

WILDLIFE INCIDENT UNIT

WILDLIFE INCIDENT REPORT



Original thinking... applied

RESTRICTED

INCIDENT NUMBER 43/21
PART OF STUDY FSGD-213
REGIONAL NUMBER W/21/10
OTHER REFERENCES 28-M0115-03-21
SENDER APHA Carmarthen VIC
LOCATION Mathry
Pembrokeshire
GRID REFERENCE SM8931
INCIDENT DATE 13 March 2021
SUSPECTED CAUSE OF INCIDENT metaldehyde
abuse
DATE OF REPORT 10 June 2021

REPORTING OFFICER

SIGNED :

NUMBERS AND SPECIES INVOLVED

1 fox

COPIED TO

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Samples received		Date received	Sample identifier
100284	fox	19/3/21	28/M0115/03/21
100284	fox tissues	19/3/21	28/M0115/03/21

Summary of field data

A member of the public was walking through a National Nature Reserve and discovered a dead fox which had some blue material next to it. The finder suspected that the blue substance was something that the fox had excreted, or vomited and so they contacted the Police. The Police visited the location and pictures were taken of the fox and blue material and the area was searched and a blue substance in a small pit under a hedgerow was found. The incident was reported to Welsh Government and arrangements were made to secure the carcass and collect the blue substance and transfer it to the APHA, which took a couple of days. There was some rain between finding the carcass and blue material and making the arrangements to collect them and the finder reported that the material was now less blue than it had previously been. This is a nature reserve.

Summary of post mortem report

The specimens were delivered on 16th March 2021, in a single white bag secured with a cable tie via Topspeed courier. The bag was labelled W21/20 and with a barcode no. A515644. The fox, specimen 1, was contained within another white bag sealed with a cable tie inside the bag described above. In a small clear ziplock bag with the writing "W21/10", was specimen 2 - 'Blue substance 1' and described as "'Blue' poo/sick found over approx. 2 m from body". In a small clear ziplock bag with the writing "W21/10", was specimen 3 - 'Blue substance 2' and described as "'Blue' found on nature reserve perimeter 'AS SPRAINT' approx. 100m from body". The fox was a female, in fair body condition and severe autolysis. There were extended teats and not lactating. The serosal surface of the liver was patchy dark red with multiple circular pale regions across the surface approximately 0.5cm in diameter. The right lower middle incisor, and the left upper outer incisors were missing. There was a small amount of yellow fibres on the tongue. There were 2-3 superficial erosions on the surface of the tongue. The whole length of the oesophagus was full of bright blue thick liquid. There was approximately 50ml of bright blue thick liquid present in the stomach with flecks of white throughout. The proximal small intestinal contents were thick cream-coloured material with areas of blue material spread throughout. There was blue material present within the whole length of the intestines becoming darker and more scant in the large intestines. There was dark reddening of the serosal surface of the intestines in patches along the length. There was congestion of all the cranial lung lobes, and patchy congestion of the caudal lung lobes. There was blood-tinged pleural fluid. There was blood-tinged pericardial fluid. The uterus was gravid containing five fetuses. The eyes were cloudy. Examination of all other organ systems was unremarkable. The endocrine system was not examined. The Specimen 2 - 'Blue substance 1', was mostly fibrous material (dried grass) with some clumps of thicker brown-blue stained material stuck to the grass. Unable to tell if this is faeces or vomit (or neither). Specimen 3 - 'Blue substance 2': was thick dark brown material that appears to be mud, with about six areas of faint blue staining throughout. Note that these two samples were submitted for testing with the fox and are recorded under one sample number, 100284.

Analysis : metaldehyde & carb (LC) analysis suite

100284	stomach contents	metaldehyde	confirmed	5500	mg/kg
100284	undefined	metaldehyde	confirmed	770	mg/kg

Analysis : rodenticide & chloralose analysis suite

100284	liver	brodifacoum	confirmed	0.42	mg/kg
100284	liver	bromadiolone	confirmed	0.011	mg/kg

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Conclusion

It was suspected that this fox had been poisoned, given the blue material nearby and the findings of blue thick liquid in the stomach. Laboratory analysis for a range of likely pesticides has been undertaken on the submitted samples. These tests have detected and confirmed a residue of metaldehyde in the stomach contents of the fox and also in the other material submitted (note that this material was in two pots unspecified B1 and B2, which were pooled together for extraction), which consisted of soil or brown paste, some vegetation that was possibly grass, with blue colouration noted. There were also confirmed residues of brodifacoum and a small residue of bromadiolone in the liver of this fox. The death of this fox is likely due to poisoning from metaldehyde, although the amount of brodifacoum present is larger than a typical background exposure level. Abuse of metaldehyde is suspected due to the species and the circumstances of this case, but the likely bait used or other source of the metaldehyde is uncertain at present. The rodenticide residues may have been from eating contaminated rodents from a vertebrate control treatment.

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