DEPARTMENT OF PRIMARY INDUSTRIES, PARKS, WATER AND ENVIRONMENT (DPIPWE) SUBMISSION

LEGISLATIVE COUNCIL GOVERNMENT ADMINISTRATION COMMITTEE A: INQUIRY INTO WILD FALLOW DEER

June 2016

Department of Primary Industries, Parks, Water and Environment

Tasmanian Government

Contents

Background

The Department of Primary Industries, Parks, Water and Environment (the Department) welcomes the opportunity to provide a submission to the Legislative Council Government Administration Committee's inquiry into wild fallow deer.

The Department has statutory responsibility for the management of fallow deer in Tasmania.

The submission was prepared by the Natural and Cultural Heritage Division with input from other divisions within the Department with responsibility in respect to this matter, specifically: AgriGrowth Tasmania, Biosecurity Tasmania and the Parks and Wildlife Service.

This submission provides factual information on the management of fallow deer in Tasmania, and other information relevant to the Terms of Reference of the Inquiry.

Introduction

The European fallow deer, *Dama dama dama*, was introduced to Tasmania in the early 19th Century and has since been managed as part of the State's natural resources. Successive Tasmanian Governments have managed deer populations as a sustainable hunting resource whilst aiming to minimise any impacts on crops and natural values.

Consequently the presence of this species has been the most important driver of Property Based Wildlife Management Plans, which aim to organise and balance stakeholder needs. Over the past 20 years, these plans have enabled Tasmanian landholders to work with hunters towards mutually beneficial outcomes, in particular more effective browsing animal control.

The protected status and management objectives for fallow deer are described in the *Nature Conservation Act (2002)* and the *Wildlife (General) Regulations (2010)*.

Under the *Wildlife (General) Regulations (2010)* (the Regulations), fallow deer are scheduled as Partly Protected Wildlife. As such, they are subject to an open season during which they may be taken by licensed hunters. The Regulations also provide for the taking of fallow deer under permit on specified land for crop protection purposes.

Response to the Terms of Reference

1. Environmental impacts on public and private land

Since their introduction to Tasmania, fallow deer have spread to occupy an area covering over 30 per cent of the State (Figure 1). The distribution of fallow deer overlaps areas of agricultural production, areas with native grasslands, and open forests with grassy understories. The majority of the fallow deer range is classified as private land, although it also includes extensive areas of public land, some of which are reserved for timber production or conservation purposes. Fallow deer are also spreading west into the Tasmanian Wilderness World Heritage Area where they potentially threaten environmental values.[1]

Figure 1: Distribution of fallow deer in Tasmania

[1] Locke, S. (2007) The Distribution and Abundance of Fallow Deer in the Central Plateau Conservation Area and Adjacent Areas in Tasmania. A Baseline Monitoring Program. *Nature Conservation Report 07/02*. Department of Primary Industries and Water, Hobart

1.1. Impacts on Vegetation

In Tasmania, private landowners may develop conservation objectives for their land. These objectives may be formalised through the establishment of a legally binding conservation covenant under the *Nature Conservation Act 2002,* which commits the landowner to managing land for the protection of its natural values in perpetuity. Conservation covenants have been widely adopted in Tasmania and now cover over 100,000 hectares of private land.

Some landowners have identified problems with deer on their properties and regard deer as a threat to the biodiversity of remnant grasslands and the regeneration of woodlands.[2] Despite this assertion there has been little research into the environmental impact of fallow deer in Tasmania.

One Tasmanian study, involving field trials in the Midlands and Derwent Valley by the University of Tasmania and Greening Australia, found evidence of deer damage to native eucalypt and shrub species planted as part of an environmental restoration project.[3]

The Department is supporting work by the University of Tasmania to undertake research to better define and quantify the impacts of deer on areas of reserved land on the Central Plateau.

On the Australian mainland several deer species cause harm to the environment through land degradation, and plant and habitat loss.[4] There are six deer species that have formed viable populations on the Australian mainland, mostly on the eastern seaboard. It is estimated that there are approximately 200,000 wild deer in 218 populations in Australia.[5]

Under Queensland legislation feral deer are declared pest animals.

In Victoria and New South Wales feral deer have been nominated for listing as a key threatening process under the threatened species legislation. While the New South Wales nomination was successful, Victoria's nomination was rejected by the Scientific Advisory Committee due to a lack of supporting scientific evidence.

This disparity in the status of deer between States reflects the current range of views about the appropriate management of wild deer, and the lack of scientific knowledge on the ecological impacts of deer in Australia.

A large amount of information exists about the environmental impact of a number of deer species in other countries, including the United States, United Kingdom, and New Zealand.

---

[2] Tasmanian Land Conservancy (2014) *Five Rivers Management Plan 2014 – 2019*. Tasmanian Land Conservancy, Hobart, Tasmania.

