



Exhibition

6 October 2014

until

27 February 2015

Monday - Friday

9.00 - 13.00 uur

afternoon by
appointment

HORSE POWER

Wageningen UR Library

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Horse Power. Wageningen UR Library; 6-10-2014/27-2-2015

Well into the twentieth century most social and economic life has been dependent to some degree on the abundant supply of power by horses. Horses were used in the military, in agriculture, industry (milling), transportation of man and goods and for leisure (including races). Civilisation can be viewed from the domestication of horses, through the diversification of horse uses and specialised breeds unto the substitution of horse labour and equine energy by mechanisation and fossil energy. Even during the period of the Industrial Revolution more horses were used in a wider range of industrial applications and settings than before, providing a flexible and relatively cheap source of power. Nowadays horses are still abundantly around since a decline in uses is met by a rise in the numbers of horses held for leisure and sporting purposes.

The focus on this exhibition is on the study of horses in general and of their anatomy in particular. The reason for this exhibition being the restoration by Elizabet Nijhoff Asser in Amsterdam of the life-sized horse and 40 other anatomical horse parts made by the French Dr. Auzoux (1797-1880). We like to show these models now embedded in our other special collections with a small selection of our rare books and some remarkable illustrated plate works regarding horses.

1: The working horse in old books

The study of horses was started by the nobility and landed gentlemen, mainly for judging the age and quality of horses by their exterior, health and performance. In the early books on agriculture we see treatise on the age of horses (Crescentius, 1518) and its illnesses and defects (Estienne & Liebault, 1588; 1662). Most notable is the work of Jethro Tull (1674-1741), an English agricultural pioneer, who helped bring about the Agricultural Revolution. He perfected a horse-drawn seed drill in 1701 that economically sowed the seeds in neat rows. He later developed a horse-drawn hoe. Tull's methods were adopted by many great land owners and helped to provide the basis for modern agriculture. Because the agricultural revolution freed up labour, providing an escape from the Malthusian trap, it is often cited as one of the causes of the Industrial Revolution.

The regard for highly valued thoroughbred horses, especially in the military, grew into the separate medical science of veterinary (Robinchon, 1736; Van Cour, 1740; Van Oebchelwitz, 1774). Typically for the period of Enlightenment, late 18th century, Van Berkhey studied the Dutch native, domestic horse, and especially the early depiction thereof. He concluded that only paintings by Dutch painter Paulus Potter (c. 1625-1654) were correctly portrayed. In his study on Dutch natural history he displays an engraving of a horse with correctly measured proportions, made by engraver Reinier Vinkeles, after Paulus Potter. More books look into the history of horses to traces the origin of different horse breeds (Lawrence, 1809; Youatt, 1862; Van Leeuwen, 1922). Breeding of horses and the pedigree registration thereof becomes highly organised around the 1900s (Maarsingh, 1921; Lotsy, 1923). More practical works appear on management, training and breeding regarding the different uses of horses, including pulling horses (Louter, 1905; Labouchere, 1927) and war horses (Voeltz, 1916; Carter, 1923). Finally the horse is met by mechanical power according to Watt's horse power.

1. Crescentius, P. de

Von dem nutz der ding die in aeckeren gebuwet werde[n]

Gedruckt zu Strassburg: durch Joanne[m] Schott, ... Joannis Knoblauch, und Pauli Goetz, 1518. - 169 fol : pl.

FORUM - SPEC.COLL. - R334C15 // <http://edepot.wur.nl/272362>

2. Estienne, C. ; Liebault, J.

De veltbouw ofte lantwinnighe : inhoudende eene rechte wel bestellinghe eenes hofs te bouwen, ...

Amstelredam: Claesz., 1588. - 254 p. : 24 houtsn.

FORUM - SPEC.COLL. - R334C11

3. Estienne, C. ; Liebault, J. ; Lonicerus, A. ; Schroederus, J. ; De Serres, O. ; Someren, K. van

Hof-stede en landt-huys : vervatende niet alleen, ... bequame hof-stede, kruyd- en moes-hof, ..., paarden

Dordrecht: Adam Andriesz., 1662. - 189 p. : 4 grav.

FORUM - SPEC.COLL. - R342E06

4. Tull, J.

The horse - hoing husbandry : or, an essay on the principles of tillage ...

London: G. Strahan ; [et al.], 1733. - 274 p.

FORUM - SPEC.COLL. - R346C07

5. Robichon, F.

Ecole de cavalerie, contenant la connoissance, l'instruction et la conservation du cheval

A Paris: chez Jacques Guerrin, 1736. - 2 t.

