R-A-T

AN ASSOCIATIVE ORDERING

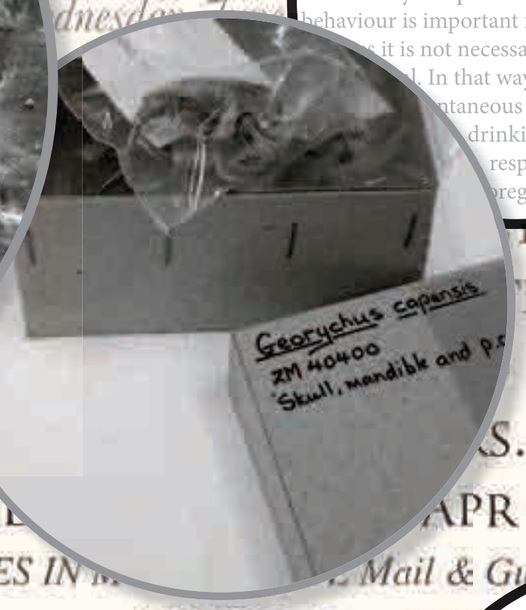
FRITHA LANGERMAN

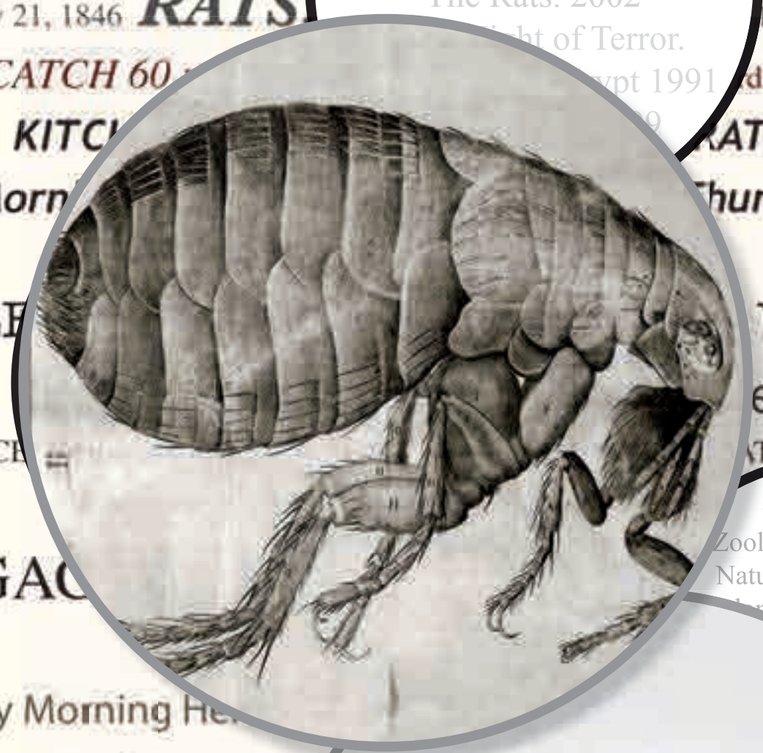
2012–2013

IZIKO SOUTH AFRICAN MUSEUM
CAPE TOWN

Dracula. 1979
Altered Species. 2001
Deadly Eyes. 1982
The Food of Gods. 1976
The Rats. 2002

The male rat's sexual behaviour constitutes a highly ordered sequence of motor acts involving both striate and smooth muscles. It is spontaneously displayed by most adult made rats in the presence of a sexually receptive female. Although the behaviour is important for the survival of the it is not necessary for survival of the . In that way it is different from ntaneous behaviours such drinking, avoidance respiration or regulation.





WA
George Shaw.
Zoology or Systematic Natural History. 1801,
Thomas Bewick. A
of Quadrupeds.
don.
yclopaedia
Gesner.
lium
51

WEIGHT: 280–480g.
Length: (nose to tip of tail) 325–460 cm.
HEAD AND BODY: Nose blunt; heavy, thick body; 180–255 mm.
EARS: Small, close set, with fine hairs, appearing half buried in fur. Rarely over 20 mm.

Burmese
Agouti – light brown to sandy colour
Champagne – very light cream
Chinchilla – deep grey with paler nose
Chocolate – sleek, rich brown
Chocolate Agouti – chestnut brown
namon – anywhere between soft cream to reddish cream.
n Pearl – soft cream with white base fur
very deep, greyish blue.
American Blue
er with flecks of
te fur

pes of sexes. The with the main but 50 kHz, occur action with solicitation g activity. The second type of call is the long, 22 kHz whistle which is emitted mainly by the male during the post-ejaculatory refractory period, but also by both male and female at other times during the copulatory

by Dr. the early acteristics include ocile behaviour, and low The Lewis rat suffers from several spontaneous pathologies: first, they can suffer from high incidences of neoplasms, with the rat's lifespan mainly determined by this. The most common are adenomas of the pituitary and

[1551] THE BROWN RAT IS DESCRIBED FOR THE FIRST TIME IN CONRAD GESNER'S HISTORIAE ANIMALIUM [230–190 MYA] RODENT-LIKE REPTILES DEVELOP [1752] THE COMMUNE OF PIURO PURCHASE MALEDICTIONS FROM THE POPE TO GET RID OF RODENTS [1685] RATS CAUSE THE DEATHS OF ALL THE RESIDENTS OF RONA ISLAND, SCOTLAND AFTER EATING ALL FOOD SUP

The exhibition hints at an alternative experience of the visual within the museum, that destabilises linear hierarchies and is visually entangled. It uses *Rattus norvegicus*, the brown rat, as a means to explore the representation of species. Rather than a discrete display, *R-A-T* is dispersed throughout the museum, furtively making its way into disused corners and cabinets. This distribution introduces the rat in relation to ranging themes, forming a meta-narrative of connections while suggesting manners in which museum display impacts on the understanding of species.

The rat, an urban creature abhorred within the anthropocentric city, has been largely excluded from presentation in museums of natural history. This, despite rodents making up 40% of the total mammalian diversity, and *Rattus* being the largest mammalian genus, consisting of more than 60 species. As an animal that is closely related to the development of human populations, the rat speaks as much to a cultural and social history as to a natural one. It is an icon of modernity: of disease, migration, stereotype, destruction, behavioural psychology, literature and pharmacology. The archaeological record reveals that rats are reliant on human movement and settlement – and that they are as vivid a marker of settlement as domestic animals – while in the modern world rats have followed a trail of destruction caused by war, colonisation, conquest and urbanism, living on the waste of human society.

The title, *R-A-T* is taken from James Rodwell's book, *The rat* (1858), in which he suggests that the sound and form of the word is synonymous with its nature – harsh and aggressive, "the foulest name in zoology", associated with dirt, pollution, lasciviousness and unbounded appetite. One million rat bites are reported annually, and while they carry epithets such as furtive and skulking, they are also known to giggle when tickled and to behave with empathy towards fellow rats. In this way terms such as 'vermin' can be ascribed to categories of animals that become lesser, allowing for their extermination on a mass scale. The human relationship to the rat is schizophrenic. It is the loved pet and character of children's literature, while at the same time domestic rat killings are proudly posted on YouTube. The rat straddles definitions and in so doing questions the premise of museums of natural history – what is meant by nature and what is natural?

ORIENTATION LOBBY

The exhibition is introduced by a display-stand reminiscent of both a rat catcher basket and Jeremy Bentham's panopticon of the 1790s. Originally designed as a centrally positioned observation tower to watch prison inmates undetected, here the rat is positioned as the insider at the centre of the panopticon. It is thus both the observer of the museum and the observed, introducing the ambiguity of the human relationship to this particular animal. The freeze dried rat at the centre, bought at the Evolution Store in New York, is also an aside to Bentham who, after his death, had his body dissected, preserved and displayed in a wooden cabinet. This panopticon functions as an orienting device, noting some rat geography and containing the map of the project. The fat rat is the ultimate sewer rat, the global rat that has made its way across continents. It is Robert Sullivan's urban rat, James Rodwell's despised rat and Maud Ellman's modernist rat.