[3] T. G. Bailey, A. Gauli, P. Tilyard, N. J. Davidson, B. M. Potts. Feral deer damage in Tasmanian restoration plantings. *Australasian Plant Conservation* 23, 10-12 (2015).

[4] Locke, S. (2007) The Distribution and Abundance of Fallow Deer in the Central Plateau Conservation Area and Adjacent Areas in Tasmania. A Baseline Monitoring Program. *Nature Conservation Report 07/02*. Department of Primary Industries and Water, Hobart.

[5] https://www.business.qld.gov.au/industry/agriculture/species/declared-pests/animals/feral-deer.

In the United States white-tailed deer are known to impact on the establishment and growth of shrubs and trees in forests and reserved land.[6]

Fallow deer in the United States cause distinct browsing paths by stripping leafy vegetation below 1.5 m.[7] Deer's habitual movements are also thought to form trails and cause stream bank erosion.[8]

New Zealand studies have shown that selective foraging by deer has changed the structure and composition of some forests. Deer may also alter natural plant growth patterns and forest structure.[9]

1.2. Competition with Native Herbivores

In Tasmania some marsupials occupy the same environment as deer. In those areas, competition for food between the native herbivores and deer is likely to occur. The nature and extent of the competition is largely unknown.

The diets of fallow deer and forester kangaroos have been investigated in Tasmania's Midlands.[10] The findings indicated that both species ate grasses and that fallow deer ate more shrub species than forester kangaroos. It was also found that the overlap of deer and kangaroo diets is greatest during winter when food is most scarce.[11]

1.3. Loss of Wilderness Quality

The Tasmanian Wilderness World Heritage Area Management Plan (1999)[12] recognises that there is a scale of wilderness quality from high to low based on certain wilderness characteristics, including apparent naturalness and biophysical naturalness. If a sufficient population of a large exotic species like fallow deer establish in any wilderness area, it would have the potential to reduce the naturalness and therefore the wilderness quality of the area. The potential risk to the property is considered low, but will require ongoing monitoring.

---

[6] Van Clef, M. (2004) *Review of the Ecological Effects and Management of White-tailed Deer in New Jersey*, The Nature Conservancy, New Jersey

[7] Nugent, G. (1994) Home range size and its development for fallow deer in the Blue Mountains, New Zealand. *Acta Theriologica*, 39, 159-175.

[8] Gray, G.G. (1983) History and Status of European Fallow Deer (*Dama dama dama*) at Argonne National Laboratory, Illinois. *The Prairie Naturalist*, 15, 113-119.

[9] Smale, M.C., Hall, G.M.J. and Gardener, R.O. (1995) Dynamics of Kanuka (*Kunzea ericoides*) forests on South Kaipara Spit, New Zealand, and the Impact of Fallow Deer (*Dama dama*). *New Zealand Journal of Ecology*. 19(2), 131-141.

[10] Duncan, A. (1987) A dietary study of two sympatric herbivores; Fallow deer (*Dama dama*) and forester kangaroos (*Macropus giganteus tasmaniensis*). Master of Science Thesis, University of Tasmania, Hobart.

[11] Ibid.

[12] Parks and Wildlife Service (1999) *Tasmanian Wilderness World Heritage Area Management Plan 1999*. Hobart Tasmania. (www.parks.tas.gov.au/?base=6158).

1.4. Summary

- Fallow deer occur widely in Tasmania including on land of conservation value.
- Caution is needed in drawing conclusions about the potential impact of fallow deer in Tasmania from the impacts of deer species in other Australian states and overseas. However, the experience interstate and overseas suggests deer are likely to have an environmental impact in Tasmania, particularly if at higher densities.
- There is currently little scientific evidence regarding the environmental impact of fallow deer in Tasmania, but this is most likely due to a lack of investigation.
- The Department is supporting work to better quantify and define the impact of fallow deer on the State's natural values.

2. Impact on commercial activities on private land

Fallow deer occur widely on private land, where they have the potential to damage crops, pastures and infrastructure, spread disease, and provide an incentive for unlawful hunting activities.

2.1 Crop and Pasture Damage

Fallow deer compete with domestic livestock by grazing improved pastures, as well as native pastures, cereals and fodder crops. They can cause damage to farm fences, and browse plantation and naturally regenerated seedlings. Male deer also thrash and rub trees to mark their territory and remove velvet from their antlers.

In Tasmania, these issues have been exacerbated in recent years as a consequence of:

a) drought conditions, forcing deer out of the bush and onto agricultural land in search of food;

b) land use change due to greater use of irrigation and planting of high value crops;

c) the establishment of plantations, providing cover for deer close to agricultural pursuits; and

d) a growing deer population with an expanding range.

