

# Invasive Plant Management 101

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California Invasive Plant Council  
Training

Symposium 2017



# Principles of Invasive Plant Management

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Gina Darin

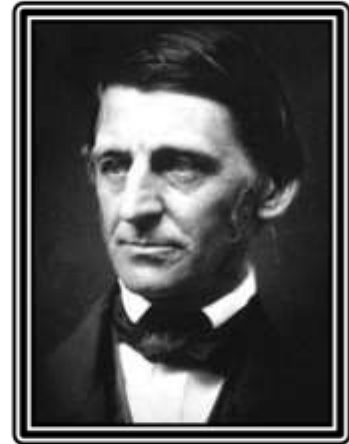
California Department of Water  
Resources



# “What is a weed?...

...A plant whose virtues have not yet been discovered.”

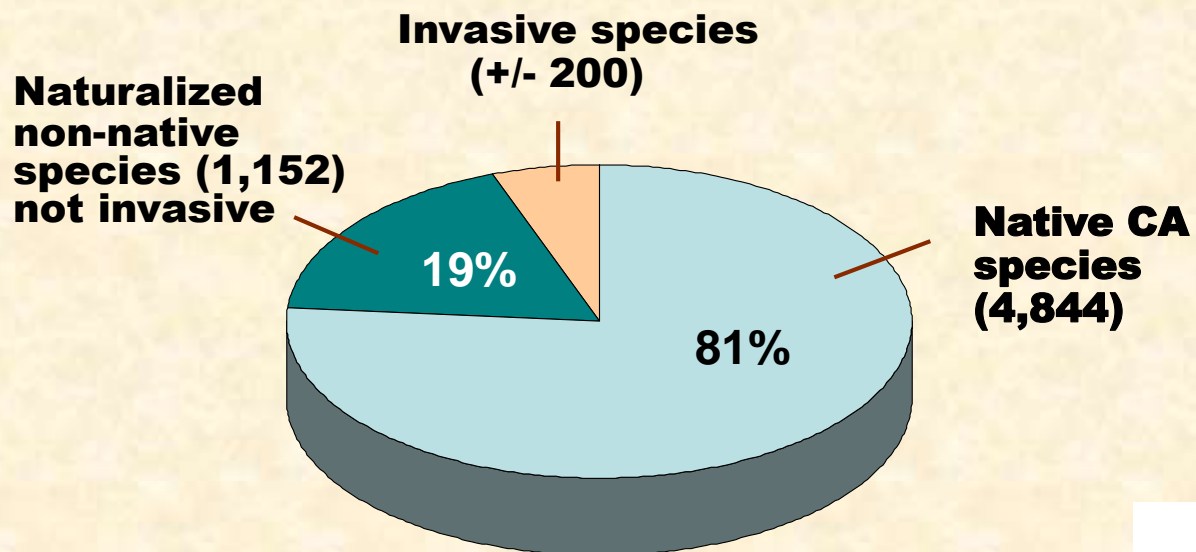
- Ralph Waldo Emerson  
(1803-1882)



# What is an Invasive Plant?

- **Non-native (can be regional)**
- **Impairs the ability of native California ecosystems to function**
  - Threatens native plants and wildlife, including endangered species
  - May cause economic losses
- **“Unfair advantage” makes it spread easily and difficult to control**
  - Natural predators are absent

# How Many Invasive Plants are in California?



Source: Joe DiTomaso, UC Davis





- **Approximately 225 plants**
- **Categorized as**
  - **High**
  - **Moderate**
  - **Limited**
  - **Alert**

**Watch List approximately 85 plants**

# The Cal-IPC Inventory

The California Invasive Plant Inventory categorizes plants that threaten the state's natural areas. The list includes plants that currently cause damage in California (invasive plants) as well as "Watch" plants that are a high risk of becoming invasive in California in the future (designated with an asterisk (\*) after their scientific name). For more information, click on Inventory Details below.

INVENTORY DETAILS ▾

Click the latin name to see the full Plant Assessment Form or Risk Assessment for any plant. For the plant profile and links to more information about that plant, click the 🇺🇸 icon in the right column. To sort the list, click on a column heading. To customize which plants are shown, use the Region and/or Habitat filters below.