A timeline runs across the stairwell. This line is dispersed throughout the museum, moving up, across and down cabinets. Together with the red rat tag, based on Gesner's rat, it signs areas of the exhibition display, connecting different sites. It disrupts chronology and linearity, presenting facts of ranging significance and unrelated contexts.

WORLD OF WATER
Marion Island

This site uses three metal cases that currently house study skins, including the historical collection of *Rattus norvegicus*. The first cabinet is surrounded by prints taken from books and folios of natural history between the 1600 and 1800s from the Iziko South African Museum and University of Cape Town collections. Included in this is a woodcut of the black rat, *Rattus rattus*, originally printed in Volume 1 of Conrad Gesner's *Historiae animalium* (1551), which also contained the first mention of the brown rat. The book was a Renaissance compendium of everything known of various species, from observation to allegory and symbolism. This image of the world as a collection of related elements is a spirit that is picked up throughout the exhibition. This cabinet is covered by mirrored texts of idioms interspersed with rat evolutionary taxonomy. It reflects on natural history museums, their knowledges and practices and presents the viewer with an image of themselves amidst a dense textual network. Within this the viewer is witness to their own confusion. The framed images are punctuated with magnifying glasses containing texts about sight: how nature is viewed and how rats see.

BOOKS FROM THE UNIVERSITY OF CAPE TOWN RARE BOOKS COLLECTION

George Shaw. Zoology or systematic natural history. 1801, London.

Thomas Bewick. A general history of quadrupeds. 1807, London.

Abraham Rees. The cyclopaedia or universal dictionary of arts, sciences and literature. 1820, London.

Comte De Buffon. Oeuvres complètes de Buffon. 1819, Paris.

Charles Knight. Natural history or second division of the English cyclopaedia. 1867, London.

Charles Knight. Penny cyclopaeia of the society for the diffusion of useful knowledge. 1839, London.

Richard Lydekker. The royal natural history. 1894, London.

Edward Topsell. History of four-footed beasts and serpents describing at large their true and lively figure, their several names, conditions, kinds and virtues ... 1658, London.

FOLIOS AND BOOKS FROM THE SOUTH AFRICAN MUSEUM COLLECTION

Geoffroy Saint-Hilaire & Frédéric Cuvier. Histoire naturelle des mammifères. 1842, Paris.

Lefebvre Théophile. Par une commission scientifique. Voyage en Abyssinie - pendant les annees. 1839-1840, Paris.

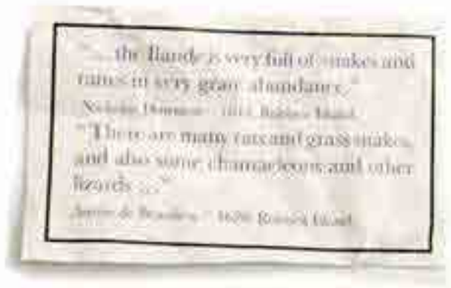
George Shaw. Engraved by John Frederick Miller. Cimelia physica. Rare and curious quadrupeds, birds &. together with some of the most elegant plants. 1796, London.

Commandee M Vaillant . Voyage autour du monde. Sur la corvette La Bonita, 1836-1837, Paris.

Eduard Rüpell. Atlas zu der reise in nördlichen Afrika. 1826, Frankfurt.

[1956] JAMES OLDS PUBLISHES HIS WORK ON THE PL

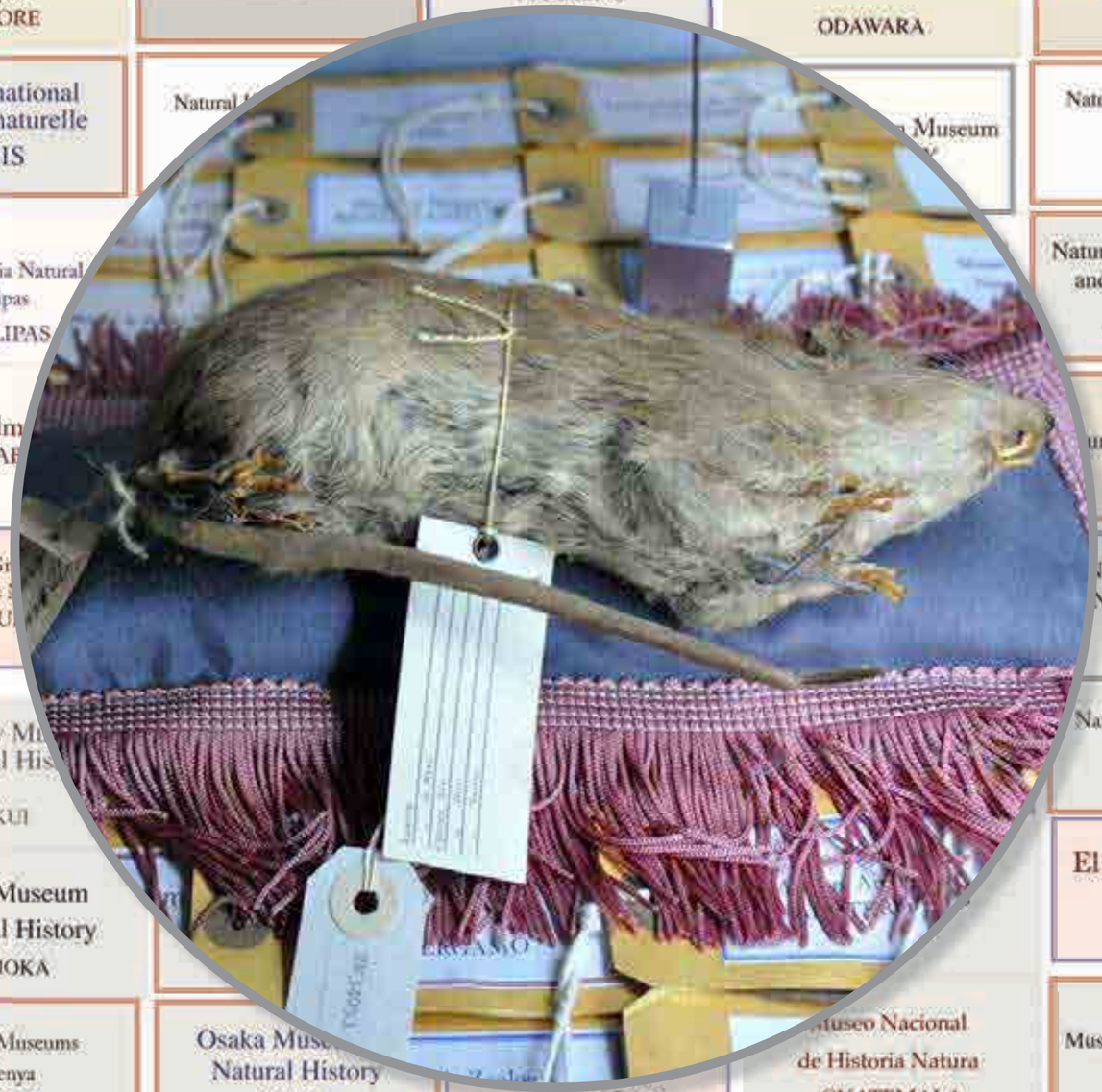
[488] RODENTS ARE EXCOMMUNICATED FROM THE DIOCESE OF AUTUN FOR THE DESTRUCT



4/12/1902 5/6/1908 29/6/1938 13/7/1905 9/5/1938 19/7/1925 8/5/1899 8/1925 5/1912 12/1902 8/5/1899 20/8/1908 3/7/1906 19/6/1902

