UNITED STATES GOVERNMENT

memorandum

DATE: 8 June 1993

REPLY TO ATTN OF: Thomas E. Lewis, Wildlife Biologist, FWS, St. Vincent NWR.

Thomas E. Lewis

SUBJECT: 1993 St. Vincent NWR Gopher Tortoise Burrow Survey

TO: Donald J. Kosin, Refuge Manager, FWS, St. Vincent NWR.

Introduction

A small population of gopher tortoises (Gopherus polyphemus) exists on St. Vincent Island. Staff reports that the population has been augmented several times throughout the years from mainland populations. The tortoise use area is located along the southeast corner of the island (Figure 1). Habitat management for the tortoise includes stimulating the growth of grasses and herbs in tortoise use areas with biannual prescribed burning. On 2 February 1993 a prescription burn was conducted in the tortoise use areas.

Methods

After burning the habitat has little or no ground cover and this facilitates burrow survey activity. During the period 8 February through 2 March 1993 the area was surveyed for existing gopher tortoise burrows. All possible dune habitat on the southeast corner of the island was surveyed on foot (Figure 1). Each dune was walked in a crisscross pattern to cover all ground. All gopher tortoise burrows with an opening that led underground were flagged with red surveyors flags. Abandoned, caved in burrows that had no opening were not flagged or counted. The entrance of all burrows were examined for tortoise activity and recorded as active if fresh tracks were noted or inactive if no tracks were visible. Gopher tortoise use areas were recorded on a refuge map (Figure 1).

Results

A total of 464 acres were surveyed. Thirty-two tortoise burrows were flagged and only two were determined to be active. Gopher tortoise burrows were located in various locations on each dune ridge from the first vegetated dune inland from the beach to B Road (Figure 1).

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Discussion

Gopher tortoises in North Florida are often inactive during cooler winter months (Cox, et al. 1987) so it is not unusual that most of the burrows surveyed were inactive. Todd Logan surveyed gopher tortoise habitat on St. Vincent's Island in January of 1979 and discovered no active burrows. Our records show no surveys since that time. Logan (1979) covered a smaller area on foot (1.5 km long and averaging about 25 m wide) but did search a larger area from the back of a slow moving pickup. He found no evidence of tortoises in any other areas than the traditional use area along the Southeast shoreline. Recent exploration of the island suggests that there is still no tortoise activity outside the survey area.

Logan (1979) reports finding nine inactive and 4 abandoned burrows along Dune Road (Figure 2). Based on the current survey there appears to be an expansion in the gopher tortoise population size and range on St. Vincent Island.

Recommendations

The gopher tortoise is listed as a species of special concern by the state of Florida. Since the traditional use areas are burned on a biannual basis I would suggest surveying the area on a biannual basis shortly after it is burned. I would also suggest that biannual burning be implemented in adjacent areas if expansion of the tortoise population nears the edge of currently burned areas.

Upper Respiratory Tract Disease (URTD) is an infectious disease that can be devastating to gopher tortoise populations (Wood 1993). URTD has been found in Florida. The population of tortoises on St. Vincent Island should be safe from natural immigration of infected tortoises. The population on St. Vincent Island appears to be stable or expanding slightly and I would not recommend allowing any introductions of tortoises. All staff should be notified of the threat from URTD.

Literature Cited

Cox, James, D. Inkley, and R. Kautz. 1987. Ecology and habitat protection needs of gopher tortoise (Gopherus polyphemus) populations found on lands slated for large-scale development in Florida. Nongame Wildlife Program Technical Report No. 4. Florida Game and Fresh Water Fish Commission, Tallahassee, FL. 69 pp.

Logan, Todd. 1979. Survey of gopher tortoise (Gopherus polyphemus) populations on St. Vincent National Wildlife Refuge, Franklin County, Florida. Gainesville Field Station, National Fish and Wildlife Laboratory, Gainesville, FL. 6pp.

