

*Acer negundo*

*Ailanthus altissima*

*Amorpha fruticosa*

*Artemisia verlotiorum*

*Aster squamatus*

*Ambrosia artemisiifolia*

*Alcea rosea*

*Broussonetia papyrifera*

# The list of plant invaders in Montenegro

*Conyza canadensis*

*Bidens subalternans*

*Paspalum paspaloides*

*Sporobolus poiretii*

*Lepidium virginicum*

**Danijela Stešević**  
**University of Montenegro**

*Xanthium strumarium*

- The list of IAS in Montenegro consists of 50 flowering plants belonging to 36 genera, 20 families and 2 classes.

*Acer negundo* L.  
*Ailanthus altissima* (Mill.) Swingle  
*Alcea rosea* L.  
*Amaranthus hybridus* L.  
*Amaranthus retroflexus* L.  
*Ambrosia artemisiifolia* L.  
*Amorpha fruticosa* L.  
*Artemisia verlotiorum* Lamotte  
*Asclepias syriaca* L.  
*Aster squamatus* (Spreng.) Hieron  
*Broussonetia papyrifera* (L.) Vent.  
*Bidens subalternans* DC.  
*Bidens frondosa* L.  
*Carpobrotus edulis* (L.) Naud.  
*Commelina* sp.  
*Chamomilla* sp. (L.) Rydb.  
*Conyza* sp.  
*Conyza bonariensis* (L.) Cronq.  
*Conyza canadensis* (L.) Cronq.  
*Cuscuta caesattiana* Bertol.  
*Cuscuta campestris* Yuncker.  
*Datura stramonium* L.  
*Eleusine indica* (L.) Gaertn.  
*Eleusine tristachya* (Lam.) Lam.  
*Erigeron annuus* (L.) Pers.

*Erigeron annuus* subsp. *serpentalis*  
*Euphorbia maculata* L.  
*Euphorbia prostrata* Aiton.  
*Galinsoga parviflora* Cav.  
*Helianthus xlaetiflorus* Pers.  
*Helianthus tuberosus* L.  
*Impatiens parviflora* DC.  
*Lepidium virginicum* L.  
*Medicago sativa* L.  
*Oenothera* sp.  
*Ornithoglossum* sp.  
*Parthenocissus vitacea* (L.) Micheli  
*Phytolacca* sp. Kenner et Rostanski  
*Rubus* sp. *ulgaris* Mill.  
*Trifolium* sp.  
*Paspalum dilatatum* Poir.  
*Paspalum paspaloides* (Michx.) Scribn.  
*Reynoutria japonica* Houtt.  
*Robinia pseudacacia* L.  
*Solanum elaeagnifolium* Cav.  
*Sorghum halepense* (L.) Pers.  
*Sporobolus poiretii* (R. et S.) Hitchc.  
*Sporobolus vaginiiflorus* (Torrey) Wood  
*Tagetes minuta* L.  
*Veronica persica* Poir.  
*Xanthium strumarium* L. *italicum* (Moretti) D.Löve  
*Xanthium spinosum* L.

**Ludwigia grandiflora and Heracleum mantegazzianum,  
are still not recorded in our flora.**

- The highest number of IAS has families *Asteraceae* (16) and *Poaceae* (7), while between genera dominant are *Conyza* (3), *Oenothera* (3), *Erigeron* (2), *Euphorbia* (2), *Amaranthus* (2), *Bidens* (2), *Xanthium* (2), *Eleusine* (2), *Paspalum* (2), *Sporobolus* (2).
- Due to its native range, majority of IAS has **North American** and **Asian** origin. These species were mainly introduced as **ornamental** plants (*Robinia pseudoacacia*, *Acer negundo*, *Ailanthus altissima*, *Reynoutria japonica*, etc.) and very soon they started to escape into the wild, invading native ecosystems with disastrous results and become invasive species. From the other side, greatly improved **transport** that enables traders to move goods from distant destinations provided ideal opportunities for the accidental introduction of AIS (*Paspalum* spp., *Eleusine* spp.).

- Due to the **favorable climate** and higher level of **disturbance** Mediterranean part of the country hosted significantly higher number of invasive species than continental-mountainous. IAS typical for Mediterranean part of the country are: *Carpobrotus edulis*, *Opuntia vulgaris*, *Oenothera glazioviana*, *O. fallax*, *Conyza bonariensis*, *C. albida*, *Aster squamatus*, *Asclepias syriaca*, *Acer negundo*, *Amaranthus hybridus*, *Lepidium virginicum*, *Bidens subalternans*, *Helianthus tuberosus*, *H. laetiflorus*, *Xanthium spinosum*, *Eleusine indica*, *E. tristachya*, *Sporobolus poiretti*, *S. vaginiiflorus*, *Commelina communis*, *Solanum elaeagnifloium*, *Tagetes minuta*, *Amorpha fruticosa*, *Paspalum paspaloides*, *P. dilatatum*.

- Up to now only one species (*Impatiens parviflora*) has distribution restricted only to **continental** part of the country (riverine forests). This is explained by its ecological preferences of species: very susceptible to water stress and a shade tolerant, mostly found at 5-40% relative daylight, prefer nitrogen rich stands, with pH range between 4.5 and 7.6 (Combe, 1956
- 
- Other species, such as *Robinia pseudoacacia*, *Erigeron annuus*, *Amaranthus retroflexus*, *Veronica persica*, *Xanthium strumarium* ssp. *italicum*, *Ailanthus altissima*, *Reynoutria japonica* are distributed in both part of the country.

- Considering *Ailanthus* and *Reynoutria*, at the beginning of our field study we noticed that first species mainly invaded mediterannean part of the country, while the second one is restricted to continental part. But during the last year both species started to move its borders. Along the roadsides *Ailanthus* moved towards the north and *Reynoutria* along roadsides and riverbanks towards the south. Success of this “movement” is strongly supported by increase of a disturbance.

*Acer negundo*

*Ailanthus altissima*

*Amorpha fruticosa*

*Artemisia verlotiorum*

*Alcea rosea*

*Ambrosia artemisiifolia*

*Aster squamatus*

**Tnx on your attention!**

*Erigeron annuus*

*Euphorbia maculata*

*Conyza canadensis*

*Bidens subalternans*

*Paspalum paspaloides*

*Sporobolus poiretii*

*Lepidium virginicum*

*Broussonetia papyrifera*

*Xanthium strumarium*