the >20cm size group than in the >10 – 20cm size range, in 2001 this occurred at 4 out of the 8 survey sites. In 2002, only at Site 8 were there more fish in the >20cm category.

In 2001 a significant correlation was found between the number of species counted and the east/west position of the survey sites. It was not apparent in 1999 nor in 2002.

Significant links are being found, as in previous years, between the density or number of species in certain families, and habitat complexity as measured by the percentage live coral or live and dead coral combined. This year such correlations have been seen within the Serranids, Pomacentrids and Chaetodontids, but not within the Labrids.

It is hoped that additional analyses, combined with several more years of data collection at Aldabra will reveal meaningful trends in the reef fish populations at the permanent survey sites. Meanwhile, based on the limited time period and analysis, there does not appear to be any cause for concern with the overall status and health of the Aldabra outer reef fish population.

At Assomption, Astove and St. Pierre, two points are of note. First, the species richness at each location is about half that recorded at Aldabra. Given this fact, the fish density is high, but there is a *Lepidozygus tapeinosoma* effect. With counts of that species removed, the average densities are reduced to 1,513; 1,516; and 1,920 fish per $100m^2$ for each island, respectively, which is higher than the 962 fish per $100m^2$ average (*L. tapeinosoma* excluded) for all sites at Aldabra.

Chaetodon melannotus.

Echinoderm Community

Following on from the urchin surveys conducted at Aldabra Atoll (Callow *et al*. 2001), it was considered that comparative urchin surveys of Astove, Assomption and St. Pierre would benefit our understanding of the coral reef recovery process in the southern Seychelles islands group. With urchins believed to play a leading role in the success of coral recolonisation (Sammarco 1980, 1982), estimation of their abundance is essential if the threats posed to the recovery of corals are to be reliably assessed. As with Aldabra Atoll, the islands of Astove, Assomption and St. Pierre are free from major anthropogenic disturbances (although to a lesser extent than Aldabra Atoll) and, as such, offer value as study sites for investigating reef recovery processes following on from the bleaching induced mortality event of 1997/1998.

Callow *et al.* (2001) concluded that the impact of urchins on coral recruit survivorship at Aldabra Atoll is negligible. When comparing the species observed at all the study sites there are few noticeable differences. A total of seven urchin species (three families) were observed at Aldabra, compared with six species (three families) at Astove, Assomption and St. Pierre. *A. radiata* and *T. gratilla* were not seen during the AMP Phase III survey but a new species, *E. metularia*, was noted at Assomption.

When considering urchin abundance, the surveys conducted at Aldabra, Astove, Assomption and St. Pierre, indicate similar population densities. Phase III AMP surveys showed *E. molaris* to be the most abundant species at Astove, and, to a much lesser extent, at St. Pierre. *Echinostrephus molaris* was also the most abundant species at Aldabra (Callow *et al*. 2001). It is worth noting that Astove possesses by far the highest density of *E. molaris* observed at all sites. Assomption exhibited a higher density of *D. setosum*. As per the AMP Phase II surveys of Aldabra, the 'target' species *D. setosum* and *E. mathaei* were observed only in low desnsities at the new island sites.

Spatially, urchin densities at Astove, Assomption and St. Pierre showed a similar pattern to that observed at Aldabra, particularly with *E. molaris*. Astove was the only site surveyed on the more exposed northeast coast during 2002 and, as with the exposed sites at Aldabra, *E. molaris* density was high. These strong surge-current environments are preferred by *E. molaris* (Barnes 1987). Assomption and St. Pierre were surveyed on the more sheltered western coasts and, as per the sheltered Aldabran sites, *E. molaris* abundance was

correspondingly low. Other urchin species did not reveal any strong geographical preferences. This was also the case at Aldabra.

