

APPENDIX A
St. Catherines Island Survey Proveniences Studied

Site	Level	Test pit	Transect	Stratum
St. Simons				
9Li231	—	—	E1	West
9Li252	—	—	E6	East
Refuge-Deptford				
9Li49	—	—	L6	South
9Li173	—	—	B6	West
9Li180	—	—	F6	West
9Li197	20–30	TPI	H6	West
9Li197	30–40	TPII	H6	West
9Li197	10–30	TPI	I1	West
9Li197	0–40	TPII	I1	West
9Li197	0–40	TPIII	I1	West
9Li197	0–40	TPIV	I1	West
9Li223	—	—	H1	Center
9Li228	—	—	F1	West
9Li235	—	—	C1	East
9Li239	10–20	TPI	B1	Center
9Li239	10–20	TPIV	B1	Center
Wilmington				
9Li162	—	—	D1	East
9Li164	—	—	M1	South
9Li196	—	—	I6	Center
9Li198	—	—	H6	West
9Li201	—	—	H6	West
9Li209	—	—	I1	Center
9Li215	—	—	H1	East
9Li217	—	—	H1	East
9Li220	—	—	H1	Center
9Li221	—	—	H1	Center
9Li224	—	—	H1	Center
9Li233	—	—	D1	East
9Li237	—	—	B1	Center
9Li240	10–20	TPII	B1	Center
9Li240	10–20	TPIII	B1	Center
St. Catherines				
9Li22	—	—	B1	East
9Li165	—	—	M1	East
9Li178	—	—	F6	Center
9Li183	—	—	G6	East
9Li203	—	—	J1	West
9Li214	—	—	J6	South
Savannah				
9Li169	—	—	D6	East
9Li171	—	—	C6	Center
9Li189	—	—	H6	East
9Li227	—	—	F1	West
9Li230	—	—	E1	West
Irene				
9Li19	—	—	F6	East
9Li51	—	—	L6	South

APPENDIX A—(Continued)

Site	Level	Test pit	Transect	Stratum
9Li52	—	—	L6	South
9Li55	—	—	L6	South
9Li84	—	—	M1	South
9Li87	—	—	N6	South
9Li163	—	—	N1	South
9Li118	—	—	O1	South
9Li128	—	—	L6	South
9Li170	—	—	C6	West
9Li175	—	—	E6	West
9Li176	—	—	E6	West
9Li177	—	—	E6	West
9Li181	—	—	F6	West
9Li182	—	—	G6	East
9Li90/AMNH 436	—	—	I6	East
9Li90/AMNH 437	—	—	I6	East
9Li191	—	—	I6	East
9Li192	—	—	I6	Center
9Li197/AMNH 445	—	—	H6	West
9Li197/AMNH 446	—	—	H6	West
9Li197/AMNH 448	—	—	H6	West
9Li197/AMNH 450	—	—	H6	West
9Li197/AMNH 45	0–20	TPI	H6	West
9Li202	—	—	J1	West
9Li205	—	—	J1	East
9Li206	—	—	J1	East
9Li207	—	—	I1	East
9Li208	—	—	I1	East
9Li255/AMNH 474	—	—	G1	West
9Li212	—	—	K1	South
9Li213	—	—	L6	South
9Li216	—	—	H1	East
9Li218	—	—	H1	East
9Li222	—	—	H1	Center
9Li255/AMNH 495	—	—	G1	West
9Li226	—	—	F1	East
9Li229	—	—	E1	West
9Li234	—	—	D1	West
9Li239	10–30	TPIII	B1	Center
9Li240/AMNH 515	10–20	TPI	B1	Center
9Li240/AMNH 515	20–30	TPI	B1	Center
9Li241	—	—	B1	West
9Li242	—	—	B1	West
9Li243	—	—	B1	West
9Li244	—	—	E6	West
9Li251	0–10	TPIX	G6	West
Altamaha				
9Li13/AMNH 208	—	—	I6	West
9Li13/AMNH 208 A	—	—	I6	West
9Li13/AMNH 208 B	—	—	I6	West
9Li13/AMNH 208 D	—	—	I6	West
9Li8	—	—	I6	West

