY: NAPOLEON'S IMPERIAL 'MOSCOW DECREE' B.475.NR°8692 (1813)

BOLS P.E.J.¹, VAN KOOTWIJK F.J.²

¹ Laboratory of Veterinary Physiology and Biochemistry – University of Antwerp (Belgium)

² DVM practitioner – Equine Department of Veterinary Clinic Emmeloord,
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Following a massive loss of war horses (approximately 125.000 animals) during his Russian campaign (1812), Napoleon decided to redesign the veterinary curriculum to increase the quality and expertise of army veterinarians. His proposal was outlined in the '*Décret Impérial sur l'Enseignement et l'Exercice de l'Art Vétérinaire*', signed in Paris on January 15, 1813, a few weeks after his return. Not only did he plan the founding of 3 additional veterinary schools (Turin, Aix-la-Chapelle, Zutphen), he also defined the structure of veterinary training and the method for practicing veterinary medicine. He defined two educational cycles, the first one including grammar, anatomy, botany, pharmacy, horseshoeing, law and the treatment of diseased animals. This basic package would be instructed in all veterinary schools, would last 3 years and resulted in the diploma of '*maréchal vétérinaire*'. The second cycle, taking 2 extra years, was only to be offered in the veterinary school of Alfort and included rural economy, management of stud farms, animal domestication, zoology and applied physics and chemistry. It would finally, after a total duration of 5 years, lead to the degree of '*médecin vétérinaire*'.

The decree also clarified the hierarchical difference between the so-called '*artistes vétérinaires*' which were renamed '*maréchal-vétérinaire en premier*' and the '*aides-vétérinaires*' which now should be called '*maréchal-vétérinaires en second*'. Unfortunately, the decree also stipulated that the salary of the veterinary professionals should decrease and that they would be given the military degree of petty officer, which would minimize their importance on the hierarchical ladder and their responsibilities for many decades to come. One of the few positive evolutions that resulted from this 'Moscow-decree' was the creation of the position of '*vétérinaire-inspecteur*'. During periods of war, '*vétérinaire-inspecteurs*' were responsible for the animal care in huge artillery units and cavalry warehouses. In addition, they controlled the status of veterinary care and could impose sanitary measures to safeguard the horses' most optimal condition. However, they did not have the authority to sanction individual colleagues. These '*vétérinaires-inspecteurs*' were chosen from the university professors or the vets that fulfilled the 5-year program.

References: DUMAS E. *Les Vétérinaires Militaires sous le Premier-Empire*. Bull. soc. fr. hist. méd. sci. vét, 2012, 12, 7-35. P. BOLS, E. DUMAS, J. OP DE BEECK, H.F.M. DE PORTE, *De Maréchal-Vétérinaire in de Grande Armée van Napoleon (1805-1815)*, Vlaams Diergeneeskundig Tijdschrift, 2015, 84, 333-342. F. VOGELI, *Des vétérinaires militaires en France, histoire critique de ce qu'ils sont et de ce qu'ils ont été, avec un essai sur ce qu'ils devraient être*. Chez Anselin, Paris, 1835.

Keywords: Veterinary Education, Imperial Decree, Veterinary Medicine and Napoleon's Moscow Decree.

LEONARDO'S HORSES. MORPHOLOGICAL AND ZOOGNOSTIC ELEMENTS

BRUNORI CIANTI L.¹, CIANTI L.²

¹ Official of Superintendency of Fine Arts and Landscape of Florence

² DVM, Head of Veterinary Services and Food Safety of USL Toscana Centro – Florence

The work examines the numerous drawings of horses made for various contexts by Leonardo da Vinci, focusing attention on the study of proportions and on the morphological characterization proposed by the artist.

In order to correctly frame the interpretation of the proportions presented in these drawings, the context from which they arise is focused and in particular the measured drawing of the horse by Andrea del Verrocchio, Leonardo's master.

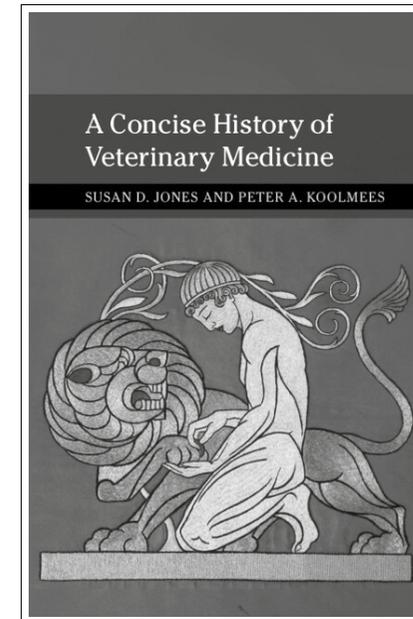
The data collected is processed in order to identify an equine morphotype which Leonardo refers to and which populates some of the most beautiful images of Italian Renaissance art.

Keywords: Leonardo's Horses, Art, Anatomic and Iconography, Veterinary Medicine.

Presentation of the book

A CONCISE HISTORY OF VETERINARY MEDICINE

by Susan Jones and Peter Koolmees



(from © 2022 LAVOISIER S.A.S.)

From Ayurvedic texts to botanical medicines to genomics, ideas and expertise about veterinary healing have circulated between cultures through travel, trade, and conflict. In this broad-ranging and accessible study spanning 400 years of history, Susan D. Jones and Peter A. Koolmees present the first global history of veterinary medicine and animal healing. Drawing on inter-disciplinary and multi-disciplinary perspectives, this book addresses how attitudes toward animals, disease causation theories, wars, problems of food insecurity and the professionalization and spread of European veterinary education have shaped new domains for animal healing, such as preventive medicine in intensive animal agriculture and the need for veterinarians specializing in zoo animals, wildlife, and pets. It concludes by considering the politicization of animal protection, changes in the global veterinary workforce, and concerns about disease and climate change. As mediators between humans and animals, veterinarians and other animal healers have both shaped, and been shaped by, the social, cultural, and economic roles of animals over time.

2

ORAL PRESENTATION ABSTRACTS



THE FIRST MILITARY VETERINARY STUDENTS AT THE ALFORT SCHOOL IN 1769

DUMAS E.

*DVM – Chief Veterinary Officer of the Armed Forces Medical Department
National Coordinator of Veterinary Activities in the Armed Forces
President of the French Society for the History of Medicine and Veterinary Sciences
Chef du bureau vétérinaire de la Direction de la Médecine des Forces
Coordonnateur national des activités vétérinaires dans les armées
Président de la Société Française d'Histoire de la Médecine et des Sciences Vétérinaires
emmanuel.dumas1769@gmail.com*

An order from the Duke of Choiseul, Secretary of State for War under King Louis XV, dated 13 September 1769, can be considered the founding act of the army veterinary corps.

With this order, Étienne-François de Choiseul asked all the regiments of mounted troops to detach a cavalryman to be instructed in the art of farriery at the Alfort veterinary school.

Research was carried out in the registers of the veterinary schools of Lyon and Alfort to find the first soldiers to join the veterinary schools.

This paper presents the results: the age of the students, their origin and their academic results. It also shows that Alfort welcomed a large number of military personnel for several years.

Keywords: France, Army veterinarians, 18th century, Veterinary School of Alfort.

"RED STAR" MERCY AMONG ARMS

MENTEŞ GÜRLER A.¹, SANAL Ş.²

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Throughout history, animals have also been used in wars, one of the main ways to resolve conflicts. The inability to provide adequate treatment and care services for injured animals during the South African war attracted the attention of animal protection associations. It caused them to increase their activities to create an international union that would provide care and assistance to animals on the battlefield with "Red Cross" status. After a long period of correspondence and efforts, the organization "Red Star" "The International Alliance of Societies to Aid Animals on the Battlefield" was officially established on February 22, 1915. Their emblem was a red and five-pointed star on white, and the slogan "Mercy Among Armies" was adopted. In the study, the historical development of the application of "Red Cross" protection to injured animals is discussed on the basis of a documents in the private archive of Veterinarian Emin Çölaşan, and Directorate of State Archives. As a result, it can be argued that "The International Alliance of Societies to Aid Animals on the Battlefield" has not been able to carry out intended activities due to various problems. However, it can be said that this initiative was provide an international basis for the activities of local animal protection associations.

References: AMERICAN HUMANE ASSOCIATION, *War Horse And Red Star Story Of Rescuing Animals For 100 Years Since WWI*. Available at <http://documentslide.com/documents/war-horse-and-red-star-story-of-rescuing-animals-for-100-years-since-wwi.html>. (Accessed January 21, 2015). CLARENCE-SMITH W.G. *Horses, mules and other animals as a factor in Ottoman military performance, 1683-1918*. Available at <https://www.soas.ac.uk/history/conferences/war-horses-conference-2014/file94820.pdf>. 2014, (Accessed November 27, 2016). FAIRHOLME E.G., PAIN W.A., *Century of Work for Animals: The History of The R.S.P.C.A., 1824-1924*. John Murray, London, 1924. SANAL Ş, MENTEŞ GÜRLER A, *A sample case on animal rights studies: "Red Star" mercy among arms*. Ankara Üniv Vet Fak Derg, 65, 335-339, 2018. https://doi.org/10.1501/Vetfak_0000002865

Keywords: Animal protection, Red Star, war animals.

A SHORT DESCRIPTION OF THE NORWEGIAN VETERINARY CORPS IN THE YEARS 1966-1971

AURSTAD J.F.

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The paper aims to describe how the veterinarians in Norway were introduced to the Military and later came to form a separate corps/department of the Army. Part two describes the training of veterinarians from students on to veterinary officers. There were four dragoon regiments which ordered the first Norwegian students to The Royal Veterinary High School in Copenhagen in the year 1780 to study Veterinary medicine and Farriery. Since then, the Army and the Army's need for veterinary skills have changed.

The training of the military veterinarians

All combative veterinary students were conscribed to obligatory military training during the first summer break. Here we were trained in military disciplines. Just before ending the recruit period, we were promoted to corporals. During the summer brake just after the graduation we were trained for 4 months to become veterinary officers. Once again, we were promoted, this time to the rank of lieutenant. Later we got an order from the Army's chief veterinarian, colonel, to serve as a veterinary officer at the different units with veterinary personnel.

The Veterinary Military Corps described in a simple diagram 1966-1971:

- 1) Chief of staff, colonel II, veterinarian
- 2) Districts commander, major, veterinarian
- 3) Head of teachers at the Army's school and training camp for the Sanitary
- 4) Engagements, including in foreign countries
- 5) Serving veterinary officers during the obligatory twelve months

The units from number 1 to 4 were staffed by employed or short time engaged veterinarians. Unit number 5 consisted of the following serving locations or companies.

References: GUNVALD A. FREDHEIM, *The Military Veterinary Service 1780-1990. The Brigade Northern Norway 1953-1995 av generalmajor Leif Lundesgaard*, ISBN 82-90545-7, Elanders Forlag. Veterinæren i yrke og organisasjon, Den Norske Veterinærforening, Oslo 1988, ISBN -82-991649-0-7. Direktiver om dyrehygiene, Hærens Overkommando 1965. Personal information: Given by request.

Keywords: Military veterinarians, Training of the veterinarian for the military in Norway between 1965 and 1972.

THE PIONEERING ROLE OF MILITARY VETERINARIANS IN THE HISTORY OF VETERINARY MEDICINE IN TURKEY

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The institutionalization in veterinary medicine coincided with the last 80 years of the Ottoman State in Turkey. In this period when the State was exposed to internal and external socio-politics and economic problems, different approaches in ongoing modernization movements were taken into agenda. As a part of military reforms, the first veterinary school was established in Istanbul in 1842. The graduates of this school had played important roles in the organization and institutionalization of veterinary medicine in Turkey. They made the earliest scientifically based contact with European veterinarians, created legal and institutional infrastructures for the conduct of military veterinary services, founded the first civilian veterinary school, published the first books and periodicals, they succeeded in establishing collaborations with their colleagues from the field of medicine both in education and research activities. The first practices associated with specialization training in veterinary medicine in Turkey were also initiated in the field of military veterinary medicine.

The organization of military veterinary medicine was constantly developed in order to meet the needs arising in a series of wars, the last four of which lasted nearly a decade and marked the end of the Ottoman State. However, after the First World War, the military veterinary organization was completely disbanded.

At the beginning of the *War of Independence* in 1919, military veterinary organization was restructured. Mobile Veterinary departments were organized at the army and army corps in accordance with the needs of three major fronts. By the way, military veterinarians were charged with food inspection for the first time in Turkey.

After the proclamation of the Republic, military veterinary medicine was reorganized, the organizational structure was expanded and military veterinarians have provided important services in various units within this structure.

In this presentation, the pioneering roles of military veterinarians in the context of the history of veterinary medicine in Turkey will be evaluated.

References: T. BASAGAC GUL, *Military Veterinary Services During the Transition of the Ottoman State to the Turkish Republic*, Proceedings of the 41st International Congress of the World Association for the History of Veterinary Medicine (WAHVM), Imperial College London, UK, 2014.

Keywords: Military Veterinarians, Turkey, Veterinary History.

HOBILARS AND HOBBY HORSES MEDIIEVAL IRISH MOUNTED INFANTRY AND THEIR MOUNTS

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When the Normans invaded Ireland in the 12th century, they encountered a type of mounted infantry which was well adapted to the local conditions. Lightly armed with javelins and short swords, they rode their hobby-horses using rudimentary saddles which were little more than cushions, without stirrups. These formations, if you can call them formations, were highly effective in heavy woodland and bog against the much heavier Destriers carrying mail or even armour-clad riders. So effective were these "Hobilar" that the Normans adapted them throughout the 13th century for use against the Irish. By the early 14th century, the English king Edward I, recruited hobilar in Ireland for use against the Scots. Ireland was a divided country even then and Gaelic hobilar fought on the side of the Scots. Using the hobilar template the English used mounted archers during the 100 years' war against the French.

Hobby-horses were small horses as opposed to ponies. They had a most unusual gait. At the trot or gallop they moved front and rear feet on the same side simultaneously as opposed to diagonally in most, indeed almost all, modern horses. In this, they resembled the modern-day Icelandic horse in which the gait is referred to as the "tollt". "Palfreys" are depicted as having the gait, as well as being described as comfortable and easy to ride "for a lady". A lady of my acquaintance, well-versed in equine dressage, described the experience of riding an Icelandic horse as being very easy, comfortable and exhilarating. Horses and ponies with this gait turn up from time to time in several breeds across northern Europe, in Scotland and in Ireland. There are pictures and sculptures from medieval times and earlier depicting horses exhibiting the Icelandic "tollt". I suspect this type of small horse was widespread across northern Europe at one time but were selected against by centration on size.