As concluded for Aldabra, it is suggested that the impact of 'target' urchins on coral recruit survivorship at Astove, Assomption and St. Pierre islands is negligible, primarily owing to similar low 'target' urchin population densities. In comparison, a maximum of 250 'target' urchins per $125m^2$ have been recorded around the inner granitic Seychelles Islands (Englehardt 2001). This conclusion is reinforced by the evaluation that the BSU index value of '3' (the critical threshold) is never exceeded for the target species on the southern islands. Including the moderately 'bio-erosive' *E. molaris* into the density counts for Astove, Assomption and St. Pierre raises only Astove (343 'bio-eroders' per $125m^2$) above the critical density threshold (BSU of 5). As *E. molaris* feeds primarily on endolithic and encrusting algae from the wall of its burrow, as well as on algal fragments and other organic debris that are washed into the burrow (Barnes 1987), it is suggested that the presence of *E. molaris* does not have a strong influence on the post-settlement survival of coral recruits. This was also reported to be the case for Aldabra (Callow *et al*. 2001).

No *A. planci* were observed during AMP Phase III, though two specimens were seen during a later visit to Aldabra in March 2002. . Callow *et al.* (2001) also reported that only 3 *A. Planci* were seen at Aldabra in that year. Low numbers of this coral feeder at all sites suggests no present threat to the reefs by *A. Planci* plagues

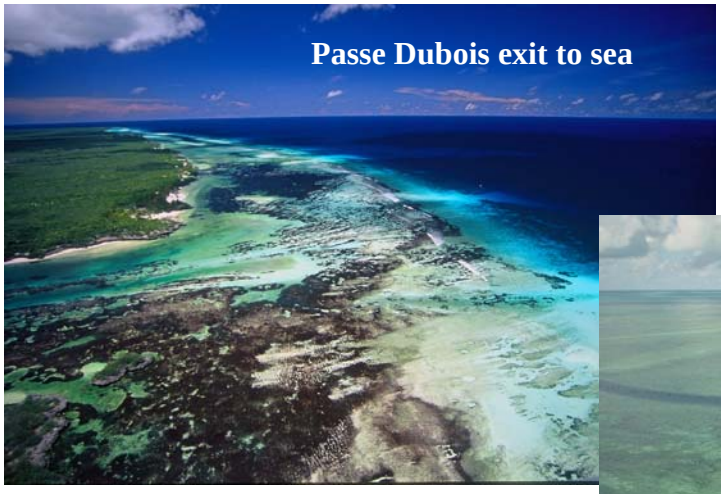
Temperature Data Loggers

Onset Computer Corporation was informed that 80% of the Optic StowAway Temp loggers had flooded, but they could not provide any explanation without examination of the loggers. They reported that they could recover data from a failed logger. However, upon examination of the temperature record data subsequently recovered from the eight failed loggers, they noted that the recorded temperatures began to "drift", presumably with the onset of moisture contamination. Furthermore, the error falsely increased the recorded temperature and there was no way to determine when the erroneous temperature recordings started. This explained the falsely high temperatures recorded by the Site 1 logger when it was still operating. As there was no way to tell when the erroneous temperature readings began, the recovered temperature records cannot be used.

The purpose of a long-term temperature recording system in the marine environment at Aldabra was to accurately record the *in-situ* water temperatures associated with any future high sea surface temperature (SST) events, and to provide accurate temperature information vital to assessments of damage and recovery in the coral and reef fish communities of the atoll. An SST event can be caused by temperatures a few degrees above average for an extended period. When the temperature loggers began to fail they recorded incorrect temperatures within the SST range for the Indian Ocean. This is a tremendous loss of information for the AMP. Temperature records have been lost for one year due to the failed loggers. The same is likely for the second year as, due to failure of loggers, it was not possible to locate them where planned and the loggers deployed in 2002 are faulty and are also likely to fail. Upon examination of the returned loggers, Onset Computer Corporation reported that this model logger flooded because the welds sealing the plastic case failed after more that three months exposure to temperatures >28ºC. This temperature and period are well within the temperature recording range of -35ºC to +75ºC, and the 10-year battery life, given as the specifications for this logger.