APPENDIX B
St. Catherines Island Survey: Deer Measurements^a

Element	Dimension	Measurement (mm)
St. Simons		
Astragalus	Bd	26.2, 28.0
Astragalus	DI	22.8, 24.4
Astragalus	Dm	22.9, 25.9
Astragalus	GLI	46.2
Astragalus	GLm	36.8, 40.9
Femur	Bd	47.5
Humerus	Bd	33.1, 44.5
Os malleolare	GD	18.5
Radius	Bd	33.6, 44.5
Radius	Bp	36.6
Tibia	Bd	33.3
Tibia	Dd	25.2
Refuge-Deptford		
Astragalus	Bd	22.5
Astragalus	DI	18.4
Astragalus	Dm	18.8
Astragalus	GLI	32.7
Astragalus	GLm	35.6
Atlas	BFcr	56.5
Atlas	GB	91.3
Atlas	GL	81.3
Atlas	H	43.5
Calcaneus	GB	24.1
Calcaneus	GL	78.5
Humerus	Bd	33.8, 36.7, 36.9
Metacarpus	Bd	26.7
Os malleolare	GD	15.5
Radius	Bp	39.5
Scapula	GLP	37.5
Scapula	SLC	22.1
Tibia	Bd	36.5
Tibia	Dd	27.5
Wilmington		
Astragalus	Bd	23.4, 23.6, 23.8, 25.4
Astragalus	DI	20.7, 21.2, 21.3, 21.7
Astragalus	Dm	21.3, 21.6, 22.2, 22.3
Astragalus	GLI	35.9, 37.4, 38.5
Astragalus	GLm	35.1, 35.1, 37.1, 48.5
Calcaneus	GL	79.5
Humerus	Bd	40.7
Metacarpus	Bp	28.2
Os malleolare	GD	17.9, 20.0
Radius	Bp	33.3
Scapula	SLC	27.2
Tibia	Bd	33.9, 34.2
Tibia	Bp	52.3
Tibia	Dd	25.0, 25.1
Ulna	DPA	31.4, 38.2
Ulna	SDO	29.4, 34.7

APPENDIX B
(Continued)

Element	Dimension	Measurement (mm)
St. Catherines		
Astragalus	Bd	24.4
Astragalus	DI	21.9
Astragalus	Dm	20.8
Astragalus	GLI	36.6
Astragalus	GLm	38.9
Cubonavicular	GB	28.8
Humerus	Bd	35.4
Metacarpus	Bd	30.7
Metacarpus	Bp	28.6
Os malleolare	GD	16.8
Tibia	Bd	29.3, 33.4
Tibia	Dd	22.8, 24.0
Savannah		
Astragalus	Bd	21.6, 24.0
Astragalus	DI	19.0, 21.4
Astragalus	Dm	19.6, 21.6
Astragalus	GLI	36.1
Astragalus	GLm	32.6, 36.3
Calcaneus	GB	23.6
Calcaneus	GL	85.5, 88.6
Scapula	GLP	31.8
Scapula	SLC	17.0
Ulna	BPC	29.5
Ulna	DPA	36.9
Ulna	SDO	32.0
Irene		
Astragalus	Bd	20.2, 22.9, 23.3, 24.3, 24.5, 24.5
Astragalus	DI	18.4, 19.3, 19.9, 20.2, 20.5, 21.4
Astragalus	Dm	18.7, 20.0, 20.0, 20.8, 21.5
Astragalus	GLI	31.3, 36.3, 37.3, 37.4, 38.5
Astragalus	GLm	25.6, 34.7, 35.3, 35.9, 36.9, 39.6
Calcaneus	GB	25.0
Calcaneus	GL	75.6, 78.4
Cubonavicular	GB	25.7, 27.4
Femur	Bd	43.1
Humerus	Bd	34.2, 35.1
Metacarpus	Bd	25.9, 26.1
Metacarpus	Bp	23.0, 26.6, 28.2
Metacarpus	GL	108.2
Metacarpus	SD	14.2
Metatarsus	Bd	25.0
Metatarsus	Bp	21.0
Radius	Bd	29.85, 34.0
Radius	BFd	25.5
Radius	Bp	30.6, 32.9, 35.6
Scapula	SLC	19.9, 21.8

