Identification of Common Spores

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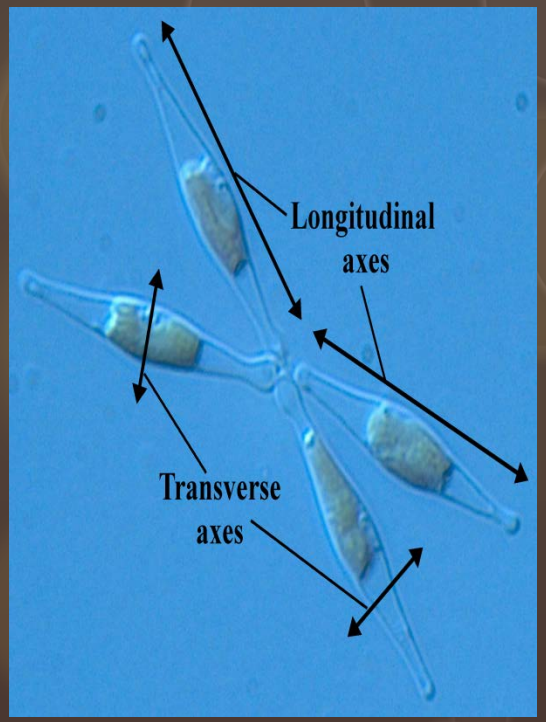
Alternaria

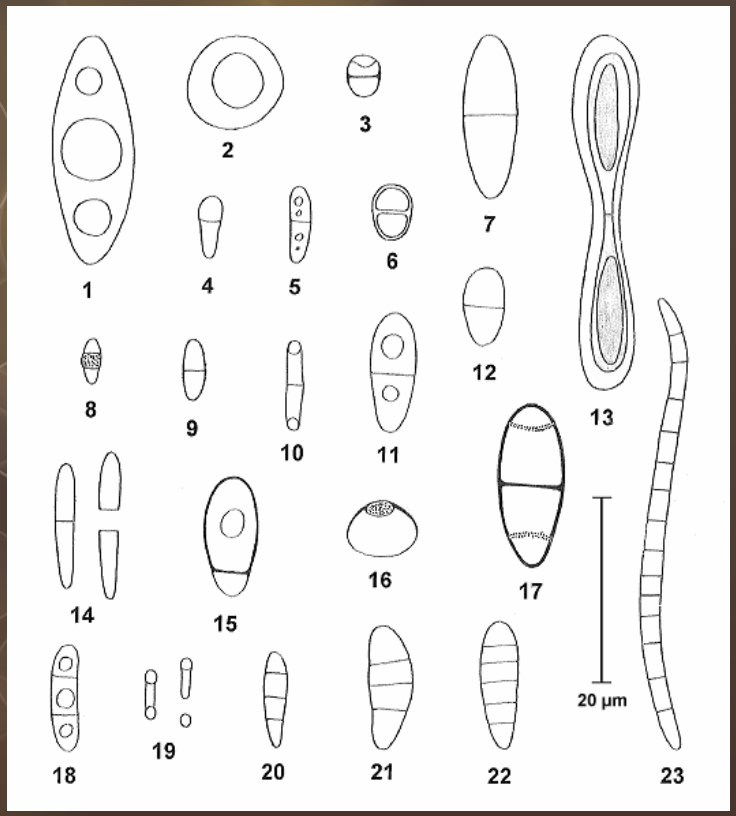
- Name
  - *Alternaria* conidia – “drumstick”
  - Second most abundant component of dry air spora
- Shape
  - Large multicellular spores
  - Septa are both beaked and produced in chains
  - Attachment scars visible at the tip of the beak
  - Various shades of brown
- Size
  - 7 µm X 18 µm to 15 µm X 75 µm
- Peak Concentrations
  - Late summer or fall
    - During afternoon hours with high wind gusts

