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16. Abstract In 1990, there were 106 traffic fatalities in the United States in crashes for which a collision with an animal was the first harmful event; by 2007 this level had risen to 223—a 110% increase. Analyses of annual trends suggest that this increase cannot be fully explained by increases in vehicle miles travelled, nor by changes in the general fatal and nonfatal crash rates. Animal-vehicle collisions (AVCs) represent a small but increasing share of the overall crash picture. Daily and seasonal AVC crash trends were examined and appear to follow the activity patterns of the U.S. deer population. This involves peaks in the hourly crash levels around dawn and dusk, and a seasonal peak during October and November. AVC crash distributions are presented by state. The odds of an AVC in darkness were modeled as a function of posted speed limit in a series of logistic regressions. Higher posted speeds were associated with proportionally greater crash risk in darkness. The effect is observed for fatal collisions compiled from the Fatality Analysis Reporting System (FARS), and for injury and property-damage-only (PDO) crashes compiled from Michigan crash datasets. One implication of the effect is that countermeasures designed to extend a driver's preview time for animals, such as headlighting and night-vision systems may help reduce the risk of AVCs.			
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