

**ADMINISTRATIVE APPEALS TRIBUNAL
GENERAL ADMINISTRATIVE DIVISION
NEW SOUTH WALES
DISTRICT REGISTRY**

No. N2005 of 916

**INTERNATIONAL FUND FOR ANIMAL WELFARE
(AUSTRALIA) PTY LTD**

HUMANE SOCIETY INTERNATIONAL INC

RSPCA AUSTRALIA INC

Applicants

MINISTER FOR THE ENVIRONMENT AND HERITAGE

First Respondent

ZOOLOGICAL PARKS BOARD OF NEW SOUTH WALES

Second Respondent

ZOOLOGICAL PARKS AND GARDENS BOARD OF VICTORIA

Third Respondent

AFFIDAVIT OF DR. JOYCE HATHEWAY POOLE

On 17 September 2005 I, Joyce Hatheway Poole, Ph.D., Research Director, Amboseli Elephant Research Project and Director, Elephant Voices, Buskhellinga 3, 3236 Sandefjord, Norway, say on oath:

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Deponent

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Lawyer/Justice of the Peace

AFFIDAVIT OF JOYCE POOLE
Filed on behalf of the Applicants

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Qualifications and experience

1. I have studied the behaviour of African elephants and worked for their conservation and welfare since 1975.
2. I studied elephants in Amboseli National Park as a member of the Amboseli Elephant Research Project (“**AERP**”) as an undergraduate research assistant between 1975 and 1979 and as a doctoral candidate at Cambridge University from 1980-1982.
3. Between 1984-1989 I was a postdoctoral research fellow of Princeton University studying elephant behaviour and communication in Amboseli.
4. In 1989 I carried out surveys on the impact of ivory poaching on the age structure and reproductive patterns of four East African elephant populations (Amboseli, Tsavo, Queen Elizabeth and Mikumi) for a report to Convention on International Trade in Endangered Species (CITES).
5. In 1989 I co-authored the successful Tanzanian proposal to CITES to move the African elephant from Appendix II to Appendix I of the Convention.
6. I worked as Elephant Programme Coordinator for Kenya Wildlife Service between 1990-1994, where I was responsible for the conservation and management of the country’s 25,000 elephants and for training a team of 11 Kenyan graduates.
7. Since 1998 I have studied the communication and social behaviour of elephants in the Laikipia, Mara and Amboseli populations. Since 1975 I have been a member of the AERP, since 2000 I have been a Director of ElephantVoices and since 2002 I have been the Director of Research of AERP.
8. I have observed elephants in the wild in India and in Sri Lanka including recording their vocalizations and behaviour.
9. I am on the Scientific Advisory Board of the Captive Elephant Management Coalition.
10. I have visited numerous captive elephant sites including zoos in Europe and the United States (eg. Disney’s Wild Kingdom, National Zoo, Bronx Zoo, Minneapolis Zoo, Portland Zoo, London Zoo, the Lincoln Park Zoo and the Brookfield Zoo).

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11. In August, 2005 I visited the Lincoln Park Zoo and the Brookfield Zoo, in Chicago, where I testified at a City Council hearing regarding the proposed Elephant Protection Ordinance.
12. I have taken elephant back safaris in Botswana and in India; I have observed working, tourist, ceremonial and temple elephants in India. I have visited and recorded the vocalizations of elephants at orphanages in Kenya and in Sri Lanka; I have visited and closely observed the behaviour of the captured Tuli infants in South Africa. I have visited tourist camps in India. I have watched numerous hours of film material depicting the behaviour of captive elephants.
13. A copy of my curriculum vitae, which includes my educational background, is exhibited to my affidavit and marked “**JP 1**”.
14. I have been provided with:
 - (i) copies of the *Guidelines for Management of Elephants in Australasian (“ARAZPA”) Zoos* (“**the ARAZPA Guidelines**”) [marked PT31];
 - (ii) a statement of reasons by the Minister for Environment and Heritage, dated 2 August 2005 (“**the Minister’s statement of reasons**”) [marked T2];
 - (iii) a 16 page document entitled “Additional Questions for Sup G – Elephants at Melbourne Zoo” dealing with an elephant enclosure at Melbourne Zoo (“**the Mebourne Zoo site plan**”) [marked PT6];
 - (iv) a 22 page document entitled “Supplementary For G – Attachment (“Asian Elephant – Proposed Facility”) dealing with an elephant enclosures at Taronga Zoo (“**the Taronga Zoo site plan**”) [marked PT57];
 - (v) a brief entitled “Application for Permits for the Import of Asian Elephants into Australian and New Zealand Zoos” signed by the Minister on 19 July 2005 [marked T27];
 - (vi) letters dated 31 August 2004 (marked T10) and 21 September 2004 from the Department to the Zoos [marked T12];

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- (vii) a letter dated 3 November 2004 from the Zoos to the Department [marked T13];
- (viii) elephant registration papers (which I understand have been provided by the Second and Third Respondents); and
- (ix) a letter dated 4 March 2005 from the Zoo Consortium to the Department [marked T23].