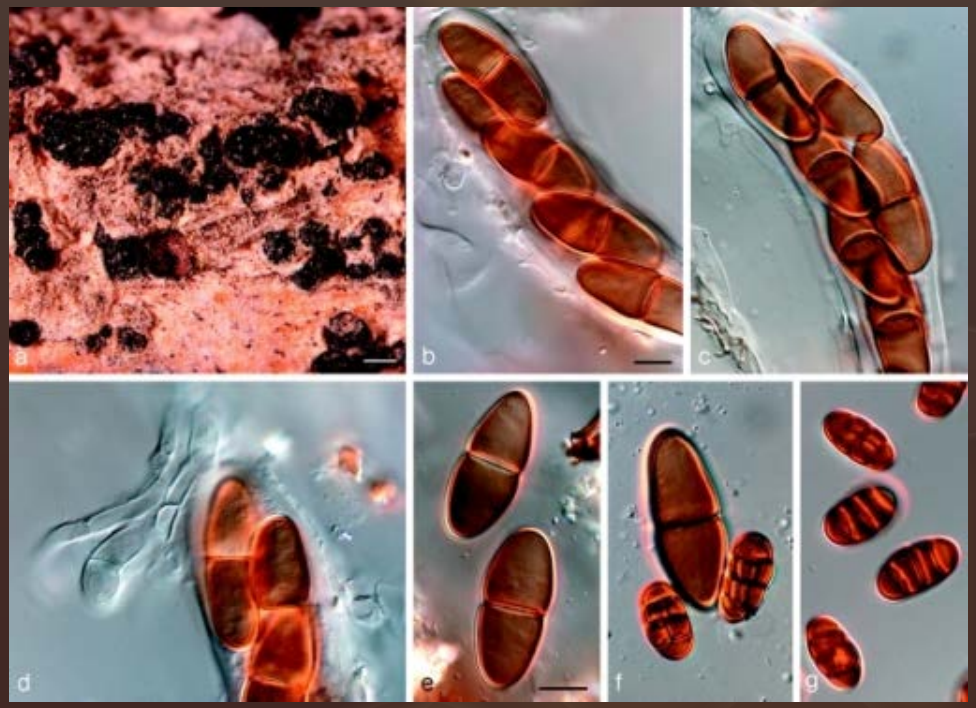
1000X

Ascospores



- Sexual spores produced by ascomycete fungi
- Vary enormously in size, shape, color and features
- Shape
  - Single-celled without any internal septa, two-celled with single septum, or multi-celled with many septa
  - Multi-celled spores can be transverse or longitudinal
  - Color ranges from colorless to dark brown and black spores
  - No attachment scar
- Size
  - 5 µm to over 100 µm
- Peak Concentrations
  - Rainy periods but can be found during early morning hours or high humidity





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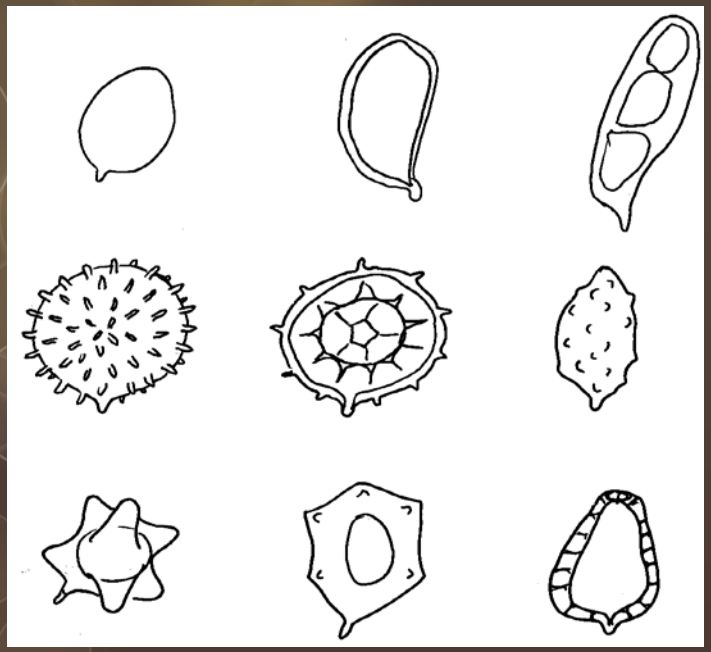
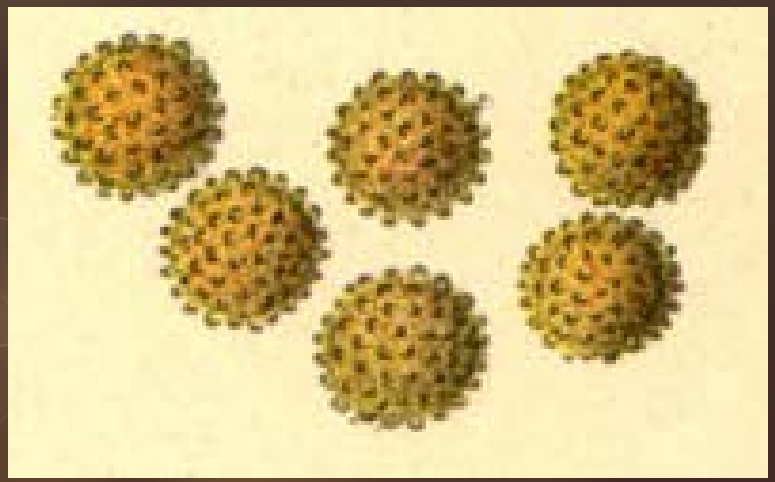
Basidiospores

