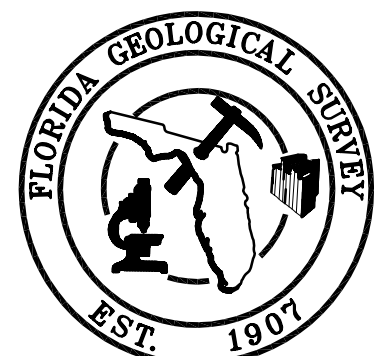


SURFICIAL SEDIMENTS OF THE WESTERN PORTION OF
THE U.S.G.S. 1:100,000 SCALE HOMESTEAD QUADRANGLEBY
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1996WALTER SCHMIDT
STATE GEOLOGIST AND CHIEF

The Miami Limestone, which forms the bedrock of the western portion of the Homestead quadrangle, is generally covered by 15 centimeters to more than three meters of marl, muck, peat, carbonate mud and soils. Data utilized in developing this map included information from Leighty and Henderson (1958), auger samples, push probes, vibracores, cuttings, and cores. Craighead (1971) was particularly useful in helping to delineate different sediment types throughout the map area.

The area mapped as thin soil over Miami Limestone covers much of the area of the Everglades National Park known as the Pinelands, in the northeastern corner of the map. The surface of the Miami Limestone in this region is quite irregular due to micro-karst development. The Miami Limestone is often exposed in this area. Where limestone is not exposed, up to approximately 30 centimeters of sediment may be present.

Surrounding the areas where Miami Limestone is covered by a thin layer of sediment, a marl of variable thickness, ranging from less than 30 centimeters to more than one meter, lies on the limestone. The marl, which is of fresh water origin, grades laterally into peats and mucks (organic-rich sediments with variable clay and carbonate contents) to the south and west.

South of Mahogany Hammock, marl underlain by peat occurs between the areas mapped as marl and those areas mapped as muck. This area was delineated from the 1958 soils map (Leighty and Henderson, 1958) and from Craighead (1971). There is also an area of marl underlain by peat north and west of the Pa-Hay-Okee Lookout Tower in the north-central part of the map area. Limestone underlies this map unit at depths exceeding 30 centimeters.

Muck lies on the Miami Limestone along the coast and inland along many of the drainage areas; mangroves commonly grow in this area. The muck contains varying percentages of organic matter, carbonate mud and marl, and minor siliclastic components. The contact between the muck and the carbonate mud is based on Leighty and Henderson, (1958), Craighead (1971), and USGS 7.5 minute orthophoto quadrangles.

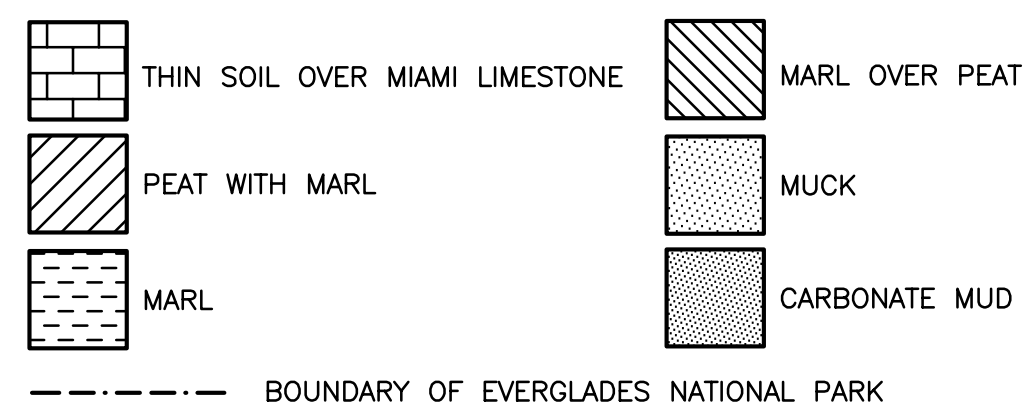
In the northwestern part of the study area, there is a unit mapped as peat with marl. This unit, which occurs within the Shark Valley Slough, is comprised predominantly of mangrove and sawgrass peat with minor marl beds (Craighead, 1971). The peat is highly variable in thickness, ranging from a few centimeters north of Pa-Hay-Okee Lookout Tower, to over 4 meters in the western part of the study area. The contact between the peat and the muck in the vicinity of the Watson River is speculative and is based on limited data.

Carbonate mud forms the islands within Florida Bay. There is an area of carbonate mud mapped along the southern edge of the mainland in the study area. The mud forms an embankment which is from one to two feet higher than the surrounding muck and marl. Craighead (1971) stated that this embankment is derived from Florida Bay mud which has been deposited by storms. In the southeastern part of the map area, this has been called the Buttonwood embankment, whereas in the southwestern part of the study area, the mud forms the Flamingo embankment (Craighead, 1971). Probe data indicates that these carbonate muds may exceed three meters in thickness. The surface of the exposed carbonate muds are often vegetated by abundant mangroves. A muck component may also be present in these areas.