15. I have been provided with a copy of the Federal Court Expert Witness Guidelines and I have prepared this affidavit in accordance with those Guidelines.

Development of scientific knowledge about elephants

16. Over the last two decades western society has witnessed an important shift in consciousness concerning the welfare of non-human animals. Much of the impetus for this swing in opinion has been driven by scientific studies which have shown many species to be capable of experiencing not only pain and suffering, but multifaceted emotions and reasoning within complex social and cognitive settings. Through a wealth of scientific publications, popular essays, books and documentary films, studies of elephant behaviour have contributed substantially to this change in outlook, challenging assumptions previously made with regard to elephant social, communicative, cognitive, and emotional abilities.

17. We now know that elephants, like humans, live in multifaceted fission-fusion societies.¹ They are highly intelligent,² possess complex emotions³ and exceptional memories,⁴ individual personalities⁵ and are unusually long-lived.⁶ They can

¹ Douglas-Hamilton (1972), publication no. 26, exhibit 'JP2'; Moss & Poole (1983), publication no. 46, exhibit 'JP2'; Moss (1988), publication no. 1, exhibit 'JP2'; Wittemyer *et al* (2005), publication no. 75, exhibit 'JP2'; Moss in press, publication no. 45, exhibit 'JP2'; Archie *et al* in press, publication no. 13, exhibit 'JP2'.
² Rench (1956 & 1957), publication no. 65, exhibit 'JP2'; Eisenberg & Shoshani (1992), publication no. 68, exhibit 'JP2'; Cozzi *et al* (2001) publication no. 21, exhibit 'JP2'; Nissani (2004), publication no. 49, exhibit 'JP2'.
³ Poole, (2000a & 2000b) publication no. 11, exhibit 'JP2'; Moss (2000), publication no. 1.
⁴ Rench, (1956 & 1957), publication no. 65, exhibit 'JP2'; Poole (1998), publication no. 50, exhibit 'JP2' and unpublished; R. Moore, personal communication; C. Buckley, personal communication.
⁵ Lee, in press, publication no. 36, exhibit 'JP2'.
⁶ Eisenberg (1983), publication no. 27, exhibit 'JP2'; Moss (2001), publication no. 45, exhibit 'JP2'.

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remember other individuals after more than a decade of separation,⁷ and are capable of emotions such as joy, anger, grief, sympathy, playfulness and revenge.⁸

18. Using scores of different vocalizations,⁹ expressions, and gestures,¹⁰ elephants are able to communicate specific information and emotions. They use these to reinforce bonds, care for youngsters, reconcile differences between friends, form coalitions against aggressors, coordinate group movement, and keep in contact over long distances.¹¹

19. Elephant development includes social learning¹² and behavioural innovation. Both are evident in the use and modification of simple tools, such as fly whisks,¹³ and in the imitation of sounds of other species and even machines.¹⁴ Elephants recognize their own image in a mirror, indicating that they are self-aware.¹⁵ Numerous observations suggest that they have the capacity for both empathy¹⁶ and anticipatory planning, including the possibility of imagining future events, such as pain to themselves and others.¹⁷

20. In addition, like human beings, elephants suffer long-term psychological effects of trauma and abuse. This may be expressed in the form of inappropriate and hostile

⁷ Poole in press, publication no. 12, exhibit 'JP2'; C. Buckley, personal communication; R. Moore, personal communication.

⁸ Poole (1998 and 2000a & 2000b), publication no. 50 and 11, exhibit 'JP2'; Moss (2000), publication no. 1, exhibit 'JP2'; Chadwick (1992), publication no. 19, exhibit 'JP2'.

⁹ Langbauer (2000), publication no. 33, exhibit 'JP2'; Poole *et al* (1988), publication no. 61, exhibit 'JP2'; Poole (1999), publication no. 50, exhibit 'JP2'; Soltis *et al* (2005a & 2005b), publication no. 67, exhibit 'JP2'; Poole in press a), publication no. 50, exhibit 'JP2'.