APPENDIX B (Continued)

Element	Dimension	Measurement (mm)
Irene (<i>continued</i>)		
Tibia	Bd	29.8, 30.8, 33.0
Tibia	Dd	24.1, 25.8, 26.1
Altamaha		
Astragalus	Bd	20.5, 20.5, 20.9, 21.0, 21.0, 21.0, 21.1, 21.55, 21.7, 21.8, 22.0, 22.2, 22.4, 22.9, 23.05, 23.05, 23.1, 23.2, 23.55, 23.6, 24.1, 24.19, 24.3, 25.5, 29.0
Astragalus	Dl	19.2, 20.5, 22.2, 22.5
Astragalus	Dm	18.8, 21.2, 21.7, 22.6
Astragalus	GLI	32.0, 32.5, 32.6, 33.3, 33.4, 33.45, 33.9, 34.0, 34.3, 34.45, 34.7, 35.5, 36.0, 36.1, 36.2, 36.3, 36.95, 37.0, 37.3, 37.4, 38.5, 39.2, 40.5
Astragalus	GLm	30.5, 30.75, 31.2, 31.3, 31.6, 31.8, 32.3, 33.0, 33.2, 33.3, 33.4, 33.5, 34.3, 34.35, 34.4, 34.5, 35.1, 35.3, 36.6, 36.9
Atlas	GB	87.5
Atlas	GLF	72.3
Atlas	H	40.6
Axis	BFed	18.9
Axis	BPTr	41.25
Calcaneus	GB	24.0, 24.0, 24.5
Calcaneus	GL	75.5, 79.0, 82.95, 83.2, 83.7, 97.8
Cubonavicular	GB	25.4, 26.1, 26.8, 27.5, 28.0, 28.0, 29.1, 29.2, 29.30, 29.7, 29.9, 30.5, 34.0
Femur	Bd	41.7
Femur	Bp	53.0, 61.7
Humerus	Bd	32.1, 33.1, 33.7, 33.9, 35.8, 36.8, 39.0, 40.9
Metacarpus	Bd	25.6, 26.5, 27.1, 29.0, 30.8
Metacarpus	Bp	22.3, 22.5, 23.1, 23.3, 23.9, 24.5, 25.5, 25.7, 26.4, 26.9, 27.1, 27.1, 27.2, 27.20, 27.5, 27.6, 27.6, 28.6
Metacarpus	SD	15.5, 16.7
Metatarsus	Bd	27.6, 27.9
Metatarsus	Bp	20.85, 21.6, 22.2, 22.9, 23.8, 24.0, 24.1, 25.1, 25.5, 25.6, 26.46, 29.5
Metatarsus	SD	12.0
Os malleolare	GD	15.2, 17.1

APPENDIX B (Continued)

Element	Dimension	Measurement (mm)
Patella	GB	26.7
Radius	Bd	27.0, 32.30, 34.5
Radius	BFp	33.0
Radius	Bp	29.4, 30.9, 32.1, 32.3, 33.8, 33.8, 34.0, 34.6, 34.9, 35.4, 37.4, 39.2, 41.5, 41.9
Radius	SD	21.8
Scapula	GLP	34.5, 35.0, 36.7, 49.8
Scapula	LP	26.4
Scapula	SLC	18.4, 20.4, 29.5
Tibia	Bd	20.7, 28.4, 28.6, 29.0, 29.5, 29.6, 29.7, 30.6, 31.1, 31.5, 32.0, 32.2, 32.3, 33.3, 33.5, 33.6
Tibia	Bp	46.1
Tibia	Dd	21.6, 22.1, 23.0, 24.6
Tibia	SD	17.4, 18.7, 19.2, 19.5, 20.1, 20.3, 20.4, 21.0, 22.1
Ulna	BPC	16.1
Ulna	DPA	33.7
Ulna	LO	53.9
Ulna	SDO	30.7

^a Measurement dimensions follow von den Driesch (1976).

