



Language and Messaging in Invasive Species Management

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Photo from TNC Maine – “Forest” Conservation Priorities website



Invasive
species
language,
messaging,
and framing
can be
problematic

- Emphasis on geography of origin oversimplifies invasive species ecology in problematic ways
- AND can be perceived as racist or xenophobic (fear of foreigners)

RUSSIA'S INVASION OF UKRAINE

As Russia massed more than 100,000 troops around Ukraine, issued ultimatums to the United States and NATO, raised tensions and prospects of war in Europe, and ultimately launched a massive invasion of Ukraine on February 24, Brookings experts have provided analysis on Moscow's aims, Western reactions and policy options, and wider implications.

1. Association with military language carries implication of agency or/and mal intent
- Creates perceived or actual xenophobia, racism

ering in its support for Ukraine

2022

EXPERTS



Fiona Hill

Senior Fellow - Foreign Policy, Center on the United States and Europe



Steven Pifer

Nonresident Senior Fellow - Foreign Policy, Center on the United States and Europe,



Angela Stent

Nonresident Senior Fellow - Foreign Policy, Center on the United States and Europe

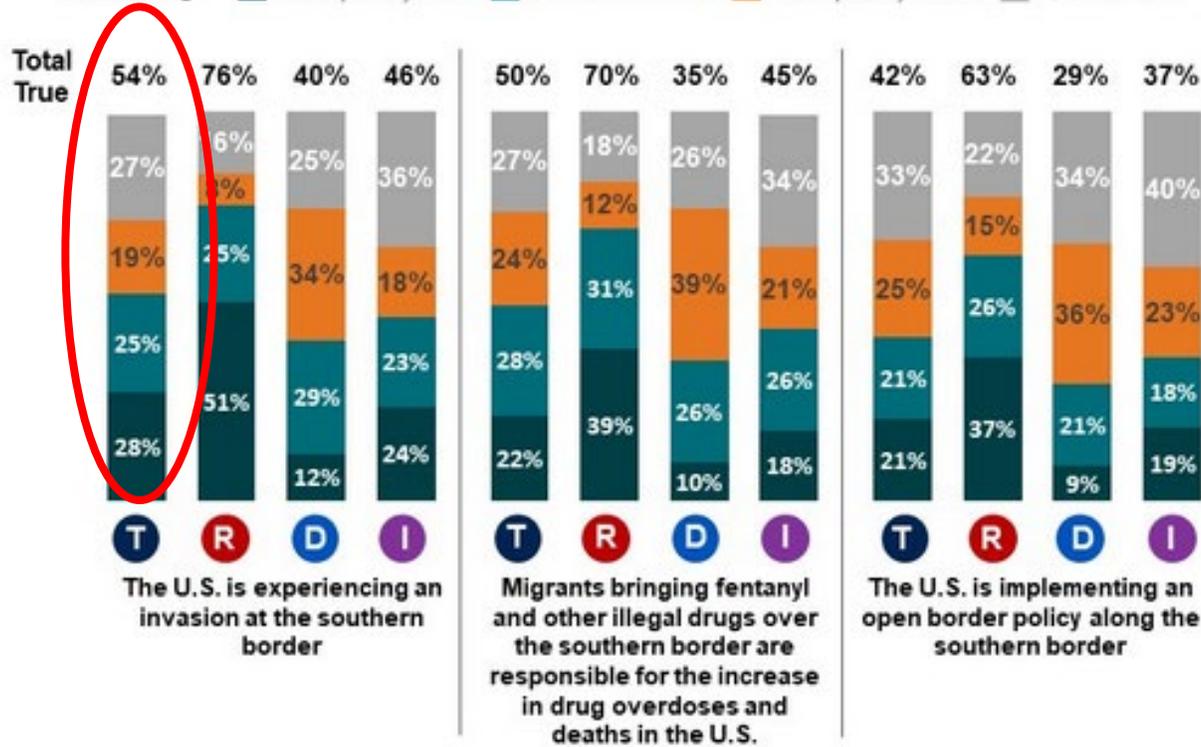
<https://www.brookings.edu/topic/russias-invasion-of-Ukraine/> accessed 10/31/2022

On immigration, most buying into idea of “invasion” at southern border

1. This language is feeding into xenophobic & racist narratives

To what extent, if any, do you believe the following are true?