¹⁰ Kahl & Armstrong (2000), publication no. 30, exhibit 'JP2'; Poole & Granli (2003), publication no. 57, exhibit 'JP2'.

¹¹ Poole *et al* (1998), publication no. 50, exhibit 'JP2'; Langbauer *et al* (1991), publication no. 33, exhibit 'JP2'; Poole & Granli (2004), publication no. 57, exhibit 'JP2'; Soltis *et al* (2005a & 2005b), publication no. 67, exhibit 'JP2'; Poole in press a), publication no. 50, exhibit 'JP2'.

¹² Lee & Moss (1999), publication no. 36, exhibit 'JP2'; Poole in press b), publication no. 50, exhibit 'JP2'.

¹³ Hart *et al* (2001). Cognitive behaviour in Asian elephants: Use and modification of branches for fly switching. *Animal Behaviour* 62:839-847.

¹⁴ Wemmer & Mishra (1982 [& Wemmer *et al*, 1985]), publication no. 71 and 72, exhibit 'JP2'; Poole *et al* (2005). Elephants are capable of vocal learning. *Nature*, 434:455-456.

¹⁵ Simon *et al* (2000), publication no. 66, exhibit 'JP2'.

¹⁶ Or Theory of Mind; Nissani (2004), publication no. 49, exhibit 'JP2'; Poole in press b), publication no. 50, exhibit 'JP2'; Rench (1956 & 1957), publication no. 65, exhibit 'JP2'.

¹⁷ Poole in press b), publication no. 50, exhibit 'JP2'.

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behaviour, such as killing individuals of their own species, including maternal infanticide.¹⁸

21. Taken together, these scientific discoveries indicate that we need to improve the way we care for elephants, and demand that we err on the side of caution when the interests of elephants are being considered.
22. To a large extent, the change in attitude toward elephants is a direct consequence of scientific research, key publications being listed in exhibit “**JP 2**” to my affidavit. Documentary films based on long-term field research have also contributed to the research, as is exemplified by the AERP in Kenya.
23. In 1972 the well-known elephant researcher Cynthia Moss initiated the systematic collection of data, which is now found in the AERP’s vast databank containing 34 years of detailed records of over 2,200 individually known elephants. This forms a unique and priceless resource of information on elephant behaviour. In addition to the regular long-term monitoring of individual elephants, scientists from around the world have undertaken a broad range of comprehensive studies on different aspects of elephant biology and behaviour. The published results of this large body of work form the essential basis for our current insight into what it means to be an elephant, and is vital to our understanding of the ecology, population dynamics, social behaviour, and cognition of all species of elephants everywhere.
24. Numerous studies have shown that the behaviour of all elephants is broadly similar. Dissimilarities are matters of degree rather than kind.¹⁹ Paragraph 5.1 of the *ARAZPA Guidelines* acknowledges the similarity in the biology and behaviour of African and Asian elephants.
25. I agree with this statement in the *ARAZPA Guidelines*. I believe that my personal knowledge and experience of African elephants applies equally to Asian elephants. I

¹⁸ Slotow *et al* (2000), publication no. 69, exhibit 'JP2'; Bradshaw *et al* (2005) publication no. 16, exhibit 'JP2'.

¹⁹ Poole (1982), publication no. 50, exhibit 'JP2'; Shoshani (1992), publication no. 68 exhibit 'JP2'; Payne (2003), publication no. 9, exhibit 'JP2'; Sukumar (2003), publication no. 70; Vidya and Sukumar (2005). Social organisation of the Asian elephant (*Elephas maximus*) in southern India inferred from microsatellite, Japan Ethological Society and Springer-Verlag, Tokyo.

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have also had the opportunity to observe the behaviour of wild Asian elephants and to record their vocalizations and compare these with those of African elephants.²⁰

26. By way of general comment on the *ARAZPA Guidelines*, “*Section 3: Biology*”, and “*Section 5: Management and Training*”,²¹ I generously acknowledge the depth of biological, social and behavioural information that is currently available. These sections go to admirable lengths to identify what the interests of elephants might be, as well as to detail how important it is for zoos to attempt to meet the physical and psychological requirements of elephants.

27. Surprisingly, however, the *ARAZPA Guidelines* give only a cursory indication of what the minimum standards for zoos should be in regard to such critical elephant management and care criteria as:

- allocation of space;
- dimensions of outdoor yards versus indoor pens;
- minimum social group size;
- social requirements of males;
- maximum duration of chaining;
- physical discipline; and
- training interventions.

