

APPENDIX 5. FAUNAL REMAINS FROM THE PRE-COLUMBIAN SITES OF POINTE DES CHÂTEAUX, LA DÉsirADE AND PETITE TERRE

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5.1 INTRODUCTION

This zooarchaeological study is a supplement to the archaeological study of the micro-region of La Désirade, Petite Terre and Pointe des Châteaux (De Waal this volume). During fieldwork related to this study, substantial numbers of faunal remains were found within the area of interest. Although originally not incorporated in the research design (De Waal 1997), it was thought that a study of these faunal remains could make a contribution to an understanding of the pre-Columbian use and the organisation of the environment. Since the excavations were originally not designed with the purpose of obtaining sufficiently large faunal samples, the numbers and quality of the faunal remains excavated varied considerably between the sites. Although this imposed some limitations on the analysis, enough material was available to yield information on pre-Columbian social organisation within the studied micro-region.

5.2 AIMS

The research focused on identification, quantification and contextual analysis of faunal remains from pre-Columbian sites in the studied micro-region, including analyses at site level and inter-site level. The study aims to contribute to a better understanding of pre-Columbian subsistence in the Early Ceramic and Late Ceramic Age, the functioning and use of pre-Columbian sites and the exploitation of the natural environments surrounding these sites.

In this respect, the results of the faunal analyses make a contribution to the analysis of site systems (De Waal this volume). Also, the study of the exploitation of the various environmental zones helps to reconstruct and understand pre-Columbian Amerindian use and perception of the landscape.

5.3 MATERIALS AND METHODS

The faunal remains originated from the undisputed archaeological contexts of Early Ceramic and Late Ceramic sites excavated within the research area. A total of 16,232

faunal remains were recovered and analysed from a total of 28 sites, accounting for a total MNI (Minimum Number of Individuals) of 739 and weighing 6014 grams.

Of the 28 sites excavated, 12 sites were located on La Désirade, 11 on Pointe des Châteaux, and five on Petite Terre. Three sites are on Terre de Bas and one is on Terre de Haut. Archaeological material from one Petite Terre site was stored in the depot of the archaeological museum in Le Moule but the name of this site had not been recorded. The collection strategy suggests that the sample from the unknown site was actually part of the Pointe Sablé site at Terre de Haut. There were great differences between the three islands in the numbers of faunal remains recovered: eight of the 12 sites on La Désirade yielded faunal remains, accounting for 86.3% (14,008 specimens) of the total number of analysed faunal remains; on Pointe des Châteaux only five of the 11 sites contained faunal remains, accounting for only 2.2% (362 specimens), while all five sites on Petite Terre yielded faunal remains accounting for 11.5% (1862 specimens) of the total amount. Not only were there large differences between the islands, major differences in the numbers of recovered faunal remains could also be observed between the individual sites.

Ten of the 28 sites chosen for excavation did not yield any faunal remains at all, even though a relatively large amount of soil was excavated at some of these sites (table A5.1). Most sites without or with only a few faunal remains were on Pointe des Châteaux, with only the Petites Salines site containing reasonable numbers. La Désirade showed the largest variety in the number of faunal remains recovered, varying from none to the À l'Escalier site with the most remains of all sites analysed. All sites on Petite Terre yielded relatively moderate to large numbers of faunal remains.

The absence of sites without faunal remains on Petite Terre is likely related to the survey strategy employed on Petite Terre, which focused mainly on relatively large sites that were already known. In contrast, at Pointe des Châteaux and on La Désirade large areas were systematically and intensively surveyed, resulting in the discovery of several small-sized sites, many of which lacked faunal remains altogether (De Waal this volume).

When comparing the density data (N faunal remains/m³)

Island	Site name	Soil excavated ¹	N faunal remains	N (1/m ³)
Pointe des Châteaux	Grande Saline	4.00 m ³	29	7
	Petites Salines	4.53 m ³	218	48
	Site 1	1.36 m ³	0	0
	Village des Pêcheurs	0.48 m ³	0	0
	Montagne Petites Salines	3.00 m ³	12	4
	Ouest Résidence Kahouanne	0.21 m ³	0	0
	Degrat	2.85 m ³	1	<1
	Site 7	0.46 m ³	1	2
	Est Pointe Tarare	1.55 m ³	0	0
	Ouest Morne Zambi	0.54 m ³	0	0
	Nord Morne Zambi	1.25 m ³	0	0
La Désirade	À l'Escalier	4.80 m ³	2715	566
	Anse des Galets	0.80 m ³	17	21
	Cocoyer	0.40 m ³	0	0
	Les Sables	0 + 2.82 m ³ ('85)	0 + 120 ('85)	43
	Voûte à Pin	0.60 m ³	45	75
	Pointe Séraphine	0.40 m ³	0	0
	Grand Abaque 1	2.80 m ³	13	5
	Pied de la Montagne	2.10 m ³	23	11
	Pointe Colibri	3.20 m ³	0	0
	Aéroport	3.10 m ³	222	72
	Pointe Gros Rempart	0.60 m ³	0	0
	Morne Souffleur	0.60 m ³	2	3
Petite Terre (Terre de Haut)	Pointe Sablé	0.3 + ? m ³ ('65 ²)	0 + 68 ('65)	?
Petite Terre (Terre de Bas)	Baleine du Sud	2.10 m ³	185	88
	Site du Phare	2.30 m ³	446	194
	Est de Mouton de Bas	4.00 m ³	1132	283
Petite Terre	Unknown	0 + ? m ³ ('65)	0 + 21 ('65)	?

Table A5.1. Number of faunal remains recovered relative to the amount of soil excavated for each of the 28 excavated sites (after Bodu 1985^b and De Waal 1998^b, 1999^e).³

from table A5.1 with the available contextual and dating data no apparent relationship between the relative density of faunal remains in a site and its supposed function could be detected. Similarly, there was no apparent relationship between the surface area covered by a site and the density of faunal remains encountered (table A5.2). There seems, however, to be a relationship between the presence of a midden area in a site and the numbers of faunal remains recovered. Sites with deep midden deposits showing

little post-depositional disturbance, such as the sites of À l'Escalier and Est de Mouton de Bas, usually also contained dense concentrations of faunal remains. The combination of relatively rapid accumulation of artefacts in midden deposits, generally few post-depositional disturbances and the general alkaline conditions in middens, caused primarily by leaking of calcium-carbonate from shells, usually results in very favourable micro-environmental conditions for the preservation of faunal remains.

Site name	Site Function	Period	Midden ⁴	N (1/m ³)	Area (m ²)
La Désirade					
À l'Escalier	Habitation site	Late Ceramic A	Present	566	1700
Anse des Galets	Habitation site	Late Ceramic A	Absent	21	14,800
Les Sables	Habitation site	Early Ceramic B	Present	43	19,000
Voûte à Pin	Ceremonial	Late Ceramic A	Absent	75	70
Grand Abaque 1	Habitation site	Late Ceramic A	Absent	5	10,000
Pied de la Montagne	Unidentified	Unidentified	Absent	11	39,000
Aéroport	Habitation site	Late Ceramic A	Present	72	28,200
Morne Souffleur	Habitation site	Late Ceramic B	Absent	3	2800
Petite Terre					
Baleine du Sud	Habitation site	Late Ceramic A	Absent	88	9500
Site du Phare	Habitation site	Late Ceramic A	Present	194	25,100
Est de Mouton de Bas	Habitation site	Late Ceramic A	Present	283	8200
Pointe Sablé	Habitation site	Late Ceramic A	Absent	?	8400
Unknown	Unidentified	Unidentified	Unknown	?	?
Pointe des Châteaux					
Grande Saline	Habitation site	Late Ceramic A	Absent	7	12,200
Petites Salines	Habitation site	Early Ceramic B + Late Ceramic A	Present	48	5200
Montagne Petites Salines	Habitation site	Early Ceramic B	Absent	4	15,500
Degrat	Habitation site	Late Ceramic A	Absent	<1	1200
Site 7	Habitation site	Late Ceramic A	Absent	2	17,000

Table A5.2. Contextual information for the sites with faunal remains.

In addition to the presence or absence of a midden, the relative abundance of faunal remains was for some sites also influenced by other factors. The Voûte à Pin site, for instance, showed a relative good recovery of faunal remains, which is probably related to the protective cave environment in which they were found. Furthermore, the relatively successful recovery of faunal remains from three of the Petite Terre sites is related to the lack of recent developments on Petite Terre compared to Pointe des Châteaux and La Désirade. Finally, the sites Baleine du Sud and Pointe Sablé, although they most likely contained extensive midden areas in the past, are today severely disturbed or even totally destroyed due primarily to marine erosion.

Sites with no or only few faunal remains were mainly small-sized surface concentrations with no apparent middens. Although it is possible that test units excavated within these sites were located outside of any existing

midden, there seemed, however, to be a close relationship between the amount of material encountered on the site surface and in the units: sites with midden areas usually also showed clear concentrations of material on the surface. Sites with few or no faunal remains in general showed evidence of ploughing activities as well, exposing faunal remains to more intense weathering processes (Lyman 1994), which may have resulted in near-complete destruction of the organic remains.

5.3.1 Field recovery methods

Test units, excavated in 1998 and 1999 at the various sites, were usually dug in areas with relatively high concentrations of surface material (De Waal this volume). Test units that were 1 m² in size and occasionally 2 m² or 4 m² were excavated by trowel in 10 cm arbitrary levels, with subdivisions when different geological or archaeological layers were

Site name	Context location	Type of context	Screen size	Amount of soil
À l'Escalier	Unit 1, Level 6	Midden	1 mm	5 litres
À l'Escalier	Unit 1, Level 7	Midden	1 mm	5 litres
À l'Escalier	Unit 2, Level 5	Midden	1 mm	5 litres
À l'Escalier	Unit 2, Level 6	Midden	1 mm	5 litres
Site du Phare	Unit 2, Level 7, F 001	Hearth	1 mm	5 litres
Petites Salines	Unit 4, F 001	Natural feature	2 mm	5 litres
Petites Salines	Unit 4, F 002	Natural feature	2 mm	5 litres

Table A5.3. Samples taken for the specific purpose of zooarchaeological analysis.

Excavations	N faunal remains recovered	Total weight (g)	Average weight per artefact (g)
1965	120	583	4.9
1985	89	1154	13.0
1998-1999 ^s	5061	3877	0.8

Table A5.4. Average weight of faunal remains recovered by De Waal in 1998 and 1999 compared with remains from earlier excavations.

encountered and were dry sieved over a 2/5 inch screen. This mesh-size was used at all sites, therefore allowing direct comparison between the various assemblages. At some of the sites showing unusual features or an abundance of faunal remains in certain contexts, additional samples were taken for zooarchaeological purposes. These were wet sieved over 1 mm or 2 mm mesh screens (table A5.3).

The artefacts from the 1985 excavations at the Les Sables site were shovel excavated and hand-collected (Bodu 1985^b). Although it is not known how the faunal remains from the sites excavated in 1965, including the site of Pointe Sablé and an unidentified site at Petite Terre, were collected, judging from the average weight of the faunal remains it seems most likely that they were also hand-collected (table A5.4). Since collection of faunal remains by hand can heavily bias the results (e.g. Payne 1972) the results from the earlier excavations cannot be directly compared with the recent ones. Detailed contextual information is also lacking and therefore only qualitative results will be presented for these sites. Furthermore, since the screen size used can also heavily influence the analysis of an assemblage (e.g. Cannon 1999; Shaffer and Sanchez 1994), faunal remains from different screen sizes have been analysed separately. Remains from the 1 mm and 2 mm screens have mainly been

used to complement information obtained from material from the 2/5 inch screens, for example to check whether the 2/5 inch screens were fine enough to collect all identifiable remains.

5.3.2 Recording methods

The identification of the faunal remains was carried out with the aid of the author's comparative reference collection. The zooarchaeological reference collection at the Department of Archaeology at the University of Southampton was also used, primarily for the identification of human remains and European mammals. In addition, some of the mammal bones and marine crab remains were analysed using the collections of the Natural History Museum in London. In addition, relevant literature with anatomical illustrations was also used.

All faunal remains were identified to element and to taxon. The portion of the skeletal element present was recorded (distal, proximal, shaft; with a percentage of completeness), and for paired elements also the side. The remains were identified to the lowest taxonomic level possible. Since most tropical fish families consist of many different species, the bones of which are often very similar in shape, most fish remains were therefore not identified

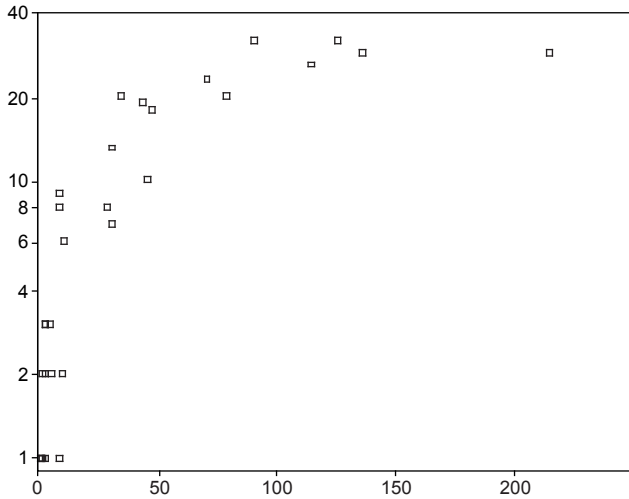


Fig. A5.1. MNI plotted against the Number of Identified (consumed) taxa (logarithmic).

beyond the family or genus level.

Notes were also taken about taphonomic phenomena, such as burning, cut marks, gnaw marks, and bone modifications. In the case of burning, the colour and the proportion of the element that was burned was noted.

5.3.2.1 Quantification

For this study, the Number of Identified Specimens (NISP), the Minimum Number of Individuals (MNI) and the Weight of the bone fragments were employed for quantification of the remains. Comparisons within and between sites were primarily based on the MNI%, which is the percentage of the MNI of a certain species in an assemblage in relation to the total MNI of that assemblage. NISP% and Weight% were also used, primarily in order to see how they compare with MNI%.

NISP and MNI were calculated using common zooarchaeological procedures (Reitz and Wing 1999). In the case of cross-mendable specimens, for NISP the elements were counted as one, if these elements showed recent breaks. For the MNI the highest MNE (Minimum Number of Elements) was used per taxon, for each context, taking into account the side, size, and the age and sex from the elements. For sea turtles (*Cheloniidae*), this often meant that measured differences in the thickness of the costals were used to calculate MNI. Similarly, for fish remains, MNI was occasionally calculated from differences in size classes,

based on measurements of the fish vertebral centra.

In order to obtain substantially large samples, for most sites the results from the analysis of individual contexts were aggregated into larger samples. Due to relatively low overall numbers of faunal remains this meant that for most sites all faunal remains were amalgamated into one larger sample. The MNIs for the various taxa for these aggregated samples have been calculated as if the remains had been physically amalgamated (*cf.* Grayson 1984). By doing so, it was taken into account that two bones from the same taxon but found in two different levels within the same test unit could in fact have originated from the same animal. For this study it has, however, been assumed that the remains from different test units within the same site belonged to different animals, as long as these test units were not located directly next to each other. The calculated MNI from different test units were therefore added up to create a species list for a site as a whole. For Pointe Sablé and the unidentified site at Petite Terre all remains were treated as if they had come from the same test unit, since no contextual information was available to separate the materials satisfactorily. For the 1 mm and 2/5 inch remains from À l'Escalier and the 2/5 inch remains from Est de Mouton de Bas there were relatively large amounts of material in the different test units. Therefore for these two sites species lists were created for each test unit separately as well as for these sites as a whole (table A5.5).

5.3.2.2 Adequacy of samples

Before comparing the site assemblages, one first needs to establish whether they are large enough. Small samples may be too biased for use in comparative research. When comparing by MNI, small samples are, for instance, heavily biased in favour of the rare species (Grayson 1984). Table A5.6 gives an overview of the relationship between the NISP, MNI and number of consumed taxa for all 30 assemblage-lists. This is further visualised in figure A5.1 where MNI is plotted against the number of identified (consumed) taxa.

For prehistoric sites in the circum-Caribbean it is often thought that, when species saturation is used as a measure of adequacy, assemblages need at least an MNI of 125 to reach the point of diminishing returns (e.g. Wing 1996; Wing and Brown 1979). Following from this, it is clear that only a limited number of the thirty assemblages can be used for inter-site comparisons. These include the samples from the À l'Escalier site and possibly those from Est de Mouton de Bas. All other assemblages are clearly too small to be statistically reliable. The results of many of these assemblages are, however, still useful for certain inter-site comparisons, although primarily on a qualitative level.

