

‘Among Birds and Beasts’: Environmental Reform, Racial Preservation and Australian Progressives at the Zoological Gardens

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The investigation of human-animal relations at Australian zoos reveals that constructions of nature alter across time and space. Material, social and symbolic relations are enveloped by historically specific understandings of animals. The importance or legitimacy attached to the conservation of species in association with the power of the elite shifted in the twentieth century from hunting and the frontier (though these continued to be important to the tourism industry) to the moulding of new cities, races and nations. The old associations of animals and natural history with the technology and science of empire remained in the guise of biology, medicine, comparative anatomy and population health. This article addresses the important place of zoos in Australian cultural and environmental history, specifically linking studies of native fauna in the early twentieth century with a striving toward model cities and model populations. Australian zoo projects at this time show the influence of Spencerian, Lamarkian and Darwinian ideas on progressive thought. Zoos were popular, educational institutions that provided ‘natural’ environments for ‘unnatural’ urban populations. They represented the ideal of fostering healthy communities through the mechanisms of heritage and habitat.

To most modern men and women there comes sometimes, in low, clear tones, the ‘Call of the Wild’. Echoes of some past existence rouse in us the instincts and the memories which we have inherited from men of the Stone Age. We want to forget our city and to live again, if only for an afternoon, that free life among trees and flowers, among birds and beasts, in the air and sunshine, that our folks lived in the long ago. To indulge such cravings there has been built Taronga Zoological Park.¹

This article locates Australian zoos within the context of the progressive movement of the early twentieth century, primarily by addressing some of the conservation, research and educational initiatives of their executive membership. Several progressive figures central to the development of Australian zoological gardens are examined, including Sherbourne Le Souef, Colin Mackenzie and Ambrose Pratt. Michael Roe describes individuals in the progressive movement as conscious of broad social and political issues. Their ideas echoed modern reform movements, such as Theodore Roosevelt’s American progressivism and the Garden City movements in Europe. Progressivism, as an extension of the Romantic quest for new sources of creativity and enrichment of life, had broad cultural influence with its new central focus on efficiency and science. The movement encompassed individuals with a range of political affiliations and ambitions, including general social reform, the civilising of *laissez-faire* economics, through to the more hysterical values of racial and mental hygiene.²

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There is some conjecture over the exact definition of the eugenicist in this period; however, the pursuit of eugenic ideals definitely comprised part of the progressive agenda. Ross Jones argues that in Australia:

eugenics developed after the First World War from a relatively simplistic scientific justification of racist and class-biased social Darwinism into a movement concerned with using environmental reforms to help a wide range of Australians reach their full potential.³

Roe suggests that an integral theme of progressivism was the ranking of the general good above individual advancement, while the passion for nature was also of intrinsic importance. As a result, conservation was a significant principle. In Australia, the reform eugenicists were active in environmental movements including health reform, slum clearance and educational improvements.⁴ Progressives at the zoological gardens were involved in promoting the accessibility of nature to the people, and the conservation and medical research of native fauna.

When considering the design for a new zoo on the Sydney Harbour, Sherbourne Le Souef, director of the existing Moore Park Zoo and member of an Australian zoo family dynasty, was influenced by trends in Europe, where the Hagenbecks of Stellingen Zoo in Germany had built barless and open-air enclosures.⁵ The Stellingen model was a geographically, rather than taxonomically, organised animal-world that formed an attractive panoramic vista. Opened in 1916, Taronga Park was shaped by internationalist and nationalist ideals that encompassed scientific, educationalist, conservationist, entertainment and engineering pursuits. In the 1920s noted comparative anatomist Colin Mackenzie established the Institute of Anatomy as an extension of the Healesville Sanctuary in Victoria, where he had been performing experiments on native animals.⁶ Situated in Canberra, the institute incorporated a national zoo with the objectives of conserving the valuable native fauna of Australia, before their final extinction, and enabling the study of live specimens. Mackenzie held that the medical research into Australian animals was vital to the understanding of anatomical evolution and, thus, the pursuit of human health. Under the guidance of Ambrose Pratt in the 1930s, Melbourne Zoo constructed a representational display of native fauna, which was considered vital for the education of the zoo-going public. Melbourne Zoo's council members sought to enhance the prospects of the survival of native species through a program especially directed at children. Realistic representations of animals in their habitat, with an added focus on behaviour, were employed to increase public awareness of Australian fauna. Pratt, a friend of Mackenzie, was also involved in animal research.⁷

Taronga

The construction of Taronga Zoo intersected with other projects of environmental improvement such as slum clearances undertaken by the Sydney Municipal Council. New South Wales Labor Premier W A Holman, and the Taronga Trust's project, expressed an aesthetic that drew on notions of the reparative quality of nature for urban populations. The slopes of Port Jackson, their slender angophoras and other native plant species, were moulded to create a public playground