Aerial Surveys

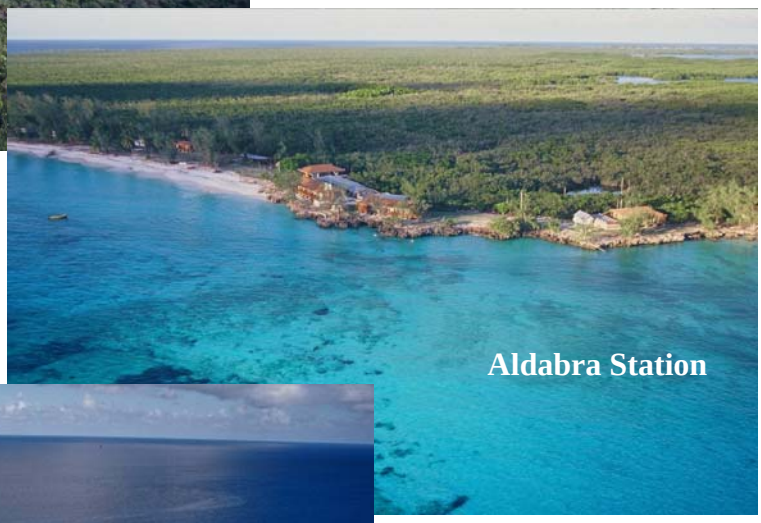
The AMP has conducted the first trial aerial surveys of Aldabra. The use of an inflatable flying boat (IFB) for such work is feasible, and just a few hours flight highlighted the potential the IFB has for further research at Aldabra. The shallow nature of the lagoon makes surveys from boats difficult and many areas are inaccessible most of the time. The IFB allows large areas of lagoon to be surveyed in a short period of time with minimum tidal constraints. Within minutes of starting flights we were able to locate a *Dugong,* and it was clear that the shark, ray and turtle populations are very large. This is the fifth sighting of a *Dugong* in a year, four other sightings have been made by station staff in 2001 (on one of these occasions two dugongs were sighted). This species has not been sighted in the Seychelles for many years and its presence in the lagoon at Aldabra merits further research.



Passe Dubois exit to sea

Grande Passe

Anse Var (Site 6)



Aldabra Station

Reef at Site 1

The Aldabra Marine Programme: Short Term and Long Term

The AMP has increased its research base in 2002 by:

- Surveying a new site at the exposed southeastern tip of Aldabra;
- Establishing three new permanent monitoring sites at Assomption, Atove and St. Pierre, all east of Aldabra;
- Conducting echinoderm surveys at Assomption, Astove and St. Pierre;
- Conducting the first preliminary aerial surveys of the lagoon at Aldabra;
- Tagging new recruit corals at Aldabra to follow their survival and growth;
- Tagging large *Acropora* corals at Astove to monitor their progress.

All of the goals of the AMP Phase III 2002 expedition were met with two exceptions:
Firstly, the AMP is committed to training Seychellois rangers in marine survey techniques and intended to do so during Phase III. However, due to funding difficulties the expedition was not confirmed in time to find suitable candidates and arrange for their participation in the expedition. It is hoped that timing of future expeditions will allow training of rangers to continue. The prospects for Aldabra Research Station staff to conduct marine surveys were improved in March 2002 thanks to the donation of diving equipment by an Italian film crew. An AMP member was able to train Station staff in the operation of the air compressor and procedures for filling diving cylinders.

Secondly, the temperature data loggers were not deployed as planned due to a serious logger design fault. New loggers will be deployed in future expeditions.

The AMP has continued to operate a long term marine programme at Aldabra, and has expanded its work eastward to include Assomption, Astove and St. Pierre. Inclusion of new sites progressively further from Aldabra, and with increasing anthropogenic influence, will provide valuable long term comparative data. The study will be increased in 2003 with the establishment of a new lagoon site at Aldabra at a location of exceptional coral cover located in March 2002. It is also hoped that a study of “coralliths” will be initiated within the lagoon and there are plans to conduct regular aerial surveys of the lagoon to initiate habitat mapping and species counts for this unique ecosystem.

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Underwater observations are difficult to record at the best of times. This has proved to be much easier with the use of ICI Imagedata's 'permanent paper' (2EP169). We would like to thank ICI Imagedata, and particularly Godfrey Moore, who kindly arranged for this to be donated to AMP.