The actual dollar value of the damage caused by wild fallow deer in isolation is difficult to assess because of the presence of other browsing animals that can coincide with damage to crops and pasture, and other environmental variables that may affect crops and pasture.

In Tasmania, fallow deer graze on improved pasture and some crops, and when in large numbers, may cause damage to specific areas.[13] Primary producers in Tasmania are concerned about the damage that deer can cause to crops, trees, pastures and fencing. The use of fencing to protect crops and pastures from damage by deer is prohibitively expensive.

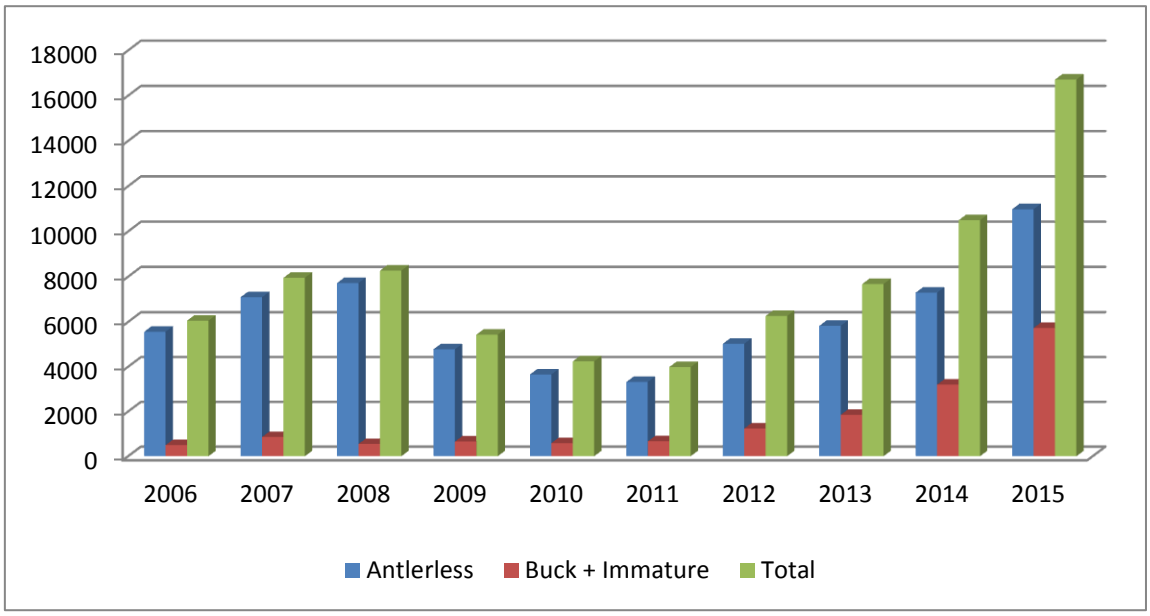
To help mitigate this problem, farmers obtain permits to shoot a specified number of deer to reduce their numbers and the impacts on their businesses.[14]

During 2015, a total of 458 primary producers in Tasmania were issued permits to manage the impacts of deer on their properties. In recent years the demand for permits has been increasing together with the number of deer permitted to be taken, for which numbered tags are issued (See Figure 2).

[13] Coleman, J.D., Montague, T.L., Eason, C.T. and Statham, H.L. (1997) *The management of problem browsing and grazing mammals in Tasmania*. 2nd Edition Revised, M. Statham, 2001. Landcare Research Contract Report: LC9596/106. Landcare Research, Lincoln, New Zealand.

[14] Department of Primary Industries, Parks, Water and Environment, Tasmania, unpublished data.

Figure 2: Crop protection tags issued for fallow deer 2006-2015



2.2 Disease

A survey of wild fallow deer in Australia found that they were relatively free from infectious diseases.[15]

A Tasmanian study found evidence that Bovine Johne's Disease (BJD), which can strike cattle, was not common in a limited sample of wild fallow deer. However, fallow deer are susceptible to BJD and, if exposed to infected cattle, may themselves become infected and spread the disease to other herds.[16]

Various other potential diseases and pathogens have been examined in Tasmania, with no evidence of any being significant in terms of fallow deer/stock interactions.[17]

It should be noted however, that fallow deer are susceptible to many of the diseases and parasites that occur in farm animals.[18] It has been suggested that wild deer populations be considered potential vectors in the event of an exotic disease outbreak.[19]

The Agriculture and Resource Management Council of Australia and New Zealand provides a list of major emergency diseases which may affect wild animal populations in Australia.

---

[15] English, A.W. (1985) Diseases of Fallow Deer in New South Wales, Australia. In *Biology of Deer Production*. The Royal Society of New Zealand, Bulletin 22, 93-96.