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deserved of the 'Queen City' of the south. Holman gave over the picturesque Taronga site in 1911 as part of his government's policy to preserve the foreshores of the Sydney Harbour for the people, a scheme significant for its emphasis on landscape.⁸ The premier officiated at the opening of the park in 1916, describing it as a recreation facility that also enabled young and old to pursue nature study.⁹ The site and aspect of Taronga Park was lauded as making it the most beautiful zoo in the southern hemisphere, particularly through its evocation of the romanticised life of Indigenous Australians and the preservation of the environment in which they lived:

Over a century and a half ago the little beach at what is now Taronga Park had a small native settlement. [It had] a tiny stream flowing down to it through a wooded valley, the rough country around had food for aborigines in kangaroos and birds, and the sea had its fish. When the Zoo site was surveyed it was almost as virgin as when the natives held their corroborees and lived their primitive lives. Today the site is laid out with due regard to preserving its pristine loveliness.¹⁰

As Dennis Foley documents, Athol Bay, where Taronga was built, is mentioned in the traditional owners' story of 'The Waterspirit'. This is bandicoot country, a term to denote womens' areas, and the thick scrub now in the gullies was once a tall open forest:

Off the place now called Bradley's Head, when Tuhbowgule was once a great river, is where the fresh water mixed with the salt. The area was jealously guarded by an evil old woman, as this was a place of rich food stocks — the bounty of the salt and the richness of the inland water ... This place is now called Athol Bay, in its depths is a deep hole where she sleeps. She is said to roam the gullies at night and frequent the caves at Mosman in special times.¹¹

In 1919, Charles Hedley, a member of the Taronga Trust and curator at the Australian Museum, produced a booklet promoting Taronga to the public. He wrote of modern men and women's need for a place where 'Echoes of some past existence rouse in us the instincts and the memories which we have inherited from men of the Stone Age',¹² marking the zoo as a place of respite within the city, couched in the evolutionary terms of a 'return to the wild'. The zoo was later conceived as 'one of the best "lungs" of the city of Sydney'.¹³ These sentiments indicate the importance attributed to the zoo as a source of nature within which urban populations could find regeneration. Sydney progressives received Taronga enthusiastically, and its brief history was reported in magazines such as George Augustine Taylor's *Building and Commonwealth Home*.¹⁴ Colonel Alfred Spain, a respected Sydney architect, was congratulated on his work as president of Taronga Trust in providing for 'young, happy and healthy Australians ... disporting themselves in Australia's birthright of sunshine'.¹⁵ The cultivation and study of Australian plants was a priority at Taronga,¹⁶ as were animal studies, including Le Souef's experiments, which focused on observing animals in captivity. These included studies of 'ape mentality' and the traits common to men and animals. Le Souef thought that Australian fauna lacked development as a result of geographical isolation from the evolutionary struggle, and he cross-applied this theory to the Indigenous human inhabitants of the Australian continent.¹⁷ Le

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Souef's championing of the conservation of native animal species was based on his belief in their economic potential, particularly through the fur trade.¹⁸

In the national interest

In his introduction to *Save Australia: A Plea for the Right Use of our Flora and Fauna*, Sir James Barrett, one of Michael Roe's progressive subjects, asked what could be done to secure the preservation of Australian plants and animals. His answer was: 'There is only one really sound safeguard, viz., an enlightened public opinion'.¹⁹ Barrett, the president of the Medical Society of Victoria, established himself as a man of public affairs both political and social, and was a member of the council of the University of Melbourne, where he encouraged the development of courses in the applied sciences. Barrett held that human progress was not yet at its peak and required new direction through scientific and social development, which should be fostered by the university.²⁰ *Save Australia* also featured a chapter by Le Souef on Australian animals and the cause of scarcity in certain species, and another on the fur and plumage trade in Australia by A T Latham of the Victorian Society for the Protection of Animals.²¹ Many of the contributors sought to expound the necessity of protection of Australian wildlife as a vital characteristic of a truly modern and enlightened civilization.

During the late nineteenth and early twentieth centuries, concerns about environmental impacts on the health of the race were paramount, and revolved around the studies on 'white man' in the tropics that preoccupied the medical profession.²² Evolutionary development at the anatomical and cellular level featured in popular and scientific commentary; the powerhouse of modification, or vitalism, was a major focus of the evolutionary debate.²³ Colin Mackenzie, a prominent member of the Zoological Society of Victoria and noted comparative anatomist, looked to how the problems of the 'great scientists' were relevant to the 'man on the street'. He proposed that the work of evolutionary scientists was most significant to bodily health. In the medical enterprise Mackenzie foresaw the eminent position of Australian scientists as protectors of unique Australian animals, suggesting that 'lungfish, reptiles, monotremes, and marsupials represent a living embryology — an embryology different from that of the human body'.²⁴ The significance of acquiring and maintaining living specimens was that function, in addition to structure, could be studied.