In the 17th century the Earl of Ormonde reported to an acquaintance who enquired about the Irish Hobby that they were no longer to be found.

Keywords: Irish Hobilar, Hobby horses, medieval cavalry.

HISTORICAL ROLE OF MILITARY VETERINARIANS

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Considering the history of the Veterinary Medicine, it is possible to state, without any doubts, that Ancient Peoples in the old ages already had Veterinarians in their Armies.

This statement is only an assumption for the Assyrians, Babylonians, Sumerians and the Egyptians, because of lack of documentation, but there are documents of the ancient Greeks and Romans that confirm this assertion.

Most of horse experts in the ancient Greece and Rome were military physicians.

With the introduction of farriery the work of vets became more complex because they turned into Farriers. Their role was considered very important during the Middle Ages and it acquired even more importance in the following Centuries.

The work of military veterinarians became essential during the two World Wars, when the veterinarians of all the involved Countries did their best in preserving horses and above all in food inspection. After the two World Wars the era of military horses and mules probably came to an end but the work of Veterinarians continued in other fields (i.e. Veterinary Preventive Medicine, Civil Military Cooperation, Research and Studies, Veterinary support to the Military Working Animals).

The Author describes the role of Military Veterinarians in both Ancient and Modern Armies.

Keywords: Military veterinarians, Ancient and Modern Armies.

TETANUS SEROPROPHYLAXIS IN THE ITALIAN ARMY DURING WORLD WAR I

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The connection between contaminated gunshot wounds and tetanus was well known before the outbreak of the Great War. Tetanus was a rare disease in soldiers in peacetime, but it was of considerable importance in war as a complication of wounds.

After the outbreak of World War I, the increasing use of artillery led to a significant rise in the proportion of wounds caused by fragments of shells, producing large, lacerated wounds, which were always heavily contaminated. Tetanus assumed increasing importance since the first months of the Great War, and this importance would have become even greater later on if tetanus seroprophylaxis had not been used.

Since the end of the 19th century, the Italian Army realized an initiative of great scientific importance in the field of tetanus prevention and treatment. Thanks to Professor Guido Tizzoni, Director of the Institute of General Pathology at the University of Bologna, a Military Laboratory for the production of tetanus antitoxin was established in April 1898. This serum was produced by immunizing young Army horses; tetanus antitoxin was stored by the military hospital of Bologna, and then distributed to other military hospitals all over Italy.

The serum-producing horses were initially only 4, but their number gradually increased to 60, as the Laboratory's activity continued to raise. During the Great War, the output of tetanus antitoxin doses came to over 1,100,000 for prophylactic use, and to about 7,000 for therapeutic use.

This Laboratory played a very important role during World War I, and significantly contributed to save many lives. Its activity represented a brilliant example of good cooperation between the University, the Veterinary Service and the Medical Corps of the Italian Army.

References: G. TIZZONI, P. PERRUCCI, P. BARDELLI, *Il Laboratorio Militare per il Siero Antitetanico: sue origini e l'opera sua in pace ed in guerra* (estratto dalla "Nuova Veterinaria", anno 1924). Faenza, Industria Tipografica Faentina Antonio Montanari, 1924.

Keywords: World War I, Tetanus seroprophylaxis, Italian Army.

AN EVALUATION OF THE FIVE-YEAR WORK OF THE MILITARY VETERINARY PRACTICE SCHOOL AND HOSPITAL

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The Military Veterinary Practice School was established in 1881 for military and civilian veterinarians to carry out specialized training in various fields of the profession on the basis of an internship.

The internal functioning of the school has been regulated by a 17-item Regulation. The purpose of the school's establishment is explained in the regulation as follows: To meet all the needs of military students in the Higher Veterinary School in their educational life. To provide internship and specialization training opportunities in various fields to military and civilian veterinarians who have successfully completed the Higher Veterinary School.

The booklet titled Military Veterinary Practice School and Hospital Five Years Work, consists of four chapters. The first part explains the birth of the scientific veterinary profession in Turkey, the history and purpose of the Military Veterinary School, the Civil Veterinary School and the Military Veterinary Practice School. General information such as the establishment of the Military Veterinary Practice School and its working conditions are given. During the education period, general information was given about what was done at the School for five years, starting from 1923. The qualifications and conditions sought in veterinarians who will be sent to Europe for specialization training are explained; the procedures that must be done in order to be able to work when they return to Turkey after specialization education and the exams that must be successful in Turkey are explained. The booklet also gives information about the history of the Civil Veterinary School. This information is also an important topic of discussion in today's Turkey in terms of the spiritual-academic heritage of the Civil School. The second part describes what was done at the school in five terms. The third part is about experts to be trained in Europe. In the fourth part, information is given about the publication and the departments of the School. The administrators of the period gave the public account of what was done in the field of veterinary medicine, as in every other field. In this respect, the work is a material that will contribute to political history.

Keywords: Veterinary history in Turkey, veterinary regulation, veterinary practice school, veterinary education.

DOGS AND THE CITY: MEDICINE AND PUBLIC HEALTH IN ANCIENT MESOPOTAMIA

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The so called "Neolithic Revolution" was the first radical change in mankind way of life. On one hand, sedentarization, derived from farming of land, culminated in the creation of the first cities, the oldest of which were located in Mesopotamia. On the other hand, human-animal relations, now based on a production economy, deeply strengthened. The accumulation of waste, an endemic problem in the cities, and the grown probability of zoonoses transmission will be the new challenges for collective and individual health after this revolution. Although food animals had greater weight in the economic framework of ancient Mesopotamian societies, dogs exerted great influence, knowing how to adapt like no other species to the new spaces imposed by man. In the Sumerian classification, the canine species is included in the **Ur** group, a heterogeneous group comprising quadruped predators. It is an animal of border endowed with a marked duality, sometimes guardian at the service of man (shepherd, healer), at other times his ruin (predator, carrier of rabies). Due to the scarcity of archaeological remains of canids, artistic representations and, especially, texts are the main resource for their study. In this paper we analyze the role of dogs in the city and their habitats (the outskirts and the temple). Special attention is devoted to its healing character, a role it embodies as a numinous manifestation of Gula, goddess of healing. Due to the connection of dogs with medical practice, an approach that includes the religious dimension is necessary to allow the comprehensive study of disease and patient care in Ancient Mesopotamia. We expect studies such as this one highlight the interconnection of human and veterinary medicines, daughters of the same kind of anthropology.

Keywords: Ancient Mesopotamia, dogs, medicine, rabies.

HISTORICAL TRACES ON THE USE OF BRANDING IN LARGE LIVESTOCK (CATTLE AND HORSES), WITH PARTICULAR REFERENCE TO SARDINIA

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The use of livestock branding is a long-standing practice, prescribed above all, by the need to recognize it and to claim ownership. In particular, the use of livestock identification by means of branding or with distinctive skin markings/incisions (generally on the ears) was already diffused in the Mediterranean area: from the cultures of North Africa, such as Egypt, to the East, to finally involve the whole area ascribed to the Roman civilization and to the neo-Latin populations, the Hispanic in particular. Later, the use of livestock branding was introduced in the Americas by the European colonialism. Several figurative and textual proofs documented this practice over time, and the author reported the most evident examples with the related historical references, describing in depth the specific features of livestock branding in Sardinia (Italy).

Several proofs of how the marking of cattle and horses in Sardinia was practiced probably already in the Nuragic and Byzantine periods have been found. Moreover, greater evidence of livestock identification has been pointed out during the subsequent Arborea Judicial reign, in the so-called "Carta de Logu", a regulation issued at the end of the 14th century. Very strict civil (in relation to agricultural contracts) and criminal (in relation to the prevention and repression of livestock theft) implications about marking provisions are present in this regulation. It has gone through practically unchanged but fully binding until the Aragonese/Spanish domination and then in the Savoyard one. As a special rule of law and with its customary characteristics, it has been applied up to the post-unitary period of the Italian Kingdom and kept its special standard in terms of "repression of livestock theft in Sardinia" confirmed by the Royal Decree of 1898.

The use of livestock branding in Sardinia was then regulated in 1948, by the provisions of the High Commissioner for Sardinia, the government authority in the immediate post-war period. The "official nomenclature of owner's signs and municipal trademarks to be used for livestock" was applied until 1990, when these obsolete provisions disagreeing with the emerging European legislation on the identification of livestock, were revoked by a specific Regional Law.

Keywords: Branding in Livestock, Customary Uses and Law, Sardinian Breeding.

OLE OLSEN MALM (1854-1917) AN EARLY ADVOCATE FOR ONE HEALTH

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In 1887 the physician Ole Olsen Malm received a scholarship to study veterinary medicine in Copenhagen. After two years, he graduated and went on to studies in France, England, Belgium and Germany before returning to Norway.

When the veterinary pathology laboratory (Norwegian Veterinary Institute) was established in 1890, Malm was appointed head of the laboratory. He was also appointed as the first director of the State Veterinary Office.

Malm kept contact with the leading bacteriological research institutions in Europe and stayed eight months at the Pasteur Institute and visited Robert Koch in Berlin. In 1890, Malm started production of cowpox vaccine from calves to be used against smallpox, and in 1892, tuberculin for the Pirquet test. This was only one year after Koch presented his tuberculin research.

Malm's dissertation for the medical doctorate in 1894 was about tuberculin. Interestingly, his trial lecture at the disputation was "About the Interaction between Veterinary Medicine and Human Medicine" (translated from Norwegian) – similar to today's One Health. The lecture gives a thorough review of the history of veterinary and human medicine and their interaction from ancient Greek history and up to late 1800. For instance, Malm describes Aristoteles as the first comparative anatomist and physiologist. He also refers to periods when veterinary science was ahead of human medical science, among these Columella who lived in Spain around year 50 AD, and may be the first to develop veterinary medicine as an independent science.

Malm's background as medical doctor, veterinarian and microbiologist was excellent for zoonotic challenges. Testing and surveillance of bovine tuberculosis started in 1895 and continued until 1965 when the disease was successfully eradicated in Norway. The bovine control scheme was crucial for controlling tuberculosis in the human population. The same health surveillance strategy was implemented for other diseases, i.e. brucellosis which was eradicated in 1954.

References: O.O. MALM, *Om Veterinærmedicinens og Menneskemedicinens indbyrdes Forhold*. Nor. Vet. Tidsskr. 7: 1896, pp. 1-25. E. LIVEN (ed.), *Dyrehelse i Norge. Veterinærvesenets historie*. 2021, pp. 18-24, 164-170. Kolofon Forlag. ISBN 987-82-300-2212.2. A. FRØSLIE, *Veterinærinstituttet 1891-1991*. 1991, Veterinærinstituttet. ISBN 82-90550-10-3.

Key words: Veterinary medicine, Zoonosis, One Health.

SHIPPING LIVE CATTLE OR 'DEAD MEAT': ANIMAL DISEASE AND WELFARE POLICY IN THE NINETEENTH-CENTURY TRANSATLANTIC CATTLE TRADE

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In the late nineteenth century, a disruption occurred in the growing and lucrative transatlantic cattle trade. In January 1879, British veterinary inspectors discovered contagious bovine pleuro-pneumonia (CBPP) in a shipment of North American cattle unloaded at the port of Liverpool. While indeed a pivotal moment that would prompt decades-long regulatory changes, the disease diagnosis was not entirely unexpected, as the British government had received in 1878 several reports detailing CBPP's prevalence in various parts (including, significantly, areas around ports) of the eastern seaboard of the United States (U.S.). A new regulation – a specific requirement that U.S. cattle be slaughtered port-side in Great Britain within ten days of importation – was based on veterinarians' understanding (and British livestock raisers' experiences) that CBPP was an animal disease of economic seriousness. While a sensible and prudent policy, the British government's application of this so-called 'immediate slaughter rule' to U.S. cattle was criticized by American and British stakeholders who were either financially invested in or operationally engaged with the transatlantic livestock trade. Meanwhile, other interested observers – most notably, the activist Humanitarian League – also weighed in on the matter at hand, advocating a technical policy solution that would address *both* animal disease *and* their own animal welfare concerns. The advocacy work of Isabel Greg, an author and spokeswoman for the League, illustrates how some activists advocated for slaughter (albeit *prior* to trans-oceanic shipment) to achieve their philosophical aims. Significantly, Greg and others associated with the Humanitarian League contributed to a growing chorus of numerous voices (including veterinarians, meat scientists, shipping stakeholders, political activists, and consumers) favoring the adoption of new refrigeration and freezing technology in the trans-oceanic livestock and meat trade. With the installation of refrigeration and freezing units on ocean-going steamships, it was now feasible to ship 'dead meat' (instead of live animals) and avert *both* disease transmission and inhumane treatment of cattle.

Keywords: livestock disease, animal welfare, trade policy, transatlantic, 19th century, Humanitarian League.

LOST IN BATTLE: THE REMARKABLE LIFE AND WORK OF DR. GERRIT DE HOOG (1784-1812)

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Gerrit de Hoog was born in Delft in 1784. He lost his parents at a young age and ended up in an orphanage. He was admitted to an institution where clever and talented boys were educated for useful occupations. At the age of 18, he chose to become a veterinarian. Since no veterinary school existed yet in the Netherlands, the trustees sent him to the Medical Faculty of Leiden University. After three years he graduated as physician. In 1805 he was sent to the Berlin Veterinary School. Two years later he returned to be appointed as lecturer at a planned veterinary school. However, political circumstances prevented the establishment of that school.

De Hoog then received supplementary training in surgery at the military hospital in Leiden. In 1808 he passed an examination by which he became one of the first three officially licensed veterinarians 1st class in the Netherlands. For short periods he worked as *artiste vétérinaire* in the army, as veterinarian investigating livestock diseases, and as practitioner of human and veterinary medicine. In 1812 he was enlisted as army doctor in the *Grande Armée* of Napoleon. From the fatal march on Moscow he never returned.

De Hoog was the first veterinarian in the Netherlands to obtain a doctoral degree. In May 1811 he defended his thesis on the analogy of human and veterinary medicine and the usefulness of a reciprocal application. His study can be regarded as the first Dutch representative of the apologetic tradition in veterinary historiography, which started with Giovanni Ingrassia in 1568. De Hoog was inspired by Ingrassia's book and chose its title as motto for his thesis: "Veterinary medicine is essentially one and the same as the more noble human medicine, differing only in the dignity or nobility of its material". The way in which De Hoog worked out this topic again shows that the "One Health" approach propagated by veterinary authorities of today is not new. With his thesis, now published in translation from the Latin, Gerrit de Hoog still delivers an important addition to the history of One Health, after more than two centuries.

