

Natural and Human Impacts on Back-barrier Islands of Georgia

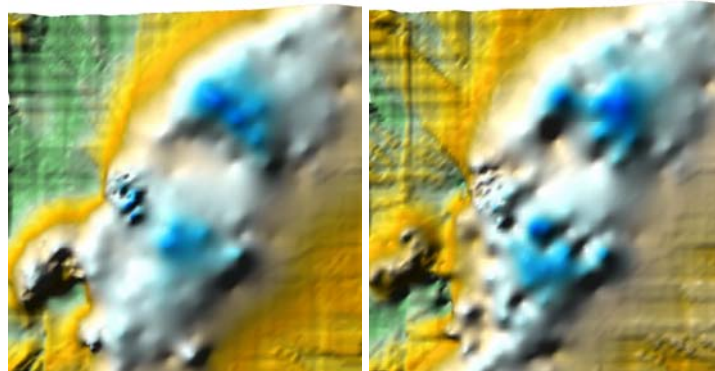
by John Turck¹ and Victor Thompson²

INTRODUCTION

Back-barrier islands, or hammocks, are relatively small islands of higher elevation surrounded by tidal marsh.

Archaeological and remotely sensed data were analyzed to understand the landscape history of two of these islands on the coast of Georgia.

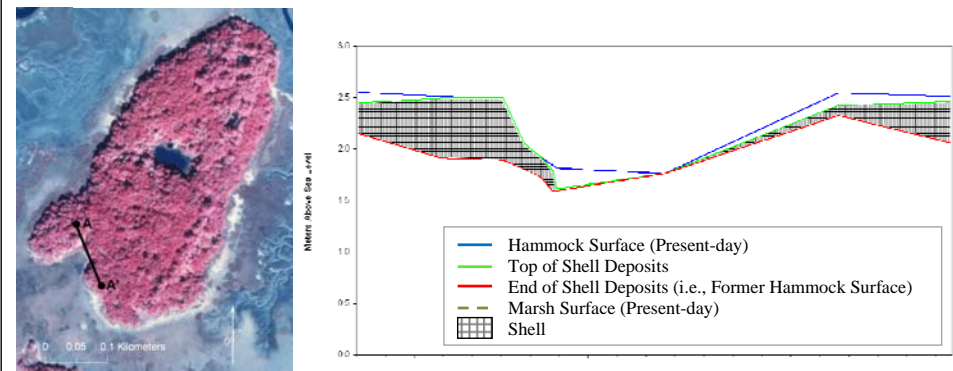
Figure 1. Topography of Mary Hammock



a. Present-day

b. Prior to shell deposition

Figure 2. Detailed Topography of Mary Hammock along a Transect



a. Location of transect

a. Vertical Cross-section of transect

Figure 3. Shovel Test Data for Mary Hammock

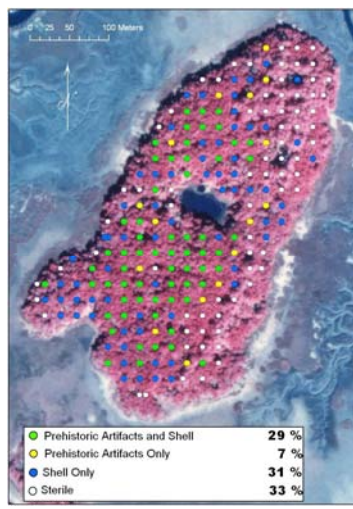
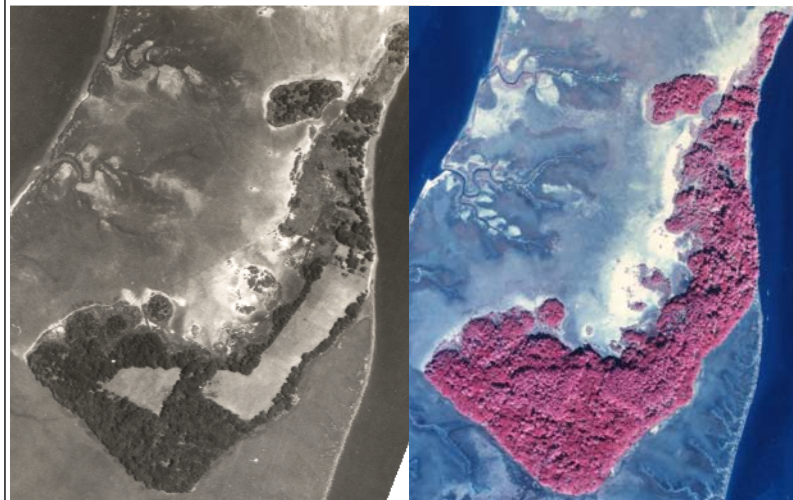


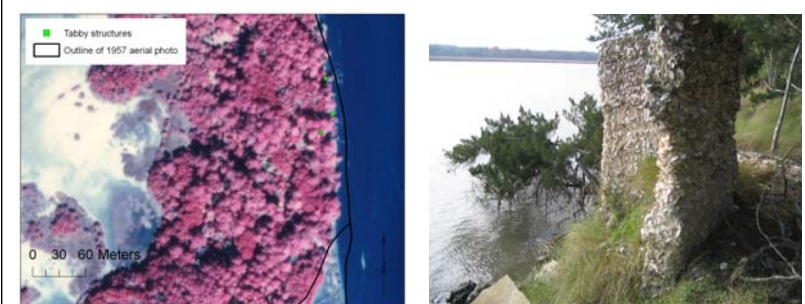
Figure 4. Time Series Analysis of Little Sapelo Island



a. 1945: Cleared fields

b. 1999: Succession of pine

Figure 5. Erosion along the Eastern shore of Little Sapelo Island



a. Erosion of 21m over 42 years (50 cm/ year).

b. Tabby structures from the 19th Century eroding into river.

Both natural processes (e.g., erosion, vegetative succession, changes in sea level) and human processes (e.g., prehistoric shell deposition, modern clearing) have impacted the structure of back-barrier islands on the coast of Georgia. Both types of processes have occurred continually throughout the past and present. Present-day back-barrier islands cannot be understood without a thorough knowledge of their landscape history. Thus for a more complete understanding of present-day estuarine ecosystem processes, past and present human activity must be taken into consideration.

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