

Assessment of waterbirds deposited at Treasury Place following the opening week of the 2024 duck season

Background and summary

The attached spreadsheet provides an assessment of waterbirds collected and left by animal welfare activists at 1 Treasury Place, Melbourne, on 16 April 2024 following the first week of the 2024 Victorian duck season. The primary purpose of the assessment was to determine the number of birds carrying embedded shotgun pellets as an indicator of shooting being the cause of death.

Protected waterbirds found not to contain embedded pellets were examined in greater detail to identify any signs of tissue damage consistent with gunshot wounds, as shotgun pellets can pass through the body and therefore would not appear in radiographs (x-rays).

Assessment of birds was conducted at the Benalla office of the Department of Jobs, Skills, Industry and Regions on Wednesday 17 April 2024 by staff of the Game Management Authority. With the exception of badly decomposed animals, Agriculture Victoria veterinarians took swabs for avian influenza and disposed of the birds (incineration) on the same day. The attached spreadsheet provides data.

The table below summarises the findings:

Total number of birds examined		40
	Total game	31
	Total non-game	9
Total number of birds carrying pellets		33
	Total game	27
	Total non-game	6

- Of the 40 waterbirds presented and examined, 33 (83%) were found to be carrying embedded shotgun pellets and seven (17%) were not.
- Of those 33 birds inflicted with shotgun pellets, 27 (82%) were game ducks and six (18%) were non-game species.
- Assessments of radiographs and visual inspections were not conducted by veterinarians. The state of decay in some specimens made assessment difficult and, in some cases, definitively establishing a cause of death by shooting was not possible.

Findings

Species totals

A total of 40 waterbirds (game and non-game) were presented by animal welfare activists. These can be categorised into game duck, non-game (protected) duck and other non-game waterbird (protected) species as follows:

- 31 game-ducks, consisting of Australian wood duck (2), Grey teal (26), Chestnut teal (1) and Pacific black duck (2)
- six non-game ducks consisting of Hardhead (2) and Australasian shoveler (4)
- three non-game waterbirds, consisting of Hoary-headed grebe (2) and Eurasian coot (1).

Only game species may be hunted during the prescribed open season. Non-game ducks and other non-game waterbirds are protected and must not be hunted. Therefore, of the 40 dead waterbirds presented, 31 (78%) were game ducks and nine (22%) were protected species not available for hunting.

Radiography procedure

Each animal was placed in a plastic tub on a 25 x 30cm digital x-ray plate (Exprimer EVS 2430) and radiographed with an Atomscope TR9020B portable veterinary x-ray unit suspended on a surveyor's tripod. Settings of 68 kV and 1.05 mAs, with a focal distance of approximately 50cm, were used. Radiography was performed on ducks in a semi-frozen state. This made the uniform orientation of each animal impossible. Where possible, each animal was positioned on the plate in a dorso-ventral location, but this varied. Each digital image was immediately viewed and, if necessary, subsequent radiographs were taken to confirm the presence or absence of embedded shotgun pellets.

Number of birds with embedded shot

Radiography revealed that 33 (83%) of the 40 waterbirds contained embedded shot pellets and seven (17%) did not. These can be classified into game-duck, non-game duck and other waterbird species as follows:

- 27 out of 31 game-ducks (87%) were shown to contain embedded shotgun pellets. This consisted of two out of two (100%) Australian wood ducks, 22 out of 26 (85%) Grey teal (85%), one out of one (100%) Chestnut teal and two out of two (100%) Pacific black ducks.
- Five out of six (83%) non-game ducks which consisted of one out of two (50%) Hardhead and four out of four (100%) Australasian shoveler. Hardhead and Australasian Shoveler are declared 'game' under the *Wildlife Act 1975* and may be hunted under the Wildlife (Game) Interim Regulations 2023. However, under an instrument of the *Wildlife Act 1975*, these species were prohibited from hunting for the 2024 duck season due to their recent listing as threatened species under the *Flora and Fauna Guarantee Act 1988*.
- One out of three (33%) non-game waterbirds which consisted of one out of two (50%) Hoary-headed grebes and zero out of one (0%) Eurasian coot. Therefore, of the 33 waterbirds found to be containing embedded shotgun pellets, 27 (82%) were game ducks and six (18%) were non-game protected species.

Physical state and animal assessment

Despite the birds being refrigerated while transported from Melbourne to Benalla and subsequently frozen, there was variation in the level of decomposition between specimens. Unlike birds assessed from the 2023 duck season, the majority of birds were intact and appeared to have been recently deceased or had been preserved at low temperatures prior to being deposited at Treasury Place. However, there were several specimens that were highly decayed, making an assessment of the timing of death and any injuries (outside of the determination of the presence or absence of embedded shotgun pellets) difficult. Unlike the assessment of specimens collected from activists in 2023, no individuals were defeathered and assessed for shot damage. Physical assessment did not extend beyond a visual examination of each animal and the absence of skin, broken bones and obvious trauma. These observations were recorded with data on embedded shot.