APPENDIX C
Meeting House Field and Fallen Tree: Deer Measurements^a

Element	Dimension	Measurement (mm)
Meeting House Field		
Astragalus	GLI	34.3
Humerus	SD	11.9
Humerus	Bd	19.1
Innominate	LA	36.1
Metacarpus	Bp	22.6, 25.4
Phalanx, 1st	SD	9.2
Phalanx, 1st	GL	34.9
Phalanx, 1st	Bd	10.5
Radius	Bp	20.8, 30.3, 32.9
Fallen Tree		
Astragalus	Dm	18.4
Astragalus	GLI	32.2
Astragalus	GLm	29.6, 30.7
Astragalus	Bd	20.0
Astragalus	DI	17.7
Calcaneus	GB	22.0, 23.2, 27.0, 29.1
Calcaneus	GL	83.2, 84.2
Femur	DC	19.5, 22.8, 24.4
Femur	Bd	48.4
Femur	SD	18.5
Femur	Bp	52.9
Humerus	Bt	29.4, 33.0
Humerus	Bd	39.9
Humerus	SD	18.1
Innominate	LA	34.7, 38.2
Innominate	LFo	42.3
Metacarpus	Bp	19.7, 23.9, 27.9, 28.1, 28.4
Metacarpus	Bd	26.4, 27.1, 28.7
Metacarpus	SD	17.6
Metatarsus	Bp	24.9
Phalanx, 1st	GL	41.3, 44.0, 46.1
Phalanx, 1st	Bp	13.0, 13.6, 15.0, 15.0
Phalanx, 1st	SD	8.6, 9.9, 10.2, 10.6, 11.2
Phalanx, 1st	Bd	9.9, 10.8, 12.2, 12.4
Phalanx, 2nd	SD	9.4, 9.8
Phalanx, 2nd	Bd	9.0, 9.8
Phalanx, 2nd	GL	32.3, 33.7
Phalanx, 2nd	Bp	12.1
Radius	Bp	29.2, 31.1
Radius	Bd	30.3, 30.8, 31.0, 33.0
Radius	SD	19.1, 22.0
Scapula	SLC	20.8, 21.4, 23.2
Scapula	GLP	32.6
Tibia	Bd	26.6, 28.5, 28.6, 29.8, 30.1, 32.8, 34.5
Tibia	Bp	52.3
Tibia	SD	17.5
Ulna	BPC	19.9, 22.4

^a Measurement dimensions follow von den Driesch (1976).

APPENDIX D
THE HAYES ISLAND SITE (9Li1620)

BY ELLIOT BLAIR

The Hayes Island site (AMNH-694, 9Li1620) is located in the upper salt marsh along the western margin of St. Catherines Island (and immediately north of Persimmon Point; see fig. 20.10). This discrete shell mound is roughly 15 m east/west by 8 m north/south. The entire midden is elevated about 50 cm to 1 m above the surrounding marsh—remaining above water even during high tide. Royce Hayes initially identified the site and reports that the shrub/tree forestiera (*Forestiera acuminata*) was present during the recent past—likely indicating the presence of a freshwater seep nearby (also indicated by the presence of a large outcrop of beach rock). The extinction of *Forestiera* from Hayes Island likely corresponds with the recent drop in the water table.

Four circular shell “pit” features are present along the eastern margin of 9Li1620. The top of each shell circle is flush with the surrounding marsh. Probing of these features, however, indicated that there was little or no depth to the shell. A grit-and-sand tempered sherd (28.4/5883) was found on the surface of one of these features. Three additional small sherds were also collected from the surface, as was a lithic fragment (28.4/5880) (made of Coastal Plain chert, and likely heat treated).

We excavated two 1 × 1 m squares at Hayes Island, saving bulk and flotation samples and wet screening the remaining fill through 1/8-in. mesh. Additionally, three samples of marine shell, all *Mercenaria mercenaria*, were submitted for radiocarbon dating (see table 13.4).