[See a map of Jepson regions here.](#)

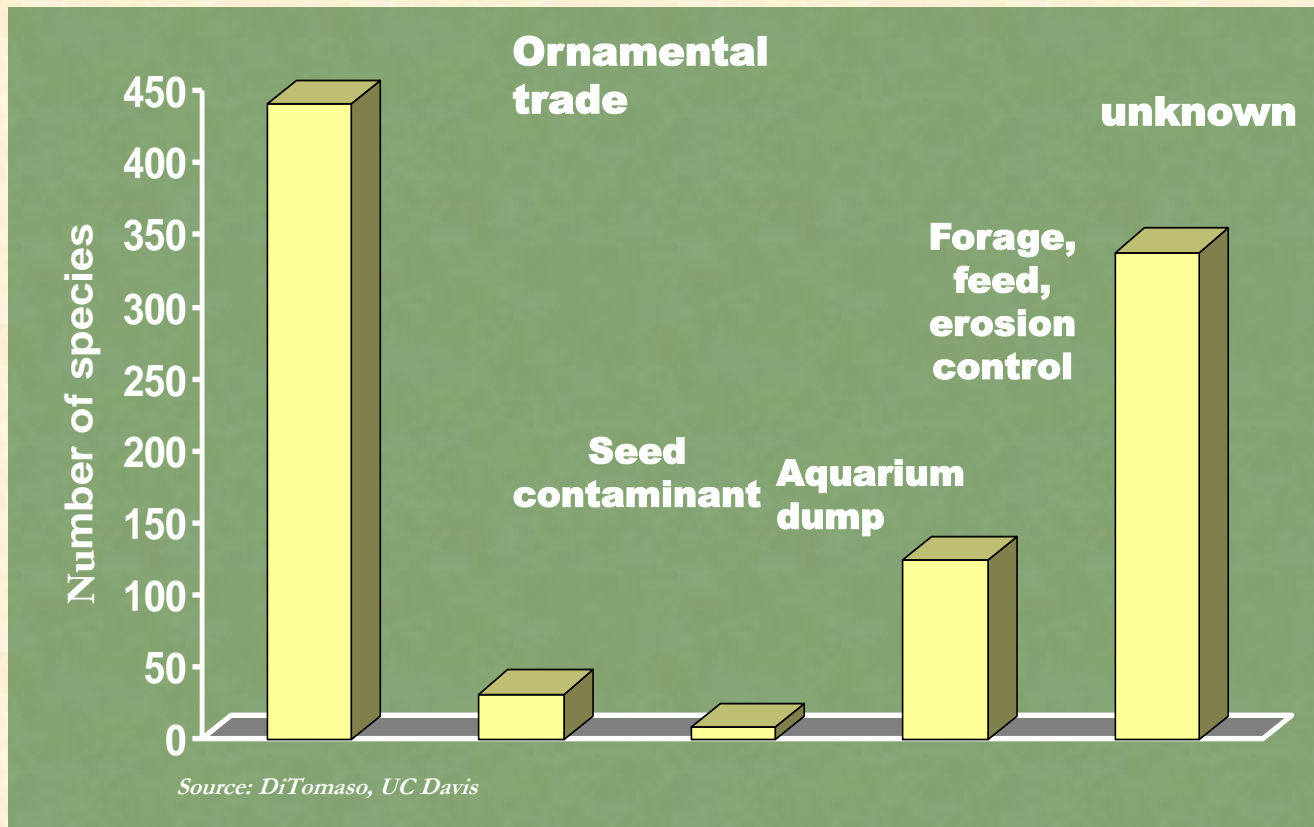
Show all listed species

Filter by Jepson Region

Filter by Habitat Type

Latin name	Common names	Rating	Alert	Hort	CWM	ID card	Profile
<a href="#">Acacia baileyana *</a>	cootamundra wattle	Watch		✓			🇺🇸
<a href="#">Acacia cyclops *</a>	cyclops acacia	Watch					🇺🇸

