

FIELD GUIDEBOOK
to
ENVIRONMENTS OF COAL FORMATION
IN
SOUTHERN FLORIDA

Trip Leaders
William Spackman
David W. Scholl and William H. Taft

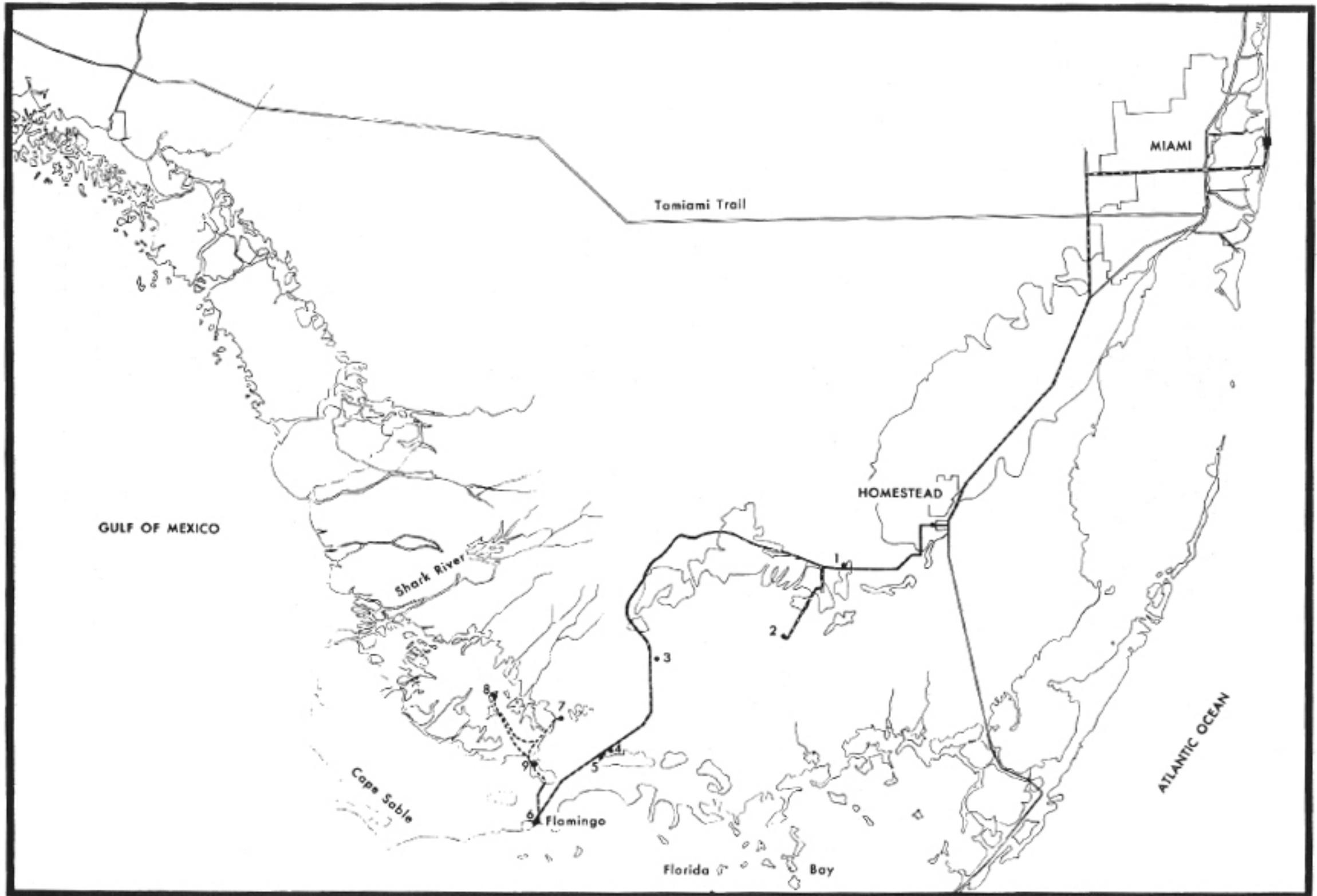
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ROUTE FOR THE FIRST DAY

(Trip Map No. 1)

