



Center for Conservation Biology  
College of William and Mary

# THE IMPACT OF HIGHWAY PLANTINGS ON BIRD MORTALITY (Briefing Paper)

## The Problem

Thorny Elaeagnus (*Elaeagnus pungens*) is a large, woody shrub that has been used extensively within highway medians by transportation departments throughout eastern North America. Since the early to mid 1970's, this species has been planted widely within many states. Native to Asia, thorny elaeagnus has a number of characteristics that make it ideal for roadside plantings. The plant is a heat and drought resistant, evergreen shrub that is fast growing. Because elaeagnus forms a dense, tall hedgerow, it provides an effective divider between opposing lanes of traffic. No statistics are currently available that summarize the distribution and abundance of the plant along roadways. An estimated 6-8 miles of plantings occur within coastal Virginia alone.

Thorny elaeagnus produces a large fleshy fruit with a high sugar content. Individual plants are capable of producing tremendous fruit crops. When planted in mass, these shrubs can produce an extraordinary patch of fruit. Unlike most native shrubs, elaeagnus flowers in late fall and bears fruit in mid spring. In many years, fruit ripens in April during a time when many bird species are staging for spring migration. Because most other fruit-producing plants do not fruit at this time, elaeagnus is very attractive to migrant frugivores.

The occurrence of thorny elaeagnus with dense berry crops along high-traffic roadways represents a hazard to fruit-eating birds. The hazard is increased by the timing of fruit set relative to the timing of northward migration for many fruit-eating birds. During the spring of 2000, The Center for Conservation Biology conducted a controlled study of bird mortality along high-traffic areas in coastal Virginia. This study conclusively showed that elaeagnus fruit attracted migrant birds into the path of traffic and caused more than 95% of observed mortality.



*Long patches of elaeagnus are often planted in the medians of major roadways as shown here.*



*Fruit of thorny elaeagnus is large and sweet. The fruit seems to be particularly attractive to several bird species.*

During the spring of 2001, segments of roadway planted with elaeagnus were monitored for bird use and mortality. More than 1,600 Cedar Waxwings were collected along 2 segments of highway east of Richmond, VA. Large flocks of birds were observed to fly repeatedly through dense traffic to feed on elaeagnus fruit. Birds were struck and killed by oncoming traffic. More than 350 birds were collected from one location in a single day. Birds continued to feed on fruit for a period of two weeks until the fruit crop was consumed.



*The photo above shows a portion of the birds collected in a single day along one section of shrubs.*

## **Request for Assistance**

Thorny elaeagnus continues to be planted along roadways throughout the southeast. How much of the plant currently exists along roadways is not known. We are requesting that individuals contact local and state transportation departments to request that alternative shrubs be planted that do not produce fruit crops. In addition, we are requesting that individuals make authorities aware of elaeagnus plantings in high-traffic areas and request that these shrubs be replaced.

## **For Further Information**

Contact      Dr. Bryan D. Watts, Director  
Center for Conservation Biology  
College of William & Mary  
Williamsburg, VA 23187-8795  
(757) 221-2247  
bdwatt@wm.edu