Keywords: Veterinary and Human Medicine, Thesis on One Health, Veterinary Education.

THE ECOLOGY OF FEEDING FACTORY FARMS: EARLY WARNINGS FROM THE HEART OF INTENSIVE LIVESTOCK FARMING IN THE NETHERLANDS (1935-1965)

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This paper is about early ecological criticism of the mid-twentieth century shift to intensive livestock keeping from the heart of the livestock sector itself. I use the story of a remarkable Dutch veterinarian and animal feed expert: Jan Grashuis (1896-1978). Grashuis was remarkable, because he combined two seemingly conflicting perspectives: he was an important architect of intensive livestock keeping, and he voiced early ecological and social criticism about this shift.

On the one hand, Grashuis was one of the most influential experts in the mid-twentieth century Dutch transition to feeding animals compound feed. This “modern” feed was produced in a factory from feed ingredients imported in massive amounts via the port of Rotterdam. It contained grains like maize, oil seeds like soy, animal proteins like fishmeal, and additives like vitamins and antibiotics. Compound feed made it possible for a farmer to produce a lot of pigs and chickens as efficiently as possible without agricultural land.

On the other hand, Grashuis was an early voice to criticise ecological and social consequences of what this new feed enabled: farming as an “industry”. Examples are his criticism of the use of antibiotics as growth promoters in compound feed, and of “artificial pastures” with one species of grass being artificially fertilised. Grashuis warned that humans, animals, plants, micro-organisms and the soil influenced each other in complicated ways that were hardly understood by veterinary, food, feed and agricultural science.

What does Grashuis’ story tell us about the rise of industrial livestock farming in north-western Europe in the postwar decades? It seems to complicate the view that this rise was self-evident or inevitable, supporting recent historiographical arguments by historians like Abigail Woods, Karen Sayer and Bert Theunissen. But were Grashuis’ ecological views exceptional or not? How were they received in Dutch society, and (how) did they influence the rapid mid-twentieth century changes in livestock farming?

Keywords: intensive livestock farming, animal feed, ecology, antibiotics, veterinary medicine.

FIRST ZOOS IN EUROPE, VIENNA (1752) AND MADRID (1774). PARALLELISM OF THE EVOLUTION OF VETERINARY ACTIVITY

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Early zoological collections in Europe follow a common trajectory of dependence on monarchs and aristocratic classes. Later, they were opened to the public as a symbol of prestige of the city or its rulers. Vienna Zoo (first zoo in Europe, 1752) is the reference on which others, such as the Madrid Zoo (1774), are based. The Schönbrunn Zoo has maintained its venue over the centuries, while the Madrid Zoo moved to a new location in 1972 with new facilities and a larger area. However, both zoos share some interesting coincidences, from the veterinary activity and animal care point of view. The search of sources has corroborated veterinary involvement in necropsies, death certificates and advice, appraisal and review of animals prior to its purchase. Clinical care presents more scattered data, which are presented in this communication. Until true veterinary teams were established, animals were cared for by personnel in charge of their maintenance, and alternatively, through occasional visits entrusted to veterinarians: in the case of Vienna, from the Veterinary School; in the case of Madrid, from the Royal Veterinary School and also by the veterinary services of the Madrid City Council. Other coincidences shared by both zoos are the involvement in the clinical care made by doctors (human medicine) or zoologists, or the handling and feeding problems suffered by the animals, specially in war periods. Likewise, it is difficult to reconstruct the clinical and straight veterinary activity in certain periods, since the data found in both archival and hemerographic sources is very scarce. Based on the data from Madrid, a comparative study is achieved with research conducted by other authors on the Schönbrunn Zoo.

Keywords: Veterinary History, History of the zoos, Vienna Zoo, Madrid Zoo.

Research carried out in the framework of the project: *Exotic animals in the city. The history of the Barcelona Zoo in the international context* (PID2020-112514GB-C21).

TRACES OF SNAKE WOMAN SHAHMERAN AS A MEDICINAL ITEM IN SOUTHERN ANATOLIA

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Southern Anatolia, which is a part of the Fertile Crescent, the geography where civilization began and animals were first domesticated, also contains numerous folkloric and mythological elements in terms of medical history. This geography is also the source of the snake symbol, the universal symbol of medicine, and the mythological treatment stories, rebirth myths. Hippocrates' staff and the snakes around it were also reflected and accepted as the nature-treatment and human/heal association of the same region. Likewise, Galen's marble serpent column has a mythological reputation. However, although it is not reflected in the world of science/medical history, there is another mythological element that starts from the Anatolian geography and extends to the interior of Asia and has an important place in the legends of the peoples of the region.

Top like a human and below like a snake shape woman is "Shahmeran". Known as the queen of snakes, Şahmeran is a snake-woman who has healing power, knows the medicinal properties of plants and teaches this information to people. In a well-known legend in Anatolia for centuries, the first examples of folkloric medicine are given through Shahmeran. It is believed that Shahmeran lived in a well in the forest in Tarsus, located in the south of present-day Turkey. Shahmeran culture is so widespread in Anatolia that until the 1960s, almost every house in Turkey had a glass-bottom picture of Sahmeran. The name Shahmaran is also associated with the Assyrian Queen Semiramis.

Shahmeran also appears as a mystically beautiful woman with a snake head in the stories of the Magical Arabian Nights (Thousand and One Nights Tales) of the Western world. It is an ancient feminine symbol for local people. The real Şahmeran is allegedly a woman with a magnificent upper body and a snake-shaped lower body. Although the content and course of the story may change in all the legends about her, what remains is the external appearance and healing power. In the study, it is aimed to open the healer Shahmeran legend in terms of the history of veterinary/medicine and to announce this legend belonging to a larger geography.

Keywords: Veterinary Medicine History, Private historical resources, Turkish veterinary history, Turkish Mythology.

THE INFLUENCE OF ITALIAN UNIVERSITIES ON EARLY SLOVENE VETERINARY SCIENCE

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Three distinguished Slovenian physicians, which were also closely involved in the study of infection diseases in animals, mainly cattle plague, studied or worked on Italian medical faculties. *Marko Gerbec (Marcus Gerbezius, 1658-1718)* born near the Cistercian abbey in Sticna (about 30 km East of Ljubljana), was the first Slovenian physician who wrote a scientific paper about diseases in animals. He completed his philosophical studies in Ljubljana and studied medicine first in Vienna and afterwards in Padua and Bologna. In the Palazzo del Bo is kept his portrait among the forty most known scholars from the University in Padua (Sala dei Quaranta). Upon his return, Gerbec was appointed provincial physician of Carniola, with residence in Ljubljana. His review of cattle plague entitled *De moderno Pecorum interitu* (1713) is the oldest so far known publication with veterinary content on Slovenian territory. *Marko Plencic (Marcus Anton von Plenciz, 1705-1786)* born in Solkan near Gorizia studied philosophy at the Jesuit college in Gorizia and afterwards medicine in Vienna and later on in Padua, where Morgagni was one of his teachers. In 1762, at the time when he was already professor at the Vienna medical faculty, his great work *Opera medico physica in quatuor tractatus digesta* was published. In this comprehensive publication Plenciz reformed Fracastorius's theory about *contagium vivum* and supplemented it with new ideas. Finally we have to mention *Ivan Krstnik Lavrin (Giovanni Battista Laurin, 1793-1840)* born in Vipava (25 km east of Gorizia). From 1819-1835 Lavrin was professor of veterinary medicine at the medical faculty in Pavia and later director of the veterinary institute in Milan (Istituto Veterinario di Milano).

Keywords: Slovene veterinary medicine, Italian universities, Infectious diseases.

HISTORY OF THE MEDITERRANEAN ZOOSES CONTROL PROGRAMME OF THE WORLD HEALTH ORGANIZATION: FACTS AND CONSIDERATIONS

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The *Mediterranean Zoonoses Control Programme* (MZCP) was established by the World Health Organization (WHO) in 1978, following the adoption of a Resolution by the 31st World Health Assembly on the *Prevention and control of zoonoses and foodborne diseases from animal products*. Its coordinating Unit, the *Mediterranean Zoonoses Control Centre*, was hosted in Athens, Greece, since 1979. The MZCP was a WHO directed and supervised interregional (Europe, Mediterranean, Middle East) Programme, closely collaborating also with Food and Agriculture Organization of the United Nations, World Organization for Animal Health, specialized institutions and the MZCP network of national participating institutions. The Governing Body of the Programme was the Joint Coordinating Committee, with its sessions every two years. The South Mediterranean and Middle East regions (SMMER) were selected as the area for the implementation of MZCP's activities, considering that in SMMER the zoonoses had historically a high incidence and a noticeable socio-economic impact. This situation was due to several reasons such as the following: close coexistence between humans and animals; livestock rearing in traditional small herds/flocks; local habits and social customs on animals and food of animal origin; inadequate services for disease surveillance and control.

The overall objectives of the MZCP had been to foster integrated programmes and activities for zoonoses surveillance, prevention and control, through strengthening collaboration between national, inter-country and inter-agency public health, animal health sectors and related institutions. The goals of the MZCP had been to: (i) develop capacity building in emerging zoonoses surveillance and response; (ii) strengthen national capacities for risk communication to the community; (iii) promote cross-border inter-agency collaboration for zoonoses prevention and control; and (iv) foster applied research on zoonoses and related foodborne diseases.

Based on the rules provided by its statute, the services of MZCP were depending on the annual financial contributions from the member countries under voluntary adhesion, the in kind one from collaborating institutions and the contributions from specialists in different fields. The progressive financial deficiency of the MZCP obliged WHO to discontinue its activities in 2011. It is a fact that the services offered by the MZCP received international recognition.

Keywords: Zoonoses, Mediterranean, Middle East, World Health Organization, Public Health.

PROTEINIZING AND MINERALIZING DIETS IN THE INTERESTS OF HUMANITY AND ECONOMY: THE COLONIAL DISCOVERY OF INTERSPECIES MALNUTRITION IN NIGERIA

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The era of Colonial Development and Welfare, particularly from the 1930s, coincided with the period when, in the field of medical sciences, dietary deficiencies were being identified as an important factor in the causation of diseases not just in humans but also in animals. As such, colonial scientists and researchers moved into different colonial societies conducting ethnographic and biochemical studies on the dietetics and nutrition of the peoples as well as of animals in relation to certain diseases endemic to or common in the area. Fundamentally, the works of these "experts" pathologized the local diets as lacking in essential nutrients, particularly protein, minerals and vitamins. The British colonial government, impelled by the works of these colonial experts, embarked on series of campaigns to "improve" the diet of humans and some animals in the colony as a way to promote public health. However, a critical analysis of the archival data reveals that there is more to the motivation for the campaign to proteinize and mineralize human and animal diets respectively than just the promotion of multispecies welfare. The economic interests of the colonial empire were equally crucial concerns for the colonial authorities.

This paper explores different aspects and dynamics of the colonial pathologization of nutrition in Nigeria in the light of public health concerns and colonial economic interests.

I argue that despite the limited attention it has attracted among scholars of Africa, food offers fresh, capacious perspectives on colonialism and societies.

Keywords: Veterinary Public Health, Colonial Pathologization, Human and Animal Malnutrition, Dietary Deficiency, Essential Nutrients.

VETERINARY MEDICINE AND INTERNATIONAL COOPERATION FOR DEVELOPMENT: A HISTORICAL CONTRIBUTION

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Veterinary Medicine and International Cooperation for Development have a strong relationship. The Italian case, which has delayed times if compared to similar phenomena that occurred in other European countries, protagonists of a much older colonial expansion, is analyzed to find the first footprints of this connection. So that, to understand the dynamics that allowed the birth of Tropical Veterinary Medicine in Italy which has become an instrument of International Cooperation well incorporated in National Legislation since 1971. Some topic moments, among which some indisputable examples of “One Health” stand out, are described to try to follow the evolution of this linkage that has given a substantial contribution to food security and to the improvement of health conditions of part of human populations in disadvantaged countries with low economic and socio-health development. Furthermore, a take stock about 50 years of International Cooperation has been tried: in which wasted opportunities but also achieved objectives emerge. A final synopsis identifies some “milestones” of the evolutionary process through which Tropical Veterinary Medicine has become a component of the institutional International Cooperation for Development implemented by Italian Republic.

References: A. GADOLA, *Zootecnia Profilassi e Igiene Zootecnica in Africa Orientale*. Istituto Superiore di Sanità, Fondazione Emanuele Paternò. Roma, 1947; R. MARABELLI, A. MANTOVANI (Eds). *La Medicina Veterinaria presentata ai Pubblici Amministratori*. (Stampato in proprio), Roma, 1997; L. VENTURI. *Per una storia della Cooperazione allo sviluppo italiana (1954-2016)*. AFRICANA - Rivista di Studi Extraeuropei, Pisa, XXVII (2021).

Keywords: Tropical Veterinary Medicine, International Cooperation for Development, Food Security, One Health.

FROM THE DISCOVERY OF ANTIBIOTIC DRUGS, THROUGH THE ANTIBIOTIC RESISTANCE TILL POST ANTIBIOTIC ERA IN VETERINARY MEDICINE

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The discovery of antimicrobial drugs represented a revolutionary milestone both in human and veterinary medicine. During the Second World War, the use of penicillin was considered miraculous since it permitted to treat and cure thousands of wounded soldiers. Some commercials are still available nowadays, demonstrating the full confidence of people, almost a faith, in the power of these drugs. But the veterinary perspectives began some years before, when Prontosil was commercialized by Bayer as a low-cost drug to treat several pathologies of ruminants. During the following three decades, several veterinary pharmacologists were focused on sulphonamides that were used to study and improve the scientific techniques of investigations and permitted to set the actual methodologies that are still used in the modern pharmacokinetic/pharmacodynamic modeling. The miraculous power that was recognized in these drugs also concealed numerous pitfalls which also led to the establishment of antibiotic resistance. These drugs were widely used not only for therapeutic purposes but also as growth promoters or in empiric way. According to these factors, at the beginning of '60s, the first rumbling of problems was recognized by the scientific community that pushed for a more stringent law that, unfortunately, was ignored for several years. The problem was no more negligible at the end of '90s and the non-therapeutic uses have been abandoned by the more developed countries. The history of antimicrobial drugs and the emergence of antimicrobial resistance topic were the focus of thousands of papers and millions of words. It is a fascinating and complex story that led the Veterinary Medicine to important reflections to preserve such an incredible resource as antimicrobial drugs are, to evaluate the role and the evolution of Veterinarians that must be always more specialized and aware of their crucial role, not only for animal health, but also for-public health and environment, realizing the concept of one health every day to enter in the post-antibiotic era. It is necessary to take care of what was learnt from the past and carry it in the future to find new strategies to go beyond antimicrobial resistance phenomenon.