% Selecting ■ Completely true ■ Somewhat true ■ Completely false ■ Don't know



© 2022 Ipsos Base: All respondents (N=1,116); Republicans (N=317), Democrats (N=516), Independents (N=141)

August 2022 NPR/Ipsos poll as reported on Ipsos.com 8/18/2022

2. “Uninvited aggressive invader” narrative hides reality of intentional introductions for many taxa

How do **terrestrial** invasive plants get here? – Mostly brought on purpose

62% deliberate, **9% accidental**, **28% unknown**



- ~40% for horticulture
- ~8% for forage
- ~7% deliberate, reason unknown
- ~4% for “conservation”
- ~3% medicinal



~9% accidental

- contaminants:
seed, livestock,
packaging (8%)
- ballast (<1%)

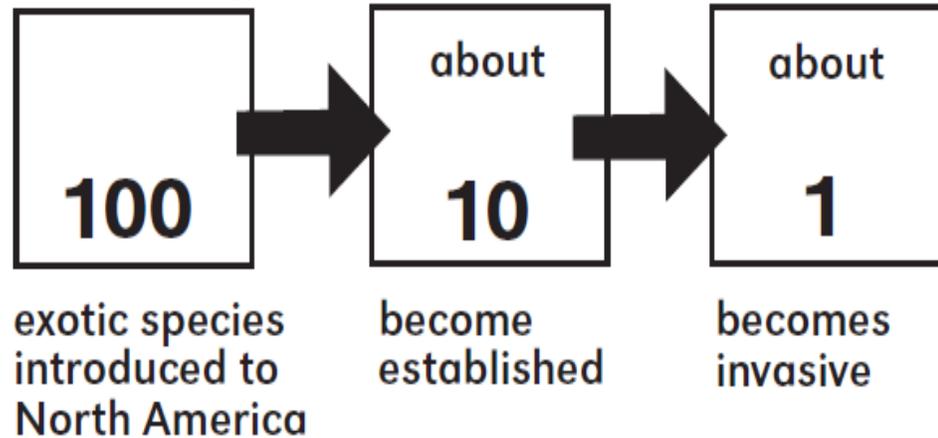


Lehan et al. 2013. Am. Journal of Botany 100(7): 1287-1293

3. Emphasis on “non-native” / geography of origin can imply that all such species are harmful, which is false

“Tens Rule”

Out of every

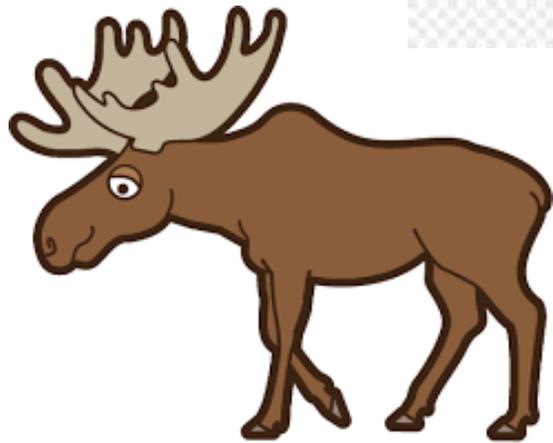
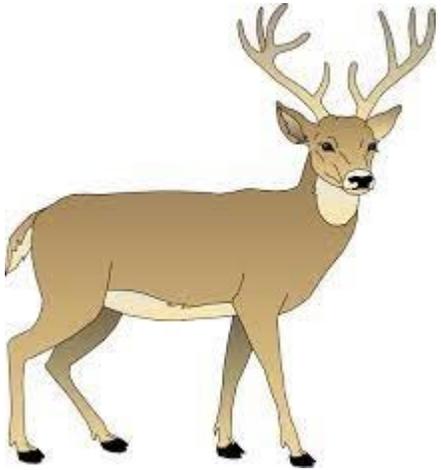


“...metanalysis of 102 empirical tests of the tens rule from 65 publications shows no support for this hypothesis.”