- Sexual Spores produced by basidiomycetes
  - Mushrooms, bracket fungi, and puffballs
- Wide range in shape, size, and color
- Shape
  - ALWAYS single-celled
  - Globose, elliptical, fusiform, nodulose, angular, or irregular
  - Spore walls can be smooth or ornamented with spines, warts or ridges
  - Yellow, brown (various), or black in color
- Size
  - Small; 5 to 12 µm
- Peak Concentrations
  - Pre –dawn hours when humidity is high

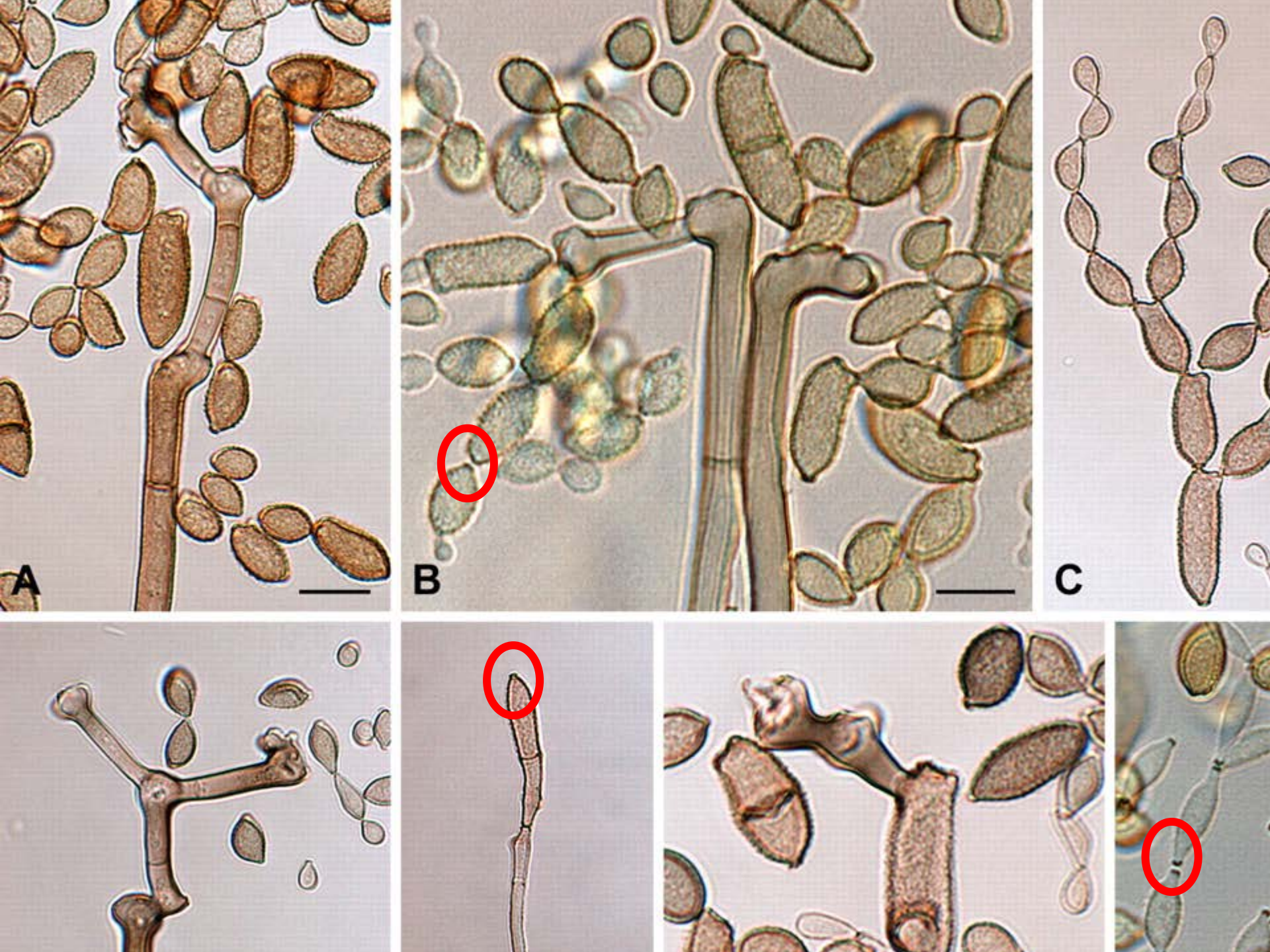