[16] Dr Bruce Jackson Department of Primary Industries, Parks, Water and Environment. *pers. comm*.

[17] Ibid.

[18] Calleja, M.C. (2001) *Evaluation of Rapid Census Methods on Wild Fallow Deer (*Dama dama*) Populations within NSW and the Economic Impacts of these Herds*. Bachelor of Landscape Management and Conservation (Hons) Thesis, University of Western Sydney, Richmond.

[19] Statham, H.L. and Statham, M. (1996) *Movements of fallow deer (*Dama dama*) in Tasmania and the effects of population sampling on dispersal.* Department of Primary Industries and Fisheries. Prospect, Tasmania.

The following exotic diseases from the list have been identified as potentially affecting wild deer:

- Bluetongue
- foot and mouth disease
- screw worm fly
- vascular stomatitis
- transmissible spongiform encephalopathy (prion diseases), particularly chronic wasting disease.[20]

It is important to note that the epidemiology of these diseases depends on the density of the host population. As density increases, the likelihood that the disease pathogen will be caught and spread also increases. According to the Agriculture and Resource Management Council of Australia and New Zealand, the fact that deer are gregarious and travel long distances, have erratic behaviour and are difficult to control may increase the risk of them contracting and spreading disease.[21] However, where fallow deer populations are localised and where dispersal is limited by lack of suitable habitat, they are unlikely to play an important role in a disease outbreak.

2.3 Poaching

Taking wildlife, including fallow deer, illegally (poaching) remains a problem in Tasmania however, because of the covert nature of the activity, it is difficult to determine its full extent. In recent years the Department has responded to an increasing number of reports of spotlighting from roads, cutting of farm gates or fences, and the finding of illegally taken deer carcasses with only the head removed.

Figures for the number of persons convicted of wildlife related offences show clearly that a disproportionate number of wildlife-related offences involve deer (see Table 1).[22] Landholders, and hunters who legally access properties, regard deer poaching and related offences as a serious problem.

Table 1: Persons convicted of wildlife offences including those relating to deer

Year	2010	2011	2012	2013	2014	2015
All Offences	6	5	13	8	20	20
Deer Offences	3	3	7	3	11	10

[20] Agriculture and Resource Management Council of Australia and New Zealand (2000) *AUSVETPLAN 2000 Wild Animal Management Manual*. Department of Agriculture, Fisheries and Forestry. Canberra.
[21] Ibid.
[22] Department of Primary Industries, Parks, Water and Environment, Tasmania, unpublished data.

Poaching on agricultural land can lead to damage to property infrastructure such as gates, fences, and tracks and can also interfere with domestic stock and cropping. The presence of poachers on private land can be a major source of emotional stress and reduced amenity for landholders whose properties are affected.

Poaching also has potential to interfere with the management goals for public reserved land.

The presence of fallow deer in an area may lead to an increase in the likelihood of poachers to target that area.

In addition, illegal shooting of deer (on public and private land) from public roads represents a public safety issue and, based on Departmental responses to such incidents, is a regular occurrence in many rural areas where deer occur.

2.4 Summary

- Fallow deer occur widely in Tasmania on private land.
- Deer can pose a threat to pasture, crops and fences, and can cause significant localised damage.
- While wild deer may act as a potential carrier of exotic diseases, evidence indicates that they are relatively free of infectious disease in Tasmania.
- Deer poaching is a serious on-going problem that results in trespass, property damage and poses a public safety risk in rural areas.

3. The Partly Protected status of fallow deer under the *Wildlife (General) Regulations (2010)*

Fallow deer were introduced to Tasmania for hunting purposes. Successive Tasmanian Governments have managed deer populations for sustainable hunting and to mitigate their impact on crops and natural values. Management aims to ensure sustainable deer populations while protecting habitat, land use and recreational interests.

In order to facilitate effective management, fallow deer have for many years been subject to some level of statutory protection.

3.1 Legislative Basis for Management

The *Animals and Birds Protection Act (1929)* gave fallow deer Partly Protected status which meant they could be hunted during an annual open season. This enabled management of fallow deer by identifying them as a hunting resource.

Currently, the management of wildlife (including fallow deer) in Tasmania is regulated under the provisions of the *Nature Conservation Act (2002)* (the NCA). Part 4 of the NCA (Conservation of Flora and Fauna) sets out the legislative framework for the management of wildlife in Tasmania and outlines the provisions that may be made for the control (management) of prescribed wildlife species in Tasmania.

The NCA provides legal protection for wildlife species and also for the taking of some wildlife species.

The NCA has provisions for making wildlife regulations, as well as the taking of wildlife, maintaining order among hunters, protecting crops from wildlife damage, and restricting certain types of hunting equipment.

