



POLLEN IS IN  
THE  
AIR

## COMMON RAGWEED: AN ALIEN INVASIVE SPECIES THREATENING HEALTH AND CROP PRODUCTION ALL OVER EUROPE

It thrives in disturbed soils and grows mainly in fields, along roadsides and riverbanks and is a major cause of allergic disease. This invasive species, which is the source of highly allergenic pollen, is *Ambrosia artemisiifolia*, also known as common ragweed.

*Ambrosia artemisiifolia* is an annual herbaceous plant native to North America. Although it was first observed in Europe in the mid-19th century, it began to spread in Europe after 1940, first in Hungary and then in Eastern European countries, South Eastern France, Northern Italy and into many continental European countries later on, partly as a result of the trade in crop seed that was contaminated with ragweed.

It poses a great threat to human health, economy and the environment.

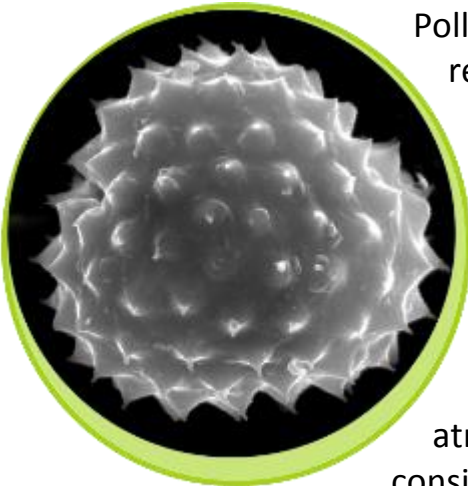
It is a highly invasive weed. It spreads quickly under warm continental climate conditions, colonising a wide range of habitats. Ragweed populations are considered as a pest for agriculture and natural ecosystems. They successfully compete with neighbouring plants and crops for resources. Sunflower fields, for example, are particularly susceptible to ragweed infestation.

Moreover, Ambrosia pollen is an important cause of human allergy with symptoms ranging from hay fever to asthma.

Currently, the pace at which Ambrosia is spreading in Europe is on the rise, with a concomitant rise in allergy.

## INTERESTING FACTS

### THE POLLEN



Pollen is produced by all seed plants and is key for their reproductive cycle. It is generated by male flowers.

Ragweed may produce up to a billion pollen grains per plant in one season and uses the wind to spread them. Pollen grains are only 20µm in diameter. They can travel far away, for more than 600 km, and remain suspended in the air for several hours. Even if pollen is not generally considered (e.g. in legislation) as an air pollutant, atmospheric ragweed pollen load, which is considered a proxy for aeroallergen exposure, may

alarmingly threaten air quality and health. In many parts of the US and Canada, ragweed pollen is the second most important cause of seasonal allergies and in Europe its clinical relevance is increasing.

For the high definition image <https://www.atopica.eu/img/2.png> and full image [https://www.atopica.eu/img/2\\_full.jpg](https://www.atopica.eu/img/2_full.jpg)

### THE SEEDS

In order for seeds to be produced, pollen must reach the female flower. A plant produces from about 3000 to 62,000 seeds. The seeds are small, persistent and able to survive in many different types of environment. Ambrosia protects them inside a fruit called the achene.

Under unsuitable conditions for germination, the seeds can survive in a dormant state for about 40 years and then germinate.

## HOW TO RECOGNIZE IT

### By the leaf

While its foliage resembles that of another plant which can grow in similar locations, Artemisia, the leaf of Ambrosia has unique features:

deeply divided

green on both sides

odourless when crushed



### By the stem

green and purplish

covered with white hairs which give it a velvety look

branched

from 20 to 250 cm in length.

### By the male flower

yellow-green

grouped in spikes.