# How Did They Get Here?

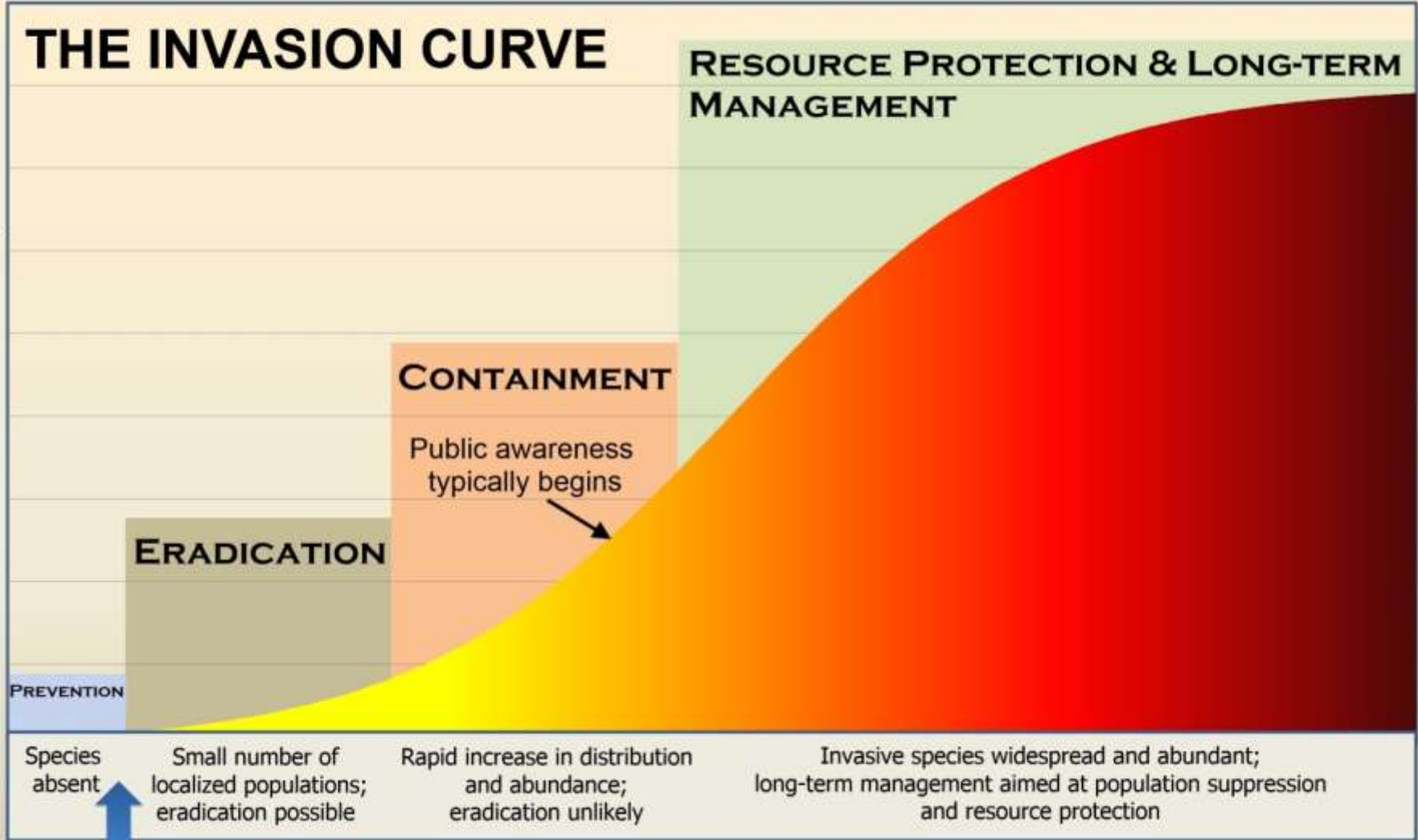


# THE INVASION CURVE

RESOURCE PROTECTION & LONG-TERM MANAGEMENT

AREA INFESTED →

CONTROL COSTS →

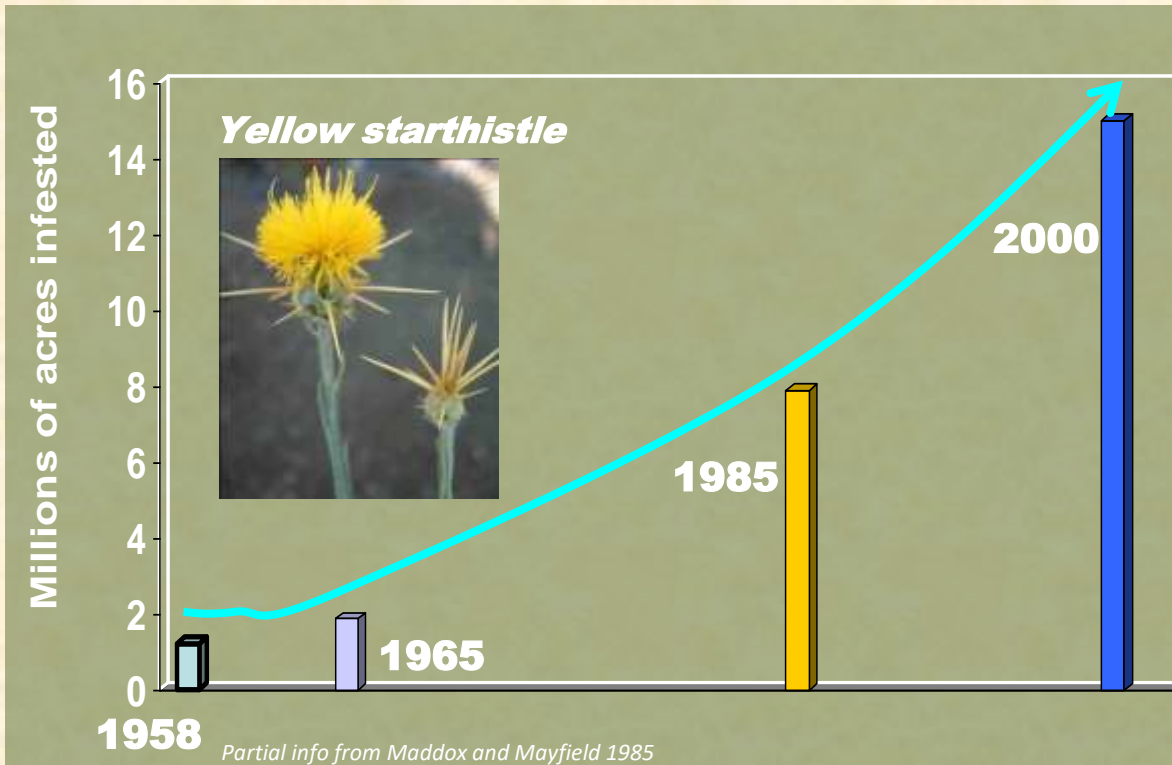


TIME →

Introduction



# How Fast Do They Spread?



# Know Your Enemy

- » Annuals
- » Biennials
- » Perennials
- » Woody plants

**By learning more about weed biology you will be better equipped to plan and implement effective