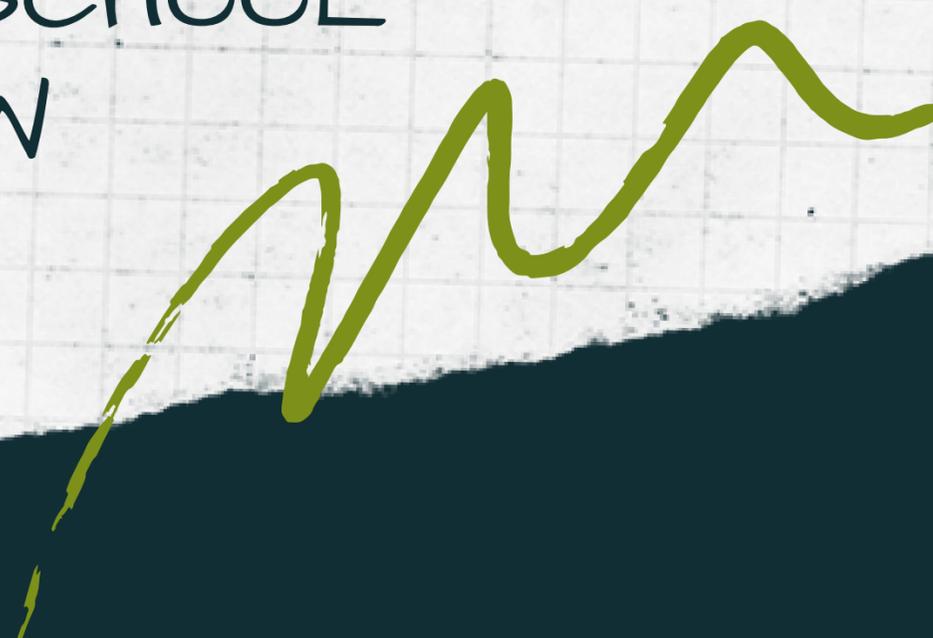




INVASIVE SPECIES IN FOREST

SALESIAN HIGH SCHOOL
WROCLAW
POLAND





Among 88 invasive plant species:

- 35 are invasive on a national scale (of which 12 occur in forests),
- 31 regionally invasive (8 in forests),
- 10 domestic and only locally invasive (4 in forests),
- 12 potentially invasive in the country (3 in forests)



In the past, a common practice in forest management was the large-scale introduction of alien tree species into the natural environment. This was, among others, improve soil conditions and increase the diversity and productivity of stands. Unfortunately, some of the species introduced in this way, e.g. black cherry *Padus serotina*, turned out to be very invasive and began to dominate the stand, negatively affecting both natural diversity and wood production.