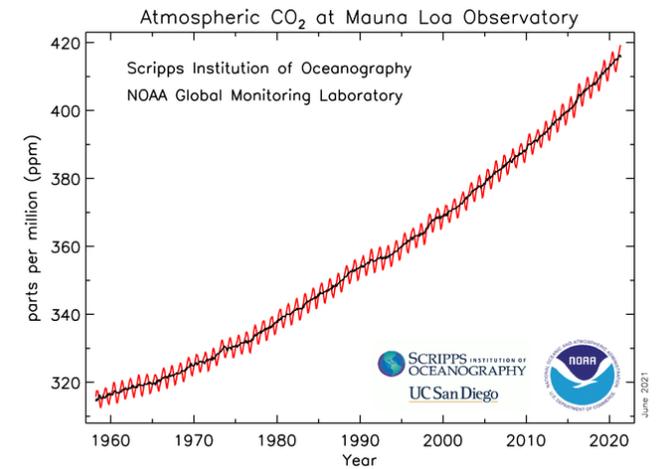
“...about 25% of non-native plants and invertebrates, and about 50% of non-native vertebrates are on average successful in taking consecutive steps of the invasion process.”

Jeschke, J. M. & P. Pyšek. 2018. “Tens Rule.” in J. M. Jeschke & T. Heger (Eds). Invasion Biology: Hypotheses and Evidence. Pgs: 124-132. CABI Invasives Series. ISBN : 978-1-78064-764-7.

4. Facilitating factors can be important but are rarely emphasized in the context of IS management



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Not a new problem

CONCEPTS AND QUESTIONS

495

The war of the roses: demilitarizing invasion biology

Brendon MH Larson

Biologists need to continuously reflect upon the ethical and rhetorical dimensions of their language when communicating about invasive species. In particular, is current language likely to promote social cohesion and, consequently, effective and appropriate action towards invasive species? To address this question, I focus on prevailing militaristic and combative metaphors within invasion biology. I argue that these metaphors are problematic because (1) they lead to an inaccurate perception of invasive species; (2) they contribute to social misunderstanding, charges of xenophobia, and loss of scientific credibility; and (3) they reinforce militaristic patterns of thought that are counterproductive for conservation. Therefore, while these metaphors may effectively motivate conservation action in the short term, they could be ineffective in the long term. Alternatives to militarism will better promote realistic management and conservation goals in a multicultural context.

Front Ecol Environ 2005; 3(9): 495–500

Biologists currently devote considerable resources towards invasive species because of their dramatic spread, economic cost, and effects on ecological systems (Mack *et al.* 2000). Given the magnitude of this phenom-

example, a popular book states, “There is little consolation in the fact that 90% of these *impacts* are ‘*duds*’, and only 1% really *detonate*. The *bombardment* is continual, and so are the *detonations*” (Bright 1998; emphasis

Larson 2005, *Frontiers in Ecology and the Environment*

Good solutions to the problem?

**NOW DON'T EVERYBODY JUMP UP AT
ONCE.**

Possible best practices

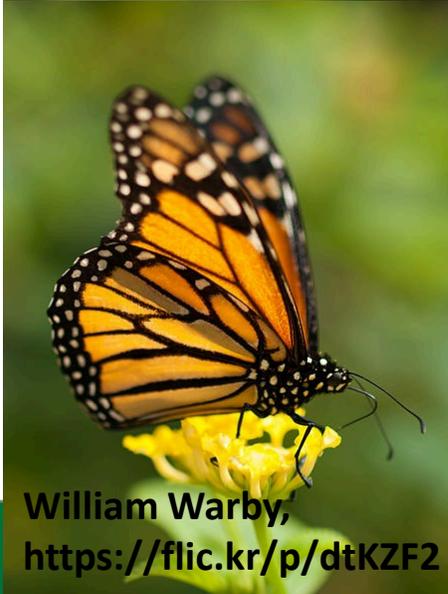
1. Avoid use of “warlike” metaphors/language
2. Investigate and name the agency of people of privilege in arrival of IS
3. Routinely place IS in the context of facilitating factors and other stressors
4. Denounce xenophobia and racism
5. Emphasize the desired ecosystem state rather than IS removal

Thriving native plant communities build healthy ecological relationships



10/12/2016

Food web relationships depend on native plants



William Warby,
<https://flic.kr/p/dtKZF2>





**Land
stewardship is
about tending
relationships**

Help native plants by removing invasive plants



Thank You

Look forward to hearing your best practices & questions during Q&A!

The Nature
Conservancy



Maine

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Names and Words in Invasive Species

Leigh Greenwood

Forest Pest and Pathogens Program Director

Natural Climate Solutions

North America Region

The Nature
Conservancy 

DONTMOVE
FIREWOOD.org





ENTOMOLOGICAL
SOCIETY OF AMERICA
SHARING INSECT SCIENCE GLOBALLY

"The purpose of common names is to make communication easier between scientists and the public audiences they serve. ... **names that are unwelcoming to marginalized communities run directly counter to that goal.**"

- ESA President Michelle S. Smith.