Mackenzie's thesis was that the essential difference between primitive animals, such as Australian marsupials and monotremes, and the human, was a postural one. He argued that erect posture conferred intellectual advantages: 'We have the erect posture, the platypus has not'.²⁵ The kangaroo, for Mackenzie, was an interesting experiment in nature, where the erect posture was attempted by means of an anatomical tripod. In the orangutan, chimpanzee and gorilla he saw 'successive stages in which, without the use of a tail, there [was] a lessened use of the fore limbs for support'. The patella, or kneecap, was Mackenzie's index for intellectual and postural development; he believed that 'between the patella of the gorilla and that of the Australian Aboriginal would be the types represented by prehistoric man'.²⁶ Mackenzie also suggested that the Australian game of football exercised the erect posture more so than any other in the world, and had been 'no small factor in the physical development of our nation'.²⁷

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As a Lamarckian, Mackenzie argued erect posture was the ultimate goal of nature, and that the means of attaining this posture were muscular. As such he claimed that Lamarck had anticipated the treatment for 80 per cent of men wounded in the first world war, in which he had been heavily involved, utilising the scientific rest and re-education of injured muscle, nerve and bone.²⁸ During the first world war Mackenzie worked with Sir Arthur Keith, and some years later, in 1934, he wrote to Ambrose Pratt:

Sir Arthur Keith has now left the College of Surgeons and has taken charge of a new research farm, in connection with the College of Surgeons, adjacent to Darwin's old home (about 25 miles from London). It also is for the study of the anatomy of the living.²⁹

Mackenzie's interest in the conservation of Australian animals was linked to his belief that human development was physiological, and that to obtain knowledge of the ideal state of human health, the history of human development and processes must be known. The gynaecologist, for example, could understand the history of uterine support by investigating birth in Australian reptiles, monotremes and marsupials. Mackenzie lamented that the bandicoot, 'a marsupial animal of the greatest importance for placental study' was almost unprocurable.³⁰ In a lecture before the Section of Neurology and Psychiatry of the Victorian Branch of the British Medical Association, he impressed on the medical graduates that Australian animals, which he stated were fast disappearing, presented an almost unexplored field in the investigation of normal human function, without a knowledge of which the practice of medicine could never be raised from an art to a science.³¹

Mackenzie was principally responsible for establishing the Institute of Anatomy, including a National Museum of Australian Zoology and a National Zoo at the new capital, Canberra.³² His connections and practical experience with the Melbourne Zoo and Healesville Sanctuary in Victoria were essential in leading him to this enterprise. In 1923 Mackenzie donated his extensive collection of live and preserved native animals, together with fencing and buildings from the Healesville sanctuary, to the Commonwealth Government. He also donated his services without salary for the 'furtherance of the work which he had been performing at his own expense for so long'.³³ In the Parliamentary Standing Committee Report on the Museum project it was stated that those who had studied Australian fauna felt that the animals were 'doomed to extinction' and that they would have all disappeared in less than twenty years if protective measures were not taken.³⁴ As part of the committee's investigations into the value of Mackenzie's collection, reference was made to a leading article in the *British Medical Journal*, where it was stated that the collection was well known to the profession and recognised as one of very high scientific value. It was estimated by the committee that if the collection was offered to America it would 'readily realize £100,000'.³⁵ Mackenzie emphasised the importance of the project as a world centre for the study of Australian fauna and comparative anatomy. Confirmation of the urgent need for this was the building of a great Australian hall in the New York Natural History Museum, and the eagerness of British, French, and German universities to obtain 'all the material they [could] lay their hands on

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before the final extinction'.³⁶ The location of the institute in Canberra was considered vital, as the project was perceived as in the national interest:

In working from a provincial centre, such as Melbourne, I felt that a convincing appeal for specimens could not be made to the people, whereas if we were operating from the national Capital the response would be more generous ...³⁷

The Federal Capital Commission assigned a site of eighty acres on a peninsula of the Molongolo River for the zoological park, which was intended to be a place for scientific purposes as well as for the interest of visitors. This site was separate to the museum building, which was built on Acton Hill. Burley-Griffin's early plans for Canberra included a site for a zoo, which he placed in the 'Recreation Group' with galleries, museums, baths and gymnasia.³⁸ Andrew Wilkie, director of Melbourne Zoo, was called as a witness to speak on the appropriateness of the site, which he thought was an admirable choice with good drainage, an important consideration in the keeping of animals. Mackenzie reported that the institute was moved within the bureaucratic structure and placed in the Department of Health, and that already great interest was being taken, with grants provided for an annual lecture:

The Institute will become one of the most important in the world, occupying in Australia a place in the scientific world like that of the Hunterian Museum in connexion with the College of Surgeons in England ... It is an accepted fact that anatomy is the basis of all medical and surgical problems. It will be seen therefore that the Department of Health now has a most important weapon under its control as regards the general health of the community.³⁹