A review of the *Wildlife Regulations (1999)* resulted in the creation of new regulations: the *Wildlife (General) Regulations (2010)* governing the hunting and taking of deer; and *Wildlife* (*Deer Farming*) *Regulations (2010)* governing deer farming. The 2010 regulations did not make any substantial changes to the regulation of wild and farmed fallow deer in Tasmania.

3.2 The *Wildlife (General) Regulations (2010)*

The *Wildlife (General) Regulations (2010)* schedule wild fallow deer as Partly Protected Wildlife. As such they may be subject to an open season during which they may be taken by shooting by licensed hunters.

The Regulations include a series of prescriptions covering methods that may be used to take deer, limits on deer that may be taken and the use of tags. The purpose of these prescriptions is to protect the welfare of the animals being taken, maintain the sustainability of the harvest, and enable proper enforcement of the Regulations.

The Regulations prescribe open season hunting (bag) limits for deer that are enforced by the use of numbered tags. A limit on the total number of deer to be taken by a hunter during the open season is applied so that the herd can be managed sustainably for trophy potential and quality of hunting experience.

The Regulations also provide for the taking of fallow deer under permit on specified land for crop protection purposes.

3.3 The Wildlife (Deer Farming) Regulations (2010)

The *Wildlife* (*Deer Farming*) *Regulations (2010)* contain provisions for the approval and operation of deer farms as well as the management of escaped or released farm deer. Farm deer are those confined to an approved deer farm. Farm deer are not Partly Protected Wildlife as defined under *Wildlife (General) Regulations (2010)*. All farm deer in Tasmania are European fallow deer.

Under the *Wildlife* (*Deer Farming*) *Regulations (2010)* a farmed deer that escapes becomes a wild fallow deer after 48 hours.

Escaped farm deer are present at a number of locations around Tasmania, including King Island, and this has resulted in an increase in deer range in recent years. Permits are available to landholders allowing them to take deer in numbers sufficient to eradicate escaped farm deer where they occur outside of the traditional range.

3.4 The Open Season

The *Wildlife (General) Regulations (2010)* provide for wild fallow deer to be taken in Tasmania under licence by recreational hunters during an annual open season.

The Regulations prescribe bag limits for licensed hunters which limit the number of deer they may shoot during the deer season. This limit is enforced by use of numbered tags, which are issued with a deer licence and must be affixed to the deer immediately upon being shot.

The bag limit for deer was recently increased from two to three deer during an open season, which may comprise one adult male deer and two antlerless deer, or three antlerless deer.

Section 30 of the *Nature Conservation Act (2002)* provides for the Minister to determine, by Ministerial Order notified in the Tasmanian Government Gazette, the opening and closing dates for open seasons on forms of Partly Protected Wildlife, including fallow deer. The Order may determine the places in which the open season may apply, as well as imposing any other conditions the Minister considers appropriate.

The deer season can be changed at any time by the Minister through an Amendment Order. Changes to deer seasons have previously involved extensive consultation with stakeholders.

Under the current *Nature Conservation (Open Seasons) Order (2004),* the open season is made up of an adult male deer season of five weeks during March to April, and two antlerless deer seasons of three weeks over March - April, and seven weeks during May to July. Commencing with the 2016 season, the length of the March male deer season and the first antlerless season has been extended by one week.

3.5 Crop Protection

Regulation 26 of the *Wildlife (General) Regulations (2010)* provides for permits to be issued for the taking of wildlife to prevent damage to crops and pasture.

Landowners can apply to DPIPWE for crop protection permits to take deer that are causing damage to crops or pastures. Permits can be made out to specific individuals undertaking the culling, or they can be issued as 'un-named' permits to the landowner. This allows the landowner to allocate tags to hunters of their choice.

Crop protection permits specify the number of deer permitted to be taken (the quota) and the category of deer to be taken, such as antlerless deer (female deer and male deer with cast antlers), adult male deer (male deer with branching antlers), or immature male deer (male deer with non-branching antlers). Recently, permits have been available that allow the taking of male deer (adult male deer and immature male deer) with a combined quota.

Crop protection permits are not usually issued for antlerless deer between the end of October and the beginning of the antlerless deer season in March. This is primarily to avoid the shooting of heavily pregnant does, and does with dependent young.

The quota to take fallow deer associated with crop protection permits is enforced by use of numbered tags that must be affixed to the deer immediately upon being shot.

The number of crop protection permits issued for all categories (antlerless, adult male and immature male) has increased in recent years together with the permitted take (see Figure 2 on page 9).