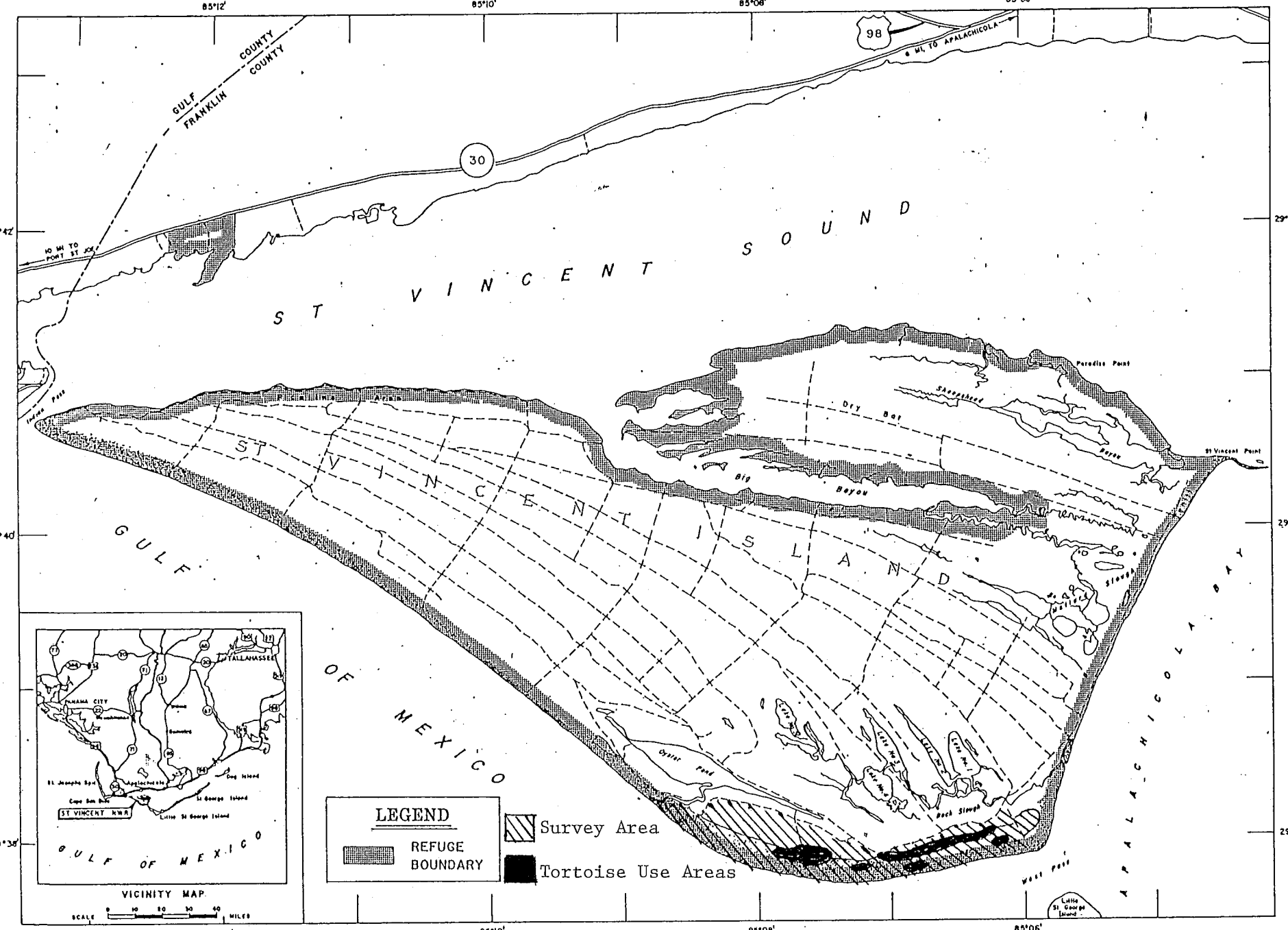
Wood, Donald. 1993. The gopher tortoise and upper respiratory tract disease. The RAP Sheet, April/June 1993, Florida Department of Natural Resources, Florida Park Service, Bureau of Local Recreation Services, Tallahassee, FL. page 3.