Site name	Contexts	Screen size
A l'Escalier	Unit 1	2/5 inch
A l'Escalier	Unit 2	2/5 inch
A l'Escalier	All remains (units 1 and 2)	2/5 inch
A l'Escalier	Unit 1, levels 6 and 7	1 mm
A l'Escalier	Unit 2, levels 5 and 6	1 mm
A l'Escalier	All remains (all samples combined)	1 mm
Anse des Galets	All remains	2/5 inch
Baleine du Sud	All remains	2/5 inch
Site du Phare	Unit 1, Feature 001	2/5 inch
Site du Phare	Unit 2, Feature 001	2/5 inch
Site du Phare	All other remains	2/5 inch
Site du Phare	Unit 2, level 7, Feature 001	1 mm
Est de Mouton de Bas	Unit 1	2/5 inch
Est de Mouton de Bas	Unit 2	2/5 inch
Est de Mouton de Bas	All remains (units 1 and 2)	2/5 inch
Les Sables	All remains	Hand-collected
Voûte à Pin	All remains	2/5 inch
Grand Abaque 1	All remains	2/5 inch
Pied de la Montagne	All remains	2/5 inch
Aéroport	All remains	2/5 inch
Morne Souffleur	All remains	2/5 inch
Pointe Sablé	All remains	Hand-collected
Name Unknown	All remains	Hand-collected
Grande Saline	All remains	2/5 inch
Petites Salines	All remains	2/5 inch
Petites Salines	Unit 4, Feature 001	2 mm
Petites Salines	Unit 4, Feature 002	2 mm
Montagne Petites Salines	All remains	2/5 inch
Degrat	All remains	2/5 inch
Site 7	All remains	2/5 inch

Table A5.5. The various assemblages created after amalgamating smaller samples. The resulting assemblages were used for further comparable analysis.

5.4 RESULTS

5.4.1 Species identified

Of the 16,232 faunal remains recovered and analysed a total of 4763 (29%) of the faunal remains could be identified to

at least family level, with the remainder identified to higher levels of taxonomy. At least 41 taxa are represented in the various assemblages analysed (table A5.7).

Of the mammal remains identified (N=86), the majority originated from two different rodents, indigenous rice rats of the *Oryzomyini* tribe, now extinct, and agoutis

Assemblage	N of taxa	NISP	MNI
A l'Escalier, units 1 and 2: 1 mm	32	10,850	126
A l'Escalier, unit 1: 1 mm	32	9360	91
A l'Escalier, units 1 and 2	29	2710	215
A l'Escalier, unit 1	29	2028	136
Est de Mouton de Bas, units 1 and 2	26	1125	115
Est de Mouton de Bas, unit 2	23	787	71
A l'Escalier, unit 2	20	682	79
A l'Escalier, unit 2: 1mm	20	1490	35
Est de Mouton de Bas, unit 1	19	338	44
Site du Phare	18	319	48
Les Sables	13	119	31
Aéroport	10	215	46
Est de Mouton de Bas, unit 2: Feature 001	9	116	9
Petites Salines	8	205	29
Site with unknown name	8	21	9
Baleine du Sud	7	175	31
Pointe Sablé	6	67	11
Les Sables	3	20	5
Est de Mouton de Bas, unit 2, Feature 001: 1 mm	3	10	3
Est de Mouton de Bas, unit 1, Feature 001	3	9	3
Petites Salines, Feature 002	2	54	10
Pied de la Montagne	2	23	6
Voûte à Pin	2	18	3
Morne Souffleur	2	2	2
Petites Salines, Feature 001	1	47	9
Montagne Petites Salines	1	12	3
Anse des Galets	1	17	2
Grand Abaque 1	1	13	1
Site 7	1	1	1
Degrat	1	1	1

Table A5.6. The relationship between NISP, MNI and the number of taxa for all assemblages. Only the taxa presumed to have been consumed are included in these calculations.

(*Dasyprocta* sp.). The rice rat bones were all relatively large-sized, similar in size to *Megalomys* rice rat remains, as previously described by Steadman *et al.* (1984^b), Reitz (1994) and Wing (1995) for prehistoric sites on nearby Montserrat and Antigua (table A5.8). *Oryzomyini* rodents were indigenous to many of the Lesser Antillean islands

(Pregill *et al.* 1994).

The remains of *Dasyprocta* sp. from La Désirade and Petite Terre, when compared to the *Dasyprocta* remains in the collection of the Natural History Museum of London, best resembled both in size and body proportions a skeleton labelled *Dasyprocta cristata* (1957.2.12.4; origin: 'Antilles'),

Class	Order	Family	Genus/Species	Common name		
<i>Mammalia</i>	Primates	<i>Hominidae</i>	<i>Homo sapiens</i>	Human		
	<i>Sirenia</i>	<i>Trichechidae</i>	<i>cf. Trichechus manatus</i>	Manatee		
	<i>Artiodactyla</i>	<i>Rodentia</i>	<i>Suidae</i>	<i>Sus scrofa</i>	Domestic pig	
				<i>cf. Capra hircus</i>	Domestic goat	
			<i>Muridae</i>	<i>Rattus</i> sp.	Norway rat/ Black rat	
			<i>Oryzomyini</i>	<i>cf. Megalomys</i>	Rice rat (extinct)	
		<i>Dasyproctidae</i>	<i>Dasyprocta</i> sp.	Agouti		
<i>Aves</i>				Unidentified bird		
<i>Reptilia</i>	<i>Testudines</i>	<i>Cheloniidae</i>		Sea turtle		
	<i>Squamata</i> (Suborder <i>Lacertilia</i>)	<i>Iguanidae</i>	<i>Iguana</i> sp.	Iguana		
		<i>Teiidae</i>	<i>cf. Ameiva</i> sp.	Lizard		
	<i>Squamata</i> (Suborder <i>Serpentes</i>)	<i>Colubridae</i>	<i>cf. Alsophis</i> sp.	Snake		
<i>Chondrichthyes</i>	<i>Lamniformes</i>	<i>Carcharhinidae</i>	<i>Carcharhinus</i> sp.	Shark		
<i>Osteichthyes</i>	<i>Clupeiformes</i>	<i>Clupeidae</i>		Herring		
		<i>Cyprinodontiformes</i>	<i>Belonidae</i>	Needlefish		
	<i>Beryciformes</i>	<i>Holocentridae</i>			Squirrelfish	
				<i>cf. Myripristis jacobus</i>	Blackbar soldierfish	
	<i>Perciformes</i>	<i>Serranidae</i>			Grouper	
				<i>Epinephelus</i> sp.	Grouper	
				<i>Mycteroperca</i> sp.	Grouper	
					Big eye	
				<i>Carangidae</i>		Jack/Scad
					<i>Caranx</i> sp.	Jack
				<i>Lutjanidae</i>		Snapper
				<i>Haemulidae</i>		Grunt
					<i>Haemulon</i> sp.	Grunt
				<i>Sparidae</i>		Porgy
				<i>Mullidae</i>		Goatfish
			<i>Sphyraenidae</i>		Barracuda	
			<i>Labridae</i>		Wrasse	
		<i>Bodianus rufus</i>	Spanish hogfish			
		<i>Halichoeres</i> sp.	Wrasse			
	<i>Scaridae</i>		Parrotfish			
		<i>Scarus</i> sp.	Parrotfish			
		<i>Sparisoma</i> sp.	Parrotfish			
		<i>Acanthuridae</i>	Surgeonfish			
		<i>Scombridae</i>	Tuna/Mackerel			
	<i>Tetraodontiformes</i>	<i>Balistidae</i>		Triggerfish		
		<i>Ostraciidae</i>		Boxfish		
		<i>Diodontidae</i>		Porcupinefish		
<i>Echinoidea</i>	<i>Echinacea</i>	<i>Echinidae</i>		Unidentified sea urchin		
				<i>Echinometra lucunter</i>	Red rock urchin	

Class	Order	Family	Genus/Species	Common name
<i>Malacostraca</i>	Decapoda, (Infraorder) <i>Anomura</i>	<i>Coenobitidae</i>	<i>Coenobita clypeatus</i>	Land hermit crab
			Decapoda, (Infraorder) <i>Brachyura</i>	<i>Mithrax</i> sp.
		<i>Xanthidae</i>	<i>Carpilius corallinus</i>	Coral crab
		<i>Gecarcinidae</i>	<i>Cardisoma guanhumi</i>	Great land crab
			<i>Gecarcinus lateralis</i>	Black land crab
			<i>cf. Gecarcinus lateralis</i>	Black land crab
			<i>cf. Gecarcinus ruricola</i>	Mountain crab
		<i>Gecarcinus</i> sp.	Land crab	

Table A5.7. Taxa identified in the various assemblages (previous page and above).

Site name	Island	Average alveolar length, lower cheek teeth row	N
Trants (Reitz 1994: table 7)	Montserrat	10.1	4
Brook site (Wing 1995: table 7)	Antigua	9.5	8
Est de Mouton de Bas	Petite Terre	9.4	1

Table A5.8. Measurements of *Megalomys* specimens found at pre-Columbian sites on Lesser Antillean islands.

now also known as *D. leporina*. Agoutis were not endemic to the region. During the Early Ceramic Age Amerindians introduced them to the islands, where some may have been kept in captivity (Wing 1993). Agoutis, as well as rice rats, were probably also attracted to the horticultural plots of the Amerindians, were they could have been hunted easily (Linares 1976).

An interesting find is a piece of a rib, almost certainly from a manatee (*Trichechus manatus*), found in the assemblage of the unidentified site on Petite Terre, which might be the Pointe Sablé site. It was worked into a small object (fig. A5.5). Nowadays, manatees are almost completely extirpated from the West Indies as they were regularly hunted during the early colonial period, but they were probably relatively abundant in prehistoric times (Lefebvre *et al.* 1989). Since manatees are usually found in or near fresh water sources (Lefebvre *et al.* 1989), the presence of a manatee bone on Petite Terre is surprising, considering the complete absence of rivers here. Most likely, therefore, this bone originated from a manatee killed elsewhere (for instance Basse-Terre on Guadeloupe). It may have been transported as raw material, or it was possibly exchanged as a finished object.

A few human remains were also encountered at the cave site of Voûte à Pin on La Désirade. This site, therefore, may have been used as a burial ground. A piece of a human skull was also found in test unit 1 of the À l'Escalier site on La Désirade. Rare finds of other mammalian remains consisted of European intrusive species in the disturbed topsoil at the sites, including pig (*Sus scrofa*), goat (*Capra hircus*) and European rat (*Rattus* sp.).

Birds (N=56) consisted mainly of pigeons and doves (*Columbidae*), which were hunted for their relatively large size, easy capture, and their tasty flesh. The bird remains await further analysis.

Of the reptiles (N=359), most bones found belonged to Iguanas (*Iguana* sp.) and sea turtles (*Cheloniidae*). The iguana remains probably belonged to the indigenous iguana (*Iguana delicatissima*). *Iguana delicatissima* is indigenous to the Lesser Antilles, and is only present on a few islands today, including La Désirade and Petite Terre. Petite Terre has the largest remaining colony of this iguana species (Office National des Forêts 1994). Today, there are still three sea turtle species that come to lay eggs on Petite Terre, including

Chelonia mydas, *Eretmochelys imbricata* and possibly also *Lepidochelys* sp. (Office National des Forêts 1994). A few bones of small-sized reptiles were also encountered, which belonged to small lizards (cf. *Ameiva* sp.) and a small snake (cf. *Alsophis* sp.), the latter now exterminated from most islands in the region. These small reptiles probably died in situ and were not part of the prehistoric diet.

Most faunal remains found belong to fishes (N=12,475). The fish remains identified belonged to 18 different fish families, but were dominated by parrotfish (*Scaridae*) and surgeonfish (*Acanthuridae*). Both of these fish families today are usually the dominant fish on Caribbean shallow-water reefs (Randall 1983). A few small-sized shark vertebrae were also found.

Of the invertebrates (N=3151), the most common remains were of land crabs (*Cardisoma guanhumi*, *Gecarcinus lateralis*, and *Gecarcinus ruricola*), as well as large-sized marine crabs (*Carpilius corallinus* and *Mithrax* sp.). Remains of the land hermit crab (*Coenobita clypeatus*) were also found in abundance. In addition, remains of sea urchins (*Echinidae*) were also found, most of which could be identified as *Echinometra lucunter*. A small, unidentified insect, found in the À l'Escalier site, was probably intrusive in the deposit.

5.4.2 Composition of the assemblages

Although in the species lists (tables A5.15-A5.44) all remains have been included, it should be noted that species not directly associated with prehistoric human consumption have been excluded from the subsequent subsistence studies made. The excluded remains consisted of recent intrusive and European species (pig, goat, European rat; insect), prehistoric intrusives (*Ameiva* sp., *Alsophis* sp., other small reptiles), human remains, some of the iguana remains from Petite Terre originating from iguana burrows, plus some of the land crab (*Gecarcinus* sp.) and land hermit crab (*Coenobita clypeatus*) remains. The crab remains posed a problem in this respect. Sometimes it was possible to identify a modern intrusion, but many intrusive crab remains may have gone unnoticed, as they closely resemble the prehistoric archaeological material. When crab remains were obviously recent, they were excluded from further calculations. If they *could* have been original, they were included in further calculations of subsistence studies.

5.4.2.1 Animal classes

Several of the larger assemblages were compared for their composition of the various animal classes. Whether one looks at the NISP%, MNI% or Weight% this table shows that mammals and birds comprised only a very small component

of the diet in all assemblages analysed (table A5.48).

Reptile remains are rare in the assemblages from La Désirade, but are somewhat more abundant on Petite Terre, which is primarily due to higher numbers of sea turtle remains in the Petite Terre sites. Sea turtles were possibly more readily available on Petite Terre than on La Désirade since Terre de Bas beaches are extensive, while La Désirade beaches consist of more isolated patches. Measurements of the thickness of the costals found at the various sites indicate that the average sea turtle eaten on Petite Terre was somewhat larger than the ones caught on La Désirade (table A5.9). This would suggest that relatively more adult sea turtles were hunted on Petite Terre. More adult female sea turtles may have been nesting on Terre de Bas during spring times compared to La Désirade. They could have easily been killed whilst laying their eggs. The only exception to this pattern seems to be the les Sables site on La Désirade where reptiles comprise a large part of the assemblage. This is, however, most likely a reflection of the collection strategies (i.e. hand- collection), favouring larger remains such as sea turtle bones against much smaller fish remains. The average size of the costals of this site (table 5.9) is, therefore, probably also artificially high.

Fish bones are most numerous in nearly all assemblages, closely followed by invertebrate remains, the only exceptions being the sites of Baleine du Sud, Les Sables, Aéroport and Petites Salines. This picture stays the same whether one looks at NISP%, MNI% or Weight%. Only for the 2/5 inch assemblage from unit 2 of the À l'Escalier site are the MNI% invertebrate remains more abundant than fish remains. However, for the 1 mm samples from the same test unit fish are clearly more abundant than invertebrates, and the difference between test unit 1 and test unit 2 of À l'Escalier as observed for the 2/5 inch material is almost absent for the 1 mm samples. This indicates that test unit 2 contained relatively more small-sized fish elements than test unit 1. The À l'Escalier invertebrates mainly consisted of large amounts of hermit crab (*Coenobita clypeatus*) remains, which may not have contributed much to the diet anyway.

There is a clear difference in the percentages of fish relative to invertebrates in the various assemblages when one compares the NISP% and Weight% on the one hand, and MNI% on the other. For NISP% and Weight%, fish remains outnumber invertebrate remains by a factor 2 to 3, whilst the difference for MNI% is in the order of a factor 1.5. This is caused by the higher number of elements usually identified *per taxon* for fish than for invertebrates, the latter often being identifiable only by their chelipeds or dactyls.

The unusual composition of the assemblages of the sites of Baleine du Sud, Aéroport and Petites Salines, in each case consisting of an overwhelming majority of

Island	Site Name	Collection method	N	Average (mm)	Standard deviation (mm)
La Désirade	A l'Escalier	2/5 inch	16	4.0	1.240
Petite Terre, T.de Bas	Est de Mouton de Bas	2/5 inch	29	5.0	1.769
La Désirade	Les Sables	Hand-collected	7	5.3	2.575
Petite Terre, T. de Haut	Pointe Sablé	Hand-collected	1	5.4	-

Table A5.9. Measurements of the thickness of sea turtle costals found in the various assemblages.

Assemblage	<i>Coenobita</i>	<i>Mithrax</i> sp.	<i>Carpilius</i>	<i>Cardisoma</i>	<i>Gecarcinus</i>	MNI
A l'Escalier, units 1 and 2: 2/5 inch	21.4%	0.9%	5.0%	2.7%	9.3%	220
A l'Escalier, units 1 and 2: 1 mm	14.2%	0.8%	0.8%	1.6%	15.7%	127
Est de M. de Bas, units 1 and 2	3.4%	0.8%	0.8%	12.7%	14.6%	118
Site du Phare	2.1%	-	2.1%	-	12.5%	48
Baleine du Sud	6.1%	-	-	-	66.7%	33
Petites Salines	30%	6.7%	6.6%	23.3%	10%	30

Table A5.10. Crab species (percentages of the total MNI as calculated for the assemblages).

invertebrate remains cannot readily be explained. The observed differences may reflect the different types of deposits encountered in these sites. The relatively low sample sizes of the three assemblages may also have partly added to these differences. Furthermore, many of the land crab and land hermit crab remains found at these sites may have been recent intrusives, not recognisable as such.