The Institute did become an important centre of research in Canberra; however, it did not achieve Mackenzie's extended ambitions.⁴⁰

Education and improvement

The link between the educational improvement of the population and the importance of conserving native species was made at zoos such as Melbourne's, whose new Australian department was incorporated into the zoo so that visitors to the Commonwealth might see in one place 'a truly representative collection of the peculiar birds and animals that are exclusively indigenous to this country'.⁴¹ David Fleay, a naturalist with a reputation forged by publications in national and international scientific journals on the fauna of Australia, was placed in charge of the collection. The identification of the zoo as a site of education, especially for children, was not new. In Adelaide it was reported that the 'new education' was largely synonymous with 'zoo education'; the zoo was considered the most valuable destination in the city for the development of children's natural powers of observation.⁴² The ideal of harmonious interspecies relationships at the zoo was espoused by Clive Lord in Hobart when he claimed:

with the advance of Education and the true ideals of citizenship, greater appreciation will be given to our fauna and animal life in general, for as Herbert Spencer has written 'The behaviour of man to the lower animals and their behaviour to one another, bear a constant relationship.'⁴³

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The building of the native fauna reserve at Melbourne, covering an area of three and a half acres, was commenced in 1934. Its main objects were the housing of Australian animals in enclosures approaching natural conditions and also ‘the presentation, systematic grouping and labelling of the various exhibits in accordance with the educational aims and purposes of the Society’.⁴⁴ The collection included a koala, platypus and spiny anteater, wombats — both Victorian and Tasmanian species, and snakes. An aviary was constructed, containing three redgums and inhabited by thirty phalangers of five species, allowing ‘these volplaning marsupials [to] be observed in “flight” at night during specially conducted tours’.⁴⁵ There was an open-air snake park with ninety snakes (tiger, black, brown and carpet). Breeding was encouraged and was successful both in the case of Tasmanian devils and boobook owls. The Melbourne Zoo promoted its Australian fauna section as an entirely new departure in the history of zoological societies, stating that ‘no such effort [had] been attempted either in Australia or any other part of the world’.⁴⁶ Dr Brooke Nicholls, a member of council, suggested that photographs combined with stories supplied by Fleay would make good copy, encouraging press involvement in the promotion of the collection and the zoo.

Both Brooke Nicholls and Ambrose Pratt were involved in conservation initiatives, particularly in relation to native fish. Through the League of Youth, Ambrose Pratt also promoted the protection of the koala and called for a national campaign for soil conservation. He organised a national conference of Australia’s leading zoologists held at Melbourne Zoo in 1936:

for the purpose of exchanging and coordinating all the knowledge ... possessed and for investigating the causes of the decreases in species, and discovering adequate remedial measures.⁴⁷

In the opening address to the delegates, the chief secretary of Victoria extolled the virtues of conservation and education:

Whereas in the past a large quantity of very interesting and valuable fauna had been destroyed by the youth of the country, today the schools, with the valuable assistance of all the leading newspapers, were instilling into the minds of youth that admiration of, and interest in Nature that was of advantage not only to Victoria, but to the whole of Australia.⁴⁸

Environmental reform and racial purity

Ambrose Pratt was a close associate and friend of Colin Mackenzie, and correspondence between them indicates not only their consensus on the importance of Australian fauna to medical research and public education, but also their views with regards to race.⁴⁹ Mackenzie was supportive of environmental reform projects and had marked leanings toward racial preservation. In a letter to Pratt he commented on the Nordic shape of Pratt’s head, stating that 90 per cent of the Australian population were Nordic rather than Slavic, and should be represented as such by the nation’s artists.⁵⁰ Pratt voiced a more overt and political aversion to the Soviets when writing a treatise on the threat of the 1930s depression to the capitalist system.

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The involuntarily idle forces of democracy are ill disposed to credit adverse reports on Soviet conditions. Their own conditions are too desperate. They demand change in tones growing harsh with menace, and they are turning their gloomy faces from the clouded sun of Capitalism to the lurid flare of Communism. Man so violently abhors injustice that he refuses to remember gratefully the favours showered upon him yesterday by the hand that hurts him now. The faults of the established economic order engross his attention. He is already beginning to forget and to disdain its virtues, white and wonderful, which have done more in a single century to enrich and elevate humanity than all the systems of all the ages gone before. It is the duty of those who can to save Demos from the crime he contemplates.⁵¹

Ambrose Pratt shifted from adamant support of the ‘white Australia’ policy, which he expressed in his numerous popular novels, to a more lenient position on immigration and trade relations. However, he appears to have maintained the belief that racial preservation was intrinsically biological:

There exist certain physiological disparities between white and coloured folk that must eternally render anything resembling a whole sale mixing of blood a matter of extreme improbability.⁵²