Keywords: antimicrobial resistance, veterinary medicine, One Health approach.

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The question of when veterinary medicine began to include the treatment of the dog has long been debated, and current scholarship does not acknowledge the long tradition of canine healthcare provided by unqualified/irregular specialists prior to the late nineteenth century. Historians of animal healthcare attribute this supposed lack of care to the dog's limited economic value, especially when compared to that of the horse or of livestock. However, this understanding does not reflect the sentimental importance of individual animals, their value in elite sports, or that conspicuous care may have been provided as a marker of elite civility.

This paper introduces and contextualises the work of John Norborn (fl. 1780-1794), celebrity dog doctor of late eighteenth-century London. In doing so, it explores one facet of the eighteenth-century medical marketplace for canine healthcare and examines the conditions in which specialist care for dogs developed. My paper employs a wealth of archival evidence to recreate Norborn's career, including newspaper adverts, trade cards, receipted bills and contemporary accounts. I posit that by presenting his practice with the trappings of a respectable occupation, Norborn lent both himself and his business credibility at a time when the term "dog doctor" was considered an insult. In doing so, Norborn bridged the gap between the jobbing "dog leech" and "dog doctor" of the seventeenth and eighteenth centuries and the new breed of veterinary surgeons specialising in canine healthcare who emerged in the early nineteenth century, such as Delabere Blaine and William Youatt. This research, therefore, represents a significant intervention in the history of veterinary medicine (and specifically of small animal practice).

References: M. MACKAY, *The Rise of a Medical Specialty: The Medicalisation of Elite Equine Care c.1680 – c.1800*, PhD Thesis, University of York, 2009, p. 336; J. SWABE, "Veterinary Dilemmas: Ambiguity and Ambivalence in Human-Animal Interaction", in *Companion Animals and Us*, A.L. Poderscek, E.S. Paul and J. A. Serpell (eds.). Cambridge: Cambridge University Press, 2000, 292-311 (p. 294).

Keywords: Veterinary Medicine, Eighteenth-Century Dogs, Canine Healthcare, Irregular Practitioners.

THE TRACTAT DE LES MULES BY MANUEL DíEZ:
STATE OF THE ART

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The *Tractat de les mules* ("Treatise of mules") is a veterinary manual written in Catalan between 1424 and 1436 by Manuel Díez, knight of Alfonso V of Aragon, the Magnanimous. This text forms, together with the *Llibre de cavalls* ("Book of horses"), the *Llibre de la menescalia* ("Book of marshalcy"). Neither of the parts of the *Llibre de la menescalia* has ever been critically edited, even though it is the most widespread Catalan medieval scientific text: we keep twelve manuscripts in this language, together with translations into Neapolitan, French and Spanish, with fourteen different printed editions in the latter. In this conference we will present a state of the art that reviews the contributions of the bibliography on the treatise, focusing on those issues that have hindered a critical edition: its complex textual history and the anachronistic consideration of the work as plagiarism.

References: L. CIFUENTES, *La ciència en català a l'Edat Mitjana i el Renaixement*, 2a ed., Universitat de Barcelona - Universitat de les Illes Balears, Barcelona – Palma, 2006. L. CIFUENTES, C. FERRAGUD, "El «Libre de la menescalia» de Manuel Díez: de espejo de caballeros a manual de albitares", *Asclepio*, 1999, 51-1: pp. 93-127. V. DUALDE PÉREZ, *Historia de la albeyteria valenciana*, Ajuntament de València, València: 1997. L. FARAUDO DE SAINT-GERMAIN, "El texto primitivo inédito del «Tractat de les mules» de mossén Manuel Díez", *Boletín de la Real Academia de Buenas Letras de Barcelona*, 1949, 22: pp. 23-62. Y. POULLE-DRIEUX, "L'hippiatrie dans l'occident latin du XIII^e au XV^e siècle", in G. BEAUJOUAN, Y. POULLE-DRIEUX, J.M. DUREAU-LAPEYSSONNIE (eds) *Médecine humaine et vétérinaire à la fin du moyen âge*, Centre de recherche d'histoire et de philologie Droz, Genève-Paris, 1966, pp. 9-168. B. PRÉVOT, B. RIBÉMONT, *Le cheval en France au Moyen Age. Sa place dans le monde médiéval; sa médecine: l'exemple d'un traité vétérinaire du XIV^e siècle, la «Chirurgie des chevaux»*, Paradigme, Orléans, 1994. C. SANZ EGAÑA, *Historia de la veterinaria española: albeitería, mariscaleria, veterinaria*, Espasa-Calpe, Madrid, 1941.

Keywords: Veterinary medicine, Marshalcy, Manuel Díez, Medieval manuscripts, Edition, Catalan.

SEEING AND KNOWING CATTLE LAMENESS IN BRITAIN, 1930-85

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Today, lameness is recognised as one of the most serious threats to dairy cow health, welfare and productivity. In inter-war Britain, it was already a familiar condition to farmers and practicing vets. In the post-war decades, as dairy farming intensified, it became increasingly prevalent and complex. However, it was not until the late 1970s and 80s that veterinary scientists began to take seriously its effects and investigate its causes. This paper seeks to explain the historic “neglect” of lameness as a veterinary scientific problem and its belated discovery as a problem of bovine populations that caused costly reductions in fertility and milk production. In so doing, it illuminates the evolution of veterinary epidemiological ways of knowing, and how they were influenced by farming practices and policies, veterinary professional structures and ambitions, new statistical methods, the power of the electronic computer, and received notions of the bovine body.

Keywords: lameness, dairy cattle, veterinary epidemiology, Britain, twentieth century.

THE DISSECTORY ACTIVITY ON ANIMALS BY THE DANISH ANATOMIST NIELS STENSEN (1638-1686). GENERAL CONSIDERATIONS WITH A CASE STUDY

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This work aims to outline some considerations on the dissection activity in the animal of Niels Stensen (Niccolò Stenone in Italian), a prominent figure of European medicine during the second half of seventeenth century.

Stensen was born in Copenhagen in 1638, his father was a goldsmith. After an initial period in the medical school of the local university, he continued his studies moving in the University of Amsterdam and in the University of Leyden where, in 1664, he obtained the medical degree. Once graduated, he moved for a short time in Paris where he continued the anatomical research and published the *Discourse on the anatomy of brain*. In 1666 he reached Florence where he was named professor of anatomy in the hospital of Santa Maria Nuova and appointed academic of *Accademia del Cimento*. In Tuscany he continued his researches and began to deal with other sciences (in particular geology). Stensen, in 1667, decided to embrace Catholicism abjuring the Lutheran faith. In 1675 he was ordained priest and in 1677 he was appointed bishop. Connected with his new religious commitments was his transfer as apostolic vicar to Hanover and then to Hamburg. He passed away in Scheverin in 1686; the body was transported by sea to Florence, and buried in the Basilica of San Lorenzo. The animal dissecting activity of Stensen should not be neglected, it is well documented by several writings dedicated to it.

In this work, Stensen's main contributions to the anatomy and physiology of animals through their dissection, often accompanied by references to human anatomy and physiology, will be recalled. A broader space will be devoted to a short paper, written in 1669, *Letter concerning a calf hydrocephalus* in which the Danish scientist exposes some considerations on the possible anatomical-physiological causes of hydrocephalus, both in animals and in humans.

References: M. ALIVERTI, *Life of Niels Stensen (1638-1686), scientist and saint*, *Dolentium Hominum - church and health in the world*, 57 (3), 52-55, 2004; M. ALIVERTI, *A letter by Nicolaus Steno about a cavern near Como*, *Medicina Historica*, 5 (3), page e2021023, 2021.

Keywords: Stensen, anatomy, dissection, calf hydrocephalus.

SNAKES AND LADDERS – THE PROCESS OF PROFESSIONALISATION OF THE VETERINARY SURGEON IN BRITAIN

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2019 was the 175th anniversary of the establishment of the Royal College of Veterinary Surgeons (RCVS). The RCVS created a PhD to research their newly catalogued archives. This communication will present an overview of the project:

Professionalising animal medicine: the history of the Royal College of Veterinary Surgeons and the Veterinary Surgeons Act 1881

The proposed methodologies include people, places, processes and products as it provides clarity in a complex history. A cause and effect framework is used to analyse the success of the royal charter and the veterinary surgeons act of 1881.

The presence of people in multiple communities and networks can be used to determine if their activities are focused on individual or professional progression. Tracing the narrating of the same events across multiple organisations where the same people are present allows an insight into individual motivations.

Surgical historiography has noted that the true division in the histories of medicine and surgery has been between qualified and unqualified practitioners rather than between surgery or medicine. The veterinary community has a similar issue but there is also division within qualified practitioners of a rural/metropolitan nature. This can also be viewed as a clinician/educator divide and affects the communities and networks and their intended roles.

Finally how the RCVS was financed in its pre 1881 period offers a new framework to view the process of professionalisation. How did income, or lack of it affect the RCVS?

The sources used include primary sources from the RCVS which have not been accessed for around 150 years.

References: C. LAWRENCE, *Democratic, divine and heroic the history and historiography of surgery* in C. Lawrence, *Medical Theory, Surgical Practice Studies in the History of Surgery*. 1991 pp. 1-78;

London, Royal College of Veterinary Surgeons, incoming letters, meeting minutes, ledgers, accounts, examiners board;

Reading, Museum of English Rural Life, Royal Agricultural Society of England, vet committee, finance ledger, education committee, journal committee.

Keywords: History, Royal College of Veterinary Surgeons, medicine, professions.

THE AMAZING STORY OF SATYR: FROM IMPOTENT STALLION TO “NAPOLEON’S HORSE”

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On 1st October 1872 the Marquis Colonel Giovanni Costabili purchased an English thoroughbred stallion in England, on behalf of the Italian government, for use in army repositories. This horse, named Satyr, was then active as breeder in Italy between the end of 1872 and 1887, when it was finally sold to a private farmer due to impotence and old age. In September 1889 Satyr was slaughtered at the Royal Veterinary School of Milan, according to previous government agreements, in order to prepare a whole mounted skeleton. This was made in 1890 by dr Ugo Barpi, who was at that time assistant professor of Anatomy, and it became one of the equine skeletons for educational use, among which there was already the famous skeleton of the Arabian horse ridden by Napoleon in the Egyptian campaign, probably identifiable as Tamerlan and donated by Viceroy Beauharnais to the School of Milan. Satyr had the honour of inaugurating the new large maceration tank, built in 1889 with a subsidy from the Ministry of Agriculture. In the years immediately following its preparation, Satyr’s skeleton was also located for a time in the anatomical theatre, as evidenced by old archive photos; it was mentioned among the skeletons of the ancient Anatomical Museum, in the description made by Director Lanzillotti-Buonsanti in his documentary book on the history of the School’s first centenary. Neither Satyr nor Napoleon’s horse were cited again in bibliographical works until the end of the 20th century, when the only horse skeleton still present in the former Institute of Anatomy of Domestic Animals was significantly identified and named as “Napoleon’s horse”. The analysis of a valuable bibliographic source found in the archives, in which dr Barpi himself gives us some accurate morphological and morphometric information, has now enabled us to identify that skeleton as Satyr, and not Tamerlan. But if Satyr took his place in the collective memory at the end of the century, what really happened to the skeleton of Napoleon’s horse?

References: BARPI U., *Brevi considerazioni intorno allo scheletro di uno Stallone governativo P.S.*, *Giornale di Medicina Veterinaria Militare*, 5 (1892), 473-490.

Keywords: Skeleton, Horse, Stallion, Thoroughbred, Arabian, Napoleon, Tamerlan, Satyr, Barpi, Veterinary School, Milan.

DURHAM X CHIANINA: HISTORY OF A FAILED CROSSBREEDING (1856-1859)

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The communication intends to reconstruct for the first time, through the use of a plurality of archival and printed contemporary sources, the failed attempt to cross between Durham cattle and Chianina cattle carried out in Val di Chiana (Tuscany) between 1856 and 1858, by the will of the Tuscan government and of the "granduca" Pietro Leopoldo II himself. Although supported by the influential Georgofili Academy of Florence, that attempt met with the strong opposition of the breeders and settlers of Val di Chiana, jealous of the "purity" of their native breed, improved over the years through a careful, however empirical selection process. The contribution explores the historical reasons that led to the experimentation and the specific events that followed one another between Pisa, Florence and Arezzo; it also focuses on the actors who were involved and the results of the experimentation, with the important testimony of the veterinarian who followed the whole "attempt" which was, twenty years later, the subject of heated discussion in Florence (1875) at the Congress of the Royal and National Society of Veterinary Medicine of Turin.

References: AA.VV., *Terra e allevamento. Razze, mostre, mercati e contesti agrari nell'evoluzione contemporanea*, Alinari, Firenze, 1989; I. BIAGIANTI, *Agricoltura e bonifiche in Valdichiana (secoli XVI-XIX)*, Centro editoriale toscano, Firenze, 1990; G.F. DI PIETRO (ed.), *Atlante della Val di Chiana. Le fattorie granducali*, Regione-Toscana-Debatte, Firenze-Livorno, 2009.

Keywords: Chianina cattle breed, cross between cattle breeds, veterinary medicine congress, zootechnical exhibitions.

A HORSEMAN UNMASKED JEAN TACQUET AND HIS HARAS DES CHEVAUX (1618)

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In 1614 the Flemish nobleman Jean Tacquet published a horse book, titled *Philippica ou haras des chevaux*, which was internationally acclaimed exuberantly in the history of veterinary medicine, but which on closer inspection turned out to be an almost literal copy of Marx Fugger's book *Von der Gestütere* from 1585, with which it was put on a par with.

Especially in the francophone world he is highly praised and is quoted with approval. By means of a number of examples I show in this paper how Tacquet worked and what role he still plays in modern French cultural history.

Keywords: Veterinary Medicine.