1000X

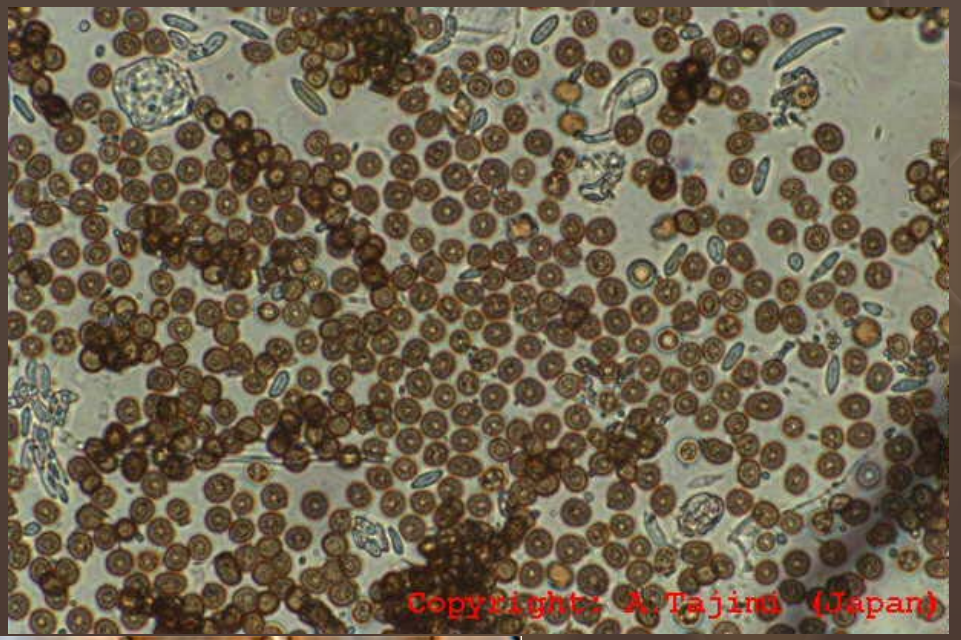
Cladosporium

- Abundant airborne spores in temperate areas (90% of the U.S.)
- Asexual fungi
- Shape
  - Ellipsoidal to cylindrical
  - Pigmented with yellow to light brown
  - Produced in chains , may be unicellular or have two septa
  - Prominent attachment scars
- Size
  - Varies from 3 µm to 25 µm
- Peak Concentrations
  - Detected year round in many areas
  - Highest levels from late spring to early fall