For the high definition and full images

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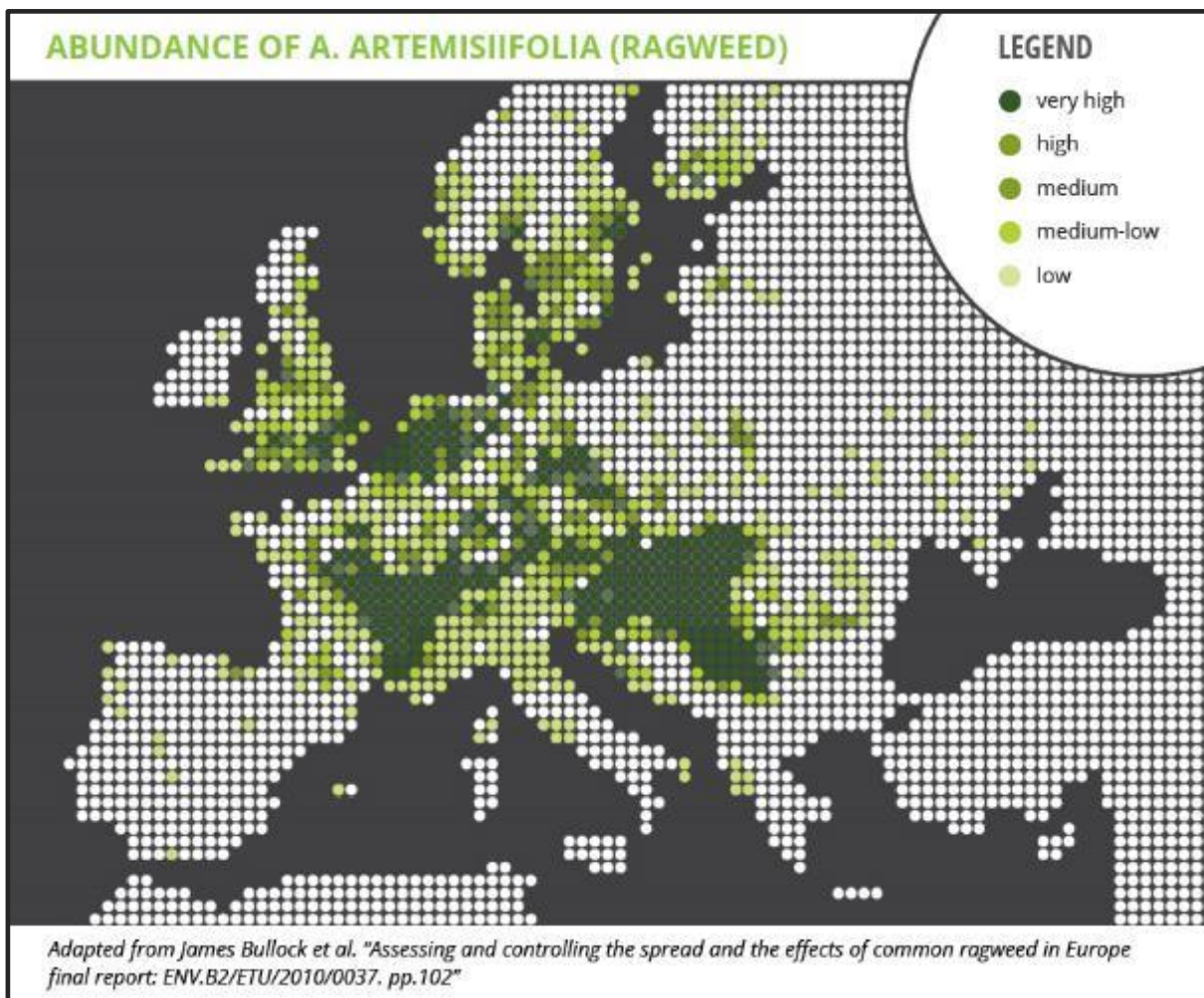
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# AMBROSIA FACTSHEET



For the high definition image <https://www.atopica.eu/img/6.jpg>

# AMBROSIA FACTSHEET



For the high definition image <https://www.atopica.eu/img/7.jpg>





For the high definition images <https://www.atopica.eu/img/8.jpg>  
<https://www.atopica.eu/img/9.jpg>

## FOR THE INFORMATION ABOVE AND MUCH MORE ON COMMON RAGWEED

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doi:10.1016/j.envint.2013.08.005

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[http://ec.europa.eu/environment/nature/invasivealien/docs/Final\\_Final\\_Report.pdf](http://ec.europa.eu/environment/nature/invasivealien/docs/Final_Final_Report.pdf)

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<http://www.niaid.nih.gov/topics/allergicDiseases/Documents/PollenAllergyFactSheet.pdf>

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doi:10.1371/journal.pone.0088156

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<http://www.who.int/globalchange/publications/atlas/en/>

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doi: 10.1111/j.1398-9995.2007.01393.x

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