THE PROJECT OF THE GRADUATES REGISTRY OF THE MILAN VETERINARY MEDICINE SCHOOL (1812-1933)

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The recent arrangement and inventory of the Milan Veterinary School archives has highlighted the importance of several documents which are suitable for providing a reliable and continuous overview over time of all the names of the young graduates of the School throughout the 125 years of its activity, up to its aggregation to the University at the end of 1932, as a Faculty of Veterinary Medicine.

Based on these sources, we have launched the project of a digital registry of graduates in the Milanese School, which will represent the main section of a website devoted to the history of the School and the training of veterinarians, which we plan to release by early 2024.

The graduates registry will gather various information, including: personal data, country of origin, date of graduation, the title of the final dissertations (a useful element to enrich our acquaintance with the development of this branch of knowledge). Moreover, whenever possible, a brief biographical note will be provided for each graduate. We have therefore designed the grid of a database that will be progressively populated through a careful collection of information and then will be transferred to the website, where it will be searchable according to different keywords.

Furthermore, the website will host other sections in which there will also be space for the results of research on the social history of the profession, for example on the contribution made by veterinary medicine to public and sanitary control of epizootic diseases, the wholesomeness of meat destined for slaughter and sale, the health conditions of livestock sold on the market (with the development of legal veterinary medicine) and of livestock raised in the countryside or used in the military. The activities both of the School and the graduates will also make it possible to illustrate the ties of the veterinary profession with state institutions, the city elites and the territory, crossing themes linked to economic development into a European dimension.

References: S. TWARDZIK, *L'Archivio della Regia Scuola superiore di medicina veterinaria di Milano. Inventario*, Roma, Edizioni di storia e letteratura, 2020.

Keywords: veterinary graduates registry; Milan Veterinary School; veterinary medicine; veterinary profession.

200 YEARS OF VETERINARY EDUCATION IN ZURICH, SWITZERLAND

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Veterinary education in Zurich, Switzerland began with the establishment of a veterinary school in 1820. Prior to this foundation, veterinary medicine in the Canton of Zurich was practiced by lay persons or butchers. Young men wishing to be trained as a veterinarian either had to complete an apprenticeship of 2 years with an officially recognized veterinarian or were sent to foreign veterinary schools like Alfort, France or Vienna, Austria. The initiative for the establishment of a veterinary school in Zurich was taken by a medical doctor and member of the cantonal health committee: Johann Jakob Römer (1763-1819). In the course of his work monitoring animal-plagues he realized there was a shortage of well-trained veterinarians and convinced the cantonal government to found a veterinary school.

The development of veterinary education up to the present can be divided into 4 major phases. After establishment in 1820, there followed a period of 14 years with a provisional veterinary school. The second phase began in 1834 when the school became a full part of the Zurich cantonal school system. The third period began in 1902 when the veterinary school was made part of the University of Zurich, known as the «Veterinärmedizinische Fakultät». The fourth period started in 2006 when the Veterinary Faculties of the Universities of Bern and Zurich were combined and formed the Vetsuisse Faculty of the Universities of Bern and Zurich.

Major proponents of the development of the Zurich veterinary school during the 19th century were medical doctors, as well as Swiss and foreign veterinarians, like Hans Rudolf Zangger, Erwin Zschokke, Johann Feser, Otto von Bollinger, Richard Metzdorf, Otto Alexander Siedamgrotzky, Alfred Guillebeau and others.

References: A. POSPISCHIL, *Können tote Tiere reden? Geschichte der Veterinärpathologie und ihre Entwicklung in Zürich (1820-2013)*, Chronos Verlag, Zürich 2018.

Keywords: History, Veterinary education in Zurich, Switzerland, major proponents.

THE CHOLERA CONGRESS OF CONSTANTINOPLE, 1866, WITH OBSERVATIONS OF A BRITISH RAPPORTEUR

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The 19th century is the period when humankind entered into a revolutionary change in every field scientifically. Especially the development in the field of microbiology has given birth to a new world. This period, when the causes of epidemics began to be understood, showed that the fight against epidemics could be possible with a joint work, and joint scientific activities began to be held all over the world.

The conferences, which started with the name of Sanitation, have led to the opening of new medical research areas with the change and progress of research techniques. Countries dominated by modern medicine systematically came together to take international measures to control cholera, one of the important epidemics of the 19th century. The activities, which started in Paris in 1851 under the leadership of European states, took place in Paris in 1938, the fourteenth of which were called "quarantine, health and sanitary conferences" and led to the establishment of WHO.

The third of these conferences was held in Istanbul in 1866. Participants from many countries of the world took part in the congress. When these people returned to their countries, they prepared reports about the event they took part in and presented them to the country managers - relevant institutions. The Cholera Report prepared by the British Delegation, which is the main material of our study, is in the collection of Bülent Başaran. In the paper, the way this preliminary congress took place from the point of view of the British participants and what its implications from the modern world congress will be presented. It will be explained how the first quarantine measures in the Ottoman Empire were interpreted by the surrounding states at the ports and borders, and it will be emphasized how the results of the congress shaped the modern world. The documents will try to understand and interpret not only how the British, as a third state, looked at the congress from the outside, but also what the Ottoman state was aiming at by using this congress.

Keywords: International Congress, Cholera Report, British Delegation, Ottoman Empire.

VIRAL SPACES: LABORATORY RESEARCH AND BIOSECURITY IN NORTH AMERICA, 1946-2022

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Since the late 19th century, the Canada, Mexico, and United States governments supported policies of total foot and mouth disease (FMD) eradication. Politicians and animal health officials in all three countries viewed North America as a sanitary island and feared that if FMD gained a foothold on the continent, it would threaten the food security and livestock economies of all three nations. These policies prohibited the use of the FMD virus in laboratories or research farms because the threat of an accidental laboratory release was considered too grave of a risk to livestock economies. Instead, animal health officials, researchers, politicians, and livestock owners in Canada, Mexico, and the United States sought knowledge about the virus in Europe and South America where the disease was enzootic.

In the mid-20th century, outbreaks of foot and mouth disease in Canada and Mexico led to changes in these policies including the development of North American networks of expertise and specific laboratory spaces for the FMD virus. The creation of these laboratories in Mexico and the United States allowed for the first successful use of vaccination in an FMD eradication program and opened new conversations about the use of FMD vaccine and how to mitigate risk associated with studying the virus. The debates over location, risk, and laboratory spaces for foot and mouth disease research and the research of other potentially epizootic diseases continued in the early 21st century as the United States government searched for a new home for its Department of Agriculture biosafety level-4 laboratory. The current transition of the facility from Plum Island, New York to Manhattan, Kansas revived old debates about laboratory safety and raised new questions about biosecurity and food security in the 21st century.

Keywords: Veterinary medicine, infectious disease, government policy, biosecurity.

FROM NIGHT-BLINDNESS TO NONSENSE NUCLEOTIDES THE INTERNATIONAL HISTORY OF CANINE RETINAL DISEASE

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In 1903, Alfred Sewell, veterinarian to the Kennel Club and King Edward VII of Britain, knew that young dogs sometimes developed a progressive disease known as 'night blindness', which had no cure. Today, this condition is known as progressive retinal atrophy, and is conveniently identified through a selection of DNA tests, cheaply available to every dog breeder. Although the underlying biology has not changed, human understanding of this condition has totally transformed.

This paper traces the international chain of veterinarians, dog breeders and scientists who together made the discoveries that eventually led to the effective control of this serious canine disease. It reveals the networks that linked people in Britain, Sweden, France, the Netherlands and the USA, and explains how they drew on their own understandings of heredity, pathology, eugenics, genetics, ophthalmology and molecular technologies as each in turn contributed to this process. By tracing the changing approaches used to deal with a single biological disease during more than a century of collaborative international effort, this paper argues that effective progress in canine health requires the productive cooperation of both researchers and dog breeders, and explains how these advances in canine healthcare have both mirrored and contributed to similar research into the inheritance and control of human retinal disease.

Keywords: Veterinary Medicine, Pedigree Dogs, Retinal Disease.

ALEEN CUST, FIRST FEMALE VET TO WORK IN IRELAND AND BRITAIN

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While the endeavours of male veterinary surgeons have been documented through the centuries, the role of the female vet has been somewhat neglected. I will address the life and career of Aleen Cust, the first female vet to work in Ireland and Britain and indeed Europe, while being denied by the Royal College of Veterinary Surgeons permission to sit the examinations that would have granted her a Diploma to practice. As 2022 is the centenary of her eventual admission to the Royal College of Veterinary Surgeons, the Aleen Cust Memorial Society was formed to have her legacy remembered and to locate her grave in Jamaica where she died suddenly in 1937.

References: C. M. FORD, *Aleen Cust, Veterinary Surgeon*, Biopress, Bristol, 1990. B.V. JONES, D. CONNOLLY, "Aleen Cust: an exceptional life of challenges and obstacles overcome" in *Veterinary History*, 2022 (in press). I. KATIC, "Pioneer Female Veterinarians" in *Medical Sciences*, vol 37, pp. 137-168.

Keywords: Female Veterinary Pioneer.

DEVELOPMENT TREND OF WOMEN GRADUATES IN VETERINARY MEDICINE FROM SASSARI'S UNIVERSITY IN THE 20TH CENTURY (AYAY 1981/82-1999/2000)

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The Veterinarians, in Sardinia hold a peculiar position under sanitarian, and socio-cultural point of view. This depending to the prominent agro-pastoral influence which distinguishes the Island. In a previous study we focused the training course of the student population in Veterinary Medicine of Sassari's University among the academic years 1961/62 and 1980/1981. The first women graduated was related to the gender-gap.

In this contribution, we deepened the progressive increase of the females within the student population among the academic years from 1981/82 to 1999/2000.

During the first decade we found that out of 338 Veterinary Medicine graduates: 272 are men (80,5%) and 66 women (19,5%). In the successive nine years of 307 graduates 151 are men (49,2%) and 156 women (50,8%). The latter span represents both the end of the 20th century and also a breaking and crucial turning point. In the academic year of 1994/95 the number of female graduates in Veterinary Medicine exceeds the number of men graduates (62,5% vs 37,5%). The gender ratio that so far characterized the undergrads in Veterinary Medicine in Sassari became a legacy of the past. Afterwards for each year of the academic triennium 1997/98-1998/99 and 1999/2000 the number of female graduates is higher than the men's, respectively 55,9% vs 44,1%, 68,0% vs 32,0% and 54,7% vs 45,3%. The academic year 1998/99 deserves further attention since it counts a clear predominance of female figures: women graduates more than doubled the men graduates.

Once the 21st century and also the 3rd millennium knocked on the doors, there was a very different future for Sassari's University and it opened up a deeply change scenery for the cultural and educational process. The University, seen as a place of learning of cultural and professional training for new generations of students, had already entered into a new relevance of the gender relationship. On the background, as a consequence, it delineated a new social and professional model of the Sardinian Veterinary Medicine.

References: G.P. BRIZZI, J. VERGER, *Le Università minori in Europa (secoli XV-XIX)*. Rubettino Editore, 1998; R. COSSU, *L'Università in Sardegna*. Edizioni Omicron, Cagliari (CA), 1986.

Keywords: Gender gap in Veterinary Medicine education; Training courses in European small Universities, History of Academic Veterinary Medicine; History of Sassari's University.

ANIMAL SYMBOLS IN THE WORKS OF THE SELJUK PERIOD: AHLAT MUSEUM EXAMPLE*

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It is aimed to give information about the existence of animal motifs used in Turkish art during the Seljuk period in the works in Ahlat Museum, which houses examples in Ahlat, one of the important cities of the period, and the purpose of use of these motifs. The animal symbols in the Ahlat Museum were evaluated categorized according to their types, and the symbols used with various ornamental compositions were considered. Forty-two sample works were examined, and photographs of animal symbols were taken.

In this research carried out in the Ahlat Museum, 21 birds, one ram, two tigers, three fish, one rabbit, one gazelle, one donkey, two elephants, two horses, 42 animal figures, including one dragon, one lion, and six unidentified animals, were identified. Ancient Turks led a nomadic life, and animals were also important. Horses from these animals sometimes war. The vehicle was sometimes used to control herds and sometimes as a passenger vehicle. However, the old Turks benefited from animal foods, including all edible and non-edible animals, in the treatment of some diseases, apart from being used as food and obtained from the bodies of animals. Many treatment methods have been applied using many drugs or animals with an appropriate method. With diseases from plants in nature, mines, and basic livelihoods, the Ancient Turks struggled by making medicines from the food and limbs of animals. Examples of these are: camel meat paste, swallow meat, deer glue, honey, milk, broth, red pearl, pearl broth, goat milk, donkey milk, yogurt, partridge etc.

It can be said that the animal figures identified in the study reflect the cultural and religious heritage of the Seljuk state. As a result, it can be argued that the Turks used animals effectively in their daily lives during the Seljuk period. This situation was reflected in their cultural activities, and animals were also given importance.

References: T. EROĞLU, H. Ç. KILIÇ, *Türk inançları ve inanışları*. Sosyal Siyaset Konferansları Dergisi, 49:750-770, 2005. E. AKURGAL, *İslâm Sanatında Türklerin Rolü*. Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Dergisi, 2 (4): 527-533, 2017.

Keywords: Seljuk period, Ahlat museum, Animal symbols.

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HISTORIOGRAPHIC SURWAY ON THE "VETS" BORN IN THE VILLAGE OF BITTI (SARDINIA-ITALY) IN THE 20TH CENTURY

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Between the 19th and 20th century, the small rural village of Bitti in the middle east of Sardinia, despite of its geographical marginality and a strong socio-economic connotation in an agro-pastoral context, played an important role in the scene of Sardinia. Politicians - such as *Giorgio Asproni*, *Giuseppe Musio*, *Gianuario Carta*, *Giosuè Ligios*, *Silvestro Ladu* - and intellectuals - such as *Michelangelo Pira*, *Raimondo Turtas* and *Bachisio Bandinu* - were born in Bitti and received their first education there. "*Su cantu a tenore*", a form of musical tradition strongly rooted in the inland areas of the Island has been recognized by UNESCO, on November 2005, as an intangible heritage of humanity, also thanks to the "*Tenores di Bitti*". Some leading figures in Veterinary Medicine were born and started their studies in Bitti before to have held roles of national and international importance in the public health *Iginio Altara* (1897-1976) and in the academic fields *Giulio Bagedda* (1918-1990).

Therefore in this specific territorial context of Sardinia we collected the *ante lauream* university and the *post lauream* their career paths, of 21 students who graduated in Veterinary Medicine during the whole 20th century. We contextualized the data with the population dynamics of residents of the village of Bitti during this same period.