5.4.2.2 Crab remains

Marine crabs, including *Mithrax* sp. and *Carpilius corallinus*, generally constitute only a small portion of the assemblages within the crab remains identified (table A5.10). The largest land crab, *Cardisoma guanhumi*, is only sparsely represented at the À l'Escalier site on La Désirade, whilst the Est de Mouton de Bas site on Petite Terre yielded a fairly large number of remains of this land crab. This may be related to the location of Est de Mouton de Bas, very close to salinas, where these crabs could have been found in large numbers. The total absence of remains of this crab at the two other sites on Petite Terre can also be seen in this light. Both sites, Baleine du Sud and Site du Phare, are located at a fair distance from any swampy area. The other land crabs, the two species of *Gecarcinus*, including *Gecarcinus ruricola* and *Gecarcinus lateralis*, are relatively well represented at all sites. Similarly, remains of the land hermit crab, *Coenobita*

clypeatus, are also relatively well represented at most sites. There is, however, a striking difference in the composition of the 2/5 inch and 1 mm samples from À l'Escalier in this respect. In the 1 mm samples both the land hermit crab and the *Gecarcinus* remains are well represented, in near-equal numbers, but in the 2/5 inch samples *Coenobita* remains clearly outnumber *Gecarcinus* remains. The high number of *Coenobita* remains in the 2/5 inch samples is difficult to explain, since the remains of *Coenobita* and *Gecarcinus* are all generally fairly small, and would, therefore, have been expected in similar numbers in the 2/5 inch samples as well.

5.4.2.3 Fish remains

A very consistent pattern can be observed in the fish remains (table A5.11). Just a few fish families make up the bulk of the fish remains. Moreover, there seems to be a consistent pattern in that the same fish families are repeatedly the most abundant in the various assemblages. Parrotfish (*Scaridae*) is clearly the most abundant of the various fish families in the 2/5 inch-screened assemblages, closely followed by surgeonfish (*Acanthuridae*) and triggerfish (*Balistidae*). These three fish families account for 58.9% of the fish remains (by MNI) in the 2/5 inch samples of the À l'Escalier site, for 52.8% in the 2/5 inch samples of the Est de Mouton

Assemblage	<i>Scaridae</i>	<i>Acanthuridae</i>	<i>Balistidae</i>	<i>Serran.</i>	<i>Clupeidae</i>	MNI
A l'Escalier, units 1 and 2: 2/5 inch	27.3%	18.4%	13.2%	8.9%	-	111
Est de M. de Bas, units 1 and 2: 2/5 inch	33.6%	(6.4%)	12.8%	9.4%	-	61
Site du Phare, 2/5 inch sample	37.2%	11.4%	8.6%	8.6%	-	35
A l'Escalier, units 1 and 2: 1 mm	10.0%	25.9%	(5.7%)	(5.7%)	10.0%	69

Table A5.11. The abundance of the most common fish families in the four largest assemblages (percentages of the total MNI of fish in the assemblages). Considered common are those families with a MNI% of 8 or more; lower MNI-percentages are in brackets.

de Bas site, and for 57.2% in the 2/5 inch samples of the Site du Phare, and for 41.6% in the À l'Escalier 1 mm sample. Groupers (*Serranidae*) are also fairly common. Other fish families that are moderately common (*i.e.* a MNI% of 4-8) in most 2/5 inch-screened assemblages are *Carangidae*, *Lutjanidae* and *Labridae*.

Whilst the composition of the fish families between the 2/5 inch-screened assemblages of À l'Escalier on La Désirade and Site du Phare and Est de Mouton de Bas on Petite Terre are surprisingly similar, there are some striking differences with the 1 mm assemblage from À l'Escalier. These differences can be fully attributed to differences in collection strategies. Not surprisingly, the generally small-sized surgeonfish are much more abundant in the 1 mm samples than in the 2/5 inch À l'Escalier assemblages. Furthermore, herring-like fish (*Clupeidae*) are only found in these 1 mm samples, albeit fairly abundantly; the remains of these small schooling fish are too small to be recovered in the 2/5 inch screens.

5.4.3 Resource exploitation

In order to further analyse the assemblages a distinction can be made between those taxa that were taken from the sea, those that were hunted on land and those from an unknown environment (table A5.12). The results can shed light on the main focus for food procurement activities.

The terrestrial component is in each case almost entirely composed of invertebrates, while terrestrial vertebrate species comprise only a small proportion of the assemblages (table A5.13). Most taxa consumed were rather obtained from a marine environment, whether one looks at NISP%, MNI%, or Weight%. A slight difference can, however, be observed between NISP% and Weight% on the one hand and MNI% on the other, with MNI% being somewhat lower on average for marine taxa. This last difference is primarily caused by the difference in numbers of identified elements per taxon between fish and invertebrates, as explained above.

Interestingly, when comparing three of the largest assemblages, including the samples from À l'Escalier and Est de Mouton de Bas, by MNI, the relative proportions of terrestrial and marine taxa in the diet are virtually identical. This similarity may reflect a similar use of the environment and/or similar cultural affinities between the people living on La Désirade and those on Petite Terre. In order to study whether the actual proportions of terrestrial and marine meat in the diet are also similar between these assemblages, one would have to convert the quantified data into edible meat weight. This, however, is beyond the scope of this study.

5.4.3.1 Marine environments

More can be learned when further dividing the marine component on the basis of the various environments where the identified taxa are most commonly found (tables A5.45 and A5.49). Following divisions by Wing (1996), the taxa were grouped into inshore, reef, and offshore or pelagic. The reef fish were further divided into carnivorous species on the one hand, and omnivorous species or herbivores on the other.

The offshore habitat is quite insignificant in all assemblages, suggesting that people preferred to stay relatively close to the shore when fishing (table A5.49). However, the offshore component is somewhat larger for the sites on Petite Terre than for À l'Escalier on La Désirade. Tunas (*Scombridae*) make up most of the offshore component; they are virtually absent in the La Désirade assemblages. Perhaps the slightly smaller reefs surrounding Petite Terre (Bouchon *et al.* 1995) compared with the reefs around La Désirade forced the people on Petite Terre to fish somewhat more in pelagic waters as well.

Furthermore, it is clear that reef fish constitute the bulk of the marine taxa in all assemblages analysed. Considering MNI%, the proportion of reef carnivorous fish versus reef omnivorous and herbivorous fish remains fairly constant between the various assemblages, with the reef

	NISP%			MNI%			Weight%		
	Terr.	Marine	Unkn.	Terr.	Marine	Unkn.	Terr.	Marine	Unkn.
La Désirade:									
À L'Escalier, units 1 and 2, 2/5 inch	11.4%	77.5%	11.1%	39.1%	60.0%	0.9%	10.7%	82.0%	7.2%
À L'Escalier, unit 1, 2/5 inch	8.3%	81.7%	10.1%	30.1%	69.1%	0.7%	7.2%	86.6%	6.2%
À L'Escalier, unit 2, 2/5 inch	20.7%	65.2%	14.1%	54.4%	44.3%	1.3%	22.6%	66.7%	10.8%
Les Sables, 2/5 inch	30.3%	65.5%	4.2%	48.4%	51.6%	0.0%	26.6%	72.7%	0.7%
Aéroport, 2/5 inch	55.3%	14.4%	30.2%	80.4%	19.6%	0.0%	54.3%	29.3%	16.4%
La Désirade:									
À L'Escalier, units 1 and 2, 1 mm	2.7%	89.4%	7.9%	38.9%	61.1%	0.0%	15.4%	76.8%	7.8%
À L'Escalier, unit 1, 1 mm	2.3%	90.2%	7.5%	36.6%	63.7%	0.0%	12.9%	79.0%	8.1%
À L'Escalier, unit 2, 1 mm	5.0%	84.4%	10.5%	45.7%	54.3%	0.0%	23.9%	69.3%	6.8%
Petite Terre:									
Baleine du Sud, 2/5 inch	58.9%	4.0%	37.1%	77.4%	22.6%	0.0%	71.2%	15.2%	13.6%
Site du Phare, 2/5 inch	11.3%	80.6%	8.2%	20.8%	77.1%	2.1%	7.4%	89.2%	3.3%
Est de M. de Bas, units 1 + 2, 2/5 inch	19.6%	66.2%	14.2%	39.1%	59.1%	1.7%	25.7%	67.6%	6.7%
Est de Mouton de Bas, unit 1, 2/5 inch	10.4%	85.5%	4.1%	27.3%	72.7%	0.0%	4.8%	93.6%	1.6%
Est de Mouton de Bas, unit 2, 2/5 inch	23.5%	57.9%	18.6%	46.5%	50.7%	2.8%	38.6%	51.6%	9.8%
Pointe des Chateaux:									
Petites Salines, 2/5 inch	55.6%	3.9%	40.5%	79.3%	20.7%	0.0%	62.1%	13.7%	24.2%

Table A5.12. Composition of the larger assemblages (with an MNI > 28).

omnivores and herbivores clearly dominating. Carnivorous fish may have been caught with hook and line while fishes with all three modes of feeding may be caught in traps set in or near the reefs (Wing 1996). The south coast of la Désirade is composed of an extensive fringing reef. A similar maritime environment is present in the area between the two islands of Petite Terre, Terre de Bas and Terre de Haut (Bouchon *et al.* 1995). The predominance of reef omnivores and herbivores, the similar proportions of reef omnivores/herbivores versus reef carnivores, as well as comparable reef environments surrounding both islands, together suggest that similar fishing techniques were employed by the inhabitants of the two islands. It is likely that most fish were caught with the aid of traps.

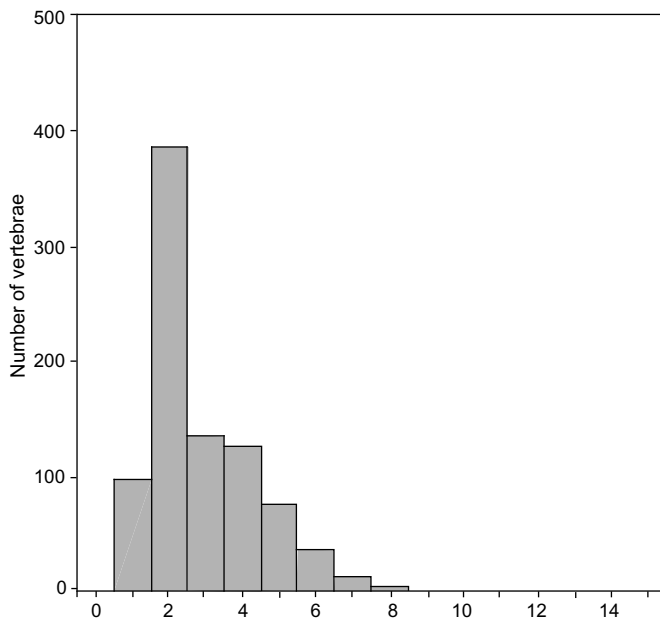
The difference between the 1 mm assemblage and the 2/5 inch assemblage from À l'Escalier is mainly an increase in the proportion of inshore taxa in the 1 mm assemblage, when comparing by MNI%, at the cost of reef omnivores/herbivores. This is caused by the relative

abundance of small schooling species (Clupeidae), which were only recovered thanks to a smaller mesh size. These small species may have been caught with the aid of nets in the inshore waters.

Measurements were taken of fish vertebrae and atlases in order to obtain more information about the most likely fishing strategies employed. The measurement taken is the greatest medial-lateral breadth of the centrum, as described by Morales and Rosenlund (1979). The results are presented in tables A5.46 and A5.47. Figures A5.2-A5.4 present the size distribution of the vertebrae found at À l'Escalier and Est de Mouton de Bas. The measurements show that the majority of the fish are within a rather restricted size range. Therefore it is likely that most fish were caught with the aid of traps (Wing and Reitz 1982). However, when comparing the graphs of the measurements from the 1 mm and 2/5 inch screens from À l'Escalier it is also clear that the majority of the fish caught were considerably smaller than suggested by the 2/5 inch screen distribution. Therefore,

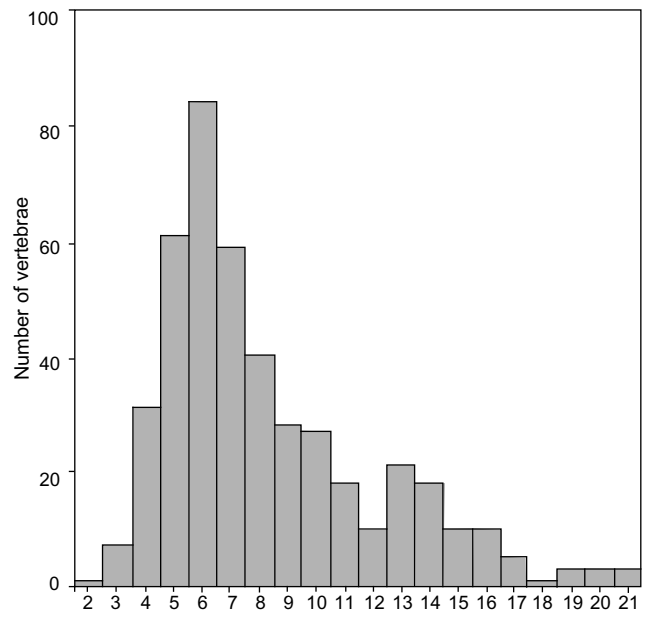
Assemblage	Collection method	NISP%	MNI%	NISP	MNI
A l'Escalier, units 1 and 2	2/5 inch	2.7	5.6	2715	220
A l'Escalier, units 1 and 2	1mm	0.3	6.3	10,851	127
Site du Phare	2/5 inch	1.9	6.3	319	48
Est de Mouton de Bas, units 1 and 2	2/5 inch	3.5	7.8	1132	118

Table A5.13. Terrestrial vertebrates as a percentage of the total NISP and MNI in the largest assemblages.



Std. Dev = 1.73
 Mean = 2.8
 N = 875

Fig. A5.2. Size distribution (mm) of the À l'Escalier fish vertebrae (1 mm).



Std. Dev = 3.76
 Mean = 8.3
 N = 440

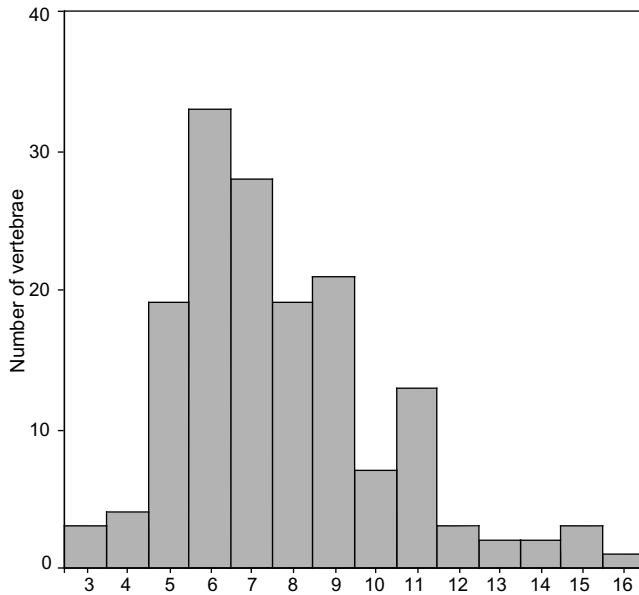
Fig. A5.3. Size distribution (mm) of the À l'Escalier fish vertebrae (2/5 inch).

many of the fish may not necessarily have been caught in traps, but many smaller specimens may have been caught in the inshore waters instead, as many of the immature reef fish species can be found in the inshore waters as well.

5.4.4 Taphonomical considerations

5.4.4.1 Collection methods

Some of the influences of the collection method on the species



Std. Dev = 2.53

Mean = 7.7

N = 158

Fig. A5.4. Size distribution (mm) of the Est de Mouton de Bas fish vertebrae (2/5 inch).

composition of the assemblages were already mentioned when the results from the 2/5 inch screens were compared with those of the 1 mm screen. When comparing the results from the 1 mm samples with the 2/5 inch material from À l'Escalier on La Désirade, some further observations were made. First of all, there was a huge difference in the number of retrieved elements per m³ excavated. While the 2/5 inch screens contained 566 faunal remains per m³ on average, the 1 mm screens contained 10,851 remains in only 20 litres. Although the 1 mm screens contained relatively more unidentifiable material, the composition of the assemblage was clearly different from the 2/5 inch material, as has been shown above. In addition, for most fish taxa a substantially larger number of different skeletal elements was recovered from the 1 mm screens in comparison with the 2/5 inch screens.

Unfortunately, such differences in the composition of the assemblages between the 1 mm and the 2/5 inch remains suggest that the interpretations made in this study based on the 2/5 inch remains may perhaps have to be

adjusted in future if more remains, screened over very small mesh sizes, will be analysed from any of the sites in the studied micro-region.

5.4.4.2 Burning

The incidence of burning on the faunal remains was generally rather low throughout all assemblages. Of all remains analysed, a total of 1027 fragments (or 6.3%) were fully or partially burned. Only 1.2% of the mammal bones was burned, together with 1.8% of the bird bones, 3.1% of the reptile bones, mainly consisting of *Cheloniidae* bones (3.2% burned; NISP=282), and 3.0% of the invertebrate remains, particularly *Carpilius corallinus* (9.3% burned; NISP=43) and *Coenobita clypeatus* remains (7.1% burned; NISP=631). Of the fishes, 7.2% was burned, mainly accounted for by unidentified fish remains (8.1% burned; NISP=9599), followed by *Balistidae* (6.6%; NISP=792) and *Acanthuridae* (5.4%; NISP=651). Most other fish families had, however, a relatively low burn rate (ca. 3%).

When comparing the amount of burning between the sites with most remains, the sites of À l'Escalier and Est de Mouton de Bas, it is clear that the amount of burning is very low in both assemblages for the 2/5 inch screened material: 2.2% for À l'Escalier and 4.5% for Est de Mouton de Bas. The 1 mm À l'Escalier material showed somewhat more burning: 7.3%. Since burning of bone usually results in a higher fragmentation of the remains, this slightly higher percentage is not surprising.

