

*Made in United States of America*

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#### PORCUPINES GNAW BOTTLES

When the big flood went through Pittsburgh, Wheeling, and other points on the Ohio River (March 1936), I was marooned for several days in the mountains of northern Pennsylvania by snow and frozen rain. I had gone back into the hills a few miles from Clarendon, Pennsylvania, where the Wildcat and the Tionesta join, to watch and photograph some of my friends who were trapping beaver not far from the cottage of the State game warden, Mr. John Hopkins.

Cut off completely from Clarendon and the world by the snows, and short of food, we lived largely on beaver, and listened to the warden's radio reporting the floods downstream. Mr. Hopkins, finding that I was a glass technologist, among other things, asked if I had seen, in the woods, bottles and glassware chewed by porcupines (*Erethizon dorsatum*). I had not, and he found several pieces for me. The prize exhibit was a catsup bottle chewed

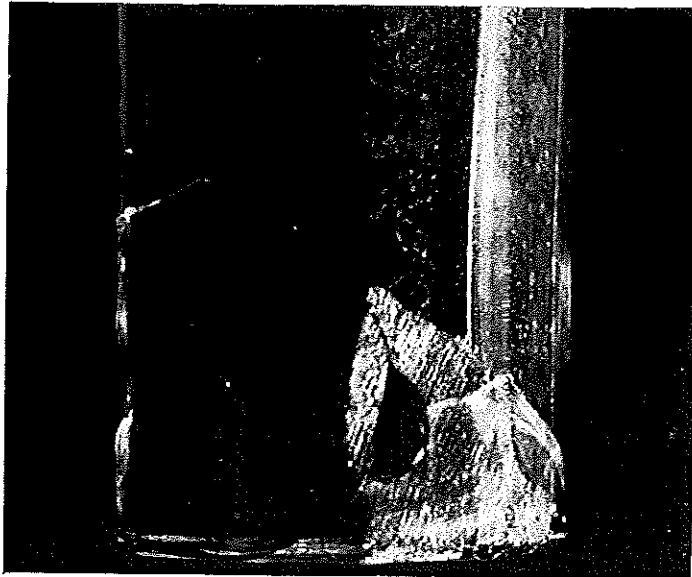


PLATE I

Bottle gnawed by porcupine

completely through. He assures me this is the work of porcupines, or of beavers, and he believes it must be porcupines. This bottle (Pl. I) is also chewed at the top or "finish."

A number of other examples show more clearly how the animal works. He gets one set of teeth (presumably the upper incisors) against an *edge* and gnaws towards this with the other (presumably the lower) set. Thus he gradually wears a concavity into the flat or flattened *face* of the glass. He generally *chips* the edge, leaving it very irregular and ragged. Most often the teeth do not meet at the end of the stroke, so there is a narrow ungnawed zone just short of the edge. Most of the other specimens I have are less spectacular than the one figured, but even more obviously the work of a rodent.

It is well known, of course, that porcupines will eat almost anything from houses to aluminum pans and outboard motors. Mr. Hopkins tells me they eat up the fallen deer antlers, and will even come on to his porch after them. But glass is a pretty hard material and must be tough on the creatures' teeth. The reason for so much ambition is not clear. However, glass contains as a rule 14 to 18 per cent of soda ( $\text{Na}_2\text{O}$ ), and this leaches slightly in the weather. Perhaps the animal likes alkali; he is said to be very fond of salt of more

kinds than one. The gnawed bottles are not all catsup bottles or we might suppose the salt of the contents to be the attraction. In general, bottles are gnawed only at places where an edge gives a purchase for the stationary teeth, in all my examples.—F. W. PRESTON, *Preston Laboratories, Butler, Pennsylvania. Received Jan. 20, 1947.*

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