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Appendix

Appendix 1. Species of fish counted in the transects and sighted off transect during the Aldabra Marine Programme surveys in February 2002, February 2001 and November 1999.

FAMILY/*Genus species*	2002 SITES 1-8 Number in transects	2002 SITES 1-8 Sighted off transect	2001 SITES 1-8 Number in transects	2001 SITES 1-8 Sighted off transect	1999 SITES 1-7 Number in transects	1999 SITES 1-7 Sighted off transect
MYLIOBATIDAE						
Aetobatis narinari		X				X
MURAENIDAE						
Gymnothorax breedeni					1	
Gymnothorax flavimarginatus			1		2	
Gymnothorax favagineus		X				
HETEROCONGRIDAE						
Heteroconger hassi						X
CHANIDAE						
Chanos chanos	2			X		X
BELONIDAE						
Tylosurus crocodilus			1			
SYNODONTIDAE						
Synodus jaculum					3	
Synodus variegatus	8				9	
HOLOCENTRIDAE						
Myripristis adusta	22		12		6	
Myripristis berndti	220		297		72	
Myripristis murdjan			36		98	
Myripristis vittata					52	
Neoniphon sammara	7		7		19	
Sargocentron caudimaculatum	34		92		106	
Sargocentron diadema	3		13			X
Sargocentron spiniferum	2		2		14	
SERRANIDAE						
Aethaloperca rogaa	41		552		1	
Cephalopholis argus	23		21		2	
Cephalopholis leoparda			4		1	
Cephalopholis miniata	31		20		58	
Cephalopholis spiloparaea			27			X
Cephalopholis urodeta		X	16		176	
Dermatolepis striolatus			1			X
Epinephelus fasciatus	2		27		60	
Epinephelus fuscoguttatus			1			X

Appendix 1 Aldabra (continued)

FAMILY/*Genus species*	2002 SITES 1-8 Number in transects	2002 SITES 1-8 Sighted off transect	2001 SITES 1-8 Number in transects	2001 SITES 1-8 Sighted off transect	1999 SITES 1-7 Number in transects	1999 SITES 1-7 Sighted off transect
Epinephelus multinotatus	3					X
Epinephelus polyphekadion			4		2	
Epinephelus spilotoceps	8		4		19	
Epinephelus tukula	1				2	
Gracilia albomarginata	16		10		7	
Plectropomus laevis	1		1		1	
Plectropomus punctatus		X				X
Variola louti	10		3		2	
Nemanthias carberryi			1			X
Pseudanthias cooperi	4		17		1975	
Pseudanthias evansi	172		381		91	
Pseudanthias squamipinnis	2747		2027		18679	
Plectropomus areolatus	3		6			X
Cephalopholis nigripinnis	100		64			
Pseudanthias ignitis		X	6			
Anyperodon leucogrammicus			1			
Epinephelus lanceolatus		X				
APOGONIDAE						
Apogon angustatus		X				X
Apogon apogonoides	3937		2237		13285	
Apogon fraenatus	2				6	
Apogon nigrofaciatus	2				10	
Cheilodipterus artus (lachneri)						X
Cheilodipterus macrodon	1		1		3	
Cheilodipterus quinquelineatus	6					
HAEMULIDAE						
Plectorhinchus gaterinus		X	7			X
Plectorhinchus obscurus	1		7		2	
Plectorhinchus orientalis	2		4		1	
Plectorhinchus paulayi		X				X
Plectorhinchus plagiodesmus	2				2	
LUTJANIDAE						
Aphareus furca	17		17		17	
Aprion virescens			3		1	
Lutjanus bengalensis		X	1		5	
Lutjanus bohar	20		43		23	
Lutjanus fulvus						X
Lutjanus gibbus		X	6		1	
Lutjanus kasmira	149		715		166	
Lutjanus monostigma	1		14		37	
Lutjanus obscurus						X
Lutjanus argentimaculatus				X		
Lutjanus fulviflamma		X				

Appendix 1 Aldabra (continued)