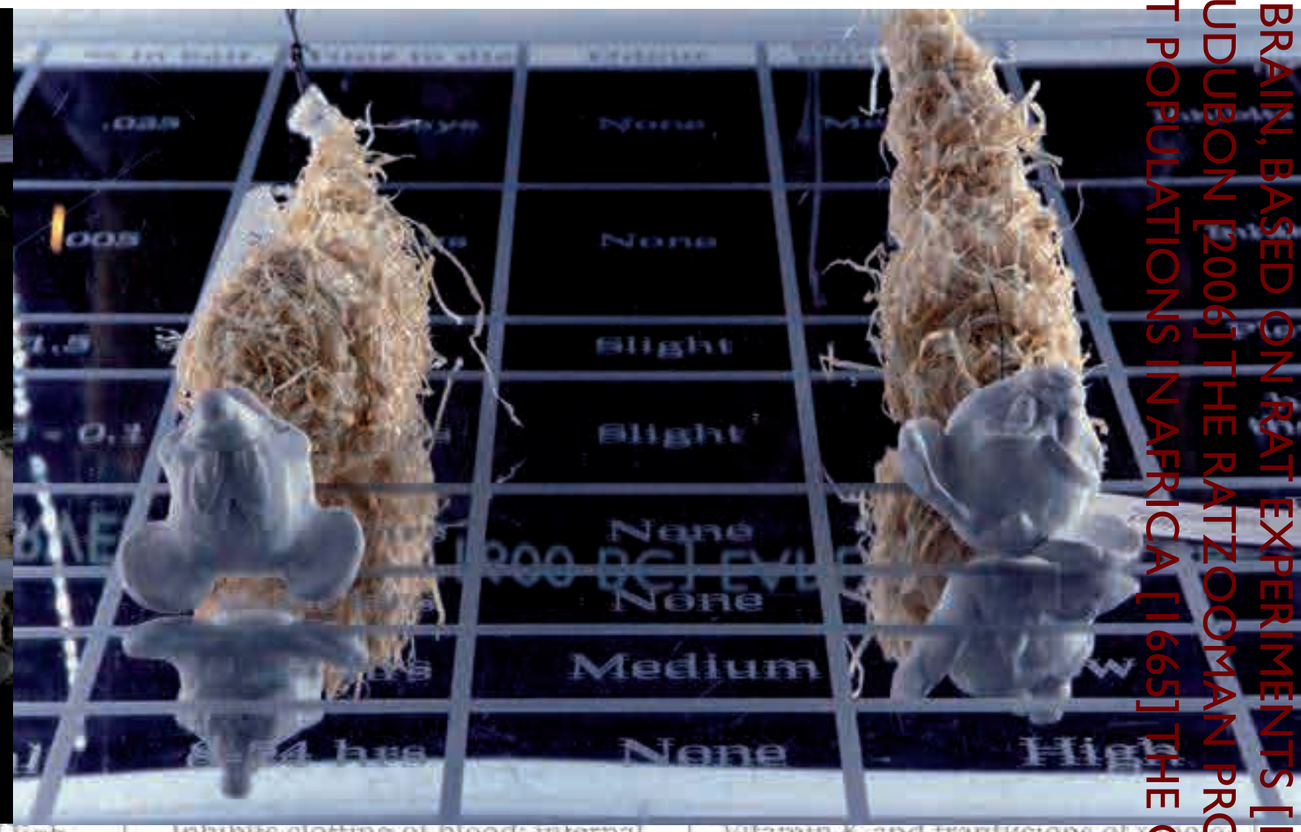
WORLD OF WATER
Marion Island

The second case contains rat study skins from the Iziko South African Museum collection, originally sourced in Cape Town, Port St Johns, Stellenbosch and Chishawasha, Zambia. The skins are housed within the very cabinets now used for display: the collection is literally being surfaced. The cabinet is lined with tags that list more than 500 museums with mammal collections, and the skins themselves are recumbent on hand-stitched silk cushions reminiscent of those of the wax models at La Specola in Florence. Interspersed amongst these are labels that augment the existing study skin labels. They contain information about taxidermy methods and museum taxidermists and collectors Shortridge and Smithers, text from ISAM experts on rat paleontology and an image of Government Avenue in 1902, when and from where many specimens were sourced. At the back of the cabinet a series of degraded mirrors are inscribed with the dates of specimen collection between 1899, shortly after the museum was relocated to its current position and 1938, the year that dredging for the Duncan Dock began.



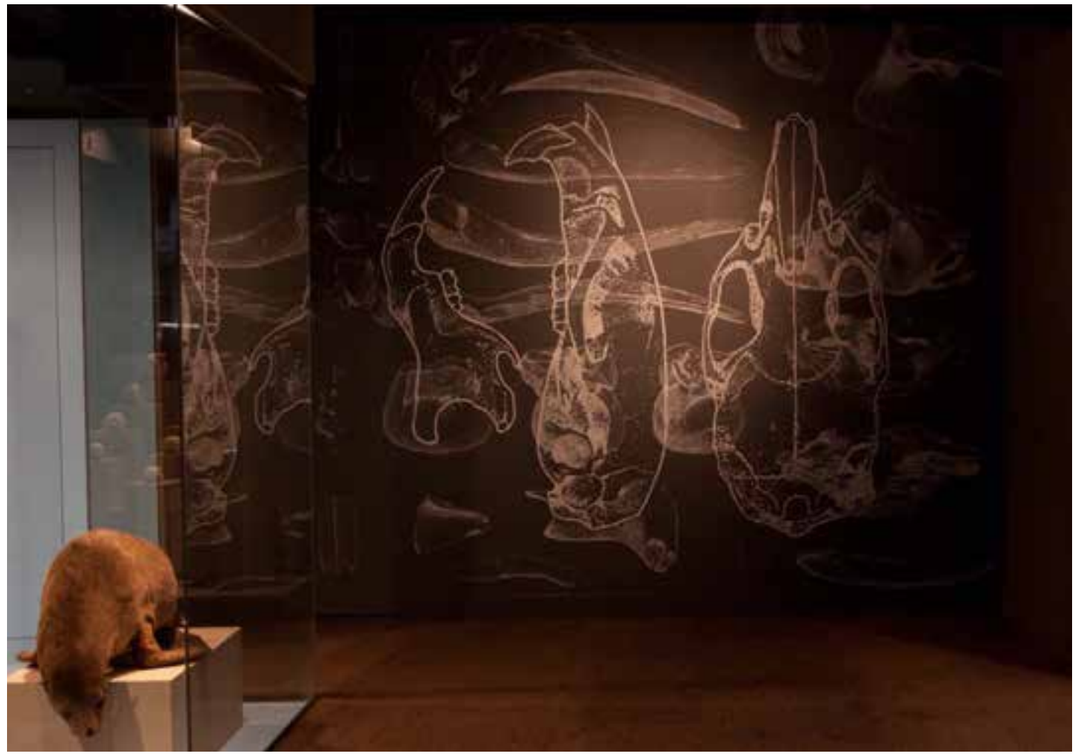
WORLD OF WATER
Marion Island

The third cabinet is in close proximity to the display of a feral cat preying on birds at Marion island. It houses chemical bottles that were previously labelled with the deaths of naturalists in *Subtle thresholds*. These have been relabelled with large-scale rat exterminations that have taken place on various islands. Ranging from 305 tonnes of Brodifacoum on MacQuarie Island, Australia in 2010 to 64 tonnes of Arsenic in Alberta, Canada in 1951. Petrie dishes with broken egg shells are labelled with bird species endangered on those islands. Lying alongside this on mirrored surfaces sandblasted with neutral information about rat habitat and rat poisons are taxidermy 'dummies' of popular rat characters: the implied 'fillings' of the nearby skins. Three responses to rats are represented here: observation, extermination and 'Disneyfication'.