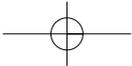
Le Souef pursued evolutionary theory as a religion and held that human and animal intelligence were only separated by degree. As a spiritualist he sought to prove the existence of animal souls. Le Souef’s career in natural history, which included the development of theories about the superiority of certain races of humans and species of animals over others, culminated in a book entitled *A Modern View of Evolution*. In this book he stated:

Many great leaders in the field of science, such as Pythagoras, Laplace, Newton, Herschel, Darwin, Huxley, Freud, Kelvin, Pasteur, Rutherford, Fabre and hosts of others helped to build a vast cathedral of knowledge that is now coming into its full perspective. The superstructure of this edifice carries us into an ethereal atmosphere of peace and security.⁵³

It would appear that amongst these influential zoological society members, reform eugenics and racial preservation were considered vital to the health and future of a ‘white Australia’.

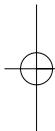
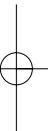
Conclusion

Tom Griffiths argues that a ‘biological cringe’ was responsible for the conceptualisation of Australian animals as ‘primitive’ in the nineteenth century. This notion was remarkably persistent and ‘even informed twentieth century preservation movements, when people came to feel that the remnants of the relic fauna, flora and peoples, genetically unable to fend for themselves should be “saved”’.⁵⁴ It appears that further to the objective of defending a primitive and vulnerable biota, progressive projects to conserve and protect Australian species intersected with discourses of population health, education and model environments. The impetus for this was, in part, the extension of the Romantic project into modernity — an understanding of the ‘biological family’ within which homosapiens had evolved with, if not beyond, other animals. This notion was perceived to be integral to the scientific progression toward moral improvement and an ideal civilization. Environmental reform policies, as part of the quest for



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improved populations, were implemented at Australian zoos during the early twentieth century. Ideals of racial preservation were also harboured within the executive membership, particularly with regard to medical research and experiments on native fauna.



Notes to pp 37–43

- 11 Ngaire Naffine, Rosemary Owens and John Williams (eds), 'The intention project' in *Intention in Law and Philosophy*, Ashgate Dartmouth, Aldershot, Hampshire, 2001, p 1.
- 12 Derrida, op. cit., p 315.
- 13 The rhetoric of benevolent paternalism pervades policies resulting in Indigenous child removal throughout Australia's colonial history, whether framed, under social Darwinism, in terms of the need to 'rescue' 'half-caste' children, because of their racial status, from what was regarded as the degrading environment of Indigenous 'camps', or under assimilationist policies, where there was a convergence of Indigenous welfare and care and protection regimes. See Anna Haebich's ground-breaking and comprehensive account of the history of forced removal of Indigenous children, *Broken Circles: Fragmenting Indigenous Families 1800–2000*, Fremantle Arts Centre Press, Fremantle, 2000, for further discussion of this point.
- 14 Hannah Robert, "'Unwanted advances": applying critiques of consent in rape to Cubillo v Commonwealth', *Australian Feminist Law Journal*, vol 16, 2002, p 6.
- 15 Julius Stone, *Evidence: Its History and Policies*, revised by W A N Wells, Butterworths, Sydney, 1991, p 468.
- 16 *ibid.*, p 498.
- 17 Eileen Heath, Cross-examination by Mr Rush QC for the Applicants, 4 August 1998, transcript of trial in *Cubillo*, p 67.
- 18 *Cubillo* para 784.
- 19 Exhibit HSK15, dated 14 September 1955.
- 20 Thomas Creed Lovegrove, Cross-examination by Mr Rush QC for the Applicants, 11 September 1999, transcript of trial in *Cubillo*, p 5556.
- 21 Colin McLeod, Cross-examination by Mr Rush QC for the Applicants, 16 November 1999, transcript of trial in *Cubillo*, p 5868.
- 22 Harry Kitching, Cross-examination by Mr Keon-Cohen for the Applicants, 6 August 1998, transcript of trial in *Cubillo*, p 35.
- 23 Charles Sanders Peirce, *Collected Papers* (8 vols), Charles Hartshorne, Paul Weiss and Arthur W Burks (eds), Harvard University Press, Cambridge, Mass, 1931–58.
- 24 Roberta Kevelson, *The Law as a System of Signs*, Plenum Press, New York, 1988.
- 25 Terence Hawkes, *Structuralism and Semiotics*, Methuen, London, 1977, pp 126–30
- 26 J L Austin, *How to do Things with Words*, Clarendon Press, Oxford, 1975.
- 27 Jonathan Culler, *On Deconstruction: Theory and Criticism After Structuralism*, Routledge & Kegan Paul, London, 1983, pp 121–2.
- 28 Austin, op. cit., p 60.
- 29 *Cubillo* para 787.
- 30 *ibid.*, para 788.
- 31 Derrida, op. cit., p 320.
- 32 *ibid.*, p 328. I will point out here that it is my understanding that Areyonga is a place, not a language, located in Pitjantjatjara lands, southwest of Alice Springs. Peter Gunner gave evidence that his mother's group was Anmatyerr.
- 33 Harry Kitching, Cross-examination by Mr Keon-Cohen for the Applicants, 6 August 1998, transcript of trial in *Cubillo*, p 64.
- 34 Derrida, op. cit., p 328.
- 35 I have appropriated this expression from Vicki Kirby, 'Corpus delicti: the body at the scene of writing' in Rosalyn Diprose and Robyn Ferrell (eds), *Cartographies: Poststructuralism and the Mapping of Bodies and Spaces*, Allen & Unwin, North Sydney, 1991.
- 36 See, for example, Human Rights and Equal Opportunity Commission, *Bringing Them Home: Report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from Their Families*, Commonwealth of Australia, Human Rights and Equal Opportunity Commission, Canberra, 1997; Haebich, op. cit.