FAMILY/*Genus species*	2002 SITES 1-8 Number in transects	2002 SITES 1-8 Sighted off transect	2001 SITES 1-8 Number in transects	2001 SITES 1-8 Sighted off transect	1999 SITES 1-7 Number in transects	1999 SITES 1-7 Sighted off transect
CAESIONIDAE						
Caesio teres					275	
Caesio xanthonota		X	94		21	
Pterocaesio lativittata	8		75			X
Pterocaesio marri						X
Pterocaesio tile	23		3201		4438	
MULLIDAE						
Parupeneus barbarensis	64		2		3	
Parupeneus bifasciatus	18		20		17	
Parupeneus cyclostomus	15		10		5	
Parupeneus macronema	71		219		82	
Parupeneus pleurostigma	1		4		5	
Mulloidichthys vanicolensis		X	550			
Parupeneus rubescens			1			
PEMPHERIDAE						
Pempheris vanicolensis	1				1	
CHAETODONTIDAE						
Chaetodon auriga	12		30		26	
Chaetodon bennetti	13		6			X
Chaetodon falcula	14		14		11	
Chaetodon guttatissimus	33		40		26	
Chaetodon kleinii	39		20		33	
Chaetodon lineolatus	2		2		4	
Chaetodon lunula	14		10		15	
Chaetodon melannotus	11				3	
Chaetodon meyeri	19		7		12	
Chaetodon paucifaciatus					2	
Chaetodon trifasciatus	16		12		17	
Chaetodon unimaculatus	1					X
Chaetodon xanthocephalus			9		2	
Chaetodon zanzibariensis	2		5		2	
Forcipiger flavissimus	24		42		5	
Forcipiger longirostris	1				9	
Hemitaurichthys zoster	54		19		8	
Heniochus acuminatus	1		1			X
Heniochus diphreutes					3	
Heniochus monoceros		X	1		2	
Chaetodon interruptus	2		2			
Chaetodon madagaskariensis	2		8			
Chaetodon vagabundus	1		2			
Heniochus singularius			2			
LETHRINIDAE						
Gnathodentex aureolineatus						X
Lethrinus nebulosus		X	3			X

Appendix 1 Aldabra (continued)

FAMILY/*Genus species*	2002 SITES 1-8 Number in transects	2002 SITES 1-8 Sighted off transect	2001 SITES 1-8 Number in transects	2001 SITES 1-8 Sighted off transect	1999 SITES 1-7 Number in transects	1999 SITES 1-7 Sighted off transect
Monotaxis grandoculis	35		59		40	
Lethrinus xanthochilus		X		X		
Lethrinus obsoletus				X		
Lethrinus microdon		X				
EPHIPPIDAE						
Platax orbicularis	2		8			X
Platax teira						X
MALACANTHIDAE						
Malacanthus brevirostris	1				5	
Malacanthus latovittatus	2		1		1	
PINGUIPEDIDAE						
Parapercis hexophthalama			8			
Parapercis millipunctata			5			
Parapercis punctulata	62					
Parapercis signata			6			
POMACANTHIDAE						
Apolemichthys trimaculatus	3		12		19	
Centropyge acanthops	168		45		79	
Centropyge multispinis	231		100		226	
Pomacanthus chrysurus					2	
Pomacanthus imperator	5				6	
Pygoplites diacanthus	3		7		4	
Centropyge bispinosa	1		4			
Centropyge debelius			6			
Pomacanthus semicirculatus	1					
POMACENTRIDAE						
Amphiprion chrysogaster	2		2		5	
Amphiprion clarkii	10		1			X
Chromis dimidiata	2267		1710		3289	
Chromis lepidolepis					310	
Chromis nigrura	3438		303		2219	
Chromis ternatensis	926		729		1796	
Chromis weberi	511		431		2205	
Chromis xanthura	3				43	
Dascyllus aruanus			12			X
Dascyllus carneus	90		63		55	
Dascyllus trimaculatus	68		15		18	
Lepidozygus tapeinosoma	48910		15985		7139	
Plectroglyphidodon dickii	11		24		1	
Plectroglyphidodon johnstonianus	58		53		33	
Plectroglyphidodon lacrymatus	129		104		59	
Pomacentrus caeruleus	118		69		101	
Pomacentrus sulfureus	3		1			X