Chlorophacinone Brodifacoum Flocoumafen Bromadiolone Difethialone	0.5[1]	.005	3-6 days	None	High	Inhibits clotting of blood; internal haemorrhages Organ failure	Vitamin K and tranfusions of blood
Alpha-naphthylthiourea	8[3]	1.5	2-4 hr	Slight	Medium	Pleural effusion (over production of fluid in lungs)	None
CALCIFEROLS Cholecalciferol Ergocalciferol	42.5	0.075 - 0.1	3-7 days	Slight	Low	hypercalcaemia and calcification of the blood vessels renal failure, cardiac abnormalities, hypertension	Calcitonin, a hormone that lowers the blood levels of calcium
FLUOROACETAMIDE (1081)	15	2.0	8- 48 hrs	None	High	Paralysis of heart and central nervous system	None
NORBORMIDE	12	1.0	8-24 hrs	None	Low	Blood vessels constrict, failure of organ systems	None
RED SQUILL	500[2]	10.0	8-24 hrs	Medium	Low	Heart paralysis	Acts as own emetic to animals capable of vomiting
SODIUM FLUOROACETATE (1080)	5	1/2 Oz/Gal	8-24 hrs	None	High	Paralysis of heart and central nervous system	None. Monoacetin or ethyl alcohol and acetic acid recommended
VACOR	5	2.0	24 hrs	None	Low	Respiratory failure	Nicotinamide in lab rats
ZINC PHOSPHIDE	40	1.0	3-12 hrs	Strong	Low	Heart paralysis; gastro-intestinal and liver damage	Copper sulphate before emetic: cathartic and water. Avoid fats and oils

THE BRAIN, BASED ON RAT EXPERIMENTS [1824] RATS EAT 200 PICTURES BY NATURALIST JOHN JAMES AUDUBON [2006] THE RATZOOMAN PROJECT CONDUCTS RESEARCH INTO HUMAN AND RAT POPULATIONS IN AFRICA [1665] THE GREAT PLAGUE IN LONDON KILLS 68 596 PEOPLE



CAROLI LINNAEI
SYSTEMAE NATURAE
REGNUM ANIMALE
1758

61
Rattus. 9. M. cauda elongata fubnuda, palmis tetradactylis cum unguiculo pollicari, plantis pentadactylis.

Mus
62 MAMMALIA GLIRES. Mus cauda elongata subnuda, corpore susco cinerascente. *Faun. suec.* 28. *Syst. nat.* 10. *n.* 6.
Mus domesticus major. *Gesn. quadr.* 109. *Aldr. quadr.* 417. *Raj. quadr.* 217. Glis. *Jonjl. quadr.f.* 66. *Habitat in domibus* Europae. *Cautum animal, utensilibus insestum.*
Glirem *veterum me ignorare agnosco, nifi sit Marmota aut Cricetus.*

JOHN BERKENHOUT
OUTLINES OF THE NATURAL HISTORY OF GREAT BRITAIN AND IRELAND
1789

MAMMALIA GLIRES (5) MUS. Lower fore-teeth small, poited. Toes 4 before, 5 behind. Tail long.

1. Norvegicus. *Brown Rat.* Length to the tail 9 inches; tail 9 inches. Back tawny. Belly dirty white. Feet and legs almost bare. Tail scaly. Omitted by Linnaeus.

4. Rattus. *Common Rat.* Tail longer than the body. On the fore feet 4 claws and a kind of thumb nail; behind 5. White whiskers. Almost extinct.

WORLD OF WATER

This cabinet responds to its proximate location to underwater displays. It alludes to a space of imagination, dread and fantasy as well as rational ordering and psychology. In response to a particular display of comparative seal skulls in the museum, stepped in an evocation of evolutionary progress, rodent skulls are presented here on a flat, non-hierarchical surface surrounded by broken ladders – the scaffolding of an ascendant iconography of evolution. Behind this are chalkboard texts that are taken from the classification of *Rattus rattus* by Linneaus in 1758 and *Rattus norvegicus* by John Berkenhout in 1789. Gesner's description of the rat from 1551 is also included. Alongside this a tower of large white books of rat fiction are marked with library cards from academic texts, and simulated rat tails are labelled with 'luggage tags' from a host of ships that arrived in Cape Town harbour over the past 350 years. Interpretations of seven rodent and one seal brain, based on those found at the Gallery of Palaeontology and Comparative Anatomy, Muséum national d'Histoire Naturelle, Paris, are presented upon a light box. They are surrounded by hundreds of specimen bottles, labelled with rat experiments, alluding to the estimation that an article based on rat research is published worldwide every minute. Frames texts held by retort stands draw connections between unihemispheric sleep in seals, sleep deprivation tests on rats, musophobia, pleasure centre tests and the amygdala. Behind these are texts taken from Skinner's survey of operant behaviour, 1963 and Freud's Ratman notes on obsessional neurosis from 1909. Opposite the cabinet, facing the whale skeletons is a drawing of whale bones and a mouse skull. This refers to Linnaeus's classification of the blue whale – *Balaenoptera musculus* in *Systema naturae* (1758) as a possible play in scale between the largest of creatures and *Mus musculus* – the house mouse.

CONRAD GESNER
HISTORIAE ANIMA
1551
DE MAIORE DOMESTICO MURE VULGO RATTUM VOCANT. 829

A.
Muris genus magnum, rattum uocamus, Albertus & Liber de naturis rerum. Ratti quidem uox non Germanis tantum, sed Gallis etiam, Hispanis, Italis & Anglis in usu est. Plura de diuersis nomenclaturis huius animantis uide supra in Mure A. Soricem non esse rattum uulgò dictú, id est maiorem murem domesticum, sed omnino syluestrem, ex Plinio demonstrabimus infra, ubi de Sorice separatim agetur. Sed murem araneum quoq à ratto differre, ex eius historia patebit: quãquam Ge. Agricola eundem esse iudicat. Colotes, stellio est. Albertus ubi Aristoteles asinum impugnare coloten scribit, rattum imperite interpretatur.