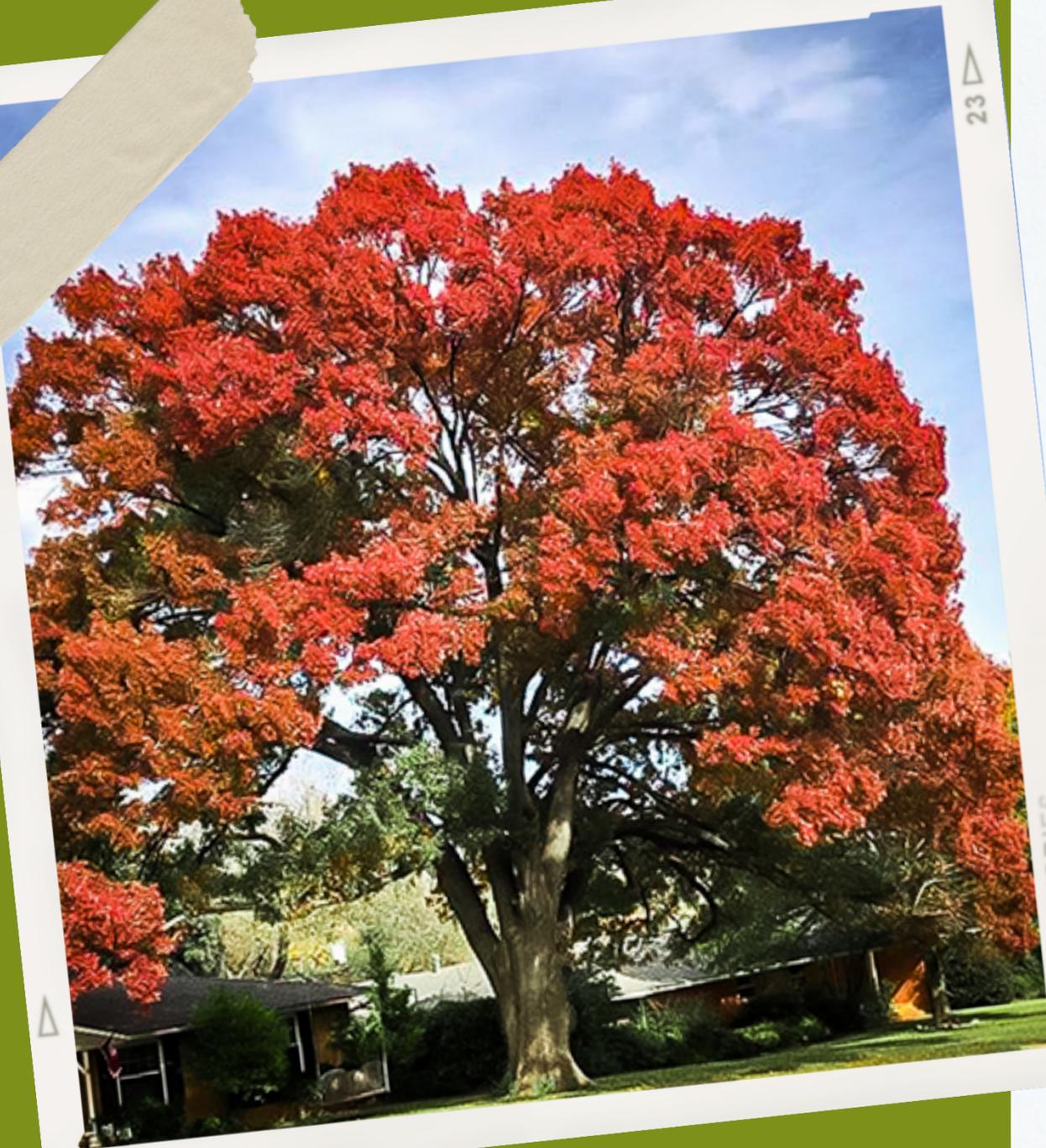




Quercus rubra - RED OAK

was introduced to Europe in
17th century as an
ornamental and commercially
important tree





Red oak negatively influenced species richness and cover of understory vegetation.

The changes in soil physicochemical parameters and understory vegetation under *Q. rubra* may be associated with low quality (low N, high C/N) litter that decomposes slowly and generates a physical barrier, limiting seed germination and seedling growth.

The changes in soil properties and vegetation under invasive *Q. rubra* indicate that this species may alter the structure and function of forest ecosystems and should be avoided in forest management practices.



