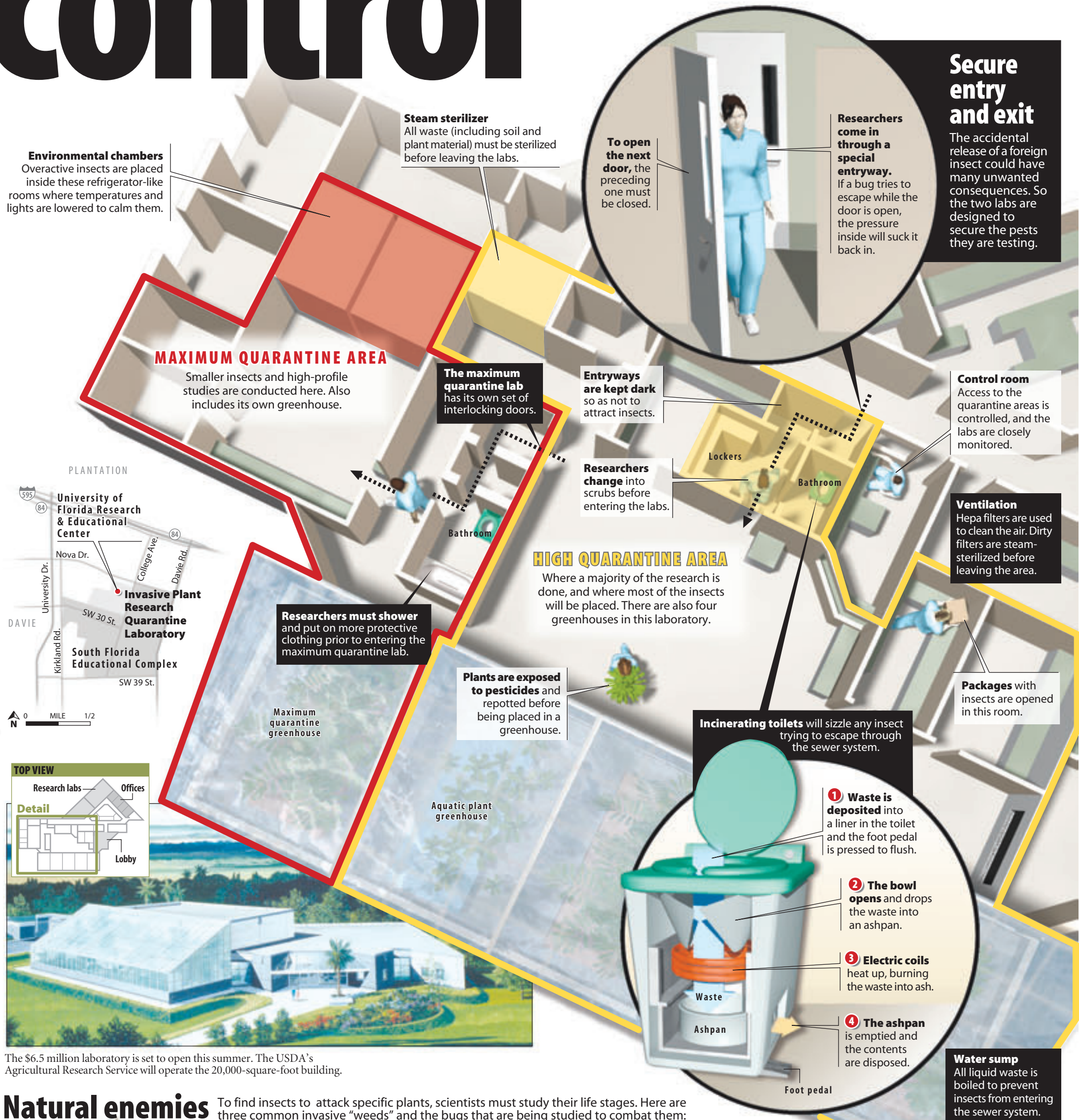
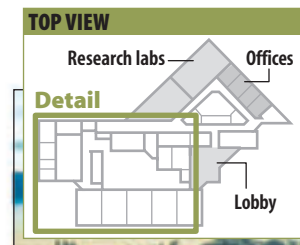


AUSTRALIAN PYRALID MOTH
Cataglyphis camptozonale



Bug control

While many Floridians fight to keep bugs out of their houses, a high-security lab in Davie will take extreme measures to keep the little pests inside. The goal: Test exotic insects to curb the growth of invasive plants.

The \$6.5 million laboratory is set to open this summer. The USDA's Agricultural Research Service will operate the 20,000-square-foot building.

Natural enemies

To find insects to attack specific plants, scientists must study their life stages. Here are three common invasive "weeds" and the bugs that are being studied to combat them:



OLD WORLD CLIMBING FERN
Lygodium microphyllum

Origin: Africa, Asia and Australia
The damage its causing: Introduced by nurseries in the early '60s, this fern grows on trees and its canopies. Its thick foliage smothers and chokes the trees and prevents sunlight from reaching lower vegetation.



Australian pyralid larva

Insect study: Australian pyralid moth.
Attack plan: The moth larva eats the leaves of the fern, eventually destroying the plant.



HYDRILLA
Hydrilla verticillata

Origin: Africa, Australia and Southeast Asia
The damage its causing: Originally an aquarium plant, hydrilla has become Florida's top aquatic weed. It found its way into irrigation canals and has spread quickly into rivers and lakes. The plant chokes waterways, destroying plant and wildlife habitats.



Hydrellia-pakistanae fly

Insect study: Hydrellia pakistanae tuber weevil.
Attack plan: Larva lives underwater and feeds on leaves, stressing the plant and leaving it open to disease.



MELALEUCA TREE
Melaleuca quinquenervia

Origin: Australia
The damage its causing: The Everglades is a mostly treeless river. But the melaleuca's ability to grow both on land and in water is changing the terrain, creating a different habitat altogether. It was introduced to Florida in the late 1800s as an ornamental tree.



Snout beetle larva

Insect study: Melaleuca snout beetles (first released into controlled areas in 1997).
Attack plan: The beetle larva feeds on leaves, eventually destroying the tree.



MELALEUCA SNOT BEETLE
Oxyops vitiosa

Water sump
All liquid waste is boiled to prevent insects from entering the sewer system.

SOURCES: Dr. Ted Center, U.S. Department of Agriculture; Agricultural Research Service; Florida Biocontrol Lab; University of Florida Institute of Food and Agricultural Services; STOA/Carlos & Law Architects; www.invasive.org; www.incirolet.com
Insect photos provided by the Agricultural Research Service. Staff and ARS plant photos. Artist's rendering provided by STOA/Carlos & Law Architects.
Staff graphic/Belinda Long