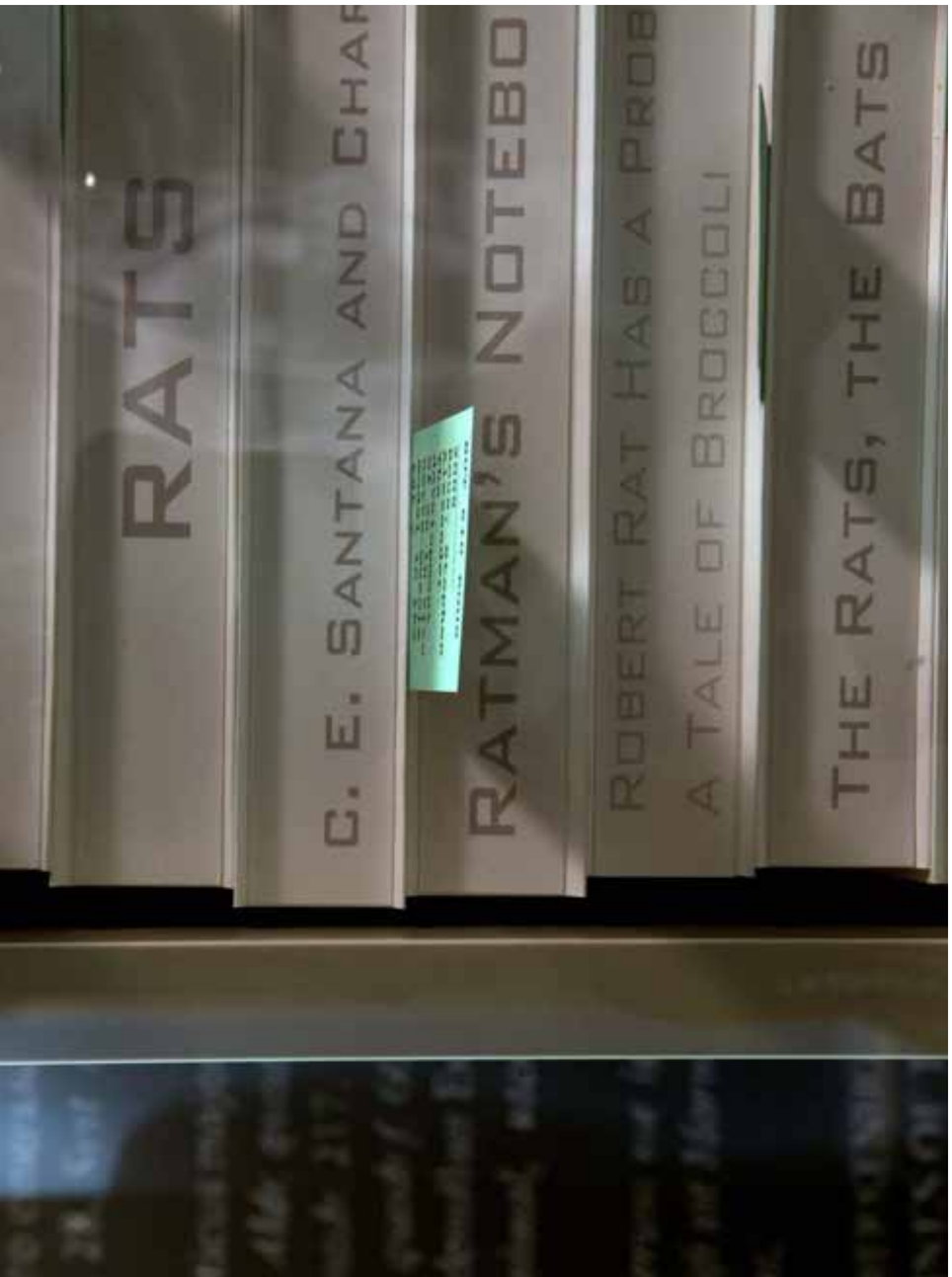
B.
Rattus quadruplo sere maior est mure: colore subniger uel suscus, qui ueuntrem uersus dilutior est. Capite longiusculo cauda procera, tenui, nuda pilis: mole corporis mustelae magnitudinem assequitur, Ge. Agricola. Ego rattum undiquaq albissimum uidi nuper apud nos captú Aprilis medeo, oculis rubicundis prominentibus, barba multis & oblongis pilis hirsute. Augustae Vindelicorum circa templum diui Huldrici ratnos nullos inueniri audio. Nõ latet in terra ueluti reliqui mures domestici, tametsi in ualle loa chimica ex proximis domicils in cuniculos (fodinas) ingrediat, & in his uerset: alioqui hyberno


1688
Queensland
1871
1882
INTAGEL CASTLE
1708
SAN JOSE
NEERMIN
1764
1978
Good Hope Castle
184
DUKE ARGY
VICTORIA
1860
1878
La Rochelle
BERG CHINA


RMIN
64
THE SCOT
Queen of the South
1858
Harlech Castle

[1821] ‘BILLY’ THE BULL TERRIER KILLS OVER 100 RATS IN LESS THAN 12 MINUTES [1917] RAT N
ESCALATE DURING WW1 AS THEY FEED ON DEAD BODIES IN NO MAN’S LAND [1612] THEOP
MÜLLER AND JOHANN FABER PERFORM THE FIRST RECORDED RAT DISSECTION AT THE ACC
DEI LINCEI [1969] A SHOWER OF RATS FALLS ON THE ISLAND OF LOMBOK, INDONESIA [190–
MYA] MULTITUBERCULATES (RODENT-LIKE MAMMALS) DEVELOP [1730] THE BROWN RAT ARR

Squirrel - Sciurus carolinensis
Ground squirrel - Xerus inauris
Woodland Dormouse - Graphiurus murinus
Cape Mole rat - Georychus capensis
Cape dune mole rat - Bathyergus suillus
Cape Porcupine - Hystrix africaeaustralis
Cape Gerbil - Tatera afra
Barbours’ Rock mouse - Petromyscus barbouri
African pygmy mouse - Mus minutoides
Brant’s Whistling Rat - Parotomys brantsii
Cape Spiny Mouse - Acomys spinosissimus
Spring hare - Pedetes capensis
Black rat - Rattus rattus
Brown rat - Rattus norvegicus



A hungry rat is placed in a semi-soundproof box. For several days bits of food are occasionally delivered into a tray by an automatic dispenser. The rat soon goes to the tray immediately upon hearing the sound of the dispenser. A small horizontal section of a lever protruding from the wall has been resting in its lowest position, but it is now raised slightly so that when the rat touches it, it moves downward. In doing so it closes an electric circuit and operates the food dispenser. Immediately after eating the delivered food the rat begins to press the lever fairly rapidly. The behavior has been strengthened or reinforced by a single consequence. The rat was not 'trying' to do anything when it first touched the lever and it did not learn from 'errors.'

To a hungry rat, food is a natural reinforcer, but the reinforcer in this example is the sound of the food dispenser, which was conditioned as a reinforcer when it was repeatedly followed by the delivery of food before the lever was pressed. In fact, the sound of that one operation of the dispenser would have had an observable effect even though no food was delivered on that occasion. When food no longer follows pressing the lever, the rat eventually stops pressing. The behavior is said to have been extinguished.

B F Skinner. A brief survey of operant behaviour. 1963

Here the patient broke off, got up from the sofa, and begged me to spare him the recital of the details. I assured him that I myself had no taste whatever for cruelty, and certainly had no desire to torment him, but that naturally I could not grant him something which was beyond my power. He might just as well ask me to give him the moon. The overcoming of resistances was a law of the treatment, and on no consideration could it be dispensed with… I went on to say that I would do all I could, nevertheless, to guess the full meaning of any hints he gave me. Was he perhaps thinking of impalement? – 'No, not that; … the criminal was tied up …' – he expressed himself so indistinctly that I could not immediately guess in what position- '… a pot was turned upside down on his buttocks … some rats were put into it … and they…' – he had again got up and was showing every sign of horror and resistance- 'bored their way in …' – into his anus, I helped him out.

At all the more important moments while he was telling his story his face took on a very strange, composite expression. I could only interpret it as one of horror at pleasure of his own which he himself was unaware. He proceeded with great difficulty: 'At that moment the idea flashed through my mind that this was happening to a person who was very dear to me.'

Sigmund Freud. Extracts from the Ratman notes upon a case of obsessional neurosis. 1909

BRAIN WEIGHT
ADULT HUMAN 1,300-1,400G
SPERM WHALE 7,800G
BEAVER 45G
PORCUPINE 25G
MARMOT 17G
RABBIT 10-13G
SQUIRREL 7.6G
GUINEA PIG 4G
HEDGEHOG 3.35G
RAT 2G
HAMSTER 1.4G

SHARK WORLD

Dominated by a whaling harpoon, this cabinet takes death and sacrifice as its theme. Shadows of rat traps and killing devices are suggested on the sliding doors behind the harpoon, again connecting whales and rodents. The cabinet is symmetrically organised and recalls the cathedral layout of *Subtle thresholds*. A central 'lancet window' houses conical bio-reaction tubes labelled with diseases carried by rats and test tubes labelled with disease experimentation done on rats. Above this rests a collection of glass reagent bottles and beakers labelled with information about the plague. On either side are trefoil frames, previously used in *Subtle thresholds*, housing electron microscope images of rat food and rat poison, the difference between the complex materials impossible to discern. The images are observed by two white *Sprague-Dawley* rats on satin cushions, that were in their past lives used in pharmacological tests for malaria drugs. These gaze at their own representations, avoiding eye contact with the viewer. On the right a gallows of rat traps recalling a rat catcher baskets is labelled with adjectives attributed to rats. On the left is a grid of skulls, skins and images – one of these a glass slide of an Anopheles mosquito. The grid also contains YouTube videos of rat killings and rat pettings. Genealogical and evolutionary tree schemas are etched onto mirror in the background. These surround urns that are labelled with extinct and rare rats – an Adamic or Linnaean task of naming and unnaming, set at the outer edge of paradise. On the far left baseball bats with names of recognised vermin are propped against empty food crates. These are assembled to constitute a Noah's Ark, labelled with animals from Athanasius Kircher's *Arca Noë* diagram (1675). Kircher described Noah's Ark as the first museum of natural history. Rats were not included in his list.

