

**THE SPREADING OF THE INVASIVE SPECIES COMMON RAGWEED
(*Ambrosia artemisiifolia* L.): A QUARANTINE WEED IN THE NORTH-WEST
OF ROMANIA**

**RĂSPÂNDIREA SPECIEI INVAZIVE FLOAREA PUSTEI (*Ambrosia
artemisiifolia* L.), BURUIANĂ DE CARANTINĂ ÎN NORD-VESTUL
ROMÂNIEI**

N. HODIȘAN*, G. MORAR**

*University of Oradea, România

**Agricultural and Veterinary University, Cluj-Napoca, România

Corresponding author: NICOLAE HODIȘAN e-mail: hodisanm@yahoo.com

Summary: *Ambrosia artemisiifolia* L. is an herbaceous plant annually producing seeds (terophytes), with late germination, identified in the North- West of Romania, on large areas since the year 1991. As a consequence of the invasive character of the species and the spread along the roads, *Ambrosia artemisiifolia* L. species spread out towards the South and the centre of Romania and continues to spread. This paper presents the evolution of the species spreading in the North-West and the West of Romania in the last years.

Rezumat: *Ambrosia artemisiifolia* L. este o plantă erbacee producătoare de semințe (terofită), anuală, cu germinație târzie, identificată în nord – vestul României pe suprafețe mai mari începând cu anul 1991. Ca urmare a caracterului invaziv al speciei și a răspândirii de-a lungul căilor de comunicații, specia *Ambrosia artemisiifolia* L. s-a extins spre sudul și centrul României și continuă să se extindă. În lucrare se prezintă evoluția răspândirii speciei în nord – vestul și vestul României în ultimii ani.

Key words: common ragweed, *Ambrosia artemisiifolia* L., spreading, the North-West and the West of Romania

Cuvinte cheie: floarea pusteii, *Ambrosia artemisiifolia* L., răspândire, nord–vestul și vestul României

INTRODUCTION

Among the 30 species of the genus *Ambrosia* from *Asteraceae* family, widely spread in the world, *Ambrosia artemisiifolia* L., *Ambrosia trifida* L., *Ambrosia psilostachya* DC were reported also in Europe (RICH 1994). *Ambrosia artemisiifolia* L. is the most invasive of all the species of the sort, being included on The Official List of Quarantine Weeds. Besides the fact that this weed causes significant production damages, in the period of flowering (July-September), the pollen may cause allergies which manifest through skin pruritus or the irritation of ocular and respiratory mucous that often turn into asthmatic reactions, affections known as "hay fever" (BOHREN et al 2006).

The species comes from North America, where it was reported for the first time before 1838, on the territory of United States of America, according to Wagner and Beals' writings. Later, in the year 1860 it was identified also on the territory of Canada, where it was studied by Palliser, according to BASSET and CROMPTON (1975), quoted by REISINGER (2001).

In Europe it was identified for the first time in the year 1863, on the territory of Germany, namely in the specific spreading area of Brandenburg and Pfaffendorf, (HEGI 1906). Between the years 1960 and 1970, the allergies caused by *Ambrosia artemisiifolia* L. created real health problems in the European central and Western countries; being widely spread nowadays (KARDEVÁN et al 2001), (BÉRES, 2003), (BÉRES et al 2005 and 2006).

In Romania it was reported for the first time in 1908 by Hegi in Banat area, more exactly at Orșova, belonging to Austro - Hungarian territory at that time, according to TIMÁR

(1955). Later it was reported in Moldova at Ungheni by Borza and Arvat (1935), in Sighet area, according to Topa Em. and Boşcaiu N. (1965), at Huşi and Bârlad, according to Mititelu D. (1970), in Muntenia at Ploieşti, according to Negrean G. (1971) and in Bihor according to HODIŞAN and collaborator (2003) and HODIŞAN & MORAR (2005).

Under the popular name of “common ragweed” we meet it in the literature from Romania, for the first time at HODIŞAN (2003 a).