In all assemblages most of the burned faunal remains were either dark brown, partially blackened, or entirely blackened. These types of burning could have occurred during roasting or grilling of the meat (Lyman 1994). Relatively few faunal remains showed signs of having reached higher temperatures, which may occur when bones are disposed of in a fire, usually showing up as blueish-grey or white in colour (Nicholson 1993; Steadman *et al.* 1984^b; Stiner *et al.* 1995).

5.4.4.3 Pathologies

Pathologies were very rare in any of the assemblages. A few fish remains showed cases of hyperostosis (table A5.14). Furthermore, the same triggerfish bone with hyperostosis from À l'Escalier also showed a healed fracture. One cheliped of a *Cardisoma guanhumi* land crab, found in level 7 of unit 2 at Est de Mouton de Bas, also had a healed fracture.

5.4.4.4 Modified bone

Cut marks were very rarely seen on the remains. One À l'Escalier *Dasyprocta* sp. femur had a possible cut mark, as did one Les Sables *Serranidae* bone, and one Est de Mouton de Bas *Osteichthyes* bone and one Aéroport

Site Name	Taxon	N of bones with hyperostosis
A l'Escalier	<i>Balistidae</i>	1
A l'Escalier	<i>Osteichthyes</i>	7
Site du Phare	<i>Osteichthyes</i>	1
Est de Mouton de Bas	<i>Osteichthyes</i>	8
Les Sables	<i>Osteichthyes</i>	4
Name Unknown	<i>Osteichthyes</i>	2

Table A5.14. Occurrence of fish bones with hyperostosis in the various assemblages.

Osteichthyes bone. One xiphiplastron of a rather large sea turtle (*Cheloniidae*) from Pointe Sablé was chopped at the proximal end. Furthermore, there were some fish remains with possible or clear butchering marks. The distal end of a first dorsal spine of *Balistidae* in Site du Phare was chopped off, and a possible similar chop was noticed on one first dorsal spine of *Balistidae* in À l'Escalier and Pointe Sablé.

A few pieces of bones were worked: the most interesting piece has already been mentioned, probably made from manatee (*Trichechus manatus*) bone, from the site on Petite Terre of which the name remains unidentified and which is possibly Pointe Sablé (fig. A5.5). The piece of worked bone resembles in shape, size and bone density the lateral end of an adult manatee rib. Just before the final tip the rib is extremely dense, and almost perfectly round in shape. Manatee ribs are composed entirely of compact lamellar bone (Reitz and Wing 1999:58), which makes them very suitable to shape into almost any form.

Three small pieces of sea turtle costals were also worked. A piece from the Est de Mouton de Bas site and one from the unknown site on Petite Terre (fig. A5.6) are part of a similar *spatula*-shaped piece of bone. Similar, more complete objects have previously been found at Anse à la Gourde on

Guadeloupe (Grouard 1999), Hillcrest (Wing 2000:151) and Silver Sands (Drewett 1991:135, 362) on Barbados, the Hichmans site on Nevis (Nokkert 2002), Anse des Pères on St. Martin and Golden Rock on St. Eustatius (Nokkert 1999^a:120-121). Its function is unknown, but a function as large scraper, perhaps used during the manufacture of manioc cakes on griddles, is suggested here. A piece from Les Sables is the greater part of what was probably originally a small square bone inlay.

5.5 DISCUSSION

The analysis of the assemblages from La Désirade and Petite Terre has shown that the types of animals exploited and their relative contribution to the diet was remarkably similar between the various sites on these two islands, at least for the sites with large enough samples. This pattern was the same whether analysing the data based on NISP, MNI or Weight. Furthermore, no evidence could be found of any specialisation for any of the analysed assemblages. In addition, even when there was enough material available of a site to carry out an intra-site analysis, no differences

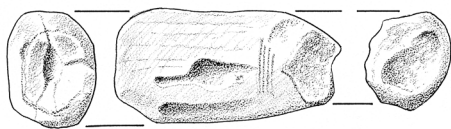


Fig. A5.5. Worked manatee rib fragment.

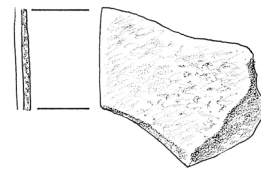


Fig. A5.6. Worked sea turtle costal.

could be observed indicating the existence of special-activity areas within a site. The remains from the excavated midden deposits, therefore, probably represent a mixture of refuse from every-day activities. As such, based on the data from the faunal remains, the sites (at least those with large samples) can most likely be interpreted as ordinary settlement sites.

The numbers of mammal remains were very low at all sites. This is most likely a reflection of the environmental constraints, with small island sizes and limited environmental diversity resulting in a low diversity and low overall numbers of mammals on these islands. Due to the very small size of La Désirade and Petite Terre these islands may never have supported large numbers of terrestrial animal populations. Once the first Amerindians settled on these islands, the existing animal populations were therefore probably very vulnerable to rapid depletion. It is likely that deposits of these first settlers are now entirely destroyed by cultural or natural changes on the islands (*cf.* De Waal this volume), and excavated deposits seem to represent a period long after the original animal populations had already been depleted. Although the Amerindians introduced agoutis to the islands as an extra protein supply, agouti remains were very limited in number in all archaeological deposits, indicating that they were not eaten very regularly.

Bird remains were also very rare at the sites. Although a limited environmental diversity probably would have resulted in a narrow range of available bird species, their actual numbers may, however, have been rather large. Large flocks of migratory bird species may, for instance, have been attracted to the salt ponds on the islands (*cf.* ONF 1994). The absence of large numbers of bird remains in the various assemblages may therefore be a reflection of cultural choices or a lack of appropriate hunting technologies.

Reptile remains were scarce at the La Désirade sites but somewhat more abundant at the Petite Terre sites. On both islands the number of iguana remains was very low. This is most likely a result of cultural choices, as the present large populations of *Iguana delicatissima* on Petite Terre and Désirade show that these islands could easily have sustained large populations of these animals in prehistoric times as well. The slightly more intensive use of reptiles by the inhabitants of the Petite Terre sites is almost fully accounted for by remains of sea turtles. Although this may suggest that the inhabitants of Petite Terre were somewhat specialised in hunting sea turtles, the higher abundance of these sea turtle remains at the Petite Terre sites is most likely a reflection of the difference in the natural environment between La Désirade and Petite Terre, with the latter having relatively much longer sandy beaches along its coast, which are ideal sea turtle nesting grounds.

Somewhat more important in the diet of the inhabitants of the various sites examined were crustaceans. Of these, marine crabs were only rarely encountered. Most crustacean remains comprised land crabs and land hermit crabs. The observed differences in the relative contribution of different crab species to the diet between the La Désirade and Petite Terre sites, especially the relative importance of the mangrove crab in the diet, are most likely a reflection of differences in the size of the prehistoric populations of these animals, resulting from differences in present suitable environments.

At all sites fish were clearly the most commonly consumed resource. When examining the types of fish exploited there were once more clear similarities between the various sites analysed, with only a few fish families accounting for the majority of fish consumed. Furthermore, the composition of the types of fish exploited showed that the sites were all very similar in respect to the location where the fish were most likely caught. Offshore fishing was, in all instances, very rare. Fishing on the coral reefs, closely followed by inshore fishing, was clearly most commonly carried out. Small schooling inshore fish were most likely caught with nets, while most fish on the coral reefs were almost certainly caught in traps set near the reefs. The latter is clear from the predominance of herbivore and omnivore fish in the assemblage, fish that cannot be caught with hook and line, and would normally not have been caught with the aid of nets, since these are very impractical over reef areas. Today, fish such as parrotfish and surgeonfish are therefore typically caught in traps (Wing 1991:363). The relatively narrow range of the fish vertebrae indicated that most fish were likely caught in fish traps, although the distribution of the fish vertebrae measurements from the 1 mm samples indicated that a considerable amount of inshore fishing may also have taken place.

Although the presence of a wide variety of taxa in the assemblages shows that the inhabitants of the sites used most animals available to them, it is clear that the primary focus of the Amerindian food procurement strategies was maritime. Only land crabs were regularly exploited, other terrestrial animals only sporadically. It seems that the Amerindians chose to settle close to where their food was most densely present: the location of all the larger habitation sites with large enough samples is on or very close to the shore. From here they primarily exploited the environments directly near the sites: the fringing reefs and the shallow waters between the reefs and the land.

The very similar composition of the various assemblages, as well as the likely similar fishing strategies employed suggests that there were strong cultural affinities

between the people living on La Désirade and Petite Terre, resulting in a very similar use of their local environments. Unfortunately, the assemblages from Pointe des Châteaux were all either too small or too much disturbed by post-depositional processes to be able to compare these assemblages with the assemblages from the other islands.

However, zooarchaeological work carried out for the Anse à la Gourde site on the western end of Pointe des Châteaux, gives some indications as to the prehistoric situation on this land mass (Grouard 1997, 1999, 2001). The material identified, sieved over a 2.8 mm screen, originated from the Early Ceramic B and Late Ceramic A (Troumassoid) occupation of the site. Similar to the largest sites on La Désirade and Petite Terre, À l'Escalier and Est de Mouton de Bas, both the Early Ceramic B and Late Ceramic A layers of the Anse à la Gourde assemblage were dominated by fish remains. The Early Ceramic B levels, however, additionally showed a somewhat higher percentage of mammals, primarily rice rats, as well as many land crabs. The larger landmass of Pointe des Châteaux (connected with the large land mass of Guadeloupe's Grande-Terre) may have sustained relatively large populations of terrestrial animals for much longer in comparison to the smaller islands nearby, although it seems that eventually these resources would also have been depleted. Remarkably, the fish families most commonly found in the Anse à la Gourde assemblage are the same ones which are most abundant in the assemblages from La Désirade and Petite Terre: parrotfish, surgeonfish and triggerfish. The Early Ceramic B layers furthermore yielded relatively high numbers of jacks (*Carangidae*) and grunts (*Haemulidae*) as well.

The analysis of the molluscs, invertebrate and vertebrate fauna from the Early Ceramic B and Late Ceramic A Anse Petite Rivière site on La Désirade, the only other site in the studied area for which faunal remains have been analysed to date, also indicated that the subsistence was based mainly on marine resources, especially reef and estuarine fish (De Waal 1996^b). Terrestrial species were poorly represented here as well. The $\delta^{13}C$ and $\delta^{15}N$ signatures of bone collagen from three skeletons from the Anse Petite Rivière site confirmed the zooarchaeological data in that the dietary protein was based primarily on marine resources. The signature was more marine than any other Lesser Antillean site for which bone collagen signatures have been analysed (Stokes 1998). In fact, the collagen values were quite similar to those of the Amerindian populations that lived in the Bahamas, who were subsisting on an almost entirely marine diet. Since both La Désirade and the Bahamas are composed of similar dry, low-lying limestone landscapes with very few available terrestrial animals, in both instances the natural environment clearly influenced the choice of prey species

to a high degree.

When comparing the data from the sites within the studied micro-region with other sites on Guadeloupe and other Lesser Antillean islands, it is clear that the sites in the micro-region do indeed show an exceptionally high reliance on marine resources. Although set in a relatively similar environment as that found on Pointe des Châteaux, Early Ceramic A deposits from the Morel site on the north-eastern coast of Grande-Terre (Guadeloupe), for instance, showed a much higher reliance on terrestrial resources, especially on terrestrial crustaceans, although terrestrial vertebrate remains were also more abundant (Nokkert 1999^b).

Assemblages from other low-lying limestone islands in the wider region, with similarly limited prehistoric terrestrial animal populations, such as Barbados (Wing 1991, 2000) and Barbuda (Watters *et al.* 1984) nevertheless did not show such an extreme dependence on marine resources as was seen in this study. Compared with such sites, the extremely low numbers of terrestrial vertebrate remains in the sites in the Pointe des Châteaux, La Désirade and Petite Terre micro-region are especially striking.

On many Lesser Antillean islands a general shift has been noted from early sites with a high terrestrial component in the diet to later sites with primarily marine resources (e.g. Wing 2001^b). The differences in the importance of the terrestrial component in the diet between the Early Ceramic B deposits of the Anse à la Gourde site and the Morel site on the one hand and the generally much later sites from the micro-region on the other hand can be seen in this light. The shift to a more marine diet may be related to depletion of the terrestrial resources due to a gradual increase in the population on the islands.

In addition, on many islands supposed overexploitation of the reef fish resulted in a gradual shift from predominantly reef fish towards inshore and pelagic species, especially tuna fish (Wing 2001^{a-b}). Since tuna fish was only rarely encountered in the assemblages of the studied micro-region it can be assumed that such extreme overexploitation of the local reef fish populations did not occur near the sites in our micro-region. Possibly the size of the human populations never reached such high numbers as has been estimated for some of the other islands of the region.

However, another shift seen on many of the Lesser Antillean islands is in the type of reef fish most commonly caught, a shift over time from predominantly reef predators to reef prey (Wing and Wing 2001). As the sites in the studied micro-region show a predominance of the reef prey species, reef herbivores and omnivores, it can be assumed that such a shift may have occurred earlier in the habitation

of the islands in the micro-region for which no site deposits have been encountered. Therefore it can be postulated that the earliest inhabitants of these islands, of whom we did not find archaeological evidence, have had a significant impact on the reef populations.

The largely similar natural environments both on La Désirade, Petite Terre and Pointe des Châteaux, as well as in their surrounding waters, may have influenced the similarities in the assemblages to a certain degree. Nevertheless, the choice of food procurement within certain environments, as well as the likely identical fishing strategies employed in these environments, can all be seen as cultural choices. Since all three islands within the micro-region have a very dry climate and relatively limited food resources on land, it has been thought that the islands would not have been very inviting for pre-Columbian occupation. Even so, this work has shown that the Amerindians had a precise knowledge of their environments and used their available technologies in the most effective way, obtaining high returns with relatively little input. Previous work on the Anse Petite Rivière site on La Désirade and the Anse à la Gourde site on Pointe des Châteaux has also shown that the local environment provided enough food to sustain sizeable village populations (De Waal 1996^b; Grouard 1997, 1999, 2001).

As a final note, it has been suggested that Petite Terre could not have been inhabited permanently in prehistoric times due to a lack of suitable drinking water. However, the results of this study show no indication that the sites on Petite Terre were used as temporary camping places for special activities only. The density of the Petite Terre middens, the general nature of the faunal remains in the middens, the very strong similarities between the assemblages from La Désirade and Petite Terre, as well as the identical cultural choices in the environmental exploitation between the inhabitants of these islands strongly suggest that the sites on Petite Terre were permanently inhabited. The study of the other artefacts from the Petite Terre sites also could not bring to light any specialisation at these sites (De Waal this volume). It can, therefore, be assumed that people who had a very precise knowledge of their environments and knew how to survive in seemingly inhospitable conditions permanently inhabited the small Petite Terre islands.

5.6 CONCLUSION

Clear patterns could be observed in the prehistoric exploitation of the environment within the micro-region of Pointe des Châteaux, La Désirade and Petite Terre. Due to a

very limited range of available terrestrial animal resources, the focus of the inhabitants of the sites in this region was clearly maritime. Based on a virtual absence of terrestrial vertebrates and a predominance of reef herbivores and omnivores instead of reef carnivores in all assemblages it is likely that the studied assemblages represent a period when the environment as well as the terrestrial and marine animal populations had already been seriously affected and altered by generations of ceramic-producing groups living on these islands. The remains of the pre-ceramic and earliest ceramic occupants, who may have encountered a rather pristine environment, have not been found in the studied micro-region and have most likely been destroyed by natural and cultural events (*cf.* De Waal this volume).

The sites yielding a large number of remains – exclusively larger settlements with relatively extensive midden areas – were, without exception, all located very close to the shore. These settlements were clearly positioned to ensure the best access to those natural environments that the inhabitants valued and exploited most: the fringing reefs and the inshore waters between these reefs and the coastline. It can, therefore, be postulated that the choice for the location of such large settlements was dictated by the need for proximity to those environments where relative dense fish populations could be encountered.

This exploitation pattern can be further expanded to include the fishing strategies employed. Based on the types of fish species found and their relative contributions to the diet, as well as the narrow size range of the commonly exploited taxa, it seems very likely that the majority of the fish consumed were obtained through the setting of traps near the reefs as well as the use of nets in the inshore shallow waters. Both of these techniques give relatively high returns for little input.

The maritime focus of the Amerindians in this micro-region is made even more clear by the huge similarities in the composition of the various assemblages studied. Thus, it is very likely that there was a very intensive contact between these groups, whereby, for instance, information about the best fishing techniques was readily exchanged between the local fishermen. Due to the close similarities in the composition of the various assemblages it can be postulated that the Amerindians of this micro-region all had some cultural affinity, and were perhaps part of a regional hierarchical site system.

This project has greatly contributed to the general knowledge of pre-Columbian Amerindian subsistence strategies within the Lesser Antillean region, since a large sample resulting from a micro-regional project has been studied. Most zooarchaeological research carried out in the Caribbean

to date usually considered archaeological sites as isolated units, with a few notable exceptions (Wing 1996; Kozuch and Wing nd.). This study can therefore be regarded as indicative of the potentials within the Caribbean area for studying faunal remains on a regional scale. Zooarchaeology is one of the very few archaeological ‘tools’ to obtain a better understanding of the way Amerindians lived within, and viewed their own natural environments, and how they exploited and changed this environment.