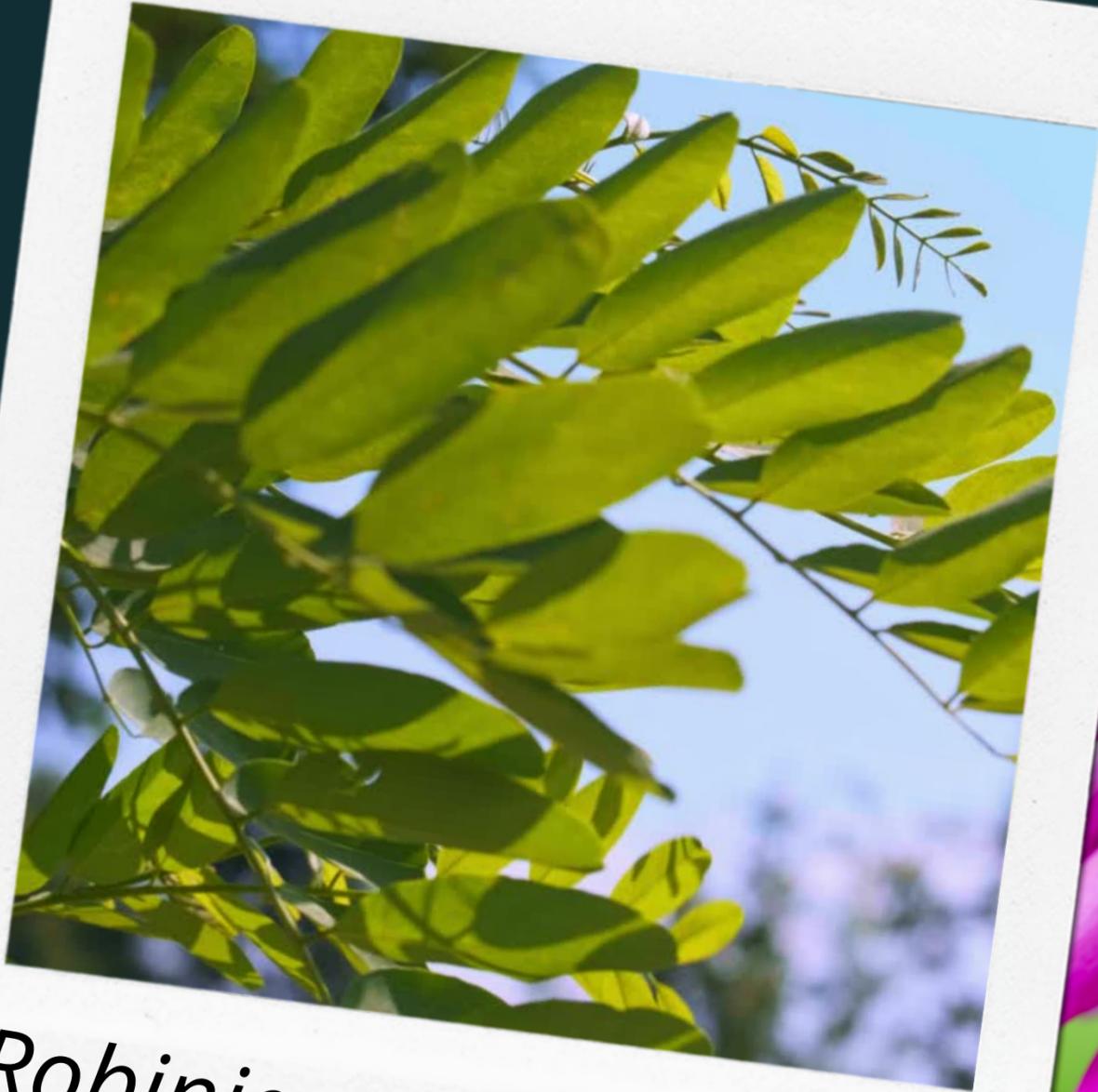
It is observed lower amounts of total C, N, available Ca, K, Mg and P beneath *Q. rubra* than under *Q. pertaea* in soils of reclaimed lignite open-cast mines.

Miltner et al. (2016) observed decreased pH and concentration of total and available nutrients in soil beneath *Q. rubra* in comparison to *Q. petraea*, but the difference depended on the soil horizon.



Douglas fir (*Pseudotsuga menziesii*) has settled in our forests for good. It does not show expansive features, but it gives beautiful wood and perfectly enriches our stands. Planted several dozen years ago, it creates beautiful clumps of several acres.