28. I consider the proper standards in relation to these issues later in this affidavit.

²⁰ Poole and Granli, unpublished data.

²¹ At pages 643-647 and 653-669 of PT31.

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Comparing the lives of elephants in captivity with those in the wild

29. By attempting to mimic wild environments, zoos have made major advances and, for many species, wild biology is now the basis for exhibits. But, for elephants, with more than 4,000 years of exploitation by humans, the starting point is too often merely what has gone before.²² Zoos have tended to treat elephants as if they are a domesticated species and, as a result, find themselves trying to justify or adapt management methods that are really about maintaining the animal as a beast of burden in various guises. Because the human-elephant relationship is historically exploitative, tradition in this case is not a reliable guide to elephant needs and interests.
30. To take this argument further the life histories and behaviour of the 2,200 free-ranging individuals who have been studied in Amboseli, should be compared with the health and behaviour of elephants in captivity, including those living in ARAZPA institutions that are currently accepted as the zoo industry's best practices.

Provision of space

31. I understand from the documents which have been provided to me that Taronga Zoo proposes to hold five elephants in its enclosure, namely two young adult females (one aged between 12 and 13 years, the other between 12 and 18 years), two female calves (one aged 4 years, the other aged between 4 and 6 years) and a male calf (aged 4 years).
32. It is planned to house the male calf with the females in the new elephant enclosure until he reaches adolescence and becomes sexually "mature". At that time he will be separated and removed to an existing elephant enclosure at the zoo. My understanding of "maturity" is social maturity, which is reached at about age 25. However, I understand from the ARAZPA Guidelines, that bull elephants should be managed separately from the "family group" and are normally separated from 8 years of age onwards.²³

²² Meredith, M. (2001). *Africa's Elephant: A Biography*. London: Hodder and Staughton.

²³ Page 654 of PT 31.

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33. An adult elephant is over 3 metres in length.
34. According to paragraph 4.1 of the *ARAZPA Guidelines*,²⁴ the outdoor area must be “as large as possible”, with a minimum area of 2,000m² to accommodate groups of up to eight elephants. If a group in excess of eight elephants is maintained, a further 250m² is required for each additional elephant aged two years or more. Adult bull elephants are required to have access to an outdoor enclosure of at least 500m².
35. In my opinion that minimum area is inadequate for a group of eight elephants, or for a group of five elephants.
36. In Amboseli, elephants inhabit what is regarded as a relatively small area. Members of the elephant population range over approximately 5,000km². Each elephant and its family have a core area of use encompassing at least 194km². Elephants travel 8 to 20 kilometres a day, frequently walking further in areas of lower resource availability, or when a male is searching for females. Figures for Asian elephants are similar with home ranges averaging 350 km² for males and 100 to 115km² for females and daily movements ranging between 8 to 22 km.²⁵
37. Zoos often argue that elephants only cover these distances to search for food, water, to find mates and to avoid predators.²⁶ They also say that when food is readily available to them they do not walk so far.²⁷ While it is true that elephants walk straight lines when moving from point A to point B, and that they will cover less area in habitats with high resource availability, it is a fallacy to argue that because elephants have food, water, security and semen presented “on a plate” or “in a tube” in captivity they, therefore, don’t need more than the 2,000 square metres of space that the *ARAZPA Guidelines* recommend.
38. Elephants in zoos currently face numerous health, reproductive and behavioural problems requiring enormous costs and frequent interventions for veterinary

²⁴ Page 649 of PT 31.

²⁵ Sukumar (1989), publication no. 70, exhibit 'JP2'.

²⁶ Letter dated 3 November 2004 from the Zoo consortium to the Department of Environment and Heritage, page.310 of PT 13.

²⁷ *Ibid.*

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treatment, hormone sampling, electro-ejaculation and artificial insemination. Such interventions often lead to “disciplinary action” and the use of “bullhooks” and other instruments, when an elephant refuses to comply. In the form of the routine problems that captive elephant managers face every day, the empirical evidence that elephants need more space is unmistakable: foot diseases, arthritis, weight related diseases, infertility, heightened aggression, and other neurotic behaviour to name but a few.