14: Cranes and Storks.

3: Pernices, Partridges, Attagines.

15: Herons of different species.

4: Kingfishers.

[passage]

5: Magpies of different species.

16: Geese, domestic and wild.

6: Parrots of different species.

17: Ducks of different species.

7: Peacocks of different species.

G: passage.

[passage]

X: Wolves.

O: Casks full of water for necessary use.

Y: 2 Foxes.

[passage]

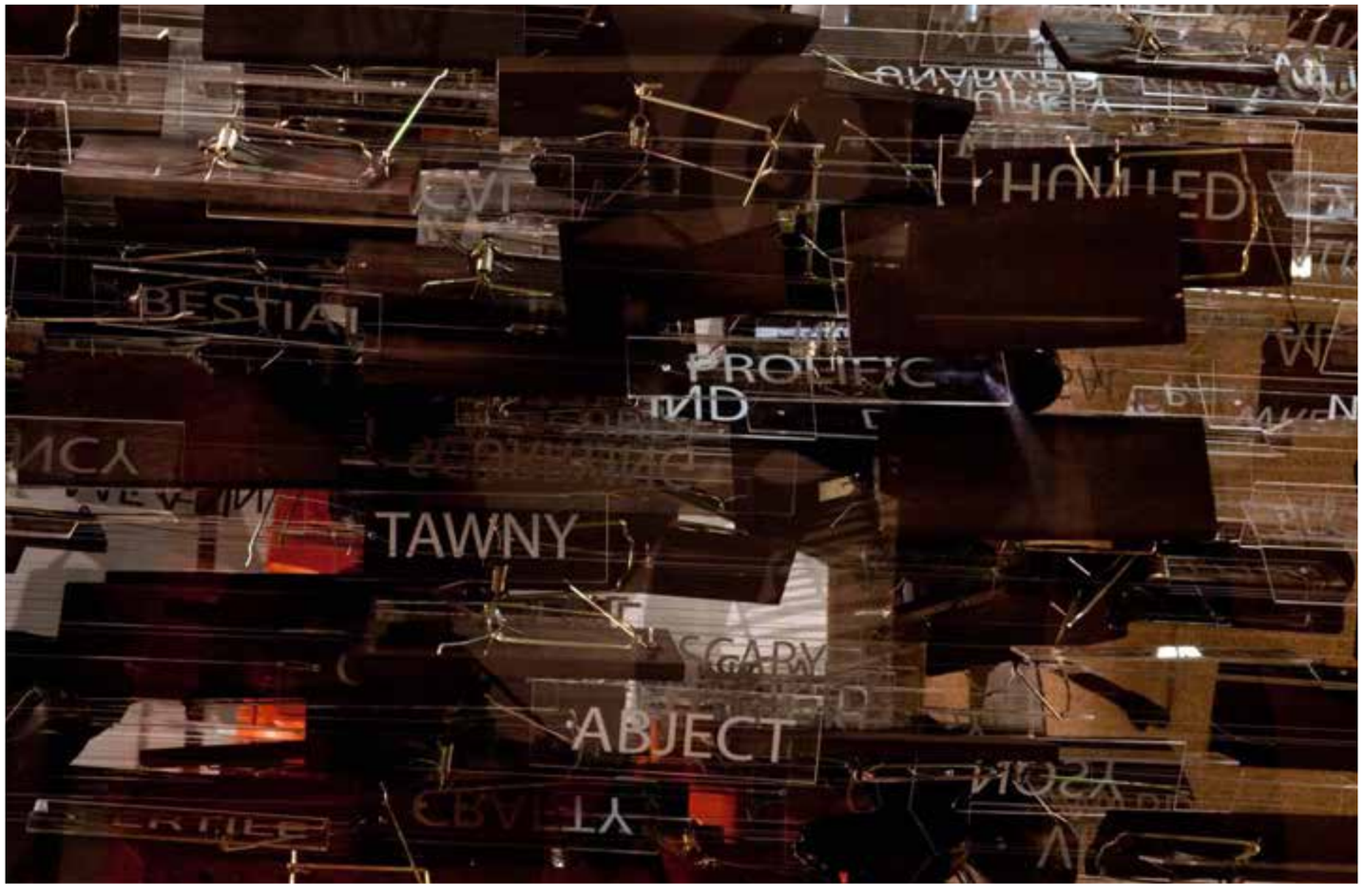
Z: Wild Boar, 2 Domestic swine.

P: Tree-leaves for the use of animals in wintertime.

Libra: Cistern

Q: Hay for the herbivorous animals.

ENGLAND FROM THE EAST [1902] CAPTAIN G C SHORTRIDGE COLLECTS RATTUS NORVEGIC
SPECIMENS AT PORT ST JOHNS [2012] 55 TONNES OF BRODIFACOUM IS DROPPED ON SOUTH
GEORGIA ISLAND [1729] VAST NUMBERS OF BROWN RATS ARRIVE IN RUSSIA, ACROSS THE



WESTERN DESERTS [1940] BUBONIC PLAGUE SPREADS TO TEN STATES IN THE USA. ONLY 65 D
ARE RECORDED [1894] C C STEWART USES RATS TO TEST THE EFFECT OF ALCOHOL AND DIE
ANIMAL ACTIVITY [1913] JOHANNES FIBIGER INTRODUCES CANCER CELLS INTO RATS [1284]


VENENUM
Rattus norvegicus

UBONIC PLAGUE CAPILLARIA AEROPHILA CAMPYLOBA
YSENTERY CRYPTOSPORIDIOSIS CYSTICERCOSIS DYSI
OSINOPHILIC MENINGITIS HANTAVIRUS HEPATIC CAPILLA
YMENOLEPIASIS LASSA FEVER TYPHUS LEPTOSPIROSIS
HORIOMENINGITIS TYPHUS MYCOPLASMA Q FEVER O
UUMALA VIRUS RABIES RINGWORM PASTEURELLOSIS

Leporillus apicalis LESSER STICK NEST RAT
Boromys torrei TORRE'S CAVE RAT
Rattus macleari MACLEAR'S RAT
**Diplothrix legata* RYUKYUS ISLANDS TREE RAT

Canariomys bravoi TENERIFE GIANT RAT
Boromys offella ORIENTE CAVE RAT
Uromys imperator EMPEROR RAT

Leporillus apicalis LESSER STICK NEST RAT
Boromys torrei TORRE'S CAVE RAT
Rattus macleari MACLEAR'S RAT
**Diplothrix legata* RYUKYUS ISLANDS TREE RAT

AUNDICE KIDNEY DISEASE LACTOSE INTOLERANCE
ANCER LIVER DISEASE LYMPHOMA MALARIA M
IUMPS MENINGOCOCCAL DISEASE MYOPIA MIGR
CLEROSIS MUSCULAR DYSTROPHY NARCOLEPSY
YMPHOMA OBESITY OSTEOPOROSIS OSTEOMY
OLIO PANCREATITIS PARKINSON'S DISEASE PE
ANCER RUBELLA SARS SCARLET FEVER SPINA
HRUSH TETANUS THYROID DISORDERS TUBERCU
ELLOW FEVER

Spelaeomys florensis FLORES CAVE RAT
Canariomys bravoi TENERIFE GIANT RAT
Boromys offella ORIENTE CAVE RAT

Leporillus apicalis LESSER STICK NEST RAT
Boromys torrei TORRE'S CAVE RAT
Rattus macleari MACLEAR'S RAT

Canariomys bravoi TENERIFE GIANT RAT
Boromys offella ORIENTE CAVE RAT
Uromys imperator EMPEROR RAT

Boromys torrei TORRE'S CAVE RAT
Rattus macleari MACLEAR'S RAT
**Diplothrix legata* RYUKYUS ISLANDS TREE RAT