Test Pit I was located on the south side of Hayes Island, at the edge of the midden deposit. It was excavated in arbitrary 10 cm levels from the southeastern corner. Situated as it was on the southern slope of the mound, the northern half of the unit was significantly higher in elevation than

the southern half—necessitating deeper excavation in the northern region of the unit in order to level the floor. The top level of the unit (0–10 cm) consisted of a gray sand/dense shell matrix with a transition to a wet gray-brown sand. At the bottom of the level the shell density significantly decreased and a very heavy concentration of sand rock began to appear—primarily in the northeast corner (excavated to 27 cm below surface—in order to reach 10 cm below the southeast corner). In this level nine ceramic fragments, all smaller than 3 cm in maximum diameter, were collected (see table D.1). Clam shell was also collected from this level and subjected to radiocarbon dating (Beta-215816).

Level 2 of TP I, 10–20 cm, was the final level excavated from the unit. Shell was almost completely absent from the level, and no other faunal material was observed. The level matrix was predominantly composed of a very wet, orange, black, and gray mottled sand with numerous large pieces of sand rock. One small, 6.06 mm, flake of Coastal Plain chert (28.4/5870) was the only cultural material recovered from the level.

Test Pit II was located northeast of TP I, slightly east of the center of Hayes Island, and directly above the high point of the mound. This unit was excavated in arbitrary 10-cm levels while following the contours of the mound. The terminal depth of the unit was 40 centimeters below surface. The unit matrix was comprised of a humic layer, above a dark brown-gray sand and shell layer, above a sticky/greasy darker gray-black sand. The terminal, sterile, level was a very dark brown sand with numerous sand rock inclusions.

Level 1 of the unit contained four small bone fragments. This level contained both the humic layer and the upper portion of the shell matrix. Level 2 (10–20 cm) was comprised of both the lighter and the darker/greasier shell matrix. Shell included numerous oysters, with few mussels, clams, crabs, and periwinkles. A clam shell collected from this level (Beta-215817) was sub-

TABLE D.1
Ceramics Recovered from Hayes Island (9Li1620)

	Surface	Test Pit I		Test Pit II	
		0–10 cm	0–10 cm	10–20 cm	20–30 cm
Grit and sand tempered	2	—	1	—	—
Grit tempered	—	—	—	—	2
Grit tempered, eroded	—	2	—	—	—
Sand tempered	—	1	—	1	1
Deptford Check Stamped	—	1	—	—	—
Small sherds	2	5	—	1	1

jected to radiocarbon dating. Level 3, 20–30 cm, was primarily composed of the greasy, black shell matrix—oyster with some mussel, clam, and periwinkle. Several small sherds appeared in this level (table D.1). Level 4, 30–40 cm, was the final level excavated in this unit. No artifacts were located. By the bottom of the level all shell from the midden deposit had disappeared, and sand rock was beginning to dominate the matrix. A clam shell sample (Beta-215818) was collected and radiocarbon dated.

The three clam shells selected for radiocarbon dating were selected in the hopes of representing both the vertical and horizontal extents of the midden. The two samples from TP II—located in the thickest, and centermost, portion of the midden—were selected from the top and bottom of the deposit. The sample from TP I came from the edge of the midden—at its southern, horizontal extent.

Because we had no realistic estimate of the age represented in the Hayes Island shell midden, we

submitted three *Mercenaria* for radiocarbon dating (table 13.4). We hoped, in effect, that lack of knowledge about the associated ceramics might assist in addressing the chronology-based biases already introduced into the overall distribution of ^{14}C data from St. Catherines Island.

Test Pit I (0–10 cm):

(Beta-215816, *Mercenaria*) 1470 ± 80 B.P.,
cal A.D. 650–990

Test Pit II (10–20 cm):

(Beta-215817, *Mercenaria*) 1190 ± 50 B.P.,
cal A.D. 970–1220

Test Pit II (30–40 cm):

(Beta-215818, *Mercenaria*) 2410 ± 60 B.P.,
cal 400–80 B.C.

As discussed in chapters 4 and 16 (this volume, Part I), date Beta-215818 from Hayes Island is important because it denotes a reappearance of Deptford Period marshside settlements along the western margin of St. Catherines Island (see also chap. 32).