Robinia pseudoacacia

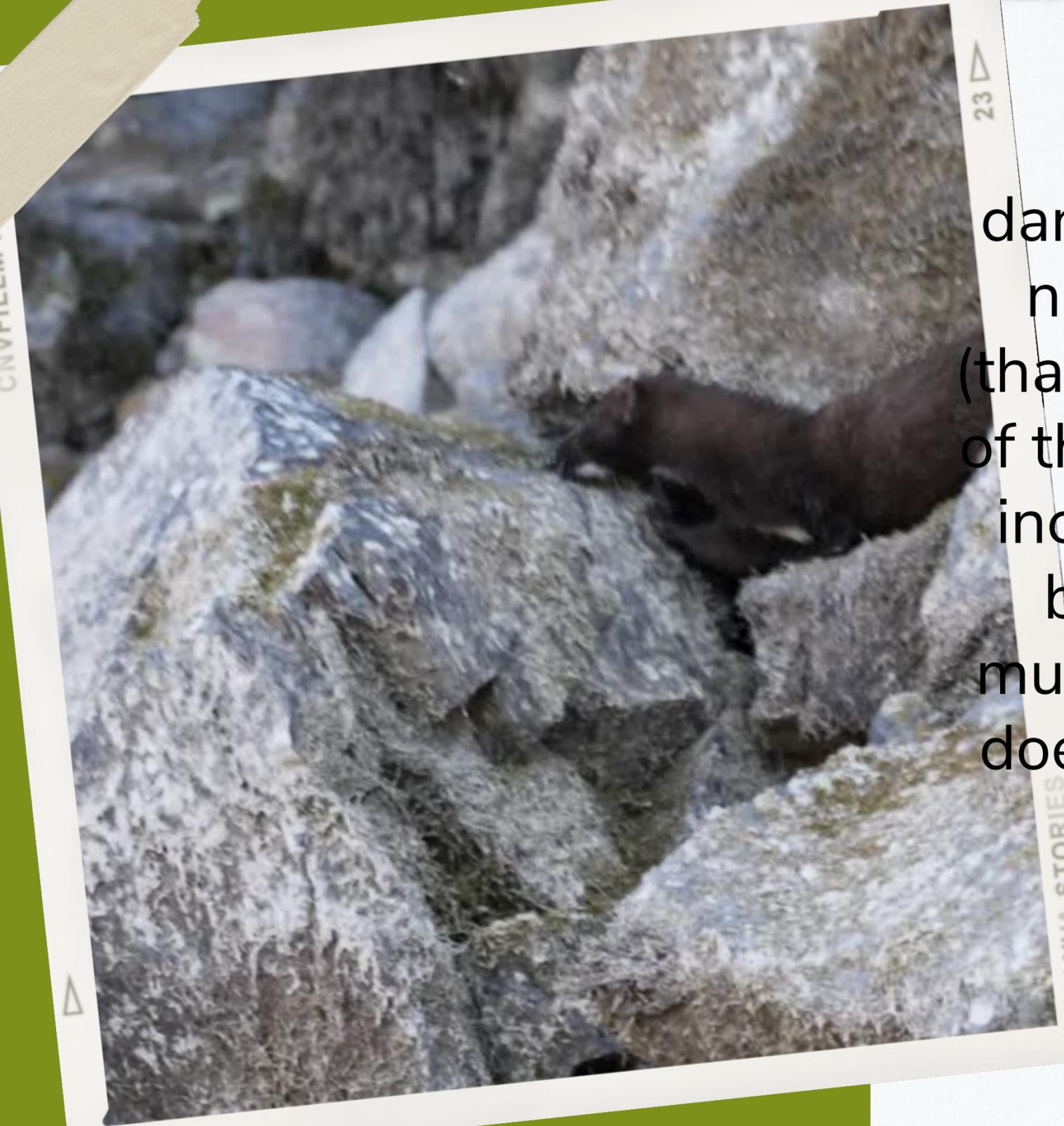


Digitalis purpurea



Impatiens parviflora

The American mink is a particularly dangerous invasive alien species that has no natural enemies. It swims very well (thanks to the membrane between the toes of the hind legs) and climbs trees. Its menu includes mainly meat - it eats fish, frogs, birds, their eggs, and even hares and muskrats with a wild appetite (although it does not despise, for example, crayfish or insects).





