

Domestic Cat Survey and Registration Program - 2016

by

Dave Algar¹, Don Nickels² and Kelly Algar³

¹ Department of Parks and Wildlife, Division of Science and Conservation, Woodvale, Western Australia, 6026.

² Veterinary Surgeon, Kalinda Drive City Beach, Western Australia 6015.

³ School of Veterinary and Life Sciences, Murdoch University, South Street, Western Australia 6150.



Plate 1. Don Nickels and Kelly Algar performing an ovariohysterectomy (photo taken by Khairin Amin)

Background

To mitigate the environmental and social impacts of cats on Christmas Island, a cat management plan was commissioned. The Plan (Algar and Johnston 2010) proposed a strategy to eradicate cats entirely from the island as the de-sexed domestic population died out. As part of this Plan, amendments to the Local Cat Management Laws (*Shire of Christmas Island Local Law for the Keeping and Control of Cats 2004 (WA)*) under the *Local Government Act 1995 (WA)* were endorsed in August 2010. These revisions require that all domestic cats in the Shire of Christmas Island are now legally bound to be de-sexed, tattooed, microchipped and registered with the Shire. The revisions were designed to limit domestic and stray/feral cat impact on the native fauna, promote responsible cat ownership, compliance and enforcement of cat management laws and prohibit the importation of new cats. To guarantee all domestic cats are registered, a survey of domestic cats is conducted in May on an annual basis. Surveys for domestic cats were conducted prior to veterinary programs in October 2010 (Algar *et al.* 2011a) at the commencement of the Cat Management Program and again in May 2011 (Algar *et al.* 2011b). The final veterinary program was conducted in May 2012 following the survey that year (Algar and Hamilton 2012; Algar *et al.* 2014). Subsequent surveys have been conducted each May in 2013, 2014 and 2015 (Algar and Hamilton 2013; 2014; Parks Australia 2015) and May 2016 this year. However, in 2016 prior to the domestic cat survey, it came to our attention that a number of unregistered cats were being kept as pets. It was decided by the "Cat Management Steering Committee" that a short-term amnesty on pet cat ownership be invoked so that these animals could also be de-sexed and registered. A final veterinary program was endorsed and fines were to be issued to those residents who wanted their cat to be de-sexed and registered, otherwise unregistered cats could be handed in and destroyed without charge. In addition, an offer of free pet health checks and application of topical parasiticide and worming treatments were provided if requested.

Methodology

Domestic cat survey

The survey for domestic cats is conducted across the entire residential area. The survey process involves door-knocking at each permanent residence (n= 500+) and questioning the adult inhabitants as to whether they have any domestic cats. All residences are surveyed and, as added insurance, neighbours are also asked whether domestic cats are present in adjoining houses. All surveyed people are informed of the risk of not declaring the presence of a domestic cat and it not being subsequently registered. The survey records the number of owned cats per household, the sex, age and coat colour. Accordingly, the database of registered cats can be updated annually with of addresses and cat deaths noted. The owners of unregistered cats were notified of the various veterinary procedures to be conducted on the animal and the date that it was to occur.

Veterinary program - registration of domestic cats

Rangers from Parks Australia and the Shire of Christmas Island systematically collected from their owner each animal identified as unregistered in the survey. The pick-up was made

early in the morning and the cat was transported in a “pet pack” to the hospital. Processed cats were returned to their owners later that day.

Cats were sedated with a standard mixture of Dormitor (Medetomidine HCL 100 µg/g; Pfizer Animal Health) and Butorphanol Tartrate (0.4 mg/kg; Bayer Australia) followed after sedation with Ketalar (Ketamine HCL 4 mg/kg; Pfizer Animal Health) all given intramuscular. Routine castration (surgical orchiectomy) was performed on the entire male cats and routine spaying (ovariohysterectomy) was performed on entire female cats. Following surgery, cats were implanted with a microchip (Microchip Australia) and a de-sexing tattoo was stamped into the left ear for future identification. Cats were also treated with an application of the allwormer Profender (Emodepside 21.4 g/l Praziquantel 85.8 g/l; Bayer Australia) and the topical parasiticide Revolution (6 mg Selamectin/kg body weight; Zoetis Australia). Other injections given were long-acting Penicillin 0.5 ml, and Meloxicam injection 0.3 mg/kg. After each surgical procedure all cats were given 0.08 ml (200 µg/kg) of Antisedan (Atipamezole 5 mg/ml; Pfizer Animal Health) as a reversing agent. Cats regained sternal recumbancy some 5 – 6 minutes after administration of the Antisedan.