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- 1 Charles Hedley, *Wild Animals of the World, Being a Popular Guide to Taronga Zoological Park*, Taronga Zoological Park, Sydney, 1919, p 7. Held in the Taronga Zoo Archive, SE/30.

- 2 Michael Roe, *Nine Australian Progressives: Vitalism in Bourgeois Social Thought, 1890–1960*, University of Queensland Press, St Lucia, 1984; Rob Watts, 'Beyond Nature and Nurture: Eugenics in Twentieth Century Australian History', *Australian Journal of Politics and History*, vol 40, no 3, 1994, pp 318–34; Stephen Garton, 'Writing Eugenics: A History of Classifying Practices' in Martin Crotty, John Germov and Grant Rodwell (eds), *A Race for a Place: Eugenics, Race, Darwinism and Social Thought and Practice in Australia*, Proceedings of the History and Sociology of Eugenic Conference, University of Newcastle, 27–28 April 2000, University of Newcastle, Newcastle, 2000, pp 9–17.
- 3 Ross Jones, 'The Master Potter and the Rejected Pots: Eugenics Legislation in Victoria, 1918–1939', *Australian Historical Studies*, vol 30, no 113, October 1999, p 319.
- 5 Members of the Le Souef family were influential at zoos in Melbourne, Sydney, and Perth in the nineteenth and twentieth centuries.
- 6 The Sir Colin MacKenzie Sanctuary, Healesville was so named because the area was selected by Sir Colin in 1921 for the purpose of anatomical research work on Australian fauna — 'the koala, the opossums, echidnas and other notable animals. The investigations made at Badger Creek (Healesville) created interest in scientific circles throughout the world'. Charles Barrett CMZS, *Australia's Wonder Animals*, The Sun News-Pictorial, Melbourne, p 39. Held in the Austech archive, Series 07, Unit 21.
- 7 Colin MacKenzie was reported in the 1928 Annual Report of the Royal Zoological and Acclimatization Society of Victoria as stating that 'As the people of Australia are the custodians for the rest of the world of the most important group of animals (from a scientific point of view) known, foreigners are looking to the success or failure of the Melbourne Zoological Gardens with no little degree of apprehension.' Developments at the zoo in the ensuing years were compromised by a lack of funds as a result of the depression; however, in 1932 it was proposed to build the extended animal section as a contribution to Victoria's centenary celebrations. The Seventieth Annual Report of the Royal Zoological and Acclimatization Society of Victoria, 1932, p10.
- 8 A public debate was held with regards the best location for the zoo. 'What is wanted to make a zoological gardens worthy, not only of Sydney but of the Commonwealth is a site of many acres on the foreshore of Port Jackson, a site with water frontage'. *Sydney Morning Herald*, 15 January 1910. The Ashton Park Reserve had been set aside by the then Minister for Lands, part of which was rededicated as a site for a zoological gardens. The area had previously been the quarantine ground for animals. For an investigation of landscape as public heritage see Harriet Ritvo, 'Fighting for Thirlmere: the roots of environmentalism', *Science*, vol 300, no 5652, pp 1510–11, 6 June 2003, and W J T Mitchell (ed.), *Landscape and Power*, University of Chicago Press, Chicago, 1994.
- 9 Speech by The Honourable Premier of NSW, WA Holman MLA at the Opening of Taronga Park Zoological Gardens on 7 October 1916, recorded in the Taronga Zoological Committee Minute Book, 13 October 1916, Taronga Archive, SE/4/1/.
- 10 Norman Campbell, 'From Billy-Goat Swamp to Taronga Park, the story of the zoos of Australia', *Life*, 15 February, 1934, p 107.
- 11 Deninis Foley, *Repossession of our Spirit: Traditional owners of Northern Sydney*, Aboriginal History Inc, Canberra, 2001, p 98.
- 12 Hedley, op. cit., p 7.
- 13 'Taronga Park, Sydney's Zoo', *Bank Notes: The Monthly Staff Magazine of the Commonwealth Bank*, August 1924, p 25.
- 14 *Building: The Magazine for the Architect, Builder, Property Owner and Merchant*, Building Publishing Co, Sydney, 1907–1942. Mitchell Library Microfilm.; *Commonwealth Home*, Sydney, 1925–1930. Held at Mitchell Library.
- 15 'Taronga Park: Australia's most beautiful, interesting and popular playground', *Commonwealth Home*, 1 May 1930, p 15. Grant Rodwell has written on the importance of physical health and sunshine to the idea of an Australian super race, see "'Dreams of a New Race of Australians": Nudism, Sun-Worship and Eugenics in Australia during the 1930s' in Martin Crotty, John Germov and Grant Rodwell (eds), *A Race for a Place: Eugenics, Race, Darwinism and Social Thought and Practice in Australia*, Proceedings of the History and Sociology of Eugenic Conference, University of Newcastle, 27–28 April 2000, University of Newcastle, Newcastle, 2000, pp 275–84.