"Words matter ... Consideration of these replacements is a **big step forward in our efforts to remove derogatory terms** whose expiration dates are long overdue."

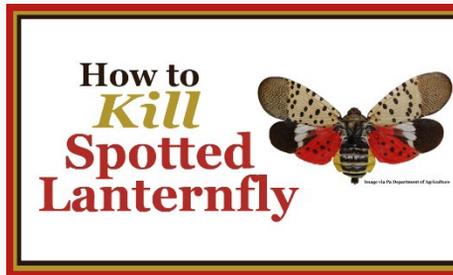
- US Secretary of the Interior Deb Haaland.

THE NATURE CONSERVANCY 2

Photo credit: R. Lindroth

Context of eradication and government control

- The context around invasive species management amplifies this issue
- Names associated with groups of people- whether ethnic, geographic, or other groups- can cause harm
- All geographic names are problematic- by stating some geographies are neutral, the underlying bias becomes apparent



What To Know About The Spotted Lanternfly Invasion

| 9/21/22 6:15AM | Alerts



Officials in multiple states have put out orders to kill spotted lanternflies on sight. *The Onion* answers common questions about the spotted lanternfly and its presence in the U.S.



Q: What is a spotted lanternfly?

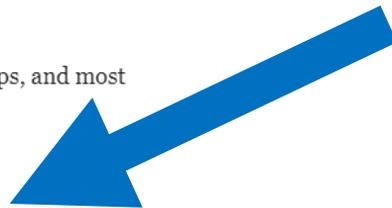
A: An invasive insect that threatens trees, commercial crops, and most terrifying of all, vineyards.

Q: Where do they come from?

A: If we tell you, do you promise not to be racist about it?

Q: What do they want?

A: To wine New Jersey off the man



Example Naming Guidelines for NEW names

From Entomological Society of America, Common Names Rules and Guidelines

(<https://entsoc.org/publications/common-names/use-submission>)

Here are some of their “Do’s”

- **Most names have two parts**, one indicating the family or group, and the other a modifier.
- Distinctive **physical features that well differentiate** the species are useful.
- Other useful descriptive terms may derive from features such **as habitat of the species, host associations, biome, life stage and aspect of seasonal life cycle.**
- Specific words used as modifiers (adjectives, adverbs) in a common name should be easily pronounced and **generally understandable by a broad public audience.**

Rainbow trout

Longnose gar

Creek chub

Prickly sculpin

Example Naming Guidelines for NEW names

From Entomological Society of America, Common Names Rules and Guidelines

(<https://entsoc.org/publications/common-names/use-submission>)

Here are some of their “Don’ts”

- Common names with words that unnecessarily **incite offense, fear or promote negative emotional reactions** (e.g., epidemic, murder, invasive) are strongly discouraged.
- Descriptors of **cultures, populations, ethnicity, race, and industries/occupations** are generally not acceptable.
- The **use of a geographic descriptor in a common names proposal is generally discouraged...**

Murder hornets Killer whales Oriental rat flea Japanese beetle

Let's dig into *Lymantria dispar*



Photo credit: J. Lindholm

● LIVE

AGM (flighted spongy moth complex)



- An eradication program via aerial spray was conducted in Langley, BC (spring 2022) following the detection of 2 moths in fall 2021
- 2022 delimitation survey results will inform next steps
- Vessel certification program – very few detections during the 2022 season
- Will be transitioning to the name flighted spongy moth complex (FSMC) to refer to the group of moths previously referred to as AGM



It is in all our power to frame language changes as an opportunity

- The conservation community has an opportunity to do better; names can be **more accurate and descriptive of the physical or behavioral characteristics.**
- We can choose to find new names that serve us for outreach, early detection, and education on invasive species.
- **We can choose to make science and conservation more inclusive in this space.**



UGA1335027

Thank you for
inviting me to
present!



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'Spongy Moth' Proposed as New Common Name for *Lymantria dispar*

Translation of French name based on destructive forest pest's sponge-like egg masses

Annapolis, MD, January 25, 2022—A group of entomologists

the Entomological
"spongy moth" as the
Lymantria dispar.

he used in France and
refers to the moth's
"gypsy moth" as the
in *Names of Insects*
he name was removed
m for the Romani

st are opened for
y the ESA Common
ard. ESA members
through February 8.



Lymantria dispar moth



Photo credit: J. Lindholm