Although the consistent use of a similar-sized mesh during the excavations in 1998 and 1999 proved to be very useful for inter-site comparisons, future research should take into account the results from the differences in the assemblages sieved over 2/5 inch and 1 mm screens. Some important differences could, for instance, be noticed in the composition of the various fish taxa, with more smaller species, and more inshore species present in the 1 mm material. The reconstruction of the exploitation of the ecological zones and the interpretations of the fishing technologies employed as presented in this study, may thus be more refined with future research using smaller mesh screens for faunal remains recovery.

As the survey and excavations in the micro-region have shown, there are only very few sites within the studied micro-region that show little post-depositional disturbance and an intact stratigraphy. Except for Petite Terre, which is now a nature reserve, modern construction work also threatens the sites studied here. Only the sites with (partly) intact stratigraphies, such as À l’Escalier and Aéroport, are sites that may hold important clues to the environmental history of the islands. It is therefore of utmost importance that the very few undisturbed sites remaining in the micro-region should obtain full protection measures, in order to be able to continue studying how humans have interacted with and lived in these very special environments in the past.

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Table. A5.15. Species list of À l’Escalier (unit 1, 2/5 inch collection); (next page).

Taxon	Intrusive ⁶	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Homo sapiens</i>	*	2/5 inch	1	0.0%	1	0.7%	6	0.4%
<i>Dasyprocta</i> sp.		2/5 inch	26	1.3%	3	2.2%	16	1.2%
Unidentified bird		2/5 inch	21	1.0%	2	1.4%	2	0.1%
<i>Cheloniidae</i>		2/5 inch	82	4.0%	2	1.4%	164	12.0%
<i>Iguana</i> sp.		2/5 inch	9	0.4%	1	0.7%	7	0.5%
Unidentified small reptile	*	2/5 inch	1	0.0%	1	0.7%	1	0.1%
<i>Carcharhinus</i> sp.		2/5 inch	1	0.0%	1	0.7%	2	0.1%
<i>Belonidae</i>		2/5 inch	1	0.0%	1	0.7%	1	0.1%
<i>Holocentridae</i>		2/5 inch	3	0.1%	1	0.7%	2	0.1%
<i>Epinephelus</i> sp.		2/5 inch	4	0.2%	2	1.4%	9	0.7%
<i>Mycteroperca</i> sp.		2/5 inch	2	0.1%	1	0.7%	8	0.6%
<i>Serranidae</i>		2/5 inch	107	5.3%	4	2.9%	148	10.9%
<i>Priacanthidae</i>		2/5 inch	1	0.0%	1	0.7%	4	0.3%
<i>Carangidae</i>		2/5 inch	65	3.2%	7	5.0%	36	2.6%
cf. <i>Carangidae</i>		2/5 inch	1	0.0%	0	0.0%	2	0.1%
<i>Lutjanidae</i>		2/5 inch	9	0.4%	1	0.7%	11	0.8%
<i>Haemulon</i> sp.		2/5 inch	1	0.0%	1	0.7%	2	0.1%
<i>Haemulidae</i>		2/5 inch	12	0.6%	2	1.4%	8	0.6%
<i>Sparidae</i>		2/5 inch	4	0.2%	2	1.4%	11	0.8%
<i>Sphyraenidae</i>		2/5 inch	7	0.3%	1	0.7%	17	1.2%
<i>Labridae</i>		2/5 inch	16	0.8%	6	4.3%	14	1.0%
cf. <i>Labridae</i>		2/5 inch	2	0.1%	0	0.0%	1	0.1%
<i>Scarus</i> sp.		2/5 inch	80	3.9%	8	5.8%	134	9.8%
<i>Sparisoma</i> sp.		2/5 inch	80	3.9%	16	11.5%	95	7.0%
<i>Scaridae</i>		2/5 inch	29	1.4%	0	0.0%	16	1.2%
<i>Acanthuridae</i>		2/5 inch	109	5.4%	11	7.9%	28	2.1%
<i>Balistidae</i>		2/5 inch	28	1.4%	11	7.9%	28	2.1%
<i>Ostraciidae</i>		2/5 inch	2	0.1%	1	0.7%	2	0.1%
<i>Diodontidae</i>		2/5 inch	1	0.0%	1	0.7%	6	0.4%
<i>Osteichthyes</i>		2/5 inch	969	47.7%	2	1.4%	355	26.1%
<i>Vertebrata</i> , unidentified		2/5 inch	34	1.7%	0	0.0%	14	1.0%
<i>Echinometra lucunter</i>		2/5 inch	2	0.1%	1	0.7%	2	0.1%
<i>Coenobita clypeatus</i>		2/5 inch	80	3.9%	26	18.7%	36	2.6%
cf. <i>Mithrax</i> sp.		2/5 inch	3	0.1%	1	0.7%	4	0.3%
<i>Carpilius corallinus</i>		2/5 inch	28	1.4%	9	6.5%	51	3.7%
cf. <i>Carpilius corallinus</i>		2/5 inch	7	0.3%	0	0.0%	11	0.8%
<i>Cardisoma guanhumi</i>		2/5 inch	5	0.2%	2	1.4%	11	0.8%
<i>Gecarcinus lateralis</i>	(*)	2/5 inch	4	0.2%	3	2.2%	3	0.2%
<i>Gecarcinus</i> sp.		2/5 inch	21	1.0%	5	3.6%	19	1.4%
<i>Gecarcinidae</i>		2/5 inch	3	0.1%	0	0.0%	5	0.4%
Unidentified crab species		2/5 inch	1	0.0%	1	0.7%	3	0.2%
<i>Decapoda</i>		2/5 inch	169	8.3%	0	0.0%	67	4.9%
Total			2031	100.0%	139	100.0%	1362	100.0%

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Rattus</i> sp.	*	2/5 inch	1	0.1%	1	1.2%	1	0.2%
<i>Dasyprocta</i> sp.		2/5 inch	8	1.2%	3	3.7%	7	1.7%
cf. <i>Dasyprocta</i> sp.		2/5 inch	1	0.1%	0	0.0%	1	0.2%
Unidentified bird		2/5 inch	5	0.7%	2	2.5%	4	1.0%
cf. <i>Cheloniidae</i>		2/5 inch	1	0.1%	1	1.2%	1	0.2%
<i>Iguana</i> sp.		2/5 inch	4	0.6%	1	1.2%	2	0.5%
cf. <i>Alsophis</i> sp.	*	2/5 inch	1	0.1%	1	1.2%	1	0.2%
cf. <i>Myripristis jacobus</i>		2/5 inch	1	0.1%	1	1.2%	1	0.2%
<i>Holocentridae</i>		2/5 inch	2	0.3%	1	1.2%	2	0.5%
<i>Serranidae</i>		2/5 inch	29	4.2%	3	3.7%	32	8.0%
<i>Carangidae</i>		2/5 inch	9	1.3%	2	2.5%	8	2.0%
<i>Labridae</i>		2/5 inch	3	0.4%	1	1.2%	6	1.5%
<i>Scarus</i> sp.		2/5 inch	36	5.3%	4	4.9%	49	12.2%
<i>Sparisoma</i> sp.		2/5 inch	14	2.0%	3	3.7%	18	4.5%
<i>Scaridae</i>		2/5 inch	14	2.0%	0	0.0%	11	2.7%
<i>Acanthuridae</i>		2/5 inch	74	10.8%	10	12.3%	19	4.7%
<i>Balistidae</i>		2/5 inch	10	1.5%	4	4.9%	8	2.0%
<i>Diodontidae</i>		2/5 inch	1	0.1%	1	1.2%	8	2.0%
<i>Osteichthyes</i>		2/5 inch	234	34.2%	0	0.0%	81	20.2%
Vertebrata, unidentified		2/5 inch	1	0.1%	0	0.0%	2	0.5%
cf. <i>Echinometra lucunter</i>		2/5 inch	5	0.7%	1	1.2%	3	0.7%
<i>Coenobita clypeatus</i>		2/5 inch	78	11.4%	21	25.9%	41	10.2%
cf. <i>Mithrax</i> sp.		2/5 inch	4	0.6%	1	1.2%	3	0.7%
<i>Carpilius corallinus</i>		2/5 inch	8	1.2%	2	2.5%	16	4.0%
<i>Cardisoma guanhumii</i>		2/5 inch	7	1.0%	4	4.9%	13	3.2%
<i>Gecarcinus</i> sp.		2/5 inch	34	5.0%	12	14.8%	17	4.2%
<i>Gecarcinidae</i>		2/5 inch	4	0.6%	0	0.0%	5	1.2%
Unidentified crab species		2/5 inch	2	0.3%	1	1.2%	3	0.7%
<i>Decapoda</i>		2/5 inch	93	13.6%	0	0.0%	38	9.5%
Total			684	100.0%	81	100.0%	401	100.0%

Table A5.16. Species list of À l'Escalier (unit 2, 2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Homo sapiens</i>	*	2/5 inch	1	0.0%	1	0.5%	6	0.3%
<i>Rattus</i> sp.	*	2/5 inch	1	0.0%	1	0.5%	1	0.1%
<i>Dasyprocta</i> sp.		2/5 inch	34	1.3%	6	2.7%	23	1.3%
<i>cf. Dasyprocta</i> sp.		2/5 inch	1	0.0%	0	0.0%	1	0.1%
Unidentified bird		2/5 inch	26	1.0%	4	1.8%	6	0.3%
<i>Cheloniidae</i>		2/5 inch	82	3.0%	2	0.9%	164	9.3%
<i>cf. Cheloniidae</i>		2/5 inch	1	0.0%	1	0.5%	1	0.1%
<i>Iguana</i> sp.		2/5 inch	13	0.5%	2	0.9%	9	0.5%
<i>cf. Alsophis</i> sp.	*	2/5 inch	1	0.0%	1	0.5%	1	0.1%
Unidentified small reptile	*	2/5 inch	1	0.0%	1	0.5%	1	0.1%
<i>Carcharhinus</i> sp.		2/5 inch	1	0.0%	1	0.5%	2	0.1%
<i>Belonidae</i>		2/5 inch	1	0.0%	1	0.5%	1	0.1%
<i>cf. Myripristis jacobus</i>		2/5 inch	1	0.0%	1	0.5%	1	0.1%
<i>Holocentridae</i>		2/5 inch	5	0.2%	2	0.9%	4	0.2%
<i>Epinephelus</i> sp.		2/5 inch	4	0.1%	2	0.9%	9	0.5%
<i>Mycteroperca</i> sp.		2/5 inch	2	0.1%	1	0.5%	8	0.5%
<i>Serranidae</i>		2/5 inch	136	5.0%	7	3.2%	180	10.2%
<i>Priacanthidae</i>		2/5 inch	1	0.0%	1	0.5%	4	0.2%
<i>Carangidae</i>		2/5 inch	74	2.7%	9	4.1%	44	2.5%
<i>cf. Carangidae</i>		2/5 inch	1	0.0%	0	0.0%	2	0.1%
<i>Lutjanidae</i>		2/5 inch	9	0.3%	1	0.5%	11	0.6%
<i>Haemulon</i> sp.		2/5 inch	1	0.0%	1	0.5%	2	0.1%
<i>Haemulidae</i>		2/5 inch	12	0.4%	2	0.9%	8	0.5%
<i>Sparidae</i>		2/5 inch	4	0.1%	2	0.9%	11	0.6%
<i>Sphyraenidae</i>		2/5 inch	7	0.3%	1	0.5%	17	1.0%
<i>Labridae</i>		2/5 inch	19	0.7%	7	3.2%	20	1.1%
<i>cf. Labridae</i>		2/5 inch	2	0.1%	0	0.0%	1	0.1%
<i>Scarus</i> sp.		2/5 inch	116	4.3%	12	5.5%	183	10.4%
<i>Sparisoma</i> sp.		2/5 inch	94	3.5%	19	8.6%	113	6.4%
<i>Scaridae</i>		2/5 inch	43	1.6%	0	0.0%	27	1.5%
<i>Acanthuridae</i>		2/5 inch	183	6.7%	21	9.5%	47	2.7%
<i>Balistidae</i>		2/5 inch	38	1.4%	15	6.8%	36	2.0%
<i>Ostraciidae</i>		2/5 inch	2	0.1%	1	0.5%	2	0.1%
<i>Diodontidae</i>		2/5 inch	2	0.1%	2	0.9%	14	0.8%
<i>Osteichthyes</i>		2/5 inch	1203	44.3%	2	0.9%	436	24.7%
<i>Vertebrata</i> , unidentified		2/5 inch	35	1.3%	0	0.0%	16	0.9%
<i>Echinometra lucunter</i>		2/5 inch	2	0.1%	1	0.5%	2	0.1%

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>cf. Echinometra lucunter</i>		2/5 inch	5	0.2%	1	0.5%	3	0.2%
<i>Coenobita clypeatus</i>		2/5 inch	158	5.8%	47	21.4%	77	4.4%
<i>cf. Mithrax</i> sp.		2/5 inch	7	0.3%	2	0.9%	7	0.4%
<i>Carpilius corallinus</i>		2/5 inch	36	1.3%	11	5.0%	67	3.8%
<i>cf. Carpilius corallinus</i>		2/5 inch	7	0.3%	0	0.0%	11	0.6%
<i>Cardisoma guanhumi</i>		2/5 inch	12	0.4%	6	2.7%	24	1.4%
<i>Gecarcinus lateralis</i>	(*)	2/5 inch	4	0.1%	3	1.4%	3	0.2%
<i>Gecarcinus</i> sp.		2/5 inch	55	2.0%	17	7.7%	36	2.0%
<i>Gecarcinidae</i>		2/5 inch	7	0.3%	0	0.0%	10	0.6%
Unidentified crab species		2/5 inch	3	0.1%	2	0.9%	6	0.3%
<i>Decapoda</i>		2/5 inch	262	9.7%	0	0.0%	105	6.0%
Total			2715	100.0%	220	100.0%	1763	100.0%

Table A5.17. Species list of À l'Escalier (units 1 and 2, 2/5 inch collection); (previous page and above).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Oryzomyini</i>		1 mm	1	<0.1%	1	1.1%	1	0.3%
<i>Dasyprocta</i> sp.		1 mm	7	<0.1%	1	1.1%	8	2.7%
Unidentified bird		1 mm	9	0.1%	1	1.1%	2	0.7%
<i>Cheloniidae</i>		1 mm	11	0.1%	1	1.1%	4	1.4%
<i>Iguana</i> sp.		1 mm	7	<0.1%	1	1.1%	3	1.0%
Unidentified reptile		1 mm	3	<0.1%	1	1.1%	1	0.3%
<i>Carcharhinus</i> sp.		1 mm	1	<0.1%	1	1.1%	2	0.7%
<i>Clupeidae</i>		1 mm	193	2.1%	5	5.4%	3	1.0%
<i>Belonidae</i>		1 mm	9	0.1%	2	2.2%	3	1.0%
<i>Holocentridae</i>		1 mm	8	0.1%	2	2.2%	2	0.7%
<i>Epinephelus</i> sp.		1 mm	2	<0.1%	2	2.2%	1	0.3%
<i>Mycteroperca</i> sp.		1 mm	1	<0.1%	1	1.1%	3	1.0%
<i>Serranidae</i>		1 mm	31	<0.1%	0	0.0%	7	2.4%
<i>Priacanthidae</i>		1 mm	1	<0.1%	1	1.1%	1	0.3%
<i>Carangidae</i>		1 mm	36	<0.1%	3	3.3%	8	2.7%
<i>Lutjanidae</i>		1 mm	7	<0.1%	1	1.1%	4	1.4%
<i>Haemulidae</i>		1 mm	17	0.2%	3	3.3%	4	1.4%
<i>Sparidae</i>		1 mm	2	<0.1%	1	1.1%	1	0.3%
<i>Mullidae</i>		1 mm	2	<0.1%	1	1.1%	1	0.3%
cf. <i>Mullidae</i>		1 mm	1	<0.1%	0	0.0%	1	0.3%
<i>Sphyracnidae</i>		1 mm	3	<0.1%	1	1.1%	2	0.7%
cf. <i>Bodianus rufus</i>		1 mm	1	<0.1%	1	1.1%	2	0.7%
<i>Halichoeres</i> sp.		1 mm	3	<0.1%	2	2.2%	2	0.7%
<i>Labridae</i>		1 mm	9	0.1%	0	0.0%	2	0.7%
<i>Scarus</i> sp.		1 mm	15	0.2%	2	2.2%	11	3.7%
<i>Sparisoma</i> sp.		1 mm	16	0.2%	3	3.3%	3	1.0%
<i>Scaridae</i>		1 mm	31	0.3%	0	0.0%	6	2.0%
<i>Acanthuridae</i>		1 mm	289	3.1%	13	14.1%	19	6.4%
cf. <i>Acanthuridae</i>		1 mm	1	<0.1%	0	0.0%	1	0.3%
<i>Balistidae</i>		1 mm	686	7.3%	3	3.3%	10	3.4%
<i>Ostraciidae</i>		1 mm	11	0.1%	1	1.1%	2	0.7%
<i>Osteichthyes</i>		1 mm	6765	72.8%	2	2.2%	106	35.8%
Vertebrata, unidentified		1 mm	42	0.5%	0	0.0%	2	0.7%
<i>Echinometra lucunter</i>		1 mm	11	0.1%	4	4.3%	3	1.0%
cf. <i>Echinometra lucunter</i>		1 mm	116	1.2%	0	0.0%	6	2.0%
<i>Echinidae</i>		1 mm	155	1.67%	0	0.0%	5	1.7%
<i>Coenobita clypeatus</i>		1 mm	125	1.3%	15	16.3%	12	4.1%