weed control projects**



# Know the Distribution of Your Species

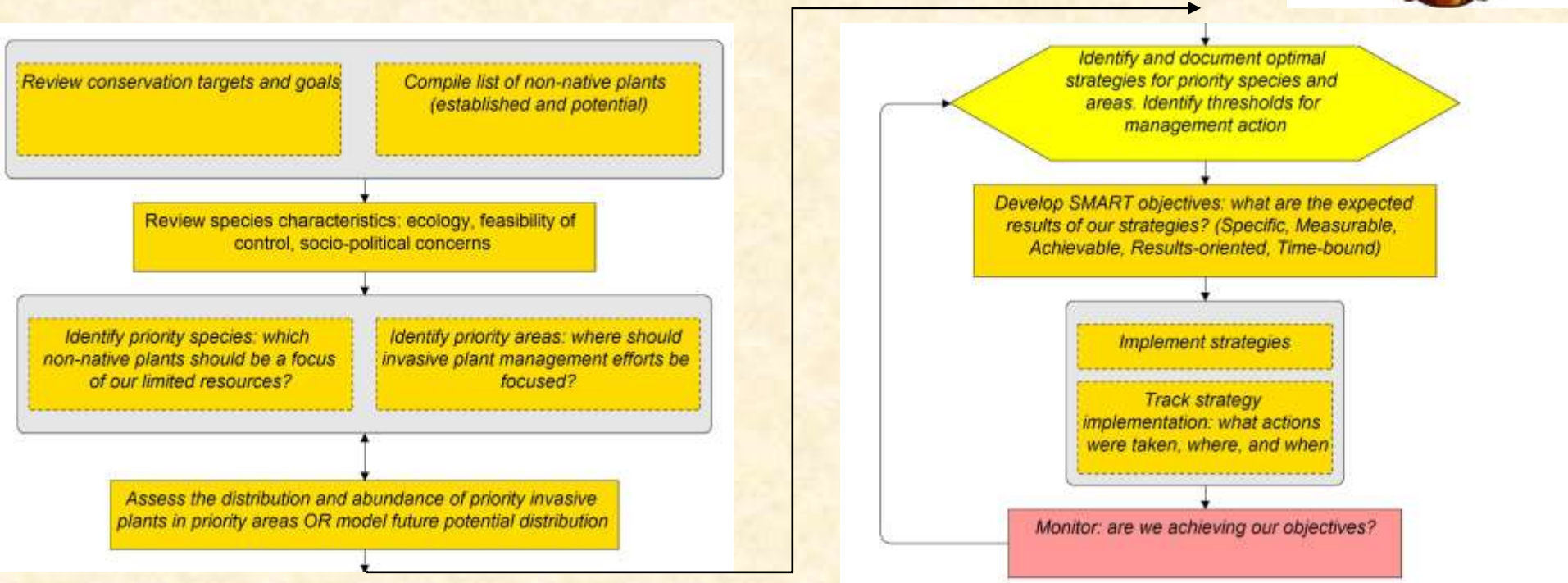
- **Inventory and map the infestation**
- **Early detection only happens if you survey**
  - **the sooner you control them the more time and money you save!**
- **Consult Weed Mapper**
  - **[calweedmapper.cal-ipc.org](http://calweedmapper.cal-ipc.org)**
- **Consult WHIPPET**
  - **[whippet.cal-ipc.org](http://whippet.cal-ipc.org)**



