

A study of the ciliar tracheal epithelium on passerine birds and small mammals subjected to air pollution: Ultrastructural study

Archives of Environmental Contamination and Toxicology (Historical Archive)

Publisher: Springer-Verlag New York, LLC

ISSN: 0090-4341 (Paper) 1432-0703 (Online)

DOI: 10.1007/BF00203900

Issue: Volume 27, Number 1

Date: July 1994

Pages: 137 - 142

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Received: 1 October 1993 **Revised:** 31 December 1993

Abstract A study was made of the ciliar tracheal epithelium on passerine birds and small mammals subjected to NO_x, SO₂ emissions and particulates from a coal-fired power plant. The results were compared to those of a non-polluted area, very similar in vegetation, relief, and climatology. We studied *Carduelis carduelis* (goldfinch), *Emberiza cia* (rock bunting), *Parus major* (great tit), *Turdus merula* (blackbird), and *Apodemus sylvaticus* (wood mouse). All animals were captured in the wild. We also used goldfinch (*Carduelis carduelis*) captured in the wild and mice (*Mus musculus*) from our laboratory. These species were placed in protected cages near the source of pollution for 5 and 12 months. The images of the tracheal epithelium surface and the observation of tracheal sections at transmission and scanning electron microscopy showed a variation in the percentage of ciliated and non-ciliated cells, and a variation in the organization, orientation, and morphology of the cilia in animals from the polluted zone.

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