FORUM - SPEC.COLL. - R334D13

6. Cour, P.A. van

Toevlucht ofte heylsamen remedien voor alderhande siektens en accidenten, die de paarden ... overkomen

Den 7den dr. - Amsterdam: by de Janssoons van Waesberge, 1740. - 248 p.

FORUM - SPEC.COLL. - R338H19

7. Oebschelwitz, L.W.F. van

De Nederlandsche stalmeester, of grondige onderrichting van al hetgeene betrekking heeft tot ... paarden

's-Gravenhage: [s.n.], 1774-1777. - 2 dl.

FORUM - SPEC.COLL. - RD0140

8. Francq van Berkhey, J. le

Natuurlyke historie van Holland

Te Amsterdam [etc.]: by Yntema en Tieboel [etc.], 1769-1811. - 9 dl. in 12 bd. : 62 pl

FORUM - SPEC.COLL. - R340E01 Deel 4, pl. III

9. Lawrence, J.

The history and delineation of the horse, in all his varieties

London: Albion press, 1809. - 288 p. : 15 pl.

FORUM - SPEC.COLL. - R384C07

10. Korsepa, A.

Onderrigt om wederspannige paarden in alle opzigten grondig af te rigten

's-Hertogenbosch: [s.n.], 1843. - 50 p. : pl.

FORUM - SPEC.COLL. - R277E07

11. Herbst, J.A.

Praktischer Unterricht über Pferdezucht : zum Gebrauche für Größere und kleinere Landwirthe

München: Literarisch-artistische Anstalt der J.G. Gotta'schen Buchhandlung, 1854. - VIII, 155 p : II pl.

FORUM - SPEC.COLL. - D0120

12. Youatt, W.

The horse : its history, management and treatment in health and disease

London: [s.n.], 1862

FORUM - SPEC.COLL. - D0101

13. Louter, L.

Het zware paard : handboek voor fokkers van zware trekpaarden

Oostburg: Bronswijk, 1905. - 110 p

FORUM - SPEC.COLL. - CA0419

14. De Nederlandsche paardenfokkerij

[S.l.: s.n.], 1915. - 12 p

FORUM - SPEC.COLL. - A2712,8,195

15. Voeltz, W.

Kriegsrationen fuer Arbeitspferden

Berlin: [s.n.], 1916

FORUM - SPEC.COLL. - D1385

16. Gay, C.W..

Productive horse husbandry. - 2nd ed., rev

Chicago [etc.]: Lippincott, 1916. - XVI, 331 p

FORUM - SPEC.COLL. - A2331,03

17. Oettingen, B. von

Die Pferdezucht : handbuch für Züchter, Studierende und Pferdefreunde

Berlin: Parey, 1918. - 491 p

FORUM - SPEC.COLL. - D1427

18. Born, L. ; Moeller, H.

Handbuch der Pferdekunde fuer Offiziere und Landwirte. - 8. Aufl.

Berlin: Parey, 1921. - 526 p.

FORUM - SPEC.COLL. - D1574

19. Maarsingh, R.A.

Eenige beschouwingen naar aanleiding van het uitgekomen deel 12 van het Groningsch paardenstamboek

[S.l.: Vereniging tot Bevordering van Wetenschappelijke Teelt, 1921. 47 p.

FORUM - SPEC.COLL. - A1647,15

20. Leeuwen, W.S.G.A. van

Een studie aangaande de geschiedenis der paardenfokkerij in Nederland en de binnen - en buitenlandse invloeden

Maastricht: Leiter-Nypels, 1922. - 187 p

FORUM - SPEC.COLL. - D1669 // <http://edepot.wur.nl/290888>

21. Carter, W.H.

The horses of the world : the Development of Man's Companion in War Camp, on Farm, in the Marts of Trade, and in the Field of Sports

Washington: National Geographic Society, 1923. - 118 p

FORUM - SPEC.COLL. - D2006

22. Lotsy, J.P.

De leer van Mendel en de fokkerij : speciaal met het oog op eventueele pogingen om zuivere Belgen uit kruisingsproducten van deze met inlandsche paarden te verkrijgen

Haarlem: Tjeenk Willink, 1923. - [8] p

FORUM - SPEC.COLL. - QE0720,01

23. Gezamenlijke tentoonstelling van het Nederlandsche rundveestamboek en het stamboek voor het Nederlandsche trekpaard, op het Malieveld te 's-Gravenhage, op 5 en 6 September 1923

's-Gravenhage: [s.n.], 1923. – 3 dl.