39. Even if the *ARAZPA Guidelines* were accepted as providing adequate minimum space, in my opinion, on the basis of the documents provided to me, the site plans do not meet those requirements.
40. According to the Taronga Zoo site plan, at Taronga Zoo, the new elephant exhibit enclosure consists of:
- a barn in which there are four indoor pens each 7m x 7m (each just large enough for an adult elephant to turn around);
 - an outside yard off the barn that is less than 10m x 10m (80m²); and
 - an outdoor exhibit of 2,420m² divided into two paddocks of which 418m² is water.
41. I understand that due to a late change of plans the male elephant Gung is to be accommodated at Taronga Zoo in the old elephant enclosure when he reaches maturity. In a letter dated 4 March 2005 from the Zoos Consortium to the Department of Environment and Heritage²⁸ it is stated that the space for the male elephant will be 2,238m². I do not see any such area appearing adjacent to the site proposed for the female elephants on the site plans and specifications,²⁹ so I assume it must be somewhere else in Taronga Zoo. There is no information about the refurbishment plans for the old enclosure or how much of the site is occupied by buildings now or under any plan. Accordingly, there is therefore no information from which I can form

²⁸ T23, pages 504-512.

²⁹ PT 57, page 1002-1020.

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a view as to whether the outdoor space proposed allotted to the male meets the *ARAZPA Guidelines* for a bull elephant.

42. The *ARAZPA Guidelines* require the minimum of 2,000m² to be met for any group up to eight elephants. That means that 2,000m² is required for a group of four elephants. It is my understanding from the Minister's statement of reasons that given the proposed breeding program it would be necessary to plan to house more than the four elephants. It also would have to be assumed that the reference to the 500m² for the bull elephant means an additional 500m²,³⁰ given the need to separate the bull when appropriate.
43. In relation to the enclosure proposed for the female elephants, when the water area is deducted from the 2,420m² of the exhibit area, the remaining area is 2,002m². Since the plan does not show dimensions, I am unable to comment on whether the calculation of space is correct. However if the 2,002m² includes the structures marked on the site plan the outdoor space does not meet the *ARAZPA* minimum of 2,000m² for eight elephants. These structures are the "protected garden" and the "associated protected (from the elephants) 2500 mm wide aquatic planter" alongside the moat. Presumably the "shade structure" and the "stilt house" would also impede free movement of the elephants.
44. The Melbourne Zoo's elephant enclosure is planned to house a female calf (aged 4 to 5 years), two juvenile females (one aged 9 to 12 years, and the other aged 6 to 7 years), together with two elephants already housed there, these being an adult female (aged 28 years) and an adult male (aged 29 years).
45. In the case of Melbourne Zoo, no information is provided as to the outdoor space for the elephants. According to the document entitled "Additional Questions for Sup G – Elephants at Melbourne Zoo",³¹ the total area of "Trail of the Elephant" including stage one, stage two and the barn, is 4,593m². No statement is made as to the dimensions of the outdoor area. The site plans provide details of the dimensions of

³⁰ Cited in Campbell, I.G. (2005). Statement of Reasons for Decision under Section 303CG of the Environment Protection and Biodiversity Conservation Act 1999.

³¹ PT 6, pages 133-150 and 208-209.

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the bull barn and other buildings, but no details of the dimensions of the outdoor area. I cannot see any basis for concluding that the ARAZPA minimum requirement is met.

46. These space specifications have to be compared with the space used by elephants in the wild.
47. Since the biological and behavioural well-being of elephants is contingent upon adequate space, and neither the Melbourne Zoo nor the Taronga Zoo come anywhere close to meeting the space requirements for elephants, in my opinion, there is an underlying flaw in the Minister's decision³² to grant the permits to the Second and Third Respondents. Without adequate space, the two zoos cannot suitably manage, confine and care for the animals, including meeting their biological and behavioural needs. In the space available, the degree of manipulation required is staggering, and removes all autonomy from the elephants, turning them into machines where stimuli are plugged in to get the required responses.
48. The space available for elephants, in both the Melbourne Zoo and the Taronga Zoo, will make it impossible to implement standards that fulfil elephants' most basic interests and requirements, as outlined in the *ARAZPA Guidelines*.
49. In the current scientific, social and ethical climate, it plainly cannot be said that the Melbourne Zoo and Taronga Zoos are suitably equipped to manage, confine and care for the animals, including meeting their biological and behavioural needs.

Chaining, freedom of movement and autonomy

50. In captivity, elephants are often chained for many hours of the day³³ and even when not chained, they are able to move relatively little. There is no information in the *ARAZPA Guidelines* to indicate what the maximum duration of chaining might be.
51. I understand that in accordance with the *ARAZPA Guidelines*, the elephants will be trained on a daily basis to accept restraints. Both the Taronga and Melbourne facilities include electric fences.

³² See Campbell fn 27.

³³ AZA, 2003.