Considerations

There are several key points to consider from this assessment:

- 1) The majority of birds assessed were well preserved but several were in various stages of decay. This made comparisons of trauma, and the potential causes thereof within and between species difficult.
- 2) There is the potential that shotgun pellets may pass through a shot animal in addition to shot being retained within limbs or the body cavity. The absence of embedded shotgun pellets in radiographs does not conclusively preclude shooting as a cause of death.
- 3) Radiography showed that the vast majority (83%) of the waterbirds examined contained embedded pellets. There were two Grey teal which had sustained what appeared to be injuries not consistent with being struck by shotgun pellets. Predation and collisions with vehicles/structures are possibilities, but it was not possible to provide a conclusive outcome for these individuals.
- 4) Assessments of radiographs were not conducted by veterinarians or radiologists. Radiographs were the primary tool used to identify evidence of shooting mortality. Obvious skeletal damage has also been noted in the attached spreadsheet. Radiographs may provide a source of additional information/assessment if considered necessary.
- 6) This was a preliminary and not exhaustive assessment of the cause of death of these birds. Death by shooting could be inferred by the presence of embedded pellets, however, game ducks are known to survive being shot and may carry embedded pellets for the remainder of their life. Other sources of mortality may have been the cause of death. Autopsies conducted by trained and experienced experts would be necessary to determine the actual cause of death.

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Table: X-ray and visual assessment of waterbirds deposited by animal welfare activists at 1 Treasury Place, Tuesday 16 April 2024

Number	Species	Species Totals	X-Ray ID	Shot Present Y(1),N(0)	# of Shot	Description of animal/physical appearance	Additional Assessment
1	Black Duck	1	1	1	12	Intact, Well preserved, Only shot damage	N/A
2	Black Duck	2	2	1	15	Intact, Well preserved, Only shot damage	N/A
3	Wood Duck	1	3	1	15	Intact, Well preserved, Only shot damage	N/A
4	Wood Duck	2	4	1	2	Intact, Well preserved, Only shot damage	N/A
5	Chestnut Teal	1	5	1	1	Intact, Well preserved, Only shot damage	N/A
6	Grey Teal	1	6	1	1	Intact, Well preserved, Only shot damage	N/A
7	Grey Teal	2	7	1	1	Intact, Well preserved, Only shot damage	N/A
8	Grey Teal	3	8	0	0	Intact well preserved, Broken Leg (L) and Neck	No obvious shot damage. No other obvious trauma
9	Grey Teal	4	9	1	1	Intact, well preserved, Only shot damage	N/A
10	Grey Teal	5	10	1	1	Intact, well preserved, Only shot damage	N/A
11	Grey Teal	6	11	1	3	Intact, Well preserved, Only shot damage	N/A
12	Grey Teal	7	12	0	0	Poor Condition, feathers missing on breast	No obvious shot damage. Bloodied/torn skin on neck
13	Grey Teal	8	13	1	1	Intact, Well preserved, Only shot damage	N/A
14	Grey Teal	9	14	1	4	Intact, Well preserved, Only shot damage	N/A
15	Grey Teal	10	15	1	1	Intact, Well preserved, Only shot damage	N/A
16	Hard Head	1	16	1	4	Poor Condition, Decomposed, Broken neck	N/A

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Number	Species	Species Totals	X-Ray ID	Shot Present Y(1),N(0)	# of Shot	Description of animal/physical appearance	Additional Assessment
17	Hard Head	2	17	0	0	Intact, Some decay, No shot damage	No obvious shot damage. No other obvious trauma
18	BWS	1	18	1	1	Intact, Well preserved, Only shot damage	N/A
19	BWS	2	19	1	15	Intact, Well preserved, Only shot damage	N/A
20	BWS	3	20	1	4	Intact, Well preserved, Only shot damage	N/A
21	BWS	4	21	1	9	Intact, Well preserved, Only shot damage	N/A
22	Coot	1	22	1	1	Poor Condition. Skinned neck. Predated?	N/A
23	Grebe	1	23	0	0	Intact, Well preserved,	No obvious shot damage. Broken neck?
24	Grebe	2	24	0	0	Intact, some decay.	No obvious shot damage. No other obvious trauma
25	Grey Teal	11	25	1	4	Intact, Well preserved, Only shot damage	N/A
26	Grey Teal	12	26	1	2	Intact, Well preserved, Only shot damage	x 2 different shot sizes identified
27	Grey Teal	13	27	1	3	Intact, Well preserved, only shot damage	N/A
28	Grey Teal	14	28	1	1	Intact, Well preserved, Only shot damage	N/A
29	Grey Teal	15	29	0	0	Intact. Well preserved. No obvious trauma.	No obvious shot damage. No other obvious trauma
30	Grey Teal	16	30	1	1	Intact. Well preserved. No obvious trauma.	N/A
31	Grey Teal	17	31	1	2	Intact, Well preserved, Only shot damage	N/A
32	Grey Teal	18	32	1	1	Intact, Well preserved, Only shot damage	N/A

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Number	Species	Species Totals	X-Ray ID	Shot Present Y(1),N(0)	# of Shot	Description of animal/physical appearance	Additional Assessment
33	Grey Teal	19	33	1	1	Plucked body. No other obvious trauma.	N/A
34	Grey Teal	20	34	0	0	Intact, Well preserved, no shot damage	No obvious shot damage. No other obvious trauma
35	Grey Teal	21	35	1	1	Intact, Well preserved	N/A
36	Grey Teal	22	36	1	1	Intact, Well preserved, Only shot damage	N/A
37	Grey Teal	23	37	1	1	Intact -other than skull and bill which are shattered/missing.	Head Shot? Unusual damage for a hunted duck
38	Grey Teal	24	38	1	2	Intact. Well preserved. No obvious trauma.	N/A
39	Grey Teal	25	39	1	2	Intact, Well preserved, Only Shot Damage	N/A
40	Grey Teal	26	40	1	1	Intact, Well preserved, Only Shot Damage	N/A

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