FORUM - SPEC.COLL. - D2143

24. Labouchere, P.C.

De geschiedenis van het Belgische trekpaard en de invloed van Indigène du Fosteau op de Nederlandsche trekpaardfokkerij

Maastricht: Leiter-Nypels, 1927. - 238 p.

FORUM - SPEC.COLL. - D1855 / A2096,1927,4

// <http://edepot.wur.nl/50944>

25. Visser, M.F.

De Watt'sche paardekracht en de "kracht" van een paard

Den Haag: [s.n.], 1929. - 4 p

FORUM - SPEC.COLL. - F0275,17

2: Anatomic Models

Dr. Louis Th.J. Auzoux (1797-1880) was a French medical doctor who made papier-mâché models of humans, animals, and plants for use in teaching medicine and anatomy. Dr. Auzoux's models were designed to be taken apart and put back together. 'Dissecting' the models provided a similar experience to examining real human bodies or animals. The models were known as 'Anatomie Clastique' (from the Greek word 'to break') because they could be taken apart. In the 1820s Dr. Auzoux originally developed his models of human bodies and body parts for professional medical training. Auzoux claimed that even lay people could learn anatomy without the aid of an instructor simply by 'dissecting' the models by themselves, as many of the anatomical details are identified by labels in French. Other numbered labels, decorated with a small image of a hand, showed the order in which the models should be taken apart and reassembled by the student.

Dr. Auzoux founded a factory in his hometown in France for producing the models. Responding to changing trends in scientific research and education, the company began producing models of human embryos, animals and plants, as well as continuing to make models of adult humans. Auzoux's company exhibited its teaching models at the industrial shows which took place in the second half of the 19th century, such as the Great Exhibition of 1851 in London, where they received much praise.

The Rijks Landbouwschool (the State Agricultural School) in Wageningen has purchased several of Auzoux's works (about 60), probably between 1876-1891. The most striking piece is a full size anatomical model of a stallion. The abdomen of the horse can be opened horizontally by moving up the head and shoulders. Twelve parts of the horse are dissectible: 1. the left leg, 2. the left side of the head, 3. the penis; in the upper abdominal cavity: 4. bladder and prostate, 5. large intestine, 6. small intestine 7. stomach, 8. liver and kidneys, 9. diaphragm, 10. left lung, 11. right lung and 12. the heart. Some parts are missing: the left of the head, the left hind leg muscle and a left back muscle. To study the anatomy of the horse a small brochure *Tableau synoptique du cheval* (Paris, 1855) was made which mentions all 352 name labels and numbers. At Wageningen University the horse is still used in the education of students Animal Sciences.

Another forty separate horse parts are available in the Wageningen Auzoux Collection: a horse's foot (1891), a horse's leg with 8 separate pathological components, 30 dental elements being the anterior upper and lower jaw with incisors (24 of different ages and 6 with abnormalities), and the female urogenital system of a mare (1879?). Two of the original set of 32 horse dental elements are missing (no. 1 and 14). The Wageningen Auzoux collection also includes another 14 dental elements of cows (incisors anterior lower jaw), the uterus of a pregnant cow with calf, and a human larynx.

During the 19th century Auzoux models were sold throughout the world, until models in plaster or plastic increasingly replaced them. At the beginning of the twentieth century paper models were made as books with moveable plates, showing the exterior, muscles, veins, organs and skeleton, even as a half life-sized model of a horse. Special paper constructions made it possible to look inside

the organs as well. These models were relatively cheap and available for a wider audience of students.

26. Quadekker, E.A.L.

Het paard : groot model (half levensgroot), aanschouwelijk uit- en inwendig voorgesteld door beweegbare platen

Deventer: Kluwer, [ca. 1910] : 6 pl.

FORUM - SPEC.COLL. - R391D28 / RPK-I-F-00

// <http://edepot.wur.nl/302228>

27. Quadekker, E.A.L.

Het paard, lichaamsbouw en inwendige organen, met 5 gekleurde, beweegbare platen ... landbouw-onderwijs ...

3e, veel verm. dr. - Deventer: Kluwer, [ca. 1910]. - 122 p.

FORUM - SPEC.COLL. - R-Modellendoos-2 // <http://edepot.wur.nl/3807>

28. Auzoux, L.T.J.

Cheval incomplet, anatomisch model van een paard [hengst] / vervaardiger L.T.J. Auzoux. 1879

Uit: Collection des modèles anatomiques de chevaux et la vache

[Saint-Aubin-d'Écrosville : Atelier du Auzoux, 1870-1900]. - 60 dl.

FORUM - SPEC.COLL.