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52. Elephants in zoos, particularly those in direct or free contact, have no autonomy; they live under the control of keepers who manage their movement and make almost every decision on their behalf. The breeding program will involve very invasive and direct contact on a continuous basis because it will be necessary to directly handle the elephants for the blood sampling, electro-ejaculation and artificial insemination procedures.
53. I understand that the Second and Third Respondents intend to use free contact to manage the elephants they are proposing to import. In direct or free contact husbandry procedures, an elephant must accept a keeper, mahout or manager as dominant. Since dominance in elephant society is based primarily on body size, to maintain this artificial and uneasy balance of power requires continuous reinforcement of keeper dominance through the imposed lack of autonomy, vocal and physical bullying and, in my opinion, physical abuse. In protected-contact situations elephants are at least given some small level of autonomy and, in theory, are subject to significantly less keeper dominance and bullying.
54. In Amboseli, elephants roam, walking, moving while feeding, or interacting, for almost three quarters of every day, only stopping to stand and rest, or lie down, for a couple of hours a day.³⁴ There is a misconception that the matriarch of an elephant family makes decisions on behalf of the family. This is not the case. Only in a moment of crisis is the matriarch's strong leadership obvious, otherwise any member of the family, including juveniles, can propose a course of action.³⁵ Such a proposal is followed by vocal negotiation during which members can make independent or group decisions regarding where to go and what to do. In other words, elephant society is democratic, not oppressive, authoritarian or despotic as life is for elephants in captivity where they are subject to the continual dominance and instruction of the keepers. Autonomy and freedom to choose is an important component of an elephant's well-being that cannot be met in either the Melbourne Zoo or the Taronga Zoo.

³⁴ Poole (1982), publication no. 50, exhibit 'JP2'.

³⁵ Poole (in press a), publication no. 50, exhibit 'JP2'.

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Separation of mothers, calves and family units

55. In Amboseli, male elephants live with their mothers until an average age of 14.3 years (with an age range of 9 to 18 years).³⁶ Females remain with their natal families for life.³⁷ Elephants in the wild are raised in a nurturing environment where they are protected, comforted, and reassured. Contrary to claims by some elephant managers, elephant calves are not physically “disciplined” by their mothers and other females in the family unit.³⁸
56. From the Minister’s statement of reasons provided to me, I am aware of the basis on which import permits have been granted to Taronga and Melbourne Zoos to enable eight Asian elephants to be imported and exhibited at Taronga and Melbourne zoos. In my opinion, much of what has already taken place in the process of acquiring the elephants, the subject of the import permits, as well as the future plans for them, are contrary to the very spirit of the *ARAZPA Guidelines*.
57. For example, Section 5.1.1 of the *ARAZPA Guidelines* entitled “Family group”, under the sub-section entitled “Animal welfare”, states that “Bonds demonstrated between females within a group suggest that there are significant benefits to the animals in developing and maintaining these relationships and that separation must inevitably be stressful.” While the *ARAZPA Guidelines* stress that for the well being of elephants, the bonds between individuals should not be severed, the importation has done, and will continue to do, exactly that, causing long-term psychological trauma to these individuals.³⁹
58. Of the eight elephants being imported from Thailand, three are young enough that in the wild they would still be suckling, and would rarely be more than a few metres from their mother’s or allomother's side.⁴⁰ Given their age, these elephants will by reason of the importation have been taken from their mothers in the wild, or have been separated from their mothers in elephant camps in Thailand. Elephant camps

³⁶ Lee & Moss (1986), publication no. 36, exhibit 'JP2'; Lee *et al* (in press) publication no. 36.

³⁷ Moss (1988), publication no. 1, exhibit 'JP2'.

³⁸ Poole, personal observation.

³⁹ Bradshaw *et al* (2005), publication no. 16, exhibit 'JP2'.

⁴⁰ Lee (1986 & 1987), publication no. 34, exhibit 'JP2'; Lee & Moss (1986), publication no. 36.

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and zoos often permit mothers and calves to be separated at a very young age. In reality, due to maternal rejection infants are often taken from their mothers soon after birth. The documents provided to me do not indicate that the mothers of the elephants to be imported are dead, or have rejected them, or are being imported with them. Nor does it appear that the elephants are being imported with any other family members.

59. It is my opinion that the abduction of infants and calves from their mothers and families is not only unethical, but it may result in psychological problems that will affect the long-term physical and emotional well being of the animals.

Social groups

60. The social units planned for the imported elephant are extremely small. In Taronga Zoo the social group will be four, while at the Melbourne Zoo the unit will be five (although the adult male will be housed separately, so the effective unit will be four).