Starting Point: Visitor's Center at Entrance to Everglades National Park

<u>Mileage</u>	<u>Description</u>
0.0	<u>STOP 1</u> : ORIENTATION AND REST STOP at Visitor's Center, Everglades National Park. Leave bus and gather in Main Lobby of Visitor's Center. Rest Rooms are at south end of building.
0.0 - 2.2	Leave Stop 1 and proceed westward on road to Flamingo. The presence of pines is an indication that this area is comparatively high ground and that bedrock is near the surface. The open areas provide an opportunity to get an initial impression of the "Everglades". A "slough" area where surface water flows southward "through" Long Pine Key will be represented at the road by a small open water area.
2.2	Leave main Park road to Flamingo, turn left on road to Royal Palm Hammock.
2.2 - 3.0	Proceed south on road to Royal Palm Hammock to intersection with Old Flamingo Road.
3.0	Leave Royal Palm Hammock Road by turning right onto Old Flamingo Road.
3.0 - 8.3	Follow Old Flamingo Road to "Cypress Head". This road will carry you outside the National Park boundary in places, hence, evidences of agricultural practice will be noted. As a weed tree along the roadside one will find poisonwood [<u>Metopium toxiferum</u> (L.)] in abundance. The sap, juice from the fruits and leaf fluids are all powerful skin poisons, many times more potent than poison ivy. It is useful to learn to recognize this tree and avoid it. The canal along the road was constructed as a private enterprise for



TRIP MAP NO. 1

navigational purposes. The intent was to use it as an avenue through the swamp that would permit transportation of produce from Cape Sable to the Miami area. The dream failed to bear fruit.

8.3 STOP 2: CYPRESS HEAD. This is the first field stop.

A discussion of the objectives of visiting this site is presented on pages 14 to 20 , together with factual information relating to the site.

8.3 - 13.6 Return to Royal Palm Hammock Road.

13.6 Leave Old Flamingo Road by turning left onto Royal Palm Hammock Road.

13.6 - 14.4 Proceed north on Royal Palm Hammock Road to new Flamingo Road.

14.4 Leave Royal Palm Hammock road by turning left on the "new road" to Flamingo (the main highway in the Everglades National Park).

14.4 - 23.7 Proceed west and south on the Flamingo Road. Through the first segment of this unit of travel you will be moving in, or adjacent to, pineland areas. These constitute visible evidence of the western extension of the Miami Rock Rim. Forested areas in the open Everglades are sometimes called "Everglades Keys", hence, this pineland, which is elongate in an east-west direction is known as Long Pine Key. The road flanks the northern and western margin of Long Pine Key for reasons that were important to the road builder, but for our purposes it would have been more useful to have the road constructed well away from this area in which the bedrock is essentially at the surface.

Except when passing through a pineland area, the open Everglades will be seen on the right side of the road. The view is not quite typical because you will

be travelling in the transition zone between the "highlands" of the Miami Rock Rim and the "lowlands" of the peat-forming Everglades.

- 23.7 Pass over a "rock reef". These are conspicuous linear features found in this area of the Everglades. They are low, narrow, ridges in which the bedrock is at, or near, the surface. Their elevation above the surrounding area (a few inches) permits the growth of shrubby and arborescent vegetation. Although referred to as "reefs", the authors are unaware of any published evidence justifying the use of this term.

The pitted nature of the bedrock surface in this area is well illustrated by exposures on the north-east side of the rock reef. This can be observed from the roadside.

- 23.7 - 27.7 Just beyond the reef a large number of stunted cypress trees may be observed in the open saw grass areas. These display the typical Taxodium ascendens Brogn. growth form with their leaves closely appressed to the twigs. Although living under adverse conditions, they have successfully colonized the open Marshland.

- 27.7 - 35.7 Continue along main Park highway. The spur road entering the main road on the right will be the road leading to Pay-Hay-Okee Lookout. A low observation tower has been constructed at Pay-Hay-Okee for visitor use. A fair view of the saw grass marsh is available from this Lookout.

- 35.7 The incipient cypress hammock on the right side of the road is one illustrated as Figure 11b.

- 35.7 - 36.4 Continue along main Park highway.

- 38.4 Turn left on side road to water pumping station.
- STOP 3: BAY HEAD. This is the second field site to be visited. A discussion of the objectives of making this stop is presented on pages 20 to 24.
- 38.4 - 39.5 Return to main Park Highway and continue south.
- 39.5 On the right is a small hammock ringed with saw-palmetto. This is the hammock shown as a sectional profile in Figure 11a.
- 39.5 - 41.0 Continue along main Park Highway.
- 41.0 The water is now too brackish for the cypress. The red mangrove appears to be colonizing this open marshland as did the cypress in the "Rock Reef" area. This brackish water zone is readily recognized from the roadside, not only by virtue of the loss of the cypress and the occurrence of the small mangroves, but by the presence of a distinctive palm as one of the members of the hammock communities. The Paurotis palm (Paurotis wrightii) seems to flourish in this vicinity in a rather narrow belt in the brackish water area. It is easily recognized by its slender stems that hold the clusters of leaves and brownish red fruits above the other trees at the hammock margins.
- 41.0 - 46.4 Continue south on main Park Highway. Within about a half-mile the mangroves will begin to dominate the scene. They will become less shrubby and begin to form the mangrove forest swamp. Hammocks that have been engulfed by the inland march of the mangroves will be detectable on both sides of the road.
- 46.4 STOP 4: SAW GRASS SITE. The objectives to be attained at this site are discussed on pages 24 to 27.
- 46.4 - 47.7 Continue south on main Park Highway. (One has little choice.)

