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RACCOON TEETH STAINED WITH ALUMINUM

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Abstract: A silver-like substance was observed to stain the buccal surface of all the maxillary and mandibular teeth of 3 of 17 raccoons from southern Florida. Energy dispersive x-ray analysis showed that the silver material was aluminum.

In mid-October 1972, 17 raccoons (*Procyon lotor elvcsus*) were live-trapped in urban Sarasota County, Florida, as part of an investigation of an epizootic of canine distemper in raccoons and foxes. During the examination of an apparently healthy adult male raccoon, it was observed that a metallic silver-like substance completely coated the buccal surface of all the maxillary and mandibular teeth. This material was not found on the lingual or masticatory surfaces. Neither boiling and bleaching of the teeth nor scraping them with a scalpel blade removed the silver color. Subsequent examination of the skulls of the other 16 raccoons revealed two more apparently healthy animals with this material on the buccal aspect of their teeth, although not as pronounced. The three raccoons were from widely separated areas of the county.

One-half of the mandible from the first raccoon was submitted for examination to the Department of Oral Medicine at the University of Florida, Gainesville. Small pieces of metal were found embedded in the teeth (Fig. 1), and energy dispersive analysis conducted by the Department of Materials Science and Engineering showed the metal and the material staining the teeth to be aluminum.

From the thickness of the metal pieces embedded in the teeth, it was hypothesized that the raccoon had been chewing on aluminum soft drink or beer cans in an attempt to reach any residue liquid in these containers. The fact that the aluminum also stained the teeth, may have been the result of a mechanical effect of the metal rubbing on the teeth or of a chemical reaction between the raccoon's saliva and the metal in the cans. It is believed that the aluminum was not related to the epizootic under investigation.

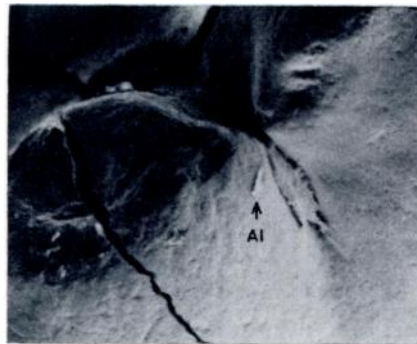


FIGURE 1. Raccoon jaw showing aluminum metal fragment embedded along buccal groove of second molar (28X).

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