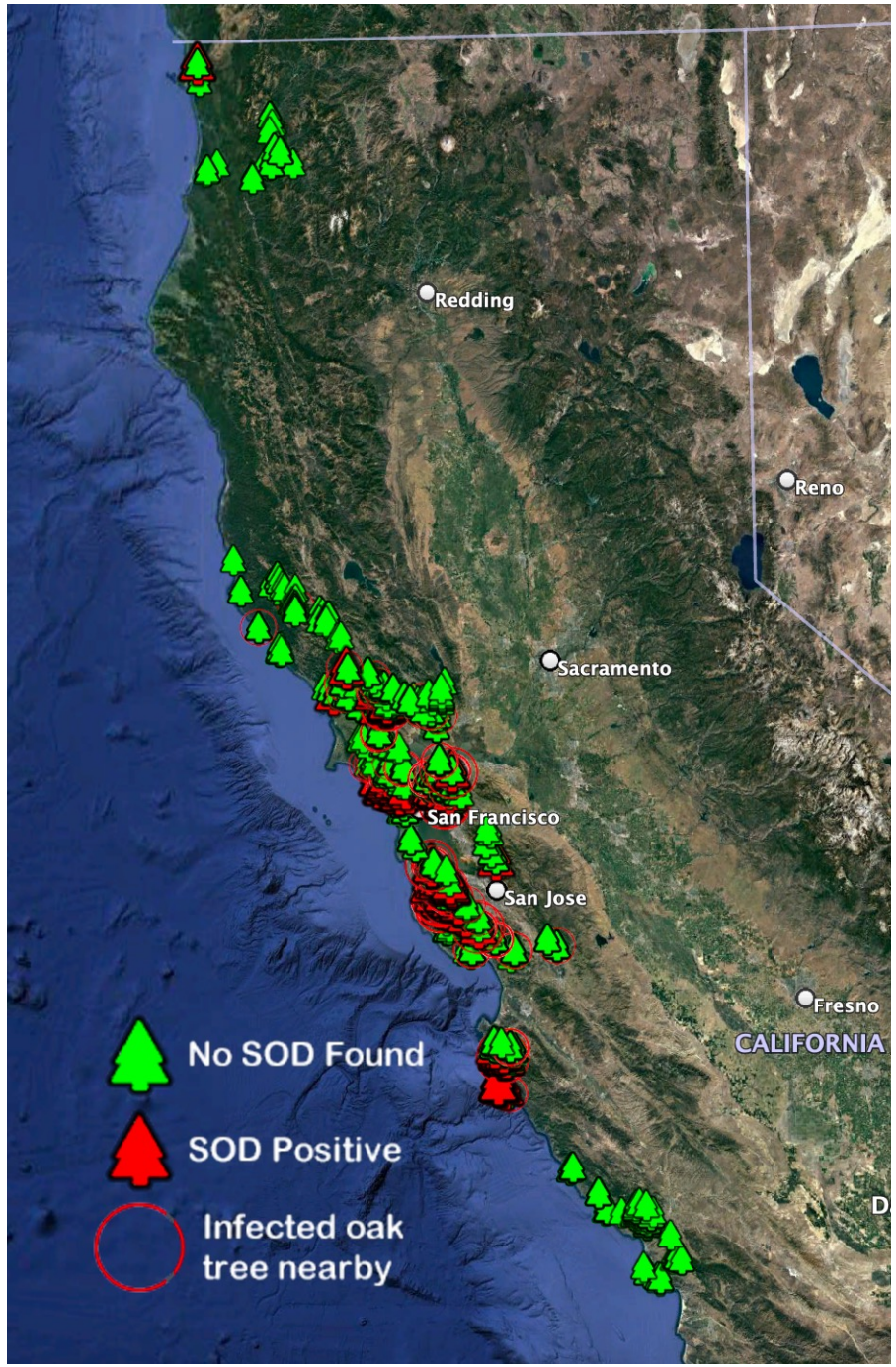

Overall 2022 Results:

Lowest number of SOD positives ever!

Most Interesting Findings of 2022 Blitzes- I

- EU1 lineage (group of variants) still present in Del Norte, but positives came from only 350 m from original 2020 findings
- Most areas in Trinity, Siskiyou, Mendocino, and North Sonoma, including tribal lands, were negative
- Central Sonoma still has several outbreaks, but in its eastern part and in Napa the blitzes found no outbreaks
- Marin sees no outbreaks in the North and several outbreaks south of San Rafael, including Angel Island

Most Interesting Findings of 2020 Blitzes- II

- East Bay sees several outbreaks, including the ones in Kensington, John Muir National Monument, Tilden, UC property, Huckleberry Preserve, Joaquin Miller, Montclaire. Two new reports to be verified: Albany Hill and Leyden Creek (Sunol)

- Natives Here Nursery in Tilden: all plants were negative even if bays around nursery were positives

- In the Peninsula, Pram is well established and as been found in several MidPen Open Space lands. In westernmost sites in San Mateo Co., Pram was absent

Most Interesting Findings of 2020 Blitzes- III

- Santa Cruz County mostly negative
- Carmel valley: canyons on the slopes of the Santa Lucia Mountains remain positive and new outbreaks are discovered, but in patchy mixed oak woodlands it is absent
- Big Sur proper confirmed as a constant hotspot, while Salmon Creek Cyn was negative, after being positive for years
- San Luis Obispo still negative

Most Interesting Findings of 2020 Blitzes- IV

- Symptomatic oaks are on the rise, in 2022 the statewide reported number is highest, but Pram infection is lowest. Symptoms are caused by drought induced diseases

- We know now that oak infection occurs only in years when rainfall is above the 30-year average, which so far has happened once every 4-5 years. Oaks are all infected the same year, but they die staggered in 4/5 years after with a peak two years after infection

- Nurseries: East Bay and San Francisco nurseries are negative: is it because of changed practices or because of the dry weather

What is determining whether SOD persists or fluctuates?

pathogens

MDPI

Article

The Epidemiology of Sudden Oak Death Disease Caused by *Phytophthora ramorum* in a Mixed Bay Laurel-Oak Woodland Provides Important Clues for Disease Management

Melina Kozanitas [1], Margaret R. Metz [2], Todd W. Osmundson [3], Maria Socorro Serrano [1] and Matteo Garbelotto [1,*]

Tree, stand, topography

RESEARCH COMMUNICATIONS RESEARCH COMMUNICATIONS

Citizen science helps predict risk of emerging infectious disease

Ross K Meentemeyer[1,2*], Monica A Dorning[2], John B Vogler[2], Douglas Schmidt[3], and Matteo Garbelotto[3,4]

Landscape, disease

forests

MDPI

Article

Environmental Factors Driving the Recovery of Bay Laurels from *Phytophthora ramorum* Infections: An Application of Numerical Ecology to Citizen Science

Guglielmo Lione [1,2], Paolo Gonthier [1] and Matteo Garbelotto [2,*]

Bay laurel recovery

SOD up

- Eastern slopes
- Larger oaks
- High bay density
- High Oak-bay proximity+++
- High infection previous year
- High Rainfall

SOD down

- Low bay density+++
- Smaller oaks
- Larger bays
- High Tmax +++
- More urbanized

RECOVERY OF over 50% of BAYS (i.e. trees revert to being healthy) OCCURS:

- When temperatures are up (ave max of 23 C)
- When rainfall is low (less than 500 mm)+++
- When terrain is flat