Appendix 1 Aldabra (continued)

FAMILY/*Genus species*	2002 SITES 1-8 Number in transects	2002 SITES 1-8 Sighted off transect	2001 SITES 1-8 Number in transects	2001 SITES 1-8 Sighted off transect	1999 SITES 1-7 Number in transects	1999 SITES 1-7 Sighted off transect
Chromis xutha	36		107		16	
Chromis opercularis	13					
Abudefduf sexfasciatus			2			
Abedefduf vaigiensis				X		
Amphiprion allardi			5			
Chromis atripectoralis			1			
Pomacentrus chrysurus			1			
Pomacentrus philippinus	12		1			
LABRIDAE						
Anampses lineatus	6				2	
Anampses meleagrides	15		16		4	
Anampses twistii					3	
Bodianus axillaris	19		14		13	
Bodianus bilunulatus	2		3			X
Bodianus diana	26		20		63	
Cheilinus undulatus					1	
Cirrhilabrus exquisitus	1898		754		555	
Coris cuvieri	12		2		3	
Coris aygula	2					X
Coris frerei	8		7		16	
Epibulus insidiator	1		1		1	
Gomphosus caeruleus	67		54		61	
Halichoeres cosmetus	256		198		258	
Halichoeres hortulanus	35		19		47	
Halichoeres marginatus					4	
Halichoeres vrolikii			6		2	
Hemigymnus fasciatus	13		2		5	
Hemigymnus melapterus	1				1	
Hologymnosus doliatus	19		3		1	
Labroides bicolor	21		18		24	
Labroides dimidiatus	395		214		305	
Labrobsis xanthonata	5		8		1	
Macropharingodon bipartitus	14		13		11	
Pseudocheilinus evanidus	317		155		306	
Pseudocheilinus hexataenia	483		221		254	
Pseudocheilinus octotaenia	54		42		92	
Pseudodax molucanus	30		2		17	
Thalassoma amblycephalum	629		41		624	
Thalassoma hardwicke	13		4		6	
Thalassoma herbraicum	43		66		103	
Thalassoma janseni	14				7	
Thalassoma lunare	34		26		14	
Cheilinus fasciatus	1					
Macropharingodon ornatus	1					
Anampses caeruleopunctatus			1			
Bodianus anthioides	6		4		1	
Bodianus mesothorax			1			

Appendix 1 Aldabra (continued)

FAMILY/*Genus species*	2002 SITES 1-8 Number in transects	2002 SITES 1-8 Sighted off transect	2001 SITES 1-8 Number in transects	2001 SITES 1-8 Sighted off transect	1999 SITES 1-7 Number in transects	1999 SITES 1-7 Sighted off transect
Coris batuensis			37			
Coris caudimacula	93				99	
Hologymnosus annulatus			1			
Novaculichthys taeniourus		X	6			
Pseudojuloides kaleidas	10		14			
Stethojulis albovittata	27		11			
Cheilinus trilobatus	3					
CIRRHITIDAE						
Cirrhitichthys oxycephalus	22		21		14	
Oxycirrhites typus		X				
Paracirrhites arcatus	35		39		50	
Paracirrhites forsteri	38		18		25	
SCARIDAE						
Bolbometopon muricatum	22			X		X
Scarus sordidus	272		117		106	
Scarus rubroviolatus	1		1		1	
Scarus frenatus			3			
Scarus strongylocephalus			8			
Scarus tricolor	33					
Scarus scaber		X				
CARANGIDAE						
Caranx ignobilis		X	25			X
Caranx melampygus	159		50		29	
Caranx sexfasciatus	10		515			X
Elagatis bipinnulata		X	2			X
Trachinotus blochii						X
Scomberoides lysan	10			X		
Carangoides fulvoguttatus	21					
Gnathanodon speciosus	2					
SPHYRAENIDAE						
Sphyraena barracuda		X		X	1	
Sphyraena quenie						X
BLENNIIDAE						
Aspidontus taeniatus	4		15		11	
Ecsenius midas	16		4		9	
Plagiotremus rhinorhynchos	55		1		11	
Plagiotremus tapeinosoma	53		9		47	
Ecsenius minutus	11					
Cirripectes castaneus	15		17			
GOBIIDAE						
Amblyeleotris periophthalmus		X			1	
Gunnellichthys curiosus					1	

