Secondary poisoning in polecat (*Mustela putorius*) and stone marten (*Martes foina*)

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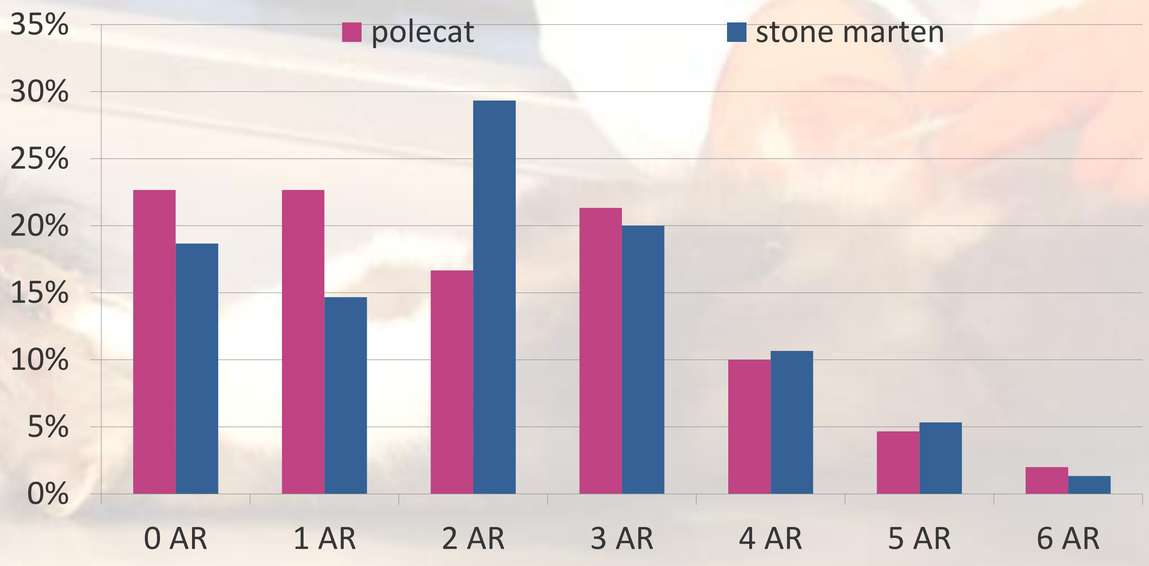
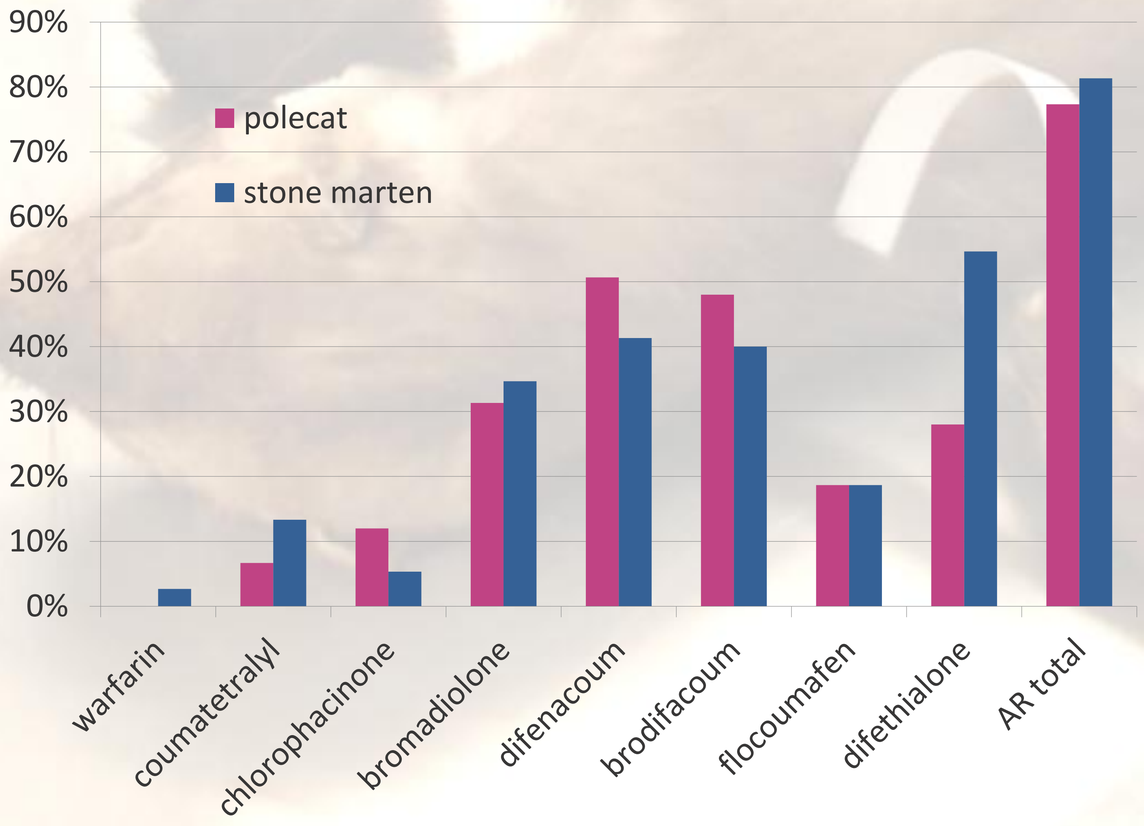
Flanders
State of the Art