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>cf. Mithrax</i> sp.		1 mm	2	<0.1%	1	1.1%	1	0.3%
<i>Carpilius corallinus</i>		1 mm	3	<0.1%	1	1.1%	6	2.0%
<i>cf. Carpilius corallinus</i>		1 mm	2	<0.1%	0	0.0%	1	0.3%
<i>Cardisoma guanhumii</i>		1 mm	1	<0.1%	1	1.1%	2	0.7%
<i>Gecarcinus</i> sp.		1 mm	41	<0.1%	11	12.0%	6	2.0%
<i>Gecarcinidae</i>		1 mm	25	<0.1%	1	1.1%	3	1.0%
<i>Decapoda</i>		1 mm	658	7.0%	0	0.0%	22	7.4%
Unidentified insect	*	1 mm	1	<0.1%	1	1.1%	1	0.3%
Total			9361	100.00%	92	100.0%	296	100.0%

Table A5.18. Species list of À l'Escalier (unit 1, 1 mm collection); (previous page and above).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Oryzomyini</i>		1 mm	1	0.1%	1	2.9%	1	1.1%
<i>cf. Oryzomyini</i>		1 mm	1	0.1%	0	0.0%	1	1.1%
<i>Dasyprocta</i> sp.		1 mm	4	0.3%	1	2.9%	3	3.4%
Unidentified bird		1 mm	4	0.3%	1	2.9%	2	2.3%
<i>Clupeidae</i>		1 mm	70	4.7%	2	5.7%	3	3.4%
<i>Belonidae</i>		1 mm	1	0.1%	1	2.9%	1	1.1%
<i>Holocentridae</i>		1 mm	2	0.1%	1	2.9%	1	1.1%
<i>Epinephelus</i> sp.		1 mm	1	0.1%	1	2.9%	1	1.1%
<i>Serranidae</i>		1 mm	6	0.4%	0	0.0%	2	2.3%
<i>Carangidae</i>		1 mm	6	0.4%	1	2.9%	2	2.3%
<i>Haemulidae</i>		1 mm	1	0.1%	1	2.9%	2	2.3%
<i>Sparidae</i>		1 mm	1	0.1%	1	2.9%	1	1.1%
<i>Sphyaenidae</i>		1 mm	1	0.1%	1	2.9%	1	1.1%
<i>Halichoeres</i> sp.		1 mm	1	0.1%	1	2.9%	1	1.1%
<i>Scarus</i> sp.		1 mm	5	0.3%	1	2.9%	4	4.5%
<i>Sparisoma</i> sp.		1 mm	3	0.2%	1	2.9%	2	2.3%
<i>Scaridae</i>		1 mm	2	0.1%	0	0.0%	2	2.3%
<i>Acanthuridae</i>		1 mm	111	7.4%	5	14.3%	8	9.1%
<i>Balistidae</i>		1 mm	25	1.7%	1	2.9%	3	3.4%
<i>Osteichthyes</i>		1 mm	1013	68.0%	0	0.0%	24	27.3%
<i>Vertebrata</i> , unidentified		1 mm	5	0.3%	0	0.0%	1	1.1%
<i>cf. Echinometra lucunter</i>		1 mm	1	0.1%	1	2.9%	1	1.1%
<i>Echinidae</i>		1 mm	8	0.5%	0	0.0%	2	2.3%
<i>Coenobita clypeatus</i>		1 mm	32	2.1%	3	8.6%	5	5.7%
<i>Cardisoma guanhumi</i>		1 mm	2	0.1%	1	2.9%	3	3.4%
<i>Gecarcinus</i> sp.		1 mm	24	1.6%	9	25.7%	4	4.5%
<i>Gecarcinidae</i>		1 mm	7	0.5%	0	0.0%	2	2.3%
<i>Decapoda</i>		1 mm	152	10.2%	0	0.0%	5	5.7%
Total			1490	100.0%	35	100.0%	88	100.0%

Table A5.19. Species list of À l'Escalier (unit 2, 1 mm collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Oryzomyini</i>		1 mm	2	<0.1%	2	1.6%	2	0.5%
<i>cf. Oryzomyini</i>		1 mm	1	<0.1%	0	0.0%	1	0.3%
<i>Dasyprocta</i> sp.		1 mm	11	0.1%	2	1.6%	11	2.9%
Unidentified bird		1 mm	13	0.1%	2	1.6%	4	1.0%
<i>Cheloniidae</i>		1 mm	11	0.1%	1	0.8%	4	1.0%
<i>Iguana</i> sp.		1 mm	7	0.1%	1	0.8%	3	0.8%
Unidentified reptile		1 mm	3	<0.1%	1	0.8%	1	0.3%
<i>Carcharhinus</i> sp.		1 mm	1	<0.1%	1	0.8%	2	0.5%
<i>Clupeidae</i>		1 mm	263	2.4%	7	5.5%	6	1.6%
<i>Belonidae</i>		1 mm	10	0.1%	3	2.4%	4	1.0%
<i>Holocentridae</i>		1 mm	10	0.1%	3	2.4%	3	0.8%
<i>Epinephelus</i> sp.		1 mm	3	<0.1%	3	2.4%	2	0.5%
<i>Mycteroperca</i> sp.		1 mm	1	<0.1%	1	0.8%	3	0.8%
<i>Serranidae</i>		1 mm	37	0.3%	0	0.0%	9	2.3%
<i>Priacanthidae</i>		1 mm	1	<0.1%	1	0.8%	1	0.3%
<i>Carangidae</i>		1 mm	42	0.4%	4	3.1%	10	2.6%
<i>Lutjanidae</i>		1 mm	7	0.1%	1	0.8%	4	1.0%
<i>Haemulidae</i>		1 mm	18	0.2%	4	3.1%	6	1.6%
<i>Sparidae</i>		1 mm	3	<0.1%	2	1.6%	2	0.5%
<i>Mullidae</i>		1 mm	2	<0.1%	1	0.8%	1	0.3%
<i>cf. Mullidae</i>		1 mm	1	<0.1%	0	0.0%	1	0.3%
<i>Sphyaenidae</i>		1 mm	4	<0.1%	2	1.6%	3	0.8%
<i>cf. Bodianus rufus</i>		1 mm	1	<0.1%	1	0.8%	2	0.5%
<i>Halichoeres</i> sp.		1 mm	4	<0.1%	3	2.4%	3	0.8%
<i>Labridae</i>		1 mm	9	0.1%	0	0.0%	2	0.5%
<i>Scarus</i> sp.		1 mm	20	0.2%	3	2.4%	15	3.9%
<i>Sparisoma</i> sp.		1 mm	19	0.2%	4	3.1%	5	1.3%
<i>Scaridae</i>		1 mm	33	0.3%	0	0.0%	8	2.1%
<i>Acanthuridae</i>		1 mm	400	3.7%	18	14.2%	27	7.0%
<i>cf. Acanthuridae</i>		1 mm	1	<0.1%	0	0.0%	1	0.3%
<i>Balistidae</i>		1 mm	711	6.6%	4	3.1%	13	3.4%
<i>Ostraciidae</i>		1 mm	11	0.1%	1	0.8%	2	0.5%
<i>Osteichthyes</i>		1 mm	7778	71.7%	2	1.6%	130	33.9%
<i>Vertebrata, unidentified</i>		1 mm	47	0.4%	0	0.0%	3	0.8%
<i>Echinometra lucunter</i>		1 mm	11	0.1%	4	3.1%	3	0.8%
<i>cf. Echinometra lucunter</i>		1 mm	117	1.1%	1	0.8%	7	1.8%
<i>Echinidae</i>		1 mm	163	1.5%	0	0.0%	7	1.8%

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Coenobita clypeatus</i>		1 mm	157	1.5%	18	14.2%	17	4.4%
<i>cf. Mithrax</i> sp.		1 mm	2	<0.1%	1	0.8%	1	0.3%
<i>Carpilius corallinus</i>		1 mm	3	<0.1%	1	0.8%	6	1.6%
<i>cf. Carpilius corallinus</i>		1 mm	2	<0.1%	0	0.0%	1	0.3%
<i>Cardisoma guanhumu</i>		1 mm	3	<0.1%	2	1.6%	5	1.3%
<i>Gecarcinus</i> sp.		1 mm	65	0.1%	20	15.7%	10	2.6%
<i>Gecarcinidae</i>		1 mm	32	0.3%	1	0.8%	5	1.3%
<i>Decapoda</i>		1 mm	810	7.5%	0	0.0%	27	7.0%
Unidentified insect	*	1 mm	1	<0.1%	1	0.8%	1	0.3%
Total			10,851	100.00%	127	100.0%	384	100.0%

Table A5.20. Species list of À l'Escalier (units 1 and 2, 1 mm collection); (previous page and above).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Gecarcinus lateralis</i>		2/5 inch	2	11.8%	1	50.0%	2	66.7%
<i>Decapoda</i>		2/5 inch	15	88.2%	1	50.0%	1	33.3%
Total			17	100.0%	2	100.0%	3	100.0%

Table A5.21. Species list of Anse des Galets (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>cf. Capra hircus</i>	*	2/5 inch	1	0.5%	1	3.0%	1	1.4%
<i>Iguana</i> sp.		2/5 inch	13	7.0%	1	3.0%	14	20.3%
<i>Serranidae</i>		2/5 inch	1	0.5%	1	3.0%	1	1.4%
<i>Sparisoma</i> sp.		2/5 inch	4	2.2%	4	12.1%	6	8.7%
<i>Acanthuridae</i>		2/5 inch	1	0.5%	1	3.0%	1	1.4%
<i>cf. Echinometra lucunter</i>		2/5 inch	1	0.5%	1	3.0%	2	2.9%
<i>Coenobita clypeatus</i>	(*)	2/5 inch	16	8.6%	2	6.1%	6	8.7%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	81	43.8%	22	66.7%	27	39.1%
<i>Gecarcinus</i> sp.		2/5 inch	2	1.1%	0	0.0%	2	2.9%
<i>Decapoda</i>		2/5 inch	65	35.1%	0	0.0%	9	13.0%
Total			185	100.0%	33	100.0%	69	100.0%

Table A5.22. Species list of Baleine du Sud (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Mammalia</i> , unidentified		2/5 inch	1	0.3%	1	2.1%	1	0.4%
<i>Cheloniidae</i>		2/5 inch	6	1.9%	1	2.1%	14	5.2%
<i>Iguana</i> sp.		2/5 inch	5	1.6%	2	4.2%	4	1.5%
<i>Holocentridae</i>		2/5 inch	5	1.6%	2	4.2%	5	1.9%
<i>Serranidae</i>		2/5 inch	20	6.3%	3	6.3%	48	17.8%
<i>Caranx</i> sp.		2/5 inch	3	0.9%	2	4.2%	3	1.1%
<i>Carangidae</i>		2/5 inch	2	0.6%	0	0.0%	3	1.1%
<i>Lutjanidae</i>		2/5 inch	2	0.6%	2	4.2%	2	0.7%
<i>Haemulidae</i>		2/5 inch	2	0.6%	2	4.2%	2	0.7%
<i>Sparidae</i>		2/5 inch	1	0.3%	1	2.1%	1	0.4%
<i>Bodianus rufus</i>		2/5 inch	1	0.3%	1	2.1%	2	0.7%
<i>Labridae</i>		2/5 inch	3	0.9%	0	0.0%	5	1.9%
<i>Scarus</i> sp.		2/5 inch	16	5.0%	5	10.4%	35	13.0%
<i>Sparisoma</i> sp.		2/5 inch	37	11.6%	8	16.7%	33	12.3%
<i>Scaridae</i>		2/5 inch	4	1.3%	0	0.0%	3	1.1%
<i>Acanthuridae</i>		2/5 inch	29	9.1%	4	8.3%	9	3.3%
<i>Scombridae</i>		2/5 inch	7	2.2%	2	4.2%	10	3.7%
<i>Balistidae</i>		2/5 inch	4	1.3%	3	6.3%	4	1.5%
<i>Osteichthyes</i>		2/5 inch	114	35.7%	0	0.0%	60	22.3%
<i>Vertebrata</i> , unidentified		2/5 inch	1	0.3%	0	0.0%	2	0.7%
<i>Coenobita clypeatus</i>		2/5 inch	2	0.6%	1	2.1%	1	0.4%
<i>Carpilius corallinus</i>		2/5 inch	1	0.3%	1	2.1%	1	0.4%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	28	8.8%	6	12.5%	14	5.2%
<i>Decapoda</i>		2/5 inch	24	7.5%	0	0.0%	5	1.9%
<i>Invertebrata</i> , unidentified		2/5 inch	1	0.3%	1	2.1%	2	0.7%
Total			319	100.0%	48	100.0%	269	100.0%

Table A5.23. Species list of Site du Phare (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Scarus</i> sp.		2/5 inch	1	11.1%	1	33.3%	2	22.2%
<i>Balistidae</i>		2/5 inch	1	11.1%	1	33.3%	2	22.2%
<i>Osteichthyes</i>		2/5 inch	1	11.1%	0	0.0%	1	11.1%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	1	11.1%	1	33.3%	2	22.2%
<i>Decapoda</i>		2/5 inch	5	55.6%	0	0.0%	2	22.2%
Total			9	100.0%	3	100.0%	9	100.0%

Table A5.24. Species list of Site du Phare (unit 1, Feature 001, 2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Aves</i> , unidentified		2/5 inch	2	1.7%	1	10.0%	1	4.5%
<i>Lutjanidae</i>		2/5 inch	1	0.8%	1	10.0%	1	4.5%
<i>Scarus</i> sp.		2/5 inch	1	0.8%	1	10.0%	6	27.3%
<i>Sparisoma</i> sp.		2/5 inch	1	0.8%	1	10.0%	1	4.5%
<i>Scaridae</i>		2/5 inch	1	0.8%	0	0.0%	2	9.1%
<i>Balistidae</i>		2/5 inch	1	0.8%	1	10.0%	1	4.5%
<i>Osteichthyes</i>		2/5 inch	98	83.1%	1	10.0%	4	18.2%
<i>Echinidae</i>		2/5 inch	5	4.2%	1	10.0%	1	4.5%
<i>Coenobita clypeatus</i>	(*)	2/5 inch	5	4.2%	2	20.0%	2	9.1%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	1	0.8%	1	10.0%	1	4.5%
<i>Gecarcinus</i> sp.		2/5 inch	1	0.8%	0	0.0%	1	4.5%
<i>Decapoda</i>		2/5 inch	1	0.8%	0	0.0%	1	4.5%
Total			118	100.0%	10	100.0%	22	100.0%

Table A5.25. Species list of Site du Phare (unit 2, Feature 001, 2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Scaridae</i>		1 mm	2	20.0%	1	33.3%	1	25.0%
<i>Acanthuridae</i>		1 mm	5	50.0%	1	33.3%	2	50.0%
<i>Balistidae</i>		1 mm	3	30.0%	1	33.3%	1	25.0%
Total			10	100.0%	3	100.0%	4	100.0%

Table A5.26. Species list of Site du Phare (unit 2, Feature 001, 1 mm collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
Unidentified bird		2/5 inch	7	2.1%	1	2.2%	2	0.4%
<i>Cheloniidae</i>		2/5 inch	68	20.0%	3	6.5%	186	37.0%
<i>Iguana</i> sp.	(*)	2/5 inch	4	1.2%	3	6.5%	5	1.0%
<i>cf. Ameiva</i> sp.	*	2/5 inch	1	0.3%	1	2.2%	1	0.2%
<i>Carcharhinus</i> sp.		2/5 inch	1	0.3%	1	2.2%	2	0.4%
<i>Epinephelus</i> sp.		2/5 inch	1	0.3%	1	2.2%	2	0.4%
<i>Serranidae</i>		2/5 inch	16	4.7%	3	6.5%	34	6.8%
<i>cf. Serranidae</i>		2/5 inch	1	0.3%	0	0.0%	2	0.4%
<i>Caranx</i> sp.		2/5 inch	1	0.3%	1	2.2%	2	0.4%
<i>Carangidae</i>		2/5 inch	9	2.6%	1	2.2%	8	1.6%
<i>cf. Carangidae</i>		2/5 inch	2	0.6%	0	0.0%	3	0.6%
<i>Lutjanidae</i>		2/5 inch	2	0.6%	1	2.2%	5	1.0%
<i>Haemulidae</i>		2/5 inch	2	0.6%	1	2.2%	4	0.8%
<i>Sparidae</i>		2/5 inch	1	0.3%	1	2.2%	2	0.4%
<i>Sphyraenidae</i>		2/5 inch	1	0.3%	1	2.2%	2	0.4%
<i>Labridae</i>		2/5 inch	5	1.5%	2	4.3%	5	1.0%
<i>Scarus</i> sp.		2/5 inch	27	7.9%	7	15.2%	108	21.5%
<i>Sparisoma</i> sp.		2/5 inch	14	4.1%	4	8.7%	19	3.8%
<i>Scaridae</i>		2/5 inch	7	2.1%	0	0.0%	9	1.8%
<i>Acanthuridae</i>		2/5 inch	15	4.4%	2	4.3%	9	1.8%
<i>Balistidae</i>		2/5 inch	6	1.8%	2	4.3%	6	1.2%
<i>Osteichthyes</i>		2/5 inch	107	31.5%	0	0.0%	53	10.5%
<i>Coenobita clypeatus</i>		2/5 inch	9	2.6%	3	6.5%	7	1.4%
<i>Carpilius corallinus</i>		2/5 inch	2	0.6%	1	2.2%	7	1.4%
<i>cf. Carpilius corallinus</i>		2/5 inch	1	0.3%	0	0.0%	1	0.2%
<i>Cardisoma guanhumi</i>		2/5 inch	1	0.3%	1	2.2%	2	0.4%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	15	4.4%	5	10.9%	9	1.8%
<i>Decapoda</i>		2/5 inch	14	4.1%	0	0.0%	8	1.6%
Total			340	100.0%	46	100.0%	503	100.0%