# What can we do about it?



## Conceptual Model of Strategic and Adaptive Invasive Plant Management



# How do you get funding???

**Where?**

**Funding Sources**

**How?**

**Grant Applications**

**The Pitch?**

**Funder Values**

**No money?**

**Use Volunteers**



# Policy and Agency Context

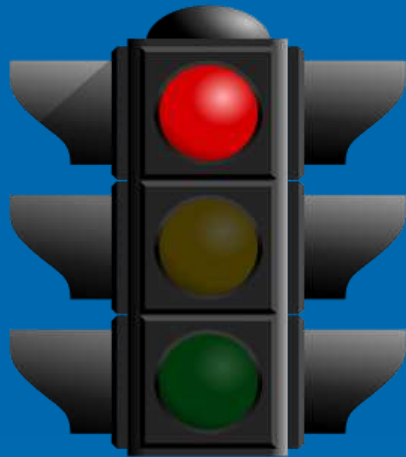


- **Federal**
  - **United States Department of Agriculture, Natural Resources Conservation Service**
    - Federal Noxious Weed List
      - 112 species
- **State**
  - **California Department of Food and Agriculture**
    - Section 4500, California Noxious Weed List
    - CDFA Pest Plant Rating List, AKA Encycloweedia
      - Approximately 250 species
- **Local**
  - **Weed Management Areas**



# Do I really need a permit?

**CEQA**



**CESA**

**HELP!**

**1600**



**404**

**NPDES**

**NEPA**

**ESA**

**401**



# Communicate what you're doing!

- **Consider your audience**
- **Craft your message**
- **Controversy**
- **Share your learning moments**
- **Share all the expert knowledge you have gained!**





# What tools are available?

- **Manual/Mechanical**
  - Hand pulling, hoeing
  - Tillage, mowing
- **Cultural**
  - Grazing
  - Prescribed burning
- **Biological**
  - St. Johnswort beetle
- **Chemical**
  - Herbicide
- **Integrated approaches**
  - Combined methods
  - Revegetation



## Stockton Deep Water Ship Channel



# Look for Advice

- **Take More Field Courses**
- **Consult the Web**
  - [www.cal-ipc.org](http://www.cal-ipc.org)
  - [wric.ucdavis.edu](http://wric.ucdavis.edu)
  - [www.invasive.org](http://www.invasive.org)
  - **More resources listed on Cal-IPC Website**
- **Ask an expert**
  - **Weed Management Areas**
  - **UC Cooperative Extension**
  - **Field course instructors**
- **Experiment!**



A photograph of a vast field of purple flowers, likely a species of Mimulus, stretching towards a dense forest of green trees under a clear sky. In the foreground, a white boat is partially submerged in the flowers. A dark green rectangular box is overlaid on the middle of the image, containing white text.

**California Invasive Plant Council**  
**Protects California's environment and**  
**economy from invasive plants**  
[www.cal-ipc.org](http://www.cal-ipc.org)

*Photo: Holly Crosson*



**Thank you!**

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