Notes to pp 45–48

- 16 'The flora in the Park, which is practically all Australian, will it is hoped further the study and cultivation of our Native Plants', Speech by the Honourable Premier of NSW, WA Holman MLA, op. cit ; J H Maiden, director of the Sydney Botanical Gardens, assisted with cultivation and planting at Taronga.
- 17 'An Australian animal probably could not establish itself in America; but reverse the order and we have the avalanche. The case is exactly paralleled by that of the European and the aborigine among mankind'. A S Le Souef and Harry Burrell, *The Wild Animals of Australasia: Embracing the Mammals of New Guinea and the Nearer Pacific Islands*, George G Harrap and Co., London, 1926, p18
- 18 A S Le Souef, 'Cultivation of the Australian Opossum', *Agricultural Gazette of NSW*, 2 November 1910, pp 972–4; A S Le Souef, 'Our Native Animals from an Economic Standpoint', *Science and Industry*, July 1919, pp 141–6.
- 19 Sir James Barrett (ed.), 'Introduction', *Save Australia: A Plea for the Right Use of our Flora and Fauna*, Macmillan and Co, Melbourne, 1925, p 13.
- 20 Roe, op. cit., pp 61–2.
- 21 The Victorian Society for the Protection of Animals was instituted in 1871, with a focus on the plight of working horses and mistreated dogs. It later condemned the international trade of live indigenous birds by Australian zoological gardens. A T Latham, 'Cruelty to Animals: Work of the Victorian Society for the Protection of Animals', James Barrett (ed.), *Save Australia: A Plea for the Right Use of our Flora and Fauna*, Macmillan and Co, Melbourne, 1925, pp 147–57.
- 22 See Warwick Anderson, *The Cultivation of Whiteness: Science, Health and Racial Destiny in Australia*, Melbourne University Press, 2002.
- 23 Commentary included the work of David Syme, editor of the *Age* and mentor to Ambrose Pratt. See David Syme, *On the Modification of Organisms*, George Robertson, Melbourne, 1890. For a history of the nineteenth century debate on evolutionary theory in Australia see Ann Mozely Moyal, *Scientists in Nineteenth Century Australia: A Documentary History*, Cassell, Melbourne, 1976. Australian scholars of comparative anatomy, Colin MacKenzie and Fredric Wood-Jones were both influenced by the work of Sir Arthur Keith, a key figure in the development of biopolitical theory. See Rhodri Hayward, 'The Biopolitics of Arthur Keith and Morely Roberts' in Christopher Lawrence and Anna K Meyers (eds), *Regenerating England: Science, Medicine and Culture in Inter-war Britain*, Wellcome Institute Series in the History of Medicine, Rodopi, Amsterdam, 2000, pp 251–74.
- 24 Colin Mackenzie, 'The Importance of Zoology to Medical Science' in Clive Lord (ed.), *Australian Association of the Advancement of Science Report*, Hobart, 1928, vol XIX, p 236.
- 25 *ibid.*, p 236.
- 26 *ibid.*, p 237. Michael Roe, op. cit., p 141.
- 27 *ibid.*, p 241.
- 28 Mackenzie had two publications with regard to his work with first world war soldiers including 'Military Orthopaedics' published in the *British Medical Journal*, and *The Action of Muscles*, a textbook used in British and American medical colleges. He also co-edited the anatomical textbook for the Fellowship of the College of Surgeons of England with Sir Arthur Keith.
- 29 Letter from Colin Mackenzie to Ambrose Pratt ,7 February 1934, La Trobe Library, Box 329/10, MS6593.
- 30 Mackenzie, 'The Importance of Zoology to Medical Science', op. cit., p 241.
- 31 Colin MacKenzie, A lecture on recent researches on the comparative anatomy of the human brain, delivered before the Section of Neurology and Psychiatry of the Victorian Branch of the British Medical Association at the Royal Society's Hall, Melbourne, 16 October 1922, Jenkin, Buxton and Co, 1922.
- 32 For a study of Mackenzie's collection in relation to the development of the National Museum see Libby Robin, 'Collections and the nation: Science, history and the National Museum of Australia', *Historical Records of Australian Science*, vol 14, no 3, 2003, pp 251–89.
- 33 *Parliamentary Standing Committee on Public Works, Report Together With Minutes of Evidence Relating to the Proposed Construction of Buildings and Formation of Reservation at Canberra for the National Museum of Australian Zoology*, Government of the Commonwealth, 1927, p iv.
- 34 *ibid.*, p iii.
- 35 *ibid.*, p vi.
- 36 *ibid.*, p 1.