61. While both zoos intend to breed the elephants, based on the very limited success of zoos elsewhere,⁴¹ there is very little indication that this will be successful enough to provide an increasing population. Thus, for the foreseeable future, both zoos will retain very small groups of unrelated individuals without any contact with a larger social network of elephants.

62. In Amboseli, females and calves live in an average family size of 18.7 individuals (with a range of 2 to 52) and on average a female will, on a daily basis, experience a group size of 20 individuals (including independent males), with a range up to 550 elephants.⁴² Six per cent of groups observed over 34 years contain more than 100 individuals. Elephants are able to discriminate between the voices of at least 100 other adults.⁴³ While Asian elephants live in smaller families than the elephants of Amboseli, and in generally experience smaller groups, their social network (individuals with whom they meet, interact and communicate on a regular basis) is likely to be similar to Amboseli's elephants.

⁴¹ Clubb & Mason Report (2002), publication no. 20, exhibit 'JP2'.

⁴² Moss, in press, publication no. 45, exhibit 'JP2'.

⁴³ McComb (2000), publication no. 41, exhibit 'JP2'.

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63. Social networking is a predominant and essential aspect of an elephant's daily life. Neither the Melbourne Zoo nor the Taronga Zoo can meet this requirement of an elephant's well being.

Social bonding

64. In captivity (both in camps and in zoos), elephants are frequently taken from the individuals with whom they are bonded, to be exchanged with elephants from other institutions. In the case of the importation of the eight elephants from Thailand, social bonds that are crucial to the well-being of the elephants have been severed.

65. I understand that all of the elephants proposed to be imported have been separated from their mothers and their family groups and are unrelated individuals. Furthermore, I understand that the elephants have been housed in a constantly changing environment of different elephants and different elephant handlers and consequently, they have not been able to establish normal, close social bonds with other elephants.

66. Close social bonds in a normal family environment play a crucial role in social learning and normal behaviour. For example, the participation of juvenile females in the care of infants both increases calf survival⁴⁴ and provides young females with an array of care-taking experiences that persist until they give birth to their own first calf. The calves of inexperienced mothers show higher levels of distress than do calves born to experienced mothers, who appear to be more responsive to calf demands for food and protection with obvious consequences for calf growth and survival.⁴⁵

67. In my opinion, the high rate of infanticide and maternal rejection in captivity is a direct consequence of the lack of close social bonds and social learning available in captivity.

⁴⁴ Lee & Moss (1986), publication no. 36, exhibit 'JP2';

⁴⁵ Lee & Moss (1986), publication no. 36, exhibit 'JP2';

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68. In Amboseli, over three decades, there has been only one case of a female permanently leaving her family to join another family.⁴⁶
69. Paragraph 5.1.1 of the *ARAZPA Guidelines* entitled “*Family group*”, states that “*The recommended age for transfer of males [away from the female unit] is 8 years, with the minimum age being four years.*”⁴⁷ After this age the males may spend a life of solitude.
70. The male elephant calf named Gung who is planned for Taronga is now about 4 years old. It is proposed that when he reaches about 8 years of age he will be housed in a completely separate enclosure from the female group. I understand that Gung is already showing signs of aggression and may have to be separated relatively soon. If this is indeed the case, there are considerable welfare issues, for not only will they be housing a male in isolation, which is unacceptable, they will be housing a calf in isolation. Signs of aggression at such a young age are likely to be a result of trauma and possible mistreatment suffered as an infant, and are likely to result in long-lasting behavioural difficulties.
71. This is entirely incompatible with what happens in the wild, where young adult males under 20 years old spend more than 70% of their time in association with family groups. They are observed alone less than 5% of the time. Large adult males over 35 years old spend half of their time in the company of other males, 25% in the company of females and only 25% of their time alone – most often while searching for receptive females.⁴⁸
72. In the case of each individual, the importation of the eight elephants has severed bonds that are crucial to the elephants’ long-term biological and behavioural well-being.
73. I understand that the *ARAZPA Guidelines* envisage developing management plans for each individual elephant. There is no information in the *Guidelines* as to how the

⁴⁶ Moss, in press, publication no. 45, exhibit 'JP2'.

⁴⁷ T 31, page 653.

⁴⁸ Lee *et al* , in press, publication no.36, exhibit 'JP2'.