Spelaeomys florensis FLORES CAVE RAT
Canariomys bravoi TENERIFE GIANT RAT
Boromys offella ORIENTE CAVE RAT
Uromys imperator EMPEROR RAT

CATCHER LURES RATS INTO THE WESER RIVER, HAMELIN [1971] THE RAT HORROR MOVIE, WIL
RELEASED [1894] TROOPS IN CHINA SPREAD BUBONIC PLAGUE TO HONG KONG WHICH IS C
BY RATS TO OTHER WORLD PORTS [1565] CONRAD GESNER DIES OF PLAGUE [1963] RESEARC

MAMMAL ROOM

The mammal room has remained unchanged for the past 30 years and displays a number of South African rodents. Amongst these are two *Rattus rattus* and a single bleached *Rattus norvegicus*, which, with its back to the viewer, appears to be attempting an escape from its hessian-bound confinement. To this specimen has been added a white handkerchief of surrender, a small wooden oar and a label: Kenneth Grahame, 1907. Diagonally across the room, a mobile diorama, designed as a scale version of the metal cabinets, has been inserted into a disused corner. Based on poses of Adam and Eve from Masaccio's *Expulsion from the Garden of Eden* (1424), two rats stand under sodium light at the outer edge of Paradise (Kirstenbosch Gardens), gripping a small fragment of hessian. The work makes reference to a long history of dioramas within museums where, in arrested time, specimens are immortal and perfectly formed. At the time of the *R-A-T* exhibition opening a cabinet opposite this had been cleared of it specimens and, strewn with rodenticide and insecticide, was an appropriate foil to paradise. These two rats were acquired from a snake park after the skins from Rentokil exterminations proved beyond saving. In an inversion, these specimens were not the fruits of temptation, but escaped the jaws of snakes in order to return to paradise.

MASACCIO, 1424
Expulsion of Adam and Eve from Eden
Brancacci Chapel, Santa Maria del Carmine, Florence

WONDERS OF NATURE

To the regular grid of wonderful and curious natural specimens in glass cabinets is added an inconsequential rat skull. This was sourced from one of the taxidermied rats on the exhibition and nestles alongside an elephant seal skull. On a carpeted area stretching below the glass cabinets are 500 different rat cut-outs, many labelled with titles of rat movies. Melodramatically illuminated by torches, the shadow-rats refer to the horror genre that has had such a strong influence upon the way in which rats are perceived.


APOCALYPSE
NOW
1979

BIRD GALLERY

This cabinet, in the midst of bird displays designed in 1959, makes obvious contextual reference to cages, breeding and feather-like colour swatches. When Jack Black, Queen Victoria's official rat catcher, began to experiment with rat breeding this resulted in a fashion for domesticated rats in Victorian England. This was cemented when Mary Douglas's black and hooded rat won first prize in at the national mouse club exhibition. This was the origin of the 'fancy rat' that heralded the contradictory relationship humans have to these animals. Both Beatrix Potter's *Samuel whiskers* (1908), said to be based on a rat obtained from Jack Black, and Kenneth Grahame's *Wind in the willows* (1907) were written after the craze for domesticated rat breeding. The coloured feather-like labels at the back of the cabinet refer to the excess of 60 different rat colours and markings in bred rats. From a cavity in the cabinet, that was previously used to display an archaeopteryx cast, cascade fabric 'mutant' rats: ear, foot and tailless. The bitumen-black cages are labelled with the sex habits of rats and they refer to the dark practice of rat baiting – a simultaneous Victorian pastime whereby rats were pitted against dogs. Here Jacko the terrier held the world record of 100 rat kills in 5.5 minutes. Also included are laboratory rat housings, labelled with the more than 200 strains of lab rat that have been developed for research purposes since a colony of hooded rats were bred in the Jardin des Plantes, Paris in 1856. A *Sprague-Dawley,* one of the most popular research rats sits within a commercial trap, sniffing Vapona, an insecticide used to protect museum specimens.

THE WISTAR PRODUCE THE SPONTANEOUSLY HYPERTENSI
CAT, USED TO FIND GENES THAT REGULATE BLO
RESSURE [2011] DR KEVIN ROWE EXTRACTS D
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ATCHING [1930] THE WORD 'RODENT' BECO
OMMONPLACE IN THE ENGLISH LANGUAGE
RYCHNINE FIRST USED TO KILL DOGS, CATS,
TS AND

RATS CAN REACH SEXUAL MATURITY AT 5 WEEKS OF AGE.

RATS DON'T HAVE A BREEDING SEASON, ALTHOUGH VERY HOT OR COLD TEMPERATURES WILL REDUCE BREEDING.

FEMALES OF BREEDING AGE COME INTO HEAT ALL YEAR ROUND, EVERY 4 TO 5 DAYS, UNLESS THEY ARE PREGNANT OR NURSING.

A FEMALE RAT APPROACHES MENOPAUSE AT ABOUT 18 MONTHS.

MOST PET SHOPS SELL 50-90% OF THEIR RATS FOR REPTILE FOOD.

THE RAT GESTATION PERIOD IS NORMALLY 22 DAYS.

FEMALE RATS COME BACK INTO HEAT WITHIN 24 HOURS OF GIVING BIRTH.

IF TWO FEMALE RATS WITH LITTERS ARE LEFT TOGETHER THEY MAY STEAL EACH OTHER'S BABIES.

IN RAT SOCIETY, A MOTHER RAT IS USUALLY DOMINANT OVER ALL OTHER RATS, EVEN IF SHE IS USUALLY SUBMISSIVE.

RAT BIRTH NORMALLY TAKES ABOUT AN HOUR OR TWO. THE MOTHER WILL HELP DELIVER THEM WITH HER HANDS AND TEETH.

MOST FEMALE RATS ARE GOOD MOTHERS, BUT IF STRESSED, MAY KILL AND PARTIALLY EAT SOME HEALTHY BABIES.

IF FEMALE RATS CO-HABIT WITHOUT MALE RATS, THEY WILL MOUNT EACH OTHER WHEN IN HEAT.

FEMALE RATS GO INTO HEAT EVERY 5 DAYS.

JACK BLACK, QUEEN VICTORIA'S OFFICIAL RAT CATCHER STARTED A FASHION FOR DOMESTICATED, 'FANCY' RATS IN VICTORIAN ENGLAND.

THERE ARE MORE THAN 200 STRAINS OF LAB RAT THAT HAVE BEEN DEVELOPED FOR RESEARCH PURPOSES SINCE 1856 IN PARIS.

THERE ARE NOW IN EXCESS OF 60 DIFFERENT RAT COLOURS AND MARKINGS IN BRED RATS.

IN VICTORIAN LONDON THERE WERE AT LEAST 70 RAT PITS IN WHICH BETS WERE PLACED ON HOW LONG IT TOOK TO KILL ALL THE RATS IN A PIT.

IN 1823, BILLY THE BULL TERRIER KILLED 100 RATS IN 5 AND A HALF MINUTES.

RAT CATCHERS PROVIDED IN EXCESS OF 1000 RATS FOR RAT BAITING MATCHES IN VICTORIAN LONDON.

TODAY REWARDS ARE OFFERED FOR CATCHING RATS IN URBAN ENVIRONMENTS. PAYMENT IS MADE ON NUMBER OF TAILS COLLECTED.

THE AVERAGE PACK SIZE IS BETWEEN 15-220 RATS.

THE MALE RAT'S SEXUAL BEHAVIOUR CONSTITUTES AN ORDERED SEQUENCE OF MOTOR ACTS INVOLVING BOTH STRIATE AND SMOOTH MUSCLES.

ULTRASONIC VOCALIZATIONS ARE CONSPICUOUS DURING RAT MATING ACTIVITY.

PROLONGED STRESS INTERFERES WITH THE ONSET OF RAT SEXUAL BEHAVIOUR AT PUBERTY AND WITH FERTILITY AT ADULTHOOD.