Table A5.27. Species list of Est de Mouton de Bas (unit 1, 2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Oryzomyini</i>		2/5 inch	4	0.5%	2	2.8%	4	0.5%
Unidentified bird		2/5 inch	3	0.4%	1	1.4%	3	0.4%
<i>Cheloniidae</i>		2/5 inch	32	4.0%	2	2.8%	102	12.4%
<i>cf. Cheloniidae</i>		2/5 inch	1	0.1%	0	0.0%	13	1.6%
<i>Iguana</i> sp.	(*)	2/5 inch	25	3.2%	3	4.2%	25	3.0%
<i>cf. Iguana</i> sp.		2/5 inch	1	0.1%	0	0.0%	1	0.1%
Unidentified reptile		2/5 inch	1	0.1%	1	1.4%	1	0.1%
<i>Belonidae</i>		2/5 inch	2	0.3%	1	1.4%	4	0.5%
<i>Holocentridae</i>		2/5 inch	1	0.1%	1	1.4%	1	0.1%
<i>Serranidae</i>		2/5 inch	13	1.6%	2	2.8%	11	1.3%
<i>cf. Serranidae</i>		2/5 inch	1	0.1%	0	0.0%	2	0.2%
<i>Carangidae</i>		2/5 inch	35	4.4%	2	2.8%	23	2.8%
<i>Lutjanidae</i>		2/5 inch	14	1.8%	3	4.2%	13	1.6%
<i>Haemulidae</i>		2/5 inch	3	0.4%	1	1.4%	5	0.6%
<i>Labridae</i>		2/5 inch	3	0.4%	3	4.2%	5	0.6%
<i>Scarus</i> sp.		2/5 inch	5	0.6%	1	1.4%	17	2.1%
<i>Sparisoma</i> sp.		2/5 inch	31	3.9%	9	12.5%	53	6.4%
<i>Scaridae</i>		2/5 inch	5	0.6%	0	0.0%	6	0.7%
<i>Acanthuridae</i>		2/5 inch	16	2.0%	2	2.8%	12	1.5%
<i>Scombridae</i>		2/5 inch	18	2.3%	2	2.8%	20	2.4%
<i>Balistidae</i>		2/5 inch	27	3.4%	6	8.3%	25	3.0%
<i>Osteichthyes</i>		2/5 inch	246	31.1%	0	0.0%	95	11.6%
<i>Vertebrata</i> , unidentified		2/5 inch	1	0.1%	0	0.0%	1	0.1%
<i>Coenobita clypeatus</i>		2/5 inch	11	1.4%	1	1.4%	9	1.1%
<i>Mithrax</i> sp.		2/5 inch	1	0.1%	1	1.4%	11	1.3%
<i>cf. Mithrax</i> sp.		2/5 inch	2	0.3%	0	0.0%	3	0.4%
<i>Cardisoma guanhumi</i>		2/5 inch	80	10.1%	14	19.4%	201	24.5%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	9	1.1%	3	4.2%	8	1.0%
<i>Gecarcinus</i> sp.		2/5 inch	34	4.3%	9	12.5%	41	5.0%
<i>Gecarcinidae</i>		2/5 inch	22	2.8%	0	0.0%	28	3.4%
Unidentified crab species		2/5 inch	2	0.3%	1	1.4%	4	0.5%
<i>Decapoda</i>		2/5 inch	141	17.8%	0	0.0%	71	8.6%
<i>Invertebrata</i> , unidentified		2/5 inch	2	0.3%	1	1.4%	4	0.5%
Total			792	100.0%	72	100.0%	822	100.0%

Table A5.28. Species list of Est de Mouton de Bas (unit 2, 2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Oryzomyini</i>		2/5 inch	4	0.4%	2	1.7%	4	0.3%
Unidentified bird		2/5 inch	10	0.9%	2	1.7%	5	0.4%
<i>Cheloniidae</i>		2/5 inch	100	8.8%	5	4.2%	288	21.7%
<i>cf. Cheloniidae</i>		2/5 inch	1	0.1%	0	0.0%	13	1.0%
<i>Iguana</i> sp.	(*)	2/5 inch	29	2.6%	6	5.1%	30	2.3%
<i>cf. Iguana</i> sp.		2/5 inch	1	0.1%	0	0.0%	1	0.1%
<i>cf. Ameiva</i> sp.	*	2/5 inch	1	0.1%	1	0.8%	1	0.1%
Unidentified reptile		2/5 inch	1	0.1%	1	0.8%	1	0.1%
<i>Carcharhinus</i> sp.		2/5 inch	1	0.1%	1	0.8%	2	0.2%
<i>Belonidae</i>		2/5 inch	2	0.2%	1	0.8%	4	0.3%
<i>Holocentridae</i>		2/5 inch	1	0.1%	1	0.8%	1	0.1%
<i>Epinephelus</i> sp.		2/5 inch	1	0.1%	1	0.8%	2	0.2%
<i>Serranidae</i>		2/5 inch	29	2.6%	5	4.2%	45	3.4%
<i>cf. Serranidae</i>		2/5 inch	2	0.2%	0	0.0%	4	0.3%
<i>Caranx</i> sp.		2/5 inch	1	0.1%	1	0.8%	2	0.2%
<i>Carangidae</i>		2/5 inch	44	3.9%	3	2.5%	31	2.3%
<i>cf. Carangidae</i>		2/5 inch	2	0.2%	0	0.0%	3	0.2%
<i>Lutjanidae</i>		2/5 inch	16	1.4%	4	3.4%	18	1.4%
<i>Haemulidae</i>		2/5 inch	5	0.4%	2	1.7%	9	0.7%
<i>Sparidae</i>		2/5 inch	1	0.1%	1	0.8%	2	0.2%
<i>Sphyraenidae</i>		2/5 inch	1	0.1%	1	0.8%	2	0.2%
<i>Labridae</i>		2/5 inch	8	0.7%	5	4.2%	10	0.8%
<i>Scarus</i> sp.		2/5 inch	32	2.8%	8	6.8%	125	9.4%
<i>Sparisoma</i> sp.		2/5 inch	45	4.0%	13	11.0%	72	5.4%
<i>Scaridae</i>		2/5 inch	12	1.1%	0	0.0%	15	1.1%
<i>Acanthuridae</i>		2/5 inch	31	2.7%	4	3.4%	21	1.6%
<i>Scombridae</i>		2/5 inch	18	1.6%	2	1.7%	20	1.5%
<i>Balistidae</i>		2/5 inch	33	2.9%	8	6.8%	31	2.3%
<i>Osteichthyes</i>		2/5 inch	353	31.2%	0	0.0%	148	11.2%
<i>Vertebrata</i> , unidentified		2/5 inch	1	0.1%	0	0.0%	1	0.1%
<i>Coenobita clypeatus</i>		2/5 inch	20	1.8%	4	3.4%	16	1.2%
<i>Mithrax</i> sp.		2/5 inch	1	0.1%	1	0.8%	11	0.8%
<i>cf. Mithrax</i> sp.		2/5 inch	2	0.2%	0	0.0%	3	0.2%
<i>Carpilius corallinus</i>		2/5 inch	2	0.2%	1	0.8%	7	0.5%
<i>cf. Carpilius corallinus</i>		2/5 inch	1	0.1%	0	0.0%	1	0.1%
<i>Cardisoma guanhumii</i>		2/5 inch	81	7.2%	15	12.7%	203	15.3%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	24	2.1%	8	6.8%	17	1.3%

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Gecarcinus</i> sp.		2/5 inch	56	4.9%	9	7.6%	69	5.2%
Unidentified crab species		2/5 inch	2	0.2%	1	0.8%	4	0.3%
<i>Decapoda</i>		2/5 inch	155	13.7%	0	0.0%	79	6.0%
<i>Invertebrata</i> , unidentified		2/5 inch	2	0.2%	1	0.8%	4	0.3%
Total			1132	100.0%	118	100.0%	1325	100.0%

Table A5.29. Species list of Est de Mouton de Bas (units 1 and 2, 2/5 inch collection); (previous page and above).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Sus scrofa</i>	*	Hand-collec.	1	0.8%	1	3.1%	4	0.7%
Unidentified mammal		Hand-collec.	2	1.7%	1	3.1%	9	1.5%
Unidentified bird		Hand-collec.	3	2.5%	1	3.1%	2	0.3%
<i>Cheloniidae</i>		Hand-collec.	43	35.8%	5	15.6%	287	49.2%
<i>Holocentridae</i>		Hand-collec.	1	0.8%	1	3.1%	2	0.3%
<i>Serranidae</i>		Hand-collec.	7	5.8%	3	9.4%	28	4.8%
<i>cf. Serranidae</i>		Hand-collec.	2	1.7%	0	0.0%	6	1.0%
<i>Carangidae</i>		Hand-collec.	1	0.8%	1	3.1%	3	0.5%
<i>Lutjanidae</i>		Hand-collec.	2	1.7%	1	3.1%	5	0.9%
<i>Scarus</i> sp.		Hand-collec.	1	0.8%	1	3.1%	4	0.7%
<i>Sparisoma</i> sp.		Hand-collec.	2	1.7%	1	3.1%	6	1.0%
<i>Scombridae</i>		Hand-collec.	3	2.5%	2	6.3%	6	1.0%
<i>Diodontidae</i>		Hand-collec.	1	0.8%	1	3.1%	13	2.2%
<i>Osteichthyes</i>		Hand-collec.	15	12.5%	0	0.0%	61	10.5%
<i>Vertebrata</i> , unidentified		Hand-collec.	3	2.5%	0	0.0%	2	0.3%
<i>Cardisoma guanhumi</i>		Hand-collec.	22	18.3%	10	31.3%	119	20.4%
<i>Gecarcinus</i> sp.		Hand-collec.	5	4.2%	3	9.4%	16	2.7%
<i>Gecarcinidae</i>		Hand-collec.	4	3.3%	0	0.0%	8	1.4%
<i>Decapoda</i>		Hand-collec.	2	1.7%	0	0.0%	2	0.3%
Total			120	100.0%	32	100.0%	583	100.0%

Table A5.30. Species list of Les Sables (Hand-collected).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Homo sapiens</i>	*	2/5 inch	7	15.6%	1	16.7%	29	56.9%
<i>cf. Homo sapiens</i>	*	2/5 inch	12	26.7%	0	0.0%	9	17.6%
<i>Vertebrata</i> , unidentified		2/5 inch	2	4.4%	0	0.0%	1	2.0%
<i>Coenobita clypeatus</i>	(*)	2/5 inch	10	22.2%	2	33.3%	4	7.8%
<i>Gecarcinus cf. ruricola</i>		2/5 inch	2	4.4%	1	16.7%	2	3.9%
<i>Gecarcinus</i> sp.	(*)	2/5 inch	2	4.4%	2	33.3%	2	3.9%
<i>Decapoda</i>		2/5 inch	10	22.2%	0	0.0%	4	7.8%
Total			45	100.0%	6	100.0%	51	100.0%

Table A5.31. Species list of Voûte à Pin (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Vertebrata</i> , unidentified		2/5 inch	13	100.0%	1	100.0%	1	100.0%
Total			13	100.0%	1	100.0%	1	100.0%

Table A5.32. Species list of Grand Abaque 1 (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Coenobita clypeatus</i>		2/5 inch	13	56.5%	4	66.7%	10	62.5%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	2	8.7%	2	33.3%	2	12.5%
<i>Decapoda</i>		2/5 inch	8	34.8%	0	0.0%	4	25.0%
Total			23	100.0%	6	100.0%	16	100.0%

Table A5.33. Species list of Pied de la Montagne (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Dasyprocta</i> sp.		2/5 inch	3	1.4%	2	4.3%	5	4.2%
Unidentified mammal		2/5 inch	2	0.9%	1	2.1%	4	3.4%
<i>Cheloniidae</i>		2/5 inch	1	0.5%	1	2.1%	2	1.7%
<i>Serranidae</i>		2/5 inch	1	0.5%	1	2.1%	2	1.7%
<i>cf. Bodianus rufus</i>		2/5 inch	1	0.5%	1	2.1%	1	0.8%
<i>Labridae</i>		2/5 inch	1	0.5%	0	0.0%	1	0.8%
<i>Sparisoma</i> sp.		2/5 inch	7	3.2%	4	8.5%	10	8.5%
<i>Scaridae</i>		2/5 inch	2	0.9%	0	0.0%	2	1.7%
<i>Acanthuridae</i>		2/5 inch	2	0.9%	1	2.1%	3	2.5%
<i>Diodontidae</i>		2/5 inch	1	0.5%	1	2.1%	6	5.1%
<i>Osteichthyes</i>		2/5 inch	15	6.8%	0	0.0%	7	5.9%
<i>Coenobita clypeatus</i>	(*)	2/5 inch	65	29.3%	16	34.0%	27	22.9%
<i>Gecarcinus lateralis</i>		2/5 inch	35	15.8%	13	27.7%	13	11.0%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	8	3.6%	3	6.4%	4	3.4%
<i>Gecarcinus</i> sp.		2/5 inch	13	5.9%	3	6.4%	12	10.2%
<i>Decapoda</i>		2/5 inch	65	29.3%	0	0.0%	19	16.1%
Total			222	100.0%	47	100.0%	118	100.0%

Table A5.34. Species list of Aéroport (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Diodontidae</i>		2/5 inch	1	50.0%	1	50.0%	5	83.3%
<i>Coenobita clypeatus</i>		2/5 inch	1	50.0%	1	50.0%	1	16.7%
Total			2	100.0%	2	100.0%	6	100.0%

Table A5.35. Species list of Morne Souffleur (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>cf. Bos taurus</i>	*	Hand-collec.	1	1.5%	1	8.3%	30	4.1%
<i>Cheloniidae</i>		Hand-collec.	34	50.0%	3	25.0%	497	67.5%
<i>Epinephelus</i> sp.		Hand-collec.	2	2.9%	2	16.7%	15	2.0%
<i>Serranidae</i>		Hand-collec.	6	8.8%	1	8.3%	72	9.8%
<i>Carangidae</i>		Hand-collec.	2	2.9%	2	16.7%	7	1.0%
<i>cf. Carangidae</i>		Hand-collec.	1	1.5%	0	0.0%	8	1.1%
<i>Sphyraenidae</i>		Hand-collec.	1	1.5%	1	8.3%	7	1.0%
<i>Scarus</i> sp.		Hand-collec.	4	5.9%	1	8.3%	50	6.8%
<i>Balistidae</i>		Hand-collec.	1	1.5%	1	8.3%	4	0.5%
<i>Osteichthyes</i>		Hand-collec.	16	23.5%	0	0.0%	46	6.3%
Total			68	100.0%	12	100.0%	736	100.0%

Table A5.36. Species list of Pointe Sablé (Hand-collected).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>cf. Trichechus manatus</i>		Hand-collec.	1	4.8%	1	11.1%	40	9.6%
<i>Cheloniidae</i>		Hand-collec.	5	23.8%	1	11.1%	243	58.1%
<i>Serranidae</i>		Hand-collec.	3	14.3%	1	11.1%	26	6.2%
<i>Sphyraenidae</i>		Hand-collec.	1	4.8%	1	11.1%	6	1.4%
<i>Scarus</i> sp.		Hand-collec.	1	4.8%	1	11.1%	13	3.1%
<i>Sparisoma</i> sp.		Hand-collec.	1	4.8%	1	11.1%	5	1.2%
<i>Diodontidae</i>		Hand-collec.	2	9.5%	2	22.2%	49	11.7%
<i>Osteichthyes</i>		Hand-collec.	6	28.6%	0	0.0%	27	6.5%
<i>Cardisoma guanhumi</i>		Hand-collec.	1	4.8%	1	11.1%	9	2.2%
Total			21	100.0%	9	100.0%	418	100.0%

Table A5.37. Species list of the site with the unknown name (Hand-collected).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Coenobita clypeatus</i>		2/5 inch	4	13.8%	2	33.3%	3	9.1%
<i>Cardisoma guanhumii</i>		2/5 inch	4	13.8%	2	33.3%	18	54.5%
<i>Gecarcinus lateralis</i>	*	2/5 inch	9	31.0%	1	16.7%	2	6.1%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	1	3.4%	0	0.0%	2	6.1%
<i>Gecarcinus</i> sp.		2/5 inch	1	3.4%	1	16.7%	2	6.1%
<i>Decapoda</i>		2/5 inch	10	34.5%	0	0.0%	6	18.2%
Total			29	100.0%	6	100.0%	33	100.0%