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“family” group and its social interactions at a group level are to be developed through individual management plans

Conservation impact

74. According to the Minister’s statement, the Thai government has assured the Minister that the elephants in question were not wild-caught and, therefore, do not constitute any impact on the highly endangered and dwindling wild Asian elephant population. However the figures regarding the ages of the elephants indicate to the contrary. I have been provided with a list of the registration details of the elephants to be imported. I have exhibited a copy of that document to my affidavit at exhibit “JP 3”.
75. The fact that most of the elephants’ ages are listed with the word “approximately” with a range of several years (eg. approximately 9 to 12 years in the case of Chaba), indicates that there are no birth records of the elephants available. This leaves open the clear possibility that these individuals may be wild caught.

Summary and Conclusions

76. In Amboseli, where elephants grow up in a nurturing social environment, have the freedom to move, and autonomy over their own lives, elephants do not develop foot or weight problems as they do in captivity in zoos.
77. Of the 2,200 elephants who have lived in Amboseli over 34 years of study, not one has had foot (other than those inflicted by humans) or weight problems.
78. In over 34,000 sightings of groups containing 1 to 550 elephants, not one elephant has been seen swaying rhythmically back and forth or showing other neurotic behaviour.
79. At Amboseli we have only recorded two cases of infertility out of 558 females over 10 years old.
80. Out of 1,500 recorded elephant births at Amboseli, there has not been a single incident of an elephant killing its own infant. There have been no incidents of elephants attacking or killing the individuals with whom they are closely bonded.

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81. In captivity, confined in small spaces, under the constant command of a trainer and kept in socially deprived conditions, elephants become dysfunctional, unhealthy, depressed, and aggressive.⁴⁹ Inactivity leads not only to obesity, but also to foot diseases, joint problems, and arthritis. Female zoo elephants are 31-72% heavier than their wild counterparts.⁵⁰
82. Infertility, maternal rejection, maternal infanticide, high infant mortality, hyper-aggression are all common problems in captivity. Degraded by a life of tension and punishment, many captive elephants have inflicted deliberate injury and even death on elephant keepers.
83. My behavioural research conducted in Amboseli National Park, which builds on long-term studies of these elephants, demonstrates some of the key biological and behavioural needs of elephants. It is my opinion that these needs will not be met in the zoo environments at Melbourne and Taronga Zoos. As explained above, the space at both Melbourne and Taronga zoos is inadequate to provide for sufficient exercise, to promote social interactions or to allow for sufficient social group sizes.
84. My long-term behavioural research on wild elephants indicates that these large, highly social and intelligent animals require ample, environmentally complex space, and a sufficient number of other elephants for social contact and learning.
85. In the case of mothering skills, adequate social learning requires the presence of experienced females and the provision of a level of autonomy that allows juveniles and young mothers to practice and even to make mistakes.
86. My research and the research of others at Amboseli points to the fact that we should be moving toward a position in which the only captive environments that are permitted to keep elephants are those with the space to allow individuals to choose from among a wide selection of social partners, thereby maintaining physical and psychological well-being. It indicates that all elephants, including males, should be allowed access to social partners. It recommends that males should remain in the company of their families until the age of natural dispersal, while closely related or

⁴⁹ Hancocks, in press, publication no. 29, exhibit 'JP2'.

⁵⁰ Clubb & Mason Report (2002), publication no. 20, exhibit 'JP2'.

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closely bonded females should stay together for life. These things will not happen in Taronga or Melbourne Zoos.

87. Elephant behaviour in the wild dictates that infants and calves are not be removed from the care of their mothers and family members. It points clearly to the fact that the tradition of removing females or youngsters from their social group for the purpose of exchange with other camps or zoos should cease, and that the parallel practice of abducting infant or young elephants from their families in the wild to send to zoos or safari parks must also stop.

88. The elephants being imported into Taronga and Melbourne Zoos have been separated from their family groups. Three of the eight should still be in the care of their mothers. The research also emphasizes that all forms of physical discipline and restraint as proposed under the free contact approach to be used by both Melbourne and Taronga Zoos must be discontinued and that chaining not be used under any circumstances unless absolutely necessary for veterinary care.

89. On the basis of all these criteria, it is my opinion that neither the Melbourne Zoo nor the Taronga Zoo can provide an appropriate environment for elephants, and that the zoos would have to make substantial and revolutionary changes to their proposals in order to meet the elephants' most basic biological and behavioural needs.

Affirmed by)
JOYCE POOLE)
at Keyna this 17th)
day of September 2005)
before me: Deponent

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Lawyer/Justice of the Peace

..... Deponent Lawyer/Justice of the Peace

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