SENTINEL PLANT NETWORK

Kerry Britton

Botanic Gardens & Arboreta

with international collections

are uniquely positioned….

THE NATIONAL INVASIVE SPECIES COUNCIL

to help PREVENT the next

Dogwood Anthracnose

Beech Disease

Eurasian Poplar Leaf Rust

Phytophthora Root Rot

Port Orford Cedar Root

White Pine Blister Rust

Butternut Canker

Europe

Cryptodiaporthe Canker

Larch Canker

Sudden Oak Death

Chestnut Blight

All of these diseases

- Were imported on nursery stock
- Could not be eradicated by the time they were identified

National Research Council Recommendations

"Predicting Invasions of Nonindigenous Plants and Plant Pests"

2002

CURRENT EFFORTS

- US/France & China
- Switzerland & Siberia
- NZ B3 5 Year Pilot

INRA Beijing planting

~400 trees

Import issues

Monthly survey

INRA-funded planting in Hangzhou

~600 trees

>50 insects

Much fungal damage

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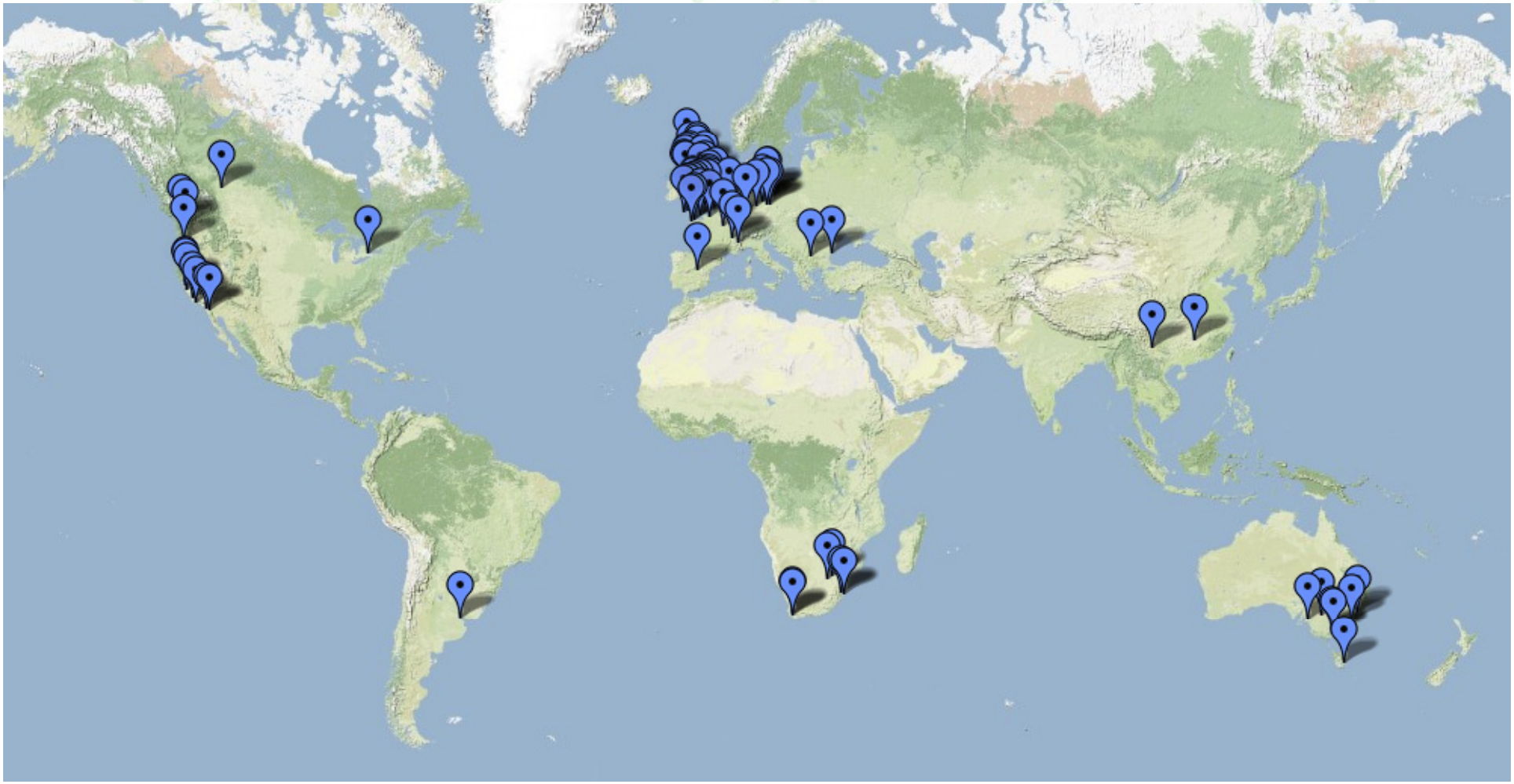
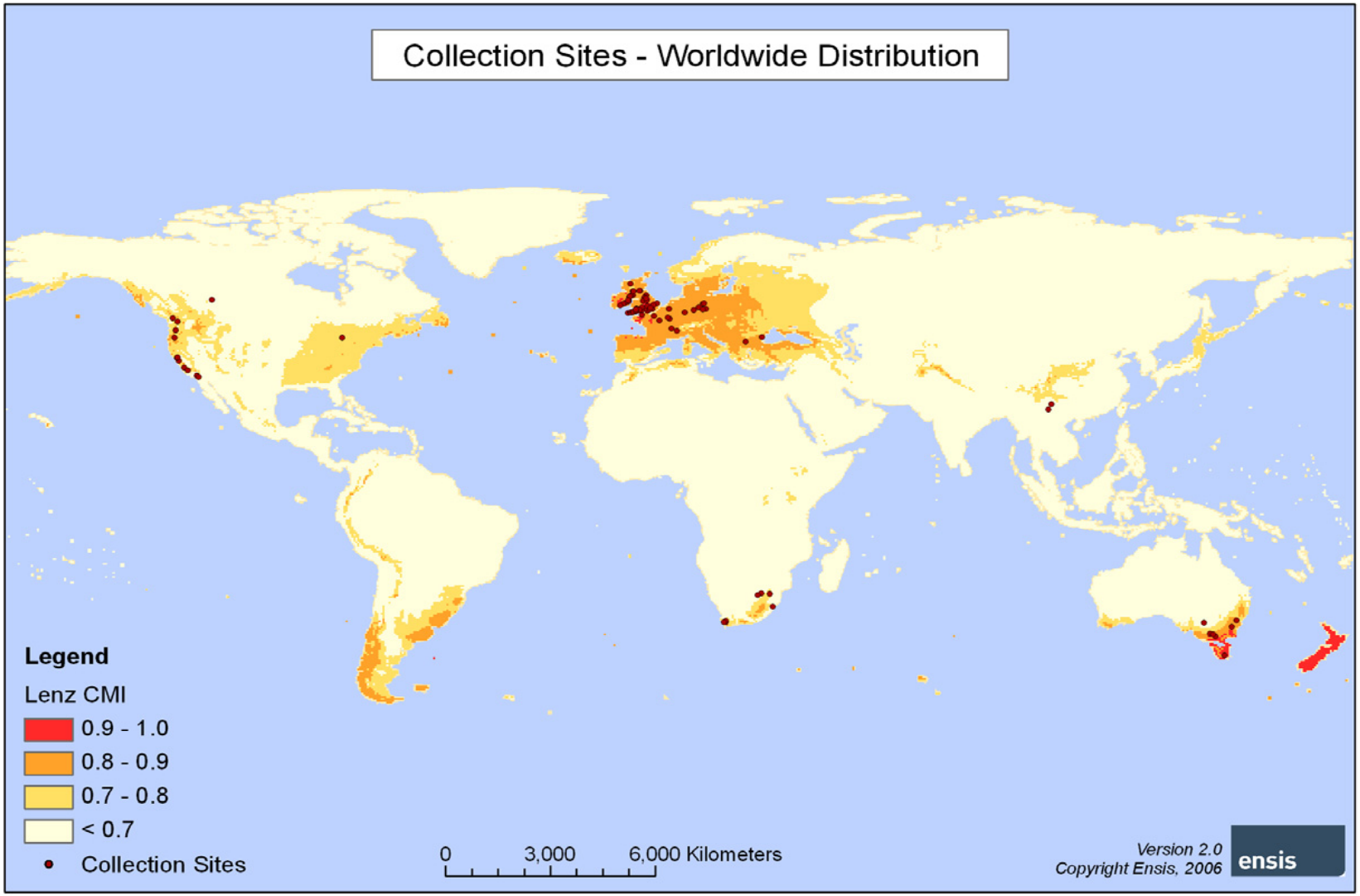
Developed NZ Plants database



Climate matching to select gardens



10 site visits & 3 monitoring/5 yrs

- 91 attacks observed
- 32 pest taxa diagnosed
- 22 already present in NZ
- 10 new pests of concern identified

How would a Sentinel Plant Network complement existing protections in the United States?