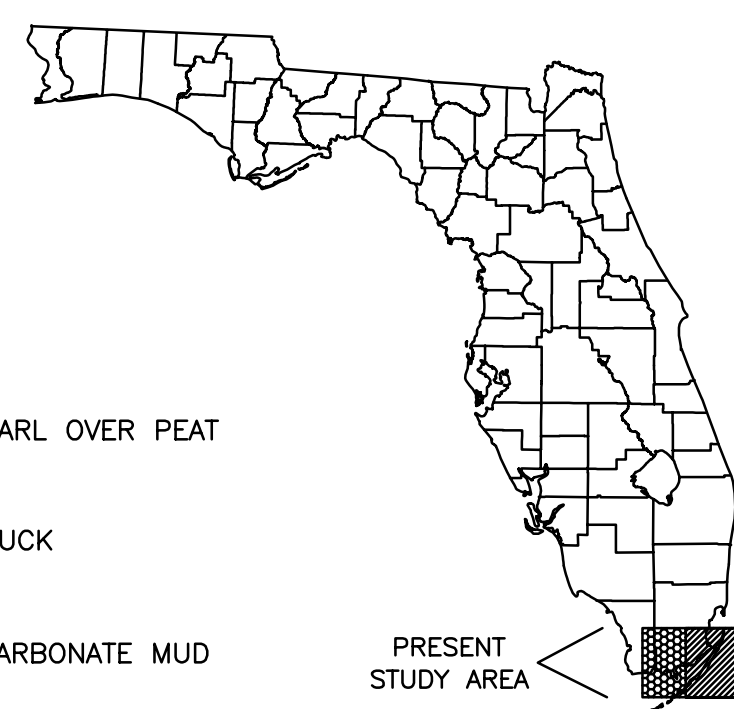
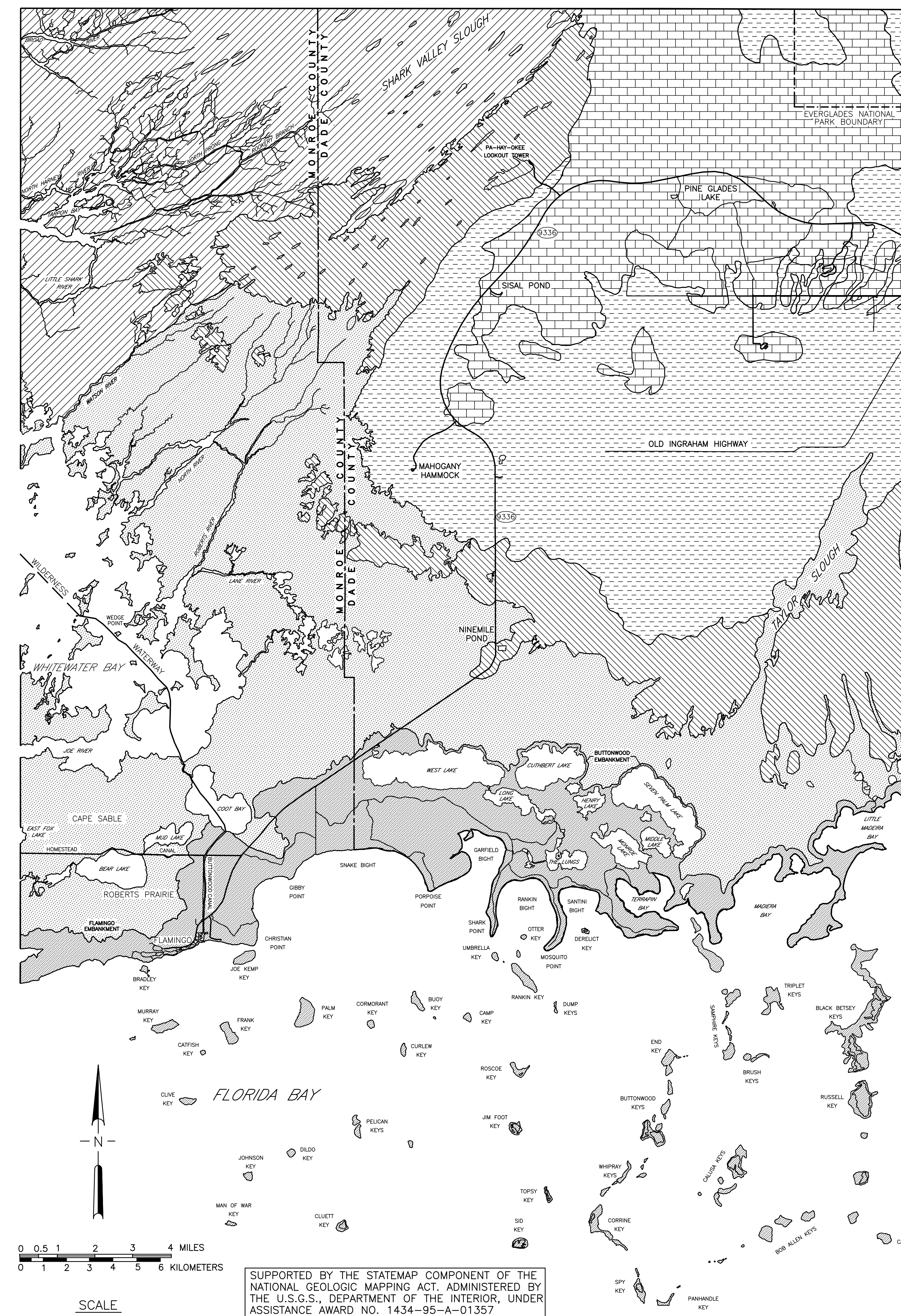
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EXPLANATION



--- BOUNDARY OF EVERGLADES NATIONAL PARK

PRESENT
STUDY AREA1994/1995
STUDY AREA1:100,000 SCALE
HOMESTEAD QUADRANGLESUPPORTED BY THE STATEMAP COMPONENT OF THE
NATIONAL GEOLOGIC MAPPING ACT, ADMINISTERED BY
THE U.S.G.S., DEPARTMENT OF THE INTERIOR, UNDER
ASSISTANCE AWARD NO. 1434-95-A-01357

CARTOGRAPHY BY RICHARD GREEN AND JENNIFER BRANCH