ST. VINCENT NATIONAL WILDLIFE REFUGE

FRANKLIN COUNTY, FLORIDA

UNITED STATES
DEPARTMENT OF THE INTERIOR

UNITED STATES
FISH AND WILDLIFE SERVICE



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FROM SURVEYS BY U.S.G.S. AND
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ATLANTA, GEORGIA MARCH, 1967
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Figure 1. 1993 Gopher Tortoise Survey

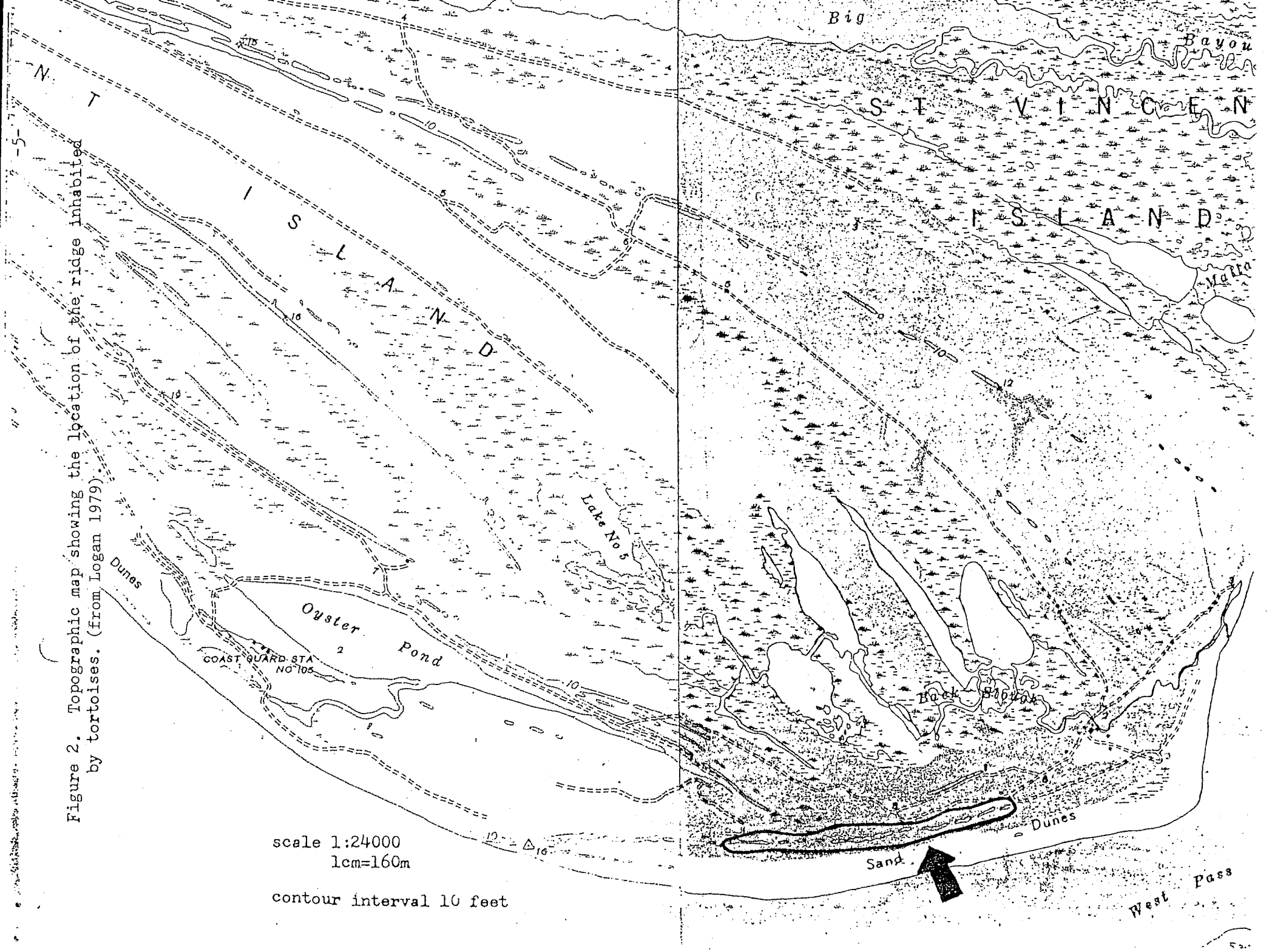

Figure 2. Topographic map showing the location of the ridge inhabited by tortoises. (from Logan 1979).