The Veterinarian estimated the age of the cats based upon tooth eruption, wear and general body condition scores. The information for each individual animal was recorded as part of the “Domestic Cat Register”.

Results

Domestic cat survey

One hundred and fifty-two cats (72 females, 80 males) were recorded during the initial survey in October 2010 of which 136 were registered as domestic pets (Algar *et al.* 2011b). Since October 2010, 166 cats have been registered following the three earlier veterinary programs. The total number of domestic cats registered each year, the sex population structure, the number of new registrations and number deregistered are presented in Table 1. The survey for domestic cats conducted in May 2015 revealed that there were 87 domestic cats registered, of these, one cat was present but had no official owner as the previous owner was no longer on-island. A further two had been missing for at least two years. These cats are believed to be dead by their owners. Of the 87 cats registered in 2015, a further 14 died prior to the May 2016 survey. One cat recorded as dead by its owner in 2013 has miraculously reappeared and re-homed, another reported as missing and recorded as dead in 2013 has also reappeared and re-homed. The non-owned cat is still present and the two missing registered animals are now presumed dead, this leaves a total of 75 registered owned cats present at the conclusion of the 2016 survey. Fourteen cats (5 females, 9 males) were deregistered at the conclusion of this latest survey; in addition, the two cats relocated and re-homed have been re-registered (1 female, 1 male).

Table 1. Total number of domestic cats registered each year, the sex structure, the number of new registrations and number deregistered

Date	No. registered			New registers			De-registers		
	Total	Female	Male	Total	Female	Male	Total	Female	Male
October 2010	N/A	N/A	N/A	136	66	70	N/A	N/A	N/A
May 2011	138	69	69	18	10	8	16	7	9
May 2012	135	66	69	12	5	7	15	8	7
May 2013	111	53	58	0	0	0	24	13	11
May 2014	101	50	51	0	0	0	10	5	5
May 2015	87	45	42	0	0	0	14	5	9
May 2016	75	41	34	2	1	1	14	5	9
June 2016	93	49	44	18	8	10	0	0	0

Veterinary program - registration of domestic cats

Eighteen cats (10 males, 8 females) were de-sexed, microchipped and tattooed (see Table 1). Records for these animals have been entered in the "Cat Register", providing a total of 93 cats registered as of June 2016. One of the females de-sexed had given birth to four kittens, five days before surgery; these were euthanized. A further two females had had four and five embryos *in utero* respectively. The age structure of the domestic cats varied from 14 weeks - 2 years, with the majority (72%) of cats being less than one year of age.

Prior to the de-sexing program, free health checks for registered cats were offered to the community. Consultations were usually conducted at the owner's home providing the opportunity to discuss the health of their cat, any issues they had, and the control program for feral and stray cats being undertaken that would likely benefit their cat's wellbeing. All cats were treated with an application of the allwormer Profender and the topical parasiticide Revolution. Several owners were provided with chemist prescriptions for treatable ailments their pets had. One cat required facial surgery following a cat fight and two required teeth to be removed. One cat was euthanized because of an aggressive facial tumour. Fifty-three cats (71%) were provided a health check, five people (7%) were provided with ointment tubes of allwormer and topical parasiticide to treat their own cats. Eight people (11%) could not locate their cats when the Veterinarian was present; often following several visits. A further five people (7%) did not want a consultation with the Veterinarian. Four cat owners (5%) were not on-island during the Veterinarian's visit and could not be contacted.

Discussion

At the conclusion of the de-sexing program this year, there were 93 registered cats. Attrition of pets on the island is high with three of these animals having since died (one from a stomach compaction and two run-over) and a fourth is missing. With this mortality, is the prevailing issue of people trying to acquire new animals as pets. The community is well aware that no further cats will be de-sexed and registered. Should any unregistered cat be found, the Shire will remove the animal and fine the owner the maximum penalty. Failure to remove these animals and not taking a strong stance will likely jeopardise the success of the eradication program.

A suggestion was made to the "Cat Management Steering Committee" to investigate the option of an alternative pet to the cat to further reduce the incidence of unregistered animals entering the domestic population. Environmentally friendly species, without negative cultural/religious significance, should be considered. A proposal has been submitted to the Committee for discussion and consideration.

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