29. Nederlandsch-Indische Vereeniging tot Bescherming der Dieren (Batavia)

Practisch zakboekje tot onderkenning van den leeftijd van een paard naar de tanden

Batavia : Nederlandsch-Indische Vereeniging tot Bescherming der Dieren, [1899]. - 19 p : 20 pl.

FORUM - SPEC.COLL. - D0694

30. Urogenitale stelsel van een merrie / doct. Auzoux fecit anno 1879[?]

Uit: Collection des modèles anatomiques de chevaux et la vache

[Saint-Aubin-d'Écrosville : Atelier du Auzoux, 1870-1900]. - 60 dl.

FORUM - SPEC.COLL.

31. Schwarz, A. ; Quadekker, E.A.L.

Het paard, zijn lichaamsbouw en zijne inwendige organen : voor fokkers, ... alsmede voor landbouwonderwijs ...

Deventer: Kluwer, [1895]. - 34 p.

FORUM - SPEC.COLL. - R-Modellendoos-2 // - RD2292

32. Paardenvoet / Anatomie Clastique du doct. Auzoux, 1891

Uit: Collection des modèles anatomiques de chevaux et la vache

[Saint-Aubin-d'Écrosville : Atelier du Auzoux, 1870-1900]. - 60 dl.

FORUM - SPEC.COLL.

33. Paardenbeen met 8 te vervangen onderdelen met gebreken
Uit: Collection des modèles anatomiques de chevaux et la vache
[Saint-Aubin-d'Écrosville : Atelier du Auzoux, 1870-1900]. - 60 dl.
FORUM - SPEC.COLL.

34. Paardengebitten (24), snijtanden onder- en bovenkaak; op leeftijd gerangschikt
Uit: Collection des modèles anatomiques de chevaux et la vache
[Saint-Aubin-d'Écrosville : Atelier du Auzoux, 1870-1900]. - 60 dl.
FORUM - SPEC.COLL.

35. Paardengebitten (6) met gebreken
Uit: Collection des modèles anatomiques de chevaux et la vache
[Saint-Aubin-d'Écrosville : Atelier du Auzoux, 1870-1900]. - 60 dl.
FORUM - SPEC.COLL.

3: Illustrations of horse breeds

Horses are featured in many paintings depicting heroic scenes. The Frenchman Carle Vernet (1758-1835) was famous for his military and hunting scenes with prominently featured horses.

Otto Eerelman (1839-1926) was a Dutch painter, etcher and lithographer who became famous thanks to his faithful sketches and paintings of dogs and horses. He also made as court painter various portraits of Princess Wilhelmina in her younger years and later as queen. In 1898 the album *Paardenrassen* (Horse Breeds) with forty lithographs of Eerelmans horse paintings was released, accompanied by explanatory texts of E.A.L. Quadekker. Because of the thorough knowledge of army captain and veterinarian Quadekker and the accurate sketches and paintings of Eerelman this is a highly valued and sought after book.

Emil F.H. Volkers (1831-1905) was a German horse painter. He created realistic portraits of particular horses for their owners. A combination of horse and horseman paintings were his equestrian portraits of Wilhelm I (1872), and Otto von Bismarck (1875), which lead into the glorifying personality cult of Wilhelminism. His horse paintings often approached a photo realistic accuracy, sometimes too realistic as a contemporary stated, which was attributed to the hippological interest and knowledge of the painter. Besides paintings Volkers made drawings, illustrations and graphics for books about

horses, for example, *Vorzügliche Pferderassen Europas* (1869) or *Abbildungen vorzüglicher Pferde-Rassen* (1880).

At the turn of the 19th into the 20th century a new variety of animal portraits appeared as the photography of horses became popular. Typically they were made during exhibitions and shows of the medal winning horses with their name, pedigree, age, weight and owner mentioned. In some cases the photos are retouched because of the long shutter speed and agility of the animal. Sometimes the background is disguised behind a cloth or a charming landscape decoration. These photo albums with original photographs were officially published in a small number of issues. Although not unique they can be quite rare nowadays. They illustrate a small but special chapter in the history of photography and book printing, being overhauled by the use of photo reproduction in books in the 1920s.

36. Eerelman, O.; Quadekker, E.A.L.

Paardenrassen : 41 afbeeldingen in chromolithografie naar schilderijen van O. Eerelman

Zutphen: [s.n.], [ca. 1898] : 41 pl.

FORUM - SPEC.COLL. - R376A01

37. Onze paarden in 1903 : afbeeldingen van paarden, bekroond op de eerste nationale paardententoonstelling gehouden te 's-Gravenhage op 14 - 18 Sept. 1903

Maastricht: Leiter-Nypels, [1903]. - [48] p.