Twelve Bitti's inhabitants graduated in Veterinary Medicine in Sassari (57,5%) and 9 in others Italian Universities (42,5%). There is a clear registered predominance of 17 male graduates (81%) compared to the female graduates (19%). The first female figure graduated in Veterinary Medicine in the academic year 1983-84 at the University of Sassari.

Over the same period of time, the demographic dynamics of the resident population of Bitti decreased from 4,650 inhabitants in 1901, to less than 3,400 in 2001. In the last twenty years of the 20th century there was a twofold phenomenon: the progressive increase of the graduates and the progressive decrease of the resident population.

The historical memory can help us to understand the complexity of new dynamics, such as the depopulation, of rural areas and districts and to face the challenge of addressing them.

Keywords: Veterinary Medicine's Territory history; Gender gap in Veterinary Medicine education; History of Sassari's University.

"PER IL PIEDE" FORGING SYSTEM AS FINE PODIATRIC INTELLECTUAL TOOL BOX: RISE AND EVOLUTION OF AN INVALUABLE CULTURAL PHENOMENON

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The craft of farriery is an ancient and complicated practice that find its foundations in the domain of metallurgy, veterinary and horsemanship. The horse foot knowledge and care is a millennial topics. Amongst Indo-european cultures it had a complex evolution and cultural importance that had left us a remarkable literature and archeological evidences.

"*Per il piede*" or "*pel piede*" is an Italian expression that can be literally translated as "for the foot" and that indicates the execution of tailor-made horseshoes and, *a priori*, fine trimming. It is not only the leitmotif of Pinerolo's military farriery School, but a crucial concept had been expressed and proposed by many authors through centuries. Anatomical, morphological, physiological and biomechanical knowledge are required in order to rationally create horseshoes that are impeccably suiting the particular needs of each horse. In 1864, Luigi Brambilla (1806-1873), professor of Veterinary surgery in the Veterinary School of Milan, created a discipline called *Ateleologia* (ancient greek *ateleja* "defect" and *logos* "discourse") in order to effectively theoretically organize horse assessment for shoeing. The rules of "*per il piede*" forging system are indissolubly linked to this type of approach. As grammar and syntax rules are necessary to make sense in language, *ateleologia* and *per il piede* forging system are essential to finely shoe a horse.

The aim of this research is to investigate the ancient origins of anatomical, morphological, physiological and biomechanical notions of Brambilla's ateleologic approach and its development in the late 19th and 20th century.

Moreover, It will be pointed out how ancient authors such as Xenophon and cultures as Celts and Etruscan already possessed knowledge of the topic; the importance of medieval farriery literature for veterinary; and how an intricate British-French-Italian podiatric dialectic emerged in modern era.

Keywords: Italian horseshoeing method, Farriery, Luigi Brambilla, *Ateleologia*.

THE VETERINARIAN AND THE BALLERINA

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Veterinarian Dr. Antonio Martínez Arredondo, an illustrious Cuban professional, was born in Havana, Cuba, on October 25, 1885. He completed his first studies in Havana schools, after completing his Secondary Education he went to the United States of America, entering the Millersville State Normal School, Penn.; and later at the McKillip Veterinary College, where he graduated as a Doctor of Veterinary Medicine on May 31, 1909. He returned to Cuba, revalidated his degree at the University of Havana, developing from there an eminent professional job; he entered the National Army in 1918 until his retirement. He made contributions in the horse clinic, he was a hyppologist and his team at the Recua or Yeguada Militar de Cuba were the pioneers of artificial insemination.

The dancer Alicia Ernestina Martínez del Hoyo, known in the artistic world as Alicia Alonso, was the daughter of Don Antonio Martínez Arredondo. She, considered the first classical ballerina in Cuba and world pride, directed the National Ballet of Cuba for more than 70 years, also being a Goodwill Ambassador in different world institutions.

This paper shows the results of research on the life and work of Dr. Antonio Martínez Arredondo and his relationship with his daughter, the glory of world art.

History, art and science united by blood and love of art and animals.

Keywords: Veterinarian, ballet, science, arts.

MICROBIAL COMMUNITIES AND BIOAEROSOL IN HORSE FACILITIES: HISTORICAL EVOLUTION OF HYGIENIC MANAGEMENT

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Many horses spend the majority of their lives in their stall, where they are exposed to high bioaerosol loads and surface microbial communities. Bioaerosols are fine particles suspended in the air that consist of bacteria, fungi, and viruses. Microbes can also adopt a surface-attached lifestyle in the form of biofilms. Both biofilm formation and bioaerosol loads are influenced by hygiene practices, feeding type, flooring, and bedding materials. Here, we discuss the historical evolution of the management approach of horse facilities by tracing the changes of environmental conditions associated specifically with the use of varied bedding and flooring. In so doing, we address the biological risk for animals housed on traditional dusty materials and the possible use of modern flooring consisting of recycled tires to reduce the indigenous microflora and bioaerosol and increase animal welfare.

Keywords: bioaerosol, horse, bedding, flooring, tyre.

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POSTER PRESENTATION ABSTRACTS

*Listed in alphabetical order of first author's surname
following the session themes*



THE FRENCH ARMY VETERINARY SERVICE AND EQUESTRIAN COMPETITIONS

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The French Army Veterinary Service was created for the medical support of mounted troops. Its attachment to the cavalry was at the origin of the passage of military veterinarians to the Cavalry School of Saumur until 1940 for their military training. Daily riding lessons revealed good riders.

Many personnel of the French Army Veterinary Service, veterinarians, non-commissioned officers or soldiers, have taken part in equestrian competitions in various disciplines: races, jumping, horse riding eventing. Some represented France at the highest level in national and international competitions such the Olympics until the 1960s.

At the same time, the Veterinary Service organized numerous equestrian competitions, notably in Compiègne.

Today, veterinary support for military equestrian competitions is still assured, in particular for the world military championship organized by the International Military Sports Council (CISM), the next edition of which will take place in the fall of 2022 in Fontainebleau.

Keywords: France, French army veterinary service, equestrian competitions, cavalry, Olympics, 19th century, 20th century.

LIST OF HONOR OF THE FRENCH MILITARY VETERINARY CORPS

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This poster presents the name, the rank, the date and place of death of the 328 military veterinarians who died serving in the French Military Veterinary Corps since its inception in 1769.

It shows the importance of the losses suffered by veterinarians in the various conflicts in which France was involved.

The schools of origin of these vets, their age of death and the main causes of death are also described.

Keywords: France, History, Army veterinarians, 19th century, 20th century.

EVOLUTION OF THE UNIFORM OF FRENCH MILITARY VETERINARIANS

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The uniform of military veterinarians followed the evolution of French army uniforms.

On this uniform, specific attributes were adopted to allow the identification of veterinarians.

In particular, embroidery representing sage leaves, awarded in 1843, and garnet velvet distinctions, adopted in 1852 with access to officer status, have been preserved since their introduction.

This poster, with its many illustrations and photographs, shows the evolution of the vets' uniform from 1769 to the present day.

Keywords: France, French army veterinary corps, Military uniforms, 19th century, 20th century.

1769-2019: EVOLUTION OF THE RANKS, NUMBERS AND MISSIONS OF FRENCH MILITARY VETERINARIANS

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It was in September 1769, a few years after the foundation of the first veterinary schools by Claude Bourgelat, in Lyon in 1761 and in Alfort in 1765, that the French military veterinarians were created. They had the rank of sergeant (marechal-des-logis) and their role was to care for the horses of mounted troops.

This paper traces the developments that have taken place over the 250-year history of the army veterinary corps.

It describes the slow progression of veterinarians in the military hierarchy up to the rank of major general, a progression made possible by the progress of science and the recognition of the role of military veterinarians.

The changes in the number of military veterinarians and the evolution of their missions are also presented. They illustrate the constant adaptation of veterinarians to the needs of the armed forces and show the increasingly important role of military veterinarians in the field of veterinary public health.

Keywords: France, Army veterinarians, 19th century, 20th century.

TURKISH MILITARY VETERINARIAN'S UNIFORMS BETWEEN 1842-2022

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Uniform is a compound word composed of prefix uni which means one, single, united and the form means shape. As it can be understood from the meaning of the word itself, the uniform is a clothing worn by certain professions and/or members of an institution. This uniform, which is worn for professional, institutional, or artistic reasons, sometimes serves to protect the worker as well as pointing to a sense of belonging.

Scientific veterinary medicine education in Turkey started with Godlewsky, who was brought from Prussia in 1842. The order of Godlewsky, who served in the artillery class, was to be honoured also made according to the rules of this class, and the signs and uniforms he used were determined accordingly. After the Balkan War, the veterinarians who graduated from the Military Academy used the same uniforms as the officers in the cavalry troops, their markings were made of black broadcloth with collar and braiding, and their sleeves were black and braiding. There are crescent and star on the buttons and their trousers are of navy-blue broadcloth. There are fringes on the epaulettes starting from the rank of major. There is an Aesculapius motif without a cane as the symbol of veterinary medicine. They have red-claret red fez. The shape of the fez was changed in 1844 and a sleeved-belt was added to the uniforms. While the ranks of the officers were determined by the braid on their sleeves, the captain and higher-ranking officers were presented with a red colour watch.

With the proclamation of the Republic, the uniforms of the veterinary class have also changed with the innovations carried out in the army. Unlike other military uniforms, the collars of the veterinarian's uniforms are made of Aesculapius, under the crescent-star in a circle, on a burgundy fabric, and the ground is military green in the training uniform and burgundy in the ceremonial uniform.

In the study, the changes in the uniforms of military veterinarians between 1842 and 2022 will be explained.

Keywords: Turkish Military Veterinary Corps, Uniform evolution.

THE VETERINARY MEDICINE IN WORLD WAR ONE THE VETERINARY SCIENCES AND THEIR EVOLUTION IN THE GREAT WAR

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The outbreak of the Great War caught the world of Veterinary Sciences in a period of great ferment. During the war many veterinarians were called to arms and among these there were University Professors too.

The war needs significantly conditioned Veterinary Medicine in all its applications.

The Authors briefly trace the evolution of Veterinary Sciences in a particularly tragic historical period for Italy and, more generally speaking, for the whole world.

Keywords: Military veterinarians, ITALY, WWI.

THE MILITARY FARRIERS IN THE FIRST WORLD WAR

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In World War One a large number of Veterinary Officers were employed in the Units, Detachments and Services supported by the use of animals; these Officers were assisted in their work by Farriers, whose main task was to shoe horses, mules and cattle in force to the Regiments and Units.

The Authors describe in details the training of the Military Farrier who represented a fundamental aid for the Military Veterinary Service in war. He was in fact responsible for the correct shoeing of the quadrupeds assigned to the Units, and he was also essential for the Veterinary Officer in the daily activities of hospitalization and care of wounded animals.

Keywords: Military veterinarians, Farriery, WWI.

TOXOPLASMOSIS: AN EXAMPLE OF ONE HEALTH

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The communication aims to reconstruct the history of knowledge regarding toxoplasmosis.

In 1908, at the “Pasteur institute” of Tunis a new protozoan is observed in the gundi (*Ctenodactylus gundi*) which is given the name of *Leishmania gondii*. In the same year, without giving him a name, he is described in Brazil. The following year it is given the name of *Toxoplasma gondii*. Since then it has been incessant researches on this protozoan that gradually outline the extreme complexity of the parasitic cycle and its implications and relevance both in human medicine and in veterinary medicine. Gradually the presence of *T. gondii* was identified in a dog (1910) and in eye lesions of a child (1923) and in a man (1937). In 1941 it was demonstrated that the isolations of *T. gondii* in animals are actually attributable to the same parasite and the following year it is described for the first time in a cat. It will be necessary to wait the 1954 to hypothesize that infection in humans can take place due to a food of animal origin contaminated by *T. gondii* cysts.

A few years later however a study conducted in Bombay demonstrates the presence of antibodies against *T. gondii* even among strictly vegetarian people.

After having found the presence of *T. gondii* in cat feces in 1969 and already in the following year it is possible to define its sexual phase in the intestine of felines and their role in the environmental diffusion of the protozoan.

With great probability the presence of cats in the laboratory of the “Pasteur institute” in Tunis had induced the infection of gundi present there and favored, although accidentally, the discovery of the until then unknown protozoan.

Once its complex biological cycle and its models of transmission as well as its role as a pathogen for humans and animals were better known hygiene measures began to be implemented to prevent exposure to infecting oocyst.

Knowledge on *T. gondii* was further enriched at the beginning of the new millennium with its identification also in marine mammals and with complete mapping of its genome.

Keywords: toxoplasmosis, human and veterinary medicine, One Health.

POST-TRUTH IN HISTORIOGRAPHY AND AN EXAMPLE FROM TURKISH VETERINARY MEDICINE

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The concept of post-truth was first used in 1992 in the article “A Government of Lies” written by the Serbian-American screenwriter Steve Tesich. The book “The Post-Truth Era” by Ralph Keyes played an important role in making this concept known to millions. The concept has become so popular that it was declared word of the year by Oxford Dictionaries in 2016. In the Dictionaries it is defined as an adjective relating to circumstances in which objective facts are less influential in shaping public opinion than emotional appeals.

As it is known history is not static, on the contrary, it is a continuous interpretation of the past by historians. As society's views and values change and evolve, so do historians and their perspectives. Historians of a particular generation may approach the past differently than their predecessors. Similarly, differences can also be observed in the approaches of contemporary historians depending on their views and values. At this point, the historian's ability to question the accuracy of the information that will be examined is important.

Today, since the perception of history is shaped on the axis of popular culture, examples of post-truth have begun to be encountered in historiography too.

This presentation deals with post-truth in historiography. In addition, a current example of post truth in the field of veterinary medicine in Turkey will be discussed.

In this example, one of the veterinary faculties (Istanbul University-Cerrahpasa Faculty of Veterinary Medicine), which was established in 1972, officially changed its establishment date to 1889. And the history of the Faculty was reconstructed without any historical evidence. The objections of the relevant scientists and the historical documents revealing the falsity of this attempt have been ignored until today.

References: OXFORD LANGUAGES, *Oxford Word of the Year 2016*. <https://languages.oup.com/word-of-the-year/2016/>, (March 13, 2022). R. KEYES, *The post-truth era: Dishonesty and deception in contemporary life*, St. Martin's Press, 2004. S. TESICH, *A government of lies*, The Nation, 1992. F. DINÇER, R.T. BASAGAC GUL, *Letter to the editor: A note on the opening date of the Istanbul University Faculty of Veterinary Medicine*, Ankara Univ. Vet. Fak. Derg., 67: 333-334, 2020.