The raccoon is a threat to birds. His dexterity, which enables him to climb trees, makes him a more dangerous predator than a fox. The presence of the raccoon in ecosystems hinders attempts to restore / reintroduce endangered species, e.g. capercaillie, hazel grouse and black grouse. The fight with this animal is made more difficult by the fact that the only natural enemy of the raccoon is ... a human.



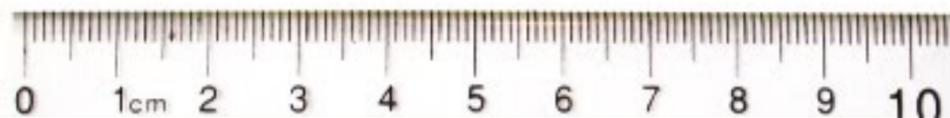


Red-eared turtle (*Trachemys scripta elegans*) - inconspicuous and well-known from aquariums and pet stores, the turtle is today recognized as one of the 100 most dangerous invasive alien species in the world. Responsible for the reintroduction of this species in our area is their own owners, that is, people who keep these turtles in home terrariums. In 1997, the EU introduced a ban on the import of red-eared and painted turtles.





INVASIVE SPECIES STOP THE SPREAD

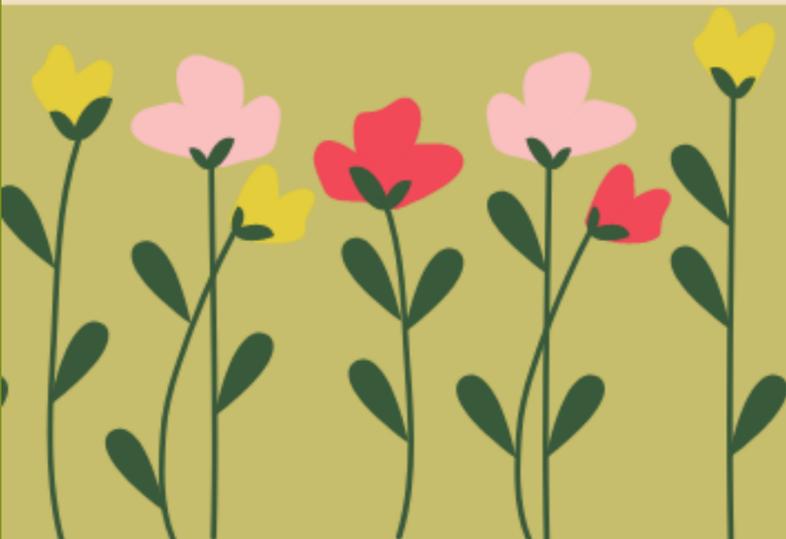




Burn Local Firewood



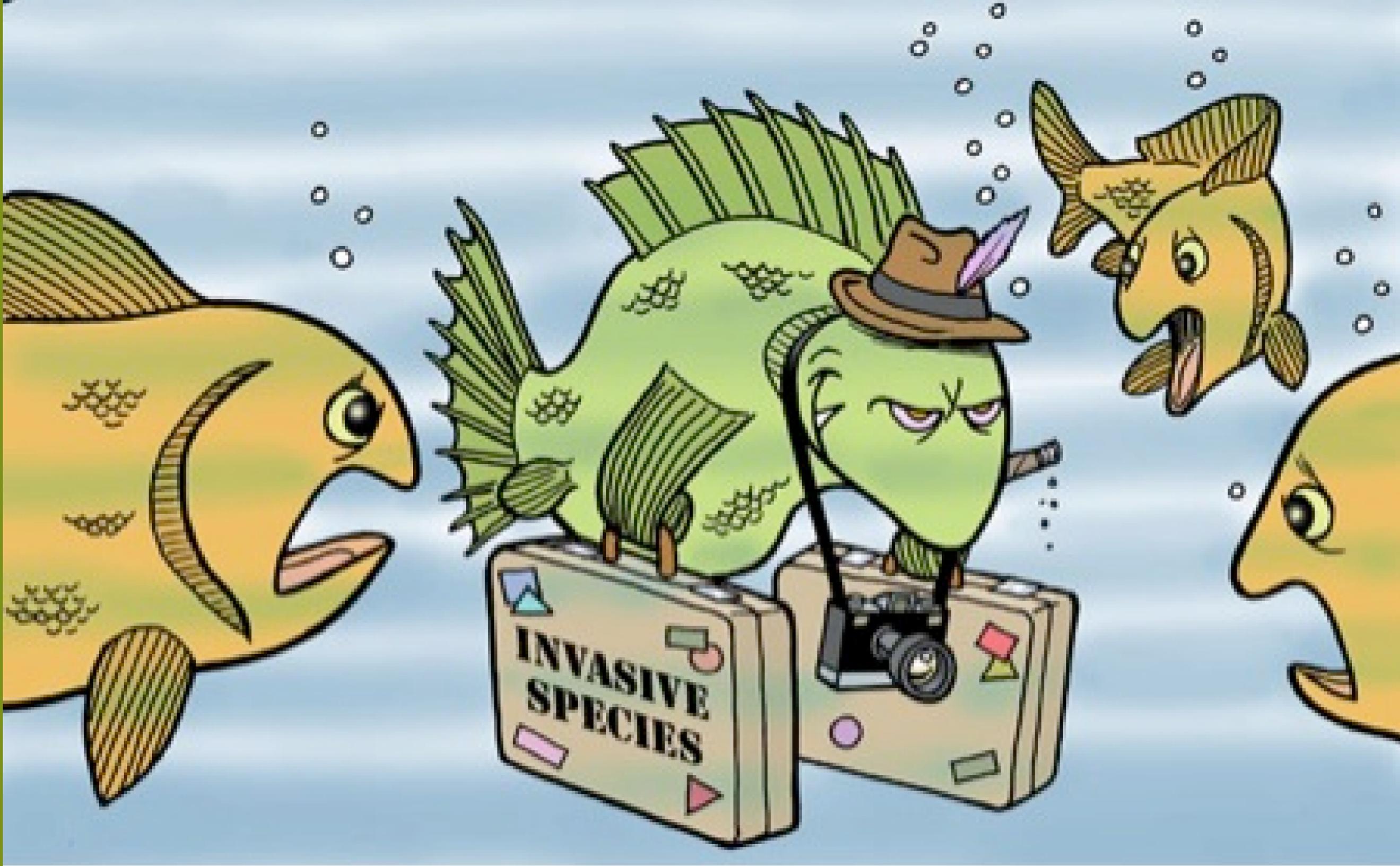
Clean Your Gear



Grow Native Plants



GREENBERG





**PROTECT THIS LAKE FROM
AQUATIC INVASIVE SPECIES**



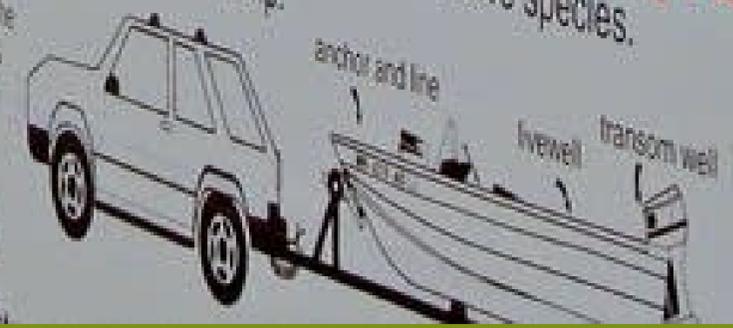
**HELP STOP
AQUATIC
HITCHHIKERS!**

It's the law: BEFORE launching ... BEFORE leaving you must

- Remove aquatic plants, zebra mussels, and other prohibited invasive species.
- Drain lake or river water away from the boat ramp.

It is unlawful to:

- Transport aquatic plants
- Launch



A vibrant field of tall green grasses with purple and yellow flowers under a clear blue sky. The text "THANK YOU!" is overlaid in the center in a large, bold, white font.

THANK YOU!