- 37 *ibid.*
- 38 Walter Burley-Griffin, *The Federal Capital: Report Explanatory of the Preliminary General Plan*, Government Printer, Melbourne, 1913, p 7.
- 39 *Parliamentary Standing Committee on Public Works, Report Relating to the Proposed Construction of Buildings for the Institute of Anatomy at Canberra*, Government Printer, Canberra, 1929, p 2.
- 40 Roe, *op. cit.*, p 141.
- 41 The Seventieth Annual Report of the Royal Zoological And Acclimatisation Society of Victoria for the Year 1932, p 10.
- 42 *South Australian Register*, 27 July 1900.
- 43 Clive Lord, 'Introduction' in D Colbron-Pearse, *The Beaumaris Zoo Guide*, The Corporation of Hobart, 1925, p 6. Crowther Library Collection.
- 44 The Seventy-First Annual Report of the Royal Zoological And Acclimatisation Society of Victoria for the Year 1934, p 8.
- 45 *ibid.*
- 46 *ibid.*, p 9.
- 47 The Chief Secretary of Victoria Hon. H S Bailey in Report of a Conference Convened by the Government of Victoria to discuss the Preservation and Protection of Native Fauna, 15–16 September 1936, p 32. La Trobe Library, Box 330, MS6626.
- 48 *ibid.*, p 1.
- 49 Correspondence between Pratt and MacKenzie, held in the Ambrose Pratt Collection, La Trobe Library.
- 50 Letter from Colin Mackenzie to Ambrose Pratt, 7 February 1934, La Trobe Library, Box 329/10, MS 6593.
- 51 Ambrose Pratt, *Elements of Constructive Economics*, La Trobe Library, Box 327/6, MS6548.
- 52 Ambrose Pratt, copy of a letter to the editor of the *Age*, December 1943, La Trobe Library, Box 327/4, MS6534.
- 53 Albert Sherbourne Le Souef, *A Modern View of Evolution: Something of Interest About Ourselves*, North Melbourne, W A Hamer, 1938, p 9. For a study of the elevation of evolutionary theory by the National Socialists in Germany see Arnold Arluke, 'Boundary work in Nazi Germany', *Regarding Animals*, Temple University Press, Philadelphia, 1996, pp 132–66.
- 54 Tom Griffiths 'Introduction' in Griffiths and Robin (eds), *Ecology and Empire: Environmental History of Settler Societies*, Melbourne University Press, 1997, p 3.

You Don't Know Jack

Kathryn H Ferguson

- 1 The five women generally accepted as the victims of Jack the Ripper are: Mary Ann (Polly) Nichols, killed Friday 31 August 1888; Annie Chapman, killed Saturday 8 September 1888; Elizabeth Stride, killed Sunday 30 September 1888; Catherine Eddowes, killed Sunday 30 September 1888; Mary Jane Kelly, killed Friday 9 November 1888. Although the murder of Mary Kelly happened just inside the boundaries of the City of London proper, the first four murders occurred in close proximity to Whitechapel Road. I have adopted the established convention of referring to the murders as the Whitechapel murders, which is consistent with contemporaneous references to the murders in the English press. For example, the *Times* would lament: 'Unhappily for all of us, the Whitechapel murderers and their victims are neighbours of every Londoner'. Quoted in Daniel Farson, *Jack the Ripper*, Sphere Books, London, 1973, p 100.
- 2 The victims of Deeming in Rainhill were his wife, Marie Deeming, and their four children, Bertha, Sydney, Francis and Marie.
- 3 Victorian Public Record Series 30 unit 966.
- 4 The first use of the phrase 'autumn of terror' that I can locate is Tom A Cullen, *Autumn of Terror: Jack the Ripper, his Crimes and Times*, Bodley Head, London, 1965. Judith Walkowitz cites its usage to Arthur Harding, quoted in Raphael Samuel (ed.), *East End Underworld: Chapters in the Life of Arthur Harding*, Routledge & Kegan Paul, London, 1981, p 110. Judith Walkowitz, *City of Dreadful Delight: Narratives of Sexual Danger in Late-Victorian London*, University of Chicago Press, Chicago, 1992, pp 192, 304.