Appendix 1 Aldabra (continued)

FAMILY/*Genus species*	2002 SITES 1-8 Number in transects	2002 SITES 1-8 Sighted off transect	2001 SITES 1-8 Number in transects	2001 SITES 1-8 Sighted off transect	1999 SITES 1-7 Number in transects	1999 SITES 1-7 Sighted off transect
Valenciennea helsdingeni		X	2		6	
Valenciennea puellaris					1	
Valenciennea strigata	10		4		8	
ACANTHURIDAE						
Acanthurus auranticavus		X	2		1	
Acanthurus leucocheilus	3		21		4	
Acanthurus leucosternon	113		93		74	
Acanthurus mata						X
Acanthurus thompsoni	91		88		116	
Acanthurus triostegus		X				X
Acanthurus tristis		X			5	
Acanthurus xanthopterus		X			16	
Ctenochaetus binotatus	19				14	
Ctenochaetus striatus	174		128		54	
Ctenochaetus strigosus	423		373		325	
Naso brevirostris	62		57		17	
Naso hexacanthus	1				1	
Naso lituratus	9		4		4	
Naso unicornis						X
Zebrasoma scopas	68		55		155	
Acanthurus lineatus	5		5			
Acanthusus nigricauda	7		4			
Acanthurus tennenti	12		1			
Naso vlamingii	144		14			
Zebrasoma desjardinii		X	2			
Paracanthurus hepatus	3					
ZANCLIDAE						
Zanclus cornutus	11		11		19	
BALISTIDAE						
Balistapus undulatus	3		5		5	
Balistoides conspicullum	1					X
Balistoides viridescens		X	1			X
Melichthys indicus	42		72		22	
Melichthys niger	10					X
Odonus niger	25		10		13	
Rhinecanthus aculeatus						X
Sufflamen bursa	7		4		6	
Sufflamen chrysopterus	6		14		15	
Sufflamen albicaudatus		X				
OSTRACIIDAE						
Ostracion meleagris			2			X
TETRAODONTIDAE						
Arothron meleagris	1		3		1	

Appendix 1 Aldabra (continued)

FAMILY/*Genus species*	2002 SITES 1-8 Number in transects	2002 SITES 1-8 Sighted off transect	2001 SITES 1-8 Number in transects	2001 SITES 1-8 Sighted off transect	1999 SITES 1-7 Number in transects	1999 SITES 1-7 Sighted off transect
Arothron nigropunctatus	7		6		13	
Canthigaster valentini	4		7		4	
Canthigaster amboinensis					1	
Canthigaster coronata		X	1			
Canthigaster smithae	5					
SCOMBRIDAE						
Gymnosarda unicolor	8			X	5	
SCORPAENIDAE						
Pterois antennata		X				
Scorpaenopsis diabola			1			
Taenianotus triacanthus		X				
Pterois miles		X				
SIGANIDAE						
Siganus argenteus	7					X
Siganus stellatus	2		2			
GINGLYMOSTOMATIDAE						
Nebrius ferrugineus		X		X		
CARCHARHINIDAE						
Carcharhinus melanopterus		X				
Negaprion acutidens		X				
Galeocerdo cuvier		X				
DASYATIDIDAE						
Himantura granulata		X		X		
KYPHOSIDAE						
Kyphosus vaigiensis				X		
MOBULIDAE						
Manta briostris			1			
OPHICHTHIDAE						
Myrichthys maculosus				X		
MICRODESMIDAE						
Nemateleotris magnifica	181		68		108	
Ptereleotris evides.	2		5			
MONACANTHIDAE						
Amanses scopas			4			
Cantherinus pardalis			1			
Paraluteres prionurus					1	