Current Q-37:

- Black list approach
- Inspection
- Some quarantine
  - Mostly "in situ"

Proposed Revision Q37

- Clean Stock production systems approach
- New “NAPPRA” category of plants

  “Not Authorized Pending a Pest Risk Assessment”
- Both assume knowledge of pests abroad

We don’t really know what’s out there!

International Cooperation is needed!

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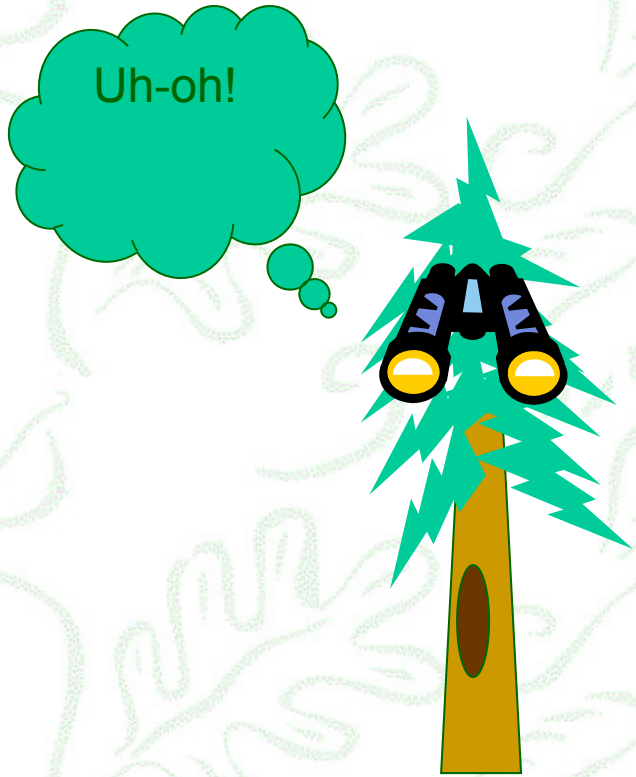

Every Plant is a Sentinel Plant!

What we need is a Network!

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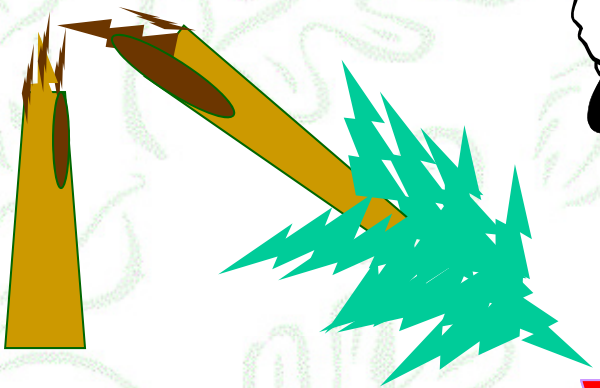

Get a professional diagnosis!

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NPDN labs standing by!

Possible outcomes:

Pest	Host	
	Native	Non-Native
Native	Advice on pest management	Warn country of origin
Non-Native	EDRR & Prevention	EDRR w/ advice from country of origin & Prevention

Prevention Activities That MIGHT Be Triggered

- NPAG
- OPIS
- Assessment of import threat:
  - NAPPRA or clean stock improvements
- PRA

Top US Gardens with exchange programs:

- Arnold Arboretum
- Chicago Botanic Garden
- Fairchild Tropical Gardens
- Huntington Botanical Garden
- Longwood Gardens
- Marie Selby Botanical Garden
- Missouri Botanical Garden
- Morton Arboretum
- Morris Arboretum
- National Arboretum
- Rhododendron Species Foundation and Botanical Garden
- San Francisco Botanical Garden

Sentinel Plant Network

- Silver – Monitor & Outreach
- Gold - Silver PLUS:
  - » Reciprocal agreements abroad
- Platinum – Gold PLUS:
  - » Examine records for previous failures
  - » Replant & monitor

Collaborators overseas

OUTREACH OPPORTUNITIES:

- Citizen Monitoring
- Master Gardener Training
- Botanical Gardens Courses
- Coloring Books in Gardens Gift Shops
- “Friends” and other frequent “fliers”

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K NO w new pathogens!

Your assistance would be

GREATLY APRRECIATED!