3.6 Summary:

- Fallow deer have had a level of statutory protection for many years in order to provide for their sustainable management.
- The *Wildlife* (*General*) *Regulations* (*2010*) currently provide for wild deer to be taken by licensed hunters during an annual open season.
- The open season currently comprises an adult male deer season of five weeks during March into April, and two antlerless deer seasons of three weeks during March into April, and seven weeks during May to July.
- A bag limit applies to licensed hunters to limit the number of deer they can shoot during the deer season. The bag limit is enforced by use of numbered tags issued with the deer licence and they must be affixed to the deer immediately upon being shot.
- Landowners can apply to DPIPWE for crop protection permits to take deer that are damaging crops or pastures.
- Permits are available to landholders to eradicate escaped farm deer where they occur outside of the traditional range.

4. Commercial opportunities for the use of wild population stocks

Wild fallow deer currently provide a commercial opportunity for landholders who are able to obtain money and services (including crop protection shooting of wallaby and possum) from hunters who wish to gain access to hunt fallow deer.

It is understood by the Department that some landholders derive an income from charging hunters a fee to access their properties, as well as obtaining considerable benefit from services, including fence maintenance and construction provided by hunters as part of these arrangements. It is also understood that these arrangements are increasingly common and viewed very positively by many in the farming sector. The consequence of this is a greater acceptance by landholders of managing deer for hunting purposes and consequently increased tolerance of deer numbers in the landscape.

Some landowners have expressed concern that hunting on adjacent properties has led to higher deer numbers on their own properties, because deer take refuge from hunters.

Over 180 properties have formalised these hunting arrangements through Property Based Wildlife Management Plans. The plans, facilitated by the Department, have been very useful in assisting landholders and hunters to work towards mutually beneficial outcomes including browsing animal control. These properties provide hunting opportunities for an estimated 3,200 deer hunters, while private landowners with wild deer on their properties are able to use these arrangements for commercial purposes.

The Department is aware of interest in commercial uses of wild deer, that may provide potential opportunities for the State's food tourism industry, particularly venison for human consumption. Other deer products, for example, antlers, are also popular in interior decorating. There are eleven commercial deer enterprises in the State either farming, or intending to farm, for the purpose of meat production.

Currently venison produced from wild deer may not be sold. In Tasmania only venison from farmed deer may be sold.

Developing new commercial uses for the products of fallow deer would need to be balanced with the objective to sustainably manage the resource.

4.1 Summary:

- The presence of fallow deer on private property can provide income and other benefits to landholders where property access is granted by the landholder.
- The Department is aware of interest in developing new commercial uses of wild deer. Any new development would need to balance the objectives of sustainable management with harvest.

5. Matters incidental thereto

The Department provides the following information for consideration by the Committee:

5.1 Status of the wild fallow deer population range and abundance

The traditional range of fallow deer in Tasmania centres around the following three main areas of the State:

a) West of the Midlands Highway, roughly between Oatlands, Bothwell, Steppes and Cressy (referred to as the Interlaken area);

b) East of the Midland Highway and south of Avoca (the Ross/Campbell Town area); and

c) East of the Midlands Highway and north of Avoca (the Deddington/Blessington area).

In recent decades deer have spread beyond these 'traditional' areas and are now found across a large part of the State (Figure 1 on). Anecdotal evidence suggests they are becoming more of an issue around urban areas and are compromising road safety because of the risks associated with vehicle collisions.

The fallow deer population has increased steadily since its introduction in the early 19th Century. In the early 1970s, a conservative estimate was made of 8 000 deer.[23] A limited survey in 1990 indicated a population of 16 000 to 20 000.[24] By the mid-2000s it was estimated that the population had reached 30 000, although it is likely that the herd declined to around 20 000 in the late 2000s as a consequence of prolonged and severe drought, and culling.

The 'deer range' has expanded substantially since the 1970s because of a variety of factors including natural expansion of the population, escapes and releases from deer farms, and illegal translocations. The current estimated distribution, including the locations of known satellite herds, is shown in Figure 1 (on page 4).

The Department has been carrying out annual nocturnal spotlight surveys in Tasmania since 1975. The surveys were designed to monitor the harvested populations of Bennett's wallabies, Tasmanian pademelons and brushtail possums, however all observations of wild native and non-native mammal species are recorded, including fallow deer.

Surveys are conducted by vehicle across five management regions on mainland Tasmania and also on King and Flinders Islands. Each survey route follows an existing road and is 10 km long. The results of these surveys provide long term time-series data for detecting population trends.

Analysis of this data highlights the increase in the number (Figure 3 below) and the range of fallow deer in Tasmania (Figure 4 below).

[23] Wapstra, J.E. (1973) *Fallow Deer in Tasmania*. National Parks and Wildlife Service, Hobart.
[24] Department of Primary Industries, Parks, Water and Environment, Tasmania, unpublished data.