Keywords: Historiography, Post-Truth, Turkey, Veterinary History.

A PROPOSAL FOR WORLD VETERINARY HERITAGE

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The long legacy of animal healing in human history left cultural assets worldwide. However, many of them have not been identified or evaluated by appropriate and reliable processes so far. Therefore, attention is needed to establishing veterinary cultural heritage and sharing information on the legacy. This study suggests establishing and managing an online archive of the World Veterinary Heritage. Veterinary heritage can be defined as an intangible and intangible cultural heritage related to the health, disease, treatment of animals, and veterinary medicine which are worth preserving culturally and scientifically.

Referencing World Heritage by UNESCO, the Globally Important Agricultural Heritage Systems by the FAO, and other veterinary historical archives, the World Veterinary Heritage (WVH) would set its purpose, criteria, and scope. The goal of the WVH is to find, evaluate, designate and promote the valuable inheritance in veterinary medicine. The WVH aims to acknowledge and share veterinary historical information worldwide. The criteria of the WVH can include originality, universality, and rarity. The scope of the WVH can reach veterinary medical instruments, books, documents, places, and intangible heritage. The WVH would have two levels of committees. As an alliance of the Regional Veterinary Heritage Committees, the World Veterinary Heritage Committee is responsible for evaluating and designation the heritage recommended by the regional committees. According to their own decision, the regional committees, consisting of related communities and organizations, have access to the online archive and can register a limited number of Preparatory Veterinary Heritage (PVH) in a year. Yearly the WVH committee designates and promotes the new WVH among the PVHs. An online archive framed with GIS mapping software provides information on WVH objects such as the name of the heritage, time of production, category, contents, historical characteristics, location, and digital images. The accumulated heritage can be used for academic research, educational purpose, and tourist attraction.

Keywords: Veterinary Medicine, History, Cultural Heritage.

THE ITALIAN VETERINARIANS CONTRIBUTE TO THE DEVELOPMENT OF THE VETERINARY SCHOOLS IN SOUTH AMERICA IN EARLY 19TH CENTURY

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The historical period between late nineteenth century and the first decades of '900 was characterized by a flow of veterinarians and agronomists who decided, either by choice or by necessity, to move from Europe to other continents. Sometimes it were the governments themselves who asked the veterinary schools of the old continent to recruit teaching staff who could be able to start *ex novo* vet schools or strengthen the existing ones, or who could be employed at field level for improving livestock production of those countries.

One of the most important veterinarians was Domenico Giovine, who, in 1927, was invited by the Colombian government with the task to re-open the *Escuela Nacional de Veterinaria* in Bogotá. Giovine re-defined the educational curriculum of the school, and was able to link teaching to research. He served as head of the school until 1931, and was founder-editor of the *Revista de Medicina Veterinaria*.

Between 1904 and 1905, Salvatore Baldassare taught in the new national high school of Agriculture and Veterinary in Buenos Aires. During that period, he had the opportunity to gather extensive information on livestock of Argentina. He took an interest in the breeding of cattle, sheep, horses and pigs and in the related industries. His observations allowed him to write the book "*La Zootecnia nella Repubblica Argentina*". In addition to promoting teaching, Baldassare had the merit of making known to the world the characteristics of Argentinian cattle, giving a great boost to the international trade.

In 1920, it was Paolo Croveri, veterinarian parasitologist who was called to Buenos Aires in order to run a serotherapeutic institute; from 1922 to 1926, thanks to his research skills, he was appointed head of the laboratory in the medical faculty of Buenos Aires, with the task of teaching laboratory techniques applied to the clinic.

In 1909, Luigi Maccagno was called to Lima where he was commissioned to set up the school of animal production, originated from the school of Agriculture. He stayed in Peru for a long period as teacher of Hygiene and Animal Production at the *Escuela Nacional de Agricultura y Veterinaria*, in Lima.

Keywords: South America, Veterinary Schools, Italian Veterinarians Teachers.

VETERINARY MEDICINE EDUCATIONAL TABLES IN THE UNIVERSITY OF TURIN

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ASTUT, Archivio Scientifico e Tecnologico dell'Università di Torino, is an institution devoted to the preservation of the historical material heritage of the University of Turin. Instruments, furniture and accessories are kept in our stores, among them also a collection of large-format educational tables of veterinary anatomy subjects. We have about three hundred tables, drawn probably between 1900 and 1950 and only two tables are signed by the author. They were used as supports during the lessons, before the introduction of projection of slides and other teaching devices. We also preserve the original wooden cabinet with drawers and the clamps to hang the tables on the wall. The boards represent cells, tissues, organs, systems and comparisons between different species of animals and are made with China ink, watercolors or tempera techniques. Sometimes the attention to details is astonishing and the realism too and they represent still today an iconographic resource of great impact and suggestion.

Keywords: Educational Tables, Material Heritage, Veterinary Anatomy.

ANGELO LOMBARDI: ANIMALS IN FRONT OF THE MOVIE LENS

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Television broadcasting in Italy first began in 1954 and between 1956 and 1964 Angelo Lombardi (1911-1996) fronted more than seventy episodes of the programme "L'amico degli animali" which was a hit with the viewing public. The Department of Veterinary Sciences of Grugliasco has obtained the Angelo's library and archive as a donation. The reorganization of this significant material has indicated the depth and breadth of the studies which constituted the zoological knowledge base that was necessary to produce the show's many episodes. The same approach is true of the subsequent editorial and broadcasting activities carried out in later years. As a young man, Angelo developed much experience in East Africa, where he served as a non-commissioned officer in the cavalry, having already developed an interest in animals and the customs of native populations. After completion of his time in the armed forces, he often returned to Africa and he was active in the 1930s as a zoological researcher within Italy's East African colonies. He then became an animal trader, worked as a lion tamer and then owned a private zoo in Salsomaggiore. After the Second World War, he continued to deal with zoos, including becoming director of the Zoo of the city of Naples, and studied new ways of containing wild animals in spaces more suited to their different behavioural needs. Thus the first zoological parks were invented, some of which still exist. He also began to collaborate with the cinema industry as a supplier and expert on animals. In 1956, he began his television broadcasts, the setting of which initially shared similarities with circus shows focusing on the danger of exotic beasts, snakes and spiders. Yet, over time it became a channel through which correct ethological and ecological information was shared. This is why Lombardi is widely considered to be the first popular science communicator. In 1966, John Huston's 'The Bible' movie was released and contained very many different species, especially in scenes depicting the story of Noah's Ark. Angelo Lombardi organised a temporary zoo to support this endeavour and co-ordinated a team of handlers to manage the animals.

References: G. LOMBARDI, *Animali sul set*, Testo&Immagine, Torino, 2000.

Keywords: Angelo Lombardi, wild animals, television, movies.

SCIENTIFIC DISCOVERIES IN CORRESPONDENCE: A LETTER FROM RIVOLTA TO MICELLONE

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Sometimes doing research about a specific topic leads to an unexpected discovery of another one. This is the case with a letter written by prof. Sebastiano Rivolta, a pathologist who taught at the Veterinary School of Turin in nineteenth century. The paper was “hidden” at the end of Rivolta’s book *Dei parassiti vegetali come introduzione allo studio delle malattie parassitarie e delle alterazioni dell’alimento degli animali domestici*, just like an abstract of the article *Di una nuova specie di micro-micete e di sarcoma nel Cavallo*, by Ignazio Micellone, Veterinary Captain and Rivolta. Both concern the *Discomyces equi*, known as “castration fungus”, as its presence was related to that surgery, aetiological agent of botryomycosis, which causes pulmonary and genital nodules.

The discovery of this new fungus, which will later be identified as a bacterium, *Staphylococcus aureus*, was made possible by the use of modern and powerful microscopes that were introduced in the second half of nineteenth century. We want to remember that Giovanni Battista Ercolani, who was the master of both Rivolta and Micellone, was a pioneer in the microscopical studies applied to pathology: indeed, he bought in 1853 a very good – and expensive – instrument made in Florence by Giovanni Battista Amici, who was one of the first manufacturers of achromatic lenses. In those years also the ancillary histological techniques, such as paraffine inclusion, microtomy and tissular stainings were just developing and this can explain also the difficulties and misunderstandings that were faced by those researchers.

References: P. PEILA, M. R. GALLONI, *A short history of the Veterinary Medicine School of Turin*. in I. Zoccarato, P. Peila, M.P. Marchisio (eds.) *Proceedings of the Congress The Military veterinary services of the fighting nations in World War One*, Turin. Fondazione Iniziative Zooprofilattiche e Zootecniche, Brescia, 108, 2018, p. 199.

P. PEILA, *Rivolta, Sebastiano*. *Dizionario Biografico degli Italiani*, 87 (2016), https://www.treccani.it/enciclopedia/sebastiano-rivolta_%28Dizionario-Biografico%29 [last accessed 2022, March 7th]. S. RIVOLTA, I. MICELLONE, *Di una nuova specie di micro-micete e di sarcoma nel Cavallo*. *Giornale di anatomia, fisiologia e patologia degli animali*, Pisa, 1887.

Keywords: Rivolta, Micellone, *Discomyces equi*, Botriomycosis.

50 YEARS OF EDUCATIONAL JOURNAL CLUBS (CONGRESSINI) AT THE INSTITUTE OF VETERINARY INTERNAL MEDICINE OF THE UNIVERSITY OF BOLOGNA

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On October 15, 1946, prof. Albino Messieri, director of the Institute of Veterinary Internal Medicine (Istituto di Patologia Speciale e Clinica Medica Veterinaria) of the University of Bologna started the recording and collection of the minutes of the internal meetings that would have been repeatedly hold for more than 50 years. A total of 289 meetings were recorded, each of them detailed in respect to participants, presented scientific topics, discussed managerial internal problems, internal institutional assignments.

The attendance of the “congressini” – this was the term used to indicate the meetings – was mandatory not only for the teaching staff but also for the students voluntarily attending the Institute. For the latter, the “congressino” was one of the few occasion at that time to have access to literature articles. Participants (students included) were requested to present and critically discuss an article. That was for the students and for the young assistants a unique opportunity to learn how to critically approach and to evidence strengths and criticisms of the presented research topics. Therefore, the “congressini” can without any doubt be considered the precursors of what is currently called “journal club”. Thanks to the scrupulous “mentoring” role of the chairman, the young assistants and students could greatly benefit of an outstanding opportunity to develop their personal attitude and improve their skills in professional public speaking.

The number of participants is estimated around 220 and contains a list of names that would have become famous in the Italian veterinary world, as professors in different veterinary schools, official veterinarians (“condotte” and then ASL), researchers in the state diagnostic laboratories (IZS), officers at the ministry of health, established private practitioners.

The “congressini” were chaired by prof. Messieri from 1946 to 1968 and by prof. Giuseppe Gentile from 1968 to 1990. Prof. Gentile, before taking over the direction of the Institute and therefore the chairmanship of the “congressini”, had already attended the meetings since 1951.

The five books, with the meticulous minutes of 289 “congressini”, constitute a unique evidence of the educational methods that characterized the Institute of Veterinary Internal Medicine of the University of Bologna.

Keywords: congressino, journal club, prof. Albino Messieri, prof. Giuseppe Gentile, Istituto di Patologia Speciale e Clinica Medica Veterinaria.

THE FIRST EVER FEMALE GRADUATES IN VETERINARY MEDICINE FROM EACH OF THE ITALIAN UNIVERSITIES

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Nowadays, the majority of veterinary students in Italy are female. This was a conquest that began almost a century ago. The first female veterinarians in the world date to the late 19th century, although most of them were prevented from practising. In fact, in those years, women were beginning to find a place in the medical field, but professions such as chemistry, law, physics and, indeed, veterinary medicine were exclusively for males.

There were about ten veterinary schools in Italy at that time. In the course of time, some of these have always been active, others have been closed, and others have been opened. There are currently 13 universities with veterinary medicine courses: seven founded before 1900 (Turin, Parma, Bologna, Milan, Naples, Pisa, Perugia), four later (Messina, Bari, Sassari, Teramo), and two, closed in earlier times, have recently been reopened (Padua, Camerino). Despite the presence of a fair number of veterinary schools, it was not until the late 20s that we had the first Italian veterinarian female: Jenny Barbieri, graduated in Bologna in 1927. She tenaciously tried to work at the university, as an assistant in Normal Anatomy, first in Perugia (until 1933) where she was removed for "excessively emancipated conduct", and then in Bologna (until 1954), where she was dismissed for lack of scientific productivity, but most likely because of conflicts with the director of the institute. The second is Antonietta Padovan, graduated in Milan in 1938. Graduated also in mathematics, pharmacy, chemistry and medicine, she was a pharmacist and never worked as a veterinarian. During the WWII, we have the first graduate in Messina: Ada D'Agostino Barbaro in 1943. The next universities with the first female veterinarians are Naples (Maria Anna Schwarz) in 1944 and Turin (Anna Vigone) in 1952, and gradually all the others.

To shine a light on these women, particularly those who graduated before the 1970s, is to recognize that they paved the way for us in the profession.

References: A. VEGGETTI, *Veterinaria al femminile. Possono le signore laurearsi in Medicina Veterinaria*. Obiettivi e documenti veterinari, 1:53-55, 1992. I. KATIĆ, *Pioneer female veterinarians*. Medical Sciences 37:137-168, 2012.

Keywords: Veterinary Medicine, first veterinarian ladies, Italy.

THE HISTORY OF VETERINARY MEDICINE TOLD THROUGH STAMPS

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History of veterinary medicine, like others branches of science, can be told through various forms of collecting: i.e. stamps, postal cancellations, postcards, coins, ancient books and instruments. In the field of philately there are many issues that may be of interest for veterinary sciences: from wild animals to pet and livestock; animal traction or animal in space; animal and human diseases as one health; animal welfare, congresses and so on. Postage stamps can relate to all veterinary researches and education. Moreover, stamps can be interesting not only for collectors, but they can be a valuable tool for reading historical events as well.

Over time, there have been veterinarians who have developed interesting collections and some contributions have been printed representing today a useful tool for collectors and a curiosity for history of veterinary medicine enthusiasts.

Searching through post cancellations, the first school to use postage service to celebrate his 150 years was the *Hochschule* of Hannover, on 12th June 1928. Referring to the foundation of the veterinary schools the first stamp was issued, in 1958, to celebrate the centenary of the Royal Veterinary and Agricultural College of Copenhagen, whereas the first stamp for a congress, 9th veterinary days in Alfort, was issued on 8th June 1951.