A
B
C

Smuts

- Common Name
  - Black, dusty spores that are plant pathogens
- 1,200 species of smuts within 50 genera
- Shape
  - Globose; with smooth, spinney, or reticulate walls
  - Yellow to brown in color
- Size
  - 3 to 24 µm
- Peak Concentrations
  - Low humidity and gusty winds promote spore dispersal
  - Peak sunshine hours and high atmospheric pressure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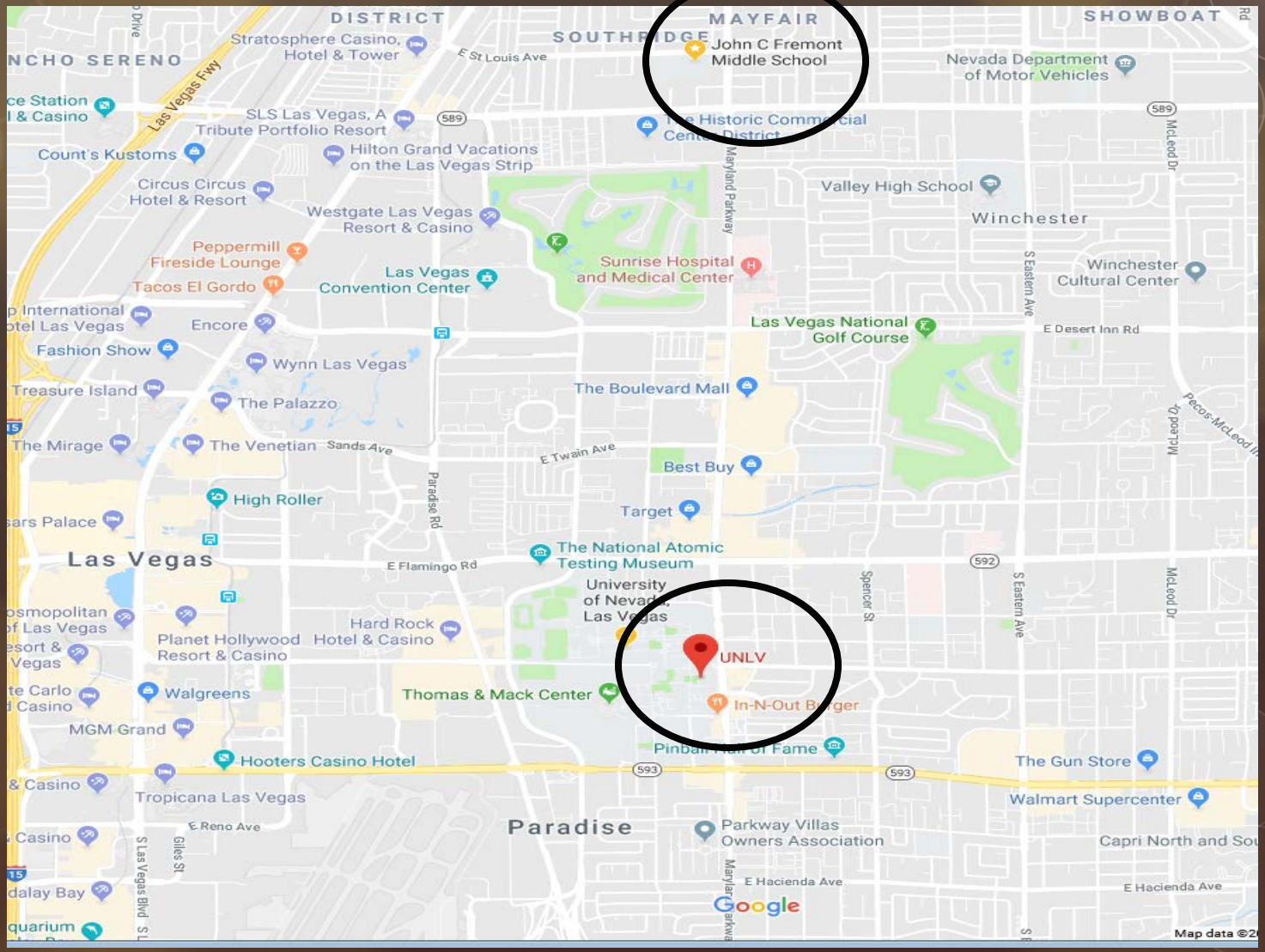
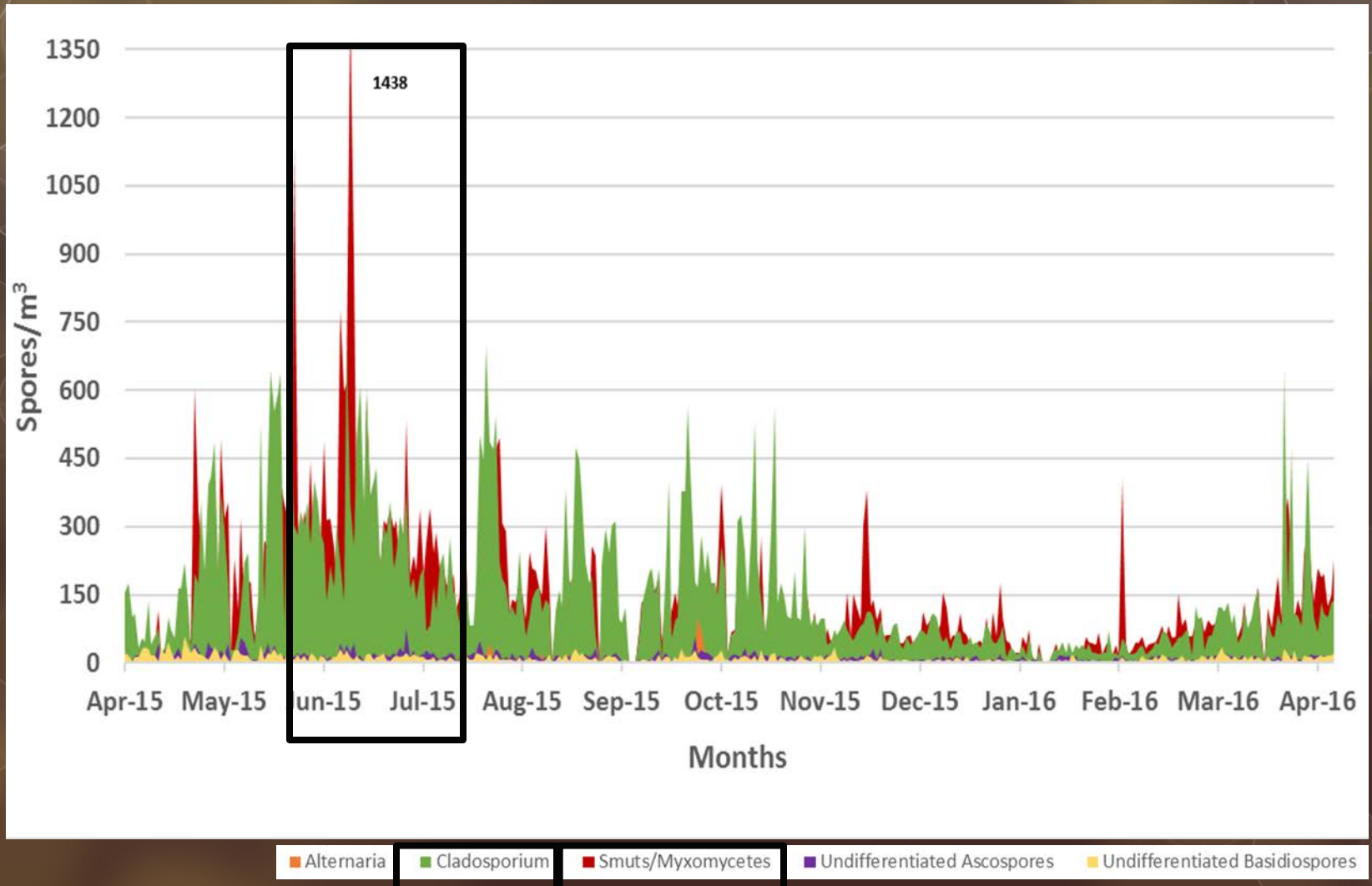
Nearest Location



What is in your neighborhood?



Current Sites

- Total of 6 stations around the valley
- UNLV, Jean, 1 High School, 2 Middle Schools, and 1 Elementary School.
- Future sites in Henderson, Boulder City, and Southwest.

Questions?/Comments!