WHEN IN HEAT THE FEMALE PROMPTS THE MALE INTO MOUNTING HER BY DARTING TOWARDS HIM AND HOPPING, SOMETIMES WIGGLING HER EARS.

LORDOSIS IS THE FEMALE RAT MATING POSTURE. SHE STANDS IMMOBILE, BACK ARCHED DOWNWARD, RUMP ELEVATED AND TAIL DEFLECTED .

THE MALE RAT SEX DRIVE IS EXPRESSED AFTER PUBERTY, WHEN TESTOSTERONE IS SECRETED.

AFTER MATING, THE MALE MAY EMIT ULTRASONIC VOCALIZATIONS, AND HE BECOMES SEXUALLY INACTIVE AND LETHARGIC.

RATS CAN REACH SEXUAL MATURITY AT 5 WEEKS OF AGE.

RATS DON'T HAVE A BREEDING SEASON, ALTHOUGH VERY HOT OR COLD TEMPERATURES WILL REDUCE BREEDING.

FEMALES OF BREEDING AGE COME INTO HEAT ALL YEAR ROUND, EVERY 4 TO 5 DAYS, UNLESS THEY ARE PREGNANT OR NURSING.

A SINGLE PAIR OF RATS CAN PRODUCE 359 HEIRS IN 3 YEARS.

8-10 YOUNG ARE BORN IN EACH LITTER.

FEMALE RATS BEAR 3-7 LITTERS IN THEIR LIFETIME.

ON AVERAGE A FEMALE WEANS 20 YOUNG EACH YEAR.

RAT PUPS ARE BORN 22 DAYS AFTER CONCEPTION.

RAT ARE ALTRICIAL – BORN BLIND AND HELPLESS WITH PINK WRINKLED, BALD SKIN, AND CAN ONLY WRIGGLE AND PADDLE.

PUPS EYES OPEN AFTER 10-15 DAYS.

PUPS ARE FED BY THEIR MOTHER UNTIL 4-5 WEEKS AND EAT SOLID AT 3 WEEKS.

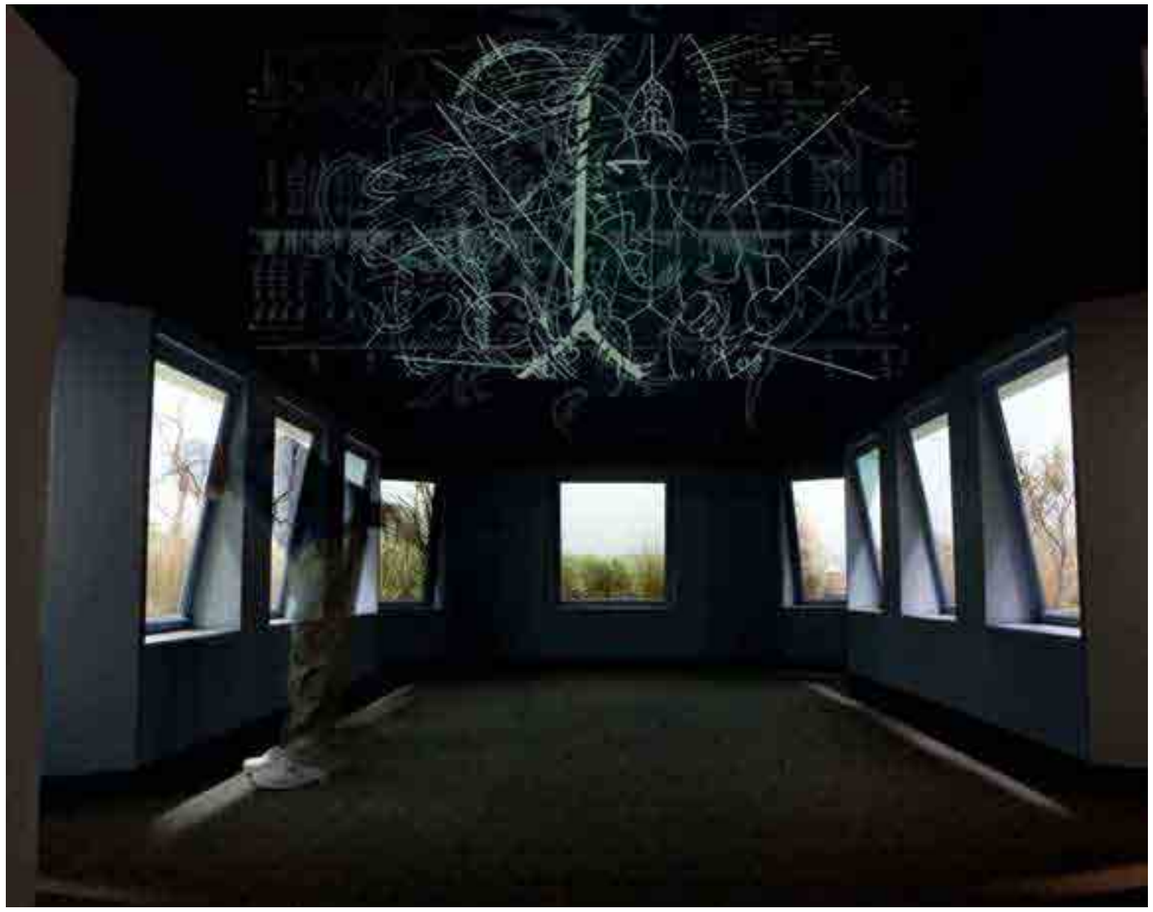
RAT PUPS REACH MATURITY AT 80-90 DAYS AND ARE ABLE TO MATE. RATS REACH OLD AGE AT 15 MONTHS.

YOUNG RATS ARE RAISED COMMUNALLY, AND FEMALES WILL RAISE ORPHANED PUPS.

MOTHERS WILL EAT THEIR LITTER UNDER STRESSFUL CONDITIONS.

WHEN FEMALE RATS ARE NOT AVAILABLE, MALE RATS WILL DISPLAY

Agouti – range of browns and reds mixed into the fur
Albino – all white, pink-eyed
Amber – pale brown to cream
Apricot
Argente Creme
Baldie
Bareback
Black eyed cream
Black Eyed Himalayan
Blazed
Blazed Essex
Beige – deeper brown than amber.
Black – very deep black with no sign of other colours
Blue – pale silvery sheen
Blue agouti- silvery blue with other colours mixed into the fur
Blue Point Himalayan
Blue Point Siamese
Buff
Burmese – rich, soft brown with no other colour traces
Burmese Agouti – light brown to sandy colour
Champagne – very light cream
Chinchilla – deep grey with paler nose
Chocolate – sleek, rich brown
Chocolate Agouti – chestnut brown
Cinnamon – anywhere between soft cream to reddish cream
Cinnamon Pearl – soft cream with white base fur
Coffee
Dark blue – very deep, greyish blue
Dark American Blue
Dove – silver with flecks of white fur
Fawn – all over cream to reddish
Havana
Himalayan
Lilac – white with brownish purple hood
Lilac Agouti – predominantly brown, white nose
Merle
Mink – mostly brown, very dark
Pearl – white/silvery coat with a variety of other colours.
Platinum – predominantly striking white.
Platinum Agouti
Powder blue – lighter than standard blue
Russian blue – very deep grey
Russian blue agouti
Russian Blue Point Siamese
Russian silver – striking silver blue
Russian Silver agouti
Russian topaz – cream/white fur with silver flecks



REPTILE GALLERY

Projected onto the white linear drawing of dinosaurs and reptiles is a video that combines drawings of rat dissections with the rat genome, connecting a timeline between the first recorded rat dissection by Theophilus Müller and Johann Faber at the Accademia dei Lincei in 1621 and the publication of the rat genome in 2004. In a space of predation, where snakes are located at the apex of the reptile pyramid, the rat is anatomised and reduced to its smallest units.


Name
Locality
Donor
Hind Leg!