Table A5.38. Species list of Grande Saline (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Aves</i> , unidentified		2/5 inch	2	0.9%	1	3.3%	1	0.5%
<i>Sparisoma</i> sp.		2/5 inch	1	0.5%	1	3.3%	1	0.5%
<i>cf. Echinometra lucunter</i>		2/5 inch	1	0.5%	1	3.3%	1	0.5%
<i>Coenobita clypeatus</i>	(*)	2/5 inch	79	36.2%	9	30.0%	37	20.2%
<i>Mithrax</i> sp.		2/5 inch	4	1.8%	2	6.7%	19	10.4%
<i>Carpilius corallinus</i>		2/5 inch	1	0.5%	1	3.3%	2	1.1%
<i>cf. Carpilius corallinus</i>		2/5 inch	1	0.5%	1	3.3%	2	1.1%
<i>Cardisoma guanhumii</i>		2/5 inch	27	12.4%	7	23.3%	49	26.8%
<i>Gecarcinus lateralis</i>		2/5 inch	4	1.8%	3	10.0%	4	2.2%
<i>Gecarcinus cf. lateralis</i>		2/5 inch	1	0.5%	0	0.0%	1	0.5%
<i>Gecarcinus</i> sp.		2/5 inch	6	2.8%	3	10.0%	8	4.4%
<i>Gecarcinidae</i>		2/5 inch	8	3.7%	1	3.3%	14	7.7%
<i>Decapoda</i>		2/5 inch	83	38.1%	0	0.0%	44	24.0%
Total			218	100.0%	30	100.0%	183	100.0%

Table A5.39. Species list of Petites Salines (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Coenobita clypeatus</i>		2 mm	47	100.0%	9	100.0%	3	100.0%
Total			47	100.0%	9	100.0%	3	100.0%

Table A5.40. Species list of Petites Salines (feature 001, 2 mm collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Vertebrata</i> , unidentified		2 mm	3	5.6%	1	10.0%	1	16.7%
<i>Coenobita clypeatus</i>		2 mm	50	92.6%	9	90.0%	4	66.7%
<i>Decapoda</i>		2 mm	1	1.9%	0	0.0%	1	16.7%
Total			54	100.0%	10	100.0%	6	100.0%

Table A5.41. Species list of Petites Salines (feature 002, 2 mm collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Coenobita clypeatus</i>		2/5 inch	3	25.0%	3	100.0%	4	66.7%
<i>Decapoda</i>		2/5 inch	9	75.0%	0	0.0%	2	33.3%
Total			12	100.0%	3	100.0%	6	100.0%

Table A5.42. Species list of Montagne des Petites Salines (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Coenobita clypeatus</i>		2/5 inch	1	100.0%	1	100.0%	1	100.0%
Total			1	100.0%	1	100.0%	1	100.0%

Table A5.43. Species list of Degrat (2/5 inch collection).

Taxon	Intrusive	Screen size	NISP	NISP%	MNI	MNI%	Weight (g)	Weight%
<i>Gecarcinus</i> sp.		2/5 inch	1	100.0%	1	100.0%	2	100.0%
Total			1	100.0%	1	100.0%	2	100.0%

Table A5.44. Species list of Site 7 (2/5 inch collection).

Environment	Taxon	Environment	Taxon		
Terrestrial	<i>Oryzomyini</i>	Reef: Carnivores	<i>Carcharchinus</i> sp.		
	<i>Dasyprocta</i> sp.		<i>Holocentridae</i>		
	Unidentified bird		<i>Serranidae</i>		
	<i>Iguana</i> sp.		<i>Priacanthidae</i>		
	Unidentified reptile		<i>Carangidae</i>		
	<i>Coenobita clypeatus</i>		<i>Lutjanidae</i>		
	<i>Gecarcinidae</i>		<i>Haemulidae</i>		
	Unidentified mammal		<i>Labridae</i>		
	Inshore ⁷		<i>Trichechus manatus</i>	Reef: Herbivores/Omnivores	<i>Scaridae</i>
			<i>Cheloniidae</i>		<i>Acanthuridae</i>
<i>Clupeidae</i>		<i>Balistidae</i>			
<i>Belonidae</i>		Offshore-Pelagic	<i>Sphyraenidae</i>		
<i>Sparidae</i>		Unknown Marine habitat	<i>Osteichthyes</i>		
<i>Mullidae</i>		Unknown habitat	Unidentified vertebrate		
<i>Ostraciidae</i>			Unidentified crab species		
<i>Diodontidae</i>			<i>Decapoda</i>		
<i>Echinidae</i>			Unidentified invertebrate		
<i>Mithrax</i> sp.					
<i>Carpilius corallinus</i>					
<i>Scombridae</i>					

Table A5.45. Different environments and related taxa that have been consumed.

Site	Taxon	Screen size	Average	Standard deviation	N
À l'Escalier	<i>Acanthuridae</i>	1 mm	2.6	0.54	13
	<i>Belonidae</i>	1 mm	3.5		1
	<i>Carangidae</i>	1 mm	4.2		1
	<i>cf. Mullidae</i>	1 mm	1.0		1
	<i>Clupeidae</i>	1 mm	1.9	0.07	2
	<i>Priacanthidae</i>	1 mm	4.0		1
	<i>Sparidae</i>	1 mm	6.0		1
À l'Escalier	all fish	1 mm	2.8	1.06	22
À l'Escalier	<i>Carangidae</i>	2/5 inch	11.0		1
	<i>Haemulidae</i>	2/5 inch	8.7	0.95	3
	<i>Lutjanidae</i>	2/5 inch	8.7		1
	<i>Priacanthidae</i>	2/5 inch	19.4		1
	<i>Scaridae</i>	2/5 inch	6.9		1
	<i>Serranidae</i>	2/5 inch	10.6	7.14	2
	<i>Sparisoma</i> sp.	2/5 inch	6.6		1
À l'Escalier	all fish	2/5 inch	9.6	4.65	13
Site du Phare	<i>Acanthuridae</i>	1 mm	2.7		1
	<i>Serranidae</i>	1 mm	10.4	3.73	3

Table A5.46. Summary of measurements, i.e., greatest medial-lateral breadth of the vertebral centre (Morales and Rosenlund 1979:44-45) taken on fish atlases found.

Site	Taxon	Screen size	Average	Standard deviation	N
À l'Escalier	<i>Acanthuridae</i>	1 mm	3.9	1.08	100
	<i>Belonidae</i>	1 mm	3.7	1.49	8
	<i>Carangidae</i>	1 mm	4.5	2.43	18
	<i>Carcharhinus</i> sp.	1 mm	12.4		1
	<i>Chupeidae</i>	1 mm	1.7	0.21	245
	<i>Ostraciidae</i>	1 mm	2.4		1
	<i>Scaridae</i>	1 mm	5.1	1.09	8
	<i>Serranidae</i>	1 mm	5.2	1.36	11
	<i>Sphyraenidae</i>	1 mm	3.9	0.07	2
À l'Escalier	all fish	1 mm	2.8	1.73	875
À l'Escalier	<i>Acanthuridae</i>	2/5 inch	5.2	1.01	95
	<i>Balistidae</i>	2/5 inch	13.3	1.52	4
	<i>Belonidae</i>	2/5 inch	8.4		1
	<i>Carangidae</i>	2/5 inch	7.6	2.14	40
	<i>Carcharhinus</i> sp.	2/5 inch	17.6		1
	<i>Ostraciidae</i>	2/5 inch	8.5		1
	<i>Scaridae</i>	2/5 inch	5.7		1
	<i>Serranidae</i>	2/5 inch	8.4	2.37	28
	<i>Sparisoma</i> sp.	2/5 inch	6.3		1
	<i>Sphyraenidae</i>	2/5 inch	20.1		1
À l'Escalier	all fish	2/5 inch	8.3	3.76	440
Baleine du Sud	<i>Acanthuridae</i>	2/5 inch	2.9		1
	<i>Serranidae</i>	2/5 inch	9.8		1
Baleine du Sud	all fish	2/5 inch	3.9	1.34	2
Site du Phare	<i>Acanthuridae</i>	1 mm	4.3	0.81	3
Site du Phare	all fish	1 mm	3.7	1.56	4
Site du Phare	<i>Acanthuridae</i>	2/5 inch	5.4	0.80	14
	<i>Carangidae</i>	2/5 inch	6.3		1
	<i>Scaridae</i>	2/5 inch	6.3		1
	<i>Scombridae</i>	2/5 inch	10.2	1.76	6
	<i>Serranidae</i>	2/5 inch	13	4.89	4
Site du Phare	all fish	2/5 inch	9.1	4.20	52
Est de Mouton de Bas	<i>Acanthuridae</i>	2/5 inch	5.8	1.06	20
	<i>Belonidae</i>	2/5 inch	4.8		1
	<i>Carangidae</i>	2/5 inch	7.4	1.51	19
	<i>Scaridae</i>	2/5 inch	7.5		1
	<i>Scombridae</i>	2/5 inch	10.7	1.40	13
	<i>Serranidae</i>	2/5 inch	9.5	2.57	8
Est de Mouton de Bas	all fish	2/5 inch	7.7	2.53	158

Site	Taxon	Screen size	Average	Standard deviation	N
Grande Saline	<i>Carangidae</i>	Hand-collection	9.3		1
	<i>Lutjanidae</i>	Hand-collection	13.8		1
	<i>Scombridae</i>	Hand-collection	11.5		1
	<i>Serranidae</i>	Hand-collection	20	0.92	2
Grande Saline	all fish	Hand-collection	14	4.90	6
Aéroport	<i>Acanthuridae</i>	2/5 inch	4.2	0.35	2
	<i>Scaridae</i>	2/5 inch	7.5	0.00	2
Aéroport	all fish	2/5 inch	9.1	5.30	6

Table A5.47. Summary of measurements, i.e., greatest medial-lateral breadth of the vertebral centre (Morales and Rosenlund 1979:44-45) taken on fish atlases found; (previous page and above).

Site	NISP%					MNI%					Weight%							
	Mammal	Bird	Reptile	Fish	Vertebrate	Invertebrate	Mammal	Bird	Reptile	Fish	Vertebrate	Invertebrate	Mammal	Bird	Reptile	Fish	Vertebrate	Invertebrate
La Desirade (2/5 inch)	1.3%	1.0%	3.5%	72.4%	1.3%	20.6%	2.8%	1.9%	2.3%	51.6%	0.0%	41.4%	1.4%	0.3%	9.9%	67.5%	0.9%	20.0%
À l'Escalier, units 1+2	1.3%	1.0%	4.5%	75.6%	1.7%	15.9%	2.2%	1.5%	2.2%	59.6%	0.0%	34.6%	1.2%	0.1%	12.6%	69.4%	1.0%	15.6%
À l'Escalier, unit 1	1.3%	0.7%	0.7%	62.6%	0.1%	34.5%	3.8%	2.5%	2.5%	38.0%	0.0%	53.2%	2.0%	1.0%	0.8%	60.9%	0.5%	34.8%
À l'Escalier, unit 2	2.3%	0.0%	0.5%	14.0%	0.0%	83.3%	6.5%	0.0%	2.2%	17.4%	0.0%	73.9%	7.8%	0.0%	1.7%	27.6%	0.0%	62.9%
Aéroport																		
La Desirade (1 mm)																		
À l'Escalier, units 1+2	0.1%	0.1%	0.2%	86.5%	0.4%	12.6%	3.2%	1.6%	2.4%	54.8%	0.0%	38.1%	3.7%	1.0%	2.1%	69.2%	0.8%	23.2%
À l'Escalier, unit 1	0.1%	0.1%	0.2%	87.0%	0.5%	12.2%	2.2%	1.1%	3.3%	56.0%	0.0%	37.4%	3.1%	0.7%	2.7%	70.2%	0.7%	22.7%
À l'Escalier, unit 2	0.4%	0.3%	0.0%	83.8%	0.3%	15.2%	5.7%	2.9%	0.0%	51.4%	0.0%	40.0%	5.7%	2.3%	0.0%	65.9%	1.1%	25.0%
Petite Terre (2/5 inch)																		
Baleine du Sud	0.0%	0.0%	7.4%	3.4%	0.0%	89.1%	0.0%	0.0%	3.2%	19.4%	0.0%	77.4%	0.0%	0.0%	21.2%	12.1%	0.0%	66.7%
Site du Phare	0.3%	0.0%	3.4%	78.4%	0.3%	17.6%	2.1%	0.0%	6.3%	72.9%	0.0%	18.8%	0.4%	0.0%	6.7%	83.6%	0.7%	8.6%
Site du Phare, unit 2, F001	0.0%	1.7%	0.0%	88.8%	0.0%	9.5%	0.0%	11.1%	0.0%	55.6%	0.0%	33.3%	0.0%	4.8%	0.0%	71.4%	0.0%	23.8%
Est de M. de Bas, units 1+2	0.4%	0.9%	11.2%	56.7%	0.1%	30.8%	1.7%	1.7%	8.7%	53.0%	0.0%	34.8%	0.3%	0.4%	24.8%	43.1%	0.1%	31.4%
Est de M. de Bas, unit 1	0.0%	2.1%	21.0%	64.5%	0.0%	12.4%	0.0%	2.3%	11.4%	63.6%	0.0%	22.7%	0.0%	0.4%	37.9%	54.9%	0.0%	6.8%
Est de M. de Bas, unit 2	0.5%	0.4%	7.0%	53.4%	0.1%	38.6%	2.8%	1.4%	7.0%	46.5%	0.0%	42.3%	0.5%	0.4%	16.7%	35.8%	0.1%	46.6%
Pointe des Chat. (2/5 inch)																		
Petites Salines	0.0%	1.0%	0.0%	0.5%	0.0%	98.5%	0.0%	3.4%	0.0%	3.4%	0.0%	93.1%	0.0%	0.5%	0.0%	0.5%	0.0%	98.9%
La Desirade (hand-coll.)																		
Les Sables	1.7%	2.5%	36.1%	29.4%	2.5%	27.7%	3.2%	3.2%	16.1%	35.5%	0.0%	41.9%	1.6%	0.3%	49.6%	23.1%	0.3%	25.0%
Petite Terre (hand-coll.)																		
Site with unknown name	4.8%	0.0%	23.8%	66.7%	0.0%	4.8%	11.1%	0.0%	11.1%	66.7%	0.0%	11.1%	9.6%	0.0%	58.1%	30.1%	0.0%	2.2%
Pointe Sablé	0.0%	0.0%	50.7%	49.3%	0.0%	0.0%	0.0%	0.0%	27.3%	72.7%	0.0%	0.0%	0.0%	0.0%	70.4%	29.6%	0.0%	0.0%

Table A5.48. Animal class (mammal, bird, reptile, fish, invertebrate) composition of the assemblages.

Site	NISP%					MNI%					Weight%							
	Inshore	Reef carnivores	Reef omnivores/ herbivores	Reef total sum	Offshore/pelagic/ Unknown	Inshore	Reef carnivores	Reef omnivores/ herbivores	Reef total sum	Offshore/pelagic/ Unknown	Inshore	Reef carnivores	Reef omnivores/ herbivores	Reef total sum	Offshore/pelagic/ Unknown			
A l'Escalier, units 1 + 2	7.1%	12.8%	22.6%	35.3%	0.3%	57.3%	18.6%	27.1%	51.9%	79.1%	0.8%	1.6%	19.7%	20.6%	28.2%	48.8%	1.2%	30.3%
A l'Escalier, units 1 + 2; 1 mm	6.2%	1.4%	12.2%	13.6%	0.0%	80.2%	28.6%	28.6%	37.7%	66.2%	2.6%	2.6%	15.3%	16.0%	23.5%	39.5%	1.0%	44.2%
Site du Phare	3.1%	14.8%	35.0%	49.8%	2.7%	44.4%	8.1%	32.4%	54.1%	86.5%	5.4%	0.0%	6.7%	29.2%	35.0%	64.2%	4.2%	25.0%
Est de Mouton de Bas, units 1+2	14.8%	14.8%	20.5%	35.3%	2.6%	47.4%	13.2%	33.8%	48.5%	82.4%	4.4%	0.0%	37.0%	14.3%	29.7%	43.9%	2.5%	16.6%

Table A5.49. Marine habitats including inshore, reef carnivores, reef omnivores/herbivores, Reef total sum, offshore/pelagic habitats and unknown habitat. Percentages are calculated for Marine Habitat = 100%.

NOTES

- 1 The amount of soil excavated at the sites of À l'Escalier, Baleine du Sud, Site du Phare, Est de Mouton de Bas and Aéroport was considerably larger than shown in the table, but the remainder only consisted of deep layers of sterile sand from underneath the cultural deposits.
- 2 For the sites excavated in 1965 no data are available on the amount of soil excavated.
- 3 For the sites of À l'Escalier, Site du Phare and Petites Salines only 2/5 inch samples have been used for these calculations, resulting in lower numbers of remains for these sites than actually analysed.
- 4 Some sites may actually have had middens in the past that have now disappeared due to post-depositional disturbances, such as recent ploughing activities or marine erosion.
- 5 From the 1998-1999 excavations only the remains from the 2/5 inch screens were used for this comparison.
- 6 All taxa presumed to be *not* consumed (all elements are intrusive *; only part of the elements are intrusive (*)).
- 7 Inshore environments include beaches, rocky shores, turtle grass areas and shallow waters.
- 8 Inshore includes beach, rocky shore, turtle grass and shallow inshore waters.