47.7

STOP 5: WEST LAKE - LUNCH

Box lunches will be provided. Toilet facilities are available in the small building. For those finishing lunch early, a "mangrove trail" leads off from the parking area. It provides an opportunity to see some of the features of this brackish water mangrove environment. Recent hurricane damage has modified the area, however.

47.7 - 51.5

Proceed south on main Park Highway. Evidence of recent hurricanes will become more conspicuous. Paurotis palms will disappear but occasionally a hammock will be discernible in the now dense mangrove cover.

51.5

Coot Bay Pond - formerly the site of one of the National Park Ranger Stations, now the home of one or two alligators. This is a natural pond and is an example of one type of open water environment in the mangrove swamp.

51.5 - 54.1

Continue south on main Park Highway. The effects of Hurricane Donna (1961) will be particularly evident after about one mile of travel. The canal we will cross is the one to be used in order to have access to the more remote portions of the swamps and marshes.

54.1

STOP 6: FLAMINGO MARINA. Leave bus and board waiting boats. Take with you only those things that you must have (guidebook, notebook, camera, etc.). Your tagged baggage will be delivered from this point to your motel room while you are aboard the boat. The bus will return to Miami before we return from the afternoon's trip so be sure all articles left on the bus are tagged or labelled. Board the boats carefully with both hands unencumbered by personal effects. Put the latter on the pier or hand them to someone in the boat before attempting to board. Be

alert to the possibility of losing articles (e.g. glasses) from unbuttoned shirt pockets. During the afternoon, toilet facilities, first aid equipment, sunburn lotion, sample cans, etc. will be available on the Pearson Express Cruiser. Notify your pilot if you wish to have him alter his course.

- 54.1 - 57.3 Proceed north in Buttonwood Canal to Channel Marker No. 2 in Coot Bay. A "marl prairie" covers much of the area around Flamingo. No peat is present at the surface in this area. At the point of entry of the Homestead Canal, note color of water that is moving into Buttonwood Canal.
- 57.3 - 59.5 Alter course and follow channel markers northwestward to Tarpon Creek.
- 59.5 - 60.2 Proceed through Tarpon Creek to Channel Marker No. 10 in Whitewater Bay.
- 60.2 At Channel Marker No. 10 alter course to a 30° heading for 2.4 miles. This is the southeastern section of a sizeable open water environment known as Whitewater Bay. The forest bordering the open water is composed of red mangrove trees with little else in evidence.
- 62.6 Alter course to 74°.
- 62.6 - 63.7 Proceed on a 74° heading for 1.1 miles. Note that the elongate island to the west has been dissected into two segments.
- 63.7 - 64.5 Employ navigational chart (C. and G.S. 599) or aerial photographs to enter mouth of East River and proceed to entry to first, elongate, N-S trending Mangrove Pond.
- 64.5 - 64.6 Alter course to 180° and proceed into Mangrove Pond. Raise engines and pole or paddle after entering pond.

- 64.6 STOP 7: MANGROVE POND. Bring boats alongside one another and secure using halter lines. See pages 27 to 30 for a discussion of the significance of this site.
- 64.6 - 69.2 Return to Channel Marker No. 10 via course just traversed.
- 69.2 At Channel Marker No. 10 alter course to 345°.
- 69.2 - 74.0 Proceed on 345° heading to Channel Marker No. 14, then alter course to 315° and follow channel markers to Marker No. 23.
- 74.0 Alter course to 7°.
- 74.0 - 74.6 Proceed on 7° heading to newly developed water pass near the north end of North Midway Key.
- 74.6 STOP 8: MIDWAY KEY (Island Mangrove Environment)
This water pass represents a recent breaching of North Midway Key, producing two separate islands. Pages 30 - 31 describe some of the facts that pertain to this and related sites.
- 74.6 - 75.1 Adopt a heading of 187° and proceed to Channel Marker No. 23.
- 75.1 Alter course to 135°.
- 75.1 - 80.4 Proceed on headings required by channel markers and return to Channel Marker No. 8 at northwestern end of Coot Bay.
- 80.4 - 80.5 At Channel Marker No. 8 alter course to 40° and proceed 0.1 mile.
- 80.5 STOP 9: TARPON CREEK SITE. Data obtained from the study of the onshore sediments in this area will be presented if time permits. See discussion on pages 31 to 32.
- 80.5 - 80.6 Return to Channel Marker No. 8
- 80.6 - 85.1 At Channel Marker No. 8 alter course and follow channel to Flamingo.