- **Introduction**
  - anticoagulant rodenticides (AR)
  - secondary poisoning in non-target species
  - Belgium: 600 ton AR/year
  - warfarin, coumatetralyl, chlorophacinone, bromadiolone, difenacoum, brodifacoum, difethialone and flocoumafen



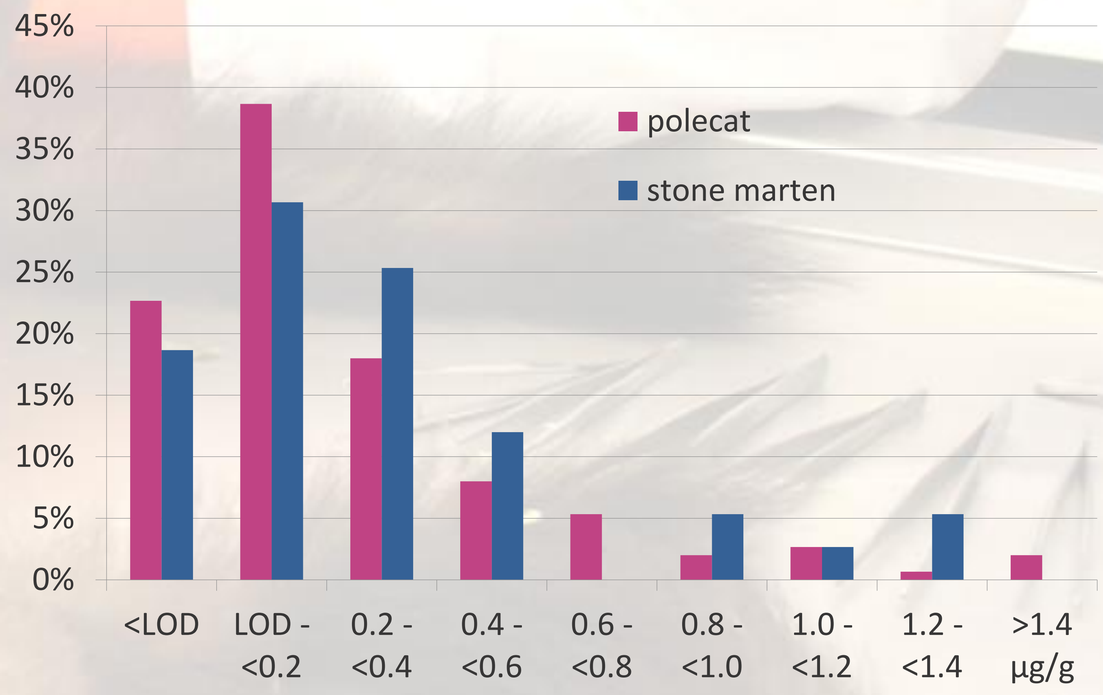
- **Materials & Method**
  - 150 polecats and 75 stone martens
  - road kills from 2006 to 2012
  - liquid chromatography-tandem mass spectrometry (LC-HESI-MS⁄MS)



- **Results**

	positive %	[median] µg/g	[max] µg/g
polecat	77	0.133	3.813
stone marten	81	0.213	1.370

  - 42% reached cut off of 0.2 µg/g
    - decrease survival probability
    - increase intoxication risk
  - borderline significant interaction effect between season and species (p=0.0409) on the sum of the residue levels
    - but no effect of sex



  - subset of adult male polecats (n=54), dead in spring: residue level >< fitness of the animal
    - body-condition (function of weight & length)
    - mesenterial fat (g)
    - kidney- & subcutaneous fat index
  - None of the observed variation in these condition variables could be explained by changes in residue concentrations.

- **Conclusion**

Secondary poisoning was not influenced by season, species nor age class and did not affect the general fitness of the animals although over 40% reached the cut off from which mortality could be expected.