FORUM - SPEC.COLL. - 001C12

38. Riesen, G.N.H. van

Het paard : leidraad voor de behandeling en verzorging van het paard, ...

Zwolle: [s.n.], 1895. - 107 p. : 36 gravures

FORUM - SPEC.COLL. - D0696

39. Volkers, E.

Paarden - album : 34 afbeeldingen van paardenrassen

Utrecht: Scrinierius, [ca. 1890]. - 1 map : 34 losse pl.

FORUM - SPEC.COLL. - R376D31

40. Drathen, C. von

Das schwere Arbeitspferd in England und Schottland sowie seine Bedeutung für Deutschland ...

Berlin: Verlagsbuchhandlung Paul Parey, 1898. - 65 p : ill.

FORUM - SPEC.COLL. - D0697

41. Quadekker, E.A.L.

De paardenrassen

Groningen: Van der Kamp, 1896-1898. - 2 dl.

FORUM - SPEC.COLL. - D0946

42. Theulegoet, H. de

Monographie du cheval de trait Belge

Bruxelles: Librairie Nationale d'Art et d'Histoire, G. van Oest, 1911. - 122 p

FORUM - SPEC.COLL. - R391D17

43. Volkers, E.

Paarden - album : 34 afbeeldingen van paardenrassen

Utrecht: Scriverius, [ca. 1890]. - 1 map : 34 losse pl.

FORUM - SPEC.COLL. - R376D31

44. Hunt, C. ; Harris, J.

[Afbeeldingen van renpaarden]

Londen ; Parijs [etc.]: Gambart, Moore, Mc. Queen Co. ; Goupil [etc.],
1857-1872. - 1 map : 22 handgekl. pl.

FORUM - SPEC.COLL. - RPK.II-F-01

45. Przewalski, N.M. ; Zalenskij, V.

Wissenschaftliche Resultate der von N.M. Przewalski nach Central-Asien
unternommen Reisen

Sanktpeterburg': Prodaetsja i Komicionerov" Imperatorskoj Akademij
Nauky, 1902. - 74 p : 4 pl.

FORUM - SPEC.COLL. - R385A24

46. Catalogus van de eerste nationale paardententoonstelling, te houden
van 13 tot 18 September 1903, in de Maliebaan te 's-Gravenhage, vanwege
de Vereeniging tot Bevordering der Paardenfokkerij in Nederland, opgericht
19 April 1902 ...

Groningen: Erven Van der Kamp, 1903. - 168 p

FORUM - SPEC.COLL. - ZZ0157

47. H. Schnaebeli und Co. (Berlin)

Photographien preisgekrönter Thiere der Internat. Landwirthschaftlichen
Thier-Ausstellung zu Hamburg, 1883

Berlin: Schnaebeli, 1883. - 2 dozen : 117 foto's.

FORUM - SPEC.COLL. - R360A006

48. [Verzameling foto's van paarden]

[S.l.: s.n., 1880-ca. 1920]. - 1 doos : 48 foto's.

FORUM - SPEC.COLL. - R360A- Fotocoll. (R374B09)

49. Schwartz, F.A. ; Schnaebeli, H. ; Hoffmann, W. ; Deutsche
Landwirtschafts-Gesellschaft (Berlin)

[Andenken an die] Wander-Ausstellung [der Deutschen
Landwirtschaftsgesellschaft : Photographien]
[Berlin: D.L.G, 1889-1910]. - 12 Bd. : 182 foto's, 120 fotorepr.
FORUM - SPEC.COLL. - R360A051

50. Vernet, C.
[Verzameling afbeeldingen van paarden, naar teekeningen van Carle
Vernet]
[S.l.: s.n., ca. 1820]. - 1 doos : 73 pl.
FORUM - SPEC.COLL. - R375B14

51. Volkers, E.
Paarden - album : 34 afbeeldingen van paardenrassen
Utrecht: Scrinierius, [ca. 1890]. - 1 map : 34 losse pl.
FORUM - SPEC.COLL. - R376D31

52. Low, D.
The breeds of the domestic animals of the British Islands
London: Longman [etc.], 1842. - 2 Vol. : Pl.
FORUM - SPEC.COLL. - R333A05 / R376B07

53. Volkers, E. ; Schwarznecker, G. ; Zipperlen, W.
Abbildungen vorzueglicher Pferde-Rassen
Stuttgart: Schickhardt und Ebner, [ca. 1880]. - 1 p. : 20 pl.
FORUM - SPEC.COLL. - R376E34

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