It produces the most significant damages within the agricultural cultures of sun-flower, corn, tobacco, soy or peas and, as a consequence of seeds biology, it is considered a species with late germination cultures and cereal and rape stubbles where it invades and dominates the field surfaces in the second half of the summer.

The spreading of the species is relatively and partially limited through mowing or weeding as a consequence of the fact that it can regenerate through new stems (BÉRES et al 2006), (SZENTÉY et al 2004), (BOHREN et al 2005).

MATERIAL AND METHOD

For the research of the spread and expansion in the North-West and the West of the country of the species *Ambrosia artemisiifolia* L., it was taken as a study area the territories of the counties: Maramureş, Satu-Mare, Sălaj, Bihor, Cluj, Arad, Timiş, Caraş Severin, Alba and Hunedoara.

The observations concerning the spreading of common ragweed plants (*Ambrosia artemisiifolia* L. sin *A. elatior* L.), took place in the public areas within the localities (parks, gardens, swimming pools), but also in the adjacent area to the localities (agricultural fields, forests), in industrial perimeters (building sites, pits) along roads (communal, district, national roads but also railways).

The determinations were made during summer time when the plants can be more easily identified as singular or grouped in compact populations.

It was aimed at the localization on the map of the specific spreading areas that have one or more populations of plants and which ulterior were noted around the nearest locality.

RESULTS AND DISCUSSIONS

The first map concerning the presence and the spreading of the species in other counties from the West of the country was made in 2003. In the following years the species spread in other Northern and Western counties. After the recently completed observations in the ten counties from the West and the North-West of Romania new locations where the common ragweed is spread were identified (figure 1).

The spreading of the species is presented as it follows:

In Maramureş County the species was reported in the locations: Seini, Cicârlău, Tăuţii - Măghereuş, Ardasat.

In Satu Mare County, in the locations: Andrid, Pişcolt, Sanislău, Berveni, Carei, Satu Mare, Botiz, Apa, Beltiug, Livada, Ardud, Tăşnad, Acâş.

In Bihor County in the locations: Curtuişeni, Şimian, Valea lui Mihai, Tarcea, Sălăcea, Săcuieni, Diosig, Marghita, Sălard, Suplacul de Barcău, Oradea, Biharia, Sântandrei, Sânmartin, Oşorhei, Cefa, Salonta, Aleşd, Borod, Tinca.

In Cluj County, in the locations: Bucea, Poieni, Huedin.

In Arad County, in the locations: Vinga, Pecica, Zădăreni, Ghioroc, Arad.

In Timiş County, in the locations: Beba Veche, Periam, Sânnicolau Mare, Jimbolia, Timişoara, Lugoj, Deta, Şag, Jebel, Teremia Mare, Recaş, Topolovăţu Mare, Coşteiu, Moraviţa, Berecsău Mare, Sacalaz, Buziaş.

In Caraş Severin County, in the locations: Caransebeş, Băile Herculane, Domaşnea, Buchin, Sacu, Prisaca, Lăpuşnicel, Armeniş.

In Alba and Hunedoara Counties, the presence of the species was not reported.



Figure1. The spreading of common ragweed species (*Ambrosia artemisiifolia* L.), in the North- West of Romania, 2006

CONCLUSIONS

The common ragweed (*Ambrosia artemisiifolia* L.) is an invasive species spread on considerable surfaces on the North-West of Romania. The presence of this was reported in localities from the North-West and the West of Romania, in the gardens of the households or recreation areas as well as in industrial areas, but especially out of localities, in agricultural cultures or in abandoned lands.

The borders of the roads represent a specific spreading area where the species is frequently found, due to systematic seed dissemination, favoured by transports that cross territories where the species adapted, forms populations, settles and then passes in the agricultural cultures as therophyte, annual, with late germination weed.

Since the year 2003, when our studies began in Bihor County, the species has been spreading towards the North, South and the centre of the country, the last reports coming from Bărăgan and the Southern part of Moldova.

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