The following decade was particularly interesting from a philatelic point of view. Many of the oldest veterinary schools had a stamp or a dedicated cancellation celebrating the bicentenary of their foundation.

Aim of this communication is to retrace until now, through stamps and postal cancellations, the foundation of the veterinary schools, some of which have recently celebrated 250 years since their foundation, and as well to recall the memory of some of the fathers of modern veterinary medicine.

References: E. MENHERT, *Veterinary Medicine in Philately*, Hist. Med. Vet. 17 (3), 65-92, 1992; P. GYSIN, R.D. LOCKE, *Veterinary Science on postal cancellations*, 2nd edition, printed by KallKwik, Cambridge, UK, 2004. ISBN 0-9547692-0-1; F. GUARDA, R. ROSSOTTI, *Sull'Arca con Noè*, Cristiano Giraldi Editore, Ozzano dell'Emilia (BO), 1998; F. GUARDA, *Piccola storia della medicina veterinaria raccontata dai francobolli*. Fondazione Iniziative Zooprofilattiche e Zootecniche, Brescia, Quaderno n. 58, 2005.

Keywords: Veterinary Medicine, philately, stamps, postal cancellations.

THE VETERINARY SCIENCES AND THE PHILATELY

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The intersections between veterinary sciences and philately are multiple. All around the world, during the time, postage stamps have been issued in order to celebrate specific events related to the veterinary sciences: i.e. the vaccination and eradication of some diseases as the rinderpest or foot and mouth disease, veterinary congresses or the Military Veterinary Corps and Farriery activities, or, in very few cases, some veterinarians fathers of the veterinary medicine.

In the same way many others postage stamps, indirectly, can recall the veterinary sciences: i.e. the livestock breeding and the different species and breed farmed; the use of animals as work force in which equids have played a great role: once for the traction in agriculture, for the transports, for the military services and, today, for the sport as horse racing and in the equestrian jumping competition, but also in the pet therapy and equestrian tourism.

Equally numerous are the postage stamps dedicated to pets: dogs, also including utility dogs, and cats, birds and the wild animals.

Moreover, through the postage stamps were also recalled the fundamental production of food of animal origin at the base of food security: milk, meat, eggs, fishing, but, also the use of animals in scientific research has also been represented as the case of Dolly, a sheep, the first living creature obtained by cloning.

Aim of this work, using some pieces of the "Franco Guarda Collection", that counts for more than 1500 postage stamps dedicated to animals and history of the veterinary medicine, is to give a colorful description of the link existing between veterinary medicine and philately.

Keywords: Veterinary Sciences, Philately.

NOTES ON THE HISTORY OF VETERINARY OPHTHALMOLOGY

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The communication aims to give a review of the main events and protagonists that have characterized the evolution of ophthalmology in the veterinary field.

The eyes has been since ancient times an object of studies and researches and in fact demonstrations in this sense are reported in Mesopotamia, Egypt, Greece but also in India and China where investigations began into the nature of organ of the sight. The main objective of the present work was to provide a review of the main historical passages of this particular branch of veterinary medicine which in recent decades has seen a formidable development. This development was made possible above all thanks to the development of suitable technological tools such as the microscope and later on of the ophthalmoscope in 1851. Most of early developments in veterinary ophthalmology occurred in European countries where the schools of veterinary medicine had been founded and recognized since the second half of the eighteenth century while in the American continent the development of veterinary ophthalmology was slower.

Starting from the sixties there was a strong growth in this sector and many veterinarians began to practice this discipline even exclusively. To date from this period significant advances are represented by the creation of veterinary ophthalmology societies or associations, the creation of certifying veterinary ophthalmology boards (colleges), the introduction of veterinary ophthalmology programs in the universities and the advancement of veterinary ophthalmology research worldwide.

The current possibilities in clinical diagnosis and management of animal patients were greatly helped by the introduction of non-invasive imaging of the outer and deeper eye and as well as by the important development of new drugs. From the first studies dating back to the ancient civilisations and the need to understand man and his needs but also the world around him. Humanity has reached levels of knowledge and care unthinkable until a few decades ago. The progress achieved by medicine, both human and veterinary, represents a very valid example of this. More specifically, both human and veterinary, ophthalmology has been able to exploit in the best possible way what new technological opportunities made available to this progress.

Keywords: veterinary ophthalmology, historical development, comparative ophthalmology.

THE DEVELOPMENT OF BUIATRICS IN ITALY IN THE LAST CENTURY

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As a consequence of the transformation of the cattle rearing systems, the specialization of the bovine attitude and the increase of the animal performances, during the 20th century the veterinarian profession related to bovine health ("buiatrics") has experienced enormous development.

This evolution was first driven by the improving knowledge of infectious diseases, allowing the successful campaign against epidemics and zoonosis. The subsequent changes were conditioned by the necessity of more and more specialized competencies in the emerging pathologies, bovine reproduction, animal nutrition, animal production and, finally, animal welfare.

Different opinion leaders in veterinary medicine enabled the beginning of a new era for the Italian buiatrics. Among them prof. Ivo Peli, from the University of Parma and Bologna, that spread the artificial insemination in Italy; Prof. Giuseppe Borrelli, from Casoli (Chieti), a small village in central Italy, which created the first private facility where bovines were brought (by walking!) for consultancy and treatment; prof. Albino Messieri, developer of the Italian method of clinical investigation; prof. Ennio Seren, who established the first university teaching hospital in the royal menagerie of Stupinigi, close to Turin.

A very effective role was played by Istituti Zooprofilattici Sperimentali which provided the veterinarians and the farmers with free diagnostic services, especially for infectious diseases. Bruno Ubertini and Giuseppe Caporale are names that will remain in the history of the battle against Foot and Mouth Disease.

An outstanding role for the addressing of the scientific development of the "buiatric sciences" and their application in the field was played by several farseeing practitioners. Among them dott. Guido Gonella, who intensively applied the cesarean section; dott. Luigi Pauluzzi, who in-depth studied the Ketosis; prof. Fiorello Bottarelli, who gave a great impulse to the theriogenology; prof. Giovanni Sali, who established the first stationary clinic for cattle in Italy, with a modern surgery theater equipped for abomasal displacement reposition, cesarian section and execution of embryo transfer and who, for over 50 years, offered its reach caseload (around 13,000 patients) for the training of more than 1,200 Italian buiatricians.

Italy hosted in 1974 and in 1994 the World Buiatric Congress.

Keywords: Buiatrics, Bovine medicine, Bovine practitioners.

BREEDING HISTORY OF THE BLACK SLAVONIAN PIG

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The Black Slavonian pig or Pfeiffer pig belongs together with the Turopolje and the Banijska Sara pigs to the autochthonous pig breeds of Croatia which are still bred. During the 19th century, a number of other more or less fat breeds were kept in the Balkans such as the Mangalica, Moravka or Bagun. Most of these breeds were adapted to regional farming systems in which the pigs were ranging in forests or on meadows.

The history of the Black Slavonian pig is strongly linked to Baron Karl (Drago) Leopold Pfeiffer (born in 1834) who was a member of a prosperous family of livestock traders and breeders in the Austro-Hungarian Empire. The family had lived in the regions of Slavonia and Syrmia in the catchment area of the rivers Danube, Drava and Save situated in modern Croatia and Serbia. This area is characterized by wet meadows, forests but also steppe. In the year 1870, Drago Pfeiffer started breeding with 10 Poland China boars which were shipped from USA via Trieste (today's Italy). He then mated crossbred sows (swallow-bellied Mangalica x Berkshire) with the Poland China boars mentioned. Selected male offspring was crossed with Mangalica x Berkshire sows repeatedly and new Poland China boars were imported every ten years. At the end of the 19th century the activities of Baron Pfeiffer were very successful and his pigs were passed and sold in Central Europe, too. Baron Drago Pfeiffer died in 1913 and at this time all breeding animals were kept exclusively at his family's estates. After the WWI breeding animals were available also for small farmers and they were distributed within the whole Kingdom of Yugoslavia. The undemanding and fertile Black Slavonian breed and its meat products were very popular until the middle of the 1950s.

With the introduction of industrial pig farming, the numbers of Pfeiffer pigs decreased rapidly and at the end of the 20th century the almost extinct breed could only be stabilized by national protection acts. Since the beginning of the millennium these remarkable pigs serve again as suppliers of high quality pork products with an upward trend.

Keywords: Swine, breeding, Austro-Hungarian Monarchy, Balkans.

A HISTORICAL APPROACH TO THE IMPORTANCE OF TAURINE FOR CATS

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Taurine is a beta-amino acid that is not included in the protein structure and is synthesized from cysteine in the organism. It was first isolated from ox bile in 1827. Taurine cannot synthesize in cats due to the low activity of cysteine dioxygenase and cysteine sulfonic acid decarboxylase. The absence of L-cysteic acid decarboxylase involved in taurine synthesis in cat liver was reported in 1955. In 1964, very low levels of enzymes synthesizing taurine in cat liver have been determined. Therefore, cats must intake taurine exogenously. The determination of taurine amounts in different parts of the cat brain was carried out first in 1969 and then in 1972. In 1975, the chronic taurine deficiency was reported to cause retinal degeneration in cats and blindness if it is left untreated.

In 1977, it was reported that the administration of taurine to a cat with chronic epilepsy resulted in the disappearance of clinical signs of seizures and improvement in abnormal electroencephalography. In 1978, taurine has been reported to be essential for cats. Observation of developmental abnormalities such as blindness and gait disturbance in kittens born to taurine-deficient mothers accelerated the supplementation of taurine to cat foods as of 1981. The relationship between low plasma taurine and myocardial failure in cats has been demonstrated in 1987. It is understood that scientific studies focused on the importance of taurine in cats reached a peak in 1992. In 2009, a comprehensive study in 120 cats has been reported that blood taurine concentration associated with sex and neuter status. Taurine has been shown to play an important role in the synthesis of bile acids in the liver in 2019. Still, taurine deficiency disorders continue to be observed in cats fed cat foods that do not contain enough taurine or fed with home-cooked meals. As a result, taurine is an essential ingredient in cat foods today.

Keywords: Cat, Historical approach, Taurine.

AN ANALYSIS OF SIX WORKS WRITTEN IN OLD TURKISH ON THE HISTORY OF TURKISH VETERINARY MEDICINE

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State archives have rich historical resources on this subject in Turkey. Among these sources, five works written in old Turkish containing information on the history of veterinary medicine were the main sources for this study. Studies; It was published in 1891-1899-1899-1917-1918-1925. These works consist of four articles, a book and a brochure.

In the first article titled "Veterinary School" published in the Journal of Public Works and Agricultural Affairs, information was given about the opening of the Civil Veterinary School. The importance of veterinary medicine for humanity was mentioned in the studies titled "History of Our Veterinary Medicine" and published consecutively with 15 days' intervals. The opening of the first veterinary school in the world and the developments of veterinary schools in other countries are included. The establishment of veterinary classes in the Ottoman Military Academy and the adventure of veterinary education in the Empire are explained. The study, published in the Journal of Halkalı Agricultural School, tells in detail what happened before the establishment of the Civil Veterinary School and its 25-year story since its establishment. The study is an important study enriched with the pictures of the Ministry of Agriculture and the school administrators of the period, as well as the external appearance of the school. The book titled Veterinary Medicine Diary has 18 chapters. The first six chapters contain important information on the history of veterinary medicine in the world and in Turkey. The book is an important historical resource for veterinary medicine with its visual material. The study titled "History of Veterinary Medicine and General Information" is the last accessible work written on the history of veterinary medicine in old Turkish. The information on the opening of veterinary schools in the world is given. Areas, populations and livestock numbers of the leading European countries are given. Information on the area, population and animal numbers of Turkey in 1913 and 1923 before the WWI has been added.

These six works written on the history of veterinary medicine are the oldest studies available in Turkish. Some of them will be presented for the first time.

Keywords: Veterinary medicine history, historical resources, Turkish veterinary history.

**DE MEDICINA EQUORUM - GIORDANO RUFFO DI CALABRIA
(13TH CENTURY)*
6TH BOOK DE ACCIDENTALIBUS INFECTIONIBUS ET
LAESIONIBUS EQUORUM**

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Hippiatria is a rare treatise on horse medicine, which Ruffo edits to gratify his sovereign (Frederick II of Swabia) and to offer scientific basis for those who interest to this important issue.

The treatise, divided into six books, regards both the hippology than hippia-try. Different diseases are taken into consideration. Each disease is exposed with a systematic approach that starts from the description of the symptoms up to the definition of the disease. It deals the etiopathogenesis, the diagnosis and various remedies (i.e. preparations, use of bloodletting, marking and surgical interventions). The aim of this study was to evaluate the part of treaty, regarding the equine acquired diseases. The author proceeds with a rigorous scientific methodology, with the preparation of an index and examines the fifty-seven diseases examined, with the definition of etiopathogenesis and appropriate remedies.

Very interesting is highlight as various diseases reported from Authors are present also today.

In conclusion, the review of the main pathologies that can affect the equine species, together with the indication of the appropriate remedies, highlights the amazing knowledge of Ruffo to deal the equine medicine.

References: M.A. CAUSATI VANNI (a cura di) *Giordano Ruffo, Nelle scuderie di Federico II imperatore, ovvero L'arte di curare il cavallo*, Velletri, 2000; P. DELPRATO *La Mascalcia di Lorenzo Rusio*, Bologna, 1867; L. KLEIN, *Studien zur "Medicina equorum" des Jordanus Ruffus (1250)*, Diss., Hannover, 1969; J.L. PENSADO TOMÉ, G. PÉREZ BARCALA, *Tratado de Albeitaria*, Santiago de Compostela, 2004; B. PRÉVOT, *La science du cheval au Moyen Âge. Le Traité d'hippiatrie de Jordanus Rufus*, Paris 1991; R. ROTH *Die Pferdeheilkunde des Jordanus Ruffus*, Diss., Berlin 1928; C. RUINI, *Dell'Anatomia et delle Infermità del Cavallo*, Bologna, 1598.

Keywords: Veterinary Medicine, Hippiatria, Giordano Ruffo.

Notes [*] (Prévot, 1991) - Giordano Ruffo di Calabria was born around 1200 in Gerace (Calabria, South Italy). He was the nephew of Pietro Ruffo, feudal lord of Tropea and Grand Executioner and Marshal of the Kingdom of Frederick II (Roth 1928).

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