

WILDLIFE INCIDENT UNIT

54/24



Original thinking... applied

WILDLIFE INCIDENT REPORT

INCIDENT NUMBER 54/24
PART OF STUDY WIIS23
REGIONAL NUMBER W/24/11
OTHER REFERENCES 28-M0074-05-24
SENDER APHA Carmarthen VIC
LOCATION Pont Henri
Carmarthenshire
GRID REFERENCE SN4709
INCIDENT DATE 22 May 2024
SUSPECTED CAUSE OF INCIDENT mixture of rodenticides
unspecified
DATE OF REPORT 23 September 2024

REPORTING OFFICER

SIGNED

NUMBERS AND SPECIES INVOLVED

1 fox

COPIED TO

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Samples received		Date received	Sample identifier
101506	fox	4/7/24	APHA ref: 28--M00074-05-24
101506	fox tissues	4/7/24	APHA ref: 28--M00074-05-24

Summary of field data

A fox was found dead in a residential garden with no signs of injury. The police were informed of the incident. This is a rural area surrounded by farmland and pockets of woodland with several residential properties in the area.

Summary of post mortem report

One male fox of unknown weight in emaciated body condition with severe autolysis was submitted dead for post-mortem examination. The ocular mucous membranes were pale yellow, and the oral mucous membranes were pale. There were thick gelatinous adhesions of mediastinum to the thoracic diaphragm. The dentition was consistent with a juvenile fox. In the alimentary system, there was a matt of grass like fibre, fine hair and fragments of bone in the stomach. The small intestinal content was pasty and dark brown/black. Rectal content was firm. In the respiratory system there was a large excess of red/brown pleural fluid. The cranial and ventral edges of the lung lobes were reddened and slightly rubbery. The whole of the mediastinum was thickened and gelatinous with multiple white miliary foci throughout and it was adhered to the sternum and diaphragm. Other organ systems examined were unremarkable. The endocrine system was not examined. Lung, mediastinum, pleural and spleen swabs were taken for bacterial culture. A heavy growth of non-haemolytic *Escherichia coli* was detected in the lung, mediastinum, and spleen swabs. No obvious pathogens were detected in the pleural swab. Samples of the liver, heart, lung, kidney, and lymph node were submitted for histopathology. Autolysis significantly limited the evaluation of the submitted tissues however there were obvious bacterial associated pyogranulomas within the presumed mesenteric lymph node and associated mediastinal tissues. Gram staining and Ziehl Neilsen staining were unable to identify the bacteria involved. The fox was emaciated and had very pale mucous membranes. It had striking pathology in the thorax; the mediastinum was very thickened and contained small white foci. There was also a large amount of pleural fluid which likely led to the death of this fox. The underlying cause of this pathology was not clear and marked autolysis severely limited examination. However, given the poor condition of the fox, it was likely to have been a chronic condition.

Analysis : rodenticide & chloralose analysis suite

101506	liver	difethialone	confirmed	0.0018	mg/kg
101506	liver	difenacoum	confirmed	0.00043	mg/kg
101506	liver	brodifacoum	confirmed	0.65	mg/kg
101506	liver	bromadiolone	confirmed	0.15	mg/kg

Conclusion

Although this fox was in poor condition, it was suspected exposure to rodenticides may have contributed to its death. There were no signs of haemorrhage indicated by the post-mortem, but the carcass had undergone severe autolysis which may have masked signs of haemorrhaging. Therefore, laboratory analysis for chloralose and a range of rodenticides has been undertaken on the submitted samples. These tests have detected and confirmed a residue of brodifacoum, bromadiolone, difethialone and difenacoum in the liver of this fox. The difethialone and difenacoum were at levels consistent with background exposure. The brodifacoum and possibly the bromadiolone were at levels that may have contributed to the death of this fox. The source of these rodenticides is uncertain at present, although they may be from a rodent control treatment, and so the case has been assigned to unspecified use.