Figure 3: Average number of deer observed per transect in all areas of Tasmania

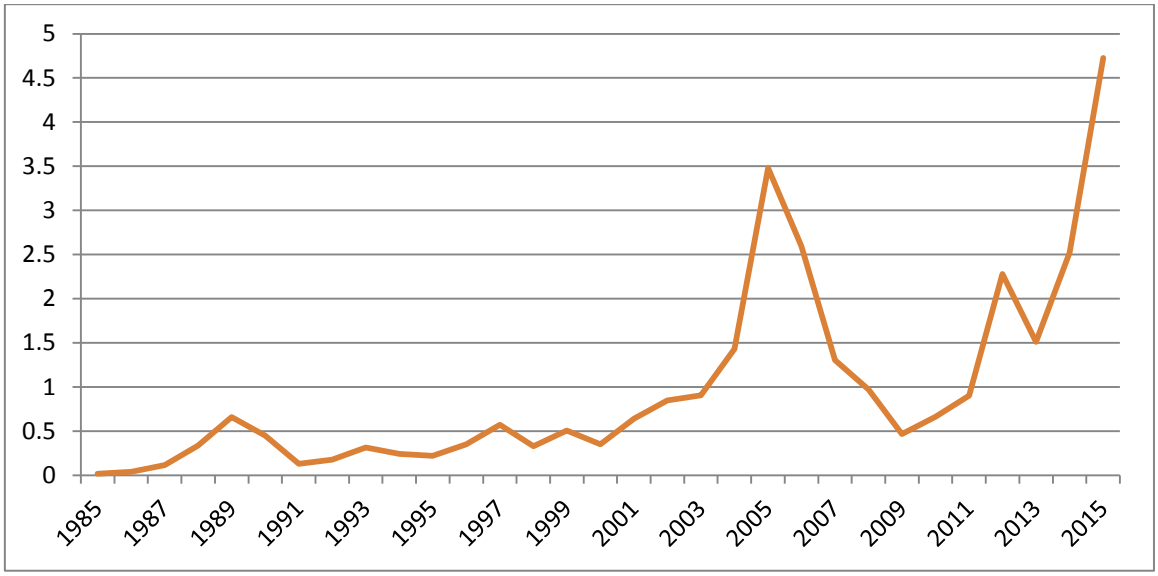


Figure 3 shows an increase in the number of fallow deer observed across Tasmania as measured by the average number of deer observed per 10 km transect per year.

Figure 4: Percentage of all transects done in Tasmania on which deer were recorded

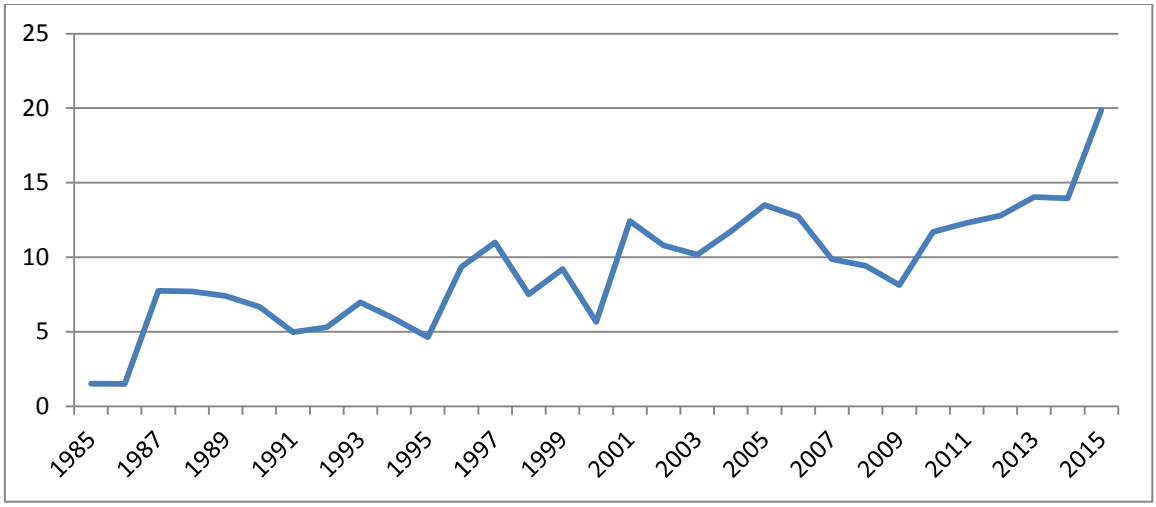


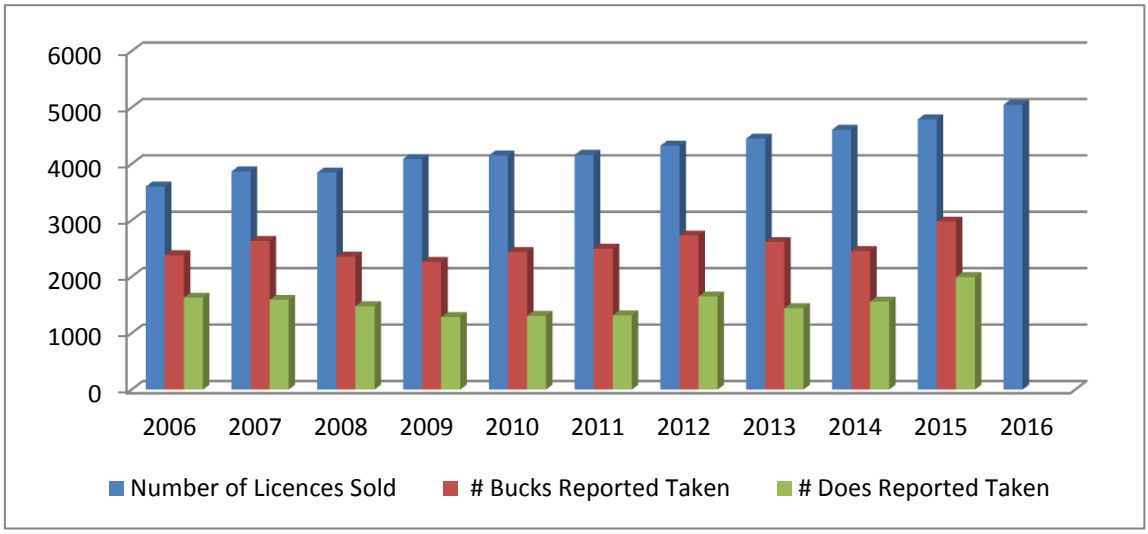
Figure 4 highlights the increasing geographic range of fallow deer since 1985. During the early 1990s only five per cent of spotlight transects across the state recorded fallow deer, however that figure has increased steadily and has reached 20 per cent in the most recent (2015/16) surveys.

The Department has also conducted 'walked line' transects within some of the traditional areas occupied by fallow deer. These transects were originally established to assist in the management of forester kangaroos, however, they also provide useful data on fallow deer. Subsequently, sufficient information is available over a 35 year period to report specific population trends for fallow deer in two areas within the traditional deer range (Nile and east of Ross). This data also supports the overall trend of a growing population, as shown by the spotlight data.

5.2 Current harvesting rates

Deer are currently managed as a game resource available for harvesting by licensed hunters during the annual deer season. During 2015, 4 792 licences were sold, allowing up to 9 584 deer to be shot. The actual harvest was 4 975 deer. The number of licences sold has increased by 40 per cent since 2006.

Figure 5: Deer licence sales and harvest success 2006-16



*Note: Returns data for 2016 is not yet available at the time of writing

Outside the defined deer hunting season, crop protection permits are freely available to land owners seeking to reduce the impact fallow deer are having on their businesses. During 2015, over 500 permits were issued to landowners authorising the shooting of over 13 000 deer. Demand for crop protection permits varies depending on a range of factors, particularly climatic conditions (See Figure 5 above).

Only around half of all deer authorised to be shot under either game licences or crop protection permits are taken, suggesting that simply allowing more deer to be taken does not necessarily result in a reduction in deer numbers.

The ongoing issue of the spread of wild fallow deer herds beyond their traditional range is being managed by permitting deer in these areas to be taken in numbers sufficient to eradicate local populations. In practice the level of hunting effort is not sufficient to achieve eradication in those areas.

5.3 Summary:

- Evidence indicates that the wild fallow deer population is expanding in its geographic range of occupation and is abundant within that range.
- Deer now occur well beyond the 'traditional' deer range.
- The spread of deer has occurred due to natural expansion by animals moving into available habitat, escapes and releases from deer farms, and illegal release in areas not previously occupied by deer.
- Crop protection cull rates and the number of deer observed during state-wide spotlight surveys suggest an expanding population.
- Recreational hunting success rates are declining (in percentage terms) while participation (number of hunters) is increasing, suggesting there are some limits on the deer population available for hunting.
- Increasing the number of recreational deer hunters or issuing greater numbers of crop protection permits do not appear to be key factors in achieving population control for fallow deer.

Conclusion

The management of wild fallow deer in Tasmania is a complex area of public policy because there are divergent views across the Tasmanian community about the management objectives for the population.

Deer have Partly Protected status and are managed as a game resource available for hunting by licensed hunters during the annual deer season.

Outside the deer season, crop protection permits are available to landowners seeking to reduce the impact fallow deer are having on their properties.

GPO Box 44, Hobart TAS 7001
Phone: 03 6165 4305 Fax: 03 6173 0253
Email: wildlife.reception@dpipwe